Water Resources Data California Water Year 1991

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

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA–91–2
Prepared in cooperation with the California Department of Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1991

1990

OCTOBER

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1991

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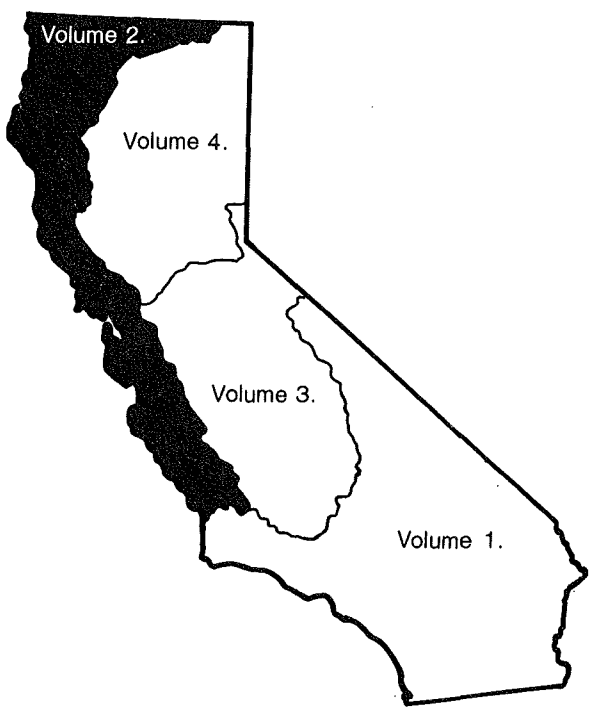
Water Resources Data California Water Year 1991

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

by L.F. Trujillo, K.L. Markham, J.R. Palmer, and M.F. Friebel



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-91-2
Prepared in cooperation with the California Department of Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., *Secretary*

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, *Director*

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1992

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 quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in five 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

Volume 5. Ground-water data

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 John M. Klein, District Chief, California.

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15. Supplementary Notes

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

16. Abstract (Limit: 200 words)

Water resources data for the 1991 water year for California consist of records of stage, discharge, and water quality of streams; stage and contents in lakes and reservoirs; and water levels and water quality in wells. Volume 2 contains discharge records for 130 streamflow-gaging stations, 1 low-flow partial-record station, and 6 miscellaneous measurement sites; stage and contents for 7 lakes and reservoirs; precipitation records for 3 stations; and water-quality records for 41 streamflow-gaging stations and 3 water-quality partial-record stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

17. Document Analysis a. Descriptors

*California, *Hydrologic data, *Surface water, Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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TABLES

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

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

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 WATSTORE for the period of record shown for each station.

Station No.	Station name	Drainage area (mi^2)	Period of record
11137500	Alamo Creek near Santa Maria	86.6	1944-62
11138000	Huasna River near Santa Maria	117	1930-62
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
11142800	Rat Creek near Lucia	.82	1961-63
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	1942-43, 1948-75
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
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 River near Paso Robles	787	1940-41
11148800	Nacimiento River near Bryson	147	1956-72
11149500	Nacimiento River near San Miguel	349	1940-57
11149650	Sulphur Springs Canyon near Jolon	5.16	1968-69
11150800	Cow Creek near San Ardo	4.8	1961-64
11151000	San Lorenzo Creek near King City	210	1940-42
11151500	San Lorenzo Creek at King City	259	1943-45
11151870	Arroyo Seco near Greenfield	113	1961-86
11152570	Alisal Creek near Salinas	14.2	1971-74
11152650	Reclamation Ditch near Salinas	53.2	1971-86
11152900	Cedar Creek near Bell Station	12.8	1962-82
11153000	Pacheco Creek near Dunneville	146	1940-82
11153040	Pacheco Creek at Dunneville	154	1982-85
11153470	Llagas Creek above Chesbro Reservoir, near Morgan Hill	9.63	1972-82
11153500	Llagas Creek near Morgan Hill	19.6	1952-71
11153700	Pajaro River near Gilroy	399	1961-82
11153790	Uvas Creel at Sveadal	2.88	1973-74
11153800	Alec Canyon near Morgan Hill	.91	1970-73
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
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
11157500	Tres Pinos Creek near Tres Pinos	206	1941-83
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	Greem 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
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
11160200	Newell Creek at Ben Lomond	8.98	1958-60
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
11162600	Purisima Creek near Half Moon Bay	4.83	1959-69
11162722	Spruce Branch at South San Francisco	.70	1965-69

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
11162900	Sharon Creek near Menlo Park	0.38	1959-69
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
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
11173200	Arroyo Hondo near San Jose	77.1	1969-81
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	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
11180750	Alameda Creek at Union City	653	1959-73
11181000	San Lorenzo Creek at Hayward	37.5	1940, 1947-83
11181004	Castro Valley Creek at Castro Valley	.98	1979-80
11181300	Peralta Creek at Oakland	1.67	1973
11181335	Caldecott Creek at Lake Temescal, at Oakland	.83	1980-81
11181400	Wildcat Creek at Richmond	8.67	1964-75
11182030	Rhem 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
11183000	San Ramon Creek at Walnut Creek	50.8	1953-73, 1986
11183500	Walnut Creek at Walnut Creek	79.2	1953-68
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
11337500	Marsh Creek near Byron	42.6	1953-83
11451520	Cache Creek near Lower Lake, plus north fork	725	1976
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, 1971-76
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)	1.24	1972-76
11459830	Irwin Creek at San Rafael	--	1972-76
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

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
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	1961
11461501	East Fork Russian River & Potter Valley powerhouse, near Calpella	--	1942-69
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
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
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
11468070	South Fork Big River near Comptche	36.2	1960-71
11468150	Warner Creek near Fort Bragg	.61	1969-71, 1973
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	1973-78
11469500	North Fork Mattole River at Petrolia	37.6	1951-57
11469800	Cold Creek tributary near Elk Creek	.81	1970-71, 1973
11471099	Potter Valley powerhouse (tributary only) near Potter Valley	--	1976-83, 1987-89
11471105	Potter Valley irrigation canal E5 near Potter Valley	--	1976-83, 1988-89
11471106	Potter Valley irrigation canal E6 near Potter Valley	--	1976-83, 1988-89
11471800	Tomki Creek near Willits	43.4	1963-70
11472000	Eel River at Hearst	466	1911-13
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, 1952-67
11474400	Hulls Creek near Covelo	25.9	1962-64
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
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	1969-71, 1973
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
11480750	Mad River near Kneeland	351	1966-74
11480800	North Fork Mad River near Korbel	40.4	1958-64, 1973-74
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
11516750	Shasta River near Edgewood	70.3	1963-67

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
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
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, 1968
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	Bulff 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	1959-69
11527500	New River near Denny	178	1928-29
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
11529500	South Fork Trinity River near China Flat	932	1912-13
11529800	Willow Creek near Willow Creek	40.9	1959-74
11530150	Mareep Creek near Weitchpec	3.56	1967-71, 1973
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, 1976-77

DISCONTINUED LAKES AND RESERVOIRS

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

Station No.	Station name	Drainage area (mi^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 WATSTORE 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	134	S	1967-73, 1977, 1990
11141280	Lopez Creek near Arroyo Grande	20.9	S	1968-72

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11142200	Santa Rosa Creek near Cambria	12.5	WQ	1988-89
11142240	Perry Creek at Cambria	22.9	WQ	1988-89
11142300	San Simeon Creek near Cambria	26.3	WQ	1988-89
11143250	Carmel River near Carmel	246	WQ,S	1954-66, 1990
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, 1990
11148500	Estrella River near Estrella	922	S	1990
11148800	Nacimiento River near Bryson	147	T,S	1959, 1961-71
11149700	San Antonio River at Sam Jones Bridge	204	T,S	1959, 1961-62, 1964-65
11150000	San Antonio River at Pleyto	277	T,S	1962, 1965
11150500	Salinas River near Bradley	2,535	WQ,S	1950, 1958, 1962-66, 1972-75, 1977, 1980-81, 1990
11151700	Salinas River at Soledad	3,563	WQ,S	1972-75, 1977, 1990
11151870	Arroyo Seco near Greenfield	113	S	1963-75, 1978, 1984
11152300	Salinas River near Chualar	4,042	WQ,B,C, T,S	1977-90
11152500	Salinas River near Spreckels	4,156	WQ,B,C, T,S	1950-54, 1958-79, 1986, 1990
11152540	El Toro Creek near Spreckels	31.9	S	1986, 1990
11153470	Llagas Creek above Chesbro Reservoir, near Morgan Hill	9.63	T	1972-78
11153500	Llagas Creek near Norgan Hill	19.6	WQ,S	1979-91
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
11159000	Pajaro River at Chittenden	1,186	C	1978-82
11160300	Zayante Creek at Zayante	11.1	S	1970-73
11160500	San Lorenzo River at Big Trees	106	S	1973-82
11162500	Pesadero Creek near Pesadero	45.9	S	1980
11162630	Pilarcitos Creek at Half Moon Bay	27.1	S	1990
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
11169000	Guadalupe River at San Jose	146	WQ,S	1979-91
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	S	1960-73
11180965	Cull Creek below Cull Creek Dam, near Castro Valley	6.37	T,S	1979
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	C,S	1978-81
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
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	S	1964-68
11461500	East Fork Russian River near Calpella	92.2	S	1965-68
11462000	East Fork Russian River near Ukiah	105	S	1964-68

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11463000	Russian River near Cloverdale	503	S	1964-68
11463160	Big Sulphur Creek near Middletown	2.89	T,S	1978-79
11463200	Big Sulphur Creek near Cloverdale	85.5	S	1967-68
11464500	Dry Creek near Cloverdale	87.8	T	1965-79
11465150	Pena Creek near Geyersville	22.3	S	1979-86
11465200	Dry Creek near Geyersville	162	S	1964-86
11467000	Russian River near Guerneville	1,338	C,S	1974-82
11467600	Garcia River near Point Arena	98.5	T	1964-78
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	S	1974-75
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	C,S	1979-81
11477500	Van Duzen River near Dinsmore	85.2	T	1966-74
11477700	Little Van Duzen River near Bridgeville	36.2	T	1961-65
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
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
11516600	Cottonwood Creek at Hornbrook	89.8	T	1965-71
11523000	Klamath River at Orleans	8,475	S	1967-79
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	C	1975-81
11532000	South Fork Smith River near Crescent City	291	T,S	1978-79
11532500	Smith River near Crescent City	609	C,S	1978-81
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 1991

VOLUME 2--PACIFIC SLOPE BASINS FROM ARROYO GRANDE TO OREGON STATE LINE EXCEPT CENTRAL VALLEY

By L.F. Trujillo, K.L. Markham, J.R. Palmer, and M.F. Friebel

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State 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 data base 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 130 streamflow-gaging stations, 1 low-flow partial-record streamflow station, and 6 miscellaneous measurement sites; (2) stage and contents records for 7 lakes and reservoirs; (3) precipitation records for 3 stations; and (4) water-quality records for 41 streamflow-gaging stations and 3 water-quality partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports Section, Box 25425, Building 810, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-91-2." 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 in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (916) 978-4668.

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, Donald Labelle, Director of Public Works.
Alameda County Water District, James D. Beard, General Manager.
California Department of Boating and Waterways, William H. Ivers, Director.
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 Director.

Humboldt Bay Municipal Water District, Arthur Bolli, General Manager.
Marin Municipal Water District, Ronald L. Johnson, General Manager.
Mendocino County Water Agency, Dennis Jackson, Hydrologist.
Monterey County Water Resources Agency, William Hurst, General Manager.
Monterey Peninsula Water Management District, James Cofer, General Manager.
Palo Alto, city of, Phil Bobel, Manager, Water Quality Control Plant.

San Benito County Water Conservation and Flood Control District, William Rupert, District Manager.
San Francisco Water Department, John Mullane, General Manager.
San Luis Obispo County Engineering Department, Clinton Milne, County Engineer.
San Mateo County, Robert Sans, Director of Public Works.

Santa Clara Valley Water District, Ronald R. Esau, General Manager.
Santa Cruz, city of, Water Department, William Kocker, Director.
Santa Cruz County Flood Control and Water Conservation District, Planning Department, Ken Hart, Program Manager.
Scotts Valley Water District, Jon Sansing, General Manager.
Sonoma County Planning Department, Steven Sharpe, Geothermal Coordinator.
Sonoma County Water Agency, Robert F. Beach, General Manager.

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

The following organizations aided in collecting records: Pacific Gas and Electric Company; PacifiCorp, formerly Pacific Power and Light Company.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

As is common in California, streamflow varied greatly in the 1991 water year--month by month and regionally. The variations are related to differences in precipitation, temperature, topography, and geology. Runoff during the 1991 water year in the area covered by this volume was 51 percent of the 1961-90 median (based on 10 representative streamflow records). Total runoff, in percent of median, at selected stations in California is shown in figure 1. Runoff ranged from 30 percent of median at Eel River at Scotia (station 11477000) to 86 percent of median at Santa Rita Creek near Templeton (station 11147070). In figure 2, monthly mean discharge in the 1991 water year is compared to the 1961-90 median, maximum, and minimum monthly mean discharge at four representative gaging stations. In addition, a comparison of monthly precipitation in the 1991 water year and the long-term average is shown in figure 2. Annual departure from 1961-90 mean discharge for four selected gaging stations is shown in figure 3. A comparison of 1991 peak discharge to peaks for period of record for selected stations is shown in table 1. A comparison of low-flow data for various years is shown in table 2.

Precipitation in the area covered by this volume was below normal during the 1991 water year, extending hydrologic drought conditions into a fifth consecutive year. Precipitation (based on seven representative rain gages) was 78 percent of the long-term average. In March, significant storms and precipitation throughout the region were much above average.

Table 1. Comparison of peak discharge for 1991 water year with those for period of record for selected stations

Station No.	Station name	Water year 1991		Period of record	
		Peak discharge (ft^3/s)	Date	Peak discharge (ft^3/s)	Water year
11152000	Arroyo Seco near Soledad	9,450	Mar. 4	28,300	1958
11456000	Napa River near St. Helena	6,940	Mar. 4	16,900	1986
11477000	Eel River at Scotia	105,000	Mar. 5	752,000	1965
11532500	Smith River near Crescent City	52,700	Mar. 4	228,000	1965

Figure 1. Runoff, in percent of median, for the 1991 water year.

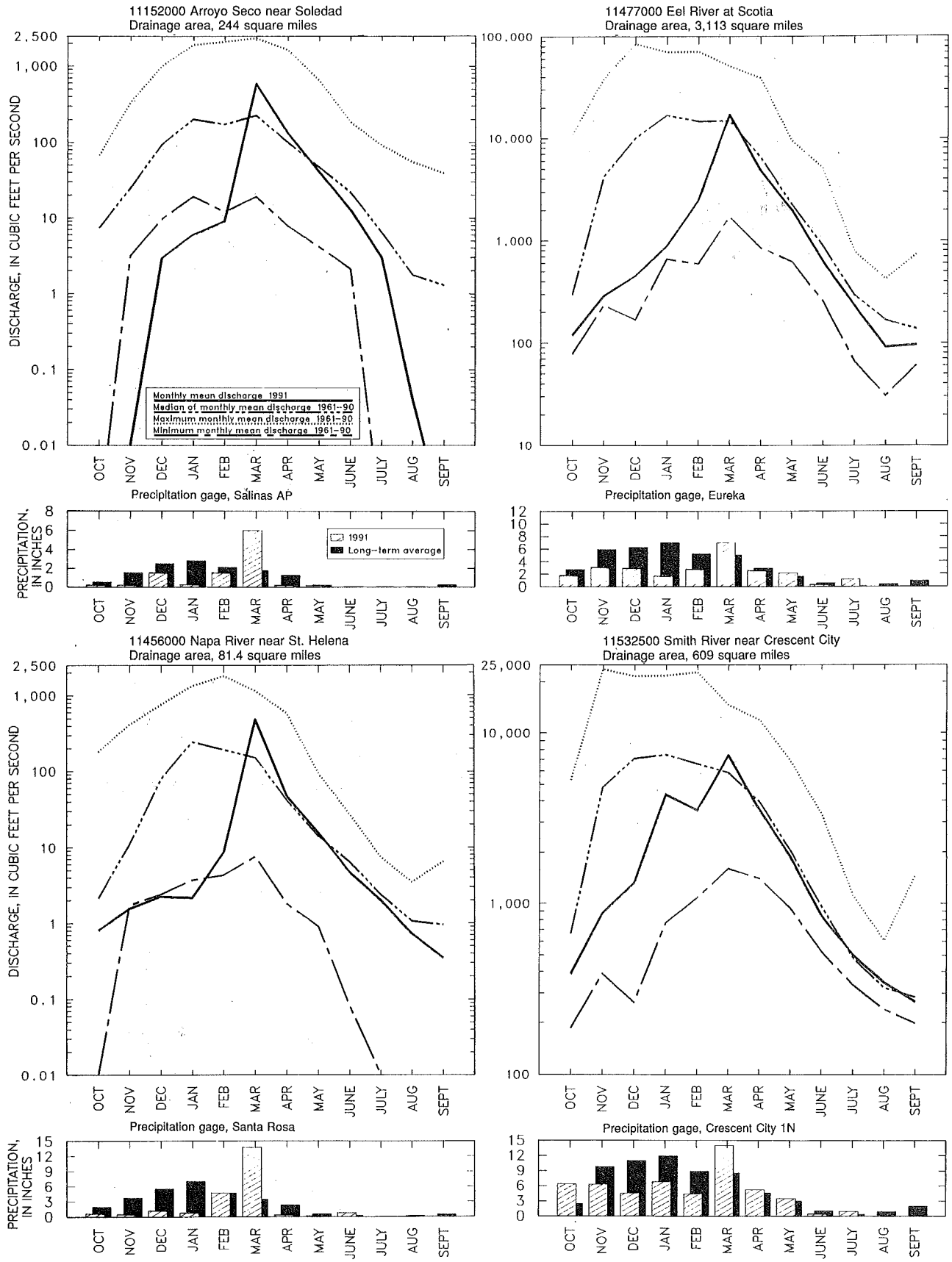


Figure 2. Discharge and precipitation during water year 1991 and long-term statistics at four representative gaging stations. Precipitation data from National Oceanic and Atmospheric Administration, 1991, Climatological data, annual report: v. 95.

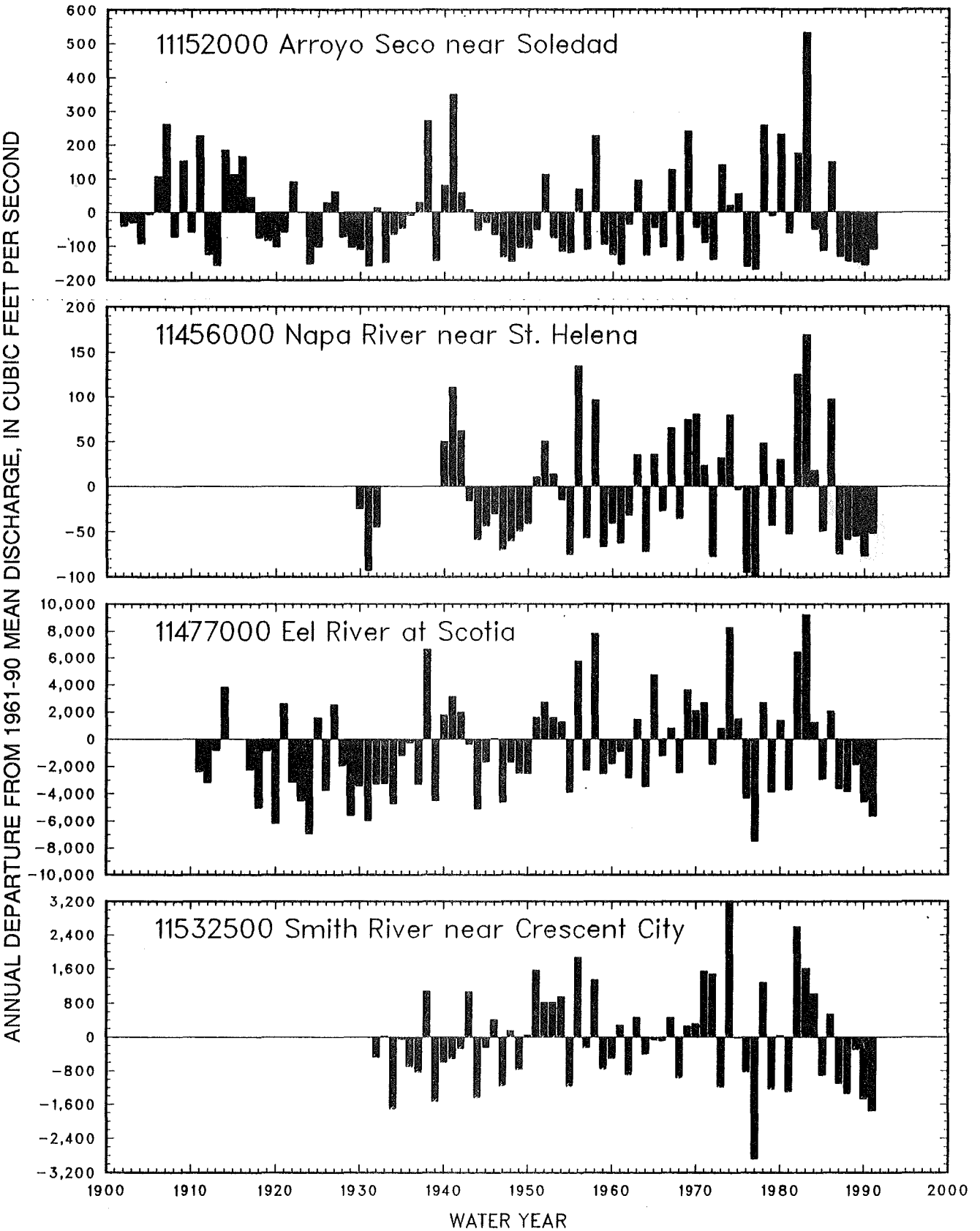


Figure 3. Annual departure from 1961-90 mean discharge for period of record at selected gaging stations.

Table 2. Comparison of 7-day and 1-day low flow for 1991 water year to 7-day, 1-day, and minimum daily flow for 30-year base period 1961-90, at selected stations

Station No.	Station name	7-day low flow (ft^3/s) 1991 water year	7-day low flow (ft^3/s) Base period 1961-90	1-day low flow (ft^3/s) 1991 water year	1-day low flow (ft^3/s) Base period 1961-90	Period of record Minimum daily (ft^3/s)	Period of record Water year
11152000	Arroyo Seco near Soledad	0	0	0	0	0	Several
11456000	Napa River near St. Helena	.28	0	.26	0	0	Several
11477000	Eel River at Scotia	78	25	68	25	10	1924
11532500	Smith River near Crescent City	237	163	245	160	160	1964

Water Quality

Water samples collected at seven NASQAN stations and one Hydrologic Benchmark station reported in this volume were analyzed for water-quality constituents. Dissolved-solids concentrations decreased slightly from the previous year and were largest at Pajaro River at Chittenden (station 11159000), where the median concentration was 1,220 milligrams per liter. The smallest concentration was in water sampled from the Smith River near Crescent City (station 11532500), where the median concentration was 60 milligrams per liter, although the Salinas River near Chualar (station 11152300) did not have any measureable flow during 346 days of the water year. The monthly mean dissolved-solids concentrations during water year 1991 are compared in figure 4 with long-term mean dissolved-solids concentrations at two selected stations. Chloride, manganese, sulfate, and dissolved-solids concentrations of water samples collected from the Pajaro River near Chittenden exceeded the water-quality criteria recommended by the U.S. Environmental Protection Agency on several occasions.

The largest densities of fecal-coliform (1,100 colonies per 100 milliliters) and fecal streptococcus (6,600 colonies per 100 milliliters) bacteria were in water samples collected from Salinas River near Chualar and Pajaro River near Chittenden, respectively.

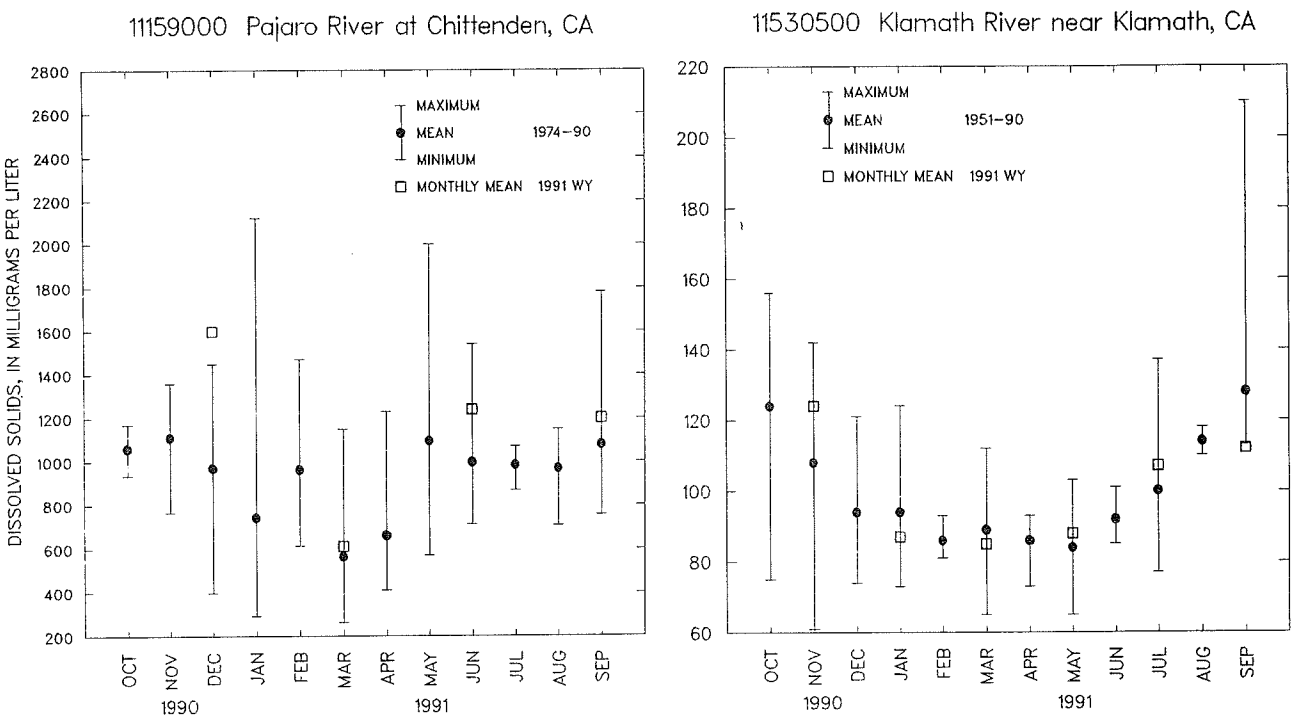


Figure 4. Comparison of monthly mean dissolved-solids concentrations during water year 1991 with long-term dissolved-solids concentrations at two selected stations.

Sediment

Suspended-sediment discharge and concentrations were monitored daily at 7 stations and periodically at 20 stations in the area included in this volume. Monthly and annual bedload discharge were estimated for all daily stations. Sediment-monitoring stations are located as far north as Crescent City and as far south as Bryson in San Luis Obispo County. Large variations in precipitation and drainage-basin characteristics result in significant differences in sediment-discharge rates.

Sediment discharge was well below normal during the 1991 water year for all the daily sediment stations included in this volume. Annual sediment discharge was 3 percent of average (1979-90) for Cull Creek above Cull Creek Reservoir, near Castro Valley (station 11180960); 4 percent (1971-90) for Redwood Creek at Orick (station 11482500); and 1 percent (1976-90) for Grass Valley Creek at Fawn Lodge, near Lewiston (station 11525600).

During the 1991 water year, sediment discharge for the seven daily stations ranged from 232 tons per year for Grass Valley Creek at Fawn Lodge, near Lewiston (drainage area, 30.8 square miles) to 35,000 tons per year for Redwood Creek at Orick (drainage area, 277 square miles). Annual sediment yield ranged from a minimum of 7.5 tons per square mile for Grass Valley Creek at Fawn Lodge, near Lewiston, to a maximum of 126 tons per square mile for Redwood Creek at Orick.

HYDRODYNAMIC DATA FOR SAN FRANCISCO BAY

The U.S. Geological Survey has collected and continues to collect hydrodynamic data for San Francisco Bay. The data include 15-minute interval time-series of salinity, specific conductance, temperature, velocity, and surface water, in addition to time-series of wind velocity, air temperature, and atmospheric pressure.

The data are stored in a data base that was designed specifically for the storage and retrieval of hydrodynamics data for San Francisco Bay. The data base contains time-series data collected by the U.S. Geological Survey, as well as those collected by other agencies. Only the data collected by the U.S. Geological Survey will be described here.

The data base resides on a workstation in the U.S. Geological Survey office in Sacramento, California. Data requests for U.S. Geological Survey collected data can be obtained by contacting the California District Public Information Officer.

Station No.	Station name	Period of record
	Surface-water data	
11181360	San Pablo Strait at Point San Pablo	June 1986 to current year
11182130	Carquinez Strait at Selby	October 1986 to current year
11182450	Carquinez Strait at Martinez	June 1986 to September 1988
11185185	Suisun Bay at Mallard Island	September 1986 to September 1987
11455470	Threemile Slough at Sacramento River	March 1979 to May 1985
	Specific conductance, salinity, temperature	
11182130	Carquinez Strait at Selby (two depths)	October 1986 to current year
	Meteorological data	
SUBAY1	Suisun Bay at channel marker #13	August 1988 to April 1990
SUBAY2	Suisun Bay at channel marker #27	July 1991 to current year
SPBAY	San Pablo Bay at channel marker #11	August 1988 to current year

Velocity data

The U.S. Geological Survey has collected velocity data at numerous locations throughout the bay using *in situ* current meters and acoustic Doppler current profilers. Most of these data have been published by the U.S. Geological Survey using report series other than the annual water resources data report series.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 56 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 drainage basins nationwide. The data provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 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. 5).

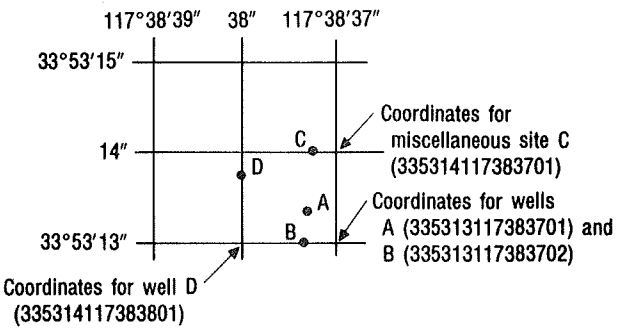


Figure 5. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and partial-record stations for which data are given in this report are shown, by county, in figures 6 through 22.

Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes 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, Chapter A6.

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.

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 record, 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

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; 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 gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. 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 can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be 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 in which the most recently revised figure was published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also 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.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations with at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

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

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

EXTREMES FOR CURRENT YEAR.--Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and 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 in published records is discovered, a revision is included in the first report published following discovery of the error.

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

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

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), 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 are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly, measured discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

The accuracy of streamflow records depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of 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 ft^3/s, to the nearest tenth between 1.0 and 10 ft^3/s, to whole numbers between 10 and 1,000 ft^3/s, and to three significant figures for more than 1,000 ft^3/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 22092, 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 California 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 California 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. 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 6 through 22.

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; Book 5, Chapters A1, A3, and A4. All these references are listed on p. 22 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the California 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 (1991) 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 (μg/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.

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

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

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 bedload sampler 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 Helley-Smith sampler is designed to collect a time-weighted sample 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 Helley-Smith sampler has not been completed, and a trap efficiency of 1.0 has been assumed applicable to this device. 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 in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

* Station Header File - Contains descriptive information on over 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.

* Daily Values File - Contains over 220 million daily values of streamflows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.

* Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.

* Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.

* Ground-Water Site Inventory Data Base - Contains inventory data for over 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.)

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3) and periphyton and benthic organisms in grams per square meter (g/m^2).

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:

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

From cell volume, total algal biomass expressed as biovolume ($\pi m^3/mL$) 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-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.

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 is 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 the National Geodetic Vertical Datum of 1929. 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 57 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 the activities of man.

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, $\mu g/g$) 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, $\mu g/L$) 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.

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) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

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

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

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

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

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

Parameter code is a five-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

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

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

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^{12} 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 [mg C/(m^2/time) for periphyton and macrophytes and mg C/(m^3/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 that 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 [mg O_2/(m^2/time) for periphyton and macrophytes and mg O_2/(m^3/time) for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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 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:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

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

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

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

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

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

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

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

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, 1991, is called the "1991 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, Books and Open-File Reports Section, Federal Center, Box 25425, Building 810, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey, Department of the Interior. 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. Scott 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 Warren 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, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. Determination of stream reaeration coefficients by use of tracers, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. Levels of streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 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 Richard L. Cooley and Richard L. Naff: USGS--TWRI: Book 3, Chapter B4. 1990. 232 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-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, edited by M.J. Fishman and L.C. Friedman: 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, edited by L.J. Britton and P.E. Greeson: 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.
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.

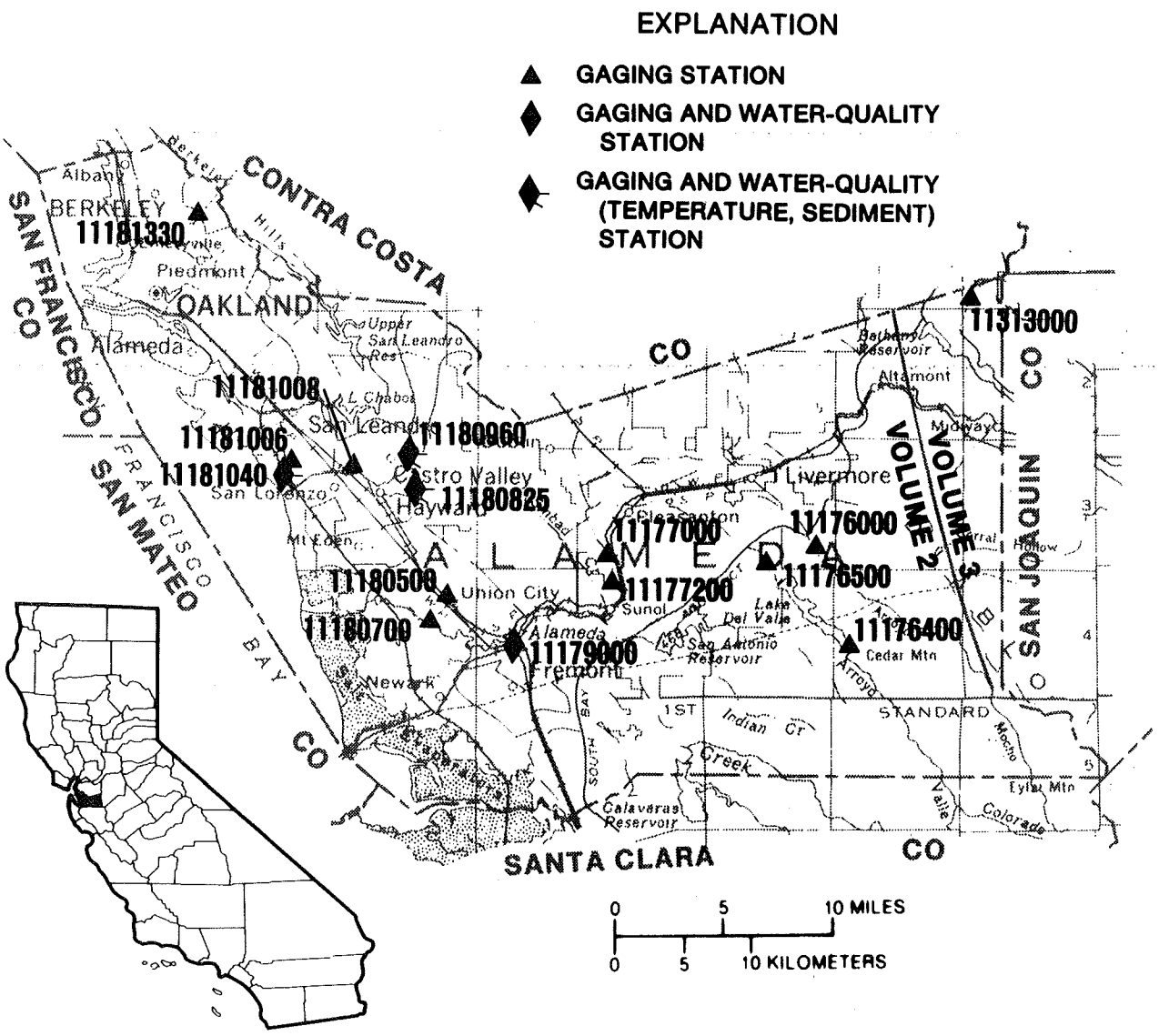


Figure 6. Location of discharge and water-quality stations in Alameda County.
(NOTE: Record for station 11313000 published in volume 3.)

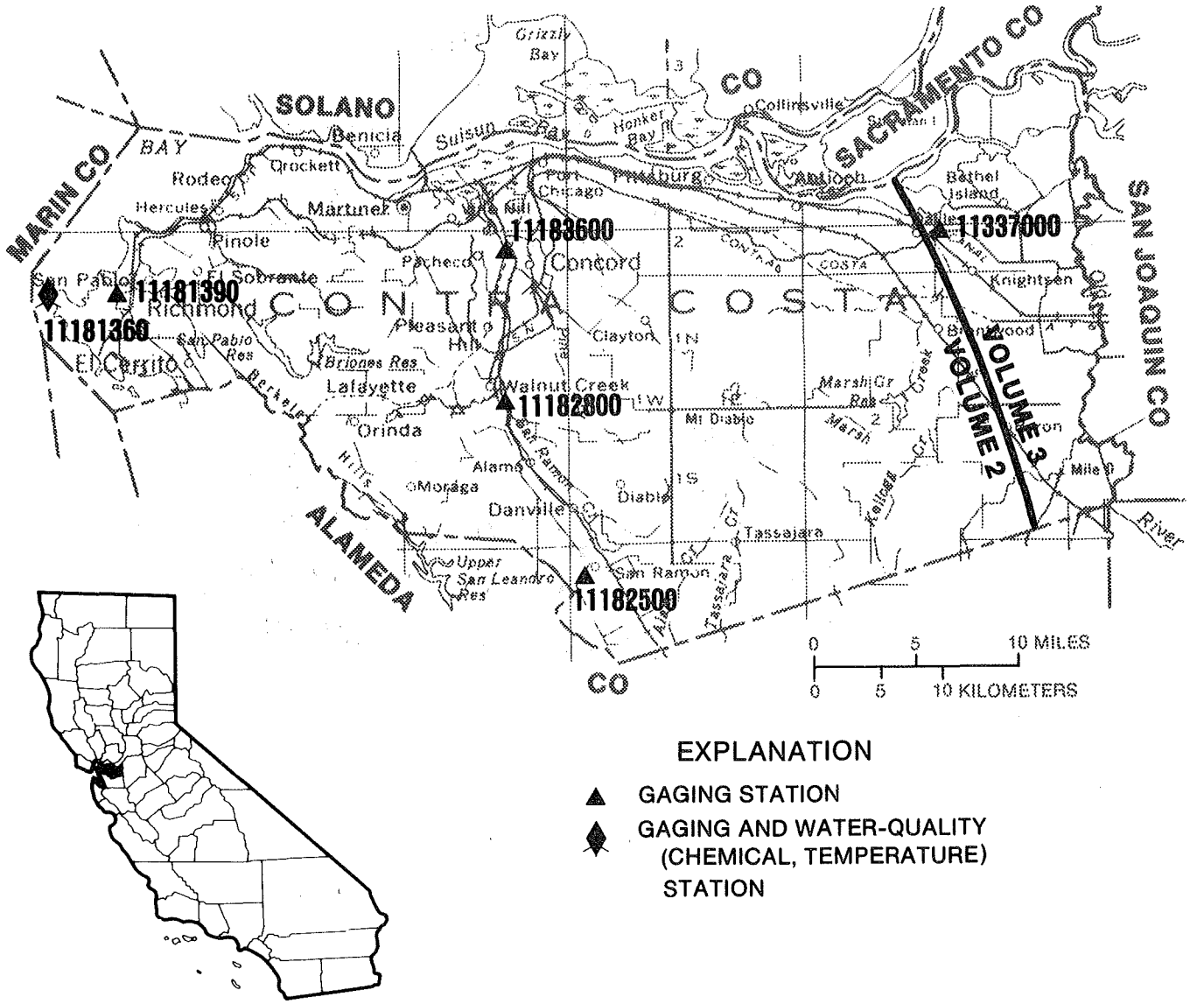


Figure 7. Location of discharge and water-quality stations in Contra Costa County. (NOTE: Record for station 11337000 published in volume 3.)

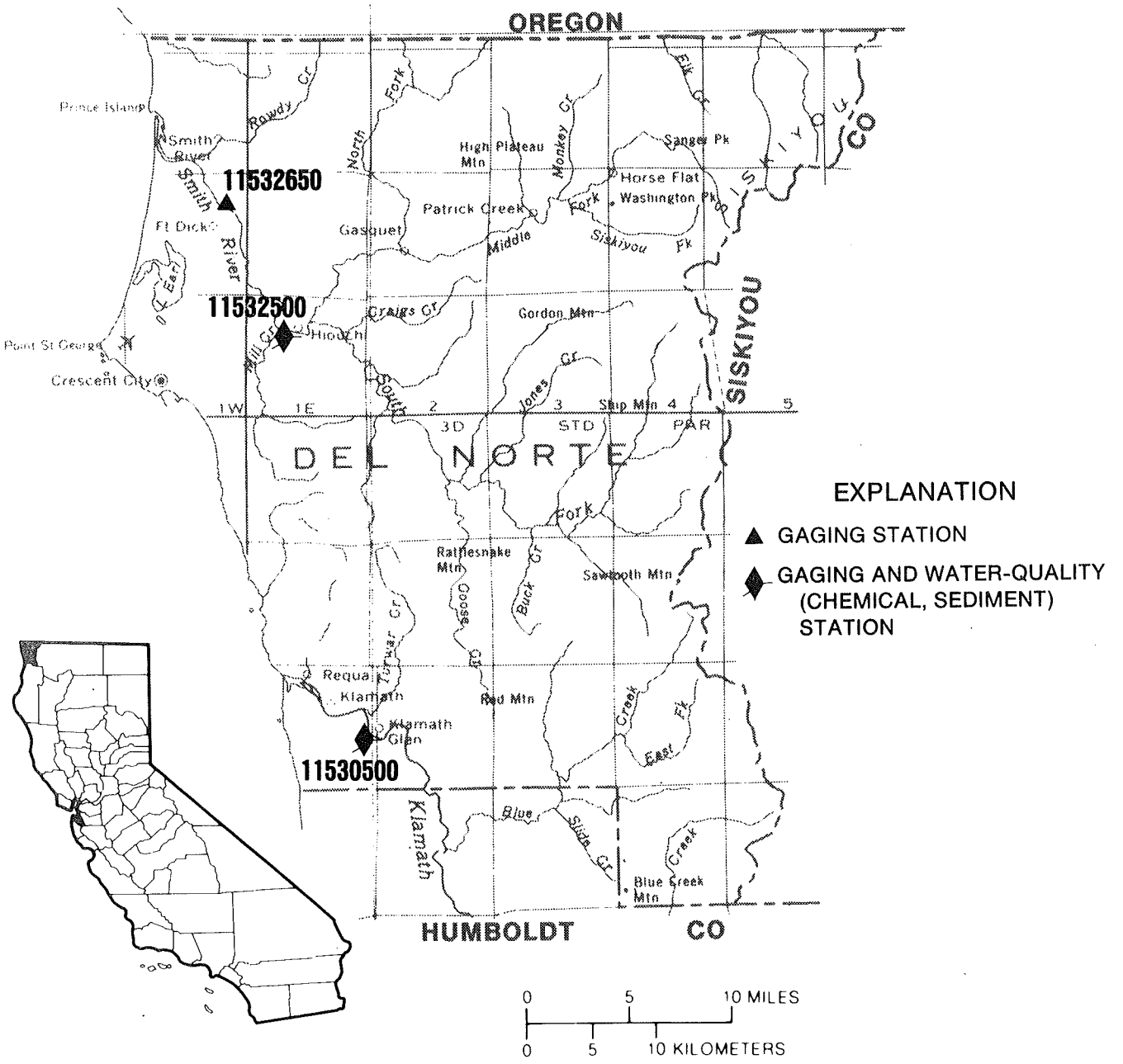


Figure 8. Location of discharge and water-quality stations in Del Norte County.

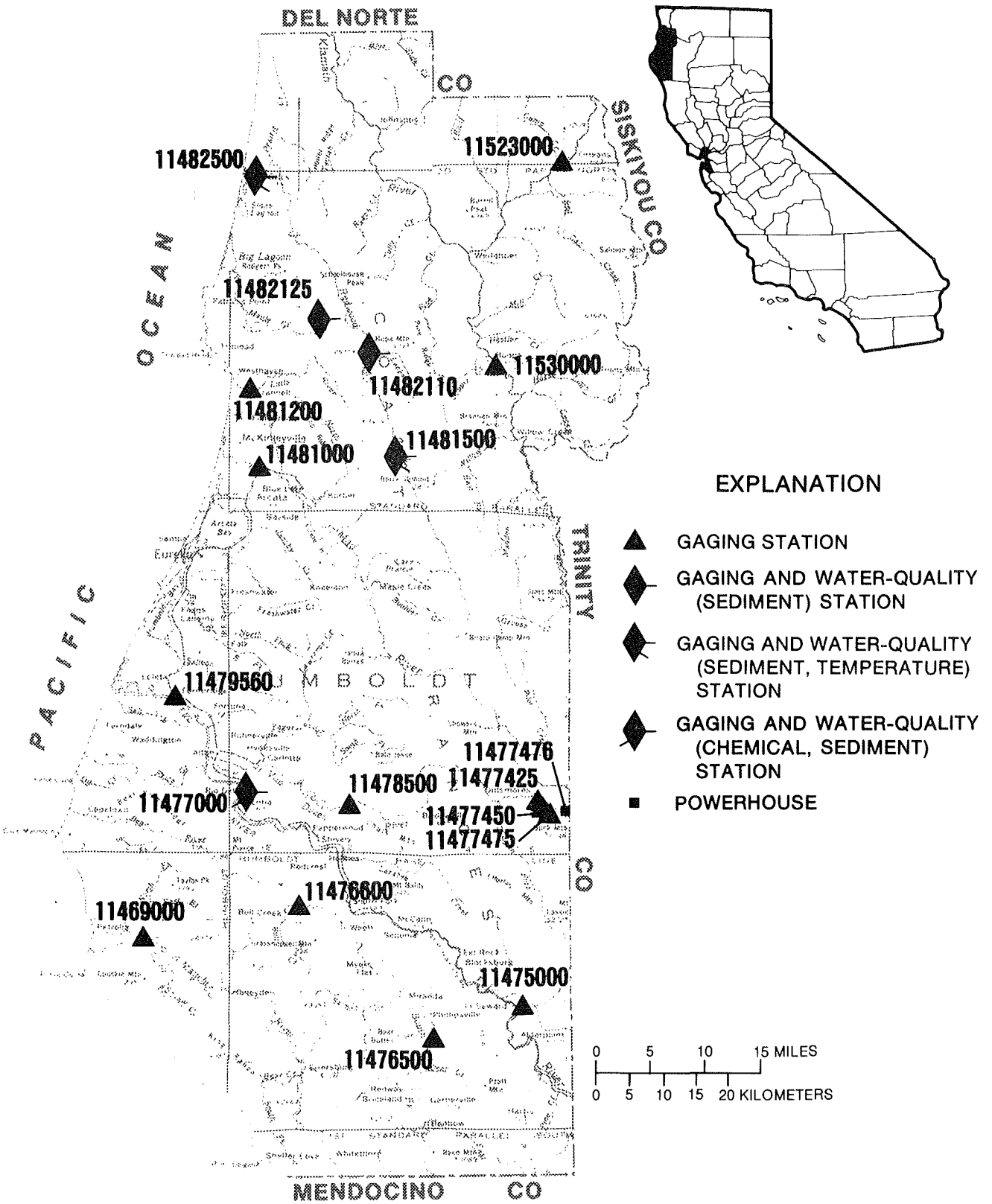


Figure 9. Location of discharge and water-quality stations in Humboldt County.

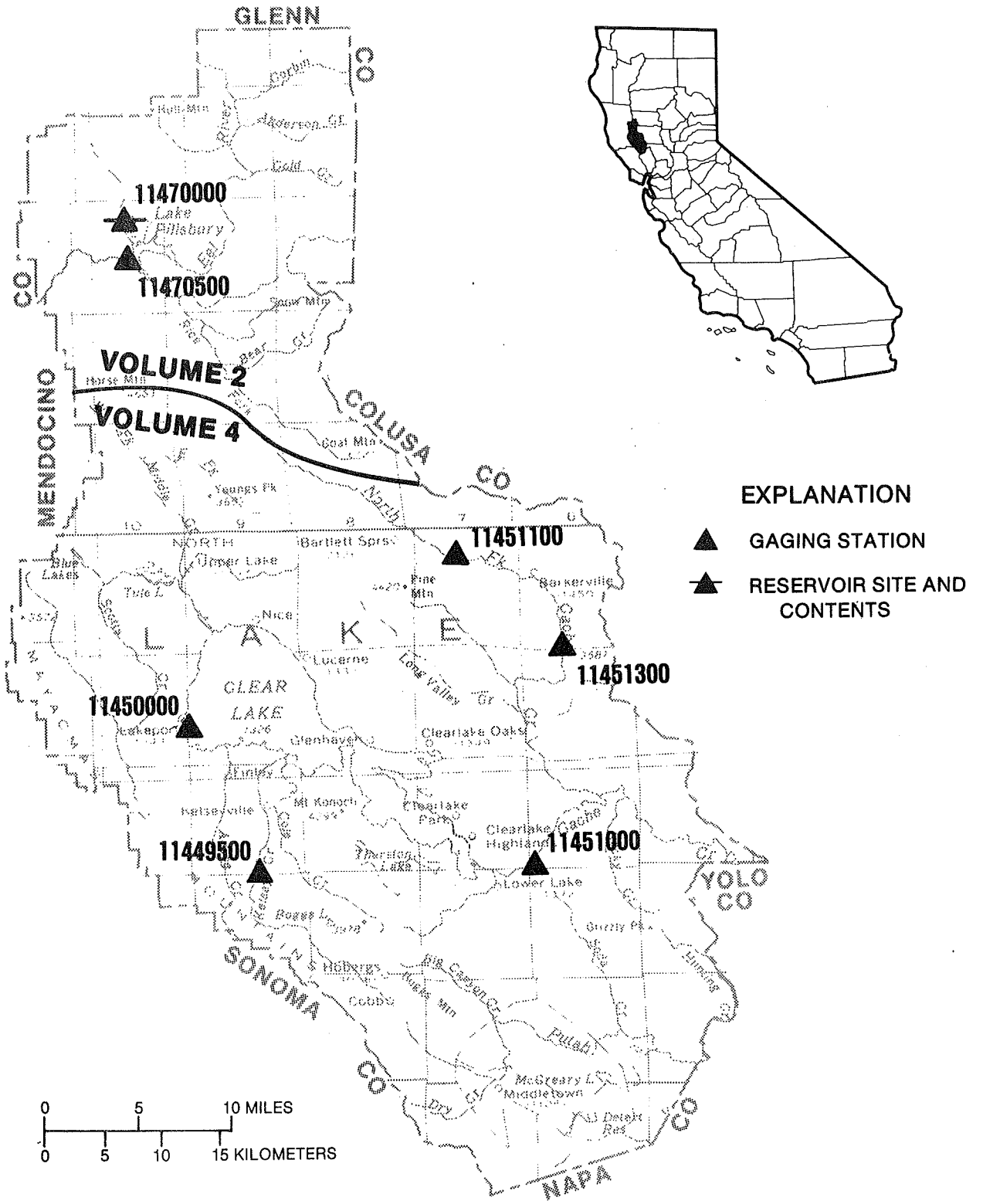


Figure 10. Location of discharge stations in Lake County. (NOTE: Records for stations 11449500 through 11451300 published in volume 4.)

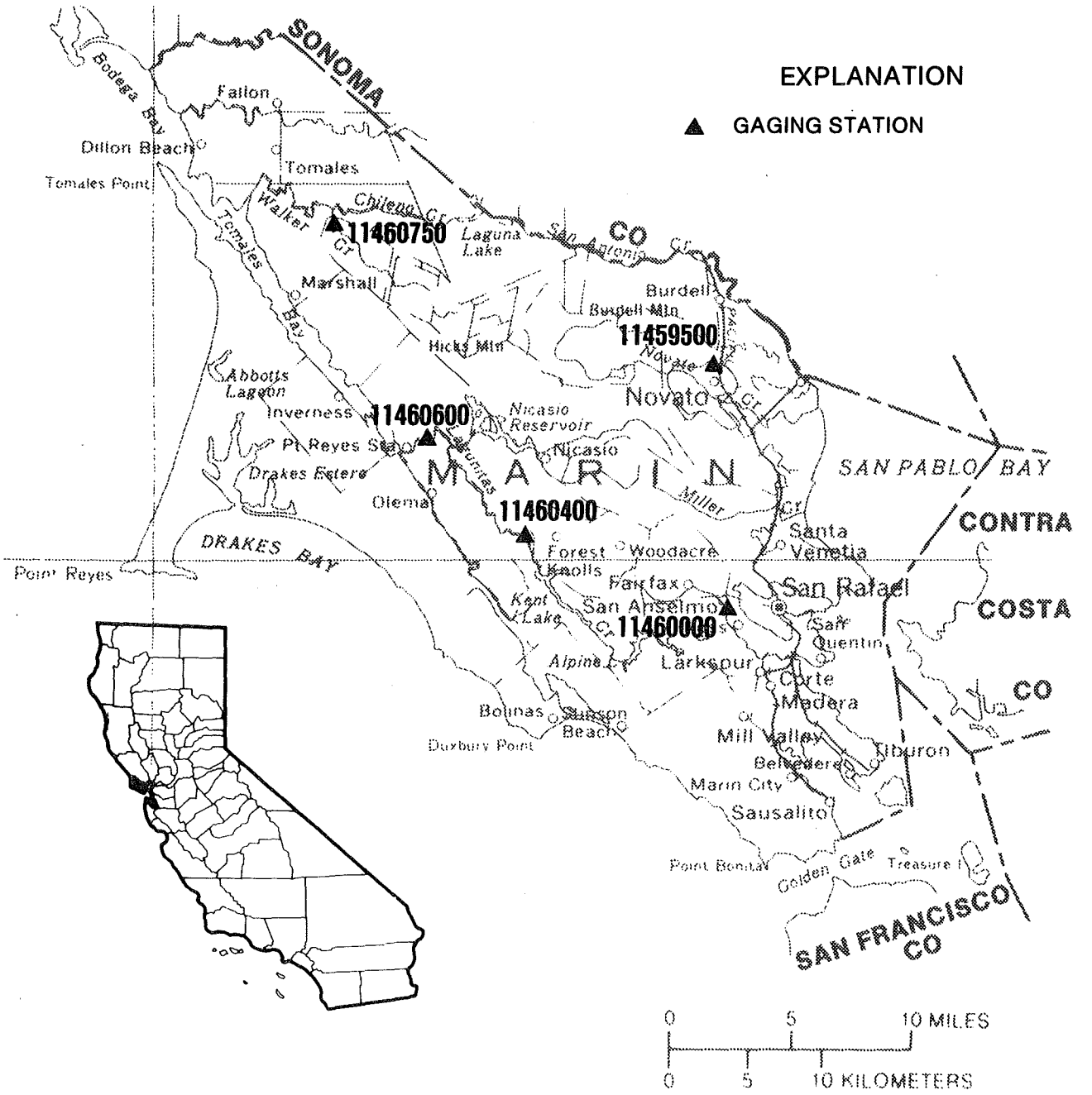


Figure 11. Location of discharge stations in Marin County.

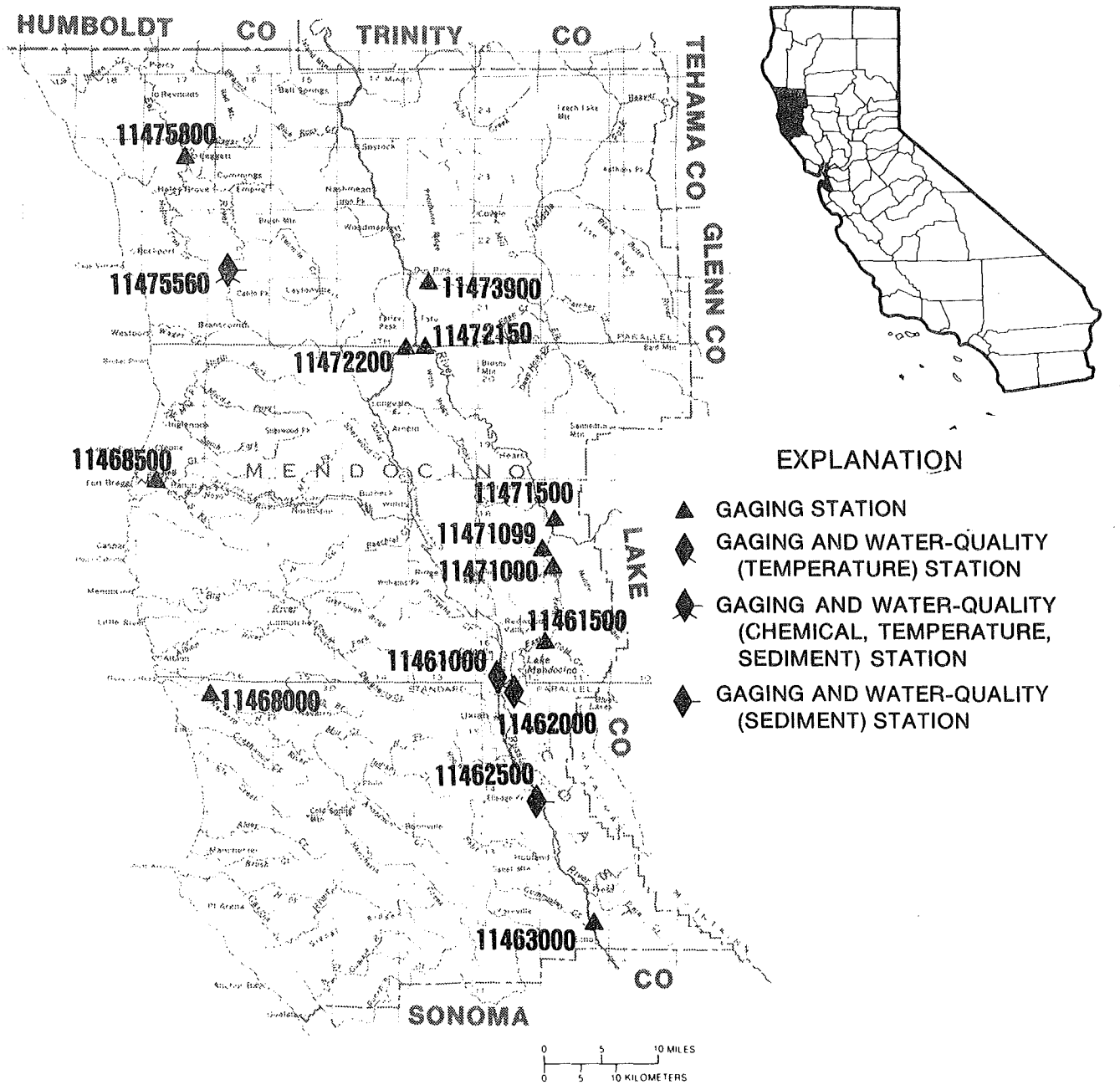


Figure 12. Location of discharge and water-quality stations in Mendocino County.

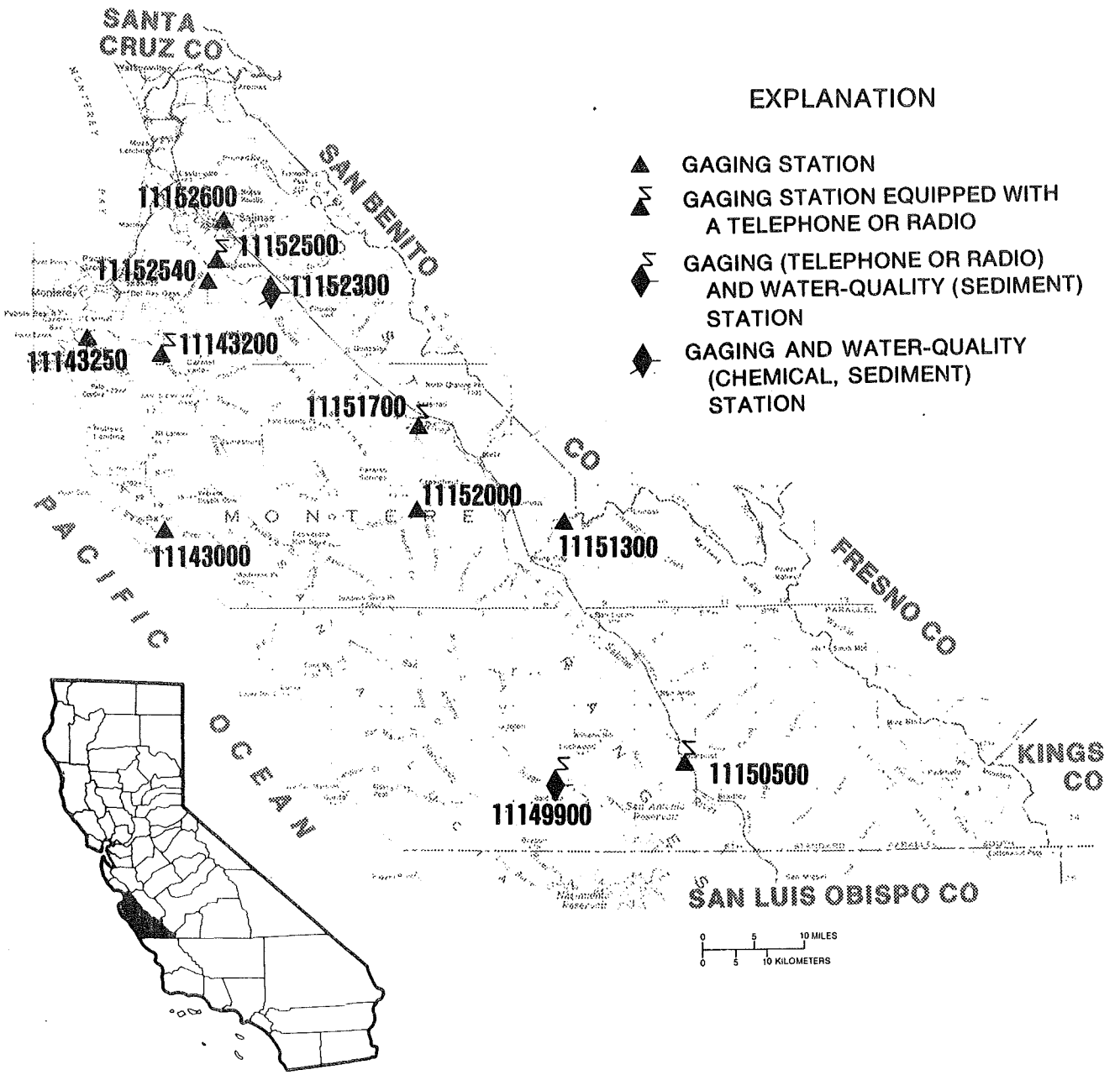


Figure 13. Location of discharge and water-quality stations in Monterey County.

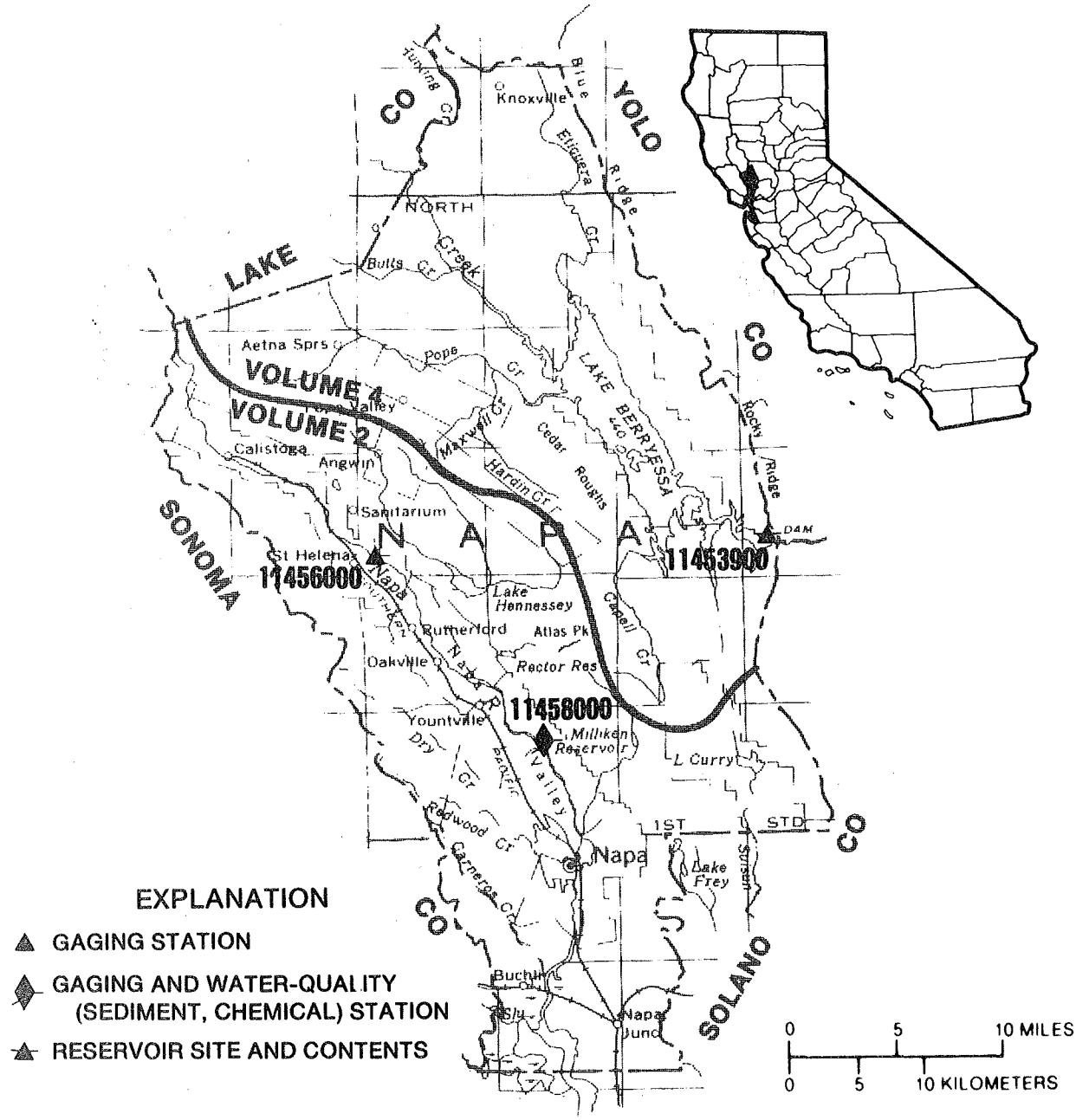


Figure 14. Location of discharge and water-quality stations in Napa County.
(NOTE: Record for station 11453900 published in volume 4.)

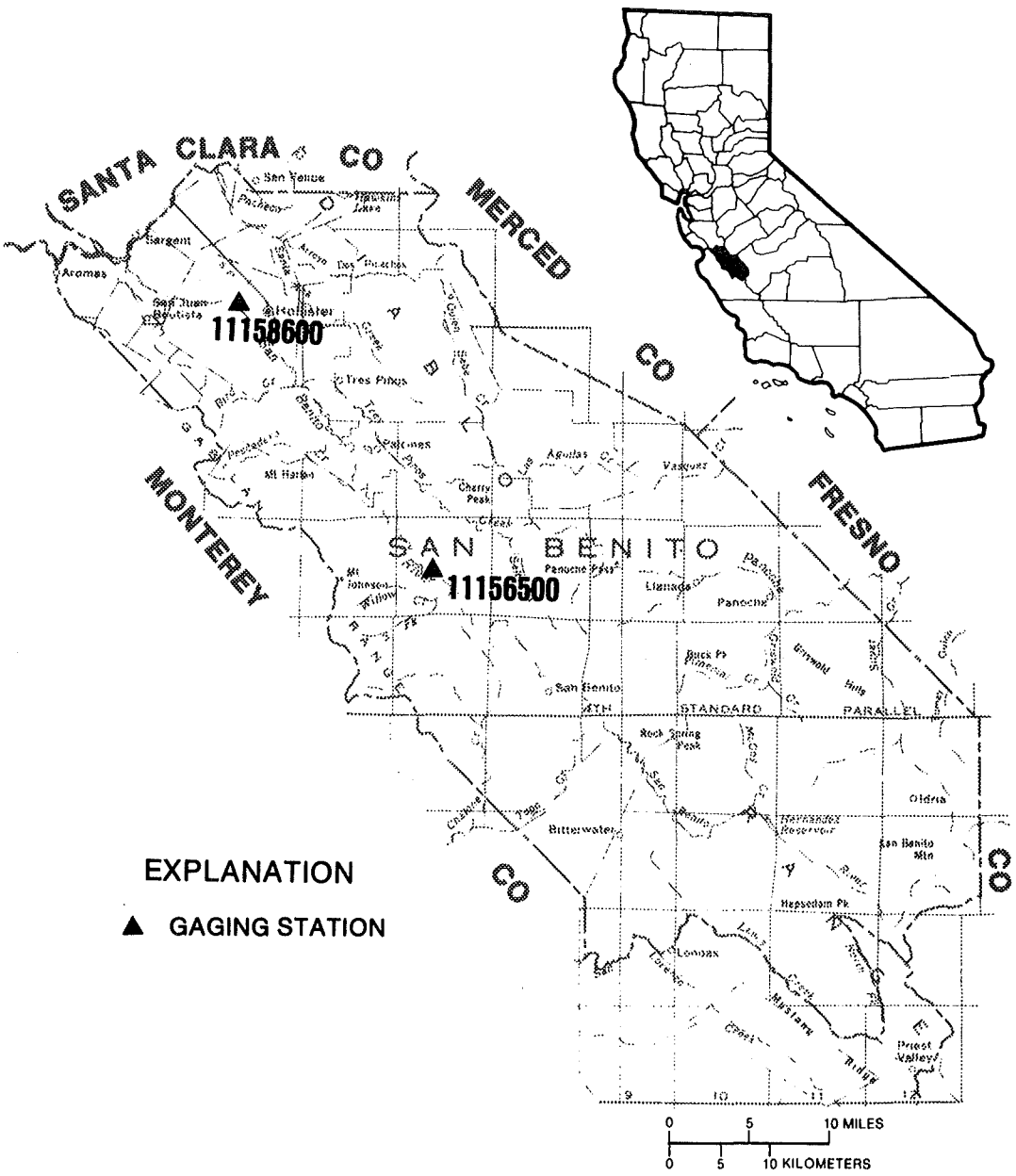


Figure 15. Location of discharge stations in San Benito County.

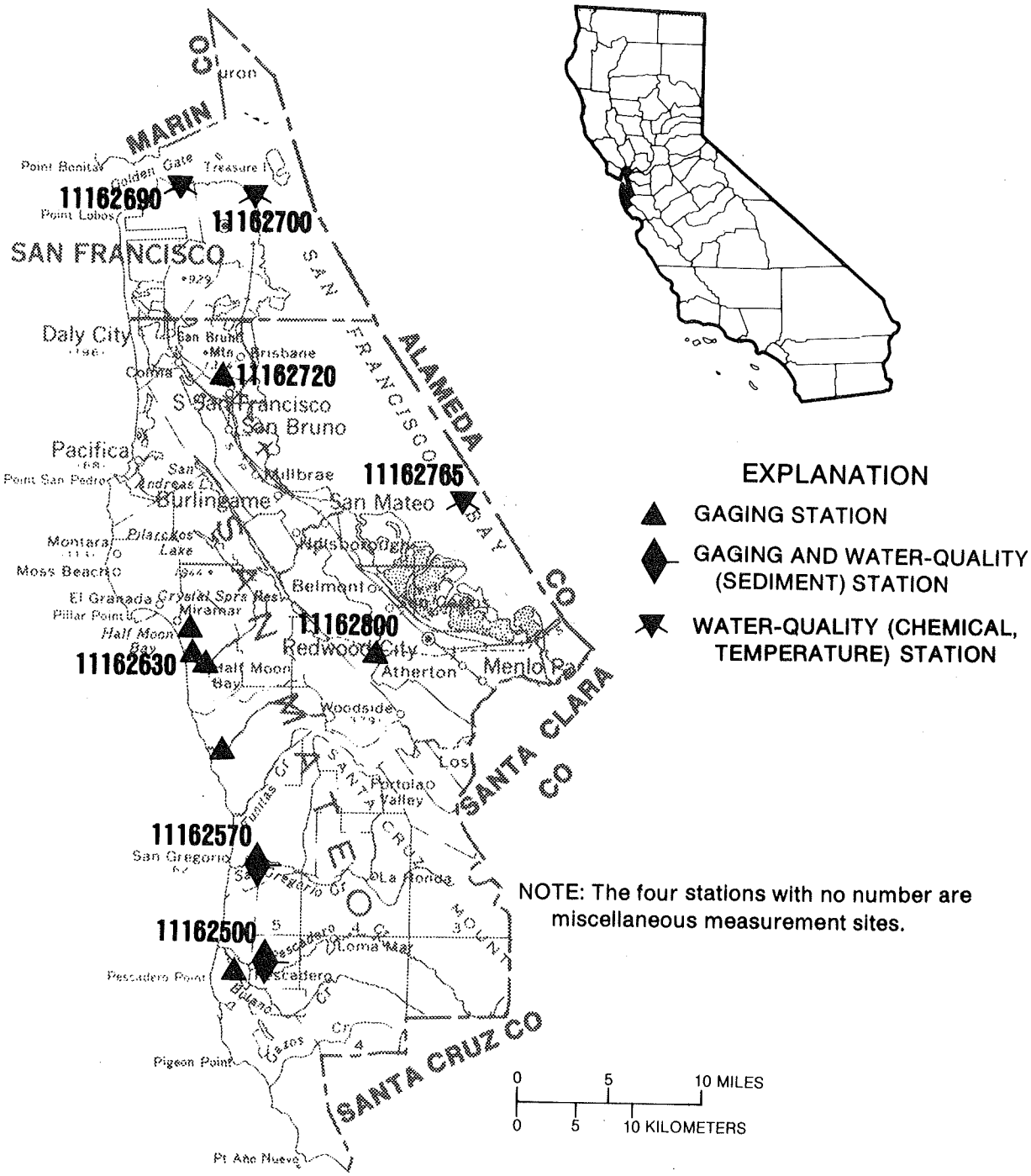
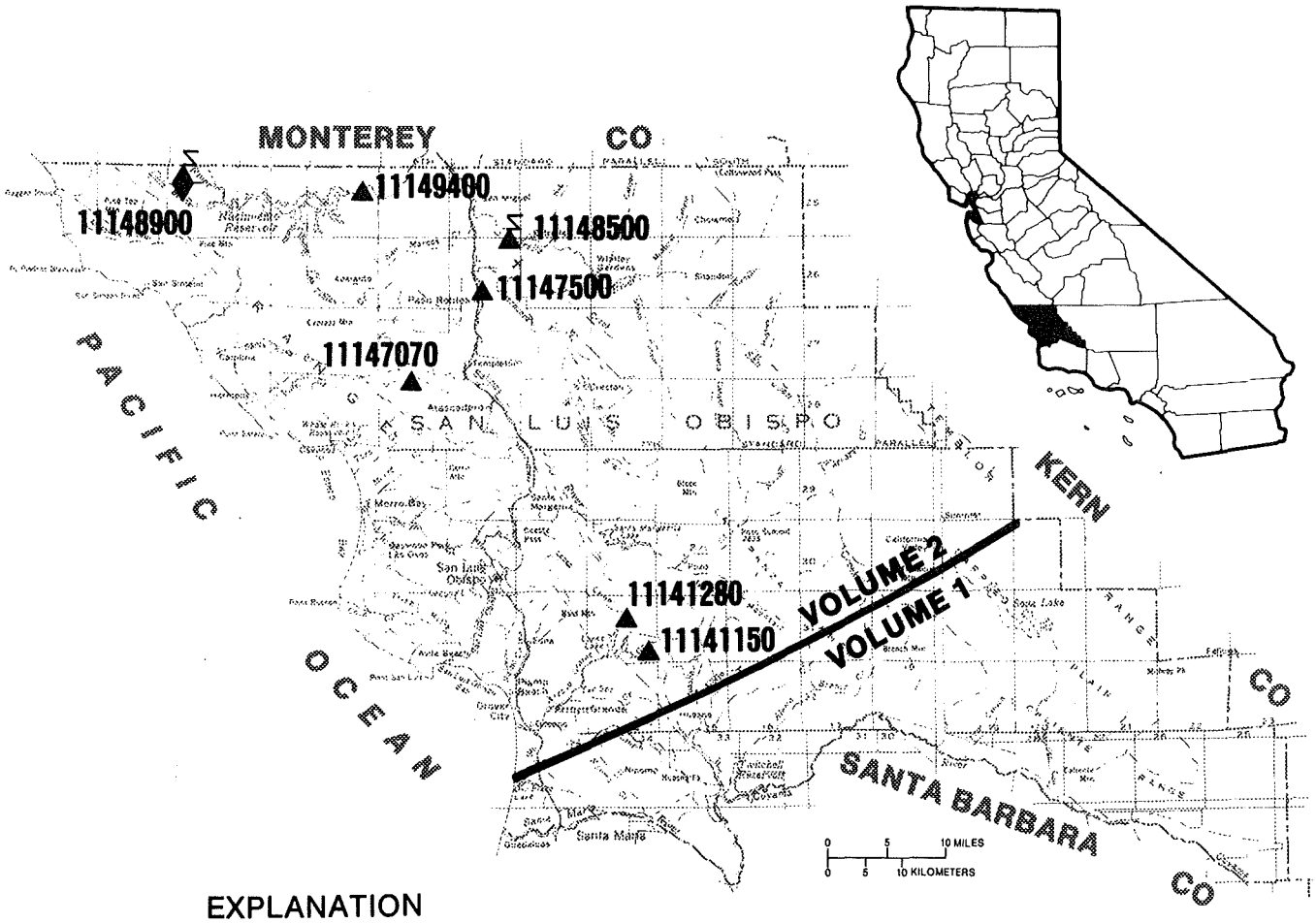


Figure 16. Location of discharge and water-quality stations in San Francisco and San Mateo Counties.



EXPLANATION

▲ GAGING STATION

GAGING STATION EQUIPPED WITH A TELEPHONE OR RADIO

GAGING (TELEPHONE OR RADIO) AND WATER-QUALITY (SEDIMENT) STATION

Figure 17. Location of discharge and water-quality stations in San Luis Obispo County.

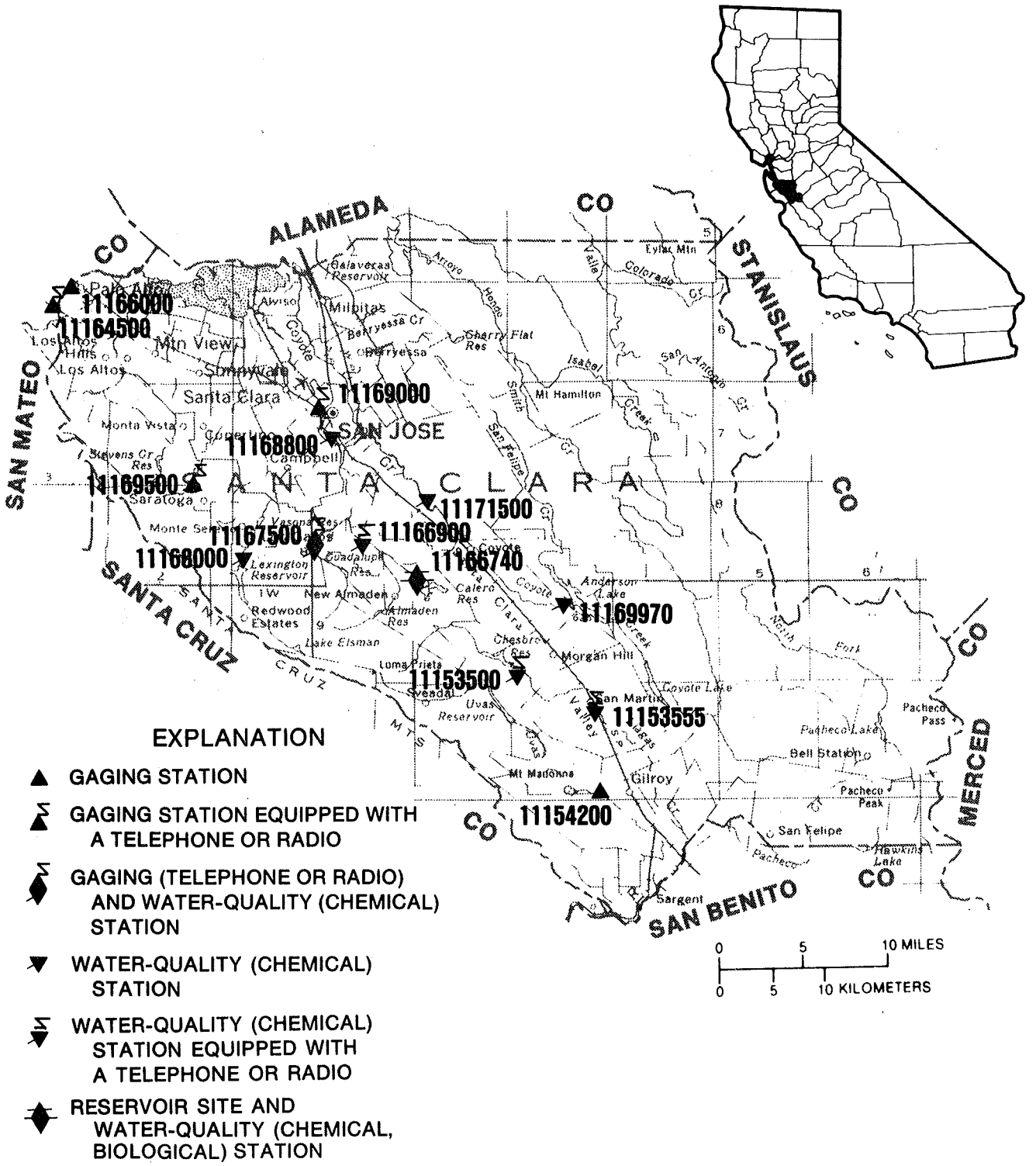


Figure 18. Location of discharge and water-quality stations in Santa Clara County.

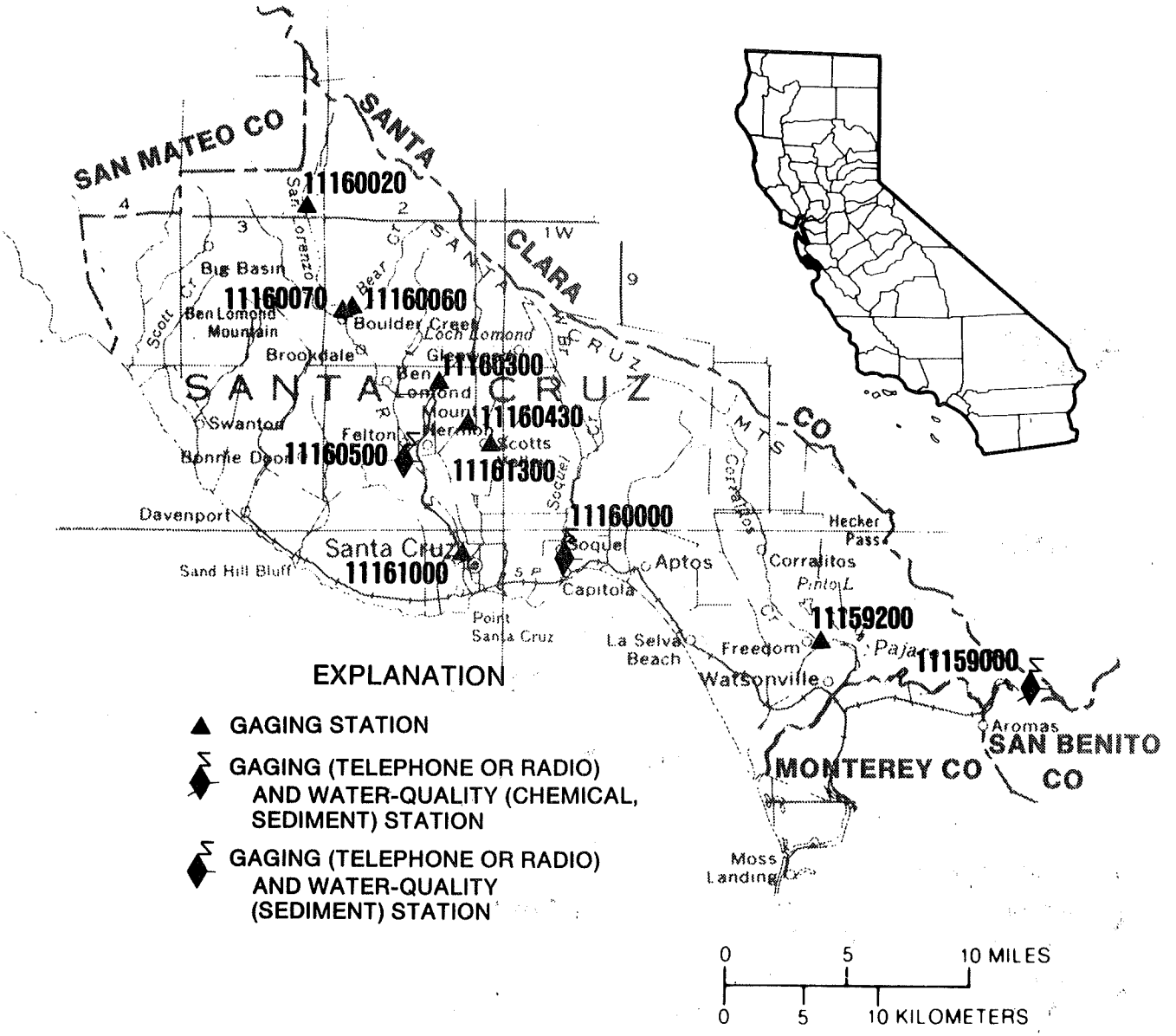


Figure 19. Location of discharge and water-quality stations in Santa Cruz County.

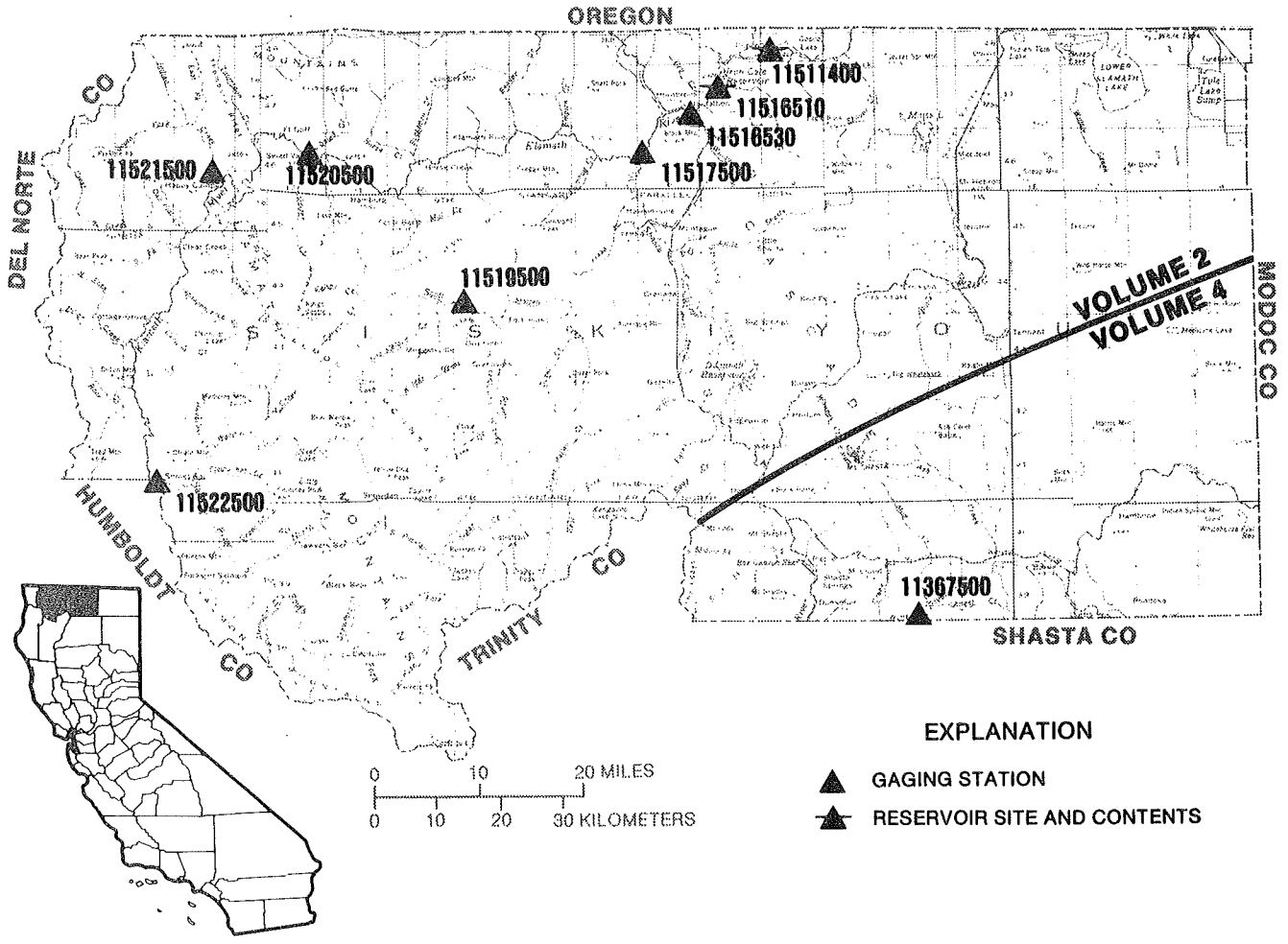


Figure 20. Location of discharge stations in Siskiyou County.
(NOTE: Records for station 11367500 published in volume 4.)

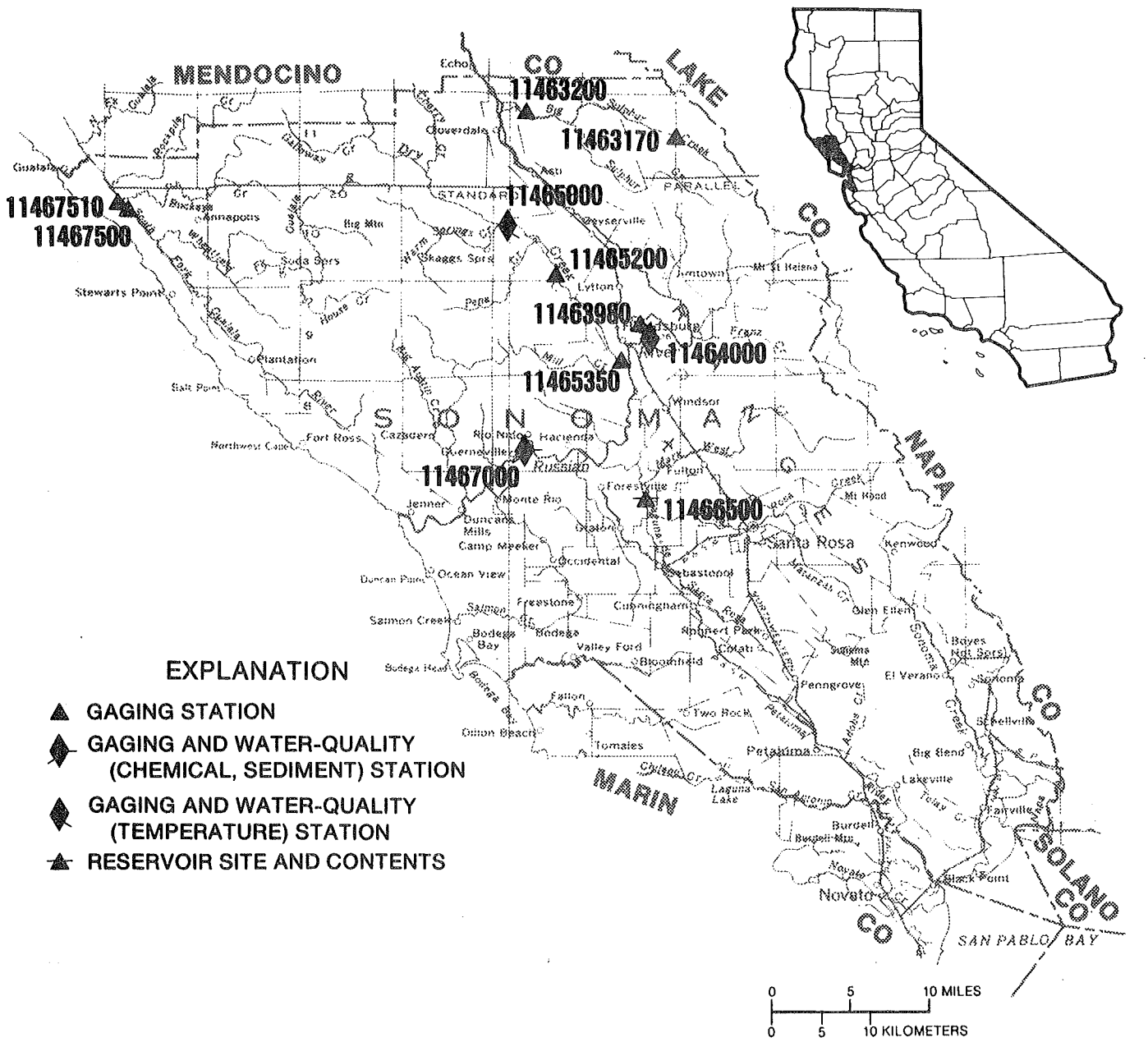


Figure 21. Location of discharge and water-quality stations in Sonoma County.

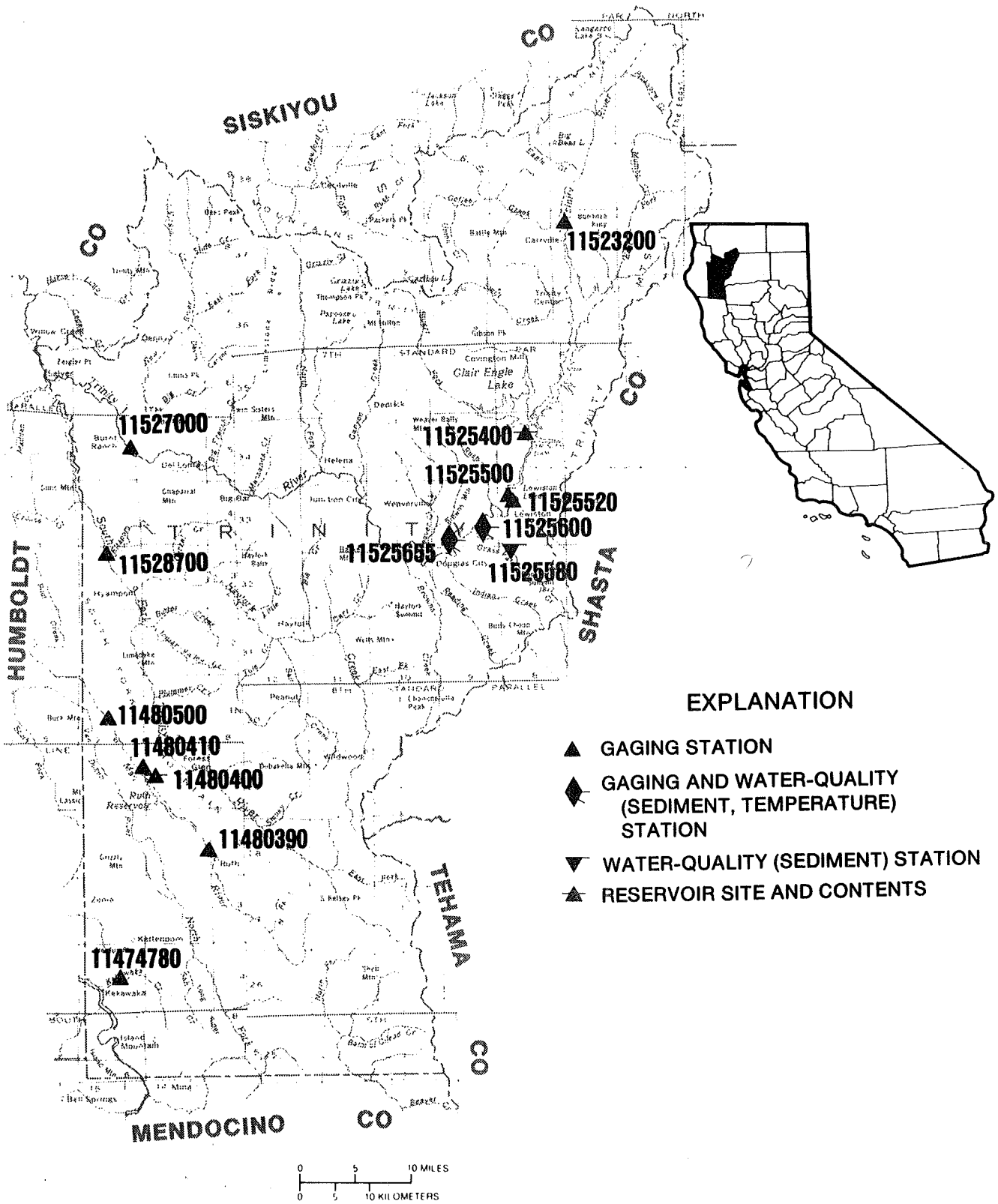


Figure 22. Location of discharge and water-quality stations in Trinity County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

PRINTED OUTPUT	REMARK
e	Estimated value
>	Actual value is greater than value shown
<	Actual value is less than value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
*	Instantaneous streamflow at the time of cross-sectional measurements
1	Laboratory value

ARROYO GRANDE BASIN

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°11'19", long 120°26'03", in Arroyo Grande Grant, San Luis Obispo County, Hydrologic Unit 18060006, on right bank 0.4 mi upstream from county road bridge, 0.45 mi upstream from Phoenix Creek, and 9.2 mi northeast of Arroyo Grande.
DRAINAGE AREA.--13.4 mi^2.

PERIOD OF RECORD.--June 1967 to current year.
CHEMICAL DATA: Water year 1977.
WATER TEMPERATURE: Water years 1968-73.
SEDIMENT DATA: Water years 1967-73, June 1990.

REVISED RECORDS.--WDR CA-70-2: Drainage area.
GAGE.--Water-stage recorder. Elevation of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 24, 1984, at site 0.4 mi downstream at different datum.

REMARKS.--Records fair except for Nov. 27 to Sept. 30, which are poor. No regulation or diversion upstream from station except for small stock ponds.
AVERAGE DISCHARGE.--24 years, 2.70 ft^3/s, 1,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft^3/s, Jan. 25, 1969, gage height, 6.83 ft, in gage well, 6.57 ft from floodmarks, site and datum then in use, from rating curve extended above 350 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 8.29 ft, Apr. 4, 1978, from floodmark, site and datum then in use; minimum daily discharge, 0.12 ft^3/s, Sept. 7, 1977.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1345	*18	*7.53				

Minimum daily, 0.29 ft^3/s, Oct. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.37	.38	.43	e.60	1.5	e1.2	e.77	e.83	e.48	e.35	e.36
2	.32	.37	.37	.45	e.61	1.2	e1.1	e.76	e.83	e.47	e.35	e.36
3	.32	.37	.38	.45	.61	1.5	e1.1	e.76	e.84	e.46	e.34	e.36
4	.31	.38	.39	.49	.62	3.4	e1.0	e.75	e.84	e.45	e.34	e.36
5	.32	.38	.40	.49	.63	1.5	e1.0	e.75	e.84	e.44	e.34	e.36
6	.32	.38	.40	.49	.63	e1.2	e1.0	e.75	e.84	e.43	e.34	e.36
7	.32	.38	.40	.48	.62	e1.1	e.99	e.75	e.84	e.42	e.34	e.36
8	.29	.38	.42	.47	.62	e.95	e.98	e.75	e.83	e.42	e.34	e.36
9	.29	.37	.42	.66	.62	e.88	e.96	e.75	e.82	e.41	e.34	e.36
10	.30	.37	.42	.63	.62	e.83	e.95	e.75	e.81	e.40	e.34	e.35
11	.30	.37	.42	.57	.62	e.81	e.94	e.75	e.80	e.40	e.34	e.35
12	.30	.37	.41	.55	.60	e.79	e.92	e.75	e.79	e.39	e.34	e.35
13	.31	.37	.41	.56	.61	e.76	e.91	e.75	e.78	e.39	e.34	e.35
14	.30	.39	.41	.56	.62	e.77	e.90	e.75	e.77	e.38	e.34	e.35
15	.31	.40	.44	.58	.61	e.81	e.88	e.75	e.76	e.38	e.34	e.34
16	.31	.41	.46	.52	.62	e.80	e.87	e.75	e.74	e.38	e.34	e.34
17	.33	.42	e.44	.50	e.62	e1.5	e.86	e.75	e.73	e.37	e.34	e.34
18	.34	.42	e.42	.48	e.62	7.4	e.85	e.75	e.71	e.37	e.34	e.34
19	.34	.43	e.41	.47	e.62	7.2	e.84	e.76	e.70	e.37	e.35	e.33
20	.32	.42	.44	.46	e.62	8.6	e1.1	e.76	e.69	e.37	e.35	e.33
21	.31	.43	.40	.47	e.63	4.6	e1.0	e.75	e.67	e.36	e.35	e.33
22	.31	.46	.41	.49	e.63	4.2	e.90	e.76	e.65	e.36	e.35	e.32
23	.31	.42	.42	.50	e.63	4.2	e.86	e.77	e.63	e.36	e.35	e.32
24	.30	.42	.42	e.52	e.62	4.9	e.83	e.78	e.61	e.36	e.35	e.32
25	.30	.48	.41	e.53	e.62	6.8	e.81	e.79	e.59	e.36	e.35	e.31
26	.31	.44	.41	e.54	e.62	6.2	e.79	e.80	e.57	e.35	e.36	e.31
27	.32	.40	.41	e.55	e.80	2.2	e.78	e.81	e.54	e.35	e.36	e.31
28	.32	.38	.41	e.56	1.7	e1.8	e.78	e.81	e.53	e.35	e.36	e.31
29	.34	.38	.41	e.57	---	e1.5	e.77	e.82	e.51	e.35	e.36	e.30
30	.35	.38	.42	e.58	---	e1.4	e.77	e.83	e.50	e.35	e.36	e.30
31	.37	---	.43	e.59	---	e1.3	---	e.83	---	e.35	e.36	---
TOTAL	9.79	11.94	12.79	16.19	18.59	82.60	27.64	23.81	21.59	12.08	10.75	10.14
MEAN	.32	.40	.41	.52	.66	2.66	.92	.77	.72	.39	.35	.34
MAX	.37	.48	.46	.66	1.7	8.6	1.2	.83	.84	.48	.36	.36
MIN	.29	.37	.37	.43	.60	.76	.77	.75	.50	.35	.34	.30
AC-FT	19	24	25	32	37	164	55	47	43	24	21	20

CAL YR 1990 TOTAL 167.06 MEAN .46 MAX 2.2 MIN .15 AC-FT 331
WTR YR 1991 TOTAL 257.91 MEAN .71 MAX 8.6 MIN .29 AC-FT 512

e Estimated.

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 mi^2.

PERIOD OF RECORD.--July 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 31, 1984, at site 0.4 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Small diversions upstream from station for domestic use.

AVERAGE DISCHARGE.--24 years, 10.1 ft^3/s, 7,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft^3/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 ft^3/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 ft^3/s, Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1745	129	5.34	Mar. 26	1515	194	5.69
Mar. 18	2100	*332	*6.30				

Minimum daily, 0.77 ft^3/s, Aug. 29, Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.3	1.4	1.7	2.0	6.2	15	3.1	2.2	1.5	1.1	.77
2	1.1	1.4	1.4	1.7	2.0	4.0	13	3.2	2.2	1.4	1.0	.78
3	1.1	1.4	1.4	1.7	2.0	3.5	9.5	3.0	2.2	1.4	1.0	.85
4	1.0	1.3	1.4	1.9	2.0	32	8.4	2.9	2.2	1.4	1.0	.88
5	1.1	1.3	1.4	1.9	1.8	11	6.7	2.8	2.2	1.4	1.0	.92
6	1.1	1.3	1.4	1.9	1.8	5.0	5.0	2.7	2.2	1.4	1.1	.93
7	1.0	1.3	1.5	1.8	1.7	4.0	4.0	2.8	2.3	1.4	1.1	1.0
8	.99	1.3	1.5	1.8	1.7	3.6	3.7	2.6	2.2	1.4	1.1	.97
9	1.0	1.3	1.5	2.3	1.7	3.4	3.6	2.6	2.2	1.3	1.1	.96
10	1.0	1.3	1.5	2.4	1.7	3.3	3.4	2.5	2.0	1.4	1.1	.97
11	1.0	1.3	1.5	2.2	1.7	3.4	3.4	2.5	2.1	1.3	1.1	.92
12	1.0	1.3	1.5	2.2	1.7	3.2	3.3	2.5	2.0	1.3	1.2	.88
13	1.0	1.3	1.5	2.0	1.8	3.7	3.3	2.5	2.0	1.3	1.1	.88
14	1.1	1.4	1.5	2.0	1.8	3.4	e3.2	2.5	1.9	1.3	1.2	.90
15	1.1	1.4	1.6	2.0	1.8	3.2	e3.2	2.4	2.0	1.3	1.2	.90
16	1.1	1.4	1.5	2.0	1.8	3.1	e3.1	2.2	1.9	1.3	1.0	.94
17	1.1	1.4	1.5	2.0	1.9	7.4	e3.1	2.2	1.7	1.3	1.1	1.0
18	1.1	1.4	1.5	2.0	2.0	82	e3.1	2.3	1.6	1.3	1.1	1.0
19	1.1	1.4	1.7	1.9	1.9	88	e3.0	2.2	1.6	1.3	1.1	1.0
20	1.1	1.4	1.8	1.9	2.0	94	e5.8	2.2	1.5	1.3	1.1	1.0
21	1.1	1.4	1.7	1.9	2.0	26	e5.4	2.3	1.5	1.3	1.1	1.0
22	1.1	1.4	1.6	2.1	2.1	26	e4.4	2.2	1.5	1.2	1.0	.97
23	1.1	1.4	1.6	2.1	2.1	17	e3.9	2.0	1.5	1.2	.98	.91
24	1.1	1.4	1.7	2.1	2.1	20	3.5	2.0	1.5	1.2	.93	.89
25	1.1	1.5	1.8	2.1	2.1	60	3.4	2.0	1.5	1.2	.98	.89
26	1.2	1.5	1.8	2.1	2.0	87	3.5	2.0	1.5	1.2	.98	.98
27	1.1	1.4	1.8	2.1	2.8	56	3.4	2.1	1.5	1.2	.87	.97
28	1.2	1.4	1.8	2.1	4.1	44	3.3	2.1	1.8	1.1	.86	.98
29	1.2	1.4	1.8	2.0	---	33	3.3	2.3	1.7	1.1	.77	.89
30	1.2	1.4	1.7	2.0	---	25	3.1	2.3	1.5	1.1	.83	.98
31	1.3	---	1.7	2.0	---	18	---	2.2	---	1.1	.79	---
TOTAL	33.89	41.1	49.0	61.9	56.1	779.4	144.0	75.2	55.7	39.9	31.89	27.91
MEAN	1.09	1.37	1.58	2.00	2.00	25.1	4.80	2.43	1.86	1.29	1.03	.93
MAX	1.3	1.5	1.8	2.4	4.1	94	15	3.2	2.3	1.5	1.2	1.0
MIN	.99	1.3	1.4	1.7	1.7	3.1	3.0	2.0	1.5	1.1	.77	.77
AC-FT	67	82	97	123	111	1550	286	149	110	79	63	55

CAL YR 1990 TOTAL 644.82 MEAN 1.77 MAX 8.1 MIN .75 AC-FT 1280
WTR YR 1991 TOTAL 1395.99 MEAN 3.82 MAX 94 MIN .77 AC-FT 2770

e Estimated.

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 mi^2.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1951, nonrecording gage at site 0.9 mi downstream at different datum.

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

AVERAGE DISCHARGE.--41 years, 96.8 ft^3/s, 70,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s, Jan. 5, 1978, gage height, 14.30 ft, from rating curve extended above 6,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 2.6 ft^3/s, Aug. 23, 1977, Sept. 9, 1990, Oct. 29, Nov. 5, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1400	*2,370	*7.96				

Minimum daily, 2.6 ft^3/s, Oct. 29, Nov. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.6	3.7	6.2	6.3	7.1	135	210	40	20	e14	e8.7	e6.8
2	e8.2	3.3	5.8	6.3	52	62	180	41	20	e14	e8.6	e6.7
3	e7.8	3.2	5.8	7.2	32	361	157	40	19	e13	e8.5	e6.7
4	e7.4	2.9	5.8	8.1	18	1250	139	39	18	e13	e8.4	e6.6
5	e7.1	2.6	5.9	7.5	18	413	126	38	18	e13	e8.3	e6.6
6	e6.8	3.0	6.3	7.1	15	169	116	36	18	e12	e8.2	e6.5
7	e6.5	3.1	6.3	7.1	13	96	106	35	17	e12	e8.2	e6.5
8	e6.2	3.0	6.3	7.6	12	66	96	34	16	e12	e8.1	e6.4
9	e5.9	2.8	6.3	18	11	49	88	33	16	e12	e8.0	e6.4
10	e5.7	2.8	6.3	15	11	49	82	32	15	e11	e8.0	e6.3
11	e5.5	3.7	7.7	11	10	50	76	32	e15	e11	e7.9	e6.3
12	e5.3	6.3	7.7	9.4	9.6	39	72	31	e15	e11	e7.8	e6.2
13	e5.1	5.5	7.1	8.8	9.3	179	68	31	e15	e11	e7.8	e6.2
14	4.8	5.0	7.1	8.0	9.0	119	64	30	e15	e11	e7.7	e6.2
15	4.6	4.8	23	7.9	8.1	98	59	29	e15	e11	e7.7	e6.1
16	4.7	5.2	16	7.2	8.1	79	57	29	e15	e10	e7.6	e6.1
17	4.7	4.9	8.4	7.1	8.0	267	55	28	e15	e10	e7.6	e6.1
18	4.5	4.9	6.5	7.4	7.9	299	52	29	e14	e10	e7.5	e6.0
19	4.5	4.7	8.3	8.1	7.6	229	50	28	e14	e10	e7.5	e6.0
20	4.3	5.3	10	8.0	7.6	501	89	28	e14	e10	e7.4	e6.0
21	4.1	5.7	7.2	7.4	7.6	351	68	27	e14	e9.8	e7.4	e5.9
22	4.0	6.6	6.7	7.2	7.6	265	58	26	e14	e9.6	e7.3	e5.9
23	4.0	6.5	6.4	7.2	7.6	207	53	25	e14	e9.5	e7.2	e5.9
24	4.0	5.4	6.3	7.3	7.5	736	51	23	e14	e9.4	e7.2	e5.8
25	3.8	6.8	6.3	8.1	7.5	934	49	22	e14	e9.3	e7.1	e5.8
26	3.8	9.9	6.3	8.1	7.2	708	48	22	e14	e9.2	e7.1	e5.8
27	3.7	7.4	6.3	8.1	33	559	45	22	e14	e9.1	e7.0	e5.7
28	3.1	6.8	6.4	8.1	120	429	43	22	e19	e9.0	e7.0	e5.7
29	2.6	7.0	6.0	7.6	---	343	43	21	e17	e9.0	e6.9	e5.7
30	2.8	6.4	6.2	7.2	---	280	41	21	e15	e8.9	e6.9	e5.6
31	3.3	---	6.3	7.1	---	235	---	21	---	e8.8	e6.8	---
TOTAL	157.4	149.2	233.2	256.5	472.3	9557	2441	915	473	332.6	237.4	184.5
MEAN	5.08	4.97	7.52	8.27	16.9	308	81.4	29.5	15.8	10.7	7.66	6.15
MAX	8.6	9.9	23	18	120	1250	210	41	20	14	8.7	6.8
MIN	2.6	2.6	5.8	6.3	7.1	39	41	21	14	8.8	6.8	5.6
AC-FT	312	296	463	509	937	18960	4840	1810	938	660	471	366

CAL YR 1990 TOTAL 5784.7 MEAN 15.8 MAX 335 MIN 2.6 AC-FT 11470
WTR YR 1991 TOTAL 15409.1 MEAN 42.2 MAX 1250 MIN 2.6 AC-FT 30560

e Estimated.

