

Water Resources Data California Water Year 1997

Volume 2. Pacific Slope Basins from Arroyo Grande to
Oregon State Line except Central Valley



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-97-2
Prepared in cooperation with the California Department
of Water Resources and with other agencies



CALENDAR FOR WATER YEAR 1997

1996

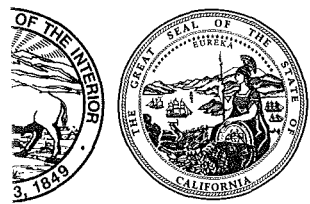
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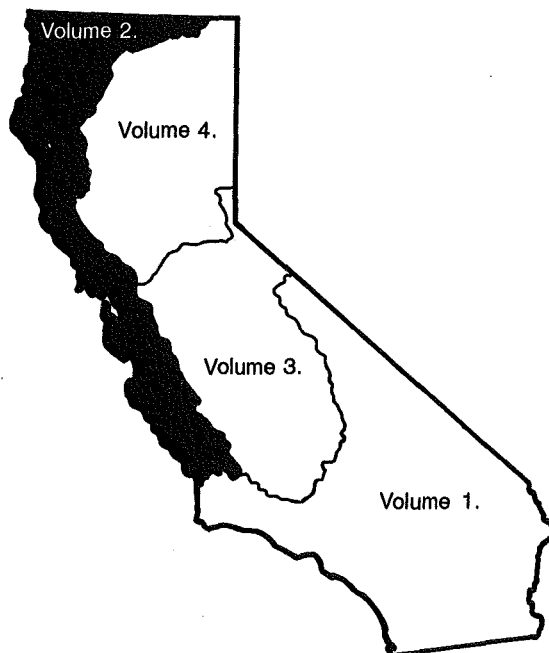
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Water Resources Data California Water Year 1997

Volume 2. Pacific Slope Basins from Arroyo Grande to
Oregon State Line except Central Valley

by M.D. Webster, M.F. Friebel, and L.A. Freeman



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-97-2
Prepared in cooperation with the California Department
of Water Resources and with other agencies

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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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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: (d), discharge;
(l), elevation, gage heights, or contents; (c), chemical; (b), biological; (p), precipitation;
(g), gage height; (t), water temperature; and (s), sediment]

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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
11141150	Arroyo Grande above Phoenix Creek, near Arroyo Grande	13.4	1967–92
11141160	Wittenberg Creek near Arroyo Grande	3.11	1967–75
11141300	Arroyo Grande near Arroyo Grande	68.3	1958–66
11141400	Tar Spring Creek near Arroyo Grande	18.2	1968–79
11141500	Arroyo Grande at Arroyo Grande	102	1940–86
11141600	Los Berros Creek near Nipomo	15	1968–78
11142080	Morro Creek at Morro Bay	24	1971–78
11142100	Toro Creek near Morro Bay	18	1971–78
11142200	Santa Rosa Creek near Cambria	12.5	1957–72
11142240	Perry Creek at Cambria	22.9	1988–89
11142300	San Simeon Creek near Cambria	26.3	1988–89
11142500	Arroyo de la Cruz near San Simeon	41.2	1951–79
11142550	San Carpoforo Creek near San Simeon	34.6	1978
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11143300	Arroyo del Rey at Del Rey Oaks	13.8	1967–78
11143500	Salinas River near Pozo	70.3	1943–83
11144000	Toro Creek near Pozo	9.56	1961–69, 1972–83
11144200	Salsipuedes Creek near Pozo	5.91	1970–83
11144600	Salinas River below Salinas Dam, near Pozo	112	1974–86
11145000	Salinas River above Pilitas Creek, near Santa Margarita	114	1942–75
11145500	Salinas River near Santa Margarita	149	1922, 1932–49
11147000	Jack Creek near Templeton	25.3	1950–78
11147040	Santa Rita Creek Tributary near Templeton	2.95	1967–72
11147070	Santa Rita Creek near Templeton	18.2	1962–94
11147600	Huerhuero Creek near Creston	101	1959–72
11147700	Cholame Creek Tributary near Cholame	9.26	1959–65
11147800	Cholame Creek near Shandon	227	1959–72
11148000	Estrella Creek near Paso Robles	787	1940–41
11148800	Nacimiento River near Bryson	147	1958–71
11149500	Nacimiento River near San Miguel	349	1940–57
11149650	Sulphur Springs Canyon near Jolon	5.16	1968–69
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11153500	Llagas Creek near Morgan Hill	19.6	1952–71
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11153900	Uvas Creek above Uvas Reservoir, near Morgan Hill	21	1961–82
11154000	Uvas Creek near Morgan Hill	30.4	1931–57
11154100	Bodfish Creek near Gilroy	7.40	1960–82
11154200	Uvas Creek near Gilroy	71.2	1959–92
11154500	Pajaro River at Sargent	505	1941
11156000	San Benito River below McCoy Creek, near Hernandez	108	1950–53, 1960–63
11156450	Willow Creek Tributary near San Benito	1.24	1964–69
11156700	Pescadero Creek near Paicines	38.3	1959–70
11158500	San Benito River near Hollister	586	1950–83
11158900	Pescadero Creek near Chittenden	10.2	1970–81
11159150	Corralitos Creek near Corralitos	10.6	1958–72
11159400	Green Valley Creek near Corralitos	7.05	1964–67
11159500	Pajaro River at Watsonville	1,272	1912–13, 1972–73
11159690	Aptos Creek near Aptos	10.2	1972–85

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11159700	Aptos Creek at Aptos	12.2	1959–72
11159800	West Branch Soquel Creek near Soquel	12.2	1959–72
11159940	Soquel Creek near Soquel	32.0	1969–72
11160020	San Lorenzo River near Boulder Creek	6.17	1968–93
11160060	Bear Creek at Boulder Creek	16.0	1977–93
11160070	Boulder Creek at Boulder Creek	11.3	1976–93
11160200	Newell Creek at Ben Lomond	8.98	1958–60
11160300	Zayante Creek at Zayante	11.1	1957–93
11161500	Branciforte Creek at Santa Cruz	17.3	1940–43, 1952–68
11161570	Majors Creek near Santa Cruz	3.77	1970–76
11161590	Laguna Creek near Davenport	3.07	1970–76
11161800	San Vicente Creek near Davenport	6.07	1970–85
11161900	Scott Creek above Little Creek, near Davenport	25.1	1959–73
11162000	Scott Creek near Davenport	27.3	1937, 1939–41
11162540	Butano Creek near Pescadero	18.3	1962–74
11162570	San Gregorio Creek at San Gregorio	50.9	1970–94
11162600	Purisima Creek near Half Moon Bay	4.83	1959–69
11162720	Colma Creek at South San Francisco	10.8	1964–96
11162722	Spruce Branch at South San Francisco	.70	1965–69
11162900	Sharon Creek near Menlo Park	.38	1959–69
11162800	Redwood Creek at Redwood City	1.82	1959–97
11162940	San Francisquito Creek below Ladera Dam site, near Stanford University	28.5	1962–70
11162950	San Francisquito Creek Tributary near Stanford University	.24	1959–64
11163000	Los Trancos Canal near Stanford University	—	1931–41
11163200	Los Trancos Creek Tributary near Stanford University	.42	1959–66
11163500	Los Trancos Creek at Stanford University	7.46	1931–41
11164000	Lagunita Canal at Stanford University	—	1931–41
11165500	San Francisquito Creek at Palo Alto	40.8	1931–41
11166500	Stevens Creek near Cupertino	18.1	1931–59
11166575	Permanente Creek near Monte Vista	3.86	1984–87
11166578	West Fork Permanente Creek near Monte Vista	2.98	1984–87
11167000	Alamitos Creek near Edenvale	34.5	1930–58
11167660	Ross Creek at San Jose	5.70	1962–70
11167700	Ross Creek below Jarvis Road, at San Jose	7.71	1972–74
11168500	Los Gatos Creek below Los Gatos	42.6	1945–53
11169800	Coyote Creek near Gilroy	109	1961–82
11170000	Coyote Creek near Madrone	196	1903–12, 1917–87
11170500	Coyote Creek at Coyote	204	1917–23
11171500	Coyote Creek near Edenvale	229	1917–62
11172000	Coyote Creek at San Jose	238	1917
11172100	Upper Penitencia Creek at San Jose	21.5	1962–87
11172500	Laguna Creek at Irvington	12.5	1917–19
11173000	Alameda Creek near Sunol	37.5	1912–30
11173500	Calaveras Creek near Sunol	98.7	1898–1908, 1911–30
11174000	San Antonio Creek near Sunol	37.0	1912–30, 1961–65
11174500	Alamo Creek at Dublin	38.7	1915–20
11174600	Alamo Canal near Pleasanton	40.8	1978–83
11175000	Tassajero Creek near Pleasanton	26.8	1915–19, 1922–30
11176090	Arroyo Mocho at Livermore	50.8	1984–86
11176100	Arroyo Las Positas above Livermore	7.82	1972–74
11176140	Altamont Creek near Livermore	13.4	1979–80
11176145	Arroyo Las Positas at Livermore	53.3	1980–86
11176150	Arroyo Las Positas near Livermore	64.6	1912–19, 1922, 1924–30
11176180	Arroyo Las Positas at El Charro Road, near Pleasanton	75.0	1978–83
11176200	Arroyo Mocho near Pleasanton	142	1962–86
11176300	Tassajara Creek near Pleasanton	26.8	1915–19, 1922–30, 1979–83
11176600	Arroyo Valle at Pleasanton	171	1958–86
11179500	Crandal Slough near Centerville	—	1917–18
11180000	Alameda Creek near Sunol	639	1917–19

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11180750	Alameda Creek at Union City	653	1959–73
11180825	San Lorenzo Creek above Don Castro Reservoir, near Castro Valley	18.0	1981–94
11181000	San Lorenzo Creek at Hayward	37.5	1940, 1947–83
11181004	Castro Valley Creek at Castro Valley	.98	1979–80
11181006	Castro Valley Creek at Knox Street, at Castro Valley	2.20	1978–80, 1989–93
11181300	Peralta Creek at Oakland	1.67	1973
11181330	Temescal Creek above Lake Temescal, at Oakland	1.74	1979–81, 1989–93
11181335	Caldecott Creek at Lake Temescal, at Oakland	.83	1980–81
11181390	Wildcat Creek at Vale Road, at Richmond	7.79	1976–96
11181400	Wildcat Creek at Richmond	8.67	1964–75
11182030	Rheem Creek at San Pablo	1.49	1961–90
11182100	Pinole Creek at Pinole	10.0	1939–70, 1972–77
11182400	Arroyo del Hambre at Martinez	15.1	1965–82
11182800	San Ramon Creek near Walnut Creek	47.9	1973–92
11183000	San Ramon Creek at Walnut Creek	50.8	1953–73
11183500	Walnut Creek at Walnut Creek	79.2	1953–68
11183600	Walnut Creek at Concord	85.2	1968–92
11183700	Little Pine Creek near Alamo	1.22	1975–89
11184000	Galindo Creek at Concord	7.74	1955–58
11184500	Pine Creek at Concord	28.3	1953–60
11455900	Napa River at Calistoga	21.9	1976–83
11455950	Sulphur Creek near St. Helena	4.50	1966–67
11456500	Conn Creek near Oakville	55.4	1930–59, 1971–75
11457000	Dry Creek near Napa	17.4	1951–66
11457500	Dry Creek near Yountville	18.7	1941
11458100	Milliken Creek near Napa	17.3	1971–83
11458200	Redwood Creek near Napa	9.79	1958–73
11458300	Napa Creek at Napa	14.9	1971–83
11458350	Tulucay Creek at Napa	12.6	1972–83
11458500	Sonoma Creek at Agua Caliente	58.4	1955–81
11459000	Petaluma River at Petaluma	30.9	1949–63
11459300	San Antonio Creek near Petaluma	28.9	1975–81
11459800	San Rafael Creek at San Rafael (REVISED RECORDS IN WDR CA-91-2)	1.24	1972–76
11459830	Irwin Creek at San Rafael	—	1972–76
11460000	Corte Madera Creek at Ross	18.1	1951–93
11460100	Arroyo Corte Madera del Presidio at Mill Valley	4.69	1966–73, 1975–86
11460160	Morses Creek at Bolinas	.70	1967–69
11460500	Nicasio Creek at Point Reyes Station	36.6	1954–60
11460800	Walker Creek near Tomales	40.1	1959–84
11460920	Salmon Creek at Bodega	15.7	1962–75
11460940	Russian River near Redwood Valley	14.1	1963–68
11461400	East Fork Russian River Tributary near Potter Valley	.15	1959–61
11462700	Feliz Creek near Hopland	31.3	1958–66
11463160	Big Sulphur Creek near Middletown	2.89	1978–79
11463500	Russian River at Geyserville	655	1911–13
11463900	Maacama Creek near Kellogg	43.4	1961–81
11463940	Franz Creek near Kellogg	15.7	1964–68
11464050	Dry Creek Tributary near Hopland	1.19	1968–69
11464400	Dry Creek near Yorkville	56.0	1974–83
11464500	Dry Creek near Cloverdale	87.8	1941–80
11464860	Warm Springs Creek near Asti	12.2	1973–83
11465050	Dutcher Creek near Asti	2.24	1973
11465150	Pena Creek near Geyserville	22.3	1979–90
11465800	Santa Rosa Creek near Santa Rosa	12.5	1959–70
11466200	Santa Rosa Creek at Santa Rosa	56.6	1940–41
11467200	Austin Creek near Cazadero	63.1	1959–66
11467500	South Fork Gualala River near Annapolis	161	1951–71, 1991–94
11467510	South Fork Gualala River near the Sea Ranch	161	1991–92
11467600	Garcia River near Point Arena	98.5	1962–83
11467800	Rancheria Creek near Boonville	65.6	1959–68
11467850	Soda Creek Tributary near Boonville	1.53	1965–68
11468010	Albion River near Comptche	14.4	1961–69

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11468070	South Fork Big River near Comptche	36.2	1960–71
11468150	Warner Creek near Fort Bragg	.61	1969
11468540	Pudding Creek near Fort Bragg	12.5	1964–71
11468850	Dunn Creek near Rockport	1.88	1961–64
11468990	Honeydew Creek near Honeydew	14.9	1973–77
11469500	North Fork Mattole River at Petrolia	37.6	1951–57
11469800	Cold Creek Tributary near Elk Creek	.81	1970
11471800	Tomki Creek near Willits	43.4	1963–70
11472000	Eel River at Hearst	466	1911–13
11472150	Eel River near Dos Rios	528	1967–94
11472200	Outlet Creek near Longvale	161	1957–94
11472500	Eel River above Dos Rios	705	1951–65
11472800	Middle Fork Eel River above Black Butte River, near Covelo	204	1968–70
11472900	Black Butte River near Covelo	162	1959–75
11473000	Middle Fork Eel River below Black Butte River, near Covelo	367	1952–67
11473100	Williams Creek near Covelo	30.4	1962–69
11473500	Middle Fork Eel River near Covelo	406	1912–18, 1920–22
11473530	Mill Creek below Alder Creek, near Covelo	17.1	1962–65
11473600	Short Creek near Covelo	15.2	1959–69
11473700	Mill Creek near Covelo	95.6	1956–71
11473800	Elk Creek near Hearst	84.1	1964–73
11473980	Goforth Creek at Dos Rios	3.83	1966–68
11474000	Eel River below Dos Rios	1,484	1912–13, 1952–66
11474400	Hulls Creek near Covelo	25.9	1962–64
11475500	South Fork Eel River near Branscomb	43.9	1947–70
11475700	Tenmile Creek near Laytonville	50.3	1958–74
11475940	East Branch South Fork Eel River near Garberville	74.3	1966–72
11476000	South Fork Eel River at Garberville	468	1912–13, 1940
11476700	Larabee Creek near Holmes	84.1	1960–65
11477475	Mill Creek below Sulphur Creek, at Dinsmore	3.11	1990–95
11477500	Van Duzen River near Dinsmore	85.2	1954–58, 1964–74
11477700	Little Van Duzen River near Bridgeville	36.2	1958–67
11478000	Van Duzen River at Bridgeville	202	1912–13, 1940–51
11478400	Van Duzen River Tributary near Bridgeville	.71	1969
11479000	Yager Creek near Carlotta	127	1954–55, 1957–60, 1966–72
11479500	Yager Creek at Carlotta	134	1912–13
11479700	Elk River near Falk	44.2	1958–67
11480000	Jacoby Creek near Freshwater	5.80	1955–64
11480500	Mad River near Forest Glen	143	1953–94
11480750	Mad River near Kneeland	351	1966–74
11480800	North Fork Mad River near Korbel	40.4	1958–64, 1973–74
11481200	Little River near Trinidad	40.5	1956–94
11481500	Redwood Creek near Blue Lake	67.7	1953–58, 1972–93
11482000	Redwood Creek near Korbel	83.0	1912–13
11482110	Lacks Creek near Orick	16.9	1980–91
11482120	Redwood Creek above Panther Creek, near Orick	150	1981–89
11482125	Panther Creek near Orick	6.07	1979–91
11482130	Coyote Creek near Orick	7.78	1980–82, 1984–89
11482200	Redwood Creek at South Park Boundary, near Orick	185	1971–81
11482468	Little Lost Man Creek at Site No. 2, near Orick	3.46	1974–82, 1985–89
11488700	Dry Lake Tributary at Perez	1.74	1963–66
11489500	Antelope Creek near Tennant	18.6	1953–79
11490000	Antelope Creek near Macdoel	30	1922
11490500	Butte Creek near Macdoel	178	1922, 1952–60
11512000	Fall Creek at Copco	14.6	1933–59
11512500	Klamath River below Fall Creek, near Copco	4,317	1924–61
11516600	Cottonwood Creek at Hornbrook	89.8	1965–71
11516900	Little Shasta River near Montague	48.2	1958–78
11517000	Shasta River near Montague	673	1912–13, 1917–21, 1924–33
11517800	Beaver Creek near Klamath River	106	1960–65
11517900	East Fork Scott River below Houston Creek, near Callahan	19.7	1970–73

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11517950	East Fork Scott River above Kangaroo Creek, near Callahan	49.5	1970–73
11518000	East Fork Scott River near Callahan	57.5	1911
11518050	East Fork Scott River at Callahan	110	1960–74
11518200	South Fork Scott River near Callahan	41.5	1959–60
11518300	Sugar Creek near Callahan	12.0	1957–60
11518310	Cedar Gulch near Callahan	.99	1966–73
11518600	Moffett Creek near Fort Jones	69.8	1959–67
11519000	Shackleford Creek near Mugginsville	17.7	1957–60
11520000	Scott River near Scott Bar	804	1912–13
11521000	Klamath River near Happy Camp	7,024	1912
11522200	Elk Creek near Happy Camp	90.4	1957–64
11522260	Ti Creek near Somes Bar	9.46	1961–64
11522300	South Fork Salmon River near forks of Salmon	252	1957–65
11522400	North Fork Salmon River near forks of Salmon	203	1959–64
11523030	Red Cap Creek near Orleans	56.1	1958–65
11523050	Bluff Creek near Weitchpec	74.6	1959–65
11523700	Coffee Creek near Trinity Center	107	1911–13, 1958–66
11524000	Trinity River near Trinity Center	300	1911–13
11525655	Trinity River below Limekiln Gulch, near Douglas City	812	1981–91
11525800	Weaver Creek near Douglas City	48.4	1959–69
11525900	Browns Creek near Douglas City	71.6	1957–67
11526000	Trinity River near Douglas City	1,014	1944–51
11527400	New River at Denny	173	1928–29, 1959–69
11528000	Trinity River near China Flat	1,733	1912–13
11528100	South Fork Trinity River at Forest Glen	208	1960–65
11528200	South Fork Trinity River near Hyampom	342	1956–65
11528400	Hayfork Creek near Hayfork	86.7	1957–65
11528440	Big Creek near Hayfork	27.1	1961, 1963–67
11528500	Hayvord Creek near Hyampom	378	1953–74
11529500	South Fork Trinity River near China Flat	932	1912–13
11529800	Willow Creek near Willow Creek	40.9	1959–74
11530020	Supply Creek at Hoopa	15.8	1981–87
11530150	Mareep Creek near Weitchpec	3.56	1967–69
11530500	Klamath River near Klamath	12,000	1910–26, 1950–94
11531000	Middle Fork Smith River at Gasquet	131	1912–17, 1959–65
11531500	North Fork Smith River at Gasquet	158	1912–13
11532700	Rowdy Creek at Smith River	33.3	1957–62
11533000	Lopez Creek near Smith River	.92	1962–66

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
11144500	Santa Margarita Lake near Pozo	112	1945–86
11166740	Calero Reservoir near New Almaden	6.93	1936–85
11461800	Lake Mendocino near Ukiah	105	1966–90
11464900	Lake Sonoma near Geyserville	130	1984–90

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
11141150	Arroyo Grande above Phoenix Creek, near Arroyo Grande	13.4	WQ,S,T	1967-73, 1977, 1990
11141280	Lopez Creek near Arroyo Grande	20.9	WQ,S,T	1968-72, 1977
11143000	Big Sur River near Big Sur	46.5	WQ,T	1966-79
11143250	Carmel River near Carmel	246	WQ	1954-66
11147040	Santa Rita Creek Tributary near Templeton	2.95	T	1968-72
11147070	Santa Rita Creek near Templeton	18.2	S	1968-72
11147500	Salinas River at Paso Robles	390	WQ,S	1963-66
11148800	Nacimiento River near Bryson	147	T,S	1959, 1961-71
11148900	Nacimiento River below Sapaque Creek, near Bryson	162	T	1972-73
11149400	Nacimiento River below Nacimiento Dam, near Bradley	329	WQ	1963-66
11149700	San Antonio River at Sam Jones Bridge	204	T,S	1959, 1961-62, 1964-65
11149900	San Antonio River near Lockwood	217	T	1966-73
11150000	San Antonio River at Pleyto	277	T,S	1962, 1965
11151870	Arroyo Seco near Greenfield	113	S	1963-75, 1978-84
11152300	Salinas River near Chualar	4,042	C,T,B	1967-69, 1977-95
11152500	Salinas River near Spreckels	4,156	C,T,S	1950-51, 1967-79
11153470	Llagas Creek above Chesbro Reservoir, near Morgan Hill	9.63	T	1972-78
11153555	Llagas Creek at San Martin	28.2	WQ,S	1980-87, 1989-91
11153900	Uvas Creek above Uvas Reservoir, near Morgan Hill	21	T,S	1966-76
11154700	Clear Creek near Idria	14.1	T	1993-96
11159000	Pajaro River at Chittenden	1,186	B,C,T, WQ,S	1952-92
11160000	Soquel Creek at Soquel	40.2	T	1966-79
11160500	San Lorenzo River at Big Trees	106	S,T	1966-82
11162500	Pesadero Creek near Pesadero	45.9	T	1965-80
11162720	Colma Creek at South San Francisco	10.8	S	1966-76
11162722	Spruce Branch at South San Francisco	1.68	S	1965-69
11166575	Permanente Creek near Monte Vista	3.86	T,S	1984-87
11166578	West Fork Permanente Creek near Monte Vista	2.98	T,S	1985-86
11166710	Arroyo Calero above Calero Reservoir, near New Almaden	3.14	WQ	1986-90
11166900	Alamitos Creek near New Almaden	31.8	WQ,S	1985-91
11167500	Guadalupe Creek at Guadalupe	12.8	WQ,S	1980-91
11168000	Los Gatos Creek at Los Gatos	39.0	WQ	1952-66, 1980-87, 1989-91
11168800	Los Gatos Creek at Lincoln Avenue, at San Jose	48.4	WQ	1980-87, 1989-91
11169580	Calabazas Creek Tributary No. 1 at Mt. Eden Road	.37	T	1973-77
11169600	Prospect Creek above Saratoga Golf Course, near Saratoga	.27	T	1973-75
11169616	Calabazas Creek at Rainbow Drive, near Cupertino	3.98	T	1974-77
11169800	Coyote Creek near Gilroy	109	T,S	1965-76
11169970	Coyote Creek below Leroy Anderson Dam, near Madrone	195	WQ,S	1980-88, 1990-91
11171500	Coyote Creek near Edenvale	229	WQ,S	1979-88, 1990-91
11174600	Alamo Canal near Pleasanton	40.8	C	1979-83
11176000	Arroyo Mocho near Livermore	38.2	C	1979-83
11176140	Altamont Creek near Livermore	13.4	C	1979-80
11176145	Arroyo Las Positas at Livermore	53.3	C	1980-83
11176180	Arroyo Las Positas at El Charro, near Pleasanton	75.0	C	1980-83
11176200	Arroyo Mocho near Pleasanton	142	C	1980-84
11176300	Tassajara Creek near Pleasanton	26.8	C	1979-83
11176350	Arroyo de la Laguna above Arroyo Valle, near Pleasanton	224	T,S	1975-79
11176400	Arroyo Valle below Lang Canal, near Livermore	130	S	1963, 1965
11176500	Arroyo Valle near Livermore	147	S	1966-67
11176600	Arroyo Valle at Pleasanton	171	T,S	1975-79
11176900	Arroyo de la Laguna above bridge, near Pleasanton	—	T	1960-63
11177000	Arroyo de la Laguna near Pleasanton	405	C	1979-83
11177200	Vallecitos Creek at Sunol	7.48	C	1975-86
11179000	Alameda Creek near Niles	633	WQ,S,T,C	1906, 1952-73, 1975-93

DISCONTINUED WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11180825	San Lorenzo Creek above Don Castro Reservoir, near Castro Valley	18.0	T,S	1981–94
11180940	Cull Creek Tributary No. 4 above Cull Creek Reservoir, near Castro Valley	.45	S	1981, 1986, 1989, 1992
11180965	Cull Creek below Cull Creek Dam, near Castro Valley	6.37	T,S	1979
11181040	San Lorenzo Creek at San Lorenzo	44.6	T,S	1989–93
11181330	Temescal Creek above Lake Temescal, at Oakland	1.74	WQ,S	1979–81
11181390	Wildcat Creek at Vale Road, at Richmond	7.79	S	1978–80
11456000	Napa River near St. Helena	81.4	S	1961–62
11458000	Napa River near Napa	218	WQ,C,S,T	1971, 1973–93
11460000	Corte Madera Creek at Ross	18.1	S	1978–80
11460015	Corte Madera Creek at College Avenue, at Kentfield	18.2	S	1988–89
11460110	Gerbode Valley Creek near Sausalito	3.29	WQ,S	1986–88
11460120	Rodeo Lagoon at Ft. Cronkhite, near Sausalito	4.07	WQ	1986–88
11460130	Tennessee Valley Creek near Tamalpais Valley	1.91	WQ,S	1986–88
11460140	Redwood Creek below Muir Woods, near Mill Valley	4.11	WQ,S	1986–88
11460152	Redwood Creek at Muir Beach, near Tamalpais Valley	7.29	WQ,S	1986–88
11460154	Green Gulch at Muir Beach, near Tamalpais Valley	1.51	WQ,S	1986–88
11460156	Webb Creek near Stinson Beach	1.12	WQ,S	1986–88
11460158	Table Rock Creek at Stinson Beach	1.34	WQ,S	1986–88
11460170	Pine Creek at Bolinas	7.83	T,S	1967, 1969–70
11460600	Lagunitas Creek near Point Reyes	81.7	T,S	1989–90
11460920	Salmon Creek at Bodega	15.7	T,S	1964–75
11461000	Russian River near Ukiah	100	WQ,S,B,T	1964–68, 1977–79, 1991–92, 1994–96
11461500	East Fork Russian River near Calpella	92.2	S	1965–68
11462000	East Fork Russian River near Ukiah	105	WQ,S,B,T	1953–55, 1964–68, 1973–94
11462500	Russian River near Hopland	362	WQ,T,S	1951–79, 1989–93, 1995–96
11463000	Russian River near Cloverdale	503	T,S	1964–68, 1995–96
11463160	Big Sulphur Creek near Middletown	2.89	T,S	1978–79
11463200	Big Sulphur Creek near Cloverdale	85.5	S	1967–68
11464000	Russian River near Healdsburg	793	WQ	1951–66, 1979–80
11464500	Dry Creek near Cloverdale	87.8	T	1965–79
11465150	Pena Creek near Geyserville	22.3	S	1979–86
11465000	Dry Creek below Warm Springs Dam, near Geyserville	131	T	1981–94
11465200	Dry Creek near Geyserville	162	WQ,S,T	1964–86
11467000	Russian River near Guerneville	1,338	C,B,WQ	1951–94
11467590	Garcia River at Eureka Hill Road, near Point Arena	83.2	S	1992–97
11467600	Garcia River near Point Arena	98.5	T	1964–78
11468000	Navarro River near Navarro	303	T	1965–79
11468600	Middle Fork Ten Mile River near Fort Bragg	32.9	T	1965–73
11471000	Potter Valley Powerhouse intake near Potter Valley	—	S	1964–68
11472150	Eel River near Dos Rios	528	S	1967–77
11472200	Outlet Creek near Longvale	161	S	1967–70
11472500	Eel River above Dos Rios	705	T,S	1959, 1962–82
11472800	Middle Fork Eel River above Black Butte River, near Covelo	204	T,S	1966, 1969–70
11472900	Black Butte River near Covelo	162	T,S	1964–66, 1968–75
11473000	Middle Fork Eel River below Black Butte River, near Covelo	367	T,S	1961–63, 1968–79
11473800	Elk Creek near Hearst	84.1	T	1965–73
11473900	Middle Fork Eel River near Dos Rios	745	C,S	1967–69
11474500	North Fork Eel River near Mina	248	T,S	1973–75
11474700	Chamise Creek near Island Mountain	22.6	T,S	1973–75
11475000	Eel River at Fort Seward	2,107	S	1966–76
11475100	Dobbyn Creek near Fort Seward	61.4	T,S	1973–76
11475500	South Fork Eel River near Branscomb	43.9	T,S	1961–70
11475560	Elder Creek near Branscomb	6.50	WQ,T,S	1968–96
11476500	South Fork Eel River near Miranda	537	S	1981
11476600	Bull Creek near Weott	28.1	S	1960–80
11477000	Eel River at Scotia	3,112	B,C,T,S	1952–95
11477500	Van Duzen River near Dinsmore	85.2	T	1966–74
11477700	Little Van Duzen River near Bridgeville	36.2	T	1961–65

DISCONTINUED WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11480700	Maple Creek near Blue Lake	12.1	T	1969
11480750	Mad River near Kneeland	351	T	1966–74
11480780	Mad River near Blue Lake	393	T	1973–76
11481000	Mad River near Arcata	485	S	1960–74
11481500	Redwood Creek near Blue Lake	67.7	WQ	1974–75
11482110	Lacks Creek near Orick	16.9	C,S	1975–76, 1978–91
11482120	Redwood Creek above Panther Creek, near Orick	150	S	1988–89
11482125	Panther Creek near Orick	6.07	T,S	1979–91
11482130	Coyote Creek near Orick	7.78	T,S	1980
11482200	Redwood Creek at South Park Boundary, near Orick	185	T	1974–81
11482468	Little Lost Man Creek at Site No. 2, near Orick	3.46	WQ,S	1974–76, 1978–82, 1985–89
11482500	Redwood Creek at Orick	277	WQ,T	1959–92
11516600	Cottonwood Creek at Hornbrook	89.8	T	1965–71
11523000	Klamath River at Orleans	8,475	S	1967–79
11525500	Trinity River at Lewiston	719	WQ,T,S	1951–83
11525550	Grass Valley Creek near French Gulch	7.93	S	1985–89
11525655	Trinity River below Limekiln Gulch, near Douglas City	812	T,S	1981–91
11526500	North Fork Trinity River at Helena	151	T,S	1963
11528200	South Fork Trinity River near Hyampom	342	T	1961–65
11528500	Hayfork Creek near Hyampom	378	T	1961–74
11528700	South Fork Trinity River below Hyampom	764	S	1967–70, 1981–82
11529000	South Fork Trinity River near Salyer	898	T,S	1959–67, 1981–82
11530000	Trinity River at Hoopa	2,853	S	1960–79
11530020	Supply Creek at Hoopa	15.8	T,S	1982–85
11530300	Blue Creek near Klamath	120	T	1966–78
11530500	Klamath River near Klamath	12,100	WQ,B,C, T,S	1951–95 1966–81
11532000	South Fork Smith River near Crescent City	291	T,S	1978–79
11532500	Smith River near Crescent City	614	WQ,C,B, S,T	1952–93
11532620	Mill Creek near Crescent City	28.6	T	1974–80
353339121053900	Santa Rosa Creek on Highway 1 Bridge, at Cambria	46.6	WQ	1988–89
353406121061100	Santa Rosa Creek at Windson Boulevard, near Cambria	47.1	WQ	1988–89
353635121043101	San Simeon Creek at Palmer Flats, near Cambria	23.1	WQ	1988–89
371057121472501	Calero Reservoir at dam, near New Almaden	6.93	WQ,B	1978–79, 1984–91
375658122324000	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 0	—	S	1988–89
375701122324200	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 1	—	S	1988–89
375704122324200	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 2	—	S	1988–89
375710122324000	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 3	—	S	1990
375711122324600	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 4	—	S	1988–89
375712122325100	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 5	—	S	1988–89
375712122325200	Corte Madera Creek near College Avenue, at Kentfield, at Cross Section 6	—	S	1988–89

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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 1997
VOLUME 2—PACIFIC SLOPE BASINS FROM ARROYO GRANDE
TO OREGON STATE LINE EXCEPT CENTRAL VALLEY

By L.A. Freeman, M.D. Webster, and M.F. Friebe

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 101 streamflow-gaging stations, 1 low-flow partial-record streamflow station, and 3 miscellaneous measurement stations; (2) gage-height records for 7 stations, (3) stage and contents records for 6 lakes and reservoirs; and (4) water-quality records for 12 streamflow-gaging stations and 10 water-quality partial-record miscellaneous sites. Records included for stream stages are only a small fraction of those obtained during the water year.

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

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

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-97-2." 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:

Alameda County Flood Control and Water Conservation District, Robert Hale, Acting Water Resources Manager.
Alameda County Water District, James D. Beard, General Manager.
California Department of Parks and Recreation, Henry R. Agonia, Director.
California Department of Water Resources, David N. Kennedy, Director.
Contra Costa County Flood Control and Water Conservation District, Milton Kubicek, Deputy Chief.

Humboldt Bay Municipal Water District, Arthur Bolli, General Manager.

Marin Municipal Water District, Pamela J. Nicolai, General Manager.

Monterey County Water Resources Agency, Michael D. Armstrong, General Manager.

Monterey Peninsula Water Management District, Darby Fuerst, General Manager.

San Benito County Water District, John Gregg, District Manager.

San Francisco Water Department, John Mullane, General Manager.

San Luis Obispo County Engineering Department, Timothy P. Nanson, County Engineer.

San Mateo County Department of Public Works, Robert Frame, Senior Civil Engineer.

Santa Clara Valley Water District, Stanley M. Williams, General Manager.

Santa Cruz, city of, Water Department, Terry Tompkins, Deputy Director/Operations.

Santa Cruz County Flood Control and Water Conservation District, Planning Department, Mark Deming, Program Manager.

Scotts Valley Water District, Jon Sansing, General Manager.

Sonoma County Permit and Resource Management Department, Chris Thomas, Administrative Assistant.

Sonoma County Water Agency, Randy O. Poole, General Manager.

Soquel Creek Water District, Laura D. Brown, General Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Bureau of Land Management; Bureau of Reclamation and National Park Service, U.S. Department of the Interior.

The following organizations aided in collecting records: Pacific Gas and Electric Company; PacifiCorp, STS Hydropower, and North Coast Hydroelectric.

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.wrvares.er.usgs.gov/nawqa/nawqa_home.html

EXPLANATION OF THE RECORDS

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

Station-Identification Numbers

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

Downstream-Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11465350, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "465350." 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).

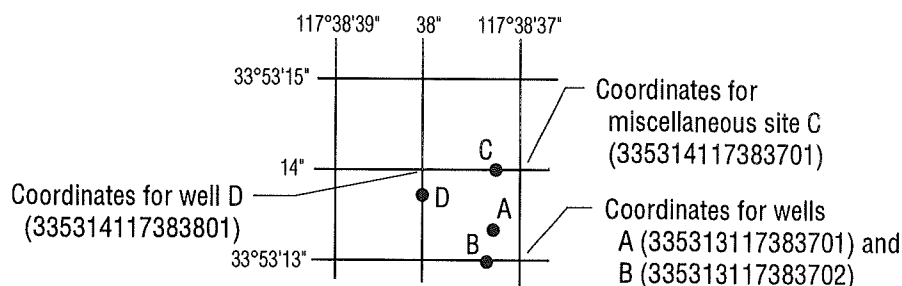


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

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 18.

Data Collection and Computation

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

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

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

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

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

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

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

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

Data Presentation

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

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

Station manuscript

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

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

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

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

REVISED RECORDS.—Published records, because of new information, occasionally are incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report is given in which the most recently revised figure was published.

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

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

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

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

separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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

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

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

Occasionally the records of a discontinued gaging station may need revision. Because for these stations there would be no current or, 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. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____—____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes.

Selected streamflow duration curve statistics and runoff data also are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than $1 \text{ ft}^3/\text{s}$, to the nearest tenth between 1.0 and $10 \text{ ft}^3/\text{s}$, to whole numbers between 10 and $1,000 \text{ ft}^3/\text{s}$, and to three significant figures

for more than 1,000 ft³/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 18.

Arrangement of Records

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

Onsite Measurements and Sample Collection

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

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

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

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

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

Water Temperature

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

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

Sediment

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

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

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

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

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

characteristics, channel geometry, and associated hydraulic factors, are also undefined. In consequence, figures of bedload discharge must be used with caution. They are estimates, at best, and are subject to revision.

Cross-Sectional Data

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

Laboratory Measurements

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

Water Quality-Control Data

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and

analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this District are:

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

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

Spike Samples

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

ACCESS TO USGS WATER DATA

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

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

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

where I_o 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

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

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

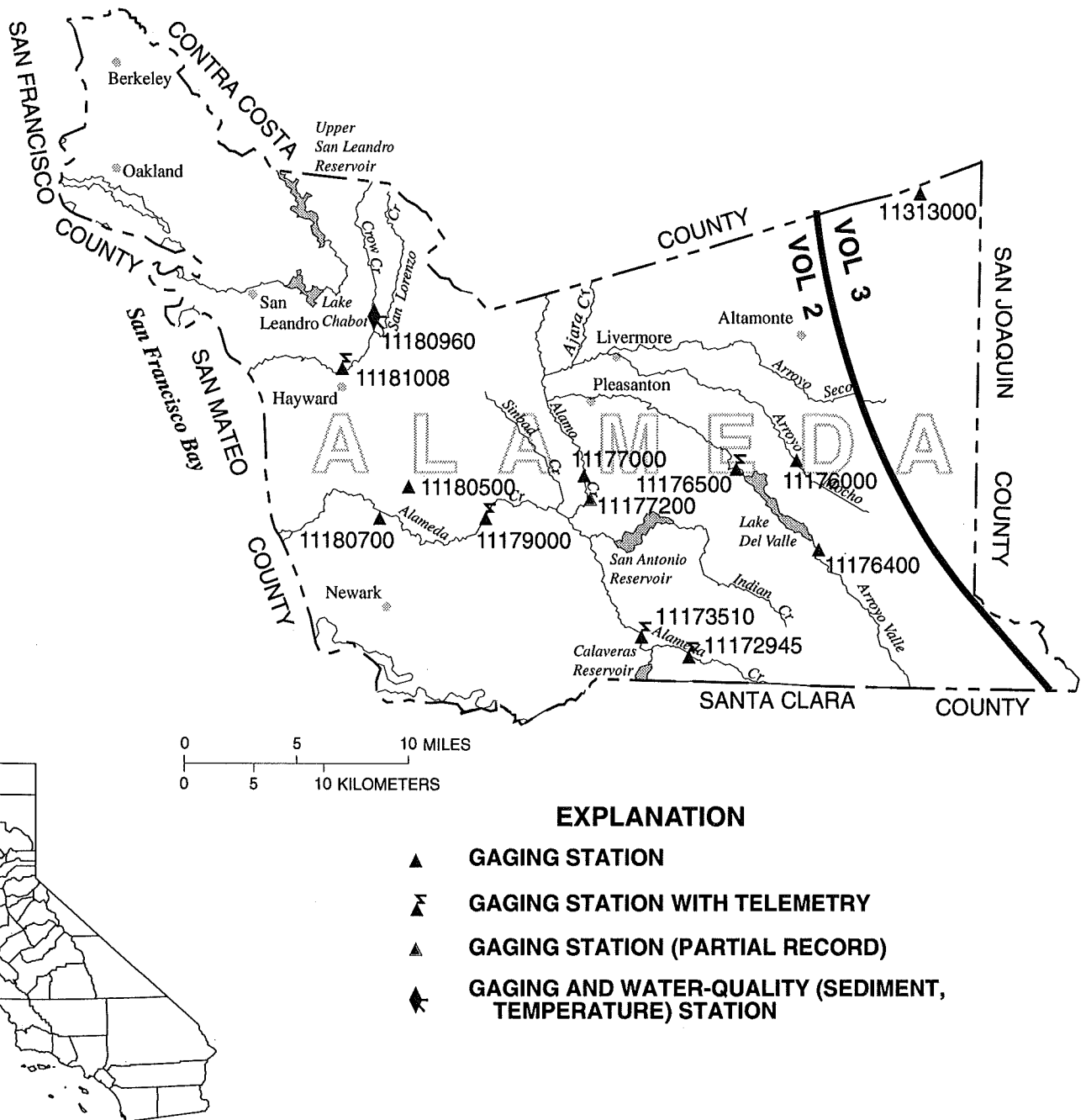


Figure 2. Location of discharge and water-quality stations in Alameda County.
(NOTE: Record for station 11313000 published in volume 3.)

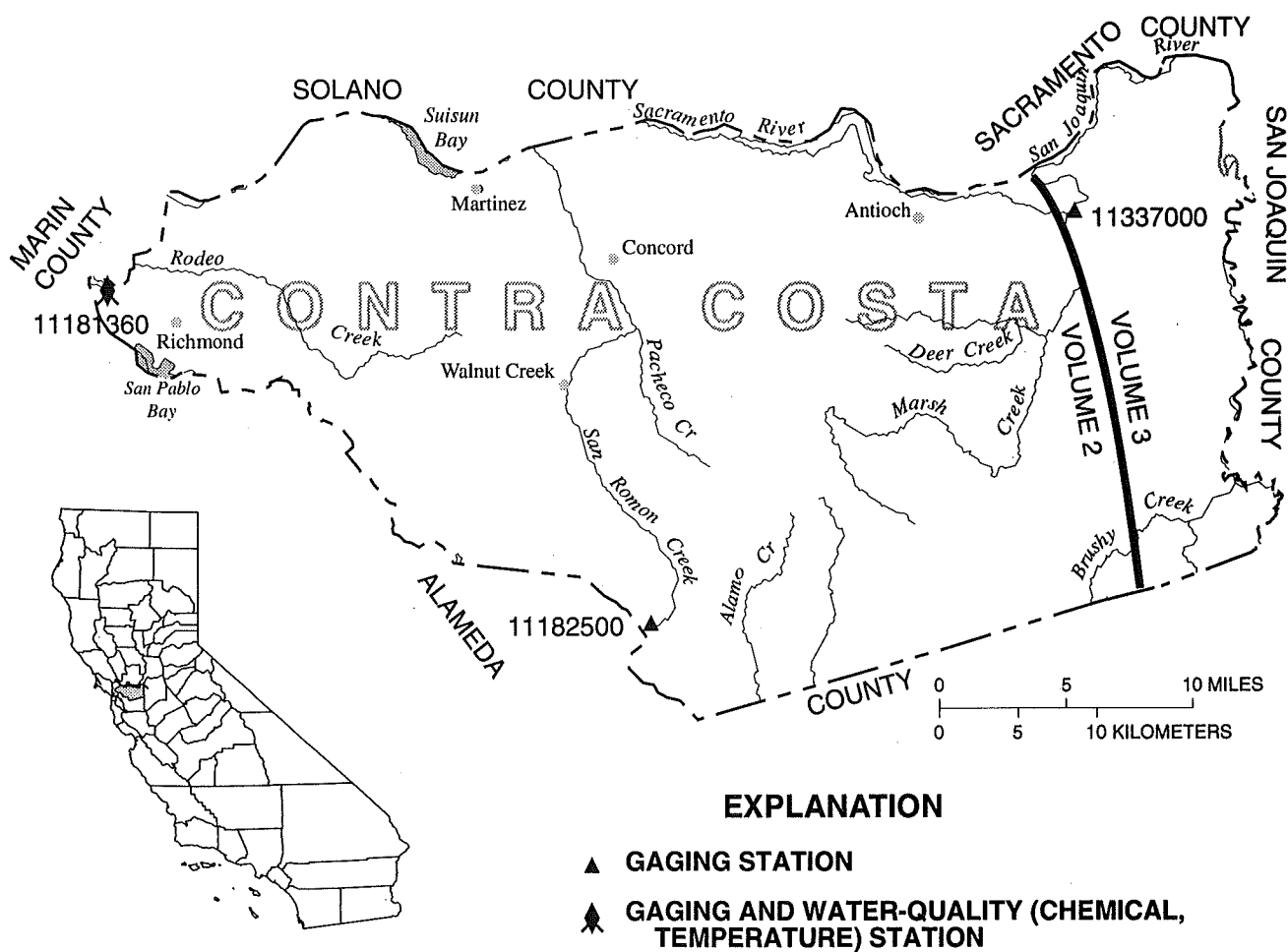


Figure 3. Location of discharge and water-quality stations in Contra Costa County.
(NOTE: Record for station 11337000 published in volume 3.)

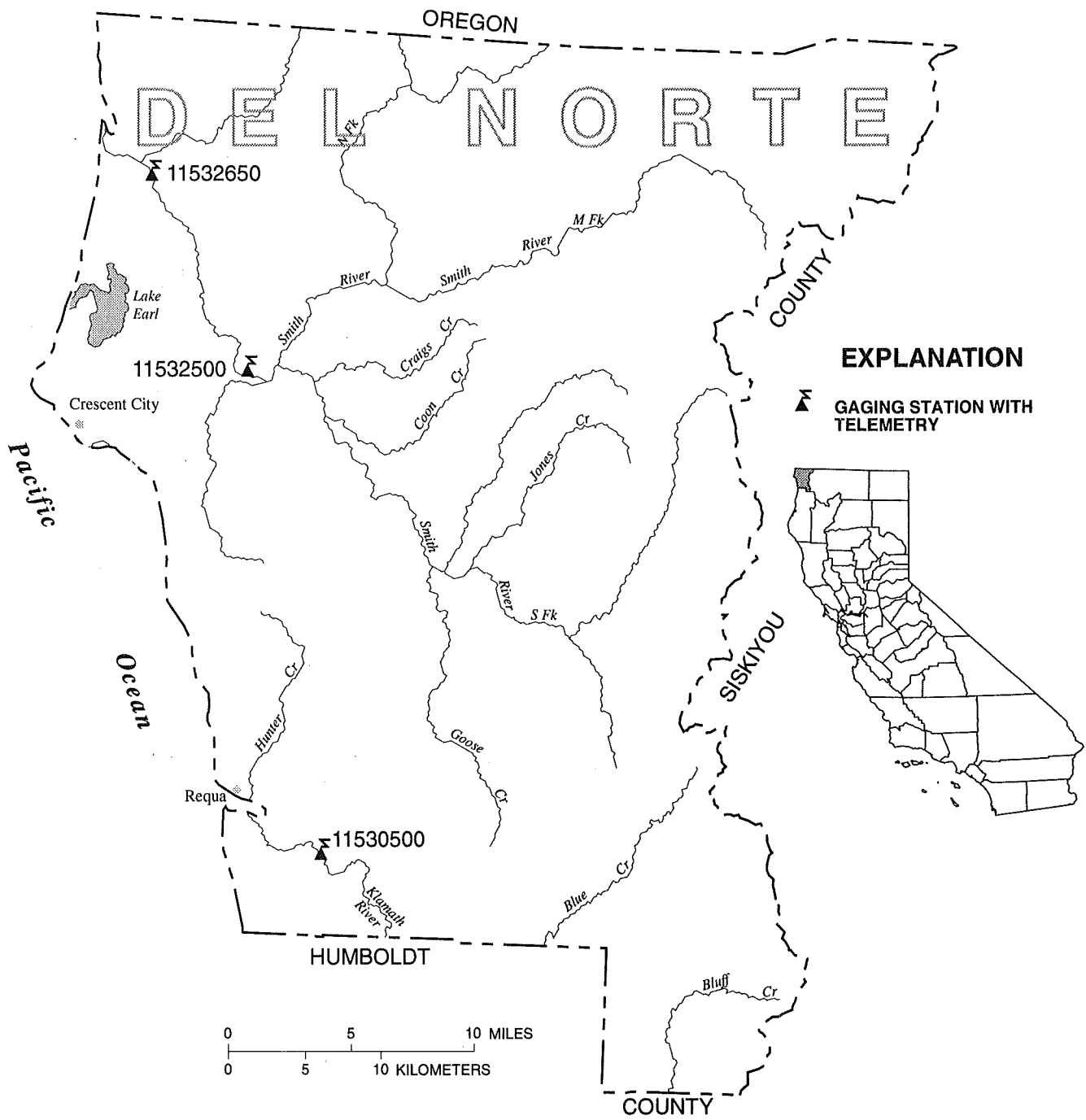


Figure 4. Location of discharge stations in Del Norte County.

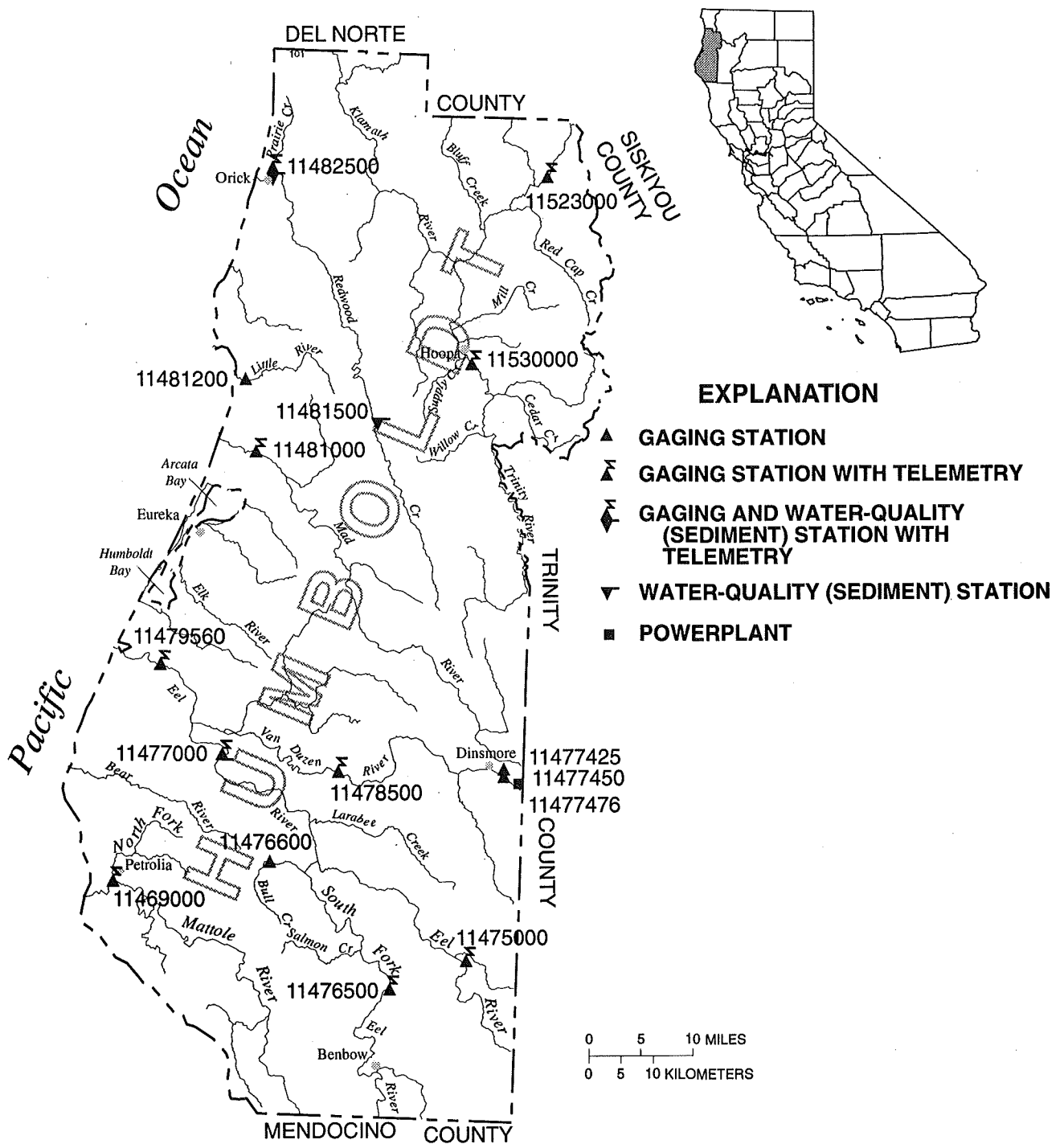


Figure 5. Location of discharge and water-quality stations in Humboldt County.

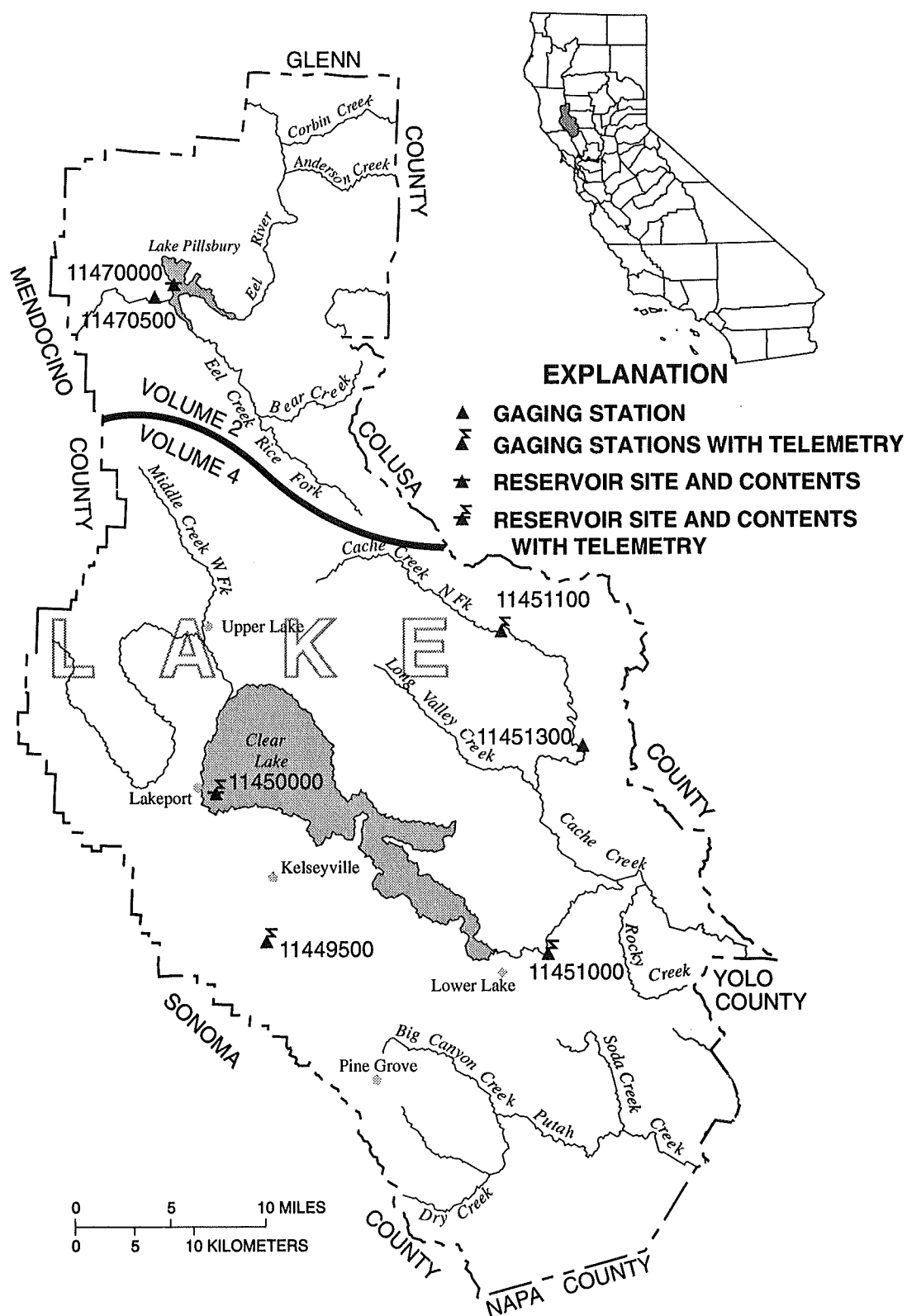


Figure 6. Location of discharge stations in Lake County.
(NOTE: Records for stations 11449500 through 11451300 published in volume 4.)

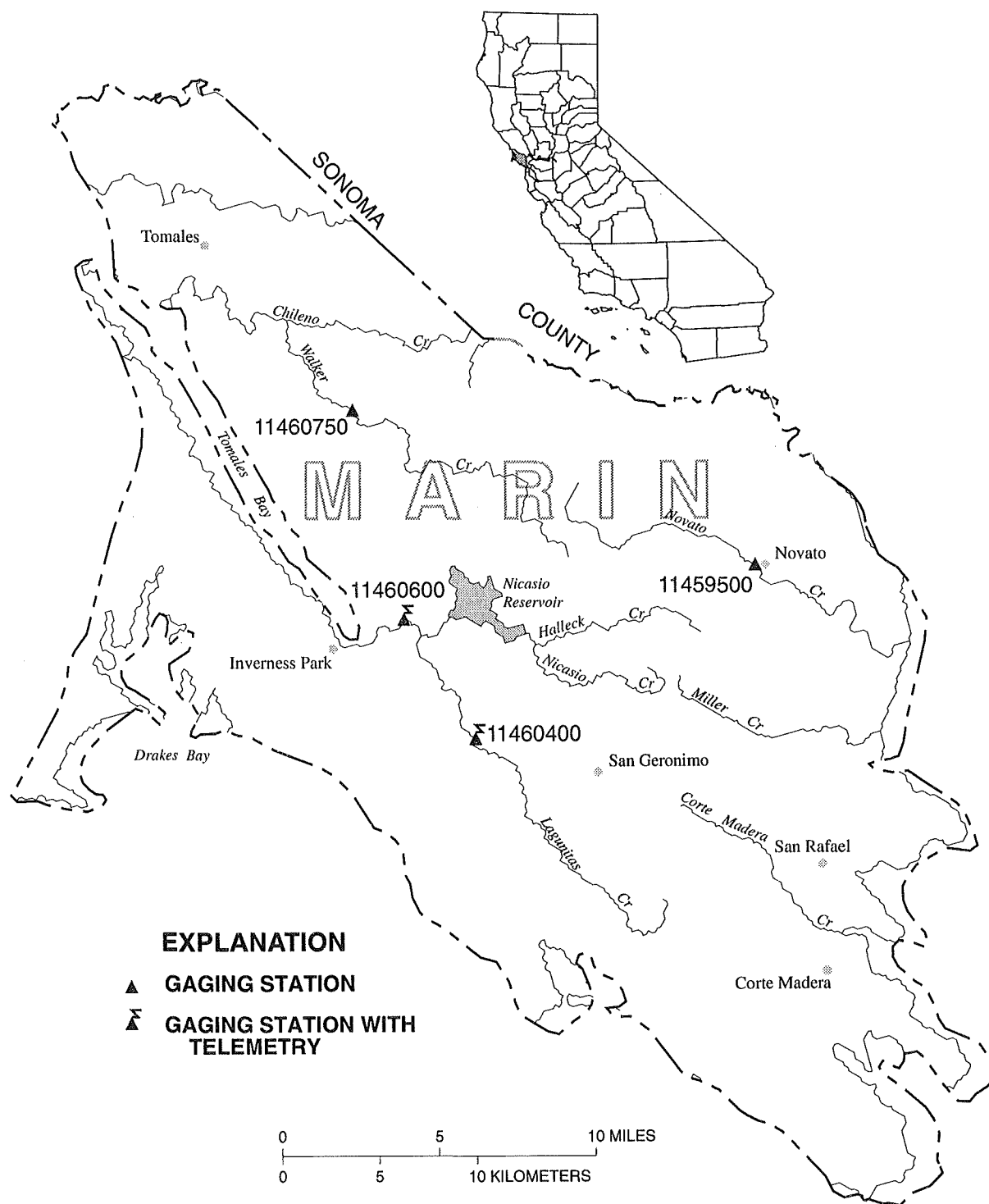


Figure 7. Location of discharge stations in Marin County.

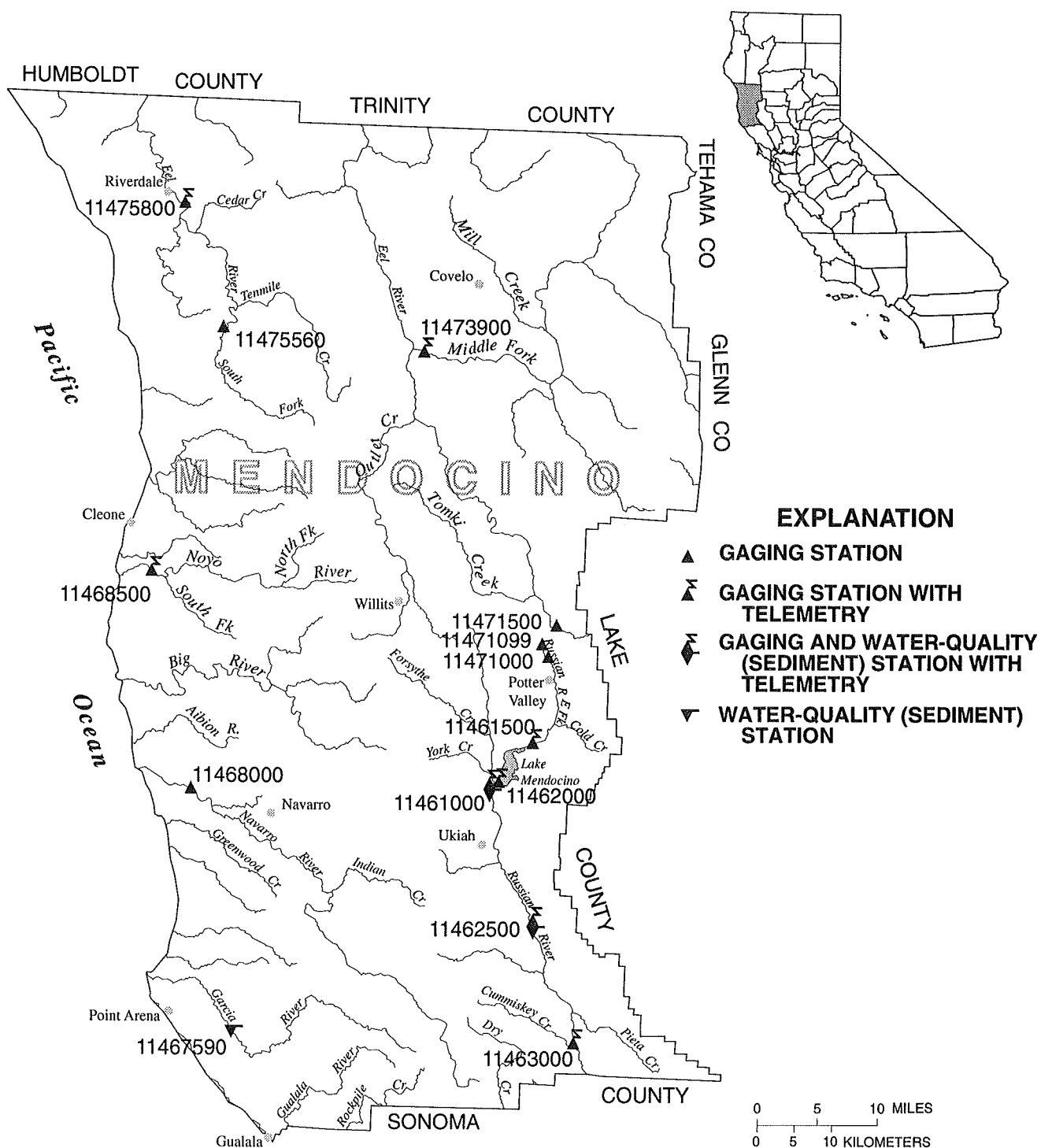


Figure 8. Location of discharge and water-quality stations in Mendocino County.

EXPLANATION

- ▲ GAGING STATION
- ▲ GAGING STATION EQUIPPED WITH A TELEPHONE, RADIO, OR DATA-COLLECTION PLATFORM (PARTIAL RECORD)
- ▲ GAGING STATION EQUIPPED WITH A TELEPHONE, RADIO, OR DATA-COLLECTION PLATFORM
- ◆ GAGING (DATA-COLLECTION PLATFORM) AND WATER-QUALITY (SEDIMENT) STATION
- ◆ GAGING (MODEM) AND WATER-QUALITY (CHEMICAL) STATION
- ◆ GAGING (DATA-COLLECTION PLATFORM) AND WATER-QUALITY (CHEMICAL, SEDIMENT) STATION

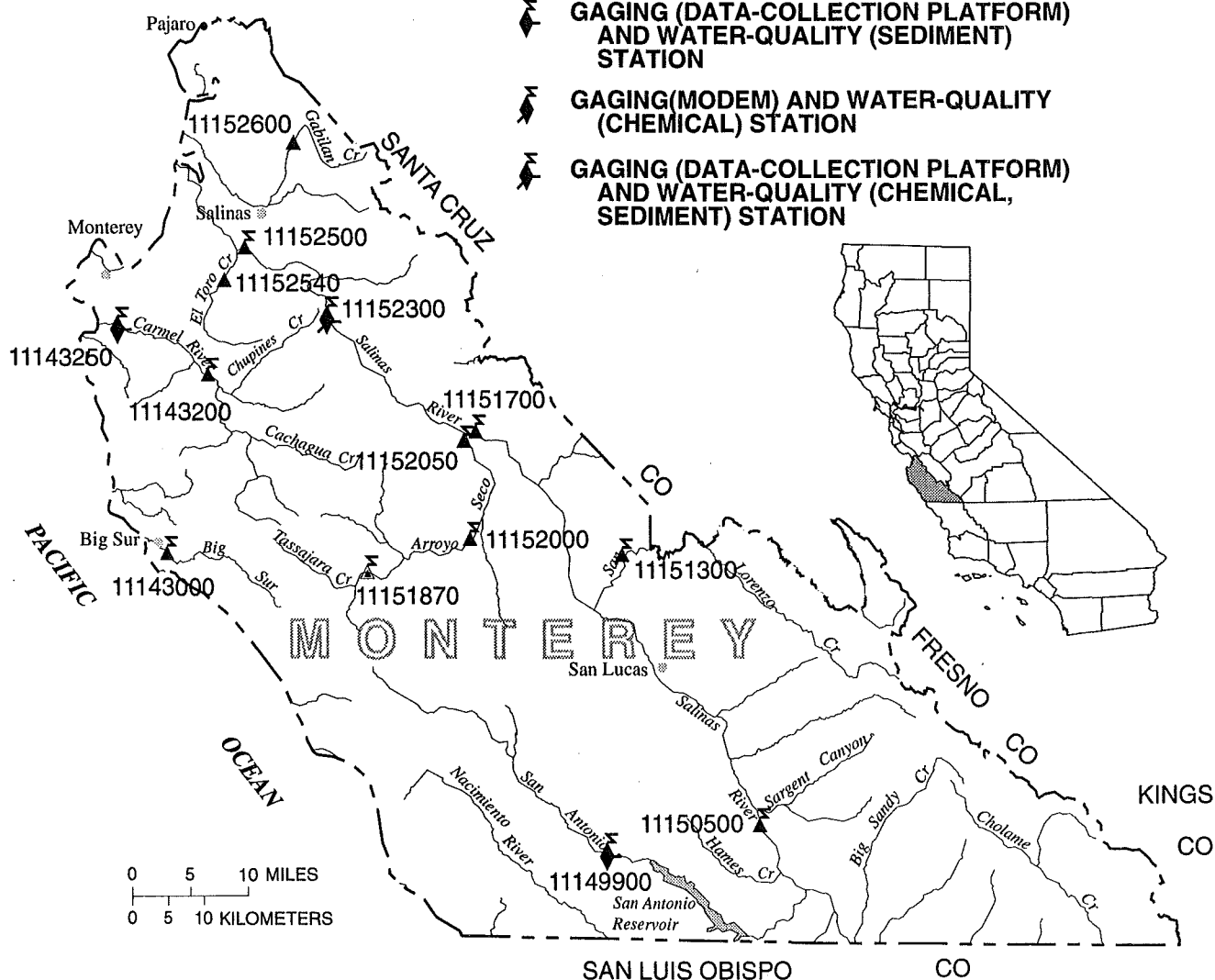


Figure 9. Location of discharge and water-quality stations in Monterey County.

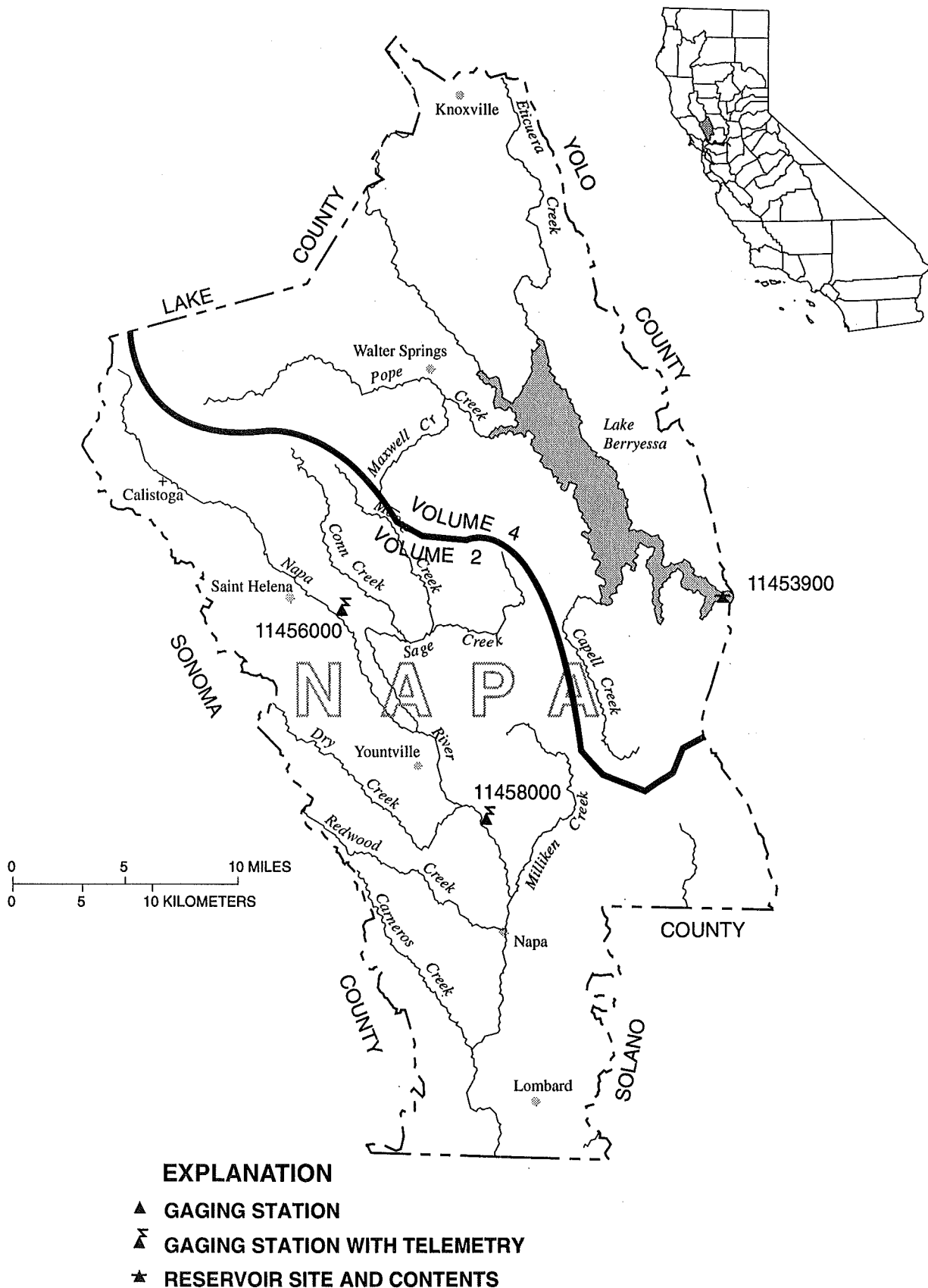


Figure 10. Location of discharge stations in Napa County.
 (NOTE: Record for station 11453900 published in volume 4.)

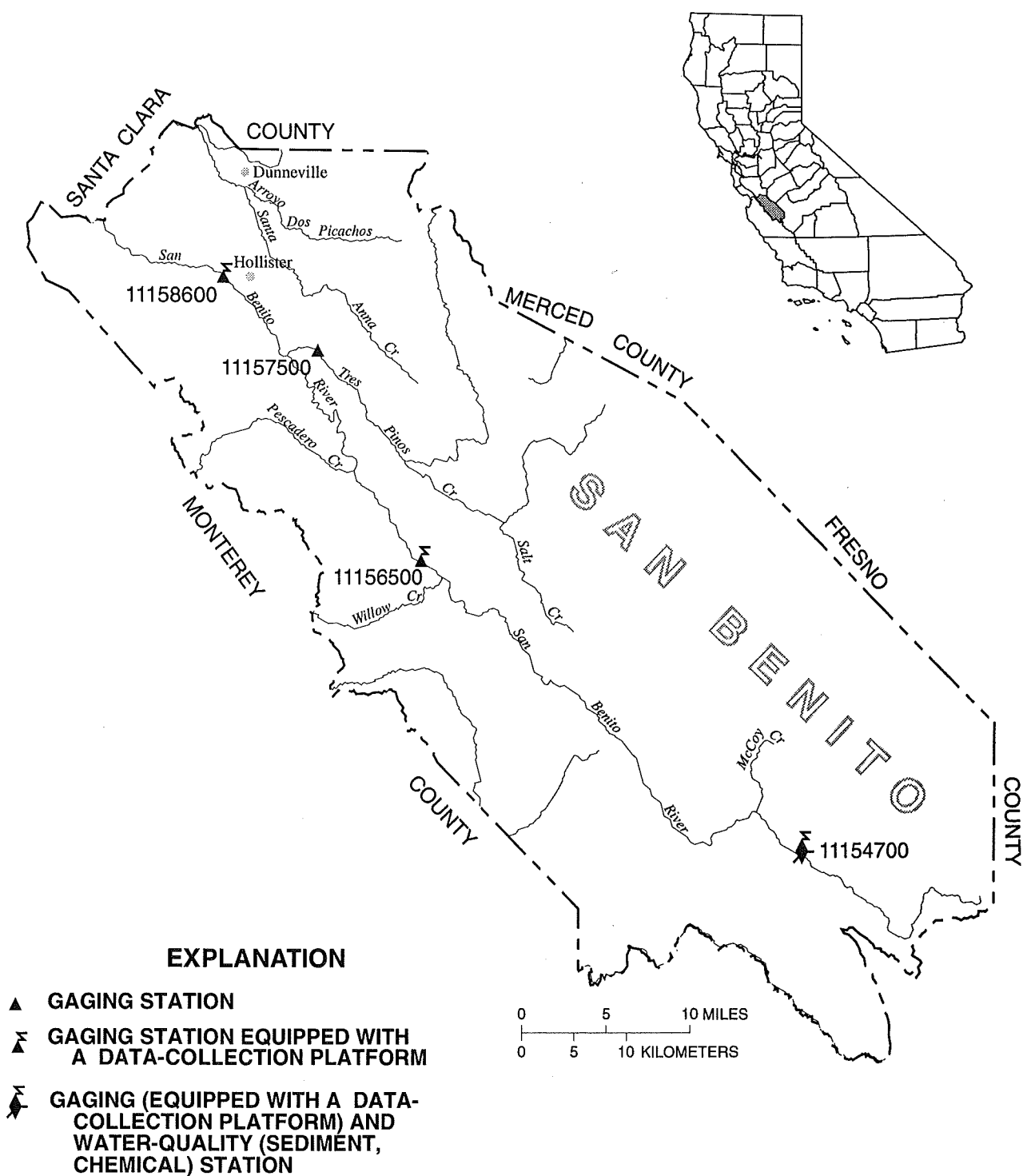


Figure 11. Location of discharge and water-quality stations in San Benito County.

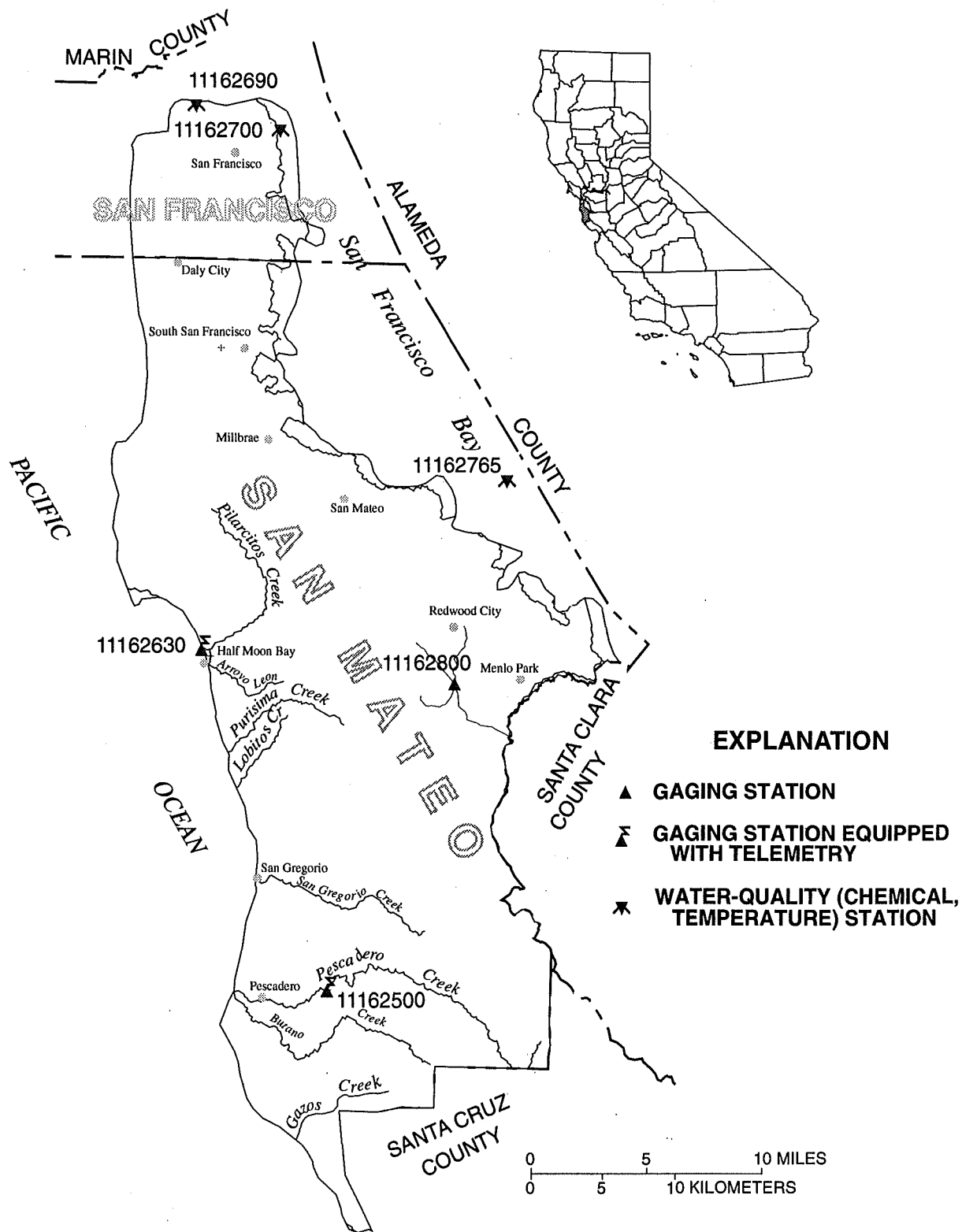
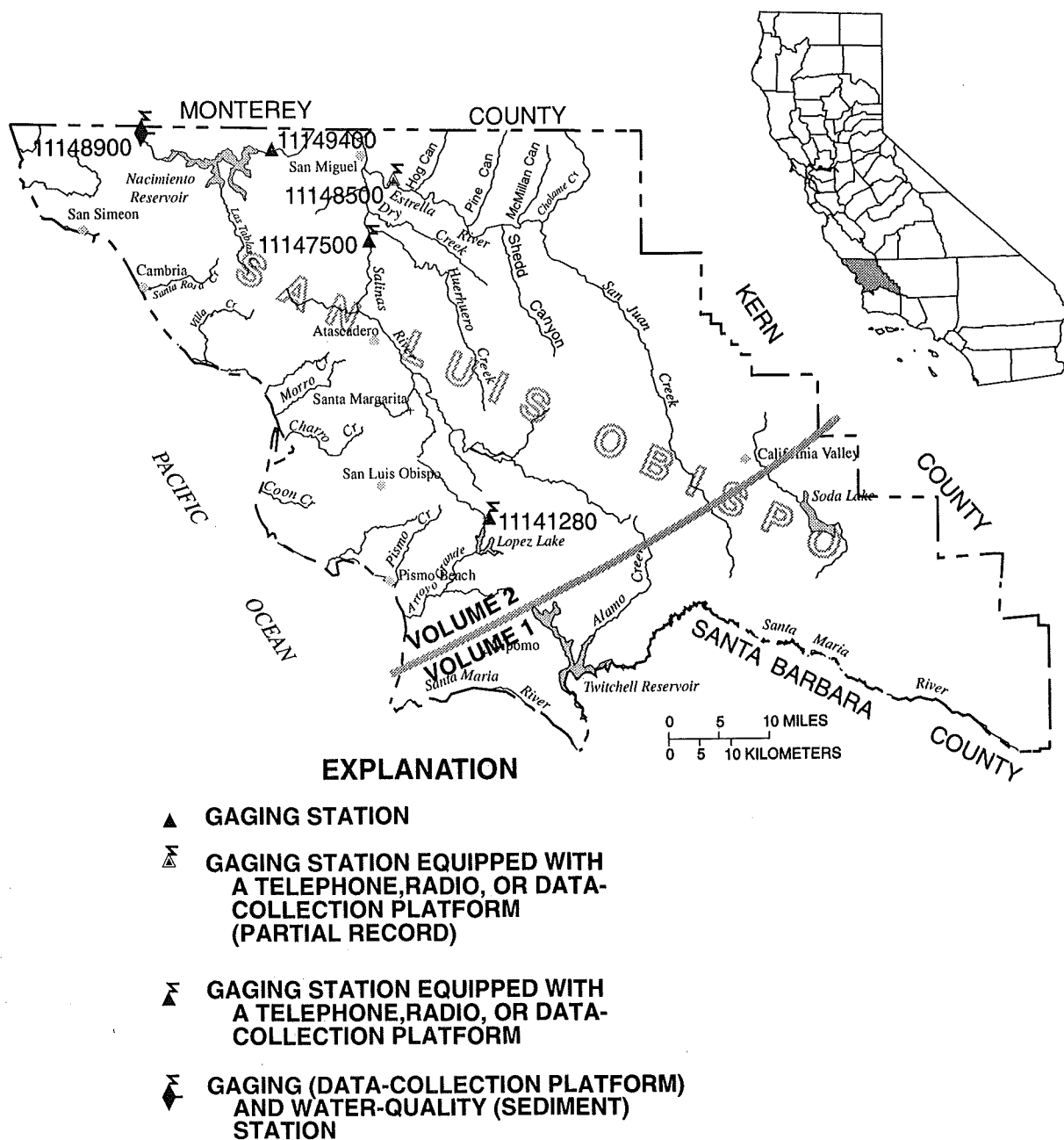


Figure 12. Location of discharge and water-quality stations in San Francisco and San Mateo Counties.



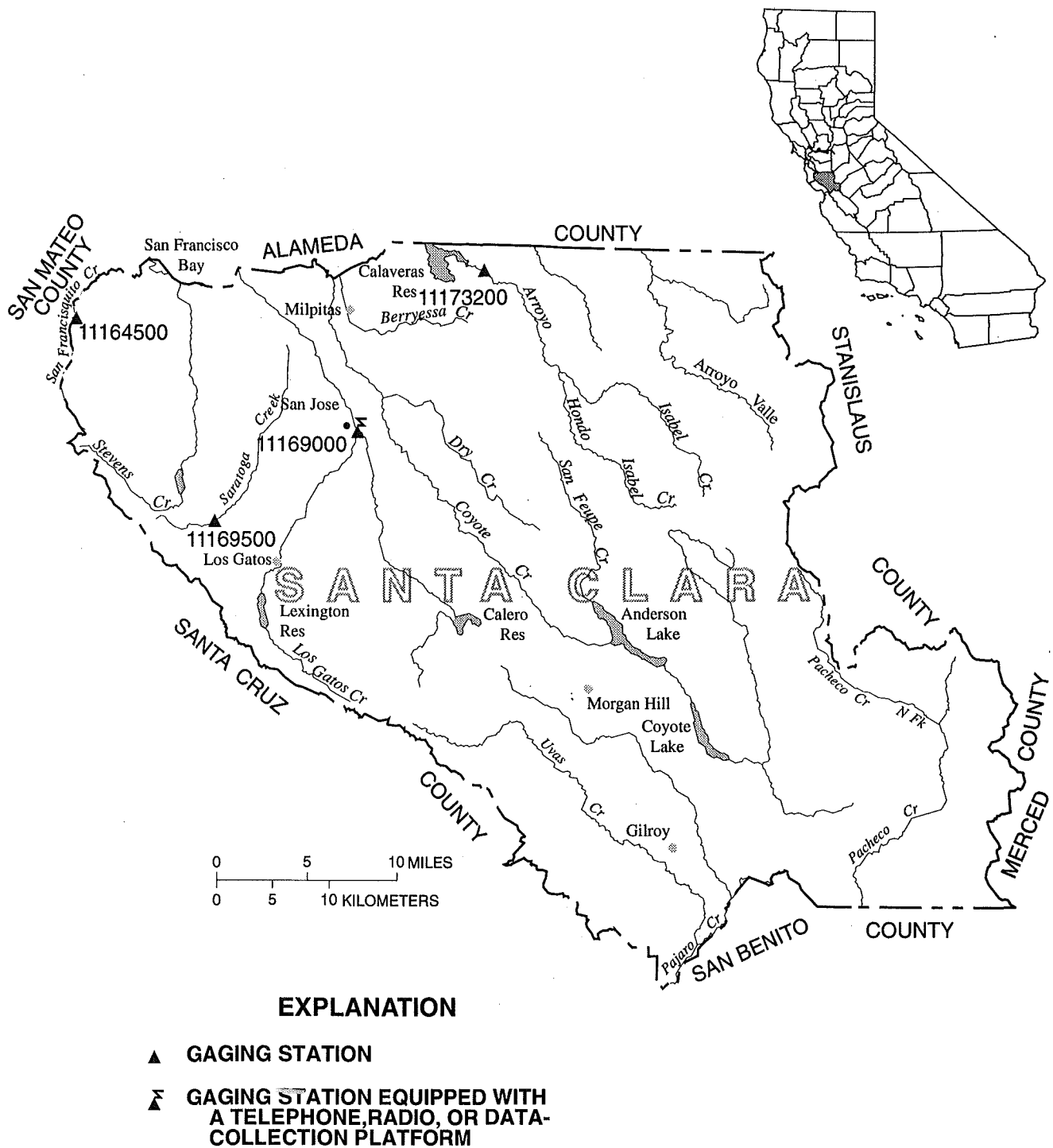
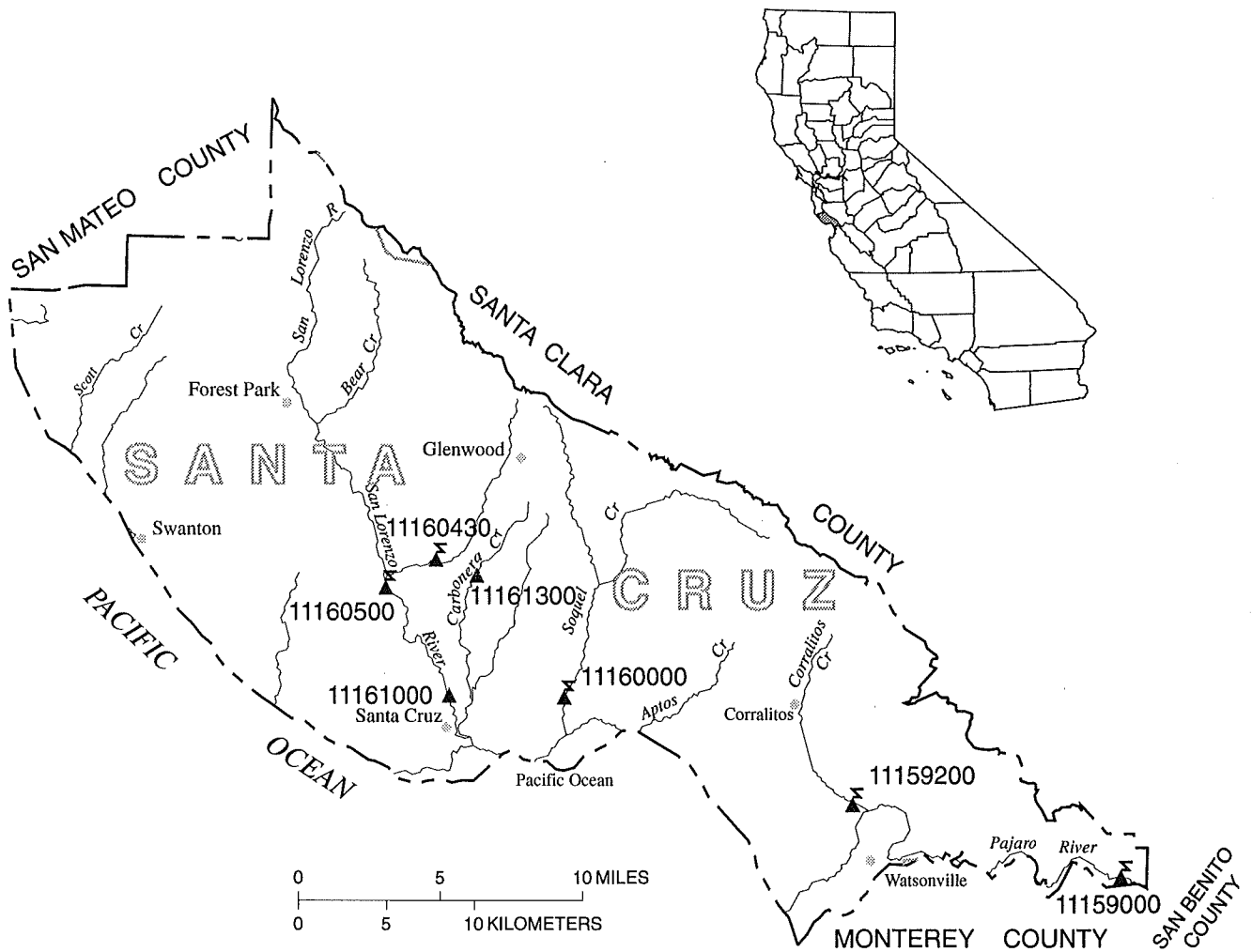


Figure 14. Location of discharge stations in Santa Clara County.



EXPLANATION

- ▲ GAGING STATION
- ▲ GAGING STATION EQUIPPED WITH A TELEPHONE, RADIO, OR DATA-COLLECTION PLATFORM

Figure 15. Location of discharge stations in Santa Cruz County.

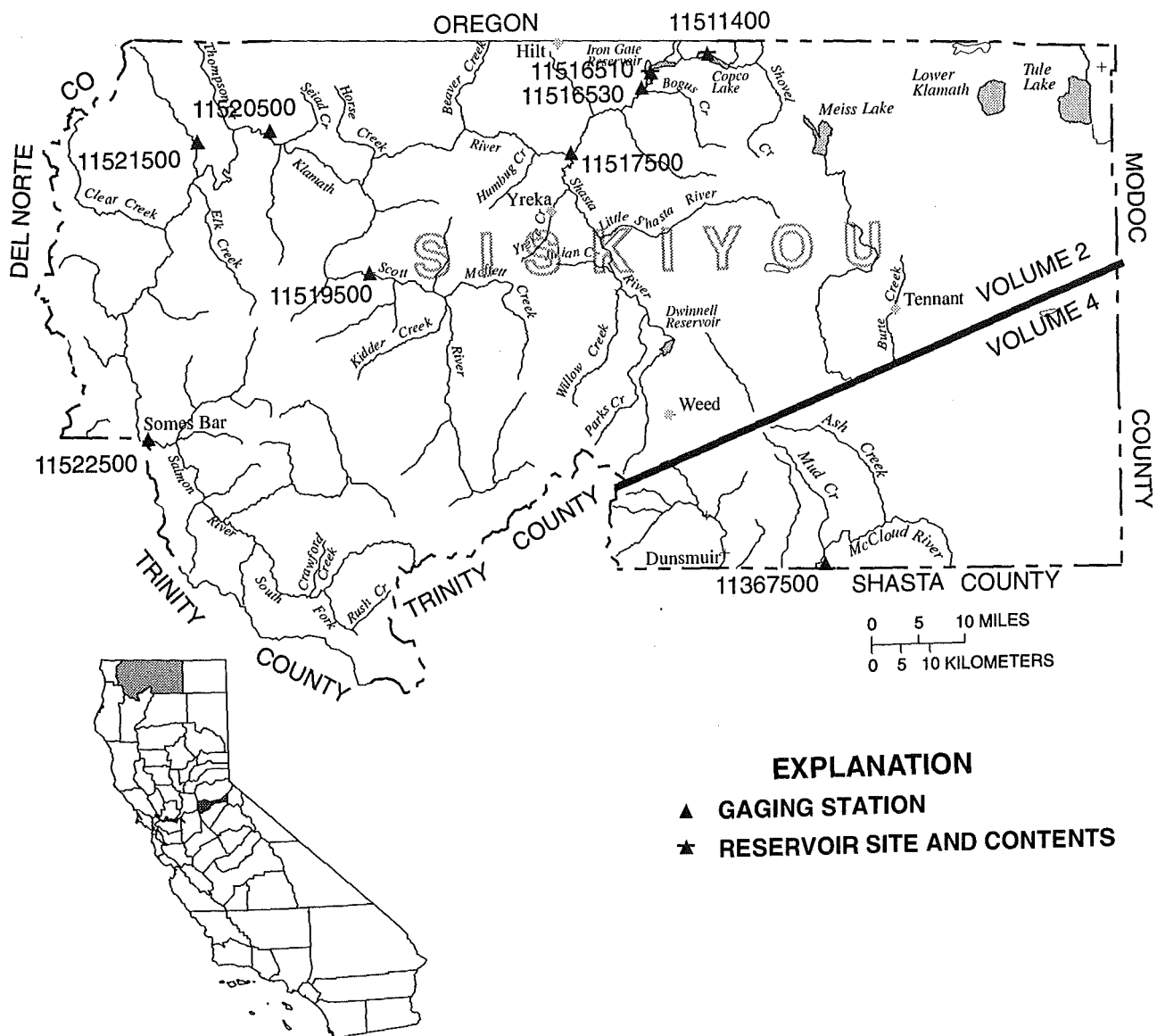


Figure 16. Location of discharge stations in Siskiyou County.
(NOTE: Records for station 11367500 published in volume 4.)

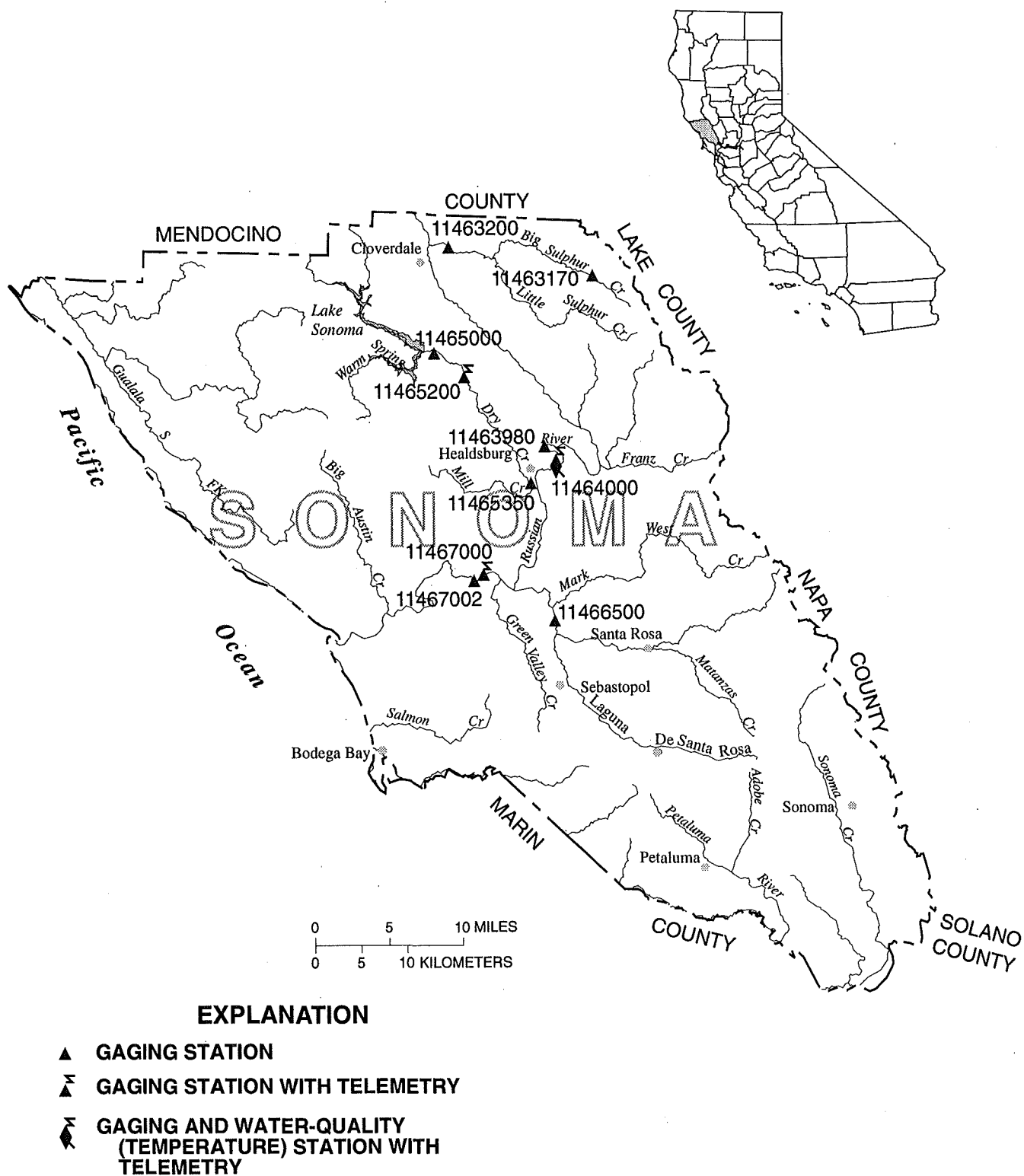


Figure 17. Location of discharge and water-quality stations in Sonoma County.

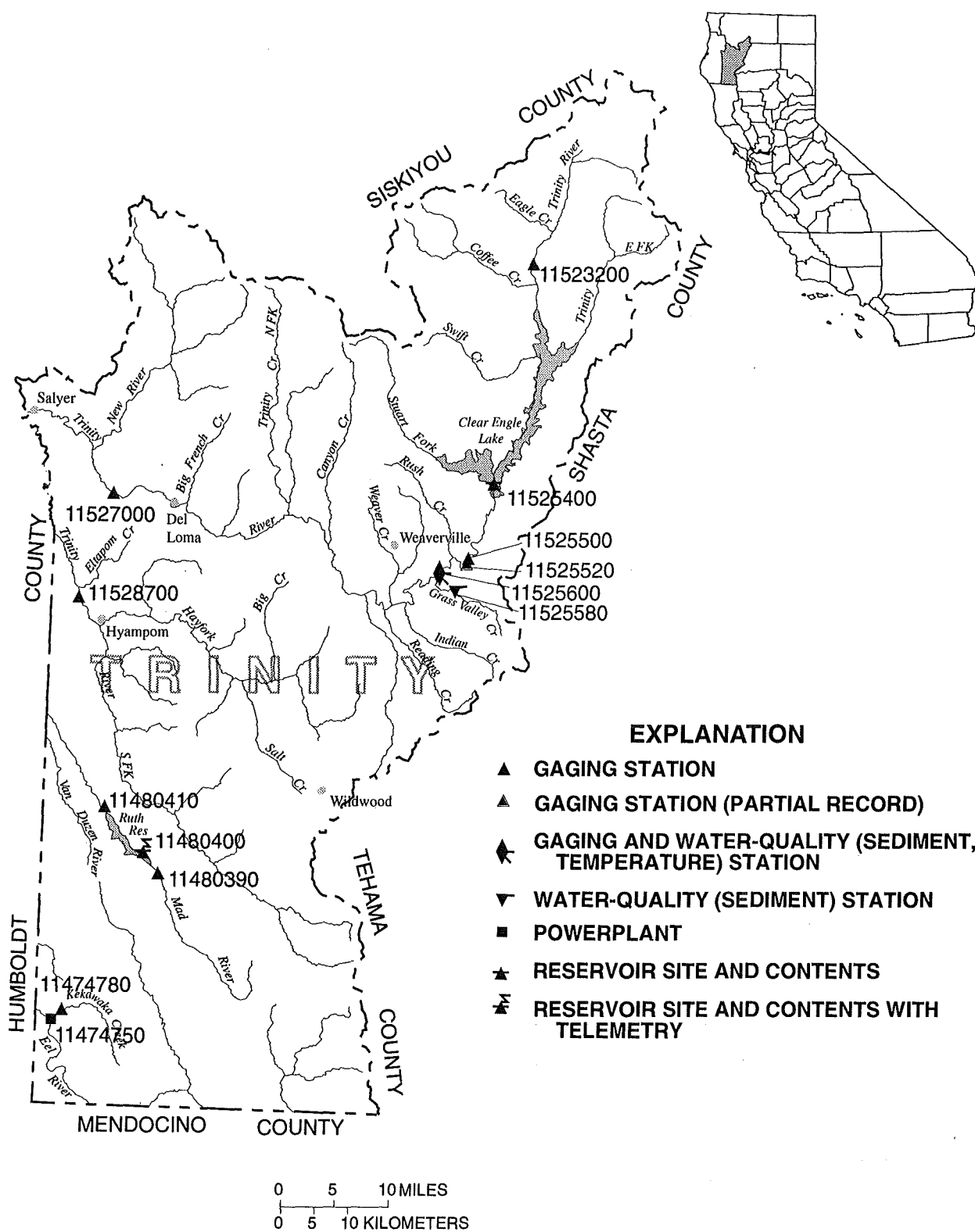


Figure 18. Location of discharge and water-quality stations in Trinity County.

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).

ARROYO GRANDE BASIN

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CA

LOCATION.—Lat 35°14'08", long 120°28'17", in SE 1/4 sec.19, T.31 S., R.14 E., San Luis Obispo County, Hydrologic Unit 18060006, on right bank 3.4 mi north of Lopez Lake Spillway and 9.2 mi northeast of Arroyo Grande.

DRAINAGE AREA.—20.9 mi².

PERIOD OF RECORD.—July 1967 to current year.

CHEMICAL DATA: Water year 1977.

WATER TEMPERATURE: Water years 1968–72.

SEDIMENT DATA: Water years 1968–72.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above sea level, from topographic map. Prior to Oct. 31, 1984, at site 0.4 mi downstream at different datum.

REMARKS.—Records poor. Small diversions upstream from station for domestic use.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,830 ft³/s, Jan. 25, 1969, gage height, 9.26 ft in gage well, 10.8 ft from floodmarks, site and datum then in use, from rating curve extended above 300 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 9.62 ft, Mar. 1, 1983, site and datum then in use; minimum daily discharge, 0.30 ft³/s, Aug. 1, 1977.

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)
Nov. 21	2230	223	6.30	Jan. 2	2030	754	7.32
Dec. 11	1015	716	7.26	Jan. 15	0400	133	5.89
Dec. 22	0700	187	6.21	Jan. 25	2330	480	6.82

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	4.5	2.2	213	e90	33	18	12	6.5	8.0	7.2	4.4
2	3.2	4.1	2.3	277	e84	32	18	12	7.8	7.3	7.2	4.5
3	3.2	4.0	2.1	166	e79	32	18	12	8.2	7.4	7.3	4.6
4	3.1	4.0	2.0	94	e74	32	18	12	8.5	7.2	7.4	4.4
5	3.0	3.7	2.3	101	e70	31	17	12	8.2	7.4	8.0	4.2
6	2.9	3.6	2.4	89	e67	31	17	11	7.8	7.7	7.8	4.2
7	2.9	3.6	2.2	77	e65	34	17	11	7.8	8.4	7.5	4.2
8	2.9	3.6	2.1	66	e62	30	17	11	7.8	e9.6	7.9	4.2
9	2.8	3.4	5.7	61	e60	30	16	10	7.8	e7.8	8.8	4.2
10	2.9	3.2	132	53	e58	29	16	10	7.8	e5.9	8.5	4.2
11	2.8	3.1	242	44	e57	29	15	10	7.8	5.9	7.1	4.2
12	2.8	3.0	65	44	e55	28	15	9.6	7.8	6.3	6.3	4.2
13	3.0	3.0	39	41	54	26	15	9.6	7.8	6.1	6.2	4.2
14	3.0	3.0	28	40	60	26	15	9.6	7.8	6.1	6.2	4.2
15	2.9	3.0	22	86	53	25	15	9.6	7.8	5.2	6.2	4.2
16	2.8	3.0	19	67	51	24	15	9.6	7.8	5.1	5.0	4.2
17	2.8	6.5	19	49	48	24	15	9.6	7.8	4.9	6.0	4.2
18	2.8	6.2	18	44	43	23	13	9.6	7.8	5.2	6.6	4.2
19	2.8	4.8	17	41	41	23	14	9.6	7.7	5.4	4.2	4.2
20	2.8	4.8	16	82	39	23	14	9.6	7.5	5.8	4.4	4.2
21	2.8	33	16	85	38	23	13	9.2	7.5	5.6	4.5	4.2
22	2.8	40	63	105	38	22	13	9.2	7.5	5.7	4.4	4.2
23	2.8	14	29	197	37	21	13	9.2	7.4	6.2	4.4	4.2
24	2.8	7.4	19	92	38	21	13	9.2	7.2	7.1	4.5	4.3
25	2.8	5.7	17	224	35	20	13	9.6	7.2	8.0	4.5	4.4
26	2.8	4.6	16	e190	37	19	13	9.2	7.2	7.2	4.7	4.6
27	2.8	4.1	49	e170	34	20	13	9.2	8.4	7.2	4.6	4.7
28	2.9	3.6	33	e150	35	19	13	9.2	7.5	7.0	4.4	4.6
29	5.5	3.5	23	e130	---	19	15	8.5	8.1	6.8	4.4	4.4
30	7.0	2.3	80	e115	---	19	13	7.5	8.4	6.8	4.4	4.4
31	5.2	---	75	e100	---	19	---	6.8	---	7.3	4.4	---
TOTAL	98.8	196.3	1060.3	3293	1502	787	450	306.2	232.2	207.6	185.0	129.1
MEAN	3.19	6.54	34.2	106	53.6	25.4	15.0	9.88	7.74	6.70	5.97	4.30
MAX	7.0	40	242	277	90	34	18	12	8.5	9.6	8.8	4.7
MIN	2.8	2.3	2.0	40	34	19	13	6.8	6.5	4.9	4.2	4.2
AC-FT	196	389	2100	6530	2980	1560	893	607	461	412	367	256

e Estimated.

PACIFIC SLOPE BASINS IN CALIFORNIA

ARROYO GRANDE BASIN

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.88	4.20	7.42	23.0	27.7	27.8	13.2	7.05	4.67	3.43	2.94	2.70
MAX	9.12	13.6	34.2	145	134	133	65.2	46.1	20.8	13.8	9.82	8.30
(WY)	1984	1984	1997	1969	1969	1983	1983	1983	1983	1983	1983	1983
MIN	1.03	1.23	1.58	2.00	2.00	2.46	2.08	1.75	1.38	.72	.44	.82
(WY)	1978	1978	1991	1991	1991	1977	1977	1990	1972	1977	1977	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1967 - 1997		
ANNUAL TOTAL	4797.5			8447.5					
ANNUAL MEAN	13.1			23.1			10.5		
HIGHEST ANNUAL MEAN							37.3		
LOWEST ANNUAL MEAN							1.89		
HIGHEST DAILY MEAN	242			Dec 11			277		
LOWEST DAILY MEAN	2.0			Dec 4			2.0		
ANNUAL SEVEN-DAY MINIMUM	2.2			Dec 2			2.2		
INSTANTANEOUS PEAK FLOW							754		
INSTANTANEOUS PEAK STAGE							7.32		
ANNUAL RUNOFF (AC-FT)	9520			16760			7600		
10 PERCENT EXCEEDS	33			61			17		
50 PERCENT EXCEEDS	5.4			8.2			3.8		
90 PERCENT EXCEEDS	3.0			3.0			1.5		

11143000 BIG SUR RIVER NEAR BIG SUR, CA

LOCATION.—Lat 36°14'45", long 121°46'20", in SW 1/4 SW 1/4 sec.29, T.19 S., R.2 E., Monterey County, Hydrologic Unit 18060006, on right bank at downstream side of bridge, 0.4 mi upstream from Post Creek, and 2.6 mi southeast of town of Big Sur.

DRAINAGE AREA.—46.5 mi².

PERIOD OF RECORD.—March 1950 to current year. Prior to October 1959, published as Sur River at Big Sur.

CHEMICAL DATA: Water year 1977.

WATER TEMPERATURE: Water years 1966–79.

REVISED RECORDS.—WSP 1445: 1952(P), 1953(M). WSP 1715: 1951, drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 240 ft above sea level, from topographic map. Prior to Oct. 1, 1951, nonrecording gage at site 0.9 mi downstream at different datum.

REMARKS.—Records good, except for June, July, and August, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,700 ft³/s, Jan. 5, 1978, gage height, 14.30 ft, from rating curve extended above 6,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.6 ft³/s, Aug. 23, 1977, Sept. 9, Oct. 29, and Nov. 5, 1990.