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 right bank 10 ft downstream from county road bridge at Robles Del Rio, 0.2 mi downstream from Hitchcock Canyon, and 11 mi southeast of town of Carmel.
DRAINAGE AREA.--193 mi^2.
PERIOD OF RECORD.--August 1957 to current year.
REVISED RECORDS.--WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 1981, at site 150 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Low flow regulated by Los Padres Reservoir 11 mi upstream, usable capacity, 2,180 acre-ft, and San Clemente Reservoir 4 mi upstream, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 2,220 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--34 years, 85.7 ft^3/s, 62,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,380 ft^3/s, Feb. 28, 1983, gage height, 11.49 ft, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 9.97 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 ft^3/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	2100	*2,730	*8.54				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.9	.21	.27	.13	1.0	202	16	16	7.0	1.9	2.4
2	1.9	2.8	.19	.38	.45	.92	179	13	16	6.5	1.8	2.4
3	1.9	2.7	.18	.38	.30	2.1	159	12	14	5.4	1.8	2.3
4	1.9	2.5	.17	.40	.22	90	142	10	13	3.9	1.9	2.3
5	1.9	2.4	.14	.35	.48	357	129	8.5	13	3.7	1.9	2.3
6	1.8	2.2	.08	.30	.28	164	116	9.1	11	3.4	1.9	2.3
7	1.8	2.1	.00	.26	.26	99	e108	12	12	3.3	1.8	2.3
8	1.8	2.1	.00	.22	.26	71	e99	12	12	3.2	1.8	2.3
9	1.8	2.0	.00	.25	.25	53	91	13	14	3.2	1.9	2.3
10	1.7	1.6	.00	.22	.25	47	e82	21	12	3.1	2.2	2.3
11	1.8	1.3	.00	.18	.25	58	e76	21	9.8	3.0	2.3	2.3
12	1.8	1.2	.00	.15	.24	44	e71	19	8.8	2.9	2.4	2.5
13	1.9	1.1	.00	.15	.25	101	e65	14	7.3	2.9	2.4	2.4
14	2.1	1.3	.02	.16	.25	131	e61	18	6.2	2.9	2.4	2.8
15	2.2	1.4	.29	.17	.25	128	59	21	5.8	2.9	2.4	2.8
16	2.0	1.3	.16	.17	.34	116	57	22	5.3	2.9	2.5	2.7
17	2.0	1.4	.03	.17	.42	269	e54	21	5.3	2.8	2.3	2.7
18	2.2	1.4	.00	.19	.46	338	51	19	5.4	2.8	2.5	2.5
19	2.3	1.5	.15	.20	.51	238	48	18	5.9	2.7	2.6	2.7
20	2.4	1.0	.40	.20	.52	380	54	18	6.8	2.7	2.6	2.7
21	2.3	.52	.21	.20	.52	479	51	18	5.9	2.7	2.6	2.7
22	2.3	.43	.24	.21	.52	354	50	18	5.4	2.8	2.6	2.7
23	2.1	.30	.03	1.7	.45	262	47	18	4.8	2.6	2.6	2.6
24	2.0	.21	.00	.26	.50	959	38	18	4.6	2.6	2.6	2.6
25	2.2	.33	.00	.18	.57	1440	34	18	5.2	2.4	2.7	2.5
26	2.3	.31	.00	.14	.55	843	29	18	6.1	2.4	2.6	2.7
27	2.5	.33	.14	.14	.75	556	27	18	6.0	2.3	2.4	2.9
28	2.6	.27	.21	.13	1.3	393	25	16	4.9	2.3	2.1	2.8
29	2.8	.26	.21	.13	---	305	22	15	4.5	2.4	2.2	2.8
30	2.8	.23	.22	.14	---	257	18	15	6.1	2.3	2.2	2.8
31	2.9	---	.28	.14	---	224	---	15	---	2.3	2.3	---
TOTAL	65.9	39.39	3.56	8.14	11.53	8760.02	2244	504.6	253.1	98.3	70.2	76.4
MEAN	2.13	1.31	.11	.26	.41	283	74.8	16.3	8.44	3.17	2.26	2.55
MAX	2.9	2.9	.40	1.7	1.3	1440	202	22	16	7.0	2.7	2.9
MIN	1.7	.21	.00	.13	.13	.92	18	8.5	4.5	2.3	1.8	2.3
AC-FT	131	78	7.1	16	23	17380	4450	1000	502	195	139	152

CAL YR 1990 TOTAL 3250.15 MEAN 8.90 MAX 553 MIN .00 AC-FT 6450
WTR YR 1991 TOTAL 12135.14 MEAN 33.2 MAX 1440 MIN .00 AC-FT 24070

e Estimated.

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 mi^2.

PERIOD OF RECORD.--August 1962 to current year.
CHEMICAL DATA: Water years 1954-66.
SEDIMENT DATA: August to September 1990.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 45 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Low flow regulated by Los Padres Reservoir, usable capacity, 2,180 acre-ft, and San Clemente Reservoir, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 2,220 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--29 years, 101 ft^3/s, 73,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft^3/s, Feb. 28, 1983, gage height, 18.22 ft, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 17.35 ft; no flow for many days since Apr. 27, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0015	*1,970	*8.93				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	224	18	3.6	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	202	14	5.8	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	179	11	6.0	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	158	11	6.5	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	137	8.2	2.8	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	118	6.0	e.30	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	106	3.9	e.05	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	87	2.7	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	85	4.5	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	79	6.9	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	75	10	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	70	11	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	65	11	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	61	8.8	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	57	8.7	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	56	9.2	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	108	53	8.4	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	270	51	8.0	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	180	49	7.2	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	271	50	6.3	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	441	54	5.4	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	350	50	4.4	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	251	49	5.0	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	578	43	4.5	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	1340	39	2.9	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	891	34	3.2	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	605	30	3.2	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	431	27	2.1	.00	.00	.00	.00
29	.00	.00	.00	.00	---	343	25	2.0	.00	.00	.00	.00
30	.00	.00	.00	.00	---	289	21	2.5	.00	.00	.00	.00
31	.00	---	.00	.00	---	248	---	3.1	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	6596.00	2334	213.1	25.05	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	213	77.8	6.87	.83	.000	.000	.000
MAX	.00	.00	.00	.00	.00	1340	224	18	6.5	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	21	2.0	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	13080	4630	423	50	.00	.00	.00

CAL YR 1990 TOTAL 161.21 MEAN .44 MAX 78 MIN .00 AC-FT 320
WTR YR 1991 TOTAL 9168.15 MEAN 25.1 MAX 1340 MIN .00 AC-FT 18190

e Estimated.

11147070 SANTA RITA CREEK NEAR TEMPLETON, CA

LOCATION.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank 1.6 mi upstream from mouth and 4 mi west of Templeton.

DRAINAGE AREA.--18.2 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Some regulation by stockponds and small diversions by irrigation pumps upstream from station.

AVERAGE DISCHARGE.--30 years, 13.4 ft^3/s, 9,710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s, Jan. 19, 1969, gage height, 11.12 ft in gage well, 11.75 ft from floodmarks, from rating curve extended above 1,300 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1630	*1,680	*7.69	Mar. 24	2115	635	5.96
Mar. 18	2300	1,290	7.17				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	9.3	13	1.7	.36	.74	.00	.00
2	.00	.00	.00	.00	.00	4.6	10	1.7	.41	.41	.00	.00
3	.00	.00	.00	.00	.00	24	8.6	1.7	.44	.33	.00	.00
4	.00	.00	.00	.00	.00	517	7.5	1.7	.44	.27	.00	.00
5	.00	.00	.00	.00	.00	87	6.7	1.5	.42	.22	.00	.00
6	.00	.00	.00	.00	.00	22	5.6	1.5	.52	.18	.00	.00
7	.00	.00	.00	.00	.00	12	5.1	1.5	.44	.14	.00	.00
8	.00	.00	.00	.00	.00	9.0	4.5	1.3	.42	.12	.00	.00
9	.00	.00	.00	.00	.00	7.3	5.4	1.2	.37	.11	.00	.00
10	.00	.00	.00	.00	.00	6.4	5.4	1.1	.35	.10	.00	.00
11	.00	.00	.00	.00	.00	7.5	5.0	.97	.32	.08	.00	.00
12	.00	.00	.00	.00	.00	5.7	4.5	.98	.39	.06	.00	.00
13	.00	.00	.00	.00	.00	13	4.5	.96	.59	.05	.00	.00
14	.00	.00	.00	.00	.00	10	4.5	1.0	.50	.04	.00	.00
15	.00	.00	.00	.00	.00	7.7	4.0	.89	.41	.03	.00	.00
16	.00	.00	.00	.00	.00	6.5	3.5	.81	.33	.02	.00	.00
17	.00	.00	.00	.00	.00	63	3.1	.81	.29	.02	.00	.00
18	.00	.00	.00	.00	.00	250	3.0	.81	.23	.01	.00	.00
19	.00	.00	.00	.00	.00	311	3.0	.80	.20	.00	.00	.00
20	.00	.00	.00	.00	.00	309	3.6	.77	.20	.00	.00	.00
21	.00	.00	.00	.00	.00	71	3.7	.80	.19	.00	.00	.00
22	.00	.00	.00	.00	.00	37	3.2	.80	.18	.00	.00	.00
23	.00	.00	.00	.00	.00	24	2.8	.73	.15	.00	.00	.00
24	.00	.00	.00	.00	.00	115	2.6	.70	.14	.00	.00	.00
25	.00	.00	.00	.00	.00	205	2.4	.68	.14	.00	.00	.00
26	.00	.00	.00	.00	.00	198	2.2	.64	.13	.00	.00	.00
27	.00	.00	.00	.00	.00	112	2.0	.63	.15	.00	.00	.00
28	.00	.00	.00	.00	.00	57	1.9	.61	.94	.00	.00	.00
29	.00	.00	.00	.00	---	41	1.7	.53	2.0	.00	.00	.00
30	.00	.00	.00	.00	---	28	1.7	.44	1.3	.00	.00	.00
31	.00	---	.00	.00	---	16	---	.43	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	2586.0	134.7	30.69	12.95	2.93	0.00	0.00
MEAN	.000	.000	.000	.000	.000	83.4	4.49	.99	.43	.095	.000	.000
MAX	.00	.00	.00	.00	.00	517	13	1.7	2.0	.74	.00	.00
MIN	.00	.00	.00	.00	.00	4.6	1.7	.43	.13	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	5130	267	61	26	5.8	.00	.00

CAL YR 1990 TOTAL 406.48 MEAN 1.11 MAX 70 MIN .00 AC-FT 806
WTR YR 1991 TOTAL 2767.27 MEAN 7.58 MAX 517 MIN .00 AC-FT 5490

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to June 14, 1951, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records poor. Low flows regulated by Santa Margarita Lake 32 mi upstream beginning in December 1941, usable capacity, 23,000 acre-ft. Diversion from Santa Margarita Lake for San Luis Obispo municipal supply amounted to 490 acre-ft for the current year. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--48 years, 91.7 ft^3/s, 66,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft^3/s, Feb. 16, 1980, gage height, 15.99 ft, from rating curve extended above 11,000 ft^3/s; maximum gage height, 17.24 ft, Apr. 3, 1958; 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 ft^3/s.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2215	2,490	8.63	Mar. 26	2100	3,110	9.09
Mar. 20	0815	*3,820	*9.71				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.16	148	.49	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	127	.33	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	106	.18	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	367	82	.11	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	257	80	.03	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	2.1	67	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	58	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	53	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	46	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	38	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	35	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	33	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.01	30	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	24	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	20	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	7.2	17	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	353	14	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	2220	12	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	2260	10	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	678	9.4	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	365	8.0	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	244	5.3	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	249	3.8	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	1870	2.8	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1610	2.3	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1590	1.4	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	656	.84	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	408	.81	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	307	.54	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	216	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	13659.47	1061.19	1.14	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	441	35.4	.037	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	2260	148	.49	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.54	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	27090	2100	2.3	.00	.00	.00	.00

CAL YR 1990 TOTAL 132.51 MEAN .36 MAX 53 MIN .00 AC-FT 263
WTR YR 1991 TOTAL 14721.80 MEAN 40.3 MAX 2260 MIN .00 AC-FT 29200

11148500 ESTRELLA RIVER NEAR ESTRELLA, CA

LOCATION.--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 right bank 0.2 mi downstream from mouth of Ranchito Canyon and 1.9 mi northwest of Estrella.

DRAINAGE AREA.--922 mi^2, not including Carrizo Plains.

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1960, published as Estrella Creek near Estrella.
SEDIMENT DATA: June 1990.

REVISED RECORDS.--WSP 2129: 1969, drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 671.59 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records poor. No regulation; pumpage from wells along river for irrigation upstream from station.

AVERAGE DISCHARGE.--37 years, 24.5 ft^3/s, 17,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s, Feb. 24, 1969, gage height, 10.4 ft, from floodmarks, by slope-area measurement of peak flow; maximum gage height, 10.9 ft, Jan. 25, 1969, from floodmarks; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	1400	362	2.50	Mar. 27	Unknown	5,830	5.64
Mar. 19	Unknown	*6,510	*5.87				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e14	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	e7.4	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	e5.8	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e71	e4.7	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e18	e3.8	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e.99	e3.1	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e.10	e2.6	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	e2.1	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	e1.8	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	e1.5	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	e1.3	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	e1.1	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	e1.0	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	e.87	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	e.76	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	e.70	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	e43	e.64	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	e2490	e.60	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e2130	e.80	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e552	e.71	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e96	e.65	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e30	e.56	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e11	e.48	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e444	e.39	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e1640	e.33	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e1870	e.25	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	e209	e.15	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e59	e.08	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e30	e.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e19	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	9713.09	68.17	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	313	2.27	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	2490	14	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	19270	135	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 107.64 MEAN .29 MAX 93 MIN .00 AC-FT 214
WTR YR 1991 TOTAL 9781.26 MEAN 26.8 MAX 2490 MIN .00 AC-FT 19400

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station.

AVERAGE DISCHARGE.--20 years, 177 ft^3/s, 128,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft^3/s, Jan. 16, 1978, gage height, 32.00 ft, from rating curve extended above 7,900 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1645	*18,000	a*21.86	Mar. 24	2030	11,200	19.00

No flow for many days.

a Outside gage, 22.87 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	586	228	29	9.3	3.6	.00	.00
2	.00	.00	.00	.00	.00	132	189	29	8.7	2.5	.00	.00
3	.00	.00	.00	.00	.00	1200	163	29	8.1	1.7	.00	.00
4	.00	.00	.00	.00	.00	8850	143	28	7.6	1.0	.00	.00
5	.00	.00	.00	.00	.00	1380	128	26	7.0	.68	.00	.00
6	.00	.00	.00	.00	.00	405	116	25	6.5	.42	.00	.00
7	.00	.00	.00	.00	.00	240	105	23	6.1	.28	.00	.00
8	.00	.00	.00	.00	.00	177	95	22	5.8	.20	.00	.00
9	.00	.00	.00	.00	.00	144	88	21	5.3	.13	.00	.00
10	.00	.00	.00	.00	.00	125	82	21	5.0	.09	.00	.00
11	.00	.00	.00	.00	.00	175	76	20	4.6	.06	.00	.00
12	.00	.00	.00	.00	.00	139	70	20	3.8	.05	.00	.00
13	.00	.00	.00	.00	.00	233	66	19	3.3	.03	.00	.00
14	.00	.00	.00	.00	.00	235	61	19	3.0	.01	.00	.00
15	.00	.00	.00	.00	.00	184	59	19	2.8	.00	.00	.00
16	.00	.00	.00	.00	.00	157	56	18	2.5	.00	.00	.00
17	.00	.00	.00	.00	.00	1010	53	16	2.4	.00	.00	.00
18	.00	.00	.00	.00	.00	1270	51	16	2.1	.00	.00	.00
19	.00	.00	.00	.00	.00	1390	48	16	1.9	.00	.00	.00
20	.00	.00	.00	.00	.00	3120	57	16	1.6	.00	.00	.00
21	.00	.00	.00	.00	.00	864	68	16	1.5	.00	.00	.00
22	.00	.00	.00	.00	.00	482	56	16	1.5	.00	.00	.00
23	.00	.00	.00	.00	.00	332	48	15	1.4	.00	.00	.00
24	.00	.00	.00	.00	.00	3350	45	14	1.4	.00	.00	.00
25	.00	.00	.00	.00	.00	3720	42	13	1.2	.00	.00	.00
26	.00	.00	.00	.00	.00	1950	40	12	1.1	.00	.00	.00
27	.00	.00	.00	.00	.00	1250	38	11	1.4	.00	.00	.00
28	.00	.00	.00	.00	107	693	35	10	2.1	.00	.00	.00
29	.00	.00	.00	.00	---	474	33	10	2.9	.00	.00	.00
30	.00	.00	.00	.00	---	355	31	9.8	3.5	.00	.00	.00
31	.00	---	.00	.00	---	275	---	9.5	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	107.00	34897	2370	568.3	115.4	10.75	0.00	0.00
MEAN	.000	.000	.000	.000	3.82	1126	79.0	18.3	3.85	.35	.000	.000
MAX	.00	.00	.00	.00	107	8850	228	29	9.3	3.6	.00	.00
MIN	.00	.00	.00	.00	.00	125	31	9.5	1.1	.00	.00	.00
AC-FT	.00	.00	.00	.00	212	69220	4700	1130	229	21	.00	.00

CAL YR 1990 TOTAL 5025.30 MEAN 13.8 MAX 782 MIN .00 AC-FT 9970
WTR YR 1991 TOTAL 38068.45 MEAN 104 MAX 8850 MIN .00 AC-FT 75510

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 443 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB						
28...	1205	0.55	13.0	0	0.0	--
28...	1325	57	12.0	29	4.5	88
28...	1445	99	12.0	14	3.7	--
MAR						
06...	1610	352	12.5	10	9.5	94
22...	1700	443	11.5	5	6.0	95
APR						
15...	1615	60	18.5	1	0.16	--
MAY						
15...	1315	20	22.0	1	0.05	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DEC							
07...	1345	0.0	--	--	--	1	4
07...	1346	0.0	--	--	--	1	2
07...	1347	0.0	--	--	--	1	2
07...	1348	0.0	--	--	--	--	3
07...	1349	0.0	--	--	--	1	15
07...	1350	0.0	--	--	--	1	15
07...	1351	0.0	--	2	6	25	58
APR							
15...	1315	60	18.5	--	1	3	7
15...	1320	60	18.5	--	1	2	6
15...	1325	60	18.5	--	--	1	6
15...	1330	60	18.5	--	--	2	17

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC							
07...	6	8	19	41	64	81	100
07...	2	8	20	34	51	67	100
07...	10	32	51	62	76	93	100
07...	25	66	84	93	98	100	--
07...	67	90	96	99	100	--	--
07...	72	97	99	100	--	--	--
07...	67	68	70	74	82	100	--
APR							
15...	11	27	46	73	95	100	--
15...	25	59	74	82	90	100	--
15...	38	74	86	90	94	100	--
15...	86	99	100	--	--	--	--

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 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 597 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE (unadjusted).--34 years, 271 ft^3/s, 196,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft^3/s, Feb. 25, 1969, gage height, 10.92 ft; no flow at times in 1958-63, 1965, 1977, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 523 ft^3/s, July 12, gage height, 4.28 ft; minimum daily, 0.12 ft^3/s, Apr. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.6	.61	3.6	3.1	6.8	1.0	12	25	25	468	448
2	2.4	2.4	1.5	3.7	3.3	3.7	1.1	13	24	25	466	448
3	2.5	2.7	1.7	3.4	3.1	5.3	1.3	13	25	24	462	451
4	2.6	2.5	2.2	3.6	3.0	12	1.5	13	24	23	459	449
5	2.5	2.3	4.6	3.4	3.5	7.4	1.3	15	25	141	458	446
6	2.8	2.4	4.6	3.4	3.5	2.0	1.3	15	26	381	458	443
7	2.6	2.3	3.7	3.6	3.3	1.1	1.2	15	26	394	454	441
8	2.6	2.1	3.6	3.8	3.1	.85	1.3	15	26	387	454	438
9	1.9	2.0	4.5	4.2	3.3	.68	1.2	15	27	399	453	436
10	2.2	2.0	4.3	3.4	3.4	.93	2.5	16	28	401	451	435
11	2.0	2.1	3.6	3.5	3.1	.97	2.3	15	28	385	447	433
12	2.0	1.9	4.0	3.1	3.1	.45	2.2	16	28	431	446	433
13	1.9	2.2	3.5	3.4	3.1	.91	1.3	15	29	502	446	432
14	1.9	2.3	3.1	3.3	3.0	.83	1.9	15	28	492	442	432
15	2.0	2.2	4.0	3.3	2.7	.67	.44	16	28	493	440	430
16	2.3	3.0	3.4	3.3	2.7	.44	.12	16	29	496	440	431
17	2.2	2.6	3.5	3.0	2.6	1.7	.13	15	29	495	440	428
18	2.2	2.6	6.8	3.1	2.6	6.2	.20	14	29	495	435	425
19	2.3	2.6	6.2	3.3	2.8	8.7	.30	16	29	493	435	421
20	2.3	2.7	5.3	3.3	2.9	8.8	.36	15	29	492	436	420
21	2.2	2.9	3.7	3.1	3.0	3.3	.97	16	40	489	436	419
22	2.3	3.0	4.0	3.0	2.9	2.7	2.9	15	23	488	434	419
23	2.4	2.9	3.9	3.1	3.3	1.5	4.0	16	23	485	436	418
24	2.5	3.1	3.6	3.3	3.2	3.4	12	16	27	482	437	416
25	2.4	3.5	3.5	3.0	2.6	5.1	12	30	24	481	437	414
26	2.4	3.1	3.4	3.3	2.3	5.8	12	30	24	480	438	410
27	2.5	3.0	3.2	3.8	4.6	3.5	12	28	23	478	439	411
28	2.3	3.5	3.3	4.0	5.2	2.6	12	23	23	476	442	411
29	2.3	4.0	3.1	3.3	---	2.4	12	24	25	474	441	410
30	2.5	2.4	3.3	3.2	---	1.8	12	24	24	471	443	408
31	2.6	---	3.8	3.2	---	1.6	---	24	---	468	445	---
TOTAL	72.1	78.9	113.51	105.0	88.3	104.13	114.82	541	798	12246	13818	12856
MEAN	2.33	2.63	3.66	3.39	3.15	3.36	3.83	17.5	26.6	395	446	429
MAX	2.8	4.0	6.8	4.2	5.2	12	12	30	40	502	468	451
MIN	1.9	1.9	.61	3.0	2.3	.44	.12	12	23	23	434	408
AC-FT	143	156	225	208	175	207	228	1070	1580	24290	27410	25500

CAL YR 1990 TOTAL 1192.97 MEAN 3.27 MAX 8.5 MIN .00 AC-FT 2370
WTR YR 1991 TOTAL 40935.76 MEAN 112 MAX 502 MIN .12 AC-FT 81200

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1975, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records poor. No regulation; some pumping upstream from station.

AVERAGE DISCHARGE.--26 years, 104 ft^3/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s, Jan. 26, 1969, gage height, 13.25 ft, current datum; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1945	*8,040	*11.28	Mar. 25	0015	3,330	9.60

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	213	40	9.0	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	180	39	8.7	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	160	36	8.2	.00	.00	.00
4	.00	.00	.00	.00	.00	2650	143	36	8.5	.00	.00	.00
5	.00	.00	.00	.00	.00	850	132	35	8.3	.00	.00	.00
6	.00	.00	.00	.00	.00	287	122	33	7.8	.00	.00	.00
7	.00	.00	.00	.00	.00	172	117	31	7.5	.00	.00	.00
8	.00	.00	.00	.00	.00	121	107	30	7.5	.00	.00	.00
9	.00	.00	.00	.00	.00	86	103	29	7.2	.00	.00	.00
10	.00	.00	.00	.00	.00	63	96	26	6.5	.00	.00	.00
11	.00	.00	.00	.00	.00	57	90	25	5.9	.00	.00	.00
12	.00	.00	.00	.00	.00	46	83	27	5.6	.00	.00	.00
13	.00	.00	.00	.00	.00	48	79	25	5.4	.00	.00	.00
14	.00	.00	.00	.00	.00	86	75	24	5.1	.00	.00	.00
15	.00	.00	.00	.00	.00	62	73	22	4.9	.00	.00	.00
16	.00	.00	.00	.00	.00	47	70	22	4.6	.00	.00	.00
17	.00	.00	.00	.00	.00	77	69	19	4.5	.00	.00	.00
18	.00	.00	.00	.00	.00	432	68	18	4.2	.00	.00	.00
19	.00	.00	.00	.00	.00	430	66	17	3.9	.00	.00	.00
20	.00	.00	.00	.00	.00	867	65	17	3.6	.00	.00	.00
21	.00	.00	.00	.00	.00	398	77	16	3.2	.00	.00	.00
22	.00	.00	.00	.00	.00	249	67	15	2.6	.00	.00	.00
23	.00	.00	.00	.00	.00	184	61	15	1.8	.00	.00	.00
24	.00	.00	.00	.00	.00	633	56	14	1.5	.00	.00	.00
25	.00	.00	.00	.00	.00	1650	55	13	.66	.00	.00	.00
26	.00	.00	.00	.00	.00	928	52	12	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	677	50	11	.84	.00	.00	.00
28	.00	.00	.00	.00	.00	445	47	11	2.4	.00	.00	.00
29	.00	.00	.00	.00	---	349	44	9.8	1.7	.00	.00	.00
30	.00	.00	.00	.00	---	293	42	9.7	.00	.00	.00	.00
31	.00	---	.00	.00	---	249	---	9.0	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	12436.00	2662	686.5	141.60	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	401	88.7	22.1	4.72	.000	.000	.000
MAX	.00	.00	.00	.00	.00	2650	213	40	9.0	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	42	9.0	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	24670	5280	1360	281	.00	.00	.00

CAL YR 1990 TOTAL 1586.23 MEAN 4.35 MAX 326 MIN .00 AC-FT 3150
WTR YR 1991 TOTAL 15926.10 MEAN 43.6 MAX 2650 MIN .00 AC-FT 31590

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 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR											
04...	1200	1420	12.5	1220	4680	34	38	47	65	85	98
07...	1435	164	17.5	28	12	27	--	--	--	--	--
18...	1430	419	12.5	130	147	20	--	--	--	--	--
21...	1730	349	14.5	123	116	16	--	--	--	--	--
APR											
16...	1535	72	23.0	6	1.2	--	--	--	--	--	--
MAY											
15...	1720	22	27.5	1	0.06	57	--	--	--	--	--
JUN											
03...	1520	7.9	29.0	1	0.02	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN							
10...	1056	0.0	--	--	--	1	14
10...	1057	0.0	--	--	--	2	12
10...	1058	0.0	--	--	--	2	18
10...	1059	0.0	--	--	1	4	20
10...	1100	0.0	--	--	1	5	24
10...	1101	0.0	--	--	--	3	26
10...	1102	0.0	--	--	1	4	18
10...	1103	0.0	--	--	--	1	5
10...	1104	0.0	--	--	1	7	17
10...	1105	0.0	--	2	5	9	17
MAR							
21...	1842	344	14.5	--	--	1	19
21...	1844	344	14.5	--	--	1	10
21...	1846	344	14.5	--	--	1	11
21...	1848	343	14.5	--	--	1	9
21...	1850	342	14.5	--	--	1	11
21...	1852	340	14.5	--	--	1	17
21...	1854	338	14.5	--	--	1	11
21...	1856	337	14.5	--	--	1	12
21...	1858	336	14.5	--	--	2	14
21...	1900	334	14.5	--	--	3	16

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JAN						
10...	44	73	87	93	98	100
10...	30	55	74	87	96	100
10...	43	69	85	93	99	100
10...	56	82	90	93	95	100
10...	54	75	85	90	95	100
10...	60	78	85	90	96	100
10...	38	62	77	85	97	100
10...	18	35	47	60	83	100
10...	39	62	74	83	94	100
10...	39	61	73	82	94	100
MAR						
21...	60	88	96	98	100	--
21...	45	84	96	99	100	--
21...	40	71	88	96	100	--
21...	29	52	68	80	92	100
21...	42	78	92	97	100	--
21...	53	79	90	96	99	100
21...	29	51	67	80	92	100
21...	35	63	80	90	97	100
21...	39	75	90	95	99	100
21...	52	84	92	96	99	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
MAR										
07...	1500	1000	1150	0.250	1455	1510	2.50	167	17.5	147
07...	1530	1000	1150	0.250	1520	1535	2.50	167	17.5	147
18...	1300	1000	1150	0.250	1245	1315	--	430	12.5	239
18...	1345	1000	1150	0.250	1330	1400	--	419	12.5	239
21...	1810	1000	1150	0.250	1800	1820	5.00	344	14.5	594
21...	1830	1000	1150	0.250	1820	1840	5.00	344	14.5	594
APR										
16...	1610	1000	1150	0.250	1605	1615	3.00	74	23.0	101
16...	1625	1000	1150	0.250	1620	1630	3.00	72	23.0	101
MAY										
15...	1750	1000	1150	0.250	1745	1755	1.00	22	27.5	9.6
15...	1805	1000	1150	0.250	1800	1810	1.00	22	27.5	9.6
JUN										
03...	1534	1000	1120	0.250	1530	1537	0.25	7.9	29.0	3.2
03...	1548	1000	1120	0.250	1545	1552	0.25	7.9	29.0	3.2

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR									
07...	1	20	57	80	90	95	99	100	--
07...	1	16	52	79	90	96	99	100	--
18...	5	30	62	80	87	92	94	96	100
18...	3	21	51	74	84	90	96	100	--
21...	2	24	60	84	92	96	99	100	--
21...	2	24	58	81	91	95	99	100	--
APR									
16...	1	20	60	84	93	97	100	--	--
16...	--	17	58	85	94	97	99	100	--
MAY									
15...	--	16	66	90	96	99	100	--	--
15...	--	16	62	89	96	100	--	--	--
JUN									
03...	--	13	55	86	96	100	--	--	--
03...	--	13	60	89	96	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 mi^2.

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, 1980-81.
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 National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except for estimated daily discharges and for discharges from Mar. 20 to Apr. 3, 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.

AVERAGE DISCHARGE (unadjusted).--43 years, 468 ft^3/s, 339,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft^3/s, Feb. 24, 1969, gage height, 20.34 ft, from floodmarks; no flow at times in 1951, 1954-55, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,770 ft^3/s, Mar. 19, gage height, 10.81 ft; minimum daily, 2.4 ft^3/s, Oct. 5, 11-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	4.0	e7.0	9.4	e9.3	15	277	24	31	23	547	488
2	3.7	4.4	6.7	8.8	10	9.6	232	24	31	20	1180	485
3	3.5	4.5	6.8	8.7	11	12	205	22	31	19	1210	483
4	2.9	4.8	7.3	9.7	10	23	180	22	31	19	1210	483
5	2.4	4.9	6.9	9.6	10	286	156	20	30	19	1210	483
6	2.7	4.9	6.6	9.3	10	370	142	19	30	163	1200	484
7	3.0	4.8	6.5	9.3	10	115	129	18	30	485	1210	486
8	3.1	4.3	6.6	9.3	10	54	116	18	30	454	1680	482
9	2.7	4.1	6.6	9.9	9.9	36	102	18	30	389	1690	482
10	2.5	4.2	7.0	9.8	10	25	90	17	28	381	1660	482
11	2.4	4.6	7.2	9.3	11	21	81	16	27	370	1100	482
12	2.4	4.5	7.8	9.9	11	18	74	16	27	351	625	480
13	2.4	e6.7	7.8	9.9	11	16	67	17	28	464	545	478
14	2.6	e5.8	7.6	9.3	11	14	65	18	28	518	510	477
15	3.0	5.4	7.8	8.9	11	13	63	16	28	524	494	475
16	3.2	5.5	8.1	8.8	e10	12	59	17	25	548	487	473
17	3.0	6.5	8.6	9.6	e10	12	55	17	25	552	486	470
18	2.8	5.9	8.1	9.2	e10	54	50	16	24	550	478	464
19	2.6	5.7	9.0	8.8	e10	5060	46	17	24	551	485	459
20	2.9	5.5	8.6	8.8	e10	5340	43	17	24	550	486	458
21	3.0	5.9	7.6	9.2	e10	2730	42	17	24	547	488	462
22	3.4	4.5	7.9	9.4	e10	670	38	19	30	542	491	457
23	3.3	5.5	7.9	9.1	e10	323	36	17	32	532	492	456
24	3.1	6.3	7.9	8.4	e10	249	33	17	28	525	490	459
25	3.1	5.4	8.8	8.9	e9.5	1470	31	16	26	524	488	458
26	3.3	e9.4	7.6	9.4	7.7	2670	29	16	28	517	491	461
27	3.6	e6.7	7.7	9.3	13	5250	28	20	28	520	489	458
28	3.8	e6.5	7.5	9.3	21	1620	26	23	31	514	489	465
29	3.7	e6.5	7.4	9.3	---	816	25	29	31	509	489	468
30	4.6	e8.0	7.7	9.3	---	525	24	31	26	506	491	469
31	4.5	---	8.3	e9.3	---	380	---	31	---	500	490	---
TOTAL	97.6	165.7	234.9	287.2	296.4	28208.6	2544	605	846	12686	23881	14167
MEAN	3.15	5.52	7.58	9.26	10.6	910	84.8	19.5	28.2	409	770	472
MAX	4.6	9.4	9.0	9.9	21	5340	277	31	32	552	1690	488
MIN	2.4	4.0	6.5	8.4	7.7	9.6	24	16	24	19	478	456
AC-FT	194	329	466	570	588	55950	5050	1200	1680	25160	47370	28100

CAL YR 1990 TOTAL 2659.29 MEAN 7.29 MAX 29 MIN .07 AC-FT 5270
WTR YR 1991 TOTAL 84019.4 MEAN 230 MAX 5340 MIN 2.4 AC-FT 166700

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1958 to current year.

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 National Geodetic Vertical Datum of 1929. 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 except for estimated daily discharges, which are poor. No regulation; small diversions upstream from station by ranchers and sand-processing plant.

AVERAGE DISCHARGE.--33 years, 13.3 ft^3/s, 9,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s, Jan. 25, 1969, gage height, 15.33 ft, in gage well, 16.2 ft, from floodmarks, from rating curve extended above 7,100 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1730	1,870	8.47	Mar. 25	0200	2,010	8.66
Mar. 20	0315	*2,730	*9.61				

Minimum daily, 0.04 ft^3/s, Sept. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.06	.07	.06	.07	7.1	e13	.44	.14	.10	.09	.08
2	.05	.06	.07	.06	.08	43	e9.3	.48	.13	.09	.09	.08
3	.05	.06	.08	.07	.08	16	e6.4	.55	.13	.09	.13	.06
4	.05	.06	.08	.07	.07	468	e4.9	.54	.13	.09	.13	.06
5	.05	.06	.09	.06	.07	114	e3.9	.47	.13	.08	.15	.07
6	.05	.05	.09	.06	.08	6.7	e3.2	.44	.13	.07	.15	.10
7	.05	.05	.09	.06	.09	3.7	e2.6	.38	.13	.07	.15	.08
8	.05	.05	.09	.06	.09	3.2	e2.2	.36	.13	.08	.13	.07
9	.05	.06	.09	.07	.09	2.8	e1.9	.33	.13	.08	.13	.06
10	.05	.05	.08	.06	.09	2.5	e1.7	.34	.13	.08	.13	.06
11	.05	.05	.08	.06	.10	2.7	e1.5	.35	.12	.08	.12	.06
12	.05	.05	.07	.06	.11	2.5	e1.4	.33	.13	.07	.13	.06
13	.05	.05	.07	.06	.13	2.6	1.2	.37	.13	.07	.15	.07
14	.05	.05	.07	.06	.15	2.4	1.2	.42	.13	.07	.11	.06
15	.05	.05	.08	.06	.15	2.8	1.1	.42	.13	.07	.12	.06
16	.05	.05	.07	.07	.14	2.8	1.0	.35	.13	.07	.09	.07
17	.05	.05	.07	.07	.11	11	.98	.30	.14	.07	.08	.07
18	.05	.05	.07	.07	.13	202	.92	.30	.13	.07	.08	.06
19	.05	.05	.07	.07	.15	590	.94	.33	.12	.07	.09	.05
20	.05	.05	.07	.06	.17	972	1.1	.36	.13	.07	.08	.06
21	.05	.05	.06	.06	.19	69	1.1	.30	.12	.07	.08	.06
22	.06	.06	.06	.06	.19	29	.99	.26	.11	.07	.08	.05
23	.06	.07	.07	.07	.19	18	.80	.26	.10	.07	.09	.05
24	.06	.07	.06	.07	.19	312	.77	.24	.09	.07	.07	.04
25	.06	.07	.06	.07	.21	785	.74	.20	.09	.07	.07	.04
26	.06	.08	.07	.07	.19	525	.71	.17	.09	.07	.07	.05
27	.06	.07	.07	.07	.75	194	.65	.17	.11	.09	.08	.05
28	.06	.07	.07	.07	2.9	62	.59	.15	.12	.10	.09	.05
29	.06	.07	.06	.07	---	e40	.55	.14	.11	.08	.08	.05
30	.06	.07	.06	.07	---	e25	.48	.13	.10	.06	.07	.05
31	.06	---	.06	.07	---	e17	---	.14	---	.10	.08	---
TOTAL	1.65	1.74	2.25	2.02	6.96	4533.8	67.82	10.02	3.64	2.39	3.19	1.83
MEAN	.053	.058	.073	.065	.25	146	2.26	.32	.12	.077	.10	.061
MAX	.06	.08	.09	.07	2.9	972	13	.55	.14	.10	.15	.10
MIN	.05	.05	.06	.06	.07	2.4	.48	.13	.09	.06	.07	.04
AC-FT	3.3	3.5	4.5	4.0	14	8990	135	20	7.2	4.7	6.3	3.6

CAL YR 1990 TOTAL 295.52 MEAN .81 MAX 36 MIN .04 AC-FT 586
WTR YR 1991 TOTAL 4637.31 MEAN 12.7 MAX 972 MIN .04 AC-FT 9200

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1968 to September 1978, October 1983 to current year.
CHEMICAL DATA: Water years 1972-75, 1977.
SEDIMENT DATA: May 1990.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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 by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions for irrigation upstream from station.

AVERAGE DISCHARGE (unadjusted).--18 years (water years 1969-78, 1984-91), 368 ft^3/s, 266,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106,000 ft^3/s, Feb. 25, 1969, gage height, 23.31 ft; maximum gage height, 23.39 ft, Jan. 26, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,750 ft^3/s, Mar. 20, gage height, 13.80 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	5.9	.00
4	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	117	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	181	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	202	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	197	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	183	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	292	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	316	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	227	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	2970	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2920	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	666	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	46	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e800	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e1100	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	e1700	.00	.00	.00	.00	.00	.00
28	.00	.00	e.00	.00	.00	e2800	.00	.00	.00	.00	.00	.00
29	.00	.00	e.00	.00	---	434	.00	.00	.00	.00	.00	.00
30	.00	.00	e.00	.00	---	57	.00	.00	.00	.00	.00	.00
31	.00	---	e.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	13503.03	0.00	0.00	0.00	0.00	1959.90	0.00
MEAN	.000	.000	.000	.000	.000	436	.000	.000	.000	.000	63.2	.000
MAX	.00	.00	.00	.00	.00	2970	.00	.00	.00	.00	316	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	26780	.00	.00	.00	.00	3890	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 15462.93 MEAN 42.4 MAX 2970 MIN .00 AC-FT 30670

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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 estimated daily discharges, which are poor. No regulation or large diversion upstream from station. Low flows affected by upstream gravel mining during summer months.

AVERAGE DISCHARGE.--90 years, 166 ft^3/s, 120,300 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1645	*9,450	*9.43	Mar. 24	2015	4,460	6.57

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	5.0	5.7	144	333	59	23	11	e.25	.00
2	.00	.00	.00	5.3	7.7	133	294	60	22	9.2	e.21	.00
3	.00	.00	.00	5.4	16	388	260	59	20	8.2	e.18	.00
4	.00	.00	.00	5.9	15	3520	232	57	19	7.3	e.15	.00
5	.00	.00	.00	5.7	11	1040	211	55	18	5.7	e.12	.00
6	.00	.00	.00	5.7	9.7	317	196	51	17	5.5	e.10	.00
7	.00	.00	.00	5.5	8.3	163	182	49	18	4.8	e.08	.00
8	.00	.00	.00	5.0	7.5	103	167	47	17	4.1	e.06	.00
9	.00	.00	.00	5.4	7.2	71	153	47	16	3.7	e.05	.00
10	.00	.00	.00	6.7	6.7	54	139	46	15	3.6	e.03	.00
11	.00	.00	.23	8.5	6.2	68	130	44	13	3.3	.00	.00
12	.00	.00	1.7	7.7	6.1	47	121	43	12	3.0	.00	.00
13	.00	.00	2.2	7.0	6.0	170	114	42	11	3.1	.00	.00
14	.00	.00	2.6	6.1	5.9	152	107	41	11	2.8	.00	.00
15	.00	.00	3.4	6.1	5.8	106	100	39	11	2.5	.00	.00
16	.00	.00	4.0	6.4	5.7	82	96	38	10	e1.8	.00	.00
17	.00	.00	6.1	5.6	5.6	579	91	37	9.4	e1.6	.00	.00
18	.00	.00	5.7	5.5	5.3	655	86	39	8.3	e1.4	.00	.00
19	.00	.00	5.0	6.1	5.0	420	83	40	8.6	e1.3	.00	.00
20	.00	.00	5.2	6.0	5.5	969	95	38	8.3	e1.1	.00	.00
21	.00	.00	4.8	5.7	5.0	599	109	36	8.5	e.98	.00	.00
22	.00	.00	5.1	5.7	5.1	395	90	34	9.4	e.90	.00	.00
23	.00	.00	4.9	5.2	5.5	289	82	33	8.4	e.79	.00	.00
24	.00	.00	4.4	5.6	5.6	1380	78	31	7.8	e.71	.00	.00
25	.00	.00	4.4	5.9	5.2	1980	76	30	8.4	e.62	.00	.00
26	.00	.00	4.7	6.1	5.4	1250	72	27	9.2	e.54	.00	.00
27	.00	.00	5.1	6.2	8.7	907	70	26	9.2	e.48	.00	.00
28	.00	.00	5.1	6.0	59	646	66	26	10	e.42	.00	.00
29	.00	.00	4.8	5.9	---	504	63	25	13	e.37	.00	.00
30	.00	.00	4.8	5.5	---	420	60	24	14	e.33	.00	.00
31	.00	---	4.8	6.0	---	364	---	23	---	e.28	.00	---
TOTAL	0.00	0.00	89.03	184.4	251.4	17915	3956	1246	385.5	91.42	1.23	0.00
MEAN	.000	.000	2.87	5.95	8.98	578	132	40.2	12.8	2.95	.040	.000
MAX	.00	.00	6.1	8.5	59	3520	333	60	23	11	.25	.00
MIN	.00	.00	.00	5.0	5.0	47	60	23	7.8	.28	.00	.00
AC-FT	.00	.00	177	366	499	35530	7850	2470	765	181	2.4	.00

CAL YR 1990 TOTAL 6422.52 MEAN 17.6 MAX 694 MIN .00 AC-FT 12740
WTR YR 1991 TOTAL 24119.98 MEAN 66.1 MAX 3520 MIN .00 AC-FT 47840

e Estimated.

11152300 SALINAS RIVER NEAR CHUALAR, CA
(National stream-quality accounting network station)

LOCATION (REVISED).--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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. 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.

AVERAGE DISCHARGE.--15 years, 468 ft^3/s, 339,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft^3/s, Mar. 3, 1983, gage height, 14.92 ft, from rating curve extended above 21,000 ft^3/s; no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,200 ft^3/s, Mar. 20, gage height, 9.78 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.88	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	43	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	3.0	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	32	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	3000	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2620	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	666	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	1490	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1030	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	2640	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	4070	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	529	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	100	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	6.0	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	16233.74	1.72	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	524	.057	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	4070	1.1	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	32200	3.4	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1991 TOTAL 16235.46 MEAN 44.5 MAX 4070 MIN .00 AC-FT 32200

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 1977-81.
SEDIMENT DATA: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1977 to September 1981.
WATER TEMPERATURE: January 1977 to September 1981.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 27...	1415	2220	546	8.0	11.0	8000	760	9.0	82	1100

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3
MAR 27...	2900	190	120	50	15	39	31	1	4.3	87

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
MAR 27...	72	180	20	0.40	15	364	371	0.50	0.020	0.010

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
MAR 27...	0.990	0.970	0.050	0.040	32	0.540	0.160	0.160	0.150

11152300 SALINAS RIVER NEAR CHUALAR, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
27...*	1442	7.40	30.0	550	7.9	12.0	760	9.0	84	19000	99
27...*	1444	6.20	51.0	549	7.9	12.0	760	9.0	84	19000	99
27...*	1448	7.00	73.0	549	8.0	12.0	760	9.0	84	18900	99
27...*	1450	4.10	97.0	549	8.0	12.0	760	9.9	92	18600	100
27...*	1454	4.40	136	549	7.9	12.0	760	10.0	93	18100	100

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 27, 2,220 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR						
22...	1600	165	12.5	13800	6150	100
27...	1540	1920	12.0	18600	96400	100

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records poor. Flow regulated by Santa Margarita Lake 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 of about 95,000 acres upstream from station.
AVERAGE DISCHARGE.--62 years (water years 1930-91), 418 ft^3/s, 302,800 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,100 ft^3/s, Feb. 26, 1969, gage height, 26.51 ft, site and datum then in use; maximum gage height, 26.85 ft, Jan. 16, 1952, site and datum then in use, from floodmarks; no flow at times in 1929-40, many days in 1990-91.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,350 ft^3/s, Mar. 28, gage height, 12.09 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	4.6	.28	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2900	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	2410	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	79	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	6.0	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	651	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	2060	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	2830	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	3770	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	923	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	92	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	16	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	15737.00	7.10	0.28	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	508	.24	.009	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	3770	4.6	.28	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	31210	14	.6	.00	.00	.00	.00

CAL YR 1990 TOTAL 68.91 MEAN .19 MAX 3.2 MIN .00 AC-FT 137
WTR YR 1991 TOTAL 15744.38 MEAN 43.1 MAX 3770 MIN .00 AC-FT 31230

11152540 EL TORO CREEK NEAR SPRECKELS, CA

LOCATION.--Lat 36°35'00", long 121°42'50", in El Toro Grant, Monterey County, Hydrologic Unit 18060005, on right bank 0.3 mi downstream from San Benancio Gulch and 4.7 mi southwest of Spreckels.

DRAINAGE AREA.--31.9 mi^2.

PERIOD OF RECORD.--October 1961 to current year.
SEDIMENT DATA: Water years 1986, August 1990.
GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 16, 1983, at site 700 ft upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station except for small stock ponds. Low flow at times affected by irrigation runoff from upstream golf course.

AVERAGE DISCHARGE.--30 years, 1.58 ft^3/s, 1,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft^3/s, Mar. 2, 1983, gage height, 6.10 ft, site and datum then in use, from rating curve extended above 93 ft^3/s on basis of slope-area measurement at gage height 6.07 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 17	1000	41	2.44	Mar. 26	1315	*78	*2.91
Mar. 21	0800	32	2.32				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.34	.02	.01	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.16	.02	.01	.00	.00	.00
3	.00	.00	.00	.00	.00	.97	.10	.02	.01	.00	.00	.00
4	.00	.00	.00	.00	.00	5.0	.09	.02	.01	.00	.00	.00
5	.00	.00	.00	.00	.00	.21	.09	.02	.01	.00	.00	.00
6	.00	.00	.00	.00	.00	.03	.09	.02	.01	.00	.00	.00
7	.00	.00	.00	.00	.00	.02	.08	.02	.01	.00	.00	.00
8	.00	.00	.00	.00	.00	.02	.08	.02	.01	.00	.00	.00
9	.00	.00	.00	.00	.00	.02	.07	.01	.01	.00	.00	.00
10	.00	.00	.00	.00	.00	e.50	.07	.01	.01	.00	.00	.00
11	.00	.00	.00	.00	.00	e.25	.06	.01	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	e.04	.05	.01	.01	.00	.00	.00
13	.00	.00	.00	.00	.00	e2.0	.04	.01	.01	.00	.00	.00
14	.00	.00	.00	.00	.00	e.55	.05	.01	.01	.00	.00	.00
15	.00	.00	.00	.00	.00	e.36	.05	.01	.01	.00	.00	.00
16	.00	.00	.00	.00	.00	e.06	e.05	.01	.01	.00	.00	.00
17	.00	.00	.00	.00	.00	e7.0	e.05	.01	.01	.00	.00	.00
18	.00	.00	.00	.00	.00	.14	.05	.01	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.18	.04	.01	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	2.2	e.08	.01	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	13	e.05	.01	.01	.00	.00	.00
22	.00	.00	.00	.00	.00	1.8	.04	.01	.01	.00	.00	.00
23	.00	.00	.00	.00	.00	.39	.03	.01	.01	.00	.00	.00
24	.00	.00	.00	.00	.00	16	.03	.01	.01	.00	.00	.00
25	.00	.00	.00	.00	.00	20	.02	.01	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	40	.02	.01	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	15	.03	.01	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	5.9	.02	.01	.00	.00	.00	.00
29	.00	.00	.00	.00	---	2.6	.03	.02	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.55	.02	.01	.00	.00	.00	.00
31	.00	---	.00	.00	---	.29	---	.01	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	135.08	1.98	0.40	0.21	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	4.36	.066	.013	.007	.000	.000	.000
MAX	.00	.00	.00	.00	.00	40	.34	.02	.01	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	268	3.9	.8	.4	.00	.00	.00

CAL YR 1990 TOTAL 12.23 MEAN .034 MAX 1.1 MIN .00 AC-FT 24
WTR YR 1991 TOTAL 137.67 MEAN .38 MAX 40 MIN .00 AC-FT 273

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1970 to current year. January 1959 to September 1970 in reports of Monterey County Flood Control and Water Conservation District.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 9, 1975, on right bank at different datum.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by small diversions, storage reservoirs, and return flow from irrigated areas.

AVERAGE DISCHARGE.--21 years, 4.11 ft^3/s, 2,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 898 ft^3/s, Apr. 1, 1974, gage height, 11.13 ft, at datum then in use, from rating curve extended above 260 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1715	87	2.75	Mar. 26	1000	*166	*3.27

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.67	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.55	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.61	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	6.6	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	6.9	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	50.43	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	1.63	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	100	.00	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 6.30 MEAN .017 MAX 2.9 MIN .00 AC-FT 12
WTR YR 1991 TOTAL 50.43 MEAN .14 MAX 26 MIN .00 AC-FT 100

11153500 LLAGAS CREEK NEAR MORGAN HILL, CA

LOCATION.--Lat 37°06'52", long 121°41'22", in Las Uvas Grant, Santa Clara County, Hydrologic Unit 18060002, 500 ft upstream from Llagas Avenue bridge, 0.3 mi downstream from Chesbro Dam, 0.3 mi upstream from small left-bank tributary, and 2.3 mi west of Morgan Hill.
DRAINAGE AREA.--19.6 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1952-71.
CHEMICAL DATA: Water years 1979 to July 1991 (discontinued).
SEDIMENT DATA: Water year 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
02...	1335	0.22	544	8.0	13.5	11	750	--	--	280	50
17...	1505	0.21	394	7.8	10.5	43	--	--	--	180	30
24...	1635	4.0	235	7.7	10.5	150	745	10.2	94	120	15
JUL											
23...	1600	16	359	7.7	16.5	37	745	10.0	105	160	34

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
02...	37	14	10	0.4	1.9	277	0	226	42	18
17...	25	8.8	10	0.3	1.8	192	0	156	22	11
24...	20	5.5	9	0.2	1.3	--	--	[1]110	7.5	7.1
JUL										
23...	19	10	12	0.3	2.1	19	0	163	18	9.0

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
02...	0.10	4.7	304	0.41	0.170	0.030	0.020	0.200	0.080	0.080
17...	0.10	14	208	0.28	1.05	0.050	0.030	1.10	0.100	0.060
24...	0.10	19	142	0.19	0.670	0.010	<0.010	0.680	0.070	0.040
JUL										
23...	0.10	14	205	0.28	0.060	0.020	0.020	0.080	0.380	0.380

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
02...	0.72	0.80	0.50	0.060	0.020	0.030	0.020	6.9	0.8	--
17...	0.50	0.60	0.50	0.110	0.050	0.070	0.040	7.6	--	--
24...	1.3	1.4	0.80	0.160	0.070	0.050	0.060	29	1.7	<1
JUL										
23...	0.62	1.0	0.90	0.200	0.020	--	0.040	6.4	1.0	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
02...	--	240	--	--	--	4	--	--	--	--
17...	--	140	--	--	--	40	--	--	--	--
24...	100	80	130	10	14000	96	280	230	<0.10	20
JUL										
23...	<100	210	10	5	--	170	660	20	<0.10	<10

11154200 UVAS CREEK NEAR GILROY, CA

LOCATION.--Lat 36°59'32", long 121°34'21", in Las Animas Grant, Santa Clara County, Hydrologic Unit 18060002, on left bank 400 ft upstream from county road bridge, 0.4 mi southwest of Gilroy, and 3.9 mi downstream from Bodfish Creek.

DRAINAGE AREA.--71.2 mi^2.

PERIOD OF RECORD.--January 1959 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for daily discharges greater than 100 ft^3/s, which are poor. Flow regulated by Uvas Reservoir 10 mi upstream, capacity, 9,950 acre-ft. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--32 years, 39.6 ft^3/s, 28,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s, Feb. 17, 1986, gage height, 21.82 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft^3/s, Mar. 4, gage height, 14.07 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	29	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	26	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	5.3	23	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	480	20	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	34	16	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	14	12	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	11	8.8	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	9.2	6.3	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.61	5.0	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	2.4	4.1	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	12	4.0	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.11	3.5	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	18	2.2	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	20	.91	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	20	.34	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	30	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	33	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	29	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	43	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	35	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	29	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	28	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	381	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	462	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	621	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	227	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	87	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	54	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	39	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	33	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	2776.62	161.15	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	89.6	5.37	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	621	29	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	5510	320	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 111.94 MEAN .31 MAX 46 MIN .00 AC-FT 222
WTR YR 1991 TOTAL 2937.77 MEAN 8.05 MAX 621 MIN .00 AC-FT 5830

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 mi^2.
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 National Geodetic Vertical Datum of 1929. 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 except for estimated daily discharges, which are poor. 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.

AVERAGE DISCHARGE.--52 years, 24.7 ft^3/s, 17,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,210 ft^3/s, Apr. 3, 1958, gage height, 8.35 ft, site and datum then in use, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 25	0700	*614	*6.87				

Minimum daily, 0.07 ft^3/s, for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.08	.08	e.09	.08	.15	e3.9	33	63	.76	.28	.18
2	.07	.08	.09	e.09	.14	.09	e3.0	40	48	e.58	.28	.20
3	.08	.09	.09	e.09	.09	1.5	e2.2	34	70	e.45	.26	.19
4	.09	.09	.09	e.13	.08	16	e1.6	33	66	e.37	.25	.20
5	.09	.08	.09	e.10	.08	21	e1.3	34	53	e.34	.24	.19
6	.08	.07	.09	e.09	.08	9.1	e1.2	36	51	e.32	.24	.24
7	.08	.08	.09	e.09	.08	3.3	e1.1	38	48	e.31	.23	.22
8	.10	.08	.09	e.09	.08	1.8	e.97	52	47	e.29	.20	.21
9	.10	.08	.10	e.14	.07	1.1	e.88	60	43	e.29	.23	.21
10	.11	.07	.11	e.11	.07	1.0	e.81	57	42	e.28	.23	.20
11	.10	.08	.14	e.10	.08	1.3	e.76	37	42	e.27	.20	.24
12	.10	.08	.10	e.10	.08	1.1	e.71	20	49	e.27	.23	.20
13	.10	.08	.09	e.10	.08	1.5	e.66	19	49	e.26	.25	.20
14	.10	.08	.09	e.10	.08	1.3	e.62	48	44	e.25	.21	.21
15	.10	.08	.14	e.10	.08	.97	e.59	61	20	e.25	.19	.21
16	.11	.08	.11	e.10	.08	.82	.57	62	e5.4	e.25	.19	.22
17	.10	.08	e.09	.11	.08	8.2	.52	62	e3.1	e.24	.19	.21
18	.11	.08	e.09	.10	.08	46	.49	65	e2.4	e.24	.18	.24
19	.13	.08	e.09	.10	.08	66	.48	66	1.8	e.24	.17	.24
20	.11	.08	e.09	.10	.08	183	.58	65	1.4	e.24	.17	.26
21	.10	.07	e.09	.09	.08	60	.57	63	1.1	e.24	.16	.25
22	.09	.07	e.09	.09	.08	18	.49	63	.93	e.24	.18	.25
23	.08	.08	e.09	.09	.08	11	.43	64	.90	e.23	.19	.25
24	.08	.09	e.09	.09	.08	56	.44	64	.93	e.23	.19	.26
25	.08	.10	e.09	.09	.09	232	.54	64	.99	e.23	.19	.25
26	.10	.09	e.09	.09	.09	e152	.52	66	1.1	e.23	.19	.22
27	.09	.08	e.09	.09	.59	e77	.49	66	1.2	e.23	.18	.22
28	.08	.08	e.09	.09	.33	e16	.54	66	1.3	e.23	.20	.23
29	.08	.08	e.09	.09	---	e8.4	.50	80	1.4	e.24	.19	.23
30	.08	.08	e.09	.09	---	e6.0	.38	86	1.0	e.25	.18	.25
31	.08	---	e.09	.08	---	e4.9	---	85	---	.32	.17	---
TOTAL	2.88	2.42	2.94	3.01	3.07	1006.53	27.84	1689	759.95	9.17	6.44	6.68
MEAN	.093	.081	.095	.097	.11	32.5	.93	54.5	25.3	.30	.21	.22
MAX	.13	.10	.14	.14	.59	232	3.9	86	70	.76	.28	.26
MIN	.07	.07	.08	.08	.07	.09	.38	19	.90	.23	.16	.18
AC-FT	5.7	4.8	5.8	6.0	6.1	2000	55	3350	1510	18	13	13

CAL YR 1990 TOTAL 53.71 MEAN .15 MAX 2.5 MIN .05 AC-FT 107
WTR YR 1991 TOTAL 3519.93 MEAN 9.64 MAX 232 MIN .07 AC-FT 6980

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are 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.

AVERAGE DISCHARGE.--21 years, 30.0 ft^3/s, 21,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s, Mar. 1, 1983, gage height, 11.97 ft, from rating curve extended above 4,100 ft^3/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 27	1600	*152	*3.34				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.00	.00	.00	e.00	e.00	.00	.00	18	.00	.00	.00
2	.11	.00	.00	.00	e.00	.00	.00	.00	20	.00	.00	.00
3	.10	.00	.00	.00	e.00	e.00	.00	.00	13	.00	.00	.00
4	.06	.00	.00	.00	e.00	.00	.00	.00	5.6	.00	.00	.00
5	.05	.00	.00	.00	e.00	.00	.00	.00	5.6	.00	.00	.00
6	.05	.00	.00	.00	e.00	.00	.00	.00	4.8	.00	.00	.00
7	.03	.00	.00	.00	e.00	.00	.00	.00	4.2	.00	.00	.00
8	.02	.00	.00	.00	e.00	.00	.00	.00	4.9	.00	.00	.00
9	.01	.00	.00	.00	e.00	.00	.00	.00	5.6	.00	.00	.00
10	.01	.00	.00	.00	e.00	.00	.00	.00	5.6	.00	.00	.00
11	.00	.00	.00	.00	e.00	.00	.00	.00	5.5	.00	.00	.00
12	.00	.00	.00	.00	e.00	.00	.00	.00	5.4	.00	.00	.00
13	.00	.00	.00	.00	e.00	e.00	.00	.00	5.6	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	2.8	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.39	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	8.3	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e.00	.00	9.2	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e.00	.00	9.2	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	9.6	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	e.00	.00	11	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	.00	11	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	9.4	.00	e12	.00	.00	.00	.12
27	.00	.00	.00	.00	.00	22	.00	e14	.00	.00	.00	.30
28	.00	.00	.00	.00	e.00	16	.00	e15	.00	.00	.00	.30
29	.00	.00	.00	e.00	---	11	.00	e16	.00	.00	.00	.29
30	.00	.00	.00	e.00	---	2.4	.00	16	.00	.00	.00	.19
31	.00	---	.00	e.00	---	.15	---	18	---	.00	.00	---
TOTAL	0.55	0.00	0.00	0.00	0.00	60.95	0.00	156.70	113.39	0.00	0.00	1.20
MEAN	.018	.000	.000	.000	.000	1.97	.000	5.05	3.78	.000	.000	.040
MAX	.11	.00	.00	.00	.00	22	.00	18	20	.00	.00	.30
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.1	.00	.00	.00	.00	121	.00	311	225	.00	.00	2.4

CAL YR 1990 TOTAL 94.89 MEAN .26 MAX 2.8 MIN .00 AC-FT 188
WTR YR 1991 TOTAL 332.79 MEAN .91 MAX 22 MIN .00 AC-FT 660

e Estimated.

11159000 PAJARO RIVER AT CHITTENDEN, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°54'01", long 121°35'48", in Salsipuedes 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 mi^2.

WATER-DISCHARGE RECORDS

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."
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 82.28 ft above National Geodetic Vertical Datum of 1929. 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.

AVERAGE DISCHARGE.--52 years, 150 ft^3/s, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s, Dec. 24, 1955, gage height, 32.46 ft, from rating curve extended above 8,300 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2345	*2,960	*14.96	Mar. 26	2130	2,100	14.33

Minimum daily, 0.08 ft^3/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.34	.65	1.6	.91	5.6	171	7.4	3.4	5.4	3.7	1.0
2	.38	.40	.65	1.6	1.5	4.7	121	7.8	3.3	3.8	3.3	.95
3	.33	.38	.65	1.6	1.5	38	84	7.5	3.6	3.7	3.0	.88
4	.29	.27	.68	1.7	1.3	937	60	7.1	4.0	3.7	2.6	.85
5	.40	.30	.74	1.8	2.0	1150	45	6.9	4.8	3.1	2.3	.87
6	.42	.30	.71	1.7	1.7	177	35	6.5	4.5	3.3	2.4	.88
7	.38	.27	.71	1.8	1.4	75	28	6.0	3.8	3.5	3.1	.64
8	.33	.27	.71	1.8	1.3	44	23	5.7	3.8	3.4	4.0	.60
9	.29	.25	.71	2.0	1.1	30	20	5.0	4.5	2.8	3.9	.78
10	.30	.23	.71	1.9	1.2	25	17	5.3	3.2	2.7	3.2	1.3
11	.31	.20	1.0	1.8	1.1	24	16	5.6	3.9	2.5	2.8	1.2
12	.30	.23	1.1	1.4	e1.0	18	14	5.5	4.7	2.1	2.9	1.2
13	.30	.20	.99	1.2	e.98	35	14	5.4	3.6	2.1	3.6	1.9
14	.33	.21	.84	1.1	e.95	39	12	5.6	3.0	2.7	3.1	1.9
15	.34	.27	2.3	1.1	e.93	24	12	5.1	3.1	4.0	3.2	1.5
16	.36	.24	2.5	1.0	e.92	17	12	5.8	3.3	4.3	2.5	1.7
17	.34	.23	1.6	.84	e.92	17	12	5.6	3.0	4.0	2.6	1.7
18	.38	.25	1.3	.91	e.91	84	10	4.8	3.0	3.2	2.7	1.1
19	.39	.26	1.6	.86	e.90	49	10	5.1	2.9	3.2	3.1	.59
20	.38	.30	1.7	.84	e.90	89	9.9	5.5	2.8	4.4	3.4	.42
21	.37	.30	1.7	.84	e.90	107	9.6	5.1	2.6	3.8	3.5	.34
22	.33	.30	1.5	.80	e.90	95	9.6	5.2	3.3	3.6	3.1	.29
23	.30	.30	1.5	.84	e.92	69	9.6	4.9	3.6	3.0	3.0	.24
24	.30	.30	1.5	.84	e.94	238	9.9	4.6	4.8	3.8	2.2	.17
25	.30	.36	1.6	.84	e.98	1290	9.4	4.1	5.4	3.8	2.2	.10
26	.28	.54	1.6	.84	1.1	1300	10	3.7	5.3	3.5	2.3	.10
27	.56	.54	1.6	.89	2.2	1130	9.9	3.6	5.2	2.8	2.6	.08
28	.57	.54	1.6	.91	4.5	587	9.1	3.8	5.3	2.8	2.3	1.5
29	.30	.54	1.5	.88	---	391	8.5	4.1	5.9	2.7	1.9	2.3
30	.30	.60	1.4	.84	---	293	7.9	4.0	5.7	2.6	1.4	1.5
31	.33	---	1.4	.84	---	226	---	3.7	---	3.1	1.1	---
TOTAL	10.88	9.72	38.75	37.91	35.86	8608.3	819.4	166.0	119.3	103.4	87.0	28.58
MEAN	.35	.32	1.25	1.22	1.28	278	27.3	5.35	3.98	3.34	2.81	.95
MAX	.57	.60	2.5	2.0	4.5	1300	171	7.8	5.9	5.4	4.0	2.3
MIN	.28	.20	.65	.80	.90	4.7	7.9	3.6	2.6	2.1	1.1	.08
AC-FT	22	19	77	75	71	17070	1630	329	237	205	173	57

CAL YR 1990 TOTAL 1003.72 MEAN 2.75 MAX 75 MIN .07 AC-FT 1990
WTR YR 1991 TOTAL 10065.10 MEAN 27.6 MAX 1300 MIN .08 AC-FT 19960

e Estimated.

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978-81.
WATER TEMPERATURE: Water years 1978-81.
SEDIMENT DATA: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1978 to September 1981.
WATER TEMPERATURE: May 1978 to September 1981.

INSTRUMENTATION.--Water-quality monitor from May 1978 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC												
10...	1210	0.71	2920	8.2	7.5	1.0	760	11.6	98	41	K28	550
MAR												
07...	1315	72	926	7.8	12.5	85	765	8.8	82	K1000	6600	310
JUN												
12...	1400	4.8	1900	8.2	17.5	1.5	760	7.6	80	61	96	560
SEP												
09...	1530	0.75	1980	7.8	17.0	0.90	755	7.4	78	K15	1400	500

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC											
10...	69	110	67	420	62	8	5.2	589	483	110	640
MAR											
07...	170	56	41	79	35	2	4.9	174	1420	200	81
JUN											
12...	100	91	81	190	42	3	3.7	560	459	290	200
SEP											
09...	78	95	64	260	53	5	4.5	517	424	140	340

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
DEC												
10...	0.30	27	1600	1670	2.18	0.020	0.020	0.300	0.300	0.200	0.190	0.80
MAR												
07...	0.20	13	612	563	0.83	0.200	0.180	--	--	0.290	0.170	2.5
JUN												
12...	0.30	20	1240	1160	1.69	0.040	0.030	2.10	2.10	0.070	0.070	0.90
SEP												
09...	<0.10	27	1200	1190	1.63	0.020	0.010	--	--	<0.010	<0.010	0.40

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
DEC												
10...	0.170	0.140	0.160	0.140	20	3	300	<10	<1.0	1	<1	<1
MAR												
07...	0.420	0.230	0.240	0.220	30	1	110	<0.5	<1.0	1	<3	4
JUN												
12...	0.260	0.220	0.210	0.200	<10	4	130	<0.5	<1.0	<1	<3	8
SEP												
09...	0.270	0.250	0.210	0.210	<10	4	180	2	<3.0	<1	<9	1

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC												
10...	<10	<1	50	200	0.2	2	2	<1	<1.0	880	25	50
MAR												
07...	63	1	13	120	0.1	<10	10	2	<1.0	450	<6	7
JUN												
12...	25	2	27	160	<0.1	<10	12	1	<1.0	780	<6	13
SEP												
09...	16	<1	39	290	<0.1	<30	4	1	<1.0	770	<18	9

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
07...*	1302	2.10	3.50	923	7.8	12.5	765	8.8	82	118	99
07...*	1304	2.30	6.70	926	7.8	12.5	765	8.7	82	116	98
07...*	1306	2.70	9.40	924	7.9	12.5	765	8.8	82	117	99
07...*	1308	2.40	12.8	925	7.8	12.5	765	8.8	82	113	98
07...*	1310	1.70	18.5	926	7.9	12.5	765	8.8	82	111	99

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 7, 72 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
10...	1200	0.71	7.5	28	0.05	--
MAR						
07...	1305	73	12.5	115	23	99
JUN						
12...	1330	4.8	17.5	12	0.16	76
SEP						
09...	1515	0.75	17.0	9	0.02	92

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 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 89.43 ft (revised) above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation; Watsonville Water Works can divert up to 8.0 ft^3/s upstream from station for municipal supply, domestic use, and irrigation.

AVERAGE DISCHARGE.--35 years, 14.9 ft^3/s, 10,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,610 ft^3/s, Jan. 4, 1982, gage height, 16.66 ft, from rating curve extended above 1,400 ft^3/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 ft^3/s based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	1300	*780	*6.07				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	16	18	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.02	4.8	13	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	250	9.8	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	312	10	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.03	69	11	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	18	7.5	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	8.3	5.1	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	2.8	2.8	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.49	1.0	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	1.8	.34	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	1.2	.24	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.08	.31	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	14	.21	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	5.7	.08	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	1.4	.06	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	17	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	37	.67	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	26	.06	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	192	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	149	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	187	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.02	123	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.02	67	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	47	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	33	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	23	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.09	1662.95	80.17	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.003	53.6	2.67	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.03	312	18	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.2	3300	159	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 504.98 MEAN 1.38 MAX 120 MIN .00 AC-FT 1000
WTR YR 1991 TOTAL 1743.21 MEAN 4.78 MAX 312 MIN .00 AC-FT 3460

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation; many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--40 years, 41.9 ft^3/s, 30,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s, Dec. 23, 1955, gage height, 22.33 ft, from rating curve extended above 2,900 ft^3/s on basis of slope-area measurement of peak flow; no flow on several days during August and September 1977, and Sept. 5, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	1315	1,190	7.84	Mar. 24	1515	*2,070	*9.75

Minimum daily, 0.28 ft^3/s, Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.2	1.8	2.5	1.9	47	43	7.4	4.1	2.6	1.4	.62
2	1.1	.77	1.8	2.5	21	28	37	7.6	4.2	2.3	1.3	.55
3	1.0	.64	1.8	2.5	11	385	33	7.6	4.1	2.3	1.3	.49
4	.95	.65	1.8	2.5	7.1	527	29	7.2	4.3	2.2	1.4	.53
5	1.0	.73	1.8	2.5	19	106	26	6.9	4.2	2.2	1.7	.51
6	1.1	.83	1.8	2.5	8.6	34	24	6.3	4.1	2.2	1.8	.54
7	1.0	.88	1.8	3.1	6.0	17	22	5.8	4.0	2.1	1.6	.63
8	.78	1.1	1.7	3.2	4.9	10	20	5.8	3.9	2.1	1.3	.58
9	.68	1.2	1.7	5.7	4.2	7.4	18	5.6	3.6	2.1	1.2	.60
10	.64	1.3	1.9	3.6	4.0	11	17	5.6	3.5	2.0	1.1	.60
11	.70	1.3	3.8	3.1	3.7	15	16	5.5	3.3	1.9	1.0	.56
12	.68	1.3	3.0	2.9	3.5	7.8	15	5.7	3.2	1.9	.97	.55
13	.73	1.3	2.4	2.7	3.3	56	15	6.0	3.0	1.9	.82	.60
14	.96	1.3	2.2	2.7	3.3	24	14	6.3	2.9	1.9	.78	.56
15	1.1	1.4	7.1	2.6	3.3	14	13	6.1	3.0	1.9	.96	.52
16	1.1	1.4	7.0	2.5	3.1	9.7	13	5.7	3.0	1.8	.86	.57
17	1.0	1.5	3.6	2.4	3.1	106	12	5.4	2.8	1.7	.74	.47
18	.92	1.4	2.9	2.3	3.1	109	11	5.4	2.6	1.6	.71	.41
19	.92	1.5	3.3	2.3	3.0	51	11	5.7	2.6	1.7	.89	.40
20	.90	1.4	3.4	2.3	2.9	113	15	5.6	2.6	2.0	.94	.43
21	.88	1.4	2.9	2.3	2.9	66	13	5.6	2.5	1.9	1.0	.41
22	.81	1.5	2.7	2.2	2.9	41	11	5.8	2.4	1.7	1.1	.40
23	.87	1.5	2.6	2.2	2.9	33	10	5.8	2.4	1.6	1.0	.41
24	.92	1.4	2.7	2.2	2.9	634	9.9	5.5	2.2	1.6	1.0	.29
25	.90	2.0	2.5	2.2	2.9	356	9.4	5.3	2.2	1.6	1.1	.28
26	1.0	2.5	2.5	2.2	2.9	307	9.1	4.6	2.2	1.5	1.1	.41
27	1.0	2.0	2.5	2.2	17	165	8.7	4.6	2.4	1.4	.95	.41
28	1.0	1.8	2.5	2.1	22	95	8.2	4.4	3.4	1.4	.96	.38
29	1.1	1.8	2.5	2.0	---	71	8.0	4.3	4.2	1.3	.86	.36
30	1.2	1.8	2.5	1.9	---	58	7.6	4.2	3.3	1.4	.63	.39
31	1.9	---	2.5	1.9	---	49	---	4.1	---	1.4	.66	---
TOTAL	29.94	40.80	85.0	79.8	176.4	3552.9	498.9	177.4	96.2	57.2	33.13	14.46
MEAN	.97	1.36	2.74	2.57	6.30	115	16.6	5.72	3.21	1.85	1.07	.48
MAX	1.9	2.5	7.1	5.7	22	634	43	7.6	4.3	2.6	1.8	.63
MIN	.64	.64	1.7	1.9	1.9	7.4	7.6	4.1	2.2	1.3	.63	.28
AC-FT	59	81	169	158	350	7050	990	352	191	113	66	29

CAL YR 1990 TOTAL 3065.11 MEAN 8.40 MAX 321 MIN .34 AC-FT 6080
WTR YR 1991 TOTAL 4842.13 MEAN 13.3 MAX 634 MIN .28 AC-FT 9600

11160000 SOQUEL CREEK AT SOQUEL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-79, January 1990 to current year.
CHEMICAL DATA: Water years 1952-66, 1977.
WATER TEMPERATURE: Water years 1966-79.
SEDIMENT DATA: Water years 1976-77, January 1990 to current year.

PERIOD OF DAILY RECORDS.--
WATER TEMPERATURE: January 1966 to February 1979.

REMARKS.--Zero bedload discharge observed for flows less than 20 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
NOV								
14...	1330	1.3	11.5	1	0.00	--	--	--
DEC								
12...	1220	2.9	9.0	2	0.02	--	--	--
JAN								
09...	1220	5.2	10.0	7	0.10	--	--	--
14...	1235	2.7	10.0	1	0.01	--	--	--
FEB								
11...	1150	3.5	11.5	1	0.01	--	--	--
28...	1225	20	13.0	14	0.76	--	--	--
MAR								
04...	1400	975	13.0	3100	8160	33	42	51
13...	1230	73	10.0	314	62	--	--	--
APR								
10...	1210	17	10.5	5	0.23	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
NOV							
14...	--	--	--	--	--	--	--
DEC							
12...	--	--	--	--	--	--	--
JAN							
09...	--	--	70	--	--	--	--
14...	--	--	--	--	--	--	--
FEB							
11...	--	--	--	--	--	--	--
28...	--	--	99	100	--	--	--
MAR							
04...	70	82	90	94	96	98	100
13...	--	--	99	100	--	--	--
APR							
10...	--	--	54	--	--	--	--

11160000 SOQUEL CREEK AT SOQUEL, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
NOV							
14...	1400	1.3	11.5	--	1	3	7
14...	1401	1.3	11.5	--	--	2	20
14...	1402	1.3	11.5	--	--	1	9
14...	1403	1.3	11.5	--	--	1	14
14...	1404	1.3	11.5	--	--	1	10
14...	1405	1.3	11.5	--	--	1	13
MAR							
13...	1315	68	10.0	3	6	8	13
13...	1316	68	10.0	1	2	3	7
13...	1317	68	10.0	1	1	2	5
13...	1318	68	10.0	--	1	1	4
13...	1319	68	10.0	--	--	1	4
13...	1320	68	10.0	--	--	1	5
13...	1321	68	10.0	--	1	2	8
13...	1322	68	10.0	4	10	33	87
APR							
10...	1226	17	10.5	1	2	7	12
10...	1230	17	10.5	1	2	6	10
10...	1237	17	10.5	1	1	2	8
10...	1243	17	10.5	1	1	3	9
10...	1250	17	10.5	--	--	2	12
10...	1259	17	10.5	--	--	1	11
10...	1305	17	10.5	2	6	24	78
10...	1308	17	10.5	13	32	60	93

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
NOV							
14...	10	13	17	24	34	84	100
14...	40	61	80	93	99	100	--
14...	17	24	32	47	66	100	--
14...	30	39	49	64	83	100	--
14...	28	48	67	82	90	100	--
14...	49	77	89	94	99	100	--
MAR							
13...	18	25	37	50	75	100	--
13...	11	16	22	34	47	100	--
13...	11	16	21	30	43	75	100
13...	8	13	19	26	37	61	100
13...	10	14	17	25	46	74	100
13...	17	28	40	50	61	80	100
13...	40	66	80	88	92	100	--
13...	99	100	--	--	--	--	--
APR							
10...	16	18	24	31	43	60	100
10...	12	14	17	23	36	62	100
10...	15	20	25	35	54	75	100
10...	22	30	34	39	54	85	100
10...	34	50	58	64	74	93	100
10...	29	38	42	48	67	100	--
10...	99	100	--	--	--	--	--
10...	100	--	--	--	--	--	--

11160000 SOQUEL CREEK AT SOQUEL, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
MAR										
04...	1445	1000	1100	0.250	1425	1500	2.00	928	13.0	1140
04...	1515	1000	1100	0.250	1500	1525	2.00	872	13.0	1140
13...	1250	1000	1150	0.250	1245	1255	1.50	71	10.0	1.8
13...	1300	1000	1150	0.250	1255	1305	1.50	69	10.0	1.8

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR										
04...	--	1	8	34	54	68	78	86	94	100
04...	--	1	9	38	61	75	84	90	98	100
13...	1	2	19	53	83	98	100	--	--	--
13...	--	1	14	59	88	98	100	--	--	--

11160020 SAN LORENZO RIVER NEAR BOULDER CREEK, CA

LOCATION.--Lat 37°12'24", long 122°08'38", in NE 1/4 SW 1/4 sec.25, T.8 S., R.3 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank 22 ft upstream from culvert on State Highway 9, 100 ft upstream from small right-bank tributary, and 5.8 mi north of town of Boulder Creek.

DRAINAGE AREA.--6.17 mi^2.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for daily discharges greater than 3.0 ft^3/s, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--23 years, 6.42 ft^3/s, 4,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft^3/s, Jan. 4, 1982, gage height, 11.48 ft, from rating curve extended above 230 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.08 ft^3/s, Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	0945	*127	*3.98				

Minimum daily, 0.27 ft^3/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.62	.74	.85	.74	2.4	3.9	1.3	.85	.74	.50	.56
2	.74	.63	.74	.83	1.4	1.4	3.4	1.3	.85	.73	.50	.45
3	.74	.63	.74	.83	.93	14	3.0	1.1	.85	.69	.53	.43
4	.73	.63	.74	.85	.95	43	2.7	1.1	.85	.67	.60	.42
5	.75	.62	.74	.77	2.0	6.4	2.5	1.1	.85	.67	.63	.41
6	.76	.63	.74	.79	.87	3.3	2.4	1.1	.85	.68	.60	.42
7	.74	.63	.74	.85	.83	2.5	2.3	1.1	.84	.68	.53	.44
8	.74	.65	.69	.85	.74	2.1	2.2	1.1	.81	.70	.51	.44
9	.67	.65	.67	.86	.74	1.9	2.1	1.1	.79	.70	.49	.44
10	.65	.63	.73	.85	.74	2.2	2.0	1.1	.77	.70	.50	.49
11	.65	.63	.98	.83	.74	2.3	2.0	1.1	.76	.68	.47	.44
12	.65	.64	.74	.84	.74	2.5	1.9	.98	.77	.63	.45	.44
13	.70	.63	.74	.81	.74	5.4	1.9	1.0	.74	.63	.48	.44
14	.70	.71	.74	.77	.74	3.3	1.9	1.0	.74	.63	.49	.44
15	.72	.72	1.3	.76	.74	2.7	1.7	.98	.74	.63	.53	.44
16	.72	.72	1.1	.74	.74	2.1	1.5	.98	.74	.63	.47	.44
17	.68	.72	.84	.74	.74	5.4	1.4	.98	.74	.63	.46	.43
18	.67	.72	.78	.74	.74	5.4	1.4	.98	.74	.60	.47	.32
19	.73	.73	1.1	.74	.74	3.6	1.4	.98	.74	.61	.46	.34
20	.72	.73	.89	.74	.74	6.0	1.6	.98	.74	.63	.45	.36
21	.69	.71	.85	.74	.74	11	1.6	.98	.74	.59	.45	.35
22	.70	.74	.85	.74	.74	6.2	1.4	.98	.74	.56	.49	.37
23	.71	.74	.85	.74	.81	6.7	1.4	.97	.74	.54	.50	.32
24	.69	.71	.85	.74	.79	29	1.4	.92	.74	.55	.45	.31
25	.68	.78	.85	.74	.81	19	1.3	.90	.74	.55	.49	.33
26	.66	.83	.85	.74	.84	21	1.3	.90	.74	.54	.50	.37
27	.69	.74	.85	.74	1.3	14	1.3	.91	.85	.53	.53	.37
28	.73	.74	.85	.74	1.7	8.5	1.3	.88	.99	.53	.53	.37
29	.74	.74	.85	.74	---	6.3	1.3	.87	.85	.51	.52	.31
30	.74	.74	.82	.74	---	5.0	1.3	.92	.82	.49	.50	.27
31	.88	---	.83	.74	---	4.3	---	.89	---	.50	.53	---
TOTAL	22.10	20.74	25.78	24.18	25.07	248.9	56.8	31.48	23.71	19.15	15.61	11.96
MEAN	.71	.69	.83	.78	.90	8.03	1.89	1.02	.79	.62	.50	.40
MAX	.88	.83	1.3	.86	2.0	43	3.9	1.3	.99	.74	.63	.56
MIN	.65	.62	.67	.74	.74	1.4	1.3	.87	.74	.49	.45	.27
AC-FT	44	41	51	48	50	494	113	62	47	38	31	24

CAL YR 1990 TOTAL 582.88 MEAN 1.60 MAX 13 MIN .62 AC-FT 1160
WTR YR 1991 TOTAL 525.48 MEAN 1.44 MAX 43 MIN .27 AC-FT 1040

11160060 BEAR CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'40", long 122°06'57", in NW 1/4 NW 1/4 sec.29, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank on downstream side of private road bridge in town of Boulder Creek and 0.3 mi upstream from mouth.

DRAINAGE AREA.--16.0 mi^2.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and daily discharges less than 0.50 ft^3/s, which are poor. No regulation; small diversions upstream from station for domestic use.

AVERAGE DISCHARGE.--14 years, 16.6 ft^3/s, 12,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,480 ft^3/s, Jan. 4, 1982, gage height, 13.30 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.09 ft^3/s, Sept. 8, 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	0945	*497	*4.20	Mar. 24	1615	343	3.50

Minimum daily, 0.26 ft^3/s, Sept. 25-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	e.80	1.2	1.2	.79	16	12	e2.3	e1.2	e.83	e.50	e.32
2	.36	e.54	1.2	1.1	6.3	9.4	10	e2.2	e1.2	e.81	e.50	e.31
3	.38	e.47	1.2	1.1	2.9	115	9.3	e2.2	e1.1	e.79	e.50	e.33
4	.41	e.45	1.3	1.1	1.8	197	8.0	e2.1	e1.1	e.77	e.51	e.38
5	.41	e.48	1.2	1.1	7.2	33	7.0	e2.1	e1.1	e.75	e.54	e.40
6	.34	e.47	1.3	1.1	2.3	13	6.6	e2.1	e1.1	e.74	e.56	e.35
7	.34	e.46	1.3	1.3	1.5	7.7	6.0	e2.0	e1.1	e.73	e.60	e.34
8	.27	e.45	1.3	1.4	1.2	5.6	5.5	e2.0	e1.1	e.72	e.56	e.32
9	e.30	e.46	1.4	1.8	1.1	4.4	5.2	e1.9	e1.0	e.70	e.54	e.31
10	e.29	e.47	1.7	1.3	1.1	6.9	4.6	e1.9	e1.0	e.68	e.50	e.30
11	e.29	e.46	3.0	.99	1.0	8.2	4.5	e1.9	e.96	e.67	e.48	e.30
12	e.28	e.45	1.8	.98	1.0	7.3	4.4	e1.9	e.94	e.66	e.43	e.29
13	e.29	e.45	1.2	1.0	1.0	36	4.2	e1.8	e.92	e.65	e.40	e.29
14	e.29	e.45	1.1	1.0	.95	15	3.9	e1.8	e.90	e.64	e.37	e.29
15	e.60	e.47	4.3	.97	.94	11	3.8	e1.8	e.90	e.64	e.35	e.28
16	e.38	.49	4.3	.91	.94	7.7	3.7	e1.8	e.88	e.63	e.34	e.28
17	e.37	.52	1.6	.81	.96	33	3.4	e1.7	e.86	e.62	e.33	e.28
18	e.36	.53	1.2	.79	1.1	25	3.2	e1.7	e.84	e.61	e.33	e.28
19	e.36	.58	1.5	.79	.97	18	3.2	e1.6	e.82	e.60	e.33	e.28
20	e.35	.65	1.8	.79	.99	35	4.6	e1.6	e.81	e.59	e.32	e.28
21	e.35	.74	1.4	.79	.97	37	3.9	e1.6	e.81	e.58	e.32	e.27
22	e.35	.76	1.2	.72	1.0	24	3.4	e1.6	e.81	e.56	e.32	e.27
23	e.35	.80	1.1	.72	1.0	30	3.1	e1.5	e.82	e.55	e.32	e.27
24	e.35	.84	1.1	.76	1.0	187	3.0	e1.5	e.82	e.54	e.32	e.27
25	e.35	1.1	1.1	.79	1.0	103	2.9	e1.5	e.83	e.53	e.32	e.26
26	e.34	1.4	1.2	.79	1.0	82	2.7	e1.4	e.83	e.52	e.32	e.26
27	e.34	1.3	1.1	.79	4.6	51	e2.6	e1.4	e.86	e.51	e.32	e.26
28	e.34	1.2	1.2	.79	9.7	31	e2.5	e1.3	e.94	e.51	e.32	e.26
29	e.34	1.2	1.2	.79	---	23	e2.5	e1.2	e1.1	e.51	e.32	e.26
30	e.34	1.2	1.1	.79	---	17	e2.4	e1.2	e.90	e.50	e.32	e.26
31	e1.1	---	1.1	.79	---	14	---	e1.2	---	e.50	e.32	---
TOTAL	11.58	20.64	47.7	30.05	56.31	1203.2	142.1	53.8	28.55	19.64	12.51	8.85
MEAN	.37	.69	1.54	.97	2.01	38.8	4.74	1.74	.95	.63	.40	.29
MAX	1.1	1.4	4.3	1.8	9.7	197	12	2.3	1.2	.83	.60	.40
MIN	.27	.45	1.1	.72	.79	4.4	2.4	1.2	.81	.50	.32	.26
AC-FT	23	41	95	60	112	2390	282	107	57	39	25	18

CAL YR 1990 TOTAL 789.06 MEAN 2.16 MAX 56 MIN .21 AC-FT 1570
WTR YR 1991 TOTAL 1634.93 MEAN 4.48 MAX 197 MIN .26 AC-FT 3240

e Estimated.

11160070 BOULDER CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'36", long 122°07'18", in NW 1/4 NE 1/4 sec.30, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank under bridge on State Highway 9 in town of Boulder Creek and 750 ft upstream from mouth.

DRAINAGE AREA.--11.3 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR CA-84-2: 1980, 1982-83.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--15 years, 16.5 ft^3/s, 11,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft^3/s, Jan. 4, 1982, gage height, 9.50 ft, from rating curve extended above 330 ft^3/s on basis of slope-area measurement at gage height 6.03 ft; minimum daily, 0.35 ft^3/s, Oct. 16, 17, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	e0915	*813	*4.19	Mar. 24	1530	560	3.58

Minimum daily, 0.53 ft^3/s, Oct. 30, Nov. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	.67	.80	.88	.88	15	19	4.2	2.9	1.5	1.1	.97
2	.72	.59	.80	.88	10	13	15	4.0	2.9	1.5	1.1	.96
3	.72	.59	.87	1.0	2.8	165	13	4.1	2.8	1.8	1.1	.92
4	.72	.53	.88	.97	2.4	e310	12	4.0	2.7	1.4	1.1	.97
5	.67	.55	.88	.97	10	e90	11	4.0	2.6	1.4	1.2	.97
6	.65	.59	.88	.88	2.0	e25	10	3.8	2.6	1.4	1.2	1.3
7	.61	.59	.88	1.1	1.5	e15	9.4	3.8	2.5	1.4	1.1	1.0
8	.59	.59	.88	1.2	1.4	e11	8.6	3.8	2.5	1.4	1.1	.80
9	.59	.59	.88	2.0	1.3	e8.0	7.9	3.8	2.3	1.4	1.1	.80
10	.61	.59	1.2	1.1	1.2	e12	7.1	3.8	2.3	1.4	1.0	.82
11	.59	.59	2.6	.97	1.2	e14	7.0	3.7	2.3	1.4	.98	.85
12	.65	.59	1.2	.97	1.2	e13	6.6	3.6	2.2	1.5	1.0	.87
13	.69	.59	1.0	.97	1.2	56	6.6	3.7	2.1	1.5	1.0	.79
14	.99	.59	.97	.97	1.2	21	6.2	3.7	2.1	1.5	.97	.76
15	.87	.59	6.0	.97	1.2	17	6.1	3.5	2.1	1.5	.97	.79
16	.65	.59	4.9	.88	1.2	11	5.8	3.5	2.1	1.6	.97	.76
17	.65	.62	1.3	.88	1.2	63	5.3	3.5	2.0	1.5	.97	.80
18	.65	.65	.97	.88	1.3	42	5.4	3.5	1.9	1.3	.95	.79
19	.65	.65	2.1	.88	1.3	29	5.2	3.5	1.8	1.3	.92	.76
20	.65	.65	1.5	.88	1.4	54	7.4	3.6	1.8	1.3	.88	.78
21	.65	.65	1.0	.88	1.4	54	6.5	3.4	1.8	1.3	.93	.80
22	.62	.65	.97	.88	1.5	33	5.7	3.3	1.8	1.3	.90	.80
23	.65	.65	.97	.88	1.5	77	5.2	3.3	1.8	1.3	.97	.84
24	.65	.65	.97	.88	1.5	283	5.3	3.3	1.8	1.3	.97	.88
25	.65	1.3	1.1	.88	1.5	130	5.3	3.2	1.8	1.2	1.0	.83
26	.59	1.6	1.2	.88	1.5	140	5.2	3.1	1.7	1.2	.97	.88
27	.59	.81	1.1	.88	5.5	70	5.0	2.9	1.7	1.2	1.0	.84
28	.59	.80	1.1	.88	9.4	43	4.6	2.9	1.8	1.2	1.1	.92
29	.57	.80	.99	.88	---	33	4.5	2.9	1.8	1.2	1.1	.97
30	.53	.80	.90	.88	---	26	4.2	2.9	1.5	1.2	1.0	.97
31	1.3	---	.88	.88	---	22	---	2.9	---	1.1	.94	---
TOTAL	21.03	20.70	42.67	29.91	69.68	1895.0	226.1	109.2	64.0	42.5	31.59	26.19
MEAN	.68	.69	1.38	.96	2.49	61.1	7.54	3.52	2.13	1.37	1.02	.87
MAX	1.3	1.6	6.0	2.0	10	310	19	4.2	2.9	1.8	1.2	1.3
MIN	.53	.53	.80	.88	.88	8.0	4.2	2.9	1.5	1.1	.88	.76
AC-FT	42	41	85	59	138	3760	448	217	127	84	63	52

CAL YR 1990 TOTAL 962.57 MEAN 2.64 MAX 59 MIN .53 AC-FT 1910
WTR YR 1991 TOTAL 2578.57 MEAN 7.06 MAX 310 MIN .53 AC-FT 5110

e Estimated.

11160300 ZAYANTE CREEK AT ZAYANTE, CA

LOCATION.--Lat 37°05'10", long 122°02'45", in SE 1/4 sec.2, T.10 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank at downstream side of bridge on Zayante Road in town of Zayante, 0.4 mi upstream from Lompico Creek, 2.0 mi east of Ben Lomond, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and bedrock notch low-flow control. Datum of gage is 372.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1989, at datum 0.04 ft higher.

REMARKS.--Records fair. No known regulation; small diversions upstream from station for individual use.

AVERAGE DISCHARGE.--34 years, 11.2 ft^3/s, 8,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft^3/s, Jan. 14, 1978, gage height, 8.52 ft, from rating curve extended above 1,200 ft^3/s on basis of slope-area measurement at gage height 7.70 ft; maximum gage height, 8.86 ft, Jan. 4, 1982; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	1045	455	3.78	Mar. 24	1345	*837	*4.51

Minimum daily, 0.14 ft^3/s, several days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.98	.54	.66	.97	6.0	8.8	1.8	1.1	.86	.44	.19
2	.43	.72	.54	.77	3.7	3.5	7.4	1.8	1.1	.73	.41	.24
3	.43	.88	.53	.81	2.1	105	6.6	1.8	1.1	.69	.41	.26
4	.40	1.1	.51	.82	1.3	144	5.9	1.6	1.0	.63	.45	.25
5	.45	.49	.52	.82	2.6	15	5.5	1.6	1.0	.63	.50	.26
6	.49	.67	.51	.82	1.4	6.7	5.1	1.5	.96	.63	e.43	.33
7	.49	.89	.52	.97	1.1	4.8	4.6	1.5	.99	.64	e.40	.46
8	.48	.78	.51	.96	.94	3.8	4.4	1.4	.99	.62	e.40	.29
9	.46	.80	.51	1.5	.92	3.3	4.0	1.3	.92	.59	e.39	.18
10	.47	.82	.58	1.0	.85	4.2	3.7	1.3	.90	.59	e.38	.20
11	.50	.67	1.3	.78	.80	4.5	3.7	1.3	.89	.59	e.37	.19
12	.50	.57	.81	.75	.75	4.4	3.7	1.3	.87	.55	e.37	.18
13	.47	.53	.65	.76	.77	11	3.6	1.4	.84	.54	e.43	.18
14	.49	.47	.62	.71	.73	6.5	3.5	1.4	.85	.50	e.36	.18
15	.50	.47	1.8	.69	.72	5.6	3.4	1.2	.84	.54	e.35	.18
16	.50	.45	1.8	.69	.72	4.6	3.2	1.2	.81	.54	e.35	.17
17	.51	.48	.95	.67	.69	22	3.0	1.1	.80	.50	e.36	.16
18	.50	.50	.72	.65	.68	18	2.9	1.1	.80	.48	e.35	.15
19	.53	.51	1.0	.71	.67	9.6	2.8	1.2	.77	.49	e.33	.14
20	.50	.53	1.0	.80	.65	16	3.5	1.1	.79	.56	e.33	.14
21	.50	.54	.77	.89	.68	12	3.1	1.1	.78	.53	e.32	.15
22	.47	.54	.67	.92	.69	9.1	2.7	1.1	.78	.48	.29	.14
23	.52	.59	.62	.92	.67	13	2.5	1.1	.75	.48	.28	.14
24	.68	.72	.66	.92	.66	309	2.5	1.1	.82	.48	.28	.14
25	.56	.79	.67	.99	.65	126	2.4	1.1	.81	.46	.29	.14
26	.46	.73	.73	1.0	.68	102	2.3	1.1	.76	.46	.29	.16
27	.47	.62	.74	.97	2.3	42	2.1	1.2	.89	.43	.28	.16
28	.48	.58	.76	.95	4.0	23	2.0	1.2	1.7	.45	.32	.15
29	.56	.58	.69	.97	---	17	1.9	1.1	1.4	.45	.37	.16
30	.63	.55	.64	.96	---	13	1.9	1.2	.97	.45	.30	.14
31	1.1	---	.64	.97	---	10	---	1.2	---	.44	.26	---
TOTAL	15.95	19.55	23.51	26.80	33.39	1074.6	112.7	40.4	27.98	17.01	11.09	5.81
MEAN	.51	.65	.76	.86	1.19	34.7	3.76	1.30	.93	.55	.36	.19
MAX	1.1	1.1	1.8	1.5	4.0	309	8.8	1.8	1.7	.86	.50	.46
MIN	.40	.45	.51	.65	.65	3.3	1.9	1.1	.75	.43	.26	.14
AC-FT	32	39	47	53	66	2130	224	80	55	34	22	12

CAL YR 1990 TOTAL 495.23 MEAN 1.36 MAX 21 MIN .35 AC-FT 982
WTR YR 1991 TOTAL 1408.79 MEAN 3.86 MAX 309 MIN .14 AC-FT 2790

e Estimated.

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, 100 ft northeast of Mt Hermon Road, 1.2 mi northwest of Camp Evers, and 1.8 mi east of Felton.

DRAINAGE AREA.--8.81 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and discharges greater than 50 ft^3/s, which are poor. No regulation; small diversions upstream from station for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 467 ft^3/s, Mar. 24, 1991, gage height, 7.10 ft; minimum daily, 1.4 ft^3/s, Oct. 19, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1400	*467	*7.10				

Minimum daily, 1.6 ft^3/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.0	2.0	1.9	1.9	7.1	e13	2.6	2.1	1.8	1.7	2.0
2	1.8	2.0	2.0	2.0	5.8	4.1	e10	2.6	2.1	1.7	2.0	2.0
3	1.8	2.1	2.0	2.4	2.1	68	e8.3	2.6	2.0	1.7	2.0	2.1
4	1.8	2.0	2.0	2.4	2.9	e77	7.4	3.1	2.0	1.7	1.9	2.0
5	1.8	2.0	2.0	2.3	3.5	e23	6.4	3.4	2.0	1.7	1.9	2.0
6	1.8	1.9	2.0	2.3	2.1	11	6.1	2.9	2.0	1.7	1.9	2.1
7	1.8	2.0	2.0	2.4	2.1	6.6	5.8	2.6	2.0	1.8	1.9	2.0
8	1.8	2.0	2.0	2.2	2.0	5.2	5.2	2.3	2.0	1.7	1.9	2.1
9	1.8	2.1	2.0	3.4	1.9	4.6	e4.5	2.3	2.0	1.8	1.9	2.0
10	1.8	2.1	2.3	2.2	1.9	7.7	e4.5	2.2	2.0	1.9	1.9	2.0
11	1.8	2.1	2.5	2.2	1.9	5.0	e4.2	2.2	2.0	1.9	1.9	2.0
12	1.9	1.9	1.9	2.2	1.9	7.7	e3.8	2.3	1.9	1.8	1.8	2.0
13	2.1	1.9	1.9	2.2	1.9	14	e3.8	2.4	1.9	1.8	1.9	1.9
14	2.1	2.0	2.0	2.1	1.9	6.7	e3.5	2.3	2.0	1.7	1.8	2.0
15	2.0	2.0	4.2	2.1	1.9	6.0	3.7	2.2	1.9	1.8	1.7	1.9
16	2.1	2.0	3.1	2.0	1.9	5.0	3.6	2.2	1.9	1.7	1.8	1.6
17	2.1	2.1	2.2	2.0	2.0	29	3.4	2.2	1.9	1.7	1.8	1.6
18	2.1	2.1	2.2	2.0	1.9	25	3.4	2.3	1.9	1.7	1.8	1.6
19	2.1	2.0	2.6	1.9	2.0	19	3.3	2.2	1.9	1.8	1.7	1.6
20	2.0	2.0	2.3	1.8	2.0	29	4.5	2.2	2.0	1.7	1.6	1.6
21	2.0	2.0	2.3	1.9	2.0	23	3.4	2.2	1.9	1.7	1.8	1.6
22	2.0	1.9	2.2	2.0	2.0	e13	3.1	2.2	1.9	1.7	1.9	1.6
23	2.0	1.9	1.9	2.0	2.0	e17	3.1	2.1	2.0	1.6	1.8	1.6
24	2.0	1.9	1.9	2.0	2.0	183	2.9	2.1	2.0	1.7	1.9	1.7
25	2.0	2.6	1.9	2.0	2.0	e103	2.8	2.1	1.9	1.6	2.0	1.7
26	1.9	1.9	1.9	2.0	2.0	e99	2.7	2.2	2.0	1.6	2.0	1.8
27	1.9	1.9	1.9	1.9	6.4	e63	2.6	2.2	2.0	1.6	2.0	1.6
28	1.8	1.8	1.9	1.9	3.8	e47	2.6	2.1	2.2	1.6	1.9	1.6
29	1.9	1.9	1.9	1.9	---	e36	2.6	2.0	1.8	1.6	1.9	1.8
30	2.0	2.0	1.9	1.9	---	e27	2.8	2.0	1.7	1.7	2.0	1.8
31	3.1	---	2.0	1.9	---	e20	---	2.0	---	1.6	2.0	---
TOTAL	60.8	60.1	66.9	65.4	67.7	991.7	137.0	72.3	58.9	53.1	58.0	54.9
MEAN	1.96	2.00	2.16	2.11	2.42	32.0	4.57	2.33	1.96	1.71	1.87	1.83
MAX	3.1	2.6	4.2	3.4	6.4	183	13	3.4	2.2	1.9	2.0	2.1
MIN	1.7	1.8	1.9	1.8	1.9	4.1	2.6	2.0	1.7	1.6	1.6	1.6
AC-FT	121	119	133	130	134	1970	272	143	117	105	115	109

CAL YR 1990 TOTAL 974.0 MEAN 2.67 MAX 15 MIN 1.6 AC-FT 1930
WTR YR 1991 TOTAL 1746.8 MEAN 4.79 MAX 183 MIN 1.6 AC-FT 3460

e Estimated.

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 mi^2.

WATER-DISCHARGE RECORDS

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

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 6, 1972, at site 1.3 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by a fiber dam located 500 ft upstream from gage. Many small diversions upstream from station for domestic supply.

AVERAGE DISCHARGE.--55 years, 130 ft^3/s, 94,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s, Dec. 23, 1955, gage height, 22.55 ft, site and datum then in use, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 28.85 ft, Jan. 5, 1982; minimum daily discharge, 5.6 ft^3/s, July 27, 28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1215	3,730	10.28	Mar. 24	1445	*4,100	*10.68

Minimum daily, 7.5 ft^3/s, Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	13	11	12	13	93	102	29	17	15	8.8	7.8
2	9.7	11	11	13	68	46	84	25	17	13	8.8	7.7
3	9.5	11	11	13	36	979	74	26	17	12	8.8	7.9
4	9.4	11	11	14	23	1420	66	28	16	12	9.4	7.7
5	9.8	11	11	13	44	267	60	26	17	12	9.6	7.5
6	9.9	10	11	13	22	96	55	25	16	11	9.5	8.1
7	9.9	11	11	15	19	53	50	24	16	11	9.4	8.3
8	9.8	10	11	14	16	39	47	24	15	11	9.0	8.4
9	9.2	11	11	22	15	32	42	24	15	11	8.7	8.6
10	9.6	11	13	17	14	56	41	24	14	11	8.6	14
11	9.4	11	20	15	14	51	37	23	14	11	8.5	9.5
12	9.4	11	16	15	14	56	35	24	24	11	8.0	8.0
13	9.8	11	13	14	14	230	32	24	16	11	8.4	8.0
14	11	11	12	14	13	101	32	24	15	10	8.6	8.0
15	10	11	33	14	13	75	32	23	15	10	8.2	8.1
16	10	11	36	14	13	48	31	22	14	10	8.4	8.0
17	9.6	11	20	14	13	267	38	17	14	10	8.2	8.1
18	10	11	15	13	13	224	35	19	13	10	8.7	7.8
19	10	11	17	13	13	136	38	21	13	10	8.8	7.8
20	9.9	12	18	13	13	258	50	20	14	11	8.5	8.0
21	9.7	12	15	13	13	233	38	20	13	11	8.2	8.3
22	9.8	11	14	13	13	156	34	20	13	10	8.0	8.2
23	9.8	11	13	13	13	236	34	20	13	10	7.6	7.9
24	9.9	11	13	13	13	1840	35	19	13	9.7	7.7	7.9
25	9.8	15	13	13	13	906	33	19	14	9.7	7.9	8.5
26	9.8	14	13	13	13	750	31	19	14	9.5	8.1	7.9
27	9.7	13	13	13	37	452	32	18	14	9.7	8.1	8.2
28	10	11	13	13	67	286	31	18	20	10	7.8	7.9
29	11	11	13	13	---	203	31	18	20	9.3	7.7	8.0
30	9.7	11	13	13	---	149	29	18	17	9.1	7.9	8.3
31	18	---	12	13	---	118	---	17	---	9.0	7.8	---
TOTAL	312.5	341	457	428	585	9856	1309	678	463	330.0	261.7	248.4
MEAN	10.1	11.4	14.7	13.8	20.9	318	43.6	21.9	15.4	10.6	8.44	8.28
MAX	18	15	36	22	68	1840	102	29	24	15	9.6	14
MIN	9.2	10	11	12	13	32	29	17	13	9.0	7.6	7.5
AC-FT	620	676	906	849	1160	19550	2600	1340	918	655	519	493

CAL YR 1990 TOTAL 7834.0 MEAN 21.5 MAX 316 MIN 9.2 AC-FT 15540
WTR YR 1991 TOTAL 15269.6 MEAN 41.8 MAX 1840 MIN 7.5 AC-FT 30290

11160500 SAN LORENZO RIVER AT BIG TREES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906-7, 1952-82, 1986, November 1989 to current year.
CHEMICAL DATA: Water years 1906-7, 1952-67, 1969-70, 1973-75, 1977, 1980-81.
WATER TEMPERATURE: Water years 1966-82.
SEDIMENT DATA: Water years 1973-82, 1986, November 1989 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 1966 to February 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1982.

REMARKS.--Zero bedload discharge observed for flows less than 98 ft^3/s during current year. Sediment loads at times affected by fiber dam upstream.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
NOV									
02...	1615	11	11.5	5	0.15	86	--	--	--
DEC									
04...	1235	11	5.5	8	0.24	54	--	--	--
JAN									
02...	1300	13	4.5	4	0.14	74	--	--	--
FEB									
01...	1310	13	8.0	2	0.07	--	--	--	--
28...	1615	74	11.5	19	3.8	96	--	--	--
MAR									
01...	1422	110	12.0	36	11	96	--	--	--
05...	1510	199	11.0	36	19	98	--	--	--
13...	1600	192	10.0	104	54	100	--	--	--
17...*	1627	447	9.0	159	192	88	--	--	--
26...	1422	914	9.5	192	474	84	91	96	100
APR									
01...	1418	98	12.5	6	1.6	84	--	--	--
MAY									
01...	1125	28	14.0	4	0.30	83	--	--	--

* Sample results are for a partial cross-section.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DEC							
04...	1300	11	5.5	1	2	6	13
04...	1301	11	5.5	1	1	2	11
04...	1302	11	5.5	1	1	2	12
04...	1303	11	5.5	--	1	1	7
04...	1304	11	5.5	1	2	3	7
04...	1305	11	5.5	2	6	20	54
MAR							
13...	1645	186	10.0	11	33	68	98
13...	1646	186	10.0	--	--	2	26
13...	1647	186	10.0	--	--	--	8
13...	1648	186	10.0	--	--	1	9
13...	1649	186	10.0	--	--	1	2
13...	1650	186	10.0	--	--	--	1
13...	1651	186	10.0	--	1	5	20
APR							
01...	1430	98	12.5	5	20	68	97
01...	1431	98	12.5	--	1	4	34
01...	1432	98	12.5	--	--	--	6
01...	1433	98	12.5	--	--	1	5
01...	1434	98	12.5	--	--	--	--
01...	1435	98	12.5	--	1	2	4
01...	1436	98	12.5	2	6	19	50

11160500 SAN LORENZO RIVER AT BIG TREES, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC							
04...	39	74	92	97	100	--	--
04...	25	40	56	68	84	100	--
04...	26	32	38	46	60	68	100
04...	18	29	41	51	66	100	--
04...	14	24	37	55	77	100	--
04...	82	90	94	96	97	100	--
MAR							
13...	100	--	--	--	--	--	--
13...	78	95	97	98	100	--	--
13...	25	38	47	55	66	86	100
13...	32	41	47	54	64	100	--
13...	8	20	33	46	65	88	100
13...	5	16	37	59	81	100	--
13...	40	56	69	82	93	100	--
APR							
01...	98	99	100	--	--	--	--
01...	84	98	99	100	--	--	--
01...	23	35	44	54	61	74	100
01...	29	49	64	73	88	100	--
01...	--	1	10	29	56	100	--
01...	11	29	53	72	90	96	100
01...	70	79	89	95	98	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM
MAR											
01...	1437	1000	1150	0.250	1430	1443	--	107	12.0	0.24	2
01...	1454	1000	1150	0.250	1450	1458	--	105	12.0	0.24	--
05...	1530	1000	1150	0.250	1525	1535	7.00	193	11.0	11	--
05...	1545	1000	1150	0.250	1540	1550	7.00	195	11.0	11	--
13...	1620	1000	1150	0.250	1615	1625	9.00	193	10.0	6.0	--
13...	1635	1000	1150	0.250	1630	1640	9.00	187	10.0	6.0	--
26...	1457	1000	1100	0.250	1448	1505	--	869	9.5	198	--
26...	1523	1000	1100	0.250	1515	1532	--	867	9.5	198	--
26...	1548	1000	1100	0.250	1540	1557	--	864	9.5	198	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR										
01...	4	6	24	76	91	100	--	--	--	--
01...	2	4	24	69	87	100	--	--	--	--
05...	--	--	11	64	89	97	100	--	--	--
05...	--	--	12	65	89	96	99	100	--	--
13...	--	1	15	62	85	95	98	100	--	--
13...	--	1	19	64	87	97	100	--	--	--
26...	--	1	7	33	60	73	80	88	100	--
26...	--	--	6	33	62	78	86	95	97	100
26...	--	--	11	47	70	82	86	90	97	100

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 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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 a 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 ft^3/s, Dec. 23, 1955, gage height, 23.10 ft, site and datum then in use, from rating curve extended above 4,500 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1400	3,580	10.37	Mar. 24	1630	*4,170	*10.83

Minimum daily, 0.48 ft^3/s, Aug. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	9.9	3.7	5.4	6.3	100	97	20	10	7.0	2.0	1.5
2	1.2	2.9	3.3	5.5	65	51	84	22	9.4	5.9	.92	.73
3	1.1	2.0	2.9	8.2	50	1000	71	19	e9.5	4.9	1.2	.97
4	1.0	1.4	3.1	8.1	19	1460	63	22	e10	4.6	1.3	1.1
5	.97	1.5	4.1	6.6	55	346	56	20	10	3.9	1.3	.96
6	1.2	2.0	3.7	5.2	19	132	52	19	9.7	3.7	2.4	1.3
7	1.2	1.4	2.8	6.3	11	67	47	18	9.5	3.7	2.0	1.3
8	1.3	1.7	2.9	6.3	8.8	48	42	18	9.0	3.2	1.3	1.5
9	1.1	2.1	3.2	13	6.6	36	39	17	8.6	3.0	2.4	1.2
10	1.3	2.1	2.9	9.9	5.8	51	37	17	8.1	3.1	2.6	2.3
11	1.3	2.1	11	6.9	5.8	67	33	17	7.9	3.0	3.1	8.5
12	1.2	2.7	8.5	6.0	5.6	48	29	18	16	3.1	2.3	2.0
13	1.2	3.2	5.2	5.4	6.6	248	28	17	11	3.0	1.9	.82
14	1.6	2.5	3.7	5.4	5.7	131	27	17	8.7	2.5	2.6	.99
15	1.8	3.6	22	5.3	4.6	90	26	16	7.7	2.0	2.1	1.2
16	1.9	2.3	43	5.5	4.6	55	27	17	7.6	2.5	2.1	1.0
17	1.4	1.6	19	5.0	4.6	237	29	15	7.1	2.1	1.2	1.3
18	1.1	2.3	8.6	4.4	4.6	266	30	11	6.3	2.0	2.6	1.8
19	2.4	3.1	7.2	4.4	4.8	152	30	13	6.0	2.1	3.4	1.0
20	1.9	2.5	9.8	4.4	5.0	280	42	13	5.9	3.2	3.2	1.3
21	1.2	3.8	8.0	4.1	4.1	247	34	13	5.8	3.0	2.8	.86
22	1.4	3.0	5.9	4.4	4.1	189	28	14	5.4	2.3	.93	.74
23	1.4	2.5	6.0	4.0	4.1	187	27	13	5.6	2.3	2.4	.69
24	1.5	2.6	4.7	4.1	4.1	1770	28	13	5.5	1.6	1.1	.73
25	1.5	6.7	4.5	4.2	4.6	1020	28	12	5.8	2.3	1.6	1.5
26	1.9	14	4.7	4.1	3.9	707	26	11	5.8	1.1	1.0	.95
27	2.3	6.2	5.2	4.4	21	419	28	11	6.0	2.0	1.0	.68
28	1.9	4.4	4.8	4.1	83	258	27	11	9.6	2.4	1.2	1.3
29	6.5	3.8	4.1	4.1	---	191	25	9.7	12	1.4	.48	2.3
30	11	3.7	3.8	4.4	---	141	25	10	9.3	1.4	.59	.76
31	18	---	4.1	4.5	---	115	---	9.6	---	1.6	1.5	---
TOTAL	75.97	103.6	226.4	173.6	427.3	10109	1165	473.3	248.8	89.9	56.52	43.28
MEAN	2.45	3.45	7.30	5.60	15.3	326	38.8	15.3	8.29	2.90	1.82	1.44
MAX	18	14	43	13	83	1770	97	22	16	7.0	3.4	8.5
MIN	.97	1.4	2.8	4.0	3.9	36	25	9.6	5.4	1.1	.48	.68
AC-FT	151	205	449	344	848	20050	2310	939	493	178	112	86

CAL YR 1990 TOTAL 5713.41 MEAN 15.7 MAX 328 MIN .66 AC-FT 11330
WTR YR 1991 TOTAL 13192.67 MEAN 36.1 MAX 1770 MIN .48 AC-FT 26170

e Estimated.