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)
Dec. 10	1845	3,340	9.34	Jan. 23	0215	2,600	8.73
Jan. 1	2045	5,000	10.58				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	22	39	3160	652	139	74	50	32	20	11	21
2	18	20	35	2970	582	140	72	48	34	21	12	20
3	18	20	34	1910	526	134	71	46	34	22	11	20
4	17	20	33	1360	482	129	71	39	37	22	11	19
5	16	19	57	1040	442	125	70	37	38	23	9.9	19
6	16	19	47	825	408	122	70	37	35	22	10	19
7	16	19	40	680	377	119	68	36	31	22	10	19
8	16	19	38	582	351	116	67	35	27	21	11	18
9	16	18	157	509	328	113	65	35	29	20	12	17
10	16	19	1890	455	310	110	65	34	28	19	13	16
11	16	19	1210	412	291	108	63	34	27	19	14	17
12	17	19	638	407	273	105	62	33	25	18	14	16
13	17	19	489	363	259	102	62	32	23	17	14	14
14	17	19	383	350	244	99	61	32	23	15	14	14
15	17	19	312	668	232	98	60	32	22	15	14	14
16	16	20	261	536	222	97	58	31	21	14	14	14
17	16	584	224	465	220	97	57	29	20	12	15	13
18	17	174	195	419	205	94	58	27	19	11	16	13
19	17	96	175	387	195	91	63	27	20	10	16	13
20	18	108	160	987	187	89	58	27	21	10	25	15
21	18	116	370	813	179	88	56	27	20	10	19	16
22	18	193	620	1150	174	87	55	27	21	10	19	16
23	18	149	486	1840	167	86	54	27	22	10	19	16
24	18	100	400	1290	160	84	54	29	21	10	19	15
25	19	76	339	1670	155	82	53	30	15	10	19	13
26	20	62	315	1850	152	81	53	29	14	10	20	14
27	19	53	382	1520	149	79	52	30	14	10	21	14
28	19	48	315	1220	145	78	51	31	14	10	21	14
29	63	43	462	1010	---	77	51	33	16	11	21	13
30	37	40	1470	859	---	76	51	33	19	11	21	13
31	25	---	1510	741	---	75	---	31	---	11	22	---
TOTAL	608	2152	13086	32448	8067	3120	1825	1028	722	466	487.9	475
MEAN	19.6	71.7	422	1047	288	101	60.8	33.2	24.1	15.0	15.7	15.8
MAX	63	584	1890	3160	652	140	74	50	38	23	25	21
MIN	16	18	33	350	145	75	51	27	14	10	9.9	13
AC-FT	1210	4270	25960	64360	16000	6190	3620	2040	1430	924	968	942

BIG SUR RIVER BASIN

11143000 BIG SUR RIVER NEAR BIG SUR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.4	45.7	106	246	263	224	143	65.5	35.7	22.9	16.9	15.0
MAX	86.8	302	449	1047	940	964	843	333	90.8	53.5	40.4	39.4
(WY)	1963	1951	1956	1997	1983	1983	1958	1983	1983	1983	1983	1983
MIN	5.08	4.97	7.52	8.27	11.4	16.8	9.15	8.70	6.17	4.94	3.80	4.52
(WY)	1991	1991	1991	1991	1977	1977	1977	1977	1977	1977	1977	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1950 - 1997			
ANNUAL TOTAL	57025				64484.9							
ANNUAL MEAN	156				177				99.5			
HIGHEST ANNUAL MEAN									319			
LOWEST ANNUAL MEAN									10.0			
HIGHEST DAILY MEAN	1890				3160				4150			
LOWEST DAILY MEAN	16				9.9				2.6			
ANNUAL SEVEN-DAY MINIMUM	16				10				2.9			
INSTANTANEOUS PEAK FLOW					5000				10700			
INSTANTANEOUS PEAK STAGE					10.58				14.30			
INSTANTANEOUS LOW FLOW									2.6			
ANNUAL RUNOFF (AC-FT)	113100				127900				72110			
10 PERCENT EXCEEDS	402				472				222			
50 PERCENT EXCEEDS	54				33				29			
90 PERCENT EXCEEDS	18				14				9.4			

11143200 CARMEL RIVER AT ROBLES DEL RIO, CA

LOCATION.—Lat 36°28'28", long 121°43'40", in Los Laureles Grant, Monterey County, Hydrologic Unit 18060012, on left bank in Cal American Water Company pumphouse, at Robles del Rio, 0.2 mi downstream from Hitchcock Canyon, and 11 mi southeast of town of Carmel.

DRAINAGE AREA.—193 mi².

PERIOD OF RECORD.—August 1957 to current year.

REVISED RECORDS.—WSP 1715: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 268.57 ft above sea level (based on Monterey County benchmark). Prior to June 1981, at site 150 ft upstream at same datum.

REMARKS.—Records fair. Low flow regulated by Los Padres Reservoir 11 mi upstream, usable capacity, 1,967 acre-ft, revised and San Clemente Reservoir 4 mi upstream, usable capacity, 76 acre-ft, revised. There is diversion from San Clemente Reservoir for municipal supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,000 ft³/s, Mar. 10, 1995, gage height, 12.90 ft; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1955, reached a stage of 11.7 ft from floodmarks, discharge, 6,930 ft³/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	2200	1,960	6.08	Jan. 26	1200	3,940	7.64
Jan. 1	1800	3,590	7.40				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	6.3	18	1930	692	125	58	30	16	7.9	10	6.1
2	8.2	6.2	17	2270	614	121	57	28	16	7.9	9.8	6.0
3	8.0	6.2	16	1560	553	120	57	27	16	8.7	9.0	6.0
4	8.1	6.3	16	963	513	115	57	28	17	9.7	8.9	5.6
5	8.1	6.2	19	760	462	112	55	28	18	9.3	8.7	5.3
6	7.9	6.1	31	635	417	109	55	28	17	9.1	8.9	6.0
7	7.9	6.8	25	541	384	107	55	28	17	10	9.0	6.1
8	8.0	6.9	20	453	350	104	55	27	16	11	9.0	6.3
9	8.3	6.5	29	395	327	102	53	25	16	12	8.5	6.4
10	8.4	6.8	862	354	305	99	52	24	17	12	8.4	6.4
11	7.8	6.7	930	322	280	96	51	25	17	12	8.5	5.1
12	7.7	6.6	415	315	263	92	51	24	16	11	9.2	5.2
13	7.8	6.8	272	296	246	91	51	22	15	12	9.4	5.1
14	7.5	6.7	193	267	231	89	51	22	14	12	9.4	5.1
15	7.4	6.8	147	501	221	87	49	21	13	12	9.5	5.4
16	7.4	7.3	120	449	207	82	47	20	13	13	9.6	5.3
17	7.4	36	102	376	204	84	43	21	12	13	9.5	5.5
18	7.5	38	88	337	198	82	42	19	11	13	9.4	5.8
19	7.5	16	77	309	182	79	43	18	11	13	9.8	5.8
20	7.7	15	68	728	173	77	42	17	11	13	10	5.8
21	7.7	15	136	715	165	75	39	17	10	13	10	5.4
22	7.6	26	660	835	156	73	38	17	9.8	13	10	5.3
23	7.1	30	497	1430	153	73	38	18	10	13	9.3	5.5
24	7.3	22	327	1010	147	71	36	20	9.5	12	5.8	5.3
25	7.9	18	241	1550	143	68	35	20	8.8	11	6.0	5.1
26	8.6	15	191	2650	139	67	34	20	8.5	12	5.8	5.1
27	7.5	13	193	1850	136	64	34	19	8.2	9.9	5.8	5.1
28	7.0	12	158	1330	131	58	34	17	8.5	12	6.2	5.1
29	7.9	17	166	1060	---	61	34	17	8.8	11	6.0	4.7
30	8.5	19	773	896	---	60	34	17	8.4	11	6.1	4.7
31	7.1	---	852	779	---	59	---	16	---	11	6.2	---
TOTAL	241.0	397.2	7659	27866	7992	2702	1380	680	389.5	350.5	261.7	165.6
MEAN	7.77	13.2	247	899	285	87.2	46.0	21.9	13.0	11.3	8.44	5.52
MAX	8.6	38	930	2650	692	125	58	30	18	13	10	6.4
MIN	7.0	6.1	16	267	131	58	34	16	8.2	7.9	5.8	4.7
AC-FT	478	788	15190	55270	15850	5360	2740	1350	773	695	519	328

CARMEL RIVER BASIN

11143200 CARMEL RIVER AT ROBLES DEL RIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.36	13.6	58.7	206	291	274	161	54.0	17.8	5.86	2.01	1.86
MAX	23.3	135	480	899	1206	1855	1071	410	129	50.9	13.4	10.6
(WY)	1984	1984	1984	1997	1969	1983	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.26	.000	.011	.000	.000	.000	.000	.000	.000
(WY)	1960	1960	1960	1991	1977	1977	1977	1977	1961	1959	1957	1957

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1957 - 1997

ANNUAL TOTAL	44783.3		50084.5									
ANNUAL MEAN	122		137							89.7		
HIGHEST ANNUAL MEAN										442		1983
LOWEST ANNUAL MEAN										.050		1977
HIGHEST DAILY MEAN	1690	Feb 20	2650	Jan 26					6500	.00	Mar 10	1995
LOWEST DAILY MEAN	6.1	Nov 6	4.7	Sep 29					.00	.00	Aug 1	1957
ANNUAL SEVEN-DAY MINIMUM	6.3	Nov 1	5.0	Sep 24					.00	.00	Aug 1	1957
INSTANTANEOUS PEAK FLOW			3940	Jan 26					16000		Mar 10	1995
INSTANTANEOUS PEAK STAGE			7.64	Jan 26					12.90		Mar 10	1995
ANNUAL RUNOFF (AC-FT)	88830		99340						64970			
10 PERCENT EXCEEDS	377		388						211			
50 PERCENT EXCEEDS	22		17						5.8			
90 PERCENT EXCEEDS	7.5		6.2						.00			

11143250 CARMEL RIVER NEAR CARMEL, CA

LOCATION.—Lat 36°32'20", long 121°52'25", in Canada de la Segunda Grant, Monterey County, Hydrologic Unit 18060012, on right bank 0.3 mi downstream from Potrero Canyon and 3 mi east of Carmel.

DRAINAGE AREA.—246 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—August 1962 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 45 ft above sea level, from topographic map.

REMARKS.—Records good. Low flow regulated by Los Padres Reservoir, usable capacity, 1,970 acre-ft, revised, and San Clemente Reservoir, usable capacity, 76 acre-ft, revised. There are diversions from San Clemente Reservoir for municipal supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,000 ft³/s, Mar. 10, 1995, gage height, 20.85 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	2315	2,670	8.65	Jan. 26	1345	5,170	11.34
Jan. 1	2400	4,460	10.54				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	22	1950	656	137	64	39	4.6	.00	.00	.00
2	.00	.00	22	3000	591	134	65	35	4.9	.00	.00	.00
3	.00	.00	21	1990	538	133	64	32	4.3	.00	.00	.00
4	.00	.00	20	1120	492	128	62	31	5.0	.00	.00	.00
5	.00	.00	22	828	446	123	61	31	5.9	.00	.00	.00
6	.00	.00	28	674	408	118	61	30	5.9	.00	.00	.00
7	.00	.00	29	576	375	116	59	30	5.0	.00	.00	.00
8	.00	.00	26	502	350	110	58	28	5.0	.00	.00	.00
9	.00	.00	27	442	325	106	56	26	3.9	.00	.00	.00
10	.00	.00	879	396	306	102	56	25	3.6	.00	.00	.00
11	.00	.00	1320	359	289	99	54	25	3.3	.00	.00	.00
12	.00	.00	408	346	272	96	52	24	2.9	.00	.00	.00
13	.00	.00	260	334	259	95	52	21	2.8	.00	.00	.00
14	.00	.00	194	303	242	92	49	19	2.2	.00	.00	.00
15	.00	.00	154	526	228	89	49	16	2.0	.00	.00	.00
16	.00	1.0	128	478	217	87	48	14	2.1	.00	.00	.00
17	.00	14	110	395	220	87	48	12	1.7	.00	.00	.00
18	.00	34	96	358	214	84	48	13	1.3	.00	.00	.00
19	.00	22	85	330	194	82	51	11	1.1	.00	.00	.00
20	.00	17	77	827	184	80	54	9.9	.65	.00	.00	.00
21	.00	19	189	753	182	79	51	9.3	.20	.00	.00	.00
22	.00	22	749	818	176	77	49	8.0	.01	.00	.00	.00
23	.00	30	511	1550	169	78	48	8.3	.00	.00	.00	.00
24	.00	27	321	1100	159	77	47	9.8	.00	.00	.00	.00
25	.00	24	238	1780	151	74	45	11	.00	.00	.00	.00
26	.00	22	194	3240	147	71	43	10	.00	.00	.00	.00
27	.00	20	190	2070	145	69	41	9.0	.00	.00	.00	.00
28	.00	19	165	1310	144	62	40	8.0	.00	.00	.00	.00
29	.00	19	155	1030	---	67	39	7.3	.00	.00	.00	.00
30	.00	22	646	836	---	64	39	6.5	.00	.00	.00	.00
31	.00	---	804	732	---	63	---	4.9	---	.00	.00	---
TOTAL	0.00	312.00	8090	30953	8079	2879	1553	564.0	68.36	0.00	0.00	0.00
MEAN	.000	10.4	261	998	289	92.9	51.8	18.2	2.28	.000	.000	.000
MAX	.00	34	1320	3240	656	137	65	39	5.9	.00	.00	.00
MIN	.00	.00	20	303	144	62	39	4.9	.00	.00	.00	.00
AC-FT	.00	619	16050	61400	16020	5710	3080	1120	136	.00	.00	.00

CARMEL RIVER BASIN

11143250 CARMEL RIVER NEAR CARMEL, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.90	9.63	63.5	252	342	330	175	66.8	19.0	4.38	.71	.33
MAX	22.3	110	479	1034	1754	2196	1006	533	130	51.4	13.1	3.80
(WY)	1984	1984	1983	1969	1969	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1965	1969	1977	1977	1977	1977	1977	1968	1966	1964	1964

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1962 - 1997	
ANNUAL TOTAL	44905.39		52498.36			
ANNUAL MEAN	123		144		104	
HIGHEST ANNUAL MEAN					508	1983
LOWEST ANNUAL MEAN					.000	1977
HIGHEST DAILY MEAN	1920	Feb 20	3240	Jan 26	8000	Mar 1 1983
LOWEST DAILY MEAN	.00	Aug 4	.00	Oct 1	.00	Oct 6 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 4	.00	Oct 1	.00	Jul 9 1964
INSTANTANEOUS PEAK FLOW			5170	Jan 26	16000	Mar 10 1995
INSTANTANEOUS PEAK STAGE			11.34	Jan 26	20.85	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	89070		104100		75510	
10 PERCENT EXCEEDS	376		401		263	
50 PERCENT EXCEEDS	22		12		.62	
90 PERCENT EXCEEDS	.00		.00		.00	

11143250 CARMEL RIVER NEAR CARMEL, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1954–66, 1990, December 1991 to current year.

CHEMICAL DATA: Water years 1954–66.

SEDIMENT DATA: Water years 1990, December 1991 to current year.

REMARKS.—Zero bedload discharge observed at flows less than 48 ft³/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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 11...	1140	1130	13.0	286	873	29	33	40	60	89	100
JAN 09...	1350	437	10.0	50	59	16	--	--	--	--	--
APR 17...	0850	48	14.5	2	.26	83	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC 11...	1250	1000	1150	.250	0	1245	1300	15	10.0
DEC 11...	1320	1000	1150	.250	0	1315	1330	15	10.0
FEB 12...	1500	1000	1150	.250	0	1455	1505	15	4.0
FEB 12...	1515	1000	1150	.250	0	1510	1520	15	4.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE T/D/FT (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)
DEC 11...	2	9	9	5.00	1050	13.0	5.53	819
DEC 11...	2	9	9	5.00	1030	13.0	12.7	819
FEB 12...	2	20	20	2.00	268	11.0	1.95	161
FEB 12...	2	20	20	2.00	268	11.0	2.07	161

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)
DEC 11...	1	4	27	70	88	90	94	100
DEC 11...	1	8	40	70	84	90	96	100
FEB 12...	--	1	32	71	83	87	90	100
FEB 12...	--	4	48	86	96	99	100	--

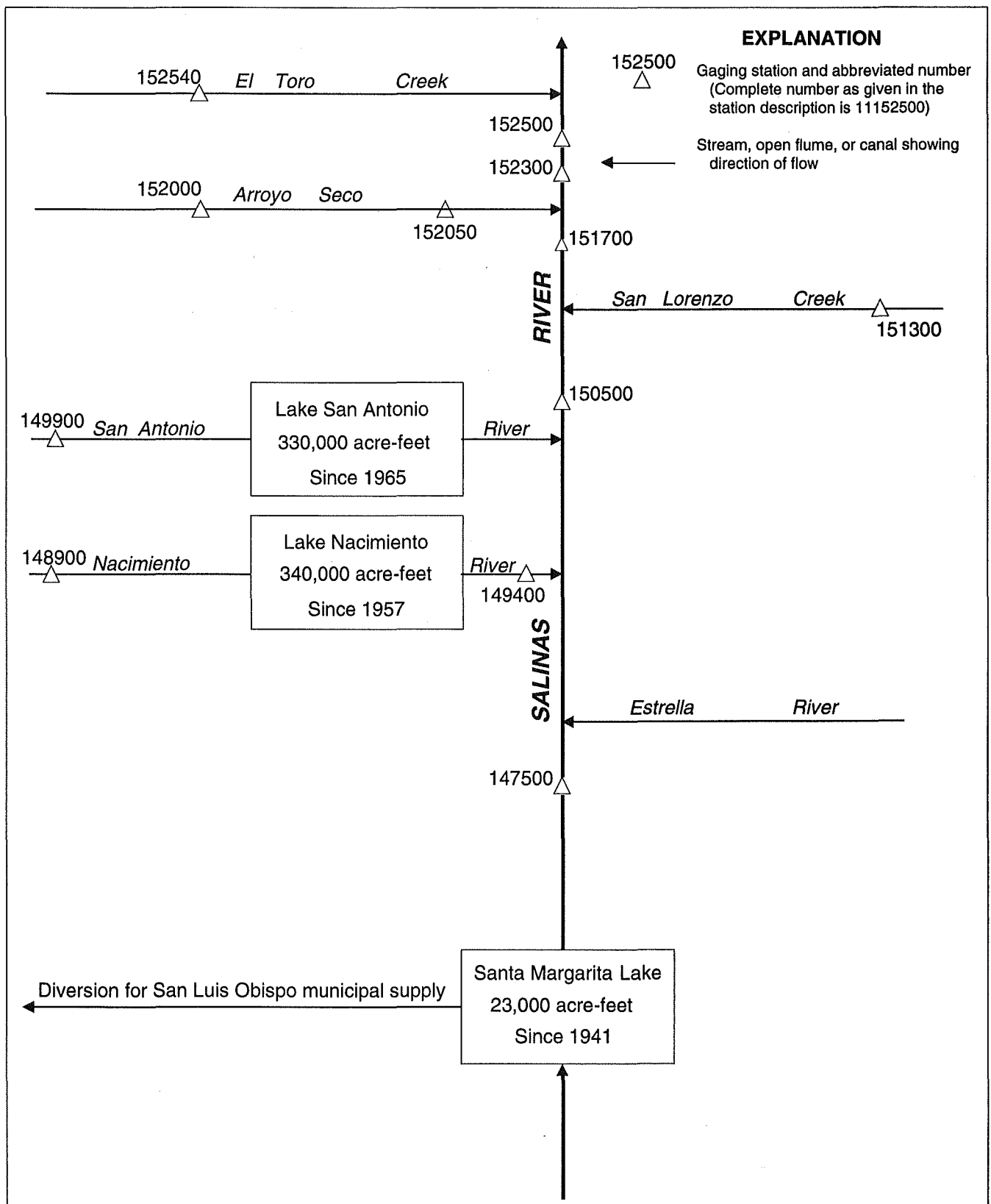


Figure 19. Diversions and storage in Salinas River Basin.

11147500 SALINAS RIVER AT PASO ROBLES, CA

LOCATION.—Lat 35°37'43", long 120°41'00", in Paso de Robles Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank at upstream side of 13th Street Bridge in Paso Robles and 3.5 mi upstream from Huerhuero Creek.

DRAINAGE AREA.—390 mi².

PERIOD OF RECORD.—October 1939 to September 1965, October 1969 to current year.

CHEMICAL DATA: Water years 1963–66.

SEDIMENT DATA: June 1990.

REVISED RECORDS.—WSP 981: 1942.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 670.61 ft above sea level. Prior to June 14, 1951, nonrecording gage at same site and datum.

REMARKS.—Records fair except estimated daily discharges, which are poor. Low flows regulated by Santa Margarita Lake 32 mi upstream beginning in December 1941, usable capacity, 23,000 acre-ft. Small diversions for irrigation upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,400 ft³/s, Mar. 10, 1995, gage height, 22.99 ft; no flow for many days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 23.8 ft from floodmarks, discharge, 28,000 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 850 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0230	1,090	6.79	Jan. 2	0100	9,760	13.63
Dec. 10	1745	8,360	12.79	Jan. 15	1315	1,850	7.54
Dec. 22	1845	934	6.56	Jan. 26	1900	7,870	12.48

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.33	4.6	2660	1010	149	48	e4.1	.00	.00	.00	.00
2	.00	.12	3.5	6810	889	143	44	e3.5	.00	.00	.00	.00
3	.00	.00	2.5	5850	793	138	44	e2.9	.00	.00	.00	.00
4	.00	.00	1.8	2800	715	135	41	e2.4	.00	.00	.00	.00
5	.00	.00	2.1	1840	662	132	40	e2.0	.00	.00	.00	.00
6	.00	.00	3.3	1260	592	125	37	e1.6	.00	.00	.00	.00
7	.00	.00	4.3	931	480	122	33	e1.3	.00	.00	.00	.00
8	.00	.00	3.5	771	404	114	31	e.95	.00	.00	.00	.00
9	.00	.00	37	655	360	107	29	e.78	.00	.00	.00	.00
10	.00	.00	3240	579	340	105	28	e.60	.00	.00	.00	.00
11	.00	.00	3750	527	328	100	28	e.40	.00	.00	.00	.00
12	.00	.00	1490	497	316	94	25	e.25	.00	.00	.00	.00
13	.00	.00	768	549	306	90	24	e.16	.00	.00	.00	.00
14	.00	.00	494	480	296	89	24	.00	.00	.00	.00	.00
15	.00	.00	348	1330	285	85	23	.00	.00	.00	.00	.00
16	.00	.00	254	1140	267	80	21	.00	.00	.00	.00	.00
17	.00	1.4	210	950	256	82	20	.00	.00	.00	.00	.00
18	.00	155	167	802	243	77	18	.00	.00	.00	.00	.00
19	.00	11	136	698	231	72	18	.00	.00	.00	.00	.00
20	.00	2.2	120	1060	222	69	16	.00	.00	.00	.00	.00
21	.00	26	111	1960	208	68	16	.00	.00	.00	.00	.00
22	.00	611	466	2040	201	69	15	.00	.00	.00	.00	.00
23	.00	266	453	3890	196	65	14	.00	.00	.00	.00	.00
24	.00	107	280	2750	185	64	12	.00	.00	.00	.00	.00
25	.00	59	263	4010	174	64	11	.00	.00	.00	.00	.00
26	.00	40	256	6690	171	60	e8.2	.00	.00	.00	.00	.00
27	.00	28	716	5170	164	56	e7.2	.00	.00	.00	.00	.00
28	.00	18	704	2920	158	52	e6.4	.00	.00	.00	.00	.00
29	22	11	577	2010	---	53	e5.6	.00	.00	.00	.00	.00
30	5.3	6.4	1080	1470	---	52	e4.8	.00	.00	.00	.00	.00
31	.84	---	1420	1190	---	52	---	.00	---	.00	.00	---
TOTAL	28.14	1342.45	17365.6	66289	10452	2763	692.2	20.94	0.00	0.00	0.00	0.00
MEAN	.91	44.7	560	2138	373	89.1	23.1	.68	.000	.000	.000	.000
MAX	22	611	3750	6810	1010	149	48	4.1	.00	.00	.00	.00
MIN	.00	.00	1.8	480	158	52	4.8	.00	.00	.00	.00	.00
AC-FT	56	2660	34440	131500	20730	5480	1370	42	.00	.00	.00	.00

e Estimated.

SALINAS RIVER BASIN

11147500 SALINAS RIVER AT PASO ROBLES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

MEAN	2.62	5.73	54.7	256	371	374	158	22.2	2.49	.26	.058	.93
MAX	117	86.0	581	2138	2026	2410	1980	247	30.5	4.84	1.91	44.0
(WY)	1943	1983	1983	1997	1980	1995	1958	1983	1941	1941	1942	1942
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1941	1940	1940	1948	1948	1961	1961	1959	1947	1940	1940	1940

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	66025.86		98953.33			
ANNUAL MEAN	180		271		103	
HIGHEST ANNUAL MEAN					526	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	4140	Feb 5	6810	Jan 2	19600	Mar 10 1995
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Nov 1 1939
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 9	.00	Oct 1	.00	Nov 1 1939
INSTANTANEOUS PEAK FLOW			9760	Jan 2	28400	Mar 10 1995
INSTANTANEOUS PEAK STAGE			13.63	Jan 2	22.99	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	131000		196300		74430	
10 PERCENT EXCEEDS	577		700		158	
50 PERCENT EXCEEDS	.36		.12		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA

LOCATION.—Lat 35°47'19", long 121°05'34", in SW 1/4 NE 1/4 sec.3, T.25 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060005, on left bank just downstream from Sapaque Creek and 1.4 mi south of Bryson.

DRAINAGE AREA.—162 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1971 to current year.

REVISED RECORDS.—WDR CA-82-2: Drainage area.

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

REMARKS.—Records fair. No storage or diversion upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 57,600 ft³/s, Jan. 14, 1993, gage height, 32.14 ft, from rating curve extended above 7,900 ft³/s on basis of slope-area measurement at 32.00 ft gage height, maximum gage height, 35.15 ft, Mar. 10, 1995; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1330	14,300	21.40	Jan. 25	1345	12,000	20.27
Jan. 1	1700	11,000	19.73				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	13	57	6560	637	106	40	20	3.9	.00	.00	.00
2	.00	8.6	53	6410	562	101	40	19	3.5	.00	.00	.00
3	.00	6.4	49	3550	491	104	37	18	2.8	.00	.00	.00
4	.00	5.2	47	1490	440	97	36	18	3.0	.00	.00	.00
5	.00	4.3	46	1040	396	94	36	17	3.2	.00	.00	.00
6	.00	3.5	97	765	357	89	36	16	3.9	.00	.00	.00
7	.00	3.2	75	632	328	87	36	15	3.9	.00	.00	.00
8	.00	3.1	65	544	303	86	36	15	3.5	.00	.00	.00
9	.00	3.1	275	479	278	82	33	15	2.8	.00	.00	.00
10	.00	3.2	5960	430	261	80	32	14	2.8	.00	.00	.00
11	.00	3.2	3060	382	244	78	32	14	3.0	.00	.00	.00
12	.00	3.3	1020	374	226	77	32	13	2.8	.00	.00	.00
13	.00	3.3	693	426	211	72	32	13	2.5	.00	.00	.00
14	.00	3.2	470	369	194	71	32	12	1.7	.00	.00	.00
15	.00	3.2	351	2700	186	70	31	12	1.6	.00	.00	.00
16	.00	3.3	281	1370	182	68	29	11	1.4	.00	.00	.00
17	.00	1150	241	844	176	67	28	9.9	1.2	.00	.00	.00
18	.00	457	209	675	172	66	27	9.2	1.1	.00	.00	.00
19	.00	147	186	586	161	61	28	8.1	.70	.00	.00	.00
20	.00	262	170	3060	153	57	30	7.4	.54	.00	.00	.00
21	.00	259	167	3260	150	56	28	6.8	.41	.00	.00	.00
22	.00	544	737	2680	143	55	27	6.8	.32	.00	.00	.00
23	.00	322	468	4360	139	55	26	6.5	.24	.00	.00	.00
24	.00	186	330	1640	129	54	25	6.5	.15	.00	.00	.00
25	.00	133	275	5120	122	52	25	6.8	.15	.00	.00	.00
26	.00	106	250	4190	119	50	24	6.8	.09	.00	.00	.00
27	.01	88	980	2080	118	48	23	6.5	.03	.00	.00	.00
28	.07	77	495	1370	113	47	22	6.2	.00	.00	.00	.00
29	2.2	69	436	1040	---	45	22	5.1	.00	.00	.00	.00
30	1.5	62	3540	850	---	44	21	4.9	.00	.00	.00	.00
31	16	---	2530	726	---	43	---	4.4	---	.00	.00	---
TOTAL	19.78	3935.1	23613	60002	6991	2162	906	343.9	51.23	0.00	0.00	0.00
MEAN	.64	131	762	1936	250	69.7	30.2	11.1	1.71	.000	.000	.000
MAX	16	1150	5960	6560	637	106	40	20	3.9	.00	.00	.00
MIN	.00	3.1	46	369	113	43	21	4.4	.00	.00	.00	.00
AC-FT	39	7810	46840	119000	13870	4290	1800	682	102	.00	.00	.00

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.56	57.7	181	604	661	531	160	42.0	9.75	1.88	.16	.042
MAX	4.90	413	911	2440	2057	2048	1142	318	43.1	11.2	2.86	.77
(WY)	1973	1973	1983	1978	1973	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	3.82	16.0	4.20	1.61	.11	.000	.000	.000
(WY)	1972	1978	1991	1991	1991	1977	1977	1990	1977	1972	1972	1972

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1971 - 1997

ANNUAL TOTAL	91204.60	98024.01	
ANNUAL MEAN	249	269	185
HIGHEST ANNUAL MEAN			623
LOWEST ANNUAL MEAN			5.74
HIGHEST DAILY MEAN	5960	Dec 10	6560
LOWEST DAILY MEAN	.00	Jul 27	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 27	.00
INSTANTANEOUS PEAK FLOW			14300
INSTANTANEOUS PEAK STAGE			21.40
ANNUAL RUNOFF (AC-FT)	180900	194400	134200
10 PERCENT EXCEEDS	562	544	319
50 PERCENT EXCEEDS	28	11	6.1
90 PERCENT EXCEEDS	.00	.00	.00

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1972 to current year. Published as station 11148800 "near Bryson" in water years 1958–59, 1961–71.

WATER TEMPERATURE: Water years 1972–73.

SEDIMENT DATA: Water years 1972 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1971 to September 1973.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1973.

REMARKS.—Zero bedload discharge observed for flows less than 432 ft³/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV						
21...	1240	159	15.0	8	3.4	88
DEC						
18...	1130	211	8.5	3	1.7	94
JAN						
10...	1135	432	9.5	4	4.7	88
FEB						
14...	1140	194	10.0	2	1.0	77
APR						
15...	1140	31	19.0	1	.08	--
MAY						
16...	1145	11	24.0	5	.15	68

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00063)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)
MAY								
16...	1148	1	11	24.0	3	6	10	16
16...	1150	1	11	24.0	1	3	9	14
16...	1152	1	11	24.0	--	--	1	5
16...	1154	1	11	24.0	--	--	3	4
16...	1156	1	11	24.0	--	--	1	3
16...	1158	1	11	24.0	--	1	5	15

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM (80174)
MAY							
16...	23	32	44	59	77	100	--
16...	24	41	57	68	81	92	100
16...	12	27	44	55	72	100	--
16...	12	21	29	38	55	88	100
16...	9	13	16	20	29	46	100
16...	42	55	63	71	82	100	--

SALINAS RIVER BASIN

11149400 NACIMIENTO RIVER BELOW NACIMIENTO DAM, NEAR BRADLEY, CA

LOCATION.—Lat 35°45'41", long 120°51'16", in NE 1/4 NE 1/4 sec.14, T.25 S., R.10 E., San Luis Obispo County, Hydrologic Unit 18060005, Camp Roberts Military Reservation, on left bank 2.2 mi downstream from Nacimiento Dam, and 7.6 mi southwest of Bradley.

DRAINAGE AREA.—329 mi².

PERIOD OF RECORD.—October 1957 to current year.

CHEMICAL DATA: Water years 1963–66.

REVISED RECORDS.—WDR CA-84-2: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 597 ft above sea level, from topographic map.

REMARKS.—Records good. Flow regulated by Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft. No diversion upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,340 ft³/s, Feb. 25, 1969, gage height, 10.92 ft; no flow at times in 1958–63, 1965, 1977, 1990.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	178	21	4170	4330	33	32	199	295	319	378	422
2	288	178	21	4500	4230	33	32	199	344	307	377	422
3	288	178	21	4670	4130	33	32	202	381	327	378	422
4	288	178	21	4650	4010	33	32	207	393	326	378	410
5	288	168	21	4590	3890	33	31	208	393	326	390	409
6	288	176	21	4490	2400	38	32	217	392	325	397	418
7	288	176	21	4390	910	33	32	227	391	323	396	418
8	283	177	21	4290	621	34	32	227	391	324	401	417
9	245	178	23	4180	562	34	31	227	390	324	405	415
10	245	178	25	4060	457	34	31	227	390	323	405	415
11	245	178	23	2710	376	33	32	227	392	323	433	416
12	245	178	23	1390	375	33	31	227	394	321	456	414
13	245	168	22	1050	376	34	32	226	392	321	453	414
14	245	160	22	1050	378	34	31	303	342	327	480	414
15	247	131	22	1070	378	34	31	346	391	345	490	277
16	229	105	22	1090	378	34	31	290	424	347	472	69
17	205	158	22	1090	378	34	31	195	504	346	459	20
18	206	94	22	1090	378	34	31	191	450	354	446	17
19	206	24	22	1090	378	34	31	194	387	365	434	19
20	206	24	22	1110	378	34	32	193	375	365	431	20
21	205	24	22	1650	350	34	32	192	369	365	432	18
22	205	24	24	4310	265	34	29	184	370	365	423	18
23	206	22	23	4450	245	34	27	144	368	376	416	15
24	205	22	22	4470	231	34	29	205	273	387	407	17
25	196	22	23	4490	112	34	32	204	365	383	404	17
26	199	22	23	4650	33	34	77	261	366	383	409	18
27	199	22	827	4690	33	34	198	376	358	382	422	18
28	199	22	3880	4650	32	33	199	351	342	382	422	18
29	167	21	1890	4580	---	33	199	295	342	382	422	16
30	178	21	1010	4500	---	32	199	295	334	382	422	18
31	177	---	2480	4400	---	32	---	295	---	379	422	---
TOTAL	7215	3207	10662	103570	30614	1044	1651	7334	11298	10804	13060	6421
MEAN	233	107	344	3341	1093	33.7	55.0	237	377	349	421	214
MAX	299	178	3880	4690	4330	38	199	376	504	387	490	422
MIN	167	21	21	1050	32	32	27	144	273	307	377	15
AC-FT	14310	6360	21150	205400	60720	2070	3270	14550	22410	21430	25900	12740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	MEAN	241	116	117	292	495	294	154	213	301	381	399	363
MAX	501	618	1629	3341	2787	3016	1501	1067	581	662	802	684	
(WY)	1983	1983	1983	1997	1983	1969	1958	1983	1969	1958	1967	1995	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.16	2.44	.000	.000	
(WY)	1958	1958	1958	1962	1962	1961	1961	1961	1990	1990	1961	1961	

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1958 - 1997

ANNUAL TOTAL	145453	206880	
ANNUAL MEAN	397	567	279
HIGHEST ANNUAL MEAN			1038
LOWEST ANNUAL MEAN			3.43
HIGHEST DAILY MEAN	4450	Feb 24	6770
LOWEST DAILY MEAN	20	Jan 4	.00
ANNUAL SEVEN-DAY MINIMUM	20	Jan 23	.00
INSTANTANEOUS PEAK FLOW			7340
INSTANTANEOUS PEAK STAGE		9.39	10.92
ANNUAL RUNOFF (AC-FT)	288500	410300	202400
10 PERCENT EXCEEDS	420	1090	511
50 PERCENT EXCEEDS	206	247	128
90 PERCENT EXCEEDS	21	22	1.5

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA

LOCATION.—Lat 35°53'48", long 121°05'14", in Los Ojitos Grant, Monterey County, Hydrologic Unit 18060005, on downstream side of highway bridge, 0.4 mi upstream from Tule Canyon, and 3.3 mi south of Lockwood.

DRAINAGE AREA.—217 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1965 to current year.

REVISED RECORDS.—WDR CA-82-2: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 795.00 ft above sea level. Prior to Aug. 28, 1975, at datum 5.00 ft higher.

REMARKS.—Records fair except for estimated periods which are poor. No regulation; some pumping upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 23,600 ft³/s, Mar. 10, 1995, gage height, 14.25 ft, current datum, from rating curve extended above 8,000 ft³/s, on basis of contracted-opening measurement at gage height 12.6 ft; no flow for many days in each year.

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)
Dec. 10	1815	4,320	9.85	Jan. 25	1630	8,910	11.65
Jan. 1	2100	8,680	11.58				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	17	4330	813	147	64	30	e6.8	.00	.00	.00
2	.00	.00	15	4470	716	139	65	30	e6.5	.00	.00	.00
3	.00	.00	14	2950	633	139	64	28	e6.0	.00	.00	.00
4	.00	.00	13	1540	563	133	62	26	e5.7	.00	.00	.00
5	.00	.00	13	1130	504	130	61	27	e5.3	.00	.00	.00
6	.00	.00	13	876	458	124	59	26	e5.4	.00	.00	.00
7	.00	.00	12	705	420	123	57	24	e5.6	.00	.00	.00
8	.00	.00	12	587	394	118	55	23	e5.6	.00	.00	.00
9	.00	.00	15	495	361	114	53	22	e5.0	.00	.00	.00
10	.00	.00	1200	430	344	111	53	20	e4.5	.00	.00	.00
11	.00	.00	1660	382	321	106	53	18	e4.1	.00	.00	.00
12	.00	.00	636	346	303	104	51	17	e4.0	.00	.00	.00
13	.00	.00	443	335	289	102	49	17	e3.8	.00	.00	.00
14	.00	.00	321	298	272	99	49	18	e3.6	.00	.00	.00
15	.00	.00	254	875	261	100	48	17	e3.2	.00	.00	.00
16	.00	.00	207	844	250	98	46	17	e2.9	.00	.00	.00
17	.00	.00	177	588	240	95	44	16	e2.5	.00	.00	.00
18	.00	27	147	488	230	93	43	15	e2.3	.00	.00	.00
19	.00	33	125	427	213	91	43	13	e2.0	.00	.00	.00
20	.00	29	106	1170	205	89	41	13	e1.6	.00	.00	.00
21	.00	38	95	1510	197	87	40	12	e1.3	.00	.00	.00
22	.00	56	719	1680	190	83	41	12	e1.1	.00	.00	.00
23	.00	118	451	2910	184	83	40	12	e.90	.00	.00	.00
24	.00	81	303	1440	174	81	36	11	e.84	.00	.00	.00
25	.00	50	239	3480	169	79	35	11	e.53	.00	.00	.00
26	.00	36	197	4530	166	75	35	11	e.30	.00	.00	.00
27	.00	29	450	2460	160	73	35	10	e.13	.00	.00	.00
28	.00	25	358	1690	154	71	34	e8.6	.00	.00	.00	.00
29	.00	22	302	1310	---	71	32	e8.1	.00	.00	.00	.00
30	.00	19	2930	1090	---	69	30	e7.7	.00	.00	.00	.00
31	.00	---	1830	934	---	67	---	e7.3	---	.00	.00	---
TOTAL	0.00	563.00	13274	46300	9184	3094	1418	527.7	91.50	0.00	0.00	0.00
MEAN	.000	18.8	428	1494	328	99.8	47.3	17.0	3.05	.000	.000	.000
MAX	.00	118	2930	4530	813	147	65	30	6.8	.00	.00	.00
MIN	.00	.00	12	298	154	67	30	7.3	.00	.00	.00	.00
AC-FT	.00	1120	26330	91840	18220	6140	2810	1050	181	.00	.00	.00

e Estimated.

SALINAS RIVER BASIN

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.36	14.8	86.1	324	371	351	126	41.6	12.3	2.76	.23	.060
MAX	11.7	108	573	1515	1807	1856	637	167	51.9	22.9	6.83	1.91
(WY)	1984	1984	1967	1969	1986	1983	1982	1983	1978	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.058	.005	.000	.000	.000	.000	.000
(WY)	1966	1967	1977	1977	1977	1977	1977	1977	1972	1966	1966	1966

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1966 - 1997			
ANNUAL TOTAL	56477.49				74452.20							
ANNUAL MEAN	154				204				110			
HIGHEST ANNUAL MEAN									455			
LOWEST ANNUAL MEAN									.005			
HIGHEST DAILY MEAN	3510 Feb 20				4530 Jan 26				14000 Mar 10 1995			
LOWEST DAILY MEAN	.00 Jul 21				.00 Oct 1				.00 Oct 1 1965			
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 21				.00 Oct 1				.00 Oct 1 1965			
INSTANTANEOUS PEAK FLOW					8910 Jan 25				23600 Mar 10 1995			
INSTANTANEOUS PEAK STAGE					11.65 Jan 25				14.25 Mar 10 1995			
ANNUAL RUNOFF (AC-FT)	112000				147700				79450			
10 PERCENT EXCEEDS	450				470				220			
50 PERCENT EXCEEDS	18				12				3.9			
90 PERCENT EXCEEDS	.00				.00				.00			

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1966 to current year.

WATER TEMPERATURE: Water years 1966–73.

SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1965 to September 1973.

SUSPENDED-SEDIMENT DISCHARGE: October 1965 to September 1973.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	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)
NOV											
21...	1630	38	16.0	5	.51	58	--	--	--	--	--
DEC											
10...	1325	250	12.0	1440	972	3	4	5	21	69	93
17...	1405	171	13.5	42	19	30	--	--	--	--	--
JAN											
15...	1250	1340	8.5	631	2280	46	59	74	86	95	100
FEB											
13...	1220	288	11.5	90	70	30	38	55	94	100	--
MAR											
19...	1345	91	20.5	10	2.5	40	--	--	--	--	--
MAY											
13...	1320	17	28.5	5	.23	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN ,062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN ,125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN ,250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN ,500 MM (80167)
DEC								
10...	1205	1	243	12.0	2	2	4	5
10...	1206	1	243	12.0	--	--	1	4
10...	1208	1	243	12.0	--	1	2	7
10...	1210	1	243	12.0	--	1	12	26
10...	1220	1	244	12.0	--	--	1	12
10...	1221	1	244	12.0	--	--	2	11
10...	1222	1	245	12.0	--	--	2	17
10...	1228	1	247	12.0	--	--	--	8
10...	1235	1	247	12.0	--	--	--	10
10...	1238	1	247	12.0	--	--	1	8

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM (80174)
------	--	--	--	--	--	--	--

DEC							
10...	16	32	44	56	75	93	100
10...	12	27	42	57	73	91	100
10...	21	39	51	57	68	76	100
10...	49	73	88	92	96	100	--
10...	39	60	73	79	88	93	100
10...	37	63	79	90	96	100	--
10...	41	64	81	91	98	100	--
10...	33	62	82	95	99	100	--
10...	37	63	81	88	94	95	100
10...	23	37	52	76	93	100	--

SALINAS RIVER BASIN

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
NOV									
21...	1655	1000	1120	.250	0	1650	1700	30	2.0
21...	1705	1000	1120	.250	0	1700	1710	30	2.0
DEC									
10...	1300	1000	1150	.250	0	1255	1300	15	10.0
10...	1315	1000	1150	.250	0	1300	1310	15	10.0
17...	1425	1000	1120	.250	0	1420	1430	15	5.0
17...	1435	1000	1120	.250	0	1430	1440	15	5.0
FEB									
13...	1140	1000	1120	.250	0	1135	1145	30	5.0
13...	1150	1000	1120	.250	0	1145	1155	30	5.0
MAR									
19...	1400	1000	1120	.250	0	1355	1405	20	3.0
19...	1410	1000	1120	.250	0	1405	1415	20	3.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE (T/D/FT DAY) (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80228)
NOV									
21...	2	19	19	.50	38	16.0	.73	27	1
21...	2	19	19	.50	38	16.0	.71	27	--
DEC									
10...	2	11	11	5.00	243	12.0	4.53	728	2
10...	2	11	11	5.00	247	12.0	8.70	728	--
17...	2	17	17	2.00	171	13.5	4.78	412	--
17...	2	17	17	2.00	171	13.5	4.92	412	--
FEB									
13...	2	23	23	2.50	292	11.5	1.74	192	2
13...	2	23	23	2.50	292	11.5	1.60	192	1
MAR									
19...	2	24	24	1.50	91	20.5	.99	120	1
19...	2	24	24	1.50	91	20.5	2.35	120	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80235)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80236)
NOV								
21...	7	45	78	92	98	100	--	--
21...	12	50	84	96	97	100	--	--
DEC								
10...	18	57	79	90	95	99	100	--
10...	11	43	73	87	93	98	100	--
17...	4	30	63	83	92	96	98	100
17...	--	8	40	75	91	97	100	--
FEB								
13...	15	49	75	87	92	95	99	100
13...	22	59	82	91	95	98	100	--
MAR								
19...	16	59	87	95	98	100	--	--
19...	16	55	83	94	98	99	100	--

11150500 SALINAS RIVER NEAR BRADLEY, CA

LOCATION.—Lat 35°55'49", long 120°52'04", in SW 1/4 NW 1/4 sec.14, T.23 S., R.10 E., Monterey County, Hydrologic Unit 18060005, on left bank 6 mi northwest of Bradley and 7 mi downstream from San Antonio River.

DRAINAGE AREA.—2,535 mi².

PERIOD OF RECORD.—October 1948 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

CHEMICAL DATA: Water years 1958, 1962–66, 1972–75, 1977, 1980, 1981.

SEDIMENT DATA: Water years 1950, 1990.

REVISED RECORDS.—WSP 1285: 1950. WDR CA-84-2: 1978.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 442.69 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 120,000 ft³/s, Mar. 11, 1995, gage height, 23.44 ft, from rating curve extended above 50,000 ft³/s; no flow at times in 1951, 1954–55, 1957.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555	270	e80	4660	5870	384	116	215	330	576	562	606
2	479	267	e82	10300	5880	363	115	221	337	547	505	622
3	483	266	79	14000	5860	345	114	221	423	594	559	588
4	495	269	76	10000	5770	259	110	225	517	536	648	554
5	490	265	74	7850	5580	224	107	251	496	526	681	539
6	466	263	72	6830	4910	227	107	274	455	535	635	540
7	455	267	70	6150	2840	224	105	290	465	554	594	609
8	456	265	68	5980	2500	222	103	282	470	578	571	631
9	431	264	76	5790	2410	249	103	284	454	566	604	622
10	407	257	336	5700	2370	223	100	290	527	521	642	627
11	413	265	4600	4960	2180	202	97	294	621	495	675	628
12	424	272	2300	3450	2150	183	97	293	616	496	709	594
13	417	253	1120	3180	2120	169	96	282	621	493	666	592
14	410	229	661	3040	2130	169	92	274	496	493	658	571
15	399	226	462	3540	2060	172	92	374	481	535	706	551
16	394	195	360	4190	1860	167	88	430	528	589	757	267
17	358	221	318	3630	1160	163	87	324	728	619	711	96
18	343	233	284	3350	993	161	84	267	731	579	678	47
19	342	166	252	3240	972	156	86	263	630	507	638	e25
20	344	e136	232	3410	918	159	82	258	604	530	605	e28
21	350	e125	218	4790	827	161	79	263	562	585	553	e30
22	362	e127	276	7850	750	155	76	311	547	556	563	e28
23	372	e203	562	10600	631	151	73	279	562	535	596	e27
24	374	205	432	10300	596	148	70	283	476	556	618	e23
25	356	154	345	9330	562	146	69	298	543	534	618	e25
26	328	e135	332	16200	445	142	70	270	561	523	566	e26
27	326	e122	384	15700	416	138	124	374	562	540	582	e26
28	331	e110	3600	10100	404	132	207	414	546	542	574	e26
29	352	e98	3390	7920	---	130	215	371	538	521	580	e25
30	313	e89	1270	6830	---	122	214	365	574	516	588	e24
31	282	---	3330	6190	---	120	---	336	---	596	569	---
TOTAL	12307	6217	25741	219060	65164	5966	3178	9176	16001	16873	19211	9597
MEAN	397	207	830	7066	2327	192	106	296	533	544	620	320
MAX	555	272	4600	16200	5880	384	215	430	731	619	757	631
MIN	282	89	68	3040	404	120	69	215	330	493	505	23
AC-FT	24410	12330	51060	434500	129300	11830	6300	18200	31740	33470	38110	19040

e Estimated.

SALINAS RIVER BASIN

11150500 SALINAS RIVER NEAR BRADLEY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1956, BY WATER YEAR (WY)

MEAN	3.23	100	752	1457	685	878	310	139	21.1	3.41	2.03	1.74
MAX	4.04	742	2319	5372	1449	2724	580	249	55.3	6.26	4.16	4.46
(WY)	1951	1951	1956	1952	1950	1952	1952	1955	1956	1953	1952	1952
MIN	1.64	4.40	11.0	140	238	293	87.4	40.7	7.87	1.64	.000	.000
(WY)	1955	1956	1954	1949	1953	1950	1951	1949	1950	1951	1955	1955

SUMMARY STATISTICS

WATER YEARS 1949 - 1956

ANNUAL MEAN	363	
HIGHEST ANNUAL MEAN	945	1952
LOWEST ANNUAL MEAN	152	1955
HIGHEST DAILY MEAN	22000	Dec 24 1955
LOWEST DAILY MEAN	.00	Aug 15 1951
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 15 1951
INSTANTANEOUS PEAK FLOW	26800	Jan 15 1952
INSTANTANEOUS PEAK STAGE	12.35	Jan 15 1952
ANNUAL RUNOFF (AC-FT)	263100	
10 PERCENT EXCEEDS	745	
50 PERCENT EXCEEDS	16	
90 PERCENT EXCEEDS	1.6	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

MEAN	288	161	220	776	1364	1033	477	314	394	469	504	438
MAX	632	559	2152	7066	8425	7044	5642	1792	845	683	770	743
(WY)	1970	1983	1983	1997	1969	1995	1958	1983	1994	1994	1991	1969
MIN	3.00	5.00	7.58	9.26	10.6	16.3	12.1	4.50	2.98	.84	.37	1.47
(WY)	1962	1962	1991	1991	1991	1990	1990	1961	1990	1990	1990	1990

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1958 - 1997

ANNUAL TOTAL	242722				408491							
ANNUAL MEAN	663				1119					532		
HIGHEST ANNUAL MEAN										1997		1983
LOWEST ANNUAL MEAN										9.39		1990
HIGHEST DAILY MEAN	5940	Feb 24			16200	Jan 26			63900		Mar 11	1995
LOWEST DAILY MEAN	40	Jan 20			23	Sep 24			.07		Sep 9	1990
ANNUAL SEVEN-DAY MINIMUM	41	Jan 18			25	Sep 24			.09		Sep 4	1990
INSTANTANEOUS PEAK FLOW					18700	Jan 27			120000		Mar 11	1995
INSTANTANEOUS PEAK STAGE					12.61	Jan 27			23.44		Mar 11	1995
ANNUAL RUNOFF (AC-FT)	481400				810200				385500			
10 PERCENT EXCEEDS	1260				3370				668			
50 PERCENT EXCEEDS	431				424				309			
90 PERCENT EXCEEDS	76				94				21			

11151300 SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CA

LOCATION.—Lat 36°16'05", long 121°03'55", in NE 1/4 sec.23, T.19 S., R.8 E., Monterey County, Hydrologic Unit 18060005, on left bank 1.3 mi downstream from Bitterwater Creek, 5 mi northeast of King City, and 10 mi upstream from mouth.

DRAINAGE AREA.—233 mi².

PERIOD OF RECORD.—October 1958 to current year.

CHEMICAL DATA: Water year 1977.

REVISED RECORDS.—WDR CA-85-2: 1969–84(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 431.48 ft above sea level. October 1958 to Apr. 24, 1967, at site 500 ft upstream at datum 5.00 ft higher. Apr. 25, 1967, to July 12, 1981, at site 200 ft upstream.

REMARKS.—Records fair. No regulation; small diversions upstream from station by ranchers and sand-processing plant. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,500 ft³/s, Jan. 25, 1969, gage height, 15.33 ft, in gage well, 16.2 ft, from floodmarks, from rating curve extended above 7,100 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in 1961 and 1973.

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. 10	1830	1,170	6.22	Jan. 15	1230	699	5.25
Dec. 22	0900	703	5.26	Jan. 20	0845	2,040	7.57
Dec. 30	1515	1,040	5.97	Jan. 26	1630	1,110	6.12
Jan. 2	2345	4,210	9.96				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	7.2	3.8	104	51	24	7.6	3.8	1.7	1.3	.97	1.9
2	1.5	4.1	4.0	765	47	23	7.9	3.8	1.4	1.3	.85	2.0
3	1.6	3.8	4.2	903	43	24	7.9	4.1	1.5	1.1	.88	1.6
4	1.5	4.5	4.6	161	40	24	7.8	3.4	1.7	1.1	.98	1.8
5	1.3	3.2	5.1	117	39	23	7.2	3.3	1.6	1.3	.86	1.6
6	1.3	3.2	5.5	70	36	23	7.0	2.6	1.6	1.2	.94	1.3
7	1.3	3.1	5.2	46	34	24	6.6	2.9	1.6	1.4	1.1	1.7
8	1.3	3.2	4.2	39	31	21	6.3	2.9	1.4	1.3	.93	1.7
9	1.5	2.8	5.8	33	29	18	6.1	2.5	1.4	1.1	1.1	1.2
10	1.5	2.5	274	31	28	19	6.1	3.7	1.3	1.4	1.1	1.2
11	1.8	2.7	275	29	27	19	6.0	3.2	1.2	1.4	1.2	1.4
12	2.0	2.8	44	28	26	18	6.1	3.2	1.4	1.7	1.1	1.3
13	2.1	3.5	26	61	25	17	6.5	2.6	1.6	1.5	1.1	1.5
14	2.0	3.3	12	33	24	17	6.3	2.2	1.4	1.4	1.0	1.5
15	1.8	3.3	8.1	224	24	17	6.2	2.2	1.5	1.2	.91	1.4
16	1.8	3.1	6.6	139	24	16	5.7	2.0	1.6	1.1	.87	1.4
17	1.7	4.2	6.1	46	24	16	5.5	2.2	1.3	1.1	1.3	1.6
18	1.7	4.5	5.2	32	24	14	5.4	2.1	1.3	1.1	1.1	1.7
19	1.7	4.0	4.9	24	23	13	5.6	1.9	1.4	1.2	1.2	1.7
20	1.8	3.9	4.8	414	24	11	5.7	2.2	1.4	1.2	1.1	1.7
21	1.9	5.8	6.1	179	25	11	5.4	2.0	1.3	1.2	1.2	1.6
22	2.0	37	268	424	27	11	4.8	1.9	1.4	1.2	1.0	1.6
23	2.0	15	58	447	28	11	3.9	1.9	1.5	1.6	.90	1.8
24	2.0	8.7	24	143	27	14	3.6	2.0	1.3	1.6	.90	1.6
25	2.0	4.9	17	251	27	13	5.1	1.8	1.2	1.2	1.0	1.7
26	2.3	4.3	14	417	29	11	4.5	1.8	1.2	1.2	1.1	1.9
27	1.9	3.7	16	191	28	9.6	4.3	1.6	1.3	1.1	1.3	2.1
28	1.9	3.9	25	109	28	9.4	4.5	1.7	1.5	1.0	1.3	1.9
29	7.5	3.4	13	90	---	9.2	4.3	1.6	1.6	1.1	1.1	2.0
30	31	3.6	333	68	---	9.1	3.7	1.3	1.5	1.0	1.4	2.1
31	19	---	223	58	---	8.0	---	1.7	---	1.1	1.7	---
TOTAL	105.9	163.2	1706.2	5676	842	497.3	173.6	76.1	43.1	38.7	33.49	49.5
MEAN	3.42	5.44	55.0	183	30.1	16.0	5.79	2.45	1.44	1.25	1.08	1.65
MAX	31	37	333	903	51	24	7.9	4.1	1.7	1.7	1.7	2.1
MIN	1.2	2.5	3.8	24	23	8.0	3.6	1.3	1.2	1.0	.85	1.2
AC-FT	210	324	3380	11260	1670	986	344	151	85	77	66	98

11151300 SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.74	3.91	10.4	43.8	48.4	45.0	14.7	4.34	1.87	.92	.65	1.17
MAX	20.0	34.7	62.6	401	410	422	113	63.6	31.9	15.0	7.26	17.9
(WY)	1977	1966	1967	1969	1969	1995	1983	1983	1983	1983	1983	1976
MIN	.053	.058	.073	.065	.25	.59	.19	.070	.040	.050	.000	.030
(WY)	1991	1991	1991	1991	1991	1964	1964	1992	1961	1992	1973	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1959 - 1997			
ANNUAL TOTAL	6205.12				9405.09							
ANNUAL MEAN	17.0				25.8				14.6			
HIGHEST ANNUAL MEAN									80.8			
LOWEST ANNUAL MEAN									.66			
HIGHEST DAILY MEAN	460				903				5860			
LOWEST DAILY MEAN	.79				.85				.00			
ANNUAL SEVEN-DAY MINIMUM	.83				.93				.00			
INSTANTANEOUS PEAK FLOW					4210				11500			
INSTANTANEOUS PEAK STAGE					9.96				15.33			
ANNUAL RUNOFF (AC-FT)	12310				18650				10570			
10 PERCENT EXCEEDS	25				38				17			
50 PERCENT EXCEEDS	3.0				3.2				1.3			
90 PERCENT EXCEEDS	1.1				1.2				.10			

11151700 SALINAS RIVER AT SOLEDAD, CA

LOCATION.—Lat 36°24'40", long 121°19'06", on boundary between San Vicente and Los Coches Grants, Monterey County, Hydrologic Unit 18060005, near right bank on upstream end of pier on U.S. Highway 101, 0.9 mi south of Soledad, and 1 mi upstream from Arroyo Seco.

DRAINAGE AREA.—3,563 mi².

PERIOD OF RECORD.—October 1968 to September 1978, October 1983 to current year.

CHEMICAL DATA: Water years 1972–75, 1977.

SEDIMENT DATA: Water years 1990, 1992.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 150.61 ft above sea level.

REMARKS.—Records fair. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions for irrigation upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 106,000 ft³/s, Feb. 25, 1969, gage height, 23.31 ft; maximum gage height, 26.49 ft, Mar. 11, 1995; no flow at times in some years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	234	90	3670	7300	382	148	45	181	e275	e150	249
2	266	210	84	7160	7420	365	136	45	163	e235	e145	263
3	264	197	81	14600	7320	344	135	44	151	e205	e155	257
4	250	190	78	11800	6750	338	114	46	144	e200	e160	245
5	243	187	74	7140	6380	324	108	47	168	e205	e150	236
6	253	185	73	5720	6380	273	95	44	189	e225	e140	216
7	267	180	70	4880	4560	258	91	45	201	e230	e138	208
8	268	178	68	4310	3080	268	83	47	206	e210	e140	236
9	265	185	72	4260	2720	268	76	51	200	e205	e145	234
10	264	189	136	4080	2560	274	63	55	206	e195	e160	221
11	260	196	805	3780	2430	286	57	66	210	e190	e180	217
12	242	192	3460	2640	2300	290	54	84	227	e190	e190	220
13	236	190	1860	1880	2220	301	52	89	263	e195	e205	223
14	240	193	996	1650	2260	307	50	83	283	e200	e220	229
15	236	197	642	1820	2250	288	47	78	285	e190	e235	244
16	221	189	446	2720	2290	272	45	92	263	e180	e275	252
17	219	190	340	2640	2020	267	47	130	313	e175	e300	210
18	217	170	266	2310	1350	262	49	149	361	e175	e335	249
19	207	172	220	2150	1040	245	50	119	461	e180	e325	210
20	195	177	189	2620	919	243	48	97	e415	e190	e310	126
21	196	151	177	2760	858	237	48	88	e400	e195	e275	65
22	195	138	204	5200	753	220	47	77	e400	e195	e240	e23
23	203	125	329	9900	e660	214	47	64	e405	e185	214	e19
24	212	109	270	e10000	e610	213	43	55	e400	e170	206	e16
25	215	130	285	e9100	e580	203	44	43	e360	e170	213	e13
26	234	144	236	e13700	e550	210	45	47	e320	e172	211	e12
27	219	127	213	17800	478	208	44	64	e315	e180	196	e10
28	213	113	208	13000	414	191	44	136	e315	e185	188	e9.0
29	236	104	2550	8670	---	179	45	314	e310	e180	203	e8.0
30	306	96	2830	8570	---	164	45	334	e300	e170	212	e7.5
31	301	---	2030	7350	---	167	---	239	---	e160	224	---
TOTAL	7408	5038	19382	197880	78452	8061	2000	2917	8415	6012	6440	4727.5
MEAN	239	168	625	6383	2802	260	66.7	94.1	281	194	208	158
MAX	306	234	3460	17800	7420	382	148	334	461	275	335	263
MIN	195	96	68	1650	414	164	43	43	144	160	138	7.5
AC-FT	14690	9990	38440	392500	155600	15990	3970	5790	16690	11920	12770	9380

e Estimated.

SALINAS RIVER BASIN

11151700 SALINAS RIVER AT SOLEDAD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

MEAN	182	123	156	969	1448	1214	278	126	144	149	158	194
MAX	488	336	876	6383	9295	8695	1834	661	457	390	327	478
(WY)	1970	1970	1984	1997	1969	1995	1969	1969	1969	1969	1969	1969
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1969 - 1997	
ANNUAL TOTAL	213193		346732.5			
ANNUAL MEAN	582		950		423	
HIGHEST ANNUAL MEAN					1981	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	7220	Feb 22	17800	Jan 27	68300	Feb 25 1969
LOWEST DAILY MEAN	28	May 14	7.5	Sep 30	.00	Mar 9 1977
ANNUAL SEVEN-DAY MINIMUM	32	May 8	11	Sep 24	.00	Mar 9 1977
INSTANTANEOUS PEAK FLOW			19000	Jan 27	106000	Feb 25 1969
INSTANTANEOUS PEAK STAGE			17.65	Jan 3	26.49	Mar 11 1995
ANNUAL RUNOFF (AC-FT)	422900		687700		306700	
10 PERCENT EXCEEDS	1280		2630		500	
50 PERCENT EXCEEDS	197		211		130	
90 PERCENT EXCEEDS	49		51		.00	

11152000 ARROYO SECO NEAR SOLEDAD, CA

LOCATION.—Lat 36°16'50", long 121°19'18", in SW 1/4 NE 1/4 sec.16, T.19 S., R.6 E., Monterey County, Hydrologic Unit 18060005, on right bank under county road bridge, 1.5 mi downstream from Vaquero Creek, and 10 mi south of Soledad.

DRAINAGE AREA.—244 mi².

PERIOD OF RECORD.—November 1901 to current year. Records for water year 1902 incomplete; yearly estimate published in WSP 1315-B.

REVISED RECORDS.—WSP 881: 1902–9 (yearly summary only). WSP 1565: 1916–19, 1920–21(M), 1922, 1926–27, 1928–30(M), 1932, 1934, 1936(M). WSP 1715: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 339.20 ft above sea level. Prior to June 16, 1929, nonrecording gage, and June 16, 1929, to Dec. 2, 1941, water-stage recorder at site 1 mi upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, water-stage recorder at datum 2.00 ft higher. Jan. 30 to Mar. 26, 1969, nonrecording gage at bridge at same datum.

REMARKS.—Records good except for those in September, which are poor. No regulation or large diversion upstream from station. Low flows affected by upstream gravel mining and irrigation during summer months. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,300 ft³/s, Apr. 3, 1958, gage height, 16.40 ft, datum then in use, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement at gage height 16.30 ft, maximum gage height, 16.44 ft, Mar. 10, 1995; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1315	6,140	7.55	Jan. 1	2230	8,280	8.77
Dec. 21	2400	3,800	6.01	Jan. 25	1300	6,620	7.84

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	21	49	4470	e940	212	103	68	26	11	3.8	4.8
2	5.0	19	47	4270	827	205	103	66	27	12	3.5	4.3
3	5.9	17	44	2510	742	200	104	68	27	12	2.9	3.9
4	7.0	17	42	1540	673	194	103	67	28	11	2.7	4.0
5	7.1	17	43	1160	615	189	101	64	32	10	2.6	3.2
6	6.9	16	62	915	566	182	99	62	33	9.1	2.1	3.7
7	5.9	16	54	740	524	176	99	60	30	7.5	2.0	3.1
8	5.0	17	49	618	489	171	97	58	26	9.6	1.4	2.9
9	4.3	17	130	525	459	167	97	57	24	6.6	.82	2.2
10	5.4	18	2520	464	433	161	97	57	24	6.0	1.4	1.7
11	6.4	18	1860	412	408	159	95	55	26	7.9	1.5	2.8
12	7.9	17	821	399	388	153	93	53	23	5.0	.81	3.1
13	8.2	17	596	381	368	147	93	49	22	6.1	1.1	3.6
14	8.2	18	419	337	349	143	91	48	22	6.4	2.8	3.5
15	8.5	19	309	1040	336	139	89	47	22	6.3	3.6	3.9
16	9.9	19	230	710	320	139	89	46	21	5.1	3.3	4.8
17	9.9	641	181	560	313	136	86	45	20	4.7	3.1	4.8
18	10	286	144	489	302	133	85	42	18	4.6	2.4	4.8
19	10	96	124	439	288	128	88	38	16	4.5	2.4	5.6
20	10	134	111	1320	278	123	89	36	14	4.5	3.6	6.0
21	12	91	230	1120	265	121	84	36	14	3.8	3.2	5.7
22	12	208	1460	1490	257	122	82	35	13	3.6	3.0	5.3
23	12	202	737	2620	253	124	80	36	13	4.0	4.4	4.3
24	12	111	494	1570	244	117	78	42	13	3.6	4.0	4.4
25	13	86	369	2910	236	116	78	42	12	3.0	3.9	4.5
26	13	73	304	3530	232	114	76	40	10	3.0	4.2	4.2
27	14	65	585	2350	227	111	73	37	10	3.2	4.0	4.1
28	14	61	388	1790	222	107	70	36	9.4	3.7	4.5	4.1
29	17	56	453	e1530	---	109	69	35	9.5	3.7	4.5	3.3
30	54	52	2190	e1280	---	105	71	30	11	3.7	5.2	3.7
31	30	---	1940	e1090	---	104	---	28	---	3.7	5.6	---
TOTAL	348.7	2445	16985	44579	11554	4507	2662	1483	595.9	188.9	94.33	120.3
MEAN	11.2	81.5	548	1438	413	145	88.7	47.8	19.9	6.09	3.04	4.01
MAX	54	641	2520	4470	940	212	104	68	33	12	5.6	6.0
MIN	4.2	16	42	337	222	104	69	28	9.4	3.0	.81	1.7
AC-FT	692	4850	33690	88420	22920	8940	5280	2940	1180	375	187	239

e Estimated.

SALINAS RIVER BASIN

11152000 ARROYO SECO NEAR SOLEDAD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.21	54.0	168	398	564	453	252	92.3	38.5	14.3	5.69	4.70
MAX	75.5	650	1161	2425	2611	2344	2043	644	185	90.8	54.5	38.8
(WY)	1905	1927	1956	1914	1938	1983	1958	1983	1983	1983	1983	1978
MIN	.000	.000	2.87	5.95	8.98	18.5	7.82	4.14	.66	.000	.000	.000
(WY)	1914	1991	1991	1991	1991	1977	1977	1977	1924	1924	1913	1913

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1902 - 1997	
ANNUAL TOTAL	80071.1		85563.13			
ANNUAL MEAN	219		234		169	
HIGHEST ANNUAL MEAN					709	
LOWEST ANNUAL MEAN					6.97	
HIGHEST DAILY MEAN	3100	Feb 20	4470	Jan 1	16500	Dec 23 1955
LOWEST DAILY MEAN	1.5	Sep 3	.81	Aug 12	.00	Aug 27 1904
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 30	1.3	Aug 7	.00	Aug 27 1904
INSTANTANEOUS PEAK FLOW			8280	Jan 1	28300	Apr 3 1958
INSTANTANEOUS PEAK STAGE			8.77	Jan 1	16.44	Mar 10 1995
INSTANTANEOUS LOW FLOW			.50	Aug 9	.00	Aug 27 1904
ANNUAL RUNOFF (AC-FT)	158800		169700		122500	
10 PERCENT EXCEEDS	625		589		359	
50 PERCENT EXCEEDS	54		42		28	
90 PERCENT EXCEEDS	4.4		3.7		.00	

11152050 ARROYO SECO BELOW RELIZ CREEK, NEAR SOLEDAD, CA

LOCATION.—Lat 36°23'59", long 121°19'23", in Los Conches Grant, Monterey County, Hydrologic Unit 18060005, on right bank at county road bridge, 1.7 mi south of Soledad, and 7.4 mi downstream from Reliz Creek.

DRAINAGE AREA.—304 mi².

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 167.93 ft above sea level (levels by Monterey County).

REMARKS.—Records poor. No regulation or large diversion upstream from station. Low flows affected by upstream gravel mining and irrigation during summer months. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,000 ft³/s, Mar. 10, 1995, gage height, 9.62 ft, rating affected by backwater from Salinas River. Discharge estimated by routing peak. No flow for many days.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 2	0100	9,210	5.89	Jan. 26	1415	9,310	5.91

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	4470	938	109	.00	.00	.00	e.00	.00	.00
2	.00	.00	.00	5420	736	109	.00	.00	.00	e.00	.00	.00
3	.00	.00	.00	3810	620	103	.00	.00	.00	e.00	.00	.00
4	.00	.00	.00	2480	534	94	.00	.00	.00	e.00	.00	.00
5	.00	.00	.00	1690	473	91	.00	.00	.00	e.00	.00	.00
6	.00	.00	.00	1220	411	88	.00	.00	.00	e.00	.00	.00
7	.00	.00	.00	930	364	81	.00	.00	.00	e.00	.00	.00
8	.00	.00	.00	765	334	73	.00	.00	.00	e.00	.00	.00
9	.00	.00	.00	654	309	69	.00	.00	.00	e.00	.00	.00
10	.00	.00	502	574	289	64	.00	.00	.00	e.00	.00	.00
11	.00	.00	1480	507	276	63	.00	.00	.00	e.00	.00	.00
12	.00	.00	750	487	259	62	.00	.00	.00	e.00	.00	.00
13	.00	.00	462	476	244	62	.00	.00	.00	e.00	.00	.00
14	.00	.00	238	401	231	53	.00	.00	.00	e.00	.00	.00
15	.00	.00	122	1230	215	45	.00	.00	.00	e.00	.00	.00
16	.00	.00	63	955	204	40	.00	.00	.00	e.00	.00	.00
17	.00	215	37	705	196	42	.00	.00	.00	e.00	.00	.00
18	.00	175	20	620	188	39	.00	.00	.00	e.00	.00	.00
19	.00	3.5	5.1	573	166	34	.00	.00	.00	e.00	.00	.00
20	.00	.00	.00	1700	156	27	.00	.00	.00	e.00	.00	.00
21	.00	.00	.00	1590	149	16	.00	.00	.00	e.00	.00	.00
22	.00	2.3	1300	2130	144	4.6	.00	.00	.00	e.00	.00	.00
23	.00	34	678	4240	138	40	.00	.00	.00	e.00	.00	.00
24	.00	.44	350	2670	132	38	.00	.00	.00	e.00	.00	.00
25	.00	.00	233	4250	123	28	.00	.00	.00	e.00	.00	.00
26	.00	.00	166	5620	120	22	.00	.00	.00	.00	.00	.00
27	.00	.00	458	3780	121	17	.00	.00	.00	.00	.00	.00
28	.00	.00	278	2700	119	11	.00	.00	.00	.00	.00	.00
29	.00	.00	222	1920	---	.51	.00	.00	.00	.00	.00	.00
30	.00	.00	2410	1480	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	2390	1170	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	430.24	12164.10	61217	8189	1525.11	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	14.3	392	1975	292	49.2	.000	.000	.000	.000	.000	.000
MAX	.00	215	2410	5620	938	109	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	401	119	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	853	24130	121400	16240	3030	.00	.00	.00	.00	.00	.00

e Estimated.

SALINAS RIVER BASIN

11152050 ARROYO SECO BELOW RELIZ CREEK, NEAR SOLEDAD, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	4.78	133	1231	477	820	126	38.8	.55	.000	.000	.000
MAX	.000	14.3	392	1975	944	1944	317	111	1.65	.000	.000	.000
(WY)	1995	1997	1997	1997	1996	1995	1995	1995	1995	1995	1995	1995
MIN	.000	.000	.000	69.1	178	49.2	.000	.000	.000	.000	.000	.000
(WY)	1995	1995	1995	1996	1995	1997	1997	1997	1996	1995	1995	1995

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1995 - 1997			
ANNUAL TOTAL	58544.14				83525.45							
ANNUAL MEAN	160				229				236			
HIGHEST ANNUAL MEAN									354			
LOWEST ANNUAL MEAN									126			
HIGHEST DAILY MEAN	4740				5620				17000			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					9310				31000			
INSTANTANEOUS PEAK STAGE					5.91				9.62			
ANNUAL RUNOFF (AC-FT)	116100				165700				171300			
10 PERCENT EXCEEDS	510				550				573			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11152300 SALINAS RIVER NEAR CHUALAR, CA

LOCATION.—Lat 36°33'20", long 121°32'55", in Guadalupe y Llanitos de Los Correos Grant, Monterey County, Hydrologic Unit 18060005, near left bank on upstream side of bridge on Chualar-River Road and 2 mi southwest of Chualar.

DRAINAGE AREA.—4,042 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1976 to current year.

REVISED RECORDS.—WDR CA-85-2: 1983–84(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 68.00 ft above sea level. Prior to January 1979, nonrecording gage at same site and datum. Prior to Aug. 19, 1991, at site 0.2 mi upstream at same datum.

REMARKS.—Records poor. Daily discharges prior to January 1979 determined by discharge measurements at this site correlated to streamflow for Salinas River at Soledad (station 11151700) and Salinas River near Spreckels (station 11152500). Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground water and small surface-water diversions for municipal use and for irrigation upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 92,000 ft³/s, estimated, Mar. 11, 1995, gage height, 19.70 ft, from rating curve extended above 18,000 ft³/s; peak flow includes an estimate of 8,800 ft³/s bypassing the gage; no flow at times during most years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	125	e34	6850	7910	715	120	.00	.00	113	61	83
2	127	96	e33	11200	6540	687	120	.00	.00	105	56	93
3	112	85	e32	16200	6620	632	121	.00	.00	98	51	97
4	96	83	27	17200	6530	601	e88	.00	.00	85	55	93
5	85	82	22	9840	5340	565	e82	.00	.00	77	59	88
6	81	81	15	7220	4150	415	e74	.00	.00	77	55	82
7	84	78	13	5940	4060	388	e68	.00	9.6	85	52	70
8	90	78	7.2	5520	2800	367	e64	.00	37	92	51	74
9	82	77	10	4760	2690	341	54	.00	49	87	51	82
10	79	79	53	4440	e2590	317	49	.00	55	81	50	80
11	80	80	2590	4330	e2480	297	44	.00	62	76	55	74
12	75	79	3300	3880	e2380	273	38	.00	66	70	64	74
13	70	77	3170	3510	e2280	252	34	.00	74	69	67	73
14	74	77	1750	3040	e2170	237	30	.00	83	74	72	75
15	80	84	1080	3650	e2070	219	26	.00	88	80	79	79
16	75	86	755	4770	e1970	205	20	.00	94	78	82	87
17	78	100	567	4230	e1870	194	15	.00	90	73	92	88
18	82	320	445	3700	e1760	196	12	.00	105	73	111	58
19	80	192	362	3340	1660	188	11	.00	123	69	125	16
20	77	118	306	3900	1570	192	8.4	.00	160	68	129	e3.0
21	78	106	274	4780	1460	189	6.9	.00	152	71	122	e.00
22	80	93	1020	5530	1320	204	6.0	.00	140	75	104	e.00
23	79	80	1210	10200	1280	210	2.6	.00	140	74	90	e.00
24	76	79	712	11500	1140	172	.00	.00	150	71	80	e.00
25	76	60	600	12000	1040	159	.00	.00	144	68	77	e.00
26	79	77	473	16600	903	151	.00	.00	129	65	81	e.00
27	79	75	466	23200	911	136	.00	.00	114	65	76	e.00
28	77	64	501	18100	796	123	.00	.00	119	67	69	e.00
29	79	57	1120	11700	---	e120	.00	.00	119	72	67	e.00
30	113	35	4510	8810	---	e118	.00	.00	119	70	73	e.00
31	140	---	4500	8230	---	e115	---	.00	---	63	76	---
TOTAL	2666	2803	29957.2	258170	78290	8978	1093.90	0.00	2421.60	2391	2332	1469.00
MEAN	86.0	93.4	966	8328	2796	290	36.5	.000	80.7	77.1	75.2	49.0
MAX	140	320	4510	23200	7910	715	121	.00	160	113	129	97
MIN	70	35	7.2	3040	796	115	.00	.00	.00	63	50	.00
AC-FT	5290	5560	59420	512100	155300	17810	2170	.00	4800	4740	4630	2910

e Estimated.

SALINAS RIVER BASIN

11152300 SALINAS RIVER NEAR CHUALAR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1997, BY WATER YEAR (WY)

MEAN	62.8	75.1	309	1283	1711	1752	439	175	65.1	55.9	56.7	79.5
MAX	286	474	2757	8328	7804	10690	2793	2418	767	462	381	425
(WY)	1983	1983	1983	1997	1983	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1981	1990	1990	1989	1977	1989	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1977 - 1997	
ANNUAL TOTAL	198176.85		390571.70			
ANNUAL MEAN	541		1070		500	
HIGHEST ANNUAL MEAN					2796	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	6720	Feb 22	23200	Jan 27	68000	Mar 12 1995
LOWEST DAILY MEAN	.00	Jan 12	.00	Apr 24	.00	Jan 27 1977
ANNUAL SEVEN-DAY MINIMUM	.00	May 6	.00	Apr 24	.00	Feb 3 1977
INSTANTANEOUS PEAK FLOW			25300	Jan 27	92000	Mar 11 1995
INSTANTANEOUS PEAK STAGE			13.43	Jan 27	19.70	Mar 11 1995
ANNUAL RUNOFF (AC-FT)	393100		774700		362200	
10 PERCENT EXCEEDS	1690		3670		840	
50 PERCENT EXCEEDS	79		81		42	
90 PERCENT EXCEEDS	1.3		.00		.00	

11152300 SALINAS RIVER NEAR CHUALAR, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1977 to current year.

CHEMICAL DATA: Water years 1977 to current year.

BIOLOGICAL DATA: Water years 1977–81.

SPECIFIC CONDUCTANCE: Water years 1977–81.

WATER TEMPERATURE: Water years 1967–69, 1977–81.

SEDIMENT DATA: December 1966 to September 1969, January 1977 to May 1995, June 1997 to September 1997.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: January 1977 to September 1981.

WATER TEMPERATURE: January 1977 to September 1981.

SUSPENDED-SEDIMENT DISCHARGE: December 1966 to September 1969.

INSTRUMENTATION.—Water-quality monitor from January 1977 to September 1981.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	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)
JAN												
16...	1200	4900	458	7.90	11.5	1600	768	9.80	89	160	51	36
JUN												
24...	1020	153	438	8.40	20.5	8.2	760	9.80	109	170	47	40
JUL												
23...	1105	74	416	8.70	19.0	6.2	760	10.0	108	160	48	39
SEP												
04...	1000	93	394	8.40	20.5	10	--	--	--	160	40	39

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 (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)
JAN										
16...	16	29	28	1	2.3	128	.000	104	92	.20
JUN										
24...	17	21	21	.7	1.6	150	.000	124	69	.2
JUL										
23...	16	21	21	.7	1.6	133	4.00	115	64	.2
SEP										
04...	15	18	20	.6	1.5	143	2.00	121	53	.2

DATE	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)	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 (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
JAN											
16...	17	291	280	.40	.010	.330	<.015	1.2	1.20	.070	.080
JUN											
24...	15	278	256	.38	<.01	.33	<.02	.3	.06	<.01	<.01
JUL											
23...	13	264	241	.36	<.01	.54	<.02	.5	.10	<.01	.01
SEP											
04...	15	257	231	.35	<.01	.99	<.02	.4	.07	.02	.02

SALINAS RIVER BASIN

11152300 SALINAS RIVER NEAR CHUALAR, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 24...	1045	153	20.5	26	11	80
JUL 23...	1110	74	19.0	48	9.6	88
SEP 04...	1020	93	20.5	52	13	82

11152500 SALINAS RIVER NEAR SPRECKELS, CA

LOCATION.—Lat 36°37'52", long 121°40'17", in Nacional Grant, Monterey County, Hydrologic Unit 18060005, on right bank on downstream side of bridge on Salinas-Monterey Highway, 0.8 mi upstream from El Toro Creek, 1.6 mi northwest of Spreckels, and 2 mi south of Salinas.

DRAINAGE AREA.—4,156 mi².

PERIOD OF RECORD.—January 1900 to August 1901, October 1929 to current year. Records for water year 1930 incomplete; yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900–01.

CHEMICAL DATA: Water years 1952–54, 1958–70, 1972–79. Published incorrectly as station 11152300 "near Chualar" in 1967.

BIOLOGICAL DATA: Water years 1975–77.

SPECIFIC CONDUCTANCE: Water years 1975 to January 1977, daily.

WATER TEMPERATURE: Water years 1967–79, daily. Published incorrectly as station 11152300 "near Chualar" in 1967–69.

SEDIMENT DATA: Water years 1950–51; 1967–79, daily; 1986, monthly; August 1990. Published incorrectly as station 11152300 "near Chualar" in 1967–69.

TURBIDITY: Water year 1973.

REVISED RECORDS.—WSP 1565: 1930, 1935, 1945. WSP 1715: 1959. WSP 1929: Drainage area. WDR CA-85-2: 1983.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 20.56 ft above sea level. 1900–01, May 10 to July 29, 1940, nonrecording gages at site 0.3 mi downstream at different datum. July 29, 1940, to May 22, 1969, water-stage recorder at site 0.3 mi downstream at datum 0.69 ft lower. May 23, 1969, to Jan. 13, 1970, nonrecording gage at same site and datum. Mar. 17, 1941, to June 30, 1961, supplementary nonrecording gages.

REMARKS.—Records poor. Flow regulated by Santa Margarita Lake (formerly Salinas Reservoir) beginning in 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground water and small surface-water diversions for municipal use and for irrigation upstream from station. See schematic diagram of Salinas River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 95,000 ft³/s, Mar. 12, 1995, gage height, 30.29 ft, from rating extended above 30,000 ft³/s, peak includes estimate of 9,800 ft³/s bypassing gage; no flow at times in 1929–40, many days in 1990–97.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	73	.00	4230	5610	777	.00	.00	.00	e2.2	.00	.00
2	6.2	60	.00	8700	5060	659	.00	.00	.00	.00	.00	.00
3	18	42	.00	12800	4950	592	.00	.00	.00	.00	.00	.00
4	28	30	.00	16300	4650	521	.00	.00	.00	.00	.00	.00
5	27	28	.00	9730	4430	448	.00	.00	.00	.00	.00	.00
6	16	29	.00	7060	4270	355	.00	.00	.00	.00	.00	.00
7	9.3	28	.00	6110	3610	268	.00	.00	.00	.00	.00	.00
8	15	23	.00	5460	2550	212	.00	.00	.00	.00	.00	.00
9	18	23	.00	5070	2260	170	.00	.00	.00	.00	.00	.00
10	14	24	24	4780	2330	134	.00	.00	.00	.00	.00	.00
11	12	26	2270	4550	2110	108	.00	.00	.00	.00	.00	.00
12	12	28	2940	4090	2150	76	.00	.00	.00	.00	.00	.00
13	5.2	26	2930	3090	2010	49	.00	.00	.00	.00	.00	.00
14	.45	22	1930	2440	1940	33	.00	.00	.00	.00	.00	.00
15	3.0	22	1480	2680	2040	21	.00	.00	.00	.00	.00	.00
16	11	28	1230	3390	1910	15	.00	.00	.00	.00	.00	.00
17	12	90	1060	3440	1800	12	.00	.00	.00	.00	.00	.00
18	14	73	911	3020	1580	8.9	.00	.00	.00	.00	.00	.00
19	18	211	705	2750	1430	6.4	.00	.00	.00	.00	.00	.00
20	14	79	556	3230	1480	4.3	.00	.00	.00	.00	.00	.00
21	8.7	60	584	4090	1420	3.0	.00	.00	.00	.00	.00	.00
22	10	73	1060	4300	1390	1.7	.00	.00	.00	.00	.00	.00
23	15	25	1630	8250	1300	.60	.00	.00	.00	.00	.00	.00
24	15	15	1280	9390	1220	.00	.00	.00	.00	.00	.00	.00
25	15	6.9	1120	8460	1140	.78	.00	.00	e3.0	.00	.00	.00
26	16	1.2	1040	11000	1070	.84	.00	.00	e14.6	.00	.00	.00
27	18	11	945	16900	1020	.40	.00	.00	e12.9	.00	.00	.00
28	18	7.2	1090	16200	914	.14	.00	.00	e10.0	.00	.00	.00
29	21	.95	1080	10700	---	.02	.00	.00	e7.3	.00	.00	.00
30	34	.00	3380	7940	---	.01	.00	.00	e4.1	.00	.00	.00
31	55	---	3850	6630	---	.00	---	.00	---	.00	.00	---
TOTAL	478.85	1165.25	33095.00	216780	67644	4477.09	0.00	0.00	51.90	2.20	0.00	0.00
MEAN	15.4	38.8	1068	6993	2416	144	.000	.000	1.73	.071	.000	.000
MAX	55	211	3850	16900	5610	777	.00	.00	15	2.2	.00	.00
MIN	.00	.00	.00	2440	914	.00	.00	.00	.00	.00	.00	.00
AC-FT	950	2310	65640	430000	134200	8880	.00	.00	103	4.4	.00	.00

e Estimated.

SALINAS RIVER BASIN

11152500 SALINAS RIVER NEAR SPRECKELS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1940, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.24	5.04	378	491	3003	1656	520	75.7	7.80	1.53	.81	1.82
MAX	12.0	12.0	3215	1742	11940	9543	2019	340	49.3	9.00	5.00	6.10
(WY)	1939	1939	1932	1940	1938	1938	1935	1938	1938	1938	1938	1932
MIN	.000	.000	.000	6.33	9.23	3.86	.70	.10	.10	.000	.000	.000
(WY)	1940	1940	1940	1931	1931	1931	1931	1931	1931	1931	1931	1931

SUMMARY STATISTICS

WATER YEARS 1930 - 1940

ANNUAL TOTAL	
ANNUAL MEAN	497
HIGHEST ANNUAL MEAN	1931
LOWEST ANNUAL MEAN	2.66
HIGHEST DAILY MEAN	69900
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	75000
INSTANTANEOUS PEAK STAGE	25.00
ANNUAL RUNOFF (AC-FT)	360400
10 PERCENT EXCEEDS	727
50 PERCENT EXCEEDS	4.7
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.8	34.3	227	966	1335	1273	492	117	32.1	18.6	20.1	30.7
MAX	402	389	2511	6993	9862	12640	6714	2839	767	403	354	394
(WY)	1970	1983	1983	1997	1969	1983	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1991	1991	1991	1991	1990	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1942 - 1997

ANNUAL TOTAL	178301.37	323694.29	
ANNUAL MEAN	487	887	376
HIGHEST ANNUAL MEAN			2997
LOWEST ANNUAL MEAN			.81
HIGHEST DAILY MEAN	6800	Feb 22	16900
LOWEST DAILY MEAN	.00	Jan 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00
INSTANTANEOUS PEAK FLOW			20600
INSTANTANEOUS PEAK STAGE			22.03
ANNUAL RUNOFF (AC-FT)	353700	642000	272700
10 PERCENT EXCEEDS	1650	3050	593
50 PERCENT EXCEEDS	4.2	.00	3.1
90 PERCENT EXCEEDS	.00	.00	.13

11152600 GABILAN CREEK NEAR SALINAS, CA

LOCATION.—Lat 36°45'21", long 121°36'34", in La Natividad Grant, Monterey County, Hydrologic Unit 18060011, on left bank at downstream side of county road bridge, 0.3 mi downstream from small left-bank tributary, and 6.2 mi northeast of Salinas.

DRAINAGE AREA.—36.7 mi².

PERIOD OF RECORD.—October 1970 to current year. January 1959 to September 1970 in reports of Monterey County Water Resources Agency.

REVISED RECORDS.—WDR CA-84-2: 1974(M), 1978(P), 1980–83(P).

GAGE.—Water-stage recorder and crest-stage gage. Concrete control since Oct. 9, 1975. Elevation of gage is 200 ft above sea level, from topographic map. Prior to Oct. 9, 1975, on right bank at different datum.

REMARKS.—Records fair except discharges greater than 200 ft³/s or less than 1 ft³/s, which are poor. Natural flow of stream affected by small diversions, storage reservoirs, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 898 ft³/s, Apr. 1, 1974, gage height, 11.13 ft, at datum then in use, from rating curve extended above 260 ft³/s on basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 60 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1730	491	3.82	Jan. 15	Unknown	206	3.45
Dec. 22	0030	582	4.09	Jan. 26	0930	688	4.77
Jan. 2	1245	822	5.04				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	90	67	8.8	10	1.3	.21	.00	.00	.00
2	.00	.00	.00	361	61	9.0	9.9	.98	.24	.00	.00	.00
3	.00	.00	.00	290	55	8.3	9.2	1.3	.29	.00	.00	.00
4	.00	.00	.00	137	51	7.8	7.7	1.1	.37	.00	.00	.00
5	.00	.00	16	108	46	7.6	7.1	1.2	.35	.00	.00	.00
6	.00	.00	11	78	43	7.0	6.5	1.3	.29	.00	.00	.00
7	.00	.00	5.7	64	44	7.1	6.5	1.2	.26	.00	.00	.00
8	.00	.00	3.7	55	39	7.2	6.0	.84	.24	.00	.00	.00
9	.00	.00	4.9	49	35	6.5	5.5	1.0	.24	.00	.00	.00
10	.00	.00	248	e44	38	6.6	4.9	.69	.22	.00	.00	.00
11	.00	.00	225	e40	27	6.1	4.9	1.0	.22	.00	.00	.00
12	.00	.00	125	e37	25	6.1	4.6	1.2	.07	.00	.00	.00
13	.00	.00	120	e35	23	8.9	4.6	.73	.00	.00	.00	.00
14	.00	.00	57	e70	21	7.9	3.9	.60	.00	.00	.00	.00
15	.00	.00	37	e130	21	9.0	3.1	.48	.00	.00	.00	.00
16	.00	.00	28	53	18	10	2.1	.52	.00	.00	.00	.00
17	.00	21	22	43	20	12	1.5	.51	.00	.00	.00	.00
18	.00	16	17	29	19	13	1.5	.46	.00	.00	.00	.00
19	.00	6.6	14	25	18	12	5.5	.50	.00	.00	.00	.00
20	.00	2.5	11	45	16	11	4.2	.73	.00	.00	.00	.00
21	.00	8.7	171	60	14	12	5.0	.43	.00	.00	.00	.00
22	.00	20	261	68	13	13	5.2	.35	.00	.00	.00	.00
23	.00	13	56	80	13	15	5.2	.28	.00	.00	.00	.00
24	.00	3.7	38	62	11	14	4.8	.24	.00	.00	.00	.00
25	.00	.82	33	172	13	15	4.5	.54	.00	.00	.00	.00
26	.00	.00	33	294	10	11	3.6	.25	.00	.00	.00	.00
27	.00	.00	34	184	8.9	12	4.2	.22	.00	.00	.00	.00
28	.00	.00	30	126	8.4	14	3.5	.17	.00	.00	.00	.00
29	.00	.00	36	99	---	12	3.6	.15	.00	.00	.00	.00
30	.00	.00	37	84	---	10	2.0	.15	.00	.00	.00	.00
31	.00	---	32	73	---	9.9	---	.17	---	.00	.00	---
TOTAL	0.00	92.32	1706.30	3085	778.3	309.8	150.8	20.59	3.00	0.00	0.00	0.00
MEAN	.000	3.08	55.0	99.5	27.8	9.99	5.03	.66	.10	.000	.000	.000
MAX	.00	21	261	361	67	15	10	1.3	.37	.00	.00	.00
MIN	.00	.00	.00	25	8.4	6.1	1.5	.15	.00	.00	.00	.00
AC-FT	.00	183	3380	6120	1540	614	299	41	6.0	.00	.00	.00

e Estimated.

TEMBLADERO SLOUGH BASIN

11152600 GABILAN CREEK NEAR SALINAS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.036	.56	4.10	10.5	12.9	14.8	7.80	1.98	.78	.25	.11	.028
MAX	.50	6.20	55.0	99.5	88.6	124	58.7	23.4	9.27	5.14	2.85	.58
(WY)	1984	1983	1997	1997	1983	1983	1974	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1971	1972	1972	1972	1972	1972	1971	1971	1971	1971	1971

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1971 - 1997

ANNUAL TOTAL	3984.76	6146.11	
ANNUAL MEAN	10.9	16.8	
HIGHEST ANNUAL MEAN			4.45
LOWEST ANNUAL MEAN			29.7
HIGHEST DAILY MEAN	261	Dec 22	377
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			822
INSTANTANEOUS PEAK STAGE			5.04
ANNUAL RUNOFF (AC-FT)	7900	12190	3220
10 PERCENT EXCEEDS	28	45	8.1
50 PERCENT EXCEEDS	.06	.29	.00
90 PERCENT EXCEEDS	.00	.00	.00

11154700 CLEAR CREEK NEAR IDRIA, CA

LOCATION.—Lat 36°21'53", long 120°45'19", in SE 1/4 sec.15, T.18 S., R.11 E., San Benito County, Hydrologic Unit 18060002, on right bank in Clear Creek Management Area, 1.7 mi upstream from San Benito River, and 5.8 mi southwest of Idria.

DRAINAGE AREA.—14.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1993 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 2,600 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, 1,100 ft³/s, Mar. 10, 1995, gage height, 6.75 ft, from rating curve extended above 18 ft³/s on basis of slope-area measurements at gage heights of 4.44 ft and 6.75 ft; minimum daily, 0.07 ft³/s, Sept. 7, 8, 1994.

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)
Oct. 29	1415	41	1.92	Jan. 1	1500	44	1.96
Dec. 10	1030	50	2.02	Jan. 20	0415	33	1.82
Dec. 22	0015	46	1.98	Jan. 26	1200	42	1.93

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.92	1.3	30	19	8.3	5.9	4.2	2.7	e1.6	1.0	.82
2	1.4	.84	1.2	30	18	8.2	5.9	4.1	2.6	e1.6	1.0	.82
3	1.3	.80	1.1	20	17	8.1	5.4	4.0	2.6	e1.6	.99	.84
4	1.3	.73	1.2	11	17	8.0	5.3	4.0	2.9	e1.6	.97	.83
5	1.3	.70	1.5	8.9	16	7.8	5.3	3.9	2.8	e1.6	.94	.82
6	1.2	.68	1.4	7.1	15	7.8	5.2	3.9	2.6	e1.6	.93	.79
7	1.2	.68	1.3	5.9	14	7.7	5.1	3.8	2.6	e1.5	.90	.78
8	1.3	.69	1.3	5.2	14	7.6	5.1	3.8	2.5	e1.5	.88	.77
9	1.3	.69	3.5	4.7	13	7.4	5.1	3.7	2.7	e1.5	.87	.77
10	1.3	.72	24	4.4	13	7.3	5.0	3.6	2.6	e1.5	.93	.77
11	1.3	.72	15	4.1	12	7.3	4.9	3.6	2.4	e1.5	.96	.78
12	1.4	.72	9.1	4.8	12	7.0	4.9	3.5	2.3	e1.5	.96	.78
13	1.3	.73	6.4	4.4	11	7.0	4.9	3.5	2.3	e1.4	.93	.77
14	.80	.72	4.7	3.5	11	6.8	4.8	3.4	2.2	e1.4	.90	.76
15	.78	.67	3.8	8.9	11	6.8	4.7	3.4	2.2	e1.4	.88	.76
16	.73	.68	3.2	5.7	11	6.9	4.7	3.4	2.1	e1.4	.87	.77
17	.72	1.6	2.8	5.0	11	6.6	4.6	3.4	e1.9	e1.4	.89	.77
18	.74	1.2	2.6	4.6	10	6.4	4.6	3.3	e1.9	e1.4	.90	.84
19	.70	.99	2.5	4.3	9.6	6.3	4.6	3.2	e1.9	e1.4	.89	.80
20	.71	1.1	2.3	11	9.4	6.3	4.5	3.2	e1.8	e1.3	.99	.78
21	.72	6.4	8.4	9.2	9.4	6.3	4.5	3.2	e1.8	e1.3	.91	.77
22	.79	4.1	20	19	9.7	6.3	4.4	3.1	e1.8	e1.3	.87	.75
23	.85	2.3	8.1	26	9.5	6.2	4.3	3.3	e1.8	1.3	.86	.74
24	.94	1.8	5.5	21	9.2	6.1	4.3	3.2	e1.8	1.2	.87	.73
25	1.0	1.6	4.4	30	9.0	6.0	4.2	3.1	e1.7	1.2	.87	.74
26	.95	1.4	4.0	34	9.0	5.9	4.1	3.0	e1.7	1.1	.86	.75
27	.86	1.4	4.2	28	9.0	5.8	4.1	3.0	e1.7	1.1	.86	.74
28	.90	1.3	3.4	25	8.6	5.8	4.1	3.0	e1.7	1.1	.85	.73
29	8.7	1.2	3.8	24	---	5.7	4.0	2.9	e1.7	1.1	.84	.72
30	2.6	1.2	18	22	---	5.8	4.0	2.9	e1.7	1.1	.84	.72
31	1.3	---	13	20	---	5.9	---	2.8	---	1.1	.83	---
TOTAL	41.69	39.28	183.0	441.7	337.4	211.4	142.5	106.4	65.0	42.6	28.04	23.21
MEAN	1.34	1.31	5.90	14.2	12.1	6.82	4.75	3.43	2.17	1.37	.90	.77
MAX	8.7	6.4	24	34	19	8.3	5.9	4.2	2.9	1.6	1.0	.84
MIN	.70	.67	1.1	3.5	8.6	5.7	4.0	2.8	1.7	1.1	.83	.72
AC-FT	83	78	363	876	669	419	283	211	129	84	56	46

e Estimated.

PAJARO RIVER BASIN

11154700 CLEAR CREEK NEAR IDRIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.97	1.00	2.35	10.5	8.57	17.3	7.83	4.72	3.16	1.79	1.07	.88
MAX	1.34	1.31	5.90	24.6	12.1	49.4	19.9	10.7	7.66	4.10	2.26	1.47
(WY)	1997	1997	1997	1995	1997	1995	1995	1995	1995	1995	1995	1995
MIN	.23	.36	.43	1.25	2.87	1.79	1.35	1.11	.62	.27	.10	.11
(WY)	1995	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1994 - 1997	
ANNUAL TOTAL	1395.98		1662.22			
ANNUAL MEAN	3.81		4.55		5.01	
HIGHEST ANNUAL MEAN					11.0	
LOWEST ANNUAL MEAN					1.06	
HIGHEST DAILY MEAN	27 Feb 21		34 Jan 26		464 Mar 10 1995	
LOWEST DAILY MEAN	.67 Nov 15		.67 Nov 15		.07 Sep 7 1994	
ANNUAL SEVEN-DAY MINIMUM	.70 Nov 5		.70 Nov 5		.08 Sep 2 1994	
INSTANTANEOUS PEAK FLOW			50 Dec 10		1100 Mar 10 1995	
INSTANTANEOUS PEAK STAGE			2.02 Dec 10		6.75 Mar 10 1995	
ANNUAL RUNOFF (AC-FT)	2770		3300		3630	
10 PERCENT EXCEEDS	10		11		12	
50 PERCENT EXCEEDS	1.8		2.6		1.5	
90 PERCENT EXCEEDS	.97		.77		.37	

11154700 CLEAR CREEK NEAR IDRIA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1993 to current year.

CHEMICAL DATA: November 1993 to December 1996.

WATER TEMPERATURE: October 1993 to September 1996.

SEDIMENT DATA: November 1993 to July 1997.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1993 to September 1996.

REMARKS.—Zero bedload discharge observed for flows less than 5.3 ft³/s during current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: Maximum recorded, 35.5°C, Aug. 13–15, 1994; minimum recorded, 0.0°C, several days during water year 1994, and Jan. 23, 1996.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV 20...	1115	1.00	1040	8.90	11.0	.20	694	620	9
DEC 31...	1245	14.0	865	8.90	11.5	23	695	500	--

DATE	CALCIUM DIS- SOLVED (MG/L AS MG) (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)
NOV 20...	2.2	150	11	4	.2	1.2	649	49.0
DEC 31...	2.9	120	6.9	3	.1	.90	523	47.0

DATE	ALKA- LINIT 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 SI02) (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)
NOV 20...	614	6.0	22	<.10	2.4	598	563	.81
DEC 31...	507	7.1	15	<.10	5.6	471	463	.64

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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)
NOV 20...	1120	1.0	11.0	4	.01	64	--	--	--
DEC 19...	1100	2.5	3.5	9	.06	80	--	--	--
DEC 31...	1410	15	11.5	12	.49	61	70	85	100
FEB 21...	1450	9.1	12.0	4	.10	72	--	--	--
APR 10...	1125	5.3	12.0	1	.01	--	--	--	--

PAJARO RIVER BASIN

11154700 CLEAR CREEK NEAR IDRIA, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		NUMBER OF SAM- PLING POINTS (COUNT) (00063)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	
DATE	TIME								
NOV									
20...	1145	1	1.0	11.0	1	2	6	10	
20...	1146	1	1.0	11.0	1	3	7	9	
20...	1147	1	1.0	11.0	1	2	8	18	
20...	1148	1	1.0	11.0	--	--	1	5	
20...	1149	1	1.0	11.0	--	--	2	5	
20...	1150	1	1.0	11.0	--	1	6	12	
20...	1151	1	1.0	11.0	--	1	18	38	
20...	1152	1	1.0	11.0	--	1	3	6	
20...	1153	1	1.0	11.0	2	4	10	24	
20...	1154	1	1.0	11.0	1	5	25	56	
JUL									
22...	1130	1	1.3	35.0	2	13	40	57	
22...	1131	1	1.3	35.0	2	6	27	40	
22...	1132	1	1.3	35.0	--	1	10	29	
22...	1133	1	1.3	35.0	--	1	14	21	
22...	1134	1	1.3	35.0	--	1	2	7	
22...	1135	1	1.3	35.0	--	--	--	--	
22...	1136	1	1.3	35.0	2	5	10	17	
22...	1137	1	1.3	35.0	1	2	9	12	
		BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM (80174)	BED MAT. SIEVE DIAM. % FINER THAN 128 MM (80175)
DATE									
NOV									
20...	16	23	35	52	74	100	--	--	
20...	10	10	11	11	11	11	11	100	
20...	29	38	47	56	72	100	--	--	
20...	11	16	20	27	40	67	100	--	
20...	13	22	31	40	53	72	100	--	
20...	22	30	37	45	58	66	100	--	
20...	62	73	76	78	84	100	--	--	
20...	13	17	21	28	39	77	100	--	
20...	40	49	60	71	96	100	--	--	
20...	68	71	74	78	90	100	--	--	
JUL									
22...	61	63	69	79	92	100	--	--	
22...	50	53	56	62	71	100	--	--	
22...	50	65	81	87	95	100	--	--	
22...	35	45	52	60	76	100	--	--	
22...	14	16	17	17	19	27	57	100	
22...	--	--	--	--	1	11	100	--	
22...	23	25	26	27	31	39	100	--	
22...	13	14	15	15	15	22	58	100	

11154700 CLEAR CREEK NEAR IDRIA, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC									
31...	1420	1000	1150	.250	0	1412	1423	30	.7
31...	1430	1000	1150	.250	0	1425	1433	30	.7

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE T/D/FT (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN (80227)
DEC									
31...	2	15	15	1.10	15	11.5	.34	4.3	--
31...	2	15	15	1.10	15	11.5	.48	4.3	1

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)
DEC								
31...	5	15	35	55	75	91	98	100
31...	3	20	49	70	85	94	100	--

11156500 SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CA

LOCATION.—Lat 36°36'34", long 121°12'07", in SE 1/4 SE 1/4 sec.21, T.15 S., R.7 E., San Benito County, Hydrologic Unit 18060002, on left bank 0.9 mi northwest of Willow Creek School, 1.3 mi downstream from Willow Creek, and 10 mi northwest of San Benito.

DRAINAGE AREA.—249 mi².

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1565: 1948(M), 1949. WSP 1315-B: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 925.52 ft above sea level. Prior to Jan. 28, 1948, and Nov. 11, 1955, to Sept. 30, 1965, at site 0.9 mi downstream at different datum. Jan. 28, 1948, to Nov. 10, 1955, and Oct. 1, 1965, to Oct. 22, 1970, at present site at datum 2.37 ft higher.

REMARKS.—Records fair. Low flow regulated by Hernandez Reservoir 40 mi upstream beginning in December 1961, capacity, 18,500 acre-ft. Small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,660 ft³/s, Mar. 10, 1995, gage height, 14.55 ft, from flood marks, from rating curve extended above 2,100 ft³/s on basis of slope-area measurement at gage height 12.94 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of February 1938 reached a stage of about 9.0 ft, from floodmarks at former site 0.9 mi downstream, referenced to datum used at that site, flow estimated at 9,000 ft³/s based on 1941 peak and rating extrapolation.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1515	1,170	8.16

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	7.4	32	e350	161	e70	16	3.8	1.9	.83	.64
2	23	13	7.1	164	e325	159	e48	16	3.7	1.8	.76	.58
3	23	11	6.9	173	e315	154	42	17	3.3	1.7	.72	.56
4	22	10	6.8	36	e305	153	36	15	3.8	1.6	.69	.52
5	22	9.2	7.4	31	e275	154	27	15	4.3	1.5	.78	.46
6	21	9.0	6.7	25	e245	158	23	14	3.5	1.4	.71	.46
7	20	8.5	6.2	21	e225	161	23	13	3.0	1.3	.64	.46
8	20	8.1	6.2	20	e218	159	22	14	2.5	1.3	.58	.46
9	19	7.8	8.1	18	e210	157	21	14	2.6	1.3	.58	.46
10	20	7.5	7.8	17	e205	160	20	13	2.2	1.4	.58	.45
11	20	6.9	175	16	e200	158	26	12	2.2	1.4	.72	.42
12	20	6.8	30	31	e195	197	26	11	2.0	1.4	.77	.46
13	19	6.8	20	32	e190	202	20	9.4	2.1	1.5	.73	.46
14	20	6.8	15	15	e185	201	18	8.8	2.4	1.5	.73	.46
15	17	7.1	13	50	187	200	17	8.0	2.4	1.5	.73	.45
16	12	7.6	12	52	181	197	15	8.2	2.3	1.3	.66	.40
17	12	14	11	29	187	195	14	7.5	2.4	1.4	.74	.40
18	11	11	10	25	177	191	12	7.1	2.2	1.4	.81	.40
19	10	8.9	9.8	22	175	189	19	7.3	2.1	1.4	.85	.40
20	8.4	8.4	9.1	41	174	190	17	6.4	2.0	1.3	.86	.47
21	7.7	10	17	55	175	189	14	5.9	2.1	1.3	.81	.52
22	7.1	14	175	151	175	191	13	5.8	2.3	1.3	.79	.52
23	6.7	14	63	371	174	190	13	5.9	2.3	1.3	.65	.52
24	6.2	11	25	313	171	188	13	6.7	2.0	1.4	.65	.52
25	6.0	9.7	19	456	168	194	13	6.6	1.9	1.1	.73	.52
26	6.2	8.5	16	818	169	195	14	5.9	1.7	1.0	.73	.52
27	7.3	8.4	16	749	168	187	14	5.4	1.7	.93	.66	.52
28	8.0	7.8	13	620	165	186	15	4.7	1.9	.90	.65	.52
29	19	7.8	13	519	---	176	15	4.3	2.0	.95	.65	.51
30	36	7.8	49	486	---	166	17	4.2	1.9	.94	.65	.50
31	25	---	54	404	---	e120	---	3.8	---	.81	.65	---
TOTAL	497.6	283.4	905.7	5792	5889	5478	657	291.9	74.6	41.23	22.09	14.54
MEAN	16.1	9.45	29.2	187	210	177	21.9	9.42	2.49	1.33	.71	.48
MAX	36	16	175	818	350	202	70	17	4.3	1.9	.86	.64
MIN	6.0	6.8	6.2	15	165	120	12	3.8	1.7	.81	.58	.40
AC-FT	987	562	1800	11490	11680	10870	1300	579	148	82	44	29

e Estimated.

11156500 SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.60	5.77	15.8	34.4	60.9	79.1	42.1	21.2	19.4	14.5	13.5	10.6
MAX	53.4	51.6	181	238	471	655	532	130	88.5	79.2	71.0	67.2
(WY)	1996	1996	1956	1952	1941	1983	1958	1983	1962	1967	1967	1978
MIN	.013	.069	.095	.081	.11	.23	.21	.15	.078	.019	.000	.000
(WY)	1962	1990	1991	1990	1991	1977	1990	1961	1989	1961	1961	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1940 - 1997			
ANNUAL TOTAL	8301.5				19947.06							
ANNUAL MEAN	22.7				54.6				26.8			
HIGHEST ANNUAL MEAN									126			
LOWEST ANNUAL MEAN									.15			
HIGHEST DAILY MEAN	229				818				5000			
LOWEST DAILY MEAN	3.0				.40				.00			
ANNUAL SEVEN-DAY MINIMUM	3.5				.42				.00			
INSTANTANEOUS PEAK FLOW					1170				9660			
INSTANTANEOUS PEAK STAGE					8.16				14.55			
ANNUAL RUNOFF (AC-FT)	16470				39560				19430			
10 PERCENT EXCEEDS	34				188				56			
50 PERCENT EXCEEDS	19				10				3.5			
90 PERCENT EXCEEDS	6.8				.65				.18			

11157500 TRES PINOS CREEK NEAR TRES PINOS, CA

LOCATION.—Lat 36°45'53", long 121°17'45", in Santa Ana y Quien Sabe Grant, San Benito County, Hydrologic Unit 18060002, on right bank 2.0 mi southeast of Tres Pinos, and 4.7 mi upstream from mouth.

DRAINAGE AREA.—208 mi².

PERIOD OF RECORD.—October 1939 to September 1983, October 1996 to September 1997. Yearly estimate only for 1940 and monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder. Altitude of gage is 515 ft above sea level, from topographic map. From 1939 to 1983, located 1.5 mi. upstream at different datum.

REMARKS.—Records poor. No regulation; diversions above station for irrigation can divert total flow in summer months, and since 1962, diversions into basin above station from San Benito River, via Paicines Reservoir, for groundwater recharge and irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,790 ft³/s, Jan. 27, 1983, gage height, 11.14 ft, from rating curve extended above 3,500 ft³/s at location and datum then in use; no flow at times in 1952, 1957–61, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in February 1938 reached a stage of about 9.0 ft, from floodmarks at datum then in use.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 450 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0330	540	5.17	Jan. 15	1745	616	5.27
Dec. 10	2330	1,670	6.26	Jan. 20	1530	624	5.28
Jan. 2	2115	5,060	8.65	Jan. 26	1145	7,030	9.88

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.3	8.1	e1.7	57	121	18	6.4	3.7	.77	2.5	4.1	2.9
2	e4.2	6.9	e1.5	1270	78	17	5.9	4.0	1.2	2.5	3.8	3.1
3	e4.1	7.9	e3.0	690	70	17	5.2	3.8	.59	2.4	3.9	3.2
4	4.4	9.5	e9.5	188	68	17	4.8	4.0	2.0	2.6	3.6	2.9
5	5.4	11	e35	167	62	17	4.6	4.1	1.4	2.6	3.0	2.6
6	5.5	8.9	e140	110	53	17	4.4	4.1	1.2	2.6	2.8	2.7
7	5.4	9.7	e80	73	45	16	4.3	4.1	1.3	2.7	2.6	2.7
8	5.5	6.5	e45	32	45	15	4.2	4.0	1.9	2.6	2.6	2.7
9	7.6	7.9	e21	20	43	15	3.8	4.0	2.0	2.5	2.6	2.6
10	8.1	6.2	e250	14	42	14	3.9	4.0	2.0	2.5	2.7	2.7
11	7.4	6.4	e1200	11	40	14	3.7	3.8	2.2	3.1	2.7	2.9
12	7.0	6.4	e600	19	41	14	3.6	3.5	2.3	3.9	2.6	2.9
13	8.8	6.7	e350	124	42	13	3.6	3.1	2.4	3.7	2.9	2.9
14	8.7	6.7	e220	43	41	12	3.4	3.2	2.9	4.1	2.8	2.9
15	7.5	6.5	e170	264	38	12	3.3	3.1	3.0	3.8	2.9	2.9
16	5.0	5.4	e80	136	33	12	3.4	3.0	3.3	3.3	2.9	3.0
17	4.7	49	e30	64	31	11	3.3	3.1	2.8	3.5	3.0	3.0
18	4.4	123	e16	51	30	10	3.3	2.9	2.9	4.3	3.0	3.2
19	4.9	25	e13	41	25	9.5	3.5	2.8	3.1	4.0	2.7	3.1
20	5.3	6.4	e11	e150	23	9.5	3.5	2.6	3.9	3.6	2.7	3.0
21	5.3	14	e13	e250	21	9.0	3.6	2.2	3.9	3.6	2.6	2.9
22	4.9	277	e70	e300	21	8.9	3.6	1.7	2.9	3.6	2.6	2.9
23	6.8	53	e250	e400	20	8.7	3.5	.93	3.0	3.7	2.7	3.2
24	7.1	5.4	97	e200	20	8.2	3.4	.43	2.7	3.8	2.6	3.1
25	7.2	e4.3	66	907	20	7.8	3.2	1.3	2.5	4.1	2.9	3.0
26	7.2	e3.3	45	1770	21	7.6	2.7	.96	2.5	4.1	2.8	3.1
27	7.2	e2.7	43	968	24	7.3	2.9	.65	2.6	4.1	3.0	2.9
28	7.0	e2.3	34	695	21	7.3	3.1	.24	2.6	4.0	2.8	2.9
29	6.8	e2.1	28	362	---	7.3	3.4	.00	2.4	3.8	2.5	3.0
30	8.3	e1.8	47	168	---	6.9	3.6	.03	2.6	3.8	2.7	3.8
31	8.4	---	81	160	---	6.3	---	.90	---	3.8	2.8	---
TOTAL	194.4	690.0	4050.7	9704	1139	365.3	115.1	80.24	70.86	105.2	89.9	88.7
MEAN	6.27	23.0	131	313	40.7	11.8	3.84	2.59	2.36	3.39	2.90	2.96
MAX	8.8	277	1200	1770	121	18	6.4	4.1	3.9	4.3	4.1	3.8
MIN	4.1	1.8	1.5	11	20	6.3	2.7	.00	.59	2.4	2.5	2.6
AC-FT	386	1370	8030	19250	2260	725	228	159	141	209	178	176

e Estimated.

11157500 TRES PINOS CREEK NEAR TRES PINOS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.63	4.22	16.3	40.9	51.0	40.5	24.4	5.60	4.56	4.49	4.07	3.23
MAX	7.40	23.0	205	313	367	391	327	33.0	17.8	18.9	20.6	14.1
(WY)	1970	1997	1956	1997	1978	1983	1958	1973	1979	1979	1978	1983
MIN	.22	.19	.64	1.06	.88	.52	.18	.22	.21	.14	.15	.12
(WY)	1965	1965	1978	1961	1961	1948	1964	1964	1950	1966	1965	1964

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	16693.40		
ANNUAL MEAN	45.7	16.6	
HIGHEST ANNUAL MEAN		95.9	1983
LOWEST ANNUAL MEAN		.69	1964
HIGHEST DAILY MEAN	1770	3300	Mar 2 1983
LOWEST DAILY MEAN	.00	.00	Aug 30 1952
ANNUAL SEVEN-DAY MINIMUM	.51	.06	Aug 22 1959
INSTANTANEOUS PEAK FLOW	7030	8790	Jan 27 1983
INSTANTANEOUS PEAK STAGE	9.88	11.14	Jan 27 1983
ANNUAL RUNOFF (AC-FT)	33110	12060	
10 PERCENT EXCEEDS	75	17	
50 PERCENT EXCEEDS	4.1	2.8	
90 PERCENT EXCEEDS	2.5	.42	

11158600 SAN BENITO RIVER AT STATE HIGHWAY 156, NEAR HOLLISTER, CA

LOCATION.—Lat 36°51'07", long 121°25'44", in San Justo Grant, San Benito County, Hydrologic Unit 18060002, on right bank at downstream side of bridge on State Highway 156 and 1.6 mi west of Hollister.

DRAINAGE AREA.—607 mi².

PERIOD OF RECORD.—October 1970 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 poor. Low flows regulated by Hernandez Reservoir 73 mi upstream, capacity, 18,500 acre-ft. Some diversions upstream from station for irrigation. Percolation ponds are constructed upstream from station during summer months.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,700 ft³/s, Mar. 10, 1995, gage height, 13.30 ft, from rating curve extended above 3,800 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	1115	1,190	4.42	Jan. 2	2330	5,520	8.58
Dec. 11	0315	2,220	5.87	Jan. 15	1915	626	3.27
Dec. 22	0730	1,480	4.88	Jan. 26	1415	6,850	9.35

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	48	25	143	323	189	99	8.7	11	3.7	5.8	6.4
2	7.2	26	24	1620	312	187	54	7.4	9.9	3.8	5.6	6.4
3	8.4	16	21	2140	308	189	42	8.2	9.8	4.0	5.6	6.1
4	9.0	11	34	609	311	186	36	7.4	8.0	4.1	5.8	6.1
5	7.7	8.8	44	417	295	186	27	6.6	8.4	4.1	5.8	6.1
6	5.9	7.0	153	303	256	184	17	6.4	8.4	3.9	5.8	6.6
7	2.4	5.6	139	215	245	183	14	5.2	8.4	4.1	6.1	6.3
8	8.5	5.7	82	171	243	178	12	3.2	10	4.8	6.0	6.2
9	12	5.7	54	138	238	181	10	9.3	10	5.5	5.8	6.1
10	11	5.0	204	116	237	176	8.1	11	11	6.2	5.8	6.0
11	12	5.2	1310	93	233	178	7.0	11	11	6.2	5.6	6.2
12	11	5.7	479	93	229	180	8.5	9.5	8.9	6.6	5.6	6.1
13	10	6.0	254	241	221	203	11	11	8.8	6.9	5.6	6.1
14	10	5.9	198	183	206	207	7.2	16	8.8	6.4	6.3	6.1
15	9.7	5.4	107	344	192	206	5.7	15	7.9	3.4	6.8	6.2
16	8.4	4.8	82	418	189	206	4.3	13	7.7	4.9	7.2	6.2
17	13	52	50	224	191	206	3.6	13	6.5	5.9	7.1	5.6
18	4.1	161	31	148	194	202	4.3	12	1.9	6.1	7.6	6.9
19	.36	62	25	109	184	202	7.2	4.4	.33	6.6	7.8	7.0
20	.00	17	17	245	174	201	7.1	2.5	.33	6.9	7.9	7.0
21	.00	26	70	505	175	195	6.2	2.7	.45	7.0	7.6	7.0
22	.00	371	859	594	171	196	5.0	8.0	2.6	7.4	4.7	7.1
23	.00	307	495	965	178	193	5.0	11	2.6	7.6	7.1	7.1
24	3.3	164	176	672	204	196	5.0	12	2.9	6.9	7.2	6.5
25	14	104	103	1220	201	195	5.3	11	3.7	6.3	7.0	6.4
26	15	59	75	2770	204	184	5.3	11	3.8	5.9	6.9	6.2
27	14	38	57	e1560	202	177	4.8	6.3	4.5	5.6	6.8	6.1
28	11	33	49	623	200	172	5.8	9.8	4.0	5.6	7.0	6.0
29	6.7	40	39	452	---	174	6.3	7.5	4.2	5.6	7.2	6.1
30	23	27	42	360	---	161	7.4	8.9	4.3	5.6	7.0	6.2
31	54	---	130	332	---	155	---	10	---	5.7	7.0	---
TOTAL	300.66	1632.8	5428	18023	6316	5828	441.1	279.0	190.11	173.3	201.1	190.4
MEAN	9.70	54.4	175	581	226	188	14.7	9.00	6.34	5.59	6.49	6.35
MAX	54	371	1310	2770	323	207	99	16	11	7.6	7.9	7.1
MIN	.00	4.8	17	93	171	155	3.6	2.5	.33	3.4	4.7	5.6
AC-FT	596	3240	10770	35750	12530	11560	875	553	377	344	399	378

e Estimated.

11158600 SAN BENITO RIVER AT STATE HIGHWAY 156, NEAR HOLLISTER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.86	6.94	20.9	75.5	106	148	32.9	10.6	5.93	5.06	5.78	4.99
MAX	10.4	54.4	175	581	613	1545	373	184	18.1	18.0	19.5	16.3
(WY)	1996	1997	1997	1997	1978	1983	1983	1983	1983	1980	1995	1973
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1973	1975	1977	1977	1977	1977	1977	1976	1972	1972	1972	1972

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1971 - 1997	
ANNUAL TOTAL	15720.26		39003.47		35.2	
ANNUAL MEAN	43.0		107		269	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	1310	Dec 11	2770	Jan 26	8860	Mar 1 1983
LOWEST DAILY MEAN	.00	May 11	.00	Oct 20	.00	Feb 1 1971
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 18	1.1	Oct 18	.00	Oct 11 1971
INSTANTANEOUS PEAK FLOW			6850	Jan 26	16700	Mar 10 1995
INSTANTANEOUS PEAK STAGE			9.35	Jan 26	13.30	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	31180		77360		25490	
10 PERCENT EXCEEDS	86		237		30	
50 PERCENT EXCEEDS	11		9.8		1.4	
90 PERCENT EXCEEDS	5.0		4.6		.00	

11159000 PAJARO RIVER AT CHITTENDEN, CA

LOCATION.—Lat 36°54'01", long 121°35'48", in Salspuedes Grant, Santa Cruz County, Hydrologic Unit 18060002, on left bank at downstream side of bridge on State Highway 129, 0.6 mi downstream from Pescadero Creek, 0.6 mi southeast of Chittenden, and 2.3 mi downstream from San Benito River.

DRAINAGE AREA.—1,186 mi².

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."

CHEMICAL DATA: Water years 1952–92.

BIOLOGICAL DATA: Water years 1978–81.

SPECIFIC CONDUCTANCE: Water years 1978–81, daily.

WATER TEMPERATURE: Water years 1978–81, daily.

SEDIMENT DATA: Water years 1978–92.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 81.89 ft above sea level. Prior to May 13, 1949, nonrecording gage on former bridge 100 ft downstream at same datum except for periods in 1947 and 1948 when a water-stage recorder was in use.

REMARKS.—Records fair. Low flows regulated by Hernandez Reservoir, capacity, 18,500 acre-ft; Pacheco Lake, capacity, 6,140 acre-ft; Chesbro Reservoir, capacity, 8,090 acre-ft; Uvas Reservoir, capacity, 9,950 acre-ft; and San Felipe Lake. Many diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,000 ft³/s, Dec. 24, 1955, gage height, 32.46 ft, from rating curve extended above 8,300 ft³/s on basis of slope-conveyance study; maximum gage height, 33.11 ft, Apr. 3, 1958; no flow at times in July and August 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in February 1938 reached a stage of 31.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	1930	594	8.75	Jan. 3	0500	15,800	29.53
Dec. 11	0830	5,870	21.26	Jan. 26	1815	11,700	26.92
Dec. 22	1600	4,500	19.23				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	16	64	3680	1930	395	204	50	24	14	9.1	7.5
2	7.4	24	58	12000	1750	382	151	50	24	14	9.1	7.1
3	7.8	24	55	14000	1550	379	134	49	24	14	10	6.9
4	7.4	18	52	9360	1310	370	126	45	28	13	9.0	6.5
5	9.6	15	95	4680	1200	362	118	42	27	13	8.2	6.7
6	8.4	14	147	2610	1020	352	108	41	25	13	9.1	6.6
7	6.9	14	189	1930	900	341	99	40	24	11	9.4	6.4
8	6.5	14	151	1650	839	327	95	38	25	11	9.0	6.6
9	6.6	14	138	1390	798	317	90	37	24	11	9.7	5.7
10	6.8	14	1710	1220	762	312	86	35	22	12	10	6.2
11	7.0	14	4840	1130	723	310	83	34	24	12	10	5.5
12	8.1	13	2590	1050	681	304	77	33	23	13	9.3	5.3
13	8.3	12	2010	1100	645	316	78	32	23	13	8.8	5.0
14	8.7	13	1330	1000	594	318	84	30	25	12	8.4	6.2
15	8.1	13	933	1190	570	320	74	29	24	12	9.0	6.0
16	7.1	14	708	1230	544	320	68	28	21	13	9.3	5.1
17	7.5	115	554	999	526	318	64	27	18	11	10	4.9
18	8.0	140	418	871	513	312	62	25	19	10	10	4.9
19	7.6	224	325	778	486	303	71	25	18	11	8.2	5.4
20	7.6	216	256	1020	465	301	77	25	17	12	8.5	4.6
21	7.4	137	703	1820	447	297	73	24	17	12	9.0	5.2
22	7.0	298	3800	2320	432	290	68	23	19	12	8.0	5.4
23	7.4	368	3400	6550	424	286	66	22	18	12	8.5	4.9
24	7.7	268	2050	5040	446	284	63	24	16	12	9.0	4.0
25	8.1	196	1540	6210	432	281	61	23	17	12	8.7	4.4
26	8.3	150	1210	9050	430	271	57	22	17	11	7.8	4.4
27	8.1	119	1050	9110	430	261	54	22	17	11	8.0	4.2
28	8.0	97	1020	5850	414	253	54	24	16	9.8	7.6	4.9
29	9.4	83	777	3470	---	247	52	25	17	9.8	8.0	4.9
30	12	72	1570	2610	---	241	51	28	16	10	7.6	4.5
31	12	---	1580	2240	---	231	---	27	---	9.5	8.1	---
TOTAL	248.5	2729	35323	117158	21261	9601	2548	979	629	366.1	274.4	165.9
MEAN	8.02	91.0	1139	3779	759	310	84.9	31.6	21.0	11.8	8.85	5.53
MAX	12	368	4840	14000	1930	395	204	50	28	14	10	7.5
MIN	6.5	12	52	778	414	231	51	22	16	9.5	7.6	4.0
AC-FT	493	5410	70060	232400	42170	19040	5050	1940	1250	726	544	329

11159000 PAJARO RIVER AT CHITTENDEN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.20	31.9	149	441	528	464	247	47.9	14.2	7.65	6.02	6.29
MAX	22.7	843	1990	3779	2641	4227	3165	646	92.9	26.2	22.1	93.3
(WY)	1984	1951	1956	1997	1969	1983	1958	1983	1983	1983	1983	1959
MIN	.10	.27	.60	1.22	1.28	1.50	.97	.75	.66	.37	.37	.24
(WY)	1962	1993	1962	1991	1991	1977	1977	1977	1977	1961	1948	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1940 - 1997			
ANNUAL TOTAL	139266.1				191282.9							
ANNUAL MEAN	381				524				161			
HIGHEST ANNUAL MEAN									905			
LOWEST ANNUAL MEAN									1.06			
HIGHEST DAILY MEAN	7830				Feb 20				21700			
LOWEST DAILY MEAN	6.5				Sep 30				.00			
ANNUAL SEVEN-DAY MINIMUM	6.8				Sep 24				.00			
INSTANTANEOUS PEAK FLOW					15800				24000			
INSTANTANEOUS PEAK STAGE					29.53				33.11			
INSTANTANEOUS LOW FLOW									.00			
ANNUAL RUNOFF (AC-FT)	276200				379400				116300			
10 PERCENT EXCEEDS	1110				1220				240			
50 PERCENT EXCEEDS	49				28				11			
90 PERCENT EXCEEDS	7.8				7.3				1.1			

11159200 CORRALITOS CREEK AT FREEDOM, CA

LOCATION.—Lat 36°56'22", long 121°46'10", in Los Corralitos Grant, Santa Cruz County, Hydrologic Unit 18060002, on right bank just upstream from Green Valley Road Bridge, 0.2 mi north of Freedom, and 2.3 mi north of Watsonville.

DRAINAGE AREA.—27.8 mi².

PERIOD OF RECORD.—October 1956 to current year.

SEDIMENT DATA: Water years 1976–77, 1980–81.

GAGE.—Water-stage recorder. Datum of gage is 89.43 ft above sea level.

REMARKS.—Records fair except for estimated discharges and those less than 1 ft³/s, which are poor. No regulation; Watsonville Water Works can divert up to 8.0 ft³/s upstream from station for municipal supply, domestic use, and irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,610 ft³/s, Jan. 4, 1982, gage height, 16.66 ft, from rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1955, reached a stage of 15.6 ft, from floodmarks, discharge, 3,620 ft³/s based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 600 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1130	3,540	13.63	Jan. 2	1015	2,610	11.80
Dec. 22	0415	668	6.22	Jan. 23	0030	1,060	7.94

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.49	3.2	1030	e95	25	6.4	2.8	.40	.17	.09	.01
2	.00	.38	2.6	1460	e88	22	6.7	2.8	.44	.15	.08	.01
3	.00	.31	2.4	483	e80	19	7.2	1.5	.46	.13	.06	.01
4	.00	.25	2.4	268	e74	18	6.7	1.1	.43	.15	.05	.02
5	.00	.20	73	211	e67	17	6.3	.90	.31	.14	.05	.02
6	.00	.17	27	163	e55	16	6.6	.85	.30	.12	.06	.01
7	.00	.15	13	139	e51	16	5.8	1.0	.48	.13	.07	.01
8	.00	.12	10	e130	48	15	5.7	.94	.37	.14	.07	.01
9	.00	.04	22	e120	45	14	5.9	.72	.29	.21	.06	.01
10	.00	.00	1150	e110	41	13	5.8	.77	.29	.16	.05	.06
11	.00	.00	472	e100	36	13	5.5	.75	.29	.17	.03	.04
12	.00	.00	530	e94	32	12	4.1	.73	.23	.18	.08	.09
13	.00	.00	328	e89	32	11	4.1	.76	.22	.17	.10	.06
14	.00	.00	211	e84	30	11	3.9	.76	.25	.16	.07	.04
15	.00	.00	166	e86	28	11	3.6	.76	.22	.15	.07	.03
16	.00	1.2	141	e94	26	13	3.6	.73	.22	.17	.07	.02
17	.00	103	132	e88	27	23	3.2	.66	.21	.15	.05	.02
18	.00	17	128	e83	26	13	4.0	.66	.19	.12	.04	.00
19	.00	51	123	e94	27	12	16	.64	.22	.10	.04	.00
20	.00	40	117	139	29	11	6.3	.58	.26	.11	.17	.01
21	.00	31	351	175	27	11	4.5	.56	.20	.30	.07	.00
22	.00	68	424	343	26	10	3.3	.55	.17	.94	.03	.00
23	.00	28	231	413	25	10	2.9	.61	.16	.49	.02	.02
24	.00	13	182	195	25	9.1	3.9	.86	.15	.18	.02	.02
25	.00	8.3	158	409	25	9.0	2.7	.57	.17	.16	.05	.00
26	.00	5.7	148	373	25	8.2	2.4	.48	.16	.22	.04	.00
27	.00	4.4	182	222	27	7.4	2.3	.49	.16	.18	.02	.00
28	.00	3.7	167	162	30	6.6	2.5	.45	.16	.22	.01	.00
29	11	3.2	248	126	---	7.7	3.1	.43	.17	.22	.01	.00
30	3.0	2.9	401	104	---	7.5	2.9	.41	.14	.17	.01	.00
31	1.0	---	289	98	---	6.6	---	.41	---	.14	.03	---
TOTAL	15.00	382.51	6434.6	7685	1147	398.1	147.9	26.23	7.72	6.20	1.67	0.52
MEAN	.48	12.8	208	248	41.0	12.8	4.93	.85	.26	.20	.054	.017
MAX	11	103	1150	1460	95	25	16	2.8	.48	.94	.17	.09
MIN	.00	.00	2.4	83	25	6.6	2.3	.41	.14	.10	.01	.00
AC-FT	30	759	12760	15240	2280	790	293	52	15	12	3.3	1.0

e Estimated.

11159200 CORRALITOS CREEK AT FREEDOM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.82	5.22	17.8	49.5	52.2	37.3	21.8	5.06	.99	.36	.16	.62
MAX	17.4	37.3	208	248	256	209	167	39.1	9.10	4.77	1.15	20.8
(WY)	1963	1984	1997	1997	1986	1983	1958	1983	1983	1983	1983	1959
MIN	.000	.000	.000	.000	.003	.076	.000	.000	.000	.000	.000	.000
(WY)	1962	1981	1991	1991	1991	1988	1977	1977	1962	1961	1961	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1957 - 1997			
ANNUAL TOTAL	15149.60				16252.45							
ANNUAL MEAN	41.4				44.5				15.8			
HIGHEST ANNUAL MEAN									56.4			
LOWEST ANNUAL MEAN									.17			
HIGHEST DAILY MEAN	1150				1460				2290			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					3540				5610			
INSTANTANEOUS PEAK STAGE					13.63				16.66			
ANNUAL RUNOFF (AC-FT)	30050				32240				11460			
10 PERCENT EXCEEDS	119				129				32			
50 PERCENT EXCEEDS	3.3				.76				.36			
90 PERCENT EXCEEDS	.00				.00				.00			

11160000 SOQUEL CREEK AT SOQUEL, CA

LOCATION.—Lat 36°59'29", long 121°57'17", in NE 1/4 sec.10, T.11 S., R.1 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank 0.2 mi upstream from highway bridge in town of Soquel and 0.4 mi downstream from Bates Creek.

DRAINAGE AREA.—40.2 mi².

PERIOD OF RECORD.—May 1951 to current year.

CHEMICAL DATA: Water years 1952–66, 1977.

WATER TEMPERATURE: Water years 1966–79.

SEDIMENT DATA: Water years 1976–77, 1990–93.

REVISED RECORDS.—WSP 1715: Drainage area. WSP 2129: 1958, 1959–60(P).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 21.38 ft above sea level.

REMARKS.—Records fair. No regulation; many diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,800 ft³/s, Dec. 23, 1955, gage height, 22.33 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement of peak flow; no flow at times in 1977, 1988, 1992–1995.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Feb. 13, 1937, reached a discharge of 5,950 ft³/s, gage height 12.6 ft, from floodmarks, from precipitation records and comparison with nearby streams. Flood of Nov. 18, 1950, reached a discharge of about 7,800 ft³/s, gage height about 15.33 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement of peak flow at gage height 22.33 ft.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0915	6,850	15.63	Jan. 22	2130	3,610	11.45
Jan. 1	1830	4,350	12.53	Jan. 25	1000	2,400	9.44

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	6.4	12	2420	157	38	22	14	8.9	e7.5	4.2	2.4
2	4.4	4.8	11	2070	137	40	23	14	8.9	e7.4	4.1	2.4
3	4.4	4.8	10	724	124	38	25	14	9.3	e7.3	3.9	2.4
4	4.2	4.7	10	398	117	37	23	13	10	7.3	3.8	2.4
5	3.6	4.4	82	295	107	35	21	13	10	6.9	3.5	2.4
6	3.1	e4.6	36	220	99	35	21	12	8.9	6.4	3.3	2.4
7	3.0	4.8	23	174	92	34	21	12	8.9	6.5	3.3	2.4
8	2.7	4.7	18	147	87	33	20	12	8.9	6.7	3.3	2.4
9	2.6	4.4	54	128	81	31	20	12	8.9	6.3	3.3	2.2
10	2.5	4.4	2020	115	78	31	20	12	8.9	5.0	3.6	2.2
11	2.2	4.7	475	106	73	30	19	12	8.8	4.8	3.9	2.2
12	2.8	5.1	719	103	69	29	19	12	e8.8	4.8	3.9	2.2
13	3.1	5.2	347	96	65	28	19	12	e8.7	5.3	3.9	2.3
14	3.1	5.7	166	89	62	27	19	12	e8.6	5.2	4.1	2.5
15	3.8	5.5	104	135	59	27	18	12	e8.5	5.0	4.2	2.5
16	2.9	12	78	98	57	31	18	11	e8.4	e5.0	4.2	2.4
17	2.7	146	64	88	56	56	17	11	e8.3	e4.9	4.2	2.2
18	2.9	42	53	83	53	34	17	11	e8.2	e4.9	4.1	2.5
19	3.4	85	47	80	51	31	33	11	e8.1	e4.8	4.1	2.6
20	3.6	71	43	124	49	30	21	11	e8.0	e4.8	6.3	2.6
21	3.7	44	401	201	47	28	19	11	e7.9	e4.7	5.7	2.6
22	3.7	83	507	1080	46	27	18	11	e7.9	e4.7	4.3	2.6
23	3.7	40	195	910	45	27	17	11	e7.8	e4.6	3.3	2.6
24	4.0	24	128	380	42	27	16	12	e7.8	e4.6	3.0	2.4
25	4.4	19	101	998	40	26	16	11	e7.7	4.5	3.0	2.3
26	5.8	16	91	807	40	25	16	9.7	e7.7	4.4	2.8	2.0
27	7.3	14	192	469	40	25	15	9.4	e7.6	4.2	2.8	2.0
28	7.7	13	152	341	40	24	15	9.4	e7.6	4.2	2.6	2.0
29	42	12	517	270	---	23	15	9.4	e7.5	4.3	2.6	2.0
30	17	12	837	215	---	23	14	9.3	e7.5	4.2	2.6	2.2
31	9.0	---	734	181	---	22	---	8.9	---	4.2	2.4	---
TOTAL	173.7	707.2	8227	13545	2013	952	577	355.1	253.0	165.4	114.3	70.3
MEAN	5.60	23.6	265	437	71.9	30.7	19.2	11.5	8.43	5.34	3.69	2.34
MAX	42	146	2020	2420	157	56	33	14	10	7.5	6.3	2.6
MIN	2.2	4.4	10	80	40	22	14	8.9	7.5	4.2	2.4	2.0
AC-FT	345	1400	16320	26870	3990	1890	1140	704	502	328	227	139

e Estimated.

11160000 SOQUEL CREEK AT SOQUEL, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.41	16.5	61.9	123	118	96.7	54.2	19.7	9.07	5.09	3.17	3.10
MAX	111	78.5	625	437	596	577	324	95.9	28.8	15.3	10.5	22.4
(WY)	1963	1973	1956	1997	1986	1983	1982	1983	1983	1983	1983	1959
MIN	.65	1.36	2.74	2.57	3.96	3.97	2.81	2.26	.91	.26	.17	.058
(WY)	1989	1991	1991	1991	1977	1988	1977	1977	1977	1977	1977	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1951 - 1997			
ANNUAL TOTAL	29685.4				27153.0							
ANNUAL MEAN	81.1				74.4				42.7			
HIGHEST ANNUAL MEAN									169			
LOWEST ANNUAL MEAN									2.89			
HIGHEST DAILY MEAN	2020				2420				8800			
LOWEST DAILY MEAN	2.2				2.0				.00			
ANNUAL SEVEN-DAY MINIMUM	2.7				2.1				.00			
INSTANTANEOUS PEAK FLOW					6850				15800			
INSTANTANEOUS PEAK STAGE					15.63				22.33			
INSTANTANEOUS LOW FLOW									.00			
ANNUAL RUNOFF (AC-FT)	58880				53860				30950			
10 PERCENT EXCEEDS	224				131				81			
50 PERCENT EXCEEDS	19				11				7.4			
90 PERCENT EXCEEDS	3.6				2.6				1.5			

11160430 BEAN CREEK NEAR SCOTTS VALLEY, CA

LOCATION.—Lat 37°03'19", long 122°02'25", in San Augustin Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank, 0.3 mi downstream from unnamed left bank tributary, 100 ft northeast of Mt. Hermon Road, 1.2 mi northwest of Scotts Valley Post Office, and 1.8 mi east of Felton.

DRAINAGE AREA.—8.81 mi².

PERIOD OF RECORD.—January 1989 to current year.

REVISED RECORDS.—WDR CA-93-2: 1989–92 (P).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 320 ft above sea level, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation; small diversions upstream from station for domestic use.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,380 ft³/s, Dec. 10, 1996, gage height, 9.88 ft, from rating curve extended above 310 ft³/s on basis of slope-area measurement at gage height 9.29 ft; minimum daily, 0.94 ft³/s, Jan. 31, 1992.

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. 10	0915	1,380	9.88	Jan. 22	2100	896	8.34
Jan. 1	1830	1,000	8.70	Jan. 25	0930	608	7.40

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.9	3.3	594	31	6.9	5.3	4.0	3.1	2.3	1.8	2.0
2	1.9	1.8	2.9	420	31	9.1	5.2	4.0	3.1	2.2	1.9	2.0
3	1.9	1.9	2.6	156	28	7.2	5.1	4.0	3.2	2.2	2.0	2.0
4	1.9	1.9	3.2	79	27	7.1	5.1	4.0	3.3	2.2	1.9	2.0
5	1.9	1.9	15	55	23	6.9	5.1	3.9	3.2	2.2	1.9	2.0
6	1.9	1.9	4.8	38	21	6.7	5.1	3.9	3.1	2.3	1.9	2.1
7	2.0	1.9	3.7	32	20	6.6	5.1	3.9	3.2	2.2	1.9	2.1
8	1.9	1.9	3.4	29	19	6.5	5.1	3.9	3.2	2.2	1.9	2.2
9	1.9	1.9	21	32	19	6.4	5.1	3.8	3.1	2.1	2.0	2.1
10	2.0	2.0	e900	34	18	6.3	4.9	3.8	2.9	2.1	2.0	2.2
11	2.0	2.0	e80	31	17	6.3	5.0	3.9	2.8	2.1	2.0	2.1
12	1.9	2.0	e115	e22	16	6.0	4.9	3.8	2.5	2.1	1.9	2.1
13	1.8	2.2	56	e18	15	6.0	4.8	3.7	2.8	2.0	1.9	2.2
14	1.9	2.5	41	e16	15	5.9	4.6	3.6	2.8	1.9	2.0	2.2
15	1.9	2.5	29	e24	14	5.8	4.6	3.4	2.8	2.0	2.0	2.2
16	1.9	9.6	24	e30	13	8.7	4.6	3.4	2.7	2.0	2.0	2.2
17	1.9	38	20	24	13	11	4.6	3.3	2.7	1.9	2.0	2.3
18	1.9	5.5	17	24	12	6.2	5.0	3.2	2.7	1.9	2.0	2.3
19	1.9	21	15	23	11	5.8	7.1	3.3	2.6	1.9	2.4	2.2
20	1.8	9.6	12	33	e10	5.8	4.7	3.4	2.6	2.0	2.8	2.3
21	1.9	7.7	43	40	e9.8	5.8	4.6	3.4	2.6	1.9	2.2	2.3
22	2.1	7.2	48	289	e9.5	5.8	4.6	3.2	2.5	1.9	2.1	2.2
23	2.0	4.8	34	206	e9.0	5.8	4.4	3.5	2.6	1.8	2.1	2.2
24	2.0	4.0	28	80	e8.6	5.8	4.3	3.5	2.6	1.8	2.0	2.2
25	2.0	3.4	25	238	e8.0	5.6	4.2	3.4	2.5	1.9	2.0	2.2
26	2.0	3.2	25	163	e7.7	5.5	4.2	3.3	2.4	1.9	2.0	2.2
27	2.0	3.0	31	85	e7.3	5.5	4.1	3.2	2.4	1.9	2.0	2.2
28	2.0	3.2	27	55	e7.0	5.5	4.0	3.2	2.5	2.0	2.0	2.1
29	12	3.1	135	44	---	5.4	4.0	3.1	2.4	2.0	2.0	2.1
30	3.6	2.8	245	36	---	5.3	4.0	3.1	2.4	1.9	2.0	2.2
31	2.0	---	238	33	---	5.3	---	3.1	---	1.8	2.0	---
TOTAL	71.7	156.3	2247.9	2983	439.9	198.5	143.4	110.2	83.3	62.6	62.6	64.7
MEAN	2.31	5.21	72.5	96.2	15.7	6.40	4.78	3.55	2.78	2.02	2.02	2.16
MAX	12	38	900	594	31	11	7.1	4.0	3.3	2.3	2.8	2.3
MIN	1.8	1.8	2.6	16	7.0	5.3	4.0	3.1	2.4	1.8	1.8	2.0
AC-FT	142	310	4460	5920	873	394	284	219	165	124	124	128

e Estimated.

SAN LORENZO RIVER BASIN

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11160430 BEAN CREEK NEAR SCOTTS VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.39	3.12	13.8	40.2	25.6	23.1	5.96	4.75	2.81	2.23	2.07	2.02
MAX	3.14	5.21	72.5	99.7	63.7	71.8	11.4	11.9	4.57	2.96	2.55	2.26
(WY)	1995	1997	1997	1995	1996	1995	1996	1995	1996	1996	1996	1993
MIN	1.96	1.96	2.16	2.11	2.42	3.81	2.62	2.33	1.79	1.71	1.84	1.76
(WY)	1991	1993	1991	1991	1991	1994	1990	1989	1994	1991	1989	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1989 - 1997			
ANNUAL TOTAL	7518.1				6624.1							
ANNUAL MEAN	20.5				18.1				11.0			
HIGHEST ANNUAL MEAN									19.5			
LOWEST ANNUAL MEAN									3.00			
HIGHEST DAILY MEAN	900				900				900			
LOWEST DAILY MEAN	1.8				1.8				.94			
ANNUAL SEVEN-DAY MINIMUM	1.9				1.9				1.0			
INSTANTANEOUS PEAK FLOW					1380				1380			
INSTANTANEOUS PEAK STAGE					9.88				9.88			
ANNUAL RUNOFF (AC-FT)	14910				13140				7950			
10 PERCENT EXCEEDS	48				31				20			
50 PERCENT EXCEEDS	4.8				3.3				2.5			
90 PERCENT EXCEEDS	2.0				1.9				1.8			

11160500 SAN LORENZO RIVER AT BIG TREES, CA

LOCATION.—Lat 37°02'40", long 122°04'17", in Zayante Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank 20 ft upstream from bridge on Henry Cowell State Park Road, 200 ft upstream from Shingle Mill Creek, 0.3 mi downstream from Zayante Creek, 0.9 mi northwest of Big Trees Station on Southern Pacific Railroad, and 5.3 mi northwest of Santa Cruz.

DRAINAGE AREA.—106 mi².

PERIOD OF RECORD.—October 1936 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

CHEMICAL DATA: Water years 1906–7, 1952–67, 1969–70, 1973–75, 1977, 1980–81.

WATER TEMPERATURE: Water years 1966–82, daily.

SEDIMENT DISCHARGE: Water years 1973–82, daily; 1986, 1990–93, monthly.

REVISED RECORDS.—WSP 1315-B: 1938(M). WSP 1715: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 227.00 ft above sea level. Prior to Oct. 6, 1972, at site 1.3 mi downstream at different datum.

REMARKS.—Records good. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by an inflatable fiber dam located 500 ft upstream from gage. Many small diversions upstream from station for domestic supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,400 ft³/s, Dec. 23, 1955, gage height, 22.55 ft, site and datum then in use, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 28.85 ft, Jan. 5, 1982; minimum daily discharge, 5.6 ft³/s, July 27, 28, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,800 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1015	11,400	18.61	Jan. 22	2130	9,250	16.90
Jan. 1	1830	9,390	17.02	Jan. 25	0930	9,010	16.70

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	24	42	6470	499	140	84	54	36	29	21	18
2	21	23	38	4260	462	154	75	53	36	28	20	23
3	21	23	35	1810	430	140	77	52	39	27	20	19
4	21	22	36	962	420	135	73	51	42	27	20	19
5	21	22	218	692	387	131	74	50	38	27	19	18
6	21	22	97	552	360	129	73	49	36	26	19	18
7	21	22	64	470	338	127	73	49	34	26	19	18
8	21	22	54	e420	320	124	70	48	35	25	20	18
9	21	21	222	e345	303	120	69	47	36	25	20	17
10	20	21	3500	e307	291	118	72	47	36	25	20	17
11	20	21	642	e280	289	116	81	47	36	25	20	17
12	20	21	666	e273	268	117	70	46	35	25	20	17
13	21	21	457	e252	259	116	69	45	35	25	20	17
14	21	21	288	e235	245	116	68	43	35	25	20	17
15	20	21	208	e310	234	117	65	43	36	25	20	17
16	21	38	164	336	224	131	64	43	35	24	19	17
17	20	e580	140	295	226	161	63	41	34	24	20	17
18	19	e150	119	274	193	112	67	40	33	23	20	17
19	19	e240	102	256	196	105	95	42	32	23	21	17
20	19	140	91	359	190	103	69	41	32	23	34	16
21	21	77	410	467	182	102	65	37	31	23	27	16
22	21	75	531	2700	178	100	63	38	31	23	23	16
23	21	71	307	2530	173	98	62	42	31	23	21	16
24	21	56	218	1060	168	94	60	44	31	22	20	15
25	22	49	174	3460	158	91	58	41	30	22	20	15
26	22	44	199	2790	155	90	57	39	29	22	19	15
27	22	41	448	1400	152	89	56	39	28	21	19	15
28	22	39	335	919	148	83	55	38	29	22	19	15
29	97	38	1390	717	---	84	56	38	29	21	19	15
30	38	37	2120	603	---	80	55	37	29	21	19	15
31	26	---	2300	541	---	79	---	36	---	21	18	---
TOTAL	743	2002	15615	36345	7448	3502	2038	1360	1009	748	636	507
MEAN	24.0	66.7	504	1172	266	113	67.9	43.9	33.6	24.1	20.5	16.9
MAX	97	580	3500	6470	499	161	95	54	42	29	34	23
MIN	19	21	35	235	148	79	55	36	28	21	18	15
AC-FT	1470	3970	30970	72090	14770	6950	4040	2700	2000	1480	1260	1010

e Estimated.

11160500 SAN LORENZO RIVER AT BIG TREES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.1	53.9	154	326	389	302	175	72.0	40.3	26.4	19.9	18.0
MAX	176	461	1319	1242	1532	1483	1005	322	113	65.8	44.0	52.1
(WY)	1963	1951	1956	1952	1986	1983	1958	1983	1983	1983	1983	1959
MIN	8.26	11.4	14.7	13.8	16.6	21.4	12.3	11.6	9.37	6.66	6.50	8.28
(WY)	1978	1991	1991	1991	1977	1977	1977	1977	1977	1977	1977	1991

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1937 - 1997	
ANNUAL TOTAL	77831		71953		132	
ANNUAL MEAN	213		197		391	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					13.2	
HIGHEST DAILY MEAN	3500	Dec 10	6470	Jan 1	17000	Dec 23 1955
LOWEST DAILY MEAN	19	Oct 18	15	Sep 24	5.6	Jul 27 1977
ANNUAL SEVEN-DAY MINIMUM	20	Oct 14	15	Sep 24	5.8	Jul 26 1977
INSTANTANEOUS PEAK FLOW			11400	Dec 10	30400	Dec 23 1955
INSTANTANEOUS PEAK STAGE			18.61	Dec 10	28.85	Jan 5 1982
INSTANTANEOUS LOW FLOW					5.6	Jul 27 1977
ANNUAL RUNOFF (AC-FT)	154400		142700		95650	
10 PERCENT EXCEEDS	519		359		274	
50 PERCENT EXCEEDS	67		41		33	
90 PERCENT EXCEEDS	22		19		13	

11161000 SAN LORENZO RIVER AT SANTA CRUZ, CA

LOCATION.—Lat 36°59'27", long 122°01'51", in La Carbonera Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank, in city of Santa Cruz Water Meter Repair compound, 0.3 mi upstream from intersection of State Highways 1 and 9, 1.0 mi north of Santa Cruz, and 2.4 mi upstream from mouth.

DRAINAGE AREA.—115 mi².

PERIOD OF RECORD.—October 1952 to September 1960, October 1987 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 5.84 ft above sea level (levels by city of Santa Cruz Water Department). October 1952 to September 1960, water-stage recorder at site 0.1 mi downstream at different datum.

REMARKS.—Records fair. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by an inflatable fiber dam located 6.8 mi upstream from gage. Water is diverted 50 ft upstream from station by city of Santa Cruz for municipal supply; many small diversions upstream from station for domestic supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,400 ft³/s, Dec. 23, 1955, gage height, 23.10 ft, site and datum then in use, from rating curve extended above 4,500 ft³/s on basis of slope-area measurement of peak flow; no flow for several days in 1955 and many days in 1960.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,800 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1115	13,900	16.41	Jan. 22	2230	9,660	14.37
Jan. 1	2015	11,000	15.07	Jan. 25	1045	9,140	14.08

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	22	40	7320	559	143	83	65	40	32	11	e12
2	16	20	38	5240	504	163	85	64	40	31	11	e12
3	15	20	35	2350	461	146	84	63	41	30	11	15
4	15	20	35	1330	447	133	84	61	43	29	11	12
5	15	19	255	987	411	129	82	61	41	28	10	12
6	14	19	117	781	385	131	82	59	39	27	10	12
7	14	19	71	647	362	123	82	58	38	26	10	11
8	14	19	59	555	342	121	81	58	38	25	10	11
9	14	18	205	488	321	116	79	57	39	25	11	11
10	13	18	4140	434	313	115	80	56	39	24	11	11
11	13	18	897	397	309	111	87	54	39	24	11	11
12	13	18	870	397	286	109	78	53	38	23	11	11
13	14	18	578	363	273	108	78	51	38	23	11	11
14	14	18	373	332	258	104	76	50	38	22	11	11
15	13	18	278	503	241	101	75	50	39	22	11	11
16	14	22	224	391	229	104	73	49	38	21	9.9	11
17	13	502	187	344	235	159	73	48	38	21	10	11
18	13	148	152	322	204	108	74	47	37	20	9.8	11
19	13	192	132	305	203	101	104	47	36	18	10	11
20	13	184	120	403	199	100	78	47	35	18	17	10
21	14	89	469	556	188	98	74	47	35	18	14	9.9
22	13	83	670	2710	182	94	74	42	35	18	12	10
23	13	70	366	3150	176	93	73	45	34	18	11	9.8
24	13	54	261	1280	174	91	72	46	34	17	11	9.7
25	14	47	208	3680	164	90	70	45	34	16	13	9.6
26	14	43	195	3070	159	91	70	44	32	16	13	9.6
27	14	40	491	1600	157	90	68	43	32	15	13	9.4
28	13	39	371	1050	156	87	68	43	32	14	13	9.2
29	90	38	1370	821	---	86	68	43	32	14	12	9.1
30	40	36	2690	695	---	84	66	41	32	13	11	9.3
31	28	---	2690	619	---	84	---	41	---	12	11	---
TOTAL	545	1871	18587	43120	7898	3413	2321	1578	1106	660	351.7	323.6
MEAN	17.6	62.4	600	1391	282	110	77.4	50.9	36.9	21.3	11.3	10.8
MAX	90	502	4140	7320	559	163	104	65	43	32	17	15
MIN	13	18	35	305	156	84	66	41	32	12	9.8	9.1
AC-FT	1080	3710	36870	85530	15670	6770	4600	3130	2190	1310	698	642

e Estimated.

SAN LORENZO RIVER BASIN

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11161000 SAN LORENZO RIVER AT SANTA CRUZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

MEAN	12.9	24.4	178	337	320	228	132	63.9	30.5	16.1	9.27	9.34
MAX	28.9	62.4	1366	1391	1254	999	1017	179	70.0	45.0	30.0	40.4
(WY)	1990	1997	1956	1997	1958	1995	1958	1995	1958	1958	1958	1959
MIN	1.83	3.45	7.30	5.60	15.3	16.8	15.9	13.7	4.64	1.48	.27	.17
(WY)	1989	1991	1991	1991	1991	1988	1990	1988	1988	1988	1960	1960

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1953 - 1997	
ANNUAL TOTAL	84273		81774.3		113	
ANNUAL MEAN	230		224		293	
HIGHEST ANNUAL MEAN					21.5	
LOWEST ANNUAL MEAN					17400	
HIGHEST DAILY MEAN	4140	Dec 10	7320	Jan 1	Dec 23	1955
LOWEST DAILY MEAN	13	Oct 10	9.1	Sep 29	Sep 3	1955
ANNUAL SEVEN-DAY MINIMUM	13	Oct 17	9.4	Sep 24	Sep 20	1960
INSTANTANEOUS PEAK FLOW			13900	Dec 10	Dec 23	1955
INSTANTANEOUS PEAK STAGE			16.41	Dec 10	Dec 23	1955
ANNUAL RUNOFF (AC-FT)	167200		162200		81500	
10 PERCENT EXCEEDS	533		439		233	
50 PERCENT EXCEEDS	63		43		23	
90 PERCENT EXCEEDS	16		11		2.5	

11161300 CARBONERA CREEK AT SCOTTS VALLEY, CA

LOCATION.—Lat 37°03'02", long 122°00'45" in San Augustin Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank at east city limits of Scotts Valley, 1.1 mi upstream from Glen Canyon Road, 3.3 mi east of Felton, and 4.1 mi upstream from Branciforte Creek.

DRAINAGE AREA.—3.60 mi².

PERIOD OF RECORD.—February 1985 to current year.

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

REMARKS.—Records poor. No regulation or diversion upstream from station. Low flows affected by return flow from urban irrigation and by periodic flushing of upstream county well.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,620 ft³/s, Dec. 10, 1996, gage height, 11.89 ft, from rating curve extended above slope-area measurement made at gage height 9.48 ft; no flow for many days in several years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0815	1,620	11.89	Jan. 1	0100	623	8.08

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.37	4.4	292	7.0	1.4	.85	.47	.33	.56	.44	.42
2	.30	.40	2.7	144	6.3	3.6	.86	.31	.56	.54	.72	.38
3	.34	.36	2.5	38	6.0	2.4	1.1	.31	.61	.56	.44	.41
4	.23	.32	4.3	24	6.2	2.2	1.2	.31	.72	.50	.41	.36
5	.17	.26	25	17	5.1	2.2	1.2	.31	.46	.59	.36	.38
6	.22	.28	2.8	13	4.7	2.2	1.2	.30	.49	.45	.40	.37
7	.14	.22	1.4	11	4.3	2.2	1.2	.29	.46	.39	.40	.37
8	.11	.20	.97	8.9	4.0	2.1	1.2	.38	.49	.36	.44	.36
9	.12	.42	32	7.3	3.6	1.9	1.2	.27	.50	.63	.44	.36
10	.20	.19	370	7.2	3.5	2.0	1.2	.30	.44	.51	.54	.41
11	.21	.22	31	6.5	3.2	2.0	1.2	.27	.51	.60	.43	.41
12	.16	.29	54	8.5	3.0	1.9	1.2	.33	.49	.52	.41	.39
13	.18	.30	31	6.2	2.8	1.9	1.2	.41	.45	.50	.44	.36
14	.18	.33	20	7.8	2.5	1.8	1.1	.30	.59	.47	.43	.42
15	.24	.36	8.0	19	2.3	1.9	.96	.38	.59	.40	.53	.38
16	.13	14	6.6	8.1	2.2	6.5	.81	.29	.52	.47	.46	.39
17	.17	61	4.6	7.1	2.3	4.0	.81	.27	.46	.38	.52	.36
18	.25	7.4	3.7	6.4	2.0	1.5	1.9	.38	.46	.38	.44	.38
19	.21	41	3.8	6.0	1.9	1.4	3.0	.40	.45	.50	2.2	.46
20	.22	8.5	2.6	18	1.8	1.3	.56	.50	.44	.54	3.1	.48
21	.23	9.3	55	23	1.7	1.3	.51	.29	.43	.46	.61	.40
22	.17	13	34	118	1.6	1.2	.47	.29	.68	.55	.57	.45
23	.26	6.7	21	48	1.5	1.2	.49	.84	.43	.49	.58	.78
24	.26	3.9	16	27	1.5	1.2	.41	.45	.39	.43	.59	.31
25	.36	3.2	12	84	1.4	1.0	.43	.38	.41	.40	.64	.32
26	.21	3.1	19	37	1.4	.99	.50	.55	.34	.53	.43	.33
27	.20	3.2	24	19	1.4	1.2	.49	.31	.34	.43	.42	.32
28	.37	3.2	16	13	1.4	.99	.82	.39	.34	.63	.39	.35
29	33	2.9	117	10	---	.99	.37	.33	.40	.43	.39	.37
30	1.9	2.4	137	8.9	---	.99	.32	.31	.41	.45	.41	.37
31	.55	---	126	7.9	---	.98	---	.32	---	.48	.40	---
TOTAL	41.56	187.32	1188.37	1051.8	86.6	58.44	28.76	11.24	14.19	15.13	18.98	11.85
MEAN	1.34	6.24	38.3	33.9	3.09	1.89	.96	.36	.47	.49	.61	.40
MAX	.33	.61	370	292	7.0	6.5	3.0	.84	.72	.63	3.1	.78
MIN	.11	.19	.97	6.0	1.4	.98	.32	.27	.33	.36	.36	.31
AC-FT	82	372	2360	2090	172	116	57	22	28	30	38	24

11161300 CARBONERA CREEK AT SCOTTS VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.68	2.01	7.39	13.7	14.5	11.0	1.52	1.26	.28	.13	.18	.19
MAX	3.01	6.24	38.3	41.0	63.9	32.0	3.70	4.72	.93	.49	.91	.68
(WY)	1990	1997	1997	1995	1986	1986	1995	1996	1995	1997	1989	1989
MIN	.039	.002	.51	.35	.95	.25	.41	.099	.002	.005	.000	.000
(WY)	1987	1987	1987	1991	1988	1988	1987	1987	1987	1990	1985	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1985 - 1997	
ANNUAL TOTAL	3178.78		2714.24			
ANNUAL MEAN	8.69		7.44		4.39	
HIGHEST ANNUAL MEAN					10.1	
LOWEST ANNUAL MEAN					1.33	
HIGHEST DAILY MEAN	370	Dec 10	370	Dec 10	370	Dec 10 1996
LOWEST DAILY MEAN	.11	Aug 13	.11	Oct 8	.00	Jun 28 1985
ANNUAL SEVEN-DAY MINIMUM	.14	Aug 9	.16	Oct 7	.00	Jun 28 1985
INSTANTANEOUS PEAK FLOW			1620	Dec 10	1620	Dec 10 1996
INSTANTANEOUS PEAK STAGE			11.89	Dec 10	11.89	Dec 10 1996
ANNUAL RUNOFF (AC-FT)	6310		5380		3180	
10 PERCENT EXCEEDS	19		13		6.6	
50 PERCENT EXCEEDS	.63		.55		.37	
90 PERCENT EXCEEDS	.18		.29		.00	

11162500 PESCADERO CREEK NEAR PESCADERO, CA

LOCATION.—Lat 37°15'39", long 122°19'40", in SW 1/4 sec.5, T.8 S., R.4 W., San Mateo County, Hydrologic Unit 18050006, on left bank at downstream side of highway bridge, 3.0 mi east of Pescadero, and 5.3 mi upstream from mouth.

DRAINAGE AREA.—45.9 mi².

PERIOD OF RECORD.—April 1951 to current year.

CHEMICAL DATA: Water year 1977.

WATER TEMPERATURE: Water years 1965–80.

SEDIMENT DATA: Water years 1971, 1973, 1980, 1986, 1990–93.

REVISED RECORDS.—WSP 1445: 1952–53(M). WSP 1715: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 62.3 ft above sea level.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Small diversions upstream from station by pumping.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,420 ft³/s, Dec. 23, 1955, gage height, 21.27 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 700 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0900	976	6.37	Jan. 22	2230	3,070	11.29
Jan. 2	Unknown	3,870	12.77	Jan. 25	1045	2,950	11.05

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.9	9.8	e1400	179	e39	19	e12	7.3	4.9	e3.6	2.8
2	3.9	4.4	11	e2500	165	e46	19	e12	6.9	4.6	e3.6	2.9
3	3.8	4.2	8.6	813	152	e39	18	e12	5.8	4.4	e3.6	2.9
4	3.8	4.2	8.1	455	135	e37	18	e12	8.7	4.5	e3.5	2.9
5	3.7	4.1	93	334	119	e36	18	e11	7.9	4.5	e3.5	2.9
6	3.6	4.0	58	259	108	e34	18	e11	7.1	4.6	e3.5	2.9
7	3.5	3.8	32	188	99	e33	18	e11	6.9	4.4	e3.4	2.8
8	3.4	3.8	24	157	92	e32	17	e11	7.0	4.2	e3.4	2.6
9	3.3	3.7	35	138	85	e31	17	e10	6.7	4.7	e3.4	2.7
10	3.2	3.7	259	123	80	e30	17	e10	6.6	4.8	e3.3	2.7
11	3.2	3.6	224	109	74	e29	16	e11	7.3	4.8	e3.3	2.7
12	3.2	3.5	236	104	71	28	16	e11	7.3	4.5	e3.3	3.0
13	3.3	3.5	193	93	66	28	16	e11	7.1	4.5	e3.2	2.9
14	5.4	3.6	124	86	63	27	16	e10	6.8	4.7	3.2	3.0
15	3.5	3.6	85	102	60	27	16	10	6.4	e4.4	2.9	2.9
16	3.4	4.3	63	88	57	27	15	9.8	6.7	e4.3	2.9	2.6
17	3.4	73	49	80	63	35	15	9.6	6.5	e4.3	2.6	3.0
18	3.4	49	39	74	56	28	15	9.2	6.3	e4.2	2.9	3.1
19	3.4	24	32	70	53	26	20	8.7	5.9	e4.2	3.2	3.0
20	3.5	41	27	146	51	25	17	8.6	5.6	e4.1	4.7	3.0
21	3.5	21	162	184	48	25	16	8.8	5.5	e4.1	5.2	3.1
22	3.4	22	292	795	e47	24	15	8.9	5.5	e4.1	3.4	3.1
23	3.4	35	136	1050	e46	24	15	11	5.2	e4.0	3.1	2.8
24	3.8	23	89	400	e45	23	14	12	5.7	e4.0	3.0	2.7
25	4.6	17	68	1210	e43	23	e14	9.6	5.5	e3.9	3.3	2.7
26	4.9	14	63	925	e42	22	e14	9.2	5.1	e3.9	3.4	2.7
27	4.4	11	175	525	e42	22	e13	8.9	4.9	e3.8	3.4	2.7
28	3.9	10	131	364	e41	21	e13	8.8	4.6	e3.8	3.0	3.0
29	7.4	9.7	335	281	---	21	e13	8.2	4.7	e3.8	2.8	3.3
30	11	8.7	564	234	---	20	e12	8.0	4.8	e3.7	2.5	3.0
31	5.8	---	502	208	---	20	---	7.8	---	e3.7	2.6	---
TOTAL	127.8	421.3	4127.5	13495	2182	882	480	312.1	188.3	132.4	102.7	86.4
MEAN	4.12	14.0	133	435	77.9	28.5	16.0	10.1	6.28	4.27	3.31	2.88
MAX	11	73	564	2500	179	46	20	12	8.7	4.9	5.2	3.3
MIN	3.2	3.5	8.1	70	41	20	12	7.8	4.6	3.7	2.5	2.6
AC-FT	253	836	8190	26770	4330	1750	952	619	373	263	204	171

e Estimated.

PESCADERO CREEK BASIN

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11162500 PESCADERO CREEK NEAR PESCADERO, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.50	13.3	58.2	122	118	94.7	54.3	18.4	8.54	4.84	3.34	2.58
MAX	92.8	85.9	469	435	476	540	398	93.8	28.1	14.8	10.5	7.79
(WY)	1963	1984	1956	1997	1983	1983	1958	1983	1983	1983	1969	1983
MIN	.38	1.61	2.30	2.75	2.92	4.25	1.93	2.00	.78	.20	.012	.083
(WY)	1962	1992	1977	1991	1977	1988	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1951 - 1997			
ANNUAL TOTAL	23135.2				22537.5							
ANNUAL MEAN	63.2				61.7				41.6			
HIGHEST ANNUAL MEAN									164			
LOWEST ANNUAL MEAN									1.72			
HIGHEST DAILY MEAN	1230				2500				5560			
LOWEST DAILY MEAN	3.2				2.5				.00			
ANNUAL SEVEN-DAY MINIMUM	3.3				2.8				.00			
INSTANTANEOUS PEAK FLOW					3870				9420			
INSTANTANEOUS PEAK STAGE					12.77				21.27			
ANNUAL RUNOFF (AC-FT)	45890				44700				30160			
10 PERCENT EXCEEDS	178				133				86			
50 PERCENT EXCEEDS	16				9.6				6.7			
90 PERCENT EXCEEDS	3.8				3.1				1.4			

11162630 PILARCITOS CREEK AT HALF MOON BAY, CA

LOCATION.—Lat 37°28'00", long 122°25'59", on north boundary of Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, on left bank 50 ft downstream from State Highway 1, 0.3 mi northwest of town of Half Moon Bay, and 1.0 mi upstream from mouth.

DRAINAGE AREA.—27.1 mi².

PERIOD OF RECORD.—July 1966 to current year.

SEDIMENT DATA: June 1990.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 31.51 ft above sea level. Prior to Nov. 17, 1983, at site 800 ft downstream at different datum.

REMARKS.—Records fair except for discharges less than 1 ft³/s, which are poor. Flow slightly regulated by storage in Pilarcitos Lake 10 mi upstream, capacity, 3,100 acre-ft. Water is diverted to city of San Francisco water system; small diversions for irrigation upstream from station by pumping.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,750 ft³/s, Jan. 4, 1982, gage height, 13.08 ft, site and datum then in use, from rating curve extended above 1,000 ft³/s on basis of contracted-opening measurement of peak flow; 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. 10	0645	241	3.91	Jan. 22	2100	754	6.76
Dec. 21	2330	622	6.20	Jan. 25	0715	1,240	8.72
Jan. 2	0815	1,970	11.29				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	2.5	4.3	525	57	9.5	.58	8.7	1.3	.13	.00	2.1
2	.72	6.4	2.0	1160	52	17	.83	8.4	2.0	.70	.00	.28
3	.45	4.7	1.1	483	49	13	1.4	8.0	5.7	.09	.00	.19
4	.30	3.6	3.5	205	46	10	2.7	7.4	5.4	.16	.00	.00
5	.34	2.2	.75	131	40	10	5.0	5.9	2.4	.81	.00	.00
6	.34	.80	24	68	35	8.7	4.5	2.5	1.7	.44	.00	.00
7	.40	.66	9.8	34	30	8.3	5.7	1.6	.61	.78	.00	.00
8	.19	.73	7.4	19	26	8.6	4.0	1.1	.98	.00	.00	.00
9	.10	.76	13	10	23	9.3	4.5	1.5	.85	.10	.00	.00
10	.15	.54	107	6.4	23	9.6	3.2	2.4	.81	.08	.00	.00
11	.13	.60	26	3.6	22	8.2	4.7	3.0	1.9	.00	.00	.34
12	.19	1.0	24	10	22	5.1	3.2	4.2	1.9	.02	.00	.02
13	.16	1.1	18	3.3	21	4.8	9.6	2.4	.93	.02	.00	.20
14	.22	1.1	8.5	4.4	19	5.3	8.4	1.5	.53	.15	.00	.29
15	.18	1.3	4.5	23	17	3.9	3.8	1.7	.70	.00	.00	1.8
16	.10	7.3	2.4	1.8	17	7.7	2.8	2.0	1.2	.00	.16	1.3
17	.08	34	1.6	1.6	19	10	3.3	1.7	1.1	.00	.38	.95
18	.80	12	1.3	1.5	15	6.2	7.7	2.1	1.1	.00	.08	.38
19	.48	7.8	.85	1.5	14	3.4	40	2.8	1.0	.00	1.1	.00
20	.38	5.4	.70	12	13	2.5	19	2.1	1.1	.00	6.0	.00
21	.23	5.1	223	13	11	2.6	13	2.1	1.0	.00	1.5	.00
22	.16	7.6	220	263	8.5	.63	10	2.3	.61	.00	.58	.03
23	.21	6.7	55	210	5.4	.75	13	12	.55	.00	.69	.27
24	2.5	4.5	33	151	6.8	.59	13	6.2	.16	.00	1.5	.00
25	1.7	3.4	25	497	8.7	.41	12	5.0	.04	.00	1.5	.00
26	2.7	2.2	32	392	11	.20	10	4.0	.00	.00	.72	.00
27	6.8	1.5	65	257	11	.24	12	2.3	.04	.00	1.3	.11
28	4.7	3.6	36	184	9.4	.23	12	.88	.14	.00	.79	.00
29	16	1.4	74	138	---	.23	12	1.4	.19	.00	1.2	.00
30	8.8	1.2	85	104	---	2.2	9.1	1.3	1.3	.00	1.7	.00
31	4.7	---	63	77	---	1.7	---	.67	---	.00	2.1	---
TOTAL	54.83	131.69	1245.95	4990.1	631.8	170.88	251.01	109.15	37.24	3.48	21.30	8.26
MEAN	1.77	4.39	40.2	161	22.6	5.51	8.37	3.52	1.24	.11	.69	.28
MAX	16	34	223	1160	57	17	40	12	5.7	.81	6.0	2.1
MIN	.08	.54	.70	1.5	5.4	.20	.58	.67	.00	.00	.00	.00
AC-FT	109	261	2470	9900	1250	339	498	216	74	6.9	42	16

11162630 PILARCITOS CREEK AT HALF MOON BAY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.15	5.42	16.4	46.3	41.2	38.4	18.4	5.69	2.02	.87	.54	.33
MAX	4.44	32.5	92.1	164	234	278	127	37.2	8.22	3.21	2.01	1.26
(WY)	1983	1983	1971	1982	1983	1983	1982	1983	1967	1967	1982	1983
MIN	.000	.000	.59	.48	.66	1.44	.073	.009	.000	.000	.000	.000
(WY)	1967	1991	1991	1991	1977	1988	1977	1977	1972	1966	1966	1966

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1966 - 1997			
ANNUAL TOTAL	9597.09				7655.69							
ANNUAL MEAN	26.2				21.0				14.6			
HIGHEST ANNUAL MEAN									73.9			
LOWEST ANNUAL MEAN									.51			
HIGHEST DAILY MEAN	436 Feb 21				1160 Jan 2				2150 Jan 4 1982			
LOWEST DAILY MEAN	.08 Oct 17				.00 Jun 26				.00 Jul 1 1966			
ANNUAL SEVEN-DAY MINIMUM	.15 Oct 11				.00 Jul 15				.00 Jul 1 1966			
INSTANTANEOUS PEAK FLOW					1970 Jan 2				4750 Jan 4 1982			
INSTANTANEOUS PEAK STAGE					11.29 Jan 2				13.08 Jan 4 1982			
ANNUAL RUNOFF (AC-FT)	19040				15190				10600			
10 PERCENT EXCEEDS	75				32				29			
50 PERCENT EXCEEDS	4.1				1.9				1.8			
90 PERCENT EXCEEDS	.46				.00				.00			

11162690 SAN FRANCISCO BAY AT PRESIDIO MILITARY RESERVATION, CA

LOCATION.—Lat 37°48'24", long 122°27'54", in NE 1/4 NE 1/4 sec.36, T.1 S., R.6 W., in San Miguel Grant, San Francisco County, Hydrologic Unit 18050002, at end of Coast Guard dock at Presidio Military Reservation.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1990 to current year.

WATER TEMPERATURE: October 1990 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1990.

REMARKS.—The probe is set at 4.0 ft below Mean Lower Low Water (MLLW).

EXTREMES FOR PERIOD OF RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 50,900 microsiemens, May 26, June 30, and July 1, 1991; minimum recorded, 5,020 microsiemens, Jan. 4, 1997.

WATER TEMPERATURE: Maximum recorded, 19.0°C, several days during August and September 1997; minimum recorded 8.0°C, several days during December 1990 and January 1991.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 49,800 microsiemens, Sept. 29; minimum recorded, 5,020 microsiemens, Jan. 4

WATER TEMPERATURE: Maximum recorded, 19.0°C, many days during August and September; minimum recorded, 9.0°C, several days in January.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48700	47200	48700	47000	48400	45500	47400	12600	28300	8200	47900	30200
2	48700	47200	48700	46500	48400	45000	38500	9500	31600	8430	46400	29900
3	48700	45400	48500	46500	48700	43900	29500	7680	41100	9630	46800	30100
4	48800	46900	48500	46400	48700	44400	27000	5020	43100	14100	46800	32200
5	48800	46400	48500	46600	48700	46300	26900	5650	44400	18500	47000	33800
6	48800	46100	48600	46800	48300	46200	32800	10600	45000	21500	47800	37400
7	49000	45900	48600	46800	48300	46100	39000	10400	45300	22200	47100	38200
8	49200	46300	48500	46900	48300	46000	40300	12900	44800	24000	47200	39100
9	49000	47200	48600	46900	48400	46100	40800	15400	42900	23200	47300	39400
10	48700	47100	48600	47000	48900	44800	40900	14900	43700	21300	47100	39900
11	48500	47100	48600	46800	48500	44900	39700	14900	43300	23600	47300	39900
12	48400	46900	48600	46800	48000	43600	37900	16700	42800	21000	47900	39100
13	48400	46800	48600	46800	47500	41600	36600	16600	41200	18800	47900	39500
14	48500	46800	48900	46900	47200	39900	38700	17900	45700	18000	48400	40200
15	48800	47000	48900	46900	46800	37600	41700	17300	42800	17900	48400	39100
16	49000	47000	48600	46800	46600	36400	43500	16400	44800	20700	47400	38000
17	49100	47100	48200	45900	46600	35100	43700	17400	42800	26000	47300	36700
18	48800	47100	48300	46300	46000	33100	42800	18900	44400	28400	47500	35900
19	48800	47200	48100	46800	45800	32000	44700	20700	46100	29100	47700	38800
20	49000	47200	---	---	46100	33000	44800	25000	45600	29800	47700	37900
21	49000	47300	48200	46600	45000	35600	44400	25400	46600	32500	47000	40700
22	48900	47200	48300	46700	45300	36400	44500	28300	46200	30600	47400	41900
23	48600	47200	48200	46500	44000	31100	45500	21500	44500	31600	46900	42000
24	48400	47100	48200	45400	44400	29900	44400	19000	43700	32800	47300	41900
25	48200	47200	48200	46400	44300	30400	45800	20900	46400	33500	47300	41500
26	48700	47100	48300	46300	44500	34600	45600	16800	45600	31800	47500	41400
27	48900	47400	48400	45300	44700	30000	41200	10900	45700	33100	47400	41100
28	49100	47500	48300	46300	44200	29900	35700	10900	45700	30600	47400	41400
29	49000	47500	48500	46300	45900	29000	32400	9220	---	---	47400	41400
30	49000	47500	48600	45900	44900	28200	29800	9390	---	---	47500	40600
31	48800	47200	---	---	45300	19500	26500	8150	---	---	46700	40400
MONTH	49200	45400	---	---	48900	19500	47400	5020	46600	8200	48400	29900

11162690 SAN FRANCISCO BAY AT PRESIDIO MILITARY RESERVATION, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	46300	40400	49000	44400	49000	46800	49600	47500	49100	47300	49100	45700
2	46400	40400	49100	45300	48900	46800	49300	47100	49100	47200	49100	46200
3	47800	42100	48500	45600	48800	46800	49300	47200	49100	47100	49000	47200
4	47500	42900	48300	45200	48500	46600	49200	47100	49000	47100	49000	47200
5	47300	43500	48400	45300	48800	46500	49200	47200	49000	47000	49000	47300
6	46700	43700	48200	45100	49400	46500	49200	47100	48900	47200	48900	47400
7	46500	43800	48300	45100	49400	46700	49300	47200	48900	47200	49000	47100
8	46600	43500	48300	45300	49500	46800	49300	47100	48800	47300	49100	47200
9	47900	43300	48400	45300	49400	47100	49500	47400	49000	47500	49100	46800
10	48100	43600	48500	45500	49200	47200	49400	47300	49400	47200	49000	46200
11	48300	43900	48800	45500	49200	46200	49500	47400	49500	47400	48900	46400
12	47900	43700	48600	45400	49200	45600	49300	46900	49500	47200	48900	46700
13	47800	43300	48600	44600	49300	46500	49200	47400	49400	47500	48800	46900
14	47700	43200	48200	44200	49400	46900	49200	47300	49300	47100	48900	47200
15	48200	42200	48700	43300	49300	46800	49300	47500	49300	47200	48900	47100
16	48000	43100	48700	43600	49300	47200	49300	47400	49400	47400	48700	47100
17	47800	44200	48600	44000	49300	47300	49500	47600	49300	47400	48800	47000
18	47800	44700	48600	45100	49000	47200	49400	47400	49300	47200	48900	47400
19	47700	44900	48200	45600	49100	46800	49500	47400	49100	47300	49100	47700
20	47400	44900	48300	45600	49200	46900	49500	47400	48700	47200	49200	47800
21	47700	44600	48000	45400	49200	46800	49400	47300	48800	47100	49100	47700
22	47700	44200	48000	45400	49300	46700	49400	47200	48600	47300	49100	47800
23	47700	43900	48000	45200	49500	46900	49000	47200	48600	47300	49300	47800
24	48500	43900	47800	45100	49600	47000	48800	47100	48700	47100	49300	47800
25	49100	44600	48000	45400	49500	46600	48900	47300	48900	47100	49300	47600
26	49400	44800	48500	45800	49400	47400	48900	47400	48800	47000	49300	47600
27	48900	45000	48600	45800	49400	47600	49200	47500	49000	46900	49200	47700
28	49100	44800	48700	45900	49600	47900	49200	47300	49000	46800	49600	47900
29	49200	44900	48700	46300	49600	47900	49200	47300	49000	46900	49800	48100
30	48900	44200	48700	46900	49600	47500	49300	47400	49100	47100	49300	48000
31	---	---	48800	46900	---	---	49200	47200	49200	47200	---	---
MONTH	49400	40400	49100	43300	49600	45600	49600	46900	49500	46800	49800	45700

11162690 SAN FRANCISCO BAY AT PRESIDIO MILITARY RESERVATION, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	15.0	13.5	12.5	13.0	12.5	13.0	11.5	12.0	11.5	11.5	10.0
2	16.0	15.0	13.5	12.5	13.0	12.5	12.5	12.0	12.0	11.0	12.0	10.0
3	16.0	15.0	13.5	12.5	12.5	12.0	12.5	12.0	12.5	11.0	12.0	10.0
4	16.0	15.0	13.0	12.5	12.5	12.0	12.5	11.5	12.5	11.5	11.5	10.0
5	16.0	15.0	13.0	12.5	12.5	12.0	12.5	11.5	13.0	11.5	11.5	10.0
6	16.5	15.0	13.0	12.5	12.5	12.0	12.5	11.0	12.5	11.5	11.5	10.0
7	16.5	15.0	13.0	12.5	12.5	12.0	12.0	11.0	12.5	12.0	11.0	10.0
8	16.5	15.0	13.0	12.5	12.5	12.0	12.5	11.0	12.5	12.0	11.5	10.0
9	16.0	15.0	13.0	12.5	12.5	12.0	12.5	10.5	12.5	12.0	11.5	10.0
10	16.0	15.0	13.0	12.5	12.5	12.0	12.0	10.5	12.5	12.0	11.5	10.0
11	16.0	15.5	13.0	12.5	13.0	12.0	12.0	10.5	12.5	11.5	11.5	10.0
12	16.5	15.5	13.5	12.5	13.0	12.5	12.0	10.0	12.5	11.5	12.0	10.0
13	16.5	15.5	13.5	12.5	13.0	12.5	11.5	9.5	12.0	11.5	12.0	10.0
14	16.5	15.5	13.0	12.5	13.0	12.5	11.5	9.0	12.0	11.5	12.0	10.0
15	16.5	15.0	13.0	12.5	13.0	12.5	11.5	9.0	12.0	11.5	12.5	10.0
16	16.5	14.5	13.0	12.5	12.5	12.0	11.5	9.0	12.5	11.5	12.0	10.5
17	16.0	14.5	13.0	12.5	12.5	12.0	11.5	9.0	12.5	12.0	13.0	10.5
18	16.0	14.0	13.0	12.5	12.5	12.0	11.5	9.0	12.5	11.5	13.0	10.5
19	15.5	14.0	13.0	12.5	12.0	11.5	11.5	9.0	12.5	11.5	13.0	10.5
20	15.0	13.5	13.0	12.5	12.0	11.5	11.5	9.5	12.5	11.5	13.0	10.5
21	15.0	13.5	13.0	12.5	12.0	11.5	11.5	10.0	12.5	11.0	12.5	11.0
22	15.0	13.5	13.0	12.5	12.0	11.5	11.5	10.0	12.5	11.0	12.0	11.0
23	14.5	13.5	13.5	13.0	12.0	11.5	12.0	10.0	12.0	11.0	12.5	11.0
24	14.5	13.5	13.5	13.0	12.0	11.0	12.0	10.0	11.5	10.5	12.5	11.0
25	14.0	13.5	13.5	13.0	12.0	11.0	12.0	10.5	11.5	10.5	13.0	11.0
26	14.0	13.0	13.5	13.0	12.0	11.0	12.0	10.5	12.0	10.5	13.0	11.5
27	14.0	12.5	13.5	13.0	12.0	11.5	12.0	10.5	11.5	10.5	13.5	11.5
28	13.5	12.5	13.0	13.0	12.0	11.5	11.5	10.5	11.5	10.5	14.0	11.5
29	13.5	12.5	13.0	12.5	12.0	11.5	11.5	10.5	---	---	14.0	11.5
30	13.5	12.5	13.0	12.5	12.0	11.5	12.0	11.0	---	---	13.5	11.5
31	13.5	12.5	---	---	12.5	11.5	12.0	11.5	---	---	14.0	11.5
MONTH	16.5	12.5	13.5	12.5	13.0	11.0	13.0	9.0	13.0	10.5	14.0	10.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.5	14.5	11.5	16.5	14.5	15.5	14.0	17.0	15.5	19.0	17.5
2	13.5	11.0	14.0	11.5	16.5	14.5	16.0	14.0	17.0	16.0	19.0	18.0
3	13.0	11.0	13.5	12.0	16.5	14.0	16.0	14.0	17.0	16.0	19.0	18.0
4	12.5	11.0	13.5	12.0	16.5	14.0	16.0	14.0	17.5	16.0	19.0	18.0
5	12.0	11.0	13.5	12.0	16.5	14.5	16.0	14.0	17.5	16.0	19.0	18.0
6	12.0	11.0	14.0	12.0	16.5	13.5	16.5	14.0	17.5	16.0	19.0	17.5
7	12.0	11.5	14.0	12.5	16.5	13.5	16.5	14.0	17.5	16.0	19.0	17.5
8	12.5	11.5	14.0	12.0	16.5	13.5	16.5	14.0	17.0	16.0	19.0	17.0
9	13.0	11.0	14.5	12.0	16.5	13.5	16.5	14.0	17.0	15.5	19.0	17.0
10	13.0	11.0	14.5	12.5	16.0	14.0	16.5	14.0	17.5	16.0	19.0	17.0
11	13.0	11.0	14.5	12.0	16.5	14.0	16.5	13.5	17.5	16.0	19.0	17.0
12	13.0	11.0	14.5	12.5	17.0	14.0	17.0	14.0	18.0	16.0	19.0	17.0
13	13.0	11.0	15.5	12.0	16.5	13.0	16.0	14.0	17.5	16.5	18.5	17.0
14	13.5	11.0	16.0	12.5	16.0	13.0	16.0	14.0	18.0	16.5	18.5	17.0
15	14.0	11.0	16.5	12.5	16.0	13.5	16.0	14.5	17.5	16.5	18.5	17.0
16	13.5	11.0	16.5	12.5	15.5	13.5	16.0	15.0	17.5	16.5	18.5	17.5
17	13.5	11.5	15.5	12.5	15.5	14.0	16.5	15.0	18.0	16.5	18.5	17.0
18	13.0	11.5	15.0	12.5	15.5	14.0	16.5	15.0	18.0	17.0	18.5	17.5
19	13.5	12.0	15.0	13.0	16.0	14.0	16.5	15.0	18.0	17.5	18.0	17.0
20	13.5	12.0	15.0	13.5	16.5	14.0	17.0	15.0	18.5	17.5	18.0	17.0
21	13.5	12.5	15.5	14.0	16.5	14.5	16.5	15.0	18.5	17.5	18.0	17.0
22	14.0	12.5	15.5	14.5	16.5	13.5	16.5	14.5	18.5	17.5	18.0	16.5
23	14.0	12.5	16.0	14.5	16.5	13.0	16.5	15.0	18.5	18.0	18.0	16.5
24	14.0	12.0	16.5	14.0	16.5	13.0	16.5	15.0	19.0	18.0	18.0	16.5
25	14.5	11.5	16.0	14.0	16.5	13.5	16.5	15.0	19.0	18.0	18.0	16.5
26	14.5	11.5	16.5	14.0	16.5	14.0	16.0	15.5	19.0	18.0	18.0	16.5
27	14.5	12.0	16.5	14.0	16.0	13.5	16.5	15.5	19.0	18.0	18.0	16.5
28	14.5	11.5	16.5	14.0	15.5	14.0	16.5	15.5	19.0	18.0	18.0	16.0
29	14.5	11.0	17.0	14.5	15.5	13.5	16.5	15.5	19.0	18.0	17.5	16.0
30	14.5	11.5	16.5	14.5	16.0	14.0	16.5	15.5	19.0	18.0	17.5	16.5
31	---	---	16.5	15.0	---	---	17.0	15.5	19.0	17.5	---	---
MONTH	14.5	11.0	17.0	11.5	17.0	13.0	17.0	13.5	19.0	15.5	19.0	16.0

LOCATION.—Lat 37°48'50", long 122°28'37", unsurveyed, T.1 S., R.6 W., in San Miguel Grant, San Francisco County, Hydrologic Unit 18050002, at south tower bridge pier of Golden Gate Bridge.

WATER TEMPERATURE: October 1995 to current year.

REMARKS.—Interruptions in record were due to malfunction of the sensing and (or) recording instruments. The probe is set at approximately 5.0 ft below Mean Lower Low Water (MLLW).

WATER TEMPERATURE: Maximum recorded, 19.5°C, Sept. 10–12, 1997; minimum recorded, 10.0°C, several days in February, March, and April 1997.

WATER TEMPERATURE: Maximum recorded, 19.5°C, Sept. 10–12; minimum recorded, 10.0°C, several days in February, March, and April.

[illegible]

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA

LOCATION.—Lat 37°47'27", long 122°23'05", in SE 1/4 NW 1/4 sec.2, T.2 S., R.5 W., in San Miguel Grant, San Francisco County, Hydrologic Unit 18050002, at end of Pier 24 and directly under the west end of the San Francisco–Oakland Bay Bridge.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1989 to current year.

WATER TEMPERATURE: October 1989 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1989.

REMARKS.—Interruptions in record were due to malfunction of the sensing and (or) recording instruments. Upper probe is set at 9.0 ft below Mean Lower Low Water (MLLW). Lower probe is set at 39.0 ft below MLLW.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,700 microsiemens, Aug. 13, 1991; minimum recorded, 5,290 microsiemens, Jan. 4, 1997.

(Lower probe) Maximum recorded, 50,300 microsiemens, Sept. 6, 9–12, 1991; minimum recorded, 3,040 microsiemens, Mar. 18, 1995.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 20.5°C, July 23, 1992, Sept. 1, 1997; minimum recorded, 7.5°C, Dec. 26, 30, 1990, Jan. 1–3, 1991.

(Lower probe) Maximum recorded, 20.5°C, Sept. 1, 1997; minimum recorded, 7.5°C, Jan. 2, 3, 1991.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 48,500 microsiemens, June 6, 7, July 3; minimum recorded, 5,290 microsiemens, Jan. 4.

(Lower probe) Maximum recorded, 48,800 microsiemens, June 7; minimum recorded, 5,410 microsiemens, Jan. 5.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 20.5°C, Sept. 1; minimum recorded, 8.5°C, Jan. 14–18.

(Lower probe) Maximum recorded, 20.5°C, Sept. 1; minimum recorded, 8.5°C, Jan. 14–18.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47800	46200	48000	45500	46400	42700	35600	12100	23700	7200	36100	27400
2	47800	46100	47800	44400	45200	40500	32800	11000	25200	6490	38300	28300
3	47800	44900	47100	44400	45500	40800	26600	8070	29800	7950	40800	23600
4	47200	44700	46800	44800	45200	40800	23200	5290	32000	9420	40500	24600
5	47100	43600	46500	44400	47300	43500	20900	5980	32500	10900	40200	25500
6	46900	44200	46700	44200	45700	42900	21000	6290	35000	12200	41100	31300
7	46800	43500	---	---	46500	43900	26500	6700	35800	11700	41000	31300
8	46900	44100	47400	45100	46900	42100	26200	7480	34800	14300	42000	32300
9	47800	45100	47300	46100	47300	42700	27200	7680	35400	13800	42600	32600
10	47800	46100	47600	46100	47800	40600	28700	7070	34800	13000	43000	32800
11	47800	46300	47600	46100	46600	39700	33300	6900	34900	14200	43000	33600
12	---	---	47500	45000	46100	37900	27500	9570	35100	13700	41600	32400
13	---	---	47500	46000	45500	33800	30700	10700	31600	14600	42300	30800
14	---	---	47400	45700	43800	30400	31000	11100	30300	15400	42700	30500
15	---	---	47600	45700	42600	27500	26800	11100	32400	17100	43000	33100
16	---	---	47500	45600	41900	26800	27500	13100	34900	18400	41800	35100
17	---	---	47400	45800	42000	27200	29200	13200	34100	19900	41400	31600
18	---	---	47200	45900	40800	23900	34000	12800	36600	19200	41600	29100
19	---	---	47300	45900	41700	25100	33900	17000	38400	22600	41800	30800
20	---	---	47500	45600	41800	24900	32300	16900	39500	20600	42100	34000
21	---	---	47600	44800	42300	28900	35100	17200	39300	21500	41800	34700
22	---	---	47600	45600	41300	27600	36900	19900	39800	23000	42400	37700
23	---	---	47400	43900	38600	21500	36900	12600	38600	26000	42700	37300
24	---	---	47400	43700	38100	18600	32000	10800	35200	24400	42100	36500
25	---	---	47300	43800	38900	19300	34000	11600	39800	25700	42200	36500
26	---	---	47300	43800	39200	22700	36400	7690	39400	26200	42700	36400
27	---	---	47000	43400	38800	22200	27600	8090	38100	30300	42900	37800
28	---	---	47200	44200	36100	19500	25300	6010	38900	29400	43200	38100
29	---	---	46800	43800	39300	19700	25200	7120	---	---	43600	34300
30	48000	46600	46600	43800	37600	16400	18200	8520	---	---	43600	36300
31	48100	46600	---	---	36000	16400	16700	7470	---	---	42000	36400
MONTH	---	---	---	---	47800	16400	36900	5290	39800	6490	43600	23600

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	41500	38200	46400	40400	47900	44900	48400	45400	47400	43700	47800	45500
2	41900	36900	46700	42000	47900	45300	48400	45400	47400	45500	47800	45300
3	45200	38000	46800	42400	47800	45600	48500	45100	47100	45400	47800	45100
4	45300	39600	46800	42300	---	---	48400	46100	47000	45600	47700	44500
5	45700	40100	47100	43200	47800	45400	48400	46300	47200	45600	47800	44200
6	45800	40900	47200	42500	48500	45100	48200	46300	47300	45300	47500	44900
7	46000	40900	47200	43000	48500	45200	48300	46400	47500	45000	47000	44200
8	45900	40800	47200	42400	48300	45900	48400	46800	47700	45400	47300	44500
9	46000	39500	47100	42500	48300	46100	48200	45900	47200	45800	47000	44400
10	46300	39700	46900	43400	48000	45400	48300	45900	47200	45000	46900	43600
11	46000	40700	47300	42700	47800	45300	47500	45300	47600	44600	47400	44100
12	45700	41800	46800	43800	47300	44400	47500	45600	47900	43300	47400	44500
13	45600	41800	46300	42900	47300	44200	47500	45600	47600	43100	47700	45700
14	45100	39800	46400	42800	47700	46000	47800	45200	47700	43400	47700	46100
15	45000	40200	45300	40800	47900	45900	48000	44400	47700	43700	47700	46300
16	45000	41200	44900	40600	48300	44900	47900	44000	47600	45700	47700	46400
17	45000	41900	45100	40200	48000	44800	47900	45900	47600	45900	47800	46600
18	45100	42300	45900	41000	48200	44800	47700	44400	47700	45900	48000	46600
19	44900	41800	46600	42600	48100	44500	47700	45600	47600	45800	48000	46900
20	45200	41600	46500	42800	47900	44700	47800	45900	47400	45900	48300	46800
21	44800	41700	46300	42700	48000	44900	48200	45900	47200	45900	48100	47000
22	45600	41800	46900	43600	47900	44800	48300	46400	47200	45900	48100	46900
23	45400	41600	46700	42500	48000	45700	48300	46500	47300	45600	48100	46900
24	46000	41600	46300	43700	47700	45800	48100	46600	47400	44800	48200	45400
25	45700	41600	46700	43600	47900	46100	48200	46700	47600	44700	48200	45900
26	46100	41700	46700	44300	47900	45900	48100	46700	47700	44500	48000	46800
27	46500	42300	46800	42500	48000	45900	48100	46700	47700	44000	47900	46700
28	45800	41500	47200	44400	48100	45400	48200	46400	47800	45000	48200	46600
29	46000	42900	47600	44500	48100	46100	48100	46400	47800	44900	48200	47000
30	46300	41200	47700	44700	48300	46400	47800	46200	47800	46200	48100	47200
31	---	---	47800	44700	---	---	47600	44700	47700	45600	---	---
MONTH	46500	36900	47800	40200	---	---	48500	44000	47900	43100	48300	43600

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47800	46000	48200	45600	46900	43100	46000	21000	44700	7380	45100	27600
2	47600	46000	48000	44400	46100	40900	45100	11800	45500	8720	45300	28500
3	47900	45000	47100	44800	45900	40700	43800	8210	46000	9000	44600	24000
4	47800	44600	46900	44700	46100	41100	42400	5440	44000	9860	43900	24400
5	47000	44000	46700	44200	47500	43500	43300	5410	42800	12400	43200	26300
6	47000	44100	47200	44200	47000	43600	42600	6700	41100	13300	43100	31900
7	47000	43800	---	---	46900	44100	40800	6770	41500	12300	43400	32000
8	47700	44200	47800	45100	47100	43000	39800	7990	40500	15300	43900	32700
9	48000	45000	47700	46100	47600	43000	38800	8010	39300	14600	44500	33200
10	48000	45800	48100	46200	48200	41100	38900	7920	40100	14300	44000	33100
11	47800	46100	47900	46100	47500	40100	37200	7490	39200	14900	44200	34000
12	---	---	47900	45100	47300	38500	38000	8970	41300	14800	44000	33200
13	---	---	47900	45900	45800	33900	37200	10100	41200	16300	44300	31400
14	---	---	47600	45700	44500	30300	39000	10800	44100	16000	44400	31400
15	---	---	47800	45600	44100	29500	43700	10800	43900	17900	44300	33900
16	---	---	47500	45700	43000	27300	43500	13400	44700	19600	43900	35500
17	---	---	47500	45800	44400	28100	42200	13400	42800	20200	44200	31900
18	---	---	47400	45900	44100	25900	42800	14300	42100	20200	44000	31000
19	---	---	47400	45900	44500	26000	42800	17100	43500	23000	44200	32100
20	---	---	47600	45600	43900	26800	42900	17300	41900	21800	43900	34900
21	---	---	47700	44900	43300	30600	42700	18400	41900	23300	43700	35300
22	---	---	47500	45400	42300	28900	41500	21800	41400	23800	44400	38200
23	---	---	47600	44100	39800	22400	40700	13100	41400	25800	44200	37900
24	---	---	47500	43900	39600	20100	41600	11500	40500	24700	44400	37300
25	---	---	47500	43700	40800	20400	41100	12200	42500	27200	44700	37200
26	---	---	47400	43900	41200	24300	40800	9010	41200	28300	44900	37400
27	---	---	47300	43600	40600	23500	39900	9290	40600	30500	44400	38900
28	---	---	47300	44000	40500	20200	42200	7260	42900	29400	44600	38900
29	---	---	46900	43900	42500	21100	42600	8850	---	---	44700	36100
30	48100	46500	46600	43900	42100	19900	42800	8540	---	---	45300	36900
31	48300	46500	---	---	43900	21000	44700	8070	---	---	44400	36900
MONTH	---	---	---	---	48200	19900	46000	5410	46000	7380	45300	24000
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	44000	38600	46600	40400	48000	45300	48300	45300	47700	44300	48100	45800
2	45500	37000	46900	42200	48100	45300	48400	45300	47600	45500	48000	45700
3	45300	38000	46900	42400	47900	45300	48400	45000	47200	45500	48100	45300
4	45600	39200	47200	42900	---	---	48300	45900	47100	45400	48100	45000
5	45700	39900	47200	43200	48300	45500	48300	46100	47200	45500	48000	44500
6	45700	40700	47400	42900	48700	45300	48300	46300	47300	45200	47800	45100
7	45700	40500	47300	43300	48800	45500	48400	46400	47600	44900	47300	44600
8	45700	40400	47300	42500	48300	46100	48400	46700	47500	45300	47500	44600
9	46200	39200	47200	42700	48300	46200	48300	46000	47600	45800	47700	44300
10	46400	40200	47100	43500	48300	45500	48600	45800	47400	45000	47700	44000
11	46000	40600	47000	42600	48300	45400	48400	45400	48200	44600	47800	44300
12	45600	41500	47100	43400	48300	44400	48400	45800	48300	43700	47800	44900
13	45500	41500	46800	42600	48000	44600	48500	46000	48100	44200	47900	45900
14	45200	39600	46300	42800	48200	45800	48400	45400	48100	44200	47800	46100
15	45400	40000	46300	41600	47900	45900	48500	44800	48000	44300	47800	46200
16	45200	41000	46400	41600	48400	45100	48600	44800	48100	46000	47700	46200
17	45600	41400	47300	41000	48300	44800	48700	46500	48100	46100	47700	46300
18	46000	41800	47000	41900	48100	44900	48600	45100	48000	46200	48000	46500
19	45800	41700	47200	43400	48500	44300	48500	46400	48000	46100	48300	46700
20	45800	41700	47100	43200	48300	45300	48500	46500	47800	46100	48500	46900
21	46000	41800	47100	43300	48300	45300	48300	46400	47600	46100	48300	46900
22	46200	42100	47300	44000	48200	45100	48400	46400	47700	46100	48400	46800
23	45900	41900	47300	43300	48300	45900	48300	46500	47900	46000	48600	46900
24	46300	41800	47300	44200	48400	46100	48300	46600	47800	45200	48400	45900
25	47200	41800	47100	43900	48400	46300	48400	46600	47900	44700	48300	45900
26	46900	42100	47300	44700	48300	46200	48300	46600	48000	44800	48100	46800
27	46700	42400	47400	43100	48300	46000	48400	46600	47900	44500	48200	46900
28	46700	41900	47800	44900	48300	45500	48400	46400	48200	45100	48500	46800
29	46900	43000	48000	45200	48300	46100	48400	46600	48000	45000	48700	47300
30	46700	41300	48100	45400	48300	46300	48100	46400	48000	46100	48500	47200
31	---	---	48200	45000	---	---	48000	45200	48100	46100	---	---
MONTH	47200	37000	48200	40400	---	---	48700	44800	48300	43700	48700	44000

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	15.5	14.0	13.0	13.0	12.5	12.5	11.5	11.5	11.5	11.5	10.5
2	17.0	15.5	13.5	13.0	13.0	12.5	12.5	12.0	12.0	11.0	12.0	10.5
3	17.0	15.5	13.5	13.0	13.0	12.0	12.5	12.0	12.0	11.5	11.5	10.5
4	16.5	16.0	13.5	13.0	12.5	12.0	12.5	12.0	12.0	11.5	12.0	10.5
5	17.0	16.0	13.5	13.0	12.5	12.0	12.0	11.5	12.5	11.5	12.0	10.5
6	17.0	16.0	13.5	13.0	12.5	12.0	12.0	11.0	12.5	11.5	11.5	10.5
7	17.5	16.0	13.5	12.5	12.5	12.0	12.0	10.5	13.0	11.5	12.0	10.5
8	17.0	16.0	13.5	12.5	12.5	12.0	11.5	10.0	12.5	11.5	12.0	10.5
9	17.0	15.5	13.5	12.5	12.5	12.0	11.5	10.0	12.0	11.5	12.5	10.5
10	17.5	15.5	14.0	12.5	12.5	12.0	11.5	9.5	12.0	11.5	12.5	10.5
11	17.5	15.5	14.0	12.5	12.5	12.0	11.5	9.5	12.0	11.5	12.5	11.0
12	---	---	14.0	12.5	13.0	12.5	11.0	9.5	12.0	11.0	12.5	11.0
13	---	---	14.0	12.5	13.0	12.5	11.5	9.0	12.0	11.5	12.5	11.0
14	---	---	14.0	12.5	13.0	12.5	11.0	8.5	12.0	11.0	12.5	10.5
15	---	---	13.5	12.5	12.5	12.0	10.0	8.5	12.5	11.5	12.5	10.5
16	---	---	13.5	12.5	12.5	12.0	10.0	8.5	13.0	11.5	12.5	11.0
17	---	---	13.0	12.5	12.5	12.0	10.0	8.5	13.0	12.0	14.0	11.0
18	---	---	13.5	12.5	12.5	11.5	10.5	8.5	12.5	11.5	14.5	11.5
19	---	---	13.5	12.5	12.0	11.0	10.5	9.0	12.5	12.0	14.0	11.5
20	---	---	13.5	12.5	12.0	11.0	10.5	9.0	12.5	11.5	13.5	11.5
21	---	---	13.5	12.5	11.5	11.0	10.5	9.0	13.0	11.5	14.5	11.5
22	---	---	13.5	12.5	11.5	11.0	11.0	9.5	13.0	11.5	13.5	12.0
23	---	---	13.5	12.5	11.5	10.5	11.0	9.5	12.0	11.5	14.0	12.0
24	---	---	13.5	12.5	11.5	10.5	11.0	9.5	12.0	11.0	14.5	12.0
25	---	---	14.0	13.0	11.5	10.5	11.0	10.0	12.0	11.0	14.0	12.5
26	---	---	14.0	13.0	11.5	10.5	11.5	10.0	12.0	11.0	14.0	12.5
27	---	---	13.5	13.0	11.5	10.5	11.5	10.0	12.0	11.0	14.5	12.5
28	---	---	13.5	13.0	11.5	10.5	11.0	10.5	11.5	11.0	14.5	12.5
29	---	---	13.5	13.0	11.5	10.5	11.5	10.5	---	---	15.0	12.5
30	14.0	13.0	13.5	12.5	12.0	11.0	11.5	11.0	---	---	14.0	12.5
31	14.0	13.0	---	---	12.0	11.0	11.5	11.0	---	---	14.5	13.0
MONTH	---	---	14.0	12.5	13.0	10.5	12.5	8.5	13.0	11.0	15.0	10.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	13.0	15.0	12.5	18.5	15.0	17.5	14.0	19.0	16.0	20.5	18.5
2	13.5	12.0	14.5	12.5	18.5	15.0	17.5	14.5	19.0	16.0	20.0	18.5
3	13.5	11.5	14.5	12.5	18.0	15.0	18.0	14.0	19.0	16.5	20.0	18.5
4	13.5	11.5	15.0	12.5	---	---	19.0	14.0	19.5	16.5	20.0	18.5
5	13.5	11.5	15.0	12.5	18.5	15.0	18.5	14.5	19.5	16.5	20.0	18.0
6	13.5	11.5	15.5	12.5	19.0	14.0	18.5	15.0	19.5	16.5	20.0	18.5
7	13.0	11.5	16.0	12.5	19.0	14.5	18.5	14.5	19.0	16.5	20.0	18.5
8	13.5	11.5	15.5	12.5	18.0	14.5	18.0	15.0	18.5	16.5	20.0	18.0
9	14.0	11.5	16.0	12.5	18.5	14.5	18.5	15.0	18.5	17.5	20.0	18.5
10	14.0	11.5	15.0	13.0	17.5	15.0	18.0	15.0	19.0	17.0	20.0	18.5
11	14.0	11.5	16.0	13.0	17.0	15.0	18.0	16.0	19.0	17.5	20.0	17.5
12	13.5	12.0	15.5	14.0	17.5	15.5	18.0	16.5	19.0	17.0	20.0	17.5
13	14.0	12.0	16.5	14.0	18.0	15.5	17.5	16.0	19.0	17.0	20.0	17.5
14	14.5	12.0	17.0	14.0	19.0	15.5	17.5	15.0	19.0	17.0	20.0	17.5
15	15.0	12.5	17.5	14.5	17.5	15.0	18.0	15.0	19.0	17.0	20.0	17.5
16	15.0	12.5	18.5	14.5	18.0	14.0	18.5	15.0	19.0	17.0	20.0	17.5
17	15.5	13.0	18.0	15.0	18.0	14.5	19.0	15.0	19.0	17.0	19.5	17.5
18	15.0	13.0	16.5	14.5	18.0	15.0	19.0	15.5	19.5	17.0	19.5	17.0
19	15.0	13.0	16.5	14.0	18.5	14.5	19.0	15.0	19.5	17.5	19.5	17.0
20	14.5	13.0	17.0	14.5	19.0	14.5	18.0	15.0	19.0	17.5	19.5	17.0
21	14.5	13.5	17.0	15.0	19.0	14.5	18.5	15.5	19.0	17.5	19.0	17.0
22	15.0	13.0	17.5	14.5	18.5	15.0	18.0	15.5	19.0	17.5	19.0	17.5
23	15.0	13.0	17.5	14.5	18.5	14.5	18.5	15.5	19.5	18.0	19.5	17.0
24	15.5	13.0	18.0	15.0	18.0	15.0	18.5	15.5	19.5	18.0	19.5	17.0
25	15.5	13.5	18.0	14.5	18.5	14.5	18.0	15.5	19.5	18.0	19.0	17.0
26	15.5	13.0	17.5	15.0	17.5	14.5	18.0	15.5	19.5	18.5	19.5	17.0
27	15.5	12.5	18.0	15.0	17.5	14.5	18.0	15.5	20.0	18.5	19.5	17.0
28	15.5	13.0	17.5	15.0	17.5	14.0	18.5	16.0	19.5	18.5	19.5	17.0
29	15.0	13.0	17.5	15.0	17.0	14.0	18.5	16.0	20.0	18.5	19.0	16.5
30	15.5	12.5	17.5	15.0	17.0	14.0	19.0	16.0	20.0	18.5	19.0	17.0
31	---	---	18.0	15.5	---	---	19.0	16.0	20.0	18.5	---	---
MONTH	15.5	11.5	18.5	12.5	---	---	19.0	14.0	20.0	16.0	20.5	16.5

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	17.0	15.0	14.0	13.0	13.0	12.5	12.5	11.5	12.5	11.5	11.5	10.0
2	17.0	15.0	13.5	13.0	13.0	12.5	12.5	12.0	12.5	11.5	12.0	10.0
3	16.5	15.0	13.5	13.0	13.0	12.0	12.5	12.0	12.5	11.5	11.5	10.0
4	16.5	15.5	13.5	13.0	12.5	12.0	12.5	12.0	12.5	11.5	11.5	10.0
5	16.5	16.0	13.5	13.0	12.5	11.5	12.5	11.5	12.5	11.5	11.5	10.0
6	17.0	16.0	13.5	12.5	12.5	12.0	12.5	11.0	12.5	11.5	11.5	10.0
7	17.5	16.0	13.5	12.5	12.5	12.0	12.5	10.5	13.0	11.5	11.5	10.5
8	17.0	15.5	13.5	12.5	12.5	12.0	12.0	10.0	12.5	11.5	12.0	10.5
9	17.0	15.0	13.5	12.5	12.5	12.0	12.0	10.0	12.5	11.5	12.0	10.5
10	17.0	15.0	14.0	12.5	12.5	12.0	12.0	10.0	12.5	11.5	12.5	10.5
11	17.5	15.5	14.0	12.5	12.5	12.0	12.0	10.0	12.0	11.5	12.0	10.5
12	---	---	14.0	12.5	13.0	12.0	12.0	9.5	12.0	11.5	12.0	10.5
13	---	---	14.0	12.5	13.0	12.5	11.5	9.0	12.0	11.5	12.5	10.5
14	---	---	13.5	12.5	13.0	12.5	11.5	8.5	12.0	11.5	12.5	10.5
15	---	---	13.5	12.5	12.5	12.0	11.5	8.5	12.0	12.0	12.5	10.5
16	---	---	13.5	12.5	12.5	12.0	11.5	8.5	12.5	12.0	12.5	10.5
17	---	---	13.0	12.5	12.5	12.0	11.5	8.5	12.5	12.0	13.5	10.5
18	---	---	13.0	12.5	12.5	11.5	11.5	8.5	12.5	12.0	13.0	11.0
19	---	---	13.0	12.5	12.0	11.5	11.5	9.0	12.5	11.5	13.5	11.0
20	---	---	13.5	12.5	12.0	11.0	11.5	9.0	12.5	11.5	13.5	11.0
21	---	---	13.5	12.5	11.5	11.0	11.5	9.5	13.0	11.5	13.5	11.5
22	---	---	13.5	12.5	11.5	11.0	11.5	10.0	12.5	11.5	13.0	11.5
23	---	---	13.5	12.5	11.5	11.0	11.5	9.5	12.5	11.5	14.0	11.5
24	---	---	13.5	12.5	11.5	10.5	11.5	9.5	12.0	11.5	14.0	11.5
25	---	---	13.5	12.5	11.5	10.5	11.5	10.0	12.0	11.0	14.0	12.0
26	---	---	13.5	12.5	11.5	10.5	11.5	10.0	12.0	11.0	13.5	12.0
27	---	---	13.5	13.0	11.5	11.0	12.0	10.5	12.0	11.0	14.0	12.0
28	---	---	13.5	12.5	11.5	10.5	12.0	10.5	11.5	10.5	14.5	12.0
29	---	---	13.0	12.5	11.5	11.0	12.0	10.5	---	---	14.5	12.5
30	14.0	13.0	13.0	12.5	12.0	11.0	12.0	11.0	---	---	14.0	12.0
31	14.0	13.0	---	---	12.0	11.5	12.5	11.0	---	---	14.0	12.5
MONTH	---	---	14.0	12.5	13.0	10.5	12.5	8.5	13.0	10.5	14.5	10.0
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	13.5	12.5	15.0	12.5	18.0	14.5	17.5	14.0	18.5	15.5	20.5	18.0
2	13.5	11.5	14.5	12.0	18.0	14.0	17.5	13.5	18.0	15.5	20.0	18.0
3	13.5	11.5	14.5	12.5	18.0	14.0	18.0	14.0	18.0	16.0	20.0	17.5
4	13.5	11.0	14.5	12.5	---	---	18.5	13.5	19.0	16.0	20.0	17.5
5	13.5	11.0	15.0	12.5	18.5	14.5	18.0	14.0	18.5	16.0	20.0	17.5
6	13.0	11.5	15.5	12.5	19.0	14.0	17.5	14.0	19.0	16.0	20.0	17.5
7	13.0	11.5	16.0	12.5	19.0	14.0	18.5	13.5	18.0	16.0	20.0	18.0
8	13.5	11.5	15.5	12.5	18.0	14.5	17.5	14.0	18.0	15.5	19.5	17.5
9	14.0	11.5	15.5	12.5	18.0	14.5	17.5	14.5	18.0	16.0	19.5	17.0
10	13.5	11.0	15.0	13.0	17.0	14.5	17.5	14.0	18.0	16.5	19.5	17.5
11	14.0	11.5	15.5	13.0	17.0	14.5	18.0	14.5	18.0	16.0	19.5	17.0
12	13.5	11.5	15.5	13.5	17.5	15.0	18.0	14.0	19.0	16.0	20.0	16.5
13	14.0	12.0	16.0	13.5	17.5	14.0	17.0	14.5	18.5	16.5	19.5	16.5
14	14.5	12.0	16.5	13.5	18.5	14.0	17.0	14.0	19.0	16.5	19.5	16.5
15	14.5	12.0	17.5	14.0	17.0	14.5	17.0	14.5	19.0	17.0	19.5	17.0
16	14.5	12.0	18.0	14.0	17.5	14.0	17.5	15.0	19.0	17.0	19.5	16.5
17	14.5	12.0	18.0	13.5	17.0	14.0	18.5	14.5	19.0	17.0	19.5	16.5
18	15.0	12.0	16.5	13.0	17.5	14.0	19.0	14.5	19.0	17.0	19.5	17.0
19	15.0	12.5	16.5	13.0	18.0	14.5	18.5	14.5	19.0	17.5	19.0	16.5
20	14.5	12.5	17.0	14.0	18.5	14.5	17.5	14.5	19.0	17.5	19.0	16.0
21	14.5	13.0	16.5	14.0	18.5	14.5	18.0	14.5	19.0	17.5	18.5	16.5
22	15.0	13.0	17.0	14.0	18.5	14.5	18.0	15.0	19.0	18.0	18.5	16.5
23	15.0	13.0	17.0	14.0	18.5	14.5	18.0	15.5	19.5	18.0	18.5	16.5
24	15.5	13.0	17.5	14.0	18.0	14.0	18.0	15.5	19.5	18.0	19.0	16.5
25	15.5	12.5	17.5	14.0	18.0	14.5	17.5	15.5	19.5	18.0	18.5	16.5
26	15.5	12.5	17.0	14.5	17.5	14.5	17.5	15.5	19.5	18.0	19.0	16.5
27	15.5	12.5	17.5	14.5	17.5	14.0	18.0	15.5	20.0	18.5	19.5	16.5
28	15.5	12.5	17.0	14.5	17.0	14.0	18.5	15.5	20.0	18.0	19.0	16.0
29	15.0	12.5	17.5	14.5	17.0	14.0	18.5	15.5	20.0	17.5	18.0	16.0
30	15.0	12.5	17.0	14.5	17.0	14.0	19.0	16.0	20.0	18.0	18.5	16.0
31	---	---	17.5	14.5	---	---	19.0	16.0	20.0	18.0	---	---
MONTH	15.5	11.0	18.0	12.0	---	---	19.0	13.5	20.0	15.5	20.5	16.0

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA

LOCATION.—Lat 37°35'04", long 122°14'59", unsurveyed, T.4 S., R.4 W., in San Mateo County, Hydrologic Unit 18050004, on Pier 20 of the San Mateo Bridge.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1989 to current year.

WATER TEMPERATURE: October 1989 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1989.

REMARKS.—Interruptions in record were due to malfunction of the sensing and (or) recording instruments. Upper probe is set at 3.5 ft below Mean Lower Low Water (MLLW). Lower probe is set at 36.0 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR PERIOD OF RECORD.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,200 microsiemens, Sept. 5, 1990; minimum recorded, 11,500 microsiemens, Mar. 17, 1996.

(Lower probe) Maximum recorded, 50,300 microsiemens, Oct. 31, Nov. 4, 9, 1990; minimum recorded, 16,000 microsiemens, Apr. 2, 4, 1995.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 23.5°C, Aug. 1, 2, 28, 1993, Aug. 8, 1995; minimum recorded, 6.5°C, on several days in December 1990 and January 1991.

(Lower probe) Maximum recorded, 23.0°C, on several days in August 1990, July 16, 17, 1992, Aug. 2–6, 1993, July 16, 31, and several days in August 1995; minimum recorded, 6.5°C, Dec. 30, 1990, to Jan. 2, 1991.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 47,000 microsiemens, Aug. 16, 21–23; minimum recorded, 12,600 microsiemens, Feb. 2.

(Lower probe) Maximum recorded, 47,000 microsiemens, Sept. 29, 30; minimum recorded, 16,100 microsiemens, Feb. 3.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 23.0°C, Aug. 26; minimum recorded, 9.0°C, Jan. 16–19.