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 mi^2.

PERIOD OF RECORD.--February 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. Low flows affected by return flow from urban irrigation and by periodic flushing of upstream county well.

AVERAGE DISCHARGE.--6 years, 3.48 ft^3/s, 2,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 934 ft^3/s, Mar. 15, 1986, gage height, 9.48 ft, from rating curve extended above 190 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	0900	*626	*8.12	Mar. 24	1215	592	7.96

No flow for many days.

CORRECTIONS.--The calendar year summary data for 1985 are incorrect; no figures should have been published in the report for 1986 for this partial-record period.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.23	.23	.26	.20	14	2.8	.47	.10	.10	.00	.08
2	.00	.11	.24	.17	18	6.5	2.4	.47	.02	.01	.13	.03
3	.10	.00	.26	.25	.63	149	2.0	.41	.07	.04	.27	.05
4	.00	.04	.36	.25	3.8	86	1.7	.33	.06	.00	.46	.03
5	.00	.06	.26	.29	6.3	13	1.6	.33	.00	.00	.55	.03
6	.00	.07	.23	.34	.56	6.6	1.4	.30	.11	.00	.54	.02
7	.00	.22	.20	.87	.46	4.8	1.3	.31	.00	.00	.52	.02
8	.05	.02	.20	.33	.40	4.0	1.1	.24	.03	.00	.03	.02
9	.00	.02	.19	3.7	.38	3.4	1.0	.25	.00	.00	.02	.07
10	.00	.00	2.0	.32	.32	10	1.0	.18	.07	.00	.00	.00
11	.00	.00	1.9	.22	.35	3.8	1.1	.19	.00	.13	.00	.03
12	.00	.00	.20	.20	.45	8.9	1.1	.25	.09	.10	.00	.00
13	.00	.00	.25	.19	.33	10	1.0	.50	.01	.00	.05	.29
14	.00	.00	.21	.21	.33	4.2	1.0	.33	.00	.00	.00	2.3
15	.00	.00	5.7	.31	.35	4.6	.99	.30	.00	.00	.00	2.2
16	.12	.00	2.3	.19	.41	3.1	1.0	.28	.00	.10	.00	1.2
17	.26	.02	.22	.29	.50	35	.98	.28	.00	.16	.00	.10
18	.42	.06	.19	.19	.42	12	.95	.30	.00	.03	.00	.02
19	.50	.22	1.6	.17	.44	15	.98	.28	.00	.00	.08	.02
20	.17	.26	.31	.17	.40	22	3.1	.27	.00	.00	.00	.02
21	.00	.29	.24	.16	.39	10	1.2	.24	.00	.00	.00	.03
22	.00	.24	.28	.16	.41	5.5	.78	.22	.00	.00	.00	.00
23	.00	.16	.30	.19	.37	18	.70	.18	.00	.00	.00	.11
24	.00	.12	.29	.17	.38	182	.63	.15	.00	.00	.00	.00
25	.19	1.8	.24	.17	.43	45	.58	.09	.00	.00	.00	.29
26	.05	.39	.23	.17	.42	64	.52	.12	.01	.00	.00	.10
27	.00	.21	.20	.16	22	16	.48	.10	.03	.00	.00	.24
28	.00	.22	.26	.19	3.2	7.7	.42	.13	2.5	.00	.02	1.0
29	.00	.23	.19	.15	---	5.4	.46	.05	.40	.00	.00	1.5
30	.00	.29	.16	.15	---	4.1	.47	.08	.23	.00	.01	1.4
31	4.0	---	.20	.17	---	3.4	---	.11	---	.00	.04	---
TOTAL	6.05	5.28	19.64	10.76	62.63	777.0	34.74	7.74	3.73	0.67	2.72	11.20
MEAN	.20	.18	.63	.35	2.24	25.1	1.16	.25	.12	.022	.088	.37
MAX	4.0	1.8	5.7	3.7	22	182	3.1	.50	2.5	.16	.55	2.3
MIN	.00	.00	.16	.15	.20	3.1	.42	.05	.00	.00	.00	.00
AC-FT	12	10	39	21	124	1540	69	15	7.4	1.3	5.4	22

CAL YR 1990 TOTAL 356.21 MEAN .98 MAX 40 MIN .00 AC-FT 707
WTR YR 1991 TOTAL 942.16 MEAN 2.58 MAX 182 MIN .00 AC-FT 1870

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Minor regulation from swimming pools in San Mateo County Memorial Park and Portola State Park during summer months. Small diversions upstream from station by pumping.

AVERAGE DISCHARGE.--40 years, 40.6 ft^3/s, 29,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft^3/s, Dec. 23, 1955, gage height, 21.27 ft, from rating curve extended above 2,700 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1400	*1,180	*7.35	Mar. 24	2000	868	6.34

Minimum daily, 0.44 ft^3/s, Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.3	2.2	2.7	2.4	12	37	5.8	3.6	2.7	1.6	1.0
2	1.8	3.1	2.2	2.8	5.2	11	30	5.8	3.1	2.4	1.5	1.1
3	1.7	2.4	2.2	2.8	8.1	154	26	5.8	3.0	2.3	1.4	1.0
4	1.7	2.4	2.2	2.6	5.3	444	23	5.7	3.0	2.1	1.5	.99
5	1.7	2.4	2.2	2.4	12	130	21	5.5	2.9	2.0	1.2	.94
6	1.5	2.5	2.2	2.4	7.4	38	20	5.2	2.8	1.9	1.8	.81
7	1.5	3.0	2.2	2.7	4.5	19	18	5.1	2.6	2.0	2.2	.90
8	1.6	3.3	2.2	2.8	3.6	12	16	5.1	2.7	2.0	1.9	.83
9	1.5	1.3	2.2	3.1	3.2	7.9	16	5.1	2.7	2.0	1.8	.74
10	1.5	1.1	2.5	3.6	3.0	9.1	15	5.0	2.7	2.1	1.7	.64
11	1.5	1.1	4.2	3.2	3.0	21	12	4.8	2.6	2.1	1.4	.56
12	1.5	1.2	4.4	3.0	3.0	13	11	4.5	2.5	2.0	1.2	.50
13	1.6	1.1	3.0	3.0	2.8	79	11	4.8	2.4	2.0	1.4	.63
14	1.6	1.1	2.4	3.0	2.8	53	10	5.3	1.9	1.8	e1.4	.59
15	1.6	1.2	7.0	3.0	2.6	34	10	5.3	1.8	1.9	e1.3	.60
16	1.8	1.3	12	3.0	2.6	25	9.6	4.7	1.6	1.6	1.3	1.7
17	1.8	1.6	6.8	2.8	2.4	118	8.8	4.4	2.2	1.6	1.3	2.1
18	1.8	1.7	4.1	2.7	2.4	115	8.6	4.2	2.2	1.5	1.4	.48
19	1.8	1.8	4.5	2.8	2.3	60	8.1	4.2	2.2	1.7	1.2	.48
20	1.8	1.9	5.6	2.8	2.2	107	9.2	4.2	2.3	1.8	1.2	.48
21	1.8	2.0	5.0	2.8	2.2	186	9.2	4.0	2.3	1.7	1.0	.48
22	1.8	2.2	3.9	2.6	2.2	108	7.6	3.9	2.3	1.6	.93	.44
23	1.8	2.0	3.2	2.6	2.1	99	7.5	3.8	2.4	1.5	.97	.44
24	1.8	1.9	3.4	2.6	2.0	522	7.5	3.9	2.4	1.6	1.0	.45
25	1.8	2.3	2.9	2.6	2.0	398	7.5	3.7	2.5	1.5	1.0	.50
26	1.8	3.3	3.0	2.6	2.0	444	7.5	3.7	2.6	1.1	1.1	.62
27	1.8	3.7	3.0	2.6	2.5	248	7.4	3.4	2.8	1.3	1.2	.59
28	1.8	2.7	3.0	2.6	6.1	119	6.7	3.4	3.4	1.3	1.3	.61
29	1.8	2.4	2.9	2.3	---	78	6.4	3.4	3.5	1.2	1.2	.64
30	1.8	2.2	2.6	2.4	---	57	6.1	3.9	3.3	1.0	1.2	.75
31	2.6	---	2.6	2.4	---	44	---	3.7	---	1.4	1.1	---
TOTAL	53.7	63.5	111.8	85.3	101.9	3765.0	393.7	141.3	78.3	54.7	41.70	22.59
MEAN	1.73	2.12	3.61	2.75	3.64	121	13.1	4.56	2.61	1.76	1.35	.75
MAX	2.6	3.7	12	3.6	12	522	37	5.8	3.6	2.7	2.2	2.1
MIN	1.5	1.1	2.2	2.3	2.0	7.9	6.1	3.4	1.6	1.0	.93	.44
AC-FT	107	126	222	169	202	7470	781	280	155	108	83	45

CAL YR 1990 TOTAL 2623.3 MEAN 7.19 MAX 122 MIN 1.1 AC-FT 5200
WTR YR 1991 TOTAL 4913.49 MEAN 13.5 MAX 522 MIN .44 AC-FT 9750

e Estimated.

11162500 PESCADERO CREEK NEAR PESCADERO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-80, 1986, December 1989 to current year.
CHEMICAL DATA: Water year 1977.
WATER TEMPERATURE: Water years 1965-80.
SEDIMENT DATA: Water years 1971, 1973, 1980, 1986, December 1989 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 1965 to February 1979.
SUSPENDED-SEDIMENT DISCHARGE: December 1979 to September 1980.

REMARKS.--Zero bedload discharge observed for flows less than 9.6 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
NOV								
20...	1150	2.0	11.0	8	0.04	--	--	--
DEC								
18...	1405	4.0	6.5	8	0.09	--	--	--
JAN								
17...	1610	2.8	9.0	12	0.09	--	--	--
FEB								
13...	1330	2.8	11.0	14	0.11	72	--	--
MAR								
05...	1725	79	11.0	79	17	96	100	--
14...	1415	49	9.0	20	2.6	92	98	100
APR								
16...	1300	9.6	10.5	9	0.23	34	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
NOV							
20...	1215	2.0	11.0	--	1	2	12
20...	1216	2.0	11.0	1	1	3	17
20...	1217	2.0	11.0	--	--	1	16
20...	1218	2.0	11.0	--	1	3	15
20...	1219	2.0	11.0	1	2	8	35
20...	1220	2.0	11.0	1	2	4	39
MAR							
14...	1445	48	9.0	5	13	33	80
14...	1446	48	9.0	--	1	3	36
14...	1447	48	9.0	--	--	1	32
14...	1448	48	9.0	--	--	1	7
14...	1449	48	9.0	--	1	2	10
14...	1450	48	9.0	2	6	20	72
APR							
16...	1305	9.6	10.5	6	14	35	79
16...	1307	9.6	10.5	3	8	24	61
16...	1310	9.6	10.5	1	2	4	20
16...	1315	9.6	10.5	--	--	1	12
16...	1320	9.6	10.5	--	--	1	9
16...	1324	9.6	10.5	--	1	2	12
16...	1328	9.6	10.5	--	1	4	27

11162500 PESCADERO CREEK NEAR PESCADERO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
NOV							
20...	35	49	60	70	87	100	--
20...	31	38	47	61	84	100	--
20...	81	97	100	--	--	--	--
20...	57	80	87	93	98	100	--
20...	83	95	98	100	--	--	--
20...	87	95	98	99	100	--	--
MAR							
14...	99	100	--	--	--	--	--
14...	92	99	100	--	--	--	--
14...	88	98	100	--	--	--	--
14...	36	66	87	98	100	--	--
14...	25	34	41	52	71	85	100
14...	98	100	--	--	--	--	--
APR							
16...	95	98	99	100	--	--	--
16...	85	93	97	99	100	--	--
16...	65	84	92	96	99	99	100
16...	55	81	92	96	100	--	--
16...	60	90	98	100	--	--	--
16...	28	36	42	51	64	82	100
16...	48	54	57	60	65	72	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
MAR								
14...	1423	1000	1150	0.250	1420	1425	3.00	48
14...	1433	1000	1150	0.250	1430	1435	3.00	48

DATE	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAR								
14...	9.0	2.4	1	36	89	97	99	100
14...	9.0	2.4	1	41	94	99	100	--

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA

LOCATION.--Lat 37°19'33", long 122°23'08", in San Gregorio Grant, San Mateo County, Hydrologic Unit 18050006, on right bank at downstream side of bridge on Old Coast Highway, 0.1 mi south of town of San Gregorio, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--50.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 11.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. Low flows affected by domestic irrigation.

AVERAGE DISCHARGE.--22 years, 36.6 ft^3/s, 26,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,910 ft^3/s, Jan. 4, 1982, gage height, 21.28 ft, from rating curve extended above 560 ft^3/s on basis of contracted-opening measurement of peak flow; no flow for many days in 1972, 1977, 1988, and 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*), from rating curve extended above 140 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1400	*1,780	*9.37				

Minimum daily, 0.04 ft^3/s, Aug. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	1.6	.42	1.5	1.7	10	37	6.1	2.8	1.2	.10	.08
2	.63	1.3	.45	1.1	3.3	11	30	5.6	2.8	1.7	.11	.22
3	.53	.58	.88	.73	6.2	125	25	5.4	2.6	1.2	.11	.23
4	.10	.26	1.1	.95	5.3	297	22	5.4	2.5	1.1	.13	.08
5	.09	.44	1.1	1.3	28	95	20	5.0	3.0	.80	.72	.12
6	.25	.96	.99	.61	9.4	24	18	4.6	2.2	.66	.78	.07
7	.31	1.4	.91	.63	5.6	12	17	4.0	1.5	.70	.58	.06
8	.09	1.1	.86	.85	4.1	8.3	15	4.6	1.3	.53	.27	.06
9	.13	.45	.87	1.4	3.3	5.9	14	4.1	2.7	1.7	.25	.08
10	.09	.46	1.1	1.5	3.1	11	13	3.6	2.6	1.3	.30	.06
11	.09	.38	3.1	1.2	2.8	25	12	3.3	2.1	1.0	.27	.06
12	.15	.45	3.4	1.5	2.7	15	11	3.9	1.6	1.8	.13	.07
13	.18	.35	2.3	1.5	2.5	163	9.9	3.9	1.0	1.1	.14	.09
14	.26	.66	1.8	1.0	2.3	23	9.9	3.4	.75	1.2	.13	.08
15	.16	.64	6.1	1.0	2.2	9.7	9.9	3.2	.50	1.2	.30	.11
16	.23	.53	18	.93	2.1	5.1	9.4	2.4	.53	.63	.19	.18
17	.21	.66	7.0	.84	2.6	240	9.0	2.7	.61	.56	.33	.18
18	.23	.80	3.5	.79	3.0	63	8.9	3.3	.63	.40	.21	.07
19	.23	.82	2.7	.73	3.0	21	8.3	3.6	.99	.31	.50	.09
20	.49	.93	3.2	.77	3.0	79	9.0	2.9	1.2	.20	.42	.05
21	.68	.96	2.8	.78	2.9	212	9.5	2.6	.95	.34	.12	.06
22	.73	.95	2.1	1.0	2.8	56	8.7	2.8	.81	.23	.11	.05
23	.69	1.0	1.9	1.5	2.7	215	8.3	2.7	1.1	.18	.19	.07
24	.72	.92	1.8	1.5	2.7	948	8.2	2.1	2.3	.17	.22	.06
25	.69	.97	1.8	1.5	2.8	497	8.3	1.9	2.1	.17	.21	.08
26	.67	1.8	1.8	1.5	2.8	722	8.7	2.6	2.3	.37	.04	.06
27	.52	2.4	1.8	1.6	3.4	270	8.1	2.7	2.7	.19	.08	.09
28	.68	1.6	1.8	1.3	8.0	128	7.2	2.3	3.3	.35	.08	.09
29	.58	1.4	1.7	1.3	---	81	6.6	2.3	3.3	.15	.07	.06
30	.52	.84	1.7	1.7	---	57	6.2	4.0	2.4	.13	.05	.06
31	.67	---	1.6	1.7	---	43	---	3.6	---	.11	.11	---
TOTAL	12.21	27.61	80.58	36.21	124.3	4472.0	388.1	110.6	55.17	21.68	7.25	2.72
MEAN	.39	.92	2.60	1.17	4.44	144	12.9	3.57	1.84	.70	.23	.091
MAX	.73	2.4	18	1.7	28	948	37	6.1	3.3	1.8	.78	.23
MIN	.09	.26	.42	.61	1.7	5.1	6.2	1.9	.50	.11	.04	.05
AC-FT	24	55	160	72	247	8870	770	219	109	43	14	5.4

CAL YR 1990 TOTAL 1977.50 MEAN 5.42 MAX 227 MIN .09 AC-FT 3920
WTR YR 1991 TOTAL 5338.43 MEAN 14.6 MAX 948 MIN .04 AC-FT 10590

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
SEDIMENT DATA: Water year 1986, December 1989 to current year.

REMARKS.--Zero bedload discharge observed for flows less than 68 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM
NOV							
20...	1410	1.0	11.0	1	0.00	--	--
DEC							
19...	1205	2.7	7.5	5	0.04	--	--
JAN							
17...	1355	0.86	8.5	6	0.01	--	--
FEB							
13...	1455	2.4	11.5	4	0.03	--	--
MAR							
05...	1350	68	11.5	80	15	98	--
13...	1455	109	11.0	146	43	99	100
APR							
18...	0945	9.3	11.0	6	0.15	47	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
NOV							
20...	1420	1.0	11.0	1	2	4	24
20...	1421	1.0	11.0	8	21	30	47
20...	1422	1.0	11.0	4	12	18	22
20...	1423	1.0	11.0	1	2	4	7
20...	1424	1.0	11.0	1	3	5	12
20...	1425	1.0	11.0	--	1	2	8
MAR							
13...	1708	86	11.0	--	1	1	2
13...	1709	86	11.0	--	1	1	3
13...	1710	86	11.0	1	2	4	8
13...	1711	86	11.0	--	1	2	8
13...	1712	86	11.0	1	3	8	29
13...	1713	86	11.0	1	3	7	25
APR							
18...	1120	9.3	11.0	1	3	5	19
18...	1125	9.3	11.0	2	4	8	16
18...	1135	9.3	11.0	2	4	7	15
18...	1150	9.3	11.0	3	6	8	12
18...	1155	9.3	11.0	--	--	--	2

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
NOV							
20...	50	65	75	86	100	--	--
20...	63	73	82	90	100	--	--
20...	28	36	48	58	76	100	--
20...	15	27	40	54	72	100	--
20...	21	31	42	53	70	100	--
20...	19	27	36	47	68	100	--
MAR							
13...	3	5	8	13	28	88	100
13...	6	11	19	28	46	68	100
13...	13	21	31	42	65	88	100
13...	20	28	36	47	68	96	100
13...	65	82	88	92	97	100	--
13...	53	63	69	77	87	94	100
APR							
18...	41	57	72	86	98	100	--
18...	27	35	46	66	90	100	--
18...	25	34	46	60	80	91	100
18...	21	31	42	53	71	96	100
18...	4	8	13	21	36	76	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
MAR								
13...	1623	1000	1120	0.250	1615	1630	2.00	92
13...	1638	1000	1120	0.250	1630	1645	2.00	89

DATE	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAR								
13...	11.0	4.8	1	30	76	91	97	100
13...	11.0	4.8	1	26	79	93	98	100

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1983, at site 800 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. 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.

AVERAGE DISCHARGE (unadjusted).--25 years, 14.3 ft^3/s, 10,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft^3/s, Jan. 4, 1982, gage height, 13.08 ft, site and datum then in use, from rating curve extended above 1,000 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	2300	235	3.61	Mar. 26	1315	*338	*4.20

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.51	.27	23	18	2.6	.73	.57	.39	.18
2	.00	.00	.00	.47	2.3	7.4	14	2.5	.98	.16	.71	.13
3	.00	.00	.00	.44	1.2	26	11	2.7	.85	.00	.86	.08
4	.00	.00	.00	.39	24	46	9.1	2.5	.85	.00	1.1	.09
5	.00	.00	.00	.18	26	35	7.7	2.6	.83	.11	.94	.08
6	.00	.00	.00	.12	4.0	16	7.7	2.3	1.1	.40	1.7	.05
7	.00	.00	.00	.32	2.8	9.8	6.8	2.1	.86	.40	1.6	.02
8	.00	.00	.00	.58	2.3	7.5	6.2	2.0	.86	.45	1.4	.05
9	.00	.00	.00	1.9	2.0	5.6	5.2	2.0	.94	.78	1.2	.06
10	.00	.00	.00	.80	1.9	10	4.9	1.9	.86	1.0	1.1	.03
11	.00	.00	.19	.71	1.6	8.3	4.6	1.8	.64	.86	1.1	.06
12	.00	.00	.00	.74	1.4	14	4.0	2.0	.29	.62	.87	.01
13	.00	.00	.00	.78	1.4	65	2.9	2.5	.20	.78	.75	.02
14	.00	.00	.00	.76	1.3	24	3.5	2.2	.20	.94	.35	.12
15	.00	.00	4.5	.67	.92	13	3.9	2.1	.23	.76	.81	.20
16	.00	.00	5.1	.53	.76	9.1	2.7	2.0	.57	.63	.77	.13
17	.00	.00	.88	.42	.74	51	2.6	1.9	.51	.51	.89	.00
18	.00	.00	.54	.43	.80	46	3.6	1.4	.31	.62	1.1	.00
19	.00	.00	.83	.52	.74	23	3.7	1.5	.23	.74	.98	.00
20	.00	.00	.75	.53	.65	57	5.3	1.4	.35	.86	.96	.00
21	.00	.00	.63	.34	.64	56	5.2	1.2	.31	.81	.83	.02
22	.00	.00	.49	.35	.66	30	4.3	1.1	.20	.87	.74	.11
23	.00	.00	.52	.10	.64	76	3.9	1.1	.46	.85	.68	.10
24	.00	.00	.57	.16	.64	155	3.9	.78	.45	.73	.66	.05
25	.00	.00	.48	.12	.62	109	3.3	.81	.57	1.0	.81	.05
26	.00	.00	.53	.25	.67	171	3.4	1.0	.36	.72	.69	.01
27	.00	.00	.42	.39	4.1	90	3.3	.84	.57	.61	.47	.00
28	.00	.00	.46	.46	3.8	52	3.2	.74	1.2	.88	.37	.00
29	.00	.00	.72	.36	---	36	3.0	.69	.94	.60	.15	.00
30	.00	.00	.31	.37	---	26	2.7	2.0	.86	.37	.05	.06
31	.00	---	.38	.19	---	21	---	1.1	---	.39	.03	---
TOTAL	0.00	0.00	18.30	14.89	88.85	1318.7	163.6	53.36	18.31	19.02	25.06	1.71
MEAN	.000	.000	.59	.48	3.17	42.5	5.45	1.72	.61	.61	.81	.057
MAX	.00	.00	5.1	1.9	26	171	18	2.7	1.2	1.0	1.7	.20
MIN	.00	.00	.00	.10	.27	5.6	2.6	.69	.20	.00	.03	.00
AC-FT	.00	.00	36	30	176	2620	325	106	36	38	50	3.4

CAL YR 1990 TOTAL 622.57 MEAN 1.71 MAX 25 MIN .00 AC-FT 1230
WTR YR 1991 TOTAL 1721.80 MEAN 4.72 MAX 171 MIN .00 AC-FT 3420

11162690 SAN FRANCISCO BAY AT PRESIDIO MILITARY RESERVATION, CA

WATER-QUALITY RECORDS

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 September 1991.
WATER TEMPERATURE: October 1990 to September 1991.

INSTRUMENTATION.--Water-quality monitor since October 1990.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. The probe is set at 4.0 ft below Mean Lower Low Water (MLLW). Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 50,900 microsiemens, May 26, June 30 and July 1.; minimum recorded, 37,900 microsiemens, Apr. 7.
WATER TEMPERATURE: Maximum recorded, 17.5 °C, many days during October, August and September; minimum recorded, 8.0 °C, several days during December and January.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	49200	46700	48700	46800	48700	47600	48600	47300
2	---	---	---	---	49300	47200	48600	46800	49100	47100	48700	47300
3	---	---	---	---	49200	47200	48600	47100	48900	47700	48800	47500
4	---	---	---	---	49200	47200	48600	47000	48900	47400	48600	47900
5	---	---	---	---	48900	46700	48500	47000	49000	47800	49100	47200
6	---	---	---	---	48500	46900	48500	47400	49100	47800	49000	46300
7	---	---	---	---	48400	46800	48600	47600	49100	47200	48500	44100
8	---	---	---	---	48200	46800	48800	47600	49400	47300	48700	44300
9	---	---	---	---	48100	46400	48900	47600	49400	47400	48400	44100
10	---	---	---	---	48000	46900	49000	47500	49200	47600	48300	44600
11	---	---	---	---	47800	46500	49000	47300	49400	47400	47500	44400
12	---	---	---	---	47700	46600	48900	47400	49400	47800	47600	45300
13	---	---	---	---	47800	46500	48800	47100	49100	47300	47600	45000
14	---	---	---	---	47900	46600	48800	46800	49000	47600	47700	45200
15	---	---	---	---	47700	46400	49200	47100	48900	47800	48200	45000
16	---	---	---	---	47700	46300	48800	47400	49800	47600	47900	45700
17	---	---	---	---	47800	46100	48900	47200	49200	47800	47600	45500
18	---	---	---	---	47800	46600	48900	47400	49400	47900	47900	45300
19	---	---	---	---	47800	46700	48600	47400	49400	47700	47300	45100
20	---	---	---	---	48000	46600	48700	47600	49800	47500	47200	45100
21	---	---	---	---	48200	46600	48700	47500	49200	47800	47000	44200
22	---	---	---	---	48000	46500	49100	47600	49400	47900	47200	43500
23	---	---	---	---	47900	46200	49000	47700	49700	47700	47500	44000
24	---	---	---	---	47900	46900	49100	47500	49300	47400	47200	43400
25	---	---	---	---	48200	46900	49000	47500	49100	47500	47400	43400
26	---	---	---	---	48100	46700	49000	47500	49100	47500	46600	42900
27	---	---	---	---	48300	46800	49100	47300	48800	47300	46000	41900
28	---	---	---	---	48400	46900	49200	47600	49500	47800	45900	42200
29	---	---	49400	47900	48300	46300	49300	47400	---	---	45300	41600
30	---	---	49500	46800	48400	46700	49100	47500	---	---	45400	40900
31	---	---	---	---	48500	46600	48800	47600	---	---	45200	40400
MONTH	---	---	---	---	49300	46100	49300	46800	49800	47100	49100	40400

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	45300	40000	49100	47100	50400	48700	50900	49300	50000	49200	50200	48900
2	45700	38300	49300	47200	50500	48800	50800	49100	49900	49200	50000	48800
3	45700	38200	49400	47300	50400	48900	50600	49300	49800	48900	50500	49000
4	45700	38900	49500	47100	50300	48800	50700	49700	49900	49000	50500	49300
5	46600	38700	49400	46800	50100	48500	50600	49200	49900	48900	50500	49400
6	47000	38500	49500	46300	49900	48500	50700	49600	49900	48600	50300	49200
7	45900	37900	50000	46900	50000	48900	50600	49100	49800	48600	50300	49400
8	46900	38100	49900	47200	50000	48800	50600	49200	49900	48500	50200	49300
9	47300	38600	50200	47900	49800	48500	50700	49100	49600	48400	50400	49400
10	46800	40200	50100	47800	49900	48200	50500	49100	49400	48300	50200	49500
11	48600	42400	50300	48200	50200	47900	50700	49100	49300	48200	50300	49400
12	48600	43800	50200	48000	50500	48700	50700	49200	49200	48000	50300	49400
13	48300	44900	50200	48200	50500	48200	50500	48600	48700	47900	50400	49500
14	48100	45100	50100	48000	50700	48600	50600	49100	48800	48000	50300	49300
15	48700	44900	50200	47900	50700	48800	50600	48700	48700	47600	50300	49100
16	48700	45600	50300	47500	50600	49000	50100	48700	48900	48000	50300	49500
17	48700	45500	50200	48300	50600	49000	50200	48900	48900	47900	50300	49300
18	48800	45500	50700	48400	50600	49400	50400	48900	49000	47800	50400	49400
19	48600	45300	50700	48500	50400	49300	50500	49300	49000	47900	50300	49500
20	48700	46100	50700	48800	50500	49400	50600	49500	49000	47800	50500	49600
21	48800	45800	50500	49100	50500	49400	50600	49400	49000	47900	50400	49600
22	48700	45700	50300	48400	50600	49400	50400	49300	49100	47800	50300	49400
23	48500	46200	50300	49100	50600	49300	50400	49200	49100	47900	50300	49200
24	48300	46500	50300	49000	50500	49300	50100	49000	49200	48000	50200	49000
25	48000	46400	50400	49000	50500	49100	50200	48900	49200	48100	50200	49100
26	48400	46400	50900	48900	50400	49100	50000	48800	49300	48400	50000	49100
27	48600	46300	50600	48800	50300	48500	50300	49100	49400	48500	50100	49100
28	48900	46500	50500	48800	50700	49400	50200	49100	49600	48700	50000	48900
29	49100	46600	50500	48700	50800	49300	50200	49100	49800	48800	50100	49300
30	49200	46700	50200	48700	50900	49300	50200	48600	50100	48900	50100	48900
31	---	---	50200	48700	---	---	50100	49200	50100	48900	---	---
MONTH	49200	37900	50900	46300	50900	47900	50900	48600	50100	47600	50500	48800

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	16.0	15.0	14.0	12.0	11.0	8.5	8.0	10.5	10.0	12.5	12.0
2	17.0	16.0	15.0	13.5	11.5	11.0	8.5	8.0	10.5	10.5	12.5	12.0
3	17.0	16.0	15.0	13.5	11.5	11.0	8.5	8.0	11.0	10.5	12.5	12.0
4	17.5	16.5	15.0	13.0	11.5	11.0	8.5	8.0	11.0	10.5	12.5	12.0
5	17.5	16.5	14.5	13.0	11.5	11.0	8.5	8.0	11.0	10.5	13.0	12.0
6	17.5	16.0	14.5	13.0	11.5	11.0	8.5	8.0	11.5	11.0	13.0	12.0
7	17.5	16.0	14.5	12.5	11.5	11.0	8.5	8.0	11.5	11.0	13.0	12.0
8	17.5	15.5	14.0	12.5	11.5	11.0	8.5	8.0	11.5	11.0	13.0	12.0
9	17.0	15.5	13.5	12.5	11.5	11.0	9.0	8.5	11.5	11.0	12.5	12.0
10	17.0	15.5	13.5	12.5	11.0	11.0	9.0	8.5	12.0	11.0	12.5	12.0
11	17.0	15.5	13.0	12.5	11.5	11.0	9.0	8.5	12.0	11.5	12.5	11.5
12	16.5	15.5	13.0	12.5	11.5	11.0	9.5	8.5	12.0	11.5	12.5	12.0
13	16.5	15.5	13.0	12.5	11.0	11.0	9.5	9.0	12.0	11.5	12.5	12.0
14	16.5	15.5	13.5	12.5	11.0	10.5	9.5	9.0	12.0	11.5	12.5	12.0
15	16.5	15.5	---	---	11.0	10.5	10.0	9.0	12.0	12.0	12.0	11.5
16	16.0	15.0	---	---	11.0	10.5	10.0	9.5	12.0	11.5	12.0	11.5
17	16.0	15.0	---	---	11.0	10.5	10.0	9.5	12.5	11.5	11.5	11.5
18	16.0	15.0	---	---	11.0	10.5	10.0	9.5	12.5	11.5	12.0	11.5
19	16.0	15.0	---	---	10.5	10.0	10.0	9.5	12.5	11.5	12.0	11.5
20	16.0	15.0	---	---	10.5	10.0	10.0	10.0	13.0	11.5	12.0	11.5
21	16.0	14.5	---	---	10.0	9.5	10.0	9.5	12.5	12.0	12.0	11.5
22	16.0	14.5	---	---	10.0	9.0	10.0	9.5	13.0	12.0	12.5	11.5
23	15.5	14.5	---	---	9.5	8.5	10.5	10.0	12.5	12.0	12.0	11.5
24	15.5	14.5	---	---	9.0	8.5	10.5	10.0	13.0	12.0	11.5	11.5
25	15.5	14.0	---	---	9.0	8.5	10.5	10.0	12.5	12.0	12.5	11.5
26	15.5	14.0	---	---	9.0	8.5	10.5	10.0	12.5	12.0	12.0	11.5
27	15.5	14.0	---	---	9.0	8.5	10.5	10.0	12.5	12.0	11.5	11.0
28	15.5	14.0	---	---	9.0	8.5	10.5	10.0	12.5	12.0	12.0	11.5
29	15.0	14.0	11.5	11.0	9.0	8.0	10.5	10.0	---	---	12.0	11.5
30	15.0	14.0	12.0	11.0	8.5	8.0	10.5	10.0	---	---	12.0	11.5
31	15.0	14.0	---	---	8.5	8.0	10.5	10.0	---	---	12.0	11.5
MONTH	17.5	14.0	---	---	12.0	8.0	10.5	8.0	13.0	10.0	13.0	11.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	12.0	13.0	11.5	14.0	12.0	15.5	13.5	16.5	16.0	17.0	15.5
2	13.0	12.0	13.0	11.5	14.0	12.0	15.5	14.0	16.5	16.0	17.0	15.0
3	13.0	12.0	13.0	11.5	14.0	12.0	15.5	14.0	16.5	15.5	17.0	15.5
4	13.5	12.0	13.5	11.5	14.0	12.0	15.5	14.0	16.5	15.5	17.5	15.5
5	13.5	12.0	13.5	11.5	14.0	12.5	15.5	14.5	16.5	15.5	17.0	15.5
6	14.0	11.5	14.0	11.5	14.0	12.5	15.5	14.5	16.5	15.5	17.0	15.5
7	14.0	12.0	14.0	11.5	14.0	12.5	15.5	14.5	17.0	15.5	17.0	15.5
8	14.0	11.5	14.0	11.5	14.0	13.0	15.5	14.5	17.0	15.5	17.0	15.5
9	14.0	11.0	13.5	11.0	14.0	13.0	16.0	14.5	17.5	16.0	16.5	15.5
10	13.0	11.5	13.0	11.0	14.5	13.0	16.0	14.5	17.5	16.0	16.5	15.5
11	13.0	10.0	12.5	11.0	15.0	13.0	16.0	14.5	17.5	16.0	16.5	15.5
12	11.5	10.0	12.5	11.0	15.0	13.0	16.0	14.5	17.5	16.0	16.5	15.5
13	11.5	10.5	12.5	11.0	15.5	13.0	16.0	14.5	17.5	16.5	16.5	15.5
14	12.0	10.5	13.0	11.5	15.5	13.0	16.5	15.0	17.5	16.5	16.5	15.0
15	12.0	10.5	13.5	11.5	15.5	13.0	16.0	15.0	17.0	16.5	16.0	15.0
16	12.0	10.5	13.5	11.5	15.5	13.5	16.0	15.0	17.5	16.5	16.0	15.0
17	12.0	10.5	13.5	11.5	15.5	13.5	16.0	15.0	17.5	16.5	16.0	15.0
18	12.5	10.5	13.5	11.5	15.0	13.5	16.0	15.0	17.5	16.0	16.0	15.0
19	12.5	11.0	13.5	11.0	15.0	13.5	16.0	15.0	17.5	16.0	16.0	15.0
20	12.5	11.0	13.0	11.5	15.0	13.5	16.0	14.5	17.5	16.0	16.0	15.0
21	13.5	11.0	13.0	11.5	15.0	13.0	16.0	14.5	17.5	16.0	16.0	15.0
22	13.0	11.5	13.0	11.5	14.5	13.0	16.0	15.0	17.5	16.0	16.0	15.5
23	12.5	11.5	13.0	12.0	14.5	13.0	16.0	15.0	17.5	15.5	16.5	15.5
24	12.5	11.5	13.5	12.0	14.5	13.0	16.5	15.0	17.0	15.5	16.5	15.5
25	12.5	12.0	13.0	12.0	14.5	13.0	16.5	15.0	17.0	15.5	16.5	14.5
26	12.5	11.5	13.5	12.0	14.5	13.0	16.5	15.0	16.5	15.5	16.5	15.5
27	12.5	11.5	13.5	12.0	14.5	13.0	16.5	15.0	16.5	15.5	16.5	15.5
28	13.0	11.5	13.5	12.0	14.5	13.0	16.5	15.5	17.0	15.5	16.5	15.5
29	13.0	11.5	14.0	12.0	14.5	13.0	16.5	15.5	17.0	15.5	16.5	15.5
30	13.0	11.5	14.0	12.0	15.0	13.0	16.5	15.5	16.5	15.5	16.5	15.5
31	---	---	14.0	12.0	---	---	16.5	15.5	17.0	15.5	---	---
MONTH	14.0	10.0	14.0	11.0	15.5	12.0	16.5	13.5	17.5	15.5	17.5	14.5

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

WATER-QUALITY RECORDS

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 recording instruments. Upper probe is set at 8.8 ft below Mean Lower Low Water (MLLW). Lower probe is set at 39.3 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,700 microsiemens, Aug. 13, 1991; minimum recorded, 33,100 microsiemens, Apr. 3, 1991.
(Lower probe) Maximum recorded, 50,300 microsiemens, Sept. 6, 9-12, 1991; minimum recorded, 34,000 microsiemens, Apr. 3, 1991.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 19.5 °C, on many days in August and September 1990, Oct. 4, 1990; minimum recorded, 7.5 °C, Dec. 26, 30, 1990, Jan. 1-3, 1991.
(Lower probe) Maximum recorded, 19.5 °C, on many days in August and September 1990; minimum recorded, 7.5 °C, Jan. 2, 3, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,700 microsiemens, Aug. 13; minimum recorded, 33,100 microsiemens, Apr. 3.
(Lower probe) Maximum recorded, 50,300 microsiemens, Sept. 6, 9-12; minimum recorded, 34,000 microsiemens, Apr. 3.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 19.5 °C, Oct. 4; minimum recorded, 7.5 °C, Dec. 26, 30, Jan. 1-3.
(Lower probe) Maximum recorded, 19.0 °C, Oct. 4, 5; minimum recorded, 7.5 °C, Jan. 2, 3.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48800	48100	50000	49300	48600	46400	47900	45700	47700	46300	48300	46800
2	48900	48000	50100	49400	48700	46200	47600	45800	47700	46300	48200	46800
3	49100	48100	50100	49200	48800	47400	47500	45700	47800	46500	48400	46900
4	49100	48400	50300	49200	48600	47200	47400	45800	47700	46400	48400	47000
5	49300	48400	50100	49100	48600	47400	47300	46000	47700	45800	48300	44700
6	49300	48300	49900	47400	48400	47300	47400	46100	47500	45400	47000	43400
7	49600	48600	49900	49200	48300	47500	47300	46200	46900	45100	46500	43000
8	49600	48700	49800	49200	48300	47500	47300	45200	47800	45100	46600	40200
9	49600	47700	49800	49200	48300	47500	47600	45200	47800	44900	46800	40700
10	49500	47900	49600	48900	48300	47400	47600	44900	47800	46000	46600	41800
11	49600	48700	49600	48800	48300	47300	47500	44800	47800	46100	45500	42300
12	49600	48700	49400	48900	48300	47400	47600	44800	47700	46200	46800	43200
13	49500	48800	49500	48800	48400	46400	47600	44800	47700	46200	46400	43300
14	49500	48800	49400	48700	48400	47200	47600	45100	47800	46300	46600	43600
15	49500	48900	49300	48600	48400	47000	47500	45200	47800	46400	46900	44000
16	49500	49000	49100	48500	48300	45800	47500	45900	47700	46500	47000	43800
17	49600	49000	49200	48400	48300	46400	47700	45900	47900	46600	47000	44200
18	49700	48900	49100	48200	48200	47000	47500	46100	47900	46600	47000	42700
19	49700	49100	49000	48300	48200	46900	47600	46200	48100	46200	46900	42500
20	49800	49200	49000	48300	48000	46900	47600	46300	48200	46200	47000	42100
21	50200	49300	49000	46800	47800	46800	47500	45500	48200	45700	46100	41500
22	49900	49300	48800	47900	47800	46700	47500	45600	48300	46600	45300	41200
23	49900	49300	48500	46700	47600	44900	47500	45800	48200	46700	---	---
24	49800	48500	48600	47200	47400	44100	47700	45200	48300	46700	---	---
25	49600	48100	48600	46300	47500	44200	47800	45800	48300	46600	---	---
26	49600	48100	48200	47700	47500	44100	47900	46200	48200	46600	---	---
27	49700	47800	48300	46200	47500	44700	48000	46200	48400	46300	---	---
28	49900	47600	48400	47300	47700	45200	47700	46200	48400	46600	44200	36400
29	49700	48500	48500	47600	47600	44800	47800	46100	---	---	44200	35100
30	50100	49200	48600	47600	47600	44600	47800	46100	---	---	43800	33300
31	49900	49300	---	---	47700	45400	47700	46100	---	---	42800	34900
MONTH	50200	47600	50300	46200	48800	44100	48000	44800	48400	44900	---	---

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	42700	---	48200	45200	49200	47500	49800	48600	50000	49300	50400	48900
2	42700	33400	48200	45400	49200	47600	49800	48100	50100	49000	50400	48900
3	42600	33100	48200	45500	49200	47800	49900	48000	50000	48600	50600	49500
4	41400	33300	47600	45500	49500	47700	49900	48600	50000	48500	50300	49300
5	42100	34700	47400	45000	49500	47500	50000	48400	50100	49100	49900	49100
6	42400	35500	47400	44700	49400	48100	50100	48700	50100	49100	50100	49000
7	40800	35500	47000	45000	49500	47800	50200	48600	50000	49100	50000	49300
8	43000	35300	47800	45600	49700	47700	50200	48500	50000	48900	50300	49300
9	43500	36800	48300	45900	49800	47700	50100	48600	50000	48900	50100	49400
10	42900	39100	48700	45700	49900	47600	---	---	50000	48900	50100	49500
11	43800	39000	48700	45700	50100	47700	50100	48800	49800	49000	50100	49500
12	45200	40800	48800	45700	50100	47600	50100	48500	50400	49000	50400	49600
13	46900	41400	48900	45600	50100	47600	50100	48900	50700	49300	50000	49400
14	46900	42200	48900	45800	50100	48000	49900	48900	50000	49400	50300	49500
15	47200	42300	49100	45700	50000	47900	49900	48900	50000	49400	50100	48700
16	47600	42400	49100	45900	49800	48200	50100	49100	50000	49200	50100	48700
17	47700	43000	49000	46300	49600	48000	50000	49100	50200	48500	50100	48700
18	47800	43400	48800	45600	49700	48600	49800	49100	50000	48100	50000	48600
19	47500	43900	48800	46400	49600	48700	50000	49100	50000	48200	50000	49200
20	47000	43700	48900	47100	49700	48300	50000	48900	50000	48100	50100	49200
21	46900	43400	48900	47300	49700	48300	49900	49000	50000	49000	50100	49300
22	47000	44600	48900	47400	49700	48200	49900	49000	50000	49100	49900	49300
23	47200	44900	49000	47200	49700	48500	49900	48800	50100	49000	49900	49300
24	47200	45000	49000	47200	49500	48100	49800	49000	50000	49100	49800	49200
25	47700	45000	49100	46800	49400	48200	50100	---	49900	49100	49900	49200
26	47500	44700	49300	46400	49800	48100	50100	49000	49800	49100	49900	49400
27	47900	44100	49400	46800	49800	48300	50100	49000	49800	49200	50000	49400
28	48300	44200	49300	46900	49800	48400	50000	49100	50000	49300	50300	49300
29	48500	44600	49200	47300	49800	48500	50200	49000	50600	49400	50000	49300
30	48300	45400	49200	47100	49800	48400	50100	49200	50500	49500	50100	49300
31	---	---	49100	47100	---	---	50000	49300	50300	49600	---	---
MONTH	48500	---	49400	44700	50100	47500	---	---	50700	48100	50600	48600

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	49000	48300	49600	48800	48500	46200	47800	45500	48100	46200	48700	47000
2	49200	48400	49700	47900	48600	46000	47800	45500	47700	46200	48500	47000
3	49400	48600	49700	48800	48400	46900	47500	45600	47800	46400	48700	47100
4	49500	48600	49900	48800	48300	46600	47600	45700	48000	46500	49000	47200
5	49400	48600	49700	48600	48100	46700	47200	45800	47800	45900	48600	44800
6	49600	48200	49500	48800	47800	46600	47200	46000	47600	45400	47500	44100
7	49600	48800	49600	48800	47500	46600	47400	46100	47500	45000	46800	43400
8	49700	48900	49600	48900	47500	46600	47600	45400	47700	45200	46800	40600
9	49800	48100	49500	48800	47500	46500	47800	45500	47700	45200	47200	40800
10	49700	48300	49400	48800	47300	46300	47700	45200	47800	46000	47200	42000
11	49600	48700	49400	48800	47200	46000	47900	45200	47900	46100	46500	42700
12	49600	48800	49400	48700	47100	46100	47900	45200	47800	46100	46900	43500
13	49400	48800	49500	48800	47200	44900	47900	45300	47900	46200	46700	43800
14	49600	48800	49400	48800	47200	45900	48000	45600	48400	46400	46900	43900
15	49700	48900	49500	48800	47300	46100	48100	45700	48400	46600	47200	44300
16	49700	48700	49400	48700	47300	44700	48300	46400	48300	46800	47600	44200
17	49800	48500	49600	48700	47500	45900	48300	46400	48400	46900	47600	44800
18	49800	48500	49600	48700	47500	46100	48000	46000	48500	46900	47400	43400
19	49600	49000	49600	48900	47400	46000	47600	46000	48600	46800	47800	43300
20	49600	49000	49600	48800	47300	46000	47700	46200	48500	46600	47500	42600
21	49700	49000	49600	47300	47200	45900	47500	45600	48600	46200	47400	42400
22	49700	49000	49400	48300	47200	45900	47400	45500	48800	46900	46700	42100
23	49700	49000	48900	47000	47000	44200	47600	45900	48800	47000	---	---
24	49600	48400	48900	47500	46800	43900	47800	45400	48700	47100	---	---
25	49500	47800	48800	46800	47000	43500	47900	45700	48600	46900	---	---
26	49500	47800	48600	47800	47100	43300	48000	46100	48600	46800	---	---
27	49300	47500	48300	46300	47200	44500	47900	46100	48700	46800	---	---
28	49400	47500	48400	47600	47300	44900	48000	46100	48700	46800	45600	37800
29	49300	48100	48600	47400	47600	44600	48100	46100	---	---	45200	36500
30	49400	48500	48600	47300	47500	44400	48100	46100	---	---	45200	35800
31	49500	48800	---	---	47700	45300	48000	46100	---	---	45000	36500
MONTH	49800	47500	49900	46300	48600	43300	48300	45200	48800	45000	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	45100	37200	48500	45200	49200	47500	49800	48400	49500	48800	50100	48500
2	43400	34600	48400	45400	49200	47600	49800	48000	49400	48600	50100	48500
3	43100	34000	48100	45400	49300	47800	49800	47800	49400	48300	50000	49100
4	43800	34400	47900	45400	49300	47400	49800	48300	49500	48000	49900	49100
5	44100	35200	47800	44900	49300	47300	49800	48200	49500	48500	49900	49000
6	45000	35700	47600	44600	49300	47700	49900	48400	49400	48500	50300	49000
7	45400	36100	48000	44900	49400	47600	49900	48300	49400	48400	50200	49300
8	46100	36800	48100	45400	49400	47600	49900	48100	49400	48200	50200	49400
9	46100	37700	48100	45800	49500	47400	49800	48300	49200	48300	50300	49600
10	44700	39200	48600	45400	49600	47300	49900	48100	49200	48300	50300	49700
11	47300	39700	48600	45400	49700	47400	49900	48400	49300	48300	50300	49600
12	47300	40900	48600	45400	49900	47300	49800	48000	49200	48400	50300	49600
13	47500	41500	48800	45300	49800	47400	49700	48400	49500	48600	50100	49500
14	47600	42500	48700	45500	49900	47700	49500	48400	49300	48500	50200	49500
15	47800	42500	48900	45400	49700	47600	49400	48400	49300	48600	50100	48900
16	47800	42600	48900	45700	49500	47900	49400	48500	49400	48500	50100	48700
17	47900	43100	48900	46000	49400	47700	49400	48500	49400	47800	50100	48700
18	47900	43500	48800	45500	49300	48200	49300	48500	49400	47600	49900	48500
19	48100	43900	48700	46300	49400	48200	49400	48500	49400	47600	49800	49100
20	47700	43700	48800	46900	49400	47900	49300	48200	49400	47600	49700	49200
21	47300	43900	48800	47200	49500	47600	49200	48400	49400	48500	49800	49100
22	47300	44700	48900	47300	49500	48000	49200	48300	49600	48500	49700	49100
23	47400	45000	49000	47100	49600	48200	49200	48200	49600	48500	49800	49000
24	47500	45100	49000	47100	49400	48000	49200	48100	49600	48600	49800	49000
25	48000	45200	49100	46700	49400	48000	49500	47900	49600	48700	49900	49100
26	47900	45000	49300	46500	49700	48000	49600	48300	49700	48800	49800	49200
27	48100	44200	49400	46800	49800	48000	49600	48500	49700	48400	49800	49200
28	48400	44400	49300	46800	49700	48200	49500	48500	49800	49000	49900	49100
29	48700	44700	49300	47300	49800	48300	49700	48500	49800	48900	49800	49000
30	48400	45500	49300	47200	49600	48200	49600	48700	49800	49000	49700	48800
31	---	---	49100	47100	---	---	49600	48700	49900	49100	---	---
MONTH	48700	34000	49400	44600	49900	47300	49900	47800	49900	47600	50300	48500

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	16.5	16.5	14.0	12.5	11.5	8.5	7.5	10.5	10.0	12.5	12.0
2	18.5	16.5	16.5	14.0	12.0	11.5	8.5	7.5	10.5	10.5	12.5	12.0
3	18.5	16.5	16.0	13.5	12.0	11.0	8.5	7.5	10.5	10.5	12.5	12.0
4	19.5	16.5	16.0	13.5	12.0	11.0	8.5	8.0	10.5	10.5	12.5	12.0
5	19.0	16.5	15.5	13.5	12.0	11.0	8.5	8.0	11.0	10.5	13.0	12.0
6	19.0	16.5	15.0	13.5	12.0	11.0	8.5	8.0	11.0	10.5	13.5	12.5
7	18.5	16.5	15.0	13.0	11.5	11.0	8.5	8.0	11.0	10.5	13.0	12.5
8	18.5	16.0	15.0	13.0	11.5	11.0	8.5	8.0	11.0	11.0	13.0	12.5
9	18.5	16.0	14.5	13.0	11.5	11.0	8.5	8.0	11.0	11.0	13.0	12.5
10	18.5	16.0	14.5	13.0	11.5	11.0	9.0	8.0	11.5	11.0	13.0	12.5
11	18.0	16.0	14.5	12.5	11.5	11.0	9.0	8.5	11.5	11.0	12.5	12.0
12	18.0	16.0	14.5	13.0	11.5	11.0	9.0	8.5	11.5	11.5	12.5	12.0
13	18.0	16.0	14.5	12.5	11.5	11.0	9.0	8.5	11.5	11.5	12.5	12.0
14	17.5	16.0	14.5	12.5	11.5	11.0	9.5	8.5	12.0	11.5	12.5	12.0
15	17.5	15.5	14.5	12.5	11.0	11.0	9.5	9.0	12.0	12.0	12.5	12.0
16	17.5	15.5	14.0	12.5	11.0	10.5	9.5	9.0	12.5	12.0	12.5	11.5
17	17.5	15.5	14.5	12.5	11.0	10.5	10.0	9.0	12.5	12.0	12.0	11.5
18	17.5	15.0	14.0	12.5	11.0	10.5	10.0	9.5	12.5	12.0	12.0	11.5
19	17.5	15.0	14.0	12.5	11.0	10.5	10.0	9.5	12.5	12.0	12.0	11.5
20	17.5	15.0	13.5	12.0	10.5	10.0	10.0	9.5	13.0	12.0	12.0	11.5
21	17.5	15.0	13.5	12.0	10.0	10.0	10.0	9.5	13.0	12.0	12.0	11.5
22	17.0	15.0	13.5	12.0	10.0	9.5	10.0	9.5	13.0	12.0	12.0	11.5
23	17.0	15.0	13.0	12.5	9.5	8.5	10.0	9.5	13.0	12.0	11.5	11.5
24	17.0	15.0	13.0	12.0	9.0	8.0	10.0	10.0	13.0	12.0	11.5	11.5
25	17.0	15.0	13.0	12.0	9.0	8.0	10.0	10.0	13.0	12.0	11.5	11.0
26	17.0	15.0	13.0	12.0	9.0	7.5	10.0	10.0	13.0	12.0	11.5	11.0
27	17.0	15.0	13.0	12.0	8.5	8.0	10.5	10.0	12.5	12.0	11.5	11.0
28	17.0	14.5	12.5	11.5	9.0	8.0	10.0	10.0	12.5	12.0	12.0	11.5
29	16.5	14.5	12.5	11.5	8.5	8.0	10.5	10.0	---	---	12.0	11.5
30	16.5	14.5	12.5	11.5	8.5	7.5	10.5	10.0	---	---	12.5	11.5
31	16.5	14.0	---	---	8.5	8.0	10.5	10.0	---	---	12.5	12.0
MONTH	19.5	14.0	16.5	11.5	12.5	7.5	10.5	7.5	13.0	10.0	13.5	11.0

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

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	16.5	16.5	14.0	12.5	11.5	8.5	8.0	10.5	10.0	13.0	12.0
2	18.5	16.5	16.5	13.5	12.5	11.5	8.5	7.5	10.5	10.5	12.5	12.0
3	18.5	16.0	16.0	13.5	12.0	11.0	8.5	7.5	11.0	10.5	12.5	12.0
4	19.0	16.0	16.0	13.0	12.0	11.0	8.5	8.0	11.0	10.5	13.0	12.0
5	19.0	16.0	16.0	13.0	12.0	11.0	8.5	8.0	11.0	10.5	13.0	12.5
6	18.5	16.0	15.5	13.5	12.0	11.0	8.5	8.0	11.0	11.0	13.0	12.5
7	18.5	16.0	15.0	13.0	11.5	11.0	8.5	8.0	11.0	11.0	13.0	12.5
8	18.5	16.0	15.0	13.0	11.5	11.0	8.5	8.0	11.0	11.0	13.0	12.5
9	18.5	15.5	15.0	13.0	11.5	11.0	9.0	8.0	11.5	11.0	13.0	12.5
10	18.5	16.0	14.5	13.0	11.5	11.0	9.0	8.0	11.5	11.0	13.0	12.5
11	18.0	16.0	14.5	12.5	11.5	11.0	9.0	8.5	11.5	11.5	12.5	12.0
12	18.0	16.0	14.5	12.5	11.5	11.0	9.0	8.5	11.5	11.5	12.5	12.0
13	17.5	16.0	14.5	12.5	11.5	11.0	9.0	8.5	12.0	11.5	12.5	12.0
14	17.5	15.5	14.5	12.5	11.5	11.0	9.5	9.0	12.0	11.5	12.5	12.0
15	17.5	15.5	14.5	12.5	11.5	11.0	9.5	9.0	12.0	12.0	12.5	12.0
16	17.5	15.0	14.0	12.5	11.0	10.5	9.5	9.0	12.5	12.0	12.5	11.5
17	17.5	15.0	14.0	12.5	11.0	10.5	10.0	9.0	12.5	12.0	12.0	11.5
18	17.5	15.0	14.0	12.5	11.0	10.5	10.0	9.5	12.5	12.0	12.0	11.5
19	17.5	15.0	14.0	12.5	11.0	10.5	10.0	9.5	12.5	12.0	12.0	11.5
20	17.5	15.0	13.5	12.5	10.5	10.0	10.0	9.5	13.0	12.0	12.0	11.5
21	17.5	15.0	13.5	12.5	10.0	10.0	10.0	9.5	12.5	12.0	12.0	11.5
22	17.5	15.0	13.5	12.5	10.0	9.5	10.0	9.5	12.5	12.0	12.0	11.5
23	17.0	15.0	13.5	12.5	9.5	8.5	10.0	9.5	12.5	12.0	11.5	11.5
24	17.0	15.0	13.0	12.0	9.0	8.0	10.0	10.0	12.5	12.0	11.5	11.5
25	17.0	15.0	13.0	12.0	9.0	8.0	10.0	10.0	13.0	12.0	11.5	11.0
26	17.0	15.0	13.0	12.0	9.0	8.0	10.5	10.0	13.0	12.0	11.5	11.0
27	17.0	14.5	13.0	12.0	9.0	8.0	10.5	10.0	13.0	12.0	11.5	11.0
28	17.0	14.5	12.5	11.5	9.0	8.0	10.5	10.0	13.0	12.0	12.0	11.5
29	16.5	14.0	12.5	11.5	9.0	8.0	10.5	10.0	---	---	12.0	11.5
30	16.5	14.0	12.5	11.5	8.5	8.0	10.5	10.0	---	---	12.5	11.5
31	16.5	14.0	---	---	8.5	8.0	10.5	10.0	---	---	12.5	11.5
MONTH	19.0	14.0	16.5	11.5	12.5	8.0	10.5	7.5	13.0	10.0	13.0	11.0

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

11162720 COLMA CREEK AT SOUTH SAN FRANCISCO, CA

LOCATION.--Lat 37°39'14", long 122°25'31", in Buri Buri Grant, San Mateo County, Hydrologic Unit 18050004, on left bank in Orange Memorial Park, 1.0 mi southwest of South San Francisco Post Office.

DRAINAGE AREA.--10.8 mi^2.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.53 ft above National Geodetic Vertical Datum of 1929. Recording raingages at Skyline College, elevation 700 ft at site 2.9 mi southwest of gaging station, and on San Bruno Mountain, elevation 930 ft at site 2.7 mi northwest of gaging station.

REMARKS.--Records fair. Low flow affected by return flow from urban irrigation. Channel lowered in 1986.

AVERAGE DISCHARGE.--28 years, 7.55 ft^3/s, 5,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,560 ft^3/s, Dec. 8, 1987, gage height, 7.53 ft, from rating curve extended above 1,200 ft^3/s on basis of step-backwater computation; no flow Oct. 5, 26, 1963, and many days in August 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1835	*1,800	*4.85	Mar. 12	2215	1,290	4.09
Mar. 10	1110	1,270	4.06				

Minimum daily, 0.34 ft^3/s, July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.6	e3.5	3.5	4.2	3.6	e42	3.7	3.5	.95	1.9	e.75	.82
2	e1.3	e1.2	2.5	5.0	72	11	1.4	1.6	1.1	1.3	.63	.54
3	e1.2	e1.2	3.7	4.6	1.2	48	3.5	1.2	1.2	2.0	.81	.96
4	e1.1	e1.2	3.1	4.7	123	52	2.3	1.7	2.8	1.6	.72	.57
5	e1.1	e1.1	4.2	3.8	9.9	5.4	.82	2.2	2.5	1.8	1.6	.83
6	e1.1	e1.1	2.6	5.2	3.2	5.8	6.6	2.0	3.2	1.7	3.2	.99
7	e1.0	e1.1	3.7	7.0	3.0	3.6	4.0	1.9	1.5	2.6	.86	1.1
8	e1.1	e1.1	2.3	6.5	2.0	1.8	3.0	5.1	1.5	3.2	.75	.47
9	e1.1	e1.1	8.5	33	3.5	3.9	3.3	3.2	2.2	4.2	.95	.82
10	e1.1	e1.1	43	4.2	2.7	69	4.7	2.9	1.7	4.5	1.0	.61
11	e1.1	e1.1	13	5.3	.94	7.7	3.4	2.3	1.9	4.6	.80	.78
12	e1.1	e1.1	3.0	2.5	1.7	57	3.7	2.0	2.7	4.0	.83	.83
13	e1.1	e1.1	3.9	.79	2.2	21	1.8	12	2.8	4.5	7.7	1.1
14	e1.1	e3.2	4.0	.79	1.6	9.1	2.6	1.4	2.6	3.8	3.7	1.8
15	e1.1	2.9	107	1.6	1.0	6.8	3.7	2.9	3.4	2.7	1.4	1.3
16	e1.1	3.3	20	2.7	.80	4.0	5.5	2.0	2.9	2.5	1.0	1.0
17	e1.1	2.7	4.0	3.6	1.6	71	4.6	2.6	4.4	2.5	.67	1.3
18	e1.1	.77	9.4	3.2	2.6	9.7	e4.4	4.3	4.8	.97	.72	1.6
19	e1.1	2.5	20	2.5	2.4	41	4.5	3.3	4.6	.76	.51	1.3
20	e1.1	4.6	3.2	2.1	2.9	24	40	2.2	2.1	1.0	.63	2.2
21	e1.1	9.1	10	2.3	2.6	25	26	1.4	3.3	1.1	.77	1.7
22	e1.1	3.3	10	2.6	1.2	8.3	1.4	1.1	2.7	1.6	.77	1.1
23	e1.0	4.1	12	2.3	1.9	72	1.5	3.6	3.7	.99	.52	1.5
24	e1.0	1.5	10	2.9	2.7	e92	1.3	2.1	4.3	1.7	.52	1.2
25	e1.0	17	8.2	3.8	3.6	e30	2.2	2.6	3.7	.90	.52	3.9
26	e1.0	7.3	8.5	5.1	2.8	e47	1.9	4.1	3.2	1.6	.90	1.2
27	e1.0	2.7	7.7	6.4	92	12	2.7	3.7	4.4	.52	.70	1.5
28	e1.0	2.0	4.7	4.9	e59	3.4	3.5	3.0	6.2	e.43	.98	.76
29	e1.1	3.9	6.5	4.0	---	5.5	2.2	4.7	2.2	.34	.72	.82
30	e1.1	3.5	8.0	4.1	---	4.6	1.8	28	1.5	.67	1.2	.96
31	e27	---	7.8	4.1	---	4.1	---	3.0	---	.87	1.3	---
TOTAL	60.1	91.37	358.0	145.78	407.64	797.7	152.02	117.6	86.05	62.85	38.13	35.56
MEAN	1.94	3.05	11.5	4.70	14.6	25.7	5.07	3.79	2.87	2.03	1.23	1.19
MAX	27	17	107	33	123	92	40	28	6.2	4.6	7.7	3.9
MIN	1.0	.77	2.3	.79	.80	1.8	.82	1.1	.95	.34	.51	.47
AC-FT	119	181	710	289	809	1580	302	233	171	125	76	71
a	0.27	0.20	1.85	0.33	2.29	4.30	0.88	0.34	0.18	0.11	0.55	0.12
b	0.30	0.23	2.06	0.28	4.12	7.44	0.66	0.42	0.16	0.06	0.49	0.01

CAL YR 1990 TOTAL 1779.77 MEAN 4.88 MAX 123 MIN .11 AC-FT 3530
WTR YR 1991 TOTAL 2352.80 MEAN 6.45 MAX 123 MIN .34 AC-FT 4670

e Estimated.
a Precipitation, in inches, at San Bruno Mountain gage.
b Precipitation, in inches, at Skyline College gage.

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

WATER-QUALITY RECORDS

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 directly under 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 recording instruments. Upper probe is set at 5.5 ft below Mean Lower Low Water (MLLW). Lower probe is set at 45.5 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, 40,500 microsiemens, Apr. 10, 11, 1991.
(Lower probe) Maximum recorded, 50,300 microsiemens, Oct. 31, Nov. 4, 9, 1990; minimum recorded, 40,700 microsiemens, Apr. 18, 19, 1991.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 23.0 °C, on several days in August 1990; 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; minimum recorded, 6.5 °C, Dec. 30, 1990 to Jan. 2, 1991.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 50,000 microsiemens, Nov. 8; minimum recorded, 40,500 microsiemens, Apr. 10, 11.
(Lower probe) Maximum recorded, 50,300 microsiemens, Oct. 31, Nov. 4, 9; minimum recorded, 40,700 microsiemens, Apr. 18, 19.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 22.0 °C, Aug. 13, 14, and Sept. 2; minimum recorded, 6.5 °C, on several days in December and January.
(Lower probe) Maximum recorded, 22.5 °C, Sept. 5; minimum recorded, 6.5 °C, Dec. 30 to Jan. 2.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	49800	49200	---	---	46400	45400	46100	45700	45700	44600
2	---	---	49700	49100	---	---	46300	45500	46100	45700	45700	44400
3	---	---	49800	49100	---	---	46200	45600	46400	45700	45700	44800
4	---	---	49800	49000	---	---	46300	45600	46200	45500	45600	44800
5	---	---	49700	48900	---	---	46400	45700	46200	45500	45500	44500
6	---	---	49600	48800	---	---	46300	45700	45900	45300	45500	44000
7	---	---	49900	48900	---	---	46400	45800	46200	44900	45500	43700
8	---	---	50000	48900	---	---	46200	45800	45900	45000	45500	43800
9	---	---	49900	48900	---	---	46200	45700	45800	44800	45400	43100
10	---	---	49700	48900	---	---	46200	45700	45900	44800	45400	43700
11	---	---	49500	49000	---	---	46100	45600	45900	44800	45100	43000
12	---	---	49800	49000	---	---	46100	45600	45900	44800	45200	43500
13	---	---	49500	48900	---	---	46400	45600	46000	44900	45000	43400
14	---	---	49400	48700	---	---	46300	45300	46300	45000	44800	43100
15	---	---	49400	48800	---	---	46100	45800	46000	45100	44200	42900
16	---	---	49300	48700	---	---	46200	45800	45900	44600	44500	43100
17	---	---	49300	48600	---	---	46200	45900	45700	44700	44500	43500
18	---	---	49200	48600	47500	46600	46200	45800	45800	44800	44400	42900
19	---	---	---	---	47400	46100	46400	45900	45800	45000	44400	43000
20	---	---	---	---	47000	45900	46700	45900	46000	45000	44400	42900
21	---	---	---	---	46700	45600	46500	45900	45900	45100	44100	42500
22	---	---	---	---	46700	45500	46500	45800	45800	45000	43800	42300
23	---	---	---	---	46700	45400	46300	45800	45900	44800	44000	43000
24	---	---	---	---	46600	45400	46200	45700	46000	44800	44000	42500
25	---	---	---	---	46600	45700	46200	45600	46100	45000	43800	42200
26	---	---	---	---	46600	45600	46200	45500	46000	45000	43700	41000
27	---	---	---	---	46700	45500	46200	45500	46000	45000	43500	41300
28	---	---	---	---	46700	45300	46300	45500	45900	44900	43300	41000
29	---	---	---	---	46600	45300	46100	45600	---	---	43600	41300
30	---	---	---	---	46500	45400	46100	45600	---	---	43500	41400
31	49800	49300	---	---	46400	45400	46100	45600	---	---	43900	41600
MONTH	---	---	---	---	---	---	46700	45300	46400	44600	45700	41000

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	43100	41600	42900	41500	46200	44900	48000	46500	---	---	---	---
2	43000	41500	42700	41600	46000	44800	48100	46700	---	---	---	---
3	43100	41600	42900	41700	45800	44700	47600	46800	---	---	---	---
4	42700	41600	42800	41600	45500	44600	47600	46800	---	---	---	---
5	42300	41000	42900	41700	45600	44700	47700	46900	---	---	---	---
6	41900	40600	43400	41700	45600	44400	47800	47000	---	---	---	---
7	41900	40900	43700	41900	45600	44800	48000	47000	---	---	---	---
8	42100	40700	43700	42200	46200	44900	47900	47400	49000	48700	---	---
9	41800	41200	43300	42400	46000	45000	47800	47500	49100	48800	---	---
10	41700	40500	43300	42600	46300	44900	47800	47400	49200	48800	---	---
11	41500	40500	43600	42600	46300	44900	47800	47400	49100	48600	---	---
12	41400	41000	43700	42500	46300	45200	47700	47200	49100	48800	---	---
13	41500	41100	43700	42400	46300	45300	47500	47000	49300	48800	---	---
14	41300	41100	43600	42100	46500	45400	47600	47000	49100	48900	---	---
15	41400	40900	43600	42500	46700	45500	47800	47200	49100	48900	---	---
16	41400	41100	43700	42600	46600	45600	---	---	49100	48900	---	---
17	41200	41100	43900	42700	46800	45700	---	---	49000	48900	---	---
18	41200	40900	44100	43000	46700	45900	---	---	49000	48900	---	---
19	41500	40800	44600	43300	46700	46000	---	---	---	---	---	---
20	41500	40800	44600	43400	46800	46000	---	---	---	---	49500	49100
21	41800	40900	44700	43600	47100	46000	---	---	---	---	49600	48700
22	41500	40900	44800	43800	47000	46200	---	---	49300	48900	49500	48600
23	41600	40900	45100	43900	47000	46200	---	---	49400	49000	49600	48900
24	42100	40900	45600	44000	46800	46200	---	---	49400	48000	49600	49000
25	42100	41100	45100	44200	47000	45900	---	---	---	---	---	---
26	42200	41100	45400	44300	47100	46400	---	---	---	---	---	---
27	42300	41200	45600	44500	47200	46400	---	---	---	---	---	---
28	42600	41300	45700	44500	47200	46500	---	---	---	---	---	---
29	42900	41500	45700	44800	47300	46500	---	---	---	---	---	---
30	43200	41600	45900	44700	47500	46500	---	---	---	---	---	---
31	---	---	46200	44800	---	---	---	---	---	---	---	---
MONTH	43200	40500	46200	41500	47500	44400	---	---	---	---	---	---

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48500	48300	50200	49600	49100	48200	46800	45800	46400	45900	46100	45100
2	48500	48100	50200	49400	49100	48300	46700	45900	46500	46200	46000	44900
3	48700	48000	50200	49600	49000	48300	46600	45900	46500	45700	46200	45500
4	48600	48200	50300	49500	48900	47900	46600	46100	46400	45700	46000	45300
5	---	---	50200	49400	48900	48200	46800	46200	46400	45800	45800	45100
6	---	---	50000	49200	48900	48300	46500	46300	46200	45800	45700	45000
7	---	---	50100	49200	48800	48400	46600	46400	46400	45700	45700	44700
8	---	---	50100	49400	48800	48500	46600	46300	46200	45600	45800	44500
9	---	---	50300	48800	48800	48500	46500	46100	46100	45200	45700	44700
10	---	---	50100	48800	48700	48400	46600	46200	46100	45500	45800	44700
11	---	---	50100	49600	48500	48300	46500	46200	46200	45500	45400	43700
12	---	---	50000	49600	48900	48300	46500	46100	46200	45500	45600	44300
13	---	---	50000	49300	48400	47900	46600	45800	46400	45600	45400	43800
14	---	---	49800	48800	48300	47800	46500	45800	46400	45700	45000	43500
15	---	---	49900	49300	48200	47600	46600	45900	46400	45200	44600	43100
16	---	---	49800	49200	48100	47400	46500	46200	46300	45200	44800	43500
17	---	---	49800	49100	48000	47300	46500	46100	46100	45100	44900	44000
18	---	---	49700	49100	47900	47100	46500	46100	46200	45300	44800	43800
19	---	---	---	---	47800	46400	46500	46300	46200	45400	44700	43600
20	---	---	---	---	47400	46100	46500	46200	46300	45600	44700	43600
21	---	---	---	---	47100	46200	46500	46200	46400	45400	44400	42900
22	---	---	49500	49000	47000	46100	46600	46100	46200	45400	44300	42800
23	---	---	49600	49200	46900	45900	46500	46100	46200	44900	44300	43300
24	---	---	49500	48900	47000	45800	46500	45700	46300	45400	44200	43400
25	---	---	49400	48800	46900	46400	46500	45800	46400	45400	44100	42800
26	---	---	49100	48800	47000	46200	46500	45700	46400	45400	44000	42900
27	---	---	49000	48300	47000	46100	46500	45800	46300	45500	43800	42600
28	---	---	49100	48500	47000	46000	46500	45800	46200	45400	43600	42400
29	---	---	49200	48400	46900	45800	46500	45900	---	---	43600	42300
30	---	---	49200	48400	46900	45800	46400	45900	---	---	43600	42400
31	50300	49800	---	---	46800	45800	46400	45900	---	---	43600	42500
MONTH	---	---	---	---	49100	45800	46800	45700	46500	44900	46200	42300

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	43400	42500	42800	41300	45400	43800	46900	45700	---	---	---	---
2	43400	42300	42900	41500	46800	44100	47200	45700	---	---	---	---
3	43500	42400	42800	41500	46000	44000	47200	45900	---	---	---	---
4	43100	42500	43300	41300	45300	44000	47500	45900	---	---	---	---
5	42800	41800	43000	41000	45700	43900	47500	46200	---	---	---	---
6	42700	41800	43400	41400	46200	44500	47500	46200	---	---	49000	48700
7	42400	41700	43700	41400	45900	44600	47800	46100	---	---	49100	48600
8	42300	41800	43800	41500	45900	44700	47400	46400	48700	48400	49100	48800
9	42100	41400	44000	41900	46100	44900	47200	46500	48700	48400	49000	48700
10	42000	41100	43500	42100	46400	44900	47400	46600	48800	48400	49000	48700
11	41900	41000	43200	42000	46400	45000	47600	47000	48700	48400	49000	48600
12	41800	41400	43300	42000	46400	44800	47600	47100	48700	48400	49000	48700
13	41700	41400	43300	41800	46200	44900	47800	47100	48800	48000	48900	48600
14	41600	41400	43200	41800	46400	45100	47600	46900	48800	48500	49000	48700
15	41600	41200	43200	42000	46700	45200	48000	46900	48700	48500	49000	48500
16	41600	41200	43500	42000	46500	44800	---	---	48700	48400	48900	48200
17	41600	41400	43700	42000	46500	45400	---	---	48700	47900	49100	48100
18	41600	40700	43900	42300	46600	44700	---	---	48700	47700	49000	48500
19	41800	40700	43900	42400	46500	45100	---	---	---	---	49100	48600
20	42200	41400	43800	42500	46800	45100	---	---	---	---	49200	48900
21	42500	41400	43700	42700	46800	45200	---	---	---	---	49300	48800
22	42000	40900	43900	42700	46900	45300	---	---	48800	48400	49400	48700
23	42100	41100	44200	42800	47000	45900	---	---	49000	48500	49500	49200
24	42400	40900	44500	43000	46900	45700	---	---	48900	48600	49500	49100
25	42400	41300	44800	42900	46700	45900	---	---	---	---	49400	49200
26	42500	41300	44600	43100	46700	45900	---	---	---	---	49400	49100
27	42700	41300	44600	43200	46800	45500	---	---	---	---	49400	48800
28	42800	41400	44700	43100	46900	45700	---	---	---	---	49300	48900
29	43100	41500	45100	43300	46900	45800	---	---	---	---	49300	48800
30	43500	41600	45200	43200	47000	45700	---	---	---	---	49200	48500
31	---	---	45300	43700	---	---	---	---	---	---	---	---
MONTH	43500	40700	45300	41000	47000	43800	---	---	---	---	---	---

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	17.5	16.5	---	---	7.0	6.5	10.0	9.5	14.0	13.5
2	---	---	17.0	16.0	---	---	7.0	6.5	10.5	10.0	13.5	13.0
3	---	---	16.5	16.0	---	---	7.0	6.5	10.5	10.0	13.5	13.0
4	---	---	16.5	16.0	---	---	7.0	6.5	10.5	10.5	13.5	13.0
5	---	---	16.5	16.0	---	---	7.5	6.5	11.5	10.5	13.5	13.0
6	---	---	16.0	15.0	---	---	7.5	6.5	11.5	11.0	14.0	13.0
7	---	---	16.0	14.5	---	---	7.5	7.0	12.0	11.0	14.0	13.0
8	---	---	15.5	14.5	---	---	7.5	7.0	11.5	11.0	14.0	13.0
9	---	---	16.0	14.5	---	---	7.5	7.0	11.5	11.5	14.0	13.0
10	---	---	15.5	15.0	---	---	8.0	7.5	11.5	11.5	13.5	13.0
11	---	---	15.5	15.0	---	---	8.0	7.5	12.0	11.5	13.0	12.5
12	---	---	15.5	15.0	---	---	8.0	7.5	12.5	11.5	13.0	12.0
13	---	---	15.5	15.0	---	---	8.5	7.5	12.5	11.5	12.5	12.5
14	---	---	15.0	15.0	---	---	8.5	8.0	13.0	12.0	12.5	12.0
15	---	---	15.0	14.5	---	---	9.0	8.0	13.0	12.0	12.0	11.5
16	---	---	15.0	14.5	---	---	9.5	8.5	13.5	12.0	12.0	11.5
17	---	---	15.0	14.5	---	---	9.5	8.5	13.0	12.5	12.0	11.5
18	---	---	15.0	14.5	11.0	11.0	9.5	8.5	13.0	12.5	12.0	11.0
19	---	---	---	---	11.0	10.0	9.5	9.0	13.5	12.5	12.0	11.5
20	---	---	---	---	10.5	9.0	10.0	9.0	13.5	12.5	12.0	11.5
21	---	---	---	---	9.5	8.0	10.0	9.0	13.5	13.0	12.0	11.5
22	---	---	---	---	9.0	7.0	10.0	9.0	13.5	13.0	12.0	11.5
23	---	---	---	---	8.5	7.0	10.0	9.5	13.5	13.0	12.0	11.5
24	---	---	---	---	8.0	6.5	10.0	9.5	13.5	13.0	12.0	11.5
25	---	---	---	---	7.5	7.0	10.0	9.5	14.0	13.5	12.0	11.5
26	---	---	---	---	7.5	7.0	9.5	9.5	14.0	13.5	11.5	11.5
27	---	---	---	---	7.5	7.0	10.0	9.5	14.0	13.5	12.0	11.0
28	---	---	---	---	7.5	7.0	10.0	9.5	14.0	13.5	12.5	11.0
29	---	---	---	---	7.5	7.0	10.0	9.5	---	---	13.5	12.0
30	---	---	---	---	7.5	7.0	10.0	9.5	---	---	14.0	12.5
31	17.5	17.0	---	---	7.0	7.0	10.0	9.5	---	---	14.0	13.0
MONTH	---	---	---	---	---	---	10.0	6.5	14.0	9.5	14.0	11.0

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

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	21.0	17.0	16.0	12.5	12.0	7.0	6.5	10.0	9.5	14.0	13.5
2	21.5	20.5	16.5	15.5	12.5	12.0	7.0	6.5	10.0	10.0	13.5	13.0
3	22.0	20.5	16.0	15.0	12.0	12.0	7.0	7.0	10.5	10.0	13.5	13.0
4	22.0	21.0	16.0	15.0	12.0	11.5	7.0	7.0	10.5	10.5	13.5	13.0
5	---	---	16.0	15.5	12.0	11.5	7.0	7.0	11.0	10.5	13.5	13.0
6	---	---	16.0	14.5	12.0	11.5	7.0	7.0	11.0	10.5	14.0	13.0
7	---	---	15.0	14.0	12.0	11.5	7.5	7.0	11.5	11.0	14.0	13.0
8	---	---	15.0	14.5	12.0	11.5	7.5	7.0	11.5	11.0	13.5	13.0
9	---	---	15.0	14.5	12.0	11.5	7.5	7.5	11.5	11.0	13.5	13.0
10	---	---	15.0	14.5	11.5	11.5	7.5	7.5	11.5	11.0	13.5	13.0
11	---	---	15.0	15.0	11.5	11.5	8.0	7.5	12.0	11.5	13.0	12.0
12	---	---	15.0	15.0	11.5	11.5	8.0	7.5	12.0	11.5	13.0	12.5
13	---	---	15.0	15.0	11.5	11.5	8.5	8.0	12.0	11.5	12.5	12.5
14	---	---	15.0	15.0	11.5	11.5	8.5	8.0	12.5	11.5	12.5	12.0
15	---	---	15.0	14.5	11.5	11.0	9.0	8.0	12.5	12.0	12.0	11.5
16	---	---	15.0	14.5	11.5	11.0	9.0	8.5	13.0	12.0	12.0	11.5
17	---	---	15.0	14.5	11.0	11.0	9.0	8.5	13.0	12.5	12.0	11.5
18	---	---	14.5	14.0	11.0	11.0	9.5	8.5	13.0	12.5	12.0	11.5
19	---	---	---	---	11.0	10.0	9.5	8.5	13.0	12.5	12.0	11.5
20	---	---	---	---	10.5	8.5	9.5	9.0	13.0	12.5	12.0	11.5
21	---	---	---	---	9.5	8.0	9.5	9.0	13.0	13.0	12.0	11.0
22	---	---	14.0	13.5	8.5	7.5	9.5	9.0	13.0	13.0	11.5	11.5
23	---	---	14.0	13.5	8.5	7.0	9.5	9.0	13.5	13.0	12.0	11.0
24	---	---	13.5	13.5	8.0	7.5	9.5	9.0	13.5	13.0	11.5	11.5
25	---	---	13.5	13.5	7.5	7.0	9.5	9.5	13.5	13.0	11.5	11.0
26	---	---	13.5	13.0	7.5	7.0	9.5	9.5	14.0	13.0	11.5	11.0
27	---	---	13.0	12.5	7.5	7.0	10.0	9.5	14.0	13.5	11.5	11.0
28	---	---	13.0	12.0	7.5	7.0	10.0	9.5	14.0	13.5	12.0	11.0
29	---	---	12.5	12.0	7.5	7.0	10.0	9.5	---	---	12.0	11.5
30	---	---	12.5	12.0	7.0	6.5	10.0	9.5	---	---	12.5	12.0
31	17.5	16.5	---	---	7.0	6.5	10.0	9.5	---	---	13.0	12.5
MONTH	---	---	---	---	12.5	6.5	10.0	6.5	14.0	9.5	14.0	11.0

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

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 mi^2.

PERIOD OF RECORD.--September 1959 to current year.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 83.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Low flow at times affected by return flow from urban irrigation.

AVERAGE DISCHARGE.--32 years, 1.11 ft^3/s, 804 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 644 ft^3/s, Jan. 31, 1963, gage height, 9.36 ft, from rating curve extended above 180 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	0730	*114	*3.99				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.02	.05	e6.5	.88	.20	.05	.00	.00	.00
2	.00	.00	.00	.02	1.9	e4.2	.75	.21	.05	.00	.00	.00
3	.00	.00	.00	.02	.14	e15	.65	.20	.11	.00	.00	.00
4	.00	.00	.00	.01	4.7	e23	1.5	.18	.09	.01	.00	.00
5	.00	.02	.00	.06	3.5	e7.5	1.0	.19	.11	.01	.01	.00
6	.00	.00	.00	.03	.54	e2.8	.52	.18	.02	.01	.02	.00
7	.00	.00	.00	.23	e.37	e.90	.48	.19	.03	.01	.01	.00
8	.00	.00	.00	.01	e.31	.45	.89	.21	.03	.01	.00	.00
9	.00	.00	.00	.39	e.28	.37	.44	.16	.03	.00	.00	.00
10	.01	.00	.19	.05	e.25	3.2	.83	.16	.05	.01	.00	.00
11	.00	.00	.66	.04	e.21	1.0	.39	.15	.02	.01	.00	.00
12	.00	.00	.00	.04	e.25	6.1	.35	.15	.03	.01	.00	.00
13	.00	.08	.00	.06	e.30	5.8	.32	.27	.02	.01	.02	.00
14	.00	.00	.00	.06	e.29	1.3	.31	.18	.02	.01	.00	.00
15	.00	.00	2.3	.06	e.24	.96	.31	.18	.01	.02	.00	.00
16	.00	.00	1.6	.06	e.24	.70	.49	.17	.02	.02	.01	.00
17	.00	.00	.08	.06	e.24	5.5	.27	.14	.02	.02	.01	.00
18	.47	.00	.03	.06	e.25	1.7	.22	.13	.01	.03	.01	.00
19	.00	.00	.30	.06	e.25	1.2	.18	.15	.01	.01	.00	.00
20	.00	.00	.07	.06	e.29	2.9	.50	.17	.02	.01	.00	.00
21	.00	.00	.02	.06	e.30	2.8	.30	.25	.03	.01	.00	.00
22	.00	.00	.08	.06	e.32	1.1	.22	.11	.03	.01	.00	.00
23	.00	.00	.13	.06	e.30	9.5	.21	.09	.04	.01	.00	.00
24	.00	.00	.11	.06	e.28	19	.20	.08	.03	.01	.00	.00
25	.00	.10	.05	.05	e.30	7.5	.21	.07	.01	.01	.00	.00
26	.00	.00	.07	.05	e.33	18	.22	.06	.00	.01	.00	.00
27	.00	.00	.03	.05	e4.5	3.0	.20	.06	.01	.01	.00	.00
28	.00	.00	.02	.05	e3.8	1.8	.19	.07	.03	.01	.00	.00
29	.00	.00	.02	.06	---	1.3	.19	.21	.01	.01	.00	.00
30	.00	.00	.02	.06	---	1.1	.18	.06	.00	.01	.00	.00
31	.02	---	.02	.06	---	.99	---	.22	---	.01	.00	---
TOTAL	0.51	0.20	5.80	2.02	24.73	157.17	13.40	4.85	0.94	0.32	0.09	0.00
MEAN	.016	.007	.19	.065	.88	5.07	.45	.16	.031	.010	.003	.000
MAX	.47	.10	2.3	.39	4.7	23	1.5	.27	.11	.03	.02	.00
MIN	.00	.00	.00	.01	.05	.37	.18	.06	.00	.00	.00	.00
AC-FT	1.0	.4	12	4.0	49	312	27	9.6	1.9	.6	.2	.00

CAL YR 1990 TOTAL 91.64 MEAN .25 MAX 24 MIN .00 AC-FT 182
WTR YR 1991 TOTAL 210.03 MEAN .58 MAX 23 MIN .00 AC-FT 417

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Recording raingage at 345 Middlefield Road in Menlo Park, 2.5 mi northeast of gage.

REMARKS.--No estimated daily discharges. 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.

AVERAGE DISCHARGE.--52 years, 19.2 ft^3/s, 13,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	0915	*626	*3.77				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.31	.43	.70	.38	15	9.4	1.7	.95	.07	.04	.02
2	.26	.25	.53	.88	2.7	4.1	8.2	1.7	1.0	.09	.03	.02
3	.17	.30	.45	.55	2.5	61	7.8	1.7	.93	.04	.04	.02
4	.28	.21	.68	.46	3.6	157	7.9	1.8	.88	.01	.09	.01
5	.38	.35	.94	.54	20	28	7.2	1.7	.86	.03	.08	.00
6	.22	.39	1.1	.43	2.3	5.0	6.6	1.5	.82	.01	.05	.01
7	.18	.12	1.2	.36	1.3	2.7	6.0	1.3	.79	.02	.04	.03
8	.25	.09	1.2	.37	1.0	2.9	5.4	1.2	.64	.02	.04	.02
9	.22	.04	1.2	.85	.78	3.2	5.2	1.2	.70	.01	.03	.01
10	.23	.17	1.9	.49	.68	15	5.7	1.0	.62	.01	.04	.00
11	.23	.21	2.9	.53	.61	16	5.2	1.0	.61	.01	.03	.00
12	.27	.27	.56	.50	.57	14	4.1	1.1	.59	.00	.05	.01
13	.36	.23	.38	.47	.58	116	3.8	1.1	.48	.01	.19	.01
14	.35	.21	.36	.54	.58	26	3.6	1.2	.41	.01	.16	.01
15	.39	.30	5.8	.51	.60	11	3.4	1.1	.43	.00	.13	.01
16	.43	.17	8.0	.51	.57	8.6	3.2	1.1	.39	.01	.15	.01
17	.32	.30	1.4	.61	.53	69	2.8	1.0	.31	.01	.17	.00
18	.36	.38	.77	.53	.62	50	2.7	1.4	.27	.02	.12	.00
19	.30	.67	1.2	.48	.62	19	2.7	1.4	.28	.01	.15	.00
20	.46	1.6	1.1	.45	.66	42	3.4	1.4	.21	.04	.08	.01
21	.33	1.9	.69	.51	.65	43	3.4	1.4	.11	.04	.06	.01
22	.32	2.4	1.0	.51	.66	22	3.0	1.3	.04	.04	.06	.01
23	.35	2.3	.90	.58	.66	60	2.8	1.2	.08	.03	.06	.01
24	.41	2.2	1.3	.49	.66	286	2.6	1.1	.08	.02	.05	.01
25	.40	2.5	.62	.40	.70	172	2.4	1.2	.11	.06	.05	.01
26	.48	.58	.50	.42	.71	401	2.4	1.1	.09	.03	.03	.03
27	.63	.82	.59	.40	3.5	103	2.4	.95	.13	.06	.04	.03
28	.66	.38	.71	.39	5.7	42	1.9	.98	.18	.07	.03	.06
29	.53	.51	.69	.42	---	23	1.6	.93	.27	.10	.04	.04
30	.28	.32	.59	.42	---	13	1.5	.90	.24	.02	.02	.05
31	.95	---	.51	.38	---	11	---	1.0	---	.01	.01	---
TOTAL	11.58	20.48	40.20	15.68	54.42	1841.5	128.3	38.66	13.50	0.91	2.16	0.46
MEAN	.37	.68	1.30	.51	1.94	59.4	4.28	1.25	.45	.029	.070	.015
MAX	.95	2.5	8.0	.88	20	401	9.4	1.8	1.0	.10	.19	.06
MIN	.17	.04	.36	.36	.38	2.7	1.5	.90	.04	.00	.01	.00
AC-FT	23	41	80	31	108	3650	254	77	27	1.8	4.3	.9
a	0.10	0.12	1.86	0.19	2.34	5.84	0.20	0.10	0.07	0	0.07	0.08

CAL YR 1990 TOTAL 795.05 MEAN 2.18 MAX 118 MIN .04 AC-FT 1580
WTR YR 1991 TOTAL 2167.85 MEAN 5.94 MAX 401 MIN .00 AC-FT 4300

a Precipitation, in inches.

11166000 MATADERO CREEK AT PALO ALTO, CA

LOCATION.--Lat 37°25'18", long 122°08'04", in Rincon de San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on Ash Street 150 ft upstream from Lambert Avenue Bridge and 2.1 mi southeast of Palo Alto Post Office.

DRAINAGE AREA.--7.26 mi^2.

PERIOD OF RECORD.--July 1952 to April 1991.

REVISED RECORDS.--WDR CA-80-2: 1971-74, 1978, 1971-72(P). WDR CA-82-2: 1973-74, 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 22.07 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Gage temporarily discontinued on Apr. 9, 1991, due to construction in the channel.

AVERAGE DISCHARGE.--38 years (1952-90), 2.29 ft^3/s, 1,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft^3/s, Jan. 24, 1983, gage height, 6.51 ft, from rating curve extended above 600 ft^3/s on basis of step-backwater computation at gage heights 7.63 and 8.00 ft, and slope-conveyance computations at 5.97 and 6.87 ft; maximum gage height, 9.88 ft, Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow at times.

EXTREMES FOR CURRENT YEAR.--(October-April). Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1115	*184	*2.02				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.00	.01	.00	.00	8.6	.69	---	---	---	---	---
2	.09	.00	.00	.01	2.2	.40	.52	---	---	---	---	---
3	.02	.00	.01	.03	.01	28	.44	---	---	---	---	---
4	.02	.00	.00	.01	8.9	30	.23	---	---	---	---	---
5	.04	.00	.00	.00	7.5	2.0	.07	---	---	---	---	---
6	.06	.01	.00	.00	.04	.35	.00	---	---	---	---	---
7	.04	.00	.00	.38	.00	.06	.00	---	---	---	---	---
8	.02	.01	.00	.10	.00	.00	.00	---	---	---	---	---
9	.03	.00	.00	1.5	.00	.00	.00	---	---	---	---	---
10	.00	.01	2.6	.00	.00	5.8	---	---	---	---	---	---
11	.00	.01	3.9	.00	.00	.92	---	---	---	---	---	---
12	.02	.04	.01	.00	.06	1.2	---	---	---	---	---	---
13	.02	.02	.00	.00	.05	6.2	---	---	---	---	---	---
14	.01	.01	.00	.01	.00	.80	---	---	---	---	---	---
15	.00	.01	14	.01	.01	.41	---	---	---	---	---	---
16	.01	.01	8.0	.00	.01	.01	---	---	---	---	---	---
17	.00	.01	.05	.00	.00	16	---	---	---	---	---	---
18	.01	.00	.00	.01	.00	2.3	---	---	---	---	---	---
19	.01	.01	.96	.01	.00	.95	---	---	---	---	---	---
20	.00	.00	.02	.00	.00	5.5	---	---	---	---	---	---
21	.01	.02	.00	.01	.00	5.5	---	---	---	---	---	---
22	.00	.00	.12	.00	.00	.73	---	---	---	---	---	---
23	.21	.00	.69	.00	.00	16	---	---	---	---	---	---
24	.09	.00	.57	.00	.00	52	---	---	---	---	---	---
25	.01	.55	.21	.00	.00	16	---	---	---	---	---	---
26	.00	.02	.05	.00	.00	40	---	---	---	---	---	---
27	.01	.01	.04	.00	10	6.7	---	---	---	---	---	---
28	.03	.00	.00	.00	2.1	2.5	---	---	---	---	---	---
29	.00	.01	.00	.00	---	1.7	---	---	---	---	---	---
30	.01	.01	.00	.00	---	1.2	---	---	---	---	---	---
31	.38	---	.00	.00	---	.92	---	---	---	---	---	---
TOTAL	1.28	0.77	31.24	2.08	30.88	252.75	---	---	---	---	---	---
MEAN	.041	.026	1.01	.067	1.10	8.15	---	---	---	---	---	---
MAX	.38	.55	14	1.5	10	52	---	---	---	---	---	---
MIN	.00	.00	.00	.00	.00	.00	---	---	---	---	---	---
AC-FT	2.5	1.5	62	4.1	61	501	---	---	---	---	---	---

CAL YR 1990 TOTAL 176.73 MEAN .48 MAX 37 MIN .00 AC-FT 351

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, T.9 S., R.2 E., Santa Clara County, Hydrologic Unit 18050003, at center of dam of Arroyo Calero, 1.7 mi northeast of New Almaden, and 6 mi southeast of Edenvale.
DRAINAGE AREA.-- 6.93 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: January 1936 to September 1985. Prior to October 1959, published in WSP 1735.
REVISED RECORDS.--WDR CA-79-2: Drainage area.
REMARKS.--Reservoir is formed by earthfill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.5 ft in 1962. Capacity, 10,160 acre-ft between elevations 393.7 ft, center of outlet tunnel, and 483.5 ft, crest of spillway. Water released down Arroyo Calero for ground-water recharge by percolation and minor irrigation. Up to 100 ft^3/s diverted from Almaden Reservoir to Calero Reservoir at times. Beginning in 1986, up to 180 ft^3/s was diverted from San Luis Reservoir at times. Inflows to Calero Reservoir are by Arroyo Calero, east of Uvas Road, Bailey turnout, west of Bailey and McKean Road, and pipe to the bottom of reservoir near the dam.