(Lower probe) Maximum recorded, 22.5°C, several days in July, August, and September; minimum recorded, 9.0°C, several days in January.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	44800	43800	45100	44000	43800	42700	35000	33300	16300	13900	26200	22500
2	44800	43900	45100	44200	44000	42900	34800	30400	15100	12600	29200	23800
3	45000	43700	45300	44300	43900	43200	32000	19700	15300	12900	28700	23000
4	44900	43800	45300	44200	43800	42900	25900	16100	16800	13700	29800	23500
5	44900	43700	45400	44300	43500	42100	20900	14000	19100	14400	30600	23900
6	45000	44000	45400	43800	43500	42300	18500	13700	19300	15300	30400	26800
7	45200	43800	45300	42800	43400	42000	18700	15600	19500	15800	30900	27000
8	45100	44100	45300	41800	43600	41900	18900	15500	19600	15400	31000	26700
9	45500	43900	45300	42200	43500	41600	18400	16200	19900	15900	31300	27400
10	45100	43800	45300	41900	42700	40900	18300	17000	19800	16500	31600	28500
11	45000	43900	45500	43900	42500	40900	18300	16800	20100	17200	32100	28800
12	44800	43700	45200	44000	42300	41100	18000	16600	19800	17000	31900	28200
13	44600	43800	45000	43900	42300	41200	18100	16900	19300	16900	32300	28800
14	45200	44000	45100	44100	42800	39400	18000	17200	19900	16800	32800	28600
15	45300	44200	45200	44000	43000	41300	17800	16900	21400	16400	32600	29300
16	45400	44000	45000	43200	43100	41600	18100	16800	22100	17300	32600	29000
17	45400	43900	44900	43200	43000	40000	19200	17200	23600	17800	35100	30000
18	45300	43800	44700	43300	42600	38900	20100	17300	22500	18100	33900	30600
19	45300	43600	44500	43200	41500	36300	22000	17600	24200	18100	34400	31300
20	45200	43600	44500	42900	40400	35200	21200	18000	24800	18400	34700	31700
21	45400	44400	44200	43200	39900	35000	23900	18100	25400	19100	34900	32500
22	45400	43400	44400	42900	39200	35100	25600	20600	25900	20900	34700	33100
23	44900	43700	44300	43100	38600	36100	---	---	26500	21100	35200	33100
24	44700	43600	44300	43000	38400	35800	25300	19300	26100	21400	35000	33000
25	44700	43600	44400	43100	38000	33600	24400	20800	25500	21900	35200	33200
26	45300	42500	44500	40100	37300	33000	23800	20800	26100	22500	35100	33500
27	45400	43300	44700	43000	36600	32700	23400	19600	26900	21200	35100	33400
28	45300	44100	44200	42900	36100	33300	22000	18400	26900	22500	34900	33200
29	45100	43500	44100	43000	35000	32500	19400	16900	---	---	35200	32900
30	44900	43700	44000	42900	34400	32900	18200	15200	---	---	35600	33100
31	45300	43900	---	---	34500	32700	17000	14700	---	---	35200	32500
MONTH	45500	42500	45500	40100	44000	32500	---	---	26900	12600	35600	22500

SAN FRANCISCO BAY

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	35500	32200	40700	38800	42400	41400	45000	44000	46300	45200	46600	45800
2	35600	32100	40700	39300	42800	41500	45200	44100	46300	45200	46600	45800
3	35200	31700	40900	39200	42800	41600	45200	44300	46000	45300	46700	45700
4	35300	32500	41200	39500	42700	41600	45200	44400	46300	45200	46800	45800
5	35900	32300	41400	39900	42800	41200	45200	44600	45900	45300	46600	45800
6	36200	33400	41600	39800	42800	41700	45400	44400	46100	45300	46700	45700
7	36300	33900	41400	40100	42900	41600	45100	44400	46100	45500	46600	45900
8	36500	33100	41300	40100	42900	41700	45400	44500	46000	45500	46700	45500
9	36100	32600	41200	40100	43100	41800	45100	44600	46500	45500	46700	45800
10	36400	34400	41100	40100	42900	41900	45800	44700	46600	45800	46600	45600
11	---	---	41300	40200	42800	41800	46000	44700	46700	45900	46500	45400
12	37400	34300	41200	40100	42600	41400	46000	44200	46700	45900	46400	45500
13	37300	35000	41600	40600	43200	41900	45700	43800	46700	45900	46500	45300
14	37800	34500	41600	40200	43400	42600	45600	43700	46900	45500	46400	45200
15	38500	35000	41600	40300	43400	42700	45700	44900	46600	45500	46400	45300
16	38600	35400	41900	40300	---	---	45700	43800	47000	45600	46100	45100
17	39400	35800	42200	40500	---	---	45900	44900	46700	45700	46000	45000
18	39600	35900	42200	40500	---	---	45900	44300	46700	45700	46600	45100
19	39700	36900	41600	40600	---	---	45900	44500	46600	45500	46400	45100
20	39600	37500	41300	40200	---	---	46000	45000	46800	45600	46500	45300
21	39500	37700	41500	40000	---	---	46000	45000	47000	45600	46500	45200
22	39600	38200	---	---	---	---	46100	45100	47000	45900	46400	45200
23	39500	37700	41700	40400	---	---	46200	45100	47000	46100	46500	45300
24	39600	38000	41700	40700	44200	43300	45800	45000	46900	45900	46400	45200
25	39600	38100	41700	40800	44200	43200	45900	45000	46900	45800	46000	45300
26	39900	38400	41800	40800	44500	43300	46100	45100	46800	45700	46000	45400
27	40000	38300	41800	40800	44400	43500	46300	45200	46600	45500	46700	45600
28	40000	38700	42000	40800	44300	43600	46100	44600	46500	45500	46700	45700
29	40300	38500	42400	41000	44800	43800	46100	45300	46400	45500	46700	45200
30	40500	38700	42200	41300	44800	43900	46000	45200	46800	45700	46400	45700
31	---	---	42500	41100	---	---	46000	45300	46600	45700	---	---
MONTH	---	---	---	---	---	---	46300	43700	47000	45200	46800	45000

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	45100	44100	45400	44400	44400	43100	36400	34600	23300	20500	28900	24400
2	45000	44000	45300	44200	44100	43200	37000	34900	23300	17200	33600	26800
3	44900	44100	45200	44200	43900	43300	36100	31200	23600	16100	35300	30800
4	44900	43700	45100	44100	43900	43300	34900	31100	25300	16400	34700	28700
5	45100	44100	45200	44200	44000	43200	34200	26000	24900	16300	32900	27400
6	45100	44200	45100	44200	43800	42800	31400	19500	21400	16500	30900	27900
7	45200	44300	45300	44200	43600	42500	26600	18800	20100	16600	31000	27700
8	45200	44400	45400	44300	43500	42200	21100	17800	20300	16800	31400	27900
9	45400	44400	45400	44200	43300	42500	18600	17200	20300	17000	31600	28400
10	45300	44400	45400	44100	43100	42100	18100	17200	20500	17600	32100	28800
11	45400	44600	45400	44000	42900	41600	17900	17000	20200	17900	32500	29100
12	45400	44400	45300	44000	42800	41600	17800	17000	20200	17500	32400	29100
13	45500	44400	45400	43900	42700	41400	17600	17000	19800	17500	32900	29400
14	45600	44100	45400	44000	42700	41600	17500	17000	21500	17700	33400	29900
15	45500	44200	45200	43500	42800	41800	18600	17100	26600	19600	33400	30400
16	45500	44100	45200	44200	42800	42000	21400	17200	28900	22500	35100	30500
17	45400	44300	45100	44100	42500	41600	22800	17400	31700	20200	37800	34300
18	45300	44100	45000	44200	42400	41200	23500	17700	27600	19400	37400	34200
19	45200	43800	45000	44000	42000	40700	24400	18500	26700	21400	36800	34200
20	44900	43800	44900	44200	41300	39100	24200	19100	26700	22200	36000	34000
21	44900	43900	44900	44100	40100	37600	27300	20200	27500	22500	35800	33900
22	45100	44000	44900	43800	38900	37000	28200	22400	27700	23300	35800	34100
23	45100	44000	44800	43400	38200	37100	---	---	28600	23500	35900	34000
24	45100	44000	44700	43500	38000	36800	26700	23300	27200	23200	36100	34000
25	45200	43800	44700	43500	37700	35900	25400	22600	26600	23000	36300	34000
26	45200	44000	44800	43700	37000	35600	25800	22500	26700	23000	36500	34300
27	45300	44200	44700	43600	36200	34800	25600	23200	28600	22000	36200	34000
28	45500	44400	44600	43400	35700	34600	25300	23000	29800	23200	36400	33600
29	45500	44200	44300	43100	35000	33500	24800	22800	---	---	37300	34000
30	45200	44100	44300	43500	34300	33700	24400	22000	---	---	37400	34800
31	45400	44300	---	---	35600	33700	23800	20700	---	---	37500	34400
MONTH	45600	43700	45400	43100	44400	33500	---	---	31700	16100	37800	24400
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	36400	33800	41500	39000	43500	40900	45600	43800	45800	45200	46500	45900
2	36100	33400	41400	39100	43400	40900	45400	43900	46000	45200	46400	45800
3	35700	33400	41400	39200	43100	40700	45500	44300	45900	45200	46300	45700
4	36500	33700	41700	39100	43500	40900	45500	44400	46000	45200	46300	45800
5	37100	34100	42000	39400	43500	40700	45400	44300	46200	45400	46400	45900
6	37100	34300	42400	39500	43400	41100	45600	44500	46300	45500	46300	45900
7	37300	34500	42000	39800	43400	41000	45700	44500	46300	45600	46400	45700
8	37600	34600	41900	39700	43100	41200	45600	44400	46400	45600	46300	45900
9	37300	34500	41700	39700	43500	41500	46000	44600	46300	45700	46300	45600
10	37800	34900	41700	39700	43600	41400	45800	44900	46500	45700	46300	45900
11	---	---	41700	39900	43300	41400	45900	44600	46300	45500	46400	45800
12	38500	35500	41800	40000	43200	41600	46100	45100	46200	45500	46400	45800
13	39400	36100	41800	40100	43700	42300	45900	45200	46200	45500	46400	46000
14	40600	36200	41900	40000	43500	42500	45700	45200	46400	45600	46500	46000
15	41300	37800	42000	40100	43700	42700	45700	45200	46500	46100	46500	45800
16	41300	37900	41900	40100	---	---	45800	45300	46700	46200	46400	45800
17	41500	38500	41800	40300	---	---	46100	45200	46700	46100	46600	45800
18	41700	39100	41700	40100	---	---	45900	45000	46600	46000	46600	45800
19	41500	39700	42100	40500	---	---	45900	45000	46500	45800	46400	45900
20	41600	39600	42200	40400	---	---	45800	44800	46500	45900	46600	46000
21	41600	39400	42300	39900	---	---	45800	44700	46600	45900	46600	45800
22	41600	39500	---	---	---	---	45800	44900	46700	45900	46600	46000
23	41700	39100	42600	40500	---	---	45800	45000	46600	46000	46800	46100
24	41700	38400	43000	40400	44900	43300	45900	45200	46500	45900	46900	46300
25	41200	38800	42800	40300	44900	43500	45900	45300	46600	45700	46800	46200
26	41700	39000	42400	40400	45200	43500	46000	45300	46500	45700	46900	45600
27	41500	38800	42600	40600	45400	43600	46100	45200	46300	45600	46900	45900
28	41300	39100	43000	40500	45300	43700	46000	44600	46400	45700	46900	46200
29	41400	38700	43500	40800	45200	43600	45900	45100	46400	45800	47000	46200
30	41900	38700	42700	40900	45100	43900	45900	45000	46400	45800	47000	46000
31	---	---	42800	41100	---	---	45900	45200	46400	45800	---	---
MONTH	---	---	---	---	---	---	46100	43800	46700	45200	47000	45600

SAN FRANCISCO BAY

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	18.5	15.5	14.0	13.5	13.0	13.5	12.5	12.5	11.5	12.5	11.5
2	19.0	18.0	14.0	13.5	13.5	12.5	13.5	13.0	13.0	11.5	12.5	11.5
3	19.0	18.0	14.0	13.5	13.0	12.5	13.5	12.5	13.0	11.5	13.0	12.0
4	19.0	18.0	14.0	13.5	13.0	12.5	13.0	12.0	13.0	12.0	12.5	12.0
5	19.5	18.0	14.0	13.5	13.5	13.0	12.5	11.5	13.5	12.0	12.5	11.5
6	19.5	18.0	14.0	13.0	13.5	13.0	12.0	11.0	13.0	11.5	12.5	11.5
7	21.0	18.5	14.0	13.0	13.5	13.0	12.0	11.0	13.0	12.0	13.0	11.5
8	21.5	19.0	14.0	13.5	13.5	13.5	11.5	11.0	13.0	12.0	13.0	11.5
9	20.5	19.0	14.0	13.5	13.5	13.5	12.0	11.0	12.5	12.0	13.5	12.0
10	20.0	19.0	14.5	13.5	13.5	13.0	11.5	11.0	13.5	12.0	13.5	12.0
11	20.5	19.0	14.0	13.5	14.0	13.5	11.5	11.0	13.0	12.0	13.5	12.5
12	20.5	19.0	14.0	13.5	14.5	13.5	11.0	11.0	13.0	12.5	13.5	12.5
13	20.0	19.0	14.0	14.0	14.0	14.0	11.0	10.0	13.5	12.0	13.5	12.5
14	20.0	19.0	14.0	13.5	14.0	13.5	10.0	9.5	14.0	12.5	13.5	12.5
15	19.5	19.0	13.5	13.0	14.0	13.0	10.0	9.5	13.5	12.5	13.5	13.0
16	19.0	18.0	13.5	13.0	14.0	13.0	10.0	9.0	14.0	12.5	13.5	13.0
17	18.5	17.5	13.5	13.0	13.5	12.5	10.0	9.0	14.0	12.5	14.5	12.5
18	18.0	17.5	14.0	13.5	13.5	12.5	10.0	9.0	14.0	12.5	15.0	13.0
19	17.5	16.0	14.0	13.5	13.0	12.0	10.0	9.0	14.0	13.0	15.5	13.5
20	16.5	16.0	14.0	13.5	12.5	11.5	10.0	9.5	13.5	12.5	15.0	13.5
21	16.5	15.5	14.0	13.5	12.0	11.5	10.0	9.5	14.0	12.5	15.5	13.5
22	16.5	15.5	14.0	14.0	12.0	11.5	10.5	10.0	14.0	12.5	15.5	14.0
23	16.5	15.5	14.0	14.0	12.0	11.5	11.0	10.0	13.5	12.5	15.5	14.0
24	16.0	15.5	14.5	14.0	12.0	11.5	11.0	10.0	13.0	12.5	16.5	14.0
25	16.0	15.0	14.5	14.0	11.5	11.0	11.5	10.5	13.0	12.0	17.0	14.5
26	15.0	14.0	15.0	14.0	11.5	11.0	12.0	11.0	12.5	12.0	16.0	15.0
27	15.0	14.0	15.0	14.0	11.5	11.5	12.5	11.0	12.0	12.0	16.0	15.0
28	15.0	14.0	14.5	14.0	11.5	11.5	13.0	11.5	12.0	11.5	16.0	15.0
29	14.5	14.0	14.0	13.5	11.5	11.5	13.0	11.5	---	---	16.5	15.5
30	14.5	13.5	14.0	13.0	12.5	11.5	12.5	11.5	---	---	16.0	15.5
31	15.0	13.5	---	---	12.5	12.0	12.5	11.5	---	---	16.0	15.0
MONTH	21.5	13.5	15.5	13.0	14.5	11.0	13.5	9.0	14.0	11.5	17.0	11.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	15.0	16.0	15.5	21.5	20.5	20.0	19.5	22.0	21.0	22.0	21.5
2	15.0	14.0	16.5	15.5	21.5	20.5	20.5	19.5	22.0	21.0	22.0	21.5
3	14.5	14.0	17.0	16.0	21.5	20.0	20.5	19.5	21.5	21.0	22.0	21.5
4	15.0	14.0	17.0	16.0	21.0	20.0	21.0	20.0	22.0	21.0	22.5	21.5
5	15.0	14.0	17.5	16.0	20.5	20.0	21.0	20.0	22.0	21.0	22.5	22.0
6	15.0	14.0	17.5	16.0	20.0	19.5	21.0	20.0	22.0	21.0	22.5	22.0
7	15.0	14.0	17.5	16.5	20.0	19.5	21.0	20.0	22.0	21.0	22.0	21.5
8	15.0	14.0	18.0	16.5	21.0	20.0	21.5	20.5	22.5	21.5	22.0	21.5
9	14.5	14.5	18.0	17.0	20.5	20.0	21.5	20.5	22.5	21.5	22.0	21.5
10	15.0	14.0	18.0	17.5	20.5	20.0	21.5	20.5	22.0	22.0	22.0	21.5
11	---	---	18.0	17.5	20.5	20.0	21.5	20.5	22.5	22.0	22.0	21.5
12	15.0	14.0	18.0	17.5	20.0	19.5	21.5	20.5	22.5	22.0	22.0	21.0
13	15.0	14.5	18.5	17.5	19.5	19.0	22.0	21.0	22.5	22.0	22.0	21.0
14	15.5	14.5	19.0	18.0	20.5	19.0	22.0	21.0	22.5	21.5	22.0	21.0
15	16.0	14.5	19.5	18.0	20.5	19.0	22.5	21.5	22.5	21.5	21.5	21.0
16	16.5	15.0	20.5	18.5	---	---	22.0	21.5	22.5	21.5	21.5	21.0
17	17.0	15.0	21.0	19.0	---	---	22.0	21.0	22.5	21.0	21.5	21.0
18	17.5	15.0	21.5	19.5	---	---	22.0	20.5	22.0	21.0	21.0	21.0
19	17.5	15.5	21.5	20.0	---	---	22.0	20.5	22.0	21.0	21.0	20.5
20	17.5	15.5	21.0	20.0	---	---	22.0	21.0	21.5	21.0	21.0	20.5
21	18.0	16.0	21.0	20.0	---	---	22.0	21.0	22.0	21.0	21.5	21.0
22	17.5	16.0	---	---	---	---	22.0	21.0	22.0	21.0	21.5	21.0
23	17.0	16.0	21.0	20.0	---	---	22.0	21.0	22.0	21.5	22.5	21.0
24	17.0	16.5	20.5	19.5	20.5	19.5	22.0	21.5	22.0	21.5	22.5	21.0
25	17.0	16.5	20.5	20.0	20.5	19.5	22.0	21.5	22.0	21.5	21.5	21.5
26	17.0	16.5	20.0	19.5	20.5	19.5	22.5	21.5	23.0	22.0	21.5	21.5
27	17.0	16.5	20.5	19.5	20.5	19.5	22.5	21.5	22.5	21.5	21.5	21.0
28	17.0	16.0	20.5	20.0	20.0	19.0	22.5	21.5	22.5	22.0	22.0	21.0
29	16.5	16.0	21.0	20.0	20.0	19.0	22.5	21.5	22.5	22.0	22.0	21.0
30	16.5	15.5	21.5	20.5	20.0	19.0	22.5	21.5	22.5	21.5	22.0	21.0
31	---	---	22.0	20.5	---	---	22.5	21.5	22.5	21.5	---	---
MONTH	---	---	---	---	---	---	22.5	19.5	23.0	21.0	22.5	20.5

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	19.5	18.5	15.0	14.5	13.0	12.5	12.0	11.5	11.5	11.5	11.5	
2	19.0	18.5	15.0	14.5	13.0	12.5	12.0	11.5	12.5	11.5	11.0	
3	19.0	18.5	14.5	14.0	12.5	12.0	12.5	11.5	12.0	11.5	11.0	
4	19.0	18.5	14.5	14.0	12.5	12.5	12.5	12.0	12.5	11.5	11.5	
5	19.0	18.5	14.5	14.0	12.5	12.5	12.0	12.0	12.5	11.0	11.5	
6	19.0	18.5	14.0	14.0	12.5	12.5	12.5	11.0	12.5	11.5	11.5	
7	19.5	19.0	14.5	14.0	13.0	12.5	12.0	11.0	12.5	11.5	11.5	
8	20.0	19.0	14.5	13.5	13.0	12.5	11.5	11.0	12.5	11.5	11.5	
9	20.0	19.5	14.5	13.5	13.5	12.5	11.5	11.0	12.5	11.5	11.5	
10	20.5	19.5	14.5	14.0	13.5	12.5	11.5	10.5	12.5	11.5	12.0	
11	20.0	19.5	15.0	14.0	13.5	12.5	11.0	10.0	12.5	11.5	12.5	
12	20.0	19.0	15.0	14.0	13.5	12.5	11.0	10.0	12.0	11.5	12.5	
13	20.0	19.0	15.0	14.0	13.5	13.0	11.0	9.5	12.0	11.5	12.5	
14	20.0	19.0	14.5	14.0	13.5	13.0	10.0	9.0	12.0	11.5	12.5	
15	19.5	18.5	14.5	13.5	13.5	12.5	9.5	9.0	12.0	11.5	13.0	
16	19.0	18.0	14.0	13.5	13.0	12.5	9.5	9.0	12.0	11.5	12.5	
17	18.5	17.5	14.0	13.5	13.0	12.5	9.5	9.0	12.5	11.5	12.0	
18	18.0	17.5	14.5	13.5	12.5	12.0	9.5	9.0	13.0	12.0	12.0	
19	17.5	16.0	14.5	14.0	12.5	12.0	9.5	9.0	13.0	12.0	12.0	
20	16.5	16.0	14.5	14.0	12.0	11.5	9.5	9.0	13.0	12.0	12.5	
21	16.0	15.5	14.0	13.5	12.0	11.5	9.5	9.0	13.0	12.0	13.0	
22	16.0	15.5	14.0	13.5	11.5	11.5	10.0	9.0	12.5	12.0	13.5	
23	16.0	15.5	14.5	13.5	11.5	11.0	10.0	9.5	13.0	12.0	14.0	
24	16.0	15.5	14.0	13.5	11.5	10.5	10.0	9.5	12.5	12.0	14.0	
25	16.0	14.5	14.0	13.5	11.5	10.5	10.5	9.5	12.5	12.0	14.0	
26	15.5	13.5	14.0	13.5	11.5	10.5	10.5	10.0	12.0	11.5	14.5	
27	14.5	13.5	14.0	13.0	11.5	10.5	10.5	10.0	12.0	11.5	15.0	
28	14.5	14.0	14.0	13.0	11.5	10.5	10.5	10.0	11.5	11.0	15.0	
29	15.0	13.5	14.0	12.5	11.5	10.5	11.0	10.5	---	---	15.5	
30	14.5	13.5	13.0	12.5	11.5	11.0	11.5	10.5	---	---	14.5	
31	15.0	13.5	---	---	11.5	11.0	11.5	11.0	---	---	15.5	
MONTH	20.5	13.5	15.0	12.5	13.5	10.5	12.5	9.0	13.0	11.0	16.0	
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.5	15.0	16.5	15.5	22.0	20.5	20.0	19.0	22.0	21.0	22.0	
2	15.0	14.0	16.5	16.0	21.5	20.0	20.5	19.5	22.0	21.0	21.5	
3	14.5	14.0	17.0	16.0	21.5	20.0	20.5	19.5	21.5	21.0	21.5	
4	15.0	14.0	17.0	16.0	21.0	19.5	20.5	20.0	21.5	21.0	21.5	
5	15.0	13.5	17.5	16.5	20.5	19.5	21.0	19.5	22.0	21.0	21.5	
6	15.0	14.0	17.5	16.5	20.0	19.5	21.0	19.5	22.0	21.0	21.5	
7	15.0	14.0	18.0	16.5	20.0	19.5	21.0	20.0	22.0	21.0	21.5	
8	15.0	14.0	18.0	17.0	20.0	19.5	21.5	20.0	22.0	21.0	21.5	
9	15.0	14.0	18.0	17.0	20.0	19.5	21.5	20.5	22.0	21.5	21.5	
10	14.5	14.0	18.0	17.5	20.0	19.5	21.5	20.5	22.0	21.5	21.5	
11	---	---	18.0	17.5	20.0	19.5	21.0	20.5	22.0	21.5	21.0	
12	15.0	14.5	18.0	17.5	20.0	19.5	21.0	20.5	22.5	21.5	21.0	
13	15.0	14.5	18.5	18.0	19.5	18.5	21.5	21.0	22.5	21.5	21.0	
14	15.0	14.0	18.5	18.0	20.0	18.5	21.5	21.0	22.5	21.5	21.0	
15	15.0	14.0	19.0	18.5	20.0	19.0	22.0	21.5	22.5	21.5	21.0	
16	15.5	14.5	19.5	18.5	---	---	22.5	21.5	22.5	21.0	21.5	
17	15.5	14.5	20.0	19.0	---	---	22.0	21.0	22.0	21.0	21.5	
18	16.0	15.0	20.5	19.0	---	---	22.0	20.5	22.0	21.0	21.0	
19	16.0	15.0	20.5	19.5	---	---	22.0	20.5	22.0	21.0	20.5	
20	16.5	15.5	21.0	20.0	---	---	22.0	21.0	21.5	21.0	20.5	
21	17.0	16.0	21.5	20.5	---	---	22.0	21.0	21.5	21.0	21.0	
22	17.0	16.0	---	---	---	---	22.0	21.0	21.5	21.0	21.0	
23	17.5	16.5	21.0	20.0	---	---	22.0	21.0	21.5	21.5	21.0	
24	17.0	16.5	21.0	20.0	20.0	19.0	22.0	21.0	22.0	21.5	21.0	
25	17.0	16.5	20.5	19.5	20.5	19.5	22.0	21.5	22.0	21.5	21.5	
26	17.5	16.5	20.0	19.5	20.5	19.5	22.0	21.5	22.0	21.5	21.0	
27	17.0	16.5	20.5	19.5	20.0	19.0	22.0	21.5	22.0	21.5	21.0	
28	17.0	16.0	20.5	20.0	20.0	19.0	22.0	21.5	22.5	21.5	21.0	
29	16.5	16.0	21.0	20.5	20.0	19.0	22.0	21.5	22.5	21.5	21.0	
30	16.5	15.5	21.0	20.5	20.0	19.0	22.0	21.5	22.5	21.5	21.0	
31	---	---	21.5	21.0	---	---	22.0	21.5	22.5	21.5	---	
MONTH	---	---	---	---	---	---	22.5	19.0	22.5	21.0	22.5	

11162800 REDWOOD CREEK AT REDWOOD CITY, CA

LOCATION.—Lat 37°26'58", long 122°13'57", in Pulgas Grant, San Mateo County, Hydrologic Unit 18050004, at Menlo Country Club, on right bank 200 ft upstream from Alameda de Las Pulgas Bridge and 2.5 mi south of Redwood City Old Post Office.

DRAINAGE AREA.—1.82 mi².

PERIOD OF RECORD.—September 1959 to September 1997 (discontinued).

REVISED RECORDS.—WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 83.92 ft above sea level.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Low flow at times affected by return flow from urban irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 644 ft³/s, Jan. 31, 1963, gage height, 9.36 ft, from rating curve extended above 180 ft³/s on basis of slope-area measurement of peak flow and computation of peak flow through culvert; maximum gage height, 11.55 ft, Nov. 29, 1970 (backwater from culvert trash racks); no flow at times.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 130 ft³/s, or maximum.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0845	236	5.54	Jan. 22	1730	192	5.03
Jan. 2	0615	201	5.14				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.02	.76	48	2.2	e1.0	.15	.25	.10	.04	.12	.04
2	.02	.02	.29	45	1.9	e.95	.17	.26	.10	.03	.15	.04
3	.02	.02	.16	8.5	1.9	e.60	.17	.27	.31	.04	.07	.04
4	.02	.02	.39	4.7	1.9	e.50	.20	.24	.23	.04	.08	.03
5	.02	.02	14	4.8	1.6	.49	.24	.47	.12	.03	.07	.04
6	.03	.02	1.4	2.6	1.4	.50	.23	.52	.11	.03	.09	.03
7	.02	.03	.56	2.1	1.3	.49	.23	.37	.10	.05	.10	.04
8	.02	.04	.41	1.9	e1.4	.46	.20	.63	.11	.06	.07	.04
9	.02	.03	3.1	1.6	e1.3	.44	.24	.23	.10	.05	.07	.03
10	.02	.02	49	1.5	e1.2	.44	.24	.23	.10	.05	.08	.04
11	.02	.03	4.0	1.4	e1.3	.46	.18	.23	.09	.04	.08	.04
12	.02	.02	3.7	2.5	e1.2	.44	.19	.21	.09	.04	.06	.04
13	.02	.02	2.8	1.4	e1.0	.44	.18	.20	.09	.03	.05	.04
14	.02	.02	1.1	2.9	e.95	.44	.21	.23	.08	.03	.04	.04
15	.02	.02	.73	8.2	e.90	.42	.16	.11	.09	.05	.03	.04
16	.02	1.2	.61	3.3	e1.0	.82	.20	.11	.10	.04	.03	.04
17	.01	13	.54	2.2	e1.8	.71	.14	.10	.07	.06	.03	.03
18	.02	1.5	.47	1.9	e1.5	.30	.53	.10	.07	.06	.04	.03
19	.02	3.2	.44	1.6	e.84	.29	1.1	.14	.07	.03	.51	.03
20	.01	.78	.44	6.1	e.89	.26	.20	.25	.07	.05	1.4	.03
21	.01	.64	32	5.0	e.77	.25	.24	.06	.06	.05	.07	.03
22	.01	2.1	16	44	e.70	.24	.25	.05	.06	.07	.06	.03
23	.02	.55	3.8	10	e.62	.24	.26	1.0	.06	.07	.05	.03
24	.02	.42	1.9	14	e.67	.24	.26	.15	.05	.06	.05	.03
25	.02	.39	1.4	32	e.64	.21	.26	.11	.06	.06	.04	.03
26	.02	.37	4.5	22	e.62	.21	.23	.10	.06	.06	.04	.04
27	.02	.33	5.3	5.7	e.63	.21	.23	.09	.06	.06	.04	.04
28	.03	.33	2.4	3.9	e.75	.18	.25	.09	.07	.07	.04	.04
29	.86	.31	12	3.0	---	.18	.25	.09	.06	.10	.04	.04
30	.24	.29	8.3	2.5	---	.15	.25	.08	.06	.10	.03	.04
31	.02	---	3.7	2.4	---	.15	---	.09	---	.12	.04	---
TOTAL	1.66	25.76	176.20	296.7	32.88	12.71	7.64	7.06	2.80	1.67	3.67	1.08
MEAN	.054	.86	5.68	9.57	1.17	.41	.25	.23	.093	.054	.12	.036
MAX	.86	13	49	48	2.2	1.0	1.1	1.0	.31	.12	1.4	.04
MIN	.01	.02	.16	1.4	.62	.15	.14	.05	.05	.03	.03	.03
AC-FT	3.3	51	349	589	65	25	15	14	5.6	3.3	7.3	2.1

e Estimated.

11162800 REDWOOD CREEK AT REDWOOD CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.22	.80	1.76	3.96	3.43	2.62	.91	.24	.092	.041	.033	.037
MAX	2.93	4.84	7.44	13.0	13.9	11.5	4.90	1.26	.32	.15	.12	.17
(WY)	1963	1974	1971	1967	1986	1983	1982	1983	1983	1983	1997	1982
MIN	.000	.003	.052	.065	.11	.18	.015	.003	.000	.000	.000	.000
(WY)	1960	1960	1960	1991	1977	1988	1977	1962	1961	1961	1961	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1960 - 1997	
ANNUAL TOTAL	811.22		569.83			
ANNUAL MEAN	2.22		1.56		1.17	
HIGHEST ANNUAL MEAN					3.67	
LOWEST ANNUAL MEAN					.096	
HIGHEST DAILY MEAN	49	Dec 10	49	Dec 10	211	Jan 21 1967
LOWEST DAILY MEAN	.01	Oct 17	.01	Oct 17	.00	Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	.01	Oct 16	.01	Oct 16	.00	Oct 1 1959
INSTANTANEOUS PEAK FLOW			236	Dec 10	644	Jan 31 1963
INSTANTANEOUS PEAK STAGE			5.54	Dec 10	11.55	Nov 29 1970
ANNUAL RUNOFF (AC-FT)	1610		1130		846	
10 PERCENT EXCEEDS	4.5		2.5		1.7	
50 PERCENT EXCEEDS	.22		.16		.10	
90 PERCENT EXCEEDS	.02		.02		.00	

11164500 SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CA

LOCATION.—Lat 37°25'24", long 122°11'18", in San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, at golf course on right bank 1.1 mi downstream from Los Trancos Creek, 1.1 mi west of Stanford University Post Office, and 5 mi downstream from Searsville Lake.

DRAINAGE AREA.—37.4 mi².

PERIOD OF RECORD.—October 1930 to September 1941, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 115.75 ft above sea level. Recording rain gage (station 372724122101201) at 345 Middlefield Road in Menlo Park, 2.5 mi northeast of gage (discontinued Sept. 30, 1995).

REMARKS.—Records good. Flow slightly regulated by Searsville Lake, capacity, 952 acre-ft. Diversions of about 800 acre-ft each year upstream from station to Los Trancos and Lagunita Canals for irrigation on Stanford University Campus downstream from station. Low flow affected by wastewater from Stanford Linear Accelerator.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,560 ft³/s, Dec. 22, 1955, gage height, 13.60 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 700 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0930	911	4.20	Jan. 2	0815	3,250	7.95
Dec. 10	0930	2,880	7.34	Jan. 22	2145	2,620	6.90
Dec. 21	1930	1,200	4.66				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.39	3.3	1400	89	20	7.3	3.6	.03	.67	.51	.33
2	.51	.39	2.8	1580	78	21	6.8	2.7	.36	.55	.51	.34
3	.45	.38	2.6	460	71	21	6.5	2.7	.40	.55	.51	.39
4	.45	.42	3.1	198	74	19	6.3	2.6	.98	.55	.51	.39
5	.42	1.7	310	155	68	17	6.0	2.5	.97	.55	.45	.39
6	.47	.94	61	103	62	16	5.8	2.3	.43	.52	.45	.34
7	.45	.66	22	86	58	15	5.8	2.2	.21	.51	.45	.33
8	.46	.66	13	73	52	14	5.8	2.3	.15	.51	.42	.35
9	.54	.58	22	58	48	14	5.6	2.6	.05	.51	.45	.39
10	.63	.58	941	49	46	13	5.2	2.5	.96	.48	.37	.39
11	.71	.58	136	43	41	13	4.0	2.5	1.6	.48	.41	.39
12	.83	.66	128	48	39	12	3.9	2.4	1.4	.51	.48	.39
13	.94	.75	88	44	37	11	3.9	2.1	1.4	.51	.51	.35
14	.94	.67	43	37	34	11	3.9	1.7	1.2	.51	.54	.35
15	.94	.74	28	101	33	11	3.8	1.7	1.3	.51	.53	.34
16	1.1	4.8	21	62	32	12	3.6	1.4	1.2	.51	.51	.33
17	1.2	132	16	49	37	16	3.4	1.0	1.1	.51	.51	.33
18	1.4	39	13	45	32	13	2.9	1.2	1.1	.47	.54	.33
19	1.7	20	12	42	29	12	14	.84	.94	.51	.61	.33
20	1.7	15	21	228	28	11	7.0	.56	.84	.51	4.4	.33
21	1.3	8.2	630	162	25	11	5.2	.25	.88	.51	.79	.29
22	.28	18	433	855	24	10	4.0	.41	.80	.51	.51	.30
23	.31	17	93	680	23	9.6	3.8	4.3	.75	.51	.45	.33
24	.33	8.4	51	341	21	11	3.6	2.1	.69	.54	.45	.33
25	.45	6.4	38	879	21	9.9	3.6	.92	.62	.51	.85	.30
26	.51	6.3	45	673	21	8.6	3.4	.92	.58	.51	.87	.30
27	.45	4.3	86	307	20	8.1	3.1	.83	.62	.51	.80	.33
28	.45	3.3	53	201	20	7.7	3.0	.77	.68	.51	.57	.30
29	1.3	3.0	152	151	---	8.0	2.9	.51	.75	.51	.39	.28
30	.53	2.6	222	120	---	8.0	2.8	.31	.81	.51	.34	.28
31	.41	---	123	103	---	7.7	---	.09	---	.51	.33	---
TOTAL	22.81	298.40	3812.8	9333	1163	391.6	146.9	52.81	23.80	16.07	20.02	10.15
MEAN	.74	9.95	123	301	41.5	12.6	4.90	1.70	.79	.52	.65	.34
MAX	1.7	132	941	1580	89	21	14	4.3	1.6	.67	4.4	.39
MIN	.28	.38	2.6	37	20	7.7	2.8	.09	.03	.47	.33	.28
AC-FT	45	592	7560	18510	2310	777	291	105	47	32	40	20

11164500 SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.93	5.84	24.8	60.9	69.0	53.0	24.8	3.38	.89	.40	.24	.29
MAX	28.2	91.9	220	301	409	315	232	39.5	10.4	3.30	1.61	2.11
(WY)	1963	1951	1956	1997	1986	1983	1958	1983	1995	1983	1983	1973
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1931 - 1997			
ANNUAL TOTAL	16642.20				15291.36							
ANNUAL MEAN	45.5				41.9				20.1			
HIGHEST ANNUAL MEAN									83.4			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	941				1580				2650			
LOWEST DAILY MEAN	.28				.03				.00			
ANNUAL SEVEN-DAY MINIMUM	.34				.30				.00			
INSTANTANEOUS PEAK FLOW					3250				5560			
INSTANTANEOUS PEAK STAGE					7.95				13.60			
ANNUAL RUNOFF (AC-FT)	33010				30330				14590			
10 PERCENT EXCEEDS	126				73				33			
50 PERCENT EXCEEDS	3.8				1.7				.40			
90 PERCENT EXCEEDS	.40				.37				.00			

11169000 GUADALUPE RIVER AT SAN JOSE, CA

LOCATION.—Lat 37°20'04", long 121°53'54", Santa Clara County, Hydrologic Unit 18050003, on right bank 150 ft upstream from St. John Street Bridge, one block below Santa Clara Avenue, and 100 ft downstream from Los Gatos Creek.

DRAINAGE AREA.—146 mi².

PERIOD OF RECORD.—October 1929 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.

CHEMICAL DATA: Water years 1979–91.

SEDIMENT DATA: Water years 1985–89.

REVISED RECORDS.—WSP 1315-B: 1943(M), 1945(M), 1949(M). WSP 1929: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 72.00 ft above sea level.

REMARKS.—Records good except for estimated daily discharges, which are poor. Flow regulated by Lexington Reservoir 12 mi upstream and by Calero, Almaden, and Guadalupe Reservoirs, and Lake Elsmar (combined usable capacity, about 42,000 acre-ft), with water released during summer for percolation in spreading basins on tributaries. Diversions into the above impoundments come from San Luis Reservoir (part of the San Felipe Project), from the South Bay Aqueduct, and from the Hetch Hetchy Aqueduct. There are also upstream diversions by the San Jose Water Works for urban use.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,000 ft³/s, Mar. 10, 1995, gage height, 17.4 ft, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow; no flow several days in most years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	e17	8.1	2930	707	44	24	17	18	13	12	10
2	e8.8	e15	6.8	2610	580	44	24	16	20	13	12	10
3	e8.4	e19	6.7	1610	281	45	25	17	26	13	12	10
4	e7.5	e21	6.9	1060	216	44	25	20	32	13	12	13
5	e7.2	26	68	795	160	42	24	19	19	13	13	10
6	e7.0	17	25	566	165	40	23	17	17	13	13	10
7	e7.0	14	11	521	253	38	23	18	19	13	11	10
8	e7.0	12	7.7	523	229	35	23	18	19	12	10	12
9	e7.4	12	32	359	224	35	23	17	19	12	12	11
10	e8.0	14	1030	222	218	35	23	18	23	10	11	11
11	e9.0	15	82	206	213	35	21	18	20	12	11	11
12	e9.2	17	68	243	186	34	20	18	27	12	11	13
13	e9.4	30	38	252	165	33	19	19	19	13	12	9.3
14	e9.4	16	24	347	158	33	21	19	22	13	12	8.7
15	e9.8	8.5	18	379	139	33	20	23	19	13	11	9.1
16	e10	43	14	210	95	35	20	20	16	13	10	8.8
17	e10	315	14	195	132	35	18	19	16	14	9.8	9.3
18	e11	19	14	145	98	33	21	19	16	13	9.6	11
19	e12	36	21	143	91	31	24	20	16	12	34	10
20	e10	26	16	462	64	31	20	21	15	12	160	10
21	e11	33	779	455	57	31	19	23	15	13	20	9.4
22	e12	43	285	1610	55	30	18	28	15	13	17	9.3
23	e13	18	71	2470	53	28	18	135	14	13	13	9.3
24	e11	12	44	1380	51	27	20	32	14	12	12	10
25	e11	10	37	2540	52	27	20	22	16	13	11	11
26	e11	9.9	39	3450	49	27	17	20	15	13	9.4	9.1
27	e12	9.5	95	1620	41	28	16	21	14	13	10	10
28	e12	9.2	35	1180	45	28	17	21	14	13	11	10
29	e15	9.2	333	921	---	28	17	20	14	13	11	10
30	e19	7.4	398	824	---	27	19	19	14	15	10	10
31	e18	---	416	713	---	25	---	19	---	13	10	---
TOTAL	321.2	853.7	4043.2	30941	4777	1041	622	733	543	396	532.8	305.3
MEAN	10.4	28.5	130	998	171	33.6	20.7	23.6	18.1	12.8	17.2	10.2
MAX	19	315	1030	3450	707	45	25	135	32	15	160	13
MIN	7.0	7.4	6.7	143	41	25	16	16	14	10	9.4	8.7
AC-FT	637	1690	8020	61370	9480	2060	1230	1450	1080	785	1060	606

e Estimated.

GUADALUPE RIVER BASIN

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11169000 GUADALUPE RIVER AT SAN JOSE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.02	14.4	40.2	104	149	136	64.7	10.2	3.39	2.94	2.74	2.98
MAX	129	123	311	998	1080	1165	847	219	24.6	23.4	22.3	31.0
(WY)	1963	1984	1932	1997	1938	1983	1982	1983	1995	1984	1984	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1931	1930	1931	1930	1930	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1930 - 1997			
ANNUAL TOTAL	36314.5				45109.2							
ANNUAL MEAN	99.2				124				44.1			
HIGHEST ANNUAL MEAN									270			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	2110				Feb 21				7870			
LOWEST DAILY MEAN	6.5				Sep 8				.00			
ANNUAL SEVEN-DAY MINIMUM	7.3				Oct 4				.00			
INSTANTANEOUS PEAK FLOW					5470				11000			
INSTANTANEOUS PEAK STAGE					9.43				17.40			
ANNUAL RUNOFF (AC-FT)	72030				89470				31980			
10 PERCENT EXCEEDS	263				235				49			
50 PERCENT EXCEEDS	17				18				.50			
90 PERCENT EXCEEDS	8.7				9.8				.00			

11169500 SARATOGA CREEK AT SARATOGA, CA

LOCATION.—Lat 37°15'16", long 122°02'18", in Quito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on upstream side of private road bridge, 0.5 mi southwest of Saratoga, and 0.7 mi downstream from diversion dam.

DRAINAGE AREA.—9.22 mi².

PERIOD OF RECORD.—October 1933 to current year. Prior to October 1951, published as Campbell Creek at Saratoga.

CHEMICAL DATA: Water years 1972 to December 1972.

REVISED RECORDS.—WSP 1445: 1940, 1952(M). WSP 1929: Drainage area.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 500 ft above sea level, from topographic map. Prior to Dec. 6, 1968, at site 40 ft downstream at different datum.

REMARKS.—Records poor. Water is diverted for municipal use by San Jose Water Works at diversion dam upstream from station. Low flows partially regulated by Lake McKenzie 8 mi upstream, usable capacity, 184 acre-ft.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,730 ft³/s, Dec. 22, 1955, gage height, 6.40 ft, site and datum then in use, from rating curve extended above 510 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 110 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0745	477	4.87	Jan. 25	0800	601	5.16
Jan. 1	1145	944	5.85				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.7	1.0	618	42	8.7	2.8	1.7	2.0	.42	.48	.75
2	1.6	1.6	.54	364	38	9.0	2.8	1.6	1.6	.75	.36	.58
3	1.5	1.6	.47	195	35	8.5	2.3	1.5	1.9	.61	.36	.60
4	1.5	1.5	.93	95	34	9.3	1.9	1.5	2.1	.42	.39	.59
5	1.4	1.5	7.5	63	34	7.7	1.6	2.1	1.6	.42	.52	.55
6	1.3	1.5	2.0	49	31	6.7	1.4	2.1	1.8	.38	.51	.46
7	1.3	1.5	1.9	38	28	6.4	1.3	1.9	1.8	.34	.49	.45
8	1.2	1.5	.69	29	26	6.1	1.6	1.9	1.7	.41	.44	.52
9	1.2	1.5	9.6	27	25	5.6	3.1	1.8	3.3	.48	.47	.36
10	1.2	1.5	182	22	23	5.4	4.5	1.8	3.2	.60	.62	.36
11	1.3	1.5	40	19	22	6.4	5.1	1.9	3.1	1.1	.84	.41
12	1.3	1.3	32	18	21	7.3	6.1	1.6	3.2	.80	.79	.37
13	1.3	1.2	18	16	22	6.7	6.2	1.6	2.1	.64	.70	.30
14	1.3	1.5	13	15	19	6.9	5.2	1.6	.71	.48	.60	.28
15	1.3	1.3	8.3	20	18	6.9	3.3	2.1	1.2	.49	.49	.41
16	1.4	1.9	5.1	14	17	8.0	2.5	2.2	1.1	.47	.48	.78
17	1.4	37	4.5	12	20	11	1.8	1.9	.78	.43	.48	.21
18	1.4	7.9	3.9	10	15	7.6	2.0	1.6	1.1	.38	.50	.22
19	1.5	9.4	3.8	9.1	14	5.4	3.7	1.9	1.3	1.0	.69	.23
20	1.5	4.1	3.4	19	13	5.5	1.6	1.9	.71	2.1	3.5	.24
21	1.5	1.6	37	26	12	4.9	1.4	1.6	1.2	1.4	.67	.24
22	1.5	3.6	48	188	12	3.8	1.3	1.8	.88	.40	.89	.20
23	1.5	2.5	29	216	11	3.8	1.4	2.2	.77	.55	.66	.24
24	1.7	.87	16	125	11	3.4	1.6	1.6	.79	.72	.76	.20
25	1.6	.64	11	284	11	3.5	2.1	1.8	1.2	.48	.59	.24
26	1.5	1.6	15	312	10	3.4	2.8	1.7	.60	.63	.50	.44
27	1.4	.56	26	136	10	4.5	2.0	1.7	.66	.56	.41	.80
28	1.4	.55	18	99	9.9	4.0	1.7	1.7	.47	.29	.40	.74
29	3.4	.68	115	73	---	3.1	2.0	1.7	.40	.42	.45	.69
30	2.1	1.0	140	54	---	2.9	1.8	1.9	.50	.50	.63	.78
31	1.8	---	187	46	---	3.1	---	1.8	---	.56	.62	---
TOTAL	46.9	96.10	980.63	3211.1	583.9	185.5	78.9	55.7	43.77	19.23	20.29	13.24
MEAN	1.51	3.20	31.6	104	20.9	5.98	2.63	1.80	1.46	.62	.65	.44
MAX	3.4	37	187	618	42	11	6.2	2.2	3.3	2.1	3.5	.80
MIN	1.2	.55	.47	9.1	9.9	2.9	1.3	1.5	.40	.29	.36	.20
AC-FT	93	191	1950	6370	1160	368	156	110	87	38	40	26

11169500 SARATOGA CREEK AT SARATOGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.89	2.71	9.38	22.9	29.3	23.4	13.6	3.84	1.28	.54	.35	.36
MAX	17.5	25.5	83.2	104	135	114	131	35.7	6.97	2.95	1.60	1.54
(WY)	1963	1951	1956	1997	1986	1983	1982	1983	1941	1941	1941	1974
MIN	.000	.037	.25	.31	.086	.32	.24	.065	.000	.000	.000	.000
(WY)	1950	1949	1957	1976	1964	1972	1972	1959	1950	1947	1934	1934

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1934 - 1997	
ANNUAL TOTAL	4724.15		5335.26			
ANNUAL MEAN	12.9		14.6		8.94	
HIGHEST ANNUAL MEAN					32.5	
LOWEST ANNUAL MEAN					.54	
HIGHEST DAILY MEAN	296	Feb 21	618	Jan 1	1260	Feb 27 1940
LOWEST DAILY MEAN	.23	Jan 2	.20	Sep 22	.00	Oct 1 1933
ANNUAL SEVEN-DAY MINIMUM	.39	Jan 2	.22	Sep 18	.00	Oct 1 1933
INSTANTANEOUS PEAK FLOW			944	Jan 1	2730	Dec 22 1955
INSTANTANEOUS PEAK STAGE			5.85	Jan 1	6.40	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	9370		10580		6470	
10 PERCENT EXCEEDS	35		26		20	
50 PERCENT EXCEEDS	1.5		1.7		.83	
90 PERCENT EXCEEDS	.46		.45		.00	

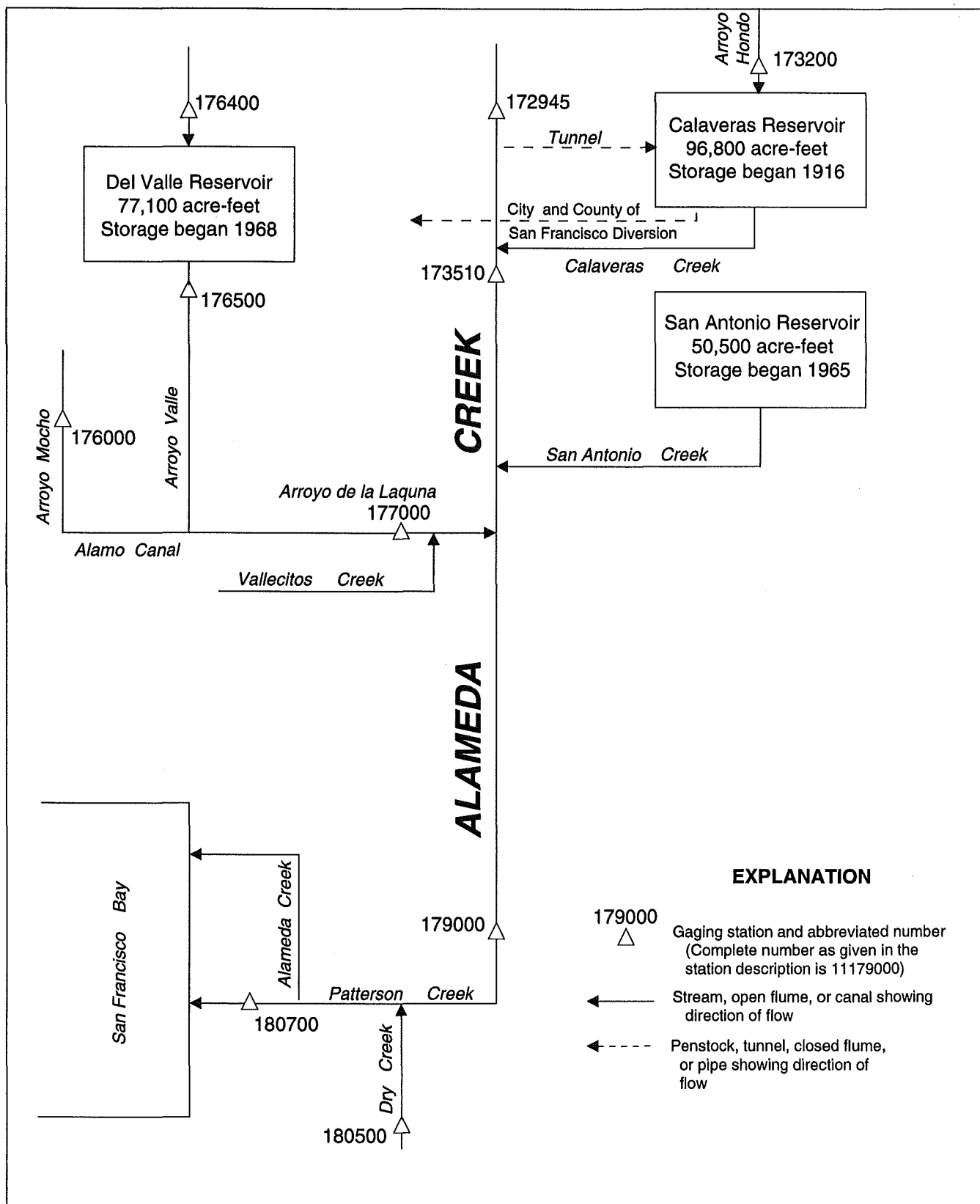


Figure 20. Diversions and storage in Alameda Creek Basin.

11172945 ALAMEDA CREEK ABOVE DIVERSION DAM, NEAR SUNOL, CA

LOCATION.—Lat 37°29'51", long 121°46'21", in SE 1/4 NE 1/4 sec.17, T.5 S., R.2 E., Alameda County, Hydrologic Unit 18050004, on right bank 700 ft upstream from diversion dam, and 9.3 mi southeast of Sunol.

DRAINAGE AREA.—33.3 mi²

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 930 ft above sea level, from topographic map.

REMARKS.—Records fair. No regulation or diversion upstream from gage. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,390 ft³/s, Jan. 9, 1995, gage height, 7.96 ft from rating curve extended above 100 ft³/s on basis of flow over dam computation; no flow several days in 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,200 (revised) ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0945	1,210	5.24	Jan. 2	1115	1,480	5.68
Dec. 10	1045	1,350	5.47	Jan. 22	2145	2,380	6.88
Dec. 21	1800	1,270	5.34				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.80	5.4	533	58	14	7.5	4.1	1.8	.92	.34	.19
2	.29	.77	6.3	868	51	15	7.1	4.0	1.7	.85	.32	.17
3	.29	.77	5.2	525	46	14	7.0	3.8	1.9	.78	.33	.16
4	.26	.81	4.6	234	43	14	6.8	3.7	1.9	.76	.28	.15
5	.26	.83	300	193	39	13	6.7	3.6	1.7	.76	.26	.14
6	.29	.81	89	128	35	13	6.4	3.4	1.6	.74	.25	.15
7	.31	.84	37	75	33	13	6.1	3.3	1.6	.70	.25	.15
8	.28	.85	22	59	31	12	6.0	3.2	1.6	.67	.28	.15
9	.26	.85	16	47	29	12	6.0	3.1	1.5	.64	.31	.15
10	.27	.82	601	44	28	11	5.9	3.1	1.5	.66	.36	.15
11	.31	.82	222	37	26	11	5.7	3.0	1.5	.66	.35	.16
12	.31	.82	242	37	25	11	5.6	2.9	1.5	.62	.35	.17
13	.35	.87	187	34	23	11	5.6	2.8	1.4	.52	.34	.18
14	.35	.97	98	28	22	11	5.4	2.8	1.3	.49	.32	.19
15	.34	1.1	62	78	21	11	5.2	2.7	1.3	.46	.31	.19
16	.34	1.4	47	46	21	11	5.1	2.7	1.2	.45	.33	.19
17	.34	354	37	37	24	11	4.9	2.6	1.2	.44	.34	.19
18	.36	68	31	34	22	11	5.1	2.5	1.1	.43	.34	.19
19	.44	21	27	32	20	10	6.4	2.4	1.1	.42	.38	.18
20	.45	25	24	225	19	10	5.7	2.4	1.1	.43	.43	.16
21	.40	13	602	290	18	9.7	5.4	2.3	1.1	.43	.26	.15
22	.36	62	591	715	17	9.5	5.2	2.3	1.1	.37	.21	.15
23	.40	55	224	754	17	9.4	5.2	2.6	1.0	.40	.21	.14
24	.50	23	104	353	16	9.1	5.0	2.3	.94	.41	.20	.14
25	.63	13	63	491	15	8.7	4.7	2.2	.88	.37	.19	.14
26	.61	9.2	50	679	15	8.4	4.4	2.1	.87	.35	.19	.15
27	.52	7.2	45	325	16	8.2	4.4	2.1	.90	.37	.21	.15
28	.50	6.2	35	185	15	7.8	4.3	2.0	.93	.38	.24	.15
29	1.4	5.6	28	119	---	7.6	4.3	2.0	.94	.38	.24	.14
30	1.2	4.8	33	85	---	7.5	4.2	1.8	.98	.38	.20	.16
31	.95	---	34	68	---	7.8	---	1.8	---	.37	.20	---
TOTAL	13.84	681.13	3872.5	7358	745	332.7	167.3	85.6	39.14	16.61	8.82	4.83
MEAN	.45	22.7	125	237	26.6	10.7	5.58	2.76	1.30	.54	.28	.16
MAX	1.4	354	602	868	58	15	7.5	4.1	1.9	.92	.43	.19
MIN	.26	.77	4.6	28	15	7.5	4.2	1.8	.87	.35	.19	.14
AC-FT	27	1350	7680	14590	1480	660	332	170	78	33	17	9.6

ALAMEDA CREEK BASIN

11172945 ALAMEDA CREEK ABOVE DIVERSION DAM, NEAR SUNOL, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.19	7.92	48.5	210	99.5	116	14.7	12.7	4.60	1.48	.45	.25
MAX	.45	22.7	125	237	250	211	19.8	27.3	9.79	2.72	.54	.36
(WY)	1997	1997	1997	1997	1996	1995	1995	1995	1995	1995	1995	1995
MIN	.009	.17	6.76	157	16.7	10.7	5.58	2.76	1.30	.54	.28	.16
(WY)	1995	1996	1995	1996	1995	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1995 - 1997	
ANNUAL TOTAL	21582.27		13325.47			
ANNUAL MEAN	59.0		36.5		43.0	
HIGHEST ANNUAL MEAN					47.7	
LOWEST ANNUAL MEAN					36.5	
HIGHEST DAILY MEAN	863	Feb 21	868	Jan 2	1200	Jan 10 1995
LOWEST DAILY MEAN	.16	Sep 9	.14	Sep 5	.00	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	.18	Sep 6	.14	Sep 23	.00	Oct 13 1994
INSTANTANEOUS PEAK FLOW			2380	Jan 22	3390	Jan 9 1995
INSTANTANEOUS PEAK STAGE			6.88	Jan 22	7.96	Jan 9 1995
ANNUAL RUNOFF (AC-FT)	42810		26430		31180	
10 PERCENT EXCEEDS	179		60		103	
50 PERCENT EXCEEDS	5.1		2.6		3.1	
90 PERCENT EXCEEDS	.29		.21		.16	

11173200 ARROYO HONDO NEAR SAN JOSE, CA

LOCATION.—Lat 37°27'42", long 121°46'06", in NE 1/4 NE 1/4 sec.32, T.5 S., R.2 E., Santa Clara County, Hydrologic Unit 18050004, on right bank 150 ft upstream from road bridge, 3.5 mi southeast of Calaveras Dam, 3.5 mi northeast of city limits of San Jose.

DRAINAGE AREA.—77.1 mi².

PERIOD OF RECORD.—October 1968 to September 1981, October 1994 to current year.

GAGE.—Water-stage recorder. Datum of gage is 783.86 ft above sea level.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,210 ft³/s, Jan. 22, 1997, gage height, 14.97 ft; minimum daily, 0.11 ft³/s, July 28–30, 1972.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	1100	1,570	9.71	Dec. 21	2230	2,650	11.05
Dec. 5	1200	910	8.42	Jan. 2	1245	4,060	12.47
Dec. 10	1345	3,380	11.83	Jan. 22	2345	7,210	14.97

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	5.7	57	1720	154	34	18	11	5.9	3.3	1.4	1.6
2	1.8	4.0	60	2410	133	33	17	10	5.8	3.5	1.4	1.6
3	1.8	3.4	56	1090	118	33	17	9.9	6.1	3.5	1.4	1.6
4	1.7	3.1	54	523	111	32	16	9.7	7.0	3.2	1.4	1.6
5	1.7	3.1	420	366	100	31	16	9.5	7.1	3.2	1.3	1.5
6	1.7	3.1	280	255	90	30	16	9.2	6.5	3.0	1.2	1.4
7	1.6	2.7	175	196	83	29	16	8.8	5.7	2.9	1.2	1.5
8	1.6	2.7	127	161	86	28	16	8.6	5.3	2.9	1.2	1.4
9	1.4	2.7	107	134	73	27	16	8.5	4.9	2.6	1.2	1.4
10	1.4	2.7	1310	117	69	26	15	8.4	4.8	2.5	1.2	1.4
11	1.4	2.7	563	101	65	26	15	8.3	4.7	2.3	1.1	1.4
12	1.4	2.7	522	99	70	25	15	8.1	4.7	2.3	1.1	1.4
13	1.4	2.7	438	93	58	24	15	7.6	4.6	2.1	1.1	1.4
14	1.4	2.9	272	80	54	24	14	7.4	4.5	2.1	1.1	1.5
15	1.4	3.1	184	169	52	23	14	7.4	4.3	2.0	1.0	1.5
16	1.4	3.3	138	137	51	24	13	7.2	4.2	1.9	1.1	1.5
17	1.4	527	110	102	56	24	13	6.5	4.0	1.8	1.1	1.6
18	1.5	232	93	90	52	23	13	6.0	3.8	1.8	1.1	1.7
19	1.6	118	81	82	46	22	17	5.3	3.5	1.8	1.1	1.7
20	1.6	102	74	314	44	22	16	5.2	3.4	1.8	1.6	1.7
21	1.6	88	941	608	42	22	14	5.3	3.2	1.8	1.3	1.7
22	1.6	217	1260	1410	41	22	14	5.3	3.2	1.7	1.3	1.7
23	1.6	209	523	2330	40	21	14	6.3	3.2	1.7	1.6	1.7
24	1.7	124	297	647	37	21	13	9.0	3.2	1.6	1.8	1.7
25	1.8	92	214	1050	36	20	12	8.5	3.2	1.6	1.9	1.7
26	1.8	76	189	2240	36	20	11	7.6	3.2	1.6	1.9	1.7
27	2.2	67	221	779	37	19	11	7.1	3.2	1.6	1.8	1.8
28	2.7	62	209	435	36	19	11	6.9	3.2	1.5	1.8	1.8
29	4.1	60	180	297	---	18	11	6.7	3.2	1.5	1.8	1.7
30	12	56	229	224	---	18	11	6.3	3.4	1.5	1.7	1.7
31	8.1	---	292	182	---	18	---	6.1	---	1.5	1.7	---
TOTAL	70.2	2080.6	9676	18441	1870	758	430	237.7	133.0	68.1	42.9	47.6
MEAN	2.26	69.4	312	595	66.8	24.5	14.3	7.67	4.43	2.20	1.38	1.59
MAX	12	527	1310	2410	154	34	18	11	7.1	3.5	1.9	1.8
MIN	1.4	2.7	54	80	36	18	11	5.2	3.2	1.5	1.0	1.4
AC-FT	139	4130	19190	36580	3710	1500	853	471	264	135	85	94

ALAMEDA CREEK BASIN

11173200 ARROYO HONDO NEAR SAN JOSE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.50	14.7	56.8	199	182	145	44.9	13.7	5.91	2.50	1.24	1.04
MAX	3.73	69.4	312	595	533	523	178	31.9	16.3	7.89	3.38	2.36
(WY)	1974	1973	1997	1997	1980	1995	1974	1995	1995	1995	1995	1995
MIN	.24	.67	1.42	3.35	2.98	5.58	2.93	1.67	.74	.33	.18	.25
(WY)	1978	1978	1977	1976	1977	1977	1977	1976	1976	1977	1972	1977

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1969 - 1997

ANNUAL TOTAL	37816.0		33855.1									
ANNUAL MEAN	103		92.8							55.2		
HIGHEST ANNUAL MEAN										101		1995
LOWEST ANNUAL MEAN										2.12		1977
HIGHEST DAILY MEAN	2290	Feb 19				2410	Jan 2			3580	Jan 10	1995
LOWEST DAILY MEAN	1.3	Aug 22				1.0	Aug 15			.11	Jul 28	1972
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 4				1.1	Aug 11			.13	Jul 27	1972
INSTANTANEOUS PEAK FLOW						7210	Jan 22			7210	Jan 22	1997
INSTANTANEOUS PEAK STAGE						14.97	Jan 22			14.97	Jan 22	1997
ANNUAL RUNOFF (AC-FT)	75010					67150				40010		
10 PERCENT EXCEEDS	281					209				113		
50 PERCENT EXCEEDS	14					7.6				4.1		
90 PERCENT EXCEEDS	1.6					1.4				.64		

11173510 ALAMEDA CREEK BELOW CALAVERAS CREEK, NEAR SUNOL, CA

LOCATION.—Lat 37°30'13", long 121°49'25", in NE 1/4 NE 1/4 sec.13, T.5 S., R.1 E., Alameda County, Hydrologic Unit 18050004, on right bank 0.2 mi downstream from Calaveras Creek, 1.1 mi downstream from Calaveras Dam, and 7.3 mi southeast of Sunol.

DRAINAGE AREA.—135 mi²

PERIOD OF RECORD.—October 1995 to current year (low-flow records only).

GAGE.—Water-stage recorder. Elevation of gage is 430 ft above sea level, from topographic map.

REMARKS.—Records poor. No records computed above 200 ft³/s. Flow regulated by Calaveras Reservoir, capacity 100,000 acre-ft, 1.1 mi upstream from gage and by diversion dam on Alameda Creek, 2.9 mi upstream. Flow is diverted out of basin from Calaveras Reservoir by city and county of San Francisco for domestic use. See schematic diagram of Alameda Creek Basin.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	.64	12	---	---	---	8.1	4.7	2.1	3.3	.91	.38
2	.66	.62	13	---	176	---	7.7	4.4	2.8	3.4	.90	.50
3	.63	.62	11	---	135	---	7.5	4.2	2.9	3.5	.88	.50
4	.60	.62	9.8	---	110	---	7.4	4.1	3.3	3.5	.88	.49
5	.60	.62	---	---	90	---	7.4	4.0	3.1	3.1	.85	.49
6	.58	.59	96	---	72	---	7.8	3.8	3.0	2.0	.83	.48
7	.58	.62	48	---	58	---	7.8	3.6	3.0	.91	.77	.49
8	.57	.62	33	---	54	---	7.1	3.4	3.0	.88	.78	.50
9	.55	.64	28	177	51	---	7.1	3.3	3.1	.85	.79	.50
10	.56	.66	---	130	47	---	7.0	3.2	3.0	.82	.82	.49
11	.56	.67	---	96	42	145	6.8	3.1	3.1	.79	.80	.48
12	.55	.67	---	82	37	15	6.8	3.0	3.2	.78	.77	.45
13	.52	.65	179	60	70	14	6.8	2.8	3.4	.77	.77	.38
14	.48	.62	95	44	112	14	6.7	2.8	3.6	.74	.74	.38
15	.48	.63	64	84	110	14	6.3	2.7	3.9	.72	.74	.38
16	.68	.76	47	64	110	14	6.1	2.6	4.0	.70	.78	.38
17	.67	---	38	53	115	14	5.9	2.5	3.9	.71	.89	.39
18	.62	57	31	45	115	13	5.8	2.4	4.0	.70	.85	.39
19	.58	20	27	40	115	12	7.9	2.1	4.0	.69	.85	.38
20	1.2	25	25	---	116	12	6.6	2.0	4.0	.81	.91	.38
21	3.2	15	---	---	167	12	6.2	1.9	3.9	.96	.61	.36
22	3.3	48	---	---	---	11	5.9	1.8	3.6	.94	.57	.34
23	3.3	51	---	---	---	11	5.8	2.2	3.3	.95	.58	.35
24	3.5	30	157	---	---	11	5.5	2.1	3.3	.93	.57	.36
25	3.5	24	109	---	---	10	5.2	1.9	3.4	.95	.56	.36
26	2.7	18	95	---	---	10	4.9	1.8	3.3	.93	.52	.37
27	.66	15	89	---	---	9.5	4.7	1.7	3.3	.95	.46	.36
28	.67	12	75	---	---	8.8	4.7	1.7	3.3	.98	.45	.31
29	.90	12	65	---	---	8.2	4.7	1.6	3.3	.99	.45	.29
30	.78	10	70	---	---	8.2	4.7	1.5	3.3	.99	.38	.29
31	.68	---	72	---	---	8.4	---	1.5	---	.96	.28	---
TOTAL	35.54	---	---	---	---	---	192.9	84.4	100.4	40.20	21.94	12.20
MEAN	1.15	---	---	---	---	---	6.43	2.72	3.35	1.30	.71	.41
MAX	3.5	---	---	---	---	---	8.1	4.7	4.0	3.5	.91	.50
MIN	.48	---	---	---	---	---	4.7	1.5	2.1	.69	.28	.29
AC-FT	70	---	---	---	---	---	383	167	199	80	44	24

11176000 ARROYO MOCHO NEAR LIVERMORE, CA

LOCATION.—Lat 37°37'35", long 121°42'13", in NW 1/4 SE 1/4 sec.36, T.3 S., R.2 E., Alameda County, Hydrologic Unit 18050004, on right bank 40 ft downstream from Mines Road Bridge, 2.4 mi upstream from small right-bank tributary, and 5.2 mi southeast of Livermore.

DRAINAGE AREA.—38.2 mi².

PERIOD OF RECORD.—January 1912 to September 1930, October 1963 to current year. Records for water year 1914 incomplete; yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

GAGE.—Water-stage recorder. Datum of gage is 746.49 ft above sea level. January 1912 to October 1914, at present site at different datum. November 1914 to Sept. 30, 1930, at site 1 mi upstream at different datum.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 2,250 ft³/s, Jan. 24, 1983, gage height, 8.80 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 10.44 ft, Feb. 19, 1986, from floodmarks; no flow for parts of most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1955, reached a discharge of 1,880 ft³/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 90 ft³/s, or maximum.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 2	1200	1,270	7.75	Jan. 23	0145	1,690	8.24

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.24	.18	e1.5	e123	18	6.8	3.8	2.1	.83	.31	.15	.12
2	e.24	.17	e1.5	e420	17	6.8	3.7	2.1	.80	.30	.15	.12
3	e.23	.16	e1.4	e140	15	7.1	3.7	2.2	.92	.27	.15	.12
4	e.23	.16	e1.3	e38	15	7.1	3.7	2.0	1.2	.26	.14	.12
5	e.20	.17	e21	e24	14	6.5	3.7	1.8	1.2	.26	.13	.11
6	e.24	.17	e12	e18	13	6.6	3.7	1.7	1.0	.24	.13	.10
7	e.20	.18	e5.8	e17	12	6.5	3.7	1.7	.85	.23	.13	.10
8	e.20	.19	e3.9	e16	11	6.6	3.6	1.7	.74	.22	.13	.10
9	e.18	.18	e3.0	e14	11	6.8	3.5	1.6	.68	.20	.13	.10
10	e.20	.19	e114	e12	11	6.8	3.5	1.6	.66	.20	.13	.10
11	e.22	.19	e48	e11	10	6.8	3.4	1.5	.66	.20	.13	.10
12	e.24	.18	e25	e11	9.8	6.5	3.3	1.4	.68	.20	.13	.10
13	e.24	.19	e21	e12	9.7	6.5	3.3	1.3	.64	.18	.12	.10
14	e.23	e.26	e12	e10	9.4	6.2	3.3	1.3	.59	.18	.12	.10
15	e.23	e.58	e8.0	e16	9.0	6.3	3.2	1.3	.57	.18	.11	.10
16	e.22	e.90	e5.9	e18	9.0	6.3	3.0	1.3	.55	.16	.10	.10
17	.21	e19	e4.6	e15	9.6	6.8	2.9	1.2	.50	.17	.10	.10
18	.17	e5.6	e3.8	e14	9.6	6.5	2.7	1.2	.45	.16	.10	.10
19	.16	e2.0	e3.2	e12	8.8	6.0	2.9	1.1	.40	.16	.10	.10
20	.16	e2.1	e2.9	e19	8.4	5.7	2.9	1.0	.37	.16	.10	.10
21	.16	e1.3	e141	e60	8.0	5.4	2.9	1.1	.36	.16	.10	.10
22	.18	e4.1	e260	e120	8.0	5.4	2.8	1.0	.34	.16	.10	.10
23	.18	e6.1	e84	e560	7.7	5.4	2.7	1.4	.33	.16	.10	.10
24	.16	e3.1	e28	e89	7.4	4.7	2.5	1.7	.31	.16	.10	.10
25	.14	e2.3	e14	e195	7.1	4.5	2.4	1.3	.28	.16	.10	.10
26	.15	e2.1	e9.2	e380	7.2	4.4	2.4	1.2	.27	.15	.10	.10
27	.17	e1.9	e8.3	e137	7.4	4.4	2.3	1.3	.27	.15	.11	.10
28	.18	e1.8	e7.5	55	7.2	4.2	2.3	1.2	.27	.15	.12	.10
29	.15	e1.7	e6.1	36	---	4.2	2.3	1.1	.29	.15	.12	.10
30	.15	e1.6	e7.1	26	---	4.2	2.2	.99	.30	.15	.12	.10
31	.17	---	e19	21	---	4.1	---	.89	---	.15	.12	---
TOTAL	6.03	58.75	884.0	2639	290.3	182.1	92.3	44.28	17.31	5.94	3.67	3.09
MEAN	.19	1.96	28.5	85.1	10.4	5.87	3.08	1.43	.58	.19	.12	.10
MAX	.24	.19	260	560	18	7.1	3.8	2.2	1.2	.31	.15	.12
MIN	.14	.16	1.3	10	7.1	4.1	2.2	.89	.27	.15	.10	.10
AC-FT	12	117	1750	5230	576	361	183	88	34	12	7.3	6.1

e Estimated.

11176000 ARROYO MOCHO NEAR LIVERMORE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	.87	4.11	14.6	21.2	14.4	4.78	1.60	.60	.20	.091	.079
MAX	1.55	11.6	33.2	122	101	155	41.8	21.5	6.96	4.04	2.57	2.47
(WY)	1984	1984	1984	1983	1915	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1913	1915	1919	1991	1991	1924	1924	1920	1913	1913	1913	1913

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1913 - 1997			
ANNUAL TOTAL	4312.88				4226.77							
ANNUAL MEAN	11.8				11.6				5.22			
HIGHEST ANNUAL MEAN									38.8			
LOWEST ANNUAL MEAN									.035			
HIGHEST DAILY MEAN	260				560				1510			
LOWEST DAILY MEAN	.14				.10				.00			
ANNUAL SEVEN-DAY MINIMUM	.16				.10				.00			
INSTANTANEOUS PEAK FLOW					1690				2250			
INSTANTANEOUS PEAK STAGE					8.24				10.44			
ANNUAL RUNOFF (AC-FT)	8550				8380				3780			
10 PERCENT EXCEEDS	26				15				6.8			
50 PERCENT EXCEEDS	1.8				1.3				.23			
90 PERCENT EXCEEDS	.19				.11				.00			

11176400 ARROYO VALLE BELOW LANG CANYON, NEAR LIVERMORE, CA

LOCATION.—Lat 37°33'41", long 121°40'58", in NE 1/4 NE 1/4 sec.30, T.4 S., R.3 E., Alameda County, Hydrologic Unit 18050004, on left bank 100 ft upstream from small left-bank tributary, 1.2 mi downstream from Lang Canyon, and 9.5 mi southeast of Livermore.

DRAINAGE AREA.—130 mi².

PERIOD OF RECORD.—October 1963 to current year. Prior to October 1974, published as "above Lang Canyon, near Livermore."

GAGE.—Water-stage recorder. Concrete control since June 19, 1975. Elevation of gage is 750 ft above sea level, from topographic map. Prior to June 19, 1975, at site 1.4 mi upstream at different datum.

REMARKS.—Records good except for flows below 5 ft³/s and periods of estimated discharges, which are fair. No regulation or diversion upstream from station. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,790 ft³/s, Feb. 17, 1986, gage height, 7.36 ft, from rating curve extended above 1,000 ft³/s on basis of slope-area measurements at gage heights 4.13, 5.40, and 7.36 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0945	701	2.17	Jan. 2	1745	3,010	3.92
Dec. 10	1830	1,990	3.29	Jan. 23	0300	5,280	5.27
Dec. 22	0200	2,300	3.49				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.2	6.1	1250	249	40	16	6.9	2.5	1.0	.00	.00
2	.00	.76	6.2	2200	216	39	15	6.3	2.5	1.1	.00	.00
3	.00	.76	5.4	1150	192	39	15	6.3	3.1	.88	.00	.00
4	.00	.76	5.0	497	180	37	15	6.3	4.6	.87	.00	.00
5	.00	.76	98	350	163	35	15	6.1	4.6	.76	.00	.00
6	.00	.76	64	242	144	33	14	5.4	3.9	.66	.00	.00
7	.00	.76	32	185	131	32	14	5.4	3.6	.45	.00	.00
8	.00	.76	19	152	121	32	14	5.4	3.1	.26	.00	.00
9	.00	.76	15	127	111	30	13	5.4	3.0	.22	.00	.00
10	.00	.76	936	110	106	30	12	4.6	2.5	.19	.00	.00
11	.00	.76	577	96	98	30	12	4.6	2.5	.18	.00	.00
12	.00	.76	263	91	91	27	12	4.6	2.5	.15	.00	.00
13	.00	1.4	228	85	85	27	11	4.6	2.5	.11	.00	.00
14	.00	1.5	134	71	79	25	11	4.0	2.5	.06	.00	.00
15	.00	1.5	78	135	77	25	11	3.8	2.2	.00	.00	.00
16	.00	2.1	52	140	74	25	11	3.8	2.0	.00	.00	.00
17	.00	225	39	104	77	27	11	3.8	2.0	.00	.00	.00
18	.00	59	31	89	73	25	11	3.4	1.8	.00	.00	.00
19	.00	20	25	79	64	24	9.7	3.1	1.4	.00	.00	.00
20	.00	21	21	182	58	23	9.7	3.1	1.3	.00	.00	.00
21	.48	14	634	368	54	23	9.7	2.5	1.2	.00	.00	.00
22	.71	32	1380	1190	51	23	9.7	2.5	1.1	.00	.00	.00
23	.88	37	544	2540	49	24	8.6	3.2	.90	.00	.00	.00
24	1.4	18	239	751	46	25	8.5	4.3	.81	.00	.00	.00
25	1.6	12	151	1430	42	23	8.5	3.8	.72	.00	.00	.00
26	1.9	9.2	118	1950	42	21	8.5	3.3	.61	.00	.00	.00
27	e1.3	7.6	113	962	42	20	7.7	3.1	.60	.00	.00	.00
28	e1.1	6.6	97	600	40	19	7.3	3.1	.62	.00	.00	.00
29	e1.9	6.3	84	445	---	18	7.3	3.1	.77	.00	.00	.00
30	4.9	5.7	107	352	---	17	7.3	2.5	.87	.00	.00	.00
31	2.3	---	186	292	---	17	---	2.7	---	.00	.00	---
TOTAL	18.47	489.46	6287.7	18215	2755	835	335.5	131.0	62.30	6.89	0.00	0.00
MEAN	.60	16.3	203	588	98.4	26.9	11.2	4.23	2.08	.22	.000	.000
MAX	4.9	225	1380	2540	249	40	16	6.9	4.6	1.1	.00	.00
MIN	.00	.76	5.0	71	40	17	7.3	2.5	.60	.00	.00	.00
AC-FT	37	971	12470	36130	5460	1660	665	260	124	14	.00	.00

e Estimated.

11176400 ARROYO VALLE BELOW LANG CANYON, NEAR LIVERMORE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.24	7.52	34.6	123	134	105	38.1	8.80	2.60	.63	.18	.11
MAX	3.12	79.2	216	588	779	625	322	71.5	17.3	7.43	3.67	2.00
(WY)	1984	1983	1984	1997	1986	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.24	.82	.14	.001	.000	.000	.000	.000
(WY)	1965	1977	1990	1991	1991	1977	1977	1977	1976	1964	1964	1964

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1964 - 1997	
ANNUAL TOTAL	32031.23		29136.32			
ANNUAL MEAN	87.5		79.8		37.5	
HIGHEST ANNUAL MEAN					174	
LOWEST ANNUAL MEAN					.24	
HIGHEST DAILY MEAN	1730	Feb 20	2540	Jan 23	4860	Feb 19 1986
LOWEST DAILY MEAN	.00	Aug 10	.00	Oct 1	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 10	.00	Oct 1	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW			5280	Jan 23	8790	Feb 17 1986
INSTANTANEOUS PEAK STAGE			5.27	Jan 23	7.36	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	63530		57790		27180	
10 PERCENT EXCEEDS	234		147		55	
50 PERCENT EXCEEDS	7.8		4.0		1.3	
90 PERCENT EXCEEDS	.00		.00		.00	

11176500 ARROYO VALLE NEAR LIVERMORE, CA

LOCATION.—Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from highway bridge, 1.1 mi upstream from Dry Creek, 1.3 mi downstream from Del Valle Dam, 4.1 mi south of Livermore, and 6.9 mi southeast of Pleasanton.

DRAINAGE AREA.—147 mi².

PERIOD OF RECORD.—January 1912 to September 1930, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912–29.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 510.44 ft above sea level. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum.

REMARKS.—Records fair. Flow regulated by Del Valle Reservoir 1.3 mi upstream beginning in September 1968, capacity, 77,100 acre-ft. Water from Sacramento–San Joaquin Delta imported through South Bay Aqueduct can be pumped into Del Valle Reservoir for storage and later released into the channel for downstream percolation or returned to the South Bay Aqueduct. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,200 ft³/s, Apr. 2, 1958, gage height, 10.91 ft; no flow at times. Maximum discharge since construction of Del Valle Dam in 1968, 2,850 ft³/s, Mar. 3, 1983, gage height, 8.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1955, reached a stage of 13.9 ft from floodmarks, discharge, 18,200 ft³/s, on basis of contracted-opening and slope-area measurement of peak flow.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.73	1.4	1.5	74	.97	.58	.39	.29	.43	.20	22
2	1.1	.73	1.4	8.8	75	1.1	.60	.36	.37	.43	.20	22
3	1.1	.73	1.4	646	75	1.2	.64	.33	.53	.31	.19	21
4	1.0	.73	2.7	1220	75	1.2	.73	.36	.59	.36	.16	21
5	1.1	.78	3.5	761	75	1.4	.79	.42	.69	.42	.14	21
6	1.1	.73	2.9	421	71	1.4	.81	.46	.75	.26	.15	21
7	1.1	.71	.92	419	68	1.2	.80	.48	.80	.26	.14	21
8	.99	.63	.93	211	68	1.0	.76	.51	.99	.33	.17	21
9	.88	.63	1.0	54	69	1.0	.75	.48	.88	.49	.22	21
10	1.0	.63	1.5	53	45	1.0	.79	.43	.76	.55	.35	21
11	1.0	.66	1.2	52	3.2	1.1	.78	.44	.70	.52	.41	21
12	.98	.64	1.3	54	2.7	1.0	.81	.41	.76	.57	.29	21
13	1.0	.64	1.4	54	2.5	1.1	.85	.37	.85	.59	.20	21
14	.86	.63	1.4	54	2.3	1.1	.89	.44	.75	.56	.15	20
15	.74	.67	1.4	54	2.2	1.1	.88	.44	.67	.49	.18	20
16	.73	.73	1.4	54	2.1	1.1	.96	.46	.68	.47	.19	19
17	.77	2.4	1.2	54	2.4	1.1	1.1	.46	.71	.49	.19	19
18	.81	1.1	1.2	54	2.3	1.1	1.2	.49	.64	.51	.20	19
19	.86	1.0	1.2	54	2.1	1.1	1.3	.68	.54	.52	.24	20
20	.86	1.2	1.2	55	2.1	1.0	1.3	.67	.44	.57	5.7	21
21	.86	1.2	2.6	54	2.1	.98	1.2	.60	.45	.57	9.4	21
22	.76	1.4	1.6	270	1.7	.97	1.2	.63	.39	.57	9.9	21
23	.74	1.4	1.2	693	1.4	.89	1.1	.81	.40	.66	9.9	21
24	.73	1.4	1.0	2020	1.4	.77	.87	.66	.38	.64	11	21
25	.76	1.4	1.0	1190	1.6	.75	.54	.54	.41	.68	11	21
26	.78	1.4	1.0	1100	1.0	.79	.46	.51	.46	.66	15	21
27	.76	1.4	1.0	2110	.97	.82	.48	.55	.48	.68	21	21
28	.65	1.4	1.0	2080	.94	.82	.40	.64	.52	.69	21	21
29	.79	1.3	1.0	2040	---	.81	.42	.60	.48	.44	21	20
30	.79	1.3	1.0	889	---	.91	.42	.55	.48	.21	21	20
31	.74	---	1.0	73	---	.77	---	.52	---	.23	21	---
TOTAL	27.44	30.30	43.95	16853.3	730.01	31.55	24.41	15.69	17.84	15.16	180.87	621
MEAN	.89	1.01	1.42	544	26.1	1.02	.81	.51	.59	.49	5.83	20.7
MAX	1.1	2.4	3.5	2110	75	1.4	1.3	.81	.99	.69	21	22
MIN	.65	.63	.92	1.5	.94	.75	.40	.33	.29	.21	.14	19
AC-FT	54	60	87	33430	1450	.63	.48	.31	.35	.30	359	1230

11176500 ARROYO VALLE NEAR LIVERMORE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1968, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.016	2.63	18.0	87.6	146	51.4	47.2	7.37	1.83	.32	.089	.021
MAX	.15	69.2	125	851	522	280	620	57.8	9.47	2.28	.83	.24
(WY)	1967	1927	1965	1914	1915	1958	1958	1915	1967	1967	1958	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.094	.000	.000	.000	.000
(WY)	1914	1914	1918	1918	1920	1924	1924	1924	1918	1914	1913	1913

SUMMARY STATISTICS

WATER YEARS 1912 - 1968

ANNUAL MEAN	29.6
HIGHEST ANNUAL MEAN	118
LOWEST ANNUAL MEAN	.008
HIGHEST DAILY MEAN	5930
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	12200
INSTANTANEOUS PEAK STAGE	10.91
ANNUAL RUNOFF (AC-FT)	21460
10 PERCENT EXCEEDS	35
50 PERCENT EXCEEDS	.20
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.06	8.46	7.83	53.1	89.4	73.5	20.1	5.78	8.61	13.6	12.4	10.3
MAX	43.2	39.4	35.9	544	549	653	334	30.8	51.7	46.0	54.3	48.1
(WY)	1971	1981	1981	1997	1986	1983	1982	1970	1980	1980	1981	1981
MIN	.17	.30	.36	.35	.30	.36	.22	.23	.15	.079	.11	.16
(WY)	1987	1987	1989	1990	1991	1994	1990	1990	1990	1985	1989	1984

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1970 - 1997

ANNUAL TOTAL	16802.32	18591.52	
ANNUAL MEAN	45.9	50.9	25.7
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			.44
HIGHEST DAILY MEAN	1960	Feb 23	2110
LOWEST DAILY MEAN	.39	Jan 3	.14
ANNUAL SEVEN-DAY MINIMUM	.42	Jan 3	.16
INSTANTANEOUS PEAK FLOW			2230
INSTANTANEOUS PEAK STAGE			8.05
ANNUAL RUNOFF (AC-FT)	33330		36880
10 PERCENT EXCEEDS	55		53
50 PERCENT EXCEEDS	1.1		.97
90 PERCENT EXCEEDS	.65		.41

11177000 ARROYO DE LA LAGUNA NEAR PLEASANTON, CA

LOCATION.—Lat 37°36'55", long 121°52'50", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi upstream from small left bank tributary, 0.8 mi downstream from highway bridge, and 3.2 mi south of Pleasanton.

DRAINAGE AREA.—405 mi².

PERIOD OF RECORD.—January 1912 to September 1930, October 1969 to September 1983, October 1987 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 248.40 ft above sea level. January 1912 to September 1917, at site 3.0 mi upstream at different datum. October 1917 to September 1930, at site 0.8 mi downstream at different datum. October 1969 to September 1983, at datum 3.00 ft higher.

REMARKS.—Records fair. Flow partly regulated by Del Valle Reservoir 15 mi upstream, beginning in September 1968, capacity, 77,100 acre-ft. Water imported from Sacramento—San Joaquin Delta (see REMARKS for station 11176500). See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft³/s, Jan. 5, 1982, gage height, 22.61 ft, present datum; no flow at times.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	27	59	1600	219	57	40	36	27	27	20	42
2	19	24	31	2890	195	69	40	32	27	23	18	39
3	20	23	26	951	179	57	40	32	29	22	20	36
4	24	23	26	1120	180	56	39	34	43	21	21	33
5	24	21	554	958	170	55	36	34	28	24	20	31
6	24	18	116	384	155	55	36	29	24	24	18	34
7	25	19	62	344	146	52	37	31	26	24	21	39
8	23	20	52	292	144	51	34	32	27	23	17	41
9	22	21	60	99	137	49	32	31	26	22	18	37
10	21	20	653	72	133	50	33	32	26	21	20	33
11	21	21	160	68	110	53	36	32	26	21	20	33
12	23	18	120	213	89	50	36	33	25	20	19	36
13	24	20	129	90	86	50	36	33	23	22	17	40
14	25	18	59	62	80	45	33	31	23	23	17	41
15	25	22	51	197	80	49	35	27	25	21	16	41
16	24	34	48	85	84	49	35	25	22	22	21	39
17	21	1190	46	62	122	53	36	26	22	20	22	37
18	21	189	39	58	87	46	47	29	22	19	23	36
19	20	117	34	56	80	44	116	30	21	20	23	38
20	24	73	32	139	74	44	44	30	21	23	110	42
21	25	49	1300	166	73	44	39	29	23	24	37	44
22	25	161	965	1460	69	43	39	26	25	22	20	44
23	24	61	267	2110	70	43	41	67	25	22	14	39
24	24	38	119	2110	66	41	35	45	25	23	18	40
25	22	34	85	2810	63	36	33	31	23	20	21	39
26	23	32	95	3410	62	34	37	29	23	19	24	39
27	24	29	175	2420	58	39	39	28	23	21	27	40
28	25	28	85	2380	60	39	39	22	24	22	31	44
29	158	27	122	2230	---	39	38	24	27	21	37	44
30	86	25	95	1590	---	39	37	24	40	17	35	37
31	43	---	74	294	---	41	---	26	---	21	39	---
TOTAL	930	2402	5739	30720	3071	1472	1198	970	771	674	784	1158
MEAN	30.0	80.1	185	991	110	47.5	39.9	31.3	25.7	21.7	25.3	38.6
MAX	158	1190	1300	3410	219	69	116	67	43	27	110	44
MIN	19	18	26	56	58	34	32	22	21	17	14	31
AC-FT	1840	4760	11380	60930	6090	2920	2380	1920	1530	1340	1560	2300

11177000 ARROYO DE LA LAGUNA NEAR PLEASANTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1930, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.43	1.96	15.9	174	234	59.5	18.5	8.67	3.52	2.06	1.36	1.19
MAX	9.90	13.4	105	1349	728	207	59.8	74.0	13.9	13.1	8.76	6.98
(WY)	1917	1927	1914	1914	1915	1919	1926	1915	1916	1916	1916	1916
MIN	.000	.000	.000	.000	.84	.53	.000	.000	.000	.000	.000	.000
(WY)	1914	1914	1919	1925	1924	1924	1929	1924	1918	1913	1913	1913

SUMMARY STATISTICS

WATER YEARS 1912 - 1930

ANNUAL MEAN	42.5
HIGHEST ANNUAL MEAN	180
LOWEST ANNUAL MEAN	.69
HIGHEST DAILY MEAN	9810
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
ANNUAL RUNOFF (AC-FT)	30800
10 PERCENT EXCEEDS	33
50 PERCENT EXCEEDS	.90
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.5	34.4	58.5	204	197	199	67.5	24.5	17.9	18.8	17.6	16.3
MAX	42.3	92.3	185	991	925	1510	517	116	43.0	40.6	43.5	41.1
(WY)	1971	1983	1997	1997	1983	1983	1982	1983	1983	1975	1981	1981
MIN	3.34	2.59	6.46	6.07	12.7	9.39	6.49	4.05	2.88	1.80	2.31	2.28
(WY)	1991	1993	1990	1991	1977	1988	1990	1992	1991	1992	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1970 - 1997

ANNUAL TOTAL	59594	49889	
ANNUAL MEAN	163	137	72.6
HIGHEST ANNUAL MEAN			339
LOWEST ANNUAL MEAN			11.6
HIGHEST DAILY MEAN	2440	Feb 21	3410
LOWEST DAILY MEAN	11	Sep 6	14
ANNUAL SEVEN-DAY MINIMUM	16	Jul 30	18
INSTANTANEOUS PEAK FLOW			5820
INSTANTANEOUS PEAK STAGE			16.84
ANNUAL RUNOFF (AC-FT)	118200	98950	52580
10 PERCENT EXCEEDS	379	159	88
50 PERCENT EXCEEDS	29	35	19
90 PERCENT EXCEEDS	20	21	4.4

11179000 ALAMEDA CREEK NEAR NILES, CA

LOCATION.—Lat 37°35'14", long 121°57'35", in NW 1/4 sec.15, T.4 S., R.1 W., Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi downstream from railroad bridge, 1.2 mi northeast of Niles, and 8.3 mi downstream from James H. Turner Dam on San Antonio Creek.

DRAINAGE AREA.—633 mi².

PERIOD OF RECORD.—January 1891 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "at Niles Dam" 1891–1900 and as "at Sunol Glen" 1901–21.

REVISED RECORDS.—WSP 1315-B: 1921. WSP 1515: 1951–52, 1956. WSP 1565: 1945. WDR CA-86-2: 1984(M).

GAGE.—Water-stage recorder and concrete control. Datum of gage is 85.65 ft above sea level. Prior to 1901, nonrecording gage at site 1 mi upstream at different datum. From 1901 to Sept. 30, 1914, nonrecording gage; Oct. 1, 1914, to Sept. 30, 1916, water-stage recorder at site 4.5 mi upstream at different datum; Oct. 1, 1916, to Dec. 17, 1923, water-stage recorder at site 800 ft upstream at different datum.

REMARKS.—Records good. Flow regulated since 1916 by Calaveras Reservoir, although dam not completed until 1925, usable capacity, 96,800 acre-ft, most of which is diverted for San Francisco water supply; since February 1965 by San Antonio Reservoir, capacity, 51,000 acre-ft; and since September 1968 by Del Valle Reservoir, 23 mi upstream, capacity, 77,100 acre-ft. Natural flow of stream affected by water imported from Delta–Mendota Canal beginning in 1962. Other diversions from ground-water basin for irrigation of 9,000 acres upstream from station. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 29,000 ft³/s, Dec. 23, 1955, gage height, 14.9 ft; minimum (water years 1892–1962), no flow at times; minimum daily (water years 1963–96), 0.63 ft³/s, Oct. 7–10, 1984.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	38	63	2460	962	296	52	46	33	35	21	41
2	26	35	44	5000	849	306	53	42	32	29	21	38
3	34	34	36	3060	652	300	53	41	36	26	21	33
4	36	33	36	2550	479	292	53	45	56	28	23	29
5	37	30	962	2030	434	287	48	45	40	32	20	29
6	37	28	274	1130	299	283	46	39	34	34	18	29
7	37	28	134	857	253	279	50	38	35	33	32	34
8	37	30	90	699	241	274	50	38	36	31	29	38
9	36	29	81	380	225	272	50	37	35	28	29	35
10	32	29	1370	289	213	272	44	38	34	29	32	30
11	30	31	542	249	184	253	47	38	36	27	34	28
12	30	28	381	381	153	84	48	37	32	28	31	31
13	35	27	351	260	159	78	46	36	31	31	31	36
14	36	25	194	195	236	71	45	35	30	30	28	37
15	36	30	129	367	227	74	46	32	35	28	28	39
16	35	30	105	260	226	72	42	31	32	30	33	35
17	37	1530	91	206	264	80	40	30	30	27	37	31
18	36	336	75	184	232	69	40	33	28	25	39	30
19	34	139	65	167	210	62	132	31	26	26	35	30
20	35	104	60	454	196	60	60	30	27	31	112	33
21	39	57	1910	827	227	59	52	30	27	30	44	41
22	39	179	2250	2680	310	58	50	28	29	26	25	41
23	38	139	742	6290	315	58	52	57	30	24	18	35
24	39	73	328	3970	307	57	46	58	30	26	18	33
25	35	53	222	4890	301	53	42	36	26	24	23	34
26	36	45	196	6630	297	53	42	34	29	23	25	34
27	39	39	301	4400	292	55	42	35	27	25	27	35
28	41	37	342	3590	300	54	45	30	28	25	26	40
29	150	34	562	3100	---	54	45	29	32	23	34	41
30	108	34	555	2520	---	53	44	29	48	19	33	34
31	65	---	531	1160	---	53	---	30	---	21	38	---
TOTAL	1310	3284	13022	61235	9043	4371	1505	1138	984	854	965	1034
MEAN	42.3	109	420	1975	323	141	50.2	36.7	32.8	27.5	31.1	34.5
MAX	150	1530	2250	6630	962	306	132	58	56	35	112	41
MIN	25	25	36	167	153	53	40	28	26	19	18	28
AC-FT	2600	6510	25830	121500	17940	8670	2990	2260	1950	1690	1910	2050

11179000 ALAMEDA CREEK NEAR NILES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1961, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.61	21.0	101	185	322	213	156	18.9	8.19	5.46	3.26	3.14
MAX	36.5	581	1469	2578	2431	1439	2323	95.5	46.1	50.1	47.5	48.9
(WY)	1936	1951	1956	1952	1938	1938	1958	1941	1938	1935	1935	1935
MIN	.000	.000	.000	.22	.71	.17	1.08	.11	.000	.000	.000	.000
(WY)	1925	1926	1931	1949	1948	1931	1929	1934	1931	1929	1925	1925

SUMMARY STATISTICS

WATER YEARS 1925 - 1961

ANNUAL MEAN	85.4
HIGHEST ANNUAL MEAN	401
LOWEST ANNUAL MEAN	.90
HIGHEST DAILY MEAN	23900
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	29000
INSTANTANEOUS PEAK STAGE	14.9
ANNUAL RUNOFF (AC-FT)	61830
10 PERCENT EXCEEDS	91
50 PERCENT EXCEEDS	2.7
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.3	57.5	111	309	398	381	135	57.4	45.1	40.4	39.3	32.2
MAX	78.6	247	434	1975	1928	2725	1163	318	154	62.9	65.9	62.1
(WY)	1992	1984	1984	1997	1983	1983	1982	1983	1973	1981	1972	1981
MIN	9.91	17.2	20.1	28.4	28.9	32.5	18.3	18.6	16.4	20.6	15.8	2.51
(WY)	1979	1996	1979	1985	1977	1977	1991	1971	1978	1974	1995	1984

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1970 - 1997

ANNUAL TOTAL	118418	98745	
ANNUAL MEAN	324	271	135
HIGHEST ANNUAL MEAN			621
LOWEST ANNUAL MEAN			31.5
HIGHEST DAILY MEAN	6340	Feb 21	6630
LOWEST DAILY MEAN	19	Jul 25	18
ANNUAL SEVEN-DAY MINIMUM	23	Jul 19	21
INSTANTANEOUS PEAK FLOW			10700
INSTANTANEOUS PEAK STAGE			11.53
ANNUAL RUNOFF (AC-FT)	234900	195900	97770
10 PERCENT EXCEEDS	890	381	175
50 PERCENT EXCEEDS	47	39	41
90 PERCENT EXCEEDS	26	27	16

11180500 DRY CREEK AT UNION CITY, CA

LOCATION.—Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from bridge on State Highway 238 in Decoto District in Union City and 1.7 mi upstream from mouth.

DRAINAGE AREA.—9.39 mi².

PERIOD OF RECORD.—October 1916 to September 1919 (published as "near Decoto"), April 1959 to current year.

REVISED RECORDS.—WSP 2129: 1962(M), 1963(P), 1965(P). WDR CA-76-2: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 85.12 ft above sea level, from topographic map. Prior to Apr. 1, 1959, at site 1.4 mi downstream at different datum.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,680 ft³/s, Jan. 9, 1995, gage height, 5.32 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 90 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0900	145	2.85	Jan. 2	0715	614	4.00
Dec. 10	1000	122	2.75	Jan. 26	0715	485	3.76
Dec. 21	1915	305	3.35				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.02	117	13	2.7	1.1	.77	.00	.00	.00	.00
2	.00	.00	.00	199	11	2.8	1.0	.76	.00	.00	.00	.00
3	.00	.00	.00	54	10	2.8	.99	.73	.00	.00	.00	.00
4	.00	.00	.00	27	9.9	2.7	.97	.71	.10	.00	.00	.00
5	.00	.00	31	23	8.5	2.5	1.0	.70	.00	.00	.00	.00
6	.00	.00	9.0	14	7.5	2.5	.96	.68	.00	.00	.00	.00
7	.00	.00	3.9	11	6.9	2.4	.96	.67	.00	.00	.00	.00
8	.00	.00	2.2	9.1	6.6	2.3	.91	.66	.00	.00	.00	.00
9	.00	.00	1.7	8.0	6.2	2.3	.90	.68	.00	.00	.00	.00
10	.00	.00	34	7.0	5.9	2.2	.88	.71	.00	.00	.00	.00
11	.00	.00	12	6.4	5.5	2.2	.86	.72	.00	.00	.00	.00
12	.00	.00	9.6	8.4	5.3	2.1	.83	.69	.00	.00	.00	.00
13	.00	.00	8.4	7.5	4.8	2.1	.86	.61	.00	.00	.00	.00
14	.00	.00	4.6	5.6	4.5	2.1	.84	.54	.00	.00	.00	.00
15	.00	.00	3.0	7.1	4.3	2.1	.77	.42	.00	.00	.00	.00
16	.00	.09	2.3	5.6	4.2	2.1	.73	.30	.00	.00	.00	.00
17	.00	1.2	1.9	5.0	4.7	e2.3	.73	.15	.00	.00	.00	.00
18	.00	.02	1.4	4.7	4.3	e2.1	1.0	.06	.00	.00	.00	.00
19	.00	.01	1.2	4.5	4.1	e1.9	2.5	.00	.00	.00	.00	.00
20	.00	.00	1.1	7.8	4.0	e2.0	1.1	.00	.00	.00	.06	.00
21	.00	.00	86	11	3.8	e1.9	.97	.02	.00	.00	.00	.00
22	.00	.01	70	74	3.6	e1.8	.93	.00	.00	.00	.00	.00
23	.00	.00	17	55	3.4	e1.7	.88	.29	.00	.00	.00	.00
24	.00	.00	10	37	2.9	e1.6	.82	.30	.00	.00	.00	.00
25	.00	.00	7.4	80	3.0	1.4	.77	.06	.00	.00	.00	.00
26	.00	.00	6.2	133	3.1	1.4	.73	.03	.00	.00	.00	.00
27	.00	.00	8.6	43	3.1	1.4	.74	.00	.00	.00	.00	.00
28	.00	.00	6.5	28	2.9	1.3	.77	.00	.00	.00	.00	.00
29	.05	.00	6.3	22	---	1.2	.79	.00	.00	.00	.00	.00
30	.08	.00	7.7	18	---	1.2	.81	.00	.00	.00	.00	.00
31	.00	---	7.9	15	---	1.2	---	.00	---	.00	.00	---
TOTAL	0.13	1.33	360.92	1047.7	157.0	62.3	28.10	11.26	0.10	0.00	0.06	0.00
MEAN	.004	.044	11.6	33.8	5.61	2.01	.94	.36	.003	.000	.002	.000
MAX	.08	1.2	86	199	13	2.8	2.5	.77	.10	.00	.06	.00
MIN	.00	.00	.00	4.5	2.9	1.2	.73	.00	.00	.00	.00	.00
AC-FT	.3	2.6	716	2080	311	124	56	22	.2	.00	.1	.00

e Estimated.

11180500 DRY CREEK AT UNION CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.16	.59	2.44	8.12	8.46	6.51	2.80	.57	.16	.028	.013	.004
MAX	6.31	11.3	21.0	33.8	36.8	58.2	20.1	6.45	2.87	.82	.51	.10
(WY)	1963	1984	1974	1997	1983	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1917	1917	1918	1918	1918	1972	1917	1917	1917	1917	1917	1917

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1917 - 1997			
ANNUAL TOTAL	2230.59				1668.90							
ANNUAL MEAN	6.09				4.57				2.47			
HIGHEST ANNUAL MEAN									13.0			
LOWEST ANNUAL MEAN									.002			
HIGHEST DAILY MEAN	101				199				335			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					614				1680			
INSTANTANEOUS PEAK STAGE					4.00				5.32			
ANNUAL RUNOFF (AC-FT)	4420				3310				1790			
10 PERCENT EXCEEDS	19				8.2				4.2			
50 PERCENT EXCEEDS	.16				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11180700 PATTERSON CREEK AT UNION CITY, CA

LOCATION.—Lat 37°55'09", long 122°02'50", in Potrero de los Cerritos Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.1 mi downstream from effluence from Alameda Creek, 0.2 mi upstream from bridge on Interstate 880 (Nimitz Freeway), and 2.0 mi southwest of Decoto District in Union City.

PERIOD OF RECORD.—October 1958 to current year.

GAGE.—Water-stage recorder. Datum of gage is 4.13 ft above sea level. Prior to Oct. 26, 1966, at site 0.2 mi downstream at same datum.

REMARKS.—Records poor. This stream is a distributary of Alameda Creek. Diversion by Alameda County Water District to percolation ponds between station 11179000 and this station; additional percolation to ground water by placing check dams in channel. See schematic diagram of Alameda Creek Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,100 ft³/s, Feb. 19, 1986, gage height, 18.44 ft; no flow at times in each year.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	33	3.0	e3050	e1080	e281	32	83	e2.8	9.8	.00	.00
2	.00	19	6.9	e6400	e890	e274	34	65	e8.5	10	.00	.00
3	.00	17	.15	e3290	e795	e274	35	90	e39	10	.00	.00
4	.00	.42	209	2210	e705	e279	38	87	e70	5.8	.00	.00
5	.00	.12	1910	1540	e495	e284	33	74	e25	.17	.00	.00
6	.00	.08	595	899	e350	e279	29	68	e9.9	.08	.00	.00
7	.00	.06	230	725	e285	e274	27	61	e7.6	.01	.00	.00
8	.00	.05	131	575	e260	e274	30	50	e5.6	6.1	.00	.00
9	.00	.04	104	347	e243	e268	57	70	e4.6	2.6	.00	.00
10	.00	.02	2370	207	e219	e259	55	66	e3.5	10	.00	.00
11	.00	.01	1320	158	e184	e251	57	50	e2.8	8.8	.00	.00
12	.00	.00	686	407	e155	e155	53	45	e2.4	11	.00	.00
13	.00	.00	442	238	e150	e147	54	59	18	11	.00	.00
14	.00	.00	88	256	e145	e140	47	72	.39	11	.00	.00
15	.00	.00	52	354	e148	e110	45	69	.14	10	.00	.00
16	.00	140	50	e305	e186	e79	55	65	7.8	6.8	.00	.00
17	.00	3670	57	e235	e192	e77	70	63	27	3.0	e.06	.00
18	.00	896	37	e108	e210	e73	82	65	19	2.9	e.00	.00
19	.00	218	40	e100	e196	e69	200	55	10	1.7	e.00	.00
20	.00	224	572	e408	e184	e62	122	44	9.8	.12	e.00	.00
21	.00	82	5800	e1010	e235	e56	103	43	16	.96	e.00	.00
22	.00	207	e3340	e3300	e293	e50	109	45	11	10	e.00	.00
23	.00	253	e1260	e6200	e290	e46	90	52	5.9	10	e.00	.00
24	.00	22	e645	e4160	e282	e38	70	156	.19	11	e.00	.00
25	.00	.58	e320	e5200	e279	36	92	79	6.8	11	e.00	.00
26	.00	.12	e280	e7480	e271	34	81	53	10	10	e.00	.00
27	.00	.07	e410	e5080	e274	36	81	52	10	5.7	e.00	.00
28	.00	.06	e475	e3810	e273	25	75	40	10	.13	e.00	.00
29	46	.04	e700	e3220	---	27	70	30	10	6.2	e.00	.00
30	304	.04	e680	e1740	---	31	98	12	10	.14	e.00	.00
31	118	---	e651	e1250	---	34	---	e2.2	---	.01	e.00	---
TOTAL	468.00	5782.71	23464.05	64262	9269	4322	2024	1865.2	363.72	186.02	0.06	0.00
MEAN	15.1	193	757	2073	331	139	67.5	60.2	12.1	6.00	.002	.000
MAX	304	3670	5800	7480	1080	284	200	156	70	11	.06	.00
MIN	.00	.00	.15	100	145	25	27	2.2	.14	.01	.00	.00
AC-FT	928	11470	46540	127500	18390	8570	4010	3700	721	369	.1	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.77	38.0	91.7	261	318	276	112	26.5	8.46	1.78	.46	1.17
MAX	53.0	404	757	2073	2150	3007	1091	312	120	27.1	8.73	19.1
(WY)	1963	1984	1997	1997	1983	1983	1982	1983	1973	1995	1970	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1959	1959	1959	1959	1961	1960	1959	1959	1959	1959	1959	1959

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1959 - 1997

ANNUAL TOTAL	105265.96	112006.76	
ANNUAL MEAN	288	307	94.0
HIGHEST ANNUAL MEAN			703
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	6000	Feb 21	11700
LOWEST DAILY MEAN	.00	Jan 4	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 1	.00
INSTANTANEOUS PEAK FLOW			22100
INSTANTANEOUS PEAK STAGE			18.44
ANNUAL RUNOFF (AC-FT)	208800	222200	68130
10 PERCENT EXCEEDS	771	583	138
50 PERCENT EXCEEDS	7.8	33	.01
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.—Lat 37°42'55", long 122°03'12", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 0.9 mi upstream from Cull Creek Dam and 1.1 mi northeast of Castro Valley Post Office.

DRAINAGE AREA.—5.79 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1978 to current year.

REVISED RECORDS.—WDR CA-80-2: 1979(P).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 450 ft above sea level, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No storage or diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,690 ft³/s, Jan. 5, 1982, gage height, 8.71 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0900	229	3.35	Jan. 22	1800	572	4.61
Jan. 2	0600	1,270	7.16	Jan. 26	0415	503	4.32

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.51	217	11	e2.0	1.0	.50	e.21	.06	.01	.00
2	.00	.00	.19	270	8.4	e1.9	1.0	.51	e.20	.05	.01	.00
3	.00	.00	.13	79	7.5	e1.9	1.0	.48	e.23	.04	.01	.00
4	.00	.00	.30	37	7.7	e1.8	1.1	.47	e.28	.04	.01	.00
5	.00	.00	39	25	7.9	e1.8	1.0	.46	e.22	.04	.01	.00
6	.00	.00	3.7	19	6.7	e1.8	.96	.41	e.20	.03	.00	.00
7	.00	.00	1.7	17	6.3	e1.8	.98	.39	e.18	.03	.00	.00
8	.00	.00	1.2	15	e7.2	e1.7	.95	.45	e.15	.03	.00	.00
9	.00	.00	1.7	14	e6.8	e1.7	.90	.50	e.13	.02	.00	.00
10	.00	.00	49	14	e5.3	e1.7	.90	.51	e.11	.02	.00	.00
11	.00	.00	9.8	14	e4.9	e1.7	.81	.49	.10	.02	.00	.00
12	.00	.00	9.9	15	e4.6	1.7	.81	.47	.10	.02	.00	.00
13	.00	.00	10	13	e4.2	1.5	.83	.44	.09	.02	.00	.00
14	.00	.00	7.5	e7.0	e3.8	1.4	.83	.41	.08	.02	.00	.00
15	.00	.00	6.6	e8.2	e3.5	1.4	.83	.41	.08	.02	.00	.00
16	.00	.02	6.4	e7.2	e3.4	1.4	.75	.40	.08	.02	.00	.00
17	.00	7.1	5.8	e6.3	e3.8	1.5	.74	e.34	.07	.02	.00	.00
18	.00	.88	4.9	e5.7	e3.5	1.3	.87	e.33	.07	.02	.00	.00
19	.00	.99	3.9	e5.2	e3.2	1.3	1.4	e.32	.07	.02	.00	.00
20	.00	.55	8.3	e6.4	e2.9	1.4	.90	e.31	.06	.02	.06	.00
21	.00	.19	90	e8.2	e2.7	1.3	.79	e.30	.06	.02	.02	.00
22	.00	5.2	47	138	e2.5	1.3	.78	e.29	.06	.02	.02	.00
23	.00	.86	16	47	e2.4	1.3	.76	e.31	.05	.02	.02	.00
24	.00	.37	10	22	e2.3	1.2	.71	e.28	.05	.01	.02	.00
25	.00	.23	8.2	94	e2.2	1.2	.69	e.27	.05	.01	.01	.00
26	.00	.17	15	126	e2.2	1.1	.60	e.26	.04	.01	.01	.00
27	.00	.13	19	47	e2.1	1.1	.58	e.25	.04	.01	.01	.00
28	.00	.12	11	29	e2.1	1.1	.58	e.24	.04	.01	.01	.00
29	.00	.12	17	20	---	1.0	.56	e.23	.04	.01	.01	.00
30	.00	.10	14	16	---	1.0	.55	e.23	.05	.01	.01	.00
31	.00	---	12	13	---	.99	---	e.22	---	.01	.01	---
TOTAL	0.00	17.03	429.73	1355.2	131.1	45.29	25.16	11.48	3.19	0.70	0.26	0.00
MEAN	.000	.57	13.9	43.7	4.68	1.46	.84	.37	.11	.023	.008	.000
MAX	.00	7.1	90	270	11	2.0	1.4	.51	.28	.06	.06	.00
MIN	.00	.00	.13	5.2	2.1	.99	.55	.22	.04	.01	.00	.00
AC-FT	.00	34	852	2690	260	90	50	23	6.3	1.4	.5	.00

e Estimated.

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.046	.84	2.93	9.91	11.1	9.11	2.75	.77	.24	.059	.011	.005
MAX	.45	6.00	14.0	43.7	39.7	54.3	16.8	3.56	.95	.25	.12	.079
(WY)	1983	1984	1984	1997	1982	1983	1982	1983	1983	1982	1983	1983
MIN	.000	.000	.001	.000	.045	.13	.055	.016	.007	.000	.000	.000
(WY)	1979	1987	1990	1991	1991	1988	1990	1988	1988	1981	1979	1979

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1979 - 1997	
ANNUAL TOTAL	1984.13		2019.14			
ANNUAL MEAN	5.42		5.53		3.11	
HIGHEST ANNUAL MEAN					10.3	1983
LOWEST ANNUAL MEAN					.054	1990
HIGHEST DAILY MEAN	116	Feb 21	270	Jan 2	445	Feb 15 1982
LOWEST DAILY MEAN	.00	Jul 28	.00	Oct 1	.00	Oct 1 1978
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 28	.00	Oct 1	.00	Oct 1 1978
INSTANTANEOUS PEAK FLOW			1270	Jan 2	1690	Jan 5 1982
INSTANTANEOUS PEAK STAGE			7.16	Jan 2	8.71	Jan 5 1982
ANNUAL RUNOFF (AC-FT)	3940		4000		2250	
10 PERCENT EXCEEDS	13		10		5.6	
50 PERCENT EXCEEDS	.42		.26		.09	
90 PERCENT EXCEEDS	.00		.00		.00	

WATER-QUALITY RECORDS

SEDIMENT DATA: Water years 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1978 to current year.

SÉDIMENT LOAD: Maximum daily, 26,400 tons, Feb. 17, 1986; minimum daily, 0 ton many days during most years.

SEDIMENT LOAD (storm season only): Maximum daily, 13,000 tons, Jan. 2; minimum daily, 0 ton on many days.