WATER-QUALITY RECORDS

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°10'57", long 121°47'25", 300 ft above center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1978-79, 1984 to September 1991 (discontinued).
BIOLOGICAL DATA: Water years 1978-79, 1984 to September 1991 (discontinued).
REMARKS.--Lake elevation provided by Santa Clara Valley Water District. Phytoplankton analyzed by Chadwick and Associates. Additional data on the bottom material chemistry are on file at the District office.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
APR										
25...	1000	0.50	506	7.4	15.3	755	9.0	91	6.06	473.79
25...	1001	1.0	505	7.4	14.9	755	8.8	88	6.34	473.79
25...	1002	2.0	506	7.4	14.8	755	8.6	86	5.88	473.79
25...	1003	3.0	507	7.4	14.8	755	8.6	86	5.88	473.79
25...	1004	4.0	508	7.4	14.8	755	8.6	86	5.88	473.79
25...	1005	5.0	507	7.4	14.7	755	8.6	86	5.79	473.79
25...	1006	6.0	506	7.3	14.7	755	8.6	86	5.79	473.79
25...	1007	7.0	507	7.3	14.7	755	8.5	85	5.71	473.79
25...	1008	8.0	506	7.3	14.7	755	8.5	85	5.79	473.79
25...	1009	9.0	512	7.2	14.3	755	7.6	75	5.79	473.79
25...	1010	10.0	501	7.2	13.8	755	7.6	74	7.09	473.79
25...	1011	11.0	500	7.2	13.7	755	7.6	74	5.71	473.79
25...	1012	12.0	499	7.1	13.7	755	7.5	73	5.79	473.79
25...	1013	13.0	499	7.2	13.6	755	7.5	73	6.06	473.79
25...	1014	14.0	499	7.2	13.6	755	7.5	73	6.24	473.79
25...	1015	15.0	499	7.2	13.6	755	7.5	73	6.24	473.79
25...	1016	16.0	498	7.1	13.5	755	7.4	72	6.34	473.79
MAY										
16...	0940	0.50	553	8.0	18.0	755	10.7	114	4.09	481.19
16...	0941	1.0	554	7.9	17.7	755	10.4	110	4.09	481.19
16...	0942	2.0	554	7.9	17.5	755	9.9	105	4.09	481.19
16...	0943	3.0	554	7.8	17.3	755	9.5	100	3.28	481.19
16...	0944	4.0	554	7.8	17.2	755	9.5	100	3.02	481.19
16...	0945	5.0	552	7.7	17.0	755	9.3	97	2.85	481.19
16...	0946	6.0	553	7.7	16.8	755	8.9	93	2.85	481.19
16...	0947	7.0	553	7.6	16.6	755	8.7	90	2.93	481.19
16...	0948	8.0	554	7.5	16.3	755	8.1	83	2.93	481.19
16...	0949	9.0	556	7.3	15.6	755	7.2	73	3.02	481.19
16...	0950	10.0	559	7.2	15.1	755	6.8	68	3.28	481.19
16...	0951	11.0	560	7.1	14.7	755	6.7	67	3.47	481.19
16...	0952	12.0	558	7.1	14.3	755	6.4	63	3.67	481.19
16...	0953	13.0	556	7.0	14.2	755	6.3	62	4.56	481.19
16...	0954	14.0	558	7.0	14.0	755	6.0	59	5.79	481.19
16...	0955	15.0	559	7.0	14.0	755	5.9	58	6.44	481.19
16...	0956	16.0	561	7.0	14.0	755	5.8	57	6.44	481.19
16...	0957	17.0	564	7.0	13.9	755	5.6	55	7.46	481.19
16...	0958	18.0	569	6.9	13.8	755	5.6	55	7.59	481.19
16...	0959	19.0	582	6.9	13.8	755	5.6	55	7.72	481.19
16...	1000	20.0	601	7.0	13.8	755	5.7	56	7.86	481.19
16...	1001	21.0	616	7.0	13.7	755	5.8	57	8.01	481.19

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 - CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
JUN										
13...	1000	0.50	595	8.1	21.6	755	8.5	98	5.55	482.16
13...	1001	1.0	599	8.1	21.6	755	8.5	98	5.79	482.16
13...	1002	2.0	599	8.1	21.6	755	8.5	98	5.88	482.16
13...	1003	3.0	599	8.1	21.6	755	8.5	98	5.79	482.16
13...	1004	4.0	599	8.1	21.6	755	8.4	96	5.88	482.16
13...	1005	5.0	599	8.1	21.6	755	8.3	95	5.79	482.16
13...	1006	6.0	599	7.3	20.0	755	3.7	41	5.79	482.16
13...	1007	7.0	598	7.1	19.1	755	2.7	29	5.55	482.16
13...	1008	8.0	597	7.0	18.2	755	2.0	21	5.88	482.16
13...	1009	9.0	601	6.9	16.6	755	2.0	21	6.06	482.16
13...	1010	10.0	604	6.9	15.9	755	2.3	24	6.24	482.16
13...	1011	11.0	608	6.8	15.3	755	2.7	27	6.24	482.16
13...	1012	12.0	614	6.8	15.0	755	3.0	30	6.24	482.16
13...	1013	13.0	620	6.8	14.8	755	3.2	32	6.06	482.16
13...	1014	14.0	623	6.8	14.7	755	3.3	33	5.88	482.16
13...	1015	15.0	629	6.8	14.5	755	3.4	34	5.88	482.16
13...	1016	16.0	632	6.8	14.5	755	3.6	36	5.71	482.16
13...	1017	17.0	650	6.8	14.4	755	3.6	36	5.39	482.16
13...	1018	18.0	650	6.8	14.3	755	3.3	33	4.95	482.16
13...	1019	19.0	649	6.8	14.3	755	3.2	32	4.81	482.16
13...	1020	20.0	649	6.8	14.2	755	2.9	29	5.24	482.16
13...	1021	21.0	649	6.8	14.2	755	2.7	27	5.88	482.16
13...	1022	22.0	649	6.8	14.2	755	2.5	25	5.88	482.16
13...	1023	23.0	649	6.7	14.2	755	2.1	21	7.59	482.16
AUG										
15...	0930	0.50	614	7.4	23.5	755	7.5	89	2.62	481.99
15...	0931	1.0	614	7.4	23.5	755	7.3	87	2.62	481.99
15...	0932	2.0	615	7.4	23.5	755	7.2	86	2.62	481.99
15...	0933	3.0	614	7.4	23.4	755	7.2	85	2.46	481.99
15...	0934	4.0	614	7.4	23.4	755	7.2	86	2.04	481.99
15...	0935	5.0	614	7.4	23.4	755	7.2	86	1.98	481.99
15...	0936	6.0	610	6.8	22.5	755	2.3	27	1.98	481.99
15...	0937	7.0	608	6.7	21.9	755	0.9	11	1.43	481.99
15...	0938	8.0	607	6.6	19.7	755	0.0	0	1.15	481.99
15...	0939	9.0	626	6.6	18.4	755	0.6	6	1.43	481.99
15...	0940	10.0	629	6.6	17.5	755	0.5	5	1.91	481.99
15...	0941	11.0	630	6.6	17.2	755	0.8	8	1.98	481.99
15...	0942	12.0	636	6.6	17.2	755	0.8	9	2.04	481.99
15...	0943	13.0	637	6.6	16.9	755	0.8	8	2.04	481.99
15...	0944	14.0	634	6.6	16.8	755	0.6	6	1.91	481.99
15...	0945	15.0	634	6.5	16.8	755	0.5	5	1.98	481.99
15...	0946	16.0	633	6.5	16.8	755	0.4	4	2.04	481.99
15...	0947	17.0	634	6.5	16.7	755	0.4	4	2.04	481.99
15...	0948	18.0	634	6.5	16.7	755	0.4	4	2.39	481.99
15...	0949	19.0	632	6.5	16.6	755	0.3	3	2.54	481.99
15...	0950	20.0	633	6.5	16.6	755	0.2	2	2.77	481.99
15...	0951	21.0	633	6.5	16.6	755	0.2	2	3.28	481.99
15...	0952	22.0	631	6.5	16.5	755	0.1	1	--	481.99

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
SEP										
05...	1000	0.50	618	7.6	23.2	755	9.3	110	3.66	480.56
05...	1001	1.0	621	7.7	23.0	755	9.2	109	3.87	480.56
05...	1002	2.0	621	7.7	23.0	755	9.0	107	3.47	480.56
05...	1003	3.0	621	7.5	22.9	755	8.4	99	2.93	480.56
05...	1004	4.0	621	7.5	22.8	755	8.0	94	2.61	480.56
05...	1005	5.0	621	7.2	22.5	755	6.8	79	1.85	480.56
05...	1006	6.0	620	7.0	22.2	755	5.9	68	1.54	480.56
05...	1007	7.0	620	6.9	22.0	755	5.0	58	1.31	480.56
05...	1008	8.0	621	6.8	21.4	755	3.6	41	1.31	480.56
05...	1009	9.0	622	6.6	19.7	755	0.2	2	1.26	480.56
05...	1010	10.0	625	6.5	19.0	755	0.1	1	1.91	480.56
05...	1011	11.0	628	6.5	18.4	755	0.0	1	1.66	480.56
05...	1012	12.0	640	6.5	17.4	755	0.1	1	1.54	480.56
05...	1013	13.0	639	6.5	17.2	755	0.0	1	1.98	480.56
05...	1014	14.0	638	6.5	17.1	755	0.0	1	1.60	480.56
05...	1015	15.0	640	6.5	17.0	755	0.0	1	1.91	480.56
05...	1016	16.0	639	6.5	16.9	755	0.0	1	1.20	480.56
05...	1017	17.0	638	6.5	16.9	755	0.0	1	1.15	480.56
05...	1018	18.0	640	6.5	16.8	755	0.0	0	1.26	480.56
05...	1019	19.0	638	6.5	16.8	755	0.0	0	1.54	480.56
05...	1020	20.0	639	6.5	16.8	755	0.0	0	1.91	480.56
05...	1021	21.0	637	6.5	16.8	755	0.0	0	2.39	480.56
05...	1022	22.0	638	6.5	16.8	755	0.0	0	2.69	480.56
05...	1023	23.0	639	6.5	16.8	755	0.0	0	3.02	480.56
05...	1024	24.0	639	6.5	16.8	755	0.0	0	3.38	480.56

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
APR												
25...	1055	1.0	505	7.4	15.0	3.2	755	8.8	88	130	24	16
25...	1125	10.0	501	7.2	14.0	7.4	755	7.6	74	130	24	16
25...	1140	15.0	499	7.1	13.5	10	755	7.5	73	130	24	16
MAY												
16...	1030	1.0	554	7.9	17.5	3.5	755	10.4	110	130	24	17
16...	1100	9.0	556	7.3	15.5	3.2	755	7.2	73	130	24	17
16...	1115	15.0	559	7.0	14.0	4.9	755	5.9	58	130	24	17
JUN												
13...	1120	1.0	599	8.1	21.5	4.0	755	8.5	97	140	25	18
13...	1145	6.0	599	7.3	20.0	3.4	755	3.7	41	140	25	18
13...	1200	15.0	629	6.8	14.5	4.9	755	3.4	34	140	26	18
AUG												
15...	1045	1.0	614	7.4	23.5	1.5	755	7.3	87	150	27	19
15...	1120	9.0	626	6.6	18.5	1.1	755	0.6	6	150	27	19
15...	1145	20.0	633	6.5	16.5	1.2	755	0.2	2	140	27	18
SEP												
05...	1115	1.0	621	7.7	23.0	2.0	755	9.2	109	140	24	19
05...	1130	8.0	621	6.8	21.5	1.4	755	3.6	41	130	24	18
05...	1145	20.0	639	6.5	17.0	1.4	755	0.0	0	140	27	18

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
APR												
25...	52	47	2	2.9	98	33	82	0.10	13	282	0.38	--
25...	51	46	2	2.9	98	32	81	0.10	13	279	0.38	--
25...	50	46	2	2.8	98	32	79	0.10	13	276	0.38	--
MAY												
16...	61	50	2	3.8	96	44	100	<0.10	14	322	0.44	--
16...	63	51	2	3.2	94	43	100	0.10	14	321	0.44	0.409
16...	63	50	2	3.7	94	42	100	<0.10	15	322	0.44	0.600
JUN												
13...	66	51	2	3.3	98	44	110	0.20	12	338	0.46	--
13...	67	51	2	3.4	97	45	100	0.20	13	330	0.45	--
13...	72	52	3	3.7	90	45	110	0.20	16	345	0.47	--
AUG												
15...	72	51	3	3.5	104	46	110	0.10	14	354	0.48	--
15...	71	51	3	3.8	103	45	110	0.10	16	354	0.48	--
15...	75	53	3	3.9	96	46	110	0.10	18	356	0.48	--
SEP												
05...	66	50	2	3.7	103	49	110	0.20	13	347	0.47	--
05...	66	51	2	3.7	103	51	110	0.20	12	347	0.47	--
05...	76	53	3	3.8	98	51	120	0.10	15	370	0.50	0.440

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
APR												
25...	<0.010	<0.010	0.320	0.040	0.030	0.56	0.37	0.60	0.40	0.040	0.010	0.010
25...	<0.010	<0.010	0.330	0.080	0.070	0.52	0.33	0.60	0.40	0.030	0.020	<0.010
25...	--	0.010	--	--	0.080	--	0.32	--	0.40	--	0.020	--
MAY												
16...	<0.010	0.010	0.230	0.010	0.010	0.79	0.39	0.80	0.40	0.010	<0.010	<0.010
16...	0.021	0.010	0.430	0.050	0.050	0.45	0.45	0.50	0.50	0.030	0.021	<0.010
16...	0.050	0.040	0.650	0.020	0.020	0.38	0.38	0.40	0.40	0.050	0.040	0.040
JUN												
13...	0.010	0.010	<0.050	0.020	0.020	0.78	0.38	0.80	0.40	0.030	<0.010	<0.010
13...	0.010	<0.010	<0.050	0.010	0.010	--	--	<0.20	<0.20	0.030	<0.010	<0.010
13...	<0.010	<0.010	0.780	0.021	0.020	0.38	0.28	0.40	0.30	0.100	0.070	0.070
AUG												
15...	<0.010	<0.010	<0.050	0.020	<0.010	0.38	--	0.40	0.40	0.020	<0.010	<0.010
15...	<0.010	<0.010	<0.050	0.030	<0.010	0.37	--	0.40	0.40	0.020	0.010	<0.010
15...	<0.010	<0.010	0.510	0.010	<0.010	0.49	--	0.50	0.50	0.110	0.090	0.080
SEP												
05...	<0.010	<0.010	<0.050	<0.010	<0.010	--	--	0.60	0.60	0.030	<0.010	<0.010
05...	<0.010	<0.010	<0.050	0.020	0.030	0.48	0.47	0.50	0.50	0.010	<0.010	<0.010
05...	0.010	0.010	0.450	0.070	0.070	0.43	0.33	0.50	0.40	0.150	0.140	0.160

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
APR												
25...	<0.010	150	15	--	--	--	--	--	--	--	--	--
25...	<0.010	150	31	--	--	--	--	--	--	--	--	--
25...	<0.010	140	24	--	--	--	--	--	--	--	--	--
MAY												
16...	<0.010	170	9	--	--	--	--	--	--	--	--	--
16...	0.010	180	18	--	--	--	--	--	--	--	--	--
16...	0.040	170	24	--	--	--	--	--	--	--	--	--
JUN												
13...	<0.010	180	14	--	--	--	--	--	--	--	--	--
13...	<0.010	170	15	--	--	--	--	--	--	--	--	--
13...	0.070	180	17	--	--	--	--	--	--	--	--	--
AUG												
15...	<0.010	190	4	<1	<100	<1	5	60	<10	4	0.10	<10
15...	<0.010	190	10	1	<100	<1	3	50	170	4	<0.10	<10
15...	0.060	200	8	1	<100	<1	3	60	100	3	<0.10	<10
SEP												
05...	<0.010	190	6	--	--	--	--	--	--	--	--	--
05...	<0.010	190	6	--	--	--	--	--	--	--	--	--
05...	0.120	190	9	--	--	--	--	--	--	--	--	--

DATE	TIME	TRANSPARENCY (SECCHI DISK) (M)
JUN		
13...	0930	1.02
MAY		
16...	1020	1.20
APR		
25...	1030	0.91
AUG		
15...	0920	2.00

DATE	TIME	SAMPLING DEPTH (M)	TURBIDITY (NTU)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)
APR					
25...	1055	1.0	3.2	2.80	0.500
25...	1110	3.0	--	2.10	0.400
MAY					
16...	1030	1.0	3.5	3.40	0.500
16...	1045	6.0	3.5	2.10	0.300
16...	1115	15.0	4.9	0.400	<0.100
JUN					
13...	1120	1.0	4.0	12.0	2.40
13...	1140	5.0	3.4	11.0	2.20
13...	1200	15.0	4.9	0.700	<0.100
AUG					
15...	1045	1.0	1.5	2.40	0.200
15...	1105	3.0	1.2	3.30	0.200
15...	1110	6.0	1.1	2.60	0.300
SEP					
05...	1115	1.0	2.0	6.70	<0.100
05...	1120	3.0	1.4	6.70	<0.100
05...	1125	6.0	1.4	2.30	<0.100

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

PHYTOPLANKTON

DATE	04/25/91		04/25/91	
TIME	1055		1110	
DEPTH (M)	1		3	
ORGANISM	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml
BACILLARIOPHYTA (Diatoms)				
Order Centrales				
Cyclotella kuetzingiana	--	--	408	15900
Cyclotella operculata	--	--	817	31000
Cyclotella sp.	2450	56400	3270	75100
Stephanodiscus astraea var. minutula	--	--	408	125000
Order Pennales				
Nitzschia acicularis	409	110000	--	--
Nitzschia gracilis	409	63000	1630	252000
CHLOROPHYTA (Green algae)				
Carteria sp.	817	21200	4900	127000
Chlamydomonas sp.	4900	274000	8170	457000
Chlorella ellipsoidea	1630	47400	4900	142000
Chlorococcum humicola	3270	134000	8170	335000
Dictyosphaerium pulchellum	33500	100000	16300	49000
Lagerheimia quadriseta	--	--	1630	31000
Micractinium pusillum	3270	45700	--	--
Oocystis borgei	--	--	4900	98000
Scenedesmus sp.	1630	76800	--	--
Selenastrum minutum	4100	57200	4900	68600
CHRYSOPHYTA (Golden-brown algae)				
Unknown flagellate	2450	12300	4900	24500
CYANOPHYTA (Blue-green algae)				
Aphanocapsa delicatissima	31900	31900	109000	109000
Aphanocapsa elachista	123000	368000	42500	127000
Aphanothece nidulans	44100	88200	60400	121000
Chroococcus dispersus	8980	126000	--	--
Chroococcus sp.	--	--	4900	39200
Dactylococcopsis acicularis	5720	177000	14700	456000
Lyngbya nana ?	14700	14700	4900	4900
Merismopedia tenuissima	92300	92300	266000	266000
CRYPTOPHYTA (Cryptomonads)				
Chroomonas sp.	--	--	1630	45700
Rhodomonas minuta	1630	13100	1630	13100
TOTAL CELLS/ml	381,000		571,000	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/ml)	1,910,000		3,010,000	
NUMBER OF SPECIES	20		23	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

PHYTOPLANKTON

DATE	5/16/91		5/16/91		5/16/91	
TIME	1030		1045		1115	
DEPTH (M)	1		6		15	
ORGANISM	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella kuetzingiana	3270	127000	384	15000	--	--
Cyclotella operculata	--	--	--	--	408	15500
Cyclotella sp.	1630	37600	1540	35400	--	--
Stephanodiscus astraea var. minutula	--	--	2690	82600	408	125000
Stephanodiscus niagarae	1630	1790000	1920	2100000	--	--
Order Pennales						
Achnanthes minutissima	--	--	545	25600	--	--
Asterionella formosa	1090	497000	--	--	--	--
Cymbella minuta	545	179000	--	--	--	--
Gomphonema parvulum	--	--	545	137000	--	--
Nitzschia gracilis	--	--	545	83900	--	--
CHLOROPHYTA (Green algae)						
Carteria sp.	1630	2510000	--	--	--	--
Chlamydomonas sp.	13100	732000	1630	91500	1630	91500
Chlorella ellipsoidea	3270	94800	1630	47400	--	--
Chlorococcum humicola	16400	670000	8170	335000	1630	67000
Coelastrum microporum	4900	554000	24500	2770000	--	--
Dictyosphaerium pulchellum	11400	34300	8170	24500	--	--
Oocystis borgei	11400	229000	--	--	--	--
Scenedesmus bijuga	9800	412000	4900	206000	--	--
Scenedesmus quadricauda	--	--	--	--	817	49800
Selenastrum minutum	11400	160000	3270	45700	--	--
Tetraedron sp.	--	--	--	--	817	204000
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	315000	315000	204000	204000	154000	154000
Aphanocapsa elachista	11400	34300	--	--	--	--
Aphanothece nidulans	24500	49000	21200	42500	7350	14700
Chroococcus dispersus	27800	38900	--	--	--	--
Dactylococcopsis acicularis	6540	203000	4900	167000	--	--
Lyngbya limnetica	13100	157000	3270	39200	--	--
Lyngbya nana ?	4900	4900	21200	21200	--	--
Merismopedia tenuissima	47400	47400	29400	29400	13100	13100
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	1630	118000	--	--	--	--
Rhodomonas minuta	4900	39200	3270	26100	817	6540
TOTAL CELLS/ml	549,000		348,000		181,000	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/ml)	9,030,000		6,530,000		741,000	
NUMBER OF SPECIES	24		21		10	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

PHYTOPLANKTON

DATE	6/13/91		6/13/91		6/13/91	
TIME	1120		1140		1200	
DEPTH (M)	1		5		15	
ORGANISM	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella kuetzingiana	68	10200	--	--	--	--
Cyclotella meneghiniana	7140	257000	17700	637000	1630	58800
Cyclotella operculata	545	257000	632	36700	--	--
Melosira varians	136	9250	632	43000	--	--
Stephanodiscus astraea var. minutula	272	120000	632	278000	--	--
Order Pennales						
Gomphonema parvulum	313	38800	--	--	109	13500
Nitzschia acicularis	33500	7170000	35600	7630000	1310	280000
Nitzschia dissipata	939	220000	356	83300	109	25500
Nitzschia gracilis	626	144000	713	164000	--	--
Synedra delicatissima	313	54500	--	--	--	--
Synedra delicatissima var. angustissima	626	1110000	--	--	--	--
Synedra rumpens	313	136000	2500	1090000	109	47400
Synedra sp.	939	132000	--	--	--	--
CHLOROPHYTA (Green algae)						
Chlamydomonas sp.	27800	1560000	37600	2100000	2450	137000
Chlorella ellipsoidea	6540	229000	13100	457000	3270	114000
Chlorococcum humicola	18000	737000	9800	402000	817	33500
Coelastrum microporum	--	--	--	--	4080	462000
Dictyosphaerium pulchellum	--	--	19600	78400	--	--
Gloeocystis ampla	--	--	21200	595000	--	--
Lagerheimia quadriseta	4900	176000	6540	235000	--	--
Micractinium pusillum	6540	91500	6540	91500	--	--
Oocystis borgei	6540	157000	1630	39200	--	--
Scenedesmus bijuga	42500	1950000	26100	1200000	1630	75100
Scenedesmus dimorphus	14700	2100000	19600	2800000	4900	701000
Scenedesmus quadricauda	16300	768000	26100	1230000	--	--
Selenastrum minutum	1630	27800	11400	194000	817	13900
Tetraedron minimum	--	--	1630	140000	--	--
CHRYSOPHYTA (Golden-brown algae)						
Mallomonas sp.	--	--	1630	105000	--	--
Unknown flagellate	4900	49000	9800	98000	3270	32700
CYANOPHYTA (Blue-green algae)						
Anabaena sp.	4900	216000	11400	503000	--	--
Aphanocapsa delicatissima	194000	194000	188000	188000	103000	103000
Aphanocapsa elachista	34300	103000	52300	157000	2450	7350
Chroococcus dispersus	--	--	26100	366000	1630	22900
Chroococcus sp.	19600	157000	--	--	--	--
Lyngbya nana ?	3270	3270	--	--	--	--
Merismopedia tenuissima	52300	52300	24500	24500	1633	24495
Synechococcus sp.	14700	1190000	9800	794000	2450	198000
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	1630	96400	3270	193000	817	48200
Rhodomonas minuta	1630	11400	--	--	1630	11400
TOTAL CELLS/ml	522,000		586,000		138,000	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/ml)	19,500,000		22,000,000		2,410,000	
NUMBER OF SPECIES	33		30		20	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

PHYTOPLANKTON

DATE	8/15/91		8/15/91		8/15/91	
TIME	1045		1105		1110	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella meneghiniana	545	19600	327	11800	200	7190
Stephanodiscus astraea var. minutula	--	--	--	--	127	55900
Order Pennales						
Achnanthes minutissima	--	--	10	910	25	2170
Amphora perpusilla	--	--	10	3060	--	--
Gomphonema parvulum	--	--	21	3550	--	--
Nitzschia acicularis	2110	452000	880	188000	2420	517000
Nitzschia gracilis	--	--	--	--	25	5470
Nitzschia palea	204	40400	10	2040	49	9760
Synedra delicatissima	340	459000	31	41800	99	133000
Synedra rumpens	--	--	10	4380	--	--
Synedra sp.	68	21000	10	3190	--	--
CHLOROPHYTA (Green algae)						
Carteria sp.	--	--	653	410000	653	410000
Chlamydomonas sp.	1090	61000	1960	110000	1140	64000
Chlorella ellipsoidea	3270	121000	653	24200	490	18100
Chlorococcum humicola	--	--	327	13400	327	13400
Lagerheimia quadriseta	545	22300	--	--	327	13400
Micractinium pusillum	--	--	--	--	353	9150
Scenedesmus bijuga	2180	100000	653	30100	163	7520
Scenedesmus quadricauda	1090	51200	1310	61400	--	--
Selenastrum minutum	545	9260	--	--	327	5560
Tetraedron minimum	545	39200	--	--	163	11800
CHRYSOPHYTA (Golden-brown algae)						
Mallomonas sp.	545	296000	--	--	653	355000
Unknown flagellate	545	5450	1630	16300	817	8170
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	75100	75100	35000	35000	18600	18600
Aphanocapsa elachista	--	--	3270	9800	1470	4410
Chroococcus sp.	1090	51200	3270	154000	1800	84500
Dactylococcopsis acicularis	4360	135000	2940	91200	1800	55700
Lyngbya limnetica	27200	272000	29400	294000	8660	86600
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	2180	157000	327	23500	653	47000
Rhodomonas minuta	545	4900	--	--	--	--
EUGLENOPHYTA (Euglenoids)						
Euglena sp.	545	57700	327	23500	--	--
TOTAL CELLS/ml	125,000		83,000		41,300	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/ml)	2,450,000		1,560,000		1,940,000	
NUMBER OF SPECIES	21		23		24	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

PHYTOPLANKTON

DATE	9/05/91		9/05/91		9/05/91	
TIME	1115		1120		1125	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml	CELLS/ ml	CELL VOLUME μm^3/ml
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella meneghiniana	327	11800	--	--	545	19600
Cyclotella sp.	--	--	545	19600	--	--
Stephanodiscus astraea var. minutula	--	--	545	7620	545	240000
Order Pennales						
Achnanthes minutissima	--	--	545	2180	--	--
Asterionella formosa	--	--	--	--	762	348000
Fragilaria sp.	--	--	1090	2180	--	--
Nitzschia acicularis	327	70000	1090	10900	2540	544000
Nitzschia palea	545	108000	--	--	--	--
CHLOROPHYTA (Green algae)						
Ankistrodesmus falcatus	1370	83600	1090	69700	545	34900
Carteria sp.	327	205000	--	--	545	341000
Chlamydomonas sp.	980	54900	2180	122000	1630	91500
Chlorococcum humicola	--	--	2180	89300	3270	134000
Chlorella ellipsoidea	653	24200	--	--	1090	40300
Lagerheimia quadriseta	--	--	1090	44700	545	22300
Pediastrum tetras var. tetaedon	1310	123000	--	--	--	--
Scenedesmus bijuga	653	30100	--	--	--	--
Scenedesmus quadricauda	1310	61400	--	--	--	--
Selenastrum minutum	327	5560	--	--	545	9260
Tetraedron minimum	653	47000	1090	78400	1090	78400
CHRYSOPHYTA (Golden-brown algae)						
Dinobryon divergens	9480	692000	7080	517000	1090	79500
Mallomonas sp.	327	177000	--	--	--	--
Unknown flagellate	2610	26100	5450	54500	1090	10900
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	42800	42800	67000	67000	65300	65300
Chroococcus dispersus	5560	77800	--	--	--	--
Chroococcus sp.	--	--	8710	410000	2180	102000
Dactylococcopsis acicularis	2290	70900	--	--	2720	84400
Lyngbya limnetica	2610	26100	--	--	--	--
Synechococcus sp.	2940	265000	--	--	--	--
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	653	47000	545	39200	1090	78400
Rhodomonas minuta	--	--	545	4900	1090	9800
TOTAL CELLS/ml	78,100		101,000		88,200	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/ml)	2,250,000		1,540,000		2,330,000	
NUMBER OF SPECIES	21		16		19	

11166900 ALAMITOS CREEK NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, Santa Clara County, on right bank at Greystone bridge, 1.1 mi downstream from Arroyo Calero, 3.4 mi southwest of Edenvale, and 3.5 mi northwest of New Almaden.
DRAINAGE AREA.--31.8 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1958-72.
CHEMICAL DATA: Water years 1985 to July 1991 (discontinued).
SEDIMENT DATA: Water years 1985, 1987-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
01...	1230	2.6	295	7.7	14.0	18	740	9.5	95	110	17
19...	0810	5.5	732	8.2	11.5	16	--	--	--	320	44
25...	1205	61	505	8.1	11.0	60	755	10.2	93	210	29
JUL											
25...	0900	11	642	8.0	17.0	5.9	750	10.0	105	210	33

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
01...	16	17	25	0.7	1.8	79	0	64	24	36
19...	50	26	15	0.6	2.0	--	--	--	46	70
25...	33	19	16	0.6	3.2	--	--	[1]167	32	37
JUL										
25...	32	53	35	2	2.6	205	0	168	46	90

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
01...	<0.10	7.7	159	0.22	0.660	0.020	0.020	0.680	0.080	0.080
19...	<0.10	23	409	0.56	2.28	0.020	0.020	2.30	0.020	<0.010
25...	0.10	19	273	0.37	3.66	0.040	0.030	3.70	0.050	0.040
JUL										
25...	0.10	19	373	0.51	0.460	0.020	<0.010	0.480	<0.010	<0.010

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
01...	0.82	0.90	0.50	0.180	0.100	0.100	0.100	5.9	2.1	--
19...	0.28	0.30	0.30	0.090	0.070	0.060	0.060	4.8	0.4	--
25...	1.0	1.1	0.90	0.210	0.150	0.160	0.150	11	1.0	<1
JUL										
25...	--	0.50	0.20	0.060	<0.010	0.030	0.020	3.3	0.5	2

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
01...	--	60	--	--	--	37	--	--	--	--
19...	--	210	--	--	--	18	--	--	--	--
25...	<100	160	39	8	5000	76	100	60	0.70	20
JUL										
25...	<100	210	5	3	--	11	210	14	<0.10	<10

11167500 GUADALUPE CREEK AT GUADALUPE, CA

LOCATION.--Lat 37°13'02", long 121°54'35", in SW 1/4 sec.19, T.8 S, R.1 E., Santa Clara County, Hydrologic Unit 18050003, on left bank 0.1 mi downstream from small left-bank tributary, 0.5 mi northwest of Guadalupe.
DRAINAGE AREA.--12.8 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1930-59.
CHEMICAL DATA: Water years 1980 to July 1991 (discontinued).
SEDIMENT DATA: Water years 1985-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
01...	1450	2.4	576	7.8	11.5	61	740	--	--	260	50
18...	1300	14	426	8.2	10.0	11	--	--	--	190	38
25...	0955	63	320	8.1	10.0	28	750	10.8	97	130	24
JUL											
24...	1400	5.2	361	8.5	16.0	1.1	750	11.4	117	170	35

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
01...	34	28	18	0.7	3.8	251	0	201	77	23
18...	24	15	14	0.5	1.5	190	0	158	46	15
25...	18	9.9	14	0.4	1.5	--	--	[1]102	44	13
JUL										
24...	20	14	15	0.5	1.3	212	0	174	18	9.7

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
01...	0.20	11	351	0.48	0.760	0.030	0.030	0.790	0.030	0.030
18...	0.20	16	249	0.34	0.860	0.010	0.010	0.870	0.020	0.010
25...	0.10	16	188	0.26	1.08	0.020	0.020	1.10	0.020	0.020
JUL										
24...	0.10	12	215	0.29	0.067	0.010	0.010	0.077	<0.010	<0.010

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
01...	0.47	0.50	0.50	0.080	0.040	0.050	0.050	8.8	1.2	--
18...	0.38	0.40	0.40	0.070	0.040	0.040	0.040	6.7	>5.0	--
25...	0.58	0.60	0.50	0.050	0.050	0.040	0.040	6.9	0.5	1
JUL										
24...	--	0.50	0.40	0.020	<0.010	<0.010	<0.010	3.9	0.2	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
01...	--	340	--	--	--	31	--	--	--	--
18...	--	120	--	--	--	35	--	--	--	--
25...	<100	80	16	6	3200	55	90	36	0.80	<10
JUL										
24...	<100	210	3	2	--	31	20	14	<0.10	<10

11168000 LOS GATOS CREEK AT LOS GATOS, CA

LOCATION.--Lat 37°13'03", long 121°59'11", in SE 1/4 sec.20, T.8 S., R.1 W., Santa Clara County, Hydrologic Unit 18050003, on right bank 0.4 mi upstream from Main Street bridge, 0.7 mi southwest of Los Gatos Post Office, and 1.1 mi downstream from Lexington Dam.
DRAINAGE AREA.-- 39 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1930-44, 1954-71.
CHEMICAL DATA: Water years 1952-66, 1980-87, 1989 to July 1991 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
01...	1700	e7.7	464	8.0	12.5	100	740	10.3	100	210	51
18...	0705	8.5	424	8.0	9.0	21	--	--	--	190	45
25...	0745	26	293	8.1	9.5	65	750	10.8	96	120	30
JUL											
24...	0800	14	468	8.0	16.5	2.5	750	10.6	110	210	53

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
01...	19	20	17	0.6	3.2	194	0	163	72	13
18...	18	16	16	0.5	1.7	--	--	[1]149	56	11
25...	12	10	15	0.4	1.5	--	--	[1]103	28	11
JUL										
24...	18	18	16	0.5	2.5	186	0	153	88	11

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
01...	0.10	6.7	281	0.38	1.06	0.040	0.030	1.10	0.050	0.050
18...	0.20	12	249	0.34	0.990	0.010	<0.010	1.00	0.020	<0.010
25...	0.20	13	168	0.23	1.28	0.020	<0.010	1.30	0.020	0.010
JUL										
24...	0.20	9.3	292	0.40	0.180	0.020	0.020	0.200	<0.010	<0.010

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
01...	0.85	0.90	0.50	0.270	0.030	0.050	0.030	5.5	>5.0	--
18...	0.28	0.30	0.30	0.060	0.030	0.020	0.020	5.5	>5.0	--
25...	0.48	0.50	0.50	0.070	0.030	0.030	0.020	36	0.8	<1
JUL										
24...	--	0.40	0.40	0.060	<0.010	0.030	0.020	5.1	0.2	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
01...	--	160	--	--	--	36	--	--	--	--
18...	--	110	--	--	--	30	--	--	--	--
25...	100	70	11	6	4100	56	130	14	<0.10	20
JUL										
24...	<100	90	1	2	--	11	250	10	<0.10	<10

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 mi^2.

WATER-DISCHARGE RECORDS

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.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Lexington Reservoir 12 mi upstream and by Calero (station 11166740), Almaden, and Guadalupe Reservoirs, and Lake Elsman (combined usable capacity, about 42,000 acre-ft), with water released during summer for percolation in spreading basins on tributaries. Transbasin diversions from San Luis Reservoir (part of San Felipe Project) and from the South Bay Aqueduct during the current year amounted to 48,400 acre-ft and 87,300 acre-ft, respectively. Upstream diversions by San Jose Water Works for urban use amounted to 5,310 acre-ft during the current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,150 ft^3/s, Apr. 2, 1958, gage height, 16.55 ft; no flow several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,330 ft^3/s, Mar. 24, gage height, 6.45 ft; no flow Aug. 24, Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	5.5	2.2	1.5	1.3	85	e6.8	2.3	1.8	.33	1.6	.00
2	2.0	2.6	2.0	1.4	16	9.4	e6.5	2.4	2.0	3.9	1.1	.11
3	2.0	1.9	1.5	1.9	3.9	358	e4.7	1.8	3.3	3.8	.51	.24
4	1.6	1.8	1.3	1.9	49	677	e4.0	1.5	3.3	.21	.22	.11
5	1.9	1.6	1.4	2.3	197	76	e3.2	1.4	2.4	.20	.07	.03
6	1.6	2.1	1.3	2.0	6.7	9.7	e2.8	.92	1.5	.03	.11	.40
7	1.7	2.4	1.3	3.1	2.6	3.1	e2.4	.58	1.3	.02	.62	.23
8	1.4	2.3	1.4	2.0	2.5	2.0	e2.0	.75	1.3	.28	1.4	.06
9	1.0	2.5	1.8	13	2.5	1.9	e1.3	.79	1.2	.57	.14	.12
10	.97	2.4	25	4.8	2.5	69	e.86	.74	.99	.59	.10	.23
11	.70	1.6	105	5.4	2.0	16	e.73	.93	.87	.82	.12	.44
12	.77	1.8	6.9	3.0	1.5	3.4	1.2	.70	.69	1.3	.02	.90
13	.80	1.8	5.2	2.8	1.4	60	.96	1.8	.85	1.3	.17	.95
14	.93	1.8	4.2	2.8	1.3	4.8	1.7	2.3	1.2	1.3	.19	.89
15	1.4	1.7	167	2.8	1.1	11	1.4	1.9	1.2	1.4	.34	1.0
16	1.7	2.0	81	2.6	1.1	2.9	2.1	1.5	1.1	1.3	.14	.95
17	1.8	2.8	5.1	2.6	1.1	421	1.9	1.5	.70	1.1	.10	1.1
18	1.5	2.7	3.2	2.8	1.1	78	1.9	1.3	.67	.49	.05	1.1
19	1.5	2.6	19	2.8	1.7	17	2.2	1.5	.75	.42	.12	.15
20	1.7	1.7	8.5	2.4	2.2	190	5.1	1.0	.92	.29	.14	.14
21	2.0	1.6	1.7	2.7	2.1	76	7.0	.75	.91	.26	.01	.14
22	1.8	1.9	1.3	2.6	2.3	12	2.9	.76	.79	.11	.09	.26
23	2.2	1.6	2.2	2.2	2.2	44	1.6	.73	.61	.18	.11	.11
24	3.5	1.9	1.9	2.1	2.2	1120	1.4	.87	.62	.39	.00	.06
25	3.3	7.1	1.5	2.2	1.8	478	1.2	.66	.91	.89	1.5	1.5
26	2.6	6.4	1.3	2.5	1.5	e539	1.0	.81	.68	.89	2.7	.95
27	2.7	2.5	1.5	2.0	202	e107	1.4	.97	1.7	.83	2.1	.69
28	2.6	2.4	1.2	1.4	91	e38	1.2	1.3	2.5	.79	1.1	.35
29	2.7	2.2	1.3	1.1	---	e21	1.8	1.7	.89	.82	.54	.24
30	2.4	2.2	1.2	1.3	---	e14	1.9	1.7	.45	.88	.02	.24
31	8.9	---	1.3	1.3	---	e10	---	1.6	---	1.4	.02	---
TOTAL	63.57	75.4	460.7	85.3	603.6	4554.2	75.15	39.46	38.10	27.09	15.45	13.69
MEAN	2.05	2.51	14.9	2.75	21.6	147	2.50	1.27	1.27	.87	.50	.46
MAX	8.9	7.1	167	13	202	1120	7.0	2.4	3.3	3.9	2.7	1.5
MIN	.70	1.6	1.2	1.1	1.1	1.9	.73	.58	.45	.02	.00	.00
AC-FT	126	150	914	169	1200	9030	149	78	76	54	31	27

CAL YR 1990 TOTAL 3780.68 MEAN 10.4 MAX 595 MIN .26 AC-FT 7500
WTR YR 1991 TOTAL 6051.71 MEAN 16.6 MAX 1120 MIN .00 AC-FT 12000

e Estimated.

11169000 GUADALUPE RIVER AT SAN JOSE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to July 1991 (discontinued).
SEDIMENT DATA: Water years 1985-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
02...	0730	10	181	7.8	13.0	30	760	--	--	69	16
17...	0915	507	162	8.2	13.5	48	--	--	--	56	13
24...	0800	49	397	8.0	11.5	33	760	10.2	94	160	27
JUL											
24...	1120	0.18	844	8.2	21.0	4.3	760	6.8	77	360	67

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
02...	7.1	9.9	23	0.5	2.6	68	0	57	11	14
17...	5.7	7.5	22	0.4	1.4	--	--	[1]47	10	15
24...	22	20	21	0.7	2.2	141	0	115	32	36
JUL										
24...	46	49	23	1	2.8	364	0	298	70	76

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
02...	<0.10	3.8	98	0.13	0.420	0.050	0.030	0.470	0.040	0.030
17...	<0.10	3.5	85	0.12	0.330	0.030	0.030	0.360	0.150	0.130
24...	0.10	9.0	218	0.30	1.05	0.050	0.030	1.10	0.060	0.050
JUL										
24...	0.20	14	504	0.69	0.090	0.010	0.010	0.100	0.090	0.080

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
02...	0.66	0.70	0.70	0.140	0.090	0.110	0.100	7.7	1.4	--
17...	0.55	0.70	0.50	0.160	0.110	0.110	0.100	7.2	0.9	--
24...	0.64	0.70	0.70	0.180	0.100	0.130	0.090	38	3.0	<1
JUL										
24...	1.0	1.1	0.90	0.110	<0.010	--	0.030	12	0.8	3

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
02...	--	50	--	--	--	74	--	--	--	--
17...	--	40	--	--	--	54	--	--	--	--
24...	<100	100	9	8	2200	40	50	18	0.20	30
JUL										
24...	<100	270	4	8	--	9	40	14	<0.10	20

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 mi^2.

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1951, published as Campbell Creek at Saratoga.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 6, 1968, at site 40 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. 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.

AVERAGE DISCHARGE (adjusted for diversion).--58 years, 9.98 ft^3/s, 7,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft^3/s, Dec. 22, 1955, gage height, 6.40 ft, site and datum then in use, from rating curve extended above 510 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 7.03 ft, Jan. 24, 1983; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	0845	*336	*4.49	Mar. 24	1600	296	4.38
Mar. 17	0915	172	3.95				

Minimum daily, 0.11 ft^3/s, June 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.57	.56	.60	.60	8.5	6.5	1.2	.35	.68	.15	.32
2	.44	.53	.56	.63	2.3	2.9	5.3	1.4	.40	.34	.18	.25
3	.33	.49	.55	.63	1.2	41	4.5	1.5	.47	.44	.23	.28
4	.32	.49	.55	.63	1.4	115	3.9	1.1	.80	.38	.22	.26
5	.41	.53	.56	.63	3.0	21	3.4	1.5	.57	.34	.22	.22
6	.41	.54	.56	.63	1.4	7.3	2.8	1.4	.60	.31	.21	.24
7	.42	.48	.56	.69	1.1	3.0	2.0	1.1	.62	.30	.22	.28
8	.36	.49	.55	.72	.87	1.9	2.3	.38	.52	.30	.17	.24
9	.39	.48	.63	.91	.91	.54	1.7	.46	.38	.33	.16	.25
10	.46	.49	.76	.81	.89	5.8	1.6	.82	.37	.32	.17	.28
11	.43	.48	1.5	.72	.90	4.1	1.7	.53	.11	.37	.14	.27
12	.46	.49	.81	.72	.83	4.9	1.8	.60	.52	.36	.15	.32
13	.42	.47	.72	.63	.81	27	.27	.69	1.4	.31	.23	.31
14	.46	.48	.69	.61	.79	10	.54	.51	.86	.29	.32	.34
15	.47	.49	3.2	.63	.73	5.3	.70	.41	1.0	.28	.35	.30
16	.48	.48	2.0	.63	.70	4.4	.70	.47	.82	.28	.26	.26
17	.49	.49	1.0	.63	.68	38	.68	.56	.80	.29	.19	.20
18	.49	.49	.91	.63	.66	19	.73	.56	.86	.27	.20	.17
19	.46	.49	1.2	.63	.64	14	.83	.95	.71	.31	.22	.24
20	.48	.52	.94	.63	.63	23	1.5	.76	.53	.27	.27	.23
21	.46	.49	.83	.63	.61	19	1.6	.63	.45	.25	.33	.26
22	.42	.49	.75	.65	.63	13	1.3	.56	.71	.25	.33	.23
23	.42	.49	.68	.57	.64	22	.70	.48	.59	.23	.28	.17
24	.42	.49	.72	.56	.62	124	.86	.30	.63	.24	.28	.15
25	.42	.61	.72	.56	.61	68	.81	.29	.44	.28	.25	.21
26	.42	.79	.72	.61	.61	68	.90	.44	.53	.22	.27	.25
27	.42	.72	.72	.63	1.7	42	.81	.37	.27	.18	.30	.21
28	.42	.65	.72	.63	2.0	25	.55	.36	.88	.19	.29	.18
29	.49	.63	.58	.60	---	18	.62	.31	.16	.17	.28	.17
30	.49	.54	.56	.54	---	12	1.2	.64	.36	.16	.31	.13
31	.60	---	.56	.61	---	8.6	---	.52	---	.15	.31	---
TOTAL	13.58	15.87	26.37	19.93	28.46	776.24	52.80	21.80	17.71	9.09	7.49	7.22
MEAN	.44	.53	.85	.64	1.02	25.0	1.76	.70	.59	.29	.24	.24
MAX	.60	.79	3.2	.91	3.0	124	6.5	1.5	1.4	.68	.35	.34
MIN	.32	.47	.55	.54	.60	.54	.27	.29	.11	.15	.14	.13
AC-FT	27	31	52	40	56	1540	105	43	35	18	15	14
a	0	0	0	0	0	98	172	139	102	0	0	0

CAL YR 1990 TOTAL 513.77 MEAN 1.41 MAX 37 MIN .19 AC-FT 1020
WTR YR 1991 TOTAL 996.56 MEAN 2.73 MAX 124 MIN .11 AC-FT 1980

a Diversion, in acre-feet, for municipal use, provided by San Jose Water Works.

11169970 COYOTE CREEK BELOW LEROY ANDERSON DAM, NEAR MADRONE, CA

LOCATION.--Lat 37°09'54", long 121°37'56", in southeast corner of La Laguna Seca Grant, Santa Clara County, Hydrologic Unit 18050003, on left bank 500 ft downstream from release at Leroy Anderson Dam, 2.3 mi northeast of Madrone.
DRAINAGE AREA.--195 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-88, October 1989 to July 1991 (discontinued).
SEDIMENT DATA: Water year 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
02...	1050	0.80	760	8.2	11.0	2.0	755	--	--	240	50
17...	1705	1.0	600	8.0	12.0	49	--	--	--	180	39
25...	1415	1.2	571	8.0	11.0	32	750	10.6	98	180	41
JUL											
23...	1045	4.0	468	8.3	22.0	25	750	10.2	119	170	40

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
02...	27	67	38	2	4.2	215	0	173	73	100
17...	19	42	34	1	3.3	173	0	141	50	62
25...	20	43	33	1	3.2	182	0	149	53	59
JUL										
23...	18	29	26	1	3.0	177	0	145	46	35

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
02...	<0.10	7.3	435	0.59	0.052	0.020	0.020	0.072	0.040	0.040
17...	0.10	8.3	309	0.42	0.740	0.030	0.010	0.770	0.080	0.050
25...	0.10	8.8	318	0.43	0.750	0.030	0.020	0.780	0.060	0.060
JUL										
23...	0.20	0.70	259	0.35	0.200	0.010	<0.010	0.210	<0.010	0.010

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
02...	0.36	0.40	0.30	<0.010	<0.010	<0.010	<0.010	3.6	0.2	--
17...	0.62	0.70	0.50	0.090	0.020	0.040	0.020	6.6	>5.0	--
25...	0.54	0.60	0.60	0.050	0.040	0.030	0.020	37	0.4	<1
JUL										
23...	--	0.50	0.70	0.030	<0.010	<0.010	<0.010	6.4	0.4	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
02...	--	200	--	--	--	<3	--	--	--	--
17...	--	160	--	--	--	29	--	--	--	--
25...	100	180	5	4	1900	42	90	10	<0.10	<10
JUL										
23...	<100	150	6	3	--	4	40	16	<0.10	<10

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--46 years, 4.93 ft^3/s, 3,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,250 ft^3/s, Jan. 24, 1983, gage height, 8.80 ft, from rating curve extended above 600 ft^3/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 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1230	303	7.22	Mar. 24	1845	*1,000	*9.19
Mar. 17	2030	92	6.22				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.19	3.7	.37	.17	.00	.00	.00
2	.00	.00	.00	.00	.00	5.2	2.7	.36	.14	.00	.00	.00
3	.00	.00	.00	.00	.00	23	2.2	.42	.14	.00	.00	.00
4	.00	.00	.00	.00	.00	101	1.9	.45	.12	.00	.00	.00
5	.00	.00	.00	.00	.00	25	1.6	.35	.12	.00	.00	.00
6	.00	.00	.00	.00	.00	5.9	1.5	.32	.10	.00	.00	.00
7	.00	.00	.00	.00	.00	2.3	1.3	.29	.11	.00	.00	.00
8	.00	.00	.00	.00	.00	1.2	1.1	.23	.12	.00	.00	.00
9	.00	.00	.00	.00	.00	.74	1.0	.21	.11	.00	.00	.00
10	.00	.00	.00	.00	.00	.78	.91	.18	.08	.00	.00	.00
11	.00	.00	.00	.00	.00	2.4	.80	.17	.08	.00	.00	.00
12	.00	.00	.00	.00	.00	1.1	.78	.18	.08	.00	.00	.00
13	.00	.00	.00	.00	.00	10	.71	.21	.07	.00	.00	.00
14	.00	.00	.00	.00	.00	7.9	.69	.23	.07	.00	.00	.00
15	.00	.00	.00	.00	.00	4.2	.69	.25	.06	.00	.00	.00
16	.00	.00	.00	.00	.00	2.5	.69	.23	.06	.00	.00	.00
17	.00	.00	.00	.00	.00	20	.61	.21	.05	.00	.00	.00
18	.00	.00	.00	.00	.00	37	.61	.21	.04	.00	.00	.00
19	.00	.00	.00	.00	.00	12	.61	.21	.04	.00	.00	.00
20	.00	.00	.00	.00	.00	16	.61	.21	.04	.00	.00	.00
21	.00	.00	.00	.00	.00	13	.59	.22	.03	.00	.00	.00
22	.00	.00	.00	.00	.00	6.1	.61	.21	.03	.00	.00	.00
23	.00	.00	.00	.00	.00	4.0	.60	.21	.02	.00	.00	.00
24	.00	.00	.00	.00	.00	221	.53	.19	.02	.00	.00	.00
25	.00	.00	.00	.00	.00	90	.53	.17	.02	.00	.00	.00
26	.00	.00	.00	.00	.00	49	.53	.17	.02	.00	.00	.00
27	.00	.00	.00	.00	.00	35	.53	.17	.02	.00	.00	.00
28	.00	.00	.00	.00	.00	27	.47	.16	.02	.00	.00	.00
29	.00	.00	.00	.00	---	15	.41	.15	.01	.00	.00	.00
30	.00	.00	.00	.00	---	8.7	.34	.17	.00	.00	.00	.00
31	.00	---	.00	.00	---	5.4	---	.17	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	752.61	29.85	7.28	1.99	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	24.3	.99	.23	.066	.000	.000	.000
MAX	.00	.00	.00	.00	.00	221	3.7	.45	.17	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.19	.34	.15	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	1490	59	14	3.9	.00	.00	.00

CAL YR 1990 TOTAL 93.14 MEAN .26 MAX 17 MIN .00 AC-FT 185
WTR YR 1991 TOTAL 791.73 MEAN 2.17 MAX 221 MIN .00 AC-FT 1570

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 19, 1975, at site 1.4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--28 years, 33.6 ft^3/s, 24,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,790 ft^3/s, Feb. 17, 1986, gage height, 7.36 ft, from rating curve extended above 1,000 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1215	676	2.24	Mar. 24	2315	*2,340	*3.51

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	6.8	43	5.5	1.4	.00	.00	.00
2	.00	.00	.00	.00	.00	8.8	35	5.6	1.2	.00	.00	.00
3	.00	.00	.00	.00	.00	37	31	5.6	1.0	.00	.00	.00
4	.00	.00	.00	.00	.03	246	27	5.1	.93	.00	.00	.00
5	.00	.00	.00	.00	2.9	182	25	4.4	.66	.00	.00	.00
6	.00	.00	.00	.00	1.1	50	23	4.1	.56	.00	.00	.00
7	.00	.00	.00	.00	.39	27	21	3.8	.46	.00	.00	.00
8	.00	.00	.00	.00	.02	16	19	3.9	.34	.00	.00	.00
9	.00	.00	.00	.00	.00	11	18	3.8	.24	.00	.00	.00
10	.00	.00	.00	.00	.00	10	17	3.8	.12	.00	.00	.00
11	.00	.00	.00	.00	.00	16	15	3.7	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	13	13	3.8	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	74	12	3.8	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	42	11	3.8	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	29	10	3.7	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	20	9.7	3.2	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	38	8.8	3.1	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	167	8.5	3.1	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	81	7.6	3.1	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	88	7.7	3.1	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	108	8.8	3.1	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	67	7.7	2.5	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	49	7.4	2.5	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	745	6.6	2.4	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	928	6.6	2.0	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	467	6.6	1.9	.00	.00	.00	.00
27	.00	.00	.00	.00	.07	443	5.9	1.7	.00	.00	.00	.00
28	.00	.00	.00	.00	2.3	224	5.6	1.5	.00	.00	.00	.00
29	.00	.00	.00	.00	---	123	5.6	1.5	.00	.00	.00	.00
30	.00	.00	.00	.00	---	79	5.3	1.5	.00	.00	.00	.00
31	.00	---	.00	.00	---	56	---	1.5	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	6.81	4451.6	428.4	102.1	6.91	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.24	144	14.3	3.29	.23	.000	.000	.000
MAX	.00	.00	.00	.00	2.9	928	43	5.6	1.4	.00	.00	.00
MIN	.00	.00	.00	.00	.00	6.8	5.3	1.5	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	14	8830	850	203	14	.00	.00	.00

CAL YR 1990 TOTAL 408.41 MEAN 1.12 MAX 55 MIN .00 AC-FT 810
WTR YR 1991 TOTAL 4995.82 MEAN 13.7 MAX 928 MIN .00 AC-FT 9910

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum.

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.

AVERAGE DISCHARGE.--29 years (water years 1912-30, 1957-68), 29.6 ft^3/s, 21,450 acre-ft/yr; 23 years (water years 1969-91), 24.7 ft^3/s, 17,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/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 ft^3/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 ft^3/s, on basis of contracted-opening and slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,560 ft^3/s, Mar. 25, gage height, 7.39 ft; minimum daily, 0.19 ft^3/s, Jan. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.29	.43	12	.24	.49	1.7	.42	.63	.34	.39	.57
2	.30	.29	.42	12	.37	.45	1.4	.43	.69	.33	.42	.55
3	.29	.29	.43	9.5	.38	.63	1.2	.45	.65	.37	.44	.53
4	.30	.31	.47	.53	.45	.84	1.2	.51	.52	.35	.43	.54
5	.33	.32	.44	.34	.84	.76	1.2	.52	.49	.38	.42	.56
6	.33	.29	.47	.29	.35	.74	1.3	.47	.50	.44	.40	.61
7	.30	.28	.47	.29	.29	.74	1.0	.57	.46	.42	.40	.51
8	.29	.25	.43	.29	.29	.72	.89	.58	.39	.43	.38	.58
9	.29	.24	.49	.30	.29	.62	.52	.57	.40	.34	.41	1.0
10	.30	.24	.58	.29	.28	.87	.52	.61	.40	.37	.45	.84
11	.28	.24	.74	.24	.24	.80	.50	.62	.39	.33	.45	.80
12	.28	.25	.59	.24	.24	.68	.51	.78	.39	.34	.46	.81
13	.32	.28	.61	.24	.24	.91	.43	.85	.45	.38	.57	.79
14	.32	.34	4.9	.24	.24	.74	.44	.77	.48	.40	.74	.77
15	.33	.37	11	.24	.23	.75	.45	.76	.47	.39	.78	.51
16	.34	.36	11	.24	.24	.74	.45	.75	.49	.40	.74	.50
17	.31	.38	11	.24	.24	.74	.46	.74	.35	.38	.72	.42
18	.32	.38	11	.24	.24	.74	.45	.82	.29	.40	.81	.45
19	.34	.42	12	.24	.20	.74	.40	.95	.39	.37	.83	.42
20	.32	.50	12	.24	.21	.92	.41	1.0	.41	.37	.69	.44
21	.25	.52	11	.21	.23	.72	.43	1.0	.51	.37	.57	.44
22	.25	.55	11	.19	.24	.69	.43	.98	.37	.44	.47	.44
23	.24	.56	12	.20	.24	.75	.45	.91	.46	.41	.47	.52
24	.22	.58	12	.24	.24	1.7	.45	.93	.54	.41	.47	.43
25	.22	.73	12	.24	.27	e939	.42	.88	.55	.42	.73	.45
26	.22	.77	12	.24	.29	630	.43	1.0	.54	.37	.81	.48
27	.22	.50	12	.24	.36	280	.43	1.0	.68	.37	.82	.49
28	.23	.36	12	.24	.30	2.6	.46	1.0	.45	.36	.80	.50
29	.26	.41	12	.24	---	1.8	.45	1.1	.40	.34	.82	.48
30	.27	.43	12	.24	---	1.5	.39	.98	.39	.35	.78	.48
31	.29	---	12	.24	---	1.8	---	.69	---	.37	.74	---
TOTAL	8.84	11.73	209.47	40.75	8.27	1875.18	19.77	23.64	14.13	11.74	18.41	16.91
MEAN	.29	.39	6.76	1.31	.30	60.5	.66	.76	.47	.38	.59	.56
MAX	.34	.77	12	12	.84	939	1.7	1.1	.69	.44	.83	1.0
MIN	.22	.24	.42	.19	.20	.45	.39	.42	.29	.33	.38	.42
AC-FT	18	23	415	81	16	3720	39	47	28	23	37	34

CAL YR 1990 TOTAL 367.26 MEAN 1.01 MAX 12 MIN .06 AC-FT 728
WTR YR 1991 TOTAL 2258.84 MEAN 6.19 MAX 939 MIN .19 AC-FT 4480

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. Flow partly regulated by Del Valle Reservoir 15 mi upstream, capacity, 77,100 acre-ft. Water imported from Sacramento-San Joaquin Delta (see REMARKS for station 11176500).

AVERAGE DISCHARGE.--17 years (water years 1913-19, 1921-30), 42.5 ft^3/s, 30,790 acre-ft/yr; 18 years (water years 1970-83, 1988-91), 64.2 ft^3/s, 46,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s, Jan. 5, 1982, gage height, 22.61 ft, present datum; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft^3/s, Feb. 5, gage height, 9.99 ft; minimum daily, 0.81 ft^3/s, July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	8.7	2.6	6.0	3.0	351	22	9.3	2.2	4.3	1.9	2.2
2	4.3	4.9	2.9	6.1	50	87	17	5.4	2.2	4.1	2.0	1.9
3	3.2	3.0	4.5	5.9	16	241	14	4.7	2.2	3.5	2.2	1.7
4	2.9	2.7	3.7	4.9	53	433	13	4.4	1.9	3.0	2.5	1.6
5	2.7	2.5	3.1	4.5	523	132	13	4.8	2.0	3.7	2.7	1.6
6	2.9	2.3	2.3	4.7	52	44	12	5.1	1.9	3.6	3.2	1.4
7	2.9	2.3	2.6	5.3	33	32	13	4.4	2.4	3.3	3.0	2.3
8	2.9	2.7	2.9	4.8	29	26	12	3.4	2.3	1.1	2.6	1.8
9	2.8	3.2	5.1	28	27	23	10	3.6	2.3	.81	2.4	2.0
10	2.8	2.4	19	16	25	133	9.2	4.4	1.8	1.0	2.2	2.0
11	2.5	2.5	139	7.1	25	77	8.5	5.4	1.9	1.3	2.2	2.2
12	2.2	2.5	33	5.2	21	47	8.1	5.8	2.4	1.5	1.9	2.2
13	2.1	2.3	13	4.8	21	217	8.3	11	2.7	1.5	2.0	2.4
14	2.4	2.3	8.0	5.1	19	46	8.8	9.7	2.4	2.5	2.2	2.6
15	2.6	2.7	108	4.3	18	34	9.8	7.3	2.3	3.4	7.0	2.3
16	2.2	2.7	79	3.4	19	27	8.3	7.9	2.6	3.0	3.2	2.2
17	2.3	2.7	22	4.1	20	67	8.3	8.3	2.7	3.0	2.6	2.6
18	2.1	2.7	12	3.8	19	46	8.2	7.5	3.0	2.8	1.9	2.5
19	3.8	2.8	10	4.1	20	29	7.4	8.3	2.4	3.0	1.9	2.2
20	3.1	3.4	7.6	4.8	18	98	17	9.9	2.9	2.7	1.9	2.1
21	3.1	7.2	5.3	5.4	17	42	25	8.2	3.1	2.4	1.9	2.1
22	3.0	4.5	4.5	5.8	16	26	11	7.5	2.7	2.6	1.8	2.6
23	3.1	3.0	5.9	5.4	17	130	7.0	6.2	2.9	2.9	2.5	2.7
24	3.1	2.6	8.3	5.4	19	756	5.9	5.3	3.6	2.6	1.6	2.7
25	3.8	16	8.0	5.4	20	894	5.4	5.0	4.0	2.6	1.4	2.5
26	3.4	36	7.7	4.9	19	1170	6.6	4.4	4.1	2.4	1.4	2.7
27	3.1	10	14	4.9	72	620	4.9	3.6	4.6	2.7	1.4	2.7
28	3.4	5.4	8.4	5.7	202	116	4.4	3.3	4.9	1.8	1.7	2.8
29	3.4	3.8	6.7	4.9	---	48	4.6	2.8	5.1	1.6	1.9	2.8
30	3.0	3.0	4.9	4.0	---	28	4.4	2.6	4.9	1.7	2.1	2.9
31	14	---	5.8	3.5	---	22	---	2.7	---	2.3	2.3	---
TOTAL	103.4	152.8	559.8	188.2	1393.0	6042	307.1	182.2	86.4	78.71	71.5	68.3
MEAN	3.34	5.09	18.1	6.07	49.7	195	10.2	5.88	2.88	2.54	2.31	2.28
MAX	14	36	139	28	523	1170	25	11	5.1	4.3	7.0	2.9
MIN	2.1	2.3	2.3	3.4	3.0	22	4.4	2.6	1.8	.81	1.4	1.4
AC-FT	205	303	1110	373	2760	11980	609	361	171	156	142	135

CAL YR 1990 TOTAL 4647.30 MEAN 12.7 MAX 641 MIN .33 AC-FT 9220
WTR YR 1991 TOTAL 9233.41 MEAN 25.3 MAX 1170 MIN .81 AC-FT 18310

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 mi^2.

WATER-DISCHARGE RECORDS

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 Sunolglen" 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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. 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.

AVERAGE DISCHARGE.--71 years (water years 1892-1962), 123 ft^3/s, 89,110 acre-ft/yr; 29 years (water years 1963-91), 115 ft^3/s, 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s, Dec. 23, 1955, gage height, 14.9 ft; minimum (water years 1892-1962), no flow at times; minimum daily (water years 1963-90), 0.63 ft^3/s, Oct. 7-10, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,430 ft^3/s, Mar. 24, gage height, 7.15 ft; minimum daily, 2.1 ft^3/s, Oct. 12, July 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	59	66	36	386	36	14	35	41	45	48
2	18	44	59	68	61	109	29	25	39	40	46	47
3	13	56	62	66	33	237	26	24	38	38	47	45
4	3.3	55	62	28	20	474	23	31	38	39	46	45
5	2.4	56	62	31	589	162	22	33	37	38	46	41
6	2.3	59	65	60	53	43	19	33	37	37	47	31
7	4.9	59	62	67	28	27	21	32	38	39	47	32
8	4.3	59	61	66	22	21	20	30	39	40	46	33
9	4.0	61	62	78	21	18	19	29	40	39	46	32
10	4.2	57	60	79	20	100	17	28	39	39	43	30
11	2.8	57	144	60	27	93	16	28	39	39	47	31
12	2.1	57	50	58	28	31	15	28	38	39	46	31
13	2.2	49	21	57	27	238	15	30	40	40	46	31
14	4.6	18	14	57	26	52	14	34	40	41	47	30
15	12	58	153	56	25	31	16	27	39	41	50	33
16	18	59	123	56	26	26	15	26	40	40	49	37
17	18	58	83	56	26	53	17	27	39	40	46	36
18	16	58	69	56	29	44	15	26	39	39	47	36
19	16	59	59	56	27	30	14	25	39	39	47	35
20	36	59	27	56	24	86	19	27	39	21	46	36
21	37	61	65	58	24	50	31	28	38	3.7	46	37
22	18	62	63	56	21	27	21	26	39	2.9	46	35
23	18	59	66	55	21	78	16	25	39	3.3	46	34
24	18	58	63	57	21	1070	15	25	40	4.4	46	35
25	37	60	68	56	21	1200	14	24	39	3.0	45	36
26	41	65	68	55	21	1510	15	26	40	2.2	46	36
27	52	71	73	57	21	871	14	27	40	2.1	46	35
28	56	67	70	56	198	194	13	27	41	2.1	46	35
29	54	60	71	55	---	86	12	27	40	3.2	45	36
30	11	60	68	56	---	54	11	26	40	32	46	36
31	7.0	---	70	51	---	40	---	26	---	45	47	---
TOTAL	551.1	1679	2102	1789	1496	7441	550	844	1168	872.9	1435	1075
MEAN	17.8	56.0	67.8	57.7	53.4	240	18.3	27.2	38.9	28.2	46.3	35.8
MAX	56	71	153	79	589	1510	36	34	41	45	50	48
MIN	2.1	18	14	28	20	18	11	14	35	2.1	43	30
AC-FT	1090	3330	4170	3550	2970	14760	1090	1670	2320	1730	2850	2130

CAL YR 1990 TOTAL 16465.0 MEAN 45.1 MAX 680 MIN 2.1 AC-FT 32660
WTR YR 1991 TOTAL 21003.0 MEAN 57.5 MAX 1510 MIN 2.1 AC-FT 41660

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906, 1952-73, 1975 to current year.
CHEMICAL DATA: Water years 1906, 1952-67, 1969, 1975-79.
SPECIFIC CONDUCTANCE: Water years 1956-57, 1959-62, 1976 to current year.
WATER TEMPERATURE: Water years 1956-73, 1976-78.
SEDIMENT DATA: Water years 1957-73.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1956 to July 1957, August 1959 to September 1962, October 1975 to current year.
WATER TEMPERATURE: July 1956 to September 1973, October 1975 to September 1978.

INSTRUMENTATION.--Water-quality monitor since October 1975. Digital recorder set for 1-hour-interval punches.

REMARKS.--Interruptions in record were due to malfunction of recording instruments. Specific conductance affected by regulation of imported water.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,530 microsiemens, Nov. 19, 1977; minimum recorded, 122 microsiemens, Jan. 22, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,400 microsiemens, Apr. 21; minimum recorded, 160 microsiemens, Mar. 24.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	704	685	---	---	781	771	915	898	806	777	401	215
2	718	696	---	---	783	776	899	874	1040	466	618	336
3	729	706	768	754	811	783	874	863	625	411	700	240
4	736	727	754	743	812	794	875	862	745	625	495	202
5	749	733	760	744	794	771	988	872	775	164	613	346
6	758	742	759	748	778	771	893	830	710	503	848	613
7	904	754	757	750	792	777	834	820	861	715	999	848
8	1020	904	758	748	798	792	824	813	947	861	1090	999
9	1060	1020	786	756	843	797	970	796	987	946	1160	1090
10	1090	1060	773	755	867	843	809	733	1020	967	1200	307
11	1110	1090	767	753	1140	350	797	786	1050	966	672	285
12	1100	1080	766	753	672	486	792	752	966	918	767	664
13	1100	1080	768	751	869	672	786	758	916	904	879	231
14	1090	1080	1000	768	950	869	795	786	931	902	692	520
15	---	---	990	761	973	458	800	783	919	905	955	672
16	---	---	764	751	610	468	789	769	916	896	1080	936
17	815	788	762	751	815	610	792	777	941	876	1160	653
18	810	785	758	748	851	815	793	783	961	916	664	572
19	809	795	750	742	870	846	794	778	927	878	905	664
20	930	758	758	747	1040	842	818	794	956	927	945	460
21	758	719	783	762	990	885	824	810	945	930	787	466
22	826	736	896	782	891	878	810	796	949	886	864	787
23	839	819	782	747	910	878	803	789	960	907	928	422
24	835	824	747	742	962	910	811	800	950	926	422	160
25	836	758	746	733	948	932	812	802	972	926	655	206
26	758	751	1070	677	932	920	813	803	992	962	629	420
27	751	720	748	719	964	920	809	796	972	901	599	499
28	725	713	763	679	964	907	807	794	1180	255	690	599
29	724	715	772	761	922	895	800	780	---	---	777	690
30	749	721	773	768	895	886	792	775	---	---	892	777
31	762	749	---	---	908	893	803	789	---	---	965	892
MONTH	---	---	---	---	1140	350	988	733	1180	164	1200	160

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1060	981	1120	1070	674	632	754	733	670	662	565	557
2	1120	1060	1260	964	632	613	748	727	662	651	557	547
3	1080	1040	945	769	622	606	737	725	657	650	548	529
4	1100	1040	766	672	627	612	726	709	659	648	531	523
5	1120	1060	694	673	628	618	709	690	653	645	541	531
6	1120	1070	699	689	636	623	691	677	648	635	574	541
7	1230	1090	710	661	635	623	687	672	654	643	589	574
8	1110	1080	662	623	637	633	680	662	653	642	605	589
9	1100	1030	623	598	666	625	684	672	646	635	601	580
10	1050	976	603	587	653	635	677	669	647	632	604	583
11	1070	997	599	585	651	645	678	670	637	627	601	573
12	1100	1030	605	590	654	634	681	671	634	623	606	584
13	1070	1030	601	582	654	644	682	669	623	608	622	606
14	1100	1000	870	594	656	647	676	664	610	591	631	613
15	1110	1010	753	641	666	649	708	672	767	587	623	616
16	1160	1110	641	604	663	649	708	674	793	639	623	602
17	1140	1070	617	582	670	659	679	671	639	604	607	599
18	1100	860	602	573	680	663	679	672	622	595	615	603
19	1030	859	603	575	687	670	679	666	596	581	615	609
20	1010	967	607	567	684	674	687	671	586	576	621	613
21	1400	1030	683	602	692	670	731	687	585	573	627	617
22	1170	924	665	609	700	681	759	732	579	568	624	616
23	936	919	638	597	696	682	772	757	601	565	632	619
24	925	910	643	591	707	695	874	772	607	572	639	625
25	939	920	651	605	728	705	965	874	572	559	636	625
26	965	922	651	593	727	714	999	965	562	554	634	628
27	1090	965	639	603	732	716	1020	989	554	539	640	633
28	1080	1030	656	628	750	725	1030	1010	552	538	646	639
29	1060	999	655	635	748	732	1060	1030	563	546	653	643
30	1090	1020	661	650	750	728	1170	689	558	546	656	651
31	---	---	665	657	---	---	689	665	562	554	---	---
MONTH	1400	859	1260	567	750	606	1170	662	793	538	656	523

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 1, 1959, at site 1.4 mi downstream at different datum.

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

AVERAGE DISCHARGE.--35 years, 2.32 ft^3/s, 1,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft^3/s, Jan. 26, 1983, gage height, 5.14 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 5.27 ft, Oct. 13, 1962, from high-water marks past gage; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1615	*86	*2.53				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.08	1.2	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.94	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.10	.65	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.34	.05	.16	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.09	.00	.02	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00	.00	.00
15	.00	.00	.05	.00	.00	.05	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.52	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	44	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.09	16	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.01	6.9	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	4.0	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.6	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.7	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.05	0.00	0.53	119.05	2.97	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.002	.000	.019	3.84	.099	.000	.000	.000	.000	.000
MAX	.00	.00	.05	.00	.34	44	1.2	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.1	.00	1.1	236	5.9	.00	.00	.00	.00	.00

CAL YR 1990 TOTAL 4.30 MEAN .012 MAX 1.3 MIN .00 AC-FT 8.5
WTR YR 1991 TOTAL 122.60 MEAN .34 MAX 44 MIN .00 AC-FT 243

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 26, 1966, at site 0.2 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Feb. 19, 1986, gage height, 18.44 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft^3/s, Mar. 24, gage height, 10.09 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	243	.14	.00	.04	.03	.00	.00
2	.00	.00	.00	.00	.00	55	.12	.00	.04	.03	.00	.00
3	.00	.00	.00	.00	.00	142	.04	.00	.04	.02	.00	.00
4	.00	.00	.00	.00	6.3	312	.01	.00	.08	.00	.00	.00
5	.00	.00	.00	.00	558	52	.00	.00	.09	.00	.00	.00
6	.00	.00	.00	.00	5.7	3.8	.00	.00	.04	.00	.00	.00
7	.00	.00	.00	.00	.47	.26	.00	.00	.04	.00	.00	.00
8	.00	.00	.00	.00	.07	.08	.00	.00	.04	.00	.00	.00
9	.00	.00	.00	.01	.04	.04	.00	.00	.04	.00	.00	.00
10	.00	.00	.00	.01	.04	9.1	.00	.00	.03	.00	.00	.00
11	.00	.00	258	.00	.03	3.2	.00	.00	.02	.00	.00	.00
12	.00	.00	7.8	.00	.01	.17	.00	.00	.01	.00	.00	.00
13	.00	.00	.67	.00	.00	13	.00	.00	.02	.00	.02	.00
14	.00	.00	.00	.00	.00	7.4	.00	.03	.29	.00	.06	.00
15	.00	.00	58	.00	.00	4.0	.00	.00	.14	.02	.18	.00
16	.00	.00	11	.00	.00	.43	.00	.00	.03	.01	.05	.00
17	.00	.00	1.1	.00	.00	8.9	.00	.00	.01	.00	.04	.00
18	.00	.00	.12	.00	.00	1.9	.00	.00	.01	.00	.04	.00
19	.00	.00	.08	.00	.00	.13	.00	.01	.01	.00	.04	.00
20	.00	.00	.04	.00	.00	18	.32	.02	.07	.00	.04	.00
21	.00	.00	.02	.00	.00	2.2	.97	.02	.03	.00	.04	.00
22	.00	.00	.00	.00	.00	.15	.15	.02	.00	.00	.02	.00
23	.00	.00	.00	.00	.00	2.3	.02	.01	.00	.00	.02	.00
24	.00	.00	.00	.00	.00	764	.02	.01	.01	.00	.02	.00
25	.00	.00	.00	.00	.00	1010	.00	.01	.03	.00	.02	.00
26	.00	.00	.00	.00	.00	1270	.00	.02	.02	.05	.02	.00
27	.00	.00	.00	.00	3.6	585	.00	.03	.12	.01	.02	.00
28	.00	.00	.00	.00	11	57	.00	.03	.40	.00	.00	.00
29	.00	.00	.00	.00	---	5.9	.00	.04	.62	.00	.00	.00
30	.00	.00	.00	.00	---	.62	.00	.04	.11	.00	.00	.00
31	.00	---	.00	.00	---	.18	---	.06	---	.00	.00	---
TOTAL	0.00	0.00	336.83	0.02	585.26	4571.76	1.79	0.35	2.43	0.17	0.63	0.00
MEAN	.000	.000	10.9	.001	20.9	147	.060	.011	.081	.005	.020	.000
MAX	.00	.00	258	.01	558	1270	.97	.06	.62	.05	.18	.00
MIN	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	668	.04	1160	9070	3.6	.7	4.8	.3	1.2	.00

CAL YR 1990 TOTAL 3721.48 MEAN 10.2 MAX 608 MIN .00 AC-FT 7380
WTR YR 1991 TOTAL 5499.24 MEAN 15.1 MAX 1270 MIN .00 AC-FT 10910

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.--Lat 37°41'42", long 122°02'38", in San Lorenzo Grant, Alameda County, Hydrologic Unit 18050004, on left bank, 250 ft south of Interstate Highway 580, 0.4 mi southeast of Independent School, and 2.2 mi east of Castro Valley.

DRAINAGE AREA.--18.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Some regulation of low flow by ponds upstream from station.

AVERAGE DISCHARGE.--11 years, 6.41 ft^3/s, 4,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft^3/s, Feb. 18, 1986, gage height, 8.33 ft; maximum gage height, 9.50 ft, Jan. 24, 1983; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 275 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	2215	*248	*3.20				

Minimum daily, 0.01 ft^3/s, several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.93	.23	.13	.07	11	3.5	.54	.12	.26	.03	.03
2	.01	.04	.08	.12	4.8	.34	2.5	.70	.14	.18	.04	.03
3	.01	.03	.08	.12	.09	9.7	2.1	.21	.13	.08	.06	.03
4	.01	.03	.09	.12	23	14	1.8	.21	.11	.07	.06	.03
5	.01	.53	.10	.11	12	.55	1.6	.16	.13	.07	.05	.03
6	.01	.13	.50	.08	.61	.19	1.5	.13	.14	.07	.08	.03
7	.01	.03	.09	.12	.30	.13	1.2	.13	.17	.07	.07	.03
8	.01	.37	.08	.13	.23	.15	1.1	.20	.13	.08	.06	.03
9	.05	.04	.08	1.7	.17	.17	1.0	.15	.22	.13	.04	.03
10	.02	.04	3.2	.11	.17	9.4	.98	.14	.30	.13	.04	.03
11	.02	.04	5.7	.08	.17	1.3	.89	.12	.18	.11	.03	.03
12	.72	.04	.23	.08	.15	6.4	.81	.13	.20	.08	.03	.03
13	.02	.03	.13	.07	.17	19	.71	.54	.23	.07	.21	.04
14	.02	.61	.17	.07	.19	1.6	.62	.48	.24	.08	.18	.03
15	.02	.07	12	.07	.21	1.4	.61	.09	.21	.14	.10	.03
16	.02	.07	3.5	.07	.18	1.0	.55	.08	.23	.11	.05	.03
17	.02	.08	.29	.09	.17	8.2	.52	.10	.20	.38	.05	.03
18	.35	.11	.20	.11	.19	1.5	.47	.12	.16	.12	.05	.03
19	.26	.34	.79	.11	.18	1.8	.47	.13	.20	.10	.05	.03
20	.02	.38	.37	.08	.19	16	.76	.12	.24	.08	.06	.04
21	.02	1.5	.38	.08	.24	2.4	.67	.11	.25	.07	.06	.03
22	.01	.35	.52	.17	.23	1.3	.43	.11	.24	.07	.04	.03
23	.01	.15	.29	.40	.23	18	.43	.11	.21	.06	.04	.03
24	.01	.13	.26	.08	.26	44	.43	.10	.24	.07	.04	.03
25	.01	2.9	.30	.07	.31	19	.49	.10	.31	.07	.03	.03
26	.01	.71	.25	.07	.36	107	.48	.10	.29	.06	.03	.03
27	.01	.25	.27	.07	8.5	29	.32	.11	.31	.06	.04	.04
28	.01	.66	.22	.07	5.0	10	.25	.12	.70	.05	.04	.04
29	.02	.22	.22	.07	---	5.6	.24	.12	.35	.07	.04	.03
30	.22	.35	.13	.12	---	4.8	.21	.18	.30	.04	.03	.03
31	3.0	---	.14	.07	---	3.7	---	.14	---	.03	.03	---
TOTAL	4.95	11.16	30.89	4.84	58.37	348.63	27.64	5.78	6.88	3.06	1.76	0.94
MEAN	.16	.37	1.00	.16	2.08	11.2	.92	.19	.23	.099	.057	.031
MAX	3.0	2.9	12	1.7	23	107	3.5	.70	.70	.38	.21	.04
MIN	.01	.03	.08	.07	.07	.13	.21	.08	.11	.03	.03	.03
AC-FT	9.8	22	61	9.6	116	692	55	11	14	6.1	3.5	1.9

CAL YR 1990 TOTAL 232.58 MEAN .64 MAX 17 MIN .01 AC-FT 461
WTR YR 1991 TOTAL 504.90 MEAN 1.38 MAX 107 MIN .01 AC-FT 1000

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to current year (storm season only).
WATER TEMPERATURE: December 1980 to current year.
SEDIMENT DATA: December 1980 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1980 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1980 to current year.

REMARKS.--Sediment samples were collected on most days where water temperature is published. Zero-bedload discharge observed for flows less than 5.4 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 10,000 mg/L, Jan. 4, 1982; minimum daily mean, 0 mg/L, Feb. 26, 1989.
SEDIMENT LOAD (storm season only): Maximum daily, 19,800 tons, Jan. 4, 1982; minimum daily, 0 ton several days in most years.
EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 1,550 mg/L, Mar. 26; minimum daily mean, 1 mg/L, Nov. 13, 24.
SEDIMENT LOAD (storm season only): Maximum daily, 575 tons, Mar. 26; 0 ton for many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
30...	1345	2.0	14.0	171	0.92	--	--
31...	1040	4.7	14.0	63	0.80	--	--
NOV							
14...	1350	0.60	12.5	322	0.52	--	--
15...	1355	0.07	11.0	24	0.00	--	--
DEC							
10...	1125	0.11	10.5	32	0.01	--	--
10...	1155	0.11	10.5	32	0.01	--	--
10...	1615	7.8	12.5	556	12	--	--
15...	1050	34	--	994	91	--	--
15...	1110	21	--	861	49	--	--
17...	1520	0.34	7.0	50	0.05	--	--
JAN							
09...	1130	1.7	8.5	39	0.18	--	--
23...	1545	0.92	6.5	38	0.09	--	--
FEB							
02...	1645	1.1	11.5	122	0.36	--	--
04...	1000	0.04	9.5	10	0.00	--	--
05...	1315	2.4	12.5	283	1.8	--	--
06...	1020	0.54	9.0	55	0.08	--	--
28...	1705	8.6	--	1080	25	56	70
28...	1725	16	--	1740	75	58	65

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
OCT						
30...	--	--	--	90	96	100
31...	--	--	--	100	--	--
NOV						
14...	--	--	--	100	--	--
15...	--	--	--	96	--	--
DEC						
10...	--	--	--	98	--	--
10...	--	--	--	98	--	--
10...	--	--	--	100	--	--
15...	--	--	--	100	--	--
15...	--	--	--	100	--	--
17...	--	--	--	97	--	--
JAN						
09...	--	--	--	48	--	--
23...	--	--	--	51	--	--
FEB						
02...	--	--	--	100	--	--
04...	--	--	--	83	--	--
05...	--	--	--	100	--	--
06...	--	--	--	99	--	--
28...	86	96	98	100	--	--
28...	79	92	97	100	--	--

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
MAR							
01...	1500	6.6	12.0	298	5.3	--	--
03...	1125	20	12.0	840	45	72	82
03...	1420	7.4	13.0	432	8.6	--	--
04...	1125	66	15.0	1240	221	55	65
04...	1200	29	15.0	1320	103	59	71
04...	1305	12	15.0	1060	34	--	--
04...	1645	5.1	14.0	528	7.3	--	--
06...	1525	0.17	11.0	210	0.10	--	--
10...	1230	2.5	9.5	138	0.93	--	--
10...	1240	19	10.0	309	16	--	--
10...	1250	27	10.0	837	61	44	52
10...	1325	24	10.5	387	25	--	--
10...	1350	27	10.5	569	41	--	--
10...	1415	54	10.5	871	127	45	54
12...	1315	0.71	10.0	215	0.41	--	--
14...	1625	1.3	9.5	168	0.59	--	--
16...	1735	1.0	10.5	51	0.14	--	--
17...	0915	26	9.5	650	46	51	60
17...	0935	31	9.5	658	55	51	61
17...	1000	37	9.5	460	46	--	--
17...	1020	47	10.0	586	74	51	60
17...	1050	52	10.0	756	106	53	62
18...	1720	1.3	10.0	88	0.31	--	--
20...	1620	5.8	10.5	522	8.2	--	--
21...	1445	3.0	10.5	144	1.2	--	--
22...	1455	1.2	11.5	71	0.23	--	--
23...	1450	1.3	10.5	98	0.34	--	--
23...	1510	6.6	10.5	182	3.2	--	--
23...	1525	13	10.5	423	15	--	--
24...	1450	55	10.5	2400	356	60	70

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
MAR						
01...	--	--	--	100	--	--
03...	91	97	99	100	--	--
03...	--	--	--	100	--	--
04...	76	90	95	98	100	--
04...	82	93	100	--	--	--
04...	--	--	--	100	--	--
04...	--	--	--	100	--	--
06...	--	--	--	84	--	--
10...	--	--	--	64	--	--
10...	--	--	--	95	99	100
10...	62	79	92	98	100	--
10...	--	--	--	99	100	--
10...	--	--	--	96	100	--
10...	66	82	92	97	100	--
12...	--	--	--	96	99	100
14...	--	--	--	93	97	100
16...	--	--	--	73	--	--
17...	69	82	92	98	100	--
17...	72	85	94	99	100	--
17...	--	--	--	97	100	--
17...	67	78	90	96	99	100
17...	72	84	91	96	99	100
18...	--	--	--	86	--	--
20...	--	--	--	100	--	--
21...	--	--	--	96	--	--
22...	--	--	--	58	--	--
23...	--	--	--	74	--	--
23...	--	--	--	100	--	--
23...	--	--	--	99	100	--
24...	85	93	96	97	99	100

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
MAR							
24...	1545	81	10.5	1900	416	55	65
24...	1555	86	10.5	2010	467	--	--
24...	1610	127	10.5	2020	693	49	59
24...	1635	107	10.5	2050	592	--	--
25...	1500	17	10.5	198	9.1	--	--
26...	1005	106	8.5	1780	509	55	61
26...	1035	116	8.5	1670	523	--	--
26...	1105	129	8.5	1820	634	46	53
26...	1215	214	8.5	2620	1510	36	42
26...	1245	239	8.5	3060	1970	35	42
26...	1315	230	8.5	2810	1750	35	42
26...	1345	198	8.5	2490	1330	37	45
26...	1515	154	8.5	2340	973	48	57
29...	1545	4.0	12.5	34	0.37	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
MAR							
24...	77	89	94	96	99	100	--
24...	--	--	--	95	--	--	--
24...	73	84	90	94	98	100	--
24...	--	--	--	94	98	100	--
25...	--	--	--	99	100	--	--
26...	73	87	94	98	99	100	--
26...	--	--	--	96	98	100	--
26...	68	83	92	95	98	99	100
26...	52	67	77	85	94	98	100
26...	47	65	76	86	94	99	100
26...	52	66	79	89	96	99	100
26...	55	73	85	92	97	99	100
26...	65	81	91	96	98	100	--
29...	--	--	--	97	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)
MAR									
03...	1145	1000	1120	0.250	1130	1200	1.00	26	12.0
24...	1540	1000	1120	0.250	1520	1555	1.00	84	10.5
25...	1525	1000	1120	0.250	1510	1535	1.00	17	10.5

DATE	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAR									
03...	0.10	1	2	8	47	83	98	100	--
24...	0.98	1	3	27	72	88	94	98	100
25...	0.01	--	--	21	70	87	100	--	--

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	12.0	12.5	---	---	---	---	---
2	---	11.0	6.5	5.0	11.5	---	13.0	---	---	---	---	---
3	---	---	---	---	---	13.0	---	---	---	---	---	---
4	---	11.5	6.5	---	9.5	14.0	---	---	---	---	---	---
5	---	---	---	5.5	12.5	---	14.0	---	---	---	---	---
6	---	11.0	7.0	---	9.0	11.0	14.5	---	---	---	---	---
7	---	---	---	7.0	---	---	---	---	---	---	---	---
8	---	---	8.0	---	10.0	11.0	12.5	---	---	---	---	---
9	---	11.0	8.5	8.5	---	---	---	---	---	---	---	---
10	---	---	12.5	---	10.5	10.5	---	---	---	---	---	---
11	---	12.5	---	8.5	---	---	11.5	---	---	---	---	---
12	---	12.5	9.5	---	12.0	10.0	---	---	---	---	---	---
13	---	11.5	---	11.0	---	---	14.0	---	---	---	---	---
14	---	---	7.0	---	12.0	9.5	---	---	---	---	---	---
15	---	11.0	---	11.0	---	---	---	---	---	---	---	---
16	---	---	---	---	---	10.5	---	---	---	---	---	---
17	---	---	7.0	10.5	---	10.0	13.0	---	---	---	---	---
18	---	12.0	---	---	11.5	10.0	---	---	---	---	---	---
19	---	11.5	---	---	---	10.5	13.0	---	---	---	---	---
20	---	9.5	4.0	8.0	---	10.5	---	---	---	---	---	---
21	---	---	---	7.5	11.5	10.5	13.5	---	---	---	---	---
22	---	8.5	---	---	12.0	11.5	---	---	---	---	---	---
23	---	---	---	6.5	---	10.5	11.5	---	---	---	---	---
24	13.0	9.0	2.0	---	12.5	10.5	---	---	---	---	---	---
25	---	10.5	---	7.5	---	10.5	---	---	---	---	---	---
26	14.5	---	---	---	12.0	9.0	---	---	---	---	---	---
27	---	7.0	3.5	---	---	---	14.5	---	---	---	---	---
28	14.0	---	---	7.5	---	---	---	---	---	---	---	---
29	---	---	3.5	7.5	---	12.5	---	---	---	---	---	---
30	14.0	7.0	---	---	---	---	---	---	---	---	---	---
31	14.0	---	3.5	7.0	---	---	---	---	---	---	---	---

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.01	5	.00	.93	107	.81	.23	27	.02
2	.01	7	.00	.04	29	.00	.08	4	.00
3	.01	10	.00	.03	14	.00	.08	2	.00
4	.01	8	.00	.03	23	.00	.09	2	.00
5	.01	6	.00	.53	52	.18	.10	3	.00
6	.01	5	.00	.13	18	.02	.50	37	.15
7	.01	4	.00	.03	10	.00	.09	7	.00
8	.01	4	.00	.37	63	.28	.08	4	.00
9	.05	9	.00	.04	29	.00	.08	6	.00
10	.02	10	.00	.04	13	.00	3.2	272	5.5
11	.02	9	.00	.04	7	.00	5.7	324	12
12	.72	99	1.4	.04	4	.00	.23	9	.01
13	.02	10	.00	.03	1	.00	.13	6	.00
14	.02	6	.00	.61	270	2.5	.17	13	.00
15	.02	9	.00	.07	38	.01	12	648	32
16	.02	11	.00	.07	15	.00	3.5	128	3.3
17	.02	9	.00	.08	10	.00	.29	48	.02
18	.35	23	.21	.11	7	.00	.20	16	.00
19	.26	33	.03	.34	9	.01	.79	47	.11
20	.02	12	.00	.38	7	.00	.37	23	.02
21	.02	10	.00	1.5	39	.31	.38	22	.02
22	.01	11	.00	.35	12	.01	.52	22	.03
23	.01	13	.00	.15	4	.00	.29	23	.02
24	.01	14	.00	.13	1	.00	.26	22	.02
25	.01	9	.00	2.9	196	6.5	.30	19	.02
26	.01	7	.00	.71	114	.35	.25	17	.01
27	.01	9	.00	.25	42	.06	.27	16	.01
28	.01	13	.00	.66	73	.41	.22	14	.01
29	.02	14	.00	.22	34	.02	.22	17	.01
30	.22	36	.07	.35	24	.04	.13	14	.00
31	3.0	169	6.3	---	---	---	.14	19	.01
TOTAL	4.95	---	8.01	11.16	---	11.51	30.89	---	53.29
		JANUARY			FEBRUARY			MARCH	
1	.13	22	.01	.07	12	.00	11	687	50
2	.12	21	.01	4.8	258	12	.34	65	.06
3	.12	23	.01	.09	31	.01	9.7	471	30
4	.12	28	.01	23	770	283	14	591	50
5	.11	27	.01	12	454	47	.55	275	.41
6	.08	25	.01	.61	51	.08	.19	210	.11
7	.12	36	.01	.30	28	.02	.13	135	.05
8	.13	25	.01	.23	14	.01	.15	25	.01
9	1.7	74	.64	.17	14	.01	.17	23	.01
10	.11	17	.01	.17	19	.01	9.4	239	15
11	.08	20	.00	.17	22	.01	1.3	235	.82
12	.08	13	.00	.15	27	.01	6.4	538	33
13	.07	19	.00	.17	24	.01	19	795	102
14	.07	17	.00	.19	21	.01	1.6	175	.76
15	.07	12	.00	.21	19	.01	1.4	123	.46
16	.07	18	.00	.18	17	.01	1.0	70	.19
17	.09	24	.01	.17	16	.01	8.2	340	18
18	.11	35	.01	.19	18	.01	1.5	124	.54
19	.11	47	.01	.18	14	.01	1.8	95	1.0
20	.08	59	.01	.19	10	.01	16	753	52
21	.08	70	.02	.24	8	.01	2.4	180	1.2
22	.17	64	.03	.23	15	.01	1.3	75	.26
23	.40	47	.06	.23	15	.01	18	426	65
24	.08	18	.00	.26	13	.01	44	1160	225
25	.07	25	.00	.31	21	.02	19	319	19
26	.07	24	.00	.36	18	.02	107	1550	575
27	.07	23	.00	8.5	640	41	29	460	36
28	.07	24	.00	5.0	602	20	10	172	4.6
29	.07	14	.00	---	---	---	5.6	52	.79
30	.12	18	.01	---	---	---	4.8	29	.38
31	.07	13	.00	---	---	---	3.7	26	.26
TOTAL	4.84	---	0.89	58.37	---	403.32	348.63	---	1281.91

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	3.5	30	.34
2	2.5	27	.18
3	2.1	30	.17
4	1.8	34	.17
5	1.6	42	.18
6	1.5	32	.13
7	1.2	22	.07
8	1.1	20	.06
9	1.0	19	.05
10	.98	18	.05
11	.89	18	.04
12	.81	13	.03
13	.71	12	.02
14	.62	13	.02
15	.61	14	.02
16	.55	15	.02
17	.52	16	.02
18	.47	10	.01
19	.47	11	.01
20	.76	21	.04
21	.67	18	.01
22	.43	13	.02
23	.43	11	.01
24	.43	10	.01
25	.49	11	.00
26	.48	14	.02
27	.32	24	.02
28	.25	20	.01
29	.24	15	.01
30	.21	12	.01
31	---	---	---
TOTAL	27.64	---	1.75
PERIOD	486.48		1760.68

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	4.95	8.01	0	8
NOVEMBER	11.16	11.51	0	12
DECEMBER	30.89	53.29	0	53
JANUARY 1991	4.84	0.89	0	1
FEBRUARY	58.37	403.32	5	408
MARCH	348.63	1281.91	22	1300
APRIL	27.64	1.75	0	2
PERIOD	486.48	1760.68	27	1784

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No storage or diversions upstream from station.

AVERAGE DISCHARGE.--13 years, 2.97 ft^3/s, 2,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1300	*99	*2.47				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.2	2.4	.53	.06	.02	.00	.00
2	.00	.00	.00	.00	.06	.20	2.1	.56	.04	.01	.00	.00
3	.00	.00	.00	.00	.00	2.4	1.9	.49	.04	.00	.00	.00
4	.00	.00	.00	.00	.51	2.2	1.7	.48	.04	.00	.00	.00
5	.00	.00	.00	.00	.28	.02	1.7	.42	.04	.00	.00	.00
6	.00	.00	.00	.00	.02	.00	1.5	.41	.02	.00	.00	.00
7	.00	.00	.00	.00	.02	.00	1.2	.35	.02	.00	.00	.00
8	.00	.00	.00	.00	.01	.00	.88	.35	.02	.00	.00	.00
9	.00	.00	.00	.01	.00	.00	.84	.35	.02	.00	.00	.00
10	.00	.00	.01	.00	.00	.00	.84	.29	.01	.00	.00	.00
11	.00	.00	.04	.00	.00	.00	.75	.24	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.06	.75	.24	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.7	.75	.34	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.04	.75	.40	.00	.00	.00	.00
15	.00	.00	.22	.00	.00	.00	.75	.34	.00	.00	.00	.00
16	.00	.00	.10	.00	.00	.00	.72	.29	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.01	.65	.28	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.62	.24	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.57	.24	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.20	.63	.19	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.01	.65	.19	.00	.00	.00	.00
22	.00	.00	.00	.00	.02	.00	.57	.19	.00	.00	.00	.00
23	.00	.00	.00	.00	.02	1.0	.57	.19	.00	.00	.00	.00
24	.00	.00	.00	.00	.02	15	.57	.13	.00	.00	.00	.00
25	.00	.00	.00	.00	.02	21	.57	.11	.00	.00	.00	.00
26	.00	.00	.00	.00	.02	30	.57	.09	.01	.00	.00	.00
27	.00	.00	.00	.00	.12	7.9	.55	.09	.01	.00	.00	.00
28	.00	.00	.00	.00	.14	4.5	.47	.08	.01	.00	.00	.00
29	.00	.00	.00	.00	---	3.4	.42	.06	.02	.00	.00	.00
30	.00	.00	.00	.00	---	2.8	.42	.06	.02	.00	.00	.00
31	.01	---	.00	.00	---	2.4	---	.06	---	.00	.00	---
TOTAL	0.01	0.00	0.37	0.01	1.26	96.04	27.36	8.28	0.39	0.03	0.00	0.00
MEAN	.000	.000	.012	.000	.045	3.10	.91	.27	.013	.001	.000	.000
MAX	.01	.00	.22	.01	.51	30	2.4	.56	.06	.02	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.42	.06	.00	.00	.00	.00
AC-FT	.02	.00	.7	.02	2.5	190	54	16	.8	.06	.00	.00

CAL YR 1990 TOTAL 19.65 MEAN .054 MAX 1.9 MIN .00 AC-FT 39
WTR YR 1991 TOTAL 133.75 MEAN .37 MAX 30 MIN .00 AC-FT 265

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year (storm season only).
WATER TEMPERATURE: Water years 1979 to current year.
SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1978 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1978 to current year.

REMARKS.--Zero bedload discharge observed at flows less than 2.00 ft^3/s. Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 22,400 mg/L, Feb. 17, 1986; minimum daily mean, no flow many days during most years.
SEDIMENT LOAD: Maximum daily, 26,400 tons, Feb. 17, 1986; minimum daily, 0 ton many days during most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 3,880 mg/L, Mar. 26; minimum daily mean, no flow on many days.
SEDIMENT LOAD: (storm season only): Maximum daily, 459 tons, Mar. 26; minimum daily, 0 ton on many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
FEB								
02...	1615	0.06	14.0	24	0.00	--	--	--
04...	1730	0.06	12.0	168	0.03	--	--	--
05...	0720	0.15	11.5	80	0.03	--	--	--
27...	1500	0.06	11.0	141	0.02	--	--	--
27...	1755	0.09	11.5	230	0.06	--	--	--
28...	1555	1.7	13.0	970	4.5	--	--	--
28...	1720	0.26	13.0	779	0.55	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
FEB								
02...	--	--	74	--	--	--	--	--
04...	--	--	100	--	--	--	--	--
05...	--	--	100	--	--	--	--	--
27...	--	--	100	--	--	--	--	--
27...	--	--	98	--	--	--	--	--
28...	--	--	100	--	--	--	--	--
28...	--	--	100	--	--	--	--	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR								
01...	0720	0.24	11.5	131	0.08	--	--	--
01...	1120	1.4	11.0	1640	6.2	61	76	90
01...	1145	2.3	11.0	2250	14	52	70	84
03...	1025	0.95	11.5	244	0.63	--	--	--
03...	1230	3.5	12.0	968	9.1	--	--	--
03...	1330	6.0	12.5	1640	27	--	--	--
03...	1435	7.0	13.0	2280	43	--	--	--
03...	1540	6.5	13.0	1410	25	56	62	71
03...	1635	6.3	12.5	1670	28	--	--	--
03...	1730	5.1	12.5	1130	16	--	--	--
04...	0710	1.2	13.0	115	0.37	--	--	--
04...	1145	7.3	14.0	6680	132	46	59	66
04...	1730	1.2	14.0	836	2.7	--	--	--
13...	1730	0.29	10.0	153	0.12	--	--	--
17...	1255	0.02	8.5	36	0.00	--	--	--
20...	0925	0.49	9.0	176	0.23	--	--	--
20...	1700	0.12	10.0	83	0.03	--	--	--
23...	1630	0.09	9.5	278	0.07	--	--	--
23...	1710	0.57	9.5	964	1.5	--	--	--
23...	1725	0.65	9.5	2250	3.9	55	72	88
24...	0930	2.1	9.0	449	2.5	--	--	--
24...	1035	4.6	9.0	794	9.9	--	--	--
24...	1040	6.1	9.0	814	13	49	57	66
24...	1120	24	9.0	5570	361	--	--	--
24...	1130	25	9.0	6020	406	30	36	44
24...	1155	29	9.0	7880	617	35	44	54
24...	1235	29	9.5	5990	469	39	45	60
24...	1300	25	10.0	4540	306	--	--	--
24...	1340	21	10.0	3470	197	47	57	64
24...	1425	22	10.0	2580	153	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR								
01...	--	--	100	--	--	--	--	--
01...	97	99	100	--	--	--	--	--
01...	92	98	100	--	--	--	--	--
03...	--	--	100	--	--	--	--	--
03...	--	--	96	--	--	--	--	--
03...	--	--	95	--	--	--	--	--
03...	--	--	96	99	100	--	--	--
03...	82	88	97	99	100	--	--	--
03...	--	--	93	98	100	--	--	--
03...	--	--	96	--	--	--	--	--
04...	--	--	99	--	--	--	--	--
04...	76	84	89	95	98	100	--	--
04...	--	--	100	--	--	--	--	--
13...	--	--	97	--	--	--	--	--
17...	--	--	80	--	--	--	--	--
20...	--	--	99	--	--	--	--	--
20...	--	--	97	--	--	--	--	--
23...	--	--	98	--	--	--	--	--
23...	--	--	99	100	--	--	--	--
23...	97	99	100	--	--	--	--	--
24...	--	--	97	98	100	--	--	--
24...	--	--	89	--	--	--	--	--
24...	75	83	90	94	98	100	--	--
24...	--	--	68	--	--	--	--	--
24...	55	64	72	83	94	99	100	--
24...	66	76	82	90	96	100	--	--
24...	71	78	84	91	97	100	--	--
24...	--	--	84	90	96	99	100	--
24...	75	81	88	92	98	100	--	--
24...	--	--	86	--	--	--	--	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR								
24...	1520	21	10.0	2740	155	--	--	--
24...	1620	28	10.0	3410	258	--	--	--
24...	1715	25	10.0	4540	306	32	41	45
24...	1720	26	10.0	4870	342	--	--	--
25...	1200	22	10.5	782	46	--	--	--
25...	1725	19	10.5	314	16	--	--	--
26...	1025	25	8.5	3580	242	37	47	50
26...	1500	55	9.0	9010	1340	30	35	45
27...	1055	7.3	6.0	205	4.0	--	--	--
27...	1630	6.6	13.0	148	2.6	--	--	--
28...	0645	4.8	9.5	46	0.60	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR								
24...	--	--	79	87	96	100	--	--
24...	--	--	77	--	--	--	--	--
24...	56	65	74	84	93	99	100	--
24...	--	--	71	81	92	99	100	--
25...	--	--	85	90	96	100	--	--
25...	--	--	88	--	--	--	--	--
26...	64	75	83	90	96	99	100	--
26...	56	66	74	85	94	99	99	100
27...	--	--	96	99	100	--	--	--
27...	--	--	97	99	100	--	--	--
28...	--	--	97	--	--	--	--	--

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM
MAR											
24...	1055	1000	1130	0.250	1040	1110	1.25	14	9.0	2.1	1
26...	1520	1000	1130	0.250	1515	1525	1.00	54	9.0	7.0	--
26...	1535	1000	1130	0.250	1530	1540	1.00	51	9.0	6.0	1
27...	1115	1000	1130	0.250	1105	1125	2.25	7.3	6.0	3.6	--
27...	1145	1000	1130	0.250	1130	1200	2.25	7.3	6.0	3.4	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR										
24...	5	27	52	61	69	78	89	94	100	--
26...	1	4	14	48	72	79	84	91	92	100
26...	4	24	57	68	73	78	86	96	100	--
27...	--	1	6	18	48	77	95	100	--	--
27...	--	2	13	33	59	83	98	100	--	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
SEP							
02...	1415	0.0	7	18	38	57	69
02...	1420	0.0	4	15	32	39	42
02...	1425	0.0	1	2	5	11	20
02...	1430	0.0	1	2	6	16	21
02...	1435	0.0	11	28	50	62	71

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
SEP						
02...	80	89	92	95	100	--
02...	49	61	81	96	100	--
02...	31	45	62	79	100	--
02...	26	31	39	52	61	100
02...	82	92	96	99	100	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	11.0	---	---	---	---	---	---
2	---	---	---	---	14.0	13.0	---	---	---	---	---	---
3	---	---	---	---	---	11.5	16.0	---	---	---	---	---
4	---	---	---	---	12.0	14.0	---	---	---	---	---	---
5	---	---	---	---	13.0	---	14.0	---	---	---	---	---
6	---	---	---	---	11.5	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	15.0	---	---	---	---	---
10	---	---	---	---	---	9.0	---	---	---	---	---	---
11	---	---	---	---	---	---	13.0	---	---	---	---	---
12	---	---	---	---	---	9.5	---	---	---	---	---	---
13	---	---	---	---	---	10.0	15.0	---	---	---	---	---
14	---	---	---	---	---	9.5	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	12.0	---	---	---	---	---
17	---	---	---	---	---	8.5	---	---	---	---	---	---
18	---	---	---	---	---	---	15.0	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	10.0	14.0	---	---	---	---	---
21	---	---	---	---	---	10.0	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	9.5	11.5	---	---	---	---	---
24	---	---	---	---	---	9.0	---	---	---	---	---	---
25	---	---	---	---	---	10.5	13.0	---	---	---	---	---
26	---	---	---	---	---	9.0	---	---	---	---	---	---
27	---	---	---	---	11.5	6.0	---	---	---	---	---	---
28	---	---	---	---	13.0	9.5	15.0	---	---	---	---	---
29	---	---	---	---	---	13.5	---	---	---	---	---	---
30	---	---	---	---	---	---	14.0	---	---	---	---	---
31	---	---	---	---	---	14.0	---	---	---	---	---	---

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.00	0	.00	.00	0	.00	.00	0	.00
2	.00	0	.00	.00	0	.00	.00	0	.00
3	.00	0	.00	.00	0	.00	.00	0	.00
4	.00	0	.00	.00	0	.00	.00	0	.00
5	.00	0	.00	.00	0	.00	.00	0	.00
6	.00	0	.00	.00	0	.00	.00	0	.00
7	.00	0	.00	.00	0	.00	.00	0	.00
8	.00	0	.00	.00	0	.00	.00	0	.00
9	.00	0	.00	.00	0	.00	.00	0	.00
10	.00	0	.00	.00	0	.00	.01	2	.00
11	.00	0	.00	.00	0	.00	.04	8	.00
12	.00	0	.00	.00	0	.00	.00	0	.00
13	.00	0	.00	.00	0	.00	.00	0	.00
14	.00	0	.00	.00	0	.00	.00	0	.00
15	.00	0	.00	.00	0	.00	.22	32	.00
16	.00	0	.00	.00	0	.00	.10	9	.00
17	.00	0	.00	.00	0	.00	.00	0	.00
18	.00	0	.00	.00	0	.00	.00	0	.00
19	.00	0	.00	.00	0	.00	.00	0	.00
20	.00	0	.00	.00	0	.00	.00	0	.00
21	.00	0	.00	.00	0	.00	.00	0	.00
22	.00	0	.00	.00	0	.00	.00	0	.00
23	.00	0	.00	.00	0	.00	.00	0	.00
24	.00	0	.00	.00	0	.00	.00	0	.00
25	.00	0	.00	.00	0	.00	.00	0	.00
26	.00	0	.00	.00	0	.00	.00	0	.00
27	.00	0	.00	.00	0	.00	.00	0	.00
28	.00	0	.00	.00	0	.00	.00	0	.00
29	.00	0	.00	.00	0	.00	.00	0	.00
30	.00	0	.00	.00	0	.00	.00	0	.00
31	.01	0	.00	---	---	---	.00	0	.00
TOTAL	0.01	---	0.00	0.00	---	0.00	0.37	---	0.00
		JANUARY			FEBRUARY			MARCH	
1	.00	0	.00	.00	0	.00	1.2	734	4.4
2	.00	0	.00	.06	28	.00	.20	151	.27
3	.00	0	.00	.00	0	.00	2.4	692	8.6
4	.00	0	.00	.51	238	2.1	2.2	1620	22
5	.00	0	.00	.28	128	.46	.02	25	.00
6	.00	0	.00	.02	13	.00	.00	0	.00
7	.00	0	.00	.02	6	.00	.00	0	.00
8	.00	0	.00	.01	4	.00	.00	0	.00
9	.01	5	.00	.00	0	.00	.00	0	.00
10	.00	0	.00	.00	0	.00	.00	0	.00
11	.00	0	.00	.00	0	.00	.00	0	.00
12	.00	0	.00	.00	0	.00	.06	150	.41
13	.00	0	.00	.00	0	.00	1.7	651	6.9
14	.00	0	.00	.00	0	.00	.04	26	.00
15	.00	0	.00	.00	0	.00	.00	0	.00
16	.00	0	.00	.00	0	.00	.00	0	.00
17	.00	0	.00	.00	0	.00	.01	19	.00
18	.00	0	.00	.00	0	.00	.00	0	.00
19	.00	0	.00	.00	0	.00	.00	0	.00
20	.00	0	.00	.00	0	.00	.20	96	.04
21	.00	0	.00	.00	0	.00	.01	11	.00
22	.00	0	.00	.02	10	.00	.00	0	.00
23	.00	0	.00	.02	6	.00	1.0	610	5.7
24	.00	0	.00	.02	5	.00	15	2310	152
25	.00	0	.00	.02	7	.00	21	1310	83
26	.00	0	.00	.02	4	.00	30	3880	459
27	.00	0	.00	.12	150	.16	7.9	229	5.7
28	.00	0	.00	.14	184	.28	4.5	49	.60
29	.00	0	.00	---	---	---	3.4	23	.21
30	.00	0	.00	---	---	---	2.8	12	.09
31	.00	0	.00	---	---	---	2.4	5	.03
TOTAL	0.01	---	0.00	1.26	---	3.00	96.04	---	748.95

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	2.4	10	.06
2	2.1	22	.12
3	1.9	44	.22
4	1.7	34	.16
5	1.7	19	.09
6	1.5	15	.06
7	1.2	14	.05
8	.88	16	.04
9	.84	16	.04
10	.84	9	.02
11	.75	5	.01
12	.75	4	.01
13	.75	4	.01
14	.75	4	.01
15	.75	4	.01
16	.72	4	.01
17	.65	5	.01
18	.62	7	.01
19	.57	5	.01
20	.63	3	.01
21	.65	3	.01
22	.57	4	.01
23	.57	4	.01
24	.57	5	.01
25	.57	6	.01
26	.57	7	.01
27	.55	8	.01
28	.47	9	.01
29	.42	6	.01
30	.42	3	.00
31	---	---	---
TOTAL	27.36	---	1.05
PERIOD	125.05		753.00

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	0.01	0	0	0
NOVEMBER	0	0	0	0
DECEMBER	.37	0	0	0
JANUARY 1991	.01	0	0	0
FEBRUARY	1.26	3.00	0	3
MARCH	96.04	748.95	71	820
APRIL	27.36	1.05	0	1
PERIOD	125.05	753.00	71	824

11181006 CASTRO VALLEY CREEK AT KNOX STREET, AT CASTRO VALLEY, CA

LOCATION.--Lat 37°40'56", long 122°04'44", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank at Knox Street, 1.0 mi southeast of Castro Valley Post Office.

DRAINAGE AREA.--2.20 mi^2.

PERIOD OF RECORD.--October 1978 to September 1980, October 1989 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 130 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 873 ft^3/s, Oct. 23, 1989, gage height, 6.69 ft, from rating curve extended above 160 ft^3/s; no flow some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	2130	*772	*6.35				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	.01	.02	.09	9.8	1.8	.29	.07	.06	.03	.01
2	.02	.01	.01	.02	4.7	1.1	.33	.28	.07	.05	.03	.02
3	.01	.01	.01	.02	.09	8.4	.34	.19	.06	.04	.02	.01
4	.01	.01	.01	.02	28	6.4	.29	.13	.06	.03	.02	.00
5	.01	.02	.01	.03	4.1	.47	.28	.13	.10	.03	.02	.01
6	.01	.02	.02	.03	.20	.28	.29	.13	.06	.03	.02	.01
7	.01	.02	.02	.04	.17	.21	.25	.13	.08	.03	.02	.02
8	.00	.02	.03	.03	.08	.17	.29	.29	.05	.03	.02	.01
9	.01	.01	.03	1.9	.05	.14	.21	.12	.05	.04	.02	.01
10	.00	.02	3.3	.04	.05	7.9	.19	.15	.05	.04	.03	.03
11	.00	.02	3.4	.02	.05	.35	.21	.11	.04	.04	.03	.02
12	.00	.02	.05	.01	.05	8.2	.54	.11	.03	.04	.03	.00
13	.01	.02	.03	.01	.04	5.4	.19	.75	.03	.03	.07	.00
14	.00	.04	.02	.02	.03	.41	.19	.16	.04	.03	.39	.01
15	.00	.01	10	.09	.03	.55	.19	.13	.11	.03	.38	.02
16	.09	.01	1.5	.01	.05	.27	.19	.15	.06	.03	.04	.02
17	.01	.01	.07	.03	.04	11	.19	.15	.07	.03	.03	.02
18	.67	.01	.04	.05	.03	.53	.19	.13	.06	.03	.03	.01
19	.14	.14	.65	.02	.03	1.2	.19	.13	.08	.03	.72	.02
20	.01	.01	.17	.02	.03	9.4	.98	.32	.08	.03	.01	.02
21	.01	.90	.41	.02	.06	.59	.53	.75	.12	.07	.01	.02
22	.01	.02	.07	.03	.07	.32	.22	.67	.13	.03	.01	.03
23	.01	.01	.09	.03	.05	8.0	.19	.11	.10	.02	.02	.03
24	.00	.01	.06	.03	.07	15	.16	.11	.03	.02	.04	.00
25	.00	1.4	.02	.04	.10	5.8	.20	.10	.03	.02	.02	.14
26	.00	.07	.02	.05	.09	23	.19	.11	.04	.03	.01	.01
27	.00	.01	.03	.06	9.4	1.6	.16	.11	.08	.03	.01	.01
28	.00	.02	.03	.08	6.0	.89	.16	.11	.52	.02	.01	.02
29	.02	.03	.02	.09	---	.64	.16	.10	.08	.03	.01	.02
30	.00	.01	.01	.09	---	.46	.16	.11	.05	.03	.01	.03
31	3.5	---	.01	.09	---	.39	---	.07	---	.03	.09	---
TOTAL	4.57	2.94	20.15	3.04	53.75	128.87	9.46	6.33	2.43	1.03	2.20	0.58
MEAN	.15	.098	.65	.098	1.92	4.16	.32	.20	.081	.033	.071	.019
MAX	3.5	1.4	10	1.9	28	23	1.8	.75	.52	.07	.72	.14
MIN	.00	.01	.01	.01	.03	.14	.16	.07	.03	.02	.01	.00
AC-FT	9.1	5.8	40	6.0	107	256	19	13	4.8	2.0	4.4	1.2

CAL YR 1990 TOTAL 154.09 MEAN .42 MAX 14 MIN .00 AC-FT 306
WTR YR 1991 TOTAL 235.35 MEAN .64 MAX 28 MIN .00 AC-FT 467

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--17 years (water years 1972-74, 1978-91), 3.81 ft^3/s, 2,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s, Jan. 23, 1983, gage height, 8.51 ft, from rating curve extended above 61 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	2115	*581	*5.62				

Minimum daily, 0.08 ft^3/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.34	.15	.20	.19	33	3.8	.79	.29	.22	.12	.09
2	.21	.27	.15	.21	14	3.0	.97	.52	.28	.21	.14	.08
3	.20	.20	.15	.23	.34	27	.89	.49	.33	.18	.15	.08
4	.18	.26	.19	.22	53	17	.84	.42	.29	.19	.15	.09
5	.22	.23	.22	.19	12	1.5	.77	.42	.29	.18	.14	.10
6	.19	.20	.18	.20	.79	.93	.75	.40	.26	.17	.19	.09
7	.21	.25	.19	.32	.55	.72	.68	.41	.27	.18	.12	.10
8	.20	.23	.16	.25	.43	.55	.67	.88	.25	.18	.14	.10
9	.21	.28	.14	5.5	.39	.50	.88	.40	.25	.19	.14	.11
10	.19	.19	12	.28	.32	16	.60	.40	.27	.18	.14	.10
11	.18	.16	11	.25	.29	.98	.66	.39	.25	.17	.14	.13
12	.18	.16	.34	.20	.27	21	.84	.39	.25	.23	.13	.14
13	.18	.17	.26	.18	.25	15	.59	2.5	.24	.19	.43	.14
14	.15	.21	.22	.21	.25	1.3	.53	.46	.26	.18	1.7	.11
15	.15	.17	34	.37	.24	1.4	.51	.41	.33	.16	.19	.11
16	.25	.20	5.6	.22	.21	.72	.61	.42	.24	.16	.11	.12
17	.17	.17	.45	.18	.20	15	.48	.44	.24	.16	.10	.11
18	2.4	.16	.34	.23	.19	1.3	.54	.40	.23	.17	.11	.12
19	.51	.64	1.6	.18	.20	3.1	.86	.49	.24	.17	.40	.12
20	.19	.19	.47	.18	.20	22	2.7	.58	.23	.16	.10	.13
21	.14	3.2	.64	.17	.20	1.5	1.1	1.1	.23	.19	.08	.13
22	.17	.21	.39	.18	.27	.94	.49	.97	.23	.17	.08	.12
23	.18	.18	.40	.22	.21	23	.58	.38	.22	.16	.11	.14
24	.18	.17	.42	.18	.20	54	.59	.35	.23	.15	.10	.14
25	.19	5.2	.29	.22	.25	14	.58	.32	.24	.15	.08	.57
26	.22	.39	.26	.20	.22	57	.48	.32	.24	.16	.08	.15
27	.18	.19	.26	.20	31	4.9	.43	.31	.32	.15	.08	.12
28	.21	.17	.24	.21	17	2.5	.42	.33	1.3	.14	.15	.11
29	.24	.19	.23	.24	---	1.8	.42	.32	.30	.14	.09	.11
30	.20	.16	.20	.21	---	1.4	.41	.31	.22	.15	.09	.18
31	13	---	.20	.19	---	1.2	---	.33	---	.14	.28	---
TOTAL	21.32	14.74	71.34	12.02	133.66	344.24	24.67	16.65	8.82	5.33	6.06	3.94
MEAN	.69	.49	2.30	.39	4.77	11.1	.82	.54	.29	.17	.20	.13
MAX	13	5.2	34	5.5	53	57	3.8	2.5	1.3	.23	1.7	.57
MIN	.14	.16	.14	.17	.19	.50	.41	.31	.22	.14	.08	.08
AC-FT	42	29	142	24	265	683	49	33	17	11	12	7.8

CAL YR 1990 TOTAL 522.63 MEAN 1.43 MAX 44 MIN .14 AC-FT 1040
WTR YR 1991 TOTAL 662.79 MEAN 1.82 MAX 57 MIN .08 AC-FT 1310

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA

LOCATION.--Lat 37°41'03", long 122°08'20", in San Lorenzo (Soto) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 400 ft downstream from Washington Avenue bridge in San Lorenzo and 1.6 mi upstream from mouth.

DRAINAGE AREA.--44.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1978, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6.13 ft above National Geodetic Vertical Datum of 1929 (levels by Alameda County Flood Control and Water Conservation District).

REMARKS.--Records good. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft) and Don Castro Reservoir (capacity, 380 acre-ft) 7 mi upstream beginning in January 1965. A few very small diversions upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1968-78, 1988-91), 16.8 ft^3/s, 12,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft^3/s, Apr. 1, 1974, gage height, 8.22 ft from rating curve extended above 1,200 ft^3/s; minimum daily, 0.01 ft^3/s, June 30, July 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 31	0600	874	5.29	Mar. 13	0015	1,160	5.61
Feb. 4	2200	*3,830	*8.10	Mar. 26	1200	1,670	6.13
Feb. 27	2015	1,170	5.62				

Minimum daily, 0.42 ft^3/s, Nov. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.1	.65	.65	.71	77	14	3.0	.83	.56	e.98	.84
2	.52	.70	.66	.65	24	14	11	2.7	.80	.54	e.97	.83
3	.49	.48	.82	.65	2.1	53	11	2.5	.78	.51	e.95	.79
4	.43	.54	.84	.65	263	42	10	2.2	.82	.54	e.92	.81
5	.45	.51	.79	.65	100	12	8.6	2.1	.76	.53	e.88	.78
6	.47	.42	.66	.65	e54	7.3	7.5	2.1	.75	.57	e.84	.76
7	.51	.55	.71	1.0	e25	5.8	7.2	2.1	.70	.65	e.78	.78
8	.50	.58	.71	.94	e9.8	5.5	7.2	2.0	.66	.64	e.70	.73
9	.52	.70	.67	12	e5.6	5.3	7.1	1.7	.64	.72	.52	.69
10	.53	.55	19	1.2	e3.4	32	6.9	1.5	.64	.83	.48	.70
11	.56	.55	26	.88	e2.3	9.8	6.8	1.6	.65	.91	.43	.70
12	.58	.54	1.5	.82	e1.5	24	6.3	1.7	.72	1.1	.43	.69
13	.60	.58	.92	.76	e1.3	79	6.0	2.3	.59	1.2	.52	.73
14	.66	.75	.78	.82	e1.3	9.5	6.0	1.2	.56	1.3	1.0	.70
15	.66	.67	63	1.0	e1.2	7.4	6.2	.93	.59	1.2	.82	.72
16	.74	.58	19	.94	e1.2	5.8	5.8	.83	.50	1.3	.68	.69
17	.64	.56	1.7	.76	e1.1	25	5.5	.95	.48	1.4	.62	.69
18	3.5	.57	.79	.82	e1.1	7.8	5.1	1.1	.50	1.4	.66	.66
19	3.3	e4.9	4.2	.76	e1.0	6.3	4.7	1.0	.54	1.3	.78	.56
20	.87	e.94	1.7	.76	e1.0	33	5.5	1.1	.54	1.2	.68	.55
21	.53	e6.4	e.82	.70	e1.0	5.0	4.0	1.2	.54	1.3	.75	.55
22	.49	1.1	e.82	.70	e1.0	7.5	3.6	1.0	.61	e1.3	.71	.58
23	.50	.70	e.76	.76	e1.0	54	3.5	.92	.68	e1.3	.74	.54
24	.58	.64	e.82	.70	e1.0	230	3.4	.91	.83	e1.2	.73	.57
25	.58	9.0	e.82	.76	e1.1	80	3.2	.95	.58	e1.2	.75	.81
26	.70	e5.1	e.76	.76	9.7	355	3.2	.94	.55	e1.2	.74	.68
27	.67	e2.6	.82	.76	77	43	2.8	.90	.62	e1.2	.80	.63
28	.72	e.84	.76	.76	48	21	2.6	.89	.99	e1.1	.87	.62
29	.75	.75	.70	.76	---	17	2.6	.91	.74	e1.1	.86	.57
30	.77	.70	.65	.74	---	13	2.5	1.0	.58	e1.0	.91	.54
31	34	---	.65	.69	---	11	---	.89	---	e1.0	1.1	---
TOTAL	57.62	44.60	153.48	35.45	640.41	1298.0	179.8	45.12	19.77	31.30	23.60	20.49
MEAN	1.86	1.49	4.95	1.14	22.9	41.9	5.99	1.46	.66	1.01	.76	.68
MAX	34	9.0	63	12	263	355	14	3.0	.99	1.4	1.1	.84
MIN	.43	.42	.65	.65	.71	5.0	2.5	.83	.48	.51	.43	.54
AC-FT	114	88	304	70	1270	2570	357	89	39	62	47	41

CAL YR 1990 TOTAL 1530.99 MEAN 4.19 MAX 83 MIN .36 AC-FT 3040
WTR YR 1991 TOTAL 2549.64 MEAN 6.99 MAX 355 MIN .42 AC-FT 5060

e Estimated.

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to current year (storm season only).
WATER TEMPERATURE: October 1989 to current year.
SEDIMENT DATA: October 1989 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1989 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1989 to current year.