DATE	TIME	DIS-CHARGE,	TEMPER-ATURE	SEDI-	SEDI-	SED.	SED.	SED.
		INST.		MENT,	MENT,	SUSP.	SUSP.	SUSP.
		CUBIC		MENT,	CHARGE,	FALL	FALL	FALL
		FEET		SUS-	SUS-	% FINER	% FINER	% FINER
		PER	WATER	PENDED	PENDED	THAN	THAN	THAN
		SECOND	(DEG C)	(MG/L)	(T/DAY)	.002 MM	.004 MM	.008 MM
		(000061)	(000010)	(80154)	(80155)	(70337)	(70338)	(70339)
NOV								
17...	1800	2.9	13.0	452	3.5	--	--	--
DEC								
19...	0850	2.6	5.5	62	.44	--	--	--
21...	1745	170	9.0	11400	5230	19	24	26
JAN								
02...	1015	314	13.5	16600	14100	20	24	29
02...	1610	146	--	7640	3010	24	28	32
22...	1915	309	11.0	25000	20900	20	25	29
25...	1125	98	11.5	6140	1620	21	27	31
26...	1735	79	12.0	2080	444	--	--	--
29...	1730	18	10.5	336	16	--	--	--
APR								
08...	1345	.96	12.0	6	.02	--	--	--
		SED.	SED.	SED.	SED.	SED.	SED.	SED.
		SUSP.	SUSP.	SUSP.	SUSP.	SUSP.	SUSP.	SUSP.
		FALL	FALL	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE
		DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.
		% FINER	% FINER	% FINER	% FINER	% FINER	% FINER	% FINER
DATE		THAN	THAN	THAN	THAN	THAN	THAN	THAN
		.016 MM	.031 MM	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM
		(70340)	(70341)	(70331)	(70332)	(70333)	(70334)	(70335)
								(70336)
NOV								
17...	--	--	100	--	--	--	--	--
DEC								
19...	--	--	67	--	--	--	--	--
21...	35	45	56	72	91	99	100	--
JAN								
02...	37	48	57	76	91	98	99	100
02...	42	53	62	77	91	98	99	100
22...	39	49	59	77	94	99	100	--
25...	43	54	64	77	90	96	99	100
26...	--	--	82	--	--	--	--	--
29...	--	--	92	--	--	--	--	--
APR								
08...	--	--	--	--	--	--	--	--

SAN LORENZO CREEK BASIN

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		NUMBER OF SAM- PLING POINTS (COUNT) (00063)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	
DATE	TIME							
DEC								
19...	0900	1	2.9	5.5	1	5	22	
19...	0905	1	3.0	5.5	1	3	9	
19...	0910	1	3.2	5.5	1	2	9	
19...	0915	1	3.3	5.5	--	1	4	
19...	0920	1	3.0	5.5	--	--	1	
APR								
08...	1400	1	.96	12.0	4	22	91	
08...	1405	1	.96	12.0	7	23	63	
08...	1410	1	.96	12.0	1	2	19	
08...	1415	1	.96	12.0	4	12	42	
08...	1420	1	.96	12.0	5	13	32	
DATE		BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
DEC								
19...	34	39	46	62	78	93	100	
19...	16	19	26	45	70	98	100	
19...	12	18	30	48	67	83	100	
19...	10	21	34	52	72	100	--	
19...	5	12	20	33	59	100	--	
APR								
08...	99	100	--	--	--	--	--	
08...	93	99	100	--	--	--	--	
08...	22	66	94	100	--	--	--	
08...	81	90	91	92	94	100	--	
08...	56	76	87	96	100	--	--	

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLNG (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
JAN									
02...	1330	1000	1120	.250	0	1315	1345	10	1.0
02...	1405	1000	1120	.250	0	1355	1415	10	1.0
25...	1025	1000	1120	.250	0	1015	1035	10	1.0
25...	1045	1000	1120	.250	0	1040	1055	10	1.0
29...	1645	1000	1120	.250	0	1635	1655	60	.8
29...	1710	1000	1120	.250	0	1700	1720	60	.8
DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE (T/D/FT DAY) (04122)	SEDI- MENT DIS- CHARGE, (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM (80227)
JAN									
02...	2	22	22	1.00	274	--	.45	7.6	2
02...	2	18	18	2.00	258	--	.20	7.6	2
25...	2	19	19	1.00	140	11.5	.53	8.2	1
25...	2	18	18	1.00	130	11.5	.27	8.2	1
29...	2	15	15	.40	21	10.5	.14	1.7	--
29...	2	15	15	.40	19	10.5	.11	1.7	--
DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM (80227)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)
JAN									
02...	6	28	42	48	51	53	57	72	100
02...	6	27	48	57	62	68	76	100	--
25...	3	24	44	56	61	65	71	82	100
25...	5	27	51	60	63	65	66	73	100
29...	--	5	14	35	62	87	98	100	--
29...	--	3	18	39	54	73	94	100	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	14.5	---	---	---	---	---	---	---	---
2	---	---	---	13.5	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	10.0	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	11.5	---	---	---	---	---	---	---	---	---
7	---	---	---	8.5	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	12.0	14.0	---	---	---	---
9	---	---	12.0	---	---	---	---	---	---	---	---	---
10	---	---	12.5	---	---	---	---	---	---	---	---	---
11	---	---	13.0	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	11.5	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	9.0	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	8.0	---	---	---	---	---	---	---	---	---
17	---	13.0	---	---	---	---	---	---	---	---	---	---
18	---	---	7.5	---	---	---	---	---	---	---	---	---
19	---	---	5.5	---	---	---	---	---	---	---	---	---
20	---	---	---	9.0	---	---	---	---	---	---	---	---
21	---	---	9.5	---	---	---	---	---	---	---	---	---
22	---	---	---	11.0	---	---	15.0	---	---	---	---	---
23	---	---	10.5	9.5	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	9.5	11.5	---	---	---	---	---	---	---	---
26	---	---	10.5	12.0	---	---	---	---	---	---	---	---
27	---	---	11.0	12.0	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	12.0	10.5	---	---	---	---	---	---	---	---
30	---	---	13.5	---	---	12.5	12.0	---	---	---	---	---
31	---	---	14.0	---	---	---	---	---	---	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	0	.00	.00	0	.00	.51	7	.01
2	.00	0	.00	.00	0	.00	.19	2	.00
3	.00	0	.00	.00	0	.00	.13	2	.00
4	.00	0	.00	.00	0	.00	.30	8	.04
5	.00	0	.00	.00	0	.00	39	4200	1230
6	.00	0	.00	.00	0	.00	3.7	151	1.6
7	.00	0	.00	.00	0	.00	1.7	81	.38
8	.00	0	.00	.00	0	.00	1.2	38	.13
9	.00	0	.00	.00	0	.00	1.7	42	.38
10	.00	0	.00	.00	0	.00	49	4900	1490
11	.00	0	.00	.00	0	.00	9.8	180	5.3
12	.00	0	.00	.00	0	.00	9.9	76	2.1
13	.00	0	.00	.00	0	.00	10	72	2.4
14	.00	0	.00	.00	0	.00	7.5	39	.80
15	.00	0	.00	.00	0	.00	6.6	32	.56
16	.00	0	.00	.02	8	.00	6.4	26	.45
17	.00	0	.00	7.1	1320	64	5.8	22	.34
18	.00	0	.00	.88	17	.06	4.9	19	.25
19	.00	0	.00	.99	35	.27	3.9	72	.81
20	.00	0	.00	.55	6	.01	8.3	225	5.3
21	.00	0	.00	.19	1	.00	90	4640	1470
22	.00	0	.00	5.2	309	17	47	1450	218
23	.00	0	.00	.86	16	.05	16	159	7.1
24	.00	0	.00	.37	5	.00	10	55	1.5
25	.00	0	.00	.23	4	.00	8.2	45	1.0
26	.00	0	.00	.17	4	.00	15	547	122
27	.00	0	.00	.13	4	.00	19	436	32
28	.00	0	.00	.12	3	.00	11	79	2.5
29	.00	0	.00	.12	3	.00	17	788	66
30	.00	0	.00	.10	3	.00	14	354	14
31	.00	0	.00	---	---	---	12	293	9.6
TOTAL	0.00	---	0.00	17.03	---	81.39	429.73	---	4684.55

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
JANUARY			FEBRUARY			MARCH			
1	217	9000	9110	11	79	2.3	e2.0	7	.06
2	270	11500	13000	8.4	57	1.3	e1.9	7	.05
3	79	2910	670	7.5	53	1.1	e1.9	7	.05
4	37	984	101	7.7	48	1.0	e1.8	7	.05
5	25	615	43	7.9	44	.94	e1.8	7	.05
6	19	414	21	6.7	41	.74	e1.8	8	.05
7	17	278	12	6.3	37	.63	e1.8	8	.05
8	15	225	9.2	e7.2	34	.61	e1.7	8	.04
9	14	212	8.0	e6.8	31	.57	e1.7	8	.04
10	14	200	7.5	e5.3	29	.50	e1.7	8	.04
11	14	188	6.9	e4.9	27	.44	e1.7	9	.04
12	15	253	12	e4.6	24	.39	1.7	9	.04
13	13	138	5.0	e4.2	22	.34	1.5	9	.04
14	e7.0	98	3.6	e3.8	20	.30	1.4	9	.03
15	e8.2	88	3.5	e3.5	19	.26	1.4	9	.03
16	e7.2	80	3.0	e3.4	17	.22	1.4	9	.03
17	e6.3	80	3.0	e3.8	14	.18	1.5	9	.04
18	e5.7	80	3.0	e3.5	12	.15	1.3	9	.03
19	e5.2	80	3.0	e3.2	10	.12	1.3	9	.03
20	e6.4	120	4.7	e2.9	9	.10	1.4	9	.03
21	e8.2	556	31	e2.7	9	.10	1.3	8	.03
22	138	9140	5380	e2.5	9	.09	1.3	8	.03
23	47	1860	382	e2.4	8	.09	1.3	8	.03
24	22	1330	165	e2.3	8	.08	1.2	8	.03
25	94	5180	2350	e2.2	8	.07	1.2	8	.03
26	126	5180	3030	e2.2	8	.07	1.1	8	.03
27	47	974	128	e2.1	8	.06	1.1	8	.03
28	29	533	43	e2.1	8	.06	1.1	8	.02
29	20	366	20	---	---	---	1.0	8	.02
30	16	226	9.9	---	---	---	1.0	8	.02
31	13	133	4.8	---	---	---	.99	8	.02
TOTAL	1355.2	---	34573.1	131.1	---	12.81	45.29	---	1.11

e Estimated.

SAN LORENZO CREEK BASIN

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			
1	1.0	8	.02
2	1.0	7	.02
3	1.0	7	.02
4	1.1	7	.02
5	1.0	7	.02
6	.96	6	.02
7	.98	6	.02
8	.95	6	.01
9	.90	6	.01
10	.90	6	.01
11	.81	6	.01
12	.81	6	.01
13	.83	6	.01
14	.83	7	.01
15	.83	7	.01
16	.75	7	.01
17	.74	7	.01
18	.87	9	.02
19	1.4	13	.06
20	.90	8	.02
21	.79	7	.02
22	.78	7	.01
23	.76	7	.01
24	.71	7	.01
25	.69	7	.01
26	.60	7	.01
27	.58	6	.01
28	.58	6	.01
29	.56	6	.01
30	.55	6	.01
31	---	---	---
TOTAL	25.16	---	0.45
PERIOD	2003.51		39353.41

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1996	0.00	0.00	0	0
NOVEMBER	17.03	81.39	1	82
DECEMBER	429.73	4684.55	0	4680
JANUARY 1997	1355.20	34573.10	272	34800
FEBRUARY	131.10	12.81	0	13
MARCH	45.29	1.11	0	1
APRIL	25.16	0.45	0	0
PERIOD	2003.51	39353.41	273	39576

11181008 CASTRO VALLEY CREEK AT HAYWARD, CA

LOCATION.—Lat 37°40'48", long 122°04'46", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 500 ft east of Hayward City Hall, 700 ft upstream from mouth, and 700 ft downstream from small left-bank tributary.

DRAINAGE AREA.—5.51 mi².

PERIOD OF RECORD.—October 1971 to current year (seasonal records only, water years 1975–77).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 100 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,350 ft³/s, Jan. 23, 1983, gage height, 8.51 ft, from rating curve extended above 61 ft³/s on basis of slope-area measurement at gage height 3.92 ft and step-backwater computation to gage height 10.40 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0615	779	6.48	Jan. 22	1655	532	5.39
Jan. 2	0545	1,240	8.15	Jan. 25	0615	784	6.50

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.31	.34	9.5	149	3.2	.83	.58	.40	.28	.28	.26	.20
2	.31	.33	.58	163	2.7	1.6	.58	.37	.28	.26	.27	.19
3	.34	.31	.52	13	2.6	1.1	.63	.37	6.1	.26	.27	.44
4	.33	.32	18	7.5	3.2	.96	.59	.35	.87	.28	.30	.22
5	.31	.32	73	5.8	2.1	.82	.58	.35	.31	.25	.31	.20
6	.32	.30	5.4	3.6	1.8	.81	.59	.36	.30	.25	.31	.20
7	.32	.45	1.4	3.0	1.7	.81	.59	.35	.28	.28	.31	.20
8	.31	.28	1.0	2.5	1.6	.81	.55	1.6	.26	.27	.30	.21
9	.31	.27	4.6	2.1	1.5	.81	.50	.35	.27	.25	.30	.22
10	.31	.32	77	1.9	1.5	.81	.51	.36	.25	.43	.28	.17
11	.31	.30	3.4	1.7	1.4	.81	.47	.35	.25	.25	.28	.20
12	.31	.30	14	16	1.3	.76	.47	.37	.24	.25	.30	.18
13	.66	.28	3.8	2.4	1.2	.74	.48	.35	.27	.31	.28	.19
14	.34	.28	1.5	3.3	1.2	.78	.50	.35	.26	.24	.28	.18
15	.31	.28	1.1	10	1.2	.81	.48	.36	.26	.28	.31	.16
16	.30	17	.89	2.1	1.2	2.8	.48	.35	.24	.27	.28	.16
17	.31	88	.75	1.7	4.9	1.2	.47	.37	.25	.25	.28	.19
18	.34	4.0	.69	1.6	1.2	.73	22	.38	.26	.26	.32	.18
19	.30	8.1	.58	1.6	1.1	.73	9.9	.34	.27	.24	4.9	.17
20	.28	1.0	.58	14	1.1	.83	.60	.30	.31	.25	17	.23
21	.29	1.4	146	7.6	1.0	.78	.54	.30	.28	.26	.35	.17
22	.27	19	17	87	1.0	.77	.45	.28	.26	.26	.28	.18
23	.29	1.1	4.2	17	.94	.73	.49	4.3	.29	.26	.26	.20
24	1.2	.70	2.5	30	.87	.80	.49	.30	.28	.26	.23	.20
25	.33	.60	1.9	87	.95	.70	.43	.28	.29	.26	.27	.18
26	.26	.53	15	84	.95	.65	.41	.29	.28	.25	.29	.22
27	.24	.50	9.5	9.9	1.1	.64	.40	.27	.25	.52	.27	.18
28	.26	.92	3.3	6.5	.89	.61	.43	.27	.24	.30	.21	.18
29	19	.48	13	5.2	---	.62	.41	.29	.26	.30	.22	.19
30	.85	.45	6.6	4.2	---	.65	.39	.28	1.4	.26	.85	.17
31	.40	---	3.1	3.6	---	.62	---	.26	---	.32	.21	---
TOTAL	30.02	148.46	440.39	747.8	45.40	27.12	45.99	15.50	15.64	8.66	30.58	5.96
MEAN	.97	4.95	14.2	24.1	1.62	.87	1.53	.50	.52	.28	.99	.20
MAX	19	88	146	163	4.9	2.8	22	4.3	6.1	.52	17	.44
MIN	.24	.27	.52	1.6	.87	.61	.39	.26	.24	.24	.21	.16
AC-FT	60	294	874	1480	90	54	91	31	31	17	61	12

SAN LORENZO CREEK BASIN

11181008 CASTRO VALLEY CREEK AT HAYWARD, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.60	4.62	5.45	9.35	9.04	7.57	2.70	1.07	.57	.38	.38	.50
MAX	4.97	19.0	14.2	24.6	25.5	34.6	12.3	3.23	1.55	1.15	1.50	1.62
(WY)	1976	1974	1997	1982	1986	1983	1974	1990	1995	1974	1983	1983
MIN	.15	.24	.24	.39	1.06	.60	.20	.30	.28	.17	.14	.12
(WY)	1978	1993	1990	1991	1977	1988	1977	1992	1980	1991	1980	1980

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1972 - 1997	
ANNUAL TOTAL	1953.33		1561.52			
ANNUAL MEAN	5.34		4.28		3.80	
HIGHEST ANNUAL MEAN					8.76	1983
LOWEST ANNUAL MEAN					1.51	1972
HIGHEST DAILY MEAN	146	Dec 21	163	Jan 2	322	Jan 4 1982
LOWEST DAILY MEAN	.24	Oct 27	.16	Sep 15	.00	Oct 11 1977
ANNUAL SEVEN-DAY MINIMUM	.29	Nov 8	.18	Sep 13	.00	Oct 11 1977
INSTANTANEOUS PEAK FLOW			1240	Jan 2	1350	Jan 23 1983
INSTANTANEOUS PEAK STAGE			8.15	Jan 2	8.51	Jan 23 1983
ANNUAL RUNOFF (AC-FT)	3870		3100		2750	
10 PERCENT EXCEEDS	12		5.6		6.3	
50 PERCENT EXCEEDS	.58		.40		.47	
90 PERCENT EXCEEDS	.31		.24		.18	

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA

LOCATION.—Lat 37°57'53", long 122°25'42", in NW 1/4 sec.3, T.1 N., R.5 W., Contra Costa County, Hydrologic Unit 18050002, on north end of Richmond Terminal No. 4 Pier on west side of Point San Pablo.

GAGE-HEIGHT RECORDS

DRAINAGE AREA.—Indeterminate.

PERIOD OF RECORD.—October 1989 to current year (gage height only).

GAGE.—Water-stage recorder. Datum of gage is 10.00 ft below sea level.

REMARKS.—Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR PERIOD OF RECORD.—Maximum gage height recorded, 15.30 ft, Dec. 11, 1993; minimum gage height recorded, 4.93 ft, June 13, 1995.

EXTREMES FOR CURRENT YEAR.—Maximum gage height recorded, 15.21 ft, Dec..10; minimum gage height recorded, 6.14 ft, Dec. 14.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.64	7.86	12.52	7.83	12.27	7.50	14.29	10.26	13.32	9.21	12.79	8.27
2	13.21	7.91	12.33	8.08	12.13	7.93	13.88	10.36	13.48	8.55	13.08	8.01
3	12.96	8.15	12.53	8.21	12.52	8.13	13.88	9.71	13.82	8.11	12.81	7.57
4	12.66	8.16	12.43	8.22	12.75	8.37	13.98	9.23	14.22	7.37	12.88	7.05
5	12.56	8.24	12.49	8.15	13.26	8.55	14.22	8.39	14.44	6.64	13.29	6.58
6	12.54	8.15	12.62	8.18	13.59	7.95	13.93	7.51	14.59	6.34	13.72	6.43
7	12.73	8.18	12.84	7.89	13.90	7.64	14.36	7.05	14.65	6.42	13.87	6.28
8	12.88	8.32	13.08	7.64	14.16	7.32	14.68	6.57	14.52	6.53	13.80	6.40
9	13.02	8.43	13.42	7.41	15.07	7.51	14.68	6.38	14.14	6.91	13.52	6.66
10	12.98	8.29	13.73	7.20	15.21	6.85	14.66	6.63	13.87	7.57	13.46	7.36
11	13.14	8.04	13.71	6.80	14.81	6.45	14.55	7.10	13.96	8.30	13.93	7.55
12	13.38	7.75	13.72	6.48	14.52	6.35	14.21	7.80	13.75	8.41	13.71	7.19
13	13.38	7.38	13.60	6.33	13.97	6.15	13.89	8.04	13.15	8.33	13.44	7.28
14	13.32	7.12	13.36	6.47	13.50	6.14	13.74	9.02	13.17	8.21	13.41	7.63
15	13.51	7.03	13.34	6.78	12.88	6.56	13.87	9.23	13.28	8.17	13.37	7.95
16	13.34	7.10	13.07	7.53	13.18	7.75	13.76	8.66	13.48	8.13	13.16	8.19
17	13.33	7.26	13.15	7.49	13.53	8.09	13.64	8.28	13.43	7.51	12.90	7.72
18	13.22	7.44	13.03	7.50	13.61	8.39	13.80	7.91	13.09	7.22	12.75	7.68
19	12.85	7.23	13.56	7.87	13.81	8.06	14.18	7.70	13.18	6.89	12.88	7.80
20	12.59	7.22	13.80	8.27	14.13	7.55	14.45	7.46	13.11	7.09	13.02	7.93
21	12.51	7.21	14.11	7.99	14.82	7.93	14.44	7.31	13.08	7.11	13.22	8.11
22	12.80	7.37	14.45	7.46	15.09	7.56	14.96	8.21	13.09	7.41	13.34	8.24
23	13.49	7.90	13.96	6.71	14.26	6.38	14.32	7.41	12.78	7.49	13.26	8.34
24	13.87	7.85	13.78	6.38	13.95	6.62	14.11	7.87	12.29	7.91	13.26	8.40
25	13.85	7.31	13.74	6.39	14.14	6.82	14.59	8.50	12.69	8.54	13.45	8.25
26	13.41	6.58	13.67	6.37	14.39	7.95	14.21	8.81	12.99	8.73	13.61	8.18
27	13.67	6.70	13.42	6.62	14.18	7.55	13.26	9.14	12.97	8.73	13.47	7.91
28	13.91	7.15	13.26	6.79	13.54	8.02	13.08	9.30	12.82	8.39	13.39	7.72
29	14.10	7.40	12.56	6.88	14.02	8.73	12.97	9.47	---	---	13.31	7.87
30	13.67	7.57	12.18	7.40	13.55	9.52	12.96	9.75	---	---	13.47	8.03
31	13.03	7.46	---	---	13.69	10.41	13.23	9.65	---	---	12.97	7.59
MONTH	14.10	6.58	14.45	6.33	15.21	6.14	14.96	6.38	14.65	6.34	13.93	6.28

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.52	7.10	12.92	7.14	14.34	8.17	14.07	7.04	13.97	7.07	13.53	7.85
2	12.52	6.92	13.23	7.39	14.61	7.69	14.14	6.78	13.91	7.06	13.52	7.95
3	13.18	7.23	13.42	7.54	14.63	7.33	14.11	6.68	13.80	7.23	13.25	8.11
4	13.43	7.22	13.72	7.26	14.43	6.96	14.02	6.63	13.72	7.38	13.10	8.43
5	13.67	7.38	13.84	6.78	14.32	6.69	14.02	6.61	13.53	7.61	13.23	8.89
6	13.68	7.45	13.92	6.36	14.33	6.69	13.79	6.80	13.33	8.02	13.28	8.92
7	13.68	6.96	13.92	6.28	14.27	6.91	13.72	7.18	13.29	8.43	13.27	8.80
8	13.76	6.64	13.90	6.27	14.01	7.15	13.46	7.54	13.55	9.09	13.40	8.79
9	13.65	6.27	13.77	6.34	13.68	7.54	13.09	7.84	13.59	9.51	13.42	8.52
10	13.54	6.49	13.45	6.63	13.14	7.78	13.11	8.24	13.48	9.33	13.33	8.44
11	13.23	6.55	13.15	6.91	12.97	8.09	13.13	8.66	13.68	9.11	13.60	8.16
12	13.03	6.84	12.68	7.25	13.02	8.34	13.32	9.10	13.90	9.06	13.86	7.87
13	12.72	7.19	12.52	7.73	13.40	8.87	13.49	9.41	14.07	8.48	13.91	7.61
14	12.21	7.41	12.57	8.04	13.55	9.37	13.73	8.88	14.38	8.02	13.92	7.35
15	12.23	7.71	12.71	8.36	13.56	8.88	13.96	8.37	14.59	7.62	---	---
16	12.43	7.72	13.12	8.67	13.80	8.35	14.15	7.86	14.77	7.39	---	---
17	12.70	7.92	13.54	8.97	13.94	7.84	14.33	7.29	14.70	7.08	13.89	7.58
18	12.99	8.11	13.74	8.72	14.07	7.30	14.53	6.89	14.54	6.97	14.13	7.93
19	12.76	8.08	14.07	8.29	14.21	6.81	14.57	6.67	14.51	7.07	14.34	7.97
20	12.94	7.80	14.05	7.87	14.39	6.58	14.50	6.52	14.28	7.34	14.26	8.00
21	13.08	7.53	14.13	7.33	14.35	6.44	14.50	6.58	13.98	7.89	14.06	8.08
22	13.28	7.15	14.13	6.92	14.40	6.19	14.36	6.82	13.94	8.31	13.84	8.16
23	13.28	6.73	14.15	6.79	13.98	6.21	13.93	7.05	13.90	8.29	13.81	8.23
24	13.06	6.51	14.16	6.64	13.69	6.48	13.74	7.53	13.79	8.09	13.71	8.42
25	13.09	6.46	13.97	6.67	13.40	6.88	13.91	8.23	13.79	8.09	13.59	8.52
26	13.41	6.67	13.80	6.75	13.39	7.35	14.16	8.77	13.77	7.99	13.23	8.28
27	13.23	6.71	13.31	6.98	13.65	8.00	14.11	8.67	13.75	7.85	13.39	7.97
28	12.95	6.91	13.33	7.44	13.73	8.38	14.20	8.24	13.78	7.72	13.63	8.32
29	12.67	7.05	13.63	7.96	13.96	8.05	14.20	7.95	13.79	7.67	13.61	8.75
30	12.54	7.00	13.90	8.28	13.92	7.55	14.11	7.63	13.69	7.61	13.52	8.85
31	---	---	14.03	8.59	---	---	14.03	7.19	13.69	7.74	---	---
MONTH	13.76	6.27	14.16	6.27	14.63	6.19	14.57	6.52	14.77	6.97	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1989 to current year.

WATER TEMPERATURE: October 1989 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1989.

REMARKS.—Interruptions in record were due to malfunction of the sensing and (or) recording instruments. Upper probe is set about 4.0 ft below Mean Lower Low Water (MLLW). Lower probe is set about 20.0 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR PERIOD OF RECORD.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,900 microsiemens, Aug. 25, 28, 1992; minimum recorded, 155 microsiemens, Jan. 5, 1997.

(Lower probe) Maximum recorded, 50,100 microsiemens, July 23, 1990; minimum recorded 147 microsiemens, Jan. 5, 1997.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 24.0°C, July 31, 1993; minimum recorded, 4.5°C, Dec. 23, 1990.

(Lower probe) Maximum recorded, 22.5°C, July 30, 1995, Aug. 26, 28, Sept. 4, 1997; minimum recorded 5.0°C, Dec. 21, 23, 1990.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 48,700 microsiemens, July 20–21; minimum recorded, 155 microsiemens, Jan. 5.

(Lower probe) Maximum recorded, 48,000 microsiemens, July 19; minimum recorded, 147 microsiemens, Jan. 5.

WATER TEMPERATURE: (Upper probe) Maximum recorded, 23.0°C, Aug. 28, Sept. 4; minimum recorded, 7.0°C, Jan. 13, 14.

(Lower probe) Maximum recorded, 22.5°C, Aug. 26, 28, Sept. 4; minimum recorded, 7.5°C, Jan. 13–16.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	46400	38200	45400	36200	45300	30600	19200	4070	30300	1870	35700	11000
2	46600	38500	44700	35700	45700	30400	25300	1350	30200	1540	37600	11100
3	46300	36200	44800	36400	45900	29900	25600	585	28200	1720	38200	11200
4	45700	35900	45200	34500	45200	31000	15100	327	28500	2720	36000	12900
5	45800	34300	45800	37900	44800	31000	16000	155	28000	4510	39500	17400
6	46100	34000	46400	38500	45200	34000	18500	224	24900	3380	42200	19200
7	46300	36100	45900	37800	45000	33600	23000	413	29200	2430	43200	19300
8	45700	36500	46200	37800	45200	33000	25000	430	30600	3970	43200	18900
9	45300	37400	46200	38200	45600	31100	21700	1070	27200	3000	43100	16600
10	45600	39000	46200	38400	44400	31400	24500	740	28400	1830	42800	20800
11	45500	38600	46300	38300	45300	26600	19400	1220	---	---	43800	19500
12	45800	38200	46400	38200	43800	23600	26200	1460	29100	3610	43600	20000
13	45600	38600	46600	39000	41300	22100	27300	3360	32100	3780	43100	18900
14	46100	38800	47200	39800	40200	15700	26100	5860	28100	4720	41800	15700
15	46400	40000	47100	41200	40300	10200	29800	3530	34300	7800	40900	18400
16	46800	40100	47200	38100	39800	11300	31100	4580	33300	10300	40800	21600
17	46100	38600	45500	36600	40000	11100	30400	6280	34600	11400	39200	20300
18	46100	38900	45200	36500	37700	12700	32200	7950	32500	10600	39500	22700
19	46500	41100	46000	34200	37300	12900	31500	4180	32900	8220	41900	22900
20	46800	40400	46100	34500	38500	13300	32900	9130	32700	11800	42700	26000
21	46500	39500	46100	36800	39600	16200	27900	8540	33000	10100	44600	28200
22	46300	38100	46600	37300	35600	13600	30900	7310	31700	9420	44300	28000
23	46000	38400	46300	37300	31900	8630	22500	4650	33700	15600	44800	28600
24	46500	40000	45900	35600	30500	9130	27100	2790	32900	14700	44600	29700
25	46800	41000	45800	35500	32300	10500	29500	2890	36900	13600	45400	26300
26	47900	40900	47000	35700	33700	8210	22800	1310	35600	16100	45900	26700
27	47400	40100	46300	34900	29900	7840	21400	379	33500	17300	45700	28300
28	47000	38600	46200	35900	29200	7020	21200	179	36200	14700	44000	27900
29	46300	38400	46200	34000	29400	4500	26000	365	---	---	43200	24300
30	46400	38800	45900	30100	28200	4310	24400	812	---	---	44100	24200
31	45700	37600	---	---	27700	4580	26300	1010	---	---	45000	26200
MONTH	47900	34000	47200	30100	45900	4310	32900	155	---	---	45900	11000

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	(UPPER PROBE)											
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	44100	26300	45000	27000	45900	34400	47600	36900	47700	35800	46300	36200
2	45900	25600	44900	26300	45900	35900	47800	37000	47200	35400	45600	35500
3	48000	29000	45200	30800	45600	36900	48000	36700	47300	35300	45600	35200
4	47800	30000	45500	30700	45100	35300	47900	36500	46800	35500	45800	34900
5	47600	32500	45500	32800	46500	37200	47500	36700	46600	34800	45600	34100
6	47100	32500	45700	31900	45500	37300	47700	36600	46000	35200	45500	33000
7	47200	32700	45900	32400	45200	35000	47600	36600	46400	32500	45400	35600
8	47400	32900	46100	31900	45200	35200	47100	37100	46500	38300	45600	34200
9	47600	31000	45600	31900	44100	36200	46800	35900	46800	36800	43900	34200
10	47000	32500	45500	33000	44500	33600	47100	35700	46200	35600	43700	33400
11	47600	29600	45900	31400	44600	31100	47000	33600	45600	32000	45000	36700
12	46400	28400	46400	31600	---	---	47700	34000	45600	33300	46400	36900
13	45200	30000	45900	33300	---	---	47400	37200	46300	33400	46900	37000
14	45000	28400	45100	32300	---	---	48100	33800	46700	36100	46700	37600
15	43600	27300	44400	31600	---	---	47400	35300	47700	36200	---	---
16	44000	28100	44800	32800	---	---	47800	36900	47600	36700	---	---
17	45700	30700	44500	33000	---	---	47500	35900	47300	36600	46100	38700
18	44600	31400	44800	34800	---	---	48000	36500	47500	36200	46200	39600
19	44300	32500	44400	35900	---	---	48300	36200	46700	36100	46100	38800
20	44700	30000	---	---	---	---	48700	36200	45900	35300	46200	38400
21	44800	28100	45200	34100	47100	34000	48700	36000	46100	36500	46300	39400
22	---	---	45800	34400	47100	35900	47700	35700	46100	36500	46100	38800
23	43800	31200	45800	34100	46600	35300	47000	36100	45600	35900	46000	38800
24	44400	28500	45400	35000	46400	34500	46400	35400	45400	36100	46400	38900
25	44100	27400	45900	35300	46400	35300	46700	33900	45400	36000	46200	37700
26	44400	29200	44700	32000	46000	35000	47500	36300	45900	35600	46000	40100
27	43100	29100	44800	33600	46600	34700	47900	35700	---	---	46300	40800
28	42400	25900	44900	32200	46900	35500	48400	37800	46200	37400	46100	38200
29	43200	29900	45500	31600	47400	37500	48400	37900	45600	35300	46500	38600
30	44100	27400	45400	32400	47900	38000	48200	37600	45300	35100	46500	40700
31	---	---	46300	34800	---	---	47900	36100	45500	36500	---	---
MONTH	---	---	---	---	---	---	48700	33600	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	46300	37800	45400	36800	44700	33600	33800	6300	32900	2860	41000	12500
2	46200	37300	45500	38400	45100	31700	36300	2780	35800	2110	40400	12900
3	46000	33800	45300	38500	45200	31900	35900	1570	39600	4070	41900	13500
4	46200	35700	45200	38200	45100	33700	26900	434	42100	3390	42000	14800
5	46200	36300	45400	38100	45300	32900	23700	147	38300	5000	41500	18200
6	45800	37600	45300	38300	45500	35100	24500	253	34800	4070	40600	20600
7	45900	36300	45400	37300	45100	33800	31200	733	36300	3500	40000	19800
8	45600	38100	45800	37800	45400	33400	32600	887	34300	4860	39900	20100
9	45700	37700	45900	37700	45900	32200	29800	1110	33100	4150	39900	18900
10	45800	39700	46100	38100	45200	32700	30000	787	31800	2360	39600	21000
11	46000	38900	46200	38300	45400	28100	28100	1250	---	---	40600	20700
12	46000	37200	46200	38300	44700	24800	28000	1800	33500	4610	40500	23600
13	46100	36700	46400	38100	44000	22600	29300	2980	38000	4980	40900	21000
14	46300	36700	46300	39000	42400	17800	31000	5960	39200	8380	42200	19300
15	46500	37900	46100	39400	40100	11700	39200	5130	41400	9150	41200	20600
16	46700	38200	46000	38700	39800	15400	41100	7520	42500	11300	39900	23500
17	46300	36300	45300	37000	40100	15800	39800	6310	39800	12000	40400	23000
18	45800	36600	45200	36600	39800	14800	38700	8230	38500	13200	41500	22300
19	46400	38600	45700	34500	41300	15100	41700	6870	38400	9350	42200	24000
20	46000	40000	45200	34900	40900	13800	38600	8880	39400	12400	41900	25200
21	45900	38900	45500	36900	39400	17300	35300	8120	39700	10600	41900	29400
22	46400	37700	45900	35200	37600	14300	32500	8120	39100	11700	41600	29200
23	46500	40200	45700	35400	36700	10700	34600	5410	39200	16200	41500	30400
24	46800	40000	45600	34400	37200	10400	33800	3590	39400	17200	41700	28500
25	46400	40500	44700	33900	38400	10800	32800	3360	38600	15800	42300	26900
26	47200	40400	46000	35900	37300	8920	31200	1590	40100	16700	42800	26100
27	46800	39800	45800	34900	35300	8790	28700	1620	40000	19800	42800	26800
28	46800	38400	45400	36300	36100	7820	29100	2150	41600	17100	43100	27400
29	46900	38700	45000	34400	32900	5950	33700	2540	---	---	43400	24900
30	46300	38700	44700	31100	34700	5750	33800	2920	---	---	44000	26500
31	46000	37400	---	---	36600	6010	33600	3070	---	---	42600	28900
MONTH	47200	33800	46400	31100	45900	5750	41700	147	---	---	44000	12500
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	44400	29200	43900	31000	45900	36700	47200	37300	47200	36100	46100	36600
2	45300	28800	44100	30700	46200	38500	47600	37600	47100	35800	45700	35500
3	44100	31100	44000	32900	45900	37800	47700	37200	47200	35900	45700	35400
4	44000	31200	44400	33400	46300	36000	47500	37300	46900	35900	46200	35700
5	44000	32800	44400	33300	46300	38300	47300	37500	46400	35400	46000	35000
6	43700	32900	44400	33400	46000	38300	47600	37000	46300	35600	45900	37400
7	43700	34600	44700	33000	46000	35900	47400	37600	46600	34900	46100	36300
8	44200	33400	44600	32500	45200	35900	47300	38000	46500	38400	46400	35500
9	44500	34000	44400	32200	45100	36800	46900	36800	46900	38800	46000	35500
10	44300	33000	44300	33200	45800	34700	47500	36100	45600	36300	46600	36600
11	44700	33000	44900	32900	45600	35200	47400	34900	46600	37500	46000	38000
12	44800	30100	44700	33300	45400	35200	47800	35800	47100	36200	46700	37400
13	43800	30700	44600	35800	46300	34600	47500	37900	46700	34200	47100	37400
14	43700	33000	44500	33900	46500	38700	47900	34800	46900	37100	46600	37900
15	44100	32600	43800	32800	46400	34500	47500	35500	47100	36800	---	---
16	44000	31000	43300	33800	46400	35200	47800	37700	47400	37200	---	---
17	44100	34700	43100	35400	46200	35200	47800	36900	47400	37300	46800	39000
18	44100	33400	43400	37600	46600	35800	47900	37400	47200	36400	47000	39900
19	44100	32200	43600	36800	46600	35300	48000	36800	46700	36600	47000	40000
20	42700	31600	---	---	46900	35500	47900	36000	46100	36100	47100	39600
21	43100	30400	46000	35200	47000	34900	47600	35700	46100	38000	47100	40100
22	---	---	46000	36100	46900	37400	47500	36500	45900	38100	46900	39400
23	43800	32900	46100	36200	46600	36100	46900	36700	45700	35900	46700	39500
24	43700	33600	45900	36600	46400	35600	46600	36900	45800	36100	46700	39600
25	43900	29300	45800	37000	46400	36400	46800	37100	45800	36500	46300	37800
26	44700	30400	45200	35600	46200	36200	46900	38200	45900	36100	46200	40100
27	44300	31900	45500	35500	46600	35900	47400	36500	---	---	46600	41400
28	44100	28700	45400	33600	46800	36300	47600	38000	46200	38100	47000	38800
29	44200	31500	45600	33300	47200	38400	47700	38000	45800	36000	47000	39100
30	43800	31600	45700	34800	47400	38700	47500	37800	45700	35900	46800	40700
31	---	---	46000	37200	---	---	47300	36400	46000	37300	---	---
MONTH	---	---	---	---	47400	34500	48000	34800	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(UPPER PROBE)

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

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	15.5	14.5	13.0	13.0	12.5	12.0	11.5	12.0	11.0	11.5	10.5
2	17.5	16.0	14.0	13.5	13.0	12.0	12.5	11.5	12.5	11.5	12.0	10.5
3	17.5	16.0	14.0	13.5	12.5	12.0	12.5	11.5	12.0	11.5	12.0	10.5
4	18.0	16.0	13.5	13.0	12.5	12.0	12.0	11.5	12.0	11.5	12.5	10.5
5	18.5	16.0	14.0	13.0	13.0	12.0	12.0	11.0	12.5	11.5	12.5	10.5
6	19.0	16.0	13.5	13.0	13.0	12.0	12.0	9.5	12.0	11.5	13.5	10.5
7	19.0	16.5	14.0	13.0	13.0	12.0	12.0	10.0	12.0	11.0	13.5	11.0
8	19.5	16.5	14.0	12.5	13.0	12.5	12.0	9.5	12.0	11.0	13.5	11.0
9	19.0	16.5	14.0	12.5	13.0	12.0	11.5	9.0	12.0	10.5	14.0	11.0
10	19.5	16.5	14.0	12.5	13.0	12.0	11.5	9.0	12.0	11.0	14.5	11.0
11	19.5	16.5	14.0	12.5	13.5	12.5	11.0	9.0	12.0	11.0	13.5	11.5
12	19.0	16.5	14.0	13.0	13.5	12.5	11.0	9.0	12.0	10.5	13.0	11.5
13	19.0	16.5	14.0	12.5	13.5	12.5	11.0	7.5	12.0	10.5	13.0	11.0
14	19.0	16.5	13.5	13.0	13.0	12.0	10.5	7.5	12.5	11.0	13.5	11.0
15	18.5	16.5	13.0	12.5	12.5	11.5	11.0	7.5	12.5	11.5	13.0	11.0
16	17.5	16.0	13.0	12.0	12.5	11.5	11.0	7.5	12.5	11.5	13.0	11.0
17	17.5	16.0	13.5	12.5	12.0	11.5	11.0	8.0	13.0	11.5	14.5	11.5
18	17.5	15.5	13.5	12.5	12.0	11.0	10.5	8.0	13.0	11.5	15.0	11.5
19	16.5	14.0	13.5	12.5	12.0	10.5	10.5	8.0	13.0	11.5	15.0	11.0
20	16.0	14.0	14.0	12.5	11.5	10.0	11.0	8.5	12.5	11.5	15.5	11.5
21	15.5	14.5	14.0	12.5	11.5	10.5	10.5	8.5	13.0	11.5	15.5	12.0
22	16.0	14.5	14.0	12.5	11.5	10.5	10.5	9.0	13.0	11.5	14.5	12.0
23	16.5	14.5	13.5	12.5	11.5	10.5	11.0	9.0	12.0	11.5	15.0	12.0
24	15.5	14.5	14.0	12.5	11.5	10.5	10.5	9.0	12.0	10.5	16.0	12.5
25	15.0	14.0	14.0	13.0	11.5	10.0	10.5	9.5	12.5	11.0	16.5	12.5
26	14.5	12.0	13.5	13.0	11.5	10.0	11.5	9.5	13.0	11.0	15.5	12.5
27	14.5	12.5	14.0	13.0	11.5	10.0	11.0	10.0	12.0	11.0	15.0	13.0
28	14.5	13.5	13.5	13.0	11.5	10.0	11.5	10.5	11.0	10.0	15.0	12.5
29	14.0	13.5	13.5	11.5	11.5	10.5	11.5	10.5	---	---	15.5	12.5
30	14.0	13.0	13.0	12.5	11.5	10.5	11.5	11.0	---	---	15.0	12.5
31	14.0	13.0	---	---	11.5	11.0	11.5	11.0	---	---	14.5	12.5
MONTH	19.5	12.0	14.5	11.5	13.5	10.0	12.5	7.5	13.0	10.0	16.5	10.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	12.0	17.0	13.5	21.0	16.5	20.5	16.0	19.5	17.0	22.0	19.5
2	13.5	11.5	17.0	13.0	20.5	16.5	21.5	16.0	19.5	17.5	21.5	19.5
3	14.5	11.5	17.5	13.5	19.0	16.5	20.5	16.0	20.0	17.5	22.0	19.5
4	15.0	11.5	17.5	13.5	20.0	16.0	19.5	16.5	20.5	17.5	22.5	19.5
5	15.0	12.0	17.5	13.5	19.5	16.0	20.0	16.5	20.5	18.0	21.5	19.5
6	14.5	12.0	18.0	13.5	20.0	16.0	20.0	16.5	20.5	18.0	21.5	19.5
7	15.5	12.5	17.5	13.5	19.5	16.0	20.0	17.0	20.5	18.0	21.0	19.5
8	15.0	12.5	17.0	13.5	19.5	16.5	20.0	17.0	20.0	18.0	21.5	19.5
9	15.0	12.0	17.0	13.5	19.0	16.0	20.5	17.0	20.0	18.0	21.0	19.5
10	14.5	12.5	17.0	14.0	---	---	20.5	17.0	20.0	18.0	21.0	19.0
11	15.0	12.0	17.5	14.0	---	---	20.5	17.0	20.5	18.0	21.0	19.0
12	15.0	12.0	18.0	14.5	---	---	20.5	16.5	20.0	18.0	21.5	19.0
13	14.5	12.5	17.5	14.5	---	---	20.0	16.5	20.0	18.0	21.0	18.5
14	16.0	12.5	18.5	14.5	---	---	19.5	16.5	20.0	18.0	21.0	18.5
15	16.5	12.5	19.5	14.5	---	---	20.0	16.5	20.0	18.0	---	---
16	16.5	12.5	21.0	14.5	---	---	19.5	16.5	20.0	18.0	---	---
17	16.5	13.0	21.0	14.5	---	---	19.5	17.0	20.0	18.0	22.0	18.5
18	15.5	13.0	19.5	15.0	---	---	20.0	17.0	21.0	18.0	21.5	18.5
19	16.0	13.0	19.0	15.0	---	---	20.0	17.0	20.0	18.0	21.0	18.5
20	16.5	13.5	---	---	---	---	19.5	16.5	20.5	18.5	21.5	18.5
21	16.0	13.5	19.5	15.5	19.5	16.0	19.5	16.5	21.5	18.5	21.0	18.5
22	---	---	19.0	15.5	20.5	16.0	20.0	16.5	21.5	19.0	20.5	18.5
23	17.0	13.5	19.5	15.5	20.0	16.5	19.0	17.0	21.5	19.0	21.0	18.5
24	16.5	13.5	19.5	16.0	20.0	16.5	19.5	17.0	22.0	19.0	21.5	18.5
25	16.0	13.5	19.5	16.0	20.5	16.0	19.5	17.0	22.0	19.5	21.0	18.5
26	16.5	13.5	19.0	16.0	20.0	16.5	19.5	17.0	22.5	19.5	21.0	18.5
27	17.0	13.5	19.5	16.0	20.0	16.5	20.0	17.0	22.0	19.5	21.0	18.5
28	16.5	13.5	20.5	16.0	19.5	16.0	19.5	17.0	22.5	19.5	21.0	18.5
29	17.0	13.5	21.0	16.5	20.0	16.0	19.5	17.0	22.0	19.5	21.5	18.0
30	18.5	13.5	21.0	16.5	19.5	16.0	19.5	17.0	21.5	19.5	21.0	18.0
31	---	---	21.0	16.5	---	---	19.0	17.0	22.0	19.5	---	---
MONTH	---	---	---	---	---	---	21.5	16.0	22.5	17.0	---	---

11182500 SAN RAMON CREEK AT SAN RAMON, CA

LOCATION.—Lat 37°46'23", long 121°59'37", in sec.8, T.2 S., R.1 W., Contra Costa County, Hydrologic Unit 18050001, on right bank 0.2 mi downstream from Bollinger Creek and 1.0 mi southwest of San Ramon.

DRAINAGE AREA.—5.89 mi².

PERIOD OF RECORD.—October 1952 to current year.

REVISED RECORDS.—WSP 1445: 1953–54(P).

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 530 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,600 ft³/s, Oct. 13, 1962, gage height, 16.98 ft, from rating curve extended above 200 ft³/s on basis of culvert computations at gage heights 11.80, 12.09, 14.20, and 16.98 ft; no flow for parts of 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. 5	0515	266	4.15	Jan. 22	1800	589	6.38
Dec. 10	0930	273	4.19	Jan. 26	0430	632	6.71
Jan. 2	0600	572	6.25				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.27	.69	195	e15	3.6	2.1	1.4	.55	.33	.13	.05
2	.19	.27	.36	185	e14	4.8	2.0	1.2	.55	.31	.10	.05
3	.18	.27	.31	60	e13	4.2	2.0	1.2	.76	.26	.10	.05
4	.16	.27	.36	35	12	3.9	2.1	1.2	.97	.23	.08	.04
5	.13	.26	59	24	11	3.6	2.0	1.2	.67	.28	.07	.03
6	.11	.23	4.6	18	9.6	3.6	2.0	1.2	.55	.31	.05	.03
7	.09	.19	2.4	16	8.9	3.6	2.0	1.1	.59	.26	.03	.03
8	.07	.19	1.7	13	8.5	3.4	2.0	1.1	.55	.23	.03	.02
9	.07	.22	1.9	12	8.1	3.4	1.9	1.2	.55	.23	.03	.01
10	.07	.23	70	11	7.6	3.4	1.9	1.1	.55	.23	.04	.01
11	.10	.23	10	10	7.1	3.4	1.9	1.1	.55	.23	.07	.02
12	.14	.29	19	12	6.7	3.3	1.9	.97	.53	.23	.07	.02
13	.16	.35	15	9.1	6.2	3.1	1.8	.86	.48	.23	.07	.04
14	.16	.40	6.8	8.0	5.7	3.2	1.7	.87	.50	.21	.04	.03
15	.16	.27	5.2	11	5.6	3.2	1.6	.87	.47	.16	.04	.03
16	.16	.47	4.4	8.2	5.7	3.2	1.6	.85	.44	.13	.05	.03
17	.15	15	3.7	7.6	6.2	3.5	1.6	.77	.42	.15	.05	.02
18	.16	2.6	3.1	7.1	5.2	3.1	1.9	.70	.42	.18	.07	.02
19	.19	1.6	2.8	6.8	4.9	2.9	3.7	.70	.40	.18	.08	.03
20	.19	1.5	2.6	7.7	4.8	3.1	1.9	.76	.36	.16	.61	.02
21	.18	.48	77	9.7	4.6	3.1	1.9	.75	.40	.16	.22	.01
22	.13	8.2	40	128	4.5	2.9	1.8	.70	.41	.15	.12	.01
23	.13	1.2	16	53	4.4	2.9	1.7	.95	.36	.12	.10	.01
24	.17	.56	11	39	4.1	2.9	1.6	.89	.35	.09	.10	.01
25	.20	.42	8.9	104	4.1	2.7	1.5	.78	.30	.07	.09	.01
26	.21	.35	17	159	4.1	2.7	1.4	.78	.27	.08	.07	.01
27	.14	.31	26	48	4.1	2.5	1.4	.77	.27	.07	.07	.01
28	.13	.31	13	37	3.9	2.3	1.4	.73	.35	.10	.06	.01
29	.58	.31	28	32	---	2.3	1.4	.67	.36	.10	.06	.01
30	.47	.27	20	28	---	2.2	1.4	.55	.44	.10	.05	.01
31	.30	---	15	e17	---	2.2	---	.61	---	.12	.05	---
TOTAL	5.45	37.52	485.82	1311.2	199.6	98.2	55.1	28.53	14.37	5.69	2.80	0.68
MEAN	.18	1.25	15.7	42.3	7.13	3.17	1.84	.92	.48	.18	.090	.023
MAX	.58	15	77	195	15	4.8	3.7	1.4	.97	.33	.61	.05
MIN	.07	.19	.31	6.8	3.9	2.2	1.4	.55	.27	.07	.03	.01
AC-FT	11	74	964	2600	396	195	109	57	29	11	5.6	1.3

e Estimated.

11182500 SAN RAMON CREEK AT SAN RAMON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	.62	3.46	9.29	9.11	7.71	4.75	1.34	.52	.20	.080	.052
MAX	17.0	5.49	27.2	42.3	45.4	60.6	44.9	4.92	1.99	.83	.40	.33
(WY)	1963	1984	1956	1997	1986	1983	1958	1967	1967	1958	1983	1982
MIN	.000	.000	.001	.002	.039	.17	.016	.000	.000	.000	.000	.000
(WY)	1953	1956	1977	1991	1991	1977	1977	1977	1976	1955	1954	1954

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1953 - 1997			
ANNUAL TOTAL	2308.24				2244.96							
ANNUAL MEAN	6.31				6.15				3.11			
HIGHEST ANNUAL MEAN									12.4			
LOWEST ANNUAL MEAN									.029			
HIGHEST DAILY MEAN	98				195				411			
LOWEST DAILY MEAN	.07				.01				.00			
ANNUAL SEVEN-DAY MINIMUM	.09				.01				.00			
INSTANTANEOUS PEAK FLOW					632				1600			
INSTANTANEOUS PEAK STAGE					6.71				16.98			
ANNUAL RUNOFF (AC-FT)	4580				4450				2250			
10 PERCENT EXCEEDS	15				12				6.3			
50 PERCENT EXCEEDS	.84				.70				.28			
90 PERCENT EXCEEDS	.15				.05				.00			

11456000 NAPA RIVER NEAR ST. HELENA, CA

LOCATION.—Lat 38°29'52", long 122°25'37", in Carne Humana Grant, Napa County, Hydrologic Unit 18050002, on right bank 0.2 mi upstream from highway bridge, 1.3 mi northeast of Zinfandel, and 2.5 mi east of St. Helena.

DRAINAGE AREA.—81.4 mi².

PERIOD OF RECORD.—October 1929 to September 1932, October 1939 to June 30, 1995. Stage only July 1, 1995, to current year. Monthly discharge only for some periods, published in WSP 1315-B.

WATER TEMPERATURE.—Water years 1958–79.

SEDIMENT DATA.—Water years 1961–62.

REVISED RECORDS.—WSP 1929: Drainage area. WDR CA-78-2: 1977(M).

GAGE.—Water-stage recorder. Datum of gage is 170.12 ft above sea level. Prior to Nov. 22, 1958, at datum 3.00 ft higher. Nov. 22, 1958, to July 22, 1976, at datum 2.00 ft higher.

REMARKS.—Interruptions in record were due to malfunction of the recording instruments. Some regulation by Kimball Creek Reservoir, capacity 344 acre-ft, since 1939, and Bell Canyon Reservoir, capacity, 2,530 acre-ft, since 1959. Small diversions upstream from station for irrigation of about 1,500 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,900 ft³/s, Feb. 17, 1986, gage height, 18.52 ft, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.83	2.80	2.88	2.86	3.20	3.06	18.47	10.24	4.91	4.73	3.44	3.41
2	2.80	2.79	2.86	2.85	3.13	3.09	11.00	7.91	4.73	4.56	3.57	3.41
3	---	---	2.85	2.84	3.09	3.07	8.01	6.36	4.56	4.44	3.46	3.42
4	---	---	2.84	2.84	4.79	3.07	6.38	5.69	4.55	4.37	3.42	3.39
5	---	---	2.84	2.82	6.28	4.16	5.78	5.28	---	---	3.39	3.37
6	---	---	2.83	2.82	4.16	3.67	5.31	4.97	---	---	3.37	3.36
7	---	---	2.84	2.82	3.67	3.48	5.01	4.78	4.18	4.12	3.36	3.35
8	---	---	2.83	2.82	3.48	3.43	4.78	4.59	4.12	4.03	3.35	3.33
9	2.77	2.76	2.82	2.82	6.64	3.43	4.60	4.43	4.04	3.98	3.34	3.33
10	2.77	2.76	2.83	2.82	9.37	5.82	4.43	4.32	3.98	3.92	3.35	3.33
11	2.78	2.76	2.83	2.82	7.23	5.43	4.32	4.23	3.93	3.87	3.34	3.33
12	2.78	2.77	2.83	2.82	7.23	5.50	4.24	4.16	3.88	3.81	3.33	3.29
13	2.79	2.78	2.84	2.83	5.50	4.77	4.19	4.05	3.82	3.76	3.30	3.28
14	2.79	2.77	2.84	2.83	4.77	4.30	4.05	3.98	3.77	3.72	3.30	3.28
15	2.78	2.77	2.84	2.84	4.30	4.00	4.04	3.95	3.74	3.68	3.30	3.28
16	2.78	2.77	3.02	2.84	4.01	3.84	3.95	3.89	3.71	3.68	4.01	3.28
17	2.78	2.78	3.29	2.98	3.84	3.72	3.89	3.84	3.80	3.66	4.00	3.45
18	2.79	2.77	3.39	3.24	3.72	3.61	3.85	3.82	3.67	3.62	3.45	3.36
19	2.78	2.77	4.48	3.16	3.61	3.56	3.82	3.78	3.64	3.61	3.37	3.35
20	2.78	2.77	4.01	3.26	3.68	3.54	3.94	3.78	3.61	3.58	3.36	3.34
21	2.78	2.78	3.27	3.17	5.36	3.68	4.23	3.92	3.59	3.56	3.34	3.33
22	2.79	2.78	4.07	3.21	6.32	5.00	16.97	4.15	3.56	3.52	3.33	3.31
23	2.81	2.79	3.78	3.27	5.66	4.96	13.62	6.31	3.53	3.49	3.32	3.30
24	2.81	2.80	3.27	3.17	4.96	4.57	7.04	5.77	3.50	3.47	3.31	3.27
25	2.81	2.79	3.17	3.13	4.57	4.32	13.57	6.94	3.48	3.45	3.29	3.25
26	2.81	2.79	3.13	3.10	8.33	4.27	14.30	7.65	3.48	3.44	3.28	3.26
27	2.80	2.79	3.10	3.08	8.33	6.93	7.67	6.38	3.47	3.44	3.29	3.25
28	2.80	2.79	3.09	3.06	7.11	5.82	6.38	5.76	3.45	3.42	3.27	3.25
29	2.95	2.80	3.07	3.06	---	---	5.78	5.38	---	---	3.27	3.24
30	2.93	2.86	3.07	3.06	---	---	5.39	5.12	---	---	3.26	3.25
31	2.91	2.88	---	---	11.56	9.39	5.12	4.90	---	---	---	---
MONTH	---	---	4.48	2.82	---	---	18.47	3.78	---	---	---	---

11456000 NAPA RIVER NEAR ST. HELENA, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	3.10	3.09	2.95	2.94	2.80	2.73	2.75	2.73	2.72	2.70
2	3.23	3.21	3.10	3.09	2.95	2.94	2.82	2.79	2.75	2.72	2.71	2.69
3	3.22	3.19	3.09	3.07	2.98	2.94	2.83	2.81	2.73	2.71	2.71	2.68
4	3.23	3.20	3.07	3.05	2.98	2.96	2.83	2.81	2.75	2.72	2.69	2.66
5	3.22	3.18	3.08	3.05	2.98	2.94	2.82	2.79	2.73	2.70	2.69	2.66
6	3.19	3.14	3.06	3.03	2.95	2.93	2.81	2.79	2.71	2.68	2.69	2.67
7	3.20	3.13	3.06	3.04	2.94	2.93	2.81	2.79	2.70	2.67	2.70	2.67
8	3.18	3.16	3.07	3.05	2.94	2.93	2.80	2.77	2.70	2.67	2.69	2.65
9	3.17	3.15	3.06	3.05	2.94	2.92	2.78	2.74	2.69	2.67	2.67	2.63
10	3.17	3.16	3.06	3.05	2.94	2.92	2.77	2.75	2.69	2.67	2.67	2.63
11	3.17	3.15	3.05	3.04	2.93	2.92	2.79	2.76	---	---	2.66	2.63
12	3.17	3.15	3.06	3.03	2.92	2.88	2.78	2.76	2.71	2.68	2.65	2.63
13	3.16	3.15	3.04	3.02	2.88	2.86	2.79	2.77	2.70	2.68	2.67	2.63
14	3.16	3.14	3.04	3.00	2.87	2.85	2.80	2.76	2.71	2.69	2.68	2.64
15	3.15	3.13	3.01	2.99	2.86	2.83	2.78	2.77	2.72	2.70	2.70	2.68
16	3.15	3.13	3.02	3.00	2.88	2.83	2.79	2.78	2.73	2.71	2.72	2.69
17	3.14	3.12	3.00	2.99	2.90	2.88	2.79	2.77	2.73	2.70	2.71	2.70
18	3.30	3.12	3.00	2.97	2.90	2.87	2.78	2.77	2.72	2.70	2.72	2.71
19	3.47	3.17	3.00	2.96	2.87	2.82	2.79	2.76	2.75	2.71	2.72	2.69
20	3.18	3.14	3.00	2.97	2.84	2.81	2.78	2.76	2.78	2.75	2.71	2.70
21	3.17	3.15	2.98	2.95	2.84	2.80	2.78	2.76	2.79	2.77	2.73	2.70
22	3.16	3.14	2.98	2.96	2.83	2.80	2.79	2.73	2.77	2.76	2.73	2.72
23	3.16	3.14	3.14	2.98	2.82	2.78	2.74	2.72	2.78	2.76	2.75	2.71
24	---	---	3.06	2.98	2.82	2.79	2.74	2.73	2.77	2.75	2.72	2.70
25	3.13	3.09	2.99	2.97	2.82	2.80	2.75	2.72	2.76	2.74	2.73	2.71
26	3.10	3.09	2.98	2.97	2.83	2.81	2.74	2.71	2.78	2.75	2.75	2.73
27	3.10	3.08	2.99	2.97	2.83	2.81	2.73	2.71	2.79	2.77	2.75	2.72
28	3.11	3.08	2.99	2.94	2.82	2.80	2.77	2.72	2.78	2.76	2.75	2.73
29	3.11	3.10	2.95	2.91	2.83	2.81	2.76	2.73	2.77	2.73	2.75	2.72
30	3.10	3.09	2.95	2.89	2.82	2.75	2.75	2.73	2.74	2.72	2.74	2.72
31	---	---	2.95	2.94	---	---	2.76	2.73	2.72	2.70	---	---
MONTH	---	---	3.14	2.89	2.98	2.75	2.83	2.71	---	---	2.75	2.63

11458000 NAPA RIVER NEAR NAPA, CA

LOCATION.—Lat 38°22'06", long 122°18'08", in Yajome Grant, Napa County, Hydrologic Unit 18050002, on left bank at downstream side of Oak Knoll Avenue Bridge, 0.4 mi downstream from Dry Creek, 5 mi north of Napa, and 12.8 mi downstream from Conn Dam.

DRAINAGE AREA.—218 mi².

PERIOD OF RECORD.—October 1929 to September 1932, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

CHEMICAL DATA: Water years 1973–93.

BIOLOGICAL DATA: Water years 1978–81.

SPECIFIC CONDUCTANCE: Water years 1978–93.

WATER TEMPERATURE: Water years 1977–93.

SEDIMENT DATA: Water years 1971, 1977–93.

REVISED RECORDS.—WSP 1315-B: 1930(M). WDR CA-87-2: 1963(M), 1965(M), 1967(M), 1982–85.

GAGE.—Water-stage recorder. Datum of gage is 24.74 ft above sea level.

REMARKS.—Records fair, except for periods of estimated discharge, which are poor. Flow regulated by Lake Hennessey beginning in December 1945, 12.8 mi upstream, capacity 31,000 acre-ft; Rector Reservoir beginning in 1948, 12.4 mi upstream, capacity 4,400 acre-ft; Bell Canyon Reservoir beginning in 1959, 19.6 mi upstream, capacity 2,530 acre-ft. Diversions for irrigation upstream from station of about 10,000 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 37,100 ft³/s, Feb. 18, 1986, gage height, 30.20 ft, from floodmarks; maximum gage height, 30.50 ft, Mar. 9, 1995; no flow at times.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.3	14	14600	740	146	e59	32	9.6	1.3	.28	.21
2	2.3	4.6	19	7840	652	146	e80	31	11	.85	.28	.20
3	2.4	5.7	17	e5800	587	146	e75	30	8.0	1.5	.28	.20
4	2.4	6.1	16	e4000	565	139	e52	29	9.0	1.7	.28	.22
5	2.4	6.0	509	e1900	519	131	46	27	10	1.8	.27	.21
6	2.4	5.9	154	e1150	476	125	40	26	9.9	1.9	.24	.21
7	2.4	5.5	78	779	442	119	35	24	9.4	2.0	.24	.21
8	2.3	5.5	56	663	416	112	33	24	9.2	2.1	.24	.20
9	2.1	5.7	125	582	389	110	33	23	8.2	2.3	.24	.19
10	2.0	5.9	e2100	529	367	107	34	23	6.3	1.9	.24	.18
11	1.9	6.6	563	493	345	98	36	24	6.9	1.7	.24	.20
12	1.9	6.6	729	472	325	91	39	24	6.2	1.6	.24	.20
13	1.9	6.7	366	439	305	89	38	21	6.9	1.3	.24	.20
14	2.0	6.9	208	396	290	86	37	18	5.7	.73	.24	.21
15	2.1	6.9	132	384	277	83	34	17	5.3	.85	.24	.24
16	1.9	e40	94	365	267	e88	32	16	5.7	1.4	.24	.23
17	1.8	e150	72	348	261	e106	32	14	5.4	1.0	.24	.20
18	1.9	e128	56	335	247	e140	30	14	4.5	.67	.24	.20
19	2.0	e145	44	326	233	e112	49	14	4.6	.48	.24	.20
20	2.1	e118	39	324	223	e98	42	14	4.4	.40	.39	.19
21	2.2	e85	336	339	215	84	38	14	3.7	.40	e.30	.16
22	2.4	e78	543	3530	207	81	40	18	3.3	.40	.27	.16
23	2.6	85	500	7110	201	79	40	29	3.5	.40	.23	.19
24	2.4	41	287	2380	192	75	40	28	3.5	.40	.21	.20
25	2.8	26	203	6570	180	73	38	22	4.2	.40	.20	.20
26	2.9	21	434	7440	175	67	37	19	4.0	.36	.20	.20
27	2.3	17	1680	2950	166	65	37	18	3.5	.36	.21	.22
28	2.3	15	1260	1740	155	62	36	15	2.7	.36	.20	.21
29	6.2	13	1990	1260	---	61	34	15	2.3	.32	.20	.20
30	5.7	12	3640	1010	---	59	33	13	1.9	.32	.20	.20
31	4.4	---	6980	849	---	e54	---	9.2	---	.30	.21	---
TOTAL	78.6	1062.9	23244	76903	9417	3032	1229	645.2	178.8	31.50	7.57	6.04
MEAN	2.54	35.4	750	2481	336	97.8	41.0	20.8	5.96	1.02	.24	.20
MAX	6.2	150	6980	14600	740	146	80	32	11	2.3	.39	.24
MIN	1.8	4.3	14	324	155	54	30	9.2	1.9	.30	.20	.16
AC-FT	156	2110	46100	152500	18680	6010	2440	1280	355	62	15	12

e Estimated.

11458000 NAPA RIVER NEAR NAPA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.7	81.8	280	744	652	492	181	48.2	15.3	5.28	2.70	2.31
MAX	338	616	1474	3083	4089	2598	1341	226	55.6	19.4	9.43	10.7
(WY)	1963	1974	1984	1995	1986	1983	1982	1983	1967	1983	1983	1982
MIN	.000	1.10	.73	2.17	.42	2.60	.20	.000	.000	.000	.000	.000
(WY)	1961	1991	1977	1991	1977	1977	1977	1977	1977	1961	1960	1960

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1960 - 1997			
ANNUAL TOTAL	112407.4				115835.61							
ANNUAL MEAN	307				317				208			
HIGHEST ANNUAL MEAN									585			
LOWEST ANNUAL MEAN									.72			
HIGHEST DAILY MEAN	7550				14600				26200			
LOWEST DAILY MEAN	1.3				.16				.00			
ANNUAL SEVEN-DAY MINIMUM	1.4				.19				.00			
INSTANTANEOUS PEAK FLOW					18600				37100			
INSTANTANEOUS PEAK STAGE					28.07				30.50			
ANNUAL RUNOFF (AC-FT)	223000				229800				150700			
10 PERCENT EXCEEDS	832				496				421			
50 PERCENT EXCEEDS	45				16				13			
90 PERCENT EXCEEDS	2.5				.23				.50			

11459500 NOVATO CREEK AT NOVATO, CA

LOCATION.—Lat 38°06'28", long 122°34'44", in Novato Grant, Marin County, Hydrologic Unit 18050002, on left bank in Novato, 100 ft upstream from 7th Street Bridge, and 3.9 mi downstream from Novato Creek Dam.

DRAINAGE AREA.—17.6 mi².

PERIOD OF RECORD.—October 1946 to current year. Prior to October 1966, published as "near Novato."

GAGE.—Water-stage recorder. Datum of gage is 14.76 ft above sea level. Prior to Aug. 23, 1967, at site 0.6 mi upstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are fair. Flow regulated by Stafford Lake beginning Dec. 1, 1951, capacity, 4,500 acre-ft since Oct. 18, 1954. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,000 ft³/s, Jan. 4, 1982, gage height, 14.52 ft from contracted opening and slope-area measurements of 3,800 ft³/s at the gage site, and slope-conveyance computations of 1,200 ft³/s of overflow about 1 mi upstream which entered the adjoining Warner Creek Basin; no flow for many days in most years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.40	1.9	e650	54	3.0	1.1	.56	.28	.58	.68	.48
2	.10	.39	.85	e350	44	3.8	1.2	.60	.30	.31	.52	.27
3	.09	.39	.75	e200	37	2.8	1.5	.59	1.7	.30	2.7	.18
4	.09	.39	5.6	144	34	2.7	1.1	.58	1.5	.33	3.5	.15
5	.02	.37	22	108	28	2.8	1.1	.89	.97	.39	3.3	.13
6	.00	.34	2.7	78	24	2.4	1.0	.56	.91	.36	1.8	.12
7	.00	.36	1.7	61	19	2.4	.90	.53	.82	.65	1.2	.10
8	.00	.39	1.6	49	16	2.3	.90	.58	.80	1.9	.45	.12
9	.00	.39	14	39	14	2.2	.92	.88	.78	2.2	.35	.11
10	.00	.39	74	33	13	2.1	1.0	.27	.77	3.0	.24	.11
11	.00	.41	18	28	11	2.1	1.0	.47	.75	3.2	.78	.16
12	.00	.40	16	29	9.8	2.0	1.0	.56	.74	1.2	.56	.16
13	.00	.16	9.3	22	8.1	1.9	1.1	.51	1.0	.75	2.4	.14
14	.00	.09	6.2	16	7.1	1.9	1.1	.50	.50	.65	2.8	.53
15	.00	.07	5.0	15	6.8	2.0	1.0	.49	.18	.99	.63	.35
16	.00	6.5	4.5	12	6.9	4.6	.94	.50	.18	.87	.19	.17
17	.16	21	4.0	10	9.7	2.0	.95	.48	.67	.64	.17	.14
18	.04	3.4	3.6	9.6	7.0	1.6	.87	.43	.84	2.5	.15	.13
19	.19	7.4	e3.1	9.7	5.6	1.6	.88	.50	.82	3.2	.44	.11
20	.09	1.9	e20	17	5.2	1.5	.95	.51	.71	.98	13	.08
21	.00	1.3	e40	17	4.6	1.4	.94	.49	.64	1.1	.59	.08
22	.00	2.6	e25	281	4.6	1.3	.90	.45	.61	.63	.35	.10
23	.00	1.2	e15	164	4.2	1.3	.90	1.9	.65	.65	.32	.10
24	.00	1.0	e10	150	3.9	1.3	.81	.56	.62	.58	.33	.10
25	.00	.94	e30	458	3.9	1.3	.83	.39	.63	.53	.25	.55
26	.00	.89	e75	683	3.9	1.3	.81	.36	.41	.44	.25	.22
27	.00	.81	e65	275	3.9	1.2	.84	.38	.36	.43	.24	.05
28	.00	.85	e60	167	3.3	1.2	1.1	.40	.42	.42	.24	.01
29	2.9	.90	e250	109	---	1.1	.62	.42	.41	.39	.27	.01
30	.92	.90	e400	81	---	1.1	.56	.45	.44	.43	.26	.06
31	.46	---	e300	64	---	1.1	---	.38	---	.76	.26	---
TOTAL	5.17	56.53	1484.80	4329.3	392.5	61.3	28.82	17.17	20.41	31.36	39.22	5.02
MEAN	.17	1.88	47.9	140	14.0	1.98	.96	.55	.68	1.01	1.27	.17
MAX	2.9	21	400	683	54	4.6	1.5	1.9	1.7	3.2	13	.55
MIN	.00	.07	.75	9.6	3.3	1.1	.56	.27	.18	.30	.15	.01
AC-FT	10	112	2950	8590	779	122	57	34	40	62	78	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1997, BY WATER YEAR (WY)

	MEAN	72	3.18	15.8	49.4	42.0	26.4	9.22	1.43	.72	.63	.39	.29
MAX	9.07	17.2	117	210	239	207	81.3	12.9	7.73	8.61	8.53	5.40	
(WY)	1963	1974	1956	1995	1986	1983	1958	1983	1980	1980	1980	1967	
MIN	.000	.000	.000	.26	.35	.84	.17	.016	.000	.000	.000	.000	
(WY)	1947	1948	1950	1948	1948	1976	1977	1961	1951	1947	1947	1947	

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1947 - 1997

ANNUAL TOTAL	6838.98	6471.60	
ANNUAL MEAN	18.7	17.7	12.4
HIGHEST ANNUAL MEAN			47.9
LOWEST ANNUAL MEAN			.40
HIGHEST DAILY MEAN	400	683	2850
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		2080	5000
INSTANTANEOUS PEAK STAGE		11.52	14.52
INSTANTANEOUS LOW FLOW		.00	.00
ANNUAL RUNOFF (AC-FT)	13570	12840	8980
10 PERCENT EXCEEDS	62	26	21
50 PERCENT EXCEEDS	1.3	.88	.59
90 PERCENT EXCEEDS	.09	.10	.00

e Estimated.

11460400 LAGUNITAS CREEK AT SAMUEL P. TAYLOR STATE PARK, CA

LOCATION.—Lat 38°01'37", long 122°44'07", Marin County, Hydrologic Unit 18050005, in Samuel P. Taylor State Park, on left bank 300 ft upstream from Deadman's Gulch, 0.9 mi downstream from park entrance, 2.1 mi northwest of Lagunitas, and 3.4 mi downstream from Kent Lake.

DRAINAGE AREA.—34.3 mi².

PERIOD OF RECORD.—December 1982 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 102.89 ft above sea level.

REMARKS.—Records good except for estimated daily discharges, which are fair. Flow regulated by Kent Lake, capacity, 16,680 acre-ft, and Alpine Lake, capacity, 8,890 acre-ft, both of which divert for domestic and industrial use in Marin County.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,520 ft³/s, Jan. 1, 1997, gage height, 8.49 ft; minimum daily, 3.8 ft³/s, Oct. 16–18, 1986.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	7.6	24	2600	115	34	22	14	11	8.7	8.2	8.0
2	9.0	7.3	32	1970	97	39	21	12	11	8.6	8.2	7.9
3	9.2	7.3	41	935	83	32	21	12	12	8.6	8.2	7.9
4	9.2	7.3	45	419	74	26	21	12	13	8.7	8.0	7.8
5	9.1	7.3	230	271	65	25	20	12	13	8.6	8.0	7.8
6	9.0	7.3	44	191	56	25	19	12	14	8.7	8.0	7.8
7	9.0	7.2	30	121	50	33	19	12	15	8.6	8.0	7.8
8	9.0	7.1	25	96	44	40	18	12	15	8.5	8.0	7.8
9	9.0	7.1	235	83	40	40	18	12	14	8.5	8.1	7.8
10	9.0	7.1	619	76	36	36	18	12	13	8.5	8.1	7.8
11	9.0	7.1	166	68	32	32	18	12	13	8.5	8.0	7.7
12	9.0	7.1	182	163	30	30	18	11	13	8.5	7.9	8.0
13	9.4	7.1	106	137	28	28	18	11	13	8.5	8.0	7.8
14	9.1	7.1	61	108	30	27	18	11	13	8.5	e8.0	8.2
15	9.0	16	40	106	28	25	18	11	13	8.6	e8.1	8.1
16	9.0	35	29	91	26	30	18	11	13	8.5	e8.5	8.0
17	9.0	52	25	80	26	32	17	10	12	8.5	e8.2	7.8
18	9.0	38	25	72	24	26	18	10	11	8.5	e8.1	7.8
19	9.0	59	25	63	25	25	21	11	10	8.3	8.3	7.8
20	9.0	44	26	62	26	24	18	11	9.0	8.3	11	7.7
21	9.0	28	380	63	33	23	18	12	8.9	8.2	8.7	7.7
22	9.0	31	173	681	38	22	18	11	8.7	8.2	8.4	7.6
23	9.0	31	89	803	38	21	17	12	8.7	8.1	8.5	7.6
24	9.0	28	61	440	37	21	16	12	8.7	8.1	8.3	7.6
25	9.0	28	49	1130	30	21	16	12	8.7	8.2	8.4	8.3
26	9.0	31	161	1170	26	21	16	12	8.7	8.3	8.0	7.9
27	9.0	30	210	561	36	21	16	11	8.7	8.3	7.9	8.0
28	7.8	22	139	321	34	21	16	12	8.7	8.3	8.0	7.9
29	9.0	22	534	220	---	22	16	12	8.6	8.3	8.0	7.8
30	8.1	22	1280	170	---	22	16	12	8.7	8.3	8.0	7.9
31	7.8	---	1130	137	---	22	---	11	---	8.2	8.0	---
TOTAL	276.7	618.0	6216	13408	1207	846	544	360	338.1	261.2	255.1	235.6
MEAN	8.93	20.6	201	433	43.1	27.3	18.1	11.6	11.3	8.43	8.23	7.85
MAX	9.4	59	1280	2600	115	40	22	14	15	8.7	11	8.3
MIN	7.8	7.1	24	62	24	21	16	10	8.6	8.1	7.9	7.6
AC-FT	549	1230	12330	26590	2390	1680	1080	714	671	518	506	467

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.25	23.1	56.2	127	128	116	24.1	18.6	8.61	6.74	5.92	5.82
MAX	13.4	66.3	201	568	421	503	67.3	66.9	12.5	8.69	8.65	8.90
(WY)	1990	1985	1997	1995	1986	1983	1983	1995	1995	1995	1996	1996
MIN	4.34	4.74	6.84	14.5	11.2	13.6	8.39	7.43	6.30	4.92	4.44	4.29
(WY)	1987	1987	1987	1991	1989	1988	1987	1987	1987	1992	1984	1984

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1983 - 1997

ANNUAL TOTAL	31387.1	24565.7	
ANNUAL MEAN	85.8	67.3	
HIGHEST ANNUAL MEAN			39.3
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	2000	Feb 4	2600
LOWEST DAILY MEAN	7.1	Nov 8	7.1
ANNUAL SEVEN-DAY MINIMUM	7.1	Nov 8	7.1
INSTANTANEOUS PEAK FLOW			3520
INSTANTANEOUS PEAK STAGE			8.49
INSTANTANEOUS LOW FLOW			4.2
ANNUAL RUNOFF (AC-FT)	62260		48730
10 PERCENT EXCEEDS	230		101
50 PERCENT EXCEEDS	16		12
90 PERCENT EXCEEDS	8.4		7.9
			5.1

e Estimated.

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA

LOCATION.—Lat 38°04'49", long 122°47'00", in Nicasio (Black) Grant, Marin County, Hydrologic Unit 18050005, on right bank at upstream side of road bridge, 300 ft downstream from small right-bank tributary, 1.4 mi northeast of town of Point Reyes Station, and 2.5 mi downstream from Nicasio Dam.

DRAINAGE AREA.—81.7 mi².

PERIOD OF RECORD.—October 1974 to current year.

WATER TEMPERATURE: October 1989 to September 1990.

SEDIMENT DATA: October 1989 to September 1990.

REVISED RECORDS.—WDR CA-79-2: 1975, 1978. WDR CA-82-2: 1975(M), 1978(M), 1980(M).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.—Records good except for estimated discharges, which are fair. Flow regulated by Nicasio Reservoir, capacity, 22,450 acre-ft; Kent Lake, capacity, 16,680 acre-ft; and Alpine Lake, capacity, 8,890 acre-ft, all of which divert water for domestic and industrial use in Marin County.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,100 ft³/s, Jan. 4, 1982, gage height, 26.96 ft, from rating curve extended above 6,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.01 ft³/s, Sept. 26, 1977.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	10	26	6050	223	42	31	15	11	8.6	8.1	8.0
2	e9.4	9.8	29	4670	190	57	37	13	11	8.6	8.1	7.9
3	e9.6	9.6	45	1860	164	51	26	12	12	8.5	8.1	7.9
4	e9.8	9.5	47	778	152	40	23	12	14	8.6	8.1	7.9
5	e9.8	9.3	280	511	e132	37	22	12	13	8.7	8.0	7.9
6	e9.8	9.2	78	358	e112	35	22	12	13	8.6	8.0	7.9
7	e9.8	9.2	44	243	105	40	21	12	15	8.5	7.9	7.9
8	9.8	9.0	34	192	97	50	20	12	15	8.4	7.9	7.9
9	9.8	9.0	192	164	87	49	20	12	15	8.4	8.1	7.8
10	9.9	9.1	945	147	79	47	20	12	13	8.3	8.2	7.9
11	9.9	8.9	244	132	70	40	20	12	13	8.3	8.1	7.9
12	9.9	9.0	320	223	64	38	20	12	13	8.3	8.0	7.8
13	10	8.8	187	205	59	34	20	12	13	8.3	8.0	8.0
14	11	8.7	111	166	59	33	19	12	13	8.3	8.0	8.3
15	10	11	74	162	56	31	19	11	13	8.3	8.1	8.6
16	9.9	40	55	145	51	39	19	11	12	8.3	8.3	8.2
17	9.9	66	45	130	53	54	19	11	12	8.3	8.2	8.0
18	10	53	41	118	50	41	20	11	11	8.2	8.1	7.9
19	10	64	39	106	47	36	25	11	11	8.2	8.3	7.8
20	10	65	39	105	48	33	21	11	9.0	8.2	13	7.7
21	10	34	627	114	49	32	20	12	8.9	8.2	9.7	7.7
22	10	33	646	1750	56	28	20	12	8.7	8.1	8.7	7.7
23	11	36	341	2070	61	28	19	13	8.7	8.3	8.5	7.7
24	11	32	217	810	63	27	17	13	8.7	8.1	8.3	7.7
25	10	30	163	2840	44	26	17	12	8.7	8.1	8.1	7.8
26	10	33	294	3490	31	25	17	12	8.7	8.1	8.1	8.4
27	10	36	668	1150	47	26	17	12	8.7	8.2	8.0	7.9
28	10	24	500	626	43	25	16	12	8.7	8.2	8.1	7.9
29	13	23	1320	440	---	25	16	12	8.7	8.2	8.0	7.8
30	12	23	2640	333	---	25	16	12	8.6	8.2	8.0	7.8
31	11	---	e2370	264	---	26	---	11	---	8.1	8.0	---
TOTAL	315.3	732.1	12661	30352	2292	1120	619	371	339.1	257.7	258.1	237.6
MEAN	10.2	24.4	408	979	81.9	36.1	20.6	12.0	11.3	8.31	8.33	7.92
MAX	13	66	2640	6050	223	57	37	15	15	8.7	13	8.6
MIN	9.0	8.7	26	105	31	25	16	11	8.6	8.1	7.9	7.7
AC-FT	625	1450	25110	60200	4550	2220	1230	736	673	511	512	471

e Estimated.

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.26	36.8	106	297	283	229	60.5	19.5	7.40	5.63	4.80	4.55
MAX	19.2	177	542	1427	1193	1109	531	91.4	14.4	9.95	8.72	8.89
(WY)	1984	1983	1984	1995	1986	1983	1982	1995	1995	1996	1996	1996
MIN	.19	1.35	1.51	2.37	3.52	7.40	1.59	.67	.45	1.77	1.47	1.12
(WY)	1977	1977	1977	1976	1977	1977	1977	1977	1977	1976	1976	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1975 - 1997			
ANNUAL TOTAL	62234.7				49554.9							
ANNUAL MEAN	170				136				87.6			
HIGHEST ANNUAL MEAN									269			
LOWEST ANNUAL MEAN									2.54			
HIGHEST DAILY MEAN	3810				Feb 4				6050			
LOWEST DAILY MEAN	8.4				Aug 13				Jan 1			
ANNUAL SEVEN-DAY MINIMUM	8.5				Aug 12				7.7			
INSTANTANEOUS PEAK FLOW									7.7			
INSTANTANEOUS PEAK STAGE									7660			
ANNUAL RUNOFF (AC-FT)	123400				19.49				Jan 1			
10 PERCENT EXCEEDS	494				98290				22100			
50 PERCENT EXCEEDS	23				191				26.96			
90 PERCENT EXCEEDS	8.8				13				9.4			
					8.0				2.4			

11460750 WALKER CREEK NEAR MARSHALL, CA

LOCATION.—Lat 38°10'33", long 122°49'02", in SoulaJule (Vasquez) Grant, Marin County, Hydrologic Unit 18050005, on right bank 0.8 mi downstream from Verde Canyon, 2.8 mi below confluence of Arroyo Sausal and Salmon Creek, and 4.0 mi east of Marshall.

DRAINAGE AREA.—31.1 mi².

PERIOD OF RECORD.—October 1983 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 140 ft above sea level, from topographic map.

REMARKS.—Records fair except for estimated discharges, which are poor. Flow affected by regulation and diversions and by SoulaJule Reservoir on Arroyo Sausal; reservoir capacity, 10,570 acre-ft.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,050 ft³/s, Feb. 17, 1986, gage height, 10.79 ft, from rating curve extended above 1,100 ft³/s on basis of comparison with discontinued downstream station Walker Creek near Tomales; minimum daily, 0.73 ft³/s, Nov. 26, 1991.

EXTREMES OUTSIDE OF PERIOD OF RECORD.—Flood of Jan. 4, 1982, reached a stage of 15.9 ft, present datum, from floodmarks, discharge, 14,600 ft³/s.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.1	5.4	2810	e68	12	12	7.1	5.8	5.6	5.1	5.2
2	5.1	4.1	4.8	961	e58	14	11	7.1	5.8	5.5	5.1	5.2
3	5.1	4.2	4.8	283	e50	e14	11	7.1	6.0	5.4	5.1	5.2
4	5.0	4.1	8.0	185	e43	e13	11	7.1	5.8	5.5	5.1	5.2
5	4.8	4.2	76	104	e38	e13	11	6.8	5.6	5.5	5.1	5.2
6	4.8	4.2	19	69	34	13	11	6.8	5.7	5.5	5.1	5.3
7	4.8	4.2	13	52	32	12	11	6.8	5.9	5.5	5.1	5.3
8	4.8	4.2	11	46	25	14	10	6.8	5.9	5.4	5.1	5.3
9	4.8	4.2	37	40	16	14	9.8	6.8	5.9	5.5	5.2	5.3
10	4.8	4.2	238	36	18	15	9.9	6.9	5.9	5.5	5.2	5.3
11	4.8	4.2	95	32	18	14	9.7	6.8	5.8	5.4	5.2	5.3
12	4.8	4.3	97	35	16	15	9.4	6.7	5.9	5.4	5.2	5.4
13	4.8	4.4	61	29	15	14	9.1	6.6	6.0	5.4	5.2	5.4
14	4.8	4.4	39	23	14	13	9.2	6.6	5.9	5.4	5.3	5.5
15	4.8	4.2	35	24	14	13	8.5	6.5	5.7	5.5	5.3	5.3
16	4.8	4.9	31	21	14	14	8.6	6.5	5.6	5.5	5.3	5.2
17	4.9	7.1	23	19	16	14	9.3	6.5	5.6	5.5	5.3	5.3
18	5.1	5.6	15	17	15	15	7.8	6.4	5.5	5.5	5.1	5.3
19	5.0	7.7	16	16	14	14	8.0	6.2	5.6	5.4	5.2	5.3
20	5.0	6.5	20	16	14	13	7.8	6.3	5.6	5.5	6.1	5.4
21	5.0	5.6	198	22	14	13	7.4	6.3	5.5	5.4	5.0	5.4
22	4.9	6.1	111	519	14	12	7.4	6.3	5.6	5.4	5.1	5.4
23	5.0	5.4	109	450	13	11	7.4	6.6	5.6	5.4	5.0	5.4
24	5.2	5.0	84	253	13	11	7.4	6.3	5.8	5.4	5.0	5.4
25	5.1	4.9	66	1250	13	12	7.4	6.2	5.9	5.4	5.1	5.4
26	5.0	4.8	178	838	13	13	7.3	5.9	5.8	5.4	5.1	5.4
27	5.0	4.7	435	312	13	12	7.2	5.8	5.7	5.5	5.1	5.4
28	4.9	4.8	464	164	12	12	7.0	5.7	5.7	5.5	5.2	5.4
29	5.5	4.8	767	122	---	12	7.1	5.7	5.6	5.5	5.2	5.4
30	4.5	4.7	938	102	---	12	7.1	5.8	5.6	5.3	5.2	5.5
31	4.0	---	909	88	---	12	---	5.8	---	5.0	5.2	---
TOTAL	152.0	145.8	5108.0	8938	637	405	267.8	200.8	172.3	168.6	160.6	160.0
MEAN	4.90	4.86	165	288	22.8	13.1	8.93	6.48	5.74	5.44	5.18	5.33
MAX	5.5	7.7	938	2810	68	15	12	7.1	6.0	5.6	6.1	5.5
MIN	4.0	4.1	4.8	16	12	11	7.0	5.7	5.5	5.0	5.0	5.2
AC-FT	301	289	10130	17730	1260	803	531	398	342	334	319	317

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.73	10.2	43.5	118	97.1	66.1	11.0	6.95	5.10	4.65	4.50	4.61
MAX	6.27	46.3	247	572	588	374	22.6	18.6	7.84	5.80	5.80	5.80
(WY)	1990	1984	1984	1995	1986	1995	1996	1995	1994	1984	1984	1984
MIN	1.35	1.23	1.85	1.71	2.14	10.4	5.52	2.18	1.90	1.42	1.42	1.22
(WY)	1991	1992	1991	1991	1991	1988	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1984 - 1997

ANNUAL TOTAL	20524.7	16515.9	
ANNUAL MEAN	56.1	45.2	31.2
HIGHEST ANNUAL MEAN			92.6
LOWEST ANNUAL MEAN			7.41
HIGHEST DAILY MEAN	1080	Feb 4	4940
LOWEST DAILY MEAN	4.0	Oct 31	.73
ANNUAL SEVEN-DAY MINIMUM	4.1	Oct 31	.78
INSTANTANEOUS PEAK FLOW			4380
INSTANTANEOUS PEAK STAGE			9.60
ANNUAL RUNOFF (AC-FT)	40710		32760
10 PERCENT EXCEEDS	162		48
50 PERCENT EXCEEDS	6.9		5.9
90 PERCENT EXCEEDS	4.8		4.9
			37
			5.8
			3.5

e Estimated.

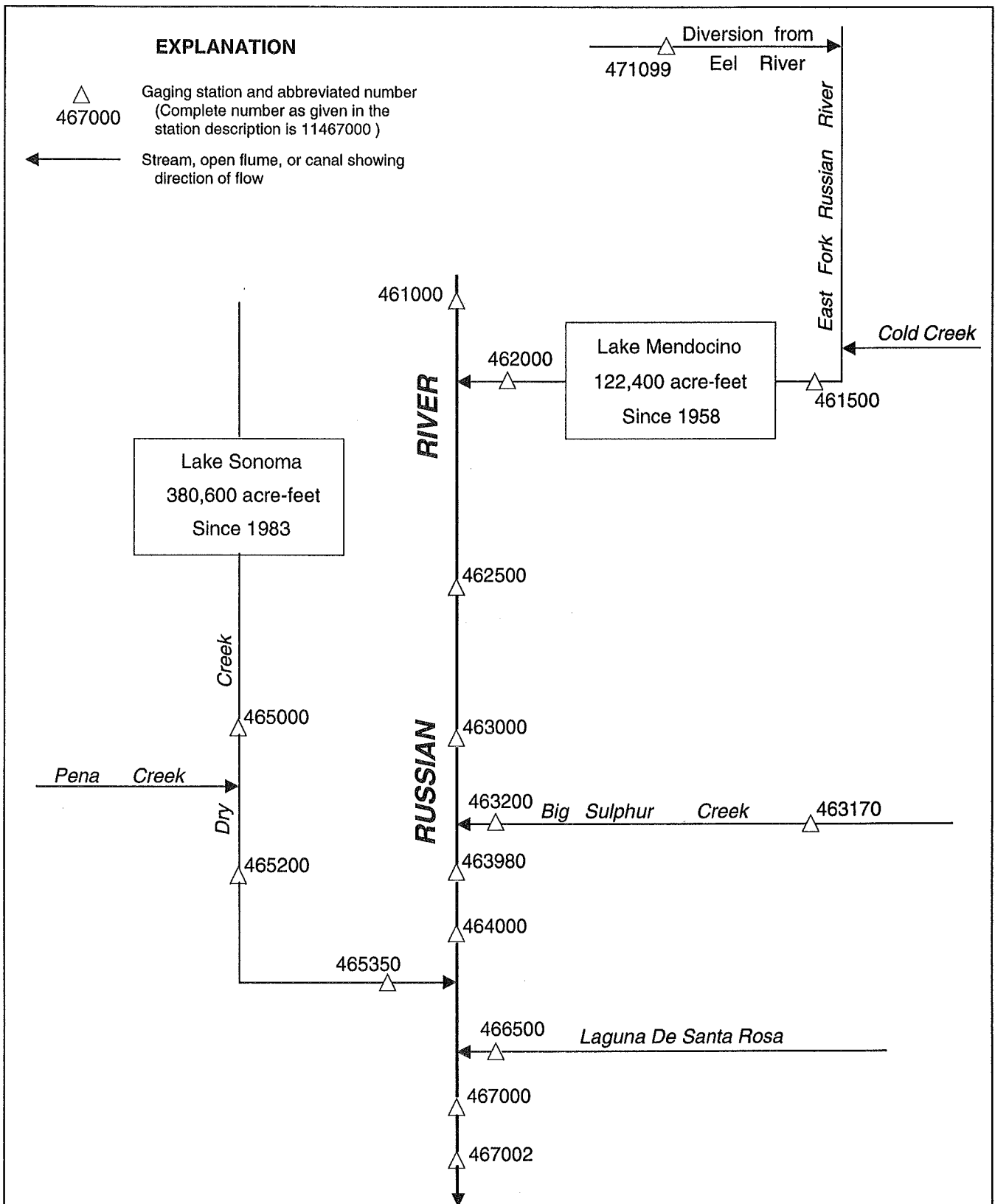


Figure 21. Diversions and storage in Russian River Basin.

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11461000 RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.—Lat 39°11'44", long 123°11'38", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank 20 ft upstream from bridge on Lake Mendocino Drive, 0.4 mi upstream from East Fork, 0.6 mi downstream from York Creek, and 3.2 mi north of Ukiah.

DRAINAGE AREA.—100 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—August 1911 to September 1913, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 599.22 ft above sea level. Prior to October 1952, nonrecording gage at bridge 20 ft upstream at different datum. Oct. 1, 1952, to Nov. 8, 1971, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation. Diversions upstream from station for irrigation of about 1,000 acres. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,900 ft³/s, Dec. 21, 1955, gage height, 19.0 ft, site and datum then in use; maximum gage height, 20.87 ft, Jan. 20, 1993; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 4,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0700	unknown	unknown	Jan. 22	1330	5,070	11.97
Jan. 1	1015	10,600	16.30	Jan. 25	1000	7,420	14.00

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.0	e45	e9200	381	69	48	31	13	3.6	.77	.79
2	.88	1.9	e76	2740	308	189	45	29	12	3.5	.98	.79
3	.63	1.5	e52	1180	270	123	44	28	14	3.2	.67	.75
4	.69	1.5	e160	769	445	101	44	27	28	2.7	.72	.57
5	.79	1.4	e1720	544	313	90	38	25	19	3.1	.78	.53
6	.29	1.7	e456	413	266	83	36	24	15	3.5	.86	.56
7	.11	1.8	e232	337	239	75	36	21	13	3.2	.37	.47
8	.47	1.8	e330	274	213	71	36	21	11	2.0	.26	.44
9	.46	2.1	e1900	224	195	66	35	21	9.5	2.0	.40	.57
10	.44	1.7	e2900	194	210	63	31	19	10	1.9	.61	.67
11	.35	1.8	e866	174	175	61	31	19	8.5	1.8	.71	.97
12	.63	2.2	e531	160	156	56	31	17	8.7	1.7	.63	.93
13	.93	2.3	e335	144	140	52	30	16	7.9	1.7	.54	.90
14	.83	2.0	e230	129	128	51	27	16	8.7	2.3	.52	2.5
15	.78	2.3	e180	129	119	49	28	15	8.6	1.3	.49	4.5
16	.71	3.0	e148	116	114	583	27	15	7.7	1.3	.45	4.2
17	.83	13	e125	109	141	445	27	15	6.1	1.1	.46	2.7
18	2.9	23	e105	103	118	216	30	14	4.3	1.9	.21	2.5
19	1.9	127	e90	97	144	164	61	12	6.2	1.2	.24	2.1
20	3.2	e130	e115	123	132	139	68	12	5.4	1.3	5.3	1.9
21	1.5	e58	e325	521	117	123	63	10	4.4	1.3	3.4	1.6
22	1.2	e99	e530	1840	107	109	65	8.5	5.0	.94	1.3	1.5
23	1.1	e94	e630	857	98	98	145	19	5.0	.60	1.3	1.6
24	1.5	e52	e560	845	89	89	81	19	4.4	.57	1.3	1.5
25	2.6	e42	e480	4400	86	80	61	16	3.7	.68	1.1	1.4
26	2.7	e30	e640	2350	84	74	50	18	3.5	.90	1.3	1.4
27	2.0	e23	e1080	1030	.78	68	43	27	3.2	.75	.92	1.8
28	1.6	e18	e1150	1040	73	63	39	20	4.3	.60	.98	1.9
29	3.4	e15	e1600	725	---	58	36	17	4.2	.67	.82	1.3
30	2.7	e13	e2500	504	---	58	34	13	3.8	.66	.63	1.3
31	2.5	---	e7800	394	---	60	---	12	---	.78	.80	---
TOTAL	41.62	768.0	27891	31665	4939	3626	1370	576.5	258.1	52.75	29.82	44.64
MEAN	1.34	25.6	900	1021	176	117	45.7	18.6	8.60	1.70	.96	1.49
MAX	3.4	130	7800	9200	445	583	145	31	28	3.6	5.3	4.5
MIN	.11	1.4	45	97	73	49	27	8.5	3.2	.57	.21	.44
AC-FT	83	1520	55320	62810	9800	7190	2720	1140	512	105	59	89

e Estimated.

RUSSIAN RIVER BASIN

11461000 RUSSIAN RIVER NEAR UKIAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.79	116	352	570	470	359	155	42.4	10.9	2.21	.55	.58
MAX	147	682	1663	1986	1975	1436	770	201	57.4	10.8	2.52	2.70
(WY)	1963	1974	1965	1995	1958	1983	1963	1995	1993	1983	1983	1983
MIN	.000	.15	1.77	3.82	14.3	20.0	4.33	3.15	.22	.000	.000	.000
(WY)	1953	1953	1960	1991	1977	1988	1977	1977	1977	1977	1977	1970

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1912 - 1997			
ANNUAL TOTAL	92453.21				71262.43							
ANNUAL MEAN	253				195				173			
HIGHEST ANNUAL MEAN									420			
LOWEST ANNUAL MEAN									5.76			
HIGHEST DAILY MEAN	7800				9200				13300			
LOWEST DAILY MEAN	.11				.11				.00			
ANNUAL SEVEN-DAY MINIMUM	.39				.39				.00			
INSTANTANEOUS PEAK FLOW					10600				18900			
INSTANTANEOUS PEAK STAGE					16.30				20.87			
ANNUAL RUNOFF (AC-FT)	183400				141300				125200			
10 PERCENT EXCEEDS	820				386				407			
50 PERCENT EXCEEDS	39				16				13			
90 PERCENT EXCEEDS	.87				.70				.11			

11461000 RUSSIAN RIVER NEAR UKIAH, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1964–68, 1977–79, 1991–92, October 1994 to April 1997 (discontinued).

CHEMICAL DATA: Water years 1977–79.

BIOLOGICAL DATA: Water years 1977–79.

WATER TEMPERATURE: Water years 1965–68.

SEDIMENT DATA: Water years 1964–68, 1991–92, October 1994 to April 1997 (discontinued).

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1964 to September 1968.

SUSPENDED-SEDIMENT DISCHARGE: January 1964 to September 1968.

REMARKS.—Zero-bedload discharge observed at flows less than 39 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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)
DEC 10...	1410	1800	12.0	610	2960	76	87	95	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC 10...	1030	1000	1100	0.250	0	1010	1055	30	4.0
10...	1125	1000	1100	0.250	0	1105	1150	30	4.0

DATE	COMPSTD SAMPLER IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE (T/D/FT DAY) (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)
DEC 10...	2	20	20	2.00	2620	12.0	5.04	447	2
10...	2	20	20	2.00	2300	12.0	5.75	447	4

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM (80236)
DEC 10...	8	14	24	42	61	82	97	100
10...	8	14	20	29	46	75	96	100

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CA

LOCATION.—Lat 39°14'48", long 123°07'45", in NW 1/4 NW 1/4 sec.18, T.16 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.1 mi downstream from Cold Creek and 3.9 mi east of Calpella.

DRAINAGE AREA.—92.2 mi².

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 787.87 ft above sea level. Prior to May 28, 1957, at site 1.3 mi downstream at different datum. May 28, 1957, to Apr. 5, 1966, at site 0.4 mi downstream at same datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow greatly affected by diversion from Eel River through Potter Valley Powerplant Intake and Tailrace (stations 11471000, 11471099, respectively). Diversion for irrigation of about 8,000 acres upstream from station. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,700 ft³/s, Dec. 22, 1964, gage height, 20.21 ft, site then in use; maximum gage height, 22.89 ft, Jan. 20, 1993; minimum daily, 1.7 ft³/s, July 23, 1990.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 3,300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0615	4,800	15.93	Jan. 22	1345	7,580	19.68
Dec. 31	0045	8,270	20.61	Jan. 25	1015	7,540	19.63

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	166	e274	6170	587	227	167	104	126	104	108	132
2	277	168	e276	1800	533	289	172	113	122	91	111	130
3	287	166	e290	764	509	244	144	114	123	85	119	130
4	290	155	e770	468	597	232	142	113	146	84	111	146
5	282	152	e1910	350	518	228	146	117	137	103	121	146
6	279	151	e446	285	458	228	144	104	131	94	111	144
7	278	155	413	257	348	227	149	100	118	99	103	141
8	268	160	416	256	330	221	140	94	109	89	105	136
9	268	159	804	265	321	222	129	96	120	89	108	131
10	266	159	1650	274	334	220	129	86	121	85	110	137
11	274	158	879	311	306	219	134	78	121	95	110	145
12	282	164	523	326	293	207	144	84	119	80	114	147
13	282	166	504	361	280	200	149	77	102	80	112	147
14	287	167	428	355	273	192	146	74	96	79	109	167
15	294	169	392	364	268	200	142	85	95	77	111	177
16	292	169	376	353	265	734	128	100	87	87	114	181
17	285	177	366	348	283	516	126	107	79	87	125	179
18	293	185	357	346	263	321	106	107	82	84	126	176
19	296	265	351	346	272	284	134	105	95	76	123	168
20	291	227	364	378	262	266	131	112	91	77	145	176
21	204	174	923	872	253	251	131	107	78	81	145	169
22	176	e265	1180	2690	248	223	135	111	79	83	143	148
23	168	e250	647	898	243	221	175	147	84	82	149	148
24	173	e210	467	1080	239	210	179	138	87	80	149	148
25	217	e185	420	4610	236	207	166	137	94	80	147	142
26	285	e220	1280	2140	235	206	159	139	99	78	136	160
27	292	e305	986	851	234	204	130	142	88	77	134	217
28	297	e409	692	964	230	185	115	146	86	82	129	211
29	303	e265	1780	727	---	186	114	139	92	84	123	205
30	299	e260	1730	667	---	195	112	126	96	90	121	194
31	246	---	4230	605	---	186	---	129	---	100	126	---
TOTAL	8306	5981	26124	30481	9218	7751	4218	3431	3103	2662	3798	4778
MEAN	268	199	843	983	329	250	141	111	103	85.9	123	159
MAX	303	409	4230	6170	597	734	179	147	146	104	149	217
MIN	168	151	274	256	230	185	106	74	78	76	103	130
AC-FT	16470	11860	51820	60460	18280	15370	8370	6810	6150	5280	7530	9480

e Estimated.

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	229	285	477	636	597	518	344	230	160	138	140	190
MAX	352	738	1476	1720	1756	1611	847	422	329	275	276	298
(WY)	1963	1982	1965	1970	1958	1983	1982	1983	1993	1967	1952	1967
MIN	4.89	74.0	30.2	42.2	21.5	42.7	11.9	23.5	15.3	8.25	19.0	23.9
(WY)	1960	1978	1960	1991	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1942 - 1997	
ANNUAL TOTAL	155276		109851			
ANNUAL MEAN	424		301			
HIGHEST ANNUAL MEAN					586	1983
LOWEST ANNUAL MEAN					76.8	1977
HIGHEST DAILY MEAN	4230	Dec 31	6170	Jan 1	12500	Dec 22 1964
LOWEST DAILY MEAN	114	Aug 18	74	May 14	1.7	Jul 23 1990
ANNUAL SEVEN-DAY MINIMUM	119	Aug 17	80	Jul 19	3.2	Jul 11 1977
INSTANTANEOUS PEAK FLOW			8270	Dec 31	18700	Dec 22 1964
INSTANTANEOUS PEAK STAGE			20.61	Dec 31	22.89	Jan 20 1993
ANNUAL RUNOFF (AC-FT)	308000		217900		237200	
10 PERCENT EXCEEDS	749		506		544	
50 PERCENT EXCEEDS	314		168		252	
90 PERCENT EXCEEDS	135		89		78	

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.—Lat 39°11'51", long 123°11'11", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 mi northeast of Ukiah.

DRAINAGE AREA.—105 mi².

PERIOD OF RECORD.—August 1911 to September 1913, October 1951 to June 1956, October 1957 to current year.

CHEMICAL DATA: Water years 1953–55, 1973–82.

BIOLOGICAL DATA: Water years 1977–78.

WATER TEMPERATURE: Water years 1953–55, 1965–68, 1973–1994.

SEDIMENT DATA: Water years 1953–55, 1964–68.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 614.41 ft above sea level. Prior to October 1951, nonrecording gage at site 0.5 mi upstream at different datum. October 1951 to June 1956, water-stage recorder at site 1.0 mi upstream at different datum.

REMARKS.—Records good. Flow affected by diversion from Eel River through Potter Valley Powerplant Intake (station 11471000) and since November 1958 by storage in Lake Mendocino, capacity, 122,400 acre-ft, 500 ft upstream. Diversions upstream from station for irrigation of about 8,000 acres and about 10 ft³/s at times, through a fish taking station which bypasses the gage. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Prior to regulation by Lake Mendocino, maximum discharge, 13,300 ft³/s, Dec. 21, 1955, gage height, 16.86 ft, site and datum then in use, from rating curve extended above 6,300 ft³/s on basis of maximum flow at station upstream which was defined to 8,600 ft³/s; no flow Aug. 13–15, 1913. Maximum discharge, since regulation (1959), 7,350 ft³/s, Jan. 24, 1970, gage height, 10.84 ft; minimum daily, 0.02 ft³/s, Apr. 17, 1973.

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

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	326	234	30	365	195	150	184	184	230	244	243
2	271	326	234	30	365	195	150	184	167	230	242	244
3	290	326	292	1860	365	195	150	184	153	230	242	240
4	326	331	342	3610	769	179	150	181	166	230	242	242
5	331	243	1050	3470	794	160	204	180	176	230	239	242
6	327	170	1280	3320	481	159	321	180	153	230	255	227
7	331	170	335	3170	501	156	215	180	153	230	280	218
8	335	170	335	1640	246	156	166	180	153	230	280	218
9	335	170	335	378	246	156	180	180	153	238	280	221
10	335	170	132	270	251	156	192	180	153	250	280	234
11	335	170	1250	246	254	156	194	180	161	250	280	248
12	332	166	1400	246	254	156	195	218	175	250	280	256
13	326	163	596	246	254	153	194	219	191	250	258	267
14	322	166	401	399	254	153	194	207	185	250	238	267
15	327	170	404	491	254	153	192	210	185	249	263	265
16	337	170	278	491	254	155	191	208	191	247	263	263
17	335	170	293	391	254	156	191	205	191	250	263	263
18	335	175	364	340	254	156	191	204	191	250	246	265
19	335	177	375	340	254	153	189	203	191	250	222	266
20	332	177	331	340	302	153	188	205	195	250	222	263
21	295	177	289	320	259	154	188	206	202	250	222	262
22	218	177	289	221	259	156	188	205	214	250	222	259
23	200	177	1320	1850	259	156	185	202	230	250	226	256
24	173	177	1010	2020	249	154	184	202	230	250	226	236
25	173	177	394	16	242	151	184	202	230	250	226	222
26	173	177	395	15	218	150	184	202	230	258	217	222
27	173	371	1330	1540	198	150	184	204	230	259	208	222
28	171	497	798	2910	197	150	184	203	230	259	210	222
29	264	338	27	3460	---	150	184	203	230	259	222	222
30	330	234	28	2320	---	150	184	202	230	248	240	222
31	327	---	29	730	---	150	---	192	---	241	242	---
TOTAL	8965	6608	16170	36710	8852	4922	5646	6095	5723	7598	7580	7297
MEAN	289	220	522	1184	316	159	188	197	191	245	245	243
MAX	337	497	1400	3610	794	195	321	219	230	259	280	267
MIN	171	163	27	15	197	150	150	180	153	230	208	218
AC-FT	17780	13110	32070	72810	17560	9760	11200	12090	11350	15070	15030	14470

RUSSIAN RIVER BASIN

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11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1958, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	200	271	576	871	649	461	399	309	213	162	166	161
MAX	316	437	1138	1289	1784	709	775	367	307	260	272	266
(WY)	1958	1913	1956	1956	1958	1958	1958	1912	1953	1953	1953	1954
MIN	20.0	21.0	40.0	258	105	182	214	226	102	65.0	23.8	2.03
(WY)	1912	1912	1912	1912	1913	1913	1955	1913	1913	1912	1913	1913

SUMMARY STATISTICS

WATER YEARS 1911 - 1958

ANNUAL MEAN	356	
HIGHEST ANNUAL MEAN	526	1958
LOWEST ANNUAL MEAN	183	1912
HIGHEST DAILY MEAN	7300	Dec 22 1955
LOWEST DAILY MEAN	.00	Aug 13 1913
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 13 1913
INSTANTANEOUS PEAK FLOW	13300	Dec 21 1955
INSTANTANEOUS PEAK STAGE	16.86	Dec 21 1955
ANNUAL RUNOFF (AC-FT)	257700	
10 PERCENT EXCEEDS	647	
50 PERCENT EXCEEDS	286	
90 PERCENT EXCEEDS	63	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	226	246	370	629	585	449	306	220	216	250	259	241
MAX	419	635	1175	1905	1934	1780	1026	419	339	336	388	416
(WY)	1994	1984	1965	1970	1986	1983	1982	1983	1993	1961	1961	1974
MIN	42.3	13.4	6.97	20.7	17.9	13.3	52.6	76.3	104	179	163	92.7
(WY)	1978	1978	1978	1977	1977	1977	1977	1968	1988	1988	1988	1977

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1960 - 1997

ANNUAL TOTAL	142062	122166	
ANNUAL MEAN	388	335	332
HIGHEST ANNUAL MEAN			598
LOWEST ANNUAL MEAN			103
HIGHEST DAILY MEAN	2950	Feb 23	6620
LOWEST DAILY MEAN	18	Jan 27	.02
ANNUAL SEVEN-DAY MINIMUM	125	Jan 9	.14
INSTANTANEOUS PEAK FLOW			7350
INSTANTANEOUS PEAK STAGE			10.84
ANNUAL RUNOFF (AC-FT)	281800	242300	240600
10 PERCENT EXCEEDS	728	376	514
50 PERCENT EXCEEDS	272	230	230
90 PERCENT EXCEEDS	170	156	64

11462500 RUSSIAN RIVER NEAR HOPLAND, CA

LOCATION.—Lat 39°01'36", long 123°07'46", in Rancho de Sanel Grant, Mendocino County, Hydrologic Unit 18010110, on right bank at abandoned highway bridge, 0.2 mi downstream from McNab Creek, 4 mi north of Hopland, and 15.2 mi downstream from Coyote Valley Dam on the East Fork Russian River.

DRAINAGE AREA.—362 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1041: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 497.61 ft above sea level. Prior to Sept. 9, 1943, nonrecording gage at same site and datum.

REMARKS.—Records good except for period of estimated discharges, which are fair. Diversions for irrigation of about 11,800 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino, capacity, 129,600 acre-ft, 15.2 mi upstream. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 45,000 ft³/s, Dec. 22, 1955, gage height, 27.00 ft; minimum daily, 9.1 ft³/s, Apr. 20, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of December 1937 reached a stage of 30.0 ft, from floodmarks.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	e327	318	17900	1590	379	260	245	196	205	187	210
2	208	e327	312	8880	1370	600	239	243	193	208	185	211
3	208	e327	302	4810	1230	503	254	238	173	208	186	204
4	251	e327	526	5630	1680	415	261	237	193	205	188	205
5	269	e239	5630	5050	1710	354	248	237	208	204	187	204
6	283	174	2900	4660	1300	352	229	236	170	200	185	203
7	282	165	997	4440	1270	337	244	234	160	203	211	192
8	279	162	1120	3390	923	331	247	225	160	197	207	191
9	275	161	2330	1770	850	324	246	221	159	200	205	189
10	262	159	4810	1510	867	315	252	221	155	214	214	190
11	264	159	3030	1350	787	308	249	219	154	212	218	205
12	270	156	3530	1280	731	285	254	230	160	210	210	208
13	270	156	1750	1210	687	274	253	244	173	215	207	225
14	277	156	1160	1250	654	279	251	231	178	215	176	240
15	283	161	960	1370	627	278	250	232	183	214	200	249
16	311	162	775	1340	608	1010	247	230	180	213	205	247
17	312	181	620	1250	652	1270	247	226	178	212	206	243
18	317	196	666	1140	608	684	250	221	177	214	204	248
19	319	297	644	1110	624	548	287	219	176	210	191	249
20	319	330	609	1150	620	486	284	217	173	209	216	242
21	315	222	1300	1660	581	446	288	213	174	213	210	245
22	220	337	2170	5010	557	413	287	206	185	207	210	242
23	206	308	2560	4160	535	382	363	215	211	212	206	241
24	171	227	2340	4340	508	360	312	220	208	210	205	238
25	166	206	1040	10300	473	344	283	218	205	208	207	215
26	164	199	1740	7260	457	328	271	220	198	208	202	210
27	164	288	3770	4320	411	317	265	238	199	209	188	204
28	162	511	3430	5340	397	304	258	227	199	211	182	208
29	e258	436	5530	5370	---	289	256	221	205	210	185	205
30	e327	256	4980	4230	---	290	253	215	205	204	207	211
31	e327	---	14300	2220	---	291	---	197	---	189	204	---
TOTAL	7947	7312	76149	124700	23307	13096	7888	6996	5488	6449	6194	6574
MEAN	256	244	2456	4023	832	422	263	226	183	208	200	219
MAX	327	511	14300	17900	1710	1270	363	245	211	215	218	249
MIN	162	156	302	1110	397	274	229	197	154	189	176	189
AC-FT	15760	14500	151000	247300	46230	25980	15650	13880	10890	12790	12290	13040

e Estimated.

RUSSIAN RIVER BASIN

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11462500 RUSSIAN RIVER NEAR HOPLAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	231	426	1162	1841	1703	1275	703	324	213	198	206	207
MAX	555	1656	4849	5856	6799	5361	2572	820	452	326	369	383
(WY)	1958	1984	1965	1970	1958	1983	1982	1983	1993	1961	1961	1974
MIN	35.1	96.5	87.6	37.2	28.8	57.1	44.1	77.0	59.6	79.7	105	78.9
(WY)	1978	1978	1991	1977	1977	1977	1977	1977	1949	1948	1950	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1940 - 1997	
ANNUAL TOTAL	360290		292100		703	
ANNUAL MEAN	984		800		1587	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					94.0	
HIGHEST DAILY MEAN	14300	Dec 31	17900	Jan 1	33800	Dec 22 1955
LOWEST DAILY MEAN	156	Nov 12	154	Jun 11	9.1	Apr 20 1977
ANNUAL SEVEN-DAY MINIMUM	158	Nov 9	158	Nov 9	13	Apr 15 1977
INSTANTANEOUS PEAK FLOW			20000	Dec 31	45000	Dec 22 1955
INSTANTANEOUS PEAK STAGE			18.84	Dec 31	27.00	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	714600		579400		509600	
10 PERCENT EXCEEDS	3130		1690		1540	
50 PERCENT EXCEEDS	329		247		252	
90 PERCENT EXCEEDS	196		184		136	

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CA

LOCATION.—Lat 38°52'46", long 123°03'09", in NW 1/4 NW 1/4 sec.23, T.12 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.3 mi downstream from Cummysky Creek, 5.5 mi northwest of Cloverdale, and 28 mi downstream from Coyote Dam.

DRAINAGE AREA.—503 mi².

PERIOD OF RECORD.—July 1951 to current year.

WATER TEMPERATURE: Water years 1964–96.

SEDIMENT DATA: Water years 1964–68, 1994–96.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above sea level, from topographic map. Prior to July 30, 1970, at site 0.2 mi upstream at different datum.