REMARKS.--Sediment samples were collected on most days where water temperature is published. Zero-bedload discharge observed for flows less than 24 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 680 mg/L, Mar. 13, 1991; minimum daily mean, 1 mg/L, Feb 20, 21, 1990, many days in 1991.
SEDIMENT LOAD (storm season only): Maximum daily, 904 tons, Feb. 4, 1991; minimum daily, 0 ton many days in 1991.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 680 mg/L, Mar. 13; minimum daily mean, 1 mg/L, on many days.
SEDIMENT LOAD (storm season only): Maximum daily, 904 tons, Feb. 4; minimum daily, 0 ton many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 500 MM
OCT									
31...	1200	26	17.0	65	4.6	92	--	--	--
DEC									
15...	1105	127	9.0	292	100	65	--	--	--
15...	1345	60	10.0	86	14	92	--	--	--
16...	0910	19	7.5	24	1.2	97	--	--	--
FEB									
02...	0930	73	11.5	172	34	73	--	--	--
02...	0940	73	11.5	152	30	87	--	--	--
02...	0950	78	11.5	120	25	93	--	--	--
02...	1000	88	11.5	126	30	88	--	--	--
02...	1035	55	12.0	93	14	95	--	--	--
02...	1105	43	12.0	80	9.3	95	--	--	--
02...	1140	35	12.0	74	7.0	95	--	--	--
02...	1155	33	12.0	58	5.2	98	--	--	--
04...	1600	0.88	14.0	144	0.34	96	--	--	--
04...	1615	2.0	14.0	150	0.81	95	--	--	--
04...	1740	64	14.0	145	25	95	--	--	--
04...	1750	74	14.0	186	37	75	--	--	--
05...	0835	35	12.0	360	34	100	--	--	--
05...	0855	32	12.0	380	33	94	--	--	--
28...	0750	21	13.0	117	6.6	97	--	--	--
MAR									
01...	0855	51	14.0	116	16	98	--	--	--
02...	1320	10	13.5	92	2.5	92	--	--	--
13...	0935	36	11.5	748	73	100	--	--	--
17...	0915	60	10.5	90	15	84	--	--	--
17...	0925	102	10.5	98	27	78	--	--	--
17...	0930	123	10.5	91	30	82	--	--	--
17...	0945	149	10.5	98	39	80	--	--	--
18...	1650	5.7	12.5	7	0.11	98	--	--	--
22...	1315	10	15.0	5	0.13	92	--	--	--
22...	1325	10	15.0	6	0.16	94	--	--	--
24...	1130	172	11.5	216	100	94	--	--	--
24...	1205	126	11.0	190	65	97	--	--	--
24...	1245	110	11.5	219	65	98	--	--	--
24...	1400	324	11.5	150	131	90	94	98	100
24...	1430	422	11.5	128	146	87	92	98	100
24...	1445	376	11.5	128	130	89	--	--	--
24...	1550	748	11.0	270	545	91	--	--	--
25...	1615	55	11.5	152	23	100	--	--	--
25...	1630	54	11.5	144	21	100	--	--	--
APR									
03...	1550	12	20.0	8	0.26	90	--	--	--
05...	1355	7.3	20.0	10	0.20	82	--	--	--
MAY									
10...	0950	1.5	15.0	6	0.02	71	--	--	--

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/ DAY)
MAR										
24...	1150	1000	1100	0.250	1140	1158	1.00	137	11.0	3.5
24...	1220	1000	1100	0.250	1212	1232	1.50	112	11.0	0.68
24...	1505	1000	1120	0.250	1502	1511	0.75	394	11.5	9.7
24...	1520	1000	1120	0.250	1516	1524	0.75	450	11.5	12
25...	1655	1000	1120	0.250	1634	1714	0.50	54	11.5	0.36

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR										
24...	--	4	25	36	43	47	48	48	100	--
24...	1	13	64	84	94	100	--	--	--	--
24...	--	4	19	30	41	50	59	75	85	100
24...	--	2	8	13	18	24	33	53	78	100
25...	--	1	6	21	53	86	97	100	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
MAR											
25...	1720	1	54	11.5	1	4	13	28	49	83	100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	---	---	---	14.0	---
2	25.5	---	---	---	11.5	13.5	---
3	---	---	---	---	---	---	20.0
4	24.0	---	10.0	---	14.0	13.0	---
5	---	18.0	---	8.0	12.0	---	22.0
6	---	---	---	---	---	---	---
7	---	---	---	10.0	---	---	---
8	---	---	---	---	---	---	---
9	---	15.0	---	---	---	---	---
10	---	---	11.0	8.0	---	---	---
11	22.5	---	12.0	---	---	---	---
12	---	---	---	---	---	10.0	---
13	---	---	---	---	---	11.5	---
14	---	14.5	---	---	10.5	---	---
15	---	---	9.0	---	---	9.5	---
16	---	---	7.5	---	---	---	---
17	---	---	---	---	---	10.5	---
18	18.5	---	---	9.5	---	12.5	---
19	---	14.5	---	---	---	---	---
20	---	---	---	---	---	10.0	---
21	---	---	1.5	6.0	---	---	---
22	---	10.5	---	---	---	15.0	---
23	---	---	1.0	---	---	---	---
24	---	---	---	---	---	11.5	---
25	---	---	---	---	---	11.5	---
26	---	---	---	---	---	---	---
27	---	---	---	---	12.0	---	---
28	---	---	6.0	---	13.0	---	---
29	---	12.0	---	9.0	---	---	---
30	---	---	---	---	---	---	---
31	17.0	---	---	---	---	---	---

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.80	6	.01	1.1	7	.02	.65	2	.00
2	.52	8	.01	.70	6	.01	.66	3	.01
3	.49	10	.01	.48	3	.00	.82	4	.01
4	.43	11	.01	.54	2	.00	.84	5	.01
5	.45	13	.02	.51	1	.00	.79	5	.01
6	.47	11	.01	.42	1	.00	.66	4	.01
7	.51	10	.01	.55	1	.00	.71	4	.01
8	.50	9	.01	.58	2	.00	.71	4	.01
9	.52	8	.01	.70	2	.00	.67	3	.01
10	.53	7	.01	.55	2	.00	19	70	8.2
11	.56	6	.01	.55	2	.00	26	34	5.5
12	.58	6	.01	.54	1	.00	1.5	10	.04
13	.60	5	.01	.58	1	.00	.92	8	.02
14	.66	5	.01	.75	1	.00	.78	7	.01
15	.66	5	.01	.67	2	.00	63	113	47
16	.74	4	.01	.58	2	.00	19	22	1.7
17	.64	4	.01	.56	2	.00	1.7	4	.02
18	3.5	14	.87	.57	1	.00	.79	3	.01
19	3.3	4	.10	e4.9	e16	e.60	4.2	6	.07
20	.87	3	.01	e.94	e6	e.02	1.7	2	.01
21	.53	3	.00	e6.4	e23	e1.1	e.82	2	e.00
22	.49	3	.00	1.1	4	.00	e.82	1	e.00
23	.50	2	.00	.70	1	.00	e.76	1	e.00
24	.58	2	.00	.64	1	.00	e.82	1	e.00
25	.58	2	.00	9.0	20	2.0	e.82	2	e.00
26	.70	2	.00	e5.1	e12	e.60	e.76	2	e.00
27	.67	1	.00	e2.6	e7	e.07	.82	2	.00
28	.72	1	.00	e.84	e3	e.01	.76	2	.00
29	.75	1	.00	.75	1	.00	.70	2	.00
30	.77	1	.00	.70	1	.00	.65	2	.00
31	34	101	70	---	---	---	.65	2	.00
TOTAL	57.62	---	71.16	44.60	---	4.43	153.48	---	62.66
		JANUARY			FEBRUARY			MARCH	
1	.65	1	.00	.71	1	.00	77	137	55
2	.65	1	.00	24	48	9.2	14	94	3.7
3	.65	1	.00	2.1	6	.03	53	104	24
4	.65	1	.00	263	171	904	42	64	8.4
5	.65	1	.00	100	330	216	12	45	1.5
6	.65	1	.00	e54	e60	e10	7.3	40	.79
7	1.0	1	.00	e25	e22	e1.5	5.8	34	.53
8	.94	2	.01	e9.8	6	e.16	5.5	29	.43
9	12	73	4.7	e5.6	5	e.08	5.3	24	.34
10	1.2	2	.01	e3.4	5	e.05	32	88	19
11	.88	1	.00	e2.3	4	e.02	9.8	22	.80
12	.82	1	.00	e1.5	4	e.02	24	137	40
13	.76	1	.00	e1.3	3	e.01	79	680	266
14	.82	1	.00	e1.3	5	e.02	9.5	70	2.1
15	1.0	1	.00	e1.2	6	e.02	7.4	6	.12
16	.94	1	.00	e1.2	7	e.02	5.8	4	.06
17	.76	1	.00	e1.1	7	e.02	25	45	9.5
18	.82	1	.00	e1.1	8	e.02	7.8	11	.23
19	.76	1	.00	e1.0	8	e.02	6.3	14	.41
20	.76	1	.00	e1.0	9	e.02	33	152	23
21	.70	1	.00	e1.0	10	e.03	5.0	10	.13
22	.70	1	.00	e1.0	10	e.03	7.5	6	.12
23	.76	1	.00	e1.0	11	e.03	54	114	51
24	.70	1	.00	e1.0	12	e.03	230	252	202
25	.76	1	.00	e1.1	12	e.04	80	178	42
26	.76	1	.00	9.7	13	.34	355	263	353
27	.76	1	.00	77	162	103	43	92	11
28	.76	1	.00	48	160	38	21	43	2.4
29	.76	1	.00	---	---	---	17	18	.83
30	.74	1	.00	---	---	---	13	11	.39
31	.69	1	.00	---	---	---	11	10	.30
TOTAL	35.45	---	4.72	640.41	---	1282.71	1298.0	---	1119.08

e Estimated.

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	14	12	.47
2	11	9	.27
3	11	8	.24
4	10	9	.24
5	8.6	10	.23
6	7.5	10	.20
7	7.2	10	.19
8	7.2	10	.19
9	7.1	9	.17
10	6.9	9	.17
11	6.8	9	.17
12	6.3	9	.15
13	6.0	9	.15
14	6.0	9	.15
15	6.2	9	.15
16	5.8	9	.14
17	5.5	8	.12
18	5.1	8	.11
19	4.7	8	.10
20	5.5	9	.16
21	4.0	8	.09
22	3.6	8	.08
23	3.5	8	.08
24	3.4	8	.07
25	3.2	7	.06
26	3.2	7	.06
27	2.8	7	.05
28	2.6	7	.05
29	2.6	7	.05
30	2.5	7	.05
TOTAL	179.8	---	4.41
PERIOD	2409.36		2549.17

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	57.62	71.16	1	72
NOVEMBER	44.60	4.43	0	4
DECEMBER	153.48	62.66	1	64
JANUARY 1991	35.45	4.72	0	5
FEBRUARY	640.41	1,282.71	37	1,320
MARCH	1,298.00	1,119.08	34	1,150
APRIL	179.80	4.41	0	4
PERIOD	2,409.36	2,549.17	73	2,619

11181330 TEMESCAL CREEK ABOVE LAKE TEMESCAL, AT OAKLAND, CA

LOCATION.--Lat 37°50'38", long 122°13'35, in San Antonio (V and D Peralta) Grant, Alameda County, Hydrologic Unit 18050002, on right bank at Oakland, 0.1 mi upstream of inflow to Lake Temescal.

DRAINAGE AREA.--1.74 mi^2.

PERIOD OF RECORD.--October 1979 to September 1981, June 1989 to current year.
CHEMICAL DATA: Water years 1979-80.
SEDIMENT DATA: Water years 1979-81.

GAGE.--Water-stage recorder. Elevation of gage is 395 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No diversion or regulation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 140 ft^3/s, Feb. 19, 1980, Oct. 23, 1989, gage height, 4.37 ft, 4.38 ft respectively; no flow Sept. 30, 1990, and several days in 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 2	0715	*78	*3.13				

No flow on several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.09	.07	.08	.07	4.9	.35	.11	.08	.05	.03	.01
2	.01	.07	.07	.09	8.9	6.1	.30	.13	.08	.04	.03	.01
3	.00	.06	.07	.09	.13	8.7	.28	.12	.08	.04	.03	.16
4	.02	.06	.08	.10	5.6	4.2	.25	.10	.09	.03	.03	.00
5	.10	.07	.11	.10	.77	.61	.23	.09	.08	.04	.02	.01
6	.01	.07	.07	.09	.15	.36	.22	.12	.08	.03	.03	.00
7	.01	.08	.09	.22	.12	.27	.20	.09	.09	.04	.03	.01
8	.03	.11	.08	.08	.09	.23	.20	.09	.08	.04	.02	.01
9	.01	.06	.08	1.2	.08	.20	.20	.10	.06	.04	.02	.01
10	.02	.07	1.7	.09	.08	3.2	.18	.10	.06	.04	.01	.01
11	.02	.06	.90	.08	.07	.32	.16	.10	.05	.06	.01	.01
12	.02	.04	.13	.08	.06	5.7	.19	.11	.06	.04	.02	.01
13	.01	.05	.13	.08	.05	2.1	.18	.24	.05	.03	.08	.01
14	.01	.10	.14	.07	.05	.60	.16	.09	.06	.03	.05	.01
15	.04	.08	3.8	.07	.06	.57	.16	.09	.05	.04	.02	.01
16	.07	.06	.72	.07	.06	.42	.16	.09	.04	.05	.02	.01
17	.01	.02	.24	.06	.05	3.6	.16	.08	.05	.03	.01	.01
18	.24	.02	.19	.05	.05	.63	.16	.10	.06	.02	.01	.00
19	.07	.06	.14	.05	.05	1.2	.17	.09	.06	.04	.01	.01
20	.02	.03	.15	.05	.05	4.4	.52	.09	.05	.03	.01	.01
21	.02	.34	.12	.05	.05	.61	.49	.10	.06	.03	.01	.01
22	.04	.03	.16	.04	.06	.42	.15	.09	.05	.03	.01	.01
23	.02	.02	.22	.06	.05	5.3	.15	.09	.05	.04	.02	.01
24	.02	.02	.20	.05	.04	8.3	.20	.09	.06	.04	.01	.01
25	.02	2.0	.21	.05	.05	8.0	.15	.07	.05	.04	.01	.01
26	.03	.13	.21	.06	.04	11	.14	.08	.06	.04	.01	.01
27	.02	.10	.18	.07	4.5	1.5	.13	.10	.05	.03	.01	.01
28	.02	.09	.15	.07	.65	.81	.12	.10	.35	.03	.01	.01
29	.04	.08	.14	.07	---	.55	.15	.10	.07	.02	.01	.00
30	.03	.07	.17	.06	---	.44	.13	.39	.05	.02	.01	.01
31	1.6	---	.08	.06	---	.37	---	.09	---	.03	.00	---
TOTAL	2.61	4.14	10.80	3.44	21.98	85.61	6.24	3.43	2.16	1.11	0.60	0.41
MEAN	.084	.14	.35	.11	.78	2.76	.21	.11	.072	.036	.019	.014
MAX	1.6	2.0	3.8	1.2	8.9	11	.52	.39	.35	.06	.08	.16
MIN	.00	.02	.07	.04	.04	.20	.12	.07	.04	.02	.00	.00
AC-FT	5.2	8.2	21	6.8	44	170	12	6.8	4.3	2.2	1.2	.8

CAL YR 1990 TOTAL 142.58 MEAN .39 MAX 16 MIN .00 AC-FT 283
WTR YR 1991 TOTAL 142.53 MEAN .39 MAX 11 MIN .00 AC-FT 283

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 Port of Richmond 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 14.81 ft, Jan. 12, 1990; minimum gage height recorded, 5.11 ft, Dec. 30, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 14.66 ft, June 11; minimum gage height recorded, 5.11 ft, Dec. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	14.38	5.39	14.33	5.28	13.50	7.02	14.29	8.01
2	---	---	---	---	14.31	5.18	14.11	5.69	13.41	7.56	13.69	8.37
3	---	---	---	---	14.42	5.31	13.75	6.33	13.27	8.13	13.95	8.72
4	---	---	---	---	14.21	5.51	13.17	6.90	13.26	8.35	14.12	8.91
5	---	---	---	---	13.79	5.87	13.08	7.38	13.23	8.16	13.56	7.69
6	---	---	---	---	13.23	6.38	13.07	8.16	13.15	8.05	12.87	7.39
7	---	---	---	---	12.74	7.12	13.16	8.40	13.17	7.93	12.50	7.62
8	---	---	---	---	13.07	7.96	13.16	8.05	13.33	7.69	12.49	7.78
9	---	---	---	---	13.32	8.27	13.60	7.83	13.39	7.47	12.70	7.81
10	---	---	---	---	13.59	8.70	13.32	7.18	13.53	7.34	12.96	7.86
11	---	---	---	---	---	7.86	13.36	6.81	13.59	7.17	12.55	7.13
12	13.15	6.84	---	---	13.62	7.38	13.26	6.48	13.57	6.85	12.98	7.28
13	13.14	7.46	---	---	13.49	6.89	13.33	6.29	13.43	6.77	13.05	7.16
14	13.10	7.56	---	---	13.60	6.84	13.29	6.06	13.51	7.11	12.61	7.05
15	13.19	7.86	---	---	14.01	6.82	13.31	6.07	13.49	7.46	12.87	7.45
16	13.34	7.75	---	---	13.76	6.41	13.32	6.27	12.93	7.36	13.49	7.92
17	13.59	7.60	13.73	6.79	13.62	6.36	13.28	6.51	12.81	7.67	13.63	8.17
18	13.72	7.45	13.78	7.00	13.56	6.58	13.20	6.95	12.86	7.82	13.75	7.56
19	13.56	7.20	13.96	7.08	13.56	6.68	12.82	7.32	12.88	7.48	14.04	7.46
20	13.50	7.09	13.41	6.91	12.98	6.47	12.74	7.73	13.03	7.42	14.31	7.42
21	13.46	7.24	13.04	6.83	12.45	6.73	12.83	8.13	13.36	7.45	13.79	6.93
22	13.51	7.51	12.56	7.11	11.97	6.93	12.96	8.43	13.46	7.06	13.29	6.73
23	13.21	7.60	12.36	7.51	11.95	7.28	13.33	7.94	13.55	6.68	13.50	7.30
24	12.88	7.72	12.32	7.94	12.36	8.04	13.47	7.39	13.64	6.44	13.52	6.87
25	12.52	7.76	12.72	8.18	12.94	8.37	13.90	6.99	13.79	6.29	13.71	7.43
26	12.35	7.94	12.70	8.26	13.23	7.63	14.06	6.39	13.91	6.41	13.95	7.33
27	12.35	7.99	12.92	8.04	13.59	6.99	14.24	5.96	14.16	6.97	13.34	7.21
28	12.51	7.94	13.23	7.20	14.19	6.44	14.30	5.74	14.41	7.74	13.05	7.27
29	12.82	8.04	13.72	6.56	14.33	5.69	14.26	5.69	---	---	13.37	7.49
30	13.19	8.13	14.17	5.91	14.33	5.11	14.10	5.90	---	---	13.42	7.37
31	13.60	7.43	---	---	14.33	5.12	13.72	6.26	---	---	13.53	7.21
MONTH	---	---	---	---	---	5.11	14.33	5.28	14.41	6.29	14.31	6.73

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.68	6.57	13.41	6.66	13.01	6.76	12.81	7.15	13.25	8.56	13.48	7.32
2	13.30	7.06	13.29	6.69	12.86	7.23	12.74	7.57	13.37	8.28	13.56	7.30
3	12.96	7.02	12.81	6.66	12.45	7.41	12.96	8.14	13.63	8.03	13.63	6.96
4	12.68	7.15	12.41	6.70	12.61	7.82	13.27	8.60	13.91	7.89	---	6.74
5	12.48	7.45	11.94	6.98	12.74	8.18	13.67	8.67	14.17	7.43	---	6.77
6	12.31	7.62	11.81	7.27	12.96	8.39	13.85	8.31	14.40	6.96	---	6.76
7	11.62	7.39	12.09	7.48	13.28	8.30	14.07	7.51	14.51	6.51	---	6.70
8	11.51	7.35	12.24	7.52	13.78	7.74	14.36	6.92	14.52	6.26	13.43	7.08
9	11.63	7.19	12.46	7.81	14.06	7.09	14.53	6.31	14.42	6.26	13.50	7.28
10	11.62	6.85	13.06	7.67	14.42	6.38	14.64	5.99	14.15	6.38	13.01	7.07
11	12.20	7.04	13.37	7.26	14.66	6.00	14.59	5.75	14.22	6.68	13.07	7.06
12	12.56	7.52	13.69	6.47	14.64	5.77	14.34	5.74	13.56	7.10	13.04	7.19
13	13.13	7.17	13.97	6.05	14.47	5.50	14.29	5.83	13.58	7.62	12.90	7.30
14	13.53	6.65	13.98	5.56	14.44	5.61	13.87	6.19	13.63	8.33	12.69	7.45
15	13.80	6.37	13.95	5.42	14.08	5.84	13.22	6.78	13.48	8.10	12.48	7.50
16	13.86	6.09	14.03	5.47	13.41	6.09	13.32	7.42	13.39	7.91	12.43	7.47
17	13.85	5.92	13.70	5.32	13.00	6.65	13.48	8.20	13.18	7.88	12.44	7.42
18	13.79	5.99	13.12	5.46	13.17	7.44	13.57	8.35	13.12	7.71	12.45	7.30
19	13.58	6.11	12.81	6.04	13.20	8.01	13.58	8.20	13.09	7.51	12.59	7.22
20	13.43	6.45	12.67	7.24	13.29	8.05	13.50	7.84	13.17	7.26	12.70	7.27
21	12.55	6.51	12.96	7.45	13.48	7.51	13.52	7.44	13.12	7.03	12.69	7.43
22	12.42	6.89	13.21	7.97	13.49	7.23	13.68	7.28	13.20	6.88	12.41	7.43
23	12.65	7.21	13.33	7.85	13.46	6.77	13.72	7.04	13.38	6.92	12.54	7.59
24	12.66	7.47	13.41	7.35	13.51	6.50	13.75	6.96	13.26	7.20	12.83	7.37
25	12.68	7.72	13.46	7.20	13.51	6.39	13.91	6.91	13.05	7.28	13.07	7.11
26	12.66	7.14	13.49	---	13.64	6.33	13.68	7.02	13.06	7.44	13.19	6.92
27	13.14	6.58	13.46	6.60	13.68	6.50	13.55	7.09	12.81	7.74	13.31	6.87
28	13.31	6.31	13.47	6.29	13.62	6.69	13.50	7.27	13.08	8.08	13.34	6.81
29	13.48	6.34	13.37	6.27	13.47	6.63	13.28	7.52	13.06	7.86	13.21	6.83
30	13.48	6.60	13.37	6.39	13.03	6.76	12.97	7.84	13.23	7.68	12.95	6.71
31	---	---	13.05	6.47	---	---	13.09	8.25	13.27	7.48	---	---
MONTH	13.86	5.92	14.03	---	14.66	5.50	14.64	5.74	14.52	6.26	---	6.70

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD 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 recording instruments. Upper probe is set at 3.6 ft below Mean Lower Low Water (MLLW). Lower probe is set at 24.8 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, 49,900 microsiemens, Oct. 31, 1989; minimum recorded, 14,700 microsiemens, Apr. 4, 1991.
(Lower probe) Maximum recorded, 50,100 microsiemens, July 23, 1990; minimum recorded 15,400 microsiemens, Apr. 3, 1991.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 22.0 °C, Sept. 6, 1990, Aug. 13, 1991; minimum recorded, 4.5 °C, Dec. 23, 1990.
(Lower probe) Maximum recorded, 21.5 °C, Aug. 19, 22, Sept. 6, 7, 9, 1990, Aug. 13, 1991; minimum recorded 5.0 °C, Dec. 21, 23, 1990.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: (Upper probe) Maximum recorded, 48,900 microsiemens, June 23; minimum recorded, 14,700 microsiemens, Apr. 4.
(Lower probe) Maximum recorded, 48,900 microsiemens, Oct. 1, Nov. 6; minimum recorded, 15,400 microsiemens, Apr. 3.
WATER TEMPERATURE: (Upper probe) Maximum recorded, 22.0 °C, Aug. 13; minimum recorded, 4.5 °C, Dec. 23.
(Lower probe) Maximum recorded, 21.5 °C, Aug. 13; minimum recorded, 5.0 °C, Dec. 21, 23.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47500	41000	47500	42700	47400	39800	46600	38000	---	---	---	---
2	47100	41100	47500	42900	47500	40100	46500	39000	---	---	---	---
3	---	---	47600	41200	47600	41900	46500	38800	---	---	---	---
4	---	---	48400	40500	47500	39900	46300	39100	---	---	---	---
5	---	---	47700	41600	47500	39600	46000	38900	---	---	---	---
6	---	---	47900	42700	47300	39800	45700	38900	---	---	---	---
7	---	---	48200	38800	47100	40200	45700	38400	---	---	---	---
8	---	---	48000	40800	46600	40300	46000	37600	---	---	43100	28600
9	---	---	47600	41100	46300	41000	45900	38100	---	---	43800	28300
10	---	---	47600	41000	46600	42300	45900	38600	---	---	44100	30800
11	48300	42000	47300	41800	44500	40300	45900	38200	---	---	44800	32400
12	48000	41800	47500	42600	46800	40200	45800	38100	---	---	43600	30700
13	48200	41500	47800	42400	46400	39900	45600	38000	---	---	44400	33800
14	48200	42100	47900	41800	47000	38800	45900	38000	---	---	43900	34000
15	48300	42600	47200	43400	46800	39000	46000	37800	---	---	44800	31100
16	48300	42900	47200	42400	46900	39000	46200	37500	---	---	44500	31200
17	48500	42600	48300	41700	46700	39300	45600	38400	---	---	44000	30600
18	48600	42300	47700	41300	46600	39000	46800	38700	---	---	44700	30000
19	48700	43400	47800	41700	46600	40300	46800	38600	---	---	44800	32800
20	48700	42200	47700	42600	46600	39900	46200	39400	---	---	44900	31700
21	48600	42300	47400	40100	46300	37100	46400	38900	---	---	44700	32200
22	48600	42900	47700	39600	45800	35600	46500	39300	---	---	44800	27500
23	48400	42700	47200	39000	45500	34500	46800	39400	---	---	42800	27100
24	48400	41500	46800	39200	45500	34800	46900	39100	---	---	44100	26400
25	48200	42200	46700	38800	45700	36700	47300	39400	---	---	42300	25300
26	47700	42500	46600	41100	45900	38100	47200	39600	---	---	42400	25100
27	47600	40500	46900	40900	46000	37300	47100	39700	---	---	40100	18800
28	47500	40600	46700	38900	46400	37900	47200	40200	---	---	40900	17100
29	47100	41000	47000	39200	46300	37200	---	---	---	---	39800	17300
30	47400	42200	47200	39300	46200	39700	---	---	---	---	40200	18600
31	47500	42400	---	---	46500	37600	---	---	---	---	40400	18500
MONTH	---	---	48400	38800	47600	34500	---	---	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	40400	18200	45200	38200	47300	38800	47500	39500	47300	40600	48400	42300
2	38600	14800	45300	36900	47600	41400	47400	38500	47700	40700	48000	42000
3	38400	14800	45100	36900	47800	40400	47600	38000	47300	39600	48300	41500
4	37600	14700	44700	35800	47500	38100	47900	40300	47700	40800	48600	41800
5	38800	17000	44600	35000	46900	38300	48000	41000	48000	41600	48800	42200
6	40400	18700	44300	34500	47600	40300	48500	41200	47800	41700	48500	42300
7	40900	19300	44800	35700	47700	38400	48400	41400	47400	40900	48100	42800
8	40700	22900	45700	36600	47900	39300	48500	41600	47100	40300	48000	42400
9	41600	20700	45400	36900	48100	40000	48600	41500	47200	41000	48300	42200
10	42000	25400	45900	38100	48200	40500	48500	40800	47200	39700	48200	42100
11	43800	27100	46300	38900	48100	40700	48200	40500	46800	40500	48400	41900
12	44000	30700	46700	38400	48500	40500	48800	41000	46500	41000	48300	42000
13	44000	31800	46500	38600	48700	40500	48800	41900	46600	40400	48400	42300
14	44600	33300	47000	40300	48600	40000	48200	40900	47600	41200	47800	42500
15	45300	35200	46500	38000	48700	40400	48500	40300	47600	41300	47300	42400
16	46000	34300	46500	37900	48200	40700	47900	41600	47200	40700	47900	41900
17	46200	34300	47000	39900	48200	39800	48000	42400	46500	40500	47900	41800
18	46200	36700	46300	39100	47800	40200	48200	41100	46600	41300	47500	41400
19	46000	36400	46200	38000	47900	39600	48600	41700	46800	41500	47900	41700
20	46400	35500	46300	38700	48200	41200	48200	42600	46800	41400	47700	42900
21	45500	35500	46600	38000	48800	40900	48200	42000	47200	41800	47700	42800
22	44800	35000	46800	38400	48800	41800	47900	41900	47300	41500	47600	43000
23	44400	37100	47100	39200	48900	42300	48200	41400	47300	41400	47400	41900
24	44500	35000	47100	38800	48400	43200	48000	41100	47500	41000	47400	41500
25	45200	35900	47000	38400	48100	42900	47900	41300	47800	41200	47400	41200
26	44500	36300	47000	40600	48800	41700	47800	40800	47800	41500	47400	40700
27	44700	36700	47400	39700	48500	41300	48000	42000	47800	40500	47600	41000
28	45100	35700	47300	39300	47900	40900	47700	41700	48000	41000	47300	40700
29	45200	35400	47500	39400	47900	40600	47000	41100	47900	41300	47100	41100
30	45200	36200	47400	41100	47500	39300	46700	40500	48200	41500	47000	40600
31	---	---	47500	40000	---	---	46800	40000	47700	41400	---	---
MONTH	46400	14700	47500	34500	48900	38100	48800	38000	48200	39600	48800	40600

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48900	43400	48100	42000	---	---	---	---	47100	40700	47500	37500
2	48400	42400	48200	40700	---	---	---	---	47200	41600	46800	39000
3	---	---	48400	42300	---	---	---	---	47000	41400	46100	37400
4	---	---	48700	42000	---	---	---	---	46600	39800	46100	37300
5	---	---	48800	41700	---	---	---	---	46900	39500	46100	37300
6	---	---	48900	42300	---	---	---	---	46600	39200	45500	35300
7	---	---	48800	42700	---	---	---	---	46900	38300	45600	36600
8	---	---	48700	41100	---	---	---	---	47100	38600	45100	32300
9	---	---	48200	41500	---	---	---	---	47000	39600	45200	32200
10	---	---	47800	41200	---	---	---	---	47200	39700	44000	31800
11	47800	41200	47900	42100	---	---	---	---	46800	40300	44400	33000
12	47400	41100	48000	42100	---	---	---	---	47000	39700	43200	30800
13	47700	40700	48400	42100	---	---	---	---	47300	39100	43800	33800
14	47500	40300	48400	41500	---	---	---	---	47100	39300	43200	34800
15	47600	41800	---	---	---	---	---	---	47100	40900	43600	31100
16	47900	42200	---	---	---	---	---	---	46800	41100	43000	23800
17	48000	40400	---	---	---	---	---	---	46900	35200	43100	30600
18	48100	41200	---	---	---	---	47000	38500	47000	36800	43400	30100
19	48100	41800	---	---	---	---	46700	38500	46800	38800	43500	33900
20	48100	41600	---	---	---	---	46200	39900	47300	39100	43400	31100
21	48300	40600	---	---	---	---	46500	39800	47600	39200	43100	31600
22	48200	42100	---	---	---	---	46500	39800	47500	40300	43000	27100
23	47900	42100	---	---	---	---	46600	39500	47600	40000	42100	27200
24	47800	41200	---	---	---	---	46800	39000	47500	37800	42200	26000
25	47800	42100	---	---	---	---	47200	39300	47400	39400	41400	24600
26	47700	41800	---	---	---	---	47200	39600	47700	39900	40600	25000
27	47400	40500	---	---	---	---	47200	40300	47500	39700	39100	21300
28	47500	40700	---	---	---	---	47200	41100	47200	40000	37800	17700
29	47400	41200	---	---	---	---	47300	40600	---	---	37300	16800
30	47800	41900	---	---	---	---	47300	40600	---	---	37300	18200
31	48100	41900	---	---	---	---	47100	39800	---	---	37900	17900
MONTH	---	---	---	---	---	---	---	---	47700	35200	47500	16800

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	38000	17900	45500	38500	47000	39200	48000	39400	48000	41200	47500	40800
2	38100	15900	45700	38700	47200	40300	47900	39200	48200	42300	48000	40300
3	38100	15400	45400	37300	47100	40400	47700	38900	47900	39900	48200	38400
4	38200	20100	45100	37200	47500	40900	47800	41900	48200	40800	48300	38400
5	39100	23300	44700	36300	47200	38800	---	---	48400	41300	48300	40300
6	39500	25000	45100	38500	47100	40700	---	---	48200	41700	48500	39200
7	40700	24900	45100	38800	47400	38300	---	---	48000	41000	48300	41400
8	41500	25400	45900	37400	48000	39100	---	---	48000	40500	48300	41200
9	41300	21300	45600	38900	48200	39800	---	---	47800	41300	48500	42000
10	41200	27000	46300	36000	48000	39800	48300	40400	48000	39700	48500	42600
11	42000	28500	46600	38900	47700	40400	48500	40100	47500	40200	48500	41800
12	42100	32600	46900	39000	48100	41000	48800	40300	47400	42600	48400	41700
13	42500	31900	46900	39200	48000	40200	48800	42000	47500	42600	48300	42100
14	43100	32600	47100	40600	48500	42000	48300	40200	47600	38400	47800	42200
15	43600	34600	46800	38600	48300	40300	48200	40300	47700	42600	47600	42000
16	44200	35100	47000	38700	48200	41500	48200	42900	47300	41500	47900	41700
17	44400	35000	47300	40400	47900	39800	48500	43100	47000	40400	47800	41500
18	44600	37200	46800	39600	47700	39400	48300	41300	46700	40600	47400	41200
19	44800	36200	46300	38900	47700	40300	48400	41400	46100	37500	47500	41400
20	44900	35300	46500	39200	48100	41300	48100	42200	47100	37400	47700	38800
21	44300	34900	46700	34700	48500	40700	48200	41900	46800	40100	47900	42400
22	43900	35300	47100	39300	48400	41300	47700	40800	46800	40700	47200	43300
23	44200	38500	47300	39700	48100	41100	48200	41000	47300	40400	47300	42700
24	44300	34200	47200	32100	47900	42400	---	---	47300	40300	47600	42000
25	44900	37200	47400	36500	47700	42600	---	---	47200	37300	47400	41100
26	44800	36800	47500	38000	48600	39900	---	---	46800	37200	47700	42000
27	44900	38200	47700	35800	48700	39300	47900	41500	47400	39300	47700	41000
28	45400	36400	47600	37300	48400	35900	47800	41400	47400	38500	47600	40700
29	45700	36200	47900	39300	48300	40700	47400	41200	47600	40000	47400	39300
30	45600	36300	47700	41600	47800	39900	47700	40700	47900	40200	47200	40500
31	---	---	47400	41000	---	---	47700	40700	48100	40600	---	---
MONTH	45700	15400	47900	32100	48700	35900	---	---	48400	37200	48500	38400

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.0	16.5	15.0	12.0	11.0	8.0	6.5	10.5	9.5	13.5	12.5
2	19.5	17.5	15.5	14.0	12.0	11.0	8.0	6.5	11.0	10.0	13.0	12.5
3	---	---	15.5	14.0	11.5	10.5	8.5	7.0	11.5	10.5	13.5	12.5
4	---	---	15.5	14.5	11.5	10.5	8.0	6.5	11.0	10.5	13.5	12.5
5	---	---	15.5	14.0	11.5	10.5	8.0	6.5	11.5	10.5	13.5	12.5
6	---	---	15.0	13.0	11.5	10.5	8.0	7.0	11.5	10.5	13.0	11.5
7	---	---	14.5	13.0	11.0	10.5	8.0	7.0	12.0	11.0	13.0	11.5
8	---	---	15.0	13.5	11.0	10.5	8.5	7.5	12.0	11.0	14.0	13.0
9	---	---	15.0	13.5	11.0	10.5	9.0	7.5	12.5	11.0	14.0	13.0
10	---	---	15.0	13.5	11.0	11.0	9.5	8.0	13.0	11.0	13.0	12.5
11	19.0	17.0	15.0	13.5	11.5	11.0	9.5	7.5	14.0	11.5	13.0	11.5
12	19.0	17.5	15.0	13.5	11.5	11.0	9.5	8.0	13.5	11.5	13.0	12.0
13	19.0	17.0	14.5	13.0	11.5	10.5	10.5	8.5	14.0	11.5	13.5	12.0
14	18.5	17.0	14.5	13.0	11.0	10.0	11.0	8.5	13.5	12.0	13.0	12.0
15	18.5	17.0	13.5	13.0	11.0	10.0	11.0	9.0	13.5	12.0	13.0	10.0
16	19.0	16.5	13.5	13.0	11.0	10.0	10.5	9.0	13.5	12.0	12.5	11.5
17	18.5	16.5	14.0	12.5	10.5	9.5	10.0	9.0	13.5	12.0	12.0	11.5
18	18.0	16.5	14.0	13.0	10.5	10.0	10.5	9.0	14.0	12.0	12.5	11.0
19	18.5	16.0	13.5	13.0	10.5	8.5	10.5	9.0	14.0	12.5	12.5	11.5
20	17.5	16.0	13.5	12.0	10.5	6.5	10.0	9.0	13.5	12.0	12.5	11.5
21	17.5	16.0	13.5	12.0	10.0	5.0	10.0	9.0	14.0	12.0	12.5	11.5
22	18.0	16.0	13.0	12.5	9.0	5.0	10.0	9.0	13.5	12.0	13.0	11.5
23	18.0	16.0	13.0	12.5	8.5	4.5	10.0	9.5	14.5	12.0	12.0	11.5
24	18.0	16.0	13.0	12.0	8.5	6.0	10.0	9.5	15.0	12.5	11.5	11.0
25	17.5	16.0	12.5	12.0	8.5	6.0	10.5	9.5	15.0	12.5	12.0	11.0
26	17.5	16.0	12.5	10.5	8.5	6.0	11.0	9.5	14.5	12.5	11.5	11.0
27	18.0	16.0	12.5	10.5	8.5	6.5	11.0	9.5	13.0	12.5	13.0	10.5
28	17.5	16.0	12.0	11.0	8.5	6.5	11.0	9.5	13.5	12.5	13.5	11.0
29	17.5	16.0	12.0	11.0	8.5	6.5	10.5	9.5	---	---	14.5	11.5
30	17.5	15.5	12.0	11.5	8.0	6.5	10.5	9.5	---	---	14.0	12.0
31	17.0	15.5	---	---	8.5	6.5	10.5	9.5	---	---	13.5	12.5
MONTH	---	---	16.5	10.5	12.0	4.5	11.0	6.5	15.0	9.5	14.5	10.0

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

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	17.5	16.5	15.0	12.0	11.5	8.5	7.0	10.0	9.5	13.0	12.0
2	19.5	17.5	15.5	14.0	12.0	11.0	8.5	6.5	11.0	10.0	13.0	12.5
3	---	---	15.5	14.5	11.5	10.5	8.5	7.0	11.0	10.0	13.0	12.5
4	---	---	15.5	13.0	11.5	10.5	8.5	7.0	11.0	10.5	13.5	12.5
5	---	---	15.5	14.0	11.5	11.0	8.0	7.0	11.0	10.5	13.0	12.5
6	---	---	15.0	13.5	11.5	11.0	8.0	7.0	11.0	10.5	13.0	11.5
7	---	---	14.5	13.5	11.5	10.5	8.0	7.5	11.5	10.5	13.0	12.0
8	---	---	15.0	13.5	11.5	10.5	8.5	7.5	11.5	11.0	13.5	12.5
9	---	---	15.0	13.5	11.0	10.5	8.5	7.5	12.0	11.0	13.0	12.5
10	---	---	15.0	13.5	11.0	11.0	9.0	8.0	12.0	11.0	12.5	12.0
11	18.5	17.0	14.5	13.5	11.5	11.0	9.5	8.0	13.5	11.5	12.5	11.5
12	18.5	17.0	15.0	13.5	11.5	11.0	9.5	8.0	13.5	11.5	12.5	12.0
13	18.5	17.0	14.5	13.0	11.5	11.0	10.5	8.5	13.5	11.5	13.0	12.0
14	18.5	17.0	14.5	13.0	11.0	10.5	11.0	8.5	13.5	12.0	13.0	11.5
15	18.5	16.5	13.5	13.5	11.0	10.0	10.5	9.0	13.5	12.0	12.5	10.5
16	19.0	16.5	13.5	13.5	11.0	10.0	10.5	9.0	13.5	12.0	12.0	11.5
17	18.5	16.0	14.0	13.0	11.0	10.0	10.0	9.0	13.5	12.0	12.0	11.5
18	18.0	16.0	14.0	13.0	11.0	10.0	10.0	9.0	13.5	12.0	12.0	11.0
19	18.0	16.0	13.5	13.0	10.5	8.5	10.5	9.5	13.5	12.0	12.0	11.5
20	17.5	16.0	13.0	12.0	10.5	6.5	10.0	9.5	13.5	12.0	12.5	11.5
21	17.5	16.0	13.0	12.0	10.0	5.0	10.0	9.0	13.5	12.0	12.0	11.5
22	18.0	16.0	13.0	12.5	9.5	5.5	10.0	9.0	13.0	12.0	12.5	11.5
23	18.0	16.0	13.0	12.5	9.0	5.0	10.0	9.5	13.5	12.0	12.0	11.5
24	18.0	16.0	13.0	12.5	8.5	6.0	10.0	9.5	14.5	12.0	12.0	11.5
25	17.5	16.0	12.5	12.0	8.5	6.5	10.0	9.5	14.5	12.0	12.0	11.0
26	17.5	16.0	12.5	11.0	8.5	6.5	10.5	9.5	14.0	12.0	11.5	11.0
27	17.5	16.0	12.0	11.0	8.5	6.5	10.5	9.5	13.0	12.5	13.0	11.0
28	17.0	16.0	12.0	11.5	8.5	6.5	11.0	9.5	13.5	12.5	13.5	11.5
29	17.5	15.5	12.0	11.0	8.5	7.0	10.5	9.5	---	---	14.0	12.0
30	17.0	15.5	12.0	11.5	8.5	7.0	10.0	9.5	---	---	14.0	12.0
31	17.0	15.0	---	---	8.5	6.5	10.0	9.5	---	---	13.5	12.5
MONTH	---	---	16.5	11.0	12.0	5.0	11.0	6.5	14.5	9.5	14.0	10.5

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

11181390 WILDCAT CREEK AT VALE ROAD, AT RICHMOND, CA

LOCATION.--Lat 37°57'12", long 122°20'14", in San Pablo Grant, Contra Costa County, Hydrologic Unit 18050002, on left bank at upstream side of Vale Road bridge at Richmond, 3.6 mi upstream from mouth.

DRAINAGE AREA.--7.79 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

REVISED RECORDS.--WDR CA-81-2: 1979-80(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 65.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Minor storage in Lake Anza and Jewel Lake 5 mi upstream. No diversion upstream from station.

AVERAGE DISCHARGE.--16 years, 4.63 ft^3/s, 3,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft^3/s, Jan. 4, 1982, gage height, 14.68 ft; maximum gage height, 15.80 ft from floodmarks, from rating curve extended above 400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1979, 1987-91.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1145	*219	*4.95				

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	1.5	.04	.06	.03	5.2	2.7	.23	.01	.03	.01	.04
2	.01	.02	.04	.07	14	9.4	2.2	.13	.01	.04	.01	.02
3	.01	.02	.04	.08	1.2	19	2.1	.13	.01	.05	.01	.01
4	.01	.02	.04	.08	2.9	14	1.7	.13	.01	.04	.01	.01
5	.01	.02	.05	.08	3.5	8.3	1.6	.13	.01	.03	.01	.01
6	.01	.02	.06	.08	.70	3.6	1.4	.13	.01	.03	.01	.01
7	.01	.02	.11	.13	.29	2.1	1.3	.11	.00	.02	.01	.01
8	.01	.02	.13	.08	.15	1.3	1.1	.10	.01	.02	.01	.01
9	.01	.02	.13	.67	.13	1.1	1.1	.07	.00	.02	.01	.01
10	.01	.02	.84	.04	.10	5.3	1.1	.04	.00	.04	.01	.01
11	.01	.02	.29	.04	.08	3.2	1.1	.02	.00	.02	.01	.01
12	.01	.02	.08	.04	.08	6.4	.92	.01	.00	.02	.01	.01
13	.01	.03	.08	.03	.08	27	.85	.24	.00	.02	.17	.01
14	.01	.03	.08	.03	.08	4.9	.78	.23	.01	.02	.05	.00
15	.01	.03	2.5	.03	.08	2.4	.70	.22	.01	.01	.04	.00
16	.01	.03	.95	.03	.08	1.6	.70	.12	.01	.02	.03	.00
17	.01	.03	.11	.03	.08	3.8	.70	.09	.01	.01	.02	.00
18	.01	.03	.07	.03	.09	4.7	.80	.04	.01	.01	.02	.00
19	.01	.03	.08	.02	.13	3.5	.85	.03	.01	.01	.02	.00
20	.01	.03	.06	.02	.13	25	1.9	.03	.01	.01	.02	.00
21	.01	.05	.06	.02	.13	6.2	2.8	.02	.01	.01	.02	.00
22	.01	.00	.06	.02	.13	3.1	1.1	.02	.00	.01	.02	.00
23	.02	.00	.06	.02	.13	11	.78	.02	.01	.01	.02	.00
24	.02	.01	.06	.03	.14	52	.73	.02	.01	.01	.02	.00
25	.01	.44	.06	.04	.18	80	.63	.02	.01	.02	.02	.03
26	.01	.04	.06	.03	.19	119	.55	.01	.01	.02	.02	.01
27	.10	.04	.06	.03	3.7	33	.38	.01	.01	.02	.01	.01
28	.24	.10	.06	.03	4.4	12	.35	.01	.07	.01	.03	.01
29	.04	.04	.06	.03	---	6.8	.28	.01	.06	.01	.03	.01
30	.04	.04	.06	.03	---	4.5	.27	.01	.03	.01	.06	.01
31	19	---	.06	.03	---	3.4	---	.01	---	.01	.06	---
TOTAL	19.71	2.72	6.44	1.98	32.91	482.8	33.47	2.39	0.36	0.61	0.80	0.25
MEAN	.64	.091	.21	.064	1.18	15.6	1.12	.077	.012	.020	.026	.008
MAX	19	1.5	2.5	.67	14	119	2.8	.24	.07	.05	.17	.04
MIN	.01	.00	.04	.02	.03	1.1	.27	.01	.00	.01	.01	.00
AC-FT	39	5.4	13	3.9	65	958	66	4.7	.7	1.2	1.6	.5

CAL YR 1990 TOTAL 241.66 MEAN .66 MAX 19 MIN .00 AC-FT 479
WTR YR 1991 TOTAL 584.44 MEAN 1.60 MAX 119 MIN .00 AC-FT 1160

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for discharges below 0.25 ft^3/s, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--39 years, 3.02 ft^3/s, 2,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s, Oct. 13, 1962, gage height, 16.98 ft, from rating curve extended above 200 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1315	*103	*3.05				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	3.3	.71	.11	.01	.00	.00	.00
2	.00	.00	.00	.00	.02	.27	.53	.14	.01	.00	.00	.00
3	.00	.01	.00	.00	.00	3.0	.44	.16	.01	.00	.00	.00
4	.00	.01	.00	.00	.14	8.4	.39	.12	.01	.01	.00	.00
5	.00	.01	.00	.00	.65	.55	.40	.06	.00	.00	.00	e.00
6	.00	.01	.00	.01	.01	.09	.40	.07	.01	.00	.00	.01
7	.00	.01	.00	.01	.00	.03	.34	.07	.01	.00	.00	.01
8	.00	.00	.00	.01	.00	.01	.30	.05	.00	.00	.00	.01
9	.00	.00	.00	.01	.00	.01	.27	.06	.01	.00	.00	.01
10	.00	.00	.01	.00	.00	.48	.20	.06	.00	.00	.00	.01
11	.00	.01	.01	.00	.00	.16	.21	.05	.00	.00	.00	.01
12	.00	.00	.00	.00	.00	.41	.22	.04	.00	.00	.00	.01
13	.00	.01	.00	.00	.00	4.9	.22	.12	.00	.00	.00	.01
14	.00	.01	.00	.00	.01	.28	.22	.11	.00	.00	.00	.01
15	.00	.01	.04	.00	.01	.26	.17	.07	.00	.00	.00	.01
16	.00	.01	.01	.00	.01	.14	.20	.05	.00	.00	.00	.01
17	.00	.01	.00	.00	.01	.31	.19	.06	.00	.00	.00	.01
18	.01	.01	.00	.00	.01	.18	.18	.05	.00	.00	.00	.01
19	.01	.00	.00	.00	.01	.14	.17	.06	.00	.00	.00	.01
20	.01	.00	.00	.00	.01	1.1	.27	.03	.01	.00	.00	.01
21	.01	.00	.00	.01	.01	.28	.25	.02	.00	.00	.00	.01
22	.01	.00	.00	.01	.01	.15	.18	.04	.00	.00	.00	.01
23	.01	.00	.00	.01	.00	2.2	.18	.03	.00	.00	.00	.01
24	.01	.00	.01	.00	.00	14	.19	.01	.00	.00	.00	.01
25	.01	.02	.01	.00	.00	10	.18	.01	.00	.00	.00	.01
26	.01	.00	.01	.00	.01	25	.19	.01	.01	.00	.00	.01
27	.01	.00	.00	.00	.04	5.1	.13	.02	.01	.00	.00	.01
28	.01	.00	.00	.00	.14	2.1	.13	.01	.01	.00	.00	.01
29	.01	.00	.00	.00	---	1.3	.11	.03	.01	.00	.00	.01
30	.01	.00	.00	.00	---	.88	.06	.02	.00	.00	.00	.01
31	.01	---	.00	.00	---	.74	---	.01	---	.00	.00	---
TOTAL	0.15	0.14	0.10	0.07	1.10	85.77	7.63	1.75	0.12	0.01	0.00	0.25
MEAN	.005	.005	.003	.002	.039	2.77	.25	.056	.004	.000	.000	.008
MAX	.01	.02	.04	.01	.65	25	.71	.16	.01	.01	.00	.01
MIN	.00	.00	.00	.00	.00	.01	.06	.01	.00	.00	.00	.00
AC-FT	.3	.3	.2	.1	2.2	170	15	3.5	.2	.02	.00	.5

CAL YR 1990 TOTAL 51.34 MEAN .14 MAX 9.2 MIN .00 AC-FT 102
WTR YR 1991 TOTAL 97.09 MEAN .27 MAX 25 MIN .00 AC-FT 193

e Estimated.

11182800 SAN RAMON CREEK NEAR WALNUT CREEK, CA

LOCATION.--Lat 37°52'38", long 122°02'52", in San Ramon Grant, Contra Costa County, Hydrologic Unit 18050001, on left bank 600 ft upstream from Rudgear Road, near south city limits of town of Walnut Creek.

DRAINAGE AREA.--47.9 mi^2.

PERIOD OF RECORD.--October 1973 to current year. Prior to October 1987, published as San Ramon Creek at Walnut Creek.

REVISED RECORDS.--WDR CA-79-2: 1978. WDR CA-84-2: 1974-75(P), 1978-80(P). WDR CA-88-2: 1974-75(P), 1978-80(P), 1982-87(P).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control. Datum of gage is 169.98 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No regulation, pumping for irrigation upstream from station during periods of low flow.

AVERAGE DISCHARGE.--18 years, 23.3 ft^3/s, 16,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft^3/s, Jan. 5, 1982, gage height, 15.55 ft, from rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1130	*1,020	*4.49				

Minimum daily, 0.56 ft^3/s, Sept. 21, 25-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	8.0	e1.6	2.2	1.9	217	11	5.2	2.6	2.7	1.2	1.1
2	1.4	2.3	1.4	2.0	55	27	7.5	5.7	2.5	4.3	1.2	1.1
3	1.1	1.4	1.4	1.9	8.9	120	6.8	5.9	2.3	2.5	1.3	1.1
4	1.1	1.3	1.4	1.9	30	249	6.2	6.0	2.3	2.4	1.3	1.1
5	1.3	1.2	1.8	1.9	198	31	5.9	6.1	2.3	2.3	1.2	1.1
6	1.1	1.1	2.7	1.9	8.1	9.3	6.1	6.1	2.2	2.3	1.4	1.1
7	.95	2.2	1.5	1.8	5.0	5.9	5.9	6.3	2.1	2.3	1.8	1.0
8	.93	.97	1.4	1.8	4.0	4.8	5.5	6.6	2.0	2.1	1.7	1.0
9	.96	.89	1.3	15	3.3	4.1	5.4	6.4	1.8	2.0	1.6	.88
10	1.2	.88	7.4	3.8	3.0	56	5.0	6.2	1.6	2.2	1.6	.88
11	1.1	.88	51	2.5	2.9	13	5.0	6.5	1.6	2.2	1.4	.92
12	1.0	.92	5.5	2.5	2.8	22	5.1	6.6	1.5	2.5	1.3	.96
13	1.0	.96	2.8	2.5	2.6	106	5.2	7.9	1.5	1.9	1.4	1.1
14	1.0	1.4	2.7	2.4	2.5	11	4.8	8.1	1.6	2.3	1.3	1.1
15	.96	1.2	50	2.2	2.5	18	5.1	5.8	1.5	1.6	1.3	1.1
16	2.3	2.3	27	2.2	2.6	6.9	4.9	5.2	1.4	2.3	1.4	1.1
17	3.4	1.4	5.0	1.9	2.6	28	5.4	4.8	1.3	1.7	1.5	1.2
18	1.1	1.4	3.2	1.9	2.5	10	5.2	4.8	1.4	1.4	1.3	1.2
19	1.0	3.4	3.1	1.9	2.4	6.2	4.7	4.7	1.5	1.4	1.2	1.2
20	1.1	1.8	3.2	2.0	2.3	44	11	5.0	1.8	1.5	1.1	.83
21	1.3	2.5	2.8	2.0	2.2	10	15	5.1	1.9	1.4	1.1	.56
22	1.1	2.4	2.6	1.9	2.3	5.9	5.4	5.2	1.9	1.3	1.1	.59
23	.96	2.1	2.6	e1.8	2.3	66	4.6	5.1	2.1	1.3	1.1	.62
24	.85	1.6	2.6	e1.8	2.3	223	4.3	4.5	2.2	1.9	1.2	.62
25	.84	13	2.6	1.8	2.1	115	4.6	3.5	2.4	1.1	1.0	.56
26	.92	13	2.9	1.8	2.0	278	5.8	3.4	2.3	2.0	.96	.56
27	.90	4.7	3.0	1.8	42	56	5.1	3.1	2.2	1.1	.96	.56
28	.88	3.1	2.6	1.8	56	21	5.1	2.8	2.5	1.1	.96	.56
29	.91	2.1	2.5	1.8	---	14	5.1	2.6	4.0	1.2	.96	.77
30	.96	e1.8	2.5	1.8	---	11	5.2	2.4	3.2	1.3	1.0	.69
31	7.2	---	2.4	1.8	---	8.9	---	2.6	---	1.2	1.1	---
TOTAL	42.12	82.20	204.5	76.3	454.1	1798.0	181.9	160.2	61.5	58.8	38.94	27.16
MEAN	1.36	2.74	6.60	2.46	16.2	58.0	6.06	5.17	2.05	1.90	1.26	.91
MAX	7.2	13	51	15	198	278	15	8.1	4.0	4.3	1.8	1.2
MIN	.84	.88	1.3	1.8	1.9	4.1	4.3	2.4	1.3	1.1	.96	.56
AC-FT	84	163	406	151	901	3570	361	318	122	117	77	54

CAL YR 1990 TOTAL 2199.86 MEAN 6.03 MAX 365 MIN .74 AC-FT 4360
WTR YR 1991 TOTAL 3185.72 MEAN 8.73 MAX 278 MIN .56 AC-FT 6320

e Estimated.

11183600 WALNUT CREEK AT CONCORD, CA

LOCATION.--Lat 37°56'43", long 122°02'55", in Arroyo de las Nueces y Bolbones Grant, Contra Costa County, Hydrologic Unit 18050001, on right bank at southwest city limits of Concord, 0.2 mi upstream from Southern Pacific railroad bridge, 3.8 mi downstream from confluence of San Ramon and Las Trampas Creeks, and 10 mi downstream from Lafayette Reservoir.

DRAINAGE AREA.--85.2 mi^2.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR CA-79-2: Drainage area. WDR CA-82-2: 1969(M), 1970(M), 1973(P), 1975(M), 1978(M), 1980(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 35.44 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Lafayette Reservoir, capacity, 4,240 acre-ft. Some small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--23 years, 47.5 ft^3/s, 34,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s, Jan. 5, 1982, gage height, 19.1 ft, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft^3/s, Oct. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1215	*1,350	*5.63				

Minimum daily, 2.2 ft^3/s, Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	5.2	6.0	5.5	264	24	12	6.1	5.6	2.6	2.6
2	16	6.2	4.8	5.8	128	74	20	12	5.5	6.9	2.6	2.8
3	20	4.5	4.8	5.7	20	219	18	12	5.5	5.2	2.7	2.9
4	20	4.0	4.7	5.8	62	363	17	12	5.5	5.1	2.8	2.7
5	17	3.8	4.7	5.6	183	62	16	12	5.6	4.7	2.8	3.7
6	16	3.6	6.0	5.5	17	25	16	11	5.2	3.9	3.2	3.0
7	16	4.4	5.1	5.5	11	18	15	11	5.2	3.7	3.9	2.5
8	16	3.7	5.1	5.8	9.1	15	15	9.8	5.4	3.4	3.4	2.6
9	15	3.6	4.8	33	8.5	15	15	9.9	5.2	3.4	3.3	2.4
10	15	3.4	27	12	8.0	98	14	10	4.9	3.5	3.4	2.4
11	16	3.4	94	7.3	7.6	35	13	9.7	4.7	3.8	3.2	2.4
12	17	3.3	12	6.5	7.3	48	13	9.2	4.4	3.9	2.8	2.4
13	15	3.4	7.1	6.2	6.9	173	12	12	4.0	3.4	2.7	2.5
14	15	3.9	6.7	6.2	6.6	32	12	14	4.0	3.9	3.0	2.9
15	19	3.9	88	6.0	6.8	37	13	11	4.1	3.6	2.9	2.9
16	11	4.7	50	5.8	6.6	22	13	8.9	3.9	4.2	3.0	2.8
17	19	4.4	12	5.7	6.6	68	13	7.9	6.3	3.9	3.8	2.9
18	14	4.1	8.0	5.5	6.6	35	14	7.8	5.9	3.5	3.5	2.9
19	13	6.0	7.1	5.5	6.6	24	14	7.6	3.9	3.3	3.4	3.0
20	9.7	4.7	7.3	5.7	6.6	102	24	7.5	4.0	3.2	3.2	2.6
21	8.8	4.9	6.4	5.5	6.6	34	28	7.4	3.9	3.4	2.9	2.4
22	6.8	7.3	10	5.3	6.7	23	14	7.4	3.9	3.4	2.9	2.5
23	5.4	5.2	17	5.2	6.9	110	13	7.6	4.0	3.2	2.9	2.5
24	4.4	4.8	9.1	5.2	6.5	299	12	6.7	4.1	3.6	3.4	2.4
25	3.6	25	7.1	5.2	7.1	227	12	6.4	4.4	4.0	2.6	2.5
26	3.4	26	7.0	5.2	6.2	484	13	5.9	4.5	4.4	2.5	2.2
27	3.7	8.8	7.0	5.3	71	120	12	5.8	4.7	3.3	2.6	2.3
28	3.9	7.2	6.7	5.5	93	49	12	6.1	9.1	2.9	2.7	2.5
29	3.8	5.9	6.3	5.5	---	33	12	6.1	7.9	2.9	2.8	2.6
30	3.9	5.5	6.2	5.5	---	27	12	5.9	6.3	3.3	2.7	2.8
31	15	---	6.2	5.5	---	23	---	5.7	---	3.3	2.5	---
TOTAL	378.4	192.6	453.4	210.0	724.3	3158	451	278.3	152.1	119.8	92.7	79.6
MEAN	12.2	6.42	14.6	6.77	25.9	102	15.0	8.98	5.07	3.86	2.99	2.65
MAX	20	26	94	33	183	484	28	14	9.1	6.9	3.9	3.7
MIN	3.4	3.3	4.7	5.2	5.5	15	12	5.7	3.9	2.9	2.5	2.2
AC-FT	751	382	899	417	1440	6260	895	552	302	238	184	158

CAL YR 1990 TOTAL 6017.7 MEAN 16.5 MAX 986 MIN 3.1 AC-FT 11940
WTR YR 1991 TOTAL 6290.2 MEAN 17.2 MAX 484 MIN 2.2 AC-FT 12480

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 mi^2.

PERIOD OF RECORD.--October 1929 to September 1932, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1929: Drainage area. WDR CA-78-2: 1977(M).

GAGE.--Water-stage recorder. Datum of gage is 170.12 ft above National Geodetic Vertical Datum of 1929. 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.--Records good above 10 ft^3/s and fair below. 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.

AVERAGE DISCHARGE.--55 years, 94.6 ft^3/s, 68,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, Feb. 17, 1986, gage height, 18.52 ft, from rating curve extended above 11,000 ft^3/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 4,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1415	*6,940	*14.26				

Minimum daily, 0.26 ft^3/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	1.4	3.2	2.2	1.1	48	134	23	8.7	4.5	1.0	.43
2	.47	1.5	3.2	2.2	e45	238	106	24	7.9	4.4	.97	.43
3	.47	1.2	3.3	2.2	26	1410	92	23	7.8	4.2	.86	.41
4	.56	1.1	2.1	2.2	18	3600	80	22	7.6	3.8	.88	.39
5	.61	1.1	1.6	2.2	33	698	72	20	7.1	3.2	.86	.38
6	.59	.95	1.6	2.2	14	254	67	20	5.4	2.9	.82	.38
7	.60	.95	1.6	3.2	9.3	140	61	17	5.2	2.4	.82	.39
8	.65	.99	1.6	6.6	7.4	93	57	18	5.7	2.2	1.0	.38
9	.65	1.0	1.6	4.8	6.2	73	52	17	5.3	2.2	1.0	.36
10	.63	1.1	2.1	2.9	5.5	78	48	17	4.5	2.4	.98	.37
11	.66	1.1	2.6	2.7	4.9	67	44	17	4.6	2.1	.85	.36
12	.67	1.1	2.3	2.5	4.3	311	42	17	4.9	1.7	.87	.33
13	.69	1.1	2.2	2.2	4.8	692	39	17	4.4	1.7	.71	.29
14	.71	1.1	1.9	2.2	4.5	273	38	16	3.8	1.3	.74	.27
15	.69	1.2	3.0	2.2	4.4	169	37	16	3.5	1.2	.77	.28
16	.70	1.3	3.8	2.3	4.0	115	37	15	3.5	1.5	.72	.33
17	.72	1.3	2.6	2.2	3.6	166	35	15	3.2	1.9	.69	.33
18	.73	1.3	2.2	1.8	3.5	177	32	14	3.1	1.6	.67	.34
19	.84	1.4	2.1	1.4	3.5	132	30	14	3.1	1.1	.66	.35
20	1.0	1.6	1.9	1.3	3.6	326	31	14	3.2	1.1	.65	.35
21	1.1	1.6	1.9	1.9	2.8	224	31	13	3.2	1.1	.60	.34
22	1.1	1.6	1.9	2.0	2.6	162	29	12	2.7	1.4	.64	.33
23	1.2	1.6	1.9	1.6	2.3	538	28	12	2.9	1.7	.60	.32
24	1.0	1.6	2.0	1.3	1.6	1210	27	13	2.9	1.4	.59	.31
25	.95	1.9	2.2	1.3	1.9	1110	27	12	2.5	1.3	.55	.30
26	.95	2.4	2.0	1.3	3.0	1060	27	12	2.5	1.3	.53	.29
27	.95	2.7	2.1	1.3	4.5	646	26	11	2.4	1.3	.53	.28
28	1.0	2.9	2.3	1.3	14	377	25	11	4.3	1.2	.48	.28
29	1.0	3.1	2.2	1.3	---	273	25	9.8	7.4	1.2	.48	.27
30	1.0	3.3	2.2	1.2	---	206	21	9.8	6.6	1.1	.51	.26
31	1.4	---	2.1	1.2	---	162	---	9.7	---	1.0	.44	---
TOTAL	24.76	46.49	69.3	67.2	239.3	15028	1400	481.3	139.9	61.4	22.47	10.13
MEAN	.80	1.55	2.24	2.17	8.55	485	46.7	15.5	4.66	1.98	.72	.34
MAX	1.4	3.3	3.8	6.6	45	3600	134	24	8.7	4.5	1.0	.43
MIN	.47	.95	1.6	1.2	1.1	48	21	9.7	2.4	1.0	.44	.26
AC-FT	49	92	137	133	475	29810	2780	955	277	122	45	20

CAL YR 1990 TOTAL 8116.62 MEAN 22.2 MAX 638 MIN .43 AC-FT 16100
WTR YR 1991 TOTAL 17590.25 MEAN 48.2 MAX 3600 MIN .26 AC-FT 34890

e Estimated.

11458000 NAPA RIVER NEAR NAPA, CA
(National stream-quality accounting network station)

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to September 1932, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. 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.

AVERAGE DISCHARGE.--35 years, 196 ft^3/s, 142,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft^3/s, Feb. 18, 1986, gage height, 30.20 ft, from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,990 ft^3/s, Mar. 4, gage height, 19.36 ft; no flow, Oct. 1, 25, 26, Nov. 7, Feb. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.4	1.5	2.6	.81	25	283	49	18	6.8	1.9	1.1
2	.32	.76	1.5	2.6	4.3	274	239	49	17	6.6	1.8	1.1
3	.61	.67	1.7	2.4	40	2280	207	47	16	6.2	1.5	1.0
4	.38	.71	2.4	2.2	23	5790	181	46	16	6.6	1.6	1.0
5	.27	.96	2.8	2.0	27	2200	163	45	15	6.1	2.0	1.0
6	.37	.20	2.6	1.9	26	497	152	43	14	5.4	1.8	1.0
7	.94	.00	2.2	2.5	17	282	141	40	13	4.9	1.8	1.1
8	1.1	.20	2.2	3.1	14	173	132	38	11	5.0	1.7	1.7
9	1.0	.72	2.2	6.6	12	140	123	35	11	4.6	1.8	2.1
10	.76	.91	2.4	5.4	10	135	117	33	11	4.4	1.7	2.1
11	.95	1.0	3.1	3.7	9.8	143	111	34	9.3	4.4	1.8	2.0
12	1.0	1.0	2.4	3.2	8.7	244	107	34	8.2	4.0	1.5	2.1
13	1.3	1.2	2.3	2.9	7.9	1220	102	35	7.6	4.0	1.7	2.1
14	1.7	1.3	2.3	2.6	7.3	497	96	34	6.5	4.1	1.8	2.0
15	1.2	1.4	3.2	2.7	9.2	323	90	33	6.6	4.1	1.6	1.7
16	.74	1.3	3.4	1.9	10	225	84	32	7.5	4.3	1.5	1.6
17	1.2	1.2	3.3	1.7	9.3	273	85	30	7.3	3.5	1.5	1.6
18	1.2	1.2	4.2	1.7	10	362	77	27	6.9	2.4	1.7	1.3
19	1.5	1.4	3.5	1.6	9.3	274	73	29	6.5	2.2	1.7	1.3
20	1.4	1.5	3.0	1.3	9.3	598	72	29	6.3	2.0	1.7	1.4
21	1.4	1.4	2.6	.94	6.3	453	72	27	6.2	1.7	1.5	1.4
22	1.4	1.4	2.4	.81	3.7	337	68	25	6.1	1.5	1.5	1.4
23	1.5	1.4	2.4	1.2	4.7	578	65	24	6.2	1.5	1.4	1.4
24	.32	1.4	2.3	1.9	3.3	2530	64	25	6.5	1.5	1.4	1.3
25	.00	1.4	2.3	1.5	.03	2610	63	23	6.3	2.5	1.3	1.2
26	.00	1.4	2.6	1.3	.00	2190	62	21	5.5	2.7	1.2	1.2
27	.11	1.4	2.6	1.1	.32	1330	59	22	5.7	2.4	1.3	1.2
28	1.3	1.4	2.6	.89	5.8	717	56	22	6.1	2.4	1.3	1.2
29	1.2	1.4	2.6	.67	---	516	54	20	6.4	2.5	1.2	1.1
30	1.4	1.4	2.6	1.2	---	402	51	20	6.4	2.3	1.4	.95
31	1.7	---	2.6	1.1	---	330	---	20	---	1.9	.98	---
TOTAL	28.27	33.03	79.8	67.21	289.06	27948	3249	991	276.1	114.5	48.58	42.65
MEAN	.91	1.10	2.57	2.17	10.3	902	108	32.0	9.20	3.69	1.57	1.42
MAX	1.7	1.5	4.2	6.6	40	5790	283	49	18	6.8	2.0	2.1
MIN	.00	.00	1.5	.67	.00	25	51	20	5.5	1.5	.98	.95
AC-FT	56	66	158	133	573	55430	6440	1970	548	227	96	85

CAL YR 1990 TOTAL 12674.99 MEAN 34.7 MAX 890 MIN .00 AC-FT 25140
WTR YR 1991 TOTAL 33167.20 MEAN 90.9 MAX 5790 MIN .00 AC-FT 65790

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973 to current year.
CHEMICAL DATA: Water years 1973 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978 to current year.
WATER TEMPERATURE: Water years 1977 to current year.
SEDIMENT DATA: Water years 1971, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to September 1981.
WATER TEMPERATURE: October 1976 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: October 1976 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
29...	1030	1.4	462	8.1	6.0	0.40	770	10.9	87	32	24	200
JAN												
15...	1035	2.7	490	8.2	10.0	0.40	770	9.8	86	K15	K20	210
MAR												
20...	1205	716	216	7.5	11.0	63	760	10.3	94	670	5100	80
MAY												
09...	1210	34	385	8.3	16.5	1.6	760	9.1	94	79	75	150
JUL												
30...	1140	2.3	459	7.9	21.0	1.1	760	7.6	86	51	74	200
SEP												
18...	1215	1.5	488	8.3	18.0	1.3	760	8.2	87	48	93	210

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
29...	1	31	30	25	21	0.8	2.2	244	0	200	28	24
JAN												
15...	29	32	31	28	22	0.8	2.1	218	0	179	38	41
MAR												
20...	21	16	9.7	11	22	0.5	2.5	72	0	59	26	8.8
MAY												
09...	15	27	20	20	22	0.7	2.5	154	5	134	36	20
JUL												
30...	19	32	30	24	20	0.7	2.6	225	0	184	34	27
SEP												
18...	16	34	31	24	20	0.7	2.4	240	0	197	36	31

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
NOV												
29...	0.20	28	280	289	0.38	<0.010	<0.010	<0.100	<0.100	0.020	0.020	<0.20
JAN												
15...	0.10	13	284	293	0.39	<0.010	<0.010	<0.100	<0.100	0.010	0.010	<0.20
MAR												
20...	<0.10	26	150	146	0.20	0.040	0.020	2.30	2.40	0.040	<0.010	0.80
MAY												
09...	0.30	34	259	251	0.35	0.030	0.020	2.40	2.30	0.010	0.020	0.40
JUL												
30...	0.20	31	280	291	0.38	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	0.30
SEP												
18...	0.30	31	283	308	0.38	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	<0.20

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV												
29...	0.050	0.030	0.040	0.040	<10	2	72	<0.5	<1.0	<1	<3	1
JAN												
15...	<0.010	0.020	0.020	0.020	<10	2	85	<0.5	<1.0	<1	<3	1
MAR												
20...	0.160	0.070	0.090	0.070	--	--	--	--	--	--	--	--
MAY												
09...	0.060	0.060	0.040	0.050	<10	2	67	<0.5	<1.0	2	<3	1
JUL												
30...	0.060	0.050	--	0.020	--	--	--	--	--	--	--	--
SEP												
18...	0.060	0.050	0.050	0.050	<10	2	81	<0.5	<1.0	<1	<3	2

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV												
29...	12	<1	36	7	<0.1	<10	1	<1	<1.0	210	<6	<3
JAN												
15...	7	1	45	8	<0.1	<10	<1	<1	<1.0	230	<6	<3
MAR												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	16	<1	34	15	<0.1	<10	2	<1	<1.0	180	<6	4
JUL												
30...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	6	<1	40	15	<0.1	<10	1	<1	<1.0	240	<6	4

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
20... *	1446	3.50	52.5	195	7.6	11.0	760	10.2	93	176	98
20... *	1453	3.20	39.6	196	7.6	11.0	760	10.1	92	172	98
20... *	1458	6.00	25.9	195	7.5	11.0	760	10.2	93	165	98
20... *	1504	5.90	19.5	197	7.5	11.0	760	10.2	93	160	98
20... *	1508	5.90	13.0	197	7.5	11.0	760	10.2	93	152	98
JUL											
30... *	1530	0.48	1.20	484	7.9	23.0	760	8.4	98	2	81
30... *	1531	0.50	2.00	484	7.9	23.0	760	8.4	98	4	72
30... *	1532	0.46	3.00	484	7.9	23.0	760	8.4	98	2	89
30... *	1534	0.42	3.80	485	7.9	23.0	760	8.4	98	4	87
30... *	1536	0.33	4.90	484	7.9	23.0	760	8.3	97	5	78

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 20, 704 ft^3/s; July 30, 2.2 ft^3/s.

11458000 NAPA RIVER NEAR NAPA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
NOV								
29...	1030	1.4	6.0	2	0.01	91	--	--
JAN								
15...	1035	2.7	10.0	3	0.02	77	--	--
MAR								
20...	1205	716	11.0	188	363	98	99	100
20...	1445	709	11.0	166	318	98	--	--
MAY								
09...	1210	34	16.5	6	0.55	92	--	--
JUL								
30...	1140	2.3	21.0	3	0.02	70	--	--
30...	1535	2.2	23.0	4	0.02	79	--	--
SEP								
18...	1215	1.5	18.0	2	0.01	74	--	--

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 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Records of diversions for water years 1952-53, estimated. Prior to October 1966, published as "near Novato."

GAGE.--Water-stage recorder. Datum of gage is 14.76 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1967, at site 0.6 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Stafford Lake beginning Dec. 1, 1951, capacity, 4,500 acre-ft since Oct. 18, 1954; contents, 1,380 acre-ft, Sept. 30, 1991. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 1,739 acre-ft for the current year. No diversion from Russian River into Stafford Lake during the current year.

COOPERATION.--Records of diversions and storage were provided by North Marin Water District.

AVERAGE DISCHARGE (adjusted for diversions).--45 years, 13.9 ft^3/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft^3/s, Jan. 4, 1982, gage height, 14.52 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 463 ft^3/s, Mar. 24, gage height, 6.61 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.02	.00	.35	.02	18	5.1	1.6	.41	.59	.30	.00
2	.16	.00	.00	.30	18	28	4.1	.87	.41	.56	.08	.00
3	.02	.00	.00	.34	2.1	63	3.3	.74	.50	.51	.28	.00
4	.03	.00	.00	.30	13	100	2.9	.68	.66	.49	.32	.00
5	.05	.00	.00	.20	5.6	17	2.6	.75	.64	.49	.34	.00
6	.03	.00	.00	.39	1.1	5.9	2.3	.62	.64	.49	.28	.00
7	.00	.00	.00	3.4	.64	4.1	1.9	.62	.64	.50	.16	.00
8	.00	.00	.00	.98	.50	3.3	1.4	.60	.63	.52	.10	.35
9	.00	.00	.00	5.7	.44	2.7	1.2	.61	.70	.57	.08	.53
10	.00	.00	4.3	1.3	.38	5.4	1.0	.57	.54	.53	.07	.46
11	.00	.00	3.3	.73	.33	2.7	.81	.24	.54	.54	.02	.48
12	.00	.17	.23	.86	.29	18	.77	.41	.59	.53	.03	.46
13	.00	.00	.03	.40	.29	14	.62	.75	.59	.59	.89	.46
14	.00	.00	.01	.36	.25	5.0	.54	.96	.58	.53	.27	.47
15	.00	.00	10	.35	.25	3.9	.51	.64	.58	.54	.16	.47
16	.00	.00	5.9	.26	.24	3.3	.42	.66	.55	.53	.14	.49
17	.00	.00	2.3	.28	.21	13	.36	.61	.54	.52	.08	.39
18	.00	.00	1.2	.25	.24	13	.34	.51	.55	.52	.11	.34
19	.00	.00	2.9	.21	.17	12	.31	.49	.56	.53	.14	.29
20	.00	.00	1.5	.18	.18	19	2.9	.59	.56	.54	.10	.38
21	.00	1.7	.65	.03	.18	6.9	3.1	.60	.55	.51	.05	.39
22	.00	.00	.79	.03	.16	5.2	1.1	.58	.57	.51	.02	.60
23	.00	.00	1.7	.02	.16	44	1.1	.58	.57	.50	.04	.35
24	.00	.00	1.7	.03	.15	140	1.2	.53	.58	.53	.02	.39
25	.00	3.1	1.5	.50	.13	63	1.3	.53	.57	.53	.00	.34
26	.00	.58	1.6	.35	.13	73	1.5	.53	.58	.41	.00	.37
27	.00	.01	1.4	.09	11	25	.82	.54	.78	.45	.00	.40
28	.00	.00	1.1	.30	11	14	.91	.57	1.9	.36	.02	.36
29	.00	.00	.72	1.3	---	10	1.3	.53	.74	.34	.02	.30
30	.00	.00	.47	.51	---	7.5	2.2	.57	.63	.63	.00	.29
31	1.2	---	.39	.08	---	6.0	---	.60	---	.32	.00	---
TOTAL	1.83	5.58	43.69	20.38	67.14	745.9	47.91	19.68	18.88	15.71	4.12	9.36
MEAN	.059	.19	1.41	.66	2.40	24.1	1.60	.63	.63	.51	.13	.31
MAX	1.2	3.1	10	5.7	18	140	5.1	1.6	1.9	.63	.89	.60
MIN	.00	.00	.00	.02	.02	2.7	.31	.24	.41	.32	.00	.00
AC-FT	3.6	11	87	40	133	1480	95	39	37	31	8.2	19

CAL YR 1990 TOTAL 516.54 MEAN 1.42 MAX 68 MIN .00 AC-FT 1020
WTR YR 1991 TOTAL 1000.18 MEAN 2.74 MAX 140 MIN .00 AC-FT 1980

REVISION OF RECORDS FOR A DISCONTINUED STATION

11459800 SAN RAFAEL CREEK AT SAN RAFAEL, CA

LOCATION.--Lat 37°58'22", long 122°32'07", in San Pedro Santa Margarita Las Gallinas Grant, Marin County, on left bank 22 ft upstream from culvert at intersection of Second and Third Streets in town of San Rafael.

DRAINAGE AREA.--1.24 mi^2.

PERIOD OF RECORD.--November 1971 to September 1976, seasonal records only (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 15.56 ft above National Geodetic Vertical Datum of 1929. Recording rain gage at City Hall 0.3 mi northeast of gage.

REMARKS.--Low flow affected by return flow from urban irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 400 ft^3/s (revised), Jan. 18, 1973, gage height, 5.32 ft, from rating curve extended above 240 ft^3/s on basis of computation of flow through culvert.

REVISIONS.--The maximum discharge for the period of record has been revised to 400 ft^3/s, Jan. 18, 1973, gage height, 5.32 ft. The peak discharge for water year 1974 has been revised to 354 ft^3/s, Nov. 17, 1973, gage height, 4.99 ft, superseding the figures published in the report for 1974.

11460000 CORTE MADERA CREEK AT ROSS, CA

LOCATION.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, Marin County, Hydrologic Unit 18050002, on left bank behind fire station at Ross, 1.7 mi southwest of San Rafael, 1.7 mi below Phoenix Lake, and 4 mi upstream from mouth.

DRAINAGE AREA.--18.1 mi^2.

PERIOD OF RECORD.--February 1951 to current year.

REVISED RECORDS.--WDR CA-85-2: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 7.97 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair. Flow slightly regulated by Phoenix Lake, capacity 612 acre-ft. Diversion on tributary upstream from station by Marin Municipal Water District.

AVERAGE DISCHARGE.--40 years, 27.3 ft^3/s, 19,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s, Jan. 4, 1982, gage height, 19.81 ft, from rating curve extended above 2,700 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 24	1000	*1,650	*12.86				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.25	.12	21	20	2.5	1.1	.35	.00	.00
2	.00	.00	.00	.26	60	169	15	2.7	1.1	.27	.00	.00
3	.00	.00	.00	.32	.74	398	12	2.3	1.1	.22	.00	.00
4	.00	.00	.00	.28	9.5	333	10	2.2	1.0	.20	.00	.00
5	.00	.00	.00	.28	6.7	114	8.8	2.1	.97	.19	.00	.00
6	.00	.00	.00	.31	.76	43	7.6	1.9	.93	.17	.00	.00
7	.00	.00	.00	.85	.46	22	6.5	1.9	.93	.16	.00	.00
8	.00	.00	.01	.22	.35	13	5.6	1.9	.88	.15	.00	.00
9	.00	.00	.01	1.4	.33	9.3	5.0	1.9	.87	.15	.00	.00
10	.00	.00	1.5	.21	.33	30	4.5	1.8	.83	.15	.00	.00
11	.00	.00	.47	.14	.29	13	4.1	1.8	.79	.13	.00	.00
12	.00	.00	.04	.13	.27	127	3.8	1.7	.77	.11	.00	.00
13	.00	.00	.04	.11	.25	157	3.5	1.9	.71	.09	.19	.00
14	.00	.00	.06	.12	.25	54	3.3	1.6	.69	.09	.06	.00
15	.00	.00	6.5	.12	.25	35	3.1	1.5	.66	.08	.02	.00
16	.00	.00	2.1	.12	.24	20	3.0	1.4	.66	.08	.00	.00
17	.00	.00	.06	.13	.24	56	2.8	1.4	.68	.08	.00	.00
18	.00	.00	.05	.12	.24	45	2.8	1.7	.66	.07	.00	.00
19	.00	.00	.33	.12	.24	55	2.7	1.7	.67	.07	.00	.00
20	.00	.00	.25	.12	.24	116	13	1.7	.66	.07	.00	.00
21	.00	.17	.16	.10	.25	58	9.9	1.6	.63	.06	.00	.00
22	.00	.02	.16	.10	.24	36	4.2	1.5	.61	.06	.00	.00
23	.00	.00	.23	.11	.22	276	3.6	1.4	.65	.04	.00	.00
24	.00	.00	.26	.10	.19	615	3.3	1.4	.68	.04	.00	.00
25	.00	1.0	.29	.11	.18	315	3.2	1.3	.62	.01	.00	.00
26	.00	.10	.33	.11	.20	333	3.0	1.4	.61	.01	.00	.00
27	.00	.01	.33	.11	10	150	2.9	1.4	.64	.00	.00	.00
28	.00	.00	.31	.12	10	77	2.7	1.3	1.3	.00	.00	.00
29	.00	.00	.28	.11	---	50	2.7	1.2	.59	.00	.00	.00
30	.00	.00	.27	.10	---	34	2.6	1.2	.46	.00	.00	.00
31	.03	---	.25	.11	---	25	---	1.2	---	.00	.00	---
TOTAL	0.03	1.30	14.29	6.79	103.08	3799.3	175.2	52.5	23.45	3.10	0.27	0.00
MEAN	.001	.043	.46	.22	3.68	123	5.84	1.69	.78	.10	.009	.000
MAX	.03	1.0	6.5	1.4	60	615	20	2.7	1.3	.35	.19	.00
MIN	.00	.00	.00	.10	.12	9.3	2.6	1.2	.46	.00	.00	.00
AC-FT	.06	2.6	28	13	204	7540	348	104	47	6.1	.5	.00

CAL YR 1990 TOTAL 1286.32 MEAN 3.52 MAX 152 MIN .00 AC-FT 2550
WTR YR 1991 TOTAL 4179.31 MEAN 11.5 MAX 615 MIN .00 AC-FT 8290

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 Deadmans 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 mi^2.

PERIOD OF RECORD.--December 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 102.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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.

AVERAGE DISCHARGE.--8 years, 25.6 ft^3/s, 18,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft^3/s, Feb. 18, 1986, gage height, 8.44 ft; minimum daily, 3.8 ft^3/s, Oct. 16-18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft^3/s, Mar. 3, gage height, 5.87 ft; minimum daily, 5.1 ft^3/s, Oct. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.1	9.3	14	14	40	30	9.7	8.7	8.1	7.0	7.0
2	5.8	7.9	9.3	14	58	166	25	9.3	8.7	8.0	7.0	7.0
3	5.7	7.9	9.3	14	21	e647	21	9.3	8.6	7.8	7.0	7.0
4	5.6	7.9	9.3	14	20	e251	19	9.3	8.6	7.9	7.1	7.0
5	5.8	7.9	9.3	14	34	120	17	9.3	8.6	8.0	7.3	7.0
6	5.8	7.6	9.3	14	20	54	16	9.0	8.6	8.2	7.2	6.9
7	5.8	7.6	9.3	17	18	35	15	8.9	8.6	8.0	7.1	6.7
8	5.7	7.9	9.3	16	17	26	14	8.8	8.4	7.9	7.2	6.6
9	5.6	7.9	9.3	16	17	21	13	8.6	8.2	7.9	7.0	6.4
10	5.6	7.7	10	16	17	25	12	8.9	8.2	7.9	7.2	6.4
11	5.6	7.6	11	15	16	23	11	9.3	8.2	7.9	7.1	6.4
12	5.6	7.6	11	15	16	81	11	9.1	8.1	7.9	6.9	6.4
13	5.7	7.6	14	15	16	136	10	9.2	7.9	7.9	7.5	6.4
14	5.6	7.8	14	15	15	58	9.7	9.2	7.9	7.9	7.3	6.4
15	5.6	7.9	21	15	15	40	9.1	11	7.9	7.9	7.2	6.5
16	6.4	8.2	21	15	15	30	8.5	8.4	7.9	7.9	6.9	6.4
17	6.4	8.6	18	15	15	52	8.3	8.6	7.9	7.8	6.9	6.4
18	6.4	8.6	17	15	15	52	8.2	9.7	7.8	7.2	7.0	6.4
19	6.4	8.6	17	14	15	48	8.2	9.7	7.9	7.1	7.0	6.4
20	6.7	8.6	17	14	15	94	14	9.3	7.8	7.3	7.0	6.4
21	7.0	9.3	17	14	15	64	14	8.9	7.7	7.3	7.0	6.4
22	7.2	9.3	17	14	15	46	11	8.9	7.7	7.3	7.0	6.4
23	7.3	9.3	17	14	15	195	10	8.8	7.6	7.3	7.0	6.4
24	7.3	9.3	17	14	14	351	9.7	8.6	7.9	7.3	7.0	6.4
25	7.3	11	17	14	14	222	10	8.6	7.9	7.3	6.9	6.4
26	7.1	10	16	14	14	200	9.9	8.6	7.9	7.3	6.7	6.4
27	5.5	9.7	15	14	17	113	9.1	8.6	7.9	7.3	7.0	6.4
28	5.1	9.4	14	14	31	70	8.6	8.8	8.8	7.3	7.0	6.4
29	5.1	9.3	14	14	---	50	8.4	8.6	8.5	7.2	7.0	6.3
30	5.1	9.3	14	14	---	39	8.8	9.0	8.1	6.9	7.0	6.4
31	5.4	---	14	14	---	32	---	8.8	---	7.0	6.9	---
TOTAL	187.0	253.4	426.7	451	524	3381	379.5	280.8	244.5	236.0	218.4	196.0
MEAN	6.03	8.45	13.8	14.5	18.7	109	12.6	9.06	8.15	7.61	7.05	6.53
MAX	7.3	11	21	17	58	647	30	11	8.8	8.2	7.5	7.0
MIN	5.1	6.1	9.3	14	14	21	8.2	8.4	7.6	6.9	6.7	6.3
AC-FT	371	503	846	895	1040	6710	753	557	485	468	433	389

CAL YR 1990 TOTAL 5490.5 MEAN 15.0 MAX 261 MIN 5.1 AC-FT 10890
WTR YR 1991 TOTAL 6778.3 MEAN 18.6 MAX 647 MIN 5.1 AC-FT 13440

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. 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.

AVERAGE DISCHARGE.--17 years, 77.0 ft^3/s, 55,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Jan. 4, 1982, gage height, 26.96 ft, from rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.01 ft^3/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft^3/s, Mar. 3, gage height, 7.23 ft; minimum daily, 5.3 ft^3/s, Oct. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.7	7.8	13	12	47	45	e12	11	9.2	7.2	6.8
2	5.6	7.2	7.7	13	62	91	38	12	11	8.7	7.2	6.8
3	5.7	7.6	7.6	13	32	773	32	12	10	8.5	7.2	6.7
4	5.6	7.6	7.6	13	20	506	28	e12	10	8.5	7.0	6.6
5	5.6	7.6	7.6	13	47	206	25	e12	10	8.3	7.0	6.6
6	5.6	7.4	7.6	13	24	89	23	12	10	8.3	6.8	6.6
7	5.6	7.4	7.6	16	21	55	21	e12	10	8.4	6.9	6.6
8	5.6	7.5	7.6	15	18	38	19	e11	10	8.4	6.8	6.6
9	5.6	7.6	7.8	16	18	28	18	e11	9.9	8.3	6.8	6.4
10	5.6	7.6	8.7	15	17	30	17	e11	9.7	8.2	6.8	6.4
11	5.6	7.6	11	14	17	31	16	e12	9.7	8.1	7.1	6.4
12	5.6	7.6	8.8	14	16	59	15	12	9.6	8.1	6.8	6.3
13	5.6	7.6	14	14	16	207	14	e12	9.4	8.1	7.3	6.2
14	5.6	7.6	15	14	16	88	14	12	9.4	8.1	7.4	6.2
15	5.6	7.6	21	14	16	59	13	13	9.3	8.1	7.2	6.2
16	5.9	7.6	23	14	15	43	12	11	9.1	8.1	7.0	6.2
17	6.0	8.0	17	14	15	82	13	11	9.2	8.1	7.0	6.2
18	6.0	8.1	16	14	15	88	e13	11	9.1	7.7	7.0	6.2
19	6.1	8.1	16	14	15	68	e13	12	9.0	7.4	7.0	6.2
20	6.2	8.1	16	14	15	154	17	12	9.0	7.4	7.0	6.2
21	6.2	8.7	16	14	15	108	e17	11	9.0	7.4	7.0	6.2
22	6.2	9.0	15	e13	15	75	15	11	9.0	7.4	6.8	6.2
23	6.2	9.0	16	e13	15	273	14	11	9.0	7.4	6.8	6.2
24	6.3	9.0	15	13	15	584	13	11	9.0	7.4	6.8	6.2
25	6.4	9.6	15	13	15	374	e13	11	9.0	7.3	6.8	6.0
26	6.4	10	15	12	15	324	e14	11	9.0	6.9	6.8	6.1
27	5.8	8.4	13	12	16	196	e14	11	9.0	7.0	6.8	6.2
28	5.4	8.1	13	12	32	120	e12	11	9.6	7.0	6.8	6.2
29	5.3	8.1	13	12	---	84	e12	11	10	7.0	6.8	6.2
30	5.3	7.9	13	12	---	64	e11	11	9.5	7.0	6.8	6.2
31	6.0	---	13	12	---	51	---	11	---	7.0	6.8	---
TOTAL	179.8	238.9	392.4	418	565	4995	541	356	286.5	242.8	215.5	190.1
MEAN	5.80	7.96	12.7	13.5	20.2	161	18.0	11.5	9.55	7.83	6.95	6.34
MAX	6.4	10	23	16	62	773	45	13	11	9.2	7.4	6.8
MIN	5.3	5.7	7.6	12	12	28	11	11	9.0	6.9	6.8	6.0
AC-FT	357	474	778	829	1120	9910	1070	706	568	482	427	377

CAL YR 1990 TOTAL 6688.9 MEAN 18.3 MAX 368 MIN 5.2 AC-FT 13270
WTR YR 1991 TOTAL 8621.0 MEAN 23.6 MAX 773 MIN 5.3 AC-FT 17100

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow affected by regulation and diversions and by Soulajule Reservoir on Arroyo Sausal; reservoir capacity, 10,570 acre-ft.

AVERAGE DISCHARGE.--8 years, 21.9 ft^3/s, 15,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft^3/s, Feb. 17, 1986, gage height, 10.79 ft, from rating curve extended above 1,100 ft^3/s on basis of comparison with discontinued downstream station Walker Creek near Tomales; minimum daily, 0.95 ft^3/s, Sept. 23, 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 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 516 ft^3/s, Mar. 24, gage height, 3.22 ft; minimum daily, 0.95 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.1	1.5	1.7	1.4	5.7	18	2.9	2.0	1.9	1.4	1.5
2	2.1	1.1	1.5	1.7	7.1	22	14	2.9	2.0	1.5	1.4	1.5
3	2.0	1.1	1.5	1.7	2.3	151	12	2.7	2.0	1.4	1.4	1.5
4	2.0	1.1	1.5	1.7	3.5	329	9.4	2.7	2.0	1.4	1.4	1.4
5	2.0	1.1	1.5	1.7	6.0	72	8.4	2.6	2.0	1.4	1.4	1.4
6	2.0	1.1	1.6	1.7	2.6	31	7.9	2.4	2.0	1.4	1.4	1.4
7	1.9	1.2	1.7	1.8	2.0	18	6.8	2.4	2.0	1.4	1.4	1.3
8	1.9	1.2	1.7	1.9	1.8	13	6.0	2.3	2.0	1.4	1.4	1.3
9	1.9	1.2	1.7	2.3	1.7	10	5.6	2.3	1.9	1.4	1.4	1.3
10	1.6	1.2	2.2	2.0	1.7	11	4.8	2.3	1.9	1.4	1.4	1.2
11	1.1	1.2	2.3	1.8	1.7	9.2	4.3	2.3	1.9	1.4	1.4	1.2
12	1.0	1.2	2.0	1.8	1.6	46	4.2	2.3	1.9	1.4	1.4	1.2
13	1.0	1.2	1.8	1.8	1.5	89	4.1	2.3	1.9	1.4	1.4	1.2
14	1.1	1.2	1.8	1.8	1.5	37	3.7	2.3	1.9	1.4	1.4	1.1
15	1.1	1.2	3.7	1.8	1.5	23	3.6	2.1	1.9	1.4	1.4	1.1
16	1.1	1.2	3.1	1.7	1.5	17	3.5	2.0	1.8	1.4	1.4	1.1
17	1.1	1.2	2.1	1.7	1.5	40	3.5	2.0	1.8	1.4	1.4	1.1
18	1.1	1.2	1.8	1.7	1.5	32	3.4	1.9	1.8	1.4	1.4	1.1
19	1.1	1.2	1.8	1.7	1.5	26	3.7	1.9	1.8	1.4	1.4	1.0
20	1.1	1.2	1.8	1.7	1.4	55	4.8	1.9	1.8	1.4	1.4	.98
21	1.1	1.3	1.8	1.7	1.4	37	4.0	1.9	1.8	1.4	1.4	.98
22	1.1	1.3	1.7	1.7	1.4	26	3.7	1.9	1.8	1.4	1.4	.98
23	1.1	1.3	1.7	1.7	1.4	140	3.5	1.9	1.8	1.4	1.4	.95
24	.98	1.2	1.7	1.7	1.5	249	3.5	1.9	1.8	1.4	1.4	1.0
25	.98	1.8	1.7	1.7	1.5	143	3.7	1.9	1.8	1.4	1.4	1.2
26	1.0	1.8	1.7	1.6	1.5	185	3.5	1.9	1.8	1.4	1.5	1.3
27	.98	1.5	1.7	1.5	2.0	90	3.2	1.9	1.8	1.4	1.6	1.3
28	.98	1.5	1.7	1.5	4.0	52	3.0	1.9	2.0	1.4	1.5	1.4
29	.98	1.5	1.7	1.4	---	35	3.0	1.9	2.0	1.4	1.5	1.3
30	1.0	1.5	1.7	1.4	---	25	2.9	2.0	2.0	1.4	1.5	1.3
31	1.3	---	1.7	1.4	---	19	---	2.0	---	1.4	1.4	---
TOTAL	41.90	38.1	57.4	53.0	60.0	2037.9	165.7	67.6	56.9	44.0	44.0	36.59
MEAN	1.35	1.27	1.85	1.71	2.14	65.7	5.52	2.18	1.90	1.42	1.42	1.22
MAX	2.2	1.8	3.7	2.3	7.1	329	18	2.9	2.0	1.9	1.6	1.5
MIN	.98	1.1	1.5	1.4	1.4	5.7	2.9	1.9	1.8	1.4	1.4	.95
AC-FT	83	76	114	105	119	4040	329	134	113	87	87	73

CAL YR 1990 TOTAL 2406.80 MEAN 6.59 MAX 154 MIN .98 AC-FT 4770
WTR YR 1991 TOTAL 2703.09 MEAN 7.41 MAX 329 MIN .95 AC-FT 5360

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 downstream 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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records fair except for discharges below 100 ft^3/s, which are poor. No regulation. Diversions upstream from station for irrigation of about 1,000 acres.

AVERAGE DISCHARGE.--41 years, 172 ft^3/s, 124,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft^3/s, Dec. 21, 1955, gage height, 19.0 ft, site and datum then in use; flood of Feb. 17, 1986, reached a stage of 19.00 ft, present site and datum; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	0825	*3,730	*11.96				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	2.1	1.8	2.7	2.5	138	134	10	5.4	2.1	.12	.49
2	.60	1.5	1.9	2.8	77	468	108	10	5.3	2.0	.02	.24
3	.51	1.5	1.7	2.8	59	1520	86	9.5	5.2	.50	.08	.33
4	.51	1.4	1.7	2.8	30	1570	68	8.9	5.5	.15	.12	.22
5	.47	1.3	1.9	2.7	121	500	59	8.7	4.7	.09	.42	.13
6	.30	1.3	1.8	3.0	37	192	68	8.1	4.3	.12	.26	.09
7	.25	1.3	1.9	5.7	18	98	51	7.9	4.8	.10	.28	.20
8	.24	1.2	2.0	5.0	12	52	37	8.0	4.5	.09	.20	.47
9	.19	1.2	2.0	4.9	8.5	30	30	7.4	4.2	.09	.16	.24
10	.22	1.3	4.9	4.6	6.9	67	27	6.1	3.6	.08	.08	.20
11	.26	1.3	5.0	4.5	5.9	69	22	6.8	3.6	.09	.14	.41
12	.29	1.3	3.5	5.3	5.4	702	18	6.5	2.2	.07	.24	.47
13	.54	.83	2.8	7.9	5.0	667	16	7.7	1.2	.03	.19	.25
14	.71	1.7	2.6	6.9	4.6	255	16	8.4	.53	.00	.38	.19
15	.60	1.6	6.3	5.7	4.0	150	16	8.1	1.3	.00	.51	.13
16	.60	3.5	5.0	5.0	3.4	91	15	7.3	.75	.00	.43	.17
17	.66	2.0	4.1	4.5	3.0	228	13	9.3	1.4	.00	.13	.42
18	.84	1.6	3.4	4.4	2.9	301	13	8.1	2.2	.00	.07	.16
19	1.1	1.5	4.7	4.2	3.0	180	12	9.0	2.7	.01	.16	.11
20	1.1	1.5	5.5	3.6	2.8	407	13	8.4	2.8	.00	.19	.11
21	1.1	1.5	4.2	3.6	2.7	430	13	7.9	2.4	.00	.21	.13
22	.95	1.6	3.1	3.2	2.2	238	11	7.1	2.1	.00	.16	.10
23	.91	1.4	2.8	3.5	1.3	1540	10	6.7	2.9	.06	.14	.01
24	.83	1.6	2.7	3.1	1.7	1190	12	6.3	3.2	.09	.32	.00
25	.79	2.5	2.7	2.5	2.2	1410	13	6.4	2.0	.13	.44	.00
26	.81	2.8	3.3	1.7	1.3	1540	18	6.0	.87	.11	.26	.02
27	.81	2.7	3.2	2.2	1.5	661	14	6.1	1.1	.17	.13	.03
28	.84	2.7	2.8	4.0	4.4	407	12	6.0	4.2	.56	.15	.03
29	.86	2.1	2.8	2.6	---	291	12	5.5	7.6	.34	.67	.03
30	.87	1.7	2.8	1.4	---	212	10	5.8	3.6	.17	.66	.10
31	2.9	---	2.8	1.7	---	165	---	6.3	---	.15	.32	---
TOTAL	22.59	51.53	97.7	118.5	429.2	15769	947	234.3	96.15	7.30	7.64	5.48
MEAN	.73	1.72	3.15	3.82	15.3	509	31.6	7.56	3.20	.24	.25	.18
MAX	2.9	3.5	6.3	7.9	121	1570	134	10	7.6	2.1	.67	.49
MIN	.19	.83	1.7	1.4	1.3	30	10	5.5	.53	.00	.02	.00
AC-FT	45	102	194	235	851	31280	1880	465	191	14	15	11

CAL YR 1990 TOTAL 22504.81 MEAN 61.7 MAX 2350 MIN .02 AC-FT 44640
WTR YR 1991 TOTAL 17786.39 MEAN 48.7 MAX 1570 MIN .00 AC-FT 35280

11461000 RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1977-79, October 1990 to September 1991 (storm season only).
CHEMICAL DATA: Water years 1977-79.
BIOLOGICAL DATA: Water years 1977-79.
WATER TEMPERATURE: Water years 1965-68.
SEDIMENT DATA: Water years 1964-68, October 1990 to September 1991.

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 3.0 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN 23...	1440	3.0	7.0	2	0.02	--
MAR 04...	1455	1960	--	729	3860	85

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
MAR 04...	1610	1000	1100	0.250	1540	1635	89.0	1780	567

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR 04...	1	5	11	17	25	42	67	93	100

11461000 RUSSIAN RIVER NEAR UKIAH, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN								
08...	1538	1	87.0	7.0	--	--	--	1
08...	1540	1	92.0	7.0	--	--	--	2
08...	1542	1	97.0	7.0	--	--	1	2
08...	1544	1	102	7.0	--	--	--	3
08...	1546	1	107	7.0	--	--	1	2
08...	1548	1	112	7.1	--	--	1	3
08...	1550	1	117	7.1	--	--	1	3
08...	1552	1	122	7.1	--	1	2	5
08...	1554	1	127	7.2	1	1	2	9
08...	1556	1	132	7.2	--	1	2	9
08...	1558	1	137	7.3	--	1	3	10
08...	1600	1	142	7.3	--	1	2	6
08...	1602	1	147	7.3	1	2	4	9
08...	1604	1	152	7.3	1	1	3	8
08...	1606	1	157	7.3	--	1	2	9
08...	1608	1	162	7.3	--	1	2	7
08...	1610	1	167	7.3	--	1	3	11
08...	1612	1	172	7.3	1	2	3	5

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
JAN								
08...	2	6	16	37	74	100	--	--
08...	7	15	22	31	48	58	100	--
08...	8	14	24	41	70	100	--	--
08...	9	19	33	56	73	100	--	--
08...	7	13	23	41	73	89	100	--
08...	9	14	21	31	58	94	100	--
08...	8	15	21	31	43	51	51	100
08...	11	16	20	28	50	70	100	--
08...	16	20	27	44	78	92	100	--
08...	18	27	36	50	66	90	100	--
08...	20	26	32	44	74	86	100	--
08...	8	12	19	29	42	51	100	--
08...	14	23	34	50	75	92	100	--
08...	27	52	73	88	99	100	--	--
08...	25	41	57	73	90	100	--	--
08...	16	28	48	70	87	100	--	--
08...	18	30	53	84	98	100	--	--
08...	8	11	15	19	26	32	47	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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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 good. Flow greatly affected by diversion from Eel River through Potter Valley powerplant (see stations 11471000, 11471099). Diversion for irrigation of about 8,000 acres upstream from station.

AVERAGE DISCHARGE.--50 years, 331 ft^3/s, 239,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s, Dec. 22, 1964, gage height, 20.21 ft, site then in use; maximum gage height, 20.82 ft, Feb. 17, 1986; minimum daily, 1.7 ft^3/s, July 23, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	0845	3,430	12.93	Mar. 23	1600	*4,730	*14.55

Minimum daily, 27 ft^3/s, Feb. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	307	116	76	32	113	371	267	152	125	83	57
2	298	308	117	75	114	467	358	286	154	114	85	65
3	298	305	118	50	133	1310	350	288	148	101	82	56
4	294	304	119	39	89	1410	346	295	128	97	82	58
5	296	308	117	39	119	468	e341	307	125	92	82	60
6	292	307	79	41	88	286	e336	310	120	87	80	60
7	293	309	73	51	61	201	e331	300	116	94	90	69
8	291	311	76	52	51	155	e327	297	112	93	88	68
9	293	304	77	48	50	133	e323	291	107	98	59	71
10	293	306	91	44	45	176	e319	293	98	103	67	72
11	285	306	90	44	44	170	e315	292	95	104	71	77
12	288	306	82	50	44	1220	303	297	89	101	68	73
13	295	307	81	55	43	900	321	302	77	103	64	66
14	294	307	80	54	41	449	324	287	90	117	78	59
15	298	309	86	49	41	380	325	263	94	121	63	67
16	294	308	83	50	39	349	322	207	106	111	52	69
17	282	308	82	41	38	718	322	177	106	111	49	116
18	302	307	82	35	38	645	322	183	112	99	54	119
19	312	307	85	34	37	431	322	177	112	105	51	122
20	307	e205	83	34	37	568	320	185	113	99	50	123
21	297	e122	77	34	37	453	317	179	96	92	53	121
22	301	e122	76	32	37	390	316	172	107	90	50	123
23	302	e122	76	31	37	1970	312	153	104	96	55	137
24	308	e122	76	31	33	1330	292	149	109	100	69	138
25	311	e122	76	31	27	1630	268	145	108	99	67	133
26	307	e122	76	31	30	1730	268	152	103	100	66	133
27	309	121	77	31	32	752	254	166	108	105	46	128
28	304	122	78	31	41	544	244	161	129	110	36	129
29	316	119	79	31	---	463	245	153	133	98	46	127
30	311	119	76	32	---	416	248	158	128	96	62	128
31	307	---	77	32	---	389	---	161	---	93	53	---
TOTAL	9282	7252	2661	1308	1458	20616	9362	7053	3379	3154	2001	2824
MEAN	299	242	85.8	42.2	52.1	665	312	228	113	102	64.5	94.1
MAX	316	311	119	76	133	1970	371	310	154	125	90	138
MIN	282	119	73	31	27	113	244	145	77	87	36	56
AC-FT	18410	14380	5280	2590	2890	40890	18570	13990	6700	6260	3970	5600

CAL YR 1990 TOTAL 78340.2 MEAN 215 MAX 1710 MIN 1.7 AC-FT 155400
WTR YR 1991 TOTAL 70350 MEAN 193 MAX 1970 MIN 27 AC-FT 139500

e Estimated.

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to September 1913, October 1951 to June 1956, October 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 614.41 ft above National Geodetic Vertical Datum of 1929. 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 (station 11471000) and since November 1958 by storage in Lake Mendocino 500 ft upstream. Diversions upstream from station for irrigation of about 8,000 acres.

AVERAGE DISCHARGE (unadjusted).--7 years (water years 1912-13, 1952-55, 1958), 356 ft^3/s, 257,900 acre-ft/yr; 32 years (water years 1960-91), 338 ft^3/s, 244,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Prior to regulation by Lake Mendocino, maximum discharge, 13,300 ft^3/s, Dec. 21, 1955, gage height, 16.86 ft, site and datum then in use, from rating curve extended above 6,300 ft^3/s on basis of maximum flow at station upstream which was defined to 8,600 ft^3/s; no flow Aug. 13-15, 1913. Maximum discharge (water years 1959-91), 7,350 ft^3/s, Jan. 24, 1970, gage height, 10.84 ft; minimum daily, 0.02 ft^3/s, Apr. 17, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,130 ft^3/s, Mar. 27, gage height, 4.13 ft; maximum gage height, 6.76 ft, Oct. 1, (backwater from coffer dam); minimum daily, 24 ft^3/s, Feb. 3, 13, 14, and Mar. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e199	331	105	80	50	26	370	e245	150	165	226	214
2	e198	331	105	80	37	26	350	e284	150	166	225	215
3	e198	331	105	78	24	26	350	289	165	182	225	215
4	e197	335	92	78	25	26	346	289	173	206	224	214
5	e198	335	91	78	26	26	327	289	170	206	223	214
6	e199	333	83	78	26	26	316	272	154	206	223	214
7	e198	313	75	78	26	26	316	365	146	208	222	214
8	e198	300	75	75	26	26	302	365	146	210	222	214
9	e199	295	75	73	26	26	296	346	148	210	222	214
10	e200	293	75	74	26	25	298	326	125	220	219	214
11	202	293	76	72	26	24	298	321	110	226	214	214
12	205	299	76	68	25	25	282	321	110	226	210	214
13	209	296	77	68	24	26	271	322	110	226	210	214
14	217	289	78	68	24	26	271	321	110	227	210	214
15	225	289	78	68	25	236	289	288	110	230	219	215
16	263	294	78	76	26	399	310	205	108	230	226	213
17	398	298	78	80	26	405	316	131	123	230	225	216
18	396	298	78	80	26	326	316	132	137	230	226	218
19	394	294	78	82	26	253	318	134	140	230	221	218
20	403	241	79	83	28	250	321	182	140	230	212	218
21	413	113	80	83	30	250	321	206	147	230	213	218
22	419	113	80	82	32	252	336	205	162	229	214	218
23	400	113	80	82	37	290	345	202	163	226	214	218
24	358	114	80	83	40	850	345	161	163	217	214	218
25	335	116	80	85	40	1300	310	140	163	206	214	216
26	331	116	80	85	40	1770	288	143	163	203	214	215
27	326	110	80	85	40	1530	285	143	163	205	212	215
28	326	106	80	84	32	853	288	143	163	206	215	214
29	326	107	80	83	---	673	e274	143	163	217	218	212
30	330	107	80	87	---	400	e272	143	163	226	216	213
31	332	---	80	91	---	401	---	148	---	189	215	---
TOTAL	8792	7203	2537	2447	839	10798	9327	7204	4338	6618	6763	6453
MEAN	284	240	81.8	78.9	30.0	348	311	232	145	213	218	215
MAX	419	335	105	91	50	1770	370	365	173	230	226	218
MIN	197	106	75	68	24	24	271	131	108	165	210	212
AC-FT	17440	14290	5030	4850	1660	21420	18500	14290	8600	13130	13410	12800

CAL YR 1990 TOTAL 77789 MEAN 213 MAX 1010 MIN 20 AC-FT 154300
WTR YR 1991 TOTAL 73319 MEAN 201 MAX 1770 MIN 24 AC-FT 145400

e Estimated.

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-55, 1964-68, 1973 to current year.
CHEMICAL DATA: Water years 1953-55, 1973-82.
BIOLOGICAL DATA: Water year 1977-78.
WATER TEMPERATURE: Water years 1953-55, 1965-68, 1973 to current year.
SEDIMENT DATA: Water years 1953-55, 1964-68.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1952 to March 1955, October 1964 to September 1968, October 1972 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1952 to March 1955, January 1964 to September 1968.

INSTRUMENTATION.--Water-temperature recorder since October 1972. Digital recorder set for 1-hour interval punches.

REMARKS.--Water temperature is affected by regulation from Coyote Dam. Interruptions in record are due to malfunction in recording instrument or probe.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 23.5 °C on several days in 1977; minimum recorded, 7.0 °C, Jan. 14, 1973, many days in 1984, several days in 1989, Feb. 23, 25-28, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 19.5 °C, Oct. 2-15; minimum recorded, 7.5 °C, on many days.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	19.0	18.0	17.5	12.0	11.5	8.0	8.0	8.0	7.5	8.5	8.0
2	19.5	19.0	18.0	17.5	12.0	12.0	8.0	8.0	9.0	8.0	9.0	8.0
3	19.5	19.0	17.5	17.0	12.0	11.5	8.0	8.0	8.5	7.5	9.5	8.5
4	19.5	19.0	17.0	17.0	11.5	11.5	8.0	7.5	8.0	7.5	9.5	8.0
5	19.5	19.0	17.0	16.5	11.5	11.0	7.5	7.5	9.0	7.5	9.0	8.0
6	19.5	19.0	17.0	16.5	11.5	11.0	7.5	7.5	9.0	7.5	9.5	8.0
7	19.5	19.0	16.5	16.5	11.5	11.0	8.0	7.5	9.0	7.5	9.5	8.0
8	19.5	19.0	16.5	16.0	11.5	11.0	7.5	7.5	9.0	7.5	10.0	8.0
9	19.5	19.5	16.0	16.0	11.5	11.0	7.5	7.5	9.0	7.5	9.0	8.0
10	19.5	19.5	16.0	16.0	11.0	11.0	7.5	7.5	9.0	8.0	8.5	8.0
11	19.5	19.0	16.0	15.5	11.0	10.5	7.5	7.5	9.0	7.5	9.5	8.0
12	19.5	19.5	15.5	15.5	11.0	10.5	7.5	7.5	9.0	7.5	8.5	8.0
13	19.5	19.0	15.5	15.0	11.0	10.5	8.0	7.5	9.5	7.5	9.0	8.0
14	19.5	19.0	15.5	15.0	11.0	10.5	8.0	7.5	9.0	7.5	9.0	8.0
15	19.5	19.0	15.0	15.0	11.0	10.5	8.0	7.5	9.0	8.0	8.5	8.0
16	19.0	19.0	15.0	15.0	11.0	10.5	8.0	7.5	9.0	7.5	8.5	8.5
17	19.0	19.0	15.0	14.5	11.0	10.5	8.0	7.5	9.0	8.0	8.5	8.5
18	19.0	19.0	14.5	14.5	10.5	10.5	8.0	7.5	9.0	8.0	8.5	8.5
19	19.0	19.0	14.5	14.5	10.5	10.0	8.0	7.5	9.5	7.5	8.5	8.5
20	19.0	19.0	14.5	14.0	10.0	10.0	8.0	7.5	9.0	7.5	8.5	8.5
21	19.0	19.0	14.0	13.5	10.0	9.5	8.0	7.5	8.5	8.0	9.0	8.5
22	19.0	18.5	13.5	13.5	9.5	9.0	8.0	7.5	9.0	8.0	9.0	8.5
23	18.5	18.5	13.5	13.5	9.5	9.0	8.0	7.5	9.0	8.0	8.5	8.5
24	18.5	18.5	13.5	13.5	9.0	9.0	8.0	7.5	9.0	8.0	9.0	8.5
25	18.5	18.5	13.5	13.5	9.0	8.5	8.0	7.5	9.0	7.5	9.0	9.0
26	18.5	18.0	13.5	13.0	9.0	8.5	8.0	7.5	9.0	8.0	9.0	9.0
27	18.5	18.0	13.0	13.0	8.5	8.5	8.0	7.5	8.5	8.0	9.0	8.5
28	18.5	18.0	13.0	12.5	8.5	8.5	8.0	7.5	8.5	8.0	9.0	8.5
29	18.5	18.0	12.5	12.5	8.5	8.0	8.0	7.5	---	---	9.0	8.5
30	18.0	18.0	12.5	12.0	8.5	8.0	8.0	7.5	---	---	9.0	8.5
31	18.0	18.0	---	---	8.5	8.0	8.0	7.5	---	---	9.0	8.5
MONTH	19.5	18.0	18.0	12.0	12.0	8.0	8.0	7.5	9.5	7.5	10.0	8.0

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	11.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---
2	9.0	8.5	10.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---
3	9.0	9.0	10.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---
4	9.0	9.0	10.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---
5	9.0	9.0	10.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---
6	9.0	9.0	12.0	10.5	11.5	11.0	12.0	11.5	13.5	13.0	---	---
7	9.5	9.0	10.5	10.5	11.5	11.0	12.0	11.5	13.5	13.0	---	---
8	9.5	9.0	10.5	10.5	11.5	11.0	12.0	11.5	14.0	13.0	---	---
9	9.5	9.0	11.0	10.5	11.5	11.0	12.0	11.5	14.0	13.5	---	---
10	9.5	9.0	11.0	10.5	12.0	11.0	12.0	11.5	14.0	13.5	---	---
11	9.5	9.0	11.0	10.5	11.5	11.0	12.5	12.0	14.0	13.5	---	---
12	10.0	9.0	11.0	10.5	11.5	11.0	12.5	12.0	14.5	13.5	---	---
13	10.0	9.0	11.0	10.5	11.5	11.0	12.5	12.0	14.0	13.5	---	---
14	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	14.5	14.0	---	---
15	10.0	9.5	11.0	10.5	12.0	11.0	12.5	12.0	14.5	14.0	---	---
16	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	14.0	13.5	---	---
17	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	14.0	13.5	---	---
18	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	14.5	14.0	---	---
19	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	14.5	14.0	---	---
20	10.0	9.5	11.0	10.5	11.5	11.0	12.5	12.0	---	---	---	---
21	10.0	9.5	11.0	10.5	11.5	11.0	13.0	12.0	---	---	---	---
22	10.0	10.0	11.0	10.5	11.5	11.5	13.0	12.5	---	---	---	---
23	10.0	9.5	11.0	11.0	11.5	11.0	13.0	12.5	---	---	---	---
24	10.0	9.5	11.0	11.0	11.5	11.5	13.0	12.5	---	---	---	---
25	10.0	10.0	11.0	10.5	11.5	11.5	13.0	12.5	---	---	---	---
26	10.0	9.5	11.0	10.5	11.5	11.5	13.5	12.5	---	---	---	---
27	10.5	10.0	11.5	11.0	12.0	11.5	13.5	12.5	---	---	---	---
28	10.5	10.0	11.5	11.0	11.5	11.5	13.5	13.0	---	---	---	---
29	10.5	10.0	11.0	11.0	12.0	11.5	13.5	13.0	---	---	---	---
30	10.5	10.0	11.5	11.0	12.0	11.5	13.5	13.0	---	---	---	---
31	---	---	11.5	11.0	---	---	---	---	---	---	---	---
MONTH	10.5	8.5	12.0	10.0	12.0	11.0	---	---	---	---	---	---

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 Dam.

DRAINAGE AREA.--362 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1943, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. 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 15.2 mi upstream.

AVERAGE DISCHARGE.--52 years, 703 ft^3/s, 509,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft^3/s, Dec. 22, 1955, gage height, 27.00 ft; minimum daily, 9.1 ft^3/s, Apr. 20, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,080 ft^3/s, Mar. 23, gage height, 10.37 ft; maximum gage height, 10.47 ft, Mar. 3; minimum daily, 21 ft^3/s, Feb. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	374	109	81	69	73	707	259	139	141	158	176
2	178	373	108	81	149	664	619	309	141	138	162	179
3	174	369	108	81	152	3030	574	327	148	127	167	179
4	173	369	102	82	92	3470	542	320	162	139	172	176
5	174	373	84	82	178	1170	508	318	158	142	177	175
6	177	373	82	82	112	421	493	292	145	147	178	173
7	180	364	80	90	74	267	459	360	131	155	178	167
8	180	341	77	90	63	200	431	361	134	161	175	167
9	179	337	77	85	55	165	410	354	134	160	168	172
10	178	325	88	83	46	221	400	335	129	163	166	167
11	165	323	93	81	46	237	376	324	105	165	169	170
12	164	325	87	77	43	1210	358	316	98	168	177	172
13	169	323	84	77	36	1570	352	323	91	165	174	167
14	173	317	83	77	38	583	349	324	86	173	180	167
15	175	314	94	68	38	446	355	309	78	178	180	170
16	179	314	92	66	36	541	364	262	81	176	189	172
17	252	318	87	75	33	968	372	186	90	173	185	176
18	339	318	82	80	32	1140	369	177	102	173	187	177
19	349	314	87	82	32	679	365	169	110	170	184	173
20	353	299	91	82	26	1070	366	183	110	173	177	178
21	359	157	90	83	28	1090	368	212	115	176	180	179
22	361	137	87	84	22	725	369	209	130	181	173	177
23	360	132	86	81	21	2780	377	204	130	181	169	179
24	361	128	85	81	33	3560	378	187	138	173	173	179
25	361	127	83	84	38	4360	369	142	136	155	179	174
26	365	127	82	82	35	4700	350	140	135	148	182	168
27	365	126	82	82	34	3280	339	151	132	144	184	171
28	369	114	82	85	49	1880	335	148	136	150	184	170
29	369	112	82	83	---	1470	326	146	142	157	179	167
30	369	110	82	78	---	944	306	147	139	170	178	171
31	385	---	81	82	---	801	---	142	---	149	178	---
TOTAL	8122	8033	2717	2507	1610	43715	12286	7636	3705	4971	5462	5188
MEAN	262	268	87.6	80.9	57.5	1410	410	246	123	160	176	173
MAX	385	374	109	90	178	4700	707	361	162	181	189	179
MIN	164	110	77	66	21	73	306	140	78	127	158	167
AC-FT	16110	15930	5390	4970	3190	86710	24370	15150	7350	9860	10830	10290

CAL YR 1990 TOTAL 106543 MEAN 292 MAX 2500 MIN 73 AC-FT 211300
WTR YR 1991 TOTAL 105952 MEAN 290 MAX 4700 MIN 21 AC-FT 210200

11462500 RUSSIAN RIVER NEAR HOPLAND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to March 1979, October 1989 to current year.
CHEMICAL DATA: Water years 1951-66.
WATER TEMPERATURE: Water years 1965-79.
SEDIMENT DATA: October 1989 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: September 1965 to March 1979.

REMARKS.--Zero-bedload discharge observed at flows less than 82 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
DEC							
06...	1200	82	10.0	1	0.22	--	--
JAN							
24...	1405	82	8.5	4	0.89	--	--
MAR							
03...	1540	3790	12.5	1050	10700	41	53
28...	1500	1810	9.5	64	313	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
DEC							
06...	--	--	--	--	--	--	--
JAN							
24...	--	--	--	83	--	--	--
MAR							
03...	69	83	90	97	99	100	--
28...	--	--	--	82	89	96	100

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
MAR										
03...	1640	1000	1100	0.250	1630	1650	96.0	3150	12.5	1140
28...	1340	1000	1100	0.250	1342	1408	95.0	1830	9.5	78

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR									
03...	--	1	32	51	65	76	90	98	100
28...	2	19	28	40	58	72	81	88	100

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 Cummisky Creek, 5.5 mi northwest of Cloverdale, and 28 mi downstream from Coyote Dam.

DRAINAGE AREA.--503 mi^2.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 30, 1970, at site 0.2 mi upstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 15,300 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.

AVERAGE DISCHARGE.--40 years, 951 ft^3/s, 689,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft^3/s, Dec. 22, 1964, gage height, 31.60 ft, site and datum then in use; minimum daily, 12 ft^3/s, Apr. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft^3/s, Mar. 4, gage height, 13.75 ft; minimum daily, 25 ft^3/s, Feb. 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	363	117	90	79	161	1160	347	145	150	110	159
2	167	360	116	90	281	1720	1000	316	139	144	132	162
3	160	360	116	90	237	8330	901	366	141	128	144	166
4	155	360	114	90	141	9790	830	363	163	120	150	157
5	164	360	102	90	203	3220	773	358	163	129	157	157
6	167	362	97	90	161	1250	735	347	154	125	155	159
7	167	361	95	96	105	749	681	377	134	139	162	158
8	171	338	93	99	88	524	634	411	129	154	167	156
9	173	328	91	95	78	401	590	411	130	154	164	161
10	170	325	95	92	69	466	563	391	140	154	160	157
11	160	322	104	89	63	578	518	373	119	161	154	154
12	143	323	97	87	58	2860	470	368	101	160	169	e157
13	155	320	94	86	e53	3730	457	371	100	150	161	e157
14	166	313	93	86	e51	1560	445	381	91	159	170	160
15	166	309	103	82	e48	1010	445	370	78	181	167	160
16	166	311	103	e71	47	1020	453	319	75	175	185	166
17	196	312	98	76	43	1940	464	243	83	175	184	163
18	290	311	95	85	41	2330	460	204	90	176	184	156
19	321	311	95	87	38	1430	454	181	91	171	183	154
20	328	303	99	85	33	2130	453	187	102	170	173	159
21	327	214	98	88	32	1920	459	234	108	177	171	164
22	338	161	96	87	29	1400	450	232	113	185	169	157
23	342	148	94	81	25	4480	461	228	111	166	164	175
24	342	142	93	79	25	6600	462	219	129	169	166	175
25	343	141	92	82	36	7810	461	168	130	145	176	170
26	344	139	91	80	37	7670	435	148	131	121	181	156
27	337	135	91	82	35	5330	415	160	128	110	173	159
28	341	126	91	82	55	3000	403	159	131	121	176	157
29	348	122	90	76	---	2290	395	154	147	141	170	158
30	347	119	90	72	---	1590	366	156	147	152	168	161
31	366	---	90	76	---	1320	---	147	---	142	165	---
TOTAL	7534	8099	3033	2641	2191	88609	16793	8689	3643	4704	5110	4810
MEAN	243	270	97.8	85.2	78.2	2858	560	280	121	152	165	160
MAX	366	363	117	99	281	9790	1160	411	163	185	185	175
MIN	143	119	90	71	25	161	366	147	75	110	110	154
AC-FT	14940	16060	6020	5240	4350	175800	33310	17230	7230	9330	10140	9540

CAL YR 1990 TOTAL 128022 MEAN 351 MAX 3820 MIN 80 AC-FT 253900
WTR YR 1991 TOTAL 155856 MEAN 427 MAX 9790 MIN 25 AC-FT 309100

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,430 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Diversion for industrial use 150 ft upstream from station when flows are above 10 ft^3/s.

AVERAGE DISCHARGE.--11 years, 38.4 ft^3/s, 27,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft^3/s, Feb. 17, 1986, gage height, 8.98 ft, from rating curve extended above 1,200 ft^3/s on basis of culvert computation of peak flow; minimum daily, 0.08 ft^3/s, Aug. 31, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	0615	*4,090	*8.25				

Minimum daily, 0.74 ft^3/s, Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.7	1.6	2.0	1.8	84	69	6.3	5.4	3.8	1.7	1.4
2	1.2	1.6	1.4	2.0	99	643	52	6.5	5.0	3.6	1.8	1.3
3	1.2	1.6	1.4	2.0	16	1470	41	5.8	4.7	3.4	1.9	1.2
4	1.2	1.6	1.4	2.0	15	1690	33	5.8	4.7	3.4	1.9	1.2
5	1.2	1.6	1.4	2.0	16	369	29	5.4	4.7	2.7	1.9	1.1
6	1.2	1.5	1.4	2.0	9.6	132	25	4.9	4.7	2.8	2.5	.97
7	1.2	1.3	1.4	e8.0	6.3	72	20	5.0	4.7	2.7	2.7	.90
8	1.2	1.3	1.4	e6.0	5.2	46	17	7.4	4.8	2.7	2.6	.86
9	1.2	1.3	1.4	e4.4	4.5	32	15	7.2	5.0	2.7	2.4	.77
10	1.1	1.3	1.8	e3.4	3.8	34	14	8.0	5.0	2.8	2.3	.88
11	1.1	1.3	2.4	e2.9	3.8	21	13	8.1	4.9	3.0	2.3	.90
12	1.1	1.3	1.9	e2.6	3.4	455	12	8.1	4.4	2.9	2.3	.86
13	1.1	1.3	1.6	e2.5	3.0	291	11	8.4	4.6	2.3	2.2	.75
14	1.1	1.4	1.5	e2.4	2.9	137	10	8.6	4.6	2.3	2.4	.75
15	1.0	1.4	3.4	2.4	2.7	82	9.6	8.1	4.3	2.3	2.2	.85
16	.95	1.4	2.6	2.4	2.8	54	9.9	8.1	4.2	2.1	2.0	.90
17	1.0	1.4	2.0	2.4	2.8	111	9.1	8.0	4.2	2.1	1.9	.90
18	1.1	1.4	1.8	2.2	2.8	93	8.8	7.8	4.2	2.1	1.9	.83
19	1.1	1.4	1.9	2.2	2.8	90	8.3	7.4	4.2	2.1	1.9	.81
20	1.1	1.4	2.0	2.0	2.6	184	10	6.5	3.9	1.9	1.5	.74
21	.95	1.4	1.8	2.0	2.4	122	8.3	6.2	4.0	1.9	1.3	.76
22	1.0	1.4	1.8	2.0	2.4	94	7.8	6.2	4.0	1.7	1.3	.78
23	1.0	1.4	1.8	2.0	2.4	435	7.3	5.8	3.0	1.7	1.4	.79
24	1.1	1.3	1.8	1.8	2.4	370	7.7	5.8	3.4	1.7	1.4	.99
25	1.1	2.2	1.8	1.8	2.4	280	8.2	5.8	3.6	1.8	1.2	1.0
26	1.1	2.3	1.8	1.8	2.4	256	8.9	5.8	3.9	1.9	1.1	.97
27	1.1	1.8	1.8	1.8	3.4	181	7.2	5.8	3.6	1.8	1.3	1.7
28	1.0	1.6	1.9	1.8	17	171	6.5	5.8	4.3	1.7	1.5	.99
29	.98	1.6	2.0	1.8	---	156	6.6	5.7	4.5	1.7	1.7	.83
30	1.0	1.6	2.0	1.8	---	122	6.3	5.4	3.9	1.8	1.5	.76
31	4.9	---	2.0	1.8	---	88	---	5.4	---	1.7	1.5	---
TOTAL	37.78	45.1	56.2	78.2	241.6	8365	491.5	205.1	130.4	73.1	57.5	28.44
MEAN	1.22	1.50	1.81	2.52	8.63	270	16.4	6.62	4.35	2.36	1.85	.95
MAX	4.9	2.3	3.4	8.0	99	1690	69	8.6	5.4	3.8	2.7	1.7
MIN	.95	1.3	1.4	1.8	1.8	21	6.3	4.9	3.0	1.7	1.1	.74
AC-FT	75	89	111	155	479	16590	975	407	259	145	114	56

CAL YR 1990 TOTAL 6656.68 MEAN 18.2 MAX 1390 MIN .95 AC-FT 13200
WTR YR 1991 TOTAL 9809.92 MEAN 26.9 MAX 1690 MIN .74 AC-FT 19460

e Estimated.

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 mi^2.

PERIOD OF RECORD.--July 1957 to September 1972. October 1989 to current year (since October 1989, low flow only).

REVISED RECORDS.--WSP 1929: 1958-60.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to September 1972, at site 0.8 mi upstream at different datum.

REMARKS.--Records poor. Diversions for irrigation and geothermal recharge upstream from station. No flow computed above 200 ft^3/s.

AVERAGE DISCHARGE.--15 years (water years 1958-72), 192 ft^3/s, 139,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1958-72), 15,700 ft^3/s, Dec. 22, 1964, gage height, 15.08 ft, site and datum then in use, from rating curve extended above 5,700 ft^3/s on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 1.3 ft^3/s, Sept. 27, 1991.

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 ft^3/s, by slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	24	24	11	e59	69	e45	21	---	26	7.7	4.5
2	9.2	22	21	14	e43	93	e39	19	---	24	7.5	4.5
3	9.0	19	19	12	---	135	e37	e16	179	24	7.2	4.5
4	8.1	16	18	11	---	155	35	e16	123	23	7.3	4.1
5	7.3	16	17	10	166	147	36	e15	105	22	7.6	4.1
6	6.8	15	16	10	169	104	36	15	92	23	6.9	3.9
7	6.6	14	16	---	115	e90	37	15	86	22	6.0	3.9
8	6.0	14	15	---	93	e83	36	14	79	20	6.0	3.9
9	5.5	13	14	---	77	e75	33	13	70	20	5.7	3.8
10	5.5	12	14	102	69	e86	32	15	65	19	4.9	3.5
11	5.8	12	14	59	65	e72	31	15	61	18	4.5	3.4
12	5.9	11	14	---	57	e50	30	15	57	17	4.4	3.3
13	5.8	11	16	---	56	e48	28	14	53	16	4.7	2.8
14	5.9	11	15	---	53	e46	28	14	51	14	4.3	2.7
15	6.3	10	13	---	53	e45	29	13	50	13	4.6	2.8
16	6.3	9.8	14	---	---	e45	29	13	48	13	5.0	3.0
17	5.4	9.2	15	165	---	e46	30	12	47	13	5.2	3.1
18	4.8	8.7	11	114	---	e47	28	12	45	13	5.4	2.9
19	5.0	8.4	11	91	---	e47	28	13	44	13	5.5	2.8
20	6.1	8.5	11	72	184	e47	30	59	42	13	5.6	3.2
21	109	8.8	11	60	153	e48	32	e34	38	12	5.4	2.6
22	108	10	11	52	159	e50	33	e188	37	11	5.4	2.4
23	---	9.7	11	46	131	e54	40	e96	37	11	5.0	2.6
24	---	10	11	42	109	e49	35	e60	34	11	4.3	2.9
25	123	139	10	38	96	e46	28	e49	31	9.8	3.9	2.8
26	60	157	11	37	88	e45	26	---	27	9.6	4.1	3.0
27	60	52	11	37	79	e45	24	---	30	9.0	4.5	e3.2
28	45	39	9.9	36	73	e47	23	186	30	8.7	4.9	e3.1
29	34	32	10	35	---	e49	23	153	29	8.3	4.7	e3.1
30	29	26	9.5	e76	---	e51	23	160	27	8.3	4.7	e3.0
31	26	---	9.5	e38	---	e49	---	---	---	7.8	4.4	---
TOTAL	---	748.1	422.9	---	---	2063	944	---	---	472.5	167.3	99.4
MEAN	---	24.9	13.6	---	---	66.5	31.5	---	---	15.2	5.40	3.31
MAX	---	157	24	---	---	155	45	---	---	26	7.7	4.5
MIN	---	8.4	9.5	---	---	45	23	---	---	7.8	3.9	2.4
AC-FT	---	1480	839	---	---	4090	1870	---	---	937	332	197

e Estimated.

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.9	9.8	5.1	6.4	4.9	---	---	45	28	14	e3.9	e2.7
2	e2.7	6.8	5.0	6.6	---	---	---	46	28	12	e3.7	e3.1
3	e2.5	5.5	4.9	6.6	67	---	---	49	28	11	e3.5	e3.6
4	e2.7	5.3	4.7	6.3	31	---	---	44	21	8.6	e3.2	e3.3
5	e2.8	5.8	4.3	6.1	79	---	194	42	17	7.3	e3.0	e3.0
6	e3.0	5.5	4.5	6.0	34	---	176	40	18	7.6	e2.9	e2.8
7	e2.9	5.4	4.5	11	20	89	157	37	18	7.5	e3.4	e2.6
8	e2.8	5.3	4.4	14	13	50	141	38	16	7.5	e4.2	e2.9
9	e2.7	5.3	4.3	9.0	11	28	128	39	15	7.0	e4.5	e3.1
10	e2.6	5.6	5.0	6.5	8.7	18	118	40	15	6.6	e4.7	e3.5
11	e2.7	5.7	7.8	5.7	7.2	26	110	40	14	6.2	e4.4	e3.3
12	e2.7	5.7	6.4	5.3	6.4	117	102	39	13	7.0	e3.5	e3.1
13	e2.8	5.7	5.8	5.2	5.9	---	98	41	13	6.2	e3.0	e3.0
14	e2.9	5.7	5.5	5.0	5.6	---	91	41	13	6.0	e2.8	e2.8
15	e3.0	5.9	13	4.8	5.2	188	87	36	13	6.4	e3.3	e2.6
16	e3.2	6.2	11	4.7	4.8	101	89	33	13	7.9	e3.8	e2.3
17	3.3	6.6	7.9	4.4	4.2	169	84	35	14	7.3	e4.0	e2.1
18	3.4	6.6	6.4	4.1	4.2	---	81	39	13	6.6	e4.0	e1.9
19	3.9	6.6	6.4	4.0	4.3	184	77	41	12	6.8	e3.8	e1.8
20	4.2	6.6	6.7	4.2	4.2	---	83	37	14	6.4	e3.6	e1.6
21	4.1	6.7	5.5	3.9	3.8	---	77	35	13	6.3	e3.2	e1.8
22	3.9	6.8	4.5	3.5	3.7	---	69	34	13	e6.2	e3.0	e1.9
23	3.7	6.8	4.8	3.7	3.6	---	64	33	13	e6.1	e2.8	e2.1
24	3.9	7.3	4.9	3.7	3.4	---	66	32	13	e5.9	e2.5	e2.0
25	3.7	7.7	5.1	4.5	3.3	---	69	31	13	e5.7	e2.2	e1.8
26	3.1	7.3	5.6	5.1	3.0	---	74	32	14	e5.4	e2.3	e1.7
27	3.0	6.3	6.2	5.0	3.7	---	60	31	14	e5.3	e2.6	e1.3
28	3.0	5.5	6.1	5.1	28	---	54	31	19	e5.2	e3.0	e1.5
29	2.9	5.2	6.1	5.2	---	---	50	31	23	e4.9	e3.5	e1.7
30	2.8	5.2	5.8	5.0	---	---	46	32	18	e4.5	e3.3	e1.8
31	8.9	---	6.1	4.8	---	---	---	31	---	e4.1	e3.0	---
TOTAL	102.7	186.4	184.3	175.4	---	---	---	1155	489	215.5	104.6	72.7
MEAN	3.31	6.21	5.95	5.66	---	---	---	37.3	16.3	6.95	3.37	2.42
MAX	8.9	9.8	13	14	---	---	---	49	28	14	4.7	3.6
MIN	2.5	5.2	4.3	3.5	---	---	---	31	12	4.1	2.2	1.3
AC-FT	204	370	366	348	---	---	---	2290	970	427	207	144

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No records computed above 300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	---	140	104	69	---	---	---	205	155	131	174
2	159	---	137	104	---	---	---	---	197	149	113	171
3	153	---	133	103	---	---	---	---	192	139	122	176
4	147	---	131	103	---	---	---	---	188	126	133	165
5	142	---	131	103	---	---	---	---	195	117	141	163
6	145	---	125	103	---	---	---	---	194	120	148	161
7	148	---	117	114	244	---	---	---	190	121	150	166
8	149	---	114	120	190	---	---	---	178	129	154	169
9	151	---	108	124	165	---	---	---	169	142	157	166
10	152	---	106	116	149	---	---	---	162	145	156	165
11	152	---	110	109	135	---	---	---	160	147	152	163
12	147	---	115	106	124	---	---	---	148	149	151	163
13	134	---	115	102	118	---	---	---	133	147	160	164
14	134	---	110	98	108	---	---	---	126	142	159	162
15	142	---	121	99	99	---	---	---	118	150	162	161
16	146	---	129	97	92	---	---	---	109	171	160	161
17	145	---	129	91	88	---	---	---	101	167	174	166
18	159	---	121	88	85	---	---	---	101	162	183	162
19	224	---	117	91	79	---	---	---	103	160	189	166
20	266	---	115	93	74	---	---	---	102	163	184	157
21	279	298	115	93	65	---	---	---	106	167	175	166
22	291	230	114	97	61	---	---	---	109	186	165	166
23	299	187	110	93	54	---	---	---	113	187	163	162
24	---	171	110	89	48	---	---	---	116	175	164	176
25	---	164	108	88	46	---	---	288	127	182	183	173
26	---	163	107	88	45	---	---	251	129	157	183	168
27	---	161	105	85	51	---	---	230	131	138	183	159
28	---	153	105	84	79	---	---	228	144	127	190	157
29	---	148	105	83	---	---	---	219	149	125	190	152
30	---	143	104	77	---	---	---	214	160	137	183	151
31	---	---	103	70	---	---	---	215	---	138	176	---
TOTAL	---	---	3610	3015	---	---	---	---	4355	4620	5034	4931
MEAN	---	---	116	97.3	---	---	---	---	145	149	162	164
MAX	---	---	140	124	---	---	---	---	205	187	190	176
MIN	---	---	103	70	---	---	---	---	101	117	113	151
AC-FT	---	---	7160	5980	---	---	---	---	8640	9160	9980	9780

P 87 WY - NO DATA

F 88 WY - 4

F 89

P 90

P 91

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 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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.

AVERAGE DISCHARGE.--52 years, 1,403 ft^3/s, 1,016,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,300 ft^3/s, Dec. 23, 1964, gage height, 27.00 ft; maximum gage height, 30.0 ft, Feb. 28, 1940; minimum daily discharge, 12 ft^3/s, June 14, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.8 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,100 ft^3/s, Mar. 4, gage height, 16.10 ft.; minimum daily, 49 ft^3/s, Feb. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	341	134	100	63	277	2140	464	186	145	130	161
2	161	338	130	100	290	2190	1840	433	180	141	116	152
3	153	335	128	100	540	17300	1600	442	177	138	118	e146
4	145	337	126	100	323	22900	1430	449	175	130	128	e151
5	140	340	126	100	359	9350	1300	433	183	124	134	142
6	145	335	119	100	315	3730	1200	427	184	124	136	142
7	146	337	110	111	243	2340	1110	406	180	124	140	145
8	147	336	105	117	190	1700	1010	451	169	126	141	144
9	149	321	102	120	159	1330	928	464	161	135	143	144
10	151	314	102	114	139	1170	867	457	154	139	141	147
11	150	309	106	107	124	1280	822	435	151	141	141	147
12	146	308	110	104	111	3710	773	423	122	141	139	143
13	131	308	107	102	102	8130	702	428	108	141	144	144
14	133	309	103	95	93	3760	675	433	111	139	146	143
15	142	303	118	97	88	2420	655	421	e112	139	150	144
16	144	299	126	95	80	1930	640	407	e103	147	151	184
17	142	301	123	90	76	2470	645	372	e95	151	164	148
18	162	301	115	87	74	4170	631	316	e95	147	172	144
19	230	302	111	87	71	2900	615	287	119	148	175	140
20	265	300	110	89	71	3970	619	268	119	152	173	140
21	280	294	109	89	71	3540	619	264	119	153	166	143
22	287	242	108	90	71	2750	597	279	119	155	161	145
23	296	197	106	89	70	5120	587	277	123	160	158	142
24	299	177	103	88	68	10600	590	270	124	150	153	148
25	304	169	103	84	67	10600	588	259	129	150	155	147
26	306	165	102	82	59	11100	596	227	130	140	164	151
27	308	159	100	81	49	8270	555	207	133	129	172	146
28	308	153	102	79	67	5500	526	205	137	122	170	143
29	313	146	100	76	---	4140	521	200	141	118	173	139
30	316	139	100	71	---	3220	521	197	145	122	167	137
31	336	---	100	65	---	2510	---	193	---	129	165	---
TOTAL	6495	8215	3444	2909	4033	164377	25902	10794	4184	4300	4686	4392
MEAN	210	274	111	93.8	144	5302	863	348	139	139	151	146
MAX	336	341	134	120	540	22900	2140	464	186	160	175	184
MIN	131	139	100	65	49	277	521	193	95	118	116	137
AC-FT	12880	16290	6830	5770	8000	326000	51380	21410	8300	8530	9290	8710

CAL YR 1990 TOTAL 177497 MEAN 486 MAX 7490 MIN 99 AC-FT 352100
WTR YR 1991 TOTAL 243731 MEAN 668 MAX 22900 MIN 49 AC-FT 483400

e Estimated.

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951-66, 1980.
WATER TEMPERATURE: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to current year.

INSTRUMENTATION.--Temperature recorder since October 1965 provides hourly recordings.

REMARKS.--Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 28.0 °C, at times in some years; minimum recorded, 3.0 °C, Dec. 23, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 26.5 °C, July 3; minimum recorded, 3.0 °C, Dec. 23.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	19.0	15.5	12.5	10.5	9.0	5.0	4.0	9.5	8.0	14.0	12.5
2	23.0	19.0	14.5	13.0	10.0	9.0	6.0	4.5	12.5	10.0	12.5	12.0
3	23.5	18.0	15.0	13.0	10.0	8.5	7.0	6.0	12.5	11.5	12.5	11.5
4	22.5	18.5	15.5	14.0	10.0	8.0	7.0	6.0	11.5	11.5	13.5	12.5
5	22.0	19.0	16.5	14.5	10.0	9.5	6.5	5.5	13.0	11.0	13.0	11.5
6	21.5	17.5	14.5	13.0	10.0	8.5	7.5	6.0	12.5	11.0	12.0	10.0
7	20.5	16.5	14.0	12.5	9.5	9.0	9.0	7.5	13.0	11.0	13.0	10.5
8	20.0	15.5	15.0	13.0	9.0	8.0	10.0	8.5	13.5	11.5	13.5	11.0
9	20.0	15.0	15.5	14.0	9.0	8.0	10.5	9.5	13.5	11.5	13.0	12.0
10	19.5	15.0	15.0	13.5	10.5	9.5	10.0	9.0	13.5	12.0	12.5	11.5
11	20.0	15.5	14.5	13.0	11.5	10.5	9.5	8.5	14.5	12.5	12.0	10.0
12	20.0	15.5	14.5	13.0	11.0	10.0	10.5	9.5	14.0	12.0	12.0	10.5
13	20.5	16.5	14.0	13.0	10.5	9.0	11.0	10.5	14.0	12.0	11.0	10.0
14	20.0	16.5	14.5	13.5	9.0	8.0	12.0	11.0	14.5	11.5	11.0	10.0
15	20.0	16.0	13.5	12.0	10.0	8.5	11.5	11.0	16.0	13.0	11.5	10.0
16	20.5	16.5	13.0	11.5	9.5	8.5	11.0	9.5	15.0	12.0	11.5	10.5
17	19.5	15.5	12.5	11.0	9.0	8.0	10.0	9.5	14.5	12.0	10.5	10.0
18	17.5	16.0	13.0	11.5	9.5	8.0	10.0	9.0	14.5	11.5	11.0	9.5
19	18.0	15.5	13.5	12.5	9.0	8.0	9.5	9.0	15.0	12.0	11.0	10.0
20	17.5	15.0	12.0	11.5	8.0	5.5	9.5	9.0	14.5	11.5	11.0	10.5
21	18.0	15.0	13.0	11.5	5.5	4.5	9.0	8.0	14.5	12.0	12.0	10.5
22	18.5	15.5	13.0	11.5	4.5	3.5	8.5	7.0	15.0	12.0	12.0	10.5
23	18.5	16.5	12.5	11.0	4.5	3.0	8.0	7.5	15.0	12.0	12.0	9.5
24	18.5	16.0	11.5	10.5	4.5	3.5	9.0	8.0	14.0	11.0	9.0	8.5
25	18.5	16.0	11.0	10.5	5.0	4.0	9.0	8.0	15.0	11.0	9.0	8.5
26	18.0	15.5	10.5	9.5	5.5	4.5	8.5	8.0	14.5	12.5	9.0	8.5
27	18.0	15.5	10.0	8.5	5.5	5.0	8.0	7.5	13.5	12.0	11.5	8.5
28	18.0	15.5	10.5	9.0	6.5	5.5	8.5	8.0	14.5	13.0	13.0	10.5
29	17.0	15.5	10.5	9.0	6.0	5.0	8.5	7.5	---	---	14.0	11.0
30	16.5	14.5	10.5	9.5	5.0	4.0	8.0	7.0	---	---	15.0	12.0
31	17.5	15.5	---	---	5.0	4.0	9.0	8.0	---	---	14.5	13.0
MONTH	23.5	14.5	16.5	8.5	11.5	3.0	12.0	4.0	16.0	8.0	15.0	8.5

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1942 (published as "Dry Creek near Healdsburg"), October 1981 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 188.21 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1942, nonrecording gage at site 500 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow affected by storage in Lake Sonoma beginning October 1983.

AVERAGE DISCHARGE.--9 years (water years 1983-91), 178 ft^3/s, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft^3/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, 3,050 ft^3/s, Dec. 27, 1983; minimum daily, 6.3 ft^3/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 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 232 ft^3/s, Feb. 11, gage height, 5.50 ft; minimum daily, 27 ft^3/s, Apr. 12-14, May 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	81	84	84	95	77	29	28	96	94	98	62
2	36	80	84	84	87	77	29	28	94	97	97	43
3	36	80	85	83	72	81	29	27	93	97	97	43
4	38	79	84	83	74	85	28	28	93	97	97	43
5	41	82	84	84	73	76	28	28	92	97	97	44
6	42	90	84	86	75	76	28	28	91	97	97	43
7	42	94	84	85	77	76	28	28	90	97	98	43
8	42	91	84	79	77	76	28	28	90	97	100	46
9	42	88	84	73	77	75	28	28	90	97	100	48
10	42	88	84	73	77	76	28	28	89	97	99	48
11	42	89	84	79	79	76	28	28	89	96	99	48
12	44	88	84	85	76	79	27	28	89	95	99	48
13	44	89	84	85	79	77	27	28	89	95	98	47
14	44	93	85	84	82	77	27	28	88	95	100	48
15	44	89	85	84	82	77	28	29	89	95	102	48
16	44	84	85	84	82	76	28	29	89	94	101	48
17	44	83	86	84	82	80	28	28	108	94	101	45
18	44	84	85	84	82	77	35	28	107	94	101	41
19	44	87	85	84	81	79	35	28	125	94	101	42
20	43	87	85	84	84	80	35	30	128	94	100	41
21	43	85	85	84	86	79	35	33	127	94	99	41
22	42	85	85	84	86	77	30	32	127	94	99	41
23	43	85	85	84	86	82	28	34	127	94	99	44
24	44	85	85	84	86	81	28	34	122	94	99	40
25	42	84	85	84	86	81	28	35	117	94	99	45
26	42	84	85	84	86	82	28	34	118	92	98	45
27	42	85	85	84	87	82	28	34	118	99	98	45
28	42	85	85	83	82	78	28	37	109	99	98	45
29	42	84	84	85	---	72	28	39	92	99	98	45
30	42	84	84	92	---	72	28	40	92	99	97	56
31	58	---	84	95	---	71	---	62	---	99	98	---
TOTAL	1323	2572	2621	2594	2278	2410	870	977	3068	2970	3064	1366
MEAN	42.7	85.7	84.5	83.7	81.4	77.7	29.0	31.5	102	95.8	98.8	45.5
MAX	58	94	86	95	95	85	35	62	128	99	102	62
MIN	36	79	84	73	72	71	27	27	88	92	97	40
AC-FT	2620	5100	5200	5150	4520	4780	1730	1940	6090	5890	6080	2710

CAL YR 1990 TOTAL 26120 MEAN 71.6 MAX 105 MIN 26 AC-FT 51810
WTR YR 1991 TOTAL 26113 MEAN 71.5 MAX 128 MIN 27 AC-FT 51800

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
WATER TEMPERATURE: November 1981 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1981 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Water temperature is affected by regulation from Warm Springs Dam. Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 27.0 °C, several days in 1983; minimum recorded, 6.5 °C, Jan. 20, 1982.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 17.5 °C, June 19; minimum recorded, 8.5 °C, on Jan. 5, 28, and Feb. 1.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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

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 mi^2.

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.

REVISED RECORDS.--WDR CA-65-1: 1962(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 156.40 ft above National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. Small diversions upstream from station for irrigation of about 1,200 acres in summer. Flow regulated by Lake Sonoma (station 11464900) 3.0 mi upstream beginning October 1983.

AVERAGE DISCHARGE.--24 years (water years 1959-83), 342 ft^3/s, 248,000 acre-ft/yr; 6 years (water years 1986-91), 163 ft^3/s, 118,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s, Jan. 31, 1963, gage height, 20.50 ft, present datum; no flow at times. Maximum discharge since regulation by Lake Sonoma, 5,280 ft^3/s, gage height, 10.41 ft, Feb. 17, 1986; minimum daily, 19 ft^3/s, Oct. 18-25, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,510 ft^3/s, Mar. 4, gage height, 10.96 ft; minimum daily, 34 ft^3/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	72	88	86	96	115	102	37	81	84	107	73
2	39	74	88	85	141	389	81	37	81	85	105	45
3	37	73	88	86	84	1720	74	36	82	85	106	43
4	40	74	88	86	81	2080	67	36	83	89	104	43
5	41	77	88	86	91	470	63	36	83	95	104	43
6	42	86	87	87	80	288	61	35	84	96	105	42
7	42	93	86	89	80	206	58	35	84	97	105	42
8	43	92	86	81	79	164	56	35	84	97	109	44
9	43	88	87	71	78	141	54	35	83	97	108	46
10	43	84	89	69	77	137	52	34	83	98	106	45
11	43	82	88	74	78	124	51	34	82	99	106	45
12	43	80	88	82	77	404	50	34	81	98	104	45
13	43	93	88	84	79	385	48	35	81	100	105	45
14	43	103	89	84	84	265	48	35	81	100	106	45
15	43	97	91	84	82	203	47	35	81	99	105	45
16	43	89	90	83	83	164	46	35	82	99	104	45
17	43	87	90	83	83	306	45	34	100	99	105	43
18	43	88	90	84	82	323	49	34	108	100	106	39
19	43	87	90	84	82	267	48	34	124	98	106	40
20	43	88	89	82	85	313	50	35	125	98	106	39
21	42	87	90	85	88	260	49	37	125	98	105	39
22	42	88	89	84	88	216	46	37	124	99	105	39
23	42	87	89	84	85	507	42	38	124	99	104	41
24	44	87	88	83	85	584	41	38	118	97	103	39
25	42	88	88	82	86	588	41	38	108	98	104	43
26	41	89	88	83	86	536	40	38	112	97	104	44
27	41	90	87	82	86	404	39	38	114	103	104	44
28	41	88	87	82	85	305	39	39	109	106	104	44
29	41	88	87	80	---	239	38	41	85	106	104	43
30	40	88	87	85	---	197	37	41	84	106	104	49
31	50	---	87	92	---	166	---	50	---	107	103	---
TOTAL	1309	2587	2735	2572	2391	12466	1562	1136	2876	3029	3256	1322
MEAN	42.2	86.2	88.2	83.0	85.4	402	52.1	36.6	95.9	97.7	105	44.1
MAX	50	103	91	92	141	2080	102	50	125	107	109	73
MIN	37	72	86	69	77	115	37	34	81	84	103	39
AC-FT	2600	5130	5420	5100	4740	24730	3100	2250	5700	6010	6460	2620

CAL YR 1990 TOTAL 30008 MEAN 82.2 MAX 573 MIN 31 AC-FT 59520
WTR YR 1991 TOTAL 37241 MEAN 102 MAX 2080 MIN 34 AC-FT 73870

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 mi^2.

PERIOD OF RECORD.--November 1980 to current year (low flow only).

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No records computed above 200 ft^3/s. Some diversions for irrigation upstream from station. Flow regulated by Lake Sonoma 13.5 mi upstream beginning October 1983.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	55	80	80	77	---	---	47	66	85	90	86
2	31	64	80	80	---	---	---	47	80	83	90	50
3	24	68	80	80	116	---	179	46	85	82	90	40
4	23	71	80	80	115	---	159	44	86	81	90	35
5	24	71	79	80	123	---	144	43	87	84	90	32
6	27	76	79	82	90	---	134	41	87	85	91	31
7	27	84	80	95	84	---	123	40	87	85	90	31
8	28	87	80	83	81	---	115	39	87	86	92	31
9	28	86	80	75	80	---	106	37	87	86	94	35
10	29	86	83	71	78	---	100	36	87	85	93	35
11	30	87	83	69	79	---	93	36	85	85	93	35
12	30	87	81	78	77	---	87	36	84	84	92	35
13	30	87	80	81	76	---	82	38	81	83	92	35
14	30	89	80	81	80	---	78	36	81	83	92	35
15	30	91	96	81	81	---	74	35	79	83	92	35
16	30	85	84	81	79	---	72	34	82	82	92	35
17	30	82	83	83	78	---	70	33	87	82	92	35
18	31	81	83	82	79	---	69	33	106	82	94	30
19	32	81	83	81	77	---	71	32	109	83	93	28
20	31	80	81	82	75	---	77	31	119	84	91	28
21	30	80	81	83	79	---	73	33	122	83	90	27
22	30	76	81	83	79	---	68	34	122	84	92	27
23	29	77	81	82	80	---	61	33	122	83	92	28
24	30	78	81	81	82	---	60	34	121	83	93	29
25	32	80	80	78	81	---	57	33	111	84	94	29
26	31	80	81	78	79	---	57	33	110	82	94	32
27	30	80	81	77	92	---	53	32	110	84	92	33
28	31	80	81	75	117	---	51	32	116	88	93	33
29	31	79	81	75	---	---	49	35	96	89	93	32
30	31	79	80	70	---	---	47	36	89	88	93	33
31	36	---	80	74	---	---	---	36	---	89	92	---
TOTAL	918	2387	2523	2461	---	---	---	1135	2871	2610	2851	1040
MEAN	29.6	79.6	81.4	79.4	---	---	---	36.6	95.7	84.2	92.0	34.7
MAX	36	91	96	95	---	---	---	47	122	89	94	86
MIN	23	55	79	69	---	---	---	31	66	81	90	27
AC-FT	1820	4730	5000	4880	---	---	---	2250	5690	5180	5650	2060

11466500 LAGUNA DE SANTA ROSA NEAR GRATON, CA

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.

PERIOD OF RECORD.--February 1940 to September 1949 (contents only), October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 74.6 ft, Feb. 18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 63.2 ft, Mar. 4.

ELEVATION, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	55.8	---	---	---	---	---	---
3	---	---	---	---	---	58.6	---	---	---	---	---	---
4	---	---	---	---	---	62.8	---	---	---	---	---	---
5	---	---	---	---	---	59.2	---	---	---	---	---	---
6	---	---	---	---	---	56.7	---	---	---	---	---	---
7	---	---	---	---	---	55.5	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	56.1	---	---	---	---	---	---
13	---	---	---	---	---	56.7	---	---	---	---	---	---
14	---	---	---	---	---	55.6	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	56.5	---	---	---	---	---	---
24	---	---	---	---	---	58.8	---	---	---	---	---	---
25	---	---	---	---	---	58.2	---	---	---	---	---	---
26	---	---	---	---	---	58.9	---	---	---	---	---	---
27	---	---	---	---	---	57.1	---	---	---	---	---	---
28	---	---	---	---	---	55.7	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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 mi^2.

WATER-DISCHARGE RECORDS

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."

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. 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.

AVERAGE DISCHARGE.--52 years, 2,258 ft^3/s, 1,636,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft^3/s, Feb. 18, 1986, gage height, 48.56 ft, from rating curve extended above 39,000 ft^3/s; maximum gage height, 49.7 ft, Dec. 23, 1955, site and datum then in use, from floodmarks; minimum daily discharge, 0.75 ft^3/s, May 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,500 ft^3/s, Mar. 4, gage height, 33.32 ft; minimum daily, 77 ft^3/s, June 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	321	175	163	103	535	3430	595	223	163	124	160
2	115	325	171	162	754	2420	2880	570	220	143	102	135
3	105	322	154	159	928	22900	2460	545	229	142	121	175
4	97	325	167	163	717	39600	2130	556	224	118	117	237
5	93	326	159	164	874	31200	1900	543	226	128	114	129
6	95	323	160	163	720	10300	1720	529	227	125	161	126
7	101	329	149	198	586	5600	1590	505	219	127	141	133
8	104	334	144	224	475	3650	1450	516	207	113	127	140
9	103	325	142	212	388	2650	1340	448	194	122	163	130
10	107	318	145	201	338	2110	1250	439	183	144	164	128
11	104	317	283	191	296	2050	1170	457	174	152	150	128
12	106	316	236	184	262	4010	1100	453	154	148	127	126
13	93	321	203	182	230	13500	1030	455	126	146	144	124
14	97	326	188	174	159	7840	973	450	113	145	156	126
15	104	328	229	171	113	4710	931	443	84	142	144	131
16	96	325	249	169	108	3360	899	430	81	147	161	131
17	91	328	233	162	111	3410	893	398	77	136	188	165
18	97	339	212	113	101	5750	869	360	91	145	174	127
19	150	334	202	107	97	4650	842	333	110	156	170	115
20	202	328	193	101	83	5430	864	309	101	158	204	114
21	220	324	189	101	83	5570	859	294	99	140	164	114
22	229	301	189	97	83	4380	823	304	100	164	169	117
23	233	255	181	90	82	5690	790	307	100	171	190	117
24	245	232	177	100	86	16800	778	301	107	157	145	114
25	279	210	171	101	85	18300	773	293	104	153	167	113
26	250	210	169	105	88	19000	787	268	114	144	189	120
27	246	206	166	106	95	16100	749	241	123	110	161	122
28	249	202	165	107	274	10100	696	220	149	138	173	119
29	254	190	163	111	---	6980	651	215	198	104	162	114
30	258	181	163	110	---	5330	625	220	172	117	189	107
31	287	---	163	107	---	4100	---	212	---	141	186	---
TOTAL	4921	8821	5690	4498	8319	288025	37252	12209	4529	4339	4847	3937
MEAN	159	294	184	145	297	9291	1242	394	151	140	156	131
MAX	287	339	283	224	928	39600	3430	595	229	171	204	237
MIN	91	181	142	90	82	535	625	212	77	104	102	107
AC-FT	9760	17500	11290	8920	16500	571300	73890	24220	8980	8610	9610	7810

CAL YR 1990 TOTAL 240616 MEAN 659 MAX 15200 MIN 89 AC-FT 477300
WTR YR 1991 TOTAL 387387 MEAN 1061 MAX 39600 MIN 77 AC-FT 768400

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year. Published as "at Guerneville" in 1961-65.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1974 to current year.
WATER TEMPERATURE: Water years 1964 to current year.
SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to September 1981.
WATER TEMPERATURE: January 1964 to September 1986.
SUSPENDED-SEDIMENT DISCHARGE: April to September 1967, October 1969 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
27...	1115	209	261	8.1	9.5	0.40	770	10.9	94	29	47	120
JAN												
16...	1015	169	336	8.2	11.0	2.2	770	10.1	91	K24	30	130
MAR												
19...	1345	4440	198	7.2	10.5	45	753	10.0	91	K120	230	81
MAY												
08...	1100	524	277	7.9	18.5	2.5	765	9.1	97	K30	38	120
JUL												
29...	1245	96	248	8.0	24.0	2.0	763	7.8	93	K10	52	110
SEP												
17...	1300	145	252	7.9	21.5	1.4	761	8.6	98	37	46	120

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
27...	0	25	14	12	18	0.5	1.2	159	0	130	9.9	9.2
JAN												
16...	5	26	15	21	26	0.8	2.5	149	0	122	15	21
MAR												
19...	0	16	10	7.9	17	0.4	1.7	104	0	85	13	8.1
MAY												
08...	0	26	14	9.8	15	0.4	1.4	147	3	125	14	9.1
JUL												
29...	3	22	14	9.5	15	0.4	1.2	134	0	110	11	7.8
SEP												
17...	1	23	14	10	16	0.4	1.1	140	0	115	10	7.8

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
NOV												
27...	<0.10	13	151	163	0.21	<0.010	<0.010	<0.100	<0.100	0.020	0.020	<0.20
JAN												
16...	0.20	12	185	191	0.25	0.030	0.020	1.00	0.900	0.050	0.050	0.50
MAR												
19...	<0.10	15	117	126	0.16	0.030	0.010	0.600	0.650	0.050	<0.010	0.50
MAY												
08...	<0.10	11	158	162	0.21	0.010	<0.010	0.310	0.310	<0.010	0.010	<0.20
JUL												
29...	0.20	11	133	143	0.18	<0.010	<0.010	<0.050	<0.050	0.020	0.010	0.20
SEP												
17...	0.20	12	152	147	0.21	<0.010	<0.010	<0.050	<0.050	<0.010	0.010	<0.20

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV												
27...	0.030	0.010	0.020	0.020	<10	<1	73	<0.5	<1.0	<1	<3	1
JAN												
16...	0.300	0.280	0.310	0.300	<10	1	73	<0.5	<1.0	<1	<3	1
MAR												
19...	0.180	0.110	0.130	0.110	--	--	--	--	--	--	--	--
MAY												
08...	0.030	0.020	<0.010	0.010	<10	<1	78	<0.5	<1.0	1	<3	2
JUL												
29...	0.020	0.010	0.020	0.020	--	--	--	--	--	--	--	--
SEP												
17...	0.020	0.020	0.010	0.020	<10	<1	78	<0.5	<1.0	<1	<3	2

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV												
27...	14	1	6	11	<0.1	<10	1	<1	<1.0	220	<6	<3
JAN												
16...	12	1	5	14	<0.1	<10	2	<1	<1.0	220	<6	<3
MAR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
08...	7	<1	<4	15	<0.1	<10	1	<1	<1.0	250	<6	<3
JUL												
29...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
17...	7	<1	4	6	<0.1	10	1	<1	<1.0	240	<6	5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
19...*	1416	25.0	128	207	7.3	10.5	753	10.0	91	66	91
19...*	1421	28.2	114	209	7.3	10.5	753	10.1	92	59	92
19...*	1428	25.7	105	205	7.4	10.5	753	10.1	92	63	90
19...*	1435	23.0	92.6	207	7.4	10.5	753	10.1	92	70	86
19...*	1442	19.4	76.4	207	7.4	10.5	753	10.1	92	66	86
JUL											
29...*	1500	1.30	11.5	254	7.5	25.0	763	8.0	97	14	94
29...*	1505	1.30	21.0	254	7.5	25.0	763	8.0	97	10	96
29...*	1510	1.10	28.5	255	7.7	25.0	763	8.0	97	10	96
29...*	1515	0.90	38.0	255	7.7	25.0	763	8.1	98	8	96
29...*	1520	1.80	24.8	255	7.7	25.0	763	8.1	98	8	92

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 19, 4,400 ft^3/s; July 29, 91 ft^3/s.

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
27...	1115	209	9.5	2	1.1	86
JAN						
16...	1015	169	11.0	4	1.8	84
MAR						
19...	1345	4440	10.5	65	779	89
MAY						
08...	1100	524	18.5	8	11	76
JUL						
29...	1245	96	24.0	10	2.6	93
SEP						
17...	1300	145	21.5	6	2.3	98

11467500 SOUTH FORK GUALALA RIVER NEAR ANNAPOLIS, CA

LOCATION.--Lat 38°42'18", long 123°25'19", in German Grant, Sonoma County, Hydrologic Unit 18010109, on left bank 0.5 mi downstream from Wheatfield Fork of Gualala River, and 3.0 mi west of Annapolis.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--October 1950 to September 1971, June 1991 to September 1991 (since June 1991, flows below 1,000 ft^3/s only).

GAGE.--Water-stage recorder. Elevation of gage is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 30, 1962, at site 2,100 ft upstream at different datum. Aug. 31, 1962 to September 1971, at site 420 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station. Beginning June 1991, no records computed above 1,000 ft^3/s.

AVERAGE DISCHARGE (1951-71).--21 years, 431 ft^3/s, 312,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1951-71).--Maximum discharge, 55,000 ft^3/s, Dec. 22, 1955, gage height, 24.57 ft, site and datum then in use, from rating extended above 13,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.4 ft^3/s, Sept. 13, 1951.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	22	15	1.9	1.7
2	---	---	---	---	---	---	---	---	21	12	1.9	1.6
3	---	---	---	---	---	---	---	---	18	10	1.6	1.6
4	---	---	---	---	---	---	---	---	18	8.9	1.5	1.6
5	---	---	---	---	---	---	---	---	18	7.4	1.7	1.5
6	---	---	---	---	---	---	---	---	17	7.0	1.7	1.5
7	---	---	---	---	---	---	---	---	16	6.5	1.8	1.5
8	---	---	---	---	---	---	---	---	16	6.0	1.8	1.5
9	---	---	---	---	---	---	---	---	16	5.9	2.0	1.5
10	---	---	---	---	---	---	---	---	15	5.5	2.0	1.5
11	---	---	---	---	---	---	---	---	14	5.3	1.6	1.4
12	---	---	---	---	---	---	---	---	13	5.2	1.9	1.4
13	---	---	---	---	---	---	---	---	12	5.0	2.3	1.3
14	---	---	---	---	---	---	---	---	10	4.8	2.5	1.4
15	---	---	---	---	---	---	---	---	9.7	4.3	2.4	1.3
16	---	---	---	---	---	---	---	---	9.5	4.4	1.7	1.4
17	---	---	---	---	---	---	---	---	8.5	4.3	2.0	1.4
18	---	---	---	---	---	---	---	---	8.4	3.8	2.1	1.4
19	---	---	---	---	---	---	---	---	8.6	3.4	2.0	1.6
20	---	---	---	---	---	---	---	---	8.1	3.3	2.0	1.6
21	---	---	---	---	---	---	---	---	8.3	3.2	1.9	1.4
22	---	---	---	---	---	---	---	---	7.8	3.0	1.9	1.5
23	---	---	---	---	---	---	---	---	6.2	3.2	1.6	1.7
24	---	---	---	---	---	---	---	---	5.3	3.7	1.7	1.6
25	---	---	---	---	---	---	---	---	5.6	2.7	1.7	1.6
26	---	---	---	---	---	---	---	---	6.9	2.5	1.5	1.5
27	---	---	---	---	---	---	---	---	7.8	3.0	1.5	1.5
28	---	---	---	---	---	---	---	---	12	2.7	1.6	1.5
29	---	---	---	---	---	---	---	---	17	2.5	1.4	1.4
30	---	---	---	---	---	---	---	---	19	2.4	1.4	1.5
31	---	---	---	---	---	---	---	---	---	2.5	1.7	---
TOTAL	---	---	---	---	---	---	---	---	374.7	159.4	56.3	44.9
MEAN	---	---	---	---	---	---	---	---	12.5	5.14	1.82	1.50
MAX	---	---	---	---	---	---	---	---	22	15	2.5	1.7
MIN	---	---	---	---	---	---	---	---	5.3	2.4	1.4	1.3
AC-FT	---	---	---	---	---	---	---	---	743	316	112	89

11467510 SOUTH FORK GUALALA RIVER NEAR THE SEA RANCH, CA

LOCATION.--Lat 38°42'33", long 123°25'32", in German Grant, Sonoma County, Hydrologic Unit 18010109, on left bank 0.8 mi downstream from Wheatfield Fork of Gualala River, and 2.0 mi north of The Sea Ranch.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--June 1991 to September 1991 (low flow only).

GAGE.--Water-stage recorder. Elevation of gage is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Some pumpage for domestic use between this station and South Fork Gualala River near Annapolis (station 11467500). No records computed above 30 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	22	16	e2.1	.73
2	---	---	---	---	---	---	---	---	21	14	e2.0	.65
3	---	---	---	---	---	---	---	---	20	11	e1.8	.76
4	---	---	---	---	---	---	---	---	19	9.9	e1.6	.82
5	---	---	---	---	---	---	---	---	18	8.6	e1.8	.81
6	---	---	---	---	---	---	---	---	18	7.9	e1.9	.82
7	---	---	---	---	---	---	---	---	16	7.6	e2.0	1.0
8	---	---	---	---	---	---	---	---	16	7.0	2.1	.95
9	---	---	---	---	---	---	---	---	15	6.9	1.9	1.0
10	---	---	---	---	---	---	---	---	14	6.5	1.8	.93
11	---	---	---	---	---	---	---	---	12	6.3	1.7	.86
12	---	---	---	---	---	---	---	---	11	5.8	1.7	.95
13	---	---	---	---	---	---	---	---	11	5.6	1.5	.73
14	---	---	---	---	---	---	---	---	10	5.4	1.4	.92
15	---	---	---	---	---	---	---	---	e10	5.0	1.6	.64
16	---	---	---	---	---	---	---	---	e9.7	4.8	1.4	.71
17	---	---	---	---	---	---	---	---	e9.2	5.1	1.2	.62
18	---	---	---	---	---	---	---	---	e9.0	4.5	1.3	.59
19	---	---	---	---	---	---	---	---	e8.6	4.7	1.2	.60
20	---	---	---	---	---	---	---	---	e8.2	4.4	1.3	.54
21	---	---	---	---	---	---	---	---	e8.0	3.9	1.1	.61
22	---	---	---	---	---	---	---	---	e7.3	3.7	1.1	.63
23	---	---	---	---	---	---	---	---	e5.2	3.7	.98	.57
24	---	---	---	---	---	---	---	---	e4.7	3.6	.91	.55
25	---	---	---	---	---	---	---	---	e5.9	3.5	.87	.56
26	---	---	---	---	---	---	---	---	e8.0	e2.4	.85	.54
27	---	---	---	---	---	---	---	---	10	e2.7	.75	.50
28	---	---	---	---	---	---	---	---	13	e2.6	.80	.43
29	---	---	---	---	---	---	---	---	16	e2.5	.68	.38
30	---	---	---	---	---	---	---	---	19	e2.3	.69	.65
31	---	---	---	---	---	---	---	---	---	e2.4	.73	---
TOTAL	---	---	---	---	---	---	---	---	374.8	180.3	42.76	21.05
MEAN	---	---	---	---	---	---	---	---	12.5	5.82	1.38	.70
MAX	---	---	---	---	---	---	---	---	22	16	2.1	1.0
MIN	---	---	---	---	---	---	---	---	4.7	2.3	.68	.38
AC-FT	---	---	---	---	---	---	---	---	743	358	85	42

e Estimated.

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 mi^2.

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 4.79 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1969, at site 0.2 mi upstream at datum 1.86 ft higher.

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

AVERAGE DISCHARGE.--41 years, 504 ft^3/s, 365,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,500 ft^3/s, Dec. 22, 1955, gage height, 40.60 ft, site and datum then in use, from rating curve extended above 19,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.23 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1400	*11,500	*18.49				

Minimum daily, 1.1 ft^3/s, Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	28	9.3	14	16	62	490	67	28	23	3.4	1.8
2	4.1	21	7.8	14	295	629	413	74	27	21	3.0	1.7
3	3.6	12	7.2	15	488	5930	349	62	26	18	2.8	1.5
4	4.2	8.1	7.4	15	214	6590	311	56	26	13	2.8	1.5
5	4.3	6.4	8.6	15	279	2900	286	52	25	11	2.8	1.4
6	4.3	5.6	8.6	15	221	1100	278	51	23	10	2.8	1.5
7	4.3	5.1	8.6	22	149	650	248	49	22	8.9	2.8	1.5
8	4.3	4.9	8.6	33	110	462	220	49	21	8.0	2.8	1.5
9	4.3	4.9	8.3	41	85	355	199	47	20	7.6	2.6	1.3
10	4.3	4.9	20	37	69	352	181	44	20	6.9	2.7	1.2
11	4.1	4.9	47	33	57	482	165	42	19	6.7	2.8	1.3
12	3.9	4.9	44	36	48	1470	153	41	18	7.2	2.8	1.4
13	3.5	5.0	28	35	42	2580	143	42	17	6.5	3.0	1.5
14	3.3	5.8	22	35	37	1260	131	46	14	6.1	3.2	1.5
15	3.4	5.9	37	34	34	834	123	43	12	5.3	3.1	1.4
16	3.8	5.8	63	32	30	568	116	40	11	4.9	3.1	1.3
17	4.5	5.8	51	30	29	842	108	46	12	5.7	3.1	1.2
18	5.6	5.8	37	28	26	1220	100	47	13	5.4	3.2	1.2
19	7.6	6.3	36	26	24	857	94	43	13	5.3	3.4	1.2
20	7.6	6.5	49	25	22	1380	96	40	13	5.2	3.5	1.2
21	8.8	6.7	48	24	21	2290	100	39	13	4.8	3.3	1.2
22	9.6	6.5	36	22	20	1530	88	37	13	4.4	3.4	1.1
23	8.5	6.5	27	20	19	2980	80	35	12	3.8	3.4	1.1
24	7.5	6.5	24	20	19	4300	81	34	12	3.7	3.7	1.2
25	7.2	9.9	20	18	18	3570	83	31	12	3.5	3.1	1.2
26	7.2	18	19	18	17	3880	94	29	12	3.4	2.8	1.2
27	7.1	21	18	18	17	2710	85	29	12	3.2	2.6	1.2
28	6.8	17	17	18	28	1610	72	28	14	3.1	2.4	1.2
29	6.8	12	17	17	---	1060	65	28	22	3.1	2.4	1.2
30	7.1	10	16	17	---	766	60	31	27	3.1	2.2	1.3
31	12	---	14	17	---	586	---	31	---	3.2	2.1	---
TOTAL	178.6	271.7	764.4	744	2434	55805	5012	1333	529	225.0	91.1	40.0
MEAN	5.76	9.06	24.7	24.0	86.9	1800	167	43.0	17.6	7.26	2.94	1.33
MAX	12	28	63	41	488	6590	490	74	28	23	3.7	1.8
MIN	3.3	4.9	7.2	14	16	62	60	28	11	3.1	2.1	1.1
AC-FT	354	539	1520	1480	4830	110700	9940	2640	1050	446	181	79

CAL YR 1990 TOTAL 51030.9 MEAN 140 MAX 2540 MIN 3.1 AC-FT 101200
WTR YR 1991 TOTAL 67427.8 MEAN 185 MAX 6590 MIN 1.1 AC-FT 133700

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 mi^2.

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--40 years, 207 ft^3/s, 150,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s, Mar. 29, 1974, gage height, 27.14 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-conveyance study; minimum daily, 0.79 ft^3/s, Sept. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	1345	*1,580	*8.26				

Minimum daily, 3.9 ft^3/s, Sept. 15-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	20	8.8	12	12	27	188	51	23	15	6.0	5.1
2	6.2	13	8.7	11	250	94	151	47	22	14	5.9	4.9
3	5.8	10	8.4	11	201	910	124	43	21	13	6.0	4.5
4	5.7	8.7	8.5	11	118	882	108	41	20	12	6.0	4.3
5	5.7	8.6	8.8	11	198	666	99	38	19	11	5.9	4.2
6	5.4	8.0	8.8	11	138	360	111	36	18	11	5.5	4.2
7	5.3	7.7	8.7	23	94	229	96	34	18	11	5.6	4.3
8	5.2	7.7	8.8	26	69	160	86	37	18	10	5.4	4.3
9	5.2	7.7	8.4	22	53	120	79	33	17	9.7	5.3	4.1
10	5.1	7.7	20	19	44	115	73	31	17	9.5	5.3	4.2
11	5.1	7.7	30	17	36	120	69	29	17	9.2	5.1	4.3
12	5.1	7.7	21	27	30	468	65	28	16	9.0	4.8	4.1
13	5.2	7.8	15	39	26	911	61	29	15	8.9	4.7	4.1
14	6.3	8.8	13	38	24	537	58	32	15	8.9	4.6	4.0
15	13	8.8	33	33	22	345	55	29	15	8.9	4.5	3.9
16	5.5	8.5	39	27	21	241	53	29	15	8.7	4.6	3.9
17	5.2	8.1	27	23	19	199	51	40	14	9.0	4.6	3.9
18	7.0	8.0	21	20	18	202	48	36	14	9.0	4.7	3.9
19	10	8.0	31	18	17	185	46	32	15	8.6	5.0	3.9
20	9.6	8.2	42	16	16	312	47	30	14	8.4	5.3	3.9
21	7.7	8.4	32	15	16	665	52	28	14	8.0	5.5	3.9
22	7.0	8.2	23	13	16	497	45	26	14	7.7	5.7	11
23	6.8	8.0	18	12	15	761	44	25	14	7.4	5.7	4.6
24	6.5	7.7	16	12	15	1370	44	24	14	7.2	5.5	4.3
25	6.4	14	15	12	14	886	48	19	14	6.9	5.4	4.1
26	6.3	18	14	11	14	952	61	20	14	6.7	5.1	4.1
27	6.3	14	14	11	14	840	54	21	14	6.8	4.9	4.1
28	6.5	11	14	11	17	579	48	21	16	6.6	5.1	4.0
29	6.6	9.8	13	11	---	405	45	22	18	6.3	5.5	4.1
30	9.1	9.0	12	11	---	305	43	29	17	6.2	5.2	4.1
31	33	---	11	10	---	232	---	26	---	6.1	5.4	---
TOTAL	230.4	288.8	551.9	544	1527	14575	2152	966	492	280.7	163.8	132.3
MEAN	7.43	9.63	17.8	17.5	54.5	470	71.7	31.2	16.4	9.05	5.28	4.41
MAX	33	20	42	39	250	1370	188	51	23	15	6.0	11
MIN	5.1	7.7	8.4	10	12	27	43	19	14	6.1	4.5	3.9
AC-FT	457	573	1090	1080	3030	28910	4270	1920	976	557	325	262

CAL YR 1990 TOTAL 41740.6 MEAN 114 MAX 3510 MIN 5.1 AC-FT 82790
WTR YR 1991 TOTAL 21903.9 MEAN 60.0 MAX 1370 MIN 3.9 AC-FT 43450

11469000 MATTOLE RIVER NEAR PETROLIA, CA

LOCATION.--Lat 40°18'42", long 124°15'48", in SE 1/4 NW 1/4 sec.11, T.2 S., R.2 W., Humboldt County, Hydrologic Unit 18010107, on right bank 0.2 mi upstream from Clear Creek, 1.5 mi southeast of Petrolia, and 1.7 mi upstream from North Fork.

DRAINAGE AREA.--240 mi^2.

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 40 ft above National Geodetic Vertical Datum of 1929, 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.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 350 acres upstream from station.

AVERAGE DISCHARGE.--43 years, 1,306 ft^3/s, 946,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,400 ft^3/s, Dec. 22, 1955, gage height, 29.60 ft, site and datum then in use, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 17 ft^3/s, Sept. 5, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	1045	*8,880	*10.20				

Minimum daily, 28 ft^3/s, Aug. 16

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	149	55	63	111	292	1170	269	147	83	31	97
2	40	89	51	62	4000	1880	1040	268	140	78	31	89
3	38	64	49	62	1940	5810	927	241	134	73	31	87
4	35	54	45	62	1740	6980	843	228	126	67	31	83
5	36	49	44	58	2600	4670	806	217	122	63	31	81
6	35	45	44	60	1490	2660	892	209	119	61	31	78
7	35	42	44	293	1040	1870	771	205	115	58	30	77
8	35	42	44	284	804	1490	690	227	109	57	30	75
9	34	41	43	187	666	1240	648	225	111	55	30	72
10	33	39	92	146	575	1230	602	199	109	54	30	70
11	32	39	226	156	505	1130	552	188	104	52	30	70
12	32	39	140	1600	451	4090	522	181	100	49	30	70
13	32	49	98	1250	404	3190	493	181	97	48	30	68
14	32	104	77	755	366	2320	468	187	96	47	29	65
15	31	86	218	523	337	1960	456	178	94	47	29	64
16	31	64	259	392	310	1590	444	174	94	50	28	61
17	30	54	179	303	290	1990	418	336	94	59	31	60
18	36	49	133	254	265	2700	395	307	91	59	39	59
19	53	48	166	224	249	2050	371	274	89	55	51	56
20	56	47	188	198	233	1900	359	243	89	50	62	54
21	48	44	145	176	221	2240	355	222	89	48	74	52
22	44	43	113	159	214	1890	325	204	89	45	79	52
23	39	41	94	144	204	4240	314	186	87	44	82	50
24	38	41	86	134	187	5370	324	174	87	41	82	49
25	38	61	79	125	178	3630	344	163	86	38	82	49
26	36	121	79	120	170	3050	341	160	82	38	82	47
27	35	109	79	113	163	2430	308	153	82	37	82	47
28	35	80	79	109	164	1990	282	149	83	36	101	47
29	35	67	81	104	---	1700	267	149	91	35	115	46
30	43	59	76	98	---	1490	255	176	91	34	118	43
31	142	---	69	91	---	1310	---	164	---	33	104	---
TOTAL	1260	1859	3175	8305	19877	80382	15982	6437	3047	1594	1666	1918
MEAN	40.6	62.0	102	268	710	2593	533	208	102	51.4	53.7	63.9
MAX	142	149	259	1600	4000	6980	1170	336	147	83	118	97
MIN	30	39	43	58	111	292	255	149	82	33	28	43
AC-FT	2500	3690	6300	16470	39430	159400	31700	12770	6040	3160	3300	3800

CAL YR 1990 TOTAL 221245 MEAN 606 MAX 15100 MIN 30 AC-FT 438800
WTR YR 1991 TOTAL 145502 MEAN 399 MAX 6980 MIN 28 AC-FT 288600

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 mi^2.

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 National Geodetic Vertical Datum of 1929 (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; part is then used for irrigation and remainder flows into East Fork Russian River. Records given represent total contents at 2400 hours.
COOPERATION.--Records were provided by Pacific Gas & Electric Co., in connection with a Federal Energy Regulatory Commission project; not rounded to U.S. Geological Survey standards.

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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 80,278 acre-ft, May 2, 3, gage height, 1,909.84 ft; minimum, 13,630 acre-ft, Jan. 6, gage height, 1,864.90 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 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49102	31022	17508	13896	13766	18383	75592	80187	77978	72683	64430	57381
2	48804	30435	17302	13780	13759	19048	76074	80278	77800	72489	64163	57114
3	48144	29881	17131	13715	14751	22618	76118	80278	77688	72165	63835	56867
4	47525	29285	16911	13687	15468	34474	76052	80187	77555	71971	63550	56659
5	46928	28662	16719	13665	15914	49700	75943	80051	77399	71649	63245	56432
6	46320	28143	16560	13630	16827	55662	76008	79982	77266	71500	62981	56224
7	45733	27518	16445	13637	17165	58052	76713	79869	77133	71264	62678	56036
8	45184	26961	16329	13672	17405	59605	76558	79778	76978	71008	62376	55849
9	44475	26366	16198	13687	17534	60506	75724	79824	76779	70774	62115	55624
10	43871	25758	16092	13694	17664	61317	74892	79688	76602	70520	62015	55382
11	43257	25181	16068	13694	17734	62256	74693	79506	76625	70265	61655	55159
12	42649	24589	15987	13694	17787	62698	75091	79348	76492	69928	61476	54917
13	42000	24006	15906	13715	17866	65715	75418	79145	76404	69738	61237	54677
14	41419	23433	15786	13766	17919	67958	75921	79055	76206	69440	61079	54434
15	40798	22859	15698	13838	17946	68824	76448	78852	75899	69163	60861	54230
16	40214	22295	15642	13838	17972	69015	77000	78672	75767	68866	60624	54007
17	39606	21699	15531	13838	18034	68951	77288	78717	75505	68696	60408	53803
18	39004	21084	15460	13838	18070	69717	77622	78762	75243	68379	60192	57171
19	38513	20472	15358	13838	18087	70202	77844	78785	75047	68085	60035	53013
20	37879	19901	15265	13838	18105	70456	78001	78762	74892	67832	59742	52703
21	37313	19457	15149	13838	18114	70689	78247	78785	74583	67560	59508	52394
22	36695	19224	15049	13896	18132	70817	78560	78785	74407	67288	59313	52032
23	36085	19067	14918	13875	18159	70711	78785	78762	74144	66955	59059	51690
24	35510	18873	14811	13882	18177	72122	78965	78717	73924	66706	58845	51385
25	34913	18663	14713	13875	18177	72316	79348	78740	73793	66457	58631	51064
26	50055	18509	14569	13860	18168	72036	79506	78695	73575	66147	58438	50726
27	33755	18302	14487	13860	18186	71928	79756	78628	73335	65838	58322	50461
28	33193	18114	14367	13838	18257	71500	79869	78515	73182	65531	58264	50126
29	32638	17919	14263	13838	---	71371	80005	78426	73095	65285	58033	49753
30	32011	17717	14145	13809	---	72359	80051	78381	72878	64938	57821	49084
31	31457	---	14020	13780	---	74275	---	78202	---	64674	57591	---
MAX	50055	31022	17508	13896	18257	74275	80051	80278	77978	72683	64430	57381
MIN	31457	17717	14020	13630	13759	18383	74693	78202	72878	64674	57591	49084
a	1882.72	1870.06	1865.44	1865.11	1870.67	1907.14	1909.74	1908.92	1906.50	1902.60	1899.03	1894.38
b	-17890	-13740	-3697	-240	+4477	+56018	+5776	-1849	-5324	-8204	-7083	-8507

CAL YR 1990 MAX 80643 MIN 14020 b -5967
WTR YR 1991 MAX 80278 MIN 13630 b -263
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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1930, at datum 3.00 ft higher.

REMARKS.--No estimated daily diacharges. Flow regulated by Lake Pillsbury (station 11470000) 0.7 mi upstream. No diversion upstream from station.

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.

AVERAGE DISCHARGE.--69 years, 549 ft^3/s, 397,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft^3/s, Dec. 22, 1964, gage height, 24.24 ft, from floodmarks, from rating curve extended above 37,000 ft^3/s; minimum daily, 0.1 ft^3/s, Sept. 8, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft^3/s, Mar. 24, gage height, 7.94 ft; minimum daily, 29 ft^3/s, Feb. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	348	114	75	32	32	1200	363	187	138	134	101
2	335	347	114	56	35	37	1210	363	188	138	133	101
3	335	347	114	40	34	40	1200	363	170	138	133	101
4	337	347	113	40	34	46	1200	362	150	137	133	101
5	340	350	92	41	35	37	1200	347	149	137	133	101
6	340	348	73	42	34	34	1210	334	150	137	133	101
7	342	350	74	42	34	33	1330	324	149	137	132	101
8	344	352	75	42	34	35	1410	320	149	137	110	101
9	345	351	75	42	34	36	1380	325	148	137	91	101
10	346	349	76	42	34	36	961	324	148	137	92	101
11	347	347	75	42	34	129	466	325	147	136	93	101
12	349	345	75	42	34	233	327	324	147	136	93	100
13	351	345	75	42	34	238	311	325	146	136	93	100
14	349	347	75	42	34	351	300	325	145	136	95	100
15	348	349	76	42	34	520	295	283	144	136	97	100
16	347	352	75	35	34	588	296	210	144	136	97	129
17	346	352	75	30	34	594	297	179	143	136	97	164
18	347	352	75	32	34	605	298	179	142	135	97	178
19	348	351	75	32	34	608	298	179	142	135	97	170
20	347	237	74	32	34	609	298	180	142	135	97	164
21	345	119	74	32	34	601	298	180	142	135	97	164
22	346	98	74	32	32	607	298	180	141	135	97	164
23	347	101	74	32	30	742	299	181	141	135	96	164
24	346	104	74	32	30	1220	299	181	141	135	96	161
25	346	104	74	32	30	1570	300	182	141	135	96	158
26	348	104	74	32	30	1560	300	183	140	134	60	158
27	348	104	74	32	30	1390	300	184	140	134	36	155
28	348	104	75	32	29	1240	300	185	140	134	63	151
29	346	114	75	32	---	815	300	185	139	134	100	151
30	345	114	75	32	---	475	333	186	138	134	100	156
31	348	---	75	32	---	917	---	186	---	134	101	---
TOTAL	10692	7932	2488	1185	925	15978	18514	7947	4433	4209	3122	3898
MEAN	345	264	80.3	38.2	33.0	515	617	256	148	136	101	130
MAX	351	352	114	75	35	1570	1410	363	188	138	134	178
MIN	335	98	73	30	29	32	295	179	138	134	36	100
AC-FT	21210	15730	4930	2350	1830	31690	36720	15760	8790	8350	6190	7730

CAL YR 1990 TOTAL 81575 MEAN 223 MAX 1290 MIN 30 AC-FT 161800
WTR YR 1991 TOTAL 81323 MEAN 223 MAX 1570 MIN 29 AC-FT 161300

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 National Geodetic Vertical Datum of 1929, 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.--No estimated daily discharges. 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.

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.

AVERAGE DISCHARGE.--81 years (water years 1911-91), 203 ft^3/s, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1922 TO CURRENT YEAR).--Maximum daily discharge, 351 ft^3/s, Oct. 31, 1982; no flow at times in several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	321	119	69	34	53	321	278	185	151	138	97
2	321	321	119	59	95	156	320	294	185	151	136	97
3	321	321	123	32	103	202	321	295	168	148	133	97
4	321	321	125	27	63	225	322	305	155	146	133	98
5	321	321	115	27	77	284	322	316	156	146	133	99
6	321	321	73	29	69	233	322	321	159	146	133	98
7	321	321	66	35	51	161	322	321	162	146	134	99
8	321	321	69	35	48	128	322	320	161	146	122	98
9	321	308	73	33	42	104	322	322	157	146	102	98
10	321	321	81	33	41	107	321	321	152	146	96	98
11	321	321	82	35	41	137	321	320	145	146	96	98
12	321	321	76	38	40	283	321	320	137	143	96	98
13	321	321	74	41	40	319	321	320	137	142	95	99
14	321	321	73	40	39	322	322	320	143	142	95	99
15	321	321	75	50	38	322	323	299	146	142	96	99
16	321	321	79	48	37	321	323	243	146	142	95	116
17	321	321	79	37	37	321	323	212	146	142	95	161
18	321	321	77	34	37	321	323	206	146	142	96	165
19	321	321	79	34	37	322	321	204	149	142	96	167
20	321	219	78	35	37	321	318	199	148	142	95	167
21	321	119	74	35	37	321	317	200	148	142	96	167
22	321	119	73	33	36	321	317	199	148	142	98	167
23	321	119	73	32	32	322	315	198	148	141	97	166
24	321	119	73	32	30	321	287	197	148	142	96	166
25	321	119	71	33	30	321	266	195	149	142	96	166
26	321	119	69	33	31	322	265	194	148	143	79	165
27	321	119	69	33	31	320	256	196	150	142	37	165
28	321	119	72	32	38	320	248	194	151	140	41	155
29	321	119	73	33	---	320	248	193	153	140	96	155
30	321	119	73	32	---	319	250	192	150	139	97	160
31	321	---	71	33	---	320	---	189	---	138	97	---
TOTAL	9951	7495	2526	1132	1271	8169	9200	7883	4576	4448	3145	3880
MEAN	321	250	81.5	36.5	45.4	264	307	254	153	143	101	129
MAX	321	321	125	69	103	322	323	322	185	151	138	167
MIN	321	119	66	27	30	53	248	189	137	138	37	97
AC-FT	19740	14870	5010	2250	2520	16200	18250	15640	9080	8820	6240	7700

CAL YR 1990 TOTAL 72653.50 MEAN 199 MAX 321 MIN .00 AC-FT 144100
WTR YR 1991 TOTAL 63676 MEAN 174 MAX 323 MIN 27 AC-FT 126300

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 Tailrace (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 and Potter Valley Irrigation District west canal. Elevation of tailrace is 1,020 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--No estimated daily discharges. Flow represents inflow into the Russian River basin after passing through powerhouse.

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, 323 ft^3/s, Apr. 15-18, 1991; no flow Apr. 4, 5 and July 18-20, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	315	116	67	33	53	321	278	165	144	132	96
2	310	315	116	57	95	156	320	294	165	144	130	96
3	310	315	120	31	103	202	321	295	157	139	131	96
4	310	315	122	27	62	225	322	305	146	139	128	97
5	310	315	112	27	76	284	322	316	140	142	127	98
6	310	315	71	29	68	233	322	317	141	141	127	97
7	310	315	64	35	51	161	322	309	153	145	121	98
8	310	315	67	34	48	128	322	305	160	145	102	97
9	310	303	71	33	42	104	322	307	156	145	81	97
10	308	316	80	33	41	107	321	307	148	145	83	97
11	304	316	81	35	41	137	321	306	140	143	84	97
12	307	316	75	38	40	283	321	311	128	132	80	97
13	311	316	73	40	40	319	321	313	136	130	82	98
14	311	316	72	40	39	322	322	306	142	134	84	98
15	311	316	74	50	38	322	323	290	132	132	86	98
16	308	315	78	48	37	321	323	239	125	122	90	115
17	306	315	78	37	37	321	323	190	122	124	90	160
18	307	316	76	34	37	321	323	196	123	136	93	164
19	310	316	78	34	37	322	321	194	131	132	94	165
20	310	214	76	35	37	321	318	187	129	134	93	166
21	310	115	72	35	37	321	317	189	130	135	93	161
22	310	116	71	33	36	321	317	190	137	135	94	149
23	310	116	71	32	32	322	315	197	136	138	86	156
24	313	116	71	31	28	321	287	196	138	134	77	155
25	316	116	69	31	26	321	266	184	142	120	83	148
26	316	116	67	31	29	322	265	179	134	120	62	145
27	316	116	67	31	31	320	256	183	141	124	17	146
28	316	116	70	30	38	320	248	178	144	123	23	139
29	316	116	71	31	---	320	248	183	146	116	95	139
30	316	116	71	30	---	319	250	183	139	117	95	147
31	316	---	69	31	---	320	---	170	---	129	94	---
TOTAL	9641	7354	2469	1110	1259	8169	9200	7597	4226	4139	2857	3712
MEAN	311	245	79.6	35.8	45.0	264	307	245	141	134	92.2	124
MAX	316	316	122	67	103	322	323	317	165	145	132	166
MIN	304	115	64	27	26	53	248	170	122	116	17	96
AC-FT	19120	14590	4900	2200	2500	16200	18250	15070	8380	8210	5670	7360

CAL YR 1990 TOTAL 70026.09 MEAN 192 MAX 320 MIN .00 AC-FT 138900
WTR YR 1991 TOTAL 61733 MEAN 169 MAX 323 MIN 17 AC-FT 122400

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 mi^2.

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 National Geodetic Vertical Datum of 1929, 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.--No estimated daily discharges. 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 powerplant (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.

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.

AVERAGE DISCHARGE (combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace).--82 years (water years 1910-91), 650 ft^3/s, 470,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,100 ft^3/s, Dec. 22, 1964, gage height, 33.9 ft from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft^3/s, Mar. 3, gage height, 11.88 ft; minimum daily, 5.7 ft^3/s, Sept. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	9.9	9.6	9.2	6.4	43	889	79	9.2	6.4	6.5	6.5
2	6.9	9.7	9.6	7.5	45	304	837	71	9.1	6.5	6.4	6.3
3	7.0	9.9	9.6	7.2	14	729	806	71	9.1	6.5	6.4	6.3
4	6.9	10	9.4	6.5	6.4	852	782	61	9.1	6.4	6.5	6.3
5	7.3	10	9.1	6.5	42	221	774	31	9.1	6.4	6.6	6.4
6	7.4	10	9.1	6.5	6.5	23	815	21	9.1	6.4	6.6	6.4
7	7.4	10	9.2	10	6.4	6.5	857	18	9.1	6.5	6.7	6.5
8	7.4	10	9.1	6.5	6.4	6.3	931	15	7.3	6.4	6.6	6.4
9	7.4	17	9.2	6.5	6.4	6.3	894	14	6.4	6.5	6.4	6.4
10	7.4	9.8	9.3	6.4	6.4	6.3	636	14	6.4	6.4	6.4	6.4
11	7.4	9.7	9.2	6.4	6.5	13	187	13	6.5	6.3	6.4	5.7
12	7.4	9.5	9.2	9.9	6.6	413	59	14	6.4	6.5	6.4	6.4
13	7.4	9.7	9.2	9.1	6.6	348	42	17	6.4	6.5	6.3	6.5
14	7.4	9.9	9.2	6.4	6.6	174	33	17	6.5	6.5	6.3	6.6
15	7.4	9.8	9.8	6.4	6.5	242	28	13	6.5	6.6	6.6	6.4
16	7.4	10	9.2	6.4	6.6	268	28	13	6.6	6.4	6.4	6.5
17	7.4	9.9	9.2	6.5	6.6	345	28	13	6.4	6.5	6.4	6.5
18	7.4	9.9	9.1	6.4	6.6	364	28	13	6.3	6.5	6.4	6.5
19	7.4	9.8	9.2	6.5	6.5	323	26	12	6.4	6.5	6.5	6.3
20	7.4	20	9.2	6.4	6.5	326	25	12	6.4	6.6	6.6	9.9
21	7.4	42	9.2	6.4	6.5	305	25	12	6.5	6.5	6.5	6.6
22	7.4	9.9	9.2	6.5	6.6	292	24	12	6.5	6.5	6.7	6.4
23	7.4	9.9	9.2	6.5	6.5	562	24	12	6.4	6.5	6.6	6.3
24	9.0	9.9	9.3	6.6	6.6	918	44	12	6.4	6.5	6.5	6.7
25	7.4	12	9.2	6.5	6.7	1390	64	11	6.4	6.4	6.8	6.4
26	7.4	9.8	9.2	6.5	6.6	1430	71	11	6.5	6.6	6.8	6.4
27	7.4	9.8	9.2	6.4	6.6	1230	71	11	6.3	6.6	6.8	12
28	7.4	9.9	9.2	6.5	8.0	1030	71	12	6.4	6.5	10	14
29	7.4	9.9	9.2	6.4	---	846	71	10	6.4	6.6	7.2	6.4
30	7.4	9.8	9.2	6.3	---	412	71	10	6.4	6.5	6.5	21
31	14	---	9.2	6.5	---	660	---	10	---	6.5	6.6	---
TOTAL	235.7	347.4	287.0	214.3	265.6	14088.4	9241	655	212.5	201.0	206.4	223.4
MEAN	7.60	11.6	9.26	6.91	9.49	454	308	21.1	7.08	6.48	6.66	7.45
MAX	14	42	9.8	10	45	1430	931	79	9.2	6.6	10	21
MIN	6.9	9.5	9.1	6.3	6.4	6.3	24	10	6.3	6.3	6.3	5.7
AC-FT	468	689	569	425	527	27940	18330	1300	421	399	409	443

CAL YR 1990 TOTAL 22159.6 MEAN 60.7 MAX 1510 MIN 6.9 AC-FT 43950
WTR YR 1991 TOTAL 26177.7 MEAN 71.7 MAX 1430 MIN 5.7 AC-FT 51920

11472150 EEL RIVER NEAR DOS RIOS, CA

LOCATION.--Lat 39°37'30", long 123°20'25", in SW 1/4 SW 1/4 sec.32, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010103, on left bank 1,100 ft upstream from Outlet Creek and 6.3 mi south of Dos Rios.

DRAINAGE AREA.--528 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,001.28 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges and for discharges below 12 ft^3/s, which are fair. Flow partly regulated by Lake Pillsbury (station 11470000) 40 mi upstream and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--25 years, 880 ft^3/s, 637,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,100 ft^3/s, Feb. 17, 1986, gage height, 35.54 ft, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement at gage height 33.64 ft; no flow for many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 45.52 ft, from information by local resident, discharge, 100,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,310 ft^3/s, Mar. 3, gage height, 10.82 ft; minimum daily, 6.8 ft^3/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	23	20	20	23	142	1280	e199	e42	e30	9.2	8.5
2	16	23	19	20	465	1600	1170	e202	e47	e27	9.2	9.2
3	16	21	19	20	353	5120	1100	e202	e43	e25	9.8	9.2
4	16	21	19	20	197	5670	1030	e181	e37	e25	10	8.7
5	16	21	19	20	458	2410	1010	e164	e40	e22	11	7.8
6	16	21	19	19	179	962	1140	e127	e36	e21	10	6.8
7	16	21	19	24	82	502	1060	e113	e33	e21	11	7.0
8	18	21	19	28	56	330	1130	e110	e31	e23	11	7.7
9	18	21	19	28	45	244	1080	e78	e34	e18	11	8.0
10	18	21	23	25	39	233	1030	e72	e31	e13	11	9.3
11	18	24	29	25	33	273	523	e66	e26	e13	9.9	9.0
12	18	22	25	29	31	2220	310	e63	e25	e13	9.7	8.9
13	17	21	23	42	29	2360	253	e65	e27	e13	9.9	10
14	17	21	21	47	27	1060	231	e65	e33	e13	9.2	11
15	17	21	25	42	26	754	e223	e56	e31	e13	8.7	10
16	17	21	27	37	25	630	e214	e52	e25	e13	11	9.2
17	17	21	25	34	24	689	e199	e54	e27	e13	10	9.0
18	18	21	24	30	23	1070	e187	e57	e26	e14	9.5	9.7
19	21	21	24	29	21	817	e175	e65	e24	e15	10	10
20	21	21	25	28	21	1010	e172	e56	e25	14	9.8	10
21	19	21	24	27	21	1150	e172	e52	e26	14	9.9	10
22	19	30	22	25	21	853	e172	e56	e26	13	9.7	9.9
23	19	31	21	25	20	2390	e164	e52	e26	13	9.8	13
24	19	21	21	25	18	2950	e164	e51	e26	12	9.5	10
25	19	20	20	25	18	2910	e196	e48	e26	11	9.2	9.8
26	19	24	21	24	18	3220	e249	e41	e26	9.9	9.2	8.6
27	20	23	21	23	18	2610	e217	e41	e27	9.9	9.2	8.6
28	19	21	21	23	21	1920	e196	e42	e28	9.9	15	9.9
29	18	20	21	23	---	1720	e202	e38	e36	9.9	16	12
30	19	20	20	23	---	1060	e202	e43	e40	9.9	11	16
31	22	---	20	23	---	1040	---	e42	---	9.7	8.1	---
TOTAL	560	659	675	833	2312	49919	15451	2553	930	481.2	317.5	286.8
MEAN	18.1	22.0	21.8	26.9	82.6	1610	515	82.4	31.0	15.5	10.2	9.56
MAX	22	31	29	47	465	5670	1280	202	47	30	16	16
MIN	16	20	19	19	18	142	164	38	24	9.7	8.1	6.8
AC-FT	1110	1310	1340	1650	4590	99010	30650	5060	1840	954	630	569

CAL YR 1990 TOTAL 85361 MEAN 234 MAX 5500 MIN 11 AC-FT 169300
WTR YR 1991 TOTAL 74977.5 MEAN 205 MAX 5670 MIN 6.8 AC-FT 148700

e Estimated.

11472200 OUTLET CREEK NEAR LONGVALE, CA

LOCATION.--Lat 39°37'05", long 123°21'20", in NE 1/4 sec.1, T.20 N., R.14 W., Mendocino County, Hydrologic Unit 18010103, on right bank 0.2 mi downstream from Bloody Run Creek, 0.9 mi upstream from mouth, and 6.9 mi northeast of Longvale.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WSP 1929: 1958(M), 1960(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 1,018.14 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--35 years, 400 ft^3/s, 289,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,900 ft^3/s, Dec. 22, 1964, gage height, 30.6 ft, from floodmarks, from rating curve extended above 17,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	0700	*8,040	*10.92				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	6.4	1.4	e2.8	e2.7	291	e238	30	8.6	6.3	.00	.00
2	.71	5.6	1.1	e2.5	e100	1590	e235	32	7.2	5.5	.00	.00
3	.64	2.2	.87	e2.3	e50	3860	e218	28	6.4	3.8	.00	.00
4	.60	1.5	.84	e2.1	e70	4720	e192	22	5.8	2.4	.00	.00
5	.50	1.3	.90	e2.0	e85	2160	e163	20	5.0	1.7	.00	.00
6	.45	1.1	.90	e1.9	e33	1060	e158	19	5.0	1.3	.00	.00
7	.45	.90	.90	e1.8	e25	521	e155	17	4.3	.98	.00	.00
8	.40	.83	.90	e3.0	e21	280	e150	15	3.4	.80	.00	.00
9	.40	.81	1.2	e6.3	e19	195	e130	16	3.4	.67	.00	.00
10	.40	.73	4.5	e5.5	e18	208	e97.0	14	3.0	.56	.00	.00
11	.42	.72	8.4	e4.7	e16	255	88	13	2.4	.54	.00	.00
12	.42	.72	13	e4.1	e14	e896	75	12	1.9	.47	.00	.00
13	.42	.66	9.1	e6.0	e13	e668	66	12	1.8	.39	.00	.00
14	.44	.92	6.2	e10	e13	e510	60	14	1.6	.26	.00	.00
15	.42	1.0	7.9	e30	e12	e488	56	15	1.5	.26	.00	.00
16	.45	.99	12	23	e11	e357	53	12	1.3	.26	.00	.00
17	.41	.82	13	17	e10	e345	49	15	1.2	.28	.00	.00
18	.50	.73	10	14	e10	e420	48	22	1.2	.30	.00	.00
19	1.1	.73	8.8	12	e9.3	e475	44	18	1.1	.26	.00	.00
20	1.3	.87	11	11	e8.7	e532	42	16	1.1	.21	.00	.00
21	1.2	.90	11	9.3	e8.3	e479	43	15	1.2	.15	.00	.00
22	1.1	.83	7.7	e7.1	e7.9	e467	41	12	1.4	.11	.00	.00
23	1.1	.74	e4.7	e5.2	e7.6	e995	37	10	1.3	.09	.00	.00
24	1.2	.72	e4.1	e4.2	e7.3	e1050	40	9.2	1.4	.16	.00	.00
25	1.1	1.1	e3.6	e3.8	e7.2	e968	50	8.0	1.4	.19	.00	.00
26	1.1	2.2	e3.3	e3.4	e7.1	e929	103	7.2	1.4	.12	.00	.00
27	1.1	1.9	e4.5	e3.4	7.1	e804	64	7.0	1.4	.07	.00	.00
28	1.0	2.7	e5.3	e2.7	9.6	e673	46	6.6	2.0	.03	.00	.00
29	.89	2.4	e4.1	e3.0	---	e610	37	6.0	4.0	.00	.00	.00
30	.86	1.9	e3.5	e3.0	---	e458	31	6.8	4.7	.00	.00	.00
31	4.3	---	e3.0	e3.0	---	e293	---	8.6	---	.00	.00	---
TOTAL	26.11	44.92	167.71	210.1	602.8	27557	2809.0	458.4	87.4	28.16	0.00	0.00
MEAN	.84	1.50	5.41	6.78	21.5	889	93.6	14.8	2.91	.91	.000	.000
MAX	4.3	6.4	13	30	100	4720	238	32	8.6	6.3	.00	.00
MIN	.40	.66	.84	1.8	2.7	195	31	6.0	1.1	.00	.00	.00
AC-FT	52	89	333	417	1200	54660	5570	909	173	56	.00	.00

CAL YR 1990 TOTAL 69141.57 MEAN 189 MAX 5200 MIN .36 AC-FT 137100
WTR YR 1991 TOTAL 31991.60 MEAN 87.6 MAX 4720 MIN .00 AC-FT 63460

e Estimated.

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 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 901.58 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--26 years, 1,544 ft^3/s, 1,119,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,100 ft^3/s, Feb. 17, 1986, gage height, 27.41 ft, from rating curve extended above 52,000 ft^3/s; minimum daily, 2.4 ft^3/s, Sept. 1, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1500	*22,700	*17.30				

Minimum daily, 2.9 ft^3/s, on several days during October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	84	24	e27	148	417	1400	814	333	91	14	6.7
2	3.3	75	23	e26	784	1380	1190	778	307	83	13	6.5
3	3.2	54	21	25	1180	7890	1220	750	289	77	13	6.3
4	3.0	40	20	24	735	13800	1130	706	266	72	12	6.2
5	2.9	33	20	24	1260	6140	1250	713	245	66	12	5.9
6	2.9	27	19	24	859	1770	2440	711	225	62	11	5.7
7	3.1	24	19	32	675	1090	1810	720	211	56	11	5.5
8	3.1	22	19	75	589	788	1350	764	199	53	11	5.3
9	3.1	20	19	71	528	611	1190	758	187	51	11	5.2
10	3.0	20	27	60	485	512	1120	676	176	49	11	5.2
11	2.9	19	52	54	455	458	993	616	163	47	10	4.9
12	2.9	18	86	e103	431	2030	883	586	149	44	9.9	5.0
13	2.9	18	67	392	411	1500	845	562	135	41	9.7	4.9
14	2.9	19	49	523	394	826	879	579	125	38	9.4	4.9
15	2.9	19	54	380	383	606	867	536	112	36	9.2	4.7
16	2.9	19	57	323	374	509	804	529	103	35	8.7	4.5
17	3.7	21	47	281	368	508	745	605	97	35	8.5	4.6
18	6.6	21	38	255	362	573	701	614	92	35	8.2	4.5
19	17	20	40	237	357	461	676	596	89	33	8.0	4.3
20	25	19	47	223	351	467	664	640	88	31	7.8	4.3
21	19	18	41	209	344	462	737	611	86	29	7.5	4.2
22	18	18	e36	195	340	372	743	583	83	27	7.3	4.0
23	17	18	e33	182	335	1120	768	582	81	27	7.1	3.9
24	19	17	e32	179	334	1340	825	556	81	25	7.0	3.9
25	19	20	e30	172	330	1040	865	522	86	23	6.7	3.9
26	18	34	e29	164	329	1150	919	480	85	22	6.7	3.8
27	17	39	e28	159	326	894	878	443	83	21	6.6	4.1
28	16	38	e27	159	329	869	833	404	83	19	6.2	4.6
29	16	32	e27	153	---	978	842	373	100	17	6.4	4.3
30	19	28	e27	150	---	1210	825	384	103	16	6.6	4.4
31	38	---	e27	148	---	1410	---	365	---	15	6.7	---
TOTAL	316.8	854	1085	5029	13796	53181	30392	18556	4462	1276	283.2	146.2
MEAN	10.2	28.5	35.0	162	493	1716	1013	599	149	41.2	9.14	4.87
MAX	38	84	86	523	1260	13800	2440	814	333	91	14	6.7
MIN	2.9	17	19	24	148	372	664	365	81	15	6.2	3.8
AC-FT	628	1690	2150	9980	27360	105500	60280	36810	8850	2530	562	290

CAL YR 1990 TOTAL 190109.3 MEAN 521 MAX 11700 MIN 2.7 AC-FT 377100
WTR YR 1991 TOTAL 129377.2 MEAN 354 MAX 13800 MIN 2.9 AC-FT 256600

e Estimated.

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 mi^2.

PERIOD OF RECORD.--January 1990 to current year.

GAGE.--Water-stage recorder, and 120 degree V-notch weir. Elevation of gage is 1,480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. See following page for records of combined discharge of creek and powerplant.

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.--River only, maximum discharge, 632 ft^3/s, Mar. 3, 1991, gage height, 5.30 ft; minimum daily, 0.1 ft^3/s, many days during August and September 1991.
Combined flow: Maximum discharge, 708 ft^3/s, Mar. 3, 1991; minimum daily, 0.1 ft^3/s, many days during August and September 1991.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 632 ft^3/s, Mar. 3, gage height, 5.30 ft; minimum daily, 0.1 ft^3/s, many days during August and September.
Combined flow: Maximum discharge, 708 ft^3/s, Mar. 3; minimum daily, 0.1 ft^3/s, many days during August and September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	5.0	3.5	3.8	4.6	71	5.2	.9	.7
2	---	---	---	---	3.8	3.7	3.8	4.5	33	5.0	.9	.7
3	---	---	---	---	51	3.8	3.7	4.3	5.6	4.9	.8	.6
4	---	---	---	---	46	24	3.9	4.0	3.7	4.6	.7	.6
5	---	---	---	---	21	11	3.9	3.9	3.8	4.8	.6	.5
6	---	---	---	---	30	3.4	3.9	3.7	3.8	4.9	.6	.4
7	---	---	---	---	7.4	3.4	3.8	3.6	3.8	4.4	.5	.4
8	---	---	---	---	25	3.2	3.8	3.3	3.9	4.1	.5	.4
9	---	---	---	---	30	3.4	4.9	3.2	3.9	3.9	.4	.4
10	---	---	---	---	29	31	7.9	3.3	3.8	3.5	.3	.4
11	---	---	---	---	8.8	14	7.4	3.3	3.8	3.1	.3	.3
12	---	---	---	---	4.7	19	7.1	3.3	3.9	2.6	.3	.3
13	---	---	---	---	3.6	3.8	7.0	3.2	3.9	2.6	.3	.3
14	---	---	---	---	3.7	35	6.6	3.1	3.9	2.5	.4	.4
15	---	---	---	---	3.8	21	6.4	3.0	3.9	2.4	.7	.4
16	---	---	---	---	3.7	4.2	6.4	2.9	3.9	2.2	.7	.4
17	---	---	---	36	26	3.7	6.3	2.8	3.9	2.3	.7	.6
18	---	---	---	10	3.6	3.8	6.1	2.8	3.9	2.3	1.0	.6
19	---	---	---	3.8	3.8	3.7	6.0	3.4	3.9	2.4	1.1	.6
20	---	---	---	3.7	4.0	8.7	6.0	6.7	5.0	2.1	1.0	.6
21	---	---	---	3.4	4.5	8.5	5.7	5.3	8.2	1.9	1.0	.6
22	---	---	---	3.2	8.4	9.9	7.3	41	7.8	1.6	.9	.6
23	---	---	---	3.2	9.2	8.0	6.3	16	7.4	1.5	.8	.6
24	---	---	---	6.5	8.9	3.8	6.6	3.6	7.0	1.5	.8	.6
25	---	---	---	6.3	5.5	3.7	6.4	3.7	6.7	1.6	.8	.6
26	---	---	---	7.8	3.7	3.8	5.9	3.9	6.4	1.6	.9	.6
27	---	---	---	3.8	3.5	3.8	5.5	150	6.2	1.4	1.2	.6
28	---	---	---	3.9	3.4	3.8	5.5	72	6.0	1.2	1.0	.6
29	---	---	---	8.6	---	3.8	5.2	13	5.8	1.1	.8	.6
30	---	---	---	19	---	3.8	4.9	141	5.4	1.0	.8	.6
31	---	---	---	4.3	---	3.8	---	131	---	.9	.7	---
TOTAL	---	---	---	---	361.0	264.0	168.0	653.4	243.2	85.1	22.4	15.6
MEAN	---	---	---	---	12.9	8.52	5.60	21.1	8.11	2.75	.72	.52
MAX	---	---	---	---	51	35	7.9	150	71	5.2	1.2	.70
MIN	---	---	---	---	3.4	3.2	3.7	2.8	3.7	.90	.30	.30
AC-FT	---	---	---	---	716	524	333	1300	482	169	44	31

11474781 KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION, NEAR ZENIA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KEKAWAKA CREEK AND KEKAWAKA CREEK POWERHOUSE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	45	46	12	4.6	141	5.2	.90	.70
2	---	---	---	---	47	50	11	4.5	103	5.0	.90	.70
3	---	---	---	---	110	61	10	4.3	74	4.9	.80	.60
4	---	---	---	---	105	86	9.9	4.0	59	4.6	.70	.60
5	---	---	---	---	84	80	9.3	3.9	47	4.8	.60	.50
6	---	---	---	---	98	63	8.8	3.7	41	4.9	.60	.40
7	---	---	---	---	72	53	8.2	3.6	36	4.4	.50	.40
8	---	---	---	---	76	50	8.3	3.3	29	4.1	.50	.40
9	---	---	---	---	97	41	8.1	3.2	25	3.9	.40	.40
10	---	---	---	---	85	93	7.9	3.3	22	3.5	.30	.40
11	---	---	---	---	77	82	7.4	3.3	20	3.1	.30	.30
12	---	---	---	---	66	78	7.1	3.3	18	2.6	.30	.30
13	---	---	---	---	55	64	7.0	3.2	16	2.6	.30	.30
14	---	---	---	---	44	102	6.6	3.1	15	2.5	.40	.40
15	---	---	---	---	39	90	6.4	3.0	13	2.4	.70	.40
16	---	---	---	---	45	70	6.4	2.9	12	2.2	.70	.40
17	---	---	---	43	42	60	6.3	2.8	11	2.3	.70	.60
18	---	---	---	34	37	51	6.1	2.8	10	2.3	1.0	.60
19	---	---	---	28	38	43	6.0	3.4	9.0	2.4	1.1	.60
20	---	---	---	23	38	38	6.0	6.7	8.5	2.1	1.0	.60
21	---	---	---	18	50	33	5.7	5.3	8.2	1.9	1.0	.60
22	---	---	---	17	71	30	7.3	85	7.8	1.6	.90	.60
23	---	---	---	15	77	27	11	65	7.4	1.5	.80	.60
24	---	---	---	15	77	24	8.4	27	7.0	1.5	.80	.60
25	---	---	---	12	73	21	6.4	18	6.7	1.6	.80	.60
26	---	---	---	16	68	19	5.9	20	6.4	1.6	.90	.60
27	---	---	---	13	60	18	5.5	187	6.2	1.4	1.2	.60
28	---	---	---	12	52	16	5.5	142	6.0	1.2	1.0	.60
29	---	---	---	12	---	15	5.2	82	5.8	1.1	.80	.60
30	---	---	---	51	---	14	4.9	210	5.4	1.0	.80	.60
31	---	---	---	43	---	13	---	201	---	.90	.70	---
TOTAL	---	---	---	---	1828	1531	224.6	1115.2	776.4	85.10	22.40	15.60
MEAN	---	---	---	---	65.3	49.4	7.49	36.0	25.9	2.75	.72	.52
MAX	---	---	---	---	110	102	12	210	141	5.2	1.2	.70
MIN	---	---	---	---	37	13	4.9	2.8	5.4	.90	.30	.30
AC-FT	---	---	---	---	3630	3040	445	2210	1540	169	44	31

11474780 KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION, NEAR ZENIA, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.7	2.5	1.3	2.4	2.2	6.7	3.1	9.7	7.3	2.4	.2	.5
2	.7	1.9	1.3	2.1	74	149	3.1	12	6.7	2.2	.2	.5
3	.7	1.4	1.3	2.2	9.4	253	3.1	7.1	6.2	1.9	.2	.4
4	.7	1.2	1.2	2.4	24	322	3.1	3.1	5.9	1.6	.2	.2
5	.7	1.1	1.2	2.4	14	147	4.5	3.1	5.4	1.4	.2	.2
6	.7	1.0	1.2	2.3	3.0	26	4.1	3.1	5.1	1.3	.3	.1
7	.7	.9	1.2	13	3.1	3.1	3.3	4.4	4.8	1.2	.3	.2
8	.7	1.0	1.2	8.8	3.1	33	3.1	6.1	4.6	1.2	.3	.2
9	.7	1.0	1.3	6.5	3.1	3.1	6.8	3.8	4.4	1.1	.2	.4
10	.7	1.0	6.6	6.2	3.1	3.2	4.3	4.0	4.0	1.0	.2	.4
11	.7	1.0	5.5	6.8	5.7	3.1	3.1	3.1	3.9	1.0	.2	.4
12	.7	.9	3.3	12	7.6	163	3.1	3.1	3.7	.9	.2	.3
13	.7	1.0	2.5	26	7.0	67	3.1	3.1	3.6	.9	.1	.3
14	.7	1.5	2.1	3.1	6.1	25	3.1	3.4	3.5	1.0	.1	.3
15	.7	1.5	2.8	5.3	5.6	3.1	3.1	3.6	3.3	1.0	.1	.2
16	.8	1.3	2.7	4.3	5.4	6.9	3.1	7.1	3.2	1.1	.1	.2
17	.8	1.1	2.3	6.6	5.2	7.7	3.1	5.5	3.1	1.4	.1	.2
18	.8	1.1	4.4	5.6	4.8	3.3	3.1	3.1	3.0	1.1	.1	.2
19	.8	1.1	9.1	4.8	4.5	3.1	3.1	3.2	3.0	.9	.1	.1
20	.8	1.1	6.3	4.1	4.3	3.1	3.2	4.4	3.1	.8	.1	.1
21	.8	1.1	5.6	3.6	4.1	3.2	3.2	3.2	2.8	.7	.1	.1
22	.6	1.1	5.6	3.3	3.9	3.2	3.1	3.1	2.7	.7	.1	.1
23	.6	1.1	5.6	3.1	3.7	20	3.1	3.1	2.6	.6	.2	.1
24	.5	1.1	5.6	2.9	3.6	22	3.1	3.1	2.6	.6	.2	.1
25	.5	1.5	5.6	2.8	3.4	20	3.2	3.1	2.5	.5	.2	.1
26	.5	2.4	5.0	2.7	3.3	46	3.2	3.1	2.3	.6	.2	.1
27	.5	1.9	4.0	2.6	3.2	27	3.1	3.6	2.5	.5	.3	.1
28	.5	1.6	3.3	2.5	4.2	18	3.1	8.0	3.2	.4	.7	.1
29	.6	1.4	3.1	2.4	---	4.6	3.1	8.2	3.6	.3	.9	.1
30	.7	1.4	3.0	2.3	---	3.2	3.1	7.3	2.8	.3	.7	.1
31	5.3	---	2.7	2.3	---	3.1	---	3.8	---	.2	.5	---
TOTAL	25.6	39.2	107.9	157.4	224.6	1401.7	100.9	145.6	115.4	30.8	7.6	6.4
MEAN	.83	1.31	3.48	5.08	8.02	45.2	3.36	4.70	3.85	.99	.25	.21
MAX	5.3	2.5	9.1	26	74	322	6.8	12	7.3	2.4	.90	.50
MIN	.50	.90	1.2	2.1	2.2	3.1	3.1	3.1	2.3	.20	.10	.10
AC-FT	51	78	214	312	445	2780	200	289	229	61	15	13

WTR YR 1991 TOTAL 2363.1 MEAN 6.47 MAX 322 MIN .10 AC-FT 4690

11474781 KEKAWAKA CREEK BELOW KEKAWAKA CREEK POWERHOUSE DIVERSION, NEAR ZENIA, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KEKAWAKA CREEK AND KEKAWAKA CREEK POWERHOUSE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	2.5	1.3	2.4	2.2	20	47	15	7.3	2.4	.20	.50
2	.70	1.9	1.3	2.1	117	178	40	12	6.7	2.2	.20	.50
3	.70	1.4	1.3	2.2	45	305	34	10	6.2	1.9	.20	.40
4	.70	1.2	1.2	2.4	68	373	29	9.4	5.9	1.6	.20	.20
5	.70	1.1	1.2	2.4	74	207	40	8.5	5.4	1.4	.20	.20
6	.70	1.0	1.2	2.3	32	101	63	7.7	5.1	1.3	.30	.10
7	.70	.90	1.2	13	20	64	40	7.9	4.8	1.2	.30	.20
8	.70	1.0	1.2	8.8	14	51	34	11	4.6	1.2	.30	.20
9	.70	1.0	1.3	6.5	11	37	32	11	4.4	1.1	.20	.40
10	.70	1.0	6.6	6.2	8.8	46	27	9.2	4.0	1.0	.20	.40
11	.70	1.0	5.5	6.8	8.0	45	25	8.1	3.9	1.0	.20	.40
12	.70	.90	3.3	12	7.6	233	22	7.4	3.7	.90	.20	.30
13	.70	1.0	2.5	38	7.0	142	20	8.0	3.6	.90	.10	.30
14	.70	1.5	2.1	17	6.1	90	18	8.0	3.5	1.0	.10	.30
15	.70	1.5	2.8	12	5.6	68	18	7.1	3.3	1.0	.10	.20
16	.80	1.3	2.7	8.3	5.4	55	16	16	3.2	1.1	.10	.20
17	.80	1.1	2.3	6.6	5.2	55	15	35	3.1	1.4	.10	.20
18	.80	1.1	4.4	5.6	4.8	50	13	26	3.0	1.1	.10	.20
19	.80	1.1	9.1	4.8	4.5	42	12	21	3.0	.90	.10	.10
20	.80	1.1	6.3	4.1	4.3	44	14	17	3.1	.80	.10	.10
21	.80	1.1	5.6	3.6	4.1	40	16	15	2.8	.70	.10	.10
22	.60	1.1	5.6	3.3	3.9	35	12	13	2.7	.70	.10	.10
23	.60	1.1	5.6	3.1	3.7	80	11	11	2.6	.60	.20	.10
24	.50	1.1	5.6	2.9	3.6	86	12	10	2.6	.60	.20	.10
25	.50	1.5	5.6	2.8	3.4	93	19	9.3	2.5	.50	.20	.10
26	.50	2.4	5.0	2.7	3.3	120	19	8.7	2.3	.60	.20	.10
27	.50	1.9	4.0	2.6	3.2	101	15	8.0	2.5	.50	.30	.10
28	.50	1.6	3.3	2.5	4.2	92	12	8.0	3.2	.40	.70	.10
29	.60	1.4	3.1	2.4	---	78	11	8.2	3.6	.30	.90	.10
30	.70	1.4	3.0	2.3	---	67	11	9.9	2.8	.30	.70	.10
31	5.3	---	2.7	2.3	---	57	---	7.4	---	.20	.50	---
TOTAL	25.60	39.20	107.9	194.0	479.9	3055	697	363.8	115.4	30.80	7.60	6.40
MEAN	.83	1.31	3.48	6.26	17.1	98.5	23.2	11.7	3.85	.99	.25	.21
MAX	5.3	2.5	9.1	38	117	373	63	35	7.3	2.4	.90	.50
MIN	.50	.90	1.2	2.1	2.2	20	11	7.1	2.3	.20	.10	.10
AC-FT	51	78	214	385	952	6060	1380	722	229	61	15	13

WTR YR 1991 TOTAL 5122.60 MEAN 14.0 MAX 373 MIN .10 AC-FT 10160

11475000 EEL 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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. Flow slightly regulated by Lake Pillsbury (station 11470000) 99 mi upstream, and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--36 years, 4,524 ft^3/s, 3,278,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561,000 ft^3/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 ft^3/s on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 1.2 ft^3/s, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 41,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1930	*64,900	*28.40				

Minimum daily, 25 ft^3/s, Dec. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	162	53	35	50	211	5520	2010	899	227	39	38
2	54	162	45	34	3220	7330	4920	2020	834	198	36	45
3	49	159	39	36	5950	30200	4540	1910	786	171	33	50
4	45	129	35	39	2860	41200	4210	1820	754	150	31	46
5	42	103	32	40	5970	31200	4160	1720	713	136	31	43
6	40	87	29	42	3340	13000	6240	1710	670	122	30	43
7	38	77	27	91	1710	7550	6120	1650	623	112	30	42
8	37	71	26	162	1110	5390	4660	1660	536	103	30	42
9	37	67	25	210	793	4400	4130	1780	462	94	31	41
10	37	63	62	180	599	4120	3870	1620	392	89	32	41
11	36	60	96	147	473	4190	3440	1470	347	84	32	41
12	35	58	166	239	390	10300	2870	1390	316	81	33	40
13	35	55	127	922	327	14500	2570	1350	291	77	32	39
14	34	57	111	1490	283	7410	2490	1350	277	75	33	40
15	34	56	93	874	248	5120	2470	1330	260	73	33	41
16	34	54	89	509	222	3970	2380	1260	238	71	32	43
17	35	52	91	345	201	3610	2240	1420	215	71	31	44
18	42	50	94	258	180	4390	2080	1620	201	70	31	45
19	52	47	122	199	165	4010	1990	1540	194	69	31	45
20	51	45	126	161	151	3700	1950	1460	188	69	31	45
21	56	43	121	134	138	4470	2080	1490	182	69	31	45
22	61	41	96	115	128	3810	2060	1390	178	67	31	45
23	62	40	71	98	118	5730	2030	1320	170	63	30	44
24	59	39	55	87	111	12800	2060	1270	164	60	31	44
25	58	59	50	78	103	9650	2230	1210	158	57	31	43
26	56	59	53	74	95	10800	2460	1140	163	56	30	42
27	55	59	55	69	89	9610	2400	1070	168	52	31	42
28	53	70	55	61	88	7590	2200	999	170	49	34	42
29	53	68	54	56	---	6540	2060	945	175	48	36	46
30	56	61	50	54	---	6020	2050	921	204	47	37	46
31	105	---	43	50	---	5660	---	966	---	43	38	---
TOTAL	1501	2153	2191	6889	29112	288481	94480	44811	10928	2753	1002	1293
MEAN	48.4	71.8	70.7	222	1040	9306	3149	1446	364	88.8	32.3	43.1
MAX	105	162	166	1490	5970	41200	6240	2020	899	227	39	50
MIN	34	39	25	34	50	211	1950	921	158	43	30	38
AC-FT	2980	4270	4350	13660	57740	572200	187400	88880	21680	5460	1990	2560

CAL YR 1990 TOTAL 640855 MEAN 1756 MAX 47000 MIN 25 AC-FT 1271000
WTR YR 1991 TOTAL 485594 MEAN 1330 MAX 41200 MIN 25 AC-FT 963200

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. Raingage: lat 39°43'50", long 123°38'07", in NW 1/4 NW 1/4 sec.28, T.22 N., R.16 W., elevation, 1,440 ft at site 0.5 mi east of gaging station.
DRAINAGE AREA.--6.50 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.
GAGE.--Water-stage recorder, crest-stage gage, and one recording and storage-type precipitation gage. Datum of gage is 1,391.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation; small diversion upstream from station for domestic use.