REMARKS.—Records good except for periods of estimated record, which is fair. Diversions for irrigation of about 15,000 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 55,200 ft³/s, Dec. 22, 1964, gage height, 31.60 ft, site and datum then in use; minimum daily, 12 ft³/s, Apr. 22, 1977.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	323	321	28100	2430	481	333	278	204	204	183	198
2	175	328	367	e17000	1910	e725	311	273	205	211	177	199
3	170	330	323	e6000	1690	e623	315	267	187	215	180	195
4	212	331	542	7060	2060	e530	325	262	213	209	181	198
5	240	330	6970	6260	2190	e444	302	257	230	206	172	193
6	262	213	3720	5630	1670	e430	273	252	202	194	168	201
7	267	183	1500	5180	1600	e417	291	247	186	196	193	188
8	249	174	1710	4210	1260	e404	297	238	175	190	205	184
9	243	167	5060	e2560	1140	e380	293	227	172	182	197	190
10	245	162	10100	e2260	1140	e365	299	221	161	200	206	177
11	248	161	4120	e2020	1050	e325	287	214	161	211	218	182
12	251	158	5360	e1870	974	e310	298	220	157	205	216	183
13	252	157	2460	e1710	913	314	299	249	169	198	215	200
14	268	156	1550	e1630	859	324	295	244	167	204	183	211
15	270	160	1260	e1720	823	322	293	244	175	210	186	235
16	297	165	1060	e1690	789	927	288	244	185	204	203	236
17	310	182	803	e1600	823	1850	287	231	180	198	202	235
18	317	208	819	e1420	784	921	291	228	179	203	205	239
19	321	488	776	e1370	756	738	334	229	167	192	188	240
20	325	470	743	e1400	781	655	338	229	169	195	193	239
21	326	292	1420	e2100	730	601	345	221	168	197	190	240
22	260	531	2810	8170	698	555	338	218	165	198	190	247
23	220	448	2990	6260	670	514	389	226	198	201	188	240
24	192	301	3090	6360	637	484	381	238	204	206	190	235
25	175	258	1390	17000	594	462	341	232	203	207	198	220
26	171	239	2110	18800	579	440	316	231	200	205	196	207
27	168	244	5610	7770	530	424	306	248	195	205	185	187
28	165	474	5560	7300	506	407	297	243	188	211	172	184
29	169	495	11200	7350	---	378	291	240	194	206	168	192
30	293	318	12600	6360	---	375	284	234	206	206	182	183
31	317	---	26200	3510	---	375	---	207	---	184	192	---
TOTAL	7566	8446	124544	191670	30586	16500	9337	7392	5565	6253	5922	6258
MEAN	244	282	4018	6183	1092	532	311	238	186	202	191	209
MAX	326	531	26200	28100	2430	1850	389	278	230	215	218	247
MIN	165	156	321	1370	506	310	273	207	157	182	168	177
AC-FT	15010	16750	247000	380200	60670	32730	18520	14660	11040	12400	11750	12410

e Estimated.

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	249	580	1607	2734	2406	1811	899	383	233	211	219	215
MAX	659	2636	6398	8324	9387	7015	3708	1156	539	312	359	385
(WY)	1963	1984	1965	1995	1958	1983	1982	1983	1993	1961	1961	1974
MIN	34.5	114	97.8	53.7	44.5	97.2	47.3	80.7	99.9	117	118	72.5
(WY)	1978	1992	1991	1977	1977	1977	1977	1977	1988	1988	1988	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1951 - 1997	
ANNUAL TOTAL	491226		420039			
ANNUAL MEAN	1342		1151		957	
HIGHEST ANNUAL MEAN					2144	
LOWEST ANNUAL MEAN					99.2	
HIGHEST DAILY MEAN	26200	Dec 31	28100	Jan 1	42800	Dec 22 1964
LOWEST DAILY MEAN	156	Nov 14	156	Nov 14	12	Apr 22 1977
ANNUAL SEVEN-DAY MINIMUM	160	Nov 10	160	Nov 10	16	Apr 16 1977
INSTANTANEOUS PEAK FLOW			29000	Jan 1	55200	Dec 22 1964
INSTANTANEOUS PEAK STAGE			19.64	Jan 1	31.60	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	974300		833100		693200	
10 PERCENT EXCEEDS	4200		2220		2240	
50 PERCENT EXCEEDS	409		258		264	
90 PERCENT EXCEEDS	186		180		154	

11463170 BIG SULPHUR CREEK AT GEYSERS RESORT, NEAR CLOVERDALE, CA

LOCATION.—Lat 38°47'52", long 122°48'05", in NW 1/4 NW 1/4 sec.19, T.11 N., R.8 W., Sonoma County, Hydrologic Unit 18010110, on left bank 400 ft downstream from unnamed tributary and 12 mi east of Cloverdale.

DRAINAGE AREA.—13.1 mi².

PERIOD OF RECORD.—October 1980 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,430 ft above sea level, from topographic map.

REMARKS.—Records poor. Diversion for industrial use 150 ft upstream from station when flows are above 10 ft³/s. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,010 ft³/s, Jan. 1, 1997, gage height, 9.78 ft, from rating curve extended above 1,200 ft³/s on basis of culvert computation of peak flow; minimum daily, 0.08 ft³/s, Aug. 31, 1983.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0515	2,280	7.21	Jan. 22	1345	3,540	7.98
Jan. 1	0030	8,010	9.78	Jan. 26	0115	2,500	7.36

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.8	e2.8	e13	1480	79	e9.4	14	8.8	3.8	3.3	e1.3	1.0
2	e1.9	e2.7	e11	e350	66	54	14	8.6	3.8	3.2	e1.3	1.0
3	e1.7	e2.7	e11	e280	55	e17	14	8.4	5.0	e3.3	1.3	.96
4	e1.7	e2.6	e53	e165	50	e14	14	8.1	5.9	e3.0	1.3	.94
5	e1.7	e2.6	e213	e135	41	e12	13	7.7	5.4	e2.9	1.2	.91
6	e1.7	e2.6	e38	e110	34	e11	13	7.5	5.0	e2.7	1.2	.86
7	e1.5	e2.7	e49	e90	29	e11	12	7.2	4.6	e2.5	1.2	.88
8	e1.6	e2.6	e116	64	25	e18	12	7.0	4.2	e2.4	1.2	.87
9	e1.6	e2.5	e1050	49	22	e13	12	6.6	5.2	e2.3	1.2	.80
10	e1.7	e2.5	e947	40	19	e12	11	6.4	4.5	e2.3	1.2	e.84
11	e1.6	e2.5	e425	33	15	e11	11	6.2	4.1	e2.3	1.3	.87
12	e1.6	e2.4	e267	28	15	e10	11	6.0	4.0	e2.3	1.2	.85
13	e1.6	e2.6	e155	26	e14	13	10	5.9	3.9	e2.2	1.1	.88
14	e1.5	e2.5	e91	22	e13	13	9.1	5.7	3.8	e2.2	1.1	2.1
15	e1.5	e2.6	53	21	e13	13	8.8	5.5	3.9	e2.0	1.0	1.7
16	e1.4	e2.9	37	17	e13	99	8.7	5.3	3.7	e1.9	1.0	1.3
17	e1.6	e6.2	25	16	14	63	8.4	5.3	3.4	e1.7	1.1	1.2
18	e2.0	e53	30	13	e12	20	22	5.2	3.4	e1.6	1.0	1.1
19	e1.7	e257	13	10	e11	16	30	5.0	3.3	e1.6	1.1	.98
20	e1.7	e71	11	11	e11	16	14	4.8	3.2	e1.6	2.9	.92
21	e1.7	e23	31	77	e10	16	15	4.8	3.1	e1.6	1.4	.87
22	e1.8	e126	69	993	e10	16	15	4.7	3.2	e1.5	1.2	.85
23	e1.9	e29	47	392	e10	17	14	5.5	2.6	e1.5	1.2	.85
24	e2.1	e9.7	33	247	e9.0	16	13	5.1	3.0	e1.5	1.3	e.85
25	e2.3	e9.4	26	1150	e9.6	16	11	4.9	3.2	e1.5	1.2	.85
26	e2.8	e9.6	172	1090	11	16	11	4.8	2.9	e1.4	1.2	.86
27	e1.9	e9.5	227	377	e10	16	10	5.0	2.9	e1.4	1.2	.90
28	e2.0	e9.8	296	224	e9.8	16	9.9	4.7	3.0	e1.4	1.1	.95
29	e8.8	e9.6	1490	154	---	17	9.4	4.4	3.1	e1.4	1.1	.93
30	e4.4	e9.3	1520	118	---	17	9.1	4.2	3.2	e1.3	1.1	.88
31	e3.5	---	3050	96	---	16	---	3.9	---	e1.3	1.1	---
TOTAL	66.3	673.9	10569	7878	630.4	624.4	379.4	183.2	114.3	63.1	38.3	29.75
MEAN	2.14	22.5	341	254	22.5	20.1	12.6	5.91	3.81	2.04	1.24	.99
MAX	8.8	257	3050	1480	79	99	30	8.8	5.9	3.3	2.9	2.1
MIN	1.4	2.4	11	10	9.0	9.4	8.4	3.9	2.6	1.3	1.0	.80
AC-FT	132	1340	20960	15630	1250	1240	753	363	227	125	76	59

e Estimated.

11463170 BIG SULPHUR CREEK AT GEYSERS RESORT, NEAR CLOVERDALE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.48	27.5	86.5	121	109	109	31.0	18.2	5.83	2.68	1.38	1.32
MAX	20.9	146	341	639	571	358	162	81.6	17.1	5.75	2.64	2.90
(WY)	1990	1984	1997	1995	1986	1995	1982	1990	1990	1993	1993	1985
MIN	.74	1.22	1.81	2.52	7.34	8.57	8.44	4.79	2.62	.86	.70	.65
(WY)	1989	1981	1991	1991	1989	1988	1990	1986	1987	1984	1988	1988

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1981 - 1997

ANNUAL TOTAL	25864.5		21250.05									
ANNUAL MEAN	70.7		58.2							42.8		
HIGHEST ANNUAL MEAN										101		1995
LOWEST ANNUAL MEAN										15.5		1994
HIGHEST DAILY MEAN	3050	Dec 31		3050	Dec 31				3920		Feb 17	1986
LOWEST DAILY MEAN	1.4	Oct 16		.80	Sep 9				.08		Aug 31	1983
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 22		.85	Sep 6				.24		Oct 13	1983
INSTANTANEOUS PEAK FLOW				8010	Jan 1				8010		Jan 1	1997
INSTANTANEOUS PEAK STAGE				9.78	Jan 1				9.78		Jan 1	1997
ANNUAL RUNOFF (AC-FT)	51300			42150					31010			
10 PERCENT EXCEEDS	160			73					86			
50 PERCENT EXCEEDS	9.6			5.5					5.8			
90 PERCENT EXCEEDS	1.7			1.1					.99			

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CA

LOCATION.—Lat 38°49'34", long 122°59'45", in Rincon de Masalacon Grant, Sonoma County, Hydrologic Unit 18010110, on right bank 900 ft downstream from unnamed tributary, 1.0 mi upstream of Russian River and 1.8 mi northeast of Cloverdale.

DRAINAGE AREA.—85.5 mi².

PERIOD OF RECORD.—July 1957 to September 1972. October 1989 to current year (since October 1989, low flow records only).

REVISED RECORDS.—WSP 1929: 1958–60.

GAGE.—Water-stage recorder. Elevation of gage is 350 ft above sea level, from topographic map. Prior to September 1972, at site 0.8 mi upstream at different datum.

REMARKS.—Records poor. No records computed above 200 ft³/s. Diversions for irrigation and geothermal recharge upstream from station. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (water years 1958–72), 15,700 ft³/s, Dec. 22, 1964, gage height, 15.08 ft, site and datum then in use, from rating curve extended above 5,700 ft³/s on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 0.90 ft³/s, Aug. 17, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1955, reached a stage of 16.8 ft from floodmarks, site and datum then in use, discharge, 20,000 ft³/s, by slope-area measurement of peak flow.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	9.7	25	---	---	e45	68	e27	e11	e8.2	e2.4	e1.8
2	5.3	8.1	22	---	---	e68	65	e26	e11	e8.4	e2.3	e1.8
3	5.6	7.4	19	---	---	---	64	e25	e11	e8.4	e2.3	e1.8
4	5.4	6.8	45	---	---	e130	60	e24	e13	e8.2	e2.2	e1.7
5	5.2	6.5	---	---	e185	e82	59	e23	e15	e8.0	e2.2	e1.7
6	5.0	6.5	119	---	e160	e70	56	e23	e16	e7.4	e2.1	e1.6
7	5.0	6.3	85	---	e130	e61	56	e22	e15	e7.0	e2.0	e1.5
8	4.7	6.7	---	---	e115	e57	55	e21	e13	e6.7	e1.9	e1.5
9	4.4	6.6	---	---	e100	e72	53	e21	e12	e6.6	e1.9	e1.5
10	4.1	6.2	---	---	e94	e64	53	e20	e13	e6.0	e1.8	e1.5
11	4.6	6.1	---	---	e85	e60	55	e19	e14	e5.9	e1.8	e1.5
12	5.3	6.3	---	---	e79	e56	60	e19	e12	e5.8	e1.8	e1.5
13	5.2	5.9	---	---	e73	e54	62	e18	e11	e5.7	e1.7	e1.5
14	5.6	6.0	198	---	e69	e52	65	e17	e11	e5.6	e1.7	e1.5
15	5.5	6.2	125	e190	e64	e51	70	e17	e10	e5.2	e1.7	e2.5
16	5.2	6.6	90	e180	e61	e160	73	e16	e10	e5.0	e1.7	e6.0
17	4.8	14	66	e160	e60	---	77	e16	e10	e4.6	e1.7	e5.5
18	5.6	54	57	e150	e66	---	86	e15	e9.6	e4.3	e1.6	e4.5
19	5.5	---	39	e140	e61	e130	167	e15	e9.4	e4.0	e1.6	e3.9
20	6.0	---	36	e130	e58	e110	112	e14	e9.0	e3.8	e1.6	e3.5
21	5.1	72	106	---	e55	e95	114	e14	e8.9	e3.5	e1.8	e3.2
22	5.0	---	---	---	e52	e85	e51	e14	e8.8	e3.3	e4.1	e3.0
23	4.8	106	177	---	e51	e80	e46	e15	e8.4	e3.1	e3.3	e2.8
24	5.4	40	120	---	e50	e75	e42	e14	e8.2	e3.0	e2.7	e2.7
25	6.5	28	95	---	e50	e72	e39	e14	e8.1	e2.9	e2.3	e2.6
26	6.5	24	---	---	e51	e70	e36	e13	e8.0	e2.8	e2.1	e2.6
27	6.1	21	---	---	e50	e70	e34	e13	e8.0	e2.7	e2.0	e2.7
28	5.3	20	---	---	e46	e68	e32	e13	e7.9	e2.6	e2.0	e2.7
29	22	20	---	---	---	e70	e30	e13	e7.9	e2.6	e2.0	e2.7
30	26	17	---	---	---	71	e29	e12	e8.0	e2.5	e1.9	e2.7
31	12	---	---	---	---	71	---	e12	---	e2.4	e1.8	---
TOTAL	207.5	---	---	---	---	---	1869	545	318.2	156.2	64.0	76.0
MEAN	6.69	---	---	---	---	---	62.3	17.6	10.6	5.04	2.06	2.53
MAX	26	---	---	---	---	---	167	27	16	8.4	4.1	6.0
MIN	4.1	---	---	---	---	---	29	12	7.9	2.4	1.6	1.5
AC-FT	412	---	---	---	---	---	3710	1080	631	310	127	151

e Estimated.

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1972, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.2	99.8	387	611	564	286	224	60.0	26.3	10.7	6.26	8.21
MAX	290	283	1228	1972	1962	747	726	175	67.0	22.0	11.9	51.4
(WY)	1963	1967	1965	1970	1958	1958	1958	1963	1967	1963	1967	1957
MIN	4.08	4.15	6.82	94.0	81.7	66.4	37.9	21.9	11.0	4.23	3.13	2.79
(WY)	1967	1960	1960	1962	1964	1964	1964	1959	1959	1959	1959	1970

SUMMARY STATISTICS

WATER YEARS 1957 - 1972

ANNUAL MEAN	192	
HIGHEST ANNUAL MEAN	376	1958
LOWEST ANNUAL MEAN	53.1	1972
HIGHEST DAILY MEAN	10400	Dec 22 1964
LOWEST DAILY MEAN	1.8	Oct 20 1964
ANNUAL SEVEN-DAY MINIMUM	2.0	Oct 15 1964
INSTANTANEOUS PEAK FLOW	15700	Dec 22 1964
INSTANTANEOUS PEAK STAGE	15.08	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	138800	
10 PERCENT EXCEEDS	395	
50 PERCENT EXCEEDS	33	
90 PERCENT EXCEEDS	4.2	

11463980 RUSSIAN RIVER AT DIGGER BEND, NEAR HEALDSBURG, CA

LOCATION.—Lat 38°37'59", long 122°51'16", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on right bank, 1,800 ft downstream from unnamed tributary and 1.6 mi northeast of Healdsburg.

DRAINAGE AREA.—791 mi².

PERIOD OF RECORD.—October 1988 to current year (low flow only). Records for October 1985 to September 1988 are in the files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Elevation of gage is 100 ft above sea level, from topographic map.

REMARKS.—Record good except for estimated discharges, which are fair. No records computed above 300 ft³/s. See schematic diagram of Russian River Basin.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	289	---	---	---	---	---	---	237	185	166	e191
2	177	300	---	---	---	---	---	---	215	182	163	e195
3	165	---	---	---	---	---	---	---	216	185	162	e183
4	163	---	---	---	---	---	---	---	228	187	164	178
5	192	---	---	---	---	---	---	---	243	187	162	176
6	214	274	---	---	---	---	---	---	237	184	152	172
7	233	222	---	---	---	---	---	---	216	177	146	174
8	234	206	---	---	---	---	---	294	203	172	159	170
9	226	197	---	---	---	---	---	285	195	163	170	167
10	227	193	---	---	---	---	---	274	191	162	173	164
11	228	190	---	---	---	---	---	270	184	170	183	161
12	232	184	---	---	---	---	---	263	177	174	191	165
13	234	180	---	---	---	---	---	266	171	173	193	164
14	238	178	---	---	---	---	---	281	176	174	191	177
15	243	177	---	---	---	---	---	276	176	176	174	191
16	251	196	---	---	---	---	---	274	182	175	177	203
17	267	222	---	---	---	---	---	267	185	171	188	210
18	282	---	---	---	---	---	---	258	177	168	189	214
19	289	---	---	---	---	---	---	252	175	169	190	219
20	293	---	---	---	---	---	---	247	166	167	202	220
21	297	---	---	---	---	---	---	245	159	171	196	216
22	283	---	---	---	---	---	---	240	158	172	189	216
23	238	---	---	---	---	---	---	246	159	172	188	217
24	221	---	---	---	---	---	---	263	176	173	186	213
25	197	---	---	---	---	---	---	257	180	172	186	210
26	187	---	---	---	---	---	---	250	177	173	186	198
27	179	---	---	---	---	---	---	262	176	174	183	187
28	180	---	---	---	---	---	---	272	175	180	e178	177
29	194	---	---	---	---	---	---	261	174	183	e176	174
30	239	---	---	---	---	---	---	251	178	184	e172	174
31	282	---	---	---	---	---	---	253	---	182	e186	---
TOTAL	7065	---	---	---	---	---	---	---	5662	5437	5521	5676
MEAN	228	---	---	---	---	---	---	---	189	175	178	189
MAX	297	---	---	---	---	---	---	---	243	187	202	220
MIN	163	---	---	---	---	---	---	---	158	162	146	161
AC-FT	14010	---	---	---	---	---	---	---	11230	10780	10950	11260

e Estimated.

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA

LOCATION.—Lat 38°36'48", long 122°50'07", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on left bank 2 mi east of Healdsburg and 3.5 mi upstream from Dry Creek.

DRAINAGE AREA.—793 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 981: 1942. WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 77.01 ft above sea level.

REMARKS.—Records good except for the period of May 19 to September 2, which are fair. Several diversions for irrigation of about 17,800 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino 63 mi upstream. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 73,000 ft³/s, Jan. 9, 1995, gage height, 26.23 ft; maximum gage height, 30.0 ft, Feb. 28, 1940; minimum daily discharge, 12 ft³/s, June 14, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of December 1937 reached a stage of 30.8 ft, from floodmarks.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	308	403	59400	3890	704	535	354	217	180	160	166
2	167	317	428	e34500	3240	758	492	345	207	173	156	e180
3	156	325	420	e14300	2890	933	461	341	208	176	151	184
4	148	332	414	11500	2810	799	453	330	221	180	146	180
5	172	332	6070	9830	3100	712	446	327	235	181	144	179
6	199	320	4350	8560	2710	656	423	316	224	177	139	176
7	224	241	2450	7740	2320	638	392	309	200	172	133	172
8	232	210	2380	7100	2150	614	387	297	190	168	128	172
9	229	195	7080	4260	1810	595	387	291	187	164	126	168
10	224	188	18100	3200	1700	575	384	285	180	159	128	164
11	224	181	7910	2740	1600	560	378	276	173	154	136	159
12	228	176	8450	2460	1470	549	368	272	166	152	148	156
13	228	175	5290	2220	1360	515	368	268	156	152	159	156
14	229	171	3360	2020	1270	492	371	282	158	154	164	156
15	233	167	2460	2050	1200	489	367	276	161	156	164	159
16	233	168	1970	2030	1140	691	357	276	166	156	164	171
17	270	193	1550	1930	1120	2870	354	268	174	156	164	180
18	293	231	1330	1770	1110	1600	355	256	169	156	164	185
19	304	637	1220	1650	1040	1140	478	252	163	153	169	190
20	308	1260	1110	1630	1030	977	481	246	149	150	179	197
21	311	642	1700	2550	991	941	462	238	138	148	188	197
22	311	816	3490	15800	947	885	466	235	132	148	190	246
23	261	1060	4460	e14000	309	827	463	243	132	148	182	209
24	232	604	4450	8920	873	775	494	257	164	148	180	204
25	203	453	2620	24500	835	728	470	255	183	148	180	202
26	183	378	3200	28000	812	690	433	251	180	148	180	191
27	172	337	8380	11700	782	659	404	256	180	145	180	178
28	167	368	8960	9640	738	629	388	265	180	144	178	169
29	179	507	17500	9150	---	597	374	251	180	149	165	161
30	213	485	23700	7900	---	564	365	224	180	154	152	160
31	288	---	45400	5390	---	559	---	234	---	157	155	---
TOTAL	6987	11777	200605	318440	45847	24721	12556	8576	5353	4906	4952	5367
MEAN	225	393	6471	10270	1637	797	419	277	178	158	160	179
MAX	311	1260	45400	59400	3890	2870	535	354	235	181	190	246
MIN	148	167	403	1630	738	489	354	224	132	144	126	156
AC-FT	13860	23360	397900	631600	90940	49030	24900	17010	10620	9730	9820	10650

e Estimated.

RUSSIAN RIVER BASIN

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	277	780	2488	4139	3828	2805	1444	550	260	185	185	190
MAX	1605	5293	8945	14490	14650	11810	6592	1638	672	300	331	360
(WY)	1958	1974	1956	1995	1986	1983	1982	1983	1993	1961	1974	1974
MIN	33.7	122	111	90.9	58.7	146	55.7	85.1	81.3	70.5	82.8	67.4
(WY)	1978	1992	1991	1977	1977	1977	1977	1977	1977	1947	1947	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1940 - 1997	
ANNUAL TOTAL	782903		650087			
ANNUAL MEAN	2139		1781		1418	
HIGHEST ANNUAL MEAN					3277	
LOWEST ANNUAL MEAN					101	
HIGHEST DAILY MEAN	45400	Dec 31	59400	Jan 1	69300	Jan 9 1995
LOWEST DAILY MEAN	120	Aug 17	126	Aug 9	12	Jun 14 1988
ANNUAL SEVEN-DAY MINIMUM	135	Aug 14	133	Aug 5	21	Apr 20 1977
INSTANTANEOUS PEAK FLOW			65700	Jan 1	73000	Jan 9 1995
INSTANTANEOUS PEAK STAGE			24.61	Jan 1	30.00	Feb 28 1940
ANNUAL RUNOFF (AC-FT)	1553000		1289000		1027000	
10 PERCENT EXCEEDS	6960		3290		3340	
50 PERCENT EXCEEDS	565		291		310	
90 PERCENT EXCEEDS	166		156		140	

WATER-QUALITY RECORDS

CHEMICAL DATA: Water years 1951–66, 1980.

WATER TEMPERATURE: Water years 1966 to current year.

WATER TEMPERATURE: October 1965 to current year.

INSTRUMENTATION.—Temperature recorder since October 1965 provides hourly recordings.

REMARKS.—Temperature during summer months affected by recreation dams above and below gage. Interruptions in record due to equipment malfunction.

WATER TEMPERATURE: Maximum recorded, 28.0°C, at times in some years; minimum recorded, 3.0°C, Dec. 23, 1990.

WATER TEMPERATURE: Maximum recorded, 28.0°C, August 7; minimum recorded, 8.0°C, Jan. 14.

[illegible]

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	20.0	16.5	24.0	22.0	24.0	21.5	25.5	23.5	24.5	23.5
2	---	---	19.5	16.5	23.0	21.0	25.0	22.0	26.0	24.0	24.5	23.0
3	---	---	18.5	15.5	22.5	20.0	26.0	23.5	26.0	24.0	---	---
4	---	---	18.0	15.0	23.0	19.0	26.0	24.0	26.5	24.5	25.0	23.0
5	---	---	18.0	15.0	23.5	19.5	26.0	24.0	27.0	25.0	25.5	23.5
6	---	---	18.5	15.0	24.0	19.5	26.0	24.0	27.5	25.0	24.5	23.0
7	---	---	19.0	15.5	24.5	21.0	27.0	24.5	28.0	26.0	24.0	22.5
8	---	---	18.5	15.5	24.0	22.0	27.5	25.5	27.0	25.5	24.5	22.5
9	---	---	19.0	15.0	23.5	21.5	27.0	24.5	26.0	23.0	24.5	23.0
10	---	---	19.5	15.5	23.0	21.0	26.0	24.5	23.5	22.5	24.0	22.5
11	---	---	21.0	17.0	23.5	---	26.0	24.0	24.0	22.0	24.0	22.0
12	---	---	22.5	18.5	23.0	21.5	25.5	24.0	25.0	23.0	24.5	22.5
13	---	---	22.0	19.0	23.0	20.0	25.5	23.5	25.0	23.5	24.0	22.5
14	16.5	14.0	20.5	18.0	24.0	22.0	25.5	23.5	25.0	23.0	24.0	21.5
15	16.0	14.0	18.5	17.0	24.0	22.0	25.5	23.5	25.0	23.0	---	---
16	15.0	13.5	17.5	16.5	25.0	22.5	25.0	24.0	24.0	23.0	---	---
17	14.5	12.0	17.0	15.0	25.5	23.0	25.5	23.0	23.0	22.0	---	---
18	13.0	10.5	16.5	14.5	26.0	23.0	26.0	23.5	24.0	21.5	---	---
19	12.5	11.0	18.5	14.5	26.5	24.0	26.0	24.0	24.0	22.5	---	---
20	12.5	10.0	24.0	15.5	25.5	23.5	25.5	24.0	23.0	22.0	22.5	20.5
21	12.5	11.0	23.5	19.5	24.5	23.0	26.0	24.0	24.5	21.5	22.5	20.5
22	15.0	12.0	22.0	19.5	24.0	22.0	26.0	24.0	25.5	23.0	23.5	20.5
23	16.0	13.5	22.5	19.0	24.0	22.0	25.5	23.5	24.0	23.0	---	---
24	17.5	14.5	23.0	19.0	25.0	22.5	26.5	24.5	25.5	24.0	24.5	21.0
25	17.5	14.0	23.0	19.0	26.0	23.5	26.0	24.0	25.5	24.0	24.0	21.0
26	17.5	14.5	21.5	19.0	25.0	23.5	25.5	24.0	25.5	24.0	23.5	20.5
27	17.5	13.5	24.5	19.5	24.5	22.5	25.0	23.5	25.5	24.0	23.5	19.5
28	18.0	14.5	25.5	21.5	24.0	22.5	24.5	23.0	25.0	23.0	23.0	19.5
29	19.0	15.5	26.5	22.0	23.5	21.5	24.5	23.0	25.0	23.5	23.0	19.5
30	19.5	16.0	26.5	22.0	23.5	22.0	25.0	23.0	25.0	23.5	23.0	20.0
31	---	---	25.5	22.5	---	---	25.0	23.0	24.5	23.0	---	---
MONTH	---	---	26.5	14.5	26.5	---	27.5	21.5	28.0	21.5	---	---

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA

LOCATION.—Lat 38°43'11", long 122°59'58", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Warm Springs Dam, 500 ft upstream from county road bridge, and 5.0 mi west of Geyserville.

DRAINAGE AREA.—131 mi².

PERIOD OF RECORD.—October 1939 to September 1942 (published as "Dry Creek near Healdsburg"), October 1981 to current year.

WATER TEMPERATURE RECORD: Water years 1981–94.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 188.21 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1942, nonrecording gage at site 500 ft downstream at different datum.

REMARKS.—Records good. Flow affected by storage in Lake Sonoma, capacity, 380,600 acre-ft, beginning October 1983. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,500 ft³/s, Feb. 28, 1940, gage height, 16.9 ft, datum then in use; no flow Oct. 1 to Dec. 8, 1939. Maximum discharge since regulation by Lake Sonoma, 5,090 ft³/s Jan. 18, 1995, gage height, 10.16 ft; minimum daily, 6.3 ft³/s July 10, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of December 1937 reached a stage of 21.8 ft from floodmarks, discharge about 25,000 ft³/s.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	116	122	129	3090	187	100	95	97	142	153	104
2	124	116	122	122	3070	187	100	95	97	142	153	104
3	124	116	122	122	2580	163	100	95	97	142	153	103
4	124	115	123	1680	1370	120	100	96	97	142	153	103
5	123	115	124	3150	613	103	100	96	98	142	152	103
6	124	120	121	3450	169	103	100	96	97	142	151	103
7	124	123	121	3940	472	102	101	96	99	142	156	103
8	123	123	121	3990	666	102	101	97	97	141	171	103
9	123	123	124	3970	669	102	101	97	97	141	171	103
10	123	122	134	3960	468	102	104	97	97	143	171	103
11	123	123	129	3900	188	102	102	97	97	151	171	103
12	123	122	129	3820	189	102	102	96	97	159	171	103
13	123	122	128	3780	189	102	102	96	97	158	172	103
14	121	122	125	3350	189	102	102	96	97	158	165	101
15	120	122	125	3050	189	102	102	96	97	158	151	103
16	122	122	125	1860	189	103	101	96	97	158	152	103
17	122	122	125	592	189	102	101	95	97	157	152	103
18	119	122	125	175	189	102	101	96	97	156	151	103
19	118	124	125	175	189	100	101	96	97	157	150	103
20	117	122	125	175	189	98	100	96	97	157	154	103
21	118	123	126	175	189	98	99	96	98	156	141	103
22	118	124	128	184	189	98	98	96	121	156	118	103
23	118	123	127	1070	189	98	97	95	139	155	118	103
24	117	120	127	1200	189	99	97	96	140	155	118	102
25	117	121	127	126	188	102	96	96	143	155	118	102
26	117	122	128	117	188	99	95	96	143	155	110	102
27	117	122	152	1400	188	102	96	96	143	154	103	103
28	117	122	188	2660	188	102	95	95	143	154	103	102
29	116	122	199	3080	---	100	95	95	143	154	103	102
30	117	122	161	3080	---	101	95	95	143	153	103	102
31	117	---	133	3090	---	100	---	95	---	153	104	---
TOTAL	3733	3633	4091	61572	16564	3385	2984	2971	3299	4688	4412	3084
MEAN	120	121	132	1986	592	109	99.5	95.8	110	151	142	103
MAX	124	124	199	3990	3090	187	104	97	143	159	172	104
MIN	116	115	121	117	169	98	95	95	97	141	103	101
AC-FT	7400	7210	8110	122100	32850	6710	5920	5890	6540	9300	8750	6120

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.6	159	205	446	389	371	163	92.2	104	119	111	88.7
MAX	120	524	1501	1986	1516	1494	948	265	196	274	169	122
(WY)	1997	1984	1984	1997	1995	1995	1995	1995	1987	1987	1987	1996
MIN	7.70	50.8	49.8	49.3	73.3	25.0	23.0	26.1	25.1	27.0	42.0	39.0
(WY)	1984	1986	1986	1986	1988	1985	1985	1985	1985	1985	1985	1985

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1984 - 1997			
ANNUAL TOTAL	105258				114416							
ANNUAL MEAN	288				313				193			
HIGHEST ANNUAL MEAN									512			
LOWEST ANNUAL MEAN									46.0			
HIGHEST DAILY MEAN	2040				3990				4980			
LOWEST DAILY MEAN	88				95				6.1			
ANNUAL SEVEN-DAY MINIMUM	89				95				6.3			
INSTANTANEOUS PEAK FLOW					4200				5090			
INSTANTANEOUS PEAK STAGE					9.72				10.16			
ANNUAL RUNOFF (AC-FT)	208800				226900				139900			
10 PERCENT EXCEEDS	936				189				189			
50 PERCENT EXCEEDS	123				122				99			
90 PERCENT EXCEEDS	95				97				40			

11465200 DRY CREEK NEAR GEYSERVILLE, CA

LOCATION.—Lat 38°41'55", long 122°57'25", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on left bank pier of bridge 0.3 mi downstream from Pena Creek, 3.0 mi downstream from Warm Springs Dam, and 3 mi west of Geyserville.

DRAINAGE AREA.—162 mi².

PERIOD OF RECORD.—October 1959 to current year.

CHEMICAL DATA: Water years 1971–81.

WATER TEMPERATURE: Water years 1964–86.

SEDIMENT DATA: Water years 1964–87.

TURBIDITY: Water years 1964–86. - *not daily - start 1974*

REVISED RECORDS.—WDR CA-65-1: 1962(M), 1963(M).

GAGE.—Water-stage recorder. Datum of gage is 156.40 ft above sea level. Prior to Oct. 1, 1964, at datum 4.00 ft higher. Oct. 1, 1964, to Apr. 8, 1976, at datum 3.00 ft higher; Apr. 9, 1976, to Sept. 30, 1982, at datum 2.00 ft higher.

REMARKS.—Records good except for periods of estimated discharge, which are fair. Small diversions upstream from station for irrigation of about 1,200 acres. Flow affected by storage in Lake Sonoma, 3.0 mi upstream, capacity 380,600 acre-ft, beginning October 1983. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 32,400 ft³/s, Jan. 31, 1963, gage height, 20.50 ft, present datum; no flow at times. Maximum discharge since regulation by Lake Sonoma, 7,600 ft³/s, Jan. 8, 1995, gage height, 15.48 ft; minimum daily, 19 ft³/s, Oct. 18–25, 1984.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	123	e138	3690	e3300	178	107	100	98	143	157	104
2	113	122	e135	1550	e3260	184	106	100	97	142	158	104
3	113	124	e133	735	2900	167	106	100	99	140	158	103
4	114	123	e147	1890	1800	135	105	100	101	141	157	102
5	114	125	e265	3630	849	115	105	100	101	141	155	101
6	114	128	e154	e3680	228	114	104	99	101	142	155	101
7	114	132	e152	e4030	462	113	104	99	100	142	159	102
8	113	133	e450	e4050	684	112	103	99	101	140	170	102
9	114	135	e1480	e4070	686	111	103	98	100	142	172	102
10	116	138	e1270	e4060	520	110	104	98	100	143	172	102
11	115	137	e640	e4040	211	109	103	98	99	148	170	101
12	115	137	e450	e4010	202	109	103	97	101	155	170	101
13	114	138	e290	e3990	199	109	103	96	101	154	170	101
14	115	138	e214	e3760	197	109	102	95	102	154	166	101
15	113	138	e206	e3500	198	109	102	95	102	154	159	103
16	115	139	e188	2510	196	145	101	95	101	154	160	102
17	116	145	e182	e1800	196	141	101	94	101	154	160	101
18	114	145	e168	e1200	192	123	104	95	101	154	160	102
19	115	184	162	e165	190	118	106	97	100	154	159	100
20	115	160	160	e158	188	116	103	98	101	155	164	99
21	116	147	183	356	187	114	103	97	102	155	152	100
22	116	209	213	1400	185	114	102	98	123	157	126	100
23	115	162	213	1800	183	113	102	100	142	159	126	100
24	118	148	193	1680	182	113	101	99	141	158	126	99
25	119	149	183	2190	182	113	100	99	144	157	125	99
26	119	148	279	2110	180	109	100	99	144	157	117	99
27	120	147	395	2200	180	111	100	100	143	158	105	99
28	121	152	425	3280	179	110	101	99	143	157	105	98
29	123	e148	2430	3420	---	107	101	98	144	158	104	98
30	123	e140	2110	3370	---	108	100	98	144	156	104	98
31	121	---	3110	e3330	---	107	---	98	---	157	104	---
TOTAL	3596	4294	16718	81654	18116	3746	3085	3038	3377	4681	4545	3024
MEAN	116	143	539	2634	647	121	103	98.0	113	151	147	101
MAX	123	209	3110	4070	3300	184	107	100	144	159	172	104
MIN	113	122	133	158	179	107	100	94	97	140	104	98
AC-FT	7130	8520	33160	162000	35930	7430	6120	6030	6700	9280	9020	6000

e Estimated.

RUSSIAN RIVER BASINE

11465200 DRY CREEK NEAR GEYSERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1983, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.5	240	610	1178	959	666	345	80.3	23.3	6.01	1.70	1.35
MAX	323	1619	2035	3930	2038	3095	1499	369	76.0	20.9	8.91	8.61
(WY)	1963	1974	1965	1970	1983	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.54	4.31	22.7	27.1	34.1	9.58	5.64	.25	.000	.000	.000
(WY)	1961	1981	1977	1976	1977	1977	1977	1977	1977	1977	1972	1972

SUMMARY STATISTICS

WATER YEARS 1960 - 1983

ANNUAL MEAN	342	
HIGHEST ANNUAL MEAN	790	1983
LOWEST ANNUAL MEAN	8.81	1977
HIGHEST DAILY MEAN	19400	Jan 16 1974
LOWEST DAILY MEAN	.00	Sep 17 1960
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 17 1960
INSTANTANEOUS PEAK FLOW	32400	Jan 31 1963
INSTANTANEOUS PEAK STAGE	20.50	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	247800	
10 PERCENT EXCEEDS	868	
50 PERCENT EXCEEDS	32	
90 PERCENT EXCEEDS	.08	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1997, BY WATER YEAR (WY)

MEAN	89.3	137	176	697	643	594	194	109	118	135	122	95.9
MAX	116	459	539	2634	2023	2110	1115	341	199	296	180	128
(WY)	1997	1987	1997	1997	1996	1995	1995	1995	1987	1987	1987	1988
MIN	42.2	60.4	88.2	83.0	85.4	86.0	38.5	36.6	91.8	89.4	96.1	44.1
(WY)	1991	1986	1991	1991	1991	1988	1990	1991	1996	1996	1990	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1986 - 1997

ANNUAL TOTAL	151615		149874	
ANNUAL MEAN	414		411	
HIGHEST ANNUAL MEAN				244
LOWEST ANNUAL MEAN				676
HIGHEST DAILY MEAN	3110	Dec 31	4070	Jan 9
LOWEST DAILY MEAN	84	Jun 11	94	May 17
ANNUAL SEVEN-DAY MINIMUM	85	Jun 10	95	May 12
INSTANTANEOUS PEAK FLOW			6930	Jan 1
INSTANTANEOUS PEAK STAGE			14.21	Jan 1
ANNUAL RUNOFF (AC-FT)	300700		297300	
10 PERCENT EXCEEDS	1380		989	
50 PERCENT EXCEEDS	132		126	
90 PERCENT EXCEEDS	88		100	

11465350 DRY CREEK NEAR MOUTH, NEAR HEALDSBURG, CA

LOCATION.—Lat 38°35'15", long 122°51'40", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on right bank 0.25 mi upstream from mouth, 0.4 mi downstream from Mill Creek, 1.7 mi south of Healdsburg, and 13.5 mi downstream from Warm Springs Dam.

DRAINAGE AREA.—217 mi².

PERIOD OF RECORD.—November 1980 to current year (low flow only).

GAGE.—Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair. No records computed above 200 ft³/s. Some diversions for irrigation upstream from station. Flow regulated by Lake Sonoma 13.5 mi upstream beginning October 1983. See schematic diagram of Russian River Basin.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	108	127	---	---	183	124	103	81	123	139	93
2	102	108	127	---	---	196	125	101	86	125	140	92
3	103	108	125	---	---	185	126	101	94	124	140	92
4	104	106	e138	---	---	165	123	100	100	122	139	92
5	101	e106	---	---	---	144	120	100	101	124	136	91
6	103	e108	e149	---	---	142	120	100	102	125	134	95
7	103	e116	e150	---	---	141	120	100	94	125	135	95
8	102	e117	---	---	---	138	119	93	95	122	146	96
9	100	e118	---	---	---	136	119	93	94	119	151	99
10	100	118	---	---	---	136	119	93	92	119	154	103
11	98	119	---	---	---	135	119	93	91	121	153	103
12	100	119	---	---	---	132	116	93	89	131	152	91
13	103	119	---	---	---	131	115	93	91	135	149	91
14	103	119	---	---	---	131	114	92	87	136	150	91
15	99	119	---	---	---	131	114	89	87	136	145	92
16	98	122	---	---	---	---	117	89	88	136	142	93
17	102	139	---	---	---	---	108	89	87	136	140	93
18	104	138	e199	---	---	172	119	87	86	136	141	93
19	104	---	e193	---	---	157	123	85	84	137	144	90
20	102	195	e182	---	---	150	114	83	82	138	157	89
21	102	149	---	---	199	146	111	83	80	138	148	87
22	102	---	---	---	197	142	110	83	88	138	122	87
23	102	200	---	---	196	139	108	95	120	136	116	87
24	102	158	---	---	194	137	107	92	118	137	115	89
25	103	144	---	---	192	136	107	87	125	138	112	87
26	105	136	---	---	192	135	103	87	126	136	110	85
27	105	132	---	---	190	129	102	87	124	139	97	88
28	104	130	---	---	187	129	101	87	122	140	94	89
29	122	128	---	---	---	130	102	86	125	140	92	88
30	116	127	---	---	---	127	103	81	123	140	92	87
31	109	---	---	---	---	122	---	79	---	138	91	---
TOTAL	3209	---	---	---	---	---	3428	2824	2962	4090	4076	2748
MEAN	104	---	---	---	---	---	114	91.1	98.7	132	131	91.6
MAX	122	---	---	---	---	---	126	103	126	140	157	103
MIN	98	---	---	---	---	---	101	79	80	119	91	85
AC-FT	6370	---	---	---	---	---	6800	5600	5880	8110	8080	5450

e Estimated.

LOCATION.—Lat 38°27'10", long 122°50'03", in Molinos Grant, Sonoma County, Hydrologic Unit 18010110, on downstream side of left bank pier of highway bridge, 0.2 mi downstream from Santa Rosa Creek, and 2 mi northeast of Graton.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to Dec. 31, 1958, at site 75 ft downstream at same datum.

REMARKS.—The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with the Russian River. During floods, directions of flow may be either to or from the Russian River, and the laguna acts as a natural regulator of floods on the lower Russian River. Figures given represent only those days when the elevation was above 55.0 ft. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum elevation, 74.6 ft, Feb. 18, 1986.

EXTREMES FOR CURRENT YEAR.—Maximum elevation recorded, 71.4 ft, Jan. 1.

DAILY OBSERVATION AT 2400 HOURS

[illegible]

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA
(National Stream-Quality Accounting Network Station)

LOCATION.—Lat 38°30'31", long 122°55'36", in NE 1/4 SE 1/4 sec.26, T.8 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on right bank at downstream side of Hacienda Bridge, 0.1 mi upstream from Hobson Creek, and 3.8 mi east of Guerneville.

DRAINAGE AREA.—1,338 mi².

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

CHEMICAL DATA: Water years 1951–1995. Published as "at Guerneville" in 1961–65.

BIOLOGICAL DATA: Water years 1975–81.

SPECIFIC CONDUCTANCE: Water years 1973–81.

WATER TEMPERATURE: Water years 1964–81.

SEDIMENT DATA: Water years 1966–95.

REVISED RECORDS.—WSP 1395: Drainage area at former site. WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 20.14 ft above sea level. Prior to Oct. 1, 1954, nonrecording gage at bridge 5.3 mi downstream at datum 8.58 ft lower. Oct. 1, 1954, to Oct. 23, 1974, at site 0.7 mi downstream at datum 2.75 ft lower. Supplementary water-stage recorder 2.1 mi downstream used during periods of low flow, 1948–54.

REMARKS.—Records good except for periods of estimated discharges, which are fair. Flow regulated by Lake Mendocino 77 mi upstream, beginning November 1958, and by Lake Sonoma 26 mi upstream, beginning October 1983. Many diversions upstream from station for irrigation of about 29,000 acres. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations), and by diversion for municipal use at Wohler Pumping Plant 4.0 mi upstream beginning in May 1959. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 102,000 ft³/s, Feb. 18, 1986, gage height, 48.56 ft, from rating curve extended above 57,000 ft³/s; maximum gage height, 49.7 ft, Dec. 23, 1955, site and datum then in use, from floodmarks; minimum daily discharge, 0.75 ft³/s, May 6, 1977.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	e360	576	72600	8780	1010	657	433	246	192	195	153
2	191	e368	575	75000	7710	1090	627	423	237	197	e165	161
3	179	e374	580	46500	6980	1280	610	415	213	196	154	164
4	175	e382	569	23100	5890	1090	595	403	258	196	181	e169
5	184	e390	4830	17500	5210	967	583	393	265	200	153	e179
6	207	e379	6520	14300	4160	903	560	392	261	200	159	e172
7	230	312	3940	13000	3540	873	463	369	238	203	151	e168
8	243	276	3070	12000	3520	841	458	352	220	173	155	e162
9	237	263	6400	10200	3140	816	492	338	226	177	167	e155
10	232	256	23300	8290	2920	791	474	328	209	170	176	148
11	234	251	16800	7610	2430	774	485	320	203	172	e200	149
12	245	247	11900	7240	2150	757	478	321	193	163	192	154
13	251	245	8800	6890	1970	725	471	301	187	162	202	149
14	249	241	5570	6490	1830	703	491	309	189	168	212	159
15	256	243	3820	5760	1730	694	481	307	193	164	203	214
16	258	251	2900	5370	1650	954	478	298	193	168	188	207
17	275	376	2290	3700	1600	3050	476	287	186	165	200	214
18	293	524	1840	2610	1570	2100	475	267	181	159	228	217
19	310	789	1640	2180	1480	1460	731	225	169	165	208	222
20	319	1640	1480	2060	1460	1240	662	202	149	169	283	213
21	343	1010	2260	3110	1400	1120	601	253	140	168	270	230
22	e338	986	4850	13300	1340	1040	605	233	155	193	235	242
23	e324	1460	6940	33800	1290	972	579	284	172	173	227	226
24	e285	924	5950	17500	1230	913	611	315	177	184	222	188
25	e245	735	4390	32500	1180	869	585	297	178	196	208	184
26	e213	637	3950	51700	1140	824	545	293	179	188	182	196
27	e202	578	11700	32600	1100	779	496	307	185	191	172	180
28	e240	547	13300	18500	1050	742	486	297	193	208	173	171
29	e292	644	16900	16000	---	713	460	286	177	198	171	167
30	e324	652	35500	13900	---	679	444	274	198	200	151	152
31	e346	---	47000	11100	---	672	---	251	---	216	151	---
TOTAL	7913	16340	260140	586410	79450	31441	16159	9773	5970	5674	5934	5465
MEAN	255	545	8392	18920	2838	1014	539	315	199	183	191	182
MAX	346	1640	47000	75000	8780	3050	731	433	265	216	283	242
MIN	175	241	569	2060	1050	672	444	202	140	159	151	148
AC-FT	15700	32410	516000	1163000	157600	62360	32050	19380	11840	11250	11770	10840

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1940 - 1997	
ANNUAL TOTAL	1194449		1030669			
ANNUAL MEAN	3264		2824		2287	
HIGHEST ANNUAL MEAN					5898	1983
LOWEST ANNUAL MEAN					88.7	1977
HIGHEST DAILY MEAN	47000	Dec 31	75000	Jan 2	97700	Feb 18 1986
LOWEST DAILY MEAN	141	Aug 15	140	Jun 21	.75	May 6 1977
ANNUAL SEVEN-DAY MINIMUM	157	Aug 11	154	Sep 8	5.9	Jul 29 1977
INSTANTANEOUS PEAK FLOW			82100	Jan 1	102000	Feb 18 1986
INSTANTANEOUS PEAK STAGE			44.99	Jan 1	49.70	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	2369000		2044000		1657000	
10 PERCENT EXCEEDS	11300		6670		5500	
50 PERCENT EXCEEDS	665		338		353	
90 PERCENT EXCEEDS	181		169		140	

11467002 RUSSIAN RIVER AT JOHNSONS BEACH, AT GUERNEVILLE, CA

LOCATION.—Lat 38°30'03", long 122°59'36", in NE 1/4 NW 1/4 sec.32, T.8 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on downstream side of Highway 116 bridge, 0.1 mi upstream from Pocket Creek in Guerneville.

DRAINAGE AREA.—1353 mi².

PERIOD OF RECORD.—December 1939 to September 1954 published as "at Guerneville" (station 11467000). Oct. 13, 1995, to current year, stage only above 6.00 ft.

GAGE.—Water-stage recorder. Datum of gage is 8.67 ft above sea level.

REMARKS.—Records good. Stage data for the period June 1 to Sept. 30 is affected by summer recreation dam. Flow regulated by Lake Mendocino, 82 mi upstream, and by Lake Sonoma, 31 mi upstream. Many diversions upstream from station for irrigation of about 29,000 acres. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations 11461500 and 11462000) and by diversion for municipal use. See schematic diagram of Russian River Basin.

EXTREMES FOR PERIOD OUTSIDE OF RECORD.—Maximum elevation, 48.8 ft, Feb. 18, 1986.

EXTREMES FOR PERIOD OF RECORD.—Maximum elevation, 46.87 ft, Feb. 28, 1940.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.58	8.50	---	---	---	---	44.17	35.63	14.60	13.47	6.53	6.42
2	8.58	8.51	---	---	---	---	44.25	39.10	13.47	12.82	6.78	6.43
3	8.54	8.47	---	---	---	---	39.10	---	12.82	12.14	7.06	6.78
4	8.50	8.47	---	---	---	---	---	20.38	12.14	11.20	6.84	6.54
5	8.54	8.49	---	---	13.24	---	20.38	---	11.20	10.70	6.54	6.32
6	8.59	8.52	---	---	13.39	10.31	17.58	---	10.70	9.72	6.32	6.21
7	8.64	8.58	---	---	10.31	8.29	---	16.35	9.72	9.38	6.22	6.13
8	8.66	8.62	---	---	8.67	8.25	16.35	15.79	9.64	9.31	6.14	6.06
9	8.65	8.62	---	---	15.52	8.64	15.79	13.78	9.31	9.01	6.07	6.01
10	8.64	8.62	---	---	23.98	15.52	13.78	13.11	9.01	8.80	6.02	---
11	8.65	8.63	---	---	23.74	14.63	13.13	12.73	8.80	8.27	---	---
12	8.68	8.63	---	---	15.83	14.54	12.74	12.47	8.28	8.04	---	---
13	8.69	7.04	---	---	14.85	11.74	12.47	12.22	8.04	7.85	---	---
14	---	---	---	---	11.74	9.84	12.22	11.59	7.85	7.69	---	---
15	---	---	---	---	9.84	8.76	11.59	11.33	7.69	7.57	---	---
16	---	---	---	---	8.76	8.06	11.34	10.13	7.57	7.46	7.63	---
17	---	---	---	---	8.06	7.42	10.13	8.94	7.47	7.43	9.68	7.63
18	---	---	---	---	7.42	7.13	8.94	8.10	7.46	7.36	9.14	7.64
19	---	---	6.60	---	7.13	6.89	8.10	7.82	7.36	7.23	7.64	7.11
20	---	---	7.27	6.43	6.89	6.75	7.83	7.78	7.26	7.21	7.11	6.84
21	---	---	6.43	---	8.61	6.78	10.31	7.82	7.23	7.11	6.84	6.65
22	---	---	6.41	---	11.08	8.61	27.67	9.80	7.12	7.02	6.65	6.49
23	---	---	6.83	6.26	11.98	11.08	29.95	22.51	7.03	6.92	6.51	6.37
24	---	---	6.26	---	11.08	10.68	22.51	18.39	6.93	6.83	6.38	6.23
25	---	---	---	---	10.82	8.80	32.50	18.37	6.84	6.74	6.24	6.14
26	---	---	---	---	11.29	8.50	34.99	32.50	6.75	6.67	6.15	6.03
27	---	---	---	---	16.35	11.29	33.02	22.30	6.69	6.60	6.05	---
28	---	---	---	---	16.56	15.47	22.30	18.89	6.61	6.51	---	---
29	---	---	---	---	25.93	14.40	18.89	18.00	---	---	---	---
30	---	---	---	---	28.33	25.93	18.00	16.77	---	---	---	---
31	---	---	---	---	35.63	27.42	16.77	14.60	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	14.60	6.51	---	---

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11467590 GARCIA RIVER AT EUREKA HILL ROAD, NEAR POINT ARENA, CA

LOCATION.—Lat 38°54'12", long 123°36'28", in NW 1/4 SW 1/4, sec.14, T.12 N., R.16 W., Mendocino County, Hydrologic Unit 18010108, on upstream side of bridge, 1.9 mi upstream from North Fork Garcia River and 4.5 mi southeast of Point Arena.

DRAINAGE AREA.—83.2 mi².

PERIOD OF RECORD.—

SEDIMENT DATA: October 1992 to April 1997, storm season only (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
DEC 31...	1545	9280	1760	44100	25	29	38
DATE	TIME	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)
DEC 31...		51	65	78	91	98	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		BAG MESH SIZE			TETHER LINE USED IN	START-ING TIME	END-ING TIME	TIME ON BED FOR BED LOAD SAMPLE	HORI-ZONTAL WIDTH OF VER-TICAL (FEET)
DATE	TIME	SAM-PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BEDLOAD SAMPLER (MM) (30333)	SAMPLNG (YES=1) (CODE) (04117)	(2400 HOURS) (82073)	(2400 HOURS) (82074)	(04120)	(04121)
DEC 31...	1150	1000	1100	0.250	0	1115	1220	10	12.0
	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMNT (NUM) (04118)	VER-TICALS IN COM-POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM-PLING POINTS (COUNT) (00063)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	DISCH, AV UNIT FOR COM POSITE SAMPLE (TONS/ T/D/FT DAY) (04122)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)
	1	20	20	5.00	14000	45.9	10600	2	5
DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM (80236)			
DEC 31...	13	25	41	63	87	100			

11468000 NAVARRO RIVER NEAR NAVARRO, CA

LOCATION.—Lat 39°10'20", long 123°40'06", in SE 1/4 sec.7, T.15 N., R.16 W., Mendocino County, Hydrologic Unit 18010108, on right bank 2.9 mi downstream from North Fork, 5.2 mi upstream from mouth, and 6.8 mi west of Navarro.

DRAINAGE AREA.—303 mi².

PERIOD OF RECORD.—October 1950 to current year.

REVISED RECORDS.—WSP 1445: 1954(M). WSP 1929: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2.79 ft above sea level. Prior to Jan. 9, 1995, at datum 2.00 ft higher. Prior to Oct. 1, 1969, at site 0.2 mi upstream at datum 1.86 ft higher.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 64,500 ft³/s, Dec. 22, 1955, gage height, 40.60 ft, site and datum then in use, from rating curve extended above 19,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.23 ft³/s, July 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of December 1937 reached a stage of 38.2 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 7,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1100	12,800	23.47	Jan. 26	0430	15,700	25.31
Dec. 31	0900	40,600	35.09				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	21	50	32200	1260	332	174	93	46	23	10	5.9
2	7.4	18	64	13900	1070	462	162	91	45	22	10	6.1
3	7.9	17	60	4610	939	463	156	86	47	22	9.5	5.9
4	7.5	17	80	2600	958	401	150	83	71	22	9.3	5.6
5	7.5	16	2880	1710	866	376	144	79	70	21	9.0	5.3
6	7.4	15	837	1230	787	344	139	78	59	21	9.4	5.0
7	7.1	16	446	970	735	329	135	75	50	21	9.2	5.0
8	6.4	15	1160	917	688	316	129	75	42	21	8.5	5.0
9	6.5	16	3470	752	644	301	124	72	41	20	8.3	5.2
10	6.5	16	7500	646	675	289	120	71	44	19	8.0	5.2
11	6.6	16	2880	573	618	287	117	70	41	19	7.8	5.0
12	6.6	16	2420	529	580	285	114	70	38	16	7.1	5.3
13	6.9	16	1640	470	551	274	117	68	36	17	7.4	5.0
14	7.2	16	1130	416	518	268	112	66	34	17	7.6	6.1
15	7.3	16	869	385	488	263	111	62	34	16	7.4	8.0
16	7.5	16	660	352	467	465	103	60	34	15	7.2	15
17	8.8	19	521	329	561	1280	101	58	33	15	7.2	12
18	18	40	433	359	526	699	104	56	33	15	7.3	10
19	21	110	359	387	498	542	157	54	31	15	6.7	9.1
20	18	357	308	360	489	462	154	52	30	14	9.7	8.8
21	16	137	661	533	464	408	146	50	28	14	12	8.3
22	14	173	1390	3960	439	362	145	48	28	14	14	7.5
23	13	307	1590	3780	421	317	177	58	28	14	12	7.2
24	14	135	1070	1890	397	286	166	68	27	13	11	7.0
25	17	90	830	8930	378	263	145	59	27	12	10	7.0
26	21	70	974	10700	368	240	134	55	26	12	7.2	6.8
27	20	58	3270	4410	360	221	128	64	25	11	7.1	6.5
28	18	51	3260	2990	352	207	123	62	24	11	6.3	6.3
29	18	45	8880	2320	---	196	118	56	24	10	5.8	6.2
30	21	41	9070	1810	---	188	110	52	25	10	5.6	6.1
31	26	---	29500	1460	---	193	---	49	---	10	5.4	---
TOTAL	377.0	1896	88262	106478	17097	11319	4015	2040	1121	502	263.0	207.4
MEAN	12.2	63.2	2847	3435	611	365	134	65.8	37.4	16.2	8.48	6.91
MAX	26	357	29500	32200	1260	1280	177	93	71	23	14	15
MIN	6.4	15	50	329	352	188	101	48	24	10	5.4	5.0
AC-FT	748	3760	175100	211200	33910	22450	7960	4050	2220	996	522	411

11468000 NAVARRO RIVER NEAR NAVARRO, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.6	269	993	1723	1389	1066	485	136	50.6	20.3	11.1	10.2
MAX	367	2033	4396	6496	5522	4280	2517	499	200	46.7	26.8	32.6
(WY)	1958	1974	1965	1995	1958	1983	1982	1983	1993	1983	1983	1957
MIN	2.95	9.06	18.5	24.0	58.6	69.8	34.2	14.1	4.23	.62	.67	1.33
(WY)	1995	1991	1977	1991	1977	1988	1977	1977	1977	1977	1977	1991

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1951 - 1997	
ANNUAL TOTAL	271708.6		233577.4			
ANNUAL MEAN	742		640		513	
HIGHEST ANNUAL MEAN					1310	
LOWEST ANNUAL MEAN					25.0	
HIGHEST DAILY MEAN	29500	Dec 31	32200	Jan 1	45100	Jan 16 1974
LOWEST DAILY MEAN	5.5	Sep 29	5.0	Sep 6	.23	Jul 13 1977
ANNUAL SEVEN-DAY MINIMUM	6.6	Sep 26	5.1	Sep 5	.28	Jul 8 1977
INSTANTANEOUS PEAK FLOW			40600	Dec 31	64500	Dec 22 1955
INSTANTANEOUS PEAK STAGE			35.09	Dec 31	40.60	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	538900		463300		371600	
10 PERCENT EXCEEDS	2340		972		1200	
50 PERCENT EXCEEDS	136		58		59	
90 PERCENT EXCEEDS	9.3		7.2		7.6	

11468500 NOYO RIVER NEAR FORT BRAGG, CA

LOCATION.—Lat 39°25'42", long 123°44'12", in NE 1/4 sec.15, T.18 N., R.17 W., Mendocino County, Hydrologic Unit 18010108, on right bank 0.7 mi downstream from South Fork and 3.5 mi east of Fort Bragg.

DRAINAGE AREA.—106 mi².

PERIOD OF RECORD.—August 1951 to current year.

REVISED RECORDS.—WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 11.73 ft above sea level.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 26,600 ft³/s, Mar. 29, 1974, gage height, 27.14 ft, from rating curve extended above 4,500 ft³/s on basis of slope-conveyance study; minimum daily, 0.79 ft³/s, Sept. 8, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0330	3,140	12.80	Jan. 1	1915	11,000	23.30
Dec. 9	1845	4,620	15.61	Jan. 26	0215	3,790	14.10

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	8.4	71	9630	567	161	94	110	42	25	13	9.5
2	7.3	7.2	84	5670	479	266	87	101	39	24	13	9.2
3	7.1	6.7	60	2430	418	234	84	99	48	23	13	9.0
4	7.0	6.3	168	1550	427	210	82	89	90	23	13	8.8
5	6.8	5.9	1760	1090	396	192	79	82	70	23	12	8.8
6	6.5	5.2	613	806	373	185	76	77	59	22	11	8.8
7	6.5	4.7	444	e600	352	181	73	73	52	22	11	8.8
8	6.7	4.7	768	e460	321	172	71	71	47	22	9.8	8.8
9	6.5	4.8	2520	e400	298	158	68	68	42	22	9.3	8.8
10	6.1	4.4	3220	e340	309	148	67	64	40	21	9.5	8.8
11	6.2	4.1	1370	e320	282	140	65	62	37	20	9.2	8.6
12	5.9	3.9	981	e270	259	130	64	61	35	20	9.4	8.3
13	5.7	3.6	e720	e230	235	121	64	59	33	20	9.1	8.3
14	5.5	3.5	e560	e200	216	114	61	56	32	20	8.8	12
15	5.8	3.5	e450	e180	201	110	59	53	30	20	8.8	16
16	5.7	3.7	e360	e160	195	246	57	50	30	19	8.8	16
17	5.7	6.2	e295	e150	271	535	55	47	28	19	8.8	14
18	10	27	268	142	260	e439	76	44	27	19	8.8	13
19	14	124	226	136	280	e375	185	41	28	19	8.8	13
20	12	147	207	156	296	e312	176	40	28	18	16	16
21	9.1	72	387	265	286	e249	192	40	27	18	21	16
22	7.7	109	575	898	264	207	199	39	27	17	17	9.8
23	7.4	110	e686	1140	237	194	373	55	26	16	13	9.3
24	8.7	66	e640	756	210	180	316	52	25	16	13	8.8
25	14	48	e600	2000	191	160	245	45	24	16	12	8.2
26	14	38	e690	3190	187	142	198	48	24	15	10	7.3
27	11	32	e1140	1830	185	130	178	97	24	15	11	6.8
28	8.6	30	1350	1290	176	118	151	69	24	15	10	6.2
29	11	27	1760	1040	---	111	132	57	23	15	10	6.2
30	13	24	2630	822	---	105	118	49	25	14	9.6	5.9
31	10	---	8110	661	---	104	---	45	---	14	9.7	---
TOTAL	258.6	940.8	33713	38812	8171	6129	3745	1943	1086	592	347.4	299.0
MEAN	8.34	31.4	1088	1252	292	198	125	62.7	36.2	19.1	11.2	9.97
MAX	14	147	8110	9630	567	535	373	110	90	25	21	16
MIN	5.5	3.5	60	136	176	104	55	39	23	14	8.8	5.9
AC-FT	513	1870	66870	76980	16210	12160	7430	3850	2150	1170	689	593

e Estimated.

11468500 NOYO RIVER NEAR FORT BRAGG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	117	411	661	526	446	211	77.6	34.2	14.1	7.79	6.46
MAX	166	750	2293	1890	2114	1406	877	377	170	32.0	17.7	12.7
(WY)	1963	1974	1965	1953	1958	1983	1963	1990	1993	1953	1953	1983
MIN	2.97	5.29	9.25	16.6	18.1	32.4	11.7	9.50	3.88	1.90	1.35	2.16
(WY)	1979	1960	1977	1977	1977	1988	1977	1977	1977	1977	1977	1970

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1952 - 1997			
ANNUAL TOTAL	119796.2				96036.8							
ANNUAL MEAN	327				263				210			
HIGHEST ANNUAL MEAN									484			
LOWEST ANNUAL MEAN									10.9			
HIGHEST DAILY MEAN	8110				9630				20500			
LOWEST DAILY MEAN	3.5				3.5				.79			
ANNUAL SEVEN-DAY MINIMUM	3.8				3.8				1.0			
INSTANTANEOUS PEAK FLOW					11000				26600			
INSTANTANEOUS PEAK STAGE					23.30				27.14			
ANNUAL RUNOFF (AC-FT)	237600				190500				151900			
10 PERCENT EXCEEDS	892				563				519			
50 PERCENT EXCEEDS	91				49				32			
90 PERCENT EXCEEDS	7.2				7.3				5.2			

11469000 MATTOLE RIVER NEAR PETROLIA, CA

LOCATION.—Lat 40°18'48", long 124°16'56", in SE 1/4 NW 1/4 sec.10, T.2 S., R.2 W., Humboldt County, Hydrologic Unit 18010107, on downstream side of bridge, on left bank 0.2 mi downstream from Mill Creek, 0.8 mi south of Petrolia, and 0.6 mi upstream from North Fork.

DRAINAGE AREA.—245 mi².

PERIOD OF RECORD.—October 1911 to December 1913, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1285: 1912–13. WSP 1929: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 60 ft above sea level, from topographic map. November 1911 to December 1913, nonrecording gages at several sites upstream within 0.3 mi of present site at various datums. Dec. 11, 1950, to July 14, 1955, at site 0.3 mi upstream at datum 7.48 ft higher. July 15, 1955, to Oct. 26, 1967, at site 0.4 mi downstream at different datum. Oct. 27, 1967, to Oct. 30, 1996, at site 1.1 mi upstream at datum 7.00 ft higher.

REMARKS.—Records fair. Diversions for irrigation of about 350 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 90,400 ft³/s, Dec. 22, 1955, gage height, 36.60 ft, site and datum then in use, from rating curve extended above 26,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 17 ft³/s, Sept. 5, 15, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15,000 ft³/s, or maximum:

		Discharge	Gage height			Discharge	Gage height
Date	Time	(ft ³ /s)	(ft)	Date	Time	(ft ³ /s)	(ft)
Dec. 5	0200	19,400	21.23	Jan. 1	0200	45,100	27.79
Dec. 9	0645	36,300	25.73	Jan. 26	0515	19,200	21.33

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	84	1680	38100	3230	600	364	496	224	105	44	40
2	38	72	1320	19000	2630	3020	347	461	209	98	42	38
3	37	65	1240	10300	2180	2050	329	480	247	90	41	38
4	36	60	3660	5780	2330	1590	327	421	357	83	41	35
5	36	57	11100	3940	2280	1450	322	389	269	78	40	34
6	36	55	4310	2870	1880	1300	314	370	224	75	39	36
7	35	54	6160	2130	1660	1000	308	361	205	75	36	35
8	35	54	21400	1600	1420	926	301	341	191	75	35	32
9	34	53	27300	1220	1240	862	293	334	194	73	35	31
10	33	53	14200	1040	1210	762	282	325	201	71	35	33
11	32	52	9210	896	1160	701	278	318	192	70	36	33
12	32	51	7340	791	961	666	275	306	189	71	37	40
13	37	51	5920	707	870	609	272	297	175	73	38	37
14	38	50	4660	639	812	579	262	288	154	67	38	52
15	36	50	3910	621	751	523	258	280	146	62	37	87
16	35	51	3320	596	742	714	255	273	145	61	35	89
17	33	58	2900	613	945	1120	256	266	144	60	34	81
18	47	939	2630	565	831	769	289	257	135	59	32	102
19	70	6240	2430	563	1100	645	720	248	138	59	32	80
20	66	3670	2420	773	1070	592	1700	242	129	57	34	61
21	51	3220	3090	1560	932	548	1460	237	122	49	37	55
22	44	3180	3940	2000	826	523	1500	238	125	47	36	52
23	44	2070	4240	1850	767	506	1770	244	127	47	36	45
24	66	1460	3550	1610	724	482	1280	248	119	52	42	41
25	101	1350	3170	8790	669	449	929	232	106	55	46	39
26	121	1260	5040	14200	625	431	756	233	98	50	48	44
27	86	1210	6850	6620	691	418	634	272	102	48	63	39
28	68	1190	7380	7260	645	417	580	251	101	47	63	37
29	111	1150	14400	5600	---	395	553	226	99	45	56	39
30	163	1120	19100	3820	---	403	527	214	104	47	47	38
31	112	---	29800	3120	---	415	---	218	---	44	43	---
TOTAL	1751	29029	237670	149174	35181	25465	17741	9366	4971	1993	1258	1443
MEAN	56.5	968	7667	4812	1256	821	591	302	166	64.3	40.6	48.1
MAX	163	6240	29800	38100	3230	3020	1770	496	357	105	63	102
MIN	32	50	1240	563	625	395	255	214	98	44	32	31
AC-FT	3470	57580	471400	295900	69780	50510	35190	18580	9860	3950	2500	2860

11469000 MATTOLE RIVER NEAR PETROLIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	235	1420	2954	3600	2968	2262	1204	555	215	83.2	51.0	62.0
MAX	1900	7159	8340	8928	10710	7929	5225	1842	1058	191	164	237
(WY)	1951	1974	1956	1970	1958	1983	1963	1960	1993	1993	1983	1977
MIN	23.8	41.8	39.7	135	243	187	166	151	68.9	31.3	22.9	22.0
(WY)	1988	1960	1977	1977	1977	1988	1988	1970	1977	1977	1977	1970

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1912 - 1997			
ANNUAL TOTAL	665849				515042							
ANNUAL MEAN	1819				1411				1295			
HIGHEST ANNUAL MEAN									2642			
LOWEST ANNUAL MEAN									157			
HIGHEST DAILY MEAN	29800				Dec 31				55200			
LOWEST DAILY MEAN	32				Oct 11				17			
ANNUAL SEVEN-DAY MINIMUM	34				Oct 6				17			
INSTANTANEOUS PEAK FLOW					45100				Jan 1			
INSTANTANEOUS PEAK STAGE					27.79				Jan 1			
ANNUAL RUNOFF (AC-FT)	1321000				1022000				937900			
10 PERCENT EXCEEDS	4890				3220				3280			
50 PERCENT EXCEEDS	747				257				274			
90 PERCENT EXCEEDS	40				37				36			

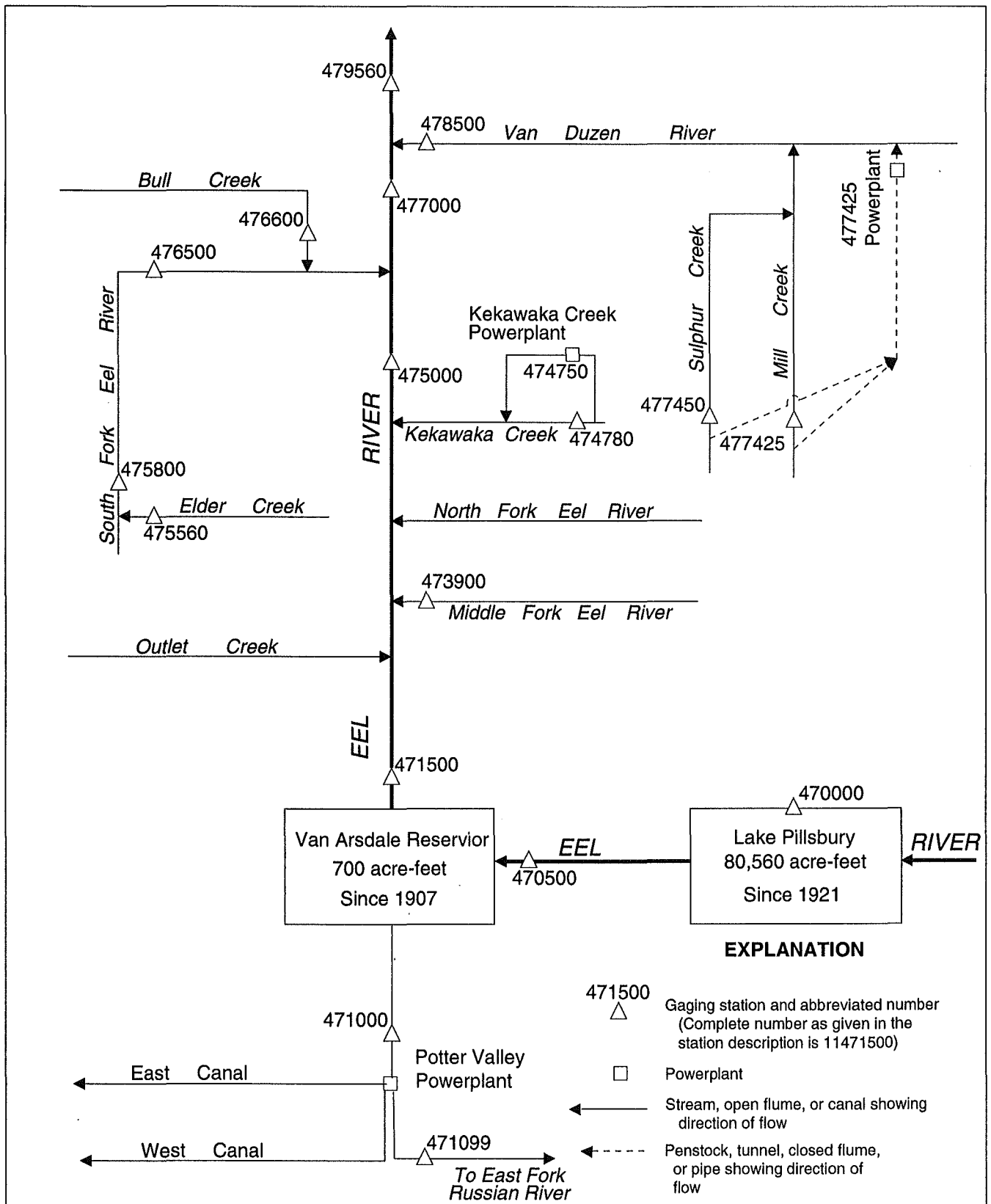


Figure 22. Diversions and storage in Eel River Basin.

11470000 LAKE PILLSBURY NEAR POTTER VALLEY, CA

LOCATION.—Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, at Scott Dam near right bank of Eel River, 0.3 mi downstream from Rice Fork, and 10.2 mi northeast of town of Potter Valley.

DRAINAGE AREA.—289 mi².

PERIOD OF RECORD.—October 1922 to September 1928 (daily gage heights only), October 1928 to current year. Monthend contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville."

GAGE.—Water-stage recorder and nonrecording gage. Datum of gage is 81.7 ft below sea level (river-profile survey). Prior to Jan. 26, 1950, nonrecording gage at same site and datum.

REMARKS.—Reservoir is formed by concrete overflow-type dam; storage began in December 1921. Beginning Oct. 1, 1985, capacity based on 1984 resurvey. Usable capacity, 80,556 acre-ft between gage heights 1,822.4 ft, sill of outlet gate, and 1,910.0 ft, top of spillway gates; dead storage, 87 acre-ft. Water is released down Eel River to Van Arsdale Reservoir, most of which is diverted through tunnel to Potter Valley Powerplant (station 11477100); part is then used for irrigation and remainder flows into East Fork Russian River. Records given, including extremes, represent total contents at 2400 hours. See schematic diagram of Eel River Basin.

COOPERATION.—Records collected by Pacific Gas & Electric 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, 95,600 acre-ft, May 13, 16, 1925, gage height, 1,910.8 ft; maximum gage height, 1,911.84 ft, Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft, Dec. 9, 10, 1931, gage height, 1,822.5 ft.

Capacity table (elevation, in feet, and contents in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated April 1984)

1,822.4	87	1,835	1,371	1,855	7,831	1,875	22,451	1,895	50,179
1,824	153	1,840	2,463	1,860	10,456	1,880	28,071	1,900	59,469
1,827	333	1,845	3,391	1,865	13,701	1,885	34,474	1,905	69,675
1,830	626	1,850	5,710	1,870	17,664	1,890	41,811	1,910	80,643

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

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40700	24100	23700	77100	62200	59300	66900	69800	67900	63400	55000	45400
2	40000	23900	23300	68700	61900	59700	66900	69800	67800	63100	54700	45000
3	39400	23600	22900	65700	61800	59800	67100	69800	67900	62900	54400	44700
4	38800	23400	24600	64100	61600	59800	67200	69700	67900	62600	54100	44300
5	38200	23100	32100	63100	61200	59700	67300	69600	67800	62400	53700	44000
6	37600	22800	35100	62500	61000	59600	67400	69600	67700	62100	53400	43600
7	37000	22500	37300	62000	60900	59500	67400	69500	67500	61900	53100	43200
8	36400	22200	41200	61700	60800	59300	67400	69500	67400	61600	52800	42900
9	35800	21900	50200	61400	60800	59100	67400	69500	67400	61400	52500	42600
10	35200	21700	57500	61200	60700	58900	67400	69500	67300	61100	52200	42200
11	34600	21400	64300	61000	60600	58700	67400	69500	67200	60900	51800	41900
12	34000	21000	63200	60900	60400	58700	67400	69500	67000	60500	51500	41500
13	33400	20700	62600	60800	60300	58500	67400	69500	66900	60300	51200	41100
14	32800	20500	61800	60600	60300	58400	67400	69500	66700	60000	50900	40900
15	32100	20200	61300	60500	60200	58400	67400	69400	66500	59700	50500	40600
16	31600	19900	60900	60400	60100	59900	67400	69200	66300	59600	50200	40200
17	31000	19900	60700	60300	60100	61300	67400	69100	66200	59200	49900	39900
18	30500	20600	60400	60300	60000	61600	67700	69000	66000	58900	49500	39500
19	29900	23900	60200	60200	60000	62300	68200	69000	65800	58700	49300	39200
20	29400	25100	60200	60300	60000	63000	68500	68900	65700	58300	49000	38900
21	29100	25500	60900	60900	59900	63700	68700	68700	65400	58100	48800	38600
22	28700	26300	61600	64700	59800	64300	69000	68500	65200	57800	48500	38200
23	28500	26500	61300	62900	59800	64800	69500	68600	65000	57600	48100	37900
24	28200	26400	60900	63000	59700	65200	69600	68600	64700	57300	47800	37600
25	27600	26100	60700	69500	59600	65600	69700	68500	64600	57100	47500	37300
26	27000	25700	65000	67600	59500	65800	69800	68400	64400	56800	47200	36800
27	26400	25200	64900	64900	59500	66200	69800	68400	64200	56500	46900	36300
28	25900	24800	65100	64700	59400	66400	69900	68300	64000	56200	46600	35900
29	25200	24300	70300	64500	---	66600	69800	68100	63800	56000	46300	35400
30	24700	23800	73000	63000	---	66800	69800	68000	63600	55700	46000	34900
31	24300	---	72700	62500	---	66900	---	68000	---	55300	45700	---
TOTAL	994000	697000	1679900	1961000	1692100	1917800	2044200	2141000	1985800	1843000	1559100	1210500
MEAN	32065	23233	54190	63258	60432	61865	68140	69065	66193	59452	50294	40350
MAX	40700	26500	73000	77100	62200	66900	69900	69800	67900	63400	55000	45400
MIN	24300	19900	22900	60200	59400	58400	66900	68000	63600	55300	45700	34900
a	1876.77	1876.29	1906.40	1901.53	1899.97	1903.66	1905.06	1904.19	1902.07	1897.84	1892.39	1885.31
b	-17000	-500	+48900	-10200	-3100	+7500	+2900	-1800	-4400	-8300	-9600	-10800

CAL YR 1996 TOTAL 22074900 MEAN 60314 MAX 79700 MIN 19900
WTR YR 1997 TOTAL 19725400 MEAN 54042 MAX 77100 MIN 19900

a Elevation in feet, at end of month.

b Change in contents, in acre-feet.

11470500 EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CA

LOCATION.—Lat 39°24'29", long 122°58'29", in SE 1/4 sec.15, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, on left bank 0.4 mi upstream from Soda Creek, 0.7 mi downstream from Scott Dam, and 9.7 mi northeast of town of Potter Valley.

DRAINAGE AREA.—290 mi².

PERIOD OF RECORD.—October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as "South Eel River at Hullville," and October 1929 to September 1953, "at Hullville."

REVISED RECORDS.—WSP 1315-B: 1923(M), 1938(M). WSP 1395: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,740 ft above sea level, from topographic map. Prior to Dec. 15, 1930, at datum 3.00 ft higher.

REMARKS.—Flow regulated by Lake Pillsbury (station 11470000) 0.7 mi upstream. No diversion upstream from station. See schematic diagram of Eel River Basin.

COOPERATION.—Records collected by Pacific Gas & Electric 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, 56,300 ft³/s, Dec. 22, 1964, gage height, 24.24 ft, from floodmarks, from rating curve extended above 37,000 ft³/s; minimum daily, 0.1 ft³/s, Sept. 8, 1924.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	357	158	378	30400	1670	418	215	179	121	123	150	154
2	355	159	377	16200	1460	440	228	191	118	120	150	154
3	354	154	375	6530	1310	482	181	195	118	125	150	173
4	353	151	389	3780	1230	466	187	196	118	145	150	188
5	352	147	361	2670	1140	444	187	193	115	141	151	178
6	350	155	336	2000	1050	427	187	186	114	133	152	172
7	349	162	317	1610	994	421	186	168	119	130	152	182
8	348	162	299	1390	946	418	186	140	126	130	152	189
9	347	162	297	1240	900	416	181	128	123	135	155	189
10	351	161	657	1130	875	417	180	126	121	142	157	182
11	353	165	2750	1050	824	417	180	122	121	142	156	175
12	359	168	3250	985	773	361	180	122	115	142	156	180
13	361	168	2380	920	718	303	180	120	116	143	156	182
14	360	168	1700	847	670	288	180	139	123	143	156	183
15	358	166	1300	814	632	278	170	154	129	143	156	182
16	357	166	1060	768	603	353	167	154	129	136	156	181
17	355	168	883	721	611	1120	155	147	127	132	156	181
18	355	169	780	677	586	653	159	143	127	128	155	180
19	352	175	688	639	570	299	173	142	127	131	156	172
20	304	176	587	630	566	245	211	140	126	132	157	163
21	165	189	896	794	534	165	213	139	125	132	156	167
22	164	253	1190	2080	506	191	213	137	125	131	155	176
23	163	331	1360	2790	481	175	215	125	124	125	155	176
24	185	378	1130	1770	456	187	217	123	123	121	155	175
25	333	386	962	7480	434	226	220	123	123	124	155	174
26	367	385	1810	10100	424	216	201	127	122	137	155	250
27	367	383	4560	5000	422	186	201	127	126	134	155	266
28	365	382	4420	3810	419	191	205	126	128	128	154	265
29	365	381	8060	3190	---	206	203	126	125	128	154	264
30	362	379	10700	2440	---	216	198	125	123	148	154	264
31	199	---	23100	1950	---	218	---	125	---	159	154	---
TOTAL	10065	6707	77352	116405	21804	10843	5759	4488	3677	4163	4781	5717
MEAN	325	224	2495	3755	779	350	192	145	123	134	154	191
MAX	367	386	23100	30400	1670	1120	228	196	129	159	157	266
MIN	163	147	297	630	419	165	155	120	114	120	150	154
AC-FT	19960	13300	153400	230900	43250	21510	11420	8900	7290	8260	9480	11340

11470500 EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	221	277	754	1291	1384	1045	663	329	195	178	180	210
MAX	361	1851	4945	5687	6625	4536	3357	1184	438	329	334	336
(WY)	1963	1974	1965	1970	1986	1983	1982	1983	1993	1959	1959	1996
MIN	19.1	13.3	27.6	35.8	7.28	11.8	15.4	34.4	50.3	64.5	65.0	34.4
(WY)	1978	1934	1960	1944	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1923 - 1997	
ANNUAL TOTAL	351116		271761			
ANNUAL MEAN	959		745		557	
HIGHEST ANNUAL MEAN					1443	
LOWEST ANNUAL MEAN					85.4	
HIGHEST DAILY MEAN	23100	Dec 31	30400	Jan 1	45300	Dec 22 1964
LOWEST DAILY MEAN	125	Jun 19	114	Jun 6	.10	Sep 8 1924
ANNUAL SEVEN-DAY MINIMUM	134	Jun 18	118	Jun 1	.43	Sep 6 1924
INSTANTANEOUS PEAK FLOW			32200	Jan 1	56300	Dec 22 1964
INSTANTANEOUS PEAK STAGE			18.65	Jan 1	24.24	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	696400		539000		403600	
10 PERCENT EXCEEDS	2540		1160		1100	
50 PERCENT EXCEEDS	366		187		232	
90 PERCENT EXCEEDS	154		126		90	

11471000 POTTER VALLEY POWERHOUSE INTAKE NEAR POTTER VALLEY, CA

LOCATION.—Lat 39°22'00", long 123°07'35", in SW 1/4 SW 1/4 sec.31, T.18 N., R.11 W., Mendocino County, Hydrologic Unit 18010103, in penstock of powerhouse of Pacific Gas & Electric Co., 1.5 mi southwest of Van Arsdale Dam, and 3.2 mi northwest of town of Potter Valley.

PERIOD OF RECORD.—December 1909 to current year. Prior to October 1922, monthly discharge only, published in WSP 1315-B. Prior to October 1931, published as Snow Mountain Water and Power Co.'s Tailrace near Potter Valley. October 1931 to September 1984, published as Potter Valley Powerhouse Tailrace near Potter Valley.

REVISED RECORDS.—WSP 1395: 1950. WDR CA-89-2: 1988.

GAGE.—Acoustic flowmeter in penstock of powerplant. Elevation of gage is 1,440 ft above sea level, from topographic map. Prior to Dec. 11, 1985, water-stage recorder and Parshall flume. See WSP 1929 for history of changes prior to Apr. 12, 1950.

REMARKS.—Water is diverted from Eel River above Van Arsdale Dam. After passing through powerhouse, part is used for irrigation in Potter Valley and remainder flows into East Fork Russian River. See schematic diagram of Eel River Basin.

COOPERATION.—Records collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD (1922 TO CURRENT YEAR).—Maximum daily discharge, 351 ft³/s, Oct. 31, 1982; no flow at times in several years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	159	306	11	328	171	156	89	135	127	154	153
2	325	163	303	1.5	328	174	150	89	135	127	154	154
3	323	162	286	88	327	168	156	91	127	129	154	154
4	323	154	283	80	328	171	126	91	127	126	151	177
5	322	154	65	82	328	171	124	91	135	136	153	186
6	321	151	316	80	330	169	123	101	133	132	151	183
7	320	159	328	82	178	171	127	97	127	135	151	175
8	319	166	331	104	177	171	127	98	130	133	151	174
9	318	166	331	142	171	172	126	100	136	133	153	175
10	320	163	315	141	172	171	124	100	136	129	153	174
11	323	163	129	242	174	171	126	100	136	138	153	188
12	325	168	127	242	174	171	127	100	133	130	151	177
13	329	168	256	327	174	171	126	100	129	130	153	177
14	328	168	324	328	172	154	127	98	127	129	154	177
15	327	166	325	325	172	157	129	129	133	130	154	188
16	324	168	327	325	174	163	107	132	136	129	156	188
17	322	166	328	328	175	174	118	141	130	129	154	186
18	326	168	325	328	174	174	91	141	130	126	154	186
19	321	166	325	330	178	172	95	133	135	129	153	186
20	313	147	324	331	177	171	92	133	133	126	154	188
21	172	172	324	330	174	172	94	133	133	126	159	182
22	169	228	324	330	171	153	95	136	130	130	154	174
23	170	298	324	330	172	157	97	135	130	130	154	175
24	178	290	325	331	172	156	153	132	130	130	154	171
25	170	295	324	153	171	154	141	132	129	124	154	175
26	175	289	324	153	174	154	139	126	127	126	154	166
27	328	283	136	148	172	154	118	133	127	127	154	166
28	327	280	188	148	171	130	89	136	127	130	154	166
29	329	277	188	148	---	154	91	135	132	132	153	166
30	331	274	124	327	---	151	91	132	129	130	154	166
31	222	---	124	328	---	156	---	135	---	150	154	---
TOTAL	9025	5931	8359	6643.5	5788	5078	3585	3619	3937	4038	4759	5253
MEAN	291	198	270	214	207	164	120	117	131	130	154	175
MAX	331	298	331	331	330	174	156	141	136	150	159	188
MIN	169	147	65	1.5	171	130	89	89	127	124	151	153
AC-FT	17900	11760	16580	13180	11480	10070	7110	7180	7810	8010	9440	10420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	187	193	210	224	242	243	231	213	177	159	155	179
MAX	321	311	311	316	325	324	326	330	325	314	320	314
(WY)	1991	1963	1982	1982	1982	1993	1996	1982	1982	1953	1953	1967
MIN	.000	9.70	3.10	15.4	11.8	.000	18.9	39.0	38.5	11.0	2.29	2.67
(WY)	1960	1934	1934	1944	1977	1950	1977	1977	1920	1920	1920	1920

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1910 - 1997

ANNUAL TOTAL	96661	66015.5	
ANNUAL MEAN	264	181	
HIGHEST ANNUAL MEAN			201
LOWEST ANNUAL MEAN			305
HIGHEST DAILY MEAN	337	Sep 5	331
LOWEST DAILY MEAN	53	May 13	1.5
ANNUAL SEVEN-DAY MINIMUM	123	Jan 24	61
ANNUAL RUNOFF (AC-FT)	191700		130900
10 PERCENT EXCEEDS	327		325
50 PERCENT EXCEEDS	321		154
90 PERCENT EXCEEDS	158		124

11471099 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CA

LOCATION.—Lat 39°21'42", long 123°07'38", in SW 1/4 NW 1/4 sec.6, T.17 N., R.11 W., Mendocino County, Hydrologic Unit 18010103, 100 ft downstream from powerhouse of Pacific Gas and Electric Co., 1.8 mi southwest of Van Arsdale Dam, and 2.9 mi northwest of town of Potter Valley.

PERIOD OF RECORD.—October 1987 to current year. October 1931 to September 1984, record published for Potter Valley Powerhouse Intake (station 11471000) not equivalent because diversion for irrigation is included.

GAGE.—Discharge computed as difference between Potter Valley Powerhouse Intake (station 11471000) and the combined flows of Potter Valley Irrigation District East Canal (station 11471105) and Potter Valley Irrigation District West Canal (station 11471106). Elevation of tailrace is 1,020 ft above sea level, from topographic map.

REMARKS.—Flow represents inflow into the Russian River basin after passing through powerhouse. See schematic diagrams of Eel and Russian River Basins.

COOPERATION.—Records collected by Pacific Gas and Electric 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, 331 ft³/s, Oct. 30 and Dec. 8, 1997; no flow Apr. 4, 5, and July 18–20, 1990; Nov. 15 19, 1993 and many days in 1995.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	158	303	11	328	170	154	88	123	103	128	140
2	315	162	302	1.2	328	173	149	88	125	103	132	141
3	315	159	286	88	326	167	151	90	122	104	132	140
4	315	149	281	80	327	170	116	90	125	107	127	155
5	314	149	64	82	327	170	123	90	133	116	129	164
6	313	146	316	80	329	168	122	94	131	107	123	165
7	304	154	328	82	177	170	126	86	112	112	121	158
8	297	163	331	103	176	170	120	76	111	108	121	153
9	294	163	330	142	170	171	116	83	121	105	123	148
10	296	160	314	140	171	170	119	84	123	101	126	147
11	299	160	128	242	173	170	125	83	122	110	127	167
12	301	165	126	241	173	169	126	81	119	100	125	159
13	305	162	254	324	173	167	125	73	116	100	127	163
14	304	163	321	325	171	150	126	67	111	100	127	170
15	303	163	322	321	171	152	128	98	116	99	129	187
16	309	165	324	322	173	160	99	104	112	98	131	187
17	307	163	325	327	174	173	107	118	102	100	131	183
18	323	166	322	327	173	173	82	120	101	96	131	185
19	318	166	322	329	177	171	94	114	107	98	127	185
20	310	146	321	329	176	170	91	113	106	97	136	187
21	169	172	321	328	173	171	93	107	106	97	146	181
22	156	227	320	327	170	152	94	113	102	101	142	166
23	157	297	321	329	171	155	96	119	102	100	145	161
24	172	288	322	330	171	154	152	124	104	103	145	153
25	164	293	321	152	170	152	140	127	101	96	144	156
26	169	288	320	152	173	152	138	123	99	97	141	149
27	326	282	136	147	171	152	117	132	101	97	141	154
28	327	279	187	148	170	129	88	135	101	99	132	156
29	329	277	187	147	---	152	90	134	107	102	130	153
30	331	274	123	327	---	149	90	125	105	102	135	151
31	222	---	123	328	---	154	---	126	---	122	139	---
TOTAL	8672	5859	8301	6611.2	5762	5026	3497	3205	3366	3180	4093	4864
MEAN	280	195	268	213	206	162	117	103	112	103	132	162
MAX	331	297	331	330	329	173	154	135	133	122	146	187
MIN	156	146	64	1.2	170	129	82	67	99	96	121	140
AC-FT	17200	11620	16470	13110	11430	9970	6940	6360	6680	6310	8120	9650

EEL RIVER BASIN

11471099 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	189	163	179	196	222	237	195	175	141	106	107	155
MAX	311	245	292	291	319	323	324	316	291	160	151	286
(WY)	1991	1991	1989	1989	1996	1993	1996	1993	1993	1993	1996	1996
MIN	79.3	90.1	60.5	35.8	45.0	51.4	53.7	97.0	59.0	60.1	81.5	66.4
(WY)	1989	1988	1995	1991	1991	1995	1990	1988	1994	1994	1988	1994

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1988 - 1997

ANNUAL TOTAL	92754	62436.2	
ANNUAL MEAN	253	171	172
HIGHEST ANNUAL MEAN			236
LOWEST ANNUAL MEAN			82.8
HIGHEST DAILY MEAN	331	Oct 30	331
LOWEST DAILY MEAN	36	May 13	1.2
ANNUAL SEVEN-DAY MINIMUM	122	Jan 25	61
ANNUAL RUNOFF (AC-FT)	184000		123800
10 PERCENT EXCEEDS	325		321
50 PERCENT EXCEEDS	306		151
90 PERCENT EXCEEDS	131		97
			124400
			317
			129
			71

11471500 EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CA

LOCATION.—Lat 39°23'19", long 123°06'54", in NE 1/4 sec.30, T.18 N., R.11 W, Mendocino County, Hydrologic Unit 18010103, on left bank 1,000 ft downstream from Van Arsdale Dam and 4.6 mi north of town of Potter Valley.

DRAINAGE AREA.—349 mi².

PERIOD OF RECORD.—November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water and Power Co.'s tailrace near Potter Valley), October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Van Arsdale Dam, near Potter Valley.

REVISED RECORDS.—WSP 1315-B: 1913, 1920–23, 1925–27. WSP 1395: 1923(M), 1938.

GAGE.—Water-stage recorder. Elevation of gage is 1,400 ft above sea level, from topographic map. Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, nonrecording gage at present site and datum.

REMARKS.—Flow regulated by Lake Pillsbury (station 11470000) 11 mi upstream. Low flows may be further regulated at Van Arsdale Dam by calibrated gates in dam and fish ladder. Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley Powerhouse Intake (station 11471000), after which part is used for irrigation and remainder flows into East Fork Russian River (see station 11471099). Records given represent only flow in the Eel River. See schematic diagram of Eel River Basin.

COOPERATION.—Records collected by Pacific Gas and Electric 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, 64,100 ft³/s, Dec. 22, 1964, gage height, 33.9 ft from floodmarks; no flow at times.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	13	108	32200	2040	272	142	159	10	7.3	7.8	8.2
2	7.8	10	75	20500	1640	355	143	151	9.5	7.7	8.2	8.2
3	7.9	11	75	10000	1360	341	140	161	9.7	7.7	8.2	8.2
4	7.5	10	366	6050	1230	325	134	157	9.7	7.8	8.2	8.3
5	7.8	10	1380	4140	1060	306	131	150	9.7	7.8	8.1	8.3
6	7.8	11	359	2970	953	291	126	134	8.9	7.8	8.1	8.1
7	7.9	13	271	2280	926	281	124	121	8.8	7.8	8.1	8.0
8	7.5	11	310	1810	848	278	121	87	9.5	7.7	8.1	8.1
9	7.9	11	510	1480	775	274	119	63	9.4	7.7	8.1	8.3
10	7.9	11	1240	1230	740	273	114	59	9.1	7.7	8.2	8.4
11	8.2	11	3530	1030	672	271	111	53	9.3	7.7	8.2	8.2
12	8.1	13	4380	874	609	246	109	50	9.8	7.7	8.3	8.1
13	8.2	14	2870	728	549	200	109	46	7.6	7.7	8.3	8.2
14	7.9	14	1910	624	506	195	108	47	8.1	7.7	8.3	8.2
15	7.8	13	1250	568	464	181	103	51	8.3	7.9	8.3	8.2
16	7.9	14	855	516	434	356	101	41	8.3	7.8	8.3	8.0
17	7.8	31	619	460	459	1180	106	32	8.7	7.8	8.3	11
18	7.9	128	449	408	421	717	128	23	8.8	8.1	8.3	7.7
19	7.8	353	378	364	408	271	172	25	8.8	8.1	8.3	8.0
20	7.9	139	292	368	400	235	212	23	8.7	7.7	8.4	7.9
21	8.0	43	775	640	376	157	209	22	8.7	7.7	8.4	8.0
22	7.9	72	1220	2630	349	161	211	18	8.7	7.8	8.3	7.9
23	8.1	75	1540	3840	327	150	235	20	8.7	7.6	8.3	8.1
24	8.2	75	1100	2360	308	139	173	19	8.6	7.4	8.4	7.9
25	8.1	75	805	9500	292	178	166	18	7.2	7.3	8.3	8.1
26	8.0	75	2030	12500	281	167	156	21	8.5	7.5	8.3	7.7
27	8.0	76	6610	7000	279	144	170	23	8.7	7.3	8.3	7.7
28	7.9	76	6260	5140	275	140	186	16	8.7	7.4	8.3	7.7
29	7.8	75	9720	4210	---	139	179	17	8.7	7.4	8.3	7.7
30	7.8	75	13700	3020	---	147	175	16	8.0	7.3	8.3	7.7
31	9.4	---	27000	2400	---	148	---	14	---	7.0	8.3	---
TOTAL	246.6	1558	91987	141840	18981	8518	4413	1837	265.2	236.9	255.6	244.1
MEAN	7.95	51.9	2967	4575	678	275	147	59.3	8.84	7.64	8.25	8.14
MAX	9.4	353	27000	32200	2040	1180	235	161	10	8.1	8.4	11
MIN	7.5	10	75	364	275	139	101	14	7.2	7.0	7.8	7.7
AC-FT	489	3090	182500	281300	37650	16900	8750	3640	526	470	507	484

11471500 EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.9	129	727	1364	1460	1033	557	166	23.3	5.17	5.60	5.34
MAX	153	2389	5249	6296	8904	5492	3863	1174	233	13.4	54.1	27.9
(WY)	1963	1974	1965	1970	1986	1983	1982	1983	1993	1990	1980	1959
MIN	.86	1.30	1.78	2.00	3.62	2.00	2.00	2.00	1.07	1.06	1.09	1.10
(WY)	1953	1953	1937	1924	1977	1924	1924	1924	1931	1931	1931	1931

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1923 - 1997

ANNUAL TOTAL	336899.1	270382.4	
ANNUAL MEAN	920	741	448
HIGHEST ANNUAL MEAN			1546
LOWEST ANNUAL MEAN			3.46
HIGHEST DAILY MEAN	27000	Dec 31	32200 Jan 1
LOWEST DAILY MEAN	5.1	Jul 28	7.0 Jul 31
ANNUAL SEVEN-DAY MINIMUM	6.2	Jul 24	7.3 Jul 25
INSTANTANEOUS PEAK FLOW			33700 Jan 1
INSTANTANEOUS PEAK STAGE			27.68 Jan 1
ANNUAL RUNOFF (AC-FT)	668200	536300	324700
10 PERCENT EXCEEDS	2910	1230	1070
50 PERCENT EXCEEDS	75	25	9.1
90 PERCENT EXCEEDS	8.0	7.8	2.0

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CA

LOCATION.—Lat 39°42'23", long 123°19'27", in NE 1/4 SE 1/4 sec.5, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010104, on right bank 0.6 mi upstream from Eastman Creek, 1.7 mi southeast of Dos Rios, and 1.9 mi upstream from mouth.

DRAINAGE AREA.—745 mi².

PERIOD OF RECORD.—October 1965 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 901.58 ft above sea level.

REMARKS.—Records fair for discharges below 5,000 ft³/s and poor for discharges above. Estimated discharges are poor. No regulation or diversion upstream from station. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 135,100 ft³/s, Jan. 1, 1997, gage height, 31.46 ft, from rating curve extended above 52,000 ft³/s; minimum daily, 0.39 ft³/s, Sept. 1, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 25,000 ft³/s, or maximum.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0400	27,400	17.86	Jan. 26	0130	31,400	16.90
Jan. 1	unknown	135,000	31.46				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	60	1220	e81200	e5240	1360	785	907	189	94	26	17
2	16	55	1060	e43100	e4560	2390	701	823	182	93	24	16
3	15	53	642	e23200	e3890	2080	644	753	182	86	22	15
4	15	49	1240	e13800	e3430	1830	590	689	500	79	22	15
5	15	47	15300	e9120	e3080	1730	533	633	354	73	21	14
6	15	45	4080	e6410	e2700	1640	479	580	247	68	20	14
7	15	43	3200	4890	2550	1580	444	537	214	65	19	13
8	15	41	6970	4150	2410	1540	415	498	196	e59	18	12
9	14	41	11000	3420	2220	1490	394	465	199	e57	16	12
10	14	40	12900	2960	2300	1450	374	439	249	e54	15	13
11	13	39	5520	2640	2070	1440	352	411	217	57	15	13
12	14	37	5380	2360	1900	1390	337	385	185	56	15	13
13	14	37	4440	2060	1730	1330	332	365	175	53	15	13
14	14	37	2990	1750	1620	1280	316	346	167	50	15	16
15	15	37	2160	1720	1540	1240	306	331	156	47	14	28
16	16	39	1640	1550	1500	3460	298	314	145	45	13	30
17	16	54	1310	1430	2320	6630	298	299	136	44	12	27
18	21	1230	1040	1290	2050	3300	318	279	130	42	12	26
19	26	3350	821	1180	2000	2540	1980	262	124	40	12	26
20	32	2890	752	1250	2150	2260	2030	250	118	38	22	25
21	32	1330	2340	3110	1980	2120	2450	239	115	36	29	23
22	28	1920	2450	8550	1850	1850	2650	228	110	35	30	22
23	26	1620	2270	5680	1740	1680	3880	262	107	33	24	21
24	29	1020	1510	3920	1630	1530	2680	298	104	31	21	19
25	35	793	1270	23600	1540	1400	2140	248	100	29	20	18
26	55	552	6090	27100	1500	1310	1800	223	95	29	20	17
27	64	385	17700	13600	1490	1210	1550	255	89	28	20	16
28	55	310	12700	17900	1440	1080	1330	244	87	27	19	16
29	53	279	23100	e8890	---	967	1160	222	87	26	19	16
30	54	224	31200	e7430	---	894	985	202	88	24	18	15
31	59	---	e47500	e6080	---	885	---	186	---	26	18	---
TOTAL	821	16657	231795	335340	64430	56886	32551	12173	5047	1524	586	541
MEAN	26.5	555	7477	10820	2301	1835	1085	393	168	49.2	18.9	18.0
MAX	64	3350	47500	81200	5240	6630	3880	907	500	94	30	30
MIN	13	37	642	1180	1440	885	298	186	87	24	12	12
AC-FT	1630	33040	459800	665100	127800	112800	64560	24150	10010	3020	1160	1070

e Estimated.

BEL RIVER BASIN

11473900 MIDDLE FORK BEL RIVER NEAR DOS RIOS, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	101	1158	2521	4337	3338	3368	2033	1221	389	80.3	24.7	23.6
MAX	475	6823	7477	13540	12870	8622	6632	3852	1744	262	62.3	172
(WY)	1980	1974	1997	1970	1986	1983	1982	1983	1993	1993	1993	1986
MIN	5.11	26.9	30.5	94.3	172	384	333	241	82.5	13.2	4.33	1.04
(WY)	1995	1996	1977	1977	1977	1977	1977	1977	1977	1977	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1966 - 1997	
ANNUAL TOTAL	770467		758351			
ANNUAL MEAN	2105		2078		1543	
HIGHEST ANNUAL MEAN					3351	
LOWEST ANNUAL MEAN					121	
HIGHEST DAILY MEAN	47500	Dec 31	81200	Jan 1	81200	Jan 1 1997
LOWEST DAILY MEAN	13	Oct 11	12	Aug 17	.39	Sep 1 1994
ANNUAL SEVEN-DAY MINIMUM	14	Oct 8	13	Sep 7	.42	Aug 28 1994
INSTANTANEOUS PEAK FLOW			135000	Jan 1	135000	Jan 1 1997
INSTANTANEOUS PEAK STAGE			31.46	Jan 1	31.46	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	1528000		1504000		1118000	
10 PERCENT EXCEEDS	4830		3880		3740	
50 PERCENT EXCEEDS	1050		279		339	
90 PERCENT EXCEEDS	18		16		15	

11474780 KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION, NEAR ZENIA, CA

LOCATION.—Lat 40°06'37", long 123°27'59", in SW 1/4 SE 1/4 sec.14, T.4 S., R.6 E., Trinity County, Hydrologic Unit 18010105, on left bank approximately 200 ft downstream from diversion dam, 3.6 mi upstream from confluence with Eel River, and 6.7 mi south of Zenia.

DRAINAGE AREA.—20.7 mi².

PERIOD OF RECORD.—January 1990 to current year.

GAGE.—Water-stage recorder, and 120° V-notch weir. Elevation of gage is 1,480 ft above sea level, from topographic map.

REMARKS.—Water is diverted from creek upstream from gage to Kekawaka Creek Powerplant (station 11474750). See station 11474781 for records of combined discharge of creek and powerplant. See schematic diagram of Eel River Basin.

COOPERATION.—Records provided by STS Hydro Power Ltd., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Creek only, maximum discharge, 3,040 ft³/s, Dec. 31, 1996 gage height, 11.03 ft.

Combined flow: Maximum discharge, 3,040 ft³/s, Dec. 31, 1996.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.20	2.0	31	1700	69	14	2.8	5.5	3.8	2.4	.46	.76
2	e.20	1.8	3.9	652	35	19	2.8	2.9	3.6	2.1	.45	.72
3	e.20	1.7	3.8	306	26	9.6	2.7	2.7	9.2	1.9	.42	.67
4	e.20	1.6	204	208	38	5.1	2.7	2.7	12	1.7	.38	.64
5	e.20	1.5	408	160	18	3.6	2.7	2.7	6.5	1.6	.34	.62
6	e.20	1.4	115	110	9.3	3.0	2.7	2.7	5.2	1.5	.29	.60
7	e.20	1.4	105	98	6.3	2.7	2.7	2.7	4.5	1.4	.27	.61
8	e.20	1.5	155	59	3.4	2.5	2.6	2.7	4.1	1.3	.24	.61
9	e.20	1.6	463	15	3.2	2.3	2.4	2.7	6.2	1.3	.19	.56
10	e.20	1.5	498	14	6.2	2.3	2.3	2.7	5.0	1.3	.21	.57
11	.20	1.5	188	14	3.2	2.2	2.3	2.7	3.9	1.3	.24	.66
12	.37	1.6	109	14	2.4	2.2	2.3	2.7	3.7	1.2	.29	.74
13	.69	1.7	119	24	2.2	2.1	2.3	2.6	3.5	1.0	.25	.73
14	.71	1.6	48	22	2.1	2.2	2.3	2.6	3.4	.92	e.60	1.1
15	.63	1.6	12	2.6	2.3	2.2	2.4	2.6	3.1	.87	e.90	1.5
16	.62	1.6	3.8	7.1	2.4	36	2.4	4.3	2.9	.84	e.90	1.3
17	.70	2.6	3.4	2.4	4.7	24	2.3	5.0	2.7	.83	e.90	.92
18	1.8	10	3.3	2.3	2.3	7.3	2.2	4.6	2.9	.86	e.90	.59
19	1.9	93	3.3	2.4	3.3	5.2	2.8	4.3	2.7	.79	e1.0	1.2
20	1.4	48	18	2.5	2.2	4.7	4.9	4.2	2.6	.70	e1.3	.94
21	1.2	23	61	65	2.1	4.3	5.4	3.9	2.6	.64	1.8	.79
22	1.1	5.7	96	127	2.1	4.0	27	3.8	2.5	.67	1.2	.72
23	1.3	3.3	108	78	2.1	3.6	18	8.1	2.4	.63	.97	.67
24	2.0	3.3	60	75	2.0	3.4	5.4	6.0	2.4	.55	.93	.61
25	3.7	3.2	51	592	4.0	3.2	3.5	4.3	2.2	.50	.91	.54
26	2.9	3.2	207	490	2.2	10	3.2	5.7	2.2	.46	.94	.53
27	1.6	5.2	242	209	2.2	3.6	3.0	6.5	2.2	.43	1.1	.60
28	1.6	8.5	211	294	17	3.4	3.0	4.8	2.2	.40	.99	.68
29	3.4	7.1	735	150	---	3.2	3.0	4.2	2.2	.42	.87	.62
30	3.1	7.1	998	90	---	3.0	2.9	3.7	2.9	.51	.84	.55
31	2.4	---	1380	73	---	2.9	---	3.8	---	.50	.81	---
TOTAL	35.32	248.8	6643.5	5658.3	275.2	196.8	127.0	120.4	115.3	31.52	21.89	22.35
MEAN	1.14	8.29	214	183	9.83	6.35	4.23	3.88	3.84	1.02	.71	.75
MAX	3.7	93	1380	1700	69	36	27	8.1	12	2.4	1.8	1.5
MIN	.20	1.4	3.3	2.3	2.0	2.1	2.2	2.6	2.2	.40	.19	.53
AC-FT	70	493	13180	11220	546	390	252	239	229	63	43	44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.91	3.70	55.3	111	40.0	46.1	12.4	9.64	5.29	1.91	.75	.52
MAX	1.29	8.29	214	262	99.1	198	51.4	21.1	14.2	4.09	1.88	1.05
(WY)	1994	1997	1997	1995	1996	1995	1995	1990	1993	1993	1993	1995
MIN	.52	1.31	3.48	5.08	8.02	5.12	3.36	3.59	1.90	.51	.036	.008
(WY)	1995	1991	1991	1991	1991	1994	1991	1994	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1990 - 1997		
ANNUAL TOTAL	16971.42			13496.38					
ANNUAL MEAN	46.4			37.0			24.7		
HIGHEST ANNUAL MEAN							49.4		
LOWEST ANNUAL MEAN							6.47		
HIGHEST DAILY MEAN	1380			1700			1700		
LOWEST DAILY MEAN	.20			.19			.00		
ANNUAL SEVEN-DAY MINIMUM	.20			.20			.00		
INSTANTANEOUS PEAK FLOW				3040			3040		
INSTANTANEOUS PEAK STAGE				11.03			11.03		
ANNUAL RUNOFF (AC-FT)	33660			26770			17910		
10 PERCENT EXCEEDS	162			71			40		
50 PERCENT EXCEEDS	3.3			2.6			3.2		
90 PERCENT EXCEEDS	.63			.56			.31		

e Estimated.