AVERAGE DISCHARGE.--24 years, 24.5 ft^3/s, 17,750 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s, Mar. 29, 1974, gage height, 9.77 ft, from rating curve extended above 660 ft^3/s on basis of slope-area measurements at gage heights 9.40 and 11.41 ft; minimum daily, 0.27 ft^3/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 ft^3/s by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1445	*203	*5.56				

Minimum daily, 0.78 ft^3/s, Sept. 22-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.1	1.5	1.5	1.7	8.9	39	12	5.5	2.9	1.6	1.4
2	1.6	2.2	1.5	1.5	33	38	36	12	5.2	2.7	1.7	1.3
3	1.6	1.9	1.5	1.5	20	106	33	12	5.1	2.6	1.7	1.3
4	1.6	1.8	1.5	1.5	22	154	31	11	4.9	2.5	1.6	1.2
5	1.6	1.7	1.5	1.5	32	116	30	11	4.7	2.4	1.6	1.1
6	1.6	1.6	1.5	1.6	19	65	32	11	4.5	2.3	1.6	1.1
7	1.6	1.5	1.4	2.7	13	46	30	10	4.3	2.2	1.5	1.1
8	1.6	1.5	1.4	3.0	10	38	28	10	4.2	2.2	1.5	1.0
9	1.6	1.5	1.4	2.9	8.7	32	26	10	4.1	2.2	1.5	1.0
10	1.6	1.5	2.6	2.5	7.4	30	24	10	3.9	2.1	1.5	1.0
11	1.6	1.5	2.7	2.5	6.3	27	22	9.9	3.7	2.1	1.5	.98
12	1.6	1.5	2.2	7.4	5.6	66	21	9.8	3.5	2.1	1.3	.97
13	1.6	1.5	1.9	8.6	5.1	65	20	9.7	3.3	2.0	1.3	.93
14	1.6	1.5	1.8	5.6	4.8	52	19	9.7	3.1	1.9	1.3	.93
15	1.6	1.5	3.2	4.2	4.4	44	18	9.3	2.9	1.8	1.2	.91
16	1.6	1.5	2.7	3.4	4.1	38	17	9.2	2.8	1.8	1.2	.88
17	1.6	1.5	2.3	2.9	4.0	35	17	11	2.8	1.9	1.2	.88
18	2.2	1.5	2.0	2.7	3.8	34	16	9.8	2.8	2.1	1.4	.87
19	2.1	1.5	2.1	2.5	3.5	32	15	9.3	2.8	2.1	1.5	.83
20	2.0	1.5	2.2	2.3	3.3	34	15	8.9	2.8	2.0	1.5	.83
21	1.9	1.5	2.1	2.1	3.2	39	15	8.5	2.8	1.9	1.5	.82
22	1.8	1.5	2.3	2.0	3.1	39	14	8.0	2.8	1.9	1.4	.78
23	1.8	1.5	1.9	1.9	3.1	58	13	7.6	2.8	1.8	1.4	.78
24	1.8	1.5	1.8	1.8	2.9	71	13	7.2	2.8	1.7	1.4	.78
25	1.8	2.5	1.8	1.8	2.8	61	14	6.9	2.8	1.8	1.4	.78
26	1.8	2.5	1.8	1.7	2.7	55	14	6.8	2.9	1.8	1.3	.83
27	1.8	2.1	1.8	1.7	2.7	50	13	6.5	2.9	1.7	1.4	.81
28	1.8	1.8	1.7	1.7	3.2	47	13	6.2	3.1	1.7	1.5	.90
29	1.8	1.7	1.7	1.6	---	45	12	5.9	3.3	1.6	1.4	.92
30	3.2	1.6	1.6	1.6	---	43	12	5.8	3.1	1.6	1.5	.88
31	7.6	---	1.6	1.5	---	41	---	5.6	---	1.6	1.5	---
TOTAL	60.7	51.5	59.0	81.7	235.4	1609.9	622	280.6	106.2	63.0	44.9	28.79
MEAN	1.96	1.72	1.90	2.64	8.41	51.9	20.7	9.05	3.54	2.03	1.45	.96
MAX	7.6	3.1	3.2	8.6	33	154	39	12	5.5	2.9	1.7	1.4
MIN	1.6	1.5	1.4	1.5	1.7	8.9	12	5.6	2.8	1.6	1.2	.78
AC-FT	120	102	117	162	467	3190	1230	557	211	125	89	57
a	3.48	1.52	2.53	2.80	5.32	17.72	2.22	2.30	0.50	0.05	0.25	0.01

CAL YR 1990 TOTAL 4699.3 MEAN 12.9 MAX 187 MIN 1.4 AC-FT 9320
WTR YR 1991 TOTAL 3243.69 MEAN 8.89 MAX 154 MIN .78 AC-FT 6430

a Precipitation, in inches.

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: Water years 1968 to current year.
WATER TEMPERATURE: Water years 1968-79.
SEDIMENT DATA: Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1967 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
MAR										
21...	1255	20	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	0.07	0.01
SEP										
11...	1105	1.7	<0.6	<0.6	0.7	<0.6	<0.6	<0.6	0.10	0.03

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC												
05...	1045	1.5	142	8.1	5.0	0.30	735	10.8	88	K4	K6	60
MAR												
19...	1040	31	103	8.1	6.5	1.9	715	11.5	100	K11	K6	42
JUN												
14...	1400	3.1	136	8.4	15.0	0.30	725	9.6	100	K2	K10	53
SEP												
12...	1230	0.98	159	7.9	12.5	0.20	725	9.4	93	<1	760	65

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC											
05...	0	16	4.8	8.0	22	0.5	0.80	81	66	3.3	3.4
MAR											
19...	0	11	3.5	5.6	22	0.4	0.60	59	48	2.4	2.5
JUN											
14...	0	14	4.4	7.5	23	0.4	0.60	78	64	3.4	2.5
SEP											
12...	0	17	5.3	9.0	23	0.5	0.80	93	76	3.5	5.5

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
DEC											
05...	<0.10	14	74	90	0.10	<0.010	<0.010	<0.100	<0.100	0.020	0.020
MAR											
19...	<0.10	14	63	69	0.09	0.020	<0.010	<0.050	<0.050	<0.010	<0.010
JUN											
14...	0.10	14	75	85	0.10	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010
SEP											
12...	0.10	15	88	102	0.12	<0.010	<0.010	<0.050	<0.050	<0.010	0.030

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
DEC											
05...	<0.20	0.030	0.020	0.030	0.020	<10	<1	18	<0.5	<1.0	<1
MAR											
19...	<0.20	0.020	0.010	0.010	<0.010	<10	<1	12	<0.5	1.0	<1
JUN											
14...	0.20	0.010	0.010	<0.010	0.010	<10	<1	14	<0.5	<1.0	<1
SEP											
12...	<0.20	0.030	0.030	0.020	0.010	<10	<1	21	<0.5	<1.0	<1

DATE	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)
DEC											
05...	<3	1	7	1	<4	3	<0.1	<10	1	<1	<1.0
MAR											
19...	<3	1	6	3	<4	<1	<0.1	<10	1	<1	<1.0
JUN											
14...	<3	2	4	<1	<4	<1	<0.1	<10	1	<1	<1.0
SEP											
12...	<3	1	4	<1	<4	2	<0.1	<10	<1	<1	<1.0

DATE	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
DEC											
05...	160	<6	18	--	--	--	--	--	--	--	--
MAR											
19...	100	<6	3	<0.6	<0.6	0.6	<0.6	<0.6	<0.6	0.02	<0.01
JUN											
14...	140	<6	<3	--	--	--	--	--	--	--	--
SEP											
12...	180	<6	4	<0.6	<0.6	0.9	<0.6	0.7	<0.6	0.02	0.03

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
18...*	1640	1.11	6.00	100	8.0	7.5	720	10.5	93	3	--
18...*	1705	1.77	11.5	100	8.0	7.5	720	10.4	92	2	--
18...*	1720	1.40	15.2	100	8.0	7.5	720	10.7	94	1	--
AUG											
05...*	1215	0.40	2.80	148	8.0	17.0	721	9.2	101	9	54
05...*	1235	0.63	6.70	148	8.0	17.0	721	9.3	102	9	52
05...*	1305	0.56	10.3	149	8.0	17.0	721	9.1	100	10	40

* Instantaneuos streamflow at the time of cross-sectional measurements: Mar. 18, 33 ft^3/s; Aug. 5, 1.6 ft^3/s.

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
05...	1045	1.5	5.0	2	0.01	--
MAR						
18...	1700	33	7.5	2	0.18	--
19...	1040	31	6.5	3	0.25	--
JUN						
14...	1400	3.1	15.0	0	0.0	--
AUG						
05...	1240	1.6	17.0	9	0.03	49
SEP						
12...	1230	0.98	12.5	1	0.00	--

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 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 691.32 ft above National Geodetic Vertical Datum of 1929. Prior to July 29, 1988, at datum 2.00 ft higher.

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

AVERAGE DISCHARGE.--26 years, 849 ft^3/s, 615,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,700 ft^3/s, Jan. 4, 1966, gage height, 27.4 ft, from floodmarks, present datum, from rating curve extended above 21,000 ft^3/s on basis of slope-area measurement at gage height 28.13 ft; minimum daily, 7.3 ft^3/s, Aug. 4-6, 12, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 28.13 ft, from floodmarks, present datum, discharge, 78,700 ft^3/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1030	*18,400	*14.50				

Minimum daily, 14 ft^3/s, on several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	145	41	58	87	260	756	175	83	62	18	24
2	32	82	39	58	1470	2680	677	176	78	58	17	22
3	31	62	37	58	946	8560	584	162	75	44	17	21
4	29	50	36	60	939	9330	519	155	73	34	17	20
5	29	43	36	60	1520	3430	508	146	71	31	17	19
6	28	39	36	62	772	1540	640	142	69	29	17	18
7	28	36	35	133	510	1080	522	138	66	28	17	17
8	29	35	35	153	402	840	460	139	63	27	17	17
9	28	34	35	129	352	700	425	139	62	27	17	17
10	26	34	77	109	321	710	396	130	61	26	17	17
11	26	34	118	103	274	721	371	125	58	24	17	17
12	26	33	94	434	239	2560	344	119	56	24	17	17
13	25	32	72	556	204	2030	323	120	54	24	16	17
14	25	32	60	391	175	1330	306	123	55	23	15	16
15	25	32	78	298	156	1050	288	116	54	22	15	16
16	25	32	96	240	150	865	275	113	54	24	14	16
17	24	32	96	201	138	802	259	140	53	25	14	16
18	29	32	81	170	130	816	249	137	54	26	15	15
19	35	31	85	150	122	730	236	127	52	27	16	15
20	35	31	90	139	108	809	231	118	53	26	17	15
21	35	31	79	126	100	1100	222	111	55	24	18	14
22	32	31	61	115	99	922	209	104	55	24	19	14
23	30	31	57	108	96	1850	203	99	55	24	20	14
24	30	31	54	102	95	2230	211	95	54	23	20	14
25	29	46	54	99	86	1710	221	91	54	22	20	14
26	28	80	54	98	83	1780	241	89	54	22	19	14
27	27	77	54	92	83	1590	215	87	54	21	19	14
28	27	60	62	90	98	1320	193	83	58	20	22	14
29	26	51	66	88	---	1120	179	81	65	19	24	14
30	34	44	61	86	---	968	171	91	67	18	24	14
31	282	---	59	84	---	843	---	91	---	18	24	---
TOTAL	1148	1363	1938	4650	9755	56276	10434	3762	1815	846	556	492
MEAN	37.0	45.4	62.5	150	348	1815	348	121	60.5	27.3	17.9	16.4
MAX	282	145	118	556	1520	9330	756	176	83	62	24	24
MIN	24	31	35	58	83	260	171	81	52	18	14	14
AC-FT	2280	2700	3840	9220	19350	111600	20700	7460	3600	1680	1100	976

CAL YR 1990 TOTAL 145666 MEAN 399 MAX 9980 MIN 24 AC-FT 288900
WTR YR 1991 TOTAL 93035 MEAN 255 MAX 9330 MIN 14 AC-FT 184500

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 mi^2.

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

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. Occasional storage and release for recreational use during summer months at Benbow Dam, 16 mi upstream. No diversion upstream from station.

AVERAGE DISCHARGE.--52 years, 1,887 ft^3/s, 1,367,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 199,000 ft^3/s, Dec. 22, 1964, gage height, 46.0 ft, from floodmarks, from rating curve extended above 53,000 ft^3/s on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 ft^3/s, Oct. 17, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1745	*22,200	*16.48				

Minimum daily, 31 ft^3/s, Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	432	91	95	129	457	1630	368	182	104	43	54
2	60	214	86	92	4150	4950	1390	367	169	101	42	52
3	59	140	82	92	3070	14800	1220	337	160	95	42	51
4	58	113	79	92	1800	15400	1090	313	154	88	41	50
5	58	101	79	92	4150	10900	1060	294	149	83	41	49
6	57	90	78	94	1960	5010	1310	281	147	78	40	47
7	57	86	78	219	1130	3190	1150	271	142	73	39	45
8	56	82	75	295	815	2270	984	284	137	72	39	45
9	56	80	78	255	662	1720	899	295	135	70	39	44
10	57	77	210	204	568	1680	839	275	132	68	38	44
11	56	76	319	182	492	1690	777	254	127	42	38	43
12	56	75	225	611	427	5840	727	243	124	33	38	43
13	56	76	166	1030	372	6470	682	246	118	54	37	42
14	56	79	134	795	332	3940	640	254	115	56	36	42
15	56	79	170	555	302	3060	604	241	112	55	35	41
16	57	79	204	414	276	2310	576	240	111	59	35	39
17	57	78	188	309	255	1990	541	325	108	72	35	39
18	64	75	171	253	237	2040	506	338	105	54	36	38
19	75	75	211	221	217	1730	481	294	88	54	37	37
20	79	74	213	193	206	1620	483	263	83	55	36	37
21	75	73	177	172	193	2160	474	243	89	56	37	37
22	73	74	146	158	189	1960	437	229	87	55	39	108
23	71	72	131	145	179	3720	411	217	86	52	43	96
24	68	74	122	139	165	6370	430	200	84	52	45	42
25	66	85	118	131	158	4740	445	191	82	48	46	35
26	65	127	119	125	153	4670	484	185	80	46	46	41
27	65	142	117	120	150	4140	462	178	79	40	46	33
28	65	128	115	115	170	3410	409	170	88	38	49	33
29	65	110	114	113	---	2870	377	171	96	41	51	31
30	70	98	105	108	---	2360	349	185	98	43	57	31
31	328	---	99	105	---	1910	---	189	---	44	56	---
TOTAL	2204	3164	4300	7524	22907	129377	21867	7941	3467	1881	1282	1369
MEAN	71.1	105	139	243	818	4173	729	256	116	60.7	41.4	45.6
MAX	328	432	319	1030	4150	15400	1630	368	182	104	57	108
MIN	56	72	75	92	129	457	349	170	79	33	35	31
AC-FT	4370	6280	8530	14920	45440	256600	43370	15750	6880	3730	2540	2720

CAL YR 1990 TOTAL 377016 MEAN 1033 MAX 28600 MIN 56 AC-FT 747800
WTR YR 1991 TOTAL 207283 MEAN 568 MAX 15400 MIN 31 AC-FT 411100

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 mi^2.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 269.36 ft above National Geodetic Vertical Datum of 1929. 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. Minor diversions upstream from station for domestic and recreational use.

AVERAGE DISCHARGE.--31 years, 120 ft^3/s, 86,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft^3/s, Dec. 22, 1964, gage height, 20.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 2,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft^3/s, Sept. 28, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1415	*2,040	*7.55				

Minimum daily, 1.2 ft^3/s, Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	5.8	4.8	6.0	24	40	112	34	22	9.2	e4.1	e3.1
2	1.4	4.6	4.6	5.9	245	327	101	31	21	8.4	e3.9	e2.9
3	1.3	4.0	4.4	5.9	109	941	92	29	20	e7.8	e3.8	e2.8
4	1.3	3.7	4.4	5.9	129	1310	84	28	19	e7.4	e3.7	e2.7
5	1.3	3.3	4.5	5.6	144	724	84	26	19	e7.0	e3.5	e2.5
6	1.4	3.2	4.4	6.5	98	435	79	26	18	e6.8	e3.4	e2.4
7	1.5	3.2	4.2	22	73	278	72	26	17	e6.8	e3.3	e2.3
8	1.5	3.2	4.1	13	58	197	67	27	16	e6.7	e3.2	e2.2
9	1.4	3.1	4.4	10	49	161	63	26	16	e6.6	e3.2	e2.1
10	1.3	3.1	20	9.2	42	147	60	24	15	e6.5	e3.1	e2.0
11	1.3	3.1	13	11	37	132	57	24	15	e6.3	e3.1	e2.0
12	1.3	3.0	8.5	28	33	316	54	23	14	e6.1	e3.1	e1.9
13	1.3	6.0	6.9	29	31	215	51	25	14	e5.9	e3.1	e1.8
14	1.3	10	6.3	23	29	200	49	24	14	e5.7	e3.1	e1.8
15	1.3	5.6	18	19	27	182	50	22	13	e5.5	e3.0	e1.7
16	1.5	4.8	12	15	25	159	47	25	13	e6.0	e3.0	e1.7
17	1.5	4.4	9.1	13	24	195	45	46	12	e7.0	e3.0	e1.5
18	4.0	4.1	8.3	11	22	213	43	38	12	e8.0	e3.0	e1.5
19	4.6	3.9	15	10	21	180	41	36	13	e6.8	e3.0	e1.5
20	3.2	3.7	11	9.1	20	167	43	33	13	e6.2	e3.0	e1.4
21	2.9	3.7	8.9	8.3	19	157	43	31	12	e5.9	e3.1	e1.4
22	2.7	3.7	7.3	7.7	18	142	39	29	11	e5.6	e3.2	e1.4
23	2.7	3.7	6.8	7.1	17	340	38	27	11	e5.4	e3.3	e1.3
24	2.5	3.7	6.3	6.8	16	351	39	26	11	e5.2	e3.4	e1.3
25	2.5	12	6.2	6.3	16	274	38	25	11	e5.1	e3.5	e1.3
26	2.5	14	6.3	6.1	15	241	37	24	10	e4.9	e3.7	e1.3
27	2.5	7.3	6.3	5.9	15	198	35	24	11	e4.7	e4.0	e1.3
28	2.5	6.0	7.5	5.7	15	171	33	23	12	e4.5	e4.4	e1.3
29	2.6	5.4	7.6	5.4	---	152	32	25	12	e4.4	e3.8	e1.2
30	3.8	5.1	6.5	5.2	---	137	31	27	9.9	e4.3	e3.5	e1.2
31	14	---	6.2	4.9	---	124	---	24	---	e4.2	e3.3	---
TOTAL	76.4	150.4	243.8	327.5	1371	8806	1659	858	426.9	190.9	104.8	54.8
MEAN	2.46	5.01	7.86	10.6	49.0	284	55.3	27.7	14.2	6.16	3.38	1.83
MAX	14	14	20	29	245	1310	112	46	22	9.2	4.4	3.1
MIN	1.3	3.0	4.1	4.9	15	40	31	22	9.9	4.2	3.0	1.2
AC-FT	152	298	484	650	2720	17470	3290	1700	847	379	208	109

CAL YR 1990 TOTAL 18818.5 MEAN 51.6 MAX 580 MIN 1.3 AC-FT 37330
WTR YR 1991 TOTAL 14269.5 MEAN 39.1 MAX 1310 MIN 1.2 AC-FT 28300

e Estimated.

11477000 EEL RIVER AT SCOTIA, CA
(National stream-quality accounting network station)

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 mi^2.

WATER-DISCHARGE RECORDS

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.
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 National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow slightly regulated by Lake Pillsbury (station 11470000) 138 mi upstream since December 1921 and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--81 years, 7,319 ft^3/s, 5,303,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 752,000 ft^3/s, Dec. 23, 1964, gage height, 72.0 ft, from floodmarks, from rating curve extended above 220,000 ft^3/s on basis of maximum flow at upstream stations; minimum observed, 10 ft^3/s, Aug. 12-14, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 72,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0130	*105,000	*29.28				

Minimum daily, 68 ft^3/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	491	305	341	379	646	9070	2740	1260	426	110	118
2	133	644	282	317	6140	7320	8440	2720	1140	463	104	118
3	124	489	261	305	12500	51700	7340	2650	1050	426	101	114
4	118	414	242	300	6930	71600	6810	2520	997	384	101	108
5	112	350	237	300	11100	72100	6450	2360	946	356	99	105
6	103	301	232	303	e5000	25400	8040	2260	884	329	97	104
7	101	261	220	472	e4000	14000	10300	2200	831	309	92	101
8	101	236	217	884	e2500	9400	7750	2190	785	287	86	99
9	99	220	215	902	e2100	7100	6670	2250	744	269	86	93
10	97	210	285	872	e1800	6230	6110	2250	703	252	86	89
11	97	204	683	801	e1680	6350	5720	2030	665	238	84	89
12	95	198	712	1240	1560	12700	4760	1890	638	221	82	88
13	91	219	670	2470	1370	29200	4110	1850	603	198	82	86
14	89	272	551	3400	1220	16000	3770	1840	569	188	82	86
15	89	245	579	2680	1100	11300	3720	1830	537	187	82	86
16	88	226	573	1900	1020	8590	3590	1770	512	210	82	86
17	86	214	561	1440	945	7480	3360	2180	496	220	84	81
18	110	211	552	1170	873	8060	3160	2450	482	211	86	76
19	128	206	789	980	814	7760	3030	2370	485	206	86	74
20	128	200	866	837	766	6780	2950	2170	453	189	86	76
21	134	200	634	732	719	7490	2940	2070	432	178	86	76
22	138	200	629	651	680	7550	2920	2000	418	173	86	74
23	138	200	524	587	656	8860	2820	1850	411	171	86	113
24	138	200	456	526	622	23900	2800	1750	394	165	86	192
25	138	254	401	488	595	18200	2920	1670	387	157	87	134
26	134	340	386	459	563	18400	3210	1570	379	149	90	97
27	128	358	379	436	533	17600	3390	1480	380	147	93	79
28	128	356	389	411	525	14000	3110	1370	395	141	100	76
29	126	346	394	397	---	11900	2880	1310	409	132	101	73
30	129	331	389	375	---	10800	2750	1280	418	123	104	68
31	196	---	365	355	---	9610	---	1250	---	116	113	---
TOTAL	3655	8596	13978	27331	68690	528026	144890	62120	18803	7221	2830	2859
MEAN	118	287	451	882	2453	17030	4830	2004	627	233	91.3	95.3
MAX	196	644	866	3400	12500	72100	10300	2740	1260	463	113	192
MIN	86	198	215	300	379	646	2750	1250	379	116	82	68
AC-FT	7250	17050	27730	54210	136200	1047000	287400	123200	37300	14320	5610	5670

CAL YR 1990 TOTAL 1195984 MEAN 3277 MAX 83500 MIN 86 AC-FT 2372000
WTR YR 1991 TOTAL 888999 MEAN 2436 MAX 72100 MIN 68 AC-FT 1763000

e Estimated.

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952-75, 1977, 1979 to current year.
BIOLOGICAL DATA: Water year 1979-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1958-82.
SEDIMENT DATA: Water years 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to September 1981.
WATER TEMPERATURE: October 1957 to June 1982.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
OCT												
31...	1200	195	284	8.4	16.0	1.0	765	10.1	102	K19	20	130
JAN												
02...	1215	319	286	8.3	3.0	0.30	765	13.7	101	K2	K6	140
MAR												
01...	1030	600	247	8.3	12.0	0.30	745	9.8	93	K2	K7	120
03...	1450	61300	107	8.1	12.5	870	755	10.3	98	--	--	60
12...	1050	10500	153	8.2	9.0	7.6	760	11.4	99	--	--	66
MAY												
02...	1010	2700	173	8.2	13.5	2.7	760	10.0	96	K3	K3	80
JUL												
02...	1010	472	259	8.3	21.0	1.2	760	7.7	87	K4	K6	120
SEP												
06...	1330	105	280	8.6	22.5	0.40	760	9.2	107	K1	66	130

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	CARBONATE WATER DIS IT FIELD MG/L AS CO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT												
31...	8	36	9.8	9.0	13	0.3	1.5	146	2	123	20	7.3
JAN												
02...	22	38	10	8.8	12	0.3	1.2	126	7	115	25	9.3
MAR												
01...	18	34	8.8	8.7	13	0.3	1.2	126	0	104	19	6.1
03...	19	17	4.2	4.1	13	0.2	1.0	50	0	41	6.8	2.3
12...	2	18	5.2	5.8	16	0.3	0.90	78	0	64	11	3.4
MAY												
02...	0	22	6.0	5.2	12	0.3	0.90	98	0	80	15	1.9
JUL												
02...	7	34	8.8	7.5	12	0.3	1.2	139	0	114	16	6.1
SEP												
06...	9	35	11	9.9	14	0.4	1.5	146	3	124	18	7.9

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
31...	<0.10	8.1	182	166	0.25	<0.010	<0.010	<0.100	<0.100	0.020	<0.010	<0.20
JAN												
02...	0.20	7.0	154	169	0.21	<0.010	<0.010	<0.050	<0.050	0.010	0.020	0.30
MAR												
01...	0.10	8.2	141	148	0.19	0.030	<0.010	<0.050	<0.050	<0.010	0.020	<0.20
03...	<0.10	7.5	79	68	0.11	0.050	0.010	0.090	0.094	0.040	0.050	1.9
12...	<0.10	9.7	97	93	0.13	0.030	<0.010	0.053	0.072	0.020	<0.010	<0.20
MAY												
02...	<0.10	9.3	100	109	0.14	0.020	<0.010	<0.050	<0.050	<0.010	<0.010	<0.20
JUL												
02...	<0.10	6.7	--	149	0.12	<0.010	<0.010	<0.050	<0.050	<0.010	0.020	0.58
SEP												
06...	0.10	7.2	153	166	0.21	<0.010	<0.010	<0.050	<0.050	0.010	<0.010	0.20

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT												
31...	<0.010	<0.010	<0.010	<0.010	<10	<1	76	<0.5	<1.0	<1	<3	1
JAN												
02...	<0.010	<0.010	0.010	<0.010	<10	<1	70	<0.5	<1.0	<1	<3	2
MAR												
01...	0.010	0.020	<0.010	<0.010	--	--	--	--	--	--	--	--
03...	0.360	0.030	0.070	0.020	--	--	--	--	--	--	--	--
12...	0.050	0.020	0.030	<0.010	--	--	--	--	--	--	--	--
MAY												
02...	0.010	0.010	<0.010	<0.010	<10	<1	46	<0.5	<1.0	<1	<3	1
JUL												
02...	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--
SEP												
06...	<0.010	<0.010	<0.010	<0.010	<10	<1	87	<0.5	<1.0	<1	<3	1

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT												
31...	5	<1	5	23	<0.1	<10	1	<1	<1.0	380	<6	7
JAN												
02...	10	<1	<4	9	<0.1	<10	1	<2	<1.0	400	<6	4
MAR												
01...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
02...	10	<1	<4	3	<0.1	<10	1	<1	<1.0	280	<6	6
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	10	<1	<4	3	<0.1	<10	<1	<1	<1.0	430	<6	10

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
12...*	1225	10.0	55.0	146	8.2	9.0	760	10.9	95	580	89
12...*	1245	8.50	110	144	8.1	9.0	760	10.4	90	669	83
12...*	1300	8.40	185	143	8.2	9.0	760	11.2	97	815	71
12...*	1325	6.10	275	143	8.2	9.0	760	11.2	97	1080	59
12...*	1345	5.10	395	143	8.2	9.0	760	11.0	95	746	74
AUG											
02...*	1115	1.35	56.0	299	8.4	22.5	765	9.5	109	2	--
02...*	1140	2.02	86.0	301	8.4	22.0	765	8.9	102	2	--
02...*	1200	2.20	106	301	8.3	22.0	765	8.6	98	2	--
02...*	1230	2.13	126	302	8.3	22.0	765	8.6	98	2	--
02...*	1255	1.43	152	302	8.4	22.5	765	8.9	102	3	--

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 12, 13,100 ft^3/s; Aug. 2, 105 ft^3/s.

11477000 EEL RIVER AT SCOTIA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
31...	1200	195	16.0	2	1.1	--	--
JAN							
02...	1215	319	3.0	2	1.7	--	--
MAR							
01...	1030	600	12.0	1	1.6	--	--
03...	1450	61300	12.5	3160	523000	24	29
12...	1050	10500	9.0	402	11400	--	--
12...	1305	13100	9.0	778	27500	--	--
MAY							
02...	1010	2700	13.5	4	29	--	--
JUL							
02...	1010	472	21.0	1	1.3	--	--
AUG							
02...	1205	105	22.0	2	0.57	--	--
SEP							
06...	1330	105	22.5	3	0.85	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT							
31...	--	--	--	--	--	--	--
JAN							
02...	--	--	--	--	--	--	--
MAR							
01...	--	--	--	--	--	--	--
03...	39	54	66	76	86	94	100
12...	--	--	--	69	--	--	--
12...	--	--	--	75	--	--	--
MAY							
02...	--	--	--	--	--	--	--
JUL							
02...	--	--	--	96	--	--	--
AUG							
02...	--	--	--	--	--	--	--
SEP							
06...	--	--	--	96	--	--	--

11477425 MILL CREEK BELOW DIVERSION DAM, NEAR DINSMORE, CA

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.

DRAINAGE AREA.--0.74 mi^2.

PERIOD OF RECORD.--October 1990 to September 1991.

GAGE.--Water-stage recorder and 90 degree v-notch weir. Elevation of gage is 3,660 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. The gage measures fishwater release only. Water diverted upstream to Mill and Sulphur Creek powerhouse.

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 0.40 ft^3/s, Mar. 3, 4, Apr. 6, 1991; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.31	.35	.31	.00	.00	.00	.00
2	.00	.00	.00	.00	.35	.37	.37	.31	.00	.00	.00	.00
3	.00	.00	.00	.00	.35	.40	.35	.29	.00	.00	.00	.00
4	.00	.00	.00	.00	.33	.40	.35	.29	.00	.00	.00	.00
5	.00	.00	.00	.00	.31	.35	.37	.29	.00	.00	.00	.00
6	.00	.00	.00	.00	.31	.35	.40	.29	.00	.00	.00	.00
7	.00	.00	.00	.37	.29	.33	.37	.29	.00	.00	.00	.00
8	.00	.00	.00	.33	.29	.33	.33	.29	.00	.00	.00	.00
9	.00	.00	.00	.35	.29	.33	.33	.29	.00	.00	.00	.00
10	.00	.00	.00	.35	.29	.31	.31	.29	.00	.00	.00	.00
11	.00	.00	.00	.37	.29	.31	.29	.29	.00	.00	.00	.00
12	.00	.00	.00	.35	.29	.29	.29	.27	.00	.00	.00	.00
13	.00	.00	.00	.33	.33	.29	.29	.27	.00	.00	.00	.00
14	.00	.00	.00	.31	.00	.29	.29	.27	.00	.00	.00	.00
15	.00	.00	.00	.20	.00	.29	.29	.31	.00	.00	.00	.00
16	.00	.00	.00	.13	.00	.29	.29	.33	.00	.00	.00	.00
17	.00	.00	.00	.17	.00	.29	.29	.33	.00	.00	.00	.00
18	.00	.00	.00	.14	.00	.29	.29	.29	.00	.00	.00	.00
19	.00	.00	.00	.20	.00	.29	.29	.29	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.29	.29	.31	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.29	.31	.31	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.29	.31	.33	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.29	.31	.35	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.29	.31	.31	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.33	.31	.29	.00	.00	.00	.00
31	.00	---	.00	.00	---	.33	---	.33	---	.00	.00	---
TOTAL	0.00	0.00	0.00	3.60	3.72	9.67	9.43	9.37	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.12	.13	.31	.31	.30	.000	.000	.000	.000
MAX	.00	.00	.00	.37	.35	.40	.40	.35	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.29	.29	.27	.00	.00	.00	.00
AC-FT	.00	.00	.00	7.1	7.4	19	19	19	.00	.00	.00	.00

WTR YR 1991 TOTAL 35.79 MEAN .098 MAX .40 MIN .00 AC-FT 71

11477450 SULPHUR CREEK BELOW DIVERSION DAM, NEAR DINSMORE, CA

LOCATION.--Lat 40°27'50", long 123°36'15", in NW 1/4 SW 1/4 sec.15, T.1 N., R.5 E., Humboldt County, Hydrologic Unit 18010105, on right bank 2 mi south southeast of Dinsmore.

DRAINAGE AREA.--1.06 mi^2.

PERIOD OF RECORD.--October 1990 to September 1991.

GAGE.--Water-stage recorder and 90 degree v-notch weir. Elevation of gage is 3,660 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--The gage measures fishwater release only. Water diverted upstream to Mill and Sulphur Creek powerhouse.

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 0.66 ft^3/s, Mar. 3, 4, 1991; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.42	.57	.40	.00	.00	.00	.00
2	.00	.00	.00	.00	.13	.49	.51	.40	.00	.00	.00	.00
3	.00	.00	.00	.00	.08	e.66	.49	.40	.00	.00	.00	.00
4	.00	.00	.00	.00	.11	e.66	.49	.40	.00	.00	.00	.00
5	.00	.00	.00	.00	.26	e.60	.51	.40	.00	.00	.00	.00
6	.00	.00	.00	.00	.33	e.54	.49	.37	.00	.00	.00	.00
7	.00	.00	.00	.44	.13	.49	.49	.37	.00	.00	.00	.00
8	.00	.00	.00	.40	.09	.44	.49	.40	.00	.00	.00	.00
9	.00	.00	.00	.40	.08	.42	.49	.40	.00	.00	.00	.00
10	.00	.00	.00	.48	.06	.44	.46	.40	.00	.00	.00	.00
11	.00	.00	.00	.46	.05	.44	.42	.37	.00	.00	.00	.00
12	.00	.00	.00	.51	.17	.46	.44	.37	.00	.00	.00	.00
13	.00	.00	.00	.46	.27	.46	.44	.37	.00	.00	.00	.00
14	.00	.00	.00	.27	.00	.44	.44	.40	.00	.00	.00	.00
15	.00	.00	.00	.11	.00	.44	.44	.46	.00	.00	.00	.00
16	.00	.00	.00	.11	.00	.44	.42	.51	.00	.00	.00	.00
17	.00	.00	.00	.14	.00	.44	.42	.49	.00	.00	.00	.00
18	.00	.00	.00	.17	.00	.44	.42	.44	.00	.00	.00	.00
19	.00	.00	.00	.20	.00	.42	.42	.44	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.42	.42	.42	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.42	.42	.40	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.42	.40	.40	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.42	.40	.37	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.42	.40	.40	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.42	.42	.37	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.44	.44	.37	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.44	.42	.42	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.46	.40	.46	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.49	.40	.44	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.57	.40	.37	.00	.00	.00	.00
31	.00	---	.00	.00	---	.60	---	.44	---	.00	.00	---
TOTAL	0.00	0.00	0.00	4.15	1.76	14.66	13.37	12.65	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.13	.063	.47	.45	.41	.000	.000	.000	.000
MAX	.00	.00	.00	.51	.33	.66	.57	.51	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.42	.40	.37	.00	.00	.00	.00
AC-FT	.00	.00	.00	8.2	3.5	29	27	25	.00	.00	.00	.00

WTR YR 1991 TOTAL 46.59 MEAN .13 MAX .66 MIN .00 AC-FT 92

e Estimated.

11477475 MILL CREEK BELOW SULPHUR CREEK, AT DINSMORE, CA

LOCATION.--Lat 40°28'59", long 123°36'28", in SE 1/4 NE 1/4 sec.9, T.1 N., R.5 E., Humboldt County, Hydrologic Unit 18010105, on right bank 300 ft downstream of confluence of Mill and Sulphur Creeks and 0.6 mi south of Dinsmore.

DRAINAGE AREA.--3.11 mi^2.

PERIOD OF RECORD.--October 1990 to September 1991.

GAGE.--Water-stage recorder and weir. Elevation of gage is 2,550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record of river only includes water retained in Mill and Sulphur creeks for fishery enhancement plus any additional water not diverted for power developement at Mill and Sulphur Creek powerplant. Combined flow includes flow to powerplant and represents all flow from drainage area. See following page for records of combined discharge of creek and powerplant.

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.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 140 ft^3/s, Mar. 3, 1991, gage height 2.02 ft; no flow many days in 1991.
Combined flow, maximum discharge, 152 ft^3/s, Mar. 3, 1991; no flow many days.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 140 ft^3/s, Mar. 3, gage height, 2.02 ft; no flow for many days.
Combined flow, maximum discharge, 152 ft^3/s, Mar. 3; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.30	.93	1.2	3.6	20	2.8	2.6	.72	.02	.00
2	.00	.00	.25	.92	38	22	12	2.6	2.4	.66	.02	.00
3	.00	.00	.25	1.0	9.7	48	9.7	2.6	2.3	e.54	.00	.00
4	.00	.00	.25	1.1	9.7	52	7.8	2.4	1.9	e.42	.00	.00
5	.00	.00	.25	1.2	10	46	26	2.3	1.6	e.36	.00	.00
6	.00	.00	.30	1.4	6.5	10	32	2.3	1.5	.25	.00	.00
7	.00	.07	.36	6.5	4.3	6.8	20	2.1	1.5	.25	.00	.00
8	.00	.07	.36	3.4	3.4	9.0	11	2.3	1.4	.21	.00	.00
9	.00	.07	.36	3.4	2.8	7.6	5.9	2.3	1.4	.21	.00	.00
10	.00	.05	4.5	4.5	2.4	5.9	5.3	2.3	1.2	.21	.00	.00
11	.00	.05	2.6	7.2	2.1	5.1	4.3	2.3	1.1	.17	.00	.00
12	.00	.03	1.5	20	2.3	14	3.8	2.1	1.1	.17	.00	.00
13	.00	.05	1.1	20	2.6	11	3.4	2.1	e1.1	.17	.00	.00
14	.00	.09	.93	7.6	2.1	9.0	3.2	1.9	e1.1	.17	.00	.00
15	.00	.09	1.0	4.8	1.9	7.2	2.9	2.3	e1.0	.17	.00	.00
16	.00	.09	.93	3.4	1.8	6.5	2.9	4.5	e1.0	.21	.00	.00
17	.00	.09	.72	3.4	1.8	7.2	2.8	5.9	e1.0	.21	.00	.00
18	.00	.11	1.4	2.9	1.6	7.6	2.8	4.8	e1.0	.21	.00	.00
19	.00	.14	2.3	2.9	1.6	6.8	2.6	4.3	e.93	.17	.00	.00
20	.00	.17	1.9	3.2	1.5	6.8	2.6	3.8	e.93	.21	.00	.00
21	.00	.17	2.1	2.8	1.4	6.5	2.4	3.4	e.93	.21	.00	.00
22	.00	.17	2.1	1.5	1.4	6.3	2.4	2.9	e.82	.21	.00	.00
23	.00	.17	2.1	1.2	1.2	7.8	2.1	2.8	e.82	.17	.00	.00
24	.00	.17	2.1	1.1	1.1	8.5	2.1	2.9	.72	.17	.00	.00
25	.00	.60	2.1	1.0	1.0	7.8	2.8	2.8	.72	.14	.00	.00
26	.00	.93	1.9	1.0	.93	9.0	2.6	2.6	.72	.14	.00	.00
27	.00	.66	1.2	.93	.93	7.6	2.4	2.6	.72	.11	.00	.00
28	.00	.54	.93	.82	1.1	8.2	2.4	2.8	.93	.09	.00	.00
29	.00	.42	.93	.66	---	9.4	2.4	2.8	1.0	.07	.00	.00
30	.00	.36	.93	.66	---	18	2.4	2.4	.82	.05	.00	.00
31	.00	---	.93	.66	---	22	---	2.6	---	.05	.00	---
TOTAL	0.00	5.36	38.88	112.08	116.36	403.2	205.0	88.6	36.26	7.10	0.04	0.00
MEAN	.000	.18	1.25	3.62	4.16	13.0	6.83	2.86	1.21	.23	.001	.000
MAX	.00	.93	4.5	20	38	52	32	5.9	2.6	.72	.02	.00
MIN	.00	.00	.25	.66	.93	3.6	2.1	1.9	.72	.05	.00	.00
AC-FT	.00	11	77	222	231	800	407	176	72	14	.08	.00

WTR YR 1991 TOTAL 1012.88 MEAN 2.78 MAX 52 MIN .00 AC-FT 2010

e Estimated.

11477476 MILL CREEK BELOW SULPHUR CREEK, AT DINSMORE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MILL CREEK
AND MILL AND SULPHUR CREEK POWERPLANT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.30	.93	1.2	4.7	26	6.0	2.6	.72	.02	.00
2	.00	.00	.25	.92	47	31	24	5.9	2.4	.66	.02	.00
3	.00	.00	.25	1.0	21	59	21	5.3	2.3	.54	.00	.00
4	.00	.00	.25	1.1	21	63	19	4.6	1.9	.42	.00	.00
5	.00	.00	.25	1.2	22	57	37	4.1	1.6	.36	.00	.00
6	.00	.00	.30	1.4	14	22	44	3.9	1.5	.25	.00	.00
7	.00	.07	.36	8.0	9.7	16	32	3.7	1.5	.25	.00	.00
8	.00	.07	.36	5.0	7.2	16	22	5.0	1.4	.21	.00	.00
9	.00	.07	.36	3.4	5.6	14	17	4.7	1.4	.21	.00	.00
10	.00	.05	4.5	6.3	4.6	12	16	4.1	1.2	.21	.00	.00
11	.00	.05	2.6	9.0	3.7	10	12	3.9	1.1	.17	.00	.00
12	.00	.03	1.5	24	3.5	22	11	3.3	1.1	.17	.00	.00
13	.00	.05	1.1	26	2.9	18	10	3.5	e1.1	.17	.00	.00
14	.00	.09	.93	13	2.1	13	9.5	2.8	e1.1	.17	.00	.00
15	.00	.09	1.0	8.3	1.9	12	8.6	3.0	e1.0	.17	.00	.00
16	.00	.09	.93	7.2	1.8	11	7.8	5.7	e1.0	.21	.00	.00
17	.00	.09	.72	5.4	1.8	11	7.3	7.1	e1.0	.21	.00	.00
18	.00	.11	1.4	e3.7	1.6	11	7.1	8.5	e1.0	.21	.00	.00
19	.00	.14	2.3	e2.9	1.6	10	6.8	8.9	e.93	.17	.00	.00
20	.00	.17	1.9	3.2	1.5	10	7.7	8.0	e.93	.21	.00	.00
21	.00	.17	2.1	2.8	1.4	9.3	7.2	6.7	e.93	.21	.00	.00
22	.00	.17	2.1	1.5	1.4	8.9	6.6	5.4	e.82	.21	.00	.00
23	.00	.17	2.1	1.2	1.2	11	5.6	4.8	e.82	.17	.00	.00
24	.00	.17	2.1	1.1	1.1	11	6.1	4.2	.72	.17	.00	.00
25	.00	.60	2.1	1.0	1.0	10	7.6	4.2	.72	.14	.00	.00
26	.00	.93	1.9	1.0	.93	11	8.1	3.7	.72	.14	.00	.00
27	.00	.66	1.2	.93	.93	10	7.0	3.3	.72	.11	.00	.00
28	.00	.54	.93	.82	1.1	12	e6.3	2.8	.93	.09	.00	.00
29	.00	.42	.93	.66	---	16	5.6	3.9	1.0	.07	.00	.00
30	.00	.36	.93	.66	---	23	5.1	3.9	.82	.05	.00	.00
31	.00	---	.93	.66	---	25	---	2.8	---	.05	.00	---
TOTAL	0.00	5.36	38.88	144.28	184.76	569.9	411.0	147.7	36.26	7.10	0.04	0.00
MEAN	.000	.18	1.25	4.65	6.60	18.4	13.7	4.76	1.21	.23	.001	.000
MAX	.00	.93	4.5	26	47	63	44	8.9	2.6	.72	.02	.00
MIN	.00	.00	.25	.66	.93	4.7	5.1	2.8	.72	.05	.00	.00
AC-FT	.00	11	77	286	366	1130	815	293	72	14	.08	.00

WTR YR 1991 TOTAL 1545.28 MEAN 4.23 MAX 63 MIN .00 AC-FT 3070

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 2.4 mi upstream at different datum.

REMARKS.--Records good. No storage or large diversion upstream from station.

AVERAGE DISCHARGE.--41 years, 857 ft^3/s, 620,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, from floodmarks, present site and datum, from rating curve extended above 20,000 ft^3/s on basis of slope-area measurement at gage height 21.3 ft, former site and datum; minimum daily, 4.6 ft^3/s, Aug. 8, 13, 14, Sept. 9-15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1330	*14,400	*11.59				

Minimum daily, 7.0 ft^3/s, Sept. 26-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	100	31	e54	83	78	1110	331	183	58	13	13
2	11	59	28	e52	3990	3010	934	347	167	53	13	12
3	11	44	26	e52	2020	7600	750	321	153	49	12	11
4	11	37	24	54	1380	10100	780	296	143	43	12	11
5	10	31	24	56	2310	5660	850	276	132	40	e11	11
6	10	29	24	56	1220	2580	1850	259	125	37	e11	10
7	10	25	24	335	831	1700	1260	251	117	35	e11	9.6
8	10	24	24	314	615	1320	964	267	109	33	11	9.6
9	10	22	23	190	468	1060	852	278	103	32	11	8.9
10	9.8	22	148	179	372	1020	816	246	97	29	11	8.9
11	9.3	21	304	230	310	905	687	232	92	28	11	8.9
12	8.9	20	144	889	264	2830	596	224	87	27	10	9.1
13	8.9	22	90	1450	227	1900	535	227	83	25	10	9.2
14	8.9	30	71	789	199	1430	497	237	79	25	9.4	9.2
15	8.9	31	75	540	175	1210	467	223	77	25	9.2	9.2
16	9.1	28	79	384	159	1090	441	231	74	26	9.2	9.2
17	9.2	24	67	290	145	932	397	738	71	28	9.1	8.9
18	13	23	68	240	129	969	370	656	70	28	8.9	8.5
19	15	22	220	207	115	818	351	510	69	28	8.7	8.2
20	16	22	156	184	102	742	354	435	69	25	8.7	8.2
21	16	22	105	155	93	695	397	385	67	23	8.9	7.8
22	15	22	87	137	87	601	354	347	63	22	8.9	7.8
23	14	21	88	125	79	1100	339	315	61	21	8.9	7.8
24	14	21	77	114	71	1260	344	282	60	21	8.9	7.4
25	14	29	68	103	64	1020	420	261	59	20	8.9	7.2
26	13	91	76	95	58	1260	487	241	57	19	8.9	7.0
27	13	71	80	86	55	1100	423	225	56	18	8.9	7.0
28	13	50	79	80	53	1090	365	210	60	17	10	7.0
29	13	42	74	73	---	1130	331	195	71	16	15	7.0
30	14	37	61	68	---	1200	318	232	66	15	15	7.0
31	38	---	e56	72	---	1220	---	209	---	14	14	---
TOTAL	389.0	1042	2501	7653	15674	58630	18639	9487	2720	880	326.5	266.6
MEAN	12.5	34.7	80.7	247	560	1891	621	306	90.7	28.4	10.5	8.89
MAX	38	100	304	1450	3990	10100	1850	738	183	58	15	13
MIN	8.9	20	23	52	53	78	318	195	56	14	8.7	7.0
AC-FT	772	2070	4960	15180	31090	116300	36970	18820	5400	1750	648	529

CAL YR 1990 TOTAL 167132.3 MEAN 458 MAX 11000 MIN 8.9 AC-FT 331500
WTR YR 1991 TOTAL 118208.1 MEAN 324 MAX 10100 MIN 7.0 AC-FT 234500

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Data is collected for flood warning purposes only. Figures given represent only those days when the gage height was above 8.0 ft prior to Nov. 8, 1990, and above 2.4 ft thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 15.3 ft, Jan. 8, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.01 ft, Mar. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	6.48	---	7.95	---
3	---	---	---	---	---	---	---	---	6.75	5.45	12.80	8.02
4	---	---	---	---	---	---	---	---	5.42	3.61	14.55	11.75
5	---	---	---	---	---	---	---	---	6.24	3.81	15.01	10.19
6	---	---	---	---	---	---	---	---	6.16	3.96	10.16	7.33
7	---	---	---	---	---	---	---	---	3.94	2.66	7.31	5.44
8	---	---	---	---	---	---	---	---	---	---	5.42	4.23
9	---	---	---	---	---	---	---	---	---	---	4.21	3.47
10	---	---	---	---	---	---	---	---	---	---	3.47	3.30
11	---	---	---	---	---	---	---	---	---	---	3.34	3.18
12	---	---	---	---	---	---	---	---	---	---	7.77	3.21
13	---	---	---	---	---	---	---	---	---	---	9.30	7.65
14	---	---	---	---	---	---	2.55	---	---	---	7.62	5.93
15	---	---	---	---	---	---	---	---	---	---	5.93	4.77
16	---	---	---	---	---	---	---	---	---	---	4.76	3.98
17	---	---	---	---	---	---	---	---	---	---	3.99	3.70
18	---	---	---	---	---	---	---	---	---	---	4.08	3.80
19	---	---	---	---	---	---	---	---	---	---	4.05	3.61
20	---	---	---	---	---	---	---	---	---	---	3.66	3.36
21	---	---	---	---	---	---	---	---	---	---	3.99	3.37
22	---	---	---	---	---	---	---	---	---	---	4.02	3.43
23	---	---	---	---	---	---	---	---	---	---	6.40	3.33
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	6.67
26	---	---	---	---	---	---	---	---	---	---	7.24	6.70
27	---	---	---	---	---	---	---	---	---	---	7.22	6.40
28	---	---	---	---	---	---	---	---	---	---	6.39	5.61
29	---	---	---	---	---	---	---	---	---	---	5.60	5.10
30	---	---	---	---	---	---	---	---	---	---	5.09	4.86
31	---	---	---	---	---	---	---	---	---	---	4.85	4.46

11479560 EEL RIVER AT FERNBRIDGE, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.52	4.23	---	---	---	---	---	---	---	---	---	---
2	4.29	3.84	---	---	---	---	---	---	---	---	---	---
3	3.84	3.52	---	---	---	---	---	---	---	---	---	---
4	3.52	3.30	---	---	---	---	---	---	---	---	---	---
5	3.45	3.23	---	---	---	---	---	---	---	---	---	---
6	4.59	3.47	---	---	---	---	---	---	---	---	---	---
7	5.22	4.34	---	---	---	---	---	---	---	---	---	---
8	4.33	3.62	---	---	---	---	---	---	---	---	---	---
9	3.62	3.34	---	---	---	---	---	---	---	---	---	---
10	3.33	3.04	---	---	---	---	---	---	---	---	---	---
11	3.06	2.81	---	---	---	---	---	---	---	---	---	---
12	2.81	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

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, near right bank on downstream end of pier 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 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. June 28 to Sept. 30, 1990, nonrecording gage 400 ft upstream at different datum.

REMARKS.--Records fair except for discharges below 10 ft^3/s, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years, 209 ft^3/s, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/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 ft^3/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1030	*3,650	*7.57				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	7.1	e2.3	6.2	11	23	397	99	28	29	1.1	.00
2	1.7	7.1	e2.2	6.2	468	614	321	103	26	26	1.0	.00
3	1.5	7.1	e2.0	6.2	342	1600	273	99	29	25	.93	.00
4	1.5	4.7	e2.0	6.4	309	2630	230	86	25	23	.90	.00
5	1.5	1.7	e2.0	6.6	480	1320	247	76	26	22	.80	.00
6	1.5	1.7	e2.0	7.0	224	601	453	69	26	20	.81	.00
7	1.5	1.7	e2.0	20	135	380	350	65	25	18	.66	.00
8	1.5	1.7	e2.0	35	91	264	282	65	24	17	.53	.00
9	1.5	1.7	e2.4	32	65	194	226	65	21	15	.50	.00
10	1.5	1.7	e15	29	48	174	192	61	20	14	.40	.00
11	1.5	1.7	e30	31	37	150	166	57	17	14	.29	.00
12	1.5	1.7	e15	100	30	395	145	53	15	12	.20	.00
13	1.5	1.7	e9.4	149	25	446	128	49	17	11	.17	.00
14	1.5	2.3	e7.4	108	20	327	115	47	19	9.9	.11	.00
15	1.2	e2.5	e7.8	66	17	251	107	46	20	8.9	.07	.00
16	1.2	e2.5	e8.2	47	15	219	100	42	20	8.6	.04	.00
17	1.2	e1.8	e7.0	36	12	192	92	57	20	8.0	.01	.00
18	1.5	e1.7	e7.1	29	10	190	87	56	20	7.1	.00	.00
19	1.7	e1.5	e20	22	8.6	180	82	53	20	6.3	.00	.00
20	1.7	e1.4	e16	18	7.3	170	80	49	20	5.4	.00	.00
21	1.7	e1.4	e11	13	6.6	165	90	47	21	4.6	.00	.00
22	1.7	e1.4	e9.0	12	5.7	154	87	48	21	4.0	.00	.00
23	1.2	e1.4	e9.2	12	5.0	260	79	48	20	3.7	.00	.00
24	1.2	e1.4	e8.0	12	4.1	326	91	42	21	3.4	.00	.00
25	1.2	e1.7	e7.1	12	3.7	304	121	40	21	2.9	.00	.00
26	1.2	e5.0	e7.9	11	3.2	331	171	35	20	2.7	.00	.00
27	1.2	e3.9	e8.3	11	2.9	310	149	37	21	2.1	.00	.00
28	1.2	e2.5	e8.2	11	3.0	334	126	36	26	2.0	.00	.00
29	1.2	e2.3	e7.7	10	---	381	111	33	32	1.8	.00	.00
30	1.2	e2.3	6.2	9.9	---	436	99	39	31	1.3	.00	.00
31	7.7	---	6.2	9.6	---	461	---	31	---	1.2	.00	---
TOTAL	50.6	78.3	250.6	884.1	2389.1	13782	5197	1733	672	329.9	8.52	0.00
MEAN	1.63	2.61	8.08	28.5	85.3	445	173	55.9	22.4	10.6	.27	.000
MAX	7.7	7.1	30	149	480	2630	453	103	32	29	1.1	.00
MIN	1.2	1.4	2.0	6.2	2.9	23	79	31	15	1.2	.00	.00
AC-FT	100	155	497	1750	4740	27340	10310	3440	1330	654	17	.00

CAL YR 1990 TOTAL 43180.5 MEAN 118 MAX 4070 MIN 1.2 AC-FT 85650
WTR YR 1991 TOTAL 25375.12 MEAN 69.5 MAX 2630 MIN .00 AC-FT 50330

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929 (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, 49,500 acre-ft, Mar. 31, elevation, 2,655.26 ft; minimum contents, 19,500 acre-ft, Dec. 9-12, elevation, 2,622.13 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 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32200	26000	21000	19800	21800	29000	49300	47900	47700	46400	40800	34400
2	32000	25800	20800	19800	23400	31000	49100	47800	47800	46300	40700	34200
3	31800	25600	20600	19800	24300	35700	48900	47700	47900	46100	40400	34000
4	31600	25400	20400	19700	25200	42600	48800	47700	47900	46000	40200	33800
5	31400	25200	20200	19700	26400	45600	48800	47600	47900	45900	40000	33600
6	31200	25000	20100	19700	26900	46700	49100	47600	47900	45700	39800	33400
7	31000	24900	19900	19800	27200	47100	49000	47600	47900	45500	39600	33200
8	30700	24700	19700	19800	27500	47300	48900	47700	47900	45400	39400	33000
9	30600	24500	19500	19900	27700	47400	48700	47600	47900	45200	39200	32800
10	30300	24300	19500	20000	27800	47400	48600	47700	47800	45000	39000	32600
11	30100	24100	19500	20100	28000	47400	48400	47700	47800	44800	38800	32400
12	29900	23900	19500	20400	28100	48100	48300	47700	47700	44600	38500	32200
13	29700	23700	19600	e20800	28200	48700	48200	47700	47700	44400	38300	32000
14	29500	23600	19600	e21000	28300	48800	48100	47700	47700	44200	38100	31800
15	29300	23400	19600	21000	28300	48600	48000	47700	47600	44100	37900	31600
16	29000	23300	19600	21200	28400	48600	47900	47700	47500	43900	37700	31400
17	28800	23100	19600	21300	28500	48600	47900	47700	47400	43700	37400	31200
18	28700	22900	19700	21400	28500	48500	47800	47700	47300	43500	37300	31000
19	28500	22800	19700	21400	28500	48400	47700	47700	47300	43400	37000	30800
20	28300	22600	19800	21500	28600	48400	47700	47700	47200	43200	36800	30600
21	28100	22500	19800	21500	28600	48300	47700	47700	47200	43000	36600	30300
22	27900	22300	19800	21500	28600	48300	47700	47700	47100	42900	36400	30100
23	27700	22200	19800	21500	28700	48600	47700	47700	47000	42600	36200	29900
24	27600	22000	19800	21500	28700	48700	47800	47600	46800	42400	36000	29800
25	27400	21900	19800	21600	28700	48800	47900	47500	46800	42200	35800	29500
26	27200	21700	19800	21600	28700	49000	47900	47600	46700	42100	35600	29300
27	26900	21600	19800	21600	28800	49000	47900	47600	46600	41900	35400	29100
28	26700	21500	19800	21600	28800	49000	48000	47500	46600	41700	35200	28900
29	26500	21300	19800	21600	---	49100	48000	47600	46500	41500	35000	28700
30	26400	21100	19800	21600	---	49300	48000	47600	46500	41200	34700	28500
31	26200	---	19800	21600	---	49400	---	47600	---	41000	34500	---
MAX	32200	26000	21000	21600	28800	49400	49300	47900	47900	46400	40800	34400
MIN	26200	21100	19500	19700	21800	29000	47700	47500	46500	41000	34500	28500
a	2631.07	2624.49	2622.62	2625.13	2634.24	2655.21	2653.93	2653.66	2652.63	2647.48	2640.78	2633.87
b	-6200	-5100	-1300	+1800	+7200	+20600	-1400	-400	-1100	-5500	-6500	-6000

CAL YR 1990 MAX 51500 MIN 19500 b -3300
WTR YR 1991 MAX 49400 MIN 19500 b +3900

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, 1,200 ft downstream from Robert W. Matthews Dam, and 5.8 mi west of Forest Glen.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for discharges below 10 ft^3/s, which are poor. Flow regulated by Ruth Reservoir (station 11480400) 1,200 ft upstream.

AVERAGE DISCHARGE.--11 years, 289 ft^3/s, 209,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft^3/s, Feb. 17, 1986, gage height, 17.61 ft, from floodmarks, from rating curve extended above 8,800 ft^3/s; minimum daily, 5.6 ft^3/s, Mar. 2, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 658 ft^3/s, Apr. 1, gage height, 6.13 ft; minimum daily, 5.6 ft^3/s, Mar. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	93	94	7.3	18	9.5	609	189	11	47	96	96
2	97	93	93	14	14	5.6	545	230	11	68	95	95
3	99	93	90	25	6.9	10	476	186	11	76	96	96
4	107	93	84	32	6.9	14	412	149	12	76	96	96
5	103	93	88	28	7.2	114	379	135	11	76	96	96
6	99	93	89	28	6.6	237	466	105	10	84	97	96
7	100	94	91	17	6.3	239	495	81	30	89	96	96
8	102	92	88	7.3	6.3	234	452	87	40	89	101	95
9	106	92	88	7.3	6.3	235	399	87	40	88	108	98
10	105	92	44	7.3	6.3	235	347	83	25	92	106	101
11	106	93	7.3	8.5	6.2	234	306	79	26	89	106	102
12	106	93	7.3	7.7	5.9	234	275	80	39	89	108	101
13	106	92	7.4	7.5	6.6	303	250	81	33	89	107	101
14	104	84	7.6	7.5	6.3	385	232	79	35	89	103	101
15	104	79	8.0	7.6	5.9	379	223	79	40	89	105	101
16	105	75	8.0	7.7	6.1	356	177	80	45	89	103	101
17	106	76	8.0	7.7	6.1	329	150	80	57	87	103	102
18	106	76	8.0	7.7	6.1	308	150	78	58	89	103	102
19	100	76	8.0	7.7	6.1	287	150	78	58	88	103	101
20	91	76	7.8	7.7	6.3	275	150	78	48	88	100	101
21	91	76	7.7	7.7	6.2	262	150	78	40	89	103	101
22	91	76	7.7	7.7	5.9	251	136	79	40	89	102	101
23	92	79	7.7	7.7	5.9	279	107	68	47	93	96	103
24	92	87	7.7	7.7	5.9	358	109	59	58	97	103	101
25	92	83	7.7	7.7	5.9	391	129	59	58	97	102	106
26	99	62	7.7	7.7	6.9	394	189	59	57	96	104	107
27	115	50	7.7	7.7	14	436	224	59	57	97	101	99
28	113	65	7.7	7.7	16	462	162	49	57	97	98	109
29	108	87	7.7	7.5	---	494	150	43	51	97	96	108
30	101	94	7.7	14	---	525	149	24	41	96	96	107
31	97	---	9.6	17	---	567	---	10	---	96	96	---
TOTAL	3133	2507	1013.0	350.6	213.1	8842.1	8148	2711	1146	2715	3125	3020
MEAN	101	83.6	32.7	11.3	7.61	285	272	87.5	38.2	87.6	101	101
MAX	115	94	94	32	18	567	609	230	58	97	108	109
MIN	90	50	7.3	7.3	5.9	5.6	107	10	10	47	95	95
AC-FT	6210	4970	2010	695	423	17540	16160	5380	2270	5390	6200	5990

CAL YR 1990 TOTAL 54599.0 MEAN 150 MAX 1920 MIN 7.3 AC-FT 108300
WTR YR 1991 TOTAL 36923.8 MEAN 101 MAX 609 MIN 5.6 AC-FT 73240

11480500 MAD RIVER NEAR FOREST GLEN, CA

LOCATION.--Lat 40°27'30", long 123°30'35", in SW 1/4 sec.16, T.1 N., R.6 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, on right bank 0.7 mi downstream from Lamb Creek and 11.1 mi northwest of Forest Glen.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WSP 1395: 1954. WSP 1715: 1957(M), 1958(P). WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,408.18 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1955, water-stage recorder at site 0.7 mi upstream at different datum. Jan. 13 to June 18, 1956, nonrecording gage at former site at datum 4.17 ft lower than former datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Ruth Reservoir (station 11480400), 9 mi upstream, beginning in July 1961. No diversion upstream from station.

AVERAGE DISCHARGE.--38 years, 369 ft^3/s, 267,300 acre-ft/yr (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,200 ft^3/s, Dec. 22, 1955, gage height, 24.5 ft, present datum, from floodmarks, from rating curve extended above 8,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.60 ft^3/s, Sept. 15, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft^3/s, Mar. 3, gage height, 6.63 ft; minimum daily, 8.5 ft^3/s, Dec. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	97	99	9.5	18	22	762	205	23	47	95	94
2	101	97	99	8.7	361	216	672	261	22	62	95	94
3	101	97	98	18	90	701	571	229	19	74	95	94
4	109	97	92	43	87	851	474	176	18	75	96	94
5	107	97	93	34	120	382	426	162	17	75	96	94
6	103	99	96	34	62	376	514	134	17	79	96	94
7	103	99	98	42	42	339	558	106	21	88	96	94
8	104	99	96	16	34	313	512	106	39	89	97	94
9	109	99	97	12	26	299	451	106	39	89	104	95
10	109	99	86	12	21	294	398	102	39	93	104	97
11	109	99	14	12	18	291	356	97	18	94	104	97
12	109	99	9.7	28	17	357	324	96	38	93	105	97
13	109	99	8.9	35	15	383	300	96	38	93	105	97
14	107	95	8.5	23	15	435	289	96	37	92	101	97
15	107	87	9.0	17	13	434	281	95	42	92	103	97
16	107	78	9.3	15	12	410	245	95	42	92	102	97
17	107	76	9.3	13	12	397	199	96	56	91	101	97
18	110	77	9.1	12	12	375	196	96	57	91	100	97
19	108	77	11	12	12	352	194	95	59	91	100	97
20	96	77	11	11	12	337	196	94	56	89	98	97
21	96	77	9.7	11	11	326	196	94	46	89	99	97
22	96	77	9.3	10	11	309	183	94	46	89	100	97
23	97	78	9.3	10	10	364	154	89	47	92	94	97
24	97	88	9.3	10	9.7	423	141	74	60	95	98	97
25	97	95	9.3	10	9.7	455	160	74	59	95	99	98
26	98	77	9.3	10	9.7	488	208	74	58	96	101	101
27	118	50	9.3	10	10	537	256	73	59	96	100	97
28	116	58	9.3	9.7	18	568	203	67	62	96	99	100
29	115	84	9.1	9.3	---	616	172	53	61	95	96	102
30	106	99	8.8	9.5	---	659	174	49	48	94	94	102
31	108	---	9.0	15	---	710	---	26	---	94	94	---
TOTAL	3255	2627	1155.5	521.7	1088.1	13019	9765	3310	1243	2720	3067	2902
MEAN	105	87.6	37.3	16.8	38.9	420	325	107	41.4	87.7	98.9	96.7
MAX	118	99	99	43	361	851	762	261	62	96	105	102
MIN	96	50	8.5	8.7	9.7	22	141	26	17	47	94	94
AC-FT	6460	5210	2290	1030	2160	25820	19370	6570	2470	5400	6080	5760

CAL YR 1990 TOTAL 65236.5 MEAN 179 MAX 2440 MIN 8.5 AC-FT 129400
WTR YR 1991 TOTAL 44673.3 MEAN 122 MAX 851 MIN 8.5 AC-FT 88610

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 mi^2.

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 12.79 ft above National Geodetic Vertical Datum of 1929. 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 Apr. 9, 1965, water-stage recorder at datum 5.00 ft higher, at present site.

REMARKS.--No estimated daily discharges. 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.

AVERAGE DISCHARGE (adjusted for diversions).--44 years, 1,458 ft^3/s, 1,056,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft^3/s, Dec. 22, 1964, gage height, 30.7 ft, present datum, from high-water profile and flood routing study; minimum daily, 0.10 ft^3/s, Aug. 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,700 ft^3/s, Mar. 4, gage height, 9.40 ft; minimum daily, 21 ft^3/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	152	82	55	63	71	2250	851	370	66	38	60
2	27	80	87	43	1440	934	2100	864	291	43	43	56
3	24	58	73	41	2100	4190	1880	851	244	25	54	38
4	26	51	66	42	1530	5290	1650	744	205	54	64	34
5	30	60	74	51	2540	5870	1770	636	173	61	63	34
6	51	60	74	70	1730	3260	3020	592	154	55	55	26
7	39	53	72	147	1140	2470	2610	552	135	50	37	38
8	29	52	67	399	827	2060	2140	754	126	56	37	34
9	32	46	77	264	638	1760	2030	741	136	59	32	21
10	38	40	513	198	511	1720	1930	631	136	54	56	25
11	39	39	850	376	419	1630	1650	559	128	45	67	32
12	37	44	337	1110	348	2830	1460	502	112	53	55	35
13	37	73	177	3500	296	2970	1320	487	97	54	50	37
14	35	147	101	2170	254	2460	1200	493	95	56	45	46
15	35	115	97	1470	215	2390	1140	436	90	50	44	47
16	44	67	125	1080	189	2140	1080	418	91	85	48	41
17	40	51	89	766	175	1890	971	1730	86	125	52	36
18	68	44	86	578	156	1780	872	1710	86	98	51	29
19	117	40	607	483	134	1620	828	1430	114	82	46	35
20	86	43	460	369	116	1490	816	1210	140	73	43	38
21	55	47	265	295	106	1470	859	1090	119	67	58	39
22	39	35	167	243	97	1450	793	917	94	50	54	41
23	48	30	136	208	89	2060	742	767	84	52	53	51
24	54	30	121	183	80	3230	738	651	76	53	42	38
25	53	84	101	165	72	2420	987	553	74	65	39	39
26	59	277	96	144	63	2940	1240	490	81	66	39	45
27	59	173	110	126	61	2540	1130	440	85	64	48	56
28	79	93	128	111	59	2260	1020	382	85	56	89	55
29	122	51	156	89	---	2170	878	366	105	54	122	39
30	128	52	123	75	---	2200	781	606	104	52	81	47
31	159	---	81	63	---	2310	---	497	---	46	64	---
TOTAL	1716	2187	5598	14914	15448	73875	41885	22950	3916	1869	1669	1192
MEAN	55.4	72.9	181	481	552	2383	1396	740	131	60.3	53.8	39.7
MAX	159	277	850	3500	2540	5870	3020	1730	370	125	122	60
MIN	24	30	66	41	59	71	738	366	74	25	32	21
AC-FT	3400	4340	11100	29580	30640	146500	83080	45520	7770	3710	3310	2360
a	5237	5045	4887	5031	4344	4860	4572	4931	4979	5266	5491	5098

CAL YR 1990 TOTAL 286344 MEAN 785 MAX 12400 MIN 24 AC-FT 568000
WTR YR 1991 TOTAL 187219 MEAN 513 MAX 5870 MIN 21 AC-FT 371300

a Diversion, in acre-feet, for municipal supply and industrial use; provided by Humboldt Bay Municipal Water District.

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 mi^2.

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--36 years, 139 ft^3/s, 100,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft^3/s, Mar. 18, 1975, gage height, 14.19 ft, from rating curve extended above 3,100 ft^3/s on basis of slope-area measurement at gage height 14.08 ft; minimum daily, 1.8 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0700	*1,760	*5.72				

Minimum daily, 1.8 ft^3/s, Sept. 25-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	23	14	13	e30	34	93	70	49	21	9.5	9.0
2	8.0	15	13	12	348	126	82	60	46	20	9.4	8.1
3	7.4	11	12	12	284	282	74	54	44	20	9.4	7.2
4	6.8	10	11	11	434	428	69	49	42	19	10	5.1
5	6.8	12	12	10	522	319	117	45	40	19	13	4.7
6	6.8	12	13	9.9	237	199	230	43	38	18	13	4.9
7	6.8	10	12	24	150	140	187	44	36	17	13	4.3
8	7.0	10	11	26	106	104	130	139	35	17	12	4.8
9	6.2	10	11	21	83	86	135	100	33	17	11	4.7
10	6.2	9.4	224	21	70	186	118	76	33	17	9.4	5.1
11	6.2	9.4	83	34	61	148	100	66	32	17	9.4	5.1
12	6.2	9.4	35	407	54	537	88	58	31	16	8.9	5.1
13	6.4	26	22	1070	48	348	78	58	30	16	8.0	5.1
14	7.4	50	16	e350	44	250	71	58	29	16	8.0	5.1
15	7.4	21	31	e210	41	221	70	51	28	16	8.0	5.0
16	7.4	14	25	e155	38	167	63	52	27	26	8.0	3.7
17	7.8	12	17	e137	38	130	58	300	26	30	8.0	3.0
18	15	11	28	e110	33	107	55	188	26	22	8.0	3.0
19	20	11	91	e90	31	95	52	143	31	19	8.0	3.0
20	12	11	62	e80	30	86	52	112	31	17	8.0	3.0
21	9.8	11	42	e67	29	94	49	93	27	17	8.0	3.0
22	9.4	10	31	e58	27	91	47	78	25	15	7.1	3.0
23	9.4	9.0	24	e54	25	264	45	68	24	15	6.2	2.2
24	9.3	8.7	20	e49	24	572	55	63	25	14	6.2	2.0
25	8.7	61	18	e44	23	301	139	57	24	14	6.2	1.8
26	8.7	62	17	e41	22	400	110	54	24	14	6.2	1.8
27	8.7	32	16	e38	22	264	81	49	24	14	6.2	1.8
28	9.0	22	17	e34	22	187	69	47	24	14	16	1.8
29	9.4	17	19	e32	---	147	61	51	24	13	22	1.8
30	11	16	16	e30	---	122	55	82	24	13	14	2.1
31	43	---	14	e28	---	105	---	57	---	12	12	---
TOTAL	302.2	545.9	977	3277.9	2876	6540	2633	2465	932	535	302.1	120.3
MEAN	9.75	18.2	31.5	106	103	211	87.8	79.5	31.1	17.3	9.75	4.01
MAX	43	62	224	1070	522	572	230	300	49	30	22	9.0
MIN	6.2	8.7	11	9.9	22	34	45	43	24	12	6.2	1.8
AC-FT	599	1080	1940	6500	5700	12970	5220	4890	1850	1060	599	239

CAL YR 1990 TOTAL 32452.7 MEAN 88.9 MAX 1740 MIN 6.2 AC-FT 64370
WTR YR 1991 TOTAL 21506.4 MEAN 58.9 MAX 1070 MIN 1.8 AC-FT 42660

e Estimated.

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1953 to September 1958, October 1972 to current year.

REVISED RECORDS.--WDR CA-78-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--24 years, 239 ft^3/s, 173,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s, Mar. 18, 1975, gage height, 13.70 ft, from rating curve extended above 6,400 ft^3/s; minimum daily, 1.8 ft^3/s, Oct. 19-22, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1830	*1,430	*4.83				

Minimum daily, 3.5 ft^3/s, Sept. 26, 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	25	20	32	50	60	294	191	109	33	13	8.7
2	6.2	16	18	29	337	305	268	181	99	33	13	8.7
3	6.2	13	17	29	251	551	247	169	89	28	13	8.1
4	6.3	12	19	30	244	831	224	159	86	28	13	7.1
5	6.5	13	29	28	356	703	303	148	79	28	13	6.6
6	6.5	13	24	28	237	448	450	141	71	26	13	6.2
7	6.6	12	21	66	186	367	340	135	67	24	13	5.6
8	6.5	11	18	60	157	308	278	162	64	23	13	6.1
9	6.4	10	19	49	136	268	304	148	62	22	13	6.2
10	5.9	10	126	67	121	258	290	136	58	22	13	6.1
11	5.9	10	124	107	107	231	251	123	55	21	12	6.2
12	5.9	9.7	62	279	97	411	230	113	54	19	12	5.9
13	6.0	12	45	632	89	371	218	114	52	19	11	5.9
14	6.2	28	38	327	83	312	210	110	52	20	11	5.6
15	6.2	20	41	249	79	283	205	102	51	20	10	5.5
16	7.0	16	36	195	76	266	194	105	50	23	10	5.2
17	7.2	14	31	157	75	238	182	223	46	26	10	5.1
18	10	13	47	136	70	228	173	216	44	23	10	4.6
19	14	13	98	123	66	209	176	207	47	20	10	4.7
20	9.6	16	63	106	63	192	188	203	49	19	10	4.6
21	8.6	15	47	94	61	193	199	193	45	19	9.9	4.4
22	8.5	14	52	86	58	190	180	170	42	18	9.9	4.4
23	8.7	13	50	78	56	326	174	148	41	17	9.9	4.4
24	8.3	13	44	73	52	371	203	136	42	17	9.8	4.4
25	7.4	34	42	68	48	293	250	127	42	17	9.4	3.9
26	7.3	51	39	64	46	332	246	118	41	17	9.4	3.5
27	7.3	26	38	61	45	309	234	109	42	16	9.6	3.5
28	7.5	21	37	58	45	277	216	104	44	16	15	3.8
29	8.5	19	33	55	---	269	201	110	45	15	15	3.9
30	8.9	20	36	53	---	281	190	148	34	15	10	3.9
31	40	---	36	51	---	301	---	122	---	14	9.2	---
TOTAL	262.5	512.7	1350	3470	3291	9982	7118	4571	1702	658	353.1	162.8
MEAN	8.47	17.1	43.5	112	118	322	237	147	56.7	21.2	11.4	5.43
MAX	40	51	126	632	356	831	450	223	109	33	15	8.7
MIN	5.9	9.7	17	28	45	60	173	102	34	14	9.2	3.5
AC-FT	521	1020	2680	6880	6530	19800	14120	9070	3380	1310	700	323

CAL YR 1990 TOTAL 53746.4 MEAN 147 MAX 2900 MIN 5.9 AC-FT 106600
WTR YR 1991 TOTAL 33433.1 MEAN 91.6 MAX 831 MIN 3.5 AC-FT 66310

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.
CHEMICAL DATA: Water years 1974-75.
WATER TEMPERATURE: Water years 1973 to current year.
SEDIMENT DATA: Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1972 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 33.5 °C, Aug. 2, 1977; minimum recorded, 0.5 °C, Jan. 9, 1977.
SEDIMENT CONCENTRATION: Maximum daily mean, 11,200 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, at times in several years.
SEDIMENT LOAD: Maximum daily, 276,000 tons, Mar. 18, 1975; minimum daily, 0 ton, at times in several years.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 639 mg/L, Mar. 4; minimum daily mean, 0 mg/L, on several days.
SEDIMENT LOAD: Maximum daily, 1,780 tons, Mar. 4; minimum daily, 0 ton on several days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN											
12...	1345	257	6.0	38	26	89	--	--	--	--	--
13...	0915	998	7.0	904	2440	71	79	85	93	98	100
13...	1630	540	9.0	217	316	70	76	81	92	100	--
FEB											
05...	1200	360	8.5	28	27	99	--	--	--	--	--
MAR											
05...	1608	613	7.0	138	228	72	--	--	--	--	--

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS	NUMBER OF SAM-PLING POINTS (COUNT)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)
MAR										
05...	1615	1000	1100	0.250	1545	1645	12	10.0	615	7.0

DATE	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
MAR									
05...	85	1	5	15	31	48	67	88	100

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	10.0	---	---	---	---	---
2	---	---	8.0	---	10.0	8.0	---
3	---	---	---	3.0	8.0	---	8.0
4	---	---	7.0	---	8.0	10.0	---
5	16.0	12.0	6.0	---	8.5	7.0	---
6	---	---	---	---	---	6.0	---
7	---	---	---	---	---	---	---
8	---	---	---	2.0	---	---	---
9	---	---	---	---	8.0	7.0	8.0
10	10.0	---	8.0	---	---	---	---
11	---	8.5	6.0	---	---	---	---
12	---	---	---	6.0	---	7.5	---
13	---	9.0	5.5	9.0	---	---	---
14	---	8.0	---	9.0	9.0	---	8.0
15	---	6.0	---	9.0	---	6.0	---
16	---	---	---	7.0	---	---	---
17	---	---	5.0	---	---	---	9.0
18	12.5	9.0	6.0	---	---	---	9.0
19	---	8.0	3.0	---	9.0	7.5	---
20	---	---	---	---	---	---	---
21	---	---	---	---	---	6.5	---
22	13.0	---	---	5.0	---	---	---
23	---	6.0	---	---	---	---	---
24	---	---	---	---	8.0	---	---
25	12.0	---	---	---	---	---	8.5
26	---	5.5	---	5.0	---	7.0	---
27	---	5.0	---	---	---	---	---
28	---	---	---	---	8.0	---	---
29	10.0	---	---	---	---	---	---
30	---	---	---	2.0	---	10.0	9.5
31	12.0	---	---	---	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	6.4	1	.02	25	3	.20	20	1	.05
2	6.2	1	.02	16	1	.04	18	1	.05
3	6.2	1	.02	13	1	.04	17	1	.05
4	6.3	1	.02	12	1	.03	19	1	.05
5	6.5	1	.02	13	1	.04	29	2	.16
6	6.5	1	.02	13	1	.04	24	2	.13
7	6.6	1	.02	12	1	.03	21	2	.11
8	6.5	2	.04	11	0	.00	18	2	.10
9	6.4	2	.03	10	0	.00	19	2	.10
10	5.9	2	.03	10	0	.00	126	59	24
11	5.9	2	.03	10	0	.00	124	24	8.0
12	5.9	2	.03	9.7	1	.03	62	4	.67
13	6.0	2	.03	12	4	.13	45	2	.24
14	6.2	1	.02	28	4	.30	38	2	.21
15	6.2	1	.02	20	1	.05	41	2	.22
16	7.0	1	.02	16	1	.04	36	2	.19
17	7.2	1	.02	14	1	.04	31	2	.17
18	10	4	.11	13	2	.07	47	22	5.7
19	14	1	.04	13	2	.07	98	89	24
20	9.6	1	.03	16	2	.09	63	52	8.8
21	8.6	1	.02	15	2	.08	47	28	3.6
22	8.5	1	.02	14	2	.08	52	25	3.5
23	8.7	1	.02	13	2	.07	50	17	2.3
24	8.3	2	.04	13	2	.07	44	8	.95
25	7.4	2	.04	34	10	1.5	42	7	.79
26	7.3	2	.04	51	9	1.2	39	5	.53
27	7.3	2	.04	26	2	.14	38	4	.41
28	7.5	1	.02	21	2	.11	37	2	.20
29	8.5	5	.11	19	2	.10	33	1	.09
30	8.9	3	.07	20	1	.05	36	3	.29
31	40	10	1.1	---	---	---	36	2	.19
TOTAL	262.5	---	2.11	512.7	---	4.64	1350	---	85.85

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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	32	2	.17	50	2	.27	60	3	.63
2	29	2	.16	337	145	149	305	123	175
3	29	2	.16	251	35	25	551	360	714
4	30	2	.16	244	37	29	831	639	1780
5	28	2	.15	356	44	47	703	313	676
6	28	2	.15	237	15	9.6	448	61	74
7	66	5	.89	186	8	4.0	367	37	37
8	60	3	.49	157	4	1.7	308	18	15
9	49	3	.40	136	2	.73	268	9	6.5
10	67	8	1.4	121	2	.65	258	7	4.9
11	107	11	3.2	107	2	.58	231	5	3.1
12	279	47	37	97	2	.52	411	71	90
13	632	333	723	89	2	.48	371	38	38
14	327	44	39	83	2	.45	312	17	14
15	249	16	11	79	2	.43	283	8	6.1
16	195	8	4.2	76	1	.21	266	6	4.3
17	157	6	2.5	75	1	.20	238	4	2.6
18	136	5	1.8	70	1	.19	228	4	2.5
19	123	4	1.3	66	1	.18	209	4	2.3
20	106	3	.86	63	1	.17	192	4	2.1
21	94	3	.76	61	1	.16	193	4	2.1
22	86	2	.46	58	1	.16	190	4	2.1
23	78	2	.42	56	0	.00	326	19	19
24	73	1	.20	52	0	.00	371	17	17
25	68	1	.18	48	0	.00	293	8	6.3
26	64	1	.17	46	1	.12	332	15	14
27	61	1	.16	45	1	.12	309	17	14
28	58	1	.16	45	1	.12	277	10	7.5
29	55	1	.15	---	---	---	269	7	5.1
30	53	1	.14	---	---	---	281	5	3.8
31	51	1	.14	---	---	---	301	6	4.9
TOTAL	3470	---	830.93	3291	---	271.04	9982	---	3743.83

DAY	APRIL		
1	294	5	4.0
2	268	5	3.6
3	247	5	3.3
4	224	4	2.4
5	303	16	18
6	450	25	30
7	340	17	16
8	278	12	9.0
9	304	13	11
10	290	10	7.8
11	251	7	4.7
12	230	6	3.7
13	218	4	2.4
14	210	3	1.7
15	205	3	1.7
16	194	2	1.0
17	182	2	.98
18	173	1	.47
19	176	1	.48
20	188	2	1.0
21	199	2	1.1
22	180	1	.49
23	174	1	.47
24	203	12	6.6
25	250	26	18
26	246	13	8.6
27	234	7	4.4
28	216	6	3.5
29	201	4	2.2
30	190	1	.51
31	---	---	---
TOTAL	7118	---	169.10
PERIOD	25986.2		5107.50

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	262.50	2.11	0	2
NOVEMBER	512.70	4.64	0	5
DECEMBER	1350.00	85.85	0	86
JANUARY 1991	3470.00	830.93	40	871
FEBRUARY	3291.00	271.04	7	278
MARCH	9982.00	3743.83	327	4070
APRIL	7118.00	169.10	46	215
PERIOD	25986.20	5107.50	420	5527

11482110 LACKS CREEK NEAR ORICK, CA

LOCATION.--Lat 41°03'39", long 123°51'57", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank at private road bridge, 0.3 mi upstream from mouth, and 19 mi southeast of Orick.

DRAINAGE AREA.--16.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1991 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

AVERAGE DISCHARGE.--11 years, 66.0 ft^3/s, 47,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft^3/s, Nov. 22, 1988, gage height, 27.99 ft; minimum daily, 0.16 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 880 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0600	*640	*25.21				

Minimum daily, 1.2 ft^3/s, Oct. 10-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	5.9	4.1	6.9	10	e15	67	29	20	4.9	2.3	2.4
2	1.4	3.8	3.9	6.3	111	e32	56	25	18	4.5	2.4	2.4
3	1.3	3.3	3.7	6.3	115	e72	46	22	16	4.2	2.4	2.2
4	1.3	3.3	3.9	6.3	235	e190	39	19	15	4.0	2.4	2.1
5	1.3	3.8	5.3	6.3	314	e170	57	17	14	3.8	2.4	2.0
6	1.3	3.6	5.0	6.7	152	e150	110	16	13	3.7	2.4	1.9
7	1.3	3.3	4.3	19	97	e140	99	15	13	3.6	2.4	1.9
8	1.3	3.1	4.0	17	71	e120	80	27	12	3.6	2.4	2.0
9	1.3	3.1	4.2	14	57	e115	79	23	11	3.5	2.3	2.0
10	1.2	3.0	72	23	48	e118	69	18	11	3.5	2.3	1.9
11	1.2	2.9	34	52	40	e130	60	16	9.5	3.3	2.3	1.9
12	1.2	2.9	17	262	34	e160	51	15	9.5	3.2	2.2	1.8
13	1.3	4.2	12	392	29	e210	44	15	9.1	3.2	2.1	1.8
14	1.3	9.4	9.7	160	26	e212	38	14	8.4	3.3	2.1	1.8
15	1.3	5.2	8.8	106	24	e185	34	13	8.1	3.3	2.0	1.7
16	1.5	4.0	8.1	77	22	e162	29	14	8.0	5.3	2.1	1.7
17	1.5	3.6	7.0	60	21	e149	25	61	7.4	5.9	2.1	1.7
18	2.4	3.4	12	49	19	e135	21	61	7.2	4.3	2.1	1.6
19	2.8	3.4	28	41	17	e120	19	56	7.3	3.8	2.1	1.6
20	2.1	3.5	17	33	16	e115	19	50	7.4	3.5	2.1	1.6
21	1.8	3.5	13	27	15	107	18	45	7.0	3.4	2.0	1.5
22	1.9	3.5	12	23	15	102	16	39	6.6	3.2	2.0	1.5
23	1.9	3.3	9.7	20	14	246	15	35	6.3	3.2	2.0	1.5
24	1.7	3.3	9.5	18	13	243	23	31	6.3	3.0	1.9	1.5
25	1.7	21	9.0	16	12	165	66	28	6.2	3.0	1.9	1.5
26	1.7	16	8.8	15	e12	183	69	25	6.0	2.9	1.9	1.4
27	1.7	7.6	8.8	14	e12	158	54	23	5.8	2.8	1.9	1.5
28	1.7	5.2	9.0	13	e12	127	44	21	5.9	2.7	3.0	1.5
29	1.8	4.4	8.9	12	---	108	37	23	5.9	2.6	3.4	1.5
30	1.9	4.3	8.0	11	---	93	32	29	5.3	2.5	2.8	1.5
31	11	---	7.5	10	---	80	---	22	---	2.4	2.5	---
TOTAL	58.5	150.8	368.2	1522.8	1563	4312	1416	847	286.2	110.1	70.2	52.9
MEAN	1.89	5.03	11.9	49.1	55.8	139	47.2	27.3	9.54	3.55	2.26	1.76
MAX	11	21	72	392	314	246	110	61	20	5.9	3.4	2.4
MIN	1.2	2.9	3.7	6.3	10	15	15	13	5.3	2.4	1.9	1.4
AC-FT	116	299	730	3020	3100	8550	2810	1680	568	218	139	105

CAL YR 1990 TOTAL 19660.9 MEAN 53.9 MAX 1590 MIN 1.2 AC-FT 39000
WTR YR 1991 TOTAL 10757.7 MEAN 29.5 MAX 392 MIN 1.2 AC-FT 21340

e Estimated.

11482110 LACKS CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-76, 1978 to September 1991 (discontinued).
CHEMICAL DATA: Water years 1975-76, 1978.
SEDIMENT DATA: Water years 1975, 1978 to September 1991 (discontinued).

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero-bedload discharge observed for flows less than 115 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
DEC					
17...	1145	7.2	5.0	1	0.02
FEB					
11...	1215	40	8.5	1	0.11
MAR					
20...	1155	115	8.0	3	0.93

11482125 PANTHER CREEK NEAR ORICK, CA

LOCATION.--Lat 41°05'19", long 123°54'26", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank 300 ft upstream from mouth, 16 mi southeast of Orick.

DRAINAGE AREA.--6.07 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1991 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair for discharges above 2.0 ft^3/s, poor below. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years, 23.9 ft^3/s, 17,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 839 ft^3/s, Feb. 17, 1986, gage height, 4.28 ft; minimum daily, 0.25 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0500	*64	*2.00				

Minimum daily, 1.3 ft^3/s, Oct. 12-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.6	2.7	2.8	8.3	12	29	17	11	5.7	3.3	e4.3
2	1.6	2.2	2.6	2.7	26	17	27	16	10	5.6	e3.4	e4.0
3	1.6	2.0	2.4	2.7	23	26	25	16	10	5.3	e3.6	e3.9
4	1.6	2.1	2.7	2.7	31	38	25	15	9.7	5.0	e4.1	e3.7
5	1.6	2.5	2.9	2.7	40	34	28	14	9.3	4.7	e4.0	e3.5
6	1.6	2.1	2.6	2.9	32	29	30	14	9.2	4.9	e3.9	e3.4
7	1.5	2.0	2.4	5.5	28	26	28	14	8.8	5.0	e3.8	e3.2
8	1.4	2.0	2.4	4.9	25	25	26	18	8.1	4.7	e3.7	e3.1
9	1.4	2.0	2.6	4.6	23	25	27	16	8.1	4.7	e3.6	e3.0
10	1.4	2.0	12	5.7	21	30	25	15	8.0	4.6	e3.5	e2.9
11	1.4	2.0	7.3	7.7	20	27	25	14	7.7	4.2	e3.5	e2.9
12	1.3	1.8	5.6	23	19	43	24	13	7.6	4.2	e3.5	e2.8
13	1.3	2.9	4.8	44	18	42	23	14	7.3	4.4	e3.4	e2.8
14	1.3	3.6	4.2	28	17	39	22	13	7.3	4.7	e3.4	e2.8
15	1.3	2.5	4.9	23	16	36	22	12	7.3	4.7	e3.4	e2.7
16	1.4	2.2	4.2	19	15	34	21	13	7.1	6.3	3.3	e2.7
17	1.4	2.1	3.4	17	15	32	20	17	6.8	5.7	e3.2	e2.7
18	2.6	2.1	5.5	16	14	30	19	15	6.5	5.2	e3.1	e2.6
19	1.9	2.2	7.4	14	13	28	18	15	7.1	4.9	e3.0	e2.6
20	1.6	2.4	6.0	13	12	26	18	14	7.1	4.7	e3.0	e2.6
21	1.6	2.3	5.3	12	12	25	17	14	6.8	4.7	e2.9	e2.5
22	1.6	2.1	4.7	11	11	24	17	13	6.5	4.7	e2.9	e2.5
23	1.6	2.1	4.2	11	11	34	16	12	6.5	4.6	e2.8	e2.5
24	1.6	2.1	4.2	10	9.7	43	18	12	6.4	4.2	e2.8	e2.5
25	1.6	6.8	4.2	9.7	8.9	39	24	11	6.1	4.2	e2.7	e2.4
26	1.6	5.0	4.2	9.3	8.9	42	19	11	6.1	4.1	e2.6	e2.4
27	1.6	3.3	3.6	9.0	8.9	38	18	11	6.1	3.7	e2.6	e2.4
28	1.7	2.8	3.4	8.9	8.8	36	17	10	6.1	3.7	e3.4	e2.4
29	1.7	2.7	3.4	8.6	---	33	17	12	6.1	3.7	e4.1	e2.3
30	2.9	2.7	3.3	8.4	---	32	17	13	6.1	3.4	e5.2	e2.3
31	5.8	---	3.0	8.1	---	30	---	12	---	3.4	e4.7	---
TOTAL	54.1	77.2	132.1	347.9	495.5	975	662	426	226.8	143.6	106.4	86.4
MEAN	1.75	2.57	4.26	11.2	17.7	31.5	22.1	13.7	7.56	4.63	3.43	2.88
MAX	5.8	6.8	12	44	40	43	30	18	11	6.3	5.2	4.3
MIN	1.3	1.8	2.4	2.7	8.3	12	16	10	6.1	3.4	2.6	2.3
AC-FT	107	153	262	690	983	1930	1310	845	450	285	211	171

CAL YR 1990 TOTAL 5453.4 MEAN 14.9 MAX 176 MIN 1.3 AC-FT 10820
WTR YR 1991 TOTAL 3733.0 MEAN 10.2 MAX 44 MIN 1.3 AC-FT 7400

e Estimated.

11482125 PANTHER CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to September 1991 (discontinued).
WATER TEMPERATURE: Water year 1980.
SEDIMENT DATA: Water years 1979 to September 1991 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1979 to September 1980.

REMARKS.--Zero-bedload discharge observed for flows less than 26 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT					
10...	1200	1.4	10.0	0	0.0
NOV					
16...	1200	2.1	10.0	1	0.01
JAN					
04...	1200	2.7	3.0	0	0.0

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--40 years, 1,027 ft^3/s, 744,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,500 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, former site, from outside high-water marks; minimum daily, 2.1 ft^3/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 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0215	*5,280	*15.81				

Minimum daily, 11 ft^3/s, Sept. 26-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	89	50	89	201	289	1290	656	417	149	48	38
2	23	57	46	87	1350	985	1170	619	372	131	47	35
3	23	37	41	86	1620	2350	1060	568	343	133	47	33
4	22	31	38	84	1760	3440	970	527	323	127	47	31
5	22	34	40	84	2700	3920	1170	488	303	119	47	29
6	21	31	46	82	1810	2150	2010	463	285	113	47	27
7	20	29	44	161	1280	e1650	1810	453	274	110	47	26
8	20	28	39	235	973	e1390	1480	676	259	107	45	26
9	19	27	37	180	774	1060	1470	636	249	104	43	26
10	18	25	e473	200	646	1240	1450	533	238	99	42	25
11	18	24	e433	372	570	1100	1250	487	226	94	41	25
12	17	23	e326	e1000	511	2730	1140	450	218	88	39	24
13	17	61	173	e3000	468	e2410	1040	464	210	81	34	24
14	17	121	129	e2570	427	e1940	952	482	203	81	34	23
15	17	69	132	1710	392	1680	898	433	197	81	34	23
16	17	48	128	1240	370	1450	844	414	193	102	34	22
17	18	36	106	917	359	1260	790	873	187	125	34	20
18	23	33	145	731	337	1130	753	936	181	109	34	19
19	33	34	e437	616	316	1050	722	863	185	90	34	18
20	29	35	e402	508	302	958	699	792	190	81	34	16
21	27	35	e326	435	288	969	708	740	183	76	34	16
22	26	32	e240	381	278	940	669	673	177	72	34	15
23	25	30	e190	343	266	e1700	644	599	171	69	32	14
24	23	29	e165	313	253	e2600	699	541	168	66	31	13
25	22	145	e165	291	242	e2100	877	501	168	63	30	12
26	22	248	e145	273	234	2350	1030	467	165	61	28	11
27	21	136	e122	253	228	2070	861	437	160	59	28	11
28	23	81	120	240	229	1760	780	404	157	57	36	11
29	25	60	121	225	---	1550	726	394	157	55	50	11
30	25	60	107	213	---	1410	673	555	156	55	50	14
31	107	---	94	206	---	1340	---	483	---	51	43	---
TOTAL	764	1728	5060	17125	19184	52971	30635	17607	6715	2808	1208	638
MEAN	24.6	57.6	163	552	685	1709	1021	568	224	90.6	39.0	21.3
MAX	107	248	473	3000	2700	3920	2010	936	417	149	50	38
MIN	17	23	37	82	201	289	644	394	156	51	28	11
AC-FT	1520	3430	10040	33970	38050	105100	60760	34920	13320	5570	2400	1270

CAL YR 1990 TOTAL 237403 MEAN 650 MAX 13100 MIN 17 AC-FT 470900
WTR YR 1991 TOTAL 156443 MEAN 429 MAX 3920 MIN 11 AC-FT 310300

e Estimated.

11482500 REDWOOD CREEK AT ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-56, 1959 to current year.
CHEMICAL DATA: Water years 1959-66, 1973-81.
WATER TEMPERATURE: Water years 1966 to current year.
SEDIMENT DATA: Water years 1955-56, 1970 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: March 1970 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

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 ton, Nov. 10-12, 1986, Apr. 20, 29, 30, 1987, several days during 1989-90, many days during 1991.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 722 mg/L, Jan. 13; minimum daily mean, 0 mg/L many days.
SEDIMENT LOAD: Maximum daily, 5,850 tons, Jan. 13; minimum daily, 0 ton many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
DEC										
10...	0715	473	9.0	55	70	90	--	--	--	--
10...	1215	473	9.0	168	215	56	--	--	--	--
JAN										
12...	0730	1000	9.0	626	1690	69	81	91	97	100
MAR										
05...	1200	3730	9.5	269	2710	79	85	92	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
AUG								
26...	1255	1	28	16.0	--	--	--	--
26...	1300	1	28	16.0	--	--	1	10
26...	1305	1	28	16.0	--	--	--	6
26...	1310	1	28	16.0	--	--	1	4
26...	1315	1	28	16.0	--	1	2	11
26...	1320	1	28	16.0	--	--	3	37
26...	1325	1	28	16.0	3	11	54	87
26...	1330	1	28	16.0	--	--	1	3
26...	1335	1	28	16.0	2	5	10	16
26...	1340	1	28	16.0	--	1	3	15

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
AUG							
26...	2	19	40	67	92	100	--
26...	21	33	50	71	87	100	--
26...	17	28	40	56	83	99	100
26...	9	11	15	25	46	85	100
26...	22	31	41	56	84	100	--
26...	70	82	88	93	100	--	--
26...	98	100	--	--	--	--	--
26...	23	36	44	58	75	91	100
26...	21	27	35	46	59	72	100
26...	25	34	45	63	89	100	--

11482500 REDWOOD CREEK AT ORICK, CA--Continued

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
MAR										
05...	1240	1000	1100	0.250	1225	1250	19	4.00	3640	9.5
05...	1310	1000	1100	0.250	1255	1321	19	4.00	3610	9.5

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAR										
05...	1150	1	4	11	26	47	65	85	96	100
05...	2230	--	3	8	24	48	72	90	100	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	10.0	---	---	7.0	10.0	---
2	---	---	---	---	10.0	10.5	9.5
3	---	---	6.5	4.0	9.0	11.0	---
4	16.0	---	---	---	10.0	11.5	---
5	---	12.0	---	---	11.0	10.0	10.5
6	---	---	6.0	---	11.0	9.0	11.0
7	10.5	---	---	5.0	8.0	10.0	12.0
8	10.5	12.0	---	---	---	---	8.0
9	---	---	---	---	---	---	10.5
10	---	---	9.0	8.0	---	9.5	---
11	11.0	---	9.5	8.0	9.0	7.0	---
12	12.5	10.0	9.0	9.0	---	9.0	---
13	---	11.0	6.0	10.0	---	9.5	9.5
14	---	12.5	---	9.5	9.0	8.0	---
15	13.0	14.0	---	10.5	---	---	---
16	---	---	9.0	8.0	---	---	9.0
17	---	---	6.0	---	---	---	---
18	14.0	11.0	---	---	9.0	7.0	---
19	---	---	6.5	7.0	---	---	9.5
20	---	---	4.5	---	---	---	---
21	---	10.0	---	5.0	8.5	8.5	---
22	14.0	---	---	---	---	---	11.0
23	---	---	---	---	---	8.0	---
24	---	---	2.0	5.0	---	8.0	---
25	11.5	11.0	---	---	8.0	8.0	9.5
26	---	10.0	---	---	---	9.5	---
27	---	10.0	2.0	---	---	7.5	---
28	---	---	---	5.0	9.5	---	---
29	11.0	11.0	---	---	---	---	10.0
30	---	---	---	---	---	9.0	---
31	---	---	1.0	6.0	---	---	---

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	24	2	.13	89	2	.48	50	1	.13
2	23	2	.12	57	1	.15	46	0	.00
3	23	2	.12	37	1	.10	41	0	.00
4	22	2	.12	31	0	.00	38	2	.21
5	22	2	.12	34	0	.00	40	1	.11
6	21	1	.06	31	0	.00	46	2	.25
7	20	0	.00	29	0	.00	44	1	.12
8	20	1	.05	28	0	.00	39	1	.11
9	19	1	.05	27	0	.00	37	2	.20
10	18	1	.05	25	0	.00	e473	112	143
11	18	1	.05	24	0	.00	e433	45	53
12	17	0	.00	23	0	.00	e326	8	7.0
13	17	0	.00	61	8	3.3	173	2	.93
14	17	0	.00	121	11	4.2	129	2	.70
15	17	0	.00	69	2	.37	132	2	.71
16	17	1	.05	48	2	.26	128	2	.69
17	18	2	.10	36	1	.10	106	3	.86
18	23	2	.12	33	1	.09	145	6	3.0
19	33	1	.09	34	2	.18	e437	20	24
20	29	1	.08	35	4	.38	e402	11	12
21	27	0	.00	35	5	.47	e326	8	7.0
22	26	0	.00	32	4	.35	e240	6	3.9
23	25	0	.00	30	3	.24	e190	3	1.5
24	23	0	.00	29	1	.08	e165	1	.45
25	22	0	.00	145	57	37	e165	1	.45
26	22	0	.00	248	22	15	e145	2	.78
27	21	1	.06	136	6	2.2	e122	2	.66
28	23	1	.06	81	4	.87	120	2	.65
29	25	1	.07	60	3	.49	121	1	.33
30	25	1	.07	60	1	.16	107	1	.29
31	107	6	1.7	---	---	---	94	1	.25
TOTAL	764	---	3.27	1728	---	66.47	5060	---	263.28

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	89	1	.24	201	3	1.6	289	7	9.2
2	87	1	.23	1350	228	1070	985	110	406
3	86	1	.23	1620	112	514	2350	298	1970
4	84	1	.23	1760	141	798	3440	371	3670
5	84	1	.23	2700	240	1810	3920	404	4910
6	82	1	.22	1810	57	279	2150	96	557
7	161	4	1.7	1280	34	118	e1650	58	258
8	235	3	1.9	973	24	63	e1390	45	169
9	180	2	.97	774	18	38	1060	35	100
10	200	3	1.6	646	13	23	1240	36	121
11	372	14	15	570	10	15	1100	23	68
12	e1000	473	1280	511	8	11	2730	266	2360
13	e3000	722	5850	468	6	7.6	e2410	110	716
14	e2570	126	874	427	5	5.8	e1940	59	309
15	1710	52	240	392	4	4.2	1680	48	218
16	1240	33	110	370	3	3.0	1450	36	141
17	917	21	52	359	2	1.9	1260	24	82
18	731	12	24	337	2	1.8	1130	16	49
19	616	6	10	316	2	1.7	1050	13	37
20	508	6	8.2	302	3	2.4	958	11	28
21	435	6	7.0	288	3	2.3	969	10	26
22	381	4	4.1	278	4	3.0	940	9	23
23	343	3	2.8	266	5	3.6	e1700	111	509
24	313	2	1.7	253	7	4.8	e2600	180	1260
25	291	2	1.6	242	7	4.6	e2100	53	301
26	273	1	.74	234	5	3.2	2350	83	527
27	253	1	.68	228	4	2.5	2070	95	531
28	240	0	.00	229	3	1.9	1760	34	162
29	225	0	.00	---	---	---	1550	24	100
30	213	0	.00	---	---	---	1410	20	76
31	206	0	.00	---	---	---	1340	18	65
TOTAL	17125	---	8489.37	19184	---	4794.9	52971	---	19758.2

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	MEAN SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	1290	15	52
2	1170	12	38
3	1060	11	31
4	970	10	26
5	1170	34	129
6	2010	87	477
7	1810	39	191
8	1480	21	84
9	1470	25	99
10	1450	20	78
11	1250	17	57
12	1140	14	43
13	1040	11	31
14	952	9	23
15	898	7	17
16	844	6	14
17	790	6	13
18	753	5	10
19	722	5	9.7
20	699	5	9.4
21	708	6	11
22	669	6	11
23	644	6	10
24	699	8	15
25	877	11	26
26	1030	12	33
27	861	9	21
28	780	7	15
29	726	5	9.8
30	673	3	5.5
31	---	---	---
TOTAL	30635	---	1589.4
PERIOD	127467		34964.89

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	764.00	3.27	0	3
NOVEMBER	1728.00	66.47	2	68
DECEMBER	5060.00	263.28	55	318
JANUARY 1991	17125.00	8489.37	3340	11800
FEBRUARY	19184.00	4794.90	3060	7850
MARCH	52971.00	19758.20	14300	34100
APRIL	30635.00	1589.40	2210	3800
PERIOD	127467.00	34964.89	22967	57939

On

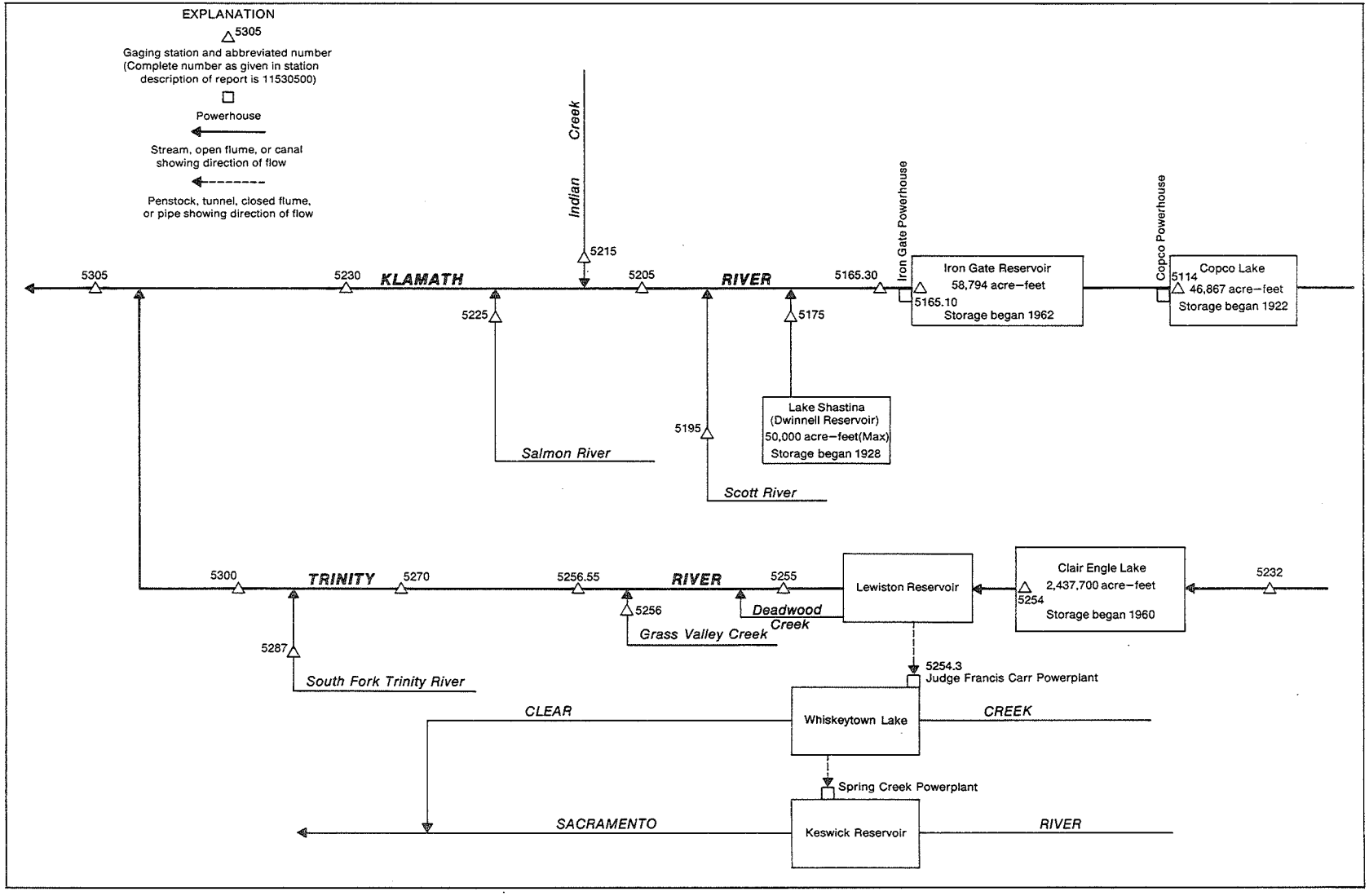


Figure 23. Diversions and storage in Klamath River and Trinity River basins.

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 mi^2, 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 National Geodetic Vertical Datum of 1929 (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, 46,571 acre-ft, Sept. 13, elevation, 2,607.20 ft; minimum, 40,725 acre-ft, Dec. 19, elevation, 2,601.10 ft.

11516510 IRON GATE RESERVOIR NEAR HORNBROOK.--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 mi^2, 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 National Geodetic Vertical Datum of 1929 (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, 61,776 acre-ft, Mar. 3, 1972, elevation, 2,330.96 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, 59,111 acre-ft, Dec. 26, 27, elevation, 2,328.32 ft; minimum, 54,276 acre-ft, May 13, elevation, 2,323.20 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	11511400 COPCO LAKE			11516510 IRON GATE RESERVOIR		
Sept. 30	2,604.79	44,217	--	2,326.43	57,278	--
Oct. 31	2,603.30	42,792	-1425	2,326.77	57,603	+325
Nov. 30	2,602.64	42,168	-624	2,327.29	58,103	+500
Dec. 31	2,604.60	44,035	+1,867	2,328.30	59,091	+988
CAL YR 1990	--	--	+2,216	--	--	+3,088
Jan. 31	2,602.75	42,271	-1,764	2,326.65	57,488	-1,603
Feb. 28	2,602.90	42,413	+142	2,325.73	56,613	-875
Mar. 31	2,604.06	43,516	+1,103	2,326.37	57,221	+608
Apr. 30	2,603.82	43,287	-229	2,326.19	57,048	-173
May 31	2,606.72	46,097	+2,810	2,325.46	56,360	-688
June 30	2,605.75	45,148	-949	2,325.61	56,500	+140
July 31	2,606.30	45,685	+537	2,326.77	57,603	+1,103
Aug. 31	2,606.02	45,410	-275	2,326.08	56,943	-660
Sept. 30	2,605.00	44,419	-991	2,325.72	56,604	-339
WTR YR 1991	--	--	+202	--	--	-674

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 mi^2, 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 National Geodetic Vertical Datum of 1929 (levels by PacificCorp, formerly Pacific Power & Light Co.).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Upper Klamath Lake, OR, 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.