11474781 KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION, NEAR ZENIA, CA—Continued

KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION AND
KEKAWAKA CREEK POWERHOUSE, NEAR ZENIA
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.20	2.0	93	1700	142	24	15	16	3.8	2.4	.46	.76
2	e.20	1.8	31	672	106	76	13	13	3.6	2.1	.45	.72
3	e.20	1.7	23	379	95	71	12	12	9.2	1.9	.42	.67
4	e.20	1.6	227	280	112	56	12	11	12	1.7	.38	.64
5	e.20	1.5	450	231	88	45	11	10	6.5	1.6	.34	.62
6	e.20	1.4	191	182	72	39	11	9.7	5.2	1.5	.29	.60
7	e.20	1.4	180	172	68	35	10	9.1	4.5	1.4	.27	.61
8	e.20	1.5	231	128	60	32	10	8.5	4.1	1.3	.24	.61
9	e.20	1.6	539	76	58	28	9.6	8.1	6.2	1.3	.19	.56
10	e.20	1.5	550	69	64	26	9.2	7.7	5.0	1.3	.21	.57
11	.20	1.5	265	62	54	24	8.8	7.3	3.9	1.3	.24	.66
12	.37	1.6	186	57	48	22	8.7	7.0	3.7	1.2	.29	.74
13	.69	1.7	195	61	42	20	8.5	6.5	3.5	1.0	.25	.73
14	.71	1.6	122	53	37	18	8.1	6.2	3.4	.92	e.60	1.1
15	.63	1.6	79	33	34	17	8.0	6.1	3.1	.87	e.90	1.5
16	.62	1.6	59	31	34	96	7.8	5.7	2.9	.84	e.90	1.3
17	.70	2.6	45	27	58	87	7.6	5.0	2.7	.83	e.90	.92
18	1.8	25	35	25	40	55	12	4.6	2.9	.86	e.90	.59
19	1.9	99	29	23	53	44	20	4.3	2.7	.79	e1.0	1.2
20	1.4	48	56	32	43	39	42	4.2	2.6	.70	e1.3	.94
21	1.2	23	134	137	36	34	47	3.9	2.6	.64	1.8	.79
22	1.1	41	155	202	33	31	71	3.8	2.5	.67	1.2	.72
23	1.3	23	183	153	29	28	81	8.1	2.4	.63	.97	.67
24	2.0	14	134	148	26	24	50	6.0	2.4	.55	.93	.61
25	3.7	11	123	668	24	22	33	4.3	2.2	.50	.91	.54
26	2.9	8.5	282	563	23	22	26	5.7	2.2	.46	.94	.53
27	1.6	8.0	316	281	24	19	22	6.5	2.2	.43	1.1	.60
28	1.6	8.5	288	369	26	17	20	4.8	2.2	.40	.99	.68
29	3.4	7.1	757	224	---	15	19	4.2	2.2	.42	.87	.62
30	3.1	7.1	983	163	---	19	17	3.7	2.9	.51	.84	.55
31	2.4	---	1380	146	---	20	---	3.8	---	.50	.81	---
TOTAL	35.32	351.4	8321	7347	1529	1105	630.3	216.8	115.3	31.52	21.89	22.35
MEAN	1.14	11.7	268	237	54.6	35.6	21.0	6.99	3.84	1.02	.71	.75
MAX	3.7	99	1380	1700	142	96	81	16	12	2.4	1.8	1.5
MIN	.20	1.4	23	23	23	15	7.6	3.7	2.2	.40	.19	.53
AC-FT	70	697	16500	14570	3030	2190	1250	430	229	63	43	44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

MEAN	.91	5.37	76.4	148	84.5	89.7	40.5	23.8	12.4	2.04	.75	.52
MAX	1.29	15.9	268	317	162	255	111	50.5	45.8	5.16	1.88	1.05
(WY)	1994	1995	1997	1995	1996	1995	1995	1993	1993	1993	1993	1995
MIN	.52	1.31	3.48	6.26	17.1	27.1	7.49	5.78	1.90	.51	.036	.008
(WY)	1995	1991	1991	1991	1991	1994	1990	1992	1992	1994	1992	1992

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1990 - 1997

ANNUAL TOTAL	26023.72	19726.88	
ANNUAL MEAN	71.1	54.0	41.2
HIGHEST ANNUAL MEAN			73.7
LOWEST ANNUAL MEAN			14.0
HIGHEST DAILY MEAN	1380	1700	1700
LOWEST DAILY MEAN	.20	.19	.00
ANNUAL SEVEN-DAY MINIMUM	.20	.20	.00
INSTANTANEOUS PEAK FLOW		3040	3040
ANNUAL RUNOFF (AC-FT)	51620	39130	29830
10 PERCENT EXCEEDS	230	139	105
50 PERCENT EXCEEDS	13	6.2	5.6
90 PERCENT EXCEEDS	.63	.56	.31

e Estimated.

11475000 BEL RIVER AT FORT SEWARD, CA

LOCATION.—Lat 40°13'05", long 123°37'54", in SE 1/4 NE 1/4 sec.8, T.3 S., R.5 E., Humboldt County, Hydrologic Unit 18010105, on right bank at downstream side of bridge, 1.0 mi southeast of Fort Seward, 1.9 mi upstream from Dobbyn Creek, and 11.8 mi northeast of Garberville.

DRAINAGE AREA.—2,107 mi².

PERIOD OF RECORD.—September 1955 to current year. Prior to October 1965, published as "at Alderpoint."

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 217.26 ft above sea level. Prior to Dec. 22, 1964, at site 7.5 mi upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, at site 7.7 mi upstream at datum 49.42 ft higher.

REMARKS.—Records fair. Flow slightly regulated by Lake Pillsbury (station 11470000) 99 mi upstream and by diversion through Potter Valley Powerhouse Intake (station 11471000). See schematic diagram of Eel River basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 561,000 ft³/s, Dec. 22, 1964, gage height, 82.6 ft, from floodmarks, present site and datum, 87.2 ft, from floodmarks, site and datum then in use, from rating curve extended above 110,000 ft³/s on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 1.2 ft³/s, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 41,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0945	67,000	28.71	Jan. 1	0845	240,000	52.86
Dec. 10	1230	69,100	29.08	Jan. 26	0645	101,000	34.51

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	178	2240	207000	16100	2420	2060	1920	434	215	35	36
2	44	172	3400	152000	13600	5020	1930	1820	411	215	34	35
3	43	156	1870	76700	11500	5440	1840	1710	418	213	36	34
4	44	146	3750	41200	10900	4000	1790	1660	620	201	38	33
5	45	140	44800	27000	10100	3360	1730	1570	970	189	37	32
6	43	128	18400	19800	8460	3080	1680	1500	699	176	36	32
7	42	122	12300	15800	7480	2840	1630	1430	580	166	35	32
8	41	117	21900	13200	7020	2680	1580	1370	507	162	32	31
9	41	115	34700	11400	6230	2540	1540	1300	436	155	32	31
10	39	113	60200	10100	6510	2410	1500	1230	439	147	33	31
11	38	112	28100	8840	5900	2340	1470	1170	474	139	33	30
12	38	112	26600	7750	5200	2270	1420	1110	435	132	31	30
13	39	111	21200	6760	4640	2130	1410	1050	420	121	31	30
14	40	109	15700	5830	4190	1970	1400	993	369	114	30	34
15	39	107	11300	5310	3860	1910	1390	918	353	108	33	38
16	39	107	8440	5030	3620	3820	1360	860	319	101	34	37
17	40	127	6610	4570	5220	13100	1350	828	295	73	26	43
18	59	770	5340	4240	5210	8300	1400	762	310	63	26	60
19	66	8040	4520	3900	4440	5640	2760	697	308	57	25	59
20	70	10700	4250	3920	4940	4390	3860	624	297	58	30	53
21	79	3720	9910	8910	4210	3980	4770	576	281	55	34	51
22	93	3800	12400	18200	3770	3520	4990	542	256	49	41	50
23	97	4500	16000	23800	3450	3190	6870	546	273	46	51	49
24	102	2380	10900	15100	3130	2940	5380	647	247	44	59	45
25	115	1570	8430	56400	2870	2730	3600	689	239	43	51	42
26	130	1190	13300	90900	2710	2600	2900	588	231	41	45	39
27	149	907	36200	49100	2660	2470	2500	576	223	40	43	38
28	169	761	36800	45500	2570	2340	2290	631	212	40	42	36
29	194	681	54200	34200	---	2200	2170	594	203	40	38	36
30	187	631	84500	22600	---	2110	2020	515	214	38	37	35
31	185	---	188000	17700	---	2120	---	465	---	36	36	---
TOTAL	2395	41822	806260	1012760	170490	109860	72590	30891	11473	3277	1124	1162
MEAN	77.3	1394	26010	32670	6089	3544	2420	996	382	106	36.3	38.7
MAX	194	10700	188000	207000	16100	13100	6870	1920	970	215	59	60
MIN	38	107	1870	3900	2570	1910	1350	465	203	36	25	30
AC-FT	4750	82950	1599000	2009000	338200	217900	144000	61270	22760	6500	2230	2300

EEL RIVER BASIN

11475000 EEL RIVER AT FORT SEWARD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	387	2925	8972	13200	12010	9640	5193	2272	670	142	53.5	55.5
MAX	4938	18740	56050	43180	47700	30660	23040	7449	4194	482	199	359
(WY)	1963	1974	1965	1995	1986	1995	1982	1983	1993	1983	1983	1986
MIN	20.5	49.4	45.5	222	434	1071	476	356	131	18.4	3.27	9.57
(WY)	1965	1960	1977	1991	1977	1988	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1955 - 1997			
ANNUAL TOTAL	2605228				2264104							
ANNUAL MEAN	7118				6203				4598			
HIGHEST ANNUAL MEAN									10350			
LOWEST ANNUAL MEAN									260			
HIGHEST DAILY MEAN	188000				207000				434000			
LOWEST DAILY MEAN	34				25				1.2			
ANNUAL SEVEN-DAY MINIMUM	36				29				1.4			
INSTANTANEOUS PEAK FLOW					240000				561000			
INSTANTANEOUS PEAK STAGE					52.86				82.60			
ANNUAL RUNOFF (AC-FT)	5167000				4491000				3331000			
10 PERCENT EXCEEDS	20000				13100				11600			
50 PERCENT EXCEEDS	1850				697				703			
90 PERCENT EXCEEDS	45				36				35			

11475560 ELDER CREEK NEAR BRANSCOMB, CA
(Hydrologic Benchmark Station)

LOCATION.—Lat 39°43'47", long 123°38'34", in NW 1/4 NE 1/4 sec.29, T.22 N., R.16 W., Mendocino County, Hydrologic Unit 18010106, on right bank 0.2 mi upstream from mouth and 5.3 mi north of Branscomb.

DRAINAGE AREA.—6.50 mi².

PERIOD OF RECORD.—October 1967 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 1,391.08 ft above sea level.

REMARKS.—Records good, except for periods of estimated discharges, which are fair. No regulation; small diversion upstream from station for domestic use. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,480 ft³/s, Dec. 30, 1996, gage height, 9.88 ft, from rating curve extended above 700 ft³/s on basis of slope-area measurements at gage heights 9.40 and 11.41 ft; minimum daily, 0.27 ft³/s, Sept. 10–15, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1964, reached a stage of 11.41 ft, from floodmarks, discharge, 3,660 ft³/s by slope-area measurement of peak flow.

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)
Dec. 4	2115	603	6.49	Dec. 30	2115	2,480	9.88
Dec. 9	1730	561	6.41	Jan. 26	0800	510	6.27

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	1.1	23	e1620	66	17	12	16	5.8	3.5	1.6	1.2
2	.83	1.1	15	e900	56	35	11	15	5.6	3.3	1.6	1.2
3	.81	1.1	13	e360	48	28	11	14	9.0	3.3	1.5	1.1
4	.80	1.1	130	197	47	26	11	13	8.9	3.2	1.5	1.1
5	.80	1.1	249	121	43	25	10	12	6.8	3.0	1.4	1.0
6	.79	1.1	112	82	39	24	10	12	6.2	3.0	1.4	1.0
7	.78	1.1	112	65	37	22	9.7	11	5.8	2.9	1.3	1.0
8	.75	1.1	198	54	33	21	9.4	11	5.5	2.8	1.3	.95
9	.72	1.1	355	45	32	19	9.1	10	5.3	2.8	1.3	.95
10	.68	1.0	354	38	32	18	8.9	10	5.2	2.7	1.4	.96
11	.71	1.0	208	34	30	17	8.6	9.7	5.0	2.6	1.5	.97
12	.72	1.0	147	30	28	16	8.5	9.3	4.9	2.6	1.4	.98
13	.81	1.1	133	27	26	15	8.3	9.0	4.8	2.5	1.3	.97
14	.81	1.1	101	24	24	15	8.0	8.7	4.7	2.4	1.2	1.7
15	.80	1.1	71	25	22	14	7.7	8.5	4.5	2.4	1.2	1.6
16	.79	1.1	51	22	22	31	7.5	8.2	4.4	2.3	1.1	1.5
17	.78	3.3	40	20	32	36	7.4	7.8	4.3	2.2	1.2	1.5
18	1.6	26	34	19	27	31	13	7.6	4.2	2.2	1.2	1.4
19	1.2	104	30	18	29	27	18	7.3	4.1	2.2	1.2	1.3
20	1.0	45	30	20	27	25	23	7.1	4.0	2.1	1.7	1.2
21	.94	27	37	32	26	e22	25	6.9	3.9	2.0	1.5	1.2
22	.90	29	52	60	25	e20	30	6.7	3.9	2.0	1.4	1.1
23	.94	22	73	65	23	17	40	8.1	3.8	1.9	1.3	1.1
24	1.3	15	62	58	22	18	35	6.9	3.7	1.9	1.4	1.0
25	1.4	11	50	e203	20	17	29	6.6	3.6	1.8	1.3	1.0
26	1.3	8.9	118	e412	19	16	25	6.9	3.5	1.8	1.4	.98
27	1.1	7.3	237	e224	18	15	22	6.9	3.5	1.7	1.4	.98
28	1.0	6.7	279	214	17	14	20	6.4	3.5	1.7	1.4	.96
29	1.5	5.7	e525	175	---	14	18	6.1	3.5	1.7	1.3	.93
30	1.4	6.3	e700	113	---	13	17	5.8	3.8	1.6	1.3	.93
31	1.2	---	e1400	82	---	13	---	5.9	---	1.6	1.2	---
TOTAL	29.98	334.5	5939	5359	870	641	473.1	280.4	145.7	73.7	42.2	33.76
MEAN	.97	11.1	192	173	31.1	20.7	15.8	9.05	4.86	2.38	1.36	1.13
MAX	1.6	104	1400	1620	66	36	40	16	9.0	3.5	1.7	1.7
MIN	.68	1.0	13	18	17	13	7.4	5.8	3.5	1.6	1.1	.93
AC-FT	59	663	11780	10630	1730	1270	938	556	289	146	84	67

e Estimated.

EEL RIVER BASIN

11475560 ELDER CREEK NEAR BRANSCOMB, CA—Continued
(Hydrologic Benchmark Station)

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.23	19.8	50.7	72.3	55.9	54.7	25.5	11.8	5.74	2.35	1.33	1.13
MAX	8.72	132	192	210	173	147	91.9	33.4	31.6	5.84	2.49	2.36
(WY)	1980	1974	1997	1970	1986	1983	1982	1996	1993	1993	1990	1986
MIN	.57	.99	1.04	2.32	3.40	5.45	3.01	2.13	1.35	.67	.48	.51
(WY)	1988	1996	1977	1977	1977	1988	1977	1977	1977	1977	1977	1988

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1968 - 1997			
ANNUAL TOTAL	18244.17				14222.34				25.2			
ANNUAL MEAN	49.8				39.0				54.4			
HIGHEST ANNUAL MEAN									2.12			
LOWEST ANNUAL MEAN									1974			
HIGHEST DAILY MEAN	1400				1620				1620			
LOWEST DAILY MEAN	.68				.68				.27			
ANNUAL SEVEN-DAY MINIMUM	.74				.74				.27			
INSTANTANEOUS PEAK FLOW					2480				2480			
INSTANTANEOUS PEAK STAGE					9.88				9.88			
ANNUAL RUNOFF (AC-FT)	36190				28210				18250			
10 PERCENT EXCEEDS	137				63				66			
50 PERCENT EXCEEDS	13				7.3				5.2			
90 PERCENT EXCEEDS	.97				1.0				.95			

11475800 SOUTH FORK EEL RIVER AT LEGGETT, CA

LOCATION.—Lat 39°52'29", long 123°43'10", in NE 1/4 SE 1/4 sec.3, T.23 N., R.17 W., Mendocino County, Hydrologic Unit 18010106, on right bank near Standish Hickey State Park, 0.2 mi upstream from Rock Creek, and 0.7 mi northwest of Leggett.

DRAINAGE AREA.—248 mi².

PERIOD OF RECORD.—October 1965 to June 30, 1995. Stage only July 1, 1995 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 691.32 ft above sea level. Prior to July 29, 1988, at datum 2.00 ft higher.

REMARKS.—Interruptions in record were due to malfunction of the recording instruments. No regulation or diversion upstream from station. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 72,700 ft³/s, Jan. 4, 1966, gage height, 27.4 ft, from floodmarks, present datum, from rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 28.13 ft; minimum daily, 7.3 ft³/s, Aug. 4–6, 12, 1977. Maximum gage height since July 1, 1995, 19.44 ft, December 31, 1997; minimum gage height since July 1, 1995, 0.57 ft, Sep. 8–13 and 30, 1997.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1964, reached a stage of 28.13 ft, from floodmarks, present datum, discharge, 78,700 ft³/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Maximum gage height, 19.44 ft, Dec. 31; minimum gage height, 0.57 ft, Sep. 8–13, 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.95	.94	1.16	1.11	---	---	16.71	15.00	4.98	4.31	2.63	2.36
2	.94	.94	1.11	1.07	---	2.73	15.40	9.39	4.44	4.03	4.90	2.63
3	.94	.94	1.07	1.06	2.74	2.45	10.75	7.74	4.10	3.84	3.56	3.22
4	.94	.94	1.06	1.05	13.34	2.40	7.80	6.03	4.47	3.96	3.23	3.04
5	.94	.94	1.05	1.04	13.73	7.13	6.06	4.90	4.19	3.85	3.06	2.91
6	.94	.94	1.04	1.03	---	---	5.05	4.33	3.96	3.68	2.94	2.79
7	.94	.94	1.03	1.02	---	---	4.36	3.88	3.73	3.57	2.81	2.69
8	.94	.94	1.02	1.02	---	---	3.90	3.52	3.62	3.40	2.71	2.60
9	.94	.93	1.02	1.02	---	---	3.56	3.23	3.42	3.30	2.61	2.50
10	.93	.92	1.02	1.02	---	---	3.31	3.05	3.68	3.36	2.52	2.44
11	.92	.92	1.02	1.02	---	---	3.09	2.87	3.38	3.18	2.46	2.38
12	.92	.92	1.02	1.02	---	---	2.91	2.73	3.22	3.07	2.39	2.31
13	.92	.92	1.02	1.02	---	---	2.77	2.59	3.08	2.95	2.32	2.25
14	.93	.92	1.02	1.02	---	---	2.61	2.47	2.97	2.84	2.26	2.19
15	.93	.93	1.02	1.02	---	---	2.59	2.47	2.87	2.75	2.21	2.16
16	.93	.93	1.03	1.02	---	---	2.52	2.35	2.83	2.70	5.86	2.17
17	.93	.93	1.62	1.03	---	---	2.38	2.26	4.10	2.83	5.46	3.65
18	1.16	.93	4.22	1.62	---	---	2.28	2.17	3.47	3.13	3.68	3.23
19	1.15	1.11	7.99	3.68	3.63	3.39	2.20	2.11	3.68	3.13	3.27	3.02
20	1.14	1.07	5.84	3.40	4.00	3.33	2.56	2.12	3.47	3.18	3.03	2.87
21	1.07	1.03	3.41	2.96	5.53	4.00	4.78	2.56	3.19	3.06	2.88	2.74
22	1.03	1.02	3.96	3.30	6.89	4.63	6.48	4.48	3.07	2.94	2.75	2.61
23	1.02	1.01	3.65	2.82	6.74	5.38	5.67	4.19	2.96	2.82	2.63	2.50
24	1.11	1.01	2.84	2.44	5.44	4.80	5.61	3.79	2.84	2.71	2.51	2.42
25	1.22	1.11	2.45	2.18	4.84	4.41	10.45	5.61	2.72	2.62	2.44	2.33
26	1.24	1.16	2.18	1.97	9.23	4.35	10.81	8.53	2.64	2.54	2.35	2.28
27	1.16	1.10	1.97	1.86	9.59	7.13	8.53	6.33	2.58	2.52	2.29	2.21
28	1.10	1.07	1.92	1.84	9.53	7.88	10.00	6.77	2.53	2.41	2.22	2.15
29	1.25	1.09	1.84	1.71	---	7.51	7.87	6.13	---	---	2.16	2.10
30	1.25	1.22	1.96	1.70	18.02	9.57	6.21	5.09	---	---	2.16	2.07
31	1.22	1.16	---	---	19.44	12.81	5.14	4.79	---	---	2.16	2.08
MONTH	1.25	.92	7.99	1.02	---	---	16.71	2.11	4.98	2.41	5.86	2.07

EEL RIVER BASIN

11475800 SOUTH FORK EEL RIVER AT LEGGETT, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.08	1.99	2.31	2.21	1.37	1.33	1.09	1.03	.69	.66	.65	.62
2	2.00	1.95	2.22	2.14	1.34	1.30	1.04	1.00	.68	.66	.64	.62
3	1.96	1.91	2.19	2.13	1.67	1.30	1.01	.98	.68	.66	.63	.61
4	1.92	1.87	2.13	2.03	2.00	1.67	.98	.95	.67	.65	.62	.60
5	1.89	1.84	2.04	1.97	1.71	1.49	.97	.93	.67	.64	.61	.59
6	1.84	1.81	1.98	1.91	1.49	1.39	.94	.91	.66	.63	.61	.58
7	1.82	1.78	1.92	1.87	1.40	1.34	.92	.90	.65	.62	.60	.58
8	1.79	1.75	1.88	1.83	1.36	1.31	.91	.88	.64	.61	.59	.57
9	1.76	1.72	1.84	1.79	1.31	1.28	.89	.86	.63	.61	.59	.57
10	1.73	1.70	1.79	1.75	1.29	1.25	.88	.85	.64	.62	.59	.57
11	1.71	1.67	1.76	1.71	1.27	1.23	.87	.84	.64	.62	.60	.57
12	1.69	1.67	1.72	1.67	1.24	1.21	.86	.83	.65	.63	.59	.57
13	1.69	1.65	1.68	1.63	1.22	1.19	.85	.82	.65	.62	.59	.57
14	1.66	1.62	1.64	1.61	1.20	1.17	.84	.81	.64	.61	.69	.59
15	1.63	1.59	1.62	1.58	1.18	1.15	.83	.80	.63	.60	.73	.69
16	1.60	1.58	1.60	1.55	1.16	1.13	.82	.79	.62	.60	.73	.71
17	1.59	1.57	1.56	1.52	1.14	1.11	.81	.78	.62	.60	.77	.71
18	2.92	1.56	1.53	1.48	1.12	1.09	.80	.77	.62	.60	.76	.72
19	3.76	2.81	1.49	1.45	1.10	1.07	.80	.77	.62	.60	.72	.69
20	3.84	2.79	1.46	1.43	1.08	1.05	.78	.76	.71	.62	.70	.67
21	3.89	3.14	1.44	1.40	1.07	1.04	.78	.74	.72	.69	.68	.65
22	4.17	3.27	1.42	1.40	1.06	1.03	.76	.73	.71	.68	.66	.64
23	4.83	3.78	1.63	1.41	1.06	1.03	.75	.72	.71	.68	.64	.62
24	3.80	3.29	1.65	1.49	1.05	1.01	.74	.71	.70	.67	.63	.61
25	3.32	2.99	1.49	1.41	1.03	1.00	.73	.70	.68	.66	.62	.60
26	3.00	2.76	1.58	1.40	1.02	.99	.72	.69	.68	.66	.61	.59
27	2.78	2.58	1.60	1.55	1.00	.97	.71	.69	.69	.66	.61	.58
28	2.60	2.47	1.55	1.44	1.00	.98	.71	.67	.68	.65	.60	.58
29	2.49	2.36	1.44	1.39	1.01	.99	.70	.68	.68	.65	.59	.58
30	2.38	2.31	1.39	1.34	1.14	1.00	.70	.67	.67	.64	.59	.57
31	---	---	1.36	1.34	---	---	.69	.66	.66	.63	---	---
MONTH	4.83	1.56	2.31	1.34	2.00	.97	1.09	.66	.72	.60	.77	.57

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CA

LOCATION.—Lat 40°10'55", long 123°46'30", in NW 1/4 sec.30, T.3 S., R.4 E., Humboldt County, Hydrologic Unit 18010106, on right bank 0.5 mi upstream from Rocky Glen Creek, 4.3 mi southeast of Miranda, and 20 mi upstream from mouth.

DRAINAGE AREA.—537 mi².

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

TEMPERATURE DATA: Water years 1960–83.

SEDIMENT DATA: Water year 1981.

REVISED RECORDS.—WSP 1395: Drainage area. WSP 2129: 1955.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 217.57 ft above sea level. Prior to Nov. 2, 1940, nonrecording gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, nonrecording gage at present site and datum.

REMARKS.—Records good except for periods of estimated discharge, which are fair. Occasional storage and release for recreational use during summer months at Benbow Reservoir, capacity, 1,060 acre-ft, 16 mi upstream. No diversion upstream from station. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 199,000 ft³/s, Dec. 22, 1964, gage height, 46.0 ft, from floodmarks, from rating curve extended above 53,000 ft³/s on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 ft³/s, Oct. 17, 1944.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0500	37,900	22.21	Jan. 1	0630	94,400	33.64
Dec. 10	0315	34,200	21.23	Jan. 26	0600	26,600	19.14

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	109	1820	81400	4720	924	749	908	284	126	43	31
2	48	95	1750	44500	3810	2500	692	835	288	119	41	30
3	48	83	1270	21800	3200	2280	658	809	298	125	28	29
4	49	76	3750	11500	3640	1810	627	769	441	128	27	28
5	48	72	22400	7190	3420	1550	603	715	446	131	28	27
6	47	70	7920	5170	2950	1390	579	691	336	130	38	26
7	48	69	6430	4080	2670	1260	562	681	286	121	34	25
8	49	68	12200	3330	2380	1150	544	628	264	90	31	24
9	46	68	24500	2810	2110	1070	523	593	249	120	25	24
10	45	67	26900	2390	2170	992	505	568	235	107	23	23
11	43	66	14000	2090	1950	933	488	522	229	104	24	23
12	43	66	9860	1860	1750	874	477	494	221	93	23	97
13	47	66	7670	1670	1570	811	458	476	212	107	24	154
14	50	66	5360	1520	1430	763	444	453	206	79	26	39
15	50	66	4060	1450	1310	723	434	426	198	107	26	63
16	49	66	3240	1380	1220	1600	453	419	190	93	26	57
17	49	83	2700	1280	1890	3650	436	405	184	82	25	54
18	60	955	2300	1190	1850	2230	e413	387	177	48	25	57
19	88	5140	2020	1130	1810	1820	e450	362	170	92	24	55
20	92	4560	1960	1270	1880	1630	e1010	345	147	84	29	47
21	81	1990	3840	2670	1660	1480	1980	325	144	77	28	41
22	71	2230	5340	4690	1520	1350	2330	315	107	58	30	37
23	65	1860	6530	4760	1390	1230	3090	333	115	56	33	35
24	67	1240	4530	3510	1260	1130	2390	383	119	56	35	32
25	82	948	3620	14700	1140	1050	1850	363	119	55	35	30
26	110	803	5800	22300	1070	985	1540	341	e107	54	35	29
27	112	737	11800	12600	1050	923	1330	383	e100	52	35	27
28	95	654	15000	16400	990	869	1170	366	98	50	37	26
29	143	603	e23800	11300	---	820	1070	326	112	48	36	25
30	152	541	e28200	7040	---	791	979	295	117	48	34	25
31	128	---	e47000	5310	---	808	---	303	---	45	33	---
TOTAL	2153	23517	317570	304290	57810	41396	28834	15219	6199	2685	941	1220
MEAN	69.5	784	10240	9816	2065	1335	961	491	207	86.6	30.4	40.7
MAX	152	5140	47000	81400	4720	3650	3090	908	446	131	43	154
MIN	43	66	1270	1130	990	723	413	295	98	45	23	23
AC-FT	4270	46650	629900	603600	114700	82110	57190	30190	12300	5330	1870	2420

e Estimated.

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	269	1477	4136	5440	4665	3589	1843	703	307	113	61.3	61.2
MAX	3332	10130	17260	17530	16640	13000	8425	2370	1755	276	131	221
(WY)	1963	1974	1965	1970	1986	1983	1982	1990	1993	1993	1983	1986
MIN	20.0	25.0	74.6	207	284	304	176	122	52.7	20.4	18.0	29.1
(WY)	1940	1940	1977	1977	1977	1988	1977	1977	1977	1977	1977	1949

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1940 - 1997			
ANNUAL TOTAL	951753				801834							
ANNUAL MEAN	2600				2197				1878			
HIGHEST ANNUAL MEAN									4393			
LOWEST ANNUAL MEAN									156			
HIGHEST DAILY MEAN	47000				81400				161000			
LOWEST DAILY MEAN	42				23				10			
ANNUAL SEVEN-DAY MINIMUM	43				24				14			
INSTANTANEOUS PEAK FLOW					94400				199000			
INSTANTANEOUS PEAK STAGE					33.64				46.00			
ANNUAL RUNOFF (AC-FT)	1888000				1590000				1361000			
10 PERCENT EXCEEDS	7300				4540				4870			
50 PERCENT EXCEEDS	847				405				342			
90 PERCENT EXCEEDS	53				33				45			

11476600 BULL CREEK NEAR WEOTT, CA

LOCATION.—Lat 40°21'05", long 124°00'10", in SW 1/4 NW 1/4 sec.30, T.1 S., R.2 E., Humboldt County, Hydrologic Unit 18010106, on left bank 0.2 mi downstream from Albee Creek, 4.5 mi northwest of Weott, and 4.6 mi upstream from mouth.

DRAINAGE AREA.—28.1 mi².

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 269.36 ft above sea level. Prior to Dec. 22, 1964, water-stage recorder, and Jan. 14 to Aug. 10, 1965, nonrecording gage at site 150 ft downstream at datum 8.90 ft lower.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Minor diversions upstream from station for domestic and recreational use. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,830 ft³/s, Dec. 31, 1996, gage height, 12.84 ft; maximum gage height, 20.6 ft³/s Dec. 22, 1964, site and datum then in use; minimum daily, 0.25 ft³/s, Sept.27, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,700 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	0530	3,670	9.50	Jan. 26	0145	2,970	9.55
Dec. 31	2000	7,830	12.84				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	5.1	81	e3010	483	89	34	30	e18	7.1	2.2	1.2
2	1.6	4.7	64	e1980	389	184	35	28	e17	6.7	2.1	1.2
3	1.6	4.4	60	e1360	314	155	36	28	e19	6.3	2.1	1.1
4	1.4	4.2	227	e1180	277	138	35	27	20	6.0	2.1	1.2
5	1.5	4.1	320	e903	220	124	34	25	18	6.0	2.0	1.1
6	1.4	3.9	195	e706	192	116	34	24	16	5.4	2.0	1.1
7	1.4	3.8	465	e584	184	112	35	23	15	5.4	2.0	1.1
8	1.2	3.9	1480	e456	177	102	34	23	14	5.2	2.0	1.1
9	1.1	3.9	2600	e335	165	96	34	22	13	5.1	1.9	1.1
10	1.0	3.8	1640	e221	159	86	34	22	12	5.2	2.0	1.1
11	1.1	3.6	1080	e153	151	84	33	22	12	5.3	2.2	1.1
12	1.4	3.5	891	e114	130	74	33	21	11	4.8	e1.6	1.1
13	1.9	3.6	698	e104	120	71	33	20	11	4.5	e1.6	1.1
14	2.0	3.6	509	e100	114	60	33	20	10	4.0	e1.5	1.3
15	1.7	3.9	406	98	120	57	33	20	9.7	3.7	e1.4	1.3
16	1.6	4.1	335	87	114	74	33	20	9.4	3.6	e1.3	1.3
17	1.6	7.3	286	75	110	60	34	19	8.6	3.2	e1.2	2.7
18	4.2	72	246	88	103	50	41	19	8.6	3.1	1.1	3.0
19	4.3	289	215	96	135	48	39	18	8.3	3.1	1.1	1.8
20	3.2	153	217	100	111	49	49	18	7.9	3.2	1.2	1.4
21	2.6	131	252	127	105	46	41	18	7.9	3.1	1.1	1.4
22	2.6	116	363	143	106	45	44	18	7.4	2.8	1.1	1.3
23	3.0	86	368	118	99	43	44	19	7.2	2.6	1.1	1.1
24	7.2	73	320	135	101	43	35	19	7.4	2.5	1.3	1.1
25	12	60	286	1090	92	45	35	18	6.9	2.5	1.2	1.1
26	9.4	51	369	1930	95	42	34	19	6.7	2.5	1.3	1.0
27	5.7	44	517	1150	107	40	32	20	6.6	2.5	1.4	.98
28	5.3	45	551	1050	95	39	31	19	6.4	2.5	1.4	.98
29	14	40	2330	852	---	38	30	18	6.6	2.5	1.3	1.3
30	7.9	45	3000	708	---	37	30	17	9.2	2.5	1.2	1.3
31	6.0	---	e3800	586	---	35	---	19	---	2.2	1.2	---
TOTAL	112.4	1276.4	24171	19639	4568	2282	1062	653	330.8	125.1	48.2	38.96
MEAN	3.63	42.5	780	634	163	73.6	35.4	21.1	11.0	4.04	1.55	1.30
MAX	14	289	3800	3010	483	184	49	30	20	7.1	2.2	3.0
MIN	1.0	3.5	60	75	92	35	30	17	6.4	2.2	1.1	.98
AC-FT	223	2530	47940	38950	9060	4530	2110	1300	656	248	96	77

e Estimated.

EEL RIVER BASIN

11476600 BULL CREEK NEAR WEOTT, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	112	266	327	285	237	119	41.7	17.3	6.63	3.49	3.01
MAX	160	683	780	901	1056	717	526	137	88.0	14.5	10.0	12.8
(WY)	1963	1974	1997	1978	1986	1983	1963	1963	1993	1993	1983	1986
MIN	.72	3.61	3.67	10.5	13.8	16.0	11.2	10.3	4.84	1.81	.70	.50
(WY)	1988	1994	1977	1977	1977	1988	1988	1988	1977	1977	1992	1988

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1961 - 1997

ANNUAL TOTAL	64633.4		54306.86									
ANNUAL MEAN	177		149							119		
HIGHEST ANNUAL MEAN										287		1983
LOWEST ANNUAL MEAN										9.72		1977
HIGHEST DAILY MEAN	3800	Dec 31				3800	Dec 31			4900	Jan 16	1974
LOWEST DAILY MEAN	1.0	Oct 10				.98	Sep 27			.25	Sep 27	1994
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 6				1.1	Sep 22			.29	Sep 22	1994
INSTANTANEOUS PEAK FLOW						7830	Dec 31			7830	Dec 31	1996
INSTANTANEOUS PEAK STAGE						12.84	Dec 31			20.60	Dec 22	1964
ANNUAL RUNOFF (AC-FT)	128200					107700				86050		
10 PERCENT EXCEEDS	464					326				309		
50 PERCENT EXCEEDS	59					19				23		
90 PERCENT EXCEEDS	2.0					1.3				2.0		

11477000 EEL RIVER AT SCOTIA, CA

LOCATION.—Lat 40°29'30", long 124°05'55", in SW 1/4 sec.5, T.1 N., R.1 E., Humboldt County, Hydrologic Unit 18010105, near center of span in left pier of A.S. Murphy Memorial Bridge on State Highway 283, 0.5 mi north of Scotia, and 6 mi upstream from Van Duzen River.

DRAINAGE AREA.—3,113 mi².

PERIOD OF RECORD.—October 1910 to current year. Monthly discharge only for some periods and yearly estimates for 1915–16, published in WSP 1315-B.

CHEMICAL DATA: Water years 1952–75, 1977, 1979–95.

BIOLOGICAL DATA: Water years 1979–81.

SPECIFIC CONDUCTANCE: Water years 1979–81.

WATER TEMPERATURE: Water years 1958–82.

SEDIMENT DATA: Water years 1955–95.

REVISED RECORDS.—WSP 931: 1938. WSP 1315-B: 1914–15(M), 1917(M), 1927–28(M), 1936(M), 1939(M). WSP 1345: Drainage area. WSP 1715: 1959.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 35.50 ft above sea level. Prior to Dec. 12, 1940, nonrecording gage at same site and datum.

REMARKS.—Records good. Low flow slightly regulated by Lake Pillsbury (station 11470000) 138 mi upstream since December 1921 and by diversion through Potter Valley Powerhouse Intake (station 11471000). See schematic diagram of Eel River basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 752,000 ft³/s, Dec. 23, 1964, gage height, 72.0 ft, from floodmarks, from rating curve extended above 220,000 ft³/s on basis of maximum flow at upstream stations; minimum observed, 10 ft³/s, Aug. 12–14, 1924.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 72,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	1430	107,000	31.68	Jan. 1	2200	360,000	54.97
Dec. 10	0930	132,000	34.54	Jan. 26	1145	156,000	37.20

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	369	3400	316000	24800	4690	3310	3470	941	464	153	131
2	118	344	7180	262000	21200	8510	3010	3210	896	442	148	125
3	117	320	5150	126000	17700	11800	2750	2970	917	452	146	121
4	116	290	5100	65600	16500	8980	2580	2760	1210	411	144	117
5	115	285	73300	42600	16700	7560	2450	2560	1470	390	138	114
6	114	274	38500	30600	14300	6780	2320	2350	1580	365	134	113
7	114	246	23100	23600	12900	6190	2180	2200	1160	333	134	111
8	113	234	52200	19400	12100	5710	2080	2040	938	315	140	110
9	110	226	80500	16500	11100	5260	1990	1910	827	290	140	110
10	110	222	117000	14300	10900	4850	1910	1800	772	284	137	107
11	109	218	64400	12700	10600	4560	1840	1700	757	273	132	105
12	107	214	50100	11300	9550	4320	1770	1590	791	275	130	104
13	110	215	38100	10200	8740	4030	1730	1500	724	253	128	105
14	109	215	28400	9060	8040	3730	1680	1410	673	247	129	207
15	109	217	19500	8260	7470	3500	1630	1330	648	235	128	167
16	108	214	14700	7890	7010	4080	1570	1270	620	230	127	146
17	110	227	11900	7320	8420	17000	1550	1220	601	222	126	169
18	122	674	9980	6810	10200	13600	1580	1170	574	215	124	164
19	138	11200	8530	6370	8780	9980	3100	1070	554	204	124	169
20	165	25000	7660	6470	9180	7930	7400	983	530	197	130	172
21	185	10400	13000	10000	8370	7110	8690	927	507	201	135	163
22	179	7550	22000	21600	7560	6420	9150	882	484	196	142	152
23	181	9020	29800	35800	6920	5780	11700	860	444	189	145	147
24	226	6220	21100	23000	6300	5290	11400	977	427	179	153	145
25	274	4170	15500	67900	5730	4790	8010	1130	419	174	166	142
26	308	3130	18200	143000	5310	4390	6330	1100	409	171	171	137
27	301	2410	54100	83800	5350	4120	5250	1120	399	168	167	128
28	300	2050	68000	66900	5200	3820	4500	1130	390	162	157	127
29	376	1830	88000	60200	---	3540	4100	1150	389	156	150	124
30	457	1660	143000	37600	---	3360	3780	1050	444	154	145	122
31	409	---	270000	27900	---	3420	---	977	---	153	139	---
TOTAL	5526	89644	1401400	1580680	296930	195100	121340	49816	21495	8000	4362	4054
MEAN	178	2988	45210	50990	10600	6294	4045	1607	717	258	141	135
MAX	457	25000	270000	316000	24800	17000	11700	3470	1580	464	171	207
MIN	107	214	3400	6370	5200	3360	1550	860	389	153	124	104
AC-FT	10960	177800	2780000	3135000	589000	387000	240700	98810	42640	15870	8650	8040

EEL RIVER BASIN

11477000 EEL RIVER AT SCOTIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	680	5115	14030	20000	19440	14250	8851	3663	1259	338	150	144
MAX	10910	38690	84420	69950	77680	51150	39190	11570	7511	920	422	735
(WY)	1963	1974	1965	1970	1958	1983	1982	1912	1993	1993	1983	1986
MIN	50.5	59.3	168	659	389	946	703	278	75.7	25.1	22.1	19.4
(WY)	1930	1930	1977	1977	1920	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1911 - 1997			
ANNUAL TOTAL	4497264				3778347				7273			
ANNUAL MEAN	12290				10350				17300			
HIGHEST ANNUAL MEAN									1983			
LOWEST ANNUAL MEAN									1977			
HIGHEST DAILY MEAN	270000				316000				648000			
LOWEST DAILY MEAN	62				104				12			
ANNUAL SEVEN-DAY MINIMUM	84				107				14			
INSTANTANEOUS PEAK FLOW					360000				752000			
INSTANTANEOUS PEAK STAGE					54.97				72.00			
INSTANTANEOUS LOW FLOW					46				10			
ANNUAL RUNOFF (AC-FT)	8920000				7494000				5269000			
10 PERCENT EXCEEDS	37800				21400				17700			
50 PERCENT EXCEEDS	3560				1210				1380			
90 PERCENT EXCEEDS	134				127				104			

LOCATION.—Lat 40°27'52", long 123°35'59", in NE 1/4 SW 1/4 sec.15, T.1 N., R.5 E., Humboldt County, Hydrologic Unit 18010105, on left bank 1.9 mi south-southeast of Dinsmore.

PERIOD OF RECORD.—October 1990 to current year.

GAGE.—Water-stage recorder and 90° V-notch weir. Elevation of gage is 3,660 ft above sea level, from topographic map.

REMARKS.—Records of fishery release normally are computed only during periods of diversion to power house. Flow over spillway bypasses this station. See schematic diagram of Eel River Basin.

COOPERATION.—Records provided by North Coast Hydroelectric, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DAILY MEAN VALUES

[illegible]

[illegible]

11478500 VAN DUZEN RIVER NEAR BRIDGEVILLE, CA

LOCATION.—Lat 40°28'50", long 123°53'23", in NE 1/4 SE 1/4 sec.12, T.1 N., R.2 E., Humboldt County, Hydrologic Unit 18010105, on left bank at downstream side of bridge on State Highway 36, 0.9 mi upstream from Grizzly Creek, and 5 mi west of Bridgeville.

DRAINAGE AREA.—222 mi².

PERIOD OF RECORD.—October 1950 to current year.

REVISED RECORDS.—WSP 1735: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 358.18 ft above sea level. Prior to Oct. 1, 1965, at site 2.4 mi upstream at different datum.

REMARKS.—Records good except for the months of November through January, which are fair. No storage or large diversion upstream from station. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 48,700 ft³/s, Dec. 22, 1964, gage height, 24.0 ft, from floodmarks, present site and datum, from rating curve extended above 20,000 ft³/s on basis of slope-area measurement at gage height 21.3 ft, former site and datum; minimum daily, 4.4 ft³/s, Sept. 28, 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	0215	19,300	12.93	Jan. 26	0530	19,500	12.99
Dec. 30	2115	37,100	18.73				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	69	2070	25800	1760	476	327	543	126	60	19	15
2	11	55	1180	13900	1320	1870	289	439	121	52	19	15
3	10	47	1030	8030	1120	1210	269	404	145	47	18	14
4	10	42	4200	4590	1260	964	253	370	401	44	18	14
5	10	40	14800	3160	1150	849	239	323	236	41	18	14
6	10	37	6830	2270	996	777	225	295	165	39	17	13
7	9.3	35	5970	1680	951	728	215	275	135	37	17	13
8	9.3	34	13900	1320	897	666	206	254	119	36	16	13
9	9.3	32	17500	1080	815	605	193	236	107	35	16	13
10	9.2	32	11500	922	816	554	186	221	103	34	15	12
11	8.9	30	6960	811	756	512	176	212	97	33	14	13
12	8.5	29	4530	728	709	469	172	198	90	32	14	13
13	8.9	29	4260	636	651	427	169	189	87	31	14	12
14	9.6	28	2380	559	604	395	161	176	82	29	14	20
15	11	28	1400	499	558	375	155	170	77	28	13	31
16	11	28	933	465	524	567	151	160	72	27	13	29
17	11	30	716	459	849	1190	142	149	66	26	12	28
18	14	1510	530	422	721	731	152	140	63	26	12	33
19	21	5910	416	384	878	621	760	133	60	26	12	31
20	28	4270	585	496	831	596	2070	129	57	25	14	28
21	28	1760	1030	971	715	559	1300	124	55	24	15	25
22	26	1470	1270	1090	651	495	1380	119	53	23	15	22
23	25	1100	1070	882	588	449	1990	127	52	22	15	21
24	54	906	835	909	535	411	1140	144	51	22	15	20
25	206	833	840	10400	482	376	870	131	49	21	15	18
26	217	684	5090	12900	455	348	702	123	47	20	15	18
27	105	583	7920	4690	520	326	605	166	46	19	16	17
28	70	622	7010	4890	562	303	522	162	45	19	17	17
29	96	625	14000	3390	---	286	510	140	46	18	17	17
30	146	563	17700	2300	---	274	545	125	55	19	16	16
31	96	---	22100	1900	---	352	---	117	---	19	15	---
TOTAL	1300.0	21461	180555	112533	22674	18761	16074	6494	2908	934	476	565
MEAN	41.9	715	5824	3630	810	605	536	209	96.9	30.1	15.4	18.8
MAX	217	5910	22100	25800	1760	1870	2070	543	401	60	19	33
MIN	8.5	28	416	384	455	274	142	117	45	18	12	12
AC-FT	2580	42570	358100	223200	44970	37210	31880	12880	5770	1850	944	1120

EEL RIVER BASIN

11478500 VAN DUZEN RIVER NEAR BRIDGEVILLE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	153	896	1897	2264	1974	1621	926	442	141	36.2	17.2	20.4
MAX	1464	5476	6046	6608	6233	5015	3255	1139	821	98.0	82.4	144
(WY)	1963	1974	1956	1995	1958	1995	1963	1953	1993	1953	1983	1986
MIN	7.20	16.8	18.8	103	156	172	131	109	40.4	12.2	5.89	5.72
(WY)	1988	1960	1977	1977	1977	1988	1977	1985	1987	1977	1977	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1951 - 1997	
ANNUAL TOTAL	499113.5		384735.0			
ANNUAL MEAN	1364		1054		861	
HIGHEST ANNUAL MEAN					1610	
LOWEST ANNUAL MEAN					95.7	
HIGHEST DAILY MEAN	22100	Dec 31	25800	Jan 1	33900	Dec 22 1964
LOWEST DAILY MEAN	8.5	Oct 12	8.5	Oct 12	4.4	Sep 28 1992
ANNUAL SEVEN-DAY MINIMUM	9.1	Oct 7	9.1	Oct 7	4.6	Aug 13 1977
INSTANTANEOUS PEAK FLOW			37100	Dec 30	48700	Dec 22 1964
INSTANTANEOUS PEAK STAGE			18.73	Dec 30	24.00	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	990000		763100		624000	
10 PERCENT EXCEEDS	3820		1800		2120	
50 PERCENT EXCEEDS	464		160		177	
90 PERCENT EXCEEDS	11		14		12	

11479560 EEL RIVER AT FERNBRIDGE, CA

LOCATION.—Lat 40°36'57", long 124°12'06", in SW 1/4 NE 1/4 sec.29, T.3 N., R.1 W, Humboldt County, Hydrologic Unit 18010105, on right bank downstream from bridge on county road at Fernbridge.

DRAINAGE AREA.—3,614 mi².

PERIOD OF RECORD.—October 1989 to current year. Records prior to October 1989 are in the files of the California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is 3.64 ft above sea level.

REMARKS.—Data is collected for flood-warning purposes only. Figures given represent only those days when the gage height was above 0.55 ft. See schematic diagram of Eel River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum gage height, 25.31 ft, Jan. 9, 1995.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.66	.64	1.23	1.15	4.24	2.49	25.28	24.20	8.12	7.73	3.96	3.84
2	.65	.63	1.15	1.10	4.58	4.24	25.19	19.75	7.73	6.96	5.68	3.94
3	.65	.63	1.10	1.04	4.27	3.68	19.75	14.41	6.96	6.43	6.17	5.58
4	.64	.59	1.04	.99	7.72	3.42	14.41	11.36	6.59	6.37	5.58	4.97
5	.63	.58	.99	.97	14.93	7.72	11.36	8.57	6.68	6.29	4.97	4.63
6	.63	.59	.97	.92	13.23	8.14	9.73	8.09	6.29	5.88	4.63	4.43
7	.62	.61	.92	.91	9.97	7.03	8.49	7.69	5.88	5.70	4.43	4.27
8	.63	.60	.91	.90	14.21	9.97	7.69	7.09	5.70	5.48	4.27	4.11
9	.63	.57	.90	.85	15.09	14.19	7.09	6.64	5.48	5.23	4.11	3.98
10	.61	.58	.87	.87	16.96	15.00	6.64	6.27	5.28	5.20	3.98	3.87
11	.60	.58	.87	.87	15.17	11.52	6.27	5.98	5.30	5.08	3.87	3.79
12	.61	.57	.87	.83	11.58	10.15	5.98	5.72	5.08	4.88	3.79	3.70
13	.61	.59	.85	.85	10.15	9.43	5.72	5.49	4.88	4.67	3.70	3.60
14	.61	.60	.85	.85	9.43	7.76	5.49	5.24	4.67	4.50	3.60	3.51
15	.65	.60	.85	.85	7.76	6.71	5.24	5.12	4.50	4.36	3.51	3.44
16	.65	.58	.86	.85	6.71	5.91	5.12	5.03	4.40	4.28	3.79	3.43
17	.60	.56	.93	.86	5.91	5.32	5.03	4.92	5.13	4.40	7.21	3.79
18	.62	.57	3.04	.93	5.32	4.87	4.92	4.79	5.33	4.91	6.77	5.33
19	.66	.62	8.00	3.04	4.87	4.48	4.79	4.69	5.04	4.82	5.33	4.73
20	.71	.66	8.74	6.82	4.87	4.36	4.88	4.69	5.04	4.95	4.73	4.40
21	.77	.71	6.82	4.75	6.99	4.87	6.62	4.88	4.96	4.67	4.40	4.23
22	.78	.76	4.75	4.46	8.11	6.99	8.15	6.62	4.67	4.45	4.23	4.04
23	.79	.75	4.82	4.57	8.76	8.08	9.92	8.15	4.45	4.29	4.04	3.91
24	.94	.79	4.57	3.77	8.08	6.80	8.53	7.34	4.29	4.12	3.91	3.78
25	1.52	.94	3.77	3.26	6.80	6.16	15.53	7.44	4.12	4.00	3.78	3.67
26	1.44	1.21	3.26	2.91	9.19	6.16	17.61	15.53	4.00	3.91	3.67	3.58
27	1.33	1.17	2.91	2.64	12.23	9.19	16.16	11.80	4.19	3.90	3.58	3.51
28	1.17	1.10	2.67	2.59	12.63	12.07	13.00	11.44	4.19	3.96	3.51	3.43
29	1.23	1.12	2.67	2.52	17.20	12.00	13.00	10.62	---	---	3.43	3.35
30	1.30	1.19	2.52	2.41	20.35	16.60	10.62	8.96	---	---	3.35	3.31
31	1.30	1.23	---	---	24.57	20.35	8.96	8.12	---	---	3.36	3.31
MONTH	1.52	.56	8.74	.83	24.57	2.49	25.28	4.69	8.12	3.90	7.21	3.31

11479560 EEL RIVER AT FERNBRIDGE, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11480390 MAD RIVER ABOVE RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.—Lat 40°17'04", long 123°20'03", in NW 1/4 NE 1/4 sec.24, T.2 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, on left bank on downstream side of Zenia Road Bridge, 500 ft downstream from unnamed creek, 0.4 mile downstream from Tompkins Creek, and 6.1 mi southwest of Forest Glen.

DRAINAGE AREA.—93.8 mi².

PERIOD OF RECORD.—June 1980 to current year. Discharge measurements only September to December 1971, July 1972, June to September 1977.

REVISED RECORDS.—WDR CA-80-2: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 2,700 ft above sea level, from topographic map. June 28 to Sept. 30, 1990, nonrecording gage 400 ft upstream at different datum.

REMARKS.—Records good except for discharges below 10 ft³/s, which are fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,000 ft³/s, Feb. 17, 1986, gage height, 11.39 ft in gage, 12.94 ft from crest-stage gage, from rating curve extended above 5,000 ft³/s, maximum gage height 13.10 ft, Jan. 20, 1993; no flow at times each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 3,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	2400	5,520	9.04	Dec. 30	2245	11,300	12.78
Dec. 10	0530	5,040	8.71	Jan. 26	0130	5,800	9.23

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	296	10300	657	154	74	92	31	8.0	1.3	.24
2	.00	.00	196	6270	558	267	69	85	30	8.9	1.2	.27
3	.00	.00	139	3640	496	243	65	81	31	9.1	1.1	.28
4	.00	.00	1140	1840	484	225	62	74	60	8.2	1.0	.19
5	.00	.00	2730	1110	455	212	60	68	46	7.7	.99	.15
6	.00	.00	1030	758	407	198	56	64	36	7.2	.89	.10
7	.00	.00	1070	587	379	185	55	61	32	6.6	.79	.06
8	.00	.00	1590	481	352	170	53	58	28	6.0	.70	.00
9	.00	.00	2630	400	326	158	50	55	26	5.6	.65	.05
10	.00	.00	3680	347	318	146	49	54	25	5.3	.59	.00
11	.00	.00	2230	312	297	138	48	52	24	5.0	.52	.00
12	.00	.00	1580	284	276	127	47	49	22	4.6	.51	.00
13	.00	.00	1210	260	258	119	45	47	21	4.5	.45	.00
14	.00	.00	798	239	242	112	44	45	20	4.2	.41	.03
15	.00	.00	540	228	229	105	42	44	19	3.8	.40	.11
16	.00	.00	397	216	217	224	40	41	17	3.6	.36	.04
17	.00	1.1	306	210	247	310	39	39	16	3.3	.36	.14
18	.00	114	243	198	228	225	55	39	15	3.3	.36	.18
19	.00	666	197	191	231	191	131	37	14	3.0	.31	.19
20	.00	418	206	192	232	174	207	36	14	2.8	.46	.17
21	.00	175	323	254	223	156	249	35	13	2.6	.36	.15
22	.00	224	330	354	211	138	260	35	12	2.5	.36	.10
23	.00	189	315	365	202	124	332	37	11	2.1	.36	.01
24	.00	124	324	392	190	113	238	44	11	2.0	.36	.00
25	.00	89	332	3940	180	104	193	40	9.7	2.0	.36	.00
26	.00	73	2580	4610	175	95	160	36	9.1	1.9	.36	.00
27	.00	60	3400	1870	169	90	136	39	8.2	1.5	.36	.00
28	.00	55	3070	2540	162	83	120	38	8.2	1.3	.35	.00
29	.00	48	5220	1450	---	78	109	37	8.0	1.8	.31	.00
30	.00	48	6010	882	---	75	98	34	7.7	1.5	.31	.00
31	.00	---	8100	706	---	80	---	32	---	1.4	.23	---
TOTAL	0.00	2284.10	52212	45426	8401	4819	3186	1528	624.9	131.3	17.07	2.46
MEAN	.000	76.1	1684	1465	300	155	106	49.3	20.8	4.24	.55	.082
MAX	.00	666	8100	10300	657	310	332	92	60	9.1	1.3	.28
MIN	.00	.00	139	191	162	75	39	32	7.7	1.3	.23	.00
AC-FT	.00	4530	103600	90100	16660	9560	6320	3030	1240	260	34	4.9

MAD RIVER BASIN

11480390 MAD RIVER ABOVE RUTH RESERVOIR, NEAR FOREST GLEN, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.59	172	459	588	554	506	264	115	47.4	7.52	1.21	1.07
MAX	57.6	741	1684	1887	2136	1299	878	301	229	25.0	4.87	12.2
(WY)	1990	1985	1997	1995	1986	1995	1982	1995	1993	1993	1993	1986
MIN	.000	.000	8.08	28.5	85.3	38.6	32.0	20.4	5.31	1.27	.000	.000
(WY)	1988	1994	1991	1991	1991	1988	1988	1987	1987	1985	1984	1984

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1980 - 1997	
ANNUAL TOTAL	152179.07		118631.83			
ANNUAL MEAN	416		325		225	
HIGHEST ANNUAL MEAN					419	
LOWEST ANNUAL MEAN					61.4	
HIGHEST DAILY MEAN	8100	Dec 31	10300	Jan 1	10300	Jan 1 1997
LOWEST DAILY MEAN	.00	Aug 28	.00	Oct 1	.00	Oct 8 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 28	.00	Oct 1	.00	Sep 11 1982
INSTANTANEOUS PEAK FLOW			11300	Dec 30	15000	Feb 17 1986
INSTANTANEOUS PEAK STAGE			12.78	Dec 30	13.10	Jan 20 1993
ANNUAL RUNOFF (AC-FT)	301800		235300		163300	
10 PERCENT EXCEEDS	1130		489		577	
50 PERCENT EXCEEDS	110		40		31	
90 PERCENT EXCEEDS	.00		.00		.00	

11480400 RUTH RESERVOIR NEAR FOREST GLEN, CA

LOCATION.—Lat 40°22'08", long 123°25'56", in NW 1/4 NW 1/4 sec.19, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, near center of Robert W. Matthews Dam on Mad River, 5.6 mi west of Forest Glen.

DRAINAGE AREA.—121 mi².

PERIOD OF RECORD.—October 1966 to current year. Records prior to October 1966 in files of Humboldt Bay Municipal Water District.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Humboldt Bay Municipal Water District).

REMARKS.—Reservoir is formed by earthfill dam; storage began July 1961. Total capacity, 48,000 acre-ft at elevation 2,654.0 ft, crest of spillway. Minimum pool capacity, 7,810 acre-ft at elevation 2,600 ft. Water is released down Mad River for municipal use. Records given represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 68,000 acre-ft, Feb. 17, 1986, elevation, 2,667.06 ft; minimum, 11,700 acre-ft, Oct. 24–28, 1977; minimum elevation, 2,607.13 ft, Oct. 28, 1977.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 61,200 acre-ft, Jan. 1, elevation, 2,664.91 ft; minimum contents, 27,600 acre-ft, Nov. 16, elevation, 2632.87 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Humboldt Bay Municipal Water District in 1977)

2,595	5,920	2,620	18,100	2,645	38,600
2,600	7,810	2,625	21,500	2,650	43,700
2,605	10,000	2,630	25,300	2,655	49,200
2,610	12,500	2,635	29,400	2,660	55,100
2,615	15,100	2,640	33,800	2,664	60,200

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

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34400	29600	33800	61200	50300	47200	47300	47700	46700	45400	42200	37700
2	34300	29500	34200	56700	50000	47600	47200	47500	46700	45400	42100	37500
3	34100	29300	34400	54100	49500	47800	47100	47300	46800	45400	41900	37400
4	33900	29200	37500	52300	49500	47900	47100	47000	46900	45300	41800	37200
5	33800	29000	43100	51200	49300	48000	47000	46700	46900	45200	41700	37100
6	33600	28900	45200	50500	49200	47900	47000	46700	46900	45100	41500	36900
7	33400	28800	48200	50000	49100	47900	47000	46700	46800	45000	41400	36700
8	33300	28700	51100	49600	49000	47800	47100	46700	46900	44900	41200	36600
9	33100	28500	53900	49400	48900	47700	47100	46700	46900	44800	41100	36500
10	32900	28400	53600	49200	48800	47600	47200	46700	46800	44800	40900	36300
11	32800	28300	52900	49000	48700	47500	47200	46700	46800	44700	40800	36200
12	32600	28100	51800	48800	48600	47300	47200	46700	46700	44600	40600	36000
13	32500	28000	51200	48600	48500	47100	47300	46700	46700	44500	40500	35900
14	32300	27900	50400	48500	48400	46900	47300	46700	46700	44400	40300	35800
15	32100	27700	49900	48400	48300	46700	47300	46700	46600	44400	40200	35700
16	31900	27600	49500	48300	48300	47400	47300	46700	46600	44200	40000	35500
17	31800	27700	49200	48200	48300	48200	47400	46700	46500	44200	39900	35400
18	31700	28000	48900	48100	48300	48400	47700	46700	46400	44000	39700	35200
19	31500	30400	48700	48000	48300	48500	48000	46700	46400	43900	39600	35100
20	31400	31400	48700	48000	48200	48500	48500	46700	46300	43800	39500	35000
21	31200	32000	48900	48200	48200	48400	49000	46700	46200	43700	39300	34800
22	31000	32500	49000	48600	48200	48300	49400	46700	46100	43600	39200	34700
23	30900	32900	49000	48800	48100	48100	49500	46800	46100	43500	39000	34600
24	30700	e33000	49000	49200	47900	48000	49100	46700	46000	43300	38900	34400
25	30600	33100	49100	54400	47800	47900	48800	46800	45900	43200	38700	34300
26	30500	33200	52800	54600	47600	47700	48600	46800	45800	43100	38600	34100
27	30300	33200	53800	52700	47500	47700	48400	46800	45800	42900	38400	33900
28	30200	33200	53400	53000	47300	47600	48200	46800	45700	42800	38300	33800
29	30000	33200	56500	51900	---	47500	48100	46700	45600	42700	38100	33700
30	29900	33300	59300	51100	---	47400	47900	46700	45500	42500	38000	33500
31	29800	---	59500	50700	---	47400	---	46800	---	42400	37800	---
MAX	34400	33300	59500	61200	50300	48500	49500	47700	46900	45400	42200	37700
MIN	29800	27600	33800	48000	47300	46700	47000	46700	45500	42400	37800	33500
a	2635.39	2639.39	2663.50	2656.30	2653.35	2653.40	2653.87	2652.87	2651.75	2648.78	2644.23	2639.67
b	-4800	+3500	+26200	-8800	-3400	+100	+500	-1100	-1300	-3100	-4600	-4300

CAL YR 1996 MAX 59500 MIN 27600 b +9000

WTR YR 1997 MAX 61200 MIN 27600 b -1100

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11480410 MAD RIVER BELOW RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.—Lat 40°22'16", long 123°26'06", in SW 1/4 SW 1/4 sec.18, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, on left bank 1,200 ft downstream from Robert W. Matthews Dam, and 5.8 mi west of Forest Glen.

DRAINAGE AREA.—121 mi².

PERIOD OF RECORD.—October 1980 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 2,560 ft above sea level, from topographic map.

REMARKS.—Records good, except for estimated discharges and flows below 10 ft³/s, which are poor. Flow regulated by Ruth Reservoir (station 11480400) 1,200 ft upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,800 ft³/s, Feb. 17, 1986, gage height, 17.61 ft, from floodmarks, from rating curve extended above 8,800 ft³/s; minimum daily, 5.6 ft³/s, Mar. 2, 1991.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	73	70	13600	1130	245	144	248	42	44	73	77
2	88	72	70	9620	942	245	134	249	42	44	73	77
3	88	72	69	5190	788	246	129	253	42	44	73	77
4	87	72	73	2940	715	246	114	251	42	45	74	76
5	87	70	166	1880	663	246	107	253	42	45	74	75
6	87	71	231	1360	594	245	94	161	42	45	74	75
7	86	71	238	1030	533	248	78	77	42	44	74	76
8	85	71	1020	798	485	249	58	77	42	44	74	76
9	85	71	2680	645	448	248	41	77	44	45	75	76
10	85	71	4150	531	426	248	41	79	46	44	75	75
11	85	71	3140	497	396	219	41	79	44	44	75	75
12	89	71	2500	429	365	245	41	79	43	44	76	75
13	90	70	1880	380	335	245	41	70	42	45	76	75
14	90	70	1390	335	312	245	41	62	42	45	76	75
15	89	70	1020	307	290	245	41	61	42	45	77	75
16	87	69	747	284	272	248	41	54	43	47	77	75
17	86	69	565	269	279	244	41	43	42	61	77	73
18	87	71	453	253	278	275	40	43	42	58	77	74
19	86	74	377	245	277	311	66	45	42	57	78	73
20	85	74	336	243	277	312	189	45	42	57	79	73
21	88	73	375	242	271	302	224	45	42	58	78	72
22	88	72	440	294	262	286	354	45	42	61	78	72
23	88	72	454	354	252	267	613	45	43	76	78	72
24	88	71	452	418	249	255	645	44	44	71	78	71
25	88	72	453	2370	246	251	499	44	44	71	79	70
26	87	71	1390	5240	245	217	409	44	44	e73	79	70
27	87	72	3620	3450	245	166	339	44	43	e73	78	70
28	87	70	4010	3020	245	163	293	57	43	e75	83	70
29	81	70	5290	2510	---	163	266	75	43	72	77	71
30	73	70	7020	1760	---	163	253	44	44	72	78	71
31	73	---	10500	1340	---	162	---	42	---	72	78	---
TOTAL	2668	2136	55179	61834	11820	7450	5417	2835	1282	1721	2371	2212
MEAN	86.1	71.2	1780	1995	422	240	181	91.5	42.7	55.5	76.5	73.7
MAX	90	74	10500	13600	1130	312	645	253	46	76	83	77
MIN	73	69	69	242	245	162	40	42	42	44	73	70
AC-FT	5290	4240	109400	122600	23440	14780	10740	5620	2540	3410	4700	4390

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.3	154	478	709	742	700	367	160	89.1	65.4	81.5	87.6
MAX	118	607	1780	2490	2993	1990	1426	449	408	89.3	103	101
(WY)	1984	1985	1997	1995	1986	1995	1982	1995	1993	1987	1990	1986
MIN	64.4	24.5	8.35	8.02	7.61	24.4	28.0	47.8	38.2	42.5	45.1	57.0
(WY)	1982	1993	1987	1992	1991	1988	1988	1987	1991	1982	1993	1993

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1981 - 1997			
ANNUAL TOTAL	203173				156925							
ANNUAL MEAN	555				430				308			
HIGHEST ANNUAL MEAN									591			
LOWEST ANNUAL MEAN									101			
HIGHEST DAILY MEAN	10500				Dec 31				13600			
LOWEST DAILY MEAN	53				Jun 22				5.6			
ANNUAL SEVEN-DAY MINIMUM	54				Jun 22				6.0			
INSTANTANEOUS PEAK FLOW					15000				17800			
INSTANTANEOUS PEAK STAGE					15.76				17.61			
ANNUAL RUNOFF (AC-FT)	403000				311300				223500			
10 PERCENT EXCEEDS	1550				645				716			
50 PERCENT EXCEEDS	92				78				91			
90 PERCENT EXCEEDS	62				44				39			

e Estimated.

11481000 MAD RIVER NEAR ARCATA, CA

LOCATION.—Lat 40°54'35", long 124°03'35", in NW 1/4 NW 1/4 sec.15, T.6 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 100 ft upstream from bridge on U.S. Highway 299, 1.0 mi downstream from Warren Creek, and 2.8 mi northeast of Arcata.

DRAINAGE AREA.—485 mi².

PERIOD OF RECORD.—October 1910 to September 1913, August 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 2129: 1965(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 10.79 ft above sea level. December 1910 to September 1913, nonrecording gage at site 0.1 mi upstream at different datum. Aug. 15, 1950, to July 23, 1956, water-stage recorder at site 0.6 mi upstream at datum 11.00 ft higher. July 24, 1956, to Aug. 10, 1992, water-stage recorder at different datums, at present site.

REMARKS.—Records fair. Flow regulated by Ruth Reservoir (station 11480400), 68 mi upstream, beginning in July 1961. Water is diverted 0.5 mi upstream from station for municipal supply and industrial use in Humboldt Bay area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 81,000 ft³/s, Dec. 22, 1964, gage height, 30.7 ft, prior datum, from high-water profile and flood-routing study; minimum daily, 0.10 ft³/s, Aug. 29, 1977.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	135	3590	44700	4730	1030	e644	1870	210	147	63	52
2	60	113	2120	28100	3680	3520	626	1370	194	114	61	50
3	59	101	1530	18100	3030	3810	631	1260	221	99	61	50
4	60	93	4380	10200	3080	2850	628	1090	437	93	61	49
5	60	88	16500	7520	2870	2250	613	938	322	92	59	49
6	61	82	6610	6000	2460	1960	599	840	252	87	57	48
7	60	80	4320	4870	2330	1730	594	721	223	83	57	47
8	58	87	12600	4130	2200	1530	575	629	203	79	55	47
9	55	86	24500	3640	1970	1380	565	625	182	e72	60	50
10	55	74	14900	3230	1810	1250	531	617	174	76	58	50
11	55	72	9990	2930	1650	1180	500	610	172	72	e56	49
12	58	70	7770	2710	1540	1060	487	550	163	70	55	49
13	62	73	6760	2440	1370	986	480	414	158	67	54	49
14	68	73	5130	2210	1220	918	495	388	149	64	53	80
15	64	76	3950	2050	1110	883	540	356	139	64	51	118
16	62	78	3070	1930	e1310	913	536	337	130	62	51	73
17	62	81	2370	1910	1860	1430	535	319	122	60	50	155
18	80	2440	1910	1750	1500	1070	531	293	123	61	52	158
19	102	4200	1590	1650	1830	955	693	273	125	59	51	88
20	97	5340	1850	1850	1930	979	2430	262	125	67	56	69
21	83	2300	4540	2680	1590	938	2520	249	127	63	62	60
22	78	1560	4810	3510	1360	868	2440	238	125	61	59	57
23	84	1110	4640	2760	1180	809	3770	240	129	59	51	55
24	318	880	3390	2470	1050	751	2880	261	128	59	58	54
25	744	783	2950	8240	957	706	2260	238	130	57	59	52
26	619	636	6400	15200	891	685	1780	228	121	58	63	54
27	305	526	9850	9570	1080	659	1450	253	102	66	69	54
28	211	725	9660	8100	1230	629	1200	245	90	63	65	52
29	275	837	11900	6720	---	616	1300	232	97	62	59	52
30	270	718	15600	4930	---	614	1830	239	164	e62	58	50
31	185	---	26300	4270	---	e651	---	212	---	66	53	---
TOTAL	4471	23517	235480	220370	52818	39610	34663	16397	5037	2264	1777	1920
MEAN	144	784	7596	7109	1886	1278	1155	529	168	73.0	57.3	64.0
MAX	744	5340	26300	44700	4730	3810	3770	1870	437	147	69	158
MIN	55	70	1530	1650	891	614	480	212	90	57	50	47
AC-FT	8870	46650	467100	437100	104800	78570	68750	32520	9990	4490	3520	3810

e Estimated.

11481000 MAD RIVER NEAR ARCATA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1960, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	313	1081	2997	4588	4164	2438	1716	1167	358	97.2	40.3	39.3
MAX	2303	2903	9335	9175	9830	5054	3450	2669	1311	210	68.2	128
(WY)	1951	1954	1956	1953	1958	1957	1958	1953	1953	1953	1953	1912
MIN	22.0	32.0	136	852	1232	1028	489	277	104	36.6	19.2	18.2
(WY)	1953	1960	1960	1960	1955	1955	1951	1954	1959	1959	1959	1951

SUMMARY STATISTICS

WATER YEARS 1911 - 1960

ANNUAL MEAN	1573	
HIGHEST ANNUAL MEAN	2377	1958
LOWEST ANNUAL MEAN	943	1955
HIGHEST DAILY MEAN	63100	Dec 22 1955
LOWEST DAILY MEAN	17	Sep 8 1951
ANNUAL SEVEN-DAY MINIMUM	17	Sep 4 1959
INSTANTANEOUS PEAK FLOW	77800	Dec 22 1955
INSTANTANEOUS PEAK STAGE	27.30	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	1139000	
10 PERCENT EXCEEDS	4010	
50 PERCENT EXCEEDS	400	
90 PERCENT EXCEEDS	31	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	210	1286	2816	3530	2860	2853	1763	666	229	57.8	44.9	65.7
MAX	2255	6671	10400	8847	9796	7150	6253	1654	1721	152	123	392
(WY)	1963	1974	1965	1970	1986	1975	1963	1995	1993	1964	1983	1986
MIN	21.3	52.6	29.8	135	138	194	165	122	31.2	8.40	7.04	15.0
(WY)	1993	1994	1977	1977	1977	1988	1988	1968	1974	1977	1977	1992

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1963 - 1997

ANNUAL TOTAL	795035	638324	
ANNUAL MEAN	2172	1749	1360
HIGHEST ANNUAL MEAN			2478
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	26300	Dec 31	44700
LOWEST DAILY MEAN	33	Aug 8	47
ANNUAL SEVEN-DAY MINIMUM	36	Aug 8	49
INSTANTANEOUS PEAK FLOW			51900
INSTANTANEOUS PEAK STAGE			24.65
ANNUAL RUNOFF (AC-FT)	1577000	1266000	985000
10 PERCENT EXCEEDS	6170	4230	3740
50 PERCENT EXCEEDS	706	337	267
90 PERCENT EXCEEDS	48	56	31

11481200 LITTLE RIVER NEAR TRINIDAD, CA

LOCATION.—Lat 41°00'40", long 124°04'50", in NE 1/4 sec.8, T.7 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 0.5 mi upstream from Coon Creek, 4.7 mi southeast of Trinidad, and 9.1 mi north of Arcata.

DRAINAGE AREA.—40.5 mi².

PERIOD OF RECORD.—October 1955 to current year. Prior to October 1971, published as "at Crannell."

REVISED RECORDS.—WSP 2129: 1956–60. WDR CA-78-2: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 17.62 ft above sea level.

REMARKS.—Records good except for estimated daily discharges, which are fair. No storage or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,830 ft³/s, Mar. 18, 1975, gage height, 14.19 ft, from rating curve extended above 3,100 ft³/s on basis of slope-area measurement at gage height 14.08 ft; minimum daily, 1.8 ft³/s, Sept. 25–29, 1991.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 17–18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 3,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	2045	5,900	11.03	Jan. 1	unknown	9,150	13.60
Dec. 8	2215	6,100	11.21				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	24	561	e4600	e750	e70	59	271	31	25	9.5	7.8
2	6.0	21	267	e2100	e600	e312	53	175	28	20	9.5	7.7
3	6.0	19	230	e980	e470	e403	51	204	54	18	9.5	7.4
4	5.9	16	1480	632	e495	e211	49	145	61	17	9.5	7.0
5	5.4	15	1920	442	e420	e189	45	113	39	17	9.5	7.0
6	5.4	13	644	329	e360	e177	44	96	33	16	9.5	7.0
7	5.3	12	659	255	e310	146	44	85	30	15	9.5	7.0
8	4.7	11	3300	204	e275	123	42	76	29	15	9.4	7.0
9	3.6	11	3780	165	e245	108	41	69	25	15	8.6	7.0
10	3.3	11	1170	137	e213	101	39	65	25	14	8.6	7.0
11	3.3	11	679	117	e190	97	38	61	24	14	8.9	7.0
12	3.3	10	494	101	e168	93	36	57	24	14	9.5	7.0
13	6.2	10	492	85	e155	89	36	53	24	14	9.3	7.0
14	7.3	10	361	72	e157	83	36	50	24	14	8.6	15
15	6.0	14	286	62	e120	80	34	47	23	14	8.6	13
16	6.0	14	237	55	e96	85	33	45	20	14	8.6	11
17	5.4	14	209	72	e146	98	35	41	19	14	8.6	26
18	32	1080	190	53	e103	81	40	39	19	13	8.6	21
19	32	945	176	54	e117	73	76	39	19	13	8.6	13
20	19	473	248	151	e158	74	418	38	19	13	8.6	10
21	13	246	437	395	e93	71	235	37	19	13	8.6	9.3
22	16	202	735	400	e88	67	375	36	18	12	8.7	8.6
23	37	134	551	205	e83	65	521	37	17	12	8.6	8.6
24	154	118	335	141	e80	62	259	39	17	11	8.6	8.6
25	199	107	315	964	e74	59	165	35	17	11	8.6	8.2
26	78	88	845	e1160	e69	58	117	34	16	11	12	8.2
27	40	78	e1050	e2300	e75	57	96	40	15	11	16	8.6
28	30	160	e1500	e1010	e90	54	84	36	15	10	12	8.6
29	66	126	e2100	e831	---	53	156	34	15	9.5	10	8.4
30	41	146	e2150	e609	---	56	384	32	34	9.5	9.4	7.7
31	29	---	e2800	e888	---	64	---	30	---	9.5	8.6	---
TOTAL	875.1	4139	30201	19569	6200	3359	3641	2159	753	428.5	292.1	286.7
MEAN	28.2	138	974	631	221	108	121	69.6	25.1	13.8	9.42	9.56
MAX	199	1080	3780	4600	750	403	521	271	61	25	16	26
MIN	3.3	10	176	53	69	53	33	30	15	9.5	8.6	7.0
AC-FT	1740	8210	59900	38820	12300	6660	7220	4280	1490	850	579	569

e Estimated.

LITTLE RIVER BASIN

11481200 LITTLE RIVER NEAR TRINIDAD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.0	160	323	341	284	260	141	74.5	33.2	13.1	8.29	7.97
MAX	202	849	1083	1145	816	819	521	271	168	31.4	23.3	28.4
(WY)	1963	1974	1965	1970	1986	1975	1963	1960	1993	1983	1983	1986
MIN	4.70	4.62	7.45	28.2	19.7	35.5	22.1	21.9	12.2	6.12	3.59	3.89
(WY)	1988	1994	1977	1977	1977	1988	1977	1987	1966	1959	1959	1987

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1956 - 1997			
ANNUAL TOTAL	80778.3				71903.4							
ANNUAL MEAN	221				197				139			
HIGHEST ANNUAL MEAN									240			
LOWEST ANNUAL MEAN									23.8			
HIGHEST DAILY MEAN	3780				4600				7860			
LOWEST DAILY MEAN	3.3				3.3				1.8			
ANNUAL SEVEN-DAY MINIMUM	4.1				4.1				1.9			
INSTANTANEOUS PEAK FLOW					9150				9830			
INSTANTANEOUS PEAK STAGE					13.60				14.19			
ANNUAL RUNOFF (AC-FT)	160200				142600				100700			
10 PERCENT EXCEEDS	567				481				361			
50 PERCENT EXCEEDS	73				39				35			
90 PERCENT EXCEEDS	7.3				8.6				5.8			

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA

LOCATION.—Lat 40°54'22", long 123°48'51", in SE 1/4 NE 1/4 sec.15, T.6 N., R.3 E., Humboldt County, Hydrologic Unit 18010102, on right bank 400 ft upstream from Lupton Creek and 9.1 mi east of town of Blue Lake.

DRAINAGE AREA.—67.7 mi².

PERIOD OF RECORD.—Water years 1973 to current year.

SURFACE WATER: Water years 1953–58, 1972–93.

CHEMICAL DATA: Water years 1974–75.

WATER TEMPERATURE: Water years 1973–92.

SEDIMENT DATA: Water years 1973 to current year.

PERIOD OF DAILY RECORD.—

SURFACE WATER: June 1953 to September 1958, October 1972 to September 1993.

WATER TEMPERATURE: October 1972 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1992.

REMARKS.—Periodic total load sampling above 1,000 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC						
05...	1030	2320	9.0	1430	8960	60
05...	1235	2080	8.5	1250	7020	60
05...	1605	1870	8.5	1140	5760	53

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH VER- TICAL (FEET) (04121)
DEC									
05...	1330	1000	1100	.250	0	1310	1350	15	3.0
05...	1410	1000	1100	.250	0	1355	1425	15	3.0
05...	1640	1000	1100	.250	0	1625	1655	15	3.0
05...	1710	1000	1100	.250	0	1700	1715	10	3.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE (T/D/FT DAY) (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD DIAM. % FINER THAN .125 MM (80227)
DEC									
05...	2	28	28	2.00	2010	8.5	6.73	944	--
05...	2	28	28	2.00	1940	8.5	15.2	944	1
05...	2	28	28	2.00	1860	8.5	22.4	1510	--
05...	2	28	28	2.00	1850	8.5	13.1	1510	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM (80236)
DEC									
05...	5	12	23	37	51	64	83	94	100
05...	3	11	19	29	40	54	73	92	100
05...	--	3	10	22	36	51	71	92	100
05...	--	4	14	28	45	61	78	92	100

11482500 REDWOOD CREEK AT ORICK, CA

LOCATION.—Lat 41°17'58", long 124°03'00", in NE 1/4 NE 1/4 sec.34, T.11 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank on U.S. Highway 101, 0.8 mi north of Orick, 300 ft downstream from Prairie Creek, and 3.7 mi upstream from mouth.

DRAINAGE AREA.—277 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—September 1911 to September 1913, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1315-B: 1912–13.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 5.16 ft above sea level. Sept. 10, 1911, to Aug. 9, 1913, nonrecording gage at different datum. October 1953 to Apr. 16, 1987, at site 0.9 mi downstream at same datum. May 7, 1987, to Aug. 3, 1987, nonrecording gage at same site and datum.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 50,500 ft³/s, Dec. 22, 1964, former site, from outside high-water marks, maximum gage height, 28.22 ft, Jan. 1, 1997; minimum daily, 2.1 ft³/s, Oct. 20–22, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 18, 1953, reached a stage of 23.95 ft, former site, from floodmarks, discharge, 50,000 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 9,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	0315	22,000	23.66	Jan. 1	1900	40,300	28.22
Dec. 9	0945	23,800	24.16				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	96	2840	30100	3640	866	563	1580	222	173	42	32
2	15	83	1930	18800	2660	2850	492	1200	207	142	42	29
3	15	74	1680	11700	2180	2640	461	1220	270	123	42	25
4	13	66	4070	6670	2730	2010	443	1040	464	112	38	26
5	12	60	14100	4570	2330	1640	423	901	337	109	37	24
6	12	55	6110	3420	1930	1480	396	809	275	104	34	24
7	11	53	4730	2740	1800	1350	394	759	243	100	35	22
8	11	50	11000	2300	1630	1220	376	715	224	96	32	22
9	10	46	20600	1930	1440	1090	367	660	208	93	28	21
10	10	46	10600	1670	1340	1020	347	616	189	89	27	21
11	10	44	6450	1510	1220	993	327	568	186	92	28	22
12	10	42	4980	1380	1160	962	316	530	182	88	28	22
13	10	42	5340	1290	1060	895	316	489	178	87	28	21
14	11	44	4100	1210	984	842	303	456	172	79	27	89
15	11	62	3270	1130	925	820	286	425	160	70	25	194
16	11	62	2660	1070	889	857	e276	396	151	64	22	260
17	11	56	2250	1110	1240	1040	e285	370	143	56	20	332
18	51	3650	1930	1040	1090	853	e321	346	139	57	20	326
19	126	4330	1680	1010	1590	751	656	318	134	63	20	202
20	93	3840	1900	1110	1490	747	2520	302	128	66	21	127
21	54	2040	3650	1600	1220	723	1910	289	127	62	26	88
22	40	1480	4070	2110	1100	661	1800	276	122	58	27	67
23	77	1070	4390	1590	992	605	3120	306	120	57	24	68
24	260	927	3440	1390	894	559	1990	330	118	57	26	57
25	442	874	3200	4370	813	531	1460	286	117	53	27	42
26	362	738	5440	6910	765	503	1190	260	112	48	49	35
27	184	644	6840	4530	946	483	1040	316	109	47	100	35
28	131	739	6370	4750	969	467	932	291	110	44	67	33
29	153	789	6760	3660	---	439	1030	264	117	44	54	32
30	143	728	8330	2900	---	469	1620	240	158	43	41	29
31	118	---	12800	2990	---	622	---	224	---	43	35	---
TOTAL	2430	22830	177510	132560	41027	30988	25960	16782	5422	2419	1072	2327
MEAN	78.4	761	5726	4276	1465	1000	865	541	181	78.0	34.6	77.6
MAX	442	4330	20600	30100	3640	2850	3120	1580	464	173	100	332
MIN	10	42	1680	1010	765	439	276	224	109	43	20	21
AC-FT	4820	45280	352100	262900	81380	61460	51490	33290	10750	4800	2130	4620

e Estimated.

REDWOOD CREEK BASIN

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11482500 REDWOOD CREEK AT ORICK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	157	1062	2173	2516	2144	1953	1223	631	258	86.8	42.0	40.1
MAX	1559	5219	8981	6041	6320	5565	4026	1732	1213	194	91.6	149
(WY)	1963	1974	1965	1956	1986	1975	1963	1912	1993	1993	1968	1986
MIN	2.91	35.3	42.1	180	190	297	251	188	77.3	35.7	9.89	4.44
(WY)	1988	1960	1977	1977	1977	1988	1988	1987	1987	1987	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1911 - 1997			
ANNUAL TOTAL	585147				461327				1020			
ANNUAL MEAN	1599				1264				1726			
HIGHEST ANNUAL MEAN									1974			
LOWEST ANNUAL MEAN									192			
HIGHEST DAILY MEAN	20600				30100				43200			
LOWEST DAILY MEAN	10				10				2.1			
ANNUAL SEVEN-DAY MINIMUM	10				10				2.2			
INSTANTANEOUS PEAK FLOW					40300				50500			
INSTANTANEOUS PEAK STAGE					28.22				28.22			
ANNUAL RUNOFF (AC-FT)	1161000				915000				738600			
10 PERCENT EXCEEDS	4350				3330				2730			
50 PERCENT EXCEEDS	650				321				306			
90 PERCENT EXCEEDS	21				26				25			

REDWOOD CREEK BASIN

11482500 REDWOOD CREEK AT ORICK, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1955–56, 1959 to September 1980, October 1981 to current year (storm season only).

CHEMICAL DATA: Water years 1959–66, 1973–81.

WATER TEMPERATURE: Water years 1966–92.

SEDIMENT DATA: Water years 1955–56, 1970 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1965 to September 1981, October 1981 to September 1992 (storm season only).

SUSPENDED-SEDIMENT DISCHARGE: March 1970 to September 1981, October 1981 to September 1992 (storm season only).

EXTREMES FOR PERIOD OF DAILY RECORD.—

SEDIMENT CONCENTRATION: Maximum daily mean, 9,610 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, Nov. 10–12, 1986, Apr. 20, 29, 30, 1987, several days during 1989–90, many days during 1991.

SEDIMENT LOAD: Maximum daily, 1,070,000 tons, Mar. 18, 1975; minimum daily, 0 tons, Nov. 10–12, 1986, Apr. 20, 29, 30, 1987, several days during 1989–90, many days during 1991.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. UBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC						
06...	1205	6300	10.0	706	12000	72
06...	1550	5660	10.0	649	9920	72
JAN						
28...	1420	4910	10.0	772	10200	68
28...	1650	4750	10.0	700	8980	67

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC									
06...	1255	1000	1100	.250	0	1240	1310	15	10.0
06...	1340	1000	1100	.250	0	1320	1355	15	10.0
06...	1645	1000	1100	.250	0	1615	1715	15	5.0
JAN									
28...	1045	1000	1100	.250	0	1025	1110	15	8.0
28...	1135	1000	1100	.250	0	1115	1150	15	8.0
28...	1505	1000	1100	.250	0	1445	1530	15	8.0
28...	1600	1000	1100	.250	0	1535	1620	15	8.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (DEG C) (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITIVE SAMPLE (T/D/FT DAY) (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)
DEC									
06...	2	22	22	5.00	6130	10.0	11.7	2730	--
06...	2	22	22	5.00	6010	10.0	13.5	2730	2
06...	1	40	40	3.00	5560	10.0	15.0	3060	1
JAN									
28...	2	20	20	4.00	5240	10.0	22.9	4210	--
28...	2	20	20	4.00	5160	10.0	26.0	4210	3
28...	2	20	20	2.00	4870	10.0	16.9	3270	2
28...	2	20	20	2.00	4780	10.0	24.8	3270	3

11482500 REDWOOD CREEK AT ORICK, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SED.	SED.	SED.	SED.	SED.	SED.	SED.	SED.
	BEDLOAD	BEDLOAD	BEDLOAD	BEDLOAD	BEDLOAD	BEDLOAD	BEDLOAD	BEDLOAD
	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE
	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
	.500 MM (80229)	1.00 MM (80230)	2.00 MM (80231)	4.00 MM (80232)	8.00 MM (80233)	16.0 MM (80234)	32.0 MM (80235)	64.0 MM (80236)
DEC								
06...	6	24	40	55	67	81	94	100
06...	12	28	46	58	64	81	94	100
06...	6	14	26	42	66	85	98	100
JAN								
28...	5	13	26	44	66	83	95	100
28...	9	21	34	52	63	85	99	100
28...	6	15	22	37	59	78	95	100
28...	6	13	22	40	63	83	99	100

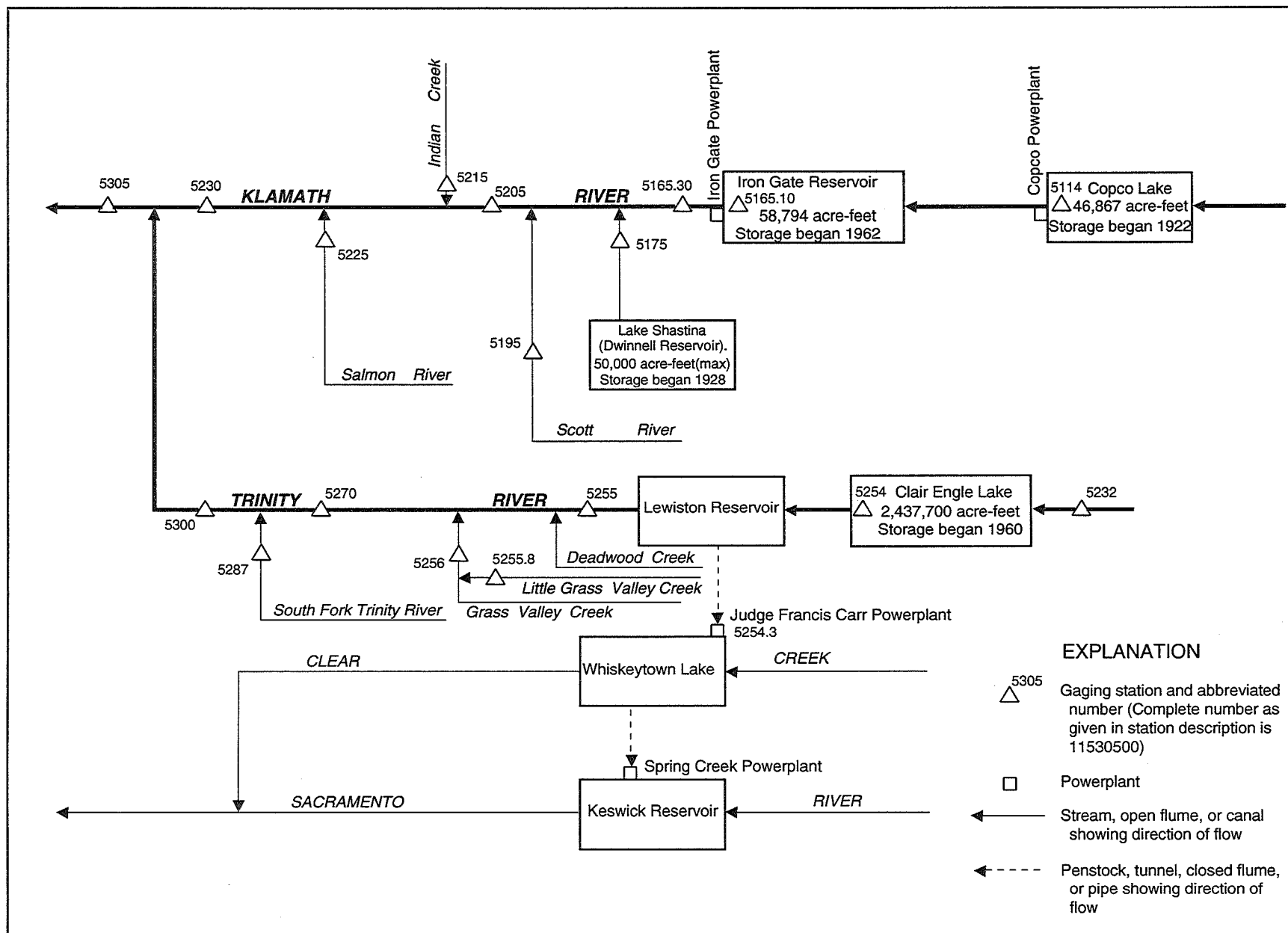


Figure 23 . Diversions and storage in Klamath River and Trinity River Basins.

RESERVOIRS IN KLAMATH RIVER BASIN, CA

11511400 COPCO LAKE NEAR COPCO.—Lat 41°58'46", long 122°20'00", in SE 1/4 SW 1/4 sec.29, T.48 N., R.4 W., Siskiyou County, Hydrologic Unit 18010206, 12.7 mi northeast of Hornbrook. DRAINAGE AREA, 4,300 mi², approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins). PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is sea level (levels by PacifiCorp, formerly Pacific Power and Light Co.). Monthend contents computed from capacity table provided by Pacific Power and Light Co., dated Aug. 25, 1964. REMARKS.—Lake is formed by gravity-type dam completed in 1922. Usable capacity, 17,107 acre-ft between elevations 2,607.5 ft, top of tainter gates, and 2,588.5 ft, invert to powerplant intake. Dead storage 29,760 acre-ft below elevation 2,588.5 ft. Figures given represent total contents at 0800 hours. Lake is used for power generation. See schematic diagram of Klamath River and Trinity River Basins. COOPERATION.—Records were provided by PacifiCorp, formerly Pacific Power & Light Co., in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards. EXTREMES (at 0800) FOR PERIOD OF RECORD.—Maximum contents, 46,818 acre-ft, June 24, 1969, elevation, 2,607.45 ft; minimum since first filling, 30,360 acre-ft, Aug. 19, 1971, elevation, 2,589.24 ft. EXTREMES (at 0800) FOR CURRENT YEAR.—Maximum contents, 46,710 acre-ft, July 14, elevation, 2,607.34 ft; minimum, 40,352 acre-ft, Jan. 31, elevation, 2,600.70 ft.

11516510 IRON GATE RESERVOIR NEAR HORN BROOK.—Lat 41°55'58", long 122°26'06", in SW 1/4 SW 1/4 sec.9, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, 6.6 mi northeast of Hornbrook. DRAINAGE AREA, 4,573 mi², approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins). PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is sea level (levels by PacifiCorp, formerly Pacific Power and Light Co.). Monthend contents computed from capacity table provided by Pacific Power and Light Co., dated Feb. 15, 1960. REMARKS.—Reservoir is formed by earth and rockfill dam completed in 1962. Usable capacity, 58,387 acre-ft, between elevations 2,328.0 ft, crest of spillway, and 2,184.75 ft, invert to diversion tunnel. Dead storage 407 acre-ft. Normal operating pool is from elevations 2,305.0 ft, capacity, 39,963 acre-ft, to 2,328.0 ft, capacity, 58,794 acre-ft. Figures given represent total contents at 0800 hours. Reservoir is used for power generation and recreation. See schematic diagram of Klamath River and Trinity River Basins. COOPERATION.—Records were provided by PacifiCorp, formerly Pacific Power and Light Co., in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards. EXTREMES (at 0800) FOR PERIOD OF RECORD.—Maximum contents, 61,797 acre-ft, Jan. 1, 1997, elevation, 2,330.98 ft; minimum since first filling, 50,103 acre-ft, Dec. 9, 1968, elevation, 2,318.40 ft. EXTREMES (at 0800) FOR CURRENT YEAR.—Maximum contents, 61,797 acre-ft, Jan. 1, elevation, 2,330.98 ft; minimum, 54,711 acre-ft, June 2, elevation, 2,323.68 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)
11511400 COPCO LAKE			11516510 IRON GATE RESERVOIR			
Sept. 30.....	2,602.55	43,082	—	2,325.83	56,702	—
Oct. 31.....	2,603.40	42,884	+802	2,326.94	57,763	+1,061
Nov. 30.....	2,604.15	43,601	+717	2,324.45	55,418	-2,345
Dec. 31.....	2,605.70	45,096	+1495	2,329.98	60,774	+5,356
CAL YR 1996.....	—	—	+2,041	—	—	+1,398
Jan. 31.....	2,600.70	40,352	-4,744	2,329.51	60,298	-476
Feb. 28.....	2,603.70	43,170	+2,818	2,328.68	59,463	-835
Mar. 31.....	2,602.85	42,366	-804	2,328.21	59,000	-463
Apr. 30.....	2,605.75	44,145	+2,779	2,328.94	59,723	+723
May 31.....	2,606.58	45,955	+810	2,324.46	55,429	-4,294
June 30.....	2,605.65	45,047	-908	2,325.55	56,443	+1,014
July 31.....	2,606.54	45,916	+869	2,326.35	57,199	+756
Aug. 31.....	2,604.50	43,936	-1,980	2,325.47	56,367	-832
Sept. 30.....	2,601.30	40,913	-3,023	2,326.56	57,400	+1,033
WTR YR 1997.....	—	—	-1,169	—	—	+2,096

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

LOCATION.—Lat 41°55'41", long 122°26'35", in SE 1/4 NE 1/4 sec.17, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, on left bank 0.1 mi downstream from Bogus Creek, 0.6 mi downstream from Iron Gate Dam, and 5.9 mi northeast of Hornbrook.

DRAINAGE AREA.—4,630 mi², approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins).

PERIOD OF RECORD.—October 1960 to current year.

CHEMICAL DATA: Water years 1962–81.

WATER TEMPERATURE: Water years 1963–80.

GAGE.—Water-stage recorder. Datum of gage is 2,162.44 ft above sea level (levels by PacifiCorp, formerly Pacific Power & Light Co.).

REMARKS.—Records excellent. Flow regulated by Upper Klamath Lake, capacity, 523,700 acre-ft; Iron Gate Reservoir (station 11516510), other smaller reservoirs, and diversions upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 29,400 ft³/s, Dec. 22, 1964, gage height, 13.63 ft, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 389 ft³/s, Aug. 25–28, 1992.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1350	1500	18500	7060	3610	2220	4600	1380	972	1020	1030
2	1340	1350	1570	15100	7070	3930	2210	4560	1260	827	1060	1030
3	1340	1350	1730	14600	6880	3950	2210	4520	1280	823	1050	1030
4	1340	1340	1850	14000	6580	3980	2180	4550	1280	825	1050	1030
5	1340	1350	2000	11300	6480	3670	2110	4330	1270	825	1050	1030
6	1340	1350	2780	10900	6610	3880	2100	3240	1310	819	1060	1030
7	1340	1350	3310	9910	6710	3850	2020	2090	1340	823	1050	1030
8	1340	1340	4170	10300	7060	3360	1740	1840	1340	834	1060	1030
9	1340	1340	4930	9950	6990	3310	1660	1710	1340	837	1060	1030
10	1340	1340	5490	9710	6970	3210	1660	1720	1340	823	1060	1040
11	1340	1340	4770	9440	6680	3140	1640	1720	1350	811	1060	1040
12	1340	1350	4060	9220	6330	3030	1630	1720	1350	813	1060	1040
13	1350	1350	3840	9240	6210	2940	1640	1720	1340	815	1060	1030
14	1340	1350	3630	9090	5570	2910	1540	1720	1340	811	1060	1050
15	1350	1340	3520	8670	5140	2930	1390	1720	1340	811	1060	1040
16	1340	1340	3510	8620	4930	2930	1400	1550	1340	810	1060	1040
17	1350	1340	2850	8660	5030	2900	1400	1470	1160	811	1060	1050
18	1350	1380	2440	8600	5160	2710	1400	1460	1140	810	1060	1040
19	1350	1510	2270	8200	5270	2670	1400	1460	1140	810	1060	1040
20	1350	1800	2340	8160	5030	2540	1400	1470	1150	807	1080	1040
21	1350	1800	2400	8110	4760	2530	1610	1470	1150	804	1070	1040
22	1350	1800	2420	7920	4110	2530	2370	1460	1150	805	1070	1030
23	1350	1790	2510	7590	4010	2530	3300	1460	1150	807	1060	1030
24	1350	1710	2700	7010	3980	2600	3620	1460	1150	808	1070	1030
25	1350	1610	3020	7210	4010	2660	4010	1460	1150	809	1070	1030
26	1350	1550	3560	7480	3790	2560	3640	1460	1150	810	1070	1040
27	1350	1500	3840	7560	3370	2470	3630	1450	1150	810	1070	1040
28	1350	1500	3850	7970	3460	2440	3820	1460	1150	807	1070	1030
29	1360	1500	4530	8120	---	2320	4290	1460	1150	809	1050	1030
30	1350	1500	6010	8140	---	2260	4580	1450	1160	811	1030	1030
31	1350	---	10900	6850	---	2200	---	1450	---	809	1030	---
TOTAL	41720	43820	108300	296130	155250	92550	69820	65210	37300	25406	32800	31050
MEAN	1346	1461	3494	9553	5545	2985	2327	2104	1243	820	1058	1035
MAX	1360	1800	10900	18500	7070	3980	4580	4600	1380	972	1080	1050
MIN	1340	1340	1500	6850	3370	2200	1390	1450	1140	804	1020	1030
AC-FT	82750	86920	214800	587400	307900	183600	138500	129300	73980	50390	65060	61590

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1656	2124	2765	3007	3114	3584	2953	2048	1055	760	972	1296
MAX	3353	5254	6735	9553	9150	10780	6922	4973	2591	1429	1208	2052
(WY)	1985	1985	1984	1997	1965	1972	1971	1971	1983	1982	1965	1965
MIN	852	873	889	888	525	511	572	512	506	428	398	538
(WY)	1982	1992	1992	1992	1992	1992	1994	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1961 - 1997
ANNUAL TOTAL	1091850	999356	
ANNUAL MEAN	2983	2738	
HIGHEST ANNUAL MEAN			2106
LOWEST ANNUAL MEAN			3657
HIGHEST DAILY MEAN	12000	Feb 22	18500 Jan 1
LOWEST DAILY MEAN	1030	Jul 10	804 Jul 21
ANNUAL SEVEN-DAY MINIMUM	1030	Jul 10	807 Jul 19
INSTANTANEOUS PEAK FLOW			20500 Jan 1
INSTANTANEOUS PEAK STAGE			13.08 Jan 1
INSTANTANEOUS LOW FLOW			389
ANNUAL RUNOFF (AC-FT)	2166000	1982000	1526000
10 PERCENT EXCEEDS	6340	6920	4100
50 PERCENT EXCEEDS	1700	1460	1390
90 PERCENT EXCEEDS	1060	1030	730

11517500 SHASTA RIVER NEAR YREKA, CA

LOCATION.—Lat 41°49'23", long 122°35'40", in SE 1/4 NE 1/4 sec.24, T.46 N., R.7 W., Siskiyou County, Hydrologic Unit 18010207, on right bank 24 mi downstream from Lake Shastina, 0.5 mi upstream from mouth, and 7 mi north of Yreka.

DRAINAGE AREA.—793 mi².

PERIOD OF RECORD.—October 1933 to December 1941, December 1944 to current year.

CHEMICAL DATA: Water years 1959–79.

WATER TEMPERATURE: Water years 1965–79.

SEDIMENT DATA: Water years 1955–56, 1958–62.

REVISED RECORDS.—WSP 1929: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,000 ft above sea level, from topographic map. Prior to Nov. 2, 1933, nonrecording gage at same site and datum.

REMARKS.—Records good. Low flow completely regulated by Lake Shastina (formerly Lake Dwinnell) beginning in 1928; storage limited to 50,000 acre-ft. Small powerplant, 5.6 miles upstream, has operated intermittently since summer of 1987. Many diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,500 ft³/s, Dec. 22, 1964, gage height, 12.92 ft, in gage well, 13.85 ft, from floodmarks, from rating curve extended above 4,100 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft³/s, Aug. 24, 1981, July 17, 1985.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 630 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1545	1,140	6.12	Jan. 1	1830	10,900	12.27

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	163	201	8420	617	337	212	164	80	139	39	91
2	133	184	198	6250	597	381	177	171	77	148	30	92
3	139	188	192	3770	580	365	164	162	85	142	26	98
4	125	181	214	2140	532	344	155	155	129	135	27	86
5	125	177	564	1440	454	336	157	156	170	125	28	58
6	125	173	408	1090	432	328	151	146	154	117	28	58
7	134	166	352	940	438	318	137	145	105	126	27	50
8	134	163	527	913	458	311	125	133	91	122	33	42
9	135	163	772	827	448	305	129	112	81	89	37	44
10	134	168	990	764	494	298	126	102	79	70	36	43
11	132	171	737	731	463	294	118	111	101	56	40	64
12	132	168	588	693	435	286	110	107	114	54	37	64
13	134	166	472	628	411	281	117	114	119	52	26	60
14	136	165	391	578	396	282	113	171	117	47	23	75
15	136	166	337	577	392	279	117	146	100	33	20	140
16	136	165	304	584	387	284	109	78	85	29	16	134
17	142	173	287	600	386	280	115	72	81	41	20	110
18	155	257	271	583	385	269	123	71	85	42	24	123
19	158	389	258	545	378	260	141	67	69	37	23	129
20	152	343	270	530	370	253	140	63	67	30	52	118
21	150	257	343	503	360	257	157	58	74	28	109	94
22	153	241	312	475	358	263	152	52	59	44	73	72
23	161	224	283	451	353	252	159	64	56	43	49	74
24	165	215	264	437	339	234	164	71	54	36	53	82
25	177	215	258	464	335	234	159	80	46	34	55	92
26	177	202	299	565	335	229	155	90	43	50	63	103
27	167	197	394	537	341	228	152	86	49	53	88	96
28	162	197	348	511	344	218	144	88	50	37	86	93
29	166	197	400	539	---	217	152	74	52	33	91	100
30	175	193	648	585	---	212	160	63	80	43	91	106
31	167	---	2510	593	---	217	---	70	---	38	87	---
TOTAL	4524	6027	14392	38263	11818	8652	4290	3242	2552	2073	1437	2591
MEAN	146	201	464	1234	422	279	143	105	85.1	66.9	46.4	86.4
MAX	177	389	2510	8420	617	381	212	171	170	148	109	140
MIN	107	163	192	437	335	212	109	52	43	28	16	42
AC-FT	8970	11950	28550	75890	23440	17160	8510	6430	5060	4110	2850	5140

KLAMATH RIVER BASIN

11517500 SHASTA RIVER NEAR YREKA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151	195	281	339	339	309	200	131	96.7	43.6	38.3	74.8
MAX	351	361	1223	1234	1002	946	753	363	296	147	111	182
(WY)	1963	1985	1965	1997	1958	1983	1974	1941	1958	1995	1941	1978
MIN	90.7	117	120	110	133	97.7	31.8	24.5	18.0	10.1	8.35	26.7
(WY)	1989	1937	1937	1937	1934	1977	1992	1992	1955	1960	1939	1981

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1934 - 1997	
ANNUAL TOTAL	91227		99861			
ANNUAL MEAN	249		274		183	
HIGHEST ANNUAL MEAN					364	
LOWEST ANNUAL MEAN					77.9	
HIGHEST DAILY MEAN	2510	Dec 31	8420	Jan 1	10400	Dec 23 1964
LOWEST DAILY MEAN	23	Aug 26	16	Aug 16	1.5	Aug 24 1981
ANNUAL SEVEN-DAY MINIMUM	26	Aug 20	22	Aug 13	5.5	Aug 9 1939
INSTANTANEOUS PEAK FLOW			10900	Jan 1	21500	Dec 22 1964
INSTANTANEOUS PEAK STAGE			12.27	Jan 1	12.92	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	180900		198100		132400	
10 PERCENT EXCEEDS	545		528		343	
50 PERCENT EXCEEDS	170		152		152	
90 PERCENT EXCEEDS	47		44		25	

11519500 SCOTT RIVER NEAR FORT JONES, CA

LOCATION.—Lat 41°38'27", long 123°00'50", in NE 1/4 NE 1/4 sec.29, T.44 N., R.10 W., Siskiyou County, Hydrologic Unit 18010208, on right bank 1.8 mi upstream from Snow Creek and 9.0 mi west of Fort Jones.

DRAINAGE AREA.—653 mi².

PERIOD OF RECORD.—October 1941 to current year. Monthly discharge only October to December 1941, published in WSP 1315-B.

CHEMICAL DATA: Water years 1959–79.

SEDIMENT DATA: Water years 1955–56.

REVISED RECORDS.—WSP 1445: 1942–43(M), 1946(M), 1948. WSP 1715: 1951–52(M). WSP 1929: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2,623.80 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1966, water-stage recorder 400 ft downstream at datum 2.00 ft higher.

REMARKS.—Records good. Diversions for irrigation of about 30,000 acres upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 54,600 ft³/s, Dec. 22, 1964, gage height, 25.34 ft, from floodmarks, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement at 21.40 ft, site and datum then in use; minimum daily, 4.1 ft³/s, Sept. 20, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,700 ft³/s, or maximim:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 20	1515	4,650	11.58	Jan. 1	1700	34,300	23.47
Dec. 9	2015	8,670	14.22				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	101	2040	27400	2440	698	744	922	382	e124	43	29
2	39	98	2040	21500	2030	839	693	837	363	e122	45	29
3	40	97	2090	12300	1780	817	659	767	366	e115	43	29
4	41	94	2400	7220	1630	750	634	767	504	108	41	30
5	42	98	3410	4840	1490	720	584	755	493	102	38	28
6	44	97	1960	3580	1380	699	568	704	431	102	35	28
7	45	97	1570	2900	1340	682	551	685	379	98	33	29
8	45	97	4510	2460	1270	669	524	660	351	92	29	29
9	47	96	7700	2160	1220	651	500	691	330	89	27	30
10	45	97	7580	1940	1210	649	487	766	306	85	25	32
11	46	98	4270	1780	1140	655	460	825	288	77	e24	33
12	46	97	2930	1630	1090	644	444	858	268	74	e24	33
13	45	96	2300	1450	1030	633	428	821	261	72	e23	32
14	45	96	1830	1300	1000	626	417	812	253	74	e23	35
15	46	100	1520	1240	968	635	411	771	230	72	e23	38
16	47	98	1310	1170	949	704	426	739	216	68	e22	40
17	48	101	1160	1190	939	800	446	704	202	64	e22	45
18	50	e1020	1050	1170	904	747	491	678	188	70	e22	44
19	49	e4900	953	1110	907	745	1040	627	173	65	e21	43
20	52	e3300	934	1080	886	923	2070	559	160	64	e21	44
21	55	3210	987	1060	851	1080	2100	505	e158	63	21	44
22	58	2740	932	1050	821	1010	1850	446	e154	62	21	44
23	63	2580	860	983	791	975	2030	438	e151	61	21	44
24	67	2600	806	935	761	952	1580	466	e147	57	23	44
25	83	1960	820	1060	744	956	1270	435	e144	54	27	43
26	97	1910	1480	1500	738	1010	1140	412	e140	48	29	42
27	96	2300	2220	1650	733	1040	1180	392	e137	47	30	43
28	92	2360	1890	1880	713	974	1110	389	e133	45	30	44
29	92	1960	3050	1900	---	878	1020	407	e129	44	30	44
30	96	2010	6280	1690	---	831	965	402	e126	41	29	43
31	100	---	14900	1860	---	794	---	389	---	45	29	---
TOTAL	1797	34508	87782	114988	31755	24786	26822	19629	7563	2304	874	1115
MEAN	58.0	1150	2832	3709	1134	800	894	633	252	74.3	28.2	37.2
MAX	100	4900	14900	27400	2440	1080	2100	922	504	124	45	45
MIN	36	94	806	935	713	626	411	389	126	41	21	28
AC-FT	3560	68450	174100	228100	62990	49160	53200	38930	15000	4570	1730	2210

e Estimated.

11519500 SCOTT RIVER NEAR FORT JONES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	341	833	1073	1160	1025	1020	1137	701	184	64.2	54.9
MAX	941	1628	5003	4417	4793	2825	2217	2426	1801	769	269	228
(WY)	1963	1974	1965	1974	1958	1972	1952	1958	1975	1983	1983	1983
MIN	9.58	10.7	52.7	80.9	99.0	83.3	55.1	121	78.0	12.8	5.82	4.75
(WY)	1995	1995	1995	1977	1977	1977	1977	1977	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1942 - 1997			
ANNUAL TOTAL	404977				353923							
ANNUAL MEAN	1106				970				639			
HIGHEST ANNUAL MEAN									1496			
LOWEST ANNUAL MEAN									74.9			
HIGHEST DAILY MEAN	14900				27400				39500			
LOWEST DAILY MEAN	20				21				4.1			
ANNUAL SEVEN-DAY MINIMUM	21				21				4.3			
INSTANTANEOUS PEAK FLOW					34300				54600			
INSTANTANEOUS PEAK STAGE					23.47				25.34			
ANNUAL RUNOFF (AC-FT)	803300				702000				463200			
10 PERCENT EXCEEDS	2420				2030				1540			
50 PERCENT EXCEEDS	966				446				305			
90 PERCENT EXCEEDS	29				33				46			

11520500 KLAMATH RIVER NEAR SEIAD VALLEY, CA

LOCATION.—Lat 41°51'14", long 123°13'52", in SW 1/4 SW 1/4 sec.3, T.46 N., R.12 W., Siskiyou County, Hydrologic Unit 18010206, Klamath National Forest, on left bank 0.4 mi upstream from Bittenbender Creek, 1.4 mi downstream from Grider Creek, 2.2 mi west of Seiad Valley, and 55 mi downstream from Iron Gate Dam.

DRAINAGE AREA.—6,940 mi², approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins).

PERIOD OF RECORD.—October 1912 to September 1925, July 1951 to current year. Monthly discharges only for some periods, published in WSP 1315-B.

CHEMICAL DATA: Water years 1959–66.

WATER TEMPERATURE: Water years 1964–79.

SEDIMENT DATA: Water years 1955–56.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,320 ft above sea level, from river-profile map. November 1912 to June 1925, nonrecording gage at site 3.5 mi upstream at different datum.

REMARKS.—Records good. Low flow regulated considerably by reservoirs and powerplants upstream from station. Large diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 165,000 ft³/s, Dec. 23, 1964, gage height, 33.75 ft, from floodmarks, from rating curve extended above 49,000 ft³/s on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 ft³/s, Nov. 25, 1917.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	1215	23,200	13.33	Jan. 1	2230	117,000	28.72

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1590	1840	2970	94100	13400	5920	4420	e6400	e2390	e1370	1040	1180
2	1590	1840	3030	82800	12900	6620	4290	e6200	e2380	e1440	1280	1180
3	1650	1850	3000	52100	12100	6700	4190	e6000	e2300	1360	1270	1190
4	1640	1850	3610	37000	11500	6560	4120	e5900	e2220	1300	1250	1190
5	1630	1820	9600	27600	10700	6240	3980	e5800	e2350	1290	1250	1160
6	1630	1820	7420	23100	10500	6080	3880	e5800	e3000	1290	1240	1140
7	1640	1820	7840	19500	10400	6400	3830	e5100	e2800	1330	1230	1140
8	1640	1820	15900	18500	10700	5760	3510	e4800	e2500	1380	1200	1140
9	1640	1810	22200	17300	10600	5620	3290	e4500	e2330	1400	1180	1130
10	1640	1810	21800	16200	10600	5520	3210	e4000	e2200	1360	1170	1160
11	1630	1810	16400	15300	10300	5430	3160	e3800	e2140	1260	1160	1190
12	1630	1800	12400	14700	9590	5310	3090	e3850	e2060	1210	1150	1200
13	1650	1800	10700	14200	9480	5130	3090	e3900	e2000	1180	1130	1180
14	1660	1820	9060	13900	8780	5040	3070	e3850	e1980	1150	1140	1220
15	1650	1820	7860	13400	8360	5070	2840	e3700	e1950	1120	1140	1310
16	1650	1810	7420	13100	7850	5230	2840	e3600	e1920	1100	1160	1350
17	1660	1820	6460	13200	7890	5390	2850	e3500	e1890	1080	1180	1350
18	1740	3310	5680	13200	7870	5110	2990	e3420	e1820	1100	1180	1350
19	1790	6500	5090	12700	8120	5000	3910	e3370	e1760	1090	1180	1320
20	1740	7200	5030	12400	7920	5230	e4900	e3250	e1700	1070	1240	1300
21	1710	4830	5300	12300	7590	5370	e7900	e3050	e1610	1040	1300	1270
22	1730	4130	5260	11900	7170	5260	e7500	e2850	e1540	1040	1260	1230
23	1800	3700	5110	11400	6480	5190	e7000	e2650	e1500	1050	1190	1210
24	1850	3440	5100	10400	6470	5140	e8100	e2550	e1470	1030	1200	1210
25	1960	3280	5380	10700	6430	5280	e7400	e2850	e1420	1020	1190	1200
26	1920	3020	7480	11800	6440	5310	e6800	e2700	e1390	1020	1200	1220
27	1880	2770	10300	12400	5900	5210	e6500	e2590	e1360	1030	1230	1220
28	1850	2770	9750	13000	5820	5100	e6300	e2480	e1330	1020	1230	1220
29	1870	2760	12700	13600	---	4810	e6200	e2400	e1310	1000	1230	1220
30	1870	2680	21200	13200	---	4690	e6600	e2500	e1300	1010	1190	1230
31	1870	---	44100	12900	---	4520	---	e2420	---	1010	1180	---
TOTAL	53400	81350	315150	657900	251860	169240	141760	119780	57920	36150	37170	36610
MEAN	1723	2712	10170	21220	8995	5459	4725	3864	1931	1166	1199	1220
MAX	1960	7200	44100	94100	13400	6700	8100	6400	3000	1440	1300	1350
MIN	1590	1800	2970	10400	5820	4520	2840	2400	1300	1000	1040	1130
AC-FT	105900	161400	625100	1305000	499600	335700	281200	237600	114900	71700	73730	72620

e Estimated.

KLAMATH RIVER BASIN

11520500 KLAMATH RIVER NEAR SEIAD VALLEY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2143	3078	4675	5834	6208	6430	5912	5068	3177	1663	1430	1673
MAX	4490	7654	20280	21500	17980	19120	13940	10700	7980	3908	2778	3000
(WY)	1963	1985	1965	1965	1958	1972	1974	1956	1953	1913	1913	1925
MIN	1047	1200	1395	1408	1466	1145	1132	1285	819	598	436	604
(WY)	1992	1995	1995	1992	1992	1977	1977	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1913 - 1997			
ANNUAL TOTAL	2084890				1958290							
ANNUAL MEAN	5696				5365				3929			
HIGHEST ANNUAL MEAN									7434			
LOWEST ANNUAL MEAN									1151			
HIGHEST DAILY MEAN	44100				94100				115000			
LOWEST DAILY MEAN	1220				1000				320			
ANNUAL SEVEN-DAY MINIMUM	1240				1020				417			
INSTANTANEOUS PEAK FLOW					117000				165000			
INSTANTANEOUS PEAK STAGE					28.72				33.75			
INSTANTANEOUS LOW FLOW									320			
ANNUAL RUNOFF (AC-FT)	4135000				3884000				2847000			
10 PERCENT EXCEEDS	11600				12200				8040			
50 PERCENT EXCEEDS	4140				2840				2700			
90 PERCENT EXCEEDS	1380				1180				1210			

11521500 INDIAN CREEK NEAR HAPPY CAMP, CA

LOCATION.—Lat 41°50'07", long 123°22'55", in SW 1/4 SW 1/4 sec.26, T.17 N., R.7 E., Siskiyou County, Hydrologic Unit 18010209, on right bank 0.2 mi upstream from Slater Creek, 3.0 mi north of Happy Camp, and 3.5 mi upstream from mouth.

DRAINAGE AREA.—120 mi².

PERIOD OF RECORD.—September 1911 to September 1921 (fragmentary), December 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1635: 1957–58.

GAGE.—Water-stage recorder. Datum of gage is 1,198.37 ft above sea level. Prior to December 1956, nonrecording gages at sites 1.0 mi upstream at different datums. December 1956 to Sept. 20, 1969, water-stage recorder at site 0.8 mi upstream at different datum.

REMARKS.—Records good. Small diversions upstream and at station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 39,000 ft³/s, Dec. 22, 1964, gage height, 24.3 ft, from floodmarks, present site and datum; 36.59 ft from floodmarks in gage well, from rating curve extended above 6,000 ft³/s on basis of slope-area measurement at gage height 29.0 ft, previous site and datum; minimum discharge observed, 20 ft³/s, Aug. 19 to Sept. 6, 1914.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 21, 1955, reached a stage of 29.0 ft, at 1956–69 site and datum, from floodmarks, discharge, 23,000 ft³/s on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 3,100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 19	1015	5,000	10.17	Dec. 8	1115	7,730	11.83
Dec. 4	2145	5,630	10.62	Jan. 1	unknown	21,300	17.68

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	100	642	e17000	1750	435	384	542	191	112	69	60
2	54	91	472	e8600	1310	595	366	469	183	108	68	59
3	54	85	385	4640	1100	547	354	453	218	105	67	60
4	54	81	1500	2850	969	511	346	420	229	102	67	58
5	54	78	2420	2070	854	494	331	392	199	100	66	58
6	54	75	1260	1650	783	492	322	376	185	98	65	58
7	54	75	2430	1400	763	497	316	359	177	96	63	57
8	52	73	6390	1190	727	498	310	350	171	94	63	57
9	52	71	5000	1070	689	494	303	357	166	93	62	58
10	52	69	3750	963	665	502	296	356	168	93	62	63
11	52	68	2410	877	630	515	289	350	161	91	62	64
12	52	68	2010	806	604	504	286	337	157	90	61	61
13	53	68	2020	743	569	474	285	315	158	87	60	60
14	54	71	1540	687	543	452	286	299	150	85	60	75
15	54	71	1230	645	523	456	288	288	143	84	59	79
16	54	70	1040	604	511	573	308	275	139	83	58	90
17	54	72	921	646	533	712	316	265	136	81	58	101
18	64	1960	819	618	508	598	372	255	132	81	59	89
19	75	3030	738	597	625	655	614	243	128	80	59	73
20	71	1200	816	603	606	736	1240	231	125	78	64	68
21	63	649	833	652	559	650	895	221	123	77	64	65
22	67	531	761	603	520	583	910	215	122	75	62	64
23	98	385	713	566	493	562	1030	242	119	74	61	63
24	195	375	679	537	466	544	777	238	116	73	63	62
25	207	345	1050	692	445	554	647	219	112	72	63	61
26	132	289	2510	1270	434	569	585	211	110	71	66	61
27	103	253	2710	1110	431	532	565	217	109	70	69	61
28	95	348	2410	2030	411	489	516	222	108	70	65	61
29	215	297	5990	1490	---	449	498	216	112	71	63	60
30	139	304	7450	1220	---	432	629	203	118	71	62	60
31	114	---	e11200	1730	---	413	---	199	---	69	60	---
TOTAL	2545	11252	74099	60159	19021	16517	14664	9335	4465	2634	1950	1966
MEAN	82.1	375	2390	1941	679	533	489	301	149	85.0	62.9	65.5
MAX	215	3030	11200	17000	1750	736	1240	542	229	112	69	101
MIN	52	68	385	537	411	413	285	199	108	69	58	57
AC-FT	5050	22320	147000	119300	37730	32760	29090	18520	8860	5220	3870	3900

e Estimated.

KLAMATH RIVER BASIN

11521500 INDIAN CREEK NEAR HAPPY CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.5	313	634	732	819	773	665	549	257	99.7	59.9	52.2
MAX	414	1498	3156	2230	2820	1896	1372	1368	579	204	100	102
(WY)	1963	1974	1965	1970	1958	1972	1966	1969	1975	1983	1983	1978
MIN	29.8	45.6	45.7	50.5	87.1	170	202	152	71.8	36.5	26.3	27.9
(WY)	1992	1960	1977	1977	1977	1977	1977	1992	1992	1977	1977	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1957 - 1997	
ANNUAL TOTAL	261884		218607			
ANNUAL MEAN	716		599		418	
HIGHEST ANNUAL MEAN					817	
LOWEST ANNUAL MEAN					83.7	
HIGHEST DAILY MEAN	11200	Dec 31	17000	Jan 1	30700	Dec 22 1964
LOWEST DAILY MEAN	52	Oct 8	52	Oct 8	21	Sep 12 1977
ANNUAL SEVEN-DAY MINIMUM	52	Oct 7	52	Oct 7	22	Sep 8 1977
INSTANTANEOUS PEAK FLOW			21300	Jan 1	39000	Dec 22 1964
INSTANTANEOUS PEAK STAGE			a17.68	Jan 1	24.30	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	519400		433600		302800	
10 PERCENT EXCEEDS	1540		1190		954	
50 PERCENT EXCEEDS	497		243		205	
90 PERCENT EXCEEDS	57		60		47	

a Maximum peak stage from floodmarks.

11522500 SALMON RIVER AT SOMES BAR, CA

LOCATION.—Lat 41°22'40", long 123°28'35", in NE 1/4 sec.3, T.11 N., R.6 E., Siskiyou County, Hydrologic Unit 18010210, Klamath National Forest, on left bank at Somes Bar, 1.0 mi upstream from mouth.

DRAINAGE AREA.—751 mi².

PERIOD OF RECORD.—September 1911 to September 1915, October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1285: 1912, 1914, 1915(M), 1946(M), 1948(M). WDR CA-72-1: 1970-71(P).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 482.97 ft above sea level. Prior to October 1927, nonrecording gage at different datum, October 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mi upstream at datum 6.54 ft higher.

REMARKS.—Records fair. No storage or large diversion upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 133,000 ft³/s, Dec. 22, 1964 (result of failure of upstream debris dam), gage height, 46.6 ft, present site and datum, from floodmarks, from rating curve extended above 33,000 ft³/s; minimum daily, 70 ft³/s, Aug. 25, 1931.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 19	1900	11,300	9.60	Dec. 9	0600	22,100	13.92
Dec. 5	0145	20,800	13.44	Jan. 1	0830	70,800	28.46

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	405	2660	64400	5900	1620	1720	2610	1260	801	338	231
2	227	383	2050	39200	4900	2040	1650	2330	1140	707	324	226
3	225	368	1770	22200	4310	1920	1610	2340	1340	654	312	217
4	225	358	4150	13600	3920	1830	1580	2310	2170	622	303	208
5	226	344	13700	9800	3550	1800	1520	2200	1430	599	295	201
6	225	334	6350	7480	3290	1790	1490	2150	1240	582	286	196
7	223	327	6270	6160	3160	1780	1470	2120	1150	556	277	193
8	220	320	15000	5350	2960	1780	1430	2130	1110	542	268	191
9	218	315	20100	4760	2820	1760	1390	2250	1090	537	258	190
10	216	309	14800	4280	2690	1780	1360	2360	1090	537	251	200
11	216	307	9430	3940	2560	1800	1340	2410	1050	509	252	232
12	219	305	7240	3650	2440	1760	1350	2390	993	486	248	245
13	229	312	6520	3370	2320	1690	1370	2240	989	473	239	216
14	235	334	5270	3160	2240	1650	1370	2180	937	462	231	317
15	231	332	4370	3000	2160	1690	1400	2070	924	454	224	418
16	228	324	3780	2840	2110	1920	1490	1980	903	442	219	411
17	227	361	3350	2890	2130	2150	1510	1880	883	435	217	435
18	344	6380	3000	2740	2020	1950	1780	1810	852	428	218	459
19	412	8210	2720	2610	2130	1980	3550	1690	809	420	219	366
20	331	6320	2820	2560	2040	2490	6060	1540	788	405	259	315
21	293	3100	2880	2600	1970	2540	4810	1430	765	395	314	288
22	306	2640	2830	2520	1890	2290	4340	1340	746	385	275	266
23	458	1910	2820	2370	1830	2250	5180	1420	718	374	251	251
24	677	1840	2720	2300	1770	2200	3960	1500	687	362	264	237
25	919	1880	3040	3510	1720	2240	3370	1310	670	354	287	225
26	606	1480	7520	5360	1700	2400	3160	1230	661	347	272	221
27	457	1260	9270	5010	1710	2340	3220	1350	646	353	299	220
28	428	1450	7500	5860	1650	2140	2890	1310	640	348	283	215
29	514	1290	12200	5310	---	1980	2660	1360	652	354	263	209
30	486	1230	17600	4540	---	1930	2840	1270	754	362	249	203
31	434	---	33800	4950	---	1850	---	1350	---	342	238	---
TOTAL	10485	44728	237530	252320	73890	61340	72870	57860	29087	14627	8233	7802
MEAN	338	1491	7662	8139	2639	1979	2429	1866	970	472	266	260
MAX	919	8210	33800	64400	5900	2540	6060	2610	2170	801	338	459
MIN	216	305	1770	2300	1650	1620	1340	1230	640	342	217	190
AC-FT	20800	88720	471100	500500	146600	121700	144500	114800	57690	29010	16330	15480

KLAMATH RIVER BASIN

11522500 SALMON RIVER AT SOMES BAR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	349	1103	2212	2922	2958	2906	2997	3111	1894	613	260	203
MAX	2297	5961	10480	11260	11190	9615	5741	6174	4354	1906	839	528
(WY)	1963	1974	1965	1970	1958	1972	1938	1938	1953	1953	1983	1983
MIN	117	130	175	190	255	448	710	786	402	146	81.6	83.1
(WY)	1988	1937	1937	1937	1977	1977	1977	1977	1992	1931	1931	1931

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1912 - 1997	
ANNUAL TOTAL	1057839		870772			
ANNUAL MEAN	2890		2386		1788	
HIGHEST ANNUAL MEAN					3754	
LOWEST ANNUAL MEAN					339	
HIGHEST DAILY MEAN	33800	Dec 31	64400	Jan 1	100000	Dec 22 1964
LOWEST DAILY MEAN	216	Sep 11	190	Sep 9	70	Aug 25 1931
ANNUAL SEVEN-DAY MINIMUM	220	Oct 6	197	Sep 4	73	Aug 24 1931
INSTANTANEOUS PEAK FLOW			70800	Jan 1	133000	Dec 22 1964
INSTANTANEOUS PEAK STAGE			28.46	Jan 1	46.60	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	2098000		1727000		1295000	
10 PERCENT EXCEEDS	6280		4850		4200	
50 PERCENT EXCEEDS	2690		1370		1020	
90 PERCENT EXCEEDS	240		231		179	

11523000 KLAMATH RIVER AT ORLEANS, CA

LOCATION.—Lat 41°18'13", long 123°32'00", in SW 1/4 NE 1/4 sec.31, T.11 N., R.6 E., Humboldt County, Hydrologic Unit 18010209, Six Rivers National Forest, on right bank at Orleans, 25 ft upstream from highway bridge, and 0.2 mi downstream from Cheenitch Creek.

DRAINAGE AREA.—8,475 mi², not including Lost River or Lower Klamath Lake basins.

PERIOD OF RECORD.—October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

SEDIMENT DATA: Water years 1967–79.

REVISED RECORDS.—WSP 1565: 1935(M), 1949.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 353.98 ft above sea level. Prior to Oct. 1, 1965, at site 6.7 mi upstream at different datum. Oct. 1, 1965, to July 14, 1992, water-stage recorder at datum 2.00 ft higher, at present site.

REMARKS.—Records fair. Flow considerably regulated by reservoirs and powerplants upstream from station. Large diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 307,000 ft³/s, Dec. 22, 1964, gage height, 76.5 ft, from floodmarks, site and datum then in use, from rating curve extended above 80,000 ft³/s on basis of slope-conveyance study, gage height, 59.4 ft; minimum daily, 320 ft³/s, Aug. 25, Sept. 1, 1951.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 19	1800	41,500	16.44	Jan. 1	1645	258,000	37.79
Dec. 9	0900	86,800	23.37				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2230	2640	9530	233000	32200	11400	9460	13900	5770	3620	1990	2040
2	2230	2580	8290	e195000	28100	13900	9160	13100	5450	3420	2060	2030
3	2200	2550	7230	e150000	25100	14000	8910	12900	5590	3020	2230	2020
4	2200	2540	11900	117000	23400	13400	8770	12600	7430	2920	2190	2010
5	2190	2500	41400	88600	21500	13000	8500	12300	6270	2810	2160	1990
6	2200	2480	24800	71200	20400	12600	8230	11800	5760	2750	2150	1950
7	2190	2460	25900	60000	19900	12700	8120	10600	5440	2690	2120	1930
8	2180	2440	67300	51800	19500	12500	7880	9450	5220	2640	2110	1920
9	2180	2430	80200	46100	19200	12000	7470	9280	5060	2630	2070	1920
10	2170	2420	63200	40600	18900	11900	7220	9320	4960	2600	2060	1950
11	2180	2410	46800	36100	18300	11900	7100	9510	4830	2520	2060	2040
12	2180	2400	37400	32100	17500	11700	7030	9510	4730	2420	2060	2060
13	2200	2410	33700	28400	16800	11200	7030	9200	4740	2370	2040	2010
14	2230	2440	27200	25200	16200	10900	7050	8960	4620	2340	2000	2230
15	2220	2450	22300	23000	15300	10900	6960	8760	4490	2300	1980	2500
16	2210	2440	19200	22200	14700	11500	7010	8480	4370	2260	1960	2730
17	2210	2490	17100	22500	14800	12900	7090	8000	4260	2220	1960	2710
18	2410	18400	14900	22000	14400	11900	7530	7640	4020	2200	1960	2900
19	2700	32400	13200	21300	15200	11700	11700	7320	3800	2200	1970	2510
20	2460	24500	13000	20900	15200	12800	19700	6940	3690	2170	2060	2350
21	2360	13400	13900	21100	14500	12800	18000	6570	3600	2130	2230	2260
22	2360	10800	13600	20700	13900	12100	17000	6290	3560	2080	2220	2190
23	2710	8310	13500	19800	12900	11800	20000	6390	3490	2060	2130	2120
24	3040	7480	13100	18900	12600	11500	17700	6670	3420	2060	2110	2090
25	3920	7500	14300	21600	12300	11600	15600	6240	3360	2020	2130	2070
26	3240	6320	29100	29100	12200	11900	14700	5960	3290	2000	2130	2050
27	2780	5540	40300	28400	12000	11700	14200	6180	3240	2010	2240	2070
28	2670	5900	36800	33500	11500	11200	13500	6070	3190	2020	2210	2070
29	3050	5750	50700	31900	---	10600	13200	6120	3220	2060	2160	2050
30	2960	5390	72100	28500	---	10200	14000	5870	3420	2050	2130	2040
31	2750	---	128000	29500	---	9980	---	5880	---	2010	2060	---
TOTAL	76810	193770	1009950	1590000	488500	370180	329820	267810	134290	74600	64940	64810
MEAN	2478	6459	32580	51290	17450	11940	10990	8639	4476	2406	2095	2160
MAX	3920	32400	128000	233000	32200	14000	20000	13900	7430	3620	2240	2900
MIN	2170	2400	7230	18900	11500	9980	6960	5870	3190	2000	1960	1920
AC-FT	152400	384300	2003000	3154000	968900	734300	654200	531200	266400	148000	128800	128600

e Estimated.

KLAMATH RIVER BASIN

11523000 KLAMATH RIVER AT ORLEANS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3033	6012	10800	13650	13970	13710	12640	10920	6385	2786	2061	2221
MAX	9876	22080	48770	51290	53740	42600	26860	25320	16900	7226	3666	3807
(WY)	1963	1974	1965	1997	1986	1972	1974	1938	1953	1953	1953	1953
MIN	1354	1930	2288	2334	2630	2806	3065	3081	1626	755	549	790
(WY)	1993	1988	1937	1937	1977	1977	1977	1992	1992	1931	1931	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1928 - 1997			
ANNUAL TOTAL	4964410				4665480							
ANNUAL MEAN	13560				12780				8154			
HIGHEST ANNUAL MEAN									17030			
LOWEST ANNUAL MEAN									2520			
HIGHEST DAILY MEAN	128000				Dec 31				240000			
LOWEST DAILY MEAN	1870				Sep 4				320			
ANNUAL SEVEN-DAY MINIMUM	1890				Aug 31				453			
INSTANTANEOUS PEAK FLOW					258000				Jan 1			
INSTANTANEOUS PEAK STAGE					37.79				Jan 1			
ANNUAL RUNOFF (AC-FT)	9847000				9254000				76.50			
10 PERCENT EXCEEDS	29200				26400				17800			
50 PERCENT EXCEEDS	10700				6390				4850			
90 PERCENT EXCEEDS	2180				2060				1890			

11523200 TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER, CA

LOCATION.—Lat 41°06'41", long 122°42'16", in SW 1/4 NW 1/4 sec.32, T.38 N., R.7 W., Trinity County, Hydrologic Unit 18010211, Shasta National Forest, on left bank 24 ft upstream from State Highway No. 3 Bridge, 1.8 mi upstream from Coffee Creek, and 8.6 mi north of Trinity Center.

DRAINAGE AREA.—149 mi².

PERIOD OF RECORD.—September 1957 to current year.

REVISED RECORDS.—WDR CA-85-2: 1982(M). WDR CA-97-2: 1982(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2,536.93 ft above sea level. Prior to Oct. 1, 1978, water-stage recorder at site 0.2 mi downstream at datum 3.57 ft lower.

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 26,500 ft³/s, Jan. 16, 1974, gage height, 12.96 ft, site and datum then in use, from rating curve extended above 4,500 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 16.82 ft, Jan. 1, 1987, present site and datum from floodmarks; minimum daily, 16 ft³/s, Sept. 11–14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1955, reached a stage of 10.5 ft, previous site and datum, from floodmarks, discharge, 11,400 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 19	1245	2,390	7.87	Jan. 1	unknown	20,100	16.82
Dec. 9	1330	7,370	11.18				

REVISIONS.—The maximum discharge for water year 1982 peak has been revised to 13,100 ft³/s, Nov. 16, 1981, gage height, 13.78 ft.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	59	156	e15000	878	287	459	541	174	124	51	40
2	36	56	138	5160	760	308	417	496	162	107	50	38
3	36	57	130	3000	663	288	399	499	228	97	48	38
4	36	56	138	1910	597	274	401	524	373	90	47	37
5	36	53	154	1390	532	272	381	520	249	86	46	37
6	36	51	159	1100	482	266	370	526	204	83	45	36
7	36	49	298	893	455	263	356	e526	181	80	44	35
8	36	49	2720	763	426	263	349	e505	168	77	43	35
9	36	48	6770	673	405	264	340	e515	161	75	42	35
10	35	47	4460	601	394	279	333	e525	156	74	41	37
11	35	47	1710	547	377	310	325	e535	185	72	42	38
12	35	47	1100	501	358	311	329	e540	163	70	42	37
13	35	47	879	434	341	307	344	e525	162	68	40	37
14	35	47	673	418	335	304	355	e510	148	66	40	72
15	35	47	557	403	331	336	412	480	138	64	39	75
16	35	47	491	e375	332	452	497	434	131	63	39	57
17	35	55	458	e350	366	453	526	397	127	64	39	50
18	39	569	418	e348	352	428	773	360	121	74	39	52
19	47	1400	386	e345	356	444	1170	323	116	65	39	46
20	47	865	373	e335	340	606	1620	287	111	61	105	43
21	46	532	361	e325	328	698	1290	259	108	58	74	42
22	43	562	348	e315	317	701	1140	239	106	56	52	40
23	49	357	319	315	305	731	1200	259	102	55	47	39
24	57	327	295	305	296	756	888	239	100	54	47	38
25	67	289	292	348	291	810	772	212	96	54	46	37
26	61	223	362	761	290	893	788	199	93	54	46	37
27	52	189	386	761	299	860	820	198	91	54	47	37
28	49	177	598	993	294	719	735	193	90	53	45	36
29	73	160	3820	894	---	625	629	191	94	65	43	36
30	75	147	6440	767	---	584	579	180	148	59	42	35
31	62	---	e10000	793	---	517	---	182	---	54	40	---
TOTAL	1373	6659	45389	41123	11500	14609	18997	11919	4486	2176	1450	1252
MEAN	44.3	222	1464	1327	411	471	633	384	150	70.2	46.8	41.7
MAX	75	1400	10000	15000	878	893	1620	541	373	124	105	75
MIN	35	47	130	305	290	263	325	180	90	53	39	35
AC-FT	2720	13210	90030	81570	22810	28980	37680	23640	8900	4320	2880	2480

e Estimated.

KLAMATH RIVER BASIN

11523200 TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.7	211	343	446	576	661	829	1032	464	122	53.8	44.3
MAX	447	1664	1726	1899	2248	1641	1500	2414	1989	778	205	134
(WY)	1963	1974	1965	1974	1958	1995	1966	1983	1983	1983	1983	1978
MIN	24.3	37.4	34.1	35.9	47.2	60.0	137	204	95.7	29.0	20.9	23.3
(WY)	1992	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1958 - 1997	
ANNUAL TOTAL	193509		160933			
ANNUAL MEAN	529		441		404	
HIGHEST ANNUAL MEAN					851	1974
LOWEST ANNUAL MEAN					66.2	1977
HIGHEST DAILY MEAN	10000	Dec 31	15000	Jan 1	18900	Jan 16 1974
LOWEST DAILY MEAN	35	Sep 12	35	Oct 10	16	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	35	Oct 10	35	Oct 10	16	Sep 8 1977
INSTANTANEOUS PEAK FLOW			20100	Jan 1	26500	Jan 16 1974
INSTANTANEOUS PEAK STAGE			a 16.82	Jan 1	16.82	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	383800		319200		292600	
10 PERCENT EXCEEDS	1150		765		1020	
50 PERCENT EXCEEDS	271		204		169	
90 PERCENT EXCEEDS	39		39		37	

a Maximum stage from floodmarks.

11525400 CLAIR ENGLE LAKE NEAR LEWISTON, CA

LOCATION.—Lat 40°48'05", long 122°45'44", in NW 1/4 SW 1/4 sec.15, T.34 N., R.8 W., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, Whiskeytown-Shasta-Trinity National Recreation Area, on side of intake structure of Trinity Dam on Trinity River, 9 mi north of Lewiston.

DRAINAGE AREA.—692 mi².

PERIOD OF RECORD.—November 1960 to current year. Prior to October 1963 published as Trinity Lake near Lewiston.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation). Prior to Jan. 4, 1962, nonrecording gage at same site and datum. Contents based on capacity table provided by U.S. Bureau of Reclamation, dated April 1962.

REMARKS.—The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 ft, elevation of invert of river outlets, and 2,370.0 ft, crest of glory hole spillway. Dead storage, 10,000 acre-ft. Operating pool is from elevation 2,145.0 ft, capacity, 312,621 acre-ft, to 2,370.0 ft, capacity, 2,447,700 acre-ft. Figures given represent total contents at 2400 hours. Lake is used for power generation, flood control, and recreation. See schematic diagram of Klamath River and Trinity River Basins.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.

EXTREMES (at 2400) FOR PERIOD OF RECORD.—Maximum contents, 2,588,000 acre-ft, Jan. 19, 1974, elevation, 2,378.32 ft; minimum since first filling, 222,400 acre-ft, Nov. 9, 1977, elevation, 2,120.22 ft.

EXTREMES (at 2400) FOR CURRENT YEAR.—Maximum contents, 2,264,999 acre-ft, Jan. 5, elevation, 2,358.58 ft; minimum, 1,493,875 acre-ft, Sept. 30, elevation, 2,302.66 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated April 1962)

2,100	162,231	2,250	955,140
2,140	292,859	2,310	1,583,586
2,190	529,611	2,380	2,616,989

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

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1706446	1617202	1667476	2185987	2096473	2047922	2113198	2168657	2056903	1872865	1662451	1546020
2	1701081	1616950	1667731	2237473	2090813	2048659	2113643	2168050	2050423	1867060	1656028	1542350
3	1695341	1616448	1667989	2256470	2084125	2047775	2114242	2167898	2047185	1861251	1650646	1540149
4	1689354	1616448	1672112	2263602	2077003	2046743	2114242	2167290	2043510	1855879	1645525	1537090
5	1683118	1615942	1677548	2264999	2069158	2043804	2113943	2166074	2037647	1849828	1641064	1534522
6	1676385	1615690	1680915	2263447	2063099	2041606	2113793	2164406	2031784	1843787	1635963	1531965
7	1670439	1614932	1688051	2259881	2056903	2039258	2114691	2163951	2025204	1836944	1630499	1529166
8	1663611	1614932	1706705	2256004	2053812	2039845	2116039	2162436	2019365	1830109	1624920	1526611
9	1657054	1614679	1757293	2250749	2051160	2040872	2116039	2160017	2012514	1822206	1619350	1524052
10	1651670	1614174	1802259	2244415	2049248	2041459	2117083	2157749	2006550	1815134	1614679	1521379
11	1647699	1613543	1820024	2237627	2048659	2042340	2117083	2155629	1998999	1808080	1610767	1519321
12	1643996	1613041	1833386	2230237	2047775	2042780	2117682	2153058	1992043	1801854	1607492	1517506
13	1640043	1612535	1842554	2222240	2047922	2043363	2119632	2150639	1986107	1795642	1604355	1516779
14	1636346	1612283	1848589	2214568	2047185	2044244	2120233	2148068	1980342	1789704	1601217	1515930
15	1633416	1611778	1852303	2206294	2047480	2046596	2121733	2144903	1975007	1782982	1598079	1513994
16	1630499	1611525	1855328	2198037	2047922	2051160	2122785	2141436	1969543	1775734	1594697	1512782
17	1628598	1612030	1858904	2189491	2048511	2054251	2121282	2137969	1963230	1768237	1591079	1511209
18	1626186	1620483	1861666	2179894	2048511	2057345	2123687	2133898	1957067	1761558	1587707	1510482
19	1623269	1637494	1864296	2170021	2049690	2060144	2127742	2128941	1949933	1754762	1584586	1509274
20	1620736	1649107	1866921	2160017	2050276	2064431	2137063	2123537	1943086	1748113	1582467	1508191
21	1618339	1652696	1869271	2150790	2050865	2069010	2143394	2117982	1935989	1740551	1579983	1506744
22	1617581	1659103	1871758	2141436	2051160	2073296	2148822	2112599	1929745	1732750	1577127	1506744
23	1617329	1661935	1873838	2131046	2051455	2078042	2157901	2107961	1923248	1725883	1574022	1504215
24	1617581	1664640	1875504	2122033	2050865	2082346	2164254	2101987	1916754	1718778	1570918	1502889
25	1617581	1666316	1877590	2115141	2050423	2087241	2166986	2095876	1910000	1711679	1567828	1500963
26	1617581	1665671	1882453	2113198	2049101	2092300	2167898	2089918	1903258	1704613	1564738	1499398
27	1617329	1666187	1888299	2110503	2048659	2097218	2168202	2084719	1896680	1697552	1561896	1497951
28	1616950	1666445	1897099	2111251	2049101	2101838	2168657	2079082	1889694	1690393	1558806	1496631
29	1617708	1666187	1925223	2108859	---	2105865	2167746	2074778	1884122	1683892	1555978	1495435
30	1617581	1666574	1960075	2104222	---	2109309	2168202	2069897	1878561	1676903	1553150	1493875
31	1617455	---	2045421	2100197	---	2112150	---	2063395	---	1669150	1550323	---
MAX	1706446	1666574	2045421	2264999	2096473	2112150	2168657	2168657	2056903	1872865	1662451	1546020
MIN	1616950	1611525	1667476	2100197	2047185	2039258	2113198	2063395	1878561	1669150	1550323	1493875
a	2312.70	2316.55	2344.05	2347.75	2344.30	2348.55	2352.27	2345.27	2332.39	2316.75	2307.31	2302.66
b	-95277	+49119	+378847	+54776	-51096	+63049	+56052	-104807	-184834	-209411	-118827	-56448

CAL YR 1996 b +184032

WTR YR 1997 b -218857

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.—Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010212, at powerplant 1.6 mi downstream from Mill Creek and 3.8 mi south of French Gulch.

PERIOD OF RECORD.—April 1963 to current year.

GAGE.—Recorded powerplant output.

REMARKS.—Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of Klamath River and Trinity River Basins.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,000 ft³/s, Oct. 18, 1987; no flow for many days most years.

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

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2565	0	356	311	265	1433	834	1738	2582	2950	2635	903
2	2258	122	251	333	332	1164	945	1720	2761	2848	2881	1294
3	2464	0	397	326	320	1345	947	1675	2545	3023	2083	0
4	2461	0	3	299	318	1488	1273	2058	2671	2884	1824	0
5	2743	0	5	314	318	2007	1162	2312	2830	2679	2173	719
6	2339	0	8	238	317	2064	843	2059	2764	2846	2271	836
7	2844	0	0	316	315	1828	176	1661	2978	3222	2511	842
8	2845	0	0	274	312	498	839	1535	2982	3224	2016	857
9	2591	0	6	318	245	321	713	1624	2486	3210	2176	887
10	1557	143	0	319	225	580	499	1686	2976	3214	1537	745
11	1158	0	8	322	241	477	630	1687	3072	3219	1551	493
12	1622	0	150	317	209	561	577	1788	3211	2884	1277	448
13	1259	0	325	318	216	531	0	1761	3024	2861	1003	0
14	873	29	354	320	736	528	748	1800	3041	2924	1018	0
15	855	0	466	315	938	0	427	1685	3034	2957	1096	496
16	880	0	328	313	1122	0	681	1803	3026	2953	1017	249
17	830	144	316	298	1006	0	2299	1974	2949	3002	1075	250
18	1194	0	314	322	890	0	2102	1848	3090	3037	1089	0
19	1004	0	262	313	882	0	2696	1681	3193	3168	911	296
20	765	0	305	316	971	0	2336	1896	2863	3172	1032	284
21	764	0	314	316	958	0	1866	1851	3093	3175	1079	295
22	0	0	316	331	977	0	1881	1809	3071	3185	876	294
23	0	0	309	345	995	14	0	1977	3041	3028	965	372
24	0	0	309	324	951	485	0	2369	3077	3055	1035	296
25	0	14	313	324	1106	0	1557	2401	3136	3090	1148	295
26	0	824	315	336	1863	1	2303	2370	3092	3082	1085	293
27	0	413	316	319	947	0	2338	2476	3074	2974	1147	301
28	0	251	365	318	988	0	1828	2537	3082	2844	998	247
29	0	348	349	318	---	0	2517	1963	2750	2837	1054	139
30	174	357	437	319	---	0	1723	2461	2900	3023	934	326
31	0	---	370	321	---	0	---	2939	---	3202	704	---
TOTAL	36045	2645	7567	9773	18963	15325	36740	61144	88394	93772	44201	12457
MEAN	1163	88.2	244	315	677	494	1225	1972	2946	3025	1426	415
MAX	2845	824	466	345	1863	2064	2696	2939	3211	3224	2881	1294
MIN	0	0	0	238	209	0	0	1535	2486	2679	704	0
AC-FT	71500	5250	15010	19380	37610	30400	72870	121300	175300	186000	87670	24710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1358	839	688	595	820	864	1147	1330	1873	2358	2227	2096
MAX	3363	2158	2891	2755	3225	3115	3220	3515	3662	3589	3236	3504
(WY)	1988	1967	1979	1982	1974	1974	1970	1974	1969	1968	1977	1988
MIN	166	18.0	.16	.000	.34	.000	.000	.097	.63	253	507	415
(WY)	1994	1992	1993	1986	1988	1988	1978	1991	1993	1978	1992	1997

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1963 - 1997

ANNUAL TOTAL	540546	427026	
ANNUAL MEAN	1477	1170	1364
HIGHEST ANNUAL MEAN			2486
LOWEST ANNUAL MEAN			301
HIGHEST DAILY MEAN	3257	Feb 13	4000
LOWEST DAILY MEAN	0	Jan 1	0
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00
ANNUAL RUNOFF (AC-FT)	1072000	847000	988400
10 PERCENT EXCEEDS	3160	2980	3140
50 PERCENT EXCEEDS	1300	842	1100
90 PERCENT EXCEEDS	.00	.00	.00

11525500 TRINITY RIVER AT LEWISTON, CA

LOCATION.—Lat 40°43'10", long 122°48'09", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on right bank 400 ft upstream from Deadwood Creek, 0.8 mi downstream from Lewiston Diversion Dam, and 0.8 mi northeast of Lewiston.

DRAINAGE AREA.—719 mi².

PERIOD OF RECORD.—August 1911 to current year.

CHEMICAL DATA: Water years 1951–81.

WATER TEMPERATURE: Water years 1952–55, 1958–83.

SEDIMENT DATA: Water years 1955–61.

REVISED RECORDS.—WSP 331: 1911–12. WSP 1181: 1949. WSP 1929: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 1,815.95 ft above sea level. See WSP 1929 for history of changes prior to July 7, 1964.

REMARKS.—Records good Flow completely regulated by Clair Engle Lake (station 11525400) beginning in November 1960 and Lewiston Lake, capacity, 14,660 acre-ft, when diversion to Judge Francis Carr Powerplant (station 11525430) began in April 1963. Small diversions above head of Clair Engle Lake for irrigation, power, placer mining, and domestic use between Trinity Dam and station at Lewiston. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 71,600 ft³/s, Dec. 22, 1955, gage height, 27.3 ft, from floodmarks, site and datum then in use; minimum, 23 ft³/s, July 30, 1924. Since completion of Trinity Dam in 1960, maximum discharge, 14,400 ft³/s, Jan. 18, 1974, gage height, 10.41 ft; minimum daily, 100 ft³/s, Apr. 14, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of December 1861 reached a stage of 21.6 ft, from floodmarks, at site 1.1 mi downstream at different datum, discharge not determined.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	457	335	307	6140	6770	320	329	350	1100	485	494	1210
2	458	339	307	6120	6840	320	330	358	1110	486	493	630
3	452	337	307	6210	6860	320	329	371	1120	486	487	488
4	452	335	309	6280	6870	317	325	374	1110	484	491	484
5	473	335	306	6290	6860	319	327	373	1110	485	491	472
6	475	335	305	6330	5890	319	326	586	1110	486	487	457
7	476	338	308	6360	5030	316	328	961	1110	478	485	455
8	473	338	308	6290	4100	318	329	1450	1130	496	485	457
9	472	336	357	6240	3610	322	324	2130	1140	500	489	455
10	478	338	531	6270	2850	322	325	2160	1090	500	488	454
11	480	357	501	6300	2230	320	326	2160	900	500	485	454
12	476	355	307	6320	1870	322	327	2160	824	499	484	454
13	471	356	304	6320	1540	323	325	2160	725	496	482	455
14	475	358	301	6230	1190	315	326	2150	613	494	483	455
15	478	358	302	6230	869	306	327	2140	525	494	483	454
16	376	357	306	6420	617	308	326	2150	479	496	483	453
17	336	357	306	6740	410	309	326	2150	479	499	483	458
18	335	360	306	6730	357	309	331	2140	480	488	485	464
19	333	361	303	6740	321	309	330	2160	482	484	487	463
20	333	357	303	6750	321	310	328	2160	485	480	488	463
21	336	358	311	6780	319	310	323	2130	488	481	488	462
22	339	358	313	6790	317	310	324	2040	485	485	485	462
23	337	358	314	6780	317	309	324	1910	481	486	485	463
24	338	359	316	6790	317	308	323	1820	475	486	486	461
25	337	359	311	6840	320	313	325	1720	472	487	488	461
26	339	358	316	6910	323	350	332	1600	473	487	488	463
27	338	362	316	6890	320	329	329	1500	477	487	488	464
28	338	358	326	6820	319	329	338	1420	486	491	485	461
29	340	360	2310	6790	---	329	344	1320	488	491	484	462
30	339	339	3690	6790	---	329	342	1200	490	490	483	461
31	338	---	4770	6800	---	329	---	1100	---	489	555	---
TOTAL	12478	10511	19877	202290	67957	9869	9848	48403	21937	15176	15148	14755
MEAN	403	350	641	6525	2427	318	328	1561	731	490	489	492
MAX	480	362	4770	6910	6870	350	344	2160	1140	500	555	1210
MIN	333	335	301	6120	317	306	323	350	472	478	482	453
AC-FT	24750	20850	39430	401200	134800	19580	19530	96010	43510	30100	30050	29270

KLAMATH RIVER BASIN

11525500 TRINITY RIVER AT LEWISTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1960, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	302	742	1257	1572	2544	2653	3675	3932	2131	611	201	158
MAX	2174	3055	5319	5734	11670	6116	6986	9062	6311	2579	628	423
(WY)	1951	1921	1956	1956	1958	1941	1915	1958	1915	1941	1941	1912
MIN	92.3	121	147	169	331	519	725	442	115	42.7	41.0	41.1
(WY)	1918	1930	1937	1937	1933	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1912 - 1960

ANNUAL MEAN	1641
HIGHEST ANNUAL MEAN	3721
LOWEST ANNUAL MEAN	367
HIGHEST DAILY MEAN	38700
LOWEST DAILY MEAN	28
ANNUAL SEVEN-DAY MINIMUM	31
INSTANTANEOUS PEAK FLOW	71600
INSTANTANEOUS PEAK STAGE	27.3
ANNUAL RUNOFF (AC-FT)	1189000
10 PERCENT EXCEEDS	4310
50 PERCENT EXCEEDS	732
90 PERCENT EXCEEDS	132

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	279	297	362	643	533	627	678	781	609	353	311	302
MAX	424	849	2285	6525	2846	5489	5029	3937	4668	1096	577	531
(WY)	1993	1984	1984	1997	1996	1983	1963	1963	1983	1983	1982	1992
MIN	203	220	144	145	145	149	130	149	146	142	139	150
(WY)	1966	1971	1977	1977	1977	1977	1976	1976	1976	1976	1976	1966

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1962 - 1997

ANNUAL TOTAL	273637	448249	
ANNUAL MEAN	748	1228	481
HIGHEST ANNUAL MEAN			1784
LOWEST ANNUAL MEAN			165
HIGHEST DAILY MEAN	6290	Feb 22	6910
LOWEST DAILY MEAN	289	Apr 2	301
ANNUAL SEVEN-DAY MINIMUM	300	Apr 1	304
INSTANTANEOUS PEAK FLOW			6970
INSTANTANEOUS PEAK STAGE			7.85
ANNUAL RUNOFF (AC-FT)	542800	889100	348500
10 PERCENT EXCEEDS	1190	5980	602
50 PERCENT EXCEEDS	441	472	299
90 PERCENT EXCEEDS	317	316	155

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA

LOCATION.—Lat 40°39'45", long 122°47'57", in NE 1/4 NW 1/4 sec.5, T.32 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on left bank 0.2 mi upstream from the confluence with Grass Valley Creek, 0.9 mi west of Buckhorn Station, and 3.1 mi south of Lewiston on State Highway 299.

DRAINAGE AREA.—10.7 mi².

PERIOD OF RECORD.—

SEDIMENT DATA: Water years 1985 to current year.

REMARKS.—Zero bedload observed at flows less than 11 ft³/s. Record is collected for hydrologic and sediment-transport correlation studies with Grass Valley Creek at Fawn Lodge, near Lewiston (station 11525600).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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)
OCT											
04...	1105	2.4	10.5	4	0.03	--	--	--	--	--	--
NOV											
05...	1005	3.4	5.0	2	0.02	--	--	--	--	--	--
DEC											
09...	1230	16	7.5	97	4.2	35	--	--	--	--	--
31...	1230	59	7.0	396	63	--	--	--	--	--	--
JAN											
01...	1445	121	8.5	2170	709	30	50	74	93	99	100
MAR											
07...	1055	11	5.0	26	0.77	--	--	--	--	--	--
APR											
18...	1030	7.7	9.5	32	0.66	--	--	--	--	--	--
MAY											
13...	1020	5.7	11.5	7	0.11	--	--	--	--	--	--
JUN											
02...	1135	5.3	11.5	3	0.04	--	--	--	--	--	--
JUL											
22...	1400	2.7	16.0	3	0.02	--	--	--	--	--	--
AUG											
08...	0925	2.5	15.0	2	0.01	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00063)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)
JUL										
22...	1400	1	2.7	16.0	2	8	24	46	67	93
22...	1405	1	2.7	16.0	--	4	17	35	55	88
22...	1410	1	2.7	16.0	1	3	10	18	34	81

KLAMATH RIVER BASIN

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BEDLOAD SAMPLER (MM) (30333)	BAG MESH SIZE USED IN SAMPLING (YES=1) (CODE) (04117)	TETHER LINE START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC									
31...	1300	1000	1120	0.250	0	1250	1305	30	0.5
31...	1315	1000	1120	0.250	0	1310	1325	30	0.5
JAN									
01...	1455	1000	1100	0.250	0	1450	1500	30	1.0
01...	1505	1000	1100	0.250	0	1500	1510	30	1.0
MAR									
07...	1105	1000	1120	0.250	0	1100	1110	30	0.5
07...	1120	1000	1120	0.250	0	1115	1125	30	0.5
DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMNT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE T/D/FT (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM (80226)
DEC									
31...	2	20	20	1.00	59	7.0	0.46	4.8	--
31...	2	20	20	1.00	59	7.0	0.50	4.8	--
JAN									
01...	2	12	12	1.00	121	8.5	0.81	9.4	2
01...	2	12	12	1.00	121	8.5	0.90	9.4	2
MAR									
07...	2	14	14	0.50	11	5.0	2.00	15	--
07...	2	14	14	0.50	11	5.0	2.20	15	--
DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM (80227)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM (80234)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM (80235)
DEC									
31...	--	6	11	20	34	74	97	99	100
31...	--	3	9	18	37	75	94	98	100
JAN									
01...	7	34	66	85	94	99	100	--	--
01...	10	39	72	91	97	100	--	--	--
MAR									
07...	--	--	2	19	58	93	100	--	--
07...	--	5	11	37	67	94	100	--	--

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA

LOCATION.—Lat 40°40'35", long 122°49'46", in SW 1/4 NE 1/4 sec.36, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on right bank 0.1 mi upstream from Phillips Gulch and 2.5 mi southwest of Lewiston.

DRAINAGE AREA.—30.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—November 1975 to current year.

REVISED RECORDS.—WDR CA-86-2: 1983(M), WDR CA-94-2: 1993(P), WDR CA-97-2: 1983(P).

GAGE.—Water-stage recorder. Datum of gage is 2,049.73 ft above sea level (California State Highway Department Benchmark).

REMARKS.—Records fair. Minor regulation by Buckhorn Reservoir since 1990, capacity 1,090 acre-ft; small pumping diversions upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,500 ft³/s, Feb. 28, 1983; gage height, 10.11 ft, from rating curve extended above 700 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 3.8 ft³/s, July 29, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 220 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	2300	438	5.22	Jan. 28	0130	380	4.50
Jan. 1	0030	2,460	8.37				

REVISIONS.—The discharge for water year 1983 peak has been revised to 3,500 ft³/s, Feb. 28, gage height, 10.11 ft.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	24	e1400	144	51	37	30	21	21	13	10
2	11	13	19	533	132	56	36	30	21	19	12	10
3	11	13	18	423	124	51	36	30	26	18	12	10
4	11	13	33	330	118	50	36	29	32	16	12	11
5	11	13	55	262	109	49	35	29	24	16	12	10
6	11	13	30	218	103	48	35	29	23	16	12	10
7	11	13	44	188	100	47	35	29	22	15	12	10
8	11	13	79	166	96	46	34	28	21	15	12	10
9	11	13	285	149	94	45	33	28	21	15	12	10
10	10	13	316	138	90	45	33	27	22	15	12	11
11	10	13	168	132	84	44	33	27	20	15	12	12
12	11	14	119	121	80	43	33	26	21	15	9.8	11
13	11	14	100	113	76	43	32	26	21	14	9.5	11
14	11	14	84	105	74	42	32	25	20	14	9.4	13
15	11	14	75	96	72	42	32	25	20	14	9.4	13
16	11	14	67	90	70	51	32	25	20	14	9.4	13
17	11	18	62	85	69	50	32	24	19	14	9.5	13
18	12	29	58	79	67	46	35	24	18	14	9.5	13
19	12	46	54	76	67	45	37	23	15	14	9.5	12
20	12	33	58	74	64	45	37	23	15	13	12	12
21	12	27	57	73	63	44	36	23	15	13	11	11
22	12	29	55	74	61	42	35	23	16	13	10	11
23	13	26	51	e78	60	42	37	25	17	13	10	11
24	15	26	50	e83	58	41	34	24	17	13	11	11
25	14	24	49	90	57	40	33	23	16	13	10	11
26	13	23	64	193	56	39	32	23	16	13	10	11
27	12	22	71	258	58	38	32	24	16	13	11	11
28	12	21	79	234	52	38	31	23	16	13	10	11
29	27	20	287	e200	---	37	31	23	17	13	10	11
30	20	20	401	e170	---	38	30	22	28	13	10	11
31	15	---	e848	150	---	37	---	21	---	13	10	---
TOTAL	386	577	3760	6381	2298	1375	1016	791	596	450	334.0	335
MEAN	12.5	19.2	121	206	82.1	44.4	33.9	25.5	19.9	14.5	10.8	11.2
MAX	27	46	848	1400	144	56	37	30	32	21	13	13
MIN	10	13	18	73	52	37	30	21	15	13	9.4	10
AC-FT	766	1140	7460	12660	4560	2730	2020	1570	1180	893	662	664

e Estimated.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.4	22.6	42.4	75.7	86.2	104	65.2	47.5	29.6	16.2	11.1	10.8
MAX	18.8	70.4	220	332	263	531	186	174	99.8	39.6	22.3	23.0
(WY)	1990	1985	1984	1995	1986	1983	1983	1983	1983	1983	1983	1983
MIN	6.94	8.88	8.20	10.2	9.10	13.8	12.3	15.1	9.64	5.85	4.95	6.50
(WY)	1992	1991	1991	1991	1991	1977	1977	1977	1977	1977	1977	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1976 - 1997	
ANNUAL TOTAL	18432.7		18299.0			
ANNUAL MEAN	50.4		50.1		44.5	
HIGHEST ANNUAL MEAN					136	1983
LOWEST ANNUAL MEAN					10.2	1977
HIGHEST DAILY MEAN	848	Dec 31	1400	Jan 1	2420	Mar 2 1983
LOWEST DAILY MEAN	9.6	Sep 3	9.4	Aug 14	3.8	Jul 29 1994
ANNUAL SEVEN-DAY MINIMUM	9.8	Aug 30	9.5	Aug 13	4.0	Jul 25 1994
INSTANTANEOUS PEAK FLOW			2460	Jan 1	3500	Feb 28 1983
INSTANTANEOUS PEAK STAGE			a 8.37	Jan 1	10.11	Feb 28 1983
ANNUAL RUNOFF (AC-FT)	36560		36300		32260	
10 PERCENT EXCEEDS	113		96		95	
50 PERCENT EXCEEDS	30		24		20	
90 PERCENT EXCEEDS	11		11		8.8	

a Maximum peak stage from floodmarks.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1976 to current year.

WATER TEMPERATURE: Water years 1976 to current year.

SEDIMENT DATA: Water years 1976 to current year.

PERIOD OF DAILY RECORD.—

SUSPENDED-SEDIMENT DISCHARGE: November 1975 to current year.

REMARKS.—Sediment samples were collected on most days where a water temperature is published. Zero bedload observed at flows less than 72 ft³/s.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SEDIMENT CONCENTRATION: Maximum daily mean, 9,550 mg/L, Mar. 2, 1983; minimum daily mean, 0 mg/L several days most years.

SEDIMENT LOAD: Maximum daily, 65,200 tons, Mar. 2, 1983; minimum daily, 0 ton several days most years.

EXTREMES FOR CURRENT YEAR.—

SEDIMENT CONCENTRATION: Maximum daily mean, 1,980 mg/L, Jan. 1; minimum daily mean, 1 mg/L, many days during the year.

SEDIMENT LOAD: Maximum daily, 7,480 tons, Jan. 1; minimum daily, 0.03 ton, several days during October and September.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN (70336)
DEC											
09...	1010	261	7.5	462	326	14	23	38	58	77	90
JAN											
01...	1150	760	8.0	1180	2420	32	46	65	83	94	100
15...	1330	99	4.0	12	3.2	81	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SAM- PLING METHOD, CODES (82398)	SAMPLER TYPE (CODE) (84164)	BAG MESH SIZE BEDLOAD SAMPLER (MM) (30333)	TETHER LINE USED IN SAMPLING (YES=1) (CODE) (04117)	START- ING TIME (2400 HOURS) (82073)	END- ING TIME (2400 HOURS) (82074)	TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET) (04121)
DEC									
09...	1050	1000	1100	0.250	0	1040	1100	60	1.0
09...	1115	1000	1100	0.250	0	1105	1125	60	1.0
31...	1030	1000	1100	0.250	0	1015	1040	30	1.0
31...	1055	1000	1100	0.250	0	1045	1105	30	1.0
JAN									
15...	1400	1000	1120	0.250	0	1350	1410	30	1.0
15...	1425	1000	1120	0.250	0	1415	1435	30	1.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM) (04118)	VER- TICALS IN COM- POSITE SAMPLE (NUM) (04119)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE (T/D/FT (04122)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)
DEC									
09...	2	22	22	4.00	280	7.5	0.08	1.9	4
09...	2	22	22	4.00	290	7.5	0.09	1.9	3
31...	2	23	23	4.00	559	7.5	2.20	53	1
31...	2	23	23	4.00	573	7.5	2.40	53	2
JAN									
15...	2	18	18	2.00	96	4.0	0.22	5.9	1
15...	2	18	18	2.00	96	4.0	0.44	5.9	4

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD	SED. BEDLOAD
	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE
	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.
	% FINER THAN .500 MM (80229)	% FINER THAN 1.00 MM (80230)	% FINER THAN 2.00 MM (80231)	% FINER THAN 4.00 MM (80232)	% FINER THAN 8.00 MM (80233)	% FINER THAN 16.0 MM (80234)	% FINER THAN 32.0 MM (80235)	% FINER THAN 64.0 MM (80236)
DEC								
09...	13	24	41	72	88	92	100	--
09...	6	10	18	50	81	89	100	--
31...	4	14	42	74	81	84	92	100
31...	3	14	46	88	97	98	100	--
JAN								
15...	4	12	37	88	100	--	--	--
15...	8	23	60	95	99	100	--	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.0	---	8.0	---	6.0	---	8.5	---	---	---	---
2	---	---	---	---	---	---	---	---	12.5	---	---	---
3	---	---	6.0	7.5	6.0	---	---	---	---	17.0	---	---
4	11.5	8.0	---	---	6.5	4.0	9.5	---	---	---	---	---
5	---	5.5	6.5	5.0	---	---	---	10.0	---	---	---	---
6	---	---	---	5.0	5.0	---	---	---	---	---	19.5	14.5
7	---	---	6.5	5.0	---	4.5	9.5	---	---	17.5	---	---
8	---	---	8.0	4.5	---	---	---	---	---	---	17.0	---
9	11.5	6.0	7.5	4.5	---	---	---	---	15.5	---	19.5	---
10	---	---	7.0	5.0	5.5	---	---	---	---	---	---	---
11	---	---	6.0	4.5	---	8.0	---	---	14.0	---	---	---
12	---	---	7.0	5.0	5.0	---	---	---	---	---	---	---
13	---	---	6.0	3.0	---	---	---	13.0	11.5	---	19.5	16.0
14	---	6.0	---	---	7.0	8.0	9.0	---	---	17.0	---	---
15	9.0	---	5.0	4.0	---	---	---	---	---	---	---	13.0
16	---	---	5.0	5.0	---	---	---	---	14.0	---	---	---
17	---	---	---	5.0	7.5	9.0	---	---	---	---	---	14.5
18	---	8.5	---	---	---	---	11.0	---	17.0	---	---	---
19	---	9.5	---	---	---	---	11.0	16.0	---	---	---	---
20	---	10.0	---	6.0	5.5	---	11.5	---	---	19.5	---	---
21	---	9.5	---	---	---	10.5	10.5	---	---	---	18.0	---
22	8.0	---	---	---	---	---	---	---	---	17.5	---	16.0
23	---	---	---	4.0	---	---	9.0	14.5	11.5	---	---	---
24	---	9.0	4.5	---	5.0	---	---	---	---	---	15.0	---
25	---	---	---	---	---	11.5	---	---	---	---	15.0	---
26	---	---	5.0	5.5	7.5	---	---	---	---	---	---	15.0
27	8.5	---	6.0	5.0	---	---	---	15.0	16.5	---	---	---
28	---	---	---	6.0	---	---	9.5	---	---	19.0	---	---
29	8.0	---	6.5	7.0	---	---	---	---	---	---	---	13.0
30	8.0	5.5	7.0	---	---	---	---	17.5	12.0	---	---	---
31	---	---	7.5	6.5	---	6.5	---	---	---	17.5	---	---

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	11	1	.03	13	1	.04	24	5	.33
2	11	1	.04	13	1	.05	19	2	.10
3	11	2	.05	13	2	.07	18	2	.10
4	11	2	.07	13	3	.09	33	21	3.0
5	11	2	.07	13	1	.04	55	15	2.6
6	11	2	.06	13	1	.04	30	4	.30
7	11	2	.05	13	1	.04	44	8	1.3
8	11	1	.04	13	1	.04	79	14	3.1
9	11	1	.03	13	1	.04	285	442	406
10	10	1	.03	13	1	.04	316	406	401
11	10	1	.04	13	1	.04	168	43	20
12	11	1	.04	14	1	.04	119	19	6.2
13	11	2	.05	14	1	.04	100	12	3.2
14	11	2	.05	14	1	.04	84	9	1.9
15	11	2	.06	14	1	.04	75	6	1.3
16	11	2	.05	14	1	.05	67	6	1.1
17	11	2	.05	18	4	.19	62	5	.76
18	12	1	.05	29	10	.82	58	3	.54
19	12	1	.05	46	31	4.8	54	3	.38
20	12	1	.04	33	8	.84	58	4	.68
21	12	1	.04	27	3	.23	57	5	.85
22	12	1	.03	29	3	.26	55	4	.66
23	13	1	.03	26	4	.26	51	4	.50
24	15	1	.04	26	4	.28	50	3	.39
25	14	1	.04	24	4	.23	49	2	.32
26	13	1	.04	23	3	.19	64	14	2.6
27	12	1	.03	22	3	.17	71	14	2.7
28	12	2	.06	21	2	.14	79	36	8.4
29	27	43	3.3	20	2	.12	287	388	352
30	20	6	.35	20	2	.12	401	353	592
31	15	2	.06	---	---	---	e848	1960	4490
TOTAL	386	---	4.97	577	---	9.39	3760	---	6304.31
JANUARY			FEBRUARY			MARCH			
1	e1400	1980	7480	144	53	21	51	3	.43
2	533	493	725	132	40	14	56	3	.50
3	423	276	318	124	31	10	51	4	.50
4	330	162	146	118	35	11	50	4	.54
5	262	139	98	109	27	7.8	49	4	.53
6	218	101	60	103	19	5.2	48	4	.52
7	188	68	34	100	17	4.7	47	4	.50
8	166	47	21	96	17	4.4	46	3	.42
9	149	36	15	94	16	4.2	45	3	.35
10	138	25	9.4	90	16	3.8	45	2	.29
11	132	18	6.6	84	14	3.3	44	2	.25
12	121	16	5.3	80	14	2.9	43	2	.23
13	113	14	4.3	76	18	3.6	43	2	.23
14	105	12	3.4	74	22	4.4	42	2	.24
15	96	11	2.8	72	19	3.6	42	3	.32
16	90	10	2.5	70	14	2.6	51	4	.57
17	85	11	2.4	69	11	2.0	50	6	.77
18	79	9	2.0	67	9	1.7	46	6	.75
19	76	8	1.7	67	9	1.6	45	6	.73
20	74	7	1.4	64	8	1.4	45	6	.72
21	73	7	1.4	63	7	1.2	44	6	.70
22	74	7	1.4	61	6	.94	42	5	.62
23	e78	7	1.5	60	5	.76	42	5	.56
24	e83	10	2.2	58	4	.64	41	4	.49
25	90	38	9.8	57	4	.62	40	4	.43
26	193	136	72	56	4	.60	39	3	.34
27	258	105	85	58	4	.57	38	3	.26
28	234	106	75	52	3	.46	38	2	.20
29	e200	30	16	---	---	---	37	2	.16
30	e170	82	38	---	---	---	38	1	.13
31	150	71	29	---	---	---	37	1	.10
TOTAL	6381	---	9270.1	2298	---	118.99	1375	---	13.38

e Estimated.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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	37	1	.10	30	1	.09	21	1	.07
2	36	1	.10	30	1	.10	21	2	.12
3	36	1	.10	30	1	.12	26	3	.21
4	36	1	.10	29	2	.14	32	3	.25
5	35	2	.14	29	2	.16	24	3	.20
6	35	2	.22	29	2	.16	23	3	.18
7	35	4	.34	29	2	.16	22	3	.18
8	34	4	.35	28	2	.15	21	3	.17
9	33	4	.33	28	2	.15	21	3	.17
10	33	4	.32	27	3	.22	22	3	.18
11	33	3	.31	27	3	.22	20	3	.17
12	33	3	.29	26	3	.21	21	4	.20
13	32	3	.27	26	3	.21	21	4	.23
14	32	3	.27	25	3	.19	20	5	.26
15	32	4	.33	25	3	.18	20	5	.29
16	32	5	.43	25	2	.17	20	6	.30
17	32	6	.55	24	2	.15	19	4	.23
18	35	6	.52	24	2	.14	18	3	.16
19	37	3	.32	23	2	.13	15	3	.10
20	37	3	.34	23	2	.14	15	2	.08
21	36	4	.37	23	3	.17	15	2	.06
22	35	3	.32	23	3	.20	16	1	.05
23	37	3	.29	25	4	.26	17	1	.05
24	34	2	.21	24	4	.25	17	1	.05
25	33	2	.17	23	3	.22	16	1	.04
26	32	2	.13	23	3	.20	16	1	.04
27	32	1	.10	24	3	.20	16	1	.04
28	31	1	.09	23	3	.17	16	1	.04
29	31	1	.08	23	2	.14	17	1	.05
30	30	1	.08	22	2	.12	28	18	1.5
31	---	---	---	21	2	.09	---	---	---
TOTAL	1016	---	7.57	791	---	5.21	596	---	5.67
JULY			AUGUST			SEPTEMBER			
1	21	4	.20	13	3	.10	10	5	.13
2	19	3	.14	12	3	.11	10	5	.14
3	18	2	.10	12	3	.11	10	6	.16
4	16	2	.10	12	4	.12	11	6	.17
5	16	3	.12	12	4	.12	10	7	.18
6	16	3	.14	12	4	.13	10	7	.19
7	15	4	.16	12	2	.07	10	6	.16
8	15	4	.15	12	3	.10	10	5	.13
9	15	3	.14	12	8	.25	10	4	.12
10	15	3	.12	12	8	.27	11	3	.10
11	15	3	.11	12	7	.24	12	3	.09
12	15	2	.10	9.8	7	.18	11	2	.08
13	14	2	.09	9.5	6	.16	11	2	.06
14	14	2	.08	9.4	6	.14	13	2	.08
15	14	2	.07	9.4	5	.13	13	3	.10
16	14	2	.06	9.4	5	.12	13	2	.08
17	14	1	.05	9.5	4	.11	13	2	.07
18	14	1	.05	9.5	4	.10	13	2	.07
19	14	1	.04	9.5	4	.09	12	2	.06
20	13	1	.04	12	3	.11	12	2	.06
21	13	1	.04	11	3	.09	11	2	.06
22	13	2	.08	10	3	.08	11	2	.06
23	13	5	.16	10	3	.08	11	2	.06
24	13	5	.18	11	3	.09	11	2	.06
25	13	6	.20	10	3	.09	11	2	.06
26	13	7	.23	10	3	.09	11	2	.06
27	13	8	.26	11	3	.10	11	2	.05
28	13	9	.29	10	4	.10	11	1	.04
29	13	7	.24	10	4	.11	11	1	.03
30	13	5	.17	10	4	.12	11	1	.03
31	13	3	.12	10	5	.12	---	---	---
TOTAL	450	---	4.03	334.0	---	3.83	335	---	2.74
YEAR	18299.0		15750.19						

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA—Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1996	386.00	4.97	0	5
NOVEMBER	577.00	9.39	0	9
DECEMBER	3760.00	6304.31	5930	12200
JANUARY 1997	6381.00	9270.10	8150	17400
FEBRUARY	2298.00	118.99	18	137
MARCH	1375.00	13.38	0	13
APRIL	1016.00	7.57	0	8
MAY	791.00	5.21	0	5
JUNE	596.00	5.67	0	6
JULY	450.00	4.03	0	4
AUGUST	334.00	3.83	0	4
SEPTEMBER ...	335.00	2.74	0	3
TOTAL	18299.00	15750.19	14098	29794

11527000 TRINITY RIVER NEAR BURNT RANCH, CA

LOCATION.—Lat 40°47'20", long 123°26'20", in S 1/2 sec.19, T.5 N., R.7 E., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, on left bank 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 mi southeast of town of Burnt Ranch.

DRAINAGE AREA.—1,439 mi².

PERIOD OF RECORD.—October 1931 to September 1940, October 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WDR CA-78-2: 1975(M). WSP 1929: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 944.05 ft above sea level. Oct. 1, 1931, to Jan. 19, 1940, at site 2 mi upstream at different datum.

REMARKS.—Records good. Flow regulated since November 1960 by Clair Engle Lake (station 11525400), 64 mi upstream, and by transbasin diversion to Judge Francis Carr Powerplant (station 11525430) since April 1963. Small diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 81,500 ft³/s, Feb. 25, 1958, gage height, 30.50 ft, from rating curve extended above 40,000 ft³/s on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 ft³/s, Aug. 31, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks, discharge, 172,000 ft³/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 12,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	2145	17,100	14.40	Jan. 26	1615	15,100	13.68
Jan. 1	0815	69,900	28.01				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552	e600	1370	53300	11700	1430	e1300	1490	1770	972	697	813
2	553	e570	1230	29400	10800	1630	e1280	1410	1660	925	696	1150
3	653	e560	1080	20500	10200	e2010	e1260	1370	1750	882	687	725
4	738	e555	1350	15100	9850	e1990	e1240	1420	2670	867	677	655
5	735	e540	7220	12500	9470	e1900	e1210	1380	1880	863	677	645
6	691	e525	3650	11100	8820	e1850	e1200	1380	1700	861	670	629
7	569	e520	2940	10400	7900	e1750	e1170	1640	1650	841	664	614
8	567	517	7950	9720	6780	e1700	1150	1980	1650	826	659	608
9	561	514	14500	9190	5840	e1650	1130	2550	1760	848	656	613
10	559	508	14000	8880	5140	e1600	1110	2970	1700	860	658	615
11	565	510	8530	8680	4360	e1550	1100	3010	1550	831	658	619
12	567	525	6510	8510	3840	e1500	1090	3060	1400	805	654	622
13	568	547	5090	8330	3410	e1470	1100	3010	1300	794	648	617
14	566	560	4050	8100	3030	e1420	1090	3010	1220	783	643	634
15	570	548	3270	7930	2640	e1390	1100	2950	1170	779	640	681
16	570	539	2710	7840	2320	e1400	1140	2930	1100	779	637	697
17	489	565	2370	8140	2120	e1600	1160	2900	1060	775	637	686
18	471	2930	2110	8100	1900	e2050	1240	2870	1030	770	638	703
19	503	4490	1910	8010	1830	e2500	2360	2800	977	748	641	683
20	483	4170	1860	7990	1760	e2300	3190	2710	957	736	671	658
21	479	2050	2100	8030	1700	e2150	2800	2630	932	725	695	645
22	481	1890	2080	8050	1640	e2020	2410	2500	913	724	681	636
23	512	1540	2130	7980	1590	e1900	2840	2470	893	722	670	629
24	678	1350	2050	7940	1540	e1820	2270	2420	874	716	666	624
25	872	1390	2060	9570	1500	e1750	1950	2220	858	713	666	618
26	675	1160	4020	13400	1490	e1650	1840	2100	861	708	663	615
27	582	1020	5910	13000	1510	e1580	1870	2110	853	707	668	616
28	565	986	5500	13600	1470	e1500	1720	2050	853	701	665	617
29	639	928	10500	12800	---	e1450	1590	2000	860	717	659	613
30	689	867	17700	11500	---	e1400	1530	1880	911	721	655	610
31	e620	---	36200	11200	---	e1350	---	1860	---	705	649	---
TOTAL	18322	33974	183950	378790	126150	53260	47440	71080	38762	24404	20545	19890
MEAN	591	1132	5934	12220	4505	1718	1581	2293	1292	787	663	663
MAX	872	4490	36200	53300	11700	2500	3190	3060	2670	972	697	1150
MIN	471	508	1080	7840	1470	1350	1090	1370	853	701	637	608
AC-FT	36340	67390	364900	751300	250200	105600	94100	141000	76880	48410	40750	39450

e Estimated.

11527000 TRINITY RIVER NEAR BURNT RANCH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1960, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	499	1192	1654	2936	5702	5569	5831	5674	3161	878	305	241
MAX	2732	4893	6426	6192	24270	10110	10090	11840	7076	2362	835	497
(WY)	1958	1938	1938	1958	1958	1938	1938	1958	1958	1958	1958	1958
MIN	138	209	253	311	831	2487	3319	1955	808	273	123	111
(WY)	1933	1937	1937	1937	1937	1935	1932	1939	1934	1934	1939	1932

SUMMARY STATISTICS

WATER YEARS 1932 - 1960

ANNUAL MEAN	2784
HIGHEST ANNUAL MEAN	6557
LOWEST ANNUAL MEAN	1409
HIGHEST DAILY MEAN	65600
LOWEST DAILY MEAN	93
ANNUAL SEVEN-DAY MINIMUM	95
INSTANTANEOUS PEAK FLOW	81500
INSTANTANEOUS PEAK STAGE	30.50
ANNUAL RUNOFF (AC-FT)	2017000
10 PERCENT EXCEEDS	7120
50 PERCENT EXCEEDS	1240
90 PERCENT EXCEEDS	198

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	474	1094	2228	3349	3069	3291	2391	2116	1422	702	460	424
MAX	804	3570	8745	12220	10190	13770	8146	6343	7006	1985	1087	734
(WY)	1980	1974	1965	1997	1983	1983	1974	1983	1983	1983	1983	1983
MIN	298	375	274	322	373	512	530	547	449	200	189	230
(WY)	1965	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1964

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1964 - 1997

ANNUAL TOTAL	961619	1016567	
ANNUAL MEAN	2627	2785	1746
HIGHEST ANNUAL MEAN			4816
LOWEST ANNUAL MEAN			372
HIGHEST DAILY MEAN	36200	Dec 31	53300
LOWEST DAILY MEAN	471	Oct 18	471
ANNUAL SEVEN-DAY MINIMUM	488	Oct 17	488
INSTANTANEOUS PEAK FLOW			69900
INSTANTANEOUS PEAK STAGE			28.01
ANNUAL RUNOFF (AC-FT)	1907000	2016000	1265000
10 PERCENT EXCEEDS	6180	8040	3620
50 PERCENT EXCEEDS	1700	1300	954
90 PERCENT EXCEEDS	557	577	343

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CA

LOCATION.—Lat 40°39'00", long 123°29'35", in NW 1/4 SW 1/4 sec.10, T.3 N., R.6 E., Trinity County, Hydrologic Unit 18010212, Trinity National Forest, on left bank 0.3 mi downstream from Big Creek, 3.0 mi northwest of Hyampom, and 3.5 mi downstream from Hayfork Creek.

DRAINAGE AREA.—764 mi².

PERIOD OF RECORD.—October 1965 to current year.

SEDIMENT DATA: Water years 1967–70, 1981–82.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 1,211.37 ft above sea level.

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 75,000 ft³/s, Feb. 17, 1986, gage height, 25.47 ft, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 28.00 ft, Jan. 26, 1983; minimum daily, 14 ft³/s, Aug. 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1964, reached a stage of 30.45 ft, from floodmarks, discharge, 88,000 ft³/s, on basis of flood-routing study.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 8,600 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0930	16,000	12.54	Jan. 26	0915	19,100	12.78
Dec. 31	0030	61,400	23.60				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	166	542	41900	5890	1310	822	695	376	212	96	68
2	84	151	695	32500	5110	1710	789	667	364	219	92	67
3	83	141	581	19900	4490	1620	763	650	379	232	90	66
4	83	134	1130	11100	4170	1500	733	626	464	209	88	65
5	85	130	6110	6990	3790	1440	707	603	424	191	86	66
6	85	127	3270	4700	3480	1390	676	584	379	180	82	64
7	84	125	2860	3680	3250	1340	654	566	358	173	79	62
8	82	125	6700	3210	3050	1300	625	550	339	167	76	62
9	84	125	9820	2930	2850	1260	610	533	334	161	73	62
10	83	124	13600	2570	2750	1210	597	510	330	158	71	66
11	82	123	9260	2310	2580	1170	581	499	313	156	70	67
12	82	123	7590	2070	2410	1130	574	486	301	152	70	66
13	85	124	6160	1860	2230	1080	561	475	296	145	69	66
14	87	126	4500	1680	2110	1050	547	463	287	141	68	73
15	89	127	3410	1540	1990	1020	530	456	277	135	66	86
16	89	127	2760	1420	1920	1250	518	448	263	133	64	91
17	90	168	2300	1320	2010	2230	522	436	250	126	63	93
18	97	686	1960	1180	1890	1820	572	427	243	124	62	97
19	111	1700	1720	1080	1920	1570	829	411	235	122	63	93
20	116	2080	1680	1030	1850	1470	916	402	226	119	71	88
21	111	1020	1950	1100	1780	1380	984	395	219	114	84	83
22	109	917	2020	1250	1690	1270	972	392	218	110	89	78
23	109	872	1960	1140	1610	1190	1160	416	219	106	81	75
24	124	693	1830	1080	1520	1120	1070	440	216	104	75	73
25	169	567	1810	7380	1460	1060	948	417	210	101	74	71
26	191	475	3970	15800	1410	1010	867	402	204	99	73	69
27	166	416	11300	10500	1400	969	807	438	199	96	75	68
28	145	401	16500	11000	1360	934	766	424	198	94	74	68
29	176	370	32100	9580	---	893	749	405	198	98	73	68
30	211	351	45400	7280	---	872	726	383	207	107	72	67
31	191	---	53000	6110	---	869	---	371	---	101	70	---
TOTAL	3467	12814	258488	217190	71970	39437	22175	14970	8526	4385	2339	2188
MEAN	112	427	8338	7006	2570	1272	739	483	284	141	75.5	72.9
MAX	211	2080	53000	41900	5890	2230	1160	695	464	232	96	97
MIN	82	123	542	1030	1360	869	518	371	198	94	62	62
AC-FT	6880	25420	512700	430800	142800	78220	43980	29690	16910	8700	4640	4340

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	733	2048	3570	3255	3327	1893	1002	452	178	89.2	76.8
MAX	351	3475	8338	11740	12770	9027	4989	2701	1660	390	227	185
(WY)	1980	1974	1997	1970	1986	1995	1982	1983	1993	1983	1983	1983
MIN	27.4	72.9	86.8	144	218	365	224	199	91.1	33.0	17.9	22.8
(WY)	1988	1988	1977	1977	1977	1977	1977	1977	1977	1977	1977	1987

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1966 - 1997	
ANNUAL TOTAL	874537		657949			
ANNUAL MEAN	2389		1803		1388	
HIGHEST ANNUAL MEAN					3049	
LOWEST ANNUAL MEAN					131	
HIGHEST DAILY MEAN	53000	Dec 31	53000	Dec 31	59200	Jan 16 1974
LOWEST DAILY MEAN	82	Sep 11	62	Aug 18	14	Aug 24 1977
ANNUAL SEVEN-DAY MINIMUM	83	Oct 6	64	Sep 3	15	Aug 18 1977
INSTANTANEOUS PEAK FLOW			61400	Dec 31	75000	Feb 17 1986
INSTANTANEOUS PEAK STAGE			23.60	Dec 31	28.00	Jan 26 1983
ANNUAL RUNOFF (AC-FT)	1735000		1305000		1006000	
10 PERCENT EXCEEDS	6310		3260		3490	
50 PERCENT EXCEEDS	1010		424		397	
90 PERCENT EXCEEDS	89		73		66	

11530000 TRINITY RIVER AT HOOPA, CA

LOCATION.—Lat 41°03'00", long 123°40'15", in SE 1/4 NW 1/4 sec.25, T.8 N., R.4 E., Humboldt County, Hydrologic Unit 18010211, in Hoopa Valley Indian Reservation, on left bank 0.1 mi upstream from Supply Creek, 0.1 mi downstream from Hospital Creek and in the town of Hoopa (revised).

DRAINAGE AREA.—2,853 mi².

PERIOD OF RECORD.—October 1911 to January 1914, October 1916 to September 1918, October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931–60.

SEDIMENT DATA: Water years 1960–79.

REVISED RECORDS.—WSP 1565: 1913. WDR CA-77-2: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 274.82 ft above sea level. Prior to October 1931, nonrecording gage at site 0.4 mi upstream at different datum. October 1931 to Dec. 22, 1964, water-stage recorder at site 2.5 mi upstream at datum 31.67 ft higher.

REMARKS.—Records good. Flow regulated since November 1960 by Clair Engle Lake (station 11525400) 84 mi upstream, and by transbasin diversion to Judge Francis Carr Powerplant (station 11525430) since April 1963. Small diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 231,000 ft³/s, Dec. 22, 1964, gage height, 57.0 ft, present site and datum, from floodmarks, from rating curve extended above 123,000 ft³/s; minimum daily, 162 ft³/s, Oct. 4, 1931.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 30,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0545	47,400	29.31	Jan. 26	1745	44,600	28.65
Jan. 1	1045	122,000	42.97				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	766	1040	4090	e101000	26500	4570	e3100	4120	2910	1630	1000	762
2	767	975	4150	e78700	23500	6130	e2950	3810	2760	1560	997	1290
3	761	934	3560	e60700	21000	6450	e2850	3670	2820	1500	988	1090
4	757	905	5370	e45000	19400	5870	e2750	3560	4050	1450	959	775
5	756	878	27600	e36000	17900	5520	e2600	3440	3300	1400	928	749
6	770	855	15100	e30300	16500	5320	e2550	3310	2900	1380	896	737
7	778	837	10200	e26500	14800	5250	e2450	3400	2750	1350	871	687
8	777	830	23200	e23600	13000	5230	e2400	3670	2690	1310	857	666
9	767	826	39300	e21200	11400	5140	e2350	4070	2740	1300	842	680
10	760	818	44600	e19300	10400	5040	e2300	4530	2760	1310	836	705
11	763	813	30800	e18000	9310	4970	e2250	4500	2610	1300	838	710
12	770	819	24500	e16900	8470	4820	e2220	4450	2380	1250	832	715
13	783	831	19600	e15800	7760	4610	e2210	4370	2250	1220	819	709
14	786	875	14800	e14400	7130	e4520	e2200	4330	2120	1190	805	782
15	788	871	11400	e14200	6610	e4400	e2200	4250	2020	1170	792	894
16	788	857	9310	13500	6180	e4600	e2200	4210	1920	1190	782	903
17	762	924	8000	13400	6270	6600	e2250	4150	1830	1190	781	947
18	765	5120	7030	13100	5830	6030	e2450	4090	1770	1180	781	951
19	856	8950	6240	12600	5970	5370	e3000	4000	1700	1150	755	917
20	831	11400	6120	12500	5930	e5000	e4500	3890	1640	1110	768	853
21	773	5840	7190	12700	5660	e4800	e5800	3790	1610	1090	846	815
22	762	4540	7300	13100	5410	e4600	e5600	3680	1570	1060	839	789
23	792	3920	7730	12800	5190	e4350	e5000	3660	1540	1050	819	771
24	1140	3360	7190	12400	5000	e4150	e5400	3710	1510	1040	807	758
25	1740	3300	7070	21000	4840	e4000	e5700	3460	1470	1020	800	745
26	1500	2800	11900	39800	4740	e3850	e4900	3280	1450	1000	799	734
27	1140	2420	24900	37200	4780	e3700	e4700	3320	1440	997	815	728
28	1020	2400	24500	36900	4720	e3600	e4350	3270	1420	991	815	728
29	1110	2340	27400	35400	---	e3450	4190	3200	1440	989	797	726
30	1230	2200	52100	29300	---	e3350	4180	3040	1510	1040	786	718
31	1150	---	85800	26400	---	e3200	---	2970	---	1020	773	---
TOTAL	27908	73478	578050	863700	284200	148490	101600	117200	64880	37437	26023	24034
MEAN	900	2449	18650	27860	10150	4790	3387	3781	2163	1208	839	801
MAX	1740	11400	85800	101000	26500	6600	5800	4530	4050	1630	1000	1290
MIN	756	813	3560	12400	4720	3200	2200	2970	1420	989	755	666
AC-FT	55360	145700	1147000	1713000	563700	294500	201500	232500	128700	74260	51620	47670

e Estimated.

11530000 TRINITY RIVER AT HOOPA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1960, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	926	2578	6468	9239	11830	10400	10170	8663	4755	1635	650	508
MAX	5405	9589	28060	30140	50380	26370	19320	16700	9875	4265	1365	1248
(WY)	1951	1938	1956	1956	1958	1938	1938	1938	1953	1941	1953	1912
MIN	260	373	531	647	2433	3815	4790	3000	1378	466	249	213
(WY)	1933	1940	1937	1937	1937	1955	1944	1934	1934	1918	1934	1934

SUMMARY STATISTICS

WATER YEARS 1912 - 1960

ANNUAL MEAN	5618
HIGHEST ANNUAL MEAN	12270
LOWEST ANNUAL MEAN	2630
HIGHEST DAILY MEAN	158000
LOWEST DAILY MEAN	162
ANNUAL SEVEN-DAY MINIMUM	164
INSTANTANEOUS PEAK FLOW	a190000
INSTANTANEOUS PEAK STAGE	36.90
ANNUAL RUNOFF (AC-FT)	4070000
10 PERCENT EXCEEDS	12700
50 PERCENT EXCEEDS	3070
90 PERCENT EXCEEDS	442

a From rating curve extended above 56,000 ft³/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	824	3126	7324	10910	9554	9849	6444	4455	2562	1181	724	647
MAX	1805	12900	29710	32090	28810	32240	16040	12020	8999	3233	1681	1309
(WY)	1980	1974	1965	1970	1986	1983	1983	1983	1983	1983	1983	1983
MIN	472	679	529	745	891	1608	1325	1204	746	338	270	336
(WY)	1988	1991	1977	1977	1977	1977	1977	1977	1977	1977	1977	1969

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1964 - 1997

ANNUAL TOTAL	2652251	2347000	
ANNUAL MEAN	7247	6430	4782
HIGHEST ANNUAL MEAN			11350
LOWEST ANNUAL MEAN			786
HIGHEST DAILY MEAN	85800	Dec 31	101000
LOWEST DAILY MEAN	747	Sep 12	666
ANNUAL SEVEN-DAY MINIMUM	763	Sep 30	696
INSTANTANEOUS PEAK FLOW			122000
INSTANTANEOUS PEAK STAGE			42.97
ANNUAL RUNOFF (AC-FT)	5261000	4655000	3464000
10 PERCENT EXCEEDS	18700	16700	11000
50 PERCENT EXCEEDS	4430	2760	2100
90 PERCENT EXCEEDS	798	776	575

11530500 KLAMATH RIVER NEAR KLAMATH, CA

LOCATION.—Lat 41°30'52", long 123°59'57", in SW 1/4, sec.13, T.13 N., R.2 E., Del Norte County, Hydrologic Unit 18010209, on right bank 0.2 mi upstream from Turwar Creek and 2.2 mi southeast of Klamath.

DRAINAGE AREA.—12,100 mi², approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.—October 1910 to December 1926 (published as "near Requa"), October 1950 to September 1994; October 1995 to current year, stage only (discontinued). Monthly discharge only for some periods, published in WSP 1315-B.

CHEMICAL DATA: Water years 1951–95.

BIOLOGICAL DATA: Water years 1975–81.

SPECIFIC CONDUCTANCE: Water years 1975–81.

WATER TEMPERATURE: Water years 1966–81.

SEDIMENT DATA: Water years 1955–56, 1975–95.

REVISED RECORDS.—WSP 1285: 1951(P). WSP 1445: 1918–20. WDR CA-81-2: 1980.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is sea level. Prior to June 1926, nonrecording gage at site 2.6 mi upstream at different datum. Oct. 1, 1950, to Oct. 2, 1975, water-stage recorder at site 2.6 mi upstream at datum 5.60 ft above sea level.

REMARKS.—Records fair. Interruptions in record were due to malfunction of sensing and (or) recording instruments. Medium and low flows considerably regulated by reservoirs and powerplants upstream from station and by transbasin (from Trinity River) diversion to Judge Francis Carr Powerplant (station 11525430) since April 1963. Large diversions for irrigation upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 557,000 ft³/s, Dec. 23, 1964, gage height, 55.3 ft, former datum, from floodmarks, from rating curve extended above 230,000 ft³/s on basis of flood-routing study; minimum daily, 1,310 ft³/s, Sept. 4, 1977.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.06	5.98	6.73	6.56	12.06	9.39	45.29	34.38	19.76	18.79	10.61	10.36
2	6.02	5.94	6.56	6.48	12.03	10.87	44.66	35.92	18.80	17.52	12.26	10.61
3	5.98	5.93	6.66	6.46	11.15	10.45	35.92	29.94	17.53	16.59	12.32	11.95
4	6.06	5.96	6.84	6.54	17.95	10.30	29.96	26.15	16.70	16.17	12.02	11.55
5	5.99	5.94	6.78	6.47	24.00	17.90	26.19	23.62	16.28	15.50	11.64	11.36
6	5.99	5.94	6.48	6.32	21.05	17.02	23.62	21.92	15.66	15.13	11.43	11.22
7	6.09	5.96	6.43	6.29	19.34	15.75	21.95	20.39	15.23	14.82	11.30	11.16
8	6.09	5.97	6.49	6.34	26.50	19.34	20.39	18.98	14.88	14.37	11.31	11.03
9	6.05	5.95	6.65	6.40	28.97	26.50	19.02	17.91	14.39	13.99	11.06	10.85
10	5.99	5.94	7.27	6.54	27.90	25.24	18.10	17.12	14.04	13.56	10.93	10.80
11	5.99	5.93	7.63	6.45	25.30	21.75	17.21	16.32	13.80	13.26	10.88	10.78
12	6.00	5.94	6.65	6.24	21.76	20.05	16.65	15.95	13.38	12.85	10.84	10.65
13	6.30	5.96	7.06	6.41	20.06	19.40	16.14	15.48	13.00	12.54	10.69	10.45
14	6.33	6.02	7.04	6.74	19.42	17.58	15.68	15.12	12.65	12.27	10.49	10.33
15	6.18	6.01	6.90	6.56	17.58	16.16	15.30	14.78	12.33	11.98	10.36	10.30
16	6.09	5.99	6.56	6.32	16.16	14.82	14.96	14.57	12.02	11.74	10.79	10.31
17	6.04	5.97	6.49	6.29	14.94	13.92	14.92	14.60	12.02	11.79	11.52	10.79
18	6.48	6.01	18.39	6.49	13.93	13.18	14.89	14.43	11.91	11.59	11.47	10.93
19	6.77	6.41	19.24	16.91	13.19	12.51	14.62	14.22	12.44	11.62	10.95	10.76
20	6.63	6.32	19.33	15.23	13.30	12.29	14.42	14.21	12.45	11.97	11.16	10.76
21	6.32	6.16	15.33	11.98	13.66	13.30	15.01	14.18	12.07	11.67	11.20	11.04
22	6.29	6.13	12.05	11.03	13.83	13.55	15.05	14.49	11.79	11.40	11.05	10.74
23	6.61	6.28	11.05	10.19	13.99	13.61	14.68	14.17	11.54	11.07	10.76	10.60
24	7.46	6.61	10.30	9.94	13.63	13.23	14.33	13.89	11.11	10.92	10.63	10.47
25	8.75	7.46	10.34	9.87	14.35	13.15	18.29	13.90	10.97	10.72	10.57	10.41
26	8.61	7.43	10.08	9.22	20.03	14.35	21.93	18.22	10.84	10.65	10.54	10.41
27	7.43	6.85	9.54	8.83	21.91	20.03	21.87	19.55	10.80	10.68	10.52	10.40
28	6.91	6.73	9.34	8.87	21.77	20.49	21.40	19.51	10.70	10.46	10.44	10.17
29	7.31	6.73	9.46	9.01	25.31	20.38	21.33	19.69	---	---	10.23	9.95
30	7.30	6.96	9.40	8.87	27.82	25.31	19.69	18.22	---	---	10.01	9.85
31	6.97	6.72	---	---	35.49	27.23	19.15	17.92	---	---	10.04	9.84
MONTH	8.75	5.93	19.33	6.24	35.49	9.39	45.29	13.89	19.76	10.46	12.32	9.84

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.84	9.57	12.11	11.49	8.42	8.24	6.86	6.67	5.61	5.49	5.57	5.46
2	9.61	9.45	11.58	11.16	8.32	8.06	6.81	6.68	5.61	5.46	5.75	5.45
3	9.46	9.36	11.24	11.08	8.64	8.00	6.75	6.47	5.58	5.48	5.79	5.65
4	9.38	9.31	11.16	10.89	9.58	8.56	6.55	6.40	5.64	5.54	5.65	5.45
5	9.35	9.20	10.93	10.71	9.52	8.58	6.46	6.32	5.59	5.51	5.47	5.42
6	9.22	9.09	10.76	10.52	8.64	8.23	6.36	6.27	5.56	5.50	5.46	5.40
7	9.14	9.04	10.56	10.18	8.31	8.02	6.31	6.23	5.54	5.49	5.41	5.36
8	9.08	8.98	10.20	9.91	8.10	7.91	6.24	6.17	5.54	5.46	5.42	5.35
9	9.01	8.81	10.03	9.89	7.97	7.85	6.19	6.16	5.49	5.44	5.44	5.34
10	8.84	8.68	10.13	9.93	7.95	7.84	6.19	6.16	5.49	5.42	5.82	5.35
11	8.70	8.63	10.16	10.04	7.87	7.74	6.16	6.11	5.49	5.42	5.72	5.48
12	8.65	8.58	10.15	10.04	7.77	7.59	6.11	6.04	5.53	5.43	5.61	5.46
13	8.65	8.57	10.10	9.94	7.70	7.52	6.04	5.99	5.54	5.43	5.60	5.42
14	8.62	8.57	9.99	9.82	7.60	7.42	6.00	5.95	5.58	5.40	5.86	5.48
15	8.62	8.54	9.89	9.74	7.51	7.32	5.96	5.90	5.83	5.38	6.22	5.81
16	8.61	8.47	9.79	9.65	7.36	7.22	5.97	5.87	5.82	5.36	6.32	6.04
17	8.63	8.56	9.72	9.47	7.25	7.10	5.98	5.83	5.82	5.36	6.71	6.10
18	8.92	8.57	9.49	9.31	7.14	7.01	6.06	5.82	5.75	5.04	7.71	6.41
19	10.95	8.91	9.37	9.19	7.10	6.87	6.05	5.80	5.74	5.37	6.84	6.14
20	14.61	10.95	9.26	9.02	6.95	6.78	6.08	5.76	5.71	5.39	6.14	5.84
21	14.57	12.93	9.09	8.88	6.88	6.75	6.07	5.72	5.76	5.47	6.01	5.76
22	13.10	12.73	8.92	8.74	6.90	6.71	5.91	5.66	5.80	5.59	5.80	5.68
23	14.21	13.01	8.87	8.71	6.79	6.66	5.81	5.65	5.73	.05	5.93	5.62
24	14.06	12.80	9.00	8.87	6.70	6.62	5.77	5.62	5.63	5.52	---	---
25	12.93	12.10	8.92	8.61	6.63	6.58	5.81	5.60	5.63	5.51	---	---
26	12.21	11.70	8.66	8.48	6.60	6.54	5.81	5.57	5.70	5.52	7.80	7.29
27	11.83	11.43	8.66	8.50	6.56	6.51	5.71	5.54	5.77	5.60	7.74	5.61
28	11.48	11.20	8.66	8.51	6.54	6.49	5.68	5.54	5.72	5.60	5.79	5.48
29	11.33	11.14	8.56	8.47	6.61	6.49	5.65	5.52	5.68	5.55	---	---
30	12.06	11.15	8.51	8.32	6.71	6.53	5.64	5.53	5.63	5.52	---	---
31	---	---	8.46	8.26	---	---	5.61	5.51	5.60	5.49	---	---
MONTH	14.61	8.47	12.11	8.26	9.58	6.49	6.86	5.51	5.83	.05	---	---

11532500 SMITH RIVER NEAR CRESCENT CITY, CA

LOCATION.—Lat 41°47'30", long 124°04'30", in SW 1/4 SW 1/4 sec. 9, T.16 N., R.1 E., Del Norte County, Hydrologic Unit 18010101, Redwood National Park, on right bank opposite mouth of Cedar Creek, 1.6 mi downstream from South Fork and 7 mi east of Crescent City.

DRAINAGE AREA.—614 mi².

PERIOD OF RECORD.—October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1929: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 79.26 ft above sea level. Prior to Oct. 9, 1991, at site 1.1 mi upstream at datum 10.35 ft higher.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 228,000 ft³/s, Dec. 22, 1964, gage height, 48.5 ft, from floodmarks, from rating curve extended above 110,000 ft³/s on basis of slope-area measurement at gage height 39.51 ft, former site and datum; minimum daily 160 ft³/s, Oct. 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of November 30, 1926, reached a stage of 41.40 feet at datum 10.35 ft higher, from floodmarks, discharge, 166,000 ft³/s from rating extension above 39.51 ft.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 36,000 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	1815	126,000	29.65	Jan. 1	0445	113,000	28.61
Dec. 8	0200	88,300	26.33				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	851	13100	87300	15800	2560	2220	5740	1330	716	381	302
2	275	731	8050	55500	10300	7700	2100	4580	1190	675	370	301
3	274	653	7730	32500	7930	6660	2010	4750	1600	638	363	298
4	273	599	24600	18500	7130	5610	1950	4170	2270	613	358	297
5	272	560	33400	12800	6270	4810	1860	3660	1740	604	355	290
6	272	524	21400	9860	5490	4950	1770	3250	1490	588	343	284
7	267	502	39000	8150	5260	5010	1770	2940	1340	579	338	280
8	259	483	75500	6950	4900	4640	1720	2670	1240	564	325	279
9	256	465	53000	6050	4480	4130	1650	2460	1160	556	319	279
10	253	451	34000	5370	4130	3810	1580	2290	1100	565	319	291
11	256	438	25300	4850	3790	3920	1520	2140	1070	547	319	309
12	264	430	21500	4420	3660	3840	1480	2000	1050	522	319	293
13	331	497	20200	4050	3380	3530	1450	1870	1050	506	316	295
14	387	532	13700	3740	3180	3280	1450	1770	983	499	306	711
15	321	565	9780	3490	2990	3170	1410	1680	928	485	302	1080
16	299	583	7590	3280	2880	4950	1380	1600	891	482	298	1410
17	283	569	6220	3780	3460	8190	1390	1520	862	485	293	1970
18	1160	51700	5230	3410	3270	5470	1440	1460	843	485	297	1520
19	1270	48400	4510	3260	6130	4520	2760	1390	811	483	301	864
20	753	20300	5080	3610	6170	4100	14200	1340	783	460	304	652
21	530	9230	7080	6260	4830	3610	8800	1290	772	455	327	548
22	495	7220	7290	6860	4080	3220	9130	1260	772	442	316	488
23	845	5370	8080	5230	3580	2930	11800	1330	746	434	304	446
24	2300	5290	8370	4430	3210	2700	8980	1330	727	431	312	415
25	3950	5540	14300	13800	2940	2520	6580	1220	709	413	310	385
26	2560	4280	29800	20300	2750	2390	5140	1170	694	406	393	380
27	1390	3490	32600	12500	2750	2270	4320	1360	687	393	538	387
28	1030	5050	24800	18000	2570	2190	3770	1260	682	386	366	362
29	1590	5190	33300	12200	---	2020	4210	1240	716	381	335	347
30	1370	4950	38900	8800	---	2140	5940	1150	712	381	323	336
31	1050	---	40500	13900	---	2320	---	1250	---	381	314	---
TOTAL	25112	185443	673910	403150	137310	123160	115780	67140	30948	15555	10364	16099
MEAN	810	6181	21740	13000	4904	3973	3859	2166	1032	502	334	537
MAX	3950	51700	75500	87300	15800	8190	14200	5740	2270	716	538	1970
MIN	253	430	4510	3260	2570	2020	1380	1150	682	381	293	279
AC-FT	49810	367800	1337000	799600	272400	244300	229600	133200	61390	30850	20560	31930

11532500 SMITH RIVER NEAR CRESCENT CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1024	4602	7626	8557	7417	6544	4424	2778	1289	535	340	339
MAX	11770	23620	21740	21930	22680	15760	11970	7550	3876	1217	715	1471
(WY)	1951	1974	1997	1953	1986	1938	1982	1933	1937	1947	1947	1978
MIN	185	200	264	767	1076	1602	1406	835	524	336	226	198
(WY)	1965	1937	1977	1977	1977	1988	1977	1947	1987	1987	1959	1939

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1932 - 1997			
ANNUAL TOTAL	2267270				1803971							
ANNUAL MEAN	6195				4942				3775			
HIGHEST ANNUAL MEAN									7027			
LOWEST ANNUAL MEAN									975			
HIGHEST DAILY MEAN	75500				Dec 8				87300			
LOWEST DAILY MEAN	253				Oct 10				253			
ANNUAL SEVEN-DAY MINIMUM	261				Oct 6				261			
INSTANTANEOUS PEAK FLOW									126000			
INSTANTANEOUS PEAK STAGE									Nov 18			
ANNUAL RUNOFF (AC-FT)	4497000				3578000				29.65			
10 PERCENT EXCEEDS	15000				10900				Nov 18			
50 PERCENT EXCEEDS	3200				1520				48.50			
90 PERCENT EXCEEDS	306				311				2735000			
									8870			
									1570			
									266			

SMITH RIVER BASIN

11532650 SMITH RIVER NEAR FORT DICK, CA

LOCATION.—Lat 41°52'51", long 124°08'07", in SW 1/4 NW 1/4 sec.12, T.17 N., R.1 W, Del Norte County, Hydrologic Unit 18010101, on right bank 10 ft upstream from bridge on U.S. Highway 101, 0.2 mi downstream from Hutsinpillar Creek, and 1.2 mi northeast of Fort Dick.

DRAINAGE AREA.—672 mi².

PERIOD OF RECORD.—October 1989 to current year. Records prior to October 1989 are in files of the California Department of Water Resources.

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

REMARKS.—Data is collected for flood-warning purposes. Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF RECORD.—Maximum gage height, 34.12 ft, Jan. 8, 1990.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.10	13.10	14.04	13.87	---	---	31.73	25.20	21.24	18.99	15.34	14.80
2	13.10	13.10	13.87	13.77	---	---	28.54	25.70	18.99	17.91	17.80	15.34
3	13.11	13.09	13.77	13.67	---	---	25.73	22.02	17.91	17.26	17.23	16.80
4	13.10	13.10	13.67	13.61	28.67	17.39	22.02	20.10	17.26	17.05	16.80	16.37
5	13.10	13.10	13.61	13.55	28.34	21.79	20.10	19.01	17.05	16.68	16.37	16.09
6	13.10	13.10	13.55	13.51	21.87	21.27	19.01	18.72	16.68	16.38	16.30	16.09
7	13.10	13.09	13.51	13.49	30.03	20.87	---	---	16.45	16.36	16.30	16.17
8	13.09	13.08	13.49	13.46	30.57	27.88	---	---	16.36	16.13	16.17	15.95
9	13.12	13.06	13.46	13.43	28.03	24.15	---	---	16.13	15.95	15.95	15.73
10	13.07	13.06	13.43	13.41	24.15	23.09	---	---	15.95	15.74	15.73	15.61
11	13.06	13.06	13.41	13.39	23.09	21.82	16.15	15.92	15.74	15.63	15.73	15.61
12	13.10	13.06	13.39	13.38	22.47	20.63	15.92	15.71	15.65	15.49	15.70	15.57
13	13.25	13.09	13.53	13.38	21.54	20.35	15.71	15.52	15.49	15.36	15.57	15.42
14	13.34	13.25	13.55	13.53	20.35	18.85	15.52	15.36	15.36	15.25	15.42	15.29
15	13.26	13.17	13.60	13.54	18.85	17.93	15.36	15.22	15.25	15.14	15.29	15.27
16	13.17	13.14	13.61	13.60	17.93	17.30	15.22	15.14	15.19	15.08	18.26	15.28
17	13.17	13.11	13.66	13.59	17.30	16.85	15.60	15.14	15.55	15.19	18.46	16.92
18	14.84	13.17	32.81	13.64	16.85	16.47	15.35	15.16	15.42	15.31	16.92	16.25
19	14.75	14.13	29.44	24.56	16.47	16.17	15.18	15.10	17.48	15.32	16.25	15.93
20	14.13	13.71	25.09	19.47	17.28	16.11	15.49	15.18	17.23	16.43	15.93	15.72
21	13.71	13.50	19.47	18.38	17.50	17.24	17.46	15.49	16.43	15.98	15.72	15.46
22	13.55	13.47	18.38	17.50	17.53	17.35	17.45	16.57	15.98	15.68	15.46	15.26
23	14.04	13.55	17.50	16.82	17.80	17.53	16.57	16.02	15.68	15.44	15.26	15.10
24	15.93	13.90	17.49	16.70	17.89	17.62	16.02	15.75	15.44	15.24	15.10	14.97
25	16.42	15.87	17.47	16.83	21.85	17.63	21.32	15.75	15.24	15.11	14.97	14.86
26	16.26	14.86	16.83	16.33	24.61	21.64	21.60	19.98	15.11	14.99	14.86	14.78
27	14.86	14.28	16.33	16.01	24.18	22.81	19.98	18.54	15.09	14.98	14.78	14.71
28	14.28	14.09	17.16	16.03	23.79	21.60	21.25	18.65	15.04	14.85	14.73	14.62
29	14.83	14.13	17.16	16.74	26.54	21.24	19.85	18.31	---	---	14.62	14.54
30	14.69	14.28	---	---	28.50	22.23	18.32	17.50	---	---	14.89	14.51
31	14.28	14.04	---	---	28.44	23.52	21.26	17.42	---	---	14.90	14.74

11532650 SMITH RIVER NEAR FORT DICK, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.75	14.66	17.06	16.32	14.12	14.01	13.44	13.41	12.94	12.92	12.85	12.83
2	14.66	14.56	16.32	15.99	14.01	13.91	13.41	13.36	12.94	12.91	12.83	12.82
3	14.56	14.51	16.37	16.08	14.99	13.89	13.36	13.32	12.92	12.91	12.82	12.81
4	14.52	14.46	16.13	15.82	15.04	14.58	13.32	13.29	12.92	12.90	12.81	12.80
5	14.46	14.39	15.82	15.55	14.58	14.31	13.29	13.27	12.90	12.88	12.82	12.80
6	14.39	14.34	15.55	15.33	14.31	14.15	13.27	13.25	12.89	12.88	12.80	12.79
7	14.38	14.33	15.33	15.16	14.15	14.04	13.25	13.23	12.88	12.86	12.79	12.78
8	14.33	14.30	15.16	15.00	14.04	13.95	13.23	13.22	12.87	12.84	12.78	12.77
9	14.30	14.23	15.00	14.87	13.95	13.88	13.22	13.21	12.84	12.83	12.78	12.77
10	14.23	14.18	14.87	14.77	13.88	13.83	13.25	13.21	12.84	12.83	12.83	12.77
11	14.18	14.13	14.77	14.67	13.83	13.80	13.22	13.18	12.83	12.83	12.85	12.83
12	14.13	14.11	14.67	14.58	13.80	13.79	13.18	13.16	12.86	12.83	12.83	12.80
13	14.11	14.09	14.58	14.49	13.81	13.76	13.16	13.14	12.85	12.83	12.92	12.78
14	14.10	14.08	14.49	14.43	13.76	13.70	13.14	13.12	12.83	12.81	13.68	12.92
15	14.08	14.04	14.43	14.35	13.70	13.66	13.44	13.05	12.83	12.80	14.29	13.68
16	14.04	14.03	14.35	14.29	13.66	13.63	13.10	13.08	12.81	12.80	14.51	13.78
17	14.05	14.04	14.29	14.22	13.63	13.60	13.10	13.07	12.81	12.80	15.50	13.68
18	---	---	14.22	14.17	13.60	13.57	13.10	13.07	12.82	12.80	15.13	13.91
19	---	---	14.17	14.12	13.57	13.53	13.09	13.06	12.84	12.81	13.91	13.53
20	---	---	14.12	14.08	13.53	13.51	13.06	13.03	12.82	12.81	13.53	13.33
21	---	---	14.08	14.03	13.51	13.49	13.04	13.02	12.89	12.82	13.33	13.21
22	---	---	14.03	14.01	13.51	13.49	13.03	13.01	12.88	12.84	13.21	13.11
23	---	---	14.14	14.01	13.49	13.46	13.02	13.00	12.84	12.83	13.11	13.06
24	---	---	14.14	14.03	13.46	13.43	13.01	12.99	12.87	12.84	13.06	13.00
25	17.42	16.66	14.03	13.94	13.43	13.41	12.99	12.97	12.86	12.84	13.00	12.96
26	16.66	16.17	13.96	13.91	13.42	13.39	12.98	12.95	13.16	12.83	12.99	12.96
27	16.17	15.79	14.13	13.96	13.39	13.37	12.96	12.92	13.30	13.09	13.00	12.97
28	15.79	15.64	14.07	13.99	13.38	13.37	12.95	12.93	13.09	12.92	12.97	12.93
29	16.00	15.65	14.00	13.95	13.42	13.38	12.93	12.92	12.92	12.88	12.93	12.90
30	17.25	15.87	13.95	13.87	13.42	13.41	12.95	12.92	12.88	12.87	12.90	12.88
31	---	---	14.12	13.86	---	---	12.94	12.93	12.87	12.84	---	---

Special study and miscellaneous sites

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and other collected for some special reason are called measurements at miscellaneous sites.

Discharge measurements in the following table were made at special study and miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at special study and miscellaneous sites during water year 1997

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
SALINAS RIVER BASIN						
11148500 Estrella River near Estrella, CA	Salinas River	Lat 35°43'02", long 120°38'21", in NW 1/4 NW 1/4 sec 36, T.25 S., R.12 E., San Luis Obispo County, Hydrologic Unit 18060004, on left bank 0.2 mi downstream from mouth of Ranchito Canyon and 1.9 mi northwest of Estrella.	922 not including Carrizo Plains	1954-96	12-23-96	52.9
					02-11-97	40.1
					03-06-97	11.4
					04-16-97	1.32
11151870 Arroyo Seco near Greenfield, CA	Salinas River	Lat 36°14'15", long 121°28'50", in NE 1/4 SE 1/4 sec.36, T.19 S., R.4 E., Monterey County, Hydrologic Unit 18060005, on right bank 0.6 mi downstream from Rocky Creek, and 14.5 mi southwest of Greenfield.	113	1962-96	10-16-96	8.09
					12-03-96	38.1
					01-08-97	683
					05-15-97	33.5
					06-26-97	12.8
ALMEDA CREEK BASIN						
11177200 Vallecitos Creek	Arroyo de la Laguna	Lat 37°35'42", long 121°52'51", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank at culvert on Sunol Road, 700 ft upstream from mouth, and 0.3 mi east of Sunol.	7.48	1975-76, 1977-96	10-16-96	14.2
					11-19-96	2.38
					2-12-97	1.74
					3-13-97	.77
					4-23-97	1.55
					5-21-97	1.06
					7-16-97	1.20
					8-27-97	.06

Low-flow partial-record stations

Measurements of streamflow in the area covered by this volume made at low-flow partial-record stations are given in the following table. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1997

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
KLAMATH RIVER BASIN						
11525520	Deadwood Creek at Lewiston, CA	Lat 40°43'02", long 122°48'04", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W., Trinity County, 300 ft upstream from mouth and 0.7 mi northeast of Lewiston.	9.10	a1965-75, 1976-97	03-06-97 08-08-97	6.42 b0.4

a Published as a miscellaneous measurement.

b Base flow.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

Water-quality partial-record stations are particular sites where chemical-quality, biological, and (or) sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

PAJARO RIVER BASIN

361931120370901 BIG RIDGE CHROMIUM MINE NEAR IDRIA, CA

LOCATION.—Lat 36°19' 31", long 120°37' 09", in NW 1/4 NW 1/4 sec.36, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
JUL 24...	1100	0.0	1210	8.2	28.0	<0.10	7

BOTTOM-MATERIAL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1100	0.0	0.04	3700

SOIL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1100	0.02	2400

361945120373801 ASBESTOS RIDGE MINE SITE NEAR IDRIA, CA

LOCATION.—Lat 36°19'45", long 120°37'38", in NW 1/4 SE 1/4 sec. 26, T.18 S., R.12 E., San Benito County Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

SOIL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24 . . .	1440	0.02	1800

PAJARO RIVER BASIN

361952120372601 SAN BENITO RIVER ABOVE BIG RIDGE CHROMIUM MINE, NEAR IDRIA, CA

LOCATION.—Lat 36°19'52", long 120°37'26", in NE 1/4 SE 1/4 sec.26, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
JUL 24...	1245	0.40	1610	8.7	32.0	<0.10	3

BOTTOM-MATERIAL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1245	0.18	2600

SOIL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1245	0.09	2700

361954120371601 SAN BENITO RIVER BELOW K.C.A.C. JOE PIT MINE TRIBUTARY, NEAR IDRIA, CA

LOCATION.—Lat 36°19'54", long 120°37'16", in NE 1/4 SE 1/4 sec.26, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
JUL 24...	1350	0.10	1660	8.7	<0.10	4

362008120375401 SAN BENITO RIVER BELOW UNNAMED TRIBUTARY, ABOVE ASBESTOS RIDGE MINE, NEAR IDRIA, CA

LOCATION.—Lat 36°20'08", long 120°37'54", in SE 1/4 NW 1/4 sec.26, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L) AS NI) (01067)
JUL 24...	1445	0.70	1590	8.7	20.0	<0.10	3

362023120395301 SAN BENITO RIVER BELOW SAN BENITO MILL SITE, NEAR IDRIA, CA

LOCATION.—Lat 36°20'23", long 120°39'53", in NW 1/4 NE 1/4 sec.28, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
JUL 24...	1715	1.0	1340	8.7	22.0	<0.10	10

BOTTOM-MATERIAL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1715	0.12	1700

PAJARO RIVER BASIN

362032120393301 SAN BENITO RIVER BELOW SAWMILL CREEK, NEAR IDRIA, CA

LOCATION.—Lat 36°20'32", long 120°39'33", in SE 1/4 SE 1/4 sec.21, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
JUL 24...	1555	1.0	1350	8.7	24.5	<0.10	4

BOTTOM-MATERIAL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1555	0.16	650

362035120395101 SAN BENITO MILL DIG SITE NEAR IDRIA, CA

LOCATION.—Lat 36° 20'35", long 120°39'51", in SW 1/4 SE 1/4 sec.21, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

SOIL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1545	0.07	1200

362037120394701 SAN BENITO RIVER TRIBUTARY BELOW SAWMILL CREEK, NEAR IDRIA, CA

LOCATION.—Lat 36°20'37", long 120°39'47", in SW 1/4 SE 1/4 sec.21, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L) AS NI) (01067)
JUL 24...	1655	0.01	973	8.8	16.5	<0.10	3

362037120395001 SAN BENITO MILL SITE NEAR IDRIA, CA

LOCATION.—Lat 36°20'37", long 120°39'50", in SW 1/4 SE 1/4 sec.21, T.18 S., R.12 E., San Benito County, Hydrologic Unit 18060002.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: July 1997

SOIL-SAMPLE ANALYSES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI) (01068)
JUL 24...	1546	0.07	1200

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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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