AVERAGE DISCHARGE.--31 years, 2,169 ft^3/s, 1,571,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s, Dec. 22, 1964, gage height, 13.63 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 530 ft^3/s, July 22, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft^3/s, Dec. 28, gage height, 4.70 ft; minimum daily, 530 ft^3/s, July 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	1330	1310	2400	740	749	875	740	750	578	545	740
2	1340	1330	1310	2390	755	749	801	735	749	592	544	736
3	1340	1330	1300	2390	748	821	780	806	745	535	545	732
4	1340	1330	1300	2110	759	905	795	810	744	544	543	734
5	1340	1330	1300	2020	765	947	795	807	742	538	541	734
6	1350	1330	1320	2010	741	925	796	807	752	540	545	733
7	1350	1330	1340	2020	749	977	793	791	752	546	545	735
8	1340	1330	1350	2010	749	926	790	735	746	551	542	734
9	1350	1350	1360	1940	749	838	798	736	739	551	541	731
10	1350	1320	1370	1890	747	825	801	733	741	538	543	729
11	1350	1320	1360	1340	745	822	800	726	738	539	542	729
12	1350	1320	1360	1310	745	829	798	732	743	537	541	731
13	1350	1330	1360	1320	745	820	796	751	747	538	541	730
14	1350	1340	1350	1320	745	795	797	755	744	538	542	730
15	1350	1330	1350	1320	745	804	797	756	690	536	662	730
16	1350	1320	1350	1310	745	793	797	765	659	538	747	730
17	1350	1330	1350	1310	745	792	797	827	647	542	736	730
18	1350	1330	1360	831	745	1080	797	775	613	535	736	731
19	1350	1330	1360	755	745	1470	767	764	619	535	731	730
20	1350	1320	1480	749	745	1220	742	759	610	531	730	732
21	1350	1320	1690	767	745	972	744	960	606	531	731	735
22	1350	1320	1710	799	745	960	742	1290	603	530	736	731
23	1340	1320	1700	800	745	961	762	1370	603	549	734	740
24	1340	1310	1700	799	744	960	743	1370	603	554	729	747
25	1340	1320	2120	802	745	912	742	1370	603	553	737	749
26	1340	1320	2400	806	745	851	740	1300	602	546	752	749
27	1340	1310	2400	803	749	900	736	1080	603	548	749	765
28	1340	1310	2400	793	749	1010	736	777	603	546	735	870
29	1340	1310	2400	749	---	1030	735	752	603	546	732	870
30	1340	1310	2390	749	---	1000	735	752	601	546	733	870
31	1330	---	2400	749	---	977	---	752	---	545	739	---
TOTAL	41700	39730	50250	41361	20919	28620	23327	27083	20300	16876	20049	22467
MEAN	1345	1324	1621	1334	747	923	778	874	677	544	647	749
MAX	1350	1350	2400	2400	765	1470	875	1370	752	592	752	870
MIN	1330	1310	1300	749	740	749	735	726	601	530	541	729
AC-FT	82710	78800	99670	82040	41490	56770	46270	53720	40270	33470	39770	44560

CAL YR 1990 TOTAL 493544 MEAN 1352 MAX 3310 MIN 717 AC-FT 978900
WTR YR 1991 TOTAL 352682 MEAN 966 MAX 2400 MIN 530 AC-FT 699500

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 mi^2.
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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 2, 1933, nonrecording gage at same site and datum.
REMARKS.--Records fair. 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.
AVERAGE DISCHARGE.--54 years (water years 1934-41, 1946-91), 184 ft^3/s, 133,300 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft^3/s, Dec. 22, 1964, gage height, 12.92 ft, in gage well, 13.85 ft, from floodmarks, from rating curve extended above 4,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft^3/s, Aug. 24, 1981, July 17, 1985.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 630 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 6	2245	*440	*4.27				

Minimum daily, 12 ft^3/s, Aug. 9, 20, Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	160	156	140	148	164	124	60	59	70	17	16
2	54	153	155	140	171	167	92	75	56	59	18	18
3	57	150	155	140	177	188	70	76	60	37	17	12
4	61	150	155	143	188	218	68	69	40	31	22	20
5	64	153	154	143	205	249	64	67	34	27	22	25
6	71	152	152	142	187	223	62	61	24	16	24	59
7	79	155	152	146	182	177	63	65	28	23	22	99
8	81	155	154	148	178	163	59	47	37	24	15	39
9	76	155	154	147	175	159	51	50	22	21	12	44
10	78	155	164	154	174	153	48	39	30	23	14	37
11	91	155	175	157	172	151	49	36	33	20	15	25
12	85	155	167	162	168	155	40	40	39	27	24	18
13	97	156	163	164	169	151	24	60	29	27	25	30
14	98	181	162	162	169	144	17	79	29	27	23	37
15	104	181	164	163	168	145	22	73	33	43	25	26
16	102	168	165	159	179	143	24	67	26	54	34	21
17	101	163	161	154	157	141	31	321	16	60	30	40
18	135	163	160	155	164	140	28	349	15	40	25	26
19	148	160	160	182	171	139	38	354	57	32	15	21
20	141	159	e156	167	168	135	40	314	58	31	12	19
21	138	158	e152	161	171	135	52	314	47	26	27	21
22	140	153	e149	158	171	138	60	287	33	18	27	35
23	141	152	e148	155	168	138	81	187	33	17	35	41
24	138	152	e145	153	164	134	77	149	46	29	35	35
25	139	163	e140	152	148	137	70	135	59	87	26	32
26	139	175	e141	151	157	137	69	106	88	51	18	34
27	140	167	142	150	163	131	55	80	83	45	20	30
28	155	161	144	149	160	125	53	62	78	38	21	30
29	148	158	143	148	---	126	54	59	72	29	23	20
30	147	158	141	147	---	126	45	71	79	26	20	25
31	148	---	140	147	---	124	---	74	---	19	18	---
TOTAL	3357	4776	4769	4739	4772	4756	1630	3826	1343	1077	681	935
MEAN	108	159	154	153	170	153	54.3	123	44.8	34.7	22.0	31.2
MAX	155	181	175	182	205	249	124	354	88	87	35	99
MIN	54	150	140	140	148	124	17	36	15	16	12	12
AC-FT	6660	9470	9460	9400	9470	9430	3230	7590	2660	2140	1350	1850

CAL YR 1990 TOTAL 42310 MEAN 116 MAX 628 MIN 11 AC-FT 83920
WTR YR 1991 TOTAL 36661 MEAN 100 MAX 354 MIN 12 AC-FT 72720

e Estimated.

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 mi^2.
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 National Geodetic Vertical Datum of 1929 (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.
AVERAGE DISCHARGE.--50 years, 639 ft^3/s, 463,000 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,600 ft^3/s, Dec. 22, 1964, gage height, 25.34 ft, from floodmarks, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement at 21.40 ft, site and datum then in use; minimum daily, 5.0 ft^3/s, several days during August 1981.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0300	*1,830	*8.56				

Minimum daily, 9.1 ft^3/s, Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	39	60	55	102	141	259	319	392	118	22	9.9
2	22	43	61	54	168	163	277	341	404	100	19	10
3	24	47	60	55	400	451	278	330	468	83	19	10
4	25	48	59	57	386	1170	276	335	480	73	17	9.5
5	25	51	57	57	756	1520	285	372	426	66	17	10
6	27	50	57	57	558	883	400	458	366	53	16	11
7	28	53	57	61	395	631	405	489	331	49	15	12
8	28	54	57	62	312	502	350	551	313	48	15	12
9	27	54	60	64	265	432	327	545	313	44	14	11
10	30	54	67	67	234	392	321	464	317	40	14	11
11	32	53	85	67	215	356	307	410	322	30	13	12
12	32	54	100	116	199	347	291	392	306	28	13	11
13	33	55	93	302	190	344	273	434	283	26	13	10
14	32	56	88	360	187	311	264	479	258	25	13	10
15	31	57	84	262	183	300	271	451	231	28	12	10
16	31	63	79	205	179	281	266	459	209	31	11	10
17	35	66	77	171	174	268	252	496	200	30	10	11
18	36	64	75	151	168	260	258	498	180	31	9.8	11
19	34	62	e71	141	163	253	260	459	178	29	9.1	12
20	33	61	e67	133	158	244	249	440	188	28	9.6	15
21	31	55	e54	125	153	237	245	480	178	30	11	14
22	32	53	e56	120	150	227	254	551	176	29	11	14
23	32	55	e57	119	145	237	292	619	163	30	11	13
24	31	56	e58	116	141	242	353	663	161	33	11	13
25	32	58	59	113	136	240	367	672	167	32	11	13
26	33	58	61	109	133	239	340	593	162	30	11	13
27	33	60	60	107	135	229	304	526	140	27	11	11
28	35	62	59	104	138	223	285	479	127	25	11	12
29	38	62	57	102	---	221	278	453	119	25	11	12
30	39	60	56	101	---	227	282	470	120	25	10	11
31	38	---	56	99	---	235	---	430	---	23	9.6	---
TOTAL	960	1663	2047	3712	6523	11806	8869	14658	7678	1269	400.1	344.4
MEAN	31.0	55.4	66.0	120	233	381	296	473	256	40.9	12.9	11.5
MAX	39	66	100	360	756	1520	405	672	480	118	22	15
MIN	21	39	54	54	102	141	245	319	119	23	9.1	9.5
AC-FT	1900	3300	4060	7360	12940	23420	17590	29070	15230	2520	794	683

CAL YR 1990 TOTAL 93559.4 MEAN 256 MAX 4040 MIN 7.9 AC-FT 185600
WTR YR 1991 TOTAL 59929.5 MEAN 164 MAX 1520 MIN 9.1 AC-FT 118900

e Estimated.

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 mi^2, 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 National Geodetic Vertical Datum of 1929, from river-profile map. November 1912 to June 1925, nonrecording gage at site 3.5 mi upstream at different datum.
REMARKS.--No estimated daily discharges. 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.
AVERAGE DISCHARGE.--53 years (water years 1913-25, 1952-91), 3,985 ft^3/s, 2,887,000 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft^3/s, Dec. 23, 1964, gage height, 33.75 ft, from floodmarks, from rating curve extended above 49,000 ft^3/s on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 ft^3/s, Nov. 25, 1917.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0900	*4,950	*6.02				

Minimum daily, 621 ft^3/s, Aug. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1670	1660	2790	1220	1320	1850	1670	1770	1070	669	806
2	1430	1640	1650	2790	1490	1500	1730	1720	1770	1030	667	825
3	1430	1630	1640	2800	1830	2460	1640	1730	1840	996	667	836
4	1430	1640	1650	2710	2030	4080	1600	1790	1840	906	662	830
5	1440	1640	1650	2450	2980	4580	1720	1840	1750	884	665	838
6	1450	1640	1640	2440	2290	3290	1900	1920	1660	857	672	850
7	1450	1630	1690	2450	1910	2690	1880	2000	1600	829	670	921
8	1460	1640	1710	2450	1730	2340	1790	2080	1580	831	657	888
9	1450	1650	1730	2440	1540	2130	1750	2020	1550	825	641	838
10	1460	1660	1900	2400	1500	1960	1720	1860	1540	810	634	843
11	1470	1630	1950	2150	1480	1860	1680	1770	1560	794	634	828
12	1470	1620	1860	2180	1440	1860	1630	1720	1530	777	625	826
13	1480	1630	1830	2660	1440	1860	1600	1800	1480	784	625	823
14	1490	1720	1800	2560	1420	1780	1580	1890	1430	785	621	824
15	1500	1700	1790	2350	1410	1710	1570	1870	1380	776	622	821
16	1490	1670	1790	2170	1390	1690	1560	1870	1270	845	751	794
17	1490	1660	1780	2050	1380	1640	1540	2220	1230	891	828	792
18	1560	1670	1780	1880	1330	1620	1530	2420	1190	848	813	816
19	1620	1670	1800	1420	1360	2140	1540	2260	1190	800	796	826
20	1590	1670	1780	1370	1340	2190	1530	2200	1260	782	778	834
21	1580	1650	1940	1320	1320	1910	1550	2240	1190	756	810	831
22	1590	1650	2030	1330	1320	1710	1570	2710	1140	748	804	841
23	1580	1640	2080	1340	1310	1750	1660	2960	1120	770	798	862
24	1580	1640	2110	1320	1290	1750	1780	2980	1140	838	798	865
25	1580	1700	2210	1310	1270	1720	1760	2960	1130	789	782	856
26	1570	1770	2750	1310	1250	1660	1710	2810	1140	832	784	856
27	1580	1700	2810	1290	1260	1610	1640	2540	1150	768	780	853
28	1590	1690	2820	1280	1260	1680	1580	2130	1140	745	788	899
29	1600	1680	2790	1250	---	1770	1570	1890	1130	718	810	987
30	1610	1670	2780	1210	---	1800	1560	1910	1100	704	806	965
31	1690	---	2790	1220	---	1840	---	1840	---	690	803	---
TOTAL	47170	49870	62190	60690	42790	63900	49720	65620	41800	25478	22460	25474
MEAN	1522	1662	2006	1958	1528	2061	1657	2117	1393	822	725	849
MAX	1690	1770	2820	2800	2980	4580	1900	2980	1840	1070	828	987
MIN	1430	1620	1640	1210	1220	1320	1530	1670	1100	690	621	792
AC-FT	93560	98920	123400	120400	84870	126700	98620	130200	82910	50540	44550	50530

CAL YR 1990 TOTAL 744633 MEAN 2040 MAX 10600 MIN 857 AC-FT 1477000
WTR YR 1991 TOTAL 557162 MEAN 1526 MAX 4580 MIN 621 AC-FT 1105000

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 left 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 mi^2.
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 National Geodetic Vertical Datum of 1929. 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.
AVERAGE DISCHARGE.--37 years (water years 1912-14, 1958-91), 417 ft^3/s, 302,100 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/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 ft^3/s on basis of slope-area measurement at gage height 29.0 ft, previous site and datum; minimum discharge observed, 20 ft^3/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 ft^3/s on basis of slope-area measurement of peak flow.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1630	*2,770	*8.28				

Minimum daily, 22 ft^3/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	90	70	e54	91	130	492	313	182	81	47	39
2	39	63	66	e54	714	316	453	309	180	78	47	37
3	39	56	63	53	769	1270	423	308	171	75	47	36
4	39	53	73	52	1130	2140	391	302	158	72	47	35
5	39	58	92	51	1200	1340	614	306	148	69	47	34
6	39	55	77	52	694	788	680	304	143	68	46	34
7	39	52	70	60	474	578	555	306	137	66	46	33
8	39	52	65	59	369	470	480	377	133	65	45	33
9	39	52	64	57	306	407	588	307	130	63	45	31
10	38	51	199	72	266	387	546	272	125	62	44	32
11	38	50	176	187	238	342	468	254	121	61	43	31
12	38	49	126	1140	218	364	423	247	115	60	42	30
13	39	51	104	1020	209	345	402	271	111	59	41	30
14	39	71	90	614	197	323	392	271	108	59	40	29
15	39	58	82	452	187	301	373	246	105	59	40	29
16	39	54	76	301	178	289	350	244	102	99	39	28
17	39	52	70	234	170	276	333	255	100	91	38	27
18	45	54	72	203	163	270	326	244	97	73	38	26
19	53	57	e67	182	158	266	326	233	104	66	37	26
20	45	58	e61	161	151	259	340	248	104	63	36	25
21	43	56	e56	145	145	253	356	272	96	60	36	25
22	50	62	e52	134	139	246	361	258	93	61	36	25
23	47	59	e50	126	134	268	388	236	95	61	35	24
24	44	57	e51	120	129	260	418	229	98	58	35	24
25	43	101	e53	113	125	263	381	220	91	57	35	24
26	42	115	e55	110	121	278	351	202	89	55	35	23
27	42	85	e56	105	119	288	341	189	87	53	35	24
28	43	74	e55	102	117	298	323	184	91	52	43	24
29	44	67	e54	97	---	311	317	194	90	50	50	23
30	74	76	e54	94	---	359	313	225	84	49	43	22
31	164	---	e52	91	---	448	---	193	---	48	40	---
TOTAL	1439	1888	2351	6295	8911	14133	12504	8019	3488	1993	1278	863
MEAN	46.4	62.9	75.8	203	318	456	417	259	116	64.3	41.2	28.8
MAX	164	115	199	1140	1200	2140	680	377	182	99	50	39
MIN	38	49	50	51	91	130	313	184	84	48	35	22
AC-FT	2850	3740	4660	12490	17670	28030	24800	15910	6920	3950	2530	1710

CAL YR 1990 TOTAL 77148 MEAN 211 MAX 3770 MIN 38 AC-FT 153000
WTR YR 1991 TOTAL 63162 MEAN 173 MAX 2140 MIN 22 AC-FT 125300

e Estimated.

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 mi^2.

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 National Geodetic Vertical Datum of 1929. 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 good. No storage or large diversion upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--68 years, 1,784 ft^3/s, 1,293,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 133,000 ft^3/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 ft^3/s; minimum, 70 ft^3/s, Aug. 25, Sept. 4, 5, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2215	*5,830	*6.89				

Minimum daily, 122 ft^3/s, Sept. 24-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	493	221	e260	e430	519	1430	1430	1250	521	198	171
2	186	472	211	e230	e1400	894	1380	1380	1470	519	194	168
3	186	436	199	e218	e1700	2710	1340	1360	1620	511	192	163
4	186	336	204	219	e1900	4460	1250	1410	1370	488	188	158
5	186	241	235	225	3690	4420	1580	1610	1180	464	189	153
6	186	241	225	218	2240	2740	2230	1730	1070	427	187	150
7	186	225	206	267	1550	2000	1860	1710	1040	397	197	152
8	186	216	206	276	1220	1630	1620	2040	1060	372	189	149
9	184	225	209	277	1020	1430	1660	1690	1100	352	184	147
10	183	222	889	285	893	1340	1660	1420	1160	334	181	147
11	183	214	1180	363	804	1180	1480	1340	1190	319	179	147
12	183	199	768	1970	737	1320	1380	1320	1010	307	173	145
13	178	202	546	3830	695	1310	1340	1560	886	297	170	142
14	177	266	351	2550	655	1200	1360	1530	798	296	167	139
15	177	260	307	2020	636	1110	1350	1430	736	291	164	138
16	177	230	294	1210	e620	1050	1290	1530	710	340	160	136
17	177	219	277	1060	e600	995	1220	1620	677	409	162	135
18	207	218	275	824	e580	952	1190	1430	662	346	161	133
19	268	213	313	692	e560	912	1190	1290	682	310	159	132
20	249	198	324	598	e540	889	1210	1390	682	288	158	127
21	210	192	e310	571	e520	859	1280	1650	609	273	156	124
22	225	191	e270	534	e512	827	1280	1890	581	262	153	124
23	215	190	e240	505	514	961	1440	2000	562	293	151	123
24	207	188	e220	475	493	987	1670	2030	627	300	149	122
25	203	251	e235	e470	476	948	1570	1930	575	261	147	122
26	198	322	e245	e450	458	981	1410	1590	544	247	148	122
27	195	250	e250	e445	447	955	1370	1430	537	234	149	123
28	200	230	e251	e440	444	961	1320	1380	546	224	182	126
29	207	214	e249	e430	---	1000	1360	1420	600	216	220	130
30	210	218	e270	e420	---	1120	1400	1700	560	211	200	130
31	417	---	e290	e415	---	1350	---	1320	---	203	178	---
TOTAL	6323	7572	10270	22747	26334	44010	43120	48560	26094	10312	5385	4178
MEAN	204	252	331	734	940	1420	1437	1566	870	333	174	139
MAX	417	493	1180	3830	3690	4460	2230	2040	1620	521	220	171
MIN	177	188	199	218	430	519	1190	1290	537	203	147	122
AC-FT	12540	15020	20370	45120	52230	87290	85530	96320	51760	20450	10680	8290

CAL YR 1990 TOTAL 380494 MEAN 1042 MAX 14400 MIN 177 AC-FT 754700
WTR YR 1991 TOTAL 254905 MEAN 698 MAX 4460 MIN 122 AC-FT 505600

e Estimated.

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 mi^2, 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."

REVISED RECORDS.--WSP 1565: 1935(M), 1949.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 355.98 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 6.7 mi upstream at datum 90.68 ft higher.

REMARKS.--No estimated daily discharges. Records good. 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.

AVERAGE DISCHARGE.--64 years, 8,135 ft^3/s, 5,894,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 307,000 ft^3/s, Dec. 22, 1964, gage height, 76.5 ft, from floodmarks, site and datum then in use, from rating curve extended above 80,000 ft^3/s by slope-conveyance study; minimum daily, 320 ft^3/s, Aug. 25, Sept. 1, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2130	*25,400	*11.40				

Minimum daily, 1,120 ft^3/s, Aug. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	2870	2440	3400	2150	2570	6330	5140	4310	2300	1310	1270
2	2010	2460	2400	3390	5490	4180	6090	5140	4460	2250	1290	1270
3	1970	2330	2360	3420	8540	11200	5790	5100	4630	2190	1280	1260
4	1970	2280	2370	3420	8990	20100	5480	5150	4350	2130	1270	1230
5	1970	2290	2560	3180	14800	19400	6330	5420	4080	2030	1250	1220
6	1970	2320	2490	3030	9590	12800	8540	5590	3780	1970	1240	1220
7	1970	2280	2410	3300	6890	9440	7420	5710	3660	1930	1240	1220
8	1970	2260	2410	3310	5640	7820	6630	6410	3590	1890	1240	1280
9	1970	2270	2450	3210	4920	6830	6720	5960	3610	1840	1210	1240
10	1980	2290	4180	3280	4420	6410	6890	5350	3630	1800	1200	1220
11	1980	2250	4560	3770	4030	5830	6190	4980	3650	1770	1180	1220
12	2000	2230	3460	10200	3750	6180	5800	4790	3440	1730	1170	1210
13	2010	2230	3050	13400	3560	6260	5620	5110	3250	1680	1160	1210
14	2010	2470	2860	9460	3420	5840	5550	5330	3100	1660	1140	1190
15	2010	2470	2760	7080	3300	5470	5430	5090	2980	1630	1130	1190
16	2030	2350	2690	5640	3210	5180	5260	5100	2860	1780	1120	1190
17	2030	2310	2620	4750	3130	4920	5010	5290	2720	1980	1210	1170
18	2080	2290	2590	4240	3020	4690	4890	5570	2630	1840	1270	1170
19	2280	2290	2770	3660	2920	4660	4880	5290	2610	1730	1250	1170
20	2240	2290	2660	3140	2850	5250	4930	5300	2690	1660	1250	1170
21	2160	2290	2490	2890	2770	4900	5060	5640	2600	1610	1230	1150
22	2150	2300	2540	2720	2700	4460	5070	6000	2480	1570	1240	1140
23	2170	2320	2710	2650	2640	4810	5410	6530	2420	1570	1240	1140
24	2160	2300	2820	2570	2570	4980	5860	6620	2480	1610	1220	1150
25	2130	2510	2830	2490	2520	4810	5880	6500	2420	1590	1220	1150
26	2120	3020	3110	2400	2460	4990	5460	6010	2380	1540	1220	1160
27	2120	2650	3500	2360	2420	4820	5320	5610	2360	1530	1220	1180
28	2120	2500	3500	2310	2420	4810	5100	5240	2390	1480	1280	1180
29	2140	2430	3470	2270	---	5040	5030	4660	2460	1450	1390	1250
30	2190	2440	3370	2190	---	5410	5050	5230	2390	1400	1350	1300
31	3070	---	3370	2150	---	6020	---	4610	---	1350	1290	---
TOTAL	65010	71590	89800	125280	125120	210080	173020	169470	94410	54490	38310	36120
MEAN	2097	2386	2897	4041	4469	6777	5767	5467	3147	1758	1236	1204
MAX	3070	3020	4560	13400	14800	20100	8540	6620	4630	2300	1390	1300
MIN	1970	2230	2360	2150	2150	2570	4880	4610	2360	1350	1120	1140
AC-FT	128900	142000	178100	248500	248200	416700	343200	336100	187300	108100	75990	71640

CAL YR 1990 TOTAL 1671380 MEAN 4579 MAX 41100 MIN 1510 AC-FT 3315000
WTR YR 1991 TOTAL 1252700 MEAN 3432 MAX 20100 MIN 1120 AC-FT 2485000

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 mi^2.
PERIOD OF RECORD.--September 1957 to current year.
REVISED RECORDS.--WDR CA-85-2: 1982(M).
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,536.93 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, water-stage recorder at site 0.2 mi downstream at datum 3.57 ft lower.
REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--34 years, 401 ft^3/s, 290,500 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft^3/s, Jan. 16, 1974, gage height, 12.96 ft, site and datum then in use, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 13.78 ft, Nov. 16, 1981, present site and datum; minimum daily, 16 ft^3/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 ft^3/s.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1815	*1,650	*7.34				

Minimum daily, 20 ft^3/s, Sept. 22-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	50	39	e40	38	132	518	485	405	e102	41	31
2	30	39	38	e40	62	192	501	460	465	e93	40	31
3	28	36	38	e39	81	783	492	485	448	e82	40	31
4	28	36	38	e40	138	1190	422	545	394	78	40	29
5	28	36	38	e39	170	714	514	636	335	74	40	28
6	28	37	38	e40	110	379	622	632	305	70	40	29
7	28	36	38	e40	88	294	467	619	293	67	40	30
8	28	36	38	40	83	250	395	639	286	65	40	29
9	28	36	39	40	80	228	386	516	e285	65	38	28
10	28	34	79	41	78	203	391	430	e285	62	37	29
11	28	33	69	46	76	184	340	417	e280	60	37	29
12	28	33	48	68	76	182	320	416	e270	56	36	27
13	28	33	44	100	75	173	349	471	e255	56	36	27
14	28	65	38	86	91	163	409	449	e225	55	36	26
15	28	50	41	70	104	157	427	466	e210	55	36	25
16	28	42	41	59	100	147	387	547	e190	59	37	23
17	28	40	40	53	84	151	370	546	e180	70	35	23
18	30	40	40	50	74	156	362	449	e165	63	34	22
19	37	39	39	48	72	152	381	408	e165	57	33	22
20	35	39	e39	45	68	168	419	502	e160	59	32	22
21	32	39	e38	42	65	167	399	607	e158	58	31	21
22	32	38	e38	41	63	160	433	703	e152	54	31	20
23	33	38	e38	41	63	178	520	759	e148	78	30	20
24	31	37	e37	40	60	175	589	748	e148	58	30	20
25	31	41	e37	37	58	171	491	655	e148	58	30	20
26	30	49	e36	38	56	179	416	543	e130	53	30	20
27	30	41	e37	36	57	183	408	489	e122	49	30	20
28	31	39	e38	37	67	202	408	466	e112	47	31	21
29	33	39	e38	39	---	245	463	459	e110	45	35	22
30	34	41	e39	38	---	317	481	425	e108	44	35	22
31	66	---	e39	38	---	433	---	364	---	42	33	---
TOTAL	966	1192	1277	1451	2237	8408	13080	16336	6937	1934	1094	747
MEAN	31.2	39.7	41.2	46.8	79.9	271	436	527	231	62.4	35.3	24.9
MAX	66	65	79	100	170	1190	622	759	465	102	41	31
MIN	28	33	36	36	38	132	320	364	108	42	30	20
AC-FT	1920	2360	2530	2880	4440	16680	25940	32400	13760	3840	2170	1480

CAL YR 1990 TOTAL 77842 MEAN 213 MAX 4130 MIN 28 AC-FT 154400
WTR YR 1991 TOTAL 55659 MEAN 152 MAX 1190 MIN 20 AC-FT 110400

e Estimated.

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 mi^2.
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 National Geodetic Vertical Datum of 1929 (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, 1,206,188 acre-ft, May 28, elevation, 2,276.77 ft; minimum, 670,247 acre-ft, Sept. 30, elevation, 2,212.82 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 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1155911	996157	969788	955054	951103	961971	1039180	1116719	1198758	1155911	1044205	865228
2	1148813	991638	969440	954366	953078	964221	1042652	1119605	1199573	1152953	1040003	858656
3	1142638	987931	968484	953938	954194	973449	1046227	1122507	1202319	1149995	1035619	851959
4	1137359	985729	967961	953594	956523	984321	1049076	1125794	1204965	1146950	1031440	845927
5	1132200	984233	967700	953164	958598	991108	1052659	1130059	1205067	1143913	1027535	839685
6	1127440	983704	966396	952906	959636	994297	1056634	1133659	1204662	1140582	1023646	833090
7	1122701	983440	965700	952820	960242	996423	1059685	1137551	1203949	1136969	1020396	826062
8	1117970	983087	965264	952476	960328	997840	1062367	1141758	1203236	1133367	1018773	818687
9	1113739	982646	965090	952218	960502	998904	1064694	1145087	1203134	1129182	1014995	812202
10	1109799	982119	965612	952132	960673	1000151	1067115	1147732	1202726	1125310	1011139	805753
11	1105979	981679	964570	952218	960586	1001222	1069162	1150389	1202117	1121539	1007462	799108
12	1102349	981326	964308	952992	960846	1003272	1071117	1152854	1200487	1118160	1003718	792498
13	1099867	980712	964134	954024	961105	1004165	1073173	1155714	1198656	1114413	999529	786077
14	1096640	980625	963786	954710	961192	1005055	1075516	1158575	1196328	1110762	994119	779616
15	1090757	980101	963440	954968	960932	1005947	1078327	1161354	1194103	1106646	987578	773190
16	1085098	978261	963180	955400	961192	1006927	1080763	1164825	1192281	1103018	980187	766794
17	1078046	977738	962921	955400	961365	1008984	1083307	1168101	1190258	1099487	972923	760136
18	1071676	977475	962490	955313	961538	1010690	1085569	1170697	1187934	1095692	965525	753512
19	1065812	976774	962317	955227	961451	1012663	1087738	1173493	1185522	1092085	958080	746854
20	1060333	976073	961711	955227	961538	1014905	1090567	1176689	1183312	1088304	950673	740737
21	1055060	975374	961105	954624	961538	1016608	1093035	1180296	1180699	1085192	944073	733931
22	1049720	974936	960415	954194	961451	1018502	1094742	1184617	1178287	1081704	938012	727237
23	1044297	974410	960846	953938	961538	1021300	1097020	1189451	1175889	1078421	932245	720369
24	1041281	973098	958167	953680	961451	1023555	1099107	1194407	1173193	1074768	924642	713265
25	1037446	973098	957734	953422	961451	1025721	1101489	1198961	1171096	1071024	917167	706574
26	1031440	972573	957475	953078	961365	1027626	1102731	1202523	1168700	1067301	908903	699656
27	1025359	971268	957128	952820	961105	1029080	1105214	1205475	1166216	1063299	901516	692319
28	1019495	971007	956782	952476	961278	1030713	1108271	1206188	1163537	1059870	894092	685047
29	1013558	970572	956263	952218	---	1031528	1111144	1205271	1161155	1056171	886792	677509
30	1007909	969962	955746	951876	---	1032800	1113643	1203440	1158774	1051925	879207	670247
31	1002025	---	955227	951446	---	1035894	---	1200487	---	1048064	871996	---
MAX	1155911	996157	969788	955400	961538	1035894	1113643	1206188	1205067	1155911	1044205	865228
MIN	1002025	969962	955227	951446	951103	961971	1039180	1116719	1158774	1048064	871996	670247
a	2255.35	2251.71	2250.01	2249.57	2250.71	2259.11	2267.42	2276.21	2272.05	2260.44	2240.04	2212.82
b	-160419	-32063	-14735	-3781	+9832	+74616	+77749	+86844	-41713	-110710	-176068	-201749
c	2137	656	142	221	802	960	2226	3631	4934	5724	4680	3094

CAL YR 1990 b -303612
WTR YR 1991 b -492197

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet, provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

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.--No estimated daily discharges. 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.

AVERAGE DISCHARGE.--28 years, 1,448 ft^3/s, 1,049,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,000 ft^3/s, Oct. 18, 1987; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2946	2821	.00	.00	.00	1	.00	.00	.00	1560	1501	2845
2	3300	1998	.00	.00	4	3	.00	.00	.00	1564	1793	2542
3	2657	1525	104	2	3	56	.00	.00	.00	1534	1557	3001
4	2388	917	6	4	2	1	.00	.00	.00	1415	1763	2864
5	2134	480	6	3	136	.00	.00	.00	1168	1219	1459	2932
6	2117	2	553	4	51	57	.00	.00	1242	1439	1467	2931
7	1822	.00	.00	3	1	.00	.00	2	1238	1469	1464	2931
8	2051	1	1	7	.00	.00	.00	.00	1240	1497	404	3011
9	1961	.00	36	6	.00	.00	119	.00	1225	1786	1531	2972
10	1857	.00	69	.00	42	2	.00	.00	1236	1466	1565	2930
11	1531	.00	517	.00	.00	.00	.00	.00	1244	1512	1520	2946
12	1592	.00	3	22	.00	6	.00	.00	1241	1257	1721	2979
13	960	1	4	5	.00	.00	.00	.00	1239	1480	1728	2989
14	1217	.00	13	5	.00	.00	.00	.00	1228	1515	2367	2977
15	2567	5	11	.00	.00	.00	.00	.00	1226	1620	2889	2985
16	2548	782	.00	12	.00	.00	.00	.00	1221	1614	3510	2984
17	3102	4	.00	2	.00	4	.00	.00	1225	1660	3393	2974
18	3079	15	1	.00	9	1	.00	.00	1229	1667	3503	2983
19	2558	.00	.00	4	120	1	.00	.00	1229	1477	3225	2979
20	2536	125	5	3	11	.00	.00	.00	1270	1524	3272	2981
21	2472	.00	1	3	2	.00	.00	.00	1227	1526	3299	2986
22	2471	.00	.00	8	.00	.00	493	1	1225	1499	3293	2982
23	2492	.00	1	3	7	.00	380	.00	1230	1571	3338	2990
24	1568	458	754	4	13	2	504	.00	1210	1481	3306	3093
25	1453	6	.00	.00	5	.00	504	.00	1232	1454	3295	3099
26	2697	13	.00	4	.00	.00	504	.00	1234	1670	3296	3298
27	2688	464	.00	2	7	356	.00	.00	1207	1685	3410	3390
28	2668	2	.00	4	.00	.00	.00	.00	1151	1484	3439	3382
29	2853	.00	.00	2	---	585	1	.00	1313	1580	3268	3377
30	2821	.00	.00	4	---	649	.00	.00	1317	1648	3536	3295
31	2825	---	.00	5	---	.00	---	.00	---	1512	3354	---
TOTAL	71931	9619.00	2085.00	121.00	413.00	1724.00	2505.00	3.00	32047.00	47385	78466	90628
MEAN	2320	321	67.3	3.90	14.7	55.6	83.5	.097	1068	1529	2531	3021
MAX	3300	2820	754	22	136	649	504	2.0	1320	1790	3540	3390
MIN	960	.00	.00	.00	.00	.00	.00	.00	.00	1220	404	2540
AC-FT	142700	19080	4140	240	819	3420	4970	6.0	63570	93990	155600	179800

CAL YR 1990 TOTAL 328934.00 MEAN 901 MAX 3410 MIN .00 AC-FT 652400
WTR YR 1991 TOTAL 336927.00 MEAN 923 MAX 3540 MIN .00 AC-FT 668300

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 mi^2.
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 National Geodetic Vertical Datum of 1929. See WSP 1929 for history of changes prior to July 7, 1964.
REMARKS.--No estimated daily discharges. 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.
AVERAGE DISCHARGE.--49 years (water years 1912-60) prior to storage and diversions, 1,641 ft^3/s, 1,189,000 acre-ft/yr; 30 years (water years 1961-90), 1,875 ft^3/s, 1,358,000 acre-ft/yr, adjusted for changes in contents, evaporation, and diversion; 31 years (water years 1961-91), 426 ft^3/s, 308,600 acre-ft/yr, unadjusted.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft^3/s, Dec. 22, 1955, gage height, 27.3 ft, from floodmarks, site and datum then in use; minimum, 23 ft^3/s, July 30, 1924. Since completion of Trinity Dam in 1960, maximum discharge, 14,400 ft^3/s, Jan. 18, 1974, gage height, 10.41 ft; minimum daily, 100 ft^3/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.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,860 ft^3/s, May 31, gage height, 6.48 ft; minimum daily, 272 ft^3/s, Apr. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	295	290	302	277	285	296	275	2690	496	435	475
2	289	296	293	302	283	280	297	284	1540	496	437	1060
3	290	294	294	303	284	281	298	300	765	499	440	578
4	289	297	295	303	284	279	295	298	333	502	438	380
5	286	297	295	303	286	298	299	295	339	507	417	385
6	292	296	294	303	285	290	298	297	361	511	405	392
7	291	295	291	299	284	288	297	296	359	508	407	396
8	291	293	294	299	284	287	298	295	361	510	402	401
9	290	293	293	297	282	288	297	294	362	511	401	402
10	291	293	292	298	282	288	298	292	363	521	402	400
11	285	294	293	297	283	289	299	294	514	527	404	400
12	291	294	293	298	283	289	300	292	497	523	403	398
13	292	293	291	294	283	286	300	294	501	519	397	390
14	295	292	292	293	284	287	300	295	501	523	400	388
15	296	293	293	293	288	288	302	293	503	495	403	387
16	295	292	293	293	290	291	301	293	498	438	404	387
17	297	288	291	292	288	294	299	290	496	434	402	386
18	299	288	290	289	287	294	298	294	498	434	400	387
19	300	287	293	287	287	298	297	292	502	436	403	388
20	299	290	285	285	287	299	297	288	503	438	406	385
21	297	289	284	285	285	299	294	283	500	438	404	383
22	294	293	300	287	285	298	290	293	498	438	398	383
23	295	294	300	286	283	300	277	296	501	436	396	383
24	296	293	302	282	284	299	279	296	502	437	400	384
25	290	291	302	281	288	298	276	299	502	440	403	386
26	295	290	300	279	288	292	278	299	497	438	406	383
27	297	295	300	280	288	295	277	321	497	437	407	383
28	297	290	299	279	288	295	276	1230	500	440	405	383
29	297	289	301	278	---	294	272	2600	500	435	405	385
30	296	291	301	276	---	294	274	2790	497	439	406	389
31	295	---	301	274	---	293	---	2770	---	439	407	---
TOTAL	9100	8775	9135	9017	7980	9036	8759	17328	17480	14645	12643	12607
MEAN	294	292	295	291	285	291	292	559	583	472	408	420
MAX	300	297	302	303	290	300	302	2790	2690	527	440	1060
MIN	285	287	284	274	277	279	272	275	333	434	396	380
AC-FT	18050	17410	18120	17890	15830	17920	17370	34370	34670	29050	25080	25010

CAL YR 1990 TOTAL 115386 MEAN 316 MAX 633 MIN 162 AC-FT 228900
WTR YR 1991 TOTAL 136505 MEAN 374 MAX 2790 MIN 272 AC-FT 270800

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 mi^2.

PERIOD OF RECORD.--
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Zero bedload observed at flows less than 2.5 ft^3/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 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT									
15...	1115	1.1	8.5	2	0.01	--	--	--	--
NOV									
02...	1325	1.6	4.5	1	0.00	--	--	--	--
DEC									
07...	1230	1.6	1.5	6	0.03	--	--	--	--
JAN									
04...	1250	1.4	0.0	2	0.01	--	--	--	--
FEB									
01...	1220	1.6	3.0	2	0.01	--	--	--	--
05...	1240	3.3	5.5	14	0.12	81	--	--	--
MAR									
01...	0820	2.5	5.5	36	0.24	88	--	--	--
04...	1320	8.8	8.0	76	1.8	80	91	96	100
APR									
04...	1315	6.5	8.0	14	0.25	75	--	--	--
MAY									
08...	1145	2.8	10.5	3	0.02	--	--	--	--
31...	1355	2.1	12.0	4	0.02	--	--	--	--
JUL									
09...	1240	0.99	14.5	2	0.01	--	--	--	--
AUG									
06...	1125	0.71	15.0	4	0.01	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	TEMPERATURE WATER (DEG C)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
DEC											
07...	1235	1.5	1.6	--	1	5	22	41	65	94	100
07...	1240	1.5	1.6	--	2	10	34	53	72	91	100
07...	1245	1.5	1.6	1	4	16	30	46	70	92	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
MAR								
01...	0845	1000	1120	0.250	0840	0846	2.80	2.5
01...	0850	1000	1120	0.250	0849	0855	2.80	2.5
04...	1350	1000	1120	0.250	1345	1353	1.00	8.4
04...	1355	1000	1120	0.250	1353	1401	1.00	8.4

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TEMPER-ATURE WATER (DEG C)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAR								
01...	5.5	0.11	2	12	38	73	97	100
01...	5.5	0.11	2	14	39	75	97	100
04...	8.0	4.0	1	6	19	53	95	100
04...	8.0	4.0	1	6	22	57	95	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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1975 to current year.

REVISED RECORDS.--WDR CA-86-2: 1983(M)

GAGE.--Water-stage recorder. Datum of gage is 2,049.73 ft above National Geodetic Vertical Datum of 1929 (California State Highway Department bench mark).

REMARKS.--Records fair except for estimated daily discharges for ice-affect period, Dec. 21 to Jan. 5, which is poor. 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.

AVERAGE DISCHARGE.--15 years (water years 1977-91), 43.2 ft^3/s, 31,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,140 ft^3/s, Feb. 28, 1983; gage height, 10.11 ft, from rating curve extended above 700 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 4.3 ft^3/s, many days in 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1815	*76	*5.48				

Minimum daily, 5.6 ft^3/s, Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	9.6	8.2	e6.8	9.6	9.8	48	54	26	10	7.6	7.5
2	7.7	9.2	8.2	e8.1	20	15	49	54	26	8.7	7.7	7.4
3	8.4	9.0	8.8	e8.2	14	38	69	53	25	9.0	7.8	7.3
4	8.3	9.0	9.0	e8.1	17	59	54	52	23	8.9	7.9	7.3
5	8.0	9.0	9.0	e8.0	16	63	55	52	23	8.7	8.0	7.2
6	8.6	9.0	9.0	8.1	9.9	37	60	51	22	8.3	7.9	7.2
7	8.6	9.3	9.0	8.8	8.9	13	55	50	22	8.3	7.8	7.3
8	8.2	9.4	9.0	9.6	8.3	11	46	50	20	8.1	7.9	7.4
9	8.1	9.4	9.1	10	8.2	11	46	45	19	7.8	7.7	7.4
10	8.6	9.4	11	11	7.8	11	48	43	18	7.7	7.9	7.4
11	6.2	9.4	9.9	11	7.8	10	43	43	18	7.7	7.7	7.4
12	6.8	9.2	9.4	13	7.5	14	35	43	18	7.8	7.7	7.1
13	8.3	9.7	9.4	14	7.4	26	45	42	17	7.8	7.8	7.1
14	8.7	11	9.2	12	7.4	11	40	41	17	8.9	8.3	7.0
15	9.0	9.9	9.8	11	7.6	10	39	40	17	8.3	8.5	7.0
16	8.8	9.4	9.4	11	7.4	9.9	45	39	17	9.3	8.2	6.9
17	8.5	7.5	9.4	10	7.4	23	56	37	17	9.4	8.2	6.4
18	9.4	7.6	9.6	10	7.4	28	59	37	17	8.6	8.1	6.2
19	9.8	7.8	9.8	10	7.4	22	50	36	17	8.3	8.1	6.2
20	9.2	7.9	9.9	10	7.4	41	62	37	17	8.2	7.8	6.2
21	9.1	7.8	e6.4	10	7.4	51	69	36	16	8.1	7.6	6.3
22	9.3	7.5	e5.6	15	7.4	44	66	36	16	8.1	7.5	6.3
23	9.0	7.8	e5.8	10	7.4	48	62	33	16	8.2	7.6	6.3
24	9.1	8.1	e6.4	10	7.4	44	66	30	14	8.1	7.4	6.3
25	8.9	9.9	e6.4	10	7.4	49	65	30	11	8.1	7.5	6.2
26	8.9	8.8	e6.4	10	7.4	56	59	30	11	8.1	7.6	6.3
27	9.0	8.6	e6.4	10	7.4	39	53	29	11	8.0	7.7	6.6
28	8.6	8.6	e6.3	11	8.5	29	55	30	11	7.9	8.3	6.6
29	8.8	9.2	e6.1	11	---	38	55	30	11	7.8	8.4	6.5
30	9.1	8.4	e6.1	11	---	46	54	29	11	7.7	7.9	6.4
31	12	---	e6.2	9.8	---	48	---	28	---	7.6	7.6	---
TOTAL	268.8	266.4	254.2	316.5	254.7	954.7	1608	1240	524	257.5	243.7	204.7
MEAN	8.67	8.88	8.20	10.2	9.10	30.8	53.6	40.0	17.5	8.31	7.86	6.82
MAX	12	11	11	15	20	63	69	54	26	10	8.5	7.5
MIN	6.2	7.5	5.6	6.8	7.4	9.8	35	28	11	7.6	7.4	6.2
AC-FT	533	528	504	628	505	1890	3190	2460	1040	511	483	406

CAL YR 1990 TOTAL 6706.7 MEAN 18.4 MAX 171 MIN 5.6 AC-FT 13300
WTR YR 1991 TOTAL 6393.2 MEAN 17.5 MAX 69 MIN 5.6 AC-FT 12680

e Estimated.

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 10 ft^3/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, 286 mg/L, Mar. 3; minimum daily mean, 0 mg/L, Oct. 17-20.
SEDIMENT LOAD: Maximum daily, 37 tons, Mar. 3; minimum daily, 0 tons, Oct. 17-20.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
FEB											
05...	1100	16	5.0	23	0.99	98	99	100	--	--	--
MAR											
01...	0845	9.6	6.0	18	0.47	93	--	--	--	--	--
02...	1325	17	6.0	183	8.4	93	--	--	--	--	--
03...	1130	48	7.5	488	63	97	98	99	100	--	--
03...	1230	42	7.5	405	46	97	98	99	100	--	--
04...	0900	59	6.5	171	27	80	82	84	88	94	100
APR											
04...	1200	53	6.0	14	2.0	62	--	--	--	--	--
MAY											
31...	1325	27	12.0	6	0.44	89	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC												
07...	1110	9.0	1.0	--	3	21	53	76	79	80	90	100
07...	1115	9.0	1.0	1	5	18	34	44	47	51	69	100
07...	1120	9.0	1.0	1	4	27	76	99	100	--	--	--
07...	1125	9.0	1.0	1	6	20	53	82	84	85	94	100
07...	1130	9.0	1.0	--	2	6	14	34	46	49	68	100
FEB												
05...	1210	16	5.0	1	7	29	61	87	92	92	100	--
05...	1215	16	5.0	--	2	14	38	55	61	66	70	100
05...	1230	16	5.0	2	7	25	58	88	95	100	--	--
05...	1245	16	5.0	--	3	23	70	97	100	--	--	--
05...	1250	16	5.0	1	5	14	24	38	48	63	100	--

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
FEB								
05...	1110	1000	1120	0.250	1105	1115	1.00	16
05...	1125	1000	1120	0.250	1120	1130	1.00	16
MAR								
04...	0930	1000	1120	0.250	0920	0935	10.0	57
04...	0940	1000	1120	0.250	0935	0950	10.0	57
APR								
04...	1210	1000	1120	0.250	1205	1217	9.00	53
04...	1225	1000	1120	0.250	1218	1230	9.00	53

DATE	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
FEB								
05...	5.0	0.66	2	10	45	83	100	--
05...	5.0	0.66	1	7	35	73	99	100
MAR								
04...	6.5	13	1	9	32	61	90	100
04...	6.5	13	1	8	34	74	97	100
APR								
04...	6.0	8.8	--	5	23	58	92	100
04...	6.0	8.8	--	3	20	56	90	100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	---	---	---	3.0	6.0	6.5	6.5	---	14.5	---	---
2	---	6.0	---	.5	4.0	6.0	---	---	---	---	16.0	---
3	---	---	3.0	---	---	7.5	4.5	---	16.0	16.5	---	17.0
4	14.5	---	---	.0	4.0	6.5	6.0	7.5	---	---	---	---
5	---	5.0	4.0	---	5.0	5.5	7.0	---	11.0	18.0	19.5	---
6	10.0	---	---	---	4.0	5.5	---	9.0	---	---	16.0	18.5
7	---	4.0	1.0	1.5	---	4.0	---	---	15.5	---	---	---
8	---	---	---	---	---	4.5	---	9.0	---	19.0	19.5	---
9	6.5	6.5	---	2.0	---	---	5.5	---	---	15.5	---	---
10	---	---	5.0	---	---	---	---	10.0	15.5	18.0	---	---
11	7.5	---	---	3.0	---	4.5	7.0	---	---	---	---	15.5
12	9.5	---	4.5	---	5.0	---	---	---	13.5	17.0	---	---
13	11.0	4.5	---	---	---	5.5	---	10.5	---	---	16.0	17.0
14	---	---	2.5	4.0	5.0	---	---	---	14.0	---	---	---
15	8.5	5.0	---	---	---	6.0	8.0	12.5	---	16.0	---	---
16	---	---	---	3.0	6.5	---	---	---	---	---	---	---
17	6.0	4.5	3.5	---	---	4.5	7.0	12.0	13.5	18.5	19.0	13.0
18	---	---	---	4.0	6.0	4.5	---	---	---	---	---	---
19	---	7.0	1.5	---	---	5.5	---	---	14.0	17.0	---	---
20	8.0	---	---	---	---	4.0	8.0	12.5	---	---	20.0	16.0
21	---	5.5	.0	1.0	6.0	---	---	---	15.0	---	---	---
22	9.0	---	---	---	---	4.0	7.5	11.5	---	21.0	19.5	---
23	---	4.0	---	1.5	6.0	4.5	---	---	---	---	---	15.0
24	7.0	---	.5	---	---	---	9.5	---	12.5	---	---	---
25	---	---	---	.0	5.0	5.5	---	13.0	---	16.0	---	---
26	9.0	2.5	---	---	---	---	7.5	---	12.5	---	---	---
27	---	---	.0	---	5.5	5.5	---	11.5	---	19.5	17.0	13.0
28	---	3.0	---	.5	6.5	---	---	---	13.0	---	---	---
29	10.0	---	.5	---	---	6.5	7.5	10.0	---	17.5	---	---
30	---	4.5	---	1.0	---	---	---	---	---	---	16.5	---
31	9.5	---	.0	---	---	---	---	12.0	---	20.5	---	---

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	7.8	1	.02	9.6	7	.19	8.2	2	.04
2	7.7	1	.02	9.2	4	.10	8.2	4	.09
3	8.4	1	.02	9.0	2	.05	8.8	7	.18
4	8.3	1	.02	9.0	2	.05	9.0	8	.19
5	8.0	1	.03	9.0	2	.05	9.0	7	.18
6	8.6	2	.04	9.0	2	.05	9.0	4	.09
7	8.6	2	.04	9.3	2	.05	9.0	7	.16
8	8.2	1	.03	9.4	1	.04	9.0	11	.26
9	8.1	1	.02	9.4	1	.03	9.1	10	.25
10	8.6	1	.02	9.4	1	.03	11	10	.31
11	6.2	1	.02	9.4	1	.03	9.9	12	.33
12	6.8	2	.04	9.2	1	.02	9.4	14	.36
13	8.3	1	.03	9.7	1	.03	9.4	12	.31
14	8.7	1	.02	11	1	.04	9.2	10	.25
15	9.0	1	.02	9.9	2	.05	9.8	9	.25
16	8.8	1	.02	9.4	1	.04	9.4	9	.22
17	8.5	0	.00	7.5	1	.02	9.4	8	.21
18	9.4	0	.00	7.6	1	.02	9.6	9	.23
19	9.8	0	.00	7.8	1	.02	9.8	9	.25
20	9.2	0	.00	7.9	1	.02	9.9	10	.27
21	9.1	1	.02	7.8	1	.02	e6.4	11	.19
22	9.3	1	.03	7.5	1	.02	e5.6	10	.15
23	9.0	1	.02	7.8	1	.02	e5.8	9	.14
24	9.1	1	.02	8.1	1	.02	e6.4	8	.14
25	8.9	1	.02	9.9	1	.03	e6.4	7	.13
26	8.9	1	.02	8.8	1	.02	e6.4	7	.11
27	9.0	1	.02	8.6	1	.02	e6.4	6	.10
28	8.6	1	.02	8.6	1	.02	e6.3	5	.08
29	8.8	1	.03	9.2	1	.02	e6.1	4	.07
30	9.1	4	.09	8.4	1	.02	e6.1	4	.07
31	12	8	.27	---	---	---	e6.2	4	.07
TOTAL	268.8	---	.97	266.4	---	1.14	254.2	---	5.68
		JANUARY			FEBRUARY			MARCH	
1	e6.8	4	.07	9.6	2	.11	9.8	20	.41
2	e8.1	4	.09	20	136	8.0	15	82	4.2
3	e8.2	3	.08	14	46	2.5	38	286	37
4	e8.1	3	.06	17	67	3.6	59	139	22
5	e8.0	2	.04	16	26	.86	63	71	14
6	8.1	2	.04	9.9	9	.27	37	50	6.1
7	8.8	2	.05	8.9	8	.19	13	8	.34
8	9.6	2	.06	8.3	7	.15	11	5	.15
9	10	3	.08	8.2	6	.13	11	5	.14
10	11	3	.09	7.8	5	.11	11	5	.13
11	11	3	.09	7.8	5	.10	10	4	.12
12	13	3	.09	7.5	4	.08	14	14	.32
13	14	2	.09	7.4	4	.08	26	17	.98
14	12	2	.07	7.4	4	.08	11	4	.22
15	11	2	.06	7.6	3	.07	10	3	.11
16	11	2	.06	7.4	3	.06	9.9	4	.29
17	10	1	.04	7.4	2	.05	23	37	2.9
18	10	1	.03	7.4	2	.04	28	21	1.4
19	10	1	.03	7.4	2	.05	22	13	.82
20	10	2	.04	7.4	3	.05	41	41	4.6
21	10	2	.05	7.4	3	.06	51	27	3.0
22	15	1	.06	7.4	4	.08	44	16	2.1
23	10	1	.03	7.4	5	.09	48	20	2.7
24	10	1	.03	7.4	4	.08	44	16	2.0
25	10	1	.03	7.4	3	.06	49	16	1.6
26	10	1	.04	7.4	2	.05	56	13	1.5
27	10	2	.06	7.4	2	.05	39	8	.86
28	11	3	.09	8.5	9	.15	29	8	.63
29	11	3	.09	---	---	---	38	9	.83
30	11	3	.08	---	---	---	46	12	1.1
31	9.8	2	.05	---	---	---	48	14	1.2
TOTAL	316.5	---	1.87	254.7	---	17.20	954.7	---	113.75

e Estimated.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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	48	10	1.5	54	7	1.0	26	6	.40
2	49	14	2.8	54	7	1.0	26	7	.47
3	69	31	5.5	53	7	1.0	25	8	.52
4	54	14	2.3	52	8	1.1	23	7	.43
5	55	11	1.6	52	11	1.6	23	6	.38
6	60	9	1.5	51	14	2.0	22	6	.36
7	55	9	1.3	50	10	1.4	22	6	.36
8	46	8	1.0	50	6	.81	20	6	.32
9	46	8	.98	45	6	.73	19	6	.31
10	48	7	.97	43	8	.95	18	6	.29
11	43	7	.84	43	6	.73	18	6	.29
12	35	9	.81	43	4	.51	18	5	.25
13	45	10	1.3	42	3	.37	17	2	.11
14	40	13	1.4	41	4	.43	17	1	.05
15	39	16	1.7	40	5	.51	17	2	.08
16	45	20	2.4	39	5	.47	17	3	.14
17	56	23	3.5	37	4	.41	17	5	.21
18	59	20	3.2	37	4	.40	17	4	.18
19	50	17	2.2	36	4	.39	17	3	.14
20	62	14	2.4	37	4	.39	17	3	.16
21	69	15	2.7	36	3	.34	16	4	.17
22	66	16	2.8	36	3	.30	16	4	.16
23	62	18	3.1	33	3	.30	16	3	.14
24	66	21	3.7	30	4	.29	14	3	.11
25	65	16	2.8	30	4	.32	11	2	.07
26	59	12	1.9	30	4	.36	11	2	.07
27	53	10	1.4	29	5	.38	11	4	.11
28	55	8	1.2	30	4	.36	11	6	.17
29	55	7	1.1	30	4	.33	11	6	.18
30	54	7	1.0	29	5	.35	11	6	.18
31	---	---	---	28	5	.38	---	---	---
TOTAL	1608	---	60.90	1240	---	19.91	524	---	6.81
		JULY			AUGUST			SEPTEMBER	
1	10	5	.14	7.6	1	.03	7.5	4	.09
2	8.7	2	.05	7.7	1	.02	7.4	4	.08
3	9.0	1	.03	7.8	1	.02	7.3	4	.08
4	8.9	1	.02	7.9	1	.02	7.3	4	.08
5	8.7	1	.02	8.0	1	.02	7.2	4	.08
6	8.3	1	.02	7.9	3	.06	7.2	4	.08
7	8.3	1	.02	7.8	2	.04	7.3	4	.08
8	8.1	1	.02	7.9	1	.02	7.4	4	.08
9	7.8	2	.05	7.7	1	.02	7.4	4	.08
10	7.7	3	.06	7.9	1	.03	7.4	4	.08
11	7.7	2	.03	7.7	2	.03	7.4	4	.08
12	7.8	1	.02	7.7	2	.04	7.1	4	.08
13	7.8	1	.03	7.8	2	.04	7.1	4	.08
14	8.9	2	.04	8.3	2	.04	7.0	4	.08
15	8.3	2	.04	8.5	1	.03	7.0	4	.08
16	9.3	1	.03	8.2	1	.03	6.9	5	.09
17	9.4	1	.03	8.2	1	.02	6.4	5	.08
18	8.6	1	.02	8.1	1	.03	6.2	5	.08
19	8.3	1	.02	8.1	2	.03	6.2	4	.07
20	8.2	1	.02	7.8	2	.04	6.2	4	.06
21	8.1	1	.02	7.6	2	.04	6.3	3	.04
22	8.1	1	.02	7.5	2	.04	6.3	2	.03
23	8.2	2	.04	7.6	2	.04	6.3	1	.02
24	8.1	3	.06	7.4	2	.04	6.3	1	.02
25	8.1	3	.07	7.5	2	.04	6.2	1	.02
26	8.1	2	.04	7.6	2	.04	6.3	1	.02
27	8.0	1	.02	7.7	2	.04	6.6	1	.02
28	7.9	1	.02	8.3	3	.06	6.6	1	.02
29	7.8	1	.02	8.4	4	.08	6.5	1	.02
30	7.7	1	.03	7.9	5	.10	6.4	1	.02
31	7.6	2	.04	7.6	5	.10	---	---	---
TOTAL	257.5	---	1.09	243.7	---	1.23	204.7	---	1.82
YEAR	6393.2		232.37						

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	268.80	0.97	0	1
NOVEMBER	266.40	1.14	0	1
DECEMBER	254.20	5.68	0	6
JANUARY 1991	316.50	1.87	0	2
FEBRUARY	254.70	17.20	0	17
MARCH	954.70	113.75	80	194
APRIL	1,608.00	60.90	229	290
MAY	1,240.00	19.91	92	112
JUNE	524.00	6.81	2	9
JULY	257.50	1.09	0	1
AUGUST	243.70	1.23	0	1
SEPTEMBER ...	204.70	1.82	0	2
TOTAL	6,393.20	232.37	403	636

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA

LOCATION.--Lat 40°40'21", long 122°55'07", in SW 1/4 NW 1/4 sec.32, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on left bank 1.8 mi northeast of Douglas City, 2.3 mi downstream from Limekiln Gulch, and 11.3 mi downstream from Lewiston diversion dam.

DRAINAGE AREA.--812 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1981 to September 1991 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Clair Engle Lake (station 11525400) and transbasin diversion to Judge Francis Carr powerplant (station 11525430). Small diversion for irrigation upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--10 years, 715 ft^3/s, 518,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,070 ft^3/s, June 12, 1983, gage height, 10.45 ft; minimum daily, 228 ft^3/s, June 15, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,720 ft^3/s, May 30, gage height, 7.33 ft; minimum daily, 299 ft^3/s, Dec. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	327	318	308	300	322	431	385	2670	497	426	417
2	308	325	318	308	364	349	426	385	1730	497	426	1030
3	308	323	318	308	351	546	436	410	953	497	426	704
4	308	323	318	310	364	565	424	407	428	492	425	397
5	308	323	318	313	395	525	420	402	377	491	416	393
6	308	323	318	313	347	427	429	402	407	491	405	397
7	308	323	317	317	327	363	420	402	404	491	418	397
8	308	323	322	318	318	345	402	418	391	491	420	400
9	314	323	323	318	318	342	397	423	405	487	420	406
10	323	327	342	318	317	342	397	398	385	490	420	407
11	323	327	344	318	313	342	393	375	500	491	420	402
12	323	327	336	335	313	352	380	374	508	491	420	401
13	323	327	330	395	313	358	380	379	503	491	420	396
14	323	327	318	354	313	352	380	385	503	491	420	391
15	322	327	326	335	313	345	380	374	503	487	420	391
16	323	327	327	318	313	337	391	374	503	447	420	391
17	323	323	323	316	313	399	391	374	501	441	420	385
18	323	323	323	308	313	459	391	374	497	437	420	385
19	323	322	327	308	313	419	391	374	505	437	420	385
20	323	318	320	308	313	449	403	374	503	437	420	385
21	323	318	299	308	308	500	408	374	500	437	420	385
22	323	318	308	308	307	442	408	381	500	437	419	385
23	323	318	308	305	303	476	408	407	497	433	413	385
24	320	318	308	303	303	484	408	395	497	431	418	385
25	318	325	308	303	303	458	407	391	497	431	420	385
26	318	328	308	304	303	451	397	389	493	431	420	385
27	318	323	308	303	303	444	385	385	491	431	420	385
28	318	323	308	303	306	409	385	1050	491	431	424	385
29	318	321	308	303	---	404	385	2350	497	430	422	385
30	318	318	308	303	---	413	385	2660	497	426	414	385
31	327	---	308	303	---	430	---	2670	---	426	414	---
TOTAL	9854	9698	9865	9772	8967	12849	12038	19241	18136	14318	13006	12710
MEAN	318	323	318	315	320	414	401	621	605	462	420	424
MAX	327	328	344	395	395	565	436	2670	2670	497	426	1030
MIN	308	318	299	303	300	322	380	374	377	426	405	385
AC-FT	19550	19240	19570	19380	17790	25490	23880	38160	35970	28400	25800	25210

CAL YR 1990 TOTAL 132793 MEAN 364 MAX 1130 MIN 228 AC-FT 263400
WTR YR 1991 TOTAL 150454 MEAN 412 MAX 2670 MIN 299 AC-FT 298400

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to September 1991 (discontinued).
WATER TEMPERATURE: Water years 1981 to September 1991 (discontinued).
SEDIMENT DATA: Water years 1981 to September 1991 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: April 1981 to September 1991 (discontinued).

REMARKS.--Sediment samples were collected most days where a water temperature is published. Zero bedload observed at flows less than 1,220 ft^3/s.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,990 mg/L, Feb. 14, 1986; minimum daily mean, 0 mg/L, several days most years.
SEDIMENT LOAD: Maximum daily, 17,300 tons, Feb. 14, 1986; minimum daily, 0 ton, several days most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 44 mg/L, May 29; minimum daily mean, 1 mg/L, many days.
SEDIMENT LOAD: Maximum daily, 278 tons, May 29; minimum daily, 0.82 ton, Feb. 23-27.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
MAR								
01...	1115	323	8.0	5	4.4	85	--	--
04...	1215	592	8.0	26	42	98	100	--
APR								
04...	1030	420	8.0	6	6.8	85	--	--
MAY								
28...	1010	1160	13.0	43	135	64	--	--
28...	1220	1260	14.0	40	136	79	94	100
29...	1150	2430	13.5	44	289	56	--	--
31...	1110	2650	11.0	28	200	52	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
DEC							
07...	0930	318	5.5	1	2	6	10
07...	0935	318	5.5	1	2	4	11
07...	0940	318	5.5	1	2	5	11
07...	0945	318	5.5	--	1	4	8
07...	0950	318	5.5	1	1	3	6

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
DEC							
07...	15	21	27	36	54	100	--
07...	18	23	28	35	48	66	100
07...	16	20	23	30	51	71	100
07...	17	24	27	33	45	72	100
07...	11	17	20	26	44	85	100

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
MAY									
29...	1215	1000	1100	0.250	1200	1225	0.0	2430	13.5
29...	1240	1000	1100	0.250	1230	1250	0.0	2430	13.5
31...	1135	1000	1100	0.250	1125	1145	12.0	2660	11.0
31...	1200	1000	1100	0.250	1150	1210	12.0	2660	11.0

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM
MAY								
29...	9.5	11	58	92	98	100	--	--
29...	9.5	11	60	93	99	100	--	--
31...	5.8	6	34	64	81	92	97	100
31...	5.8	7	40	77	92	98	100	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.5	---	---	---	6.0	8.0	8.5	10.0	13.0	12.5	---	---
2	---	7.0	---	3.0	6.0	8.5	---	---	12.0	---	11.5	---
3	---	---	6.5	---	---	8.5	8.0	---	13.5	13.0	---	12.0
4	12.5	---	---	3.5	6.0	8.0	8.0	10.5	---	---	---	---
5	---	8.0	7.0	---	---	7.5	9.0	---	11.5	13.0	14.0	---
6	9.0	---	---	---	6.5	7.0	---	11.5	---	---	12.0	13.5
7	---	7.0	5.5	3.5	---	7.0	---	---	14.0	---	---	---
8	---	---	---	---	---	7.0	---	11.5	---	14.5	15.5	---
9	8.0	8.5	---	4.5	---	---	9.0	---	---	10.0	---	---
10	---	---	7.0	---	---	---	---	12.0	15.0	13.5	---	---
11	8.0	---	---	5.0	---	7.0	9.0	---	---	---	---	12.5
12	---	---	5.5	---	6.5	---	---	---	12.0	12.0	---	---
13	10.5	7.5	---	---	---	7.5	---	12.5	---	---	12.5	13.5
14	---	---	5.5	6.5	7.0	---	---	---	11.5	---	---	---
15	9.5	8.5	---	---	---	8.0	10.5	13.0	---	11.5	---	---
16	---	---	---	5.5	7.5	---	---	---	---	---	---	---
17	8.0	8.0	6.0	---	---	---	10.0	13.0	12.5	13.0	13.5	10.5
18	---	---	---	6.0	8.5	7.0	---	---	---	---	---	---
19	---	8.5	5.0	---	---	7.5	---	---	12.5	12.0	---	---
20	9.5	---	---	---	---	7.0	10.5	13.5	---	---	15.0	12.5
21	---	8.0	2.0	4.5	8.5	---	---	---	14.5	---	---	---
22	9.5	---	---	---	---	6.5	10.5	13.0	---	15.0	14.5	---
23	---	7.5	---	4.5	8.5	7.0	---	---	---	---	---	12.0
24	9.0	---	2.5	---	---	---	11.0	---	12.0	---	---	---
25	---	---	---	3.5	7.5	7.5	---	15.0	---	12.0	---	---
26	9.5	7.0	---	---	---	---	10.0	---	11.5	---	---	---
27	---	---	4.0	---	8.0	7.0	---	14.0	---	14.5	13.0	10.5
28	---	7.0	---	4.0	8.5	---	---	14.0	11.5	---	---	---
29	10.0	---	3.0	---	---	9.5	11.0	13.5	---	12.0	---	---
30	---	7.5	---	5.0	---	---	---	13.0	---	---	10.5	---
31	9.5	---	2.5	---	---	---	---	11.0	---	16.5	---	---

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	308	1	.83	327	3	2.6	318	4	3.4
2	308	1	.83	325	2	1.8	318	6	5.2
3	308	1	.83	323	1	.87	318	7	6.0
4	308	1	.83	323	1	.87	318	6	5.2
5	308	1	.83	323	1	.87	318	5	4.3
6	308	1	.83	323	1	.87	318	4	3.4
7	308	1	.83	323	1	.87	317	2	1.7
8	308	1	.83	323	1	.87	322	1	.87
9	314	1	.85	323	1	.87	323	2	1.7
10	323	1	.87	327	1	.88	342	2	1.8
11	323	2	1.7	327	1	.88	344	1	.93
12	323	1	.87	327	1	.88	336	1	.91
13	323	1	.87	327	1	.88	330	1	.89
14	323	2	1.7	327	1	.88	318	1	.86
15	322	2	1.7	327	1	.88	326	1	.88
16	323	1	.87	327	2	1.8	327	1	.88
17	323	1	.87	323	4	3.5	323	1	.87
18	323	1	.87	323	4	3.5	323	1	.87
19	323	1	.87	322	4	3.5	327	1	.88
20	323	1	.87	318	4	3.4	320	1	.86
21	323	1	.87	318	3	2.6	299	2	1.6
22	323	1	.87	318	2	1.7	308	2	1.7
23	323	1	.87	318	2	1.7	308	2	1.7
24	320	1	.86	318	2	1.7	308	2	1.7
25	318	1	.86	325	3	2.6	308	2	1.7
26	318	2	1.7	328	3	2.7	308	3	2.5
27	318	2	1.7	323	3	2.6	308	3	2.5
28	318	3	2.6	323	3	2.6	308	3	2.5
29	318	3	2.6	321	3	2.6	308	3	2.5
30	318	4	3.4	318	3	2.6	308	3	2.5
31	327	4	3.5	---	---	---	308	4	3.3
TOTAL	9854	---	39.38	9698	---	54.87	9865	---	66.60
		JANUARY			FEBRUARY			MARCH	
1	308	4	3.3	300	3	2.4	322	4	3.5
2	308	4	3.3	364	14	14	349	8	8.2
3	308	3	2.5	351	2	2.2	546	32	54
4	310	2	1.7	364	6	5.9	565	21	33
5	313	2	1.7	395	5	5.6	525	10	14
6	313	1	.85	347	2	1.9	427	2	2.3
7	317	1	.86	327	2	1.8	363	2	2.0
8	318	1	.86	318	2	1.7	345	1	.93
9	318	2	1.7	318	1	.86	342	1	.92
10	318	1	.86	317	1	.86	342	2	1.8
11	318	1	.86	313	1	.85	342	2	1.8
12	335	1	.90	313	1	.85	352	2	1.9
13	395	1	1.1	313	1	.85	358	2	1.9
14	354	1	.96	313	1	.85	352	1	.95
15	335	1	.90	313	1	.85	345	1	.93
16	318	1	.86	313	1	.85	337	2	1.8
17	316	1	.85	313	1	.85	399	4	4.3
18	308	1	.83	313	1	.85	459	6	7.4
19	308	1	.83	313	1	.85	419	5	5.7
20	308	1	.83	313	2	1.7	449	5	6.1
21	308	1	.83	308	3	2.5	500	4	5.4
22	308	1	.83	307	2	1.7	442	3	3.6
23	305	2	1.6	303	1	.82	476	4	5.1
24	303	2	1.6	303	1	.82	484	2	2.6
25	303	2	1.6	303	1	.82	458	1	1.2
26	304	2	1.6	303	1	.82	451	2	2.4
27	303	2	1.6	303	1	.82	444	3	3.6
28	303	2	1.6	306	1	.83	409	3	3.3
29	303	2	1.6	---	---	---	404	3	3.3
30	303	2	1.6	---	---	---	413	3	3.3
31	303	2	1.6	---	---	---	430	4	4.6
TOTAL	9772	---	42.61	8967	---	55.70	12849	---	191.83

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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	431	4	4.7	385	1	1.0	2670	14	101
2	426	3	3.5	385	1	1.0	1730	3	14
3	436	3	3.5	410	1	1.1	953	3	7.7
4	424	4	4.6	407	1	1.1	428	2	2.3
5	420	2	2.3	402	1	1.1	377	1	1.0
6	429	2	2.3	402	2	2.2	407	1	1.1
7	420	2	2.3	402	2	2.2	404	1	1.1
8	402	2	2.2	418	2	2.3	391	1	1.1
9	397	2	2.1	423	1	1.1	405	1	1.1
10	397	1	1.1	398	1	1.1	385	1	1.0
11	393	1	1.1	375	1	1.0	500	1	1.3
12	380	1	1.0	374	1	1.0	508	1	1.4
13	380	1	1.0	379	1	1.0	503	1	1.4
14	380	1	1.0	385	1	1.0	503	2	2.7
15	380	1	1.0	374	2	2.0	503	3	4.1
16	391	1	1.1	374	1	1.0	503	4	5.4
17	391	2	2.1	374	1	1.0	501	5	6.8
18	391	2	2.1	374	1	1.0	497	5	6.7
19	391	2	2.1	374	2	2.0	505	5	6.8
20	403	2	2.2	374	2	2.0	503	5	6.8
21	408	1	1.1	374	1	1.0	500	6	8.1
22	408	1	1.1	381	1	1.0	500	6	8.1
23	408	1	1.1	407	1	1.1	497	6	8.1
24	408	1	1.1	395	1	1.1	497	5	6.7
25	407	2	2.2	391	1	1.1	497	2	2.7
26	397	4	4.3	389	1	1.1	493	1	1.3
27	385	3	3.1	385	1	1.0	491	2	2.7
28	385	2	2.1	1050	24	75	491	3	4.0
29	385	2	2.1	2350	44	278	497	4	5.4
30	385	1	1.0	2660	25	180	497	4	5.4
31	---	---	---	2670	23	166	---	---	---
TOTAL	12038	---	62.5	19241	---	733.6	18136	---	227.3
		JULY			AUGUST			SEPTEMBER	
1	497	5	6.7	426	3	3.5	417	5	5.6
2	497	4	5.4	426	3	3.5	1030	5	14
3	497	3	4.0	426	4	4.6	704	6	11
4	492	2	2.7	425	5	5.7	397	6	6.4
5	491	1	1.3	416	5	5.6	393	6	6.4
6	491	1	1.3	405	4	4.4	397	6	6.4
7	491	1	1.3	418	4	4.5	397	6	6.4
8	491	1	1.3	420	5	5.7	400	6	6.5
9	487	2	2.6	420	4	4.5	406	6	6.6
10	490	1	1.3	420	4	4.5	407	6	6.6
11	491	1	1.3	420	3	3.4	402	6	6.5
12	491	1	1.3	420	2	2.3	401	5	5.4
13	491	1	1.3	420	2	2.3	396	4	4.3
14	491	1	1.3	420	2	2.3	391	4	4.2
15	487	1	1.3	420	2	2.3	391	4	4.2
16	447	1	1.2	420	3	3.4	391	5	5.3
17	441	1	1.2	420	3	3.4	385	5	5.2
18	437	1	1.2	420	5	5.7	385	5	5.2
19	437	1	1.2	420	9	10	385	4	4.2
20	437	1	1.2	420	14	16	385	4	4.2
21	437	1	1.2	420	15	17	385	4	4.2
22	437	1	1.2	419	13	15	385	4	4.2
23	433	1	1.2	413	11	12	385	4	4.2
24	431	1	1.2	418	8	9.0	385	5	5.2
25	431	1	1.2	420	7	7.9	385	5	5.2
26	431	2	2.3	420	5	5.7	385	6	6.2
27	431	4	4.7	420	4	4.5	385	7	7.3
28	431	3	3.5	424	4	4.6	385	7	7.3
29	430	3	3.5	422	4	4.6	385	7	7.3
30	426	3	3.5	414	4	4.5	385	7	7.3
31	426	4	4.6	414	4	4.5	---	---	---
TOTAL	14318	---	68.5	13006	---	186.9	12710	---	183.0
YEAR	150454		1912.79						

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1990	9,854.00	39.38	0	39
NOVEMBER	9,698.00	54.87	0	55
DECEMBER	9,865.00	66.60	0	67
JANUARY 1991	9,772.00	42.61	0	43
FEBRUARY	8,967.00	55.70	0	56
MARCH	12,849.00	191.83	0	192
APRIL	12,038.00	62.50	0	62
MAY	19,241.00	733.60	46	780
JUNE	18,136.00	227.30	21	248
JULY	14,318.00	68.50	0	68
AUGUST	13,006.00	186.90	0	187
SEPTEMBER ...	12,710.00	183.00	0	183
TOTAL	150,454.00	1,912.79	67	1,980

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 mi^2.

PERIOD OF RECORD.--October 1931 to September 1940, October 1956 to current year. Monthly discharge only for some periods, published in ESP 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 National Geodetic Vertical Datum of 1929. Oct. 1, 1931, to Jan. 19, 1940, at site 2 mi upstream at different datum.

REMARKS.--Records fair. 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.

AVERAGE DISCHARGE.--13 years (water years 1932-40, 1957-60), 2,785 ft^3/s, 2,016,000 acre-ft/yr; 28 years (water years 1964-91), 1,685 ft^3/s, 1,221,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,500 ft^3/s, Feb. 25, 1958, gage height, 30.50 ft, from rating curve extended above 40,000 ft^3/s on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 ft^3/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 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,070 ft^3/s, Mar. 4, gage height, 10.04 ft; minimum daily, 361 ft^3/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	374	478	405	e400	e1100	582	2070	1170	3140	e720	465	434
2	370	430	404	e400	e3000	765	1930	1120	2990	e700	460	566
3	367	413	400	e400	e2650	e4340	1810	1100	2080	e699	458	908
4	367	407	e400	e405	e3000	e7000	1710	1110	1260	e680	460	571
5	367	405	e420	e430	e2260	e5000	1700	1190	909	e670	458	462
6	364	407	e415	e470	e1820	e3300	2080	1230	826	e660	445	455
7	369	405	e400	e540	e1400	e2700	1880	1200	831	e630	438	452
8	368	402	e410	e520	e1150	e2100	1650	1240	847	e600	437	449
9	369	404	e500	e560	817	e1700	1510	1180	886	e580	433	448
10	365	405	e960	e660	715	e1610	1460	1050	924	e562	426	448
11	365	401	e820	e960	679	e1580	1400	1000	986	e560	426	442
12	361	398	e620	e2450	634	e1500	1300	992	985	e558	426	438
13	365	398	e545	e2150	611	e1680	1280	1030	891	e550	424	431
14	365	410	e500	e1700	596	e1800	1310	1030	830	e542	418	423
15	367	411	e480	e1250	589	e1500	1320	980	796	e550	423	420
16	370	402	e470	e1000	588	e1340	1310	1030	783	e560	421	414
17	369	400	e460	e870	583	e1280	1250	1050	773	e558	421	408
18	380	398	e520	e760	583	e1250	1220	973	766	e560	421	403
19	398	397	e504	e680	583	e1330	1180	916	778	e540	417	400
20	395	396	e450	e620	566	1300	1210	904	747	e512	416	397
21	387	396	e400	e580	529	1520	1310	1000	e724	e499	417	392
22	384	393	e380	e540	529	1430	1280	1130	e720	e498	414	385
23	384	395	e395	e510	529	1510	1320	1260	e720	e499	408	383
24	383	395	e415	e490	529	1830	1360	1270	e720	e501	408	381
25	384	412	e430	e470	519	1640	1330	1230	e719	e506	408	377
26	380	442	e428	e460	486	1570	1230	1070	e720	501	411	374
27	381	425	e420	e440	486	1520	1170	988	e722	491	411	374
28	383	416	e422	e430	490	1460	1130	1080	e740	484	423	373
29	381	409	e500	e420	---	1410	1150	2130	e745	478	448	368
30	384	407	e480	e415	---	1530	1180	3190	e746	472	437	364
31	430	---	e400	e420	---	1790	---	3140	---	467	434	---
TOTAL	11676	12257	14753	22400	28021	60867	43040	38983	30304	17387	13312	13140
MEAN	377	409	476	723	1001	1963	1435	1258	1010	561	429	438
MAX	430	478	960	2450	3000	7000	2080	3190	3140	720	465	908
MIN	361	393	380	400	486	582	1130	904	719	467	408	364
AC-FT	23160	24310	29260	44430	55580	120700	85370	77320	60110	34490	26400	26060

CAL YR 1990 TOTAL 315760 MEAN 865 MAX 8900 MIN 349 AC-FT 626300
WTR YR 1991 TOTAL 306140 MEAN 839 MAX 7000 MIN 361 AC-FT 607200

e Estimated.

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 (revised) of Hyampom, and 3.5 mi downstream from Hayfork Creek.

DRAINAGE AREA.--764 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,211.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--26 years, 1,375 ft^3/s, 996,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft^3/s, Feb. 17, 1986, gage height, 25.47 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 28.00 ft, Jan. 26, 1983; minimum daily, 14 ft^3/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 ft^3/s, on basis of flood-routing study.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1600	*14,600	*11.69				

Minimum daily, 26 ft^3/s, Sept. 23-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	159	103	101	144	189	2290	769	327	157	51	44
2	66	143	97	99	1210	648	2070	767	313	148	50	42
3	64	110	97	105	1530	6350	1980	747	298	136	51	40
4	63	95	97	111	907	9900	1840	717	292	127	50	38
5	63	92	97	110	1380	7590	1870	687	281	118	47	36
6	61	87	97	109	1000	3270	2440	668	274	110	49	33
7	61	84	95	151	670	2150	2100	652	265	106	47	32
8	61	83	94	178	517	1690	1730	657	255	100	47	30
9	61	83	95	182	428	1420	1510	643	248	96	47	30
10	61	79	161	174	372	1270	1400	604	239	94	46	31
11	61	78	232	185	332	1140	1280	579	229	89	45	30
12	60	78	202	293	301	1320	1160	555	210	85	43	31
13	61	80	162	479	279	1550	1070	552	209	84	42	30
14	61	89	143	440	262	1330	1030	548	204	82	41	29
15	61	91	140	347	249	1220	984	513	200	82	39	29
16	61	91	139	284	240	1120	944	497	194	83	39	29
17	61	88	132	245	227	1080	893	529	191	82	39	29
18	66	86	129	218	218	1180	868	507	185	82	39	28
19	78	86	144	201	207	1160	848	489	179	81	38	28
20	82	86	143	187	200	1140	866	476	178	76	38	27
21	83	86	112	175	192	1200	913	457	175	73	37	27
22	81	86	93	165	188	1140	876	440	170	73	36	27
23	81	86	97	155	181	1320	851	414	164	75	36	26
24	78	86	102	152	175	1630	868	405	169	72	35	26
25	77	103	108	147	169	1490	891	394	164	71	34	26
26	74	141	110	141	163	1490	884	381	163	70	32	26
27	74	143	112	139	162	1420	851	369	160	65	33	27
28	74	128	114	133	162	1410	797	350	170	62	36	28
29	74	109	115	128	---	1510	767	346	188	61	45	28
30	75	106	102	129	---	1750	736	368	175	58	47	28
31	103	---	99	137	---	2080	---	355	---	55	47	---
TOTAL	2157	2942	3763	5800	12065	63157	37607	16435	6469	2753	1306	915
MEAN	69.6	98.1	121	187	431	2037	1254	530	216	88.8	42.1	30.5
MAX	103	159	232	479	1530	9900	2440	769	327	157	51	44
MIN	60	78	93	99	144	189	736	346	160	55	32	26
AC-FT	4280	5840	7460	11500	23930	125300	74590	32600	12830	5460	2590	1810

CAL YR 1990 TOTAL 197487 MEAN 541 MAX 7830 MIN 54 AC-FT 391700
WTR YR 1991 TOTAL 155369 MEAN 426 MAX 9900 MIN 26 AC-FT 308200

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 at Hoopa, 0.4 mi upstream from Supply Creek.
DRAINAGE AREA.--2,853 mi^2.

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.
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 National Geodetic Vertical Datum of 1929. 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.

AVERAGE DISCHARGE.--33 years (water years 1912-13, 1917-18, 1932-60), 5,619 ft^3/s, 4,071,000 acre-ft/yr; 28 years (water years 1964-91), 4,724 ft^3/s, 3,423,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 231,000 ft^3/s, Dec. 22, 1964, gage height, 57.0 ft, present site and datum, from floodmarks, from rating curve extended above 123,000 ft^3/s; minimum, 162 ft^3/s, Oct. 4, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30,000 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2315	*26,900	*24.59				

Minimum daily, 512 ft^3/s, Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	858	682	661	793	1030	5200	2820	3860	1250	663	603
2	553	789	672	670	2260	1770	5730	2760	3870	1240	656	596
3	545	709	660	672	5930	9380	5180	2640	3070	1230	653	1030
4	543	664	667	678	4510	17100	4760	2600	2360	1200	651	1010
5	549	654	702	679	5980	19700	4680	2590	1830	1160	647	612
6	542	646	696	682	5140	9760	6510	2630	1660	1130	641	546
7	543	640	676	770	3480	6270	6130	2600	1630	1080	619	541
8	544	632	664	867	2670	4640	5020	2650	1620	1040	616	538
9	542	628	661	856	2220	3990	4500	2640	1640	1000	609	538
10	540	628	964	891	1930	3630	4360	2390	1660	965	599	544
11	536	624	1600	1080	1730	3280	4140	2240	1690	946	597	541
12	534	620	1210	2020	1580	3640	3920	2170	1690	934	594	539
13	531	631	973	4940	1470	4470	3670	2190	1590	917	580	541
14	537	700	856	4120	1390	3860	3560	2230	1510	914	574	533
15	541	701	810	2580	1340	3460	3490	2100	1450	920	568	529
16	546	662	800	1970	1300	3200	3380	2080	1410	949	569	526
17	549	645	765	1610	1270	3050	3210	2320	1400	939	570	524
18	577	640	757	1400	1210	3390	3090	2280	1370	952	567	518
19	620	635	869	1270	1150	3410	3020	2150	1380	882	563	521
20	619	637	859	1170	1110	e3650	3000	2120	1390	830	563	520
21	600	632	745	1080	1080	e3500	3190	2190	1320	798	563	518
22	600	632	656	1020	1050	e3650	3120	2260	1290	780	561	515
23	593	629	627	972	1030	e3750	3070	2340	1270	795	548	513
24	586	631	677	934	993	e3800	3190	2320	1280	864	544	513
25	582	703	705	898	972	e4200	3320	2250	1270	807	541	512
26	573	852	721	870	950	e4900	3240	2080	1250	773	541	513
27	570	804	706	847	930	4300	3140	1910	1250	751	543	517
28	576	739	704	826	927	4110	2970	1820	1270	728	586	520
29	578	705	702	807	---	4120	2880	2540	1310	707	643	524
30	587	690	827	789	---	4190	2850	3950	1310	688	655	525
31	749	---	806	780	---	4190	---	3940	---	674	616	---
TOTAL	17644	20360	24419	39409	56395	157390	117520	75800	50900	28843	18440	17020
MEAN	569	679	788	1271	2014	5077	3917	2445	1697	930	595	567
MAX	749	858	1600	4940	5980	19700	6510	3950	3870	1250	663	1030
MIN	531	620	627	661	793	1030	2850	1820	1250	674	541	512
AC-FT	35000	40380	48440	78170	111900	312200	233100	150300	101000	57210	36580	33760

CAL YR 1990 TOTAL 841351 MEAN 2305 MAX 32200 MIN 515 AC-FT 1669000
WTR YR 1991 TOTAL 624140 MEAN 1710 MAX 19700 MIN 512 AC-FT 1238000
e Estimated.

11530500 KLAMATH RIVER NEAR KLAMATH, CA
(National stream-quality accounting network station)

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 mi^2, approximately (not including Lost River or Lower Klamath Lake basins).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1926 (published as "near Requa"), October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
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 National Geodetic Vertical Datum of 1929. 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 NGVD.

REMARKS.--Records fair except for discharges less than 3,000 ft^3/s, which are poor. 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.
AVERAGE DISCHARGE.--57 years, 17,520 ft^3/s, 12,690,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 557,000 ft^3/s, Dec. 23, 1964, gage height, 55.3 ft, former datum, from floodmarks, from rating curve extended above 230,000 ft^3/s on basis of flood-routing study; minimum daily, 1,310 ft^3/s, Sept. 4, 1977.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 5	0600	*70,500	*18.28				

Minimum daily, 1,770 ft^3/s, Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3100	e4800	e4500	e5950	4360	7510	18000	11000	10900	4590	2360	2250
2	3060	e4400	e4450	e5950	8460	14600	17700	11000	10800	4450	2320	2190
3	2990	e4000	4270	e6000	21900	22600	16400	10800	10400	4310	2310	2240
4	2980	3870	4400	e6000	20700	52000	15400	10600	9420	4160	2300	2830
5	2990	3880	4810	e5850	32800	63100	15700	10600	8250	3930	2280	2380
6	3000	3830	4690	e5700	26800	39400	21900	10800	7480	3760	e2250	2080
7	2980	3750	4430	e6000	18600	26600	21800	11000	7080	3610	e2220	2030
8	3000	3690	4350	e6400	14500	20900	18800	11900	6920	3450	e2200	2030
9	3000	3700	4340	6130	12100	17800	17800	12300	6880	3310	e2150	2080
10	3030	3710	6350	6300	10800	16800	18000	11000	6880	3230	e2130	1990
11	3030	3700	e8000	7960	9720	15300	16500	10200	6900	3120	e2100	1980
12	3030	3630	e6900	22800	9050	17200	15200	9740	6810	3060	e2080	2010
13	e3050	3810	e6000	37700	8350	19400	14200	9770	6480	3010	e2060	1970
14	3070	4360	e5500	28000	7900	17400	13700	10300	6190	2960	e2020	e1950
15	3060	4720	e5400	19000	7510	15700	13300	9900	5840	2960	e2020	e1950
16	3110	4230	5220	14800	7230	14200	12800	9650	5620	3200	1980	1940
17	3120	e4000	4970	11700	7000	13200	12200	10500	5430	3700	1970	1890
18	3400	e3950	5140	10100	6710	12600	11700	11000	5240	3640	e2150	1870
19	3650	e3950	e5700	9020	6380	12700	11400	10800	5170	3310	e2100	e1850
20	3590	e3950	e5400	7660	6190	12600	11300	10400	5290	3070	e2080	e1830
21	3410	e3950	e5000	6920	5970	12400	11500	10500	5190	2910	e2050	e1800
22	3410	e3950	e4950	6330	5770	11900	11500	10900	4940	2790	e2060	e1770
23	3440	e3950	e5100	5940	5620	12900	11500	11300	4770	2740	e2040	e1770
24	3370	e3950	e5200	5690	5440	16200	12400	11500	4730	2850	e2010	e1780
25	3330	e4400	e5250	5440	5280	15500	13500	11400	4840	2920	e2010	e1780
26	3320	e5400	e5600	5170	5140	15800	12800	10900	4680	2760	e2010	e1790
27	3290	e4900	e6100	4990	5050	15500	12200	10100	4600	2730	2010	e1810
28	3360	e4600	e6100	4830	5310	14700	11700	9440	4660	2640	2270	1810
29	e3380	e4500	e6100	4680	---	14400	11300	9340	4760	2560	2680	1800
30	e3500	e4500	e6100	4540	---	14900	11100	11400	4820	2510	2580	1870
31	e3900	---	e6100	4380	---	16500	---	11700	---	2370	2390	---
TOTAL	99950	124030	166420	287930	290640	592310	433300	331740	191970	100610	67190	59320
MEAN	3224	4134	5368	9288	10380	19110	14440	10700	6399	3245	2167	1977
MAX	3900	5400	8000	37700	32800	63100	21900	12300	10900	4590	2680	2830
MIN	2980	3630	4270	4380	4360	7510	11100	9340	4600	2370	1970	1770
AC-FT	198300	246000	330100	571100	576500	1175000	859500	658000	380800	199600	133300	117700

CAL YR 1990 TOTAL 3728600 MEAN 10220 MAX 108000 MIN 2620 AC-FT 7396000
WTR YR 1991 TOTAL 2745410 MEAN 7522 MAX 63100 MIN 1770 AC-FT 5446000

e Estimated.

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year.
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 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURE: November 1965 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
NOV												
20...	1310	3950	205	8.3	9.5	1.2	760	10.6	93	K1	K5	82
JAN												
23...	1315	5910	153	8.1	5.5	2.0	765	12.3	97	K1	K1	68
MAR												
28...	1100	14700	141	8.1	9.5	3.4	770	11.5	100	K1	K2	70
MAY												
07...	1300	11000	140	8.1	13.0	1.5	765	10.2	96	K3	K3	67
JUL												
17...	1515	3770	179	8.4	20.5	1.2	765	9.3	103	K15	K5	78
SEP												
05...	1155	2340	194	8.6	22.0	0.90	755	8.4	97	K3	K6	84

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	CARBONATE WATER DIS IT FIELD MG/L AS CO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV												
20...	0	18	9.0	11	22	0.5	1.6	105	0	86	9.8	7.3
JAN												
23...	3	15	7.3	6.1	16	0.3	1.1	79	0	65	7.4	4.7
MAR												
28...	6	17	6.8	4.5	12	0.2	0.80	78	0	64	8.5	3.5
MAY												
07...	3	16	6.5	4.7	13	0.3	0.80	78	0	64	7.9	2.3
JUL												
17...	2	18	8.0	7.4	17	0.4	1.2	91	1	76	11	4.8
SEP												
05...	3	19	8.8	9.2	19	0.4	1.6	95	2	81	12	5.6

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
NOV											
20...	0.10	22	124	132	0.17	0.010	<0.010	0.300	0.300	0.040	0.030
JAN											
23...	<0.10	18	87	100	0.12	<0.010	<0.010	0.200	0.300	<0.010	0.010
MAR											
28...	<0.10	15	85	95	0.12	<0.010	<0.010	0.085	0.083	0.010	<0.010
MAY											
07...	0.10	13	88	90	0.12	0.020	<0.010	<0.050	<0.050	0.030	<0.010
JUL											
17...	0.10	13	107	109	0.15	<0.010	<0.010	<0.050	<0.050	<0.010	0.020
SEP											
05...	<0.10	13	112	118	0.15	<0.010	<0.010	<0.050	<0.050	0.020	<0.010

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
NOV											
20...	0.30	0.060	0.070	0.040	0.050	20	2	15	<0.5	<1.0	<1
JAN											
23...	0.24	0.020	0.020	0.010	0.010	<10	1	13	<0.5	<1.0	<1
MAR											
28...	<0.20	0.040	0.020	<0.010	<0.010	--	--	--	--	--	--
MAY											
07...	<0.20	0.030	0.020	0.050	<0.010	10	1	13	<0.5	<1.0	<1
JUL											
17...	0.30	0.020	<0.010	--	0.020	--	--	--	--	--	--
SEP											
05...	0.30	0.040	0.030	<0.010	0.030	<10	2	15	<0.5	<1.0	<1

DATE	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)
NOV											
20...	<3	1	30	1	6	3	<0.1	<10	3	<2	<1.0
JAN											
23...	<3	2	27	1	6	4	<0.1	<10	3	<1	<1.0
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
07...	<3	1	13	1	<4	2	<0.1	<10	3	<1	<1.0
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	<3	1	11	<1	<4	2	<0.1	<10	2	<1	<1.0

DATE	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
NOV											
20...	110	<6	8	--	--	--	--	--	--	--	--
JAN											
23...	90	<6	13	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	<0.6	<0.6	0.7	<0.6	0.6	<0.6	0.03	0.07
MAY											
07...	87	<6	11	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	110	<6	19	<0.6	<0.6	1.9	<0.6	1.5	<0.6	0.03	0.11

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
28...*	1520	6.60	180	142	8.2	10.0	770	9.8	86	13	56
28...*	1535	8.70	290	142	8.2	10.0	770	11.1	97	--	--
28...*	1550	8.40	380	142	8.2	10.0	770	10.9	96	23	--
28...*	1605	8.20	490	142	8.2	10.0	770	11.5	101	10	72
28...*	1620	6.20	590	142	8.2	10.0	770	11.3	99	9	86
SEP											
05...*	1625	6.40	185	192	8.8	22.5	755	10.4	121	1	--
05...*	1645	7.80	280	192	8.8	22.5	755	10.3	120	1	--
05...*	1710	6.50	360	192	8.8	22.5	755	10.3	120	1	--
05...*	1735	7.10	440	193	8.8	22.5	755	10.2	119	1	--
05...*	1800	6.30	530	193	8.8	22.5	755	10.3	120	1	--

*Instantaneous streamflow at the time of cross-sectional measurement: Mar. 28, 14,600 ft^3/s; Sept. 5, 2,280 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
20...	1310	3950	9.5	8	85	59
JAN						
23...	1315	5910	5.5	6	96	--
MAR						
28...	1100	14700	9.5	10	397	80
MAY						
07...	1300	11000	13.0	3	89	--
JUL						
17...	1515	3770	20.5	4	41	95
SEP						
05...	1155	2340	22.0	2	13	94
05...	1620	2230	22.5	1	6.0	--

11532500 SMITH RIVER NEAR CRESCENT CITY, CA
(National stream-quality accounting network station)

LOCATION.--Lat 41°47'22", long 124°03'14", in SW 1/4 SW 1/4 sec.10, T.16 N., R.1 E., Del Norte County, Hydrologic Unit 18010101, Six Rivers National Forest, on left bank 0.5 mi downstream from South Fork and 8.1 mi east of Crescent City.

DRAINAGE AREA.--609 mi^2.

WATER-DISCHARGE RECORDS

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 89.61 ft above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--60 years, 3,781 ft^3/s, 2,739,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228,000 ft^3/s, Dec. 22, 1964, gage height, 48.5 ft, from floodmarks, from rating curve extended above 110,000 ft^3/s on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 ft^3/s, Oct. 24, 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 36,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0015	37,000	23.36	Mar. 4	Unknown	*52,700	*26.26

Minimum daily, 234 ft^3/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	289	1150	1090	636	1040	1510	3570	2060	1380	604	390	334
2	287	646	1020	614	7400	10000	3370	1930	1300	588	387	322
3	285	479	896	605	9090	e23000	3160	1840	1230	567	383	311
4	284	423	1050	593	8970	e36000	2890	1740	1150	548	381	303
5	284	511	1780	571	15500	e25000	5140	1660	1100	529	376	296
6	284	476	1420	564	8310	e15000	7490	1620	1060	517	373	289
7	273	416	1160	1800	6170	e8000	6800	1650	1020	514	375	282
8	266	402	971	2510	e5000	5890	5370	2740	975	507	369	282
9	265	405	863	1770	e3700	5020	6590	2520	942	503	362	279
10	265	396	3420	2430	3060	5170	6240	2220	904	496	362	274
11	265	372	3200	5280	2730	4880	4910	2010	869	490	347	272
12	265	350	2060	30000	2470	8860	4120	1860	840	488	339	270
13	263	625	1560	26800	2280	8340	3610	1890	815	485	333	270
14	262	1640	1310	13300	2100	6150	3280	1980	791	488	326	268
15	263	946	1230	9120	1950	5000	3060	1800	770	484	319	264
16	273	668	1120	6660	e1850	4390	2830	1700	762	647	318	261
17	277	545	1000	4970	e1730	3900	2620	2040	740	680	316	258
18	324	520	1370	3970	e1650	3600	2490	2240	719	561	314	255
19	435	506	2340	3260	e1560	3350	2380	2280	726	522	309	252
20	333	567	1770	2750	e1500	3130	2300	2260	738	499	305	247
21	301	816	1420	2360	e1430	2960	2230	2220	699	489	302	243
22	329	1270	1220	2050	1380	2790	2150	2020	677	479	295	240
23	333	970	1100	1820	1320	3780	2130	1830	663	472	294	241
24	302	760	983	1640	1250	5310	2530	1680	659	460	292	239
25	283	2580	907	1510	1200	4580	2780	1560	652	453	288	238
26	280	2850	845	1400	1150	4420	2720	1470	646	444	283	237
27	280	1590	797	1320	1120	4160	2600	1390	634	434	281	234
28	349	1190	823	1250	1130	3780	2430	1330	647	423	388	236
29	374	1000	758	1180	---	3470	2280	1340	652	416	569	238
30	973	1190	700	1110	---	3460	2150	1710	629	407	412	236
31	2460	---	663	1060	---	3680	---	1490	---	396	351	---
TOTAL	12006	26259	40846	134903	98040	228580	106220	58080	25389	15590	10739	7971
MEAN	387	875	1318	4352	3501	7374	3541	1874	846	503	346	266
MAX	2460	2850	3420	30000	15500	36000	7490	2740	1380	680	569	334
MIN	262	350	663	564	1040	1510	2130	1330	629	396	281	234
AC-FT	23810	52080	81020	267600	194500	453400	210700	115200	50360	30920	21300	15810

CAL YR 1990 TOTAL 869408 MEAN 2382 MAX 60300 MIN 262 AC-FT 1724000
WTR YR 1991 TOTAL 764623 MEAN 2095 MAX 36000 MIN 234 AC-FT 1517000

e Estimated.

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1966-81.
SEDIMENT DATA: Water years 1955-56, November 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1978 to September 1981.
WATER TEMPERATURE: October 1965 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1979, October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
DEC												
26...	1345	838	119	8.2	3.0	0.30	765	14.0	104	<1	K2	63
MAR												
25...	1545	4360	97	8.2	8.0	1.4	750	12.1	104	K8	K4	51
JUN												
25...	1615	650	123	8.3	15.0	12	760	10.0	99	K4	K3	63
SEP												
03...	1535	308	147	8.4	20.5	0.20	765	9.2	102	K5	K2	75

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
DEC												
26...	4	5.6	12	1.9	6	0.1	0.50	73	60	2.3	2.8	<0.10
MAR												
25...	2	5.2	9.2	1.8	7	0.1	0.30	59	48	1.9	2.4	<0.10
JUN												
25...	3	7.1	11	2.3	7	0.1	0.30	73	60	2.8	2.2	0.20
SEP												
03...	5	8.7	13	2.8	7	0.1	0.40	86	71	4.1	3.7	<0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
DEC												
26...	13	77	74	0.10	<0.010	<0.010	<0.100	<0.100	0.010	0.030	0.20	<0.010
MAR												
25...	14	55	64	0.08	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	<0.20	<0.010
JUN												
25...	14	60	76	0.08	<0.010	<0.010	<0.050	<0.050	0.020	<0.010	<0.20	<0.010
SEP												
03...	14	--	89	0.12	<0.010	<0.010	<0.050	<0.050	0.020	<0.010	<0.20	<0.010

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC												
26...	<0.010	<0.010	<0.010	<10	<1	5	<0.5	<1.0	2	<3	1	6
MAR												
25...	0.010	<0.010	<0.010	<10	<1	4	<0.5	<1.0	2	<3	1	23
JUN												
25...	0.030	<0.010	<0.010	<10	<1	7	<0.5	<1.0	2	<3	<1	10
SEP												
03...	<0.010	<0.010	<0.010	<10	<1	7	<0.5	<1.0	1	<3	1	5

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
DEC											
26...	<1	<4	1	<0.1	<10	6	<2	<1.0	32	<6	17
MAR											
25...	<1	<4	1	<0.1	<10	5	<1	<1.0	25	<6	17
JUN											
25...	1	<4	3	<0.1	<10	5	<1	<1.0	42	<6	10
SEP											
03...	<1	<4	1	<0.1	<10	4	<1	<1.0	49	<6	8

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)
MAR										
25...*	1740	3.90	46.0	96	8.1	7.5	750	12.3	104	0
25...*	1755	3.70	98.0	96	8.1	7.5	750	12.2	103	0
25...*	1815	5.40	141	96	8.1	7.5	750	12.3	104	0
25...*	1835	4.50	179	96	8.2	7.5	750	12.1	103	0
25...*	1855	3.00	241	97	8.1	7.5	750	11.7	99	0
SEP										
04...*	1015	1.20	34.0	148	8.2	20.5	760	8.8	98	1
04...*	1025	1.40	58.0	148	8.2	20.5	760	8.1	90	1
04...*	1045	1.40	80.0	148	8.2	20.0	760	8.2	90	1
04...*	1105	1.30	101	148	8.2	20.0	760	8.7	96	0
04...*	1120	1.80	117	148	8.2	20.5	760	8.7	97	0

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 25, 4,390 ft^3/s; Sept. 4, 301 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
26...	1345	838	3.0	1	2.3	--
MAR						
25...	1545	4360	8.0	0	0.0	--
25...	1735	4350	7.5	0	0.0	--
JUN						
25...	1615	650	15.0	2	3.5	97
SEP						
03...	1535	308	20.5	1	0.83	96
04...	1010	303	20.5	1	0.82	70

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 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Data is collected for flood warning purposes only.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.04 ft, Mar. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	16.35	---	16.98	16.04
2	---	---	---	---	---	---	---	---	21.61	16.35	21.88	17.02
3	---	---	---	---	---	---	---	---	21.51	19.28	23.48	20.51
4	---	---	---	---	---	---	---	---	21.60	19.01	28.04	22.55
5	---	---	---	---	---	---	---	---	22.87	20.72	25.49	21.11
6	---	---	---	---	---	---	---	---	20.71	18.94	21.07	19.58
7	---	---	---	---	---	---	---	---	18.93	18.10	19.59	18.83
8	---	---	---	---	---	---	---	---	18.10	17.57	18.81	18.36
9	---	---	---	---	17.12	---	---	---	17.57	17.10	18.35	18.07
10	---	---	---	---	---	---	17.77	---	---	---	18.29	18.18
11	---	---	---	---	17.79	---	20.43	17.76	---	---	18.27	18.03
12	---	---	---	---	---	---	25.36	20.43	---	---	20.66	18.10
13	---	---	17.20	17.00	---	---	25.43	22.41	---	---	20.43	19.08
14	---	---	17.14	17.03	---	---	22.41	20.34	---	---	19.06	18.47
15	---	---	---	---	---	---	20.34	---	16.38	16.29	18.48	18.10
16	---	---	---	---	---	---	---	18.56	---	---	18.12	17.81
17	---	---	---	---	---	---	18.56	17.94	---	---	17.95	17.68
18	---	---	---	---	17.06	---	17.94	17.61	---	---	17.75	17.55
19	---	---	---	---	---	---	17.61	17.29	---	---	17.55	17.42
20	---	---	---	---	---	---	17.29	---	---	---	17.42	17.32
21	---	---	---	---	---	---	---	---	---	---	17.32	---
22	---	---	---	---	---	---	---	---	---	---	17.40	17.08
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	17.83	---	---	---	---	---	---	---	---	---
26	---	---	17.71	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	17.96	17.80
28	17.11	---	---	---	---	---	---	---	---	---	17.85	17.66
29	---	---	---	---	---	---	---	---	---	---	17.67	17.55
30	17.69	17.31	---	---	---	---	---	---	---	---	17.68	17.53
31	17.63	17.09	---	---	---	---	---	---	---	---	17.75	17.53

11532650 SMITH RIVER NEAR FORT DICK, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.70	17.55	---	---	---	---	---	---	---	---	---	---
2	17.65	17.49	---	---	---	---	---	---	---	---	---	---
3	17.54	17.41	---	---	---	---	---	---	---	---	---	---
4	17.42	17.26	---	---	---	---	---	---	---	---	14.26	14.24
5	19.48	17.27	---	---	---	---	---	---	---	---	14.24	14.22
6	19.49	19.10	---	---	---	---	---	---	---	---	14.22	14.20
7	19.31	18.59	---	---	---	---	---	---	---	---	14.21	14.19
8	18.61	18.05	---	---	---	---	---	---	---	---	14.21	14.19
9	19.38	17.99	---	---	---	---	---	---	---	---	14.20	14.18
10	19.12	18.34	---	---	---	---	---	---	---	---	14.18	14.17
11	18.37	17.84	---	---	---	---	---	---	---	---	14.17	14.16
12	17.83	17.58	---	---	---	---	---	---	---	---	14.16	14.16
13	17.61	17.40	---	---	---	---	---	---	---	---	14.16	14.16
14	17.43	17.23	---	---	---	---	---	---	---	---	14.16	14.15
15	17.27	---	---	---	---	---	---	---	---	---	14.16	14.14
16	---	---	---	---	---	---	---	---	---	---	14.14	14.12
17	---	---	---	---	---	---	---	---	---	---	14.12	14.12
18	---	---	---	---	---	---	---	---	---	---	14.12	14.10
19	---	---	---	---	---	---	---	---	---	---	14.11	14.10
20	---	---	---	---	---	---	---	---	---	---	14.10	14.09
21	---	---	---	---	---	---	---	---	---	---	14.12	14.06
22	---	---	---	---	---	---	---	---	---	---	14.06	14.05
23	17.09	---	---	---	---	---	---	---	---	---	14.07	14.05
24	17.32	17.08	---	---	---	---	---	---	---	---	14.06	14.05
25	17.49	17.30	---	---	---	---	---	---	---	---	14.05	14.04
26	17.41	---	---	---	---	---	---	---	---	---	14.05	14.04
27	---	---	---	---	---	---	---	---	---	---	14.06	14.04
28	---	---	---	---	---	---	---	---	---	---	14.07	14.05
29	---	---	---	---	---	---	---	---	---	---	14.08	14.06
30	---	---	---	---	---	---	---	---	---	---	14.07	14.04
31	---	---	---	---	---	---	---	---	---	---	---	---

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.

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 1991

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, 1976-91	10-12-90 3-01-91 4-04-91	b0.36 2.26 10.9

a Published as a miscellaneous measurement.
b Base flow.

Special study and 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 1991

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water year)	Measurements	
					Date	Discharge (ft^3/s)
Salinas River basin						
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	1962-90	10-01-90	1.09
					11-02-90	1.73
					12-03-90	2.61
					1-02-91	a5.99
					2-01-91	a5.44
					3-13-91	384.0
					3-24-91	4,230.0
					4-01-91	322.0
					5-01-91	49.6
					6-03-91	20.5
					9-06-91	a.42
Frenchmans Creek basin						
11162635 Frenchmans Creek near Half Moon Bay, CA		Lat 37°29'00", long 122°26'42", in Corral de Tierra (Vasquez) Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on State Highway 1, 0.4 mi upstream from mouth, and 1.7 mi northwest of city of Half Moon Bay.	4.17	1977, 1988-90	10-10-90	0
					11-21-90	0
					12-19-90	.19
					1-17-91	.28
					2-14-91	.46
					3-29-91	5.95
					4-17-91	a.32
					5-15-91	.18
					7-16-91	.14
					8-27-91	.15
Purisima Creek basin						
Purisima Creek		Lat 37°24'09", long 122°24'41", in Canada de Verde Y Arroyo de la Purisima Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Verde Road, 0.5 mi northwest of Lobitos, and 4 mi south of Half Moon Bay.	8.35	1988-90	10-10-90	a.34
					11-21-90	.72
					12-19-90	.92
					1-17-91	.73
					2-14-91	.84
					4-17-91	a2.15
					5-15-91	.96
					7-16-91	.69
					8-27-91	.44
Pescadero Creek basin						
Butano Creek	Pescadero Creek	Lat 37°15'00", long 122°23'41", in Butano Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Pescadero Road near intersection of Bean Hollow and Pescadero Roads, 1.2 mi east of State Highway 1, and 0.7 mi southwest of Pescadero.	20.3	1988-90	10-10-90	a.61
					11-20-90	1.04
					12-18-90	2.06
					1-17-91	1.30
					2-13-91	1.20
					3-14-91	22.9
					4-16-91	6.56
					5-14-91	3.89
					7-15-91	.63
					8-26-91	.75
Pilarcitos Creek basin						
Arroyo Leon	Pilarcitos Creek	Lat 37°27'44", long 122°25'32", in Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, at bridge at entrance to Cemetery, at east end of Half Moon Bay city limits, and 0.2 mi upstream from mouth.	8.52	1988-90	10-10-90	0
					11-21-90	0
					12-19-90	.34
					1-17-91	.13
					2-14-91	.24
					3-29-91	13.2
					4-17-91	a.06
					5-15-91	.38
					7-16-91	0
					8-27-91	0

a No measurable precipitation had fallen for 10 days prior to discharge measurement.

Discharge measurements made at special study and miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage Area (mi^2)	Measured previously (water year)	Measurements Date	Measurements Discharge (ft^3/s)
		Alameda 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, 1977-91	10-03-90	1.70
					11-08-90	55.8
					12-20-90	2.16
					1-31-91	47.4
					4-04-91	1.21
					5-09-91	23.7
					8-05-91	48.6
					9-26-91	38.2

PAJARO RIVER BASIN

11153555 LLAGAS CREEK AT SAN MARTIN, CA

LOCATION.--Lat 37°05'13", long 121°36'15", in San Francisco de Las Llagas Grant, Santa Clara County, Hydrologic Unit 18060002, at bridge on San Martin Avenue, 0.3 mi east of San Martin.
DRAINAGE AREA.--28.2 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-86, 1989 to July 1991 (discontinued).
SEDIMENT DATA: Water years 1985-87.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAR											
24...	1440	18	347	8.1	12.0	21	750	10.3	97	160	29
JUL											
23...	1300	5.4	353	8.3	21.5	2.8	750	10.8	125	170	35

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR										
24...	21	11	13	0.4	1.9	169	0	139	20	18
JUL										
23...	20	11	12	0.4	1.6	204	0	167	20	10

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
MAR										
24...	0.10	14	198	0.27	2.06	0.040	0.020	2.10	0.030	0.020
JUL										
23...	<0.10	13	211	0.29	--	0.010	0.010	<0.050	<0.010	<0.010

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
24...	1.2	1.2	0.70	0.100	0.050	0.030	0.020	14	0.8	<1
JUL										
23...	--	0.60	0.60	0.060	<0.010	<0.010	<0.010	6.2	0.4	<1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
24...	<100	90	5	5	1500	42	60	11	<0.10	20
JUL										
23...	<100	170	5	3	--	21	20	10	<0.10	<10

GUADALUPE RIVER BASIN

11168800 LOS GATOS CREEK AT LINCOLN AVENUE, AT SAN JOSE, CA

LOCATION.-- Lat 37°18'45", long 121°54'12", in San Juan Bautista Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank 100 ft upstream from Lincoln Avenue bridge, 0.6 mi downstream from Dry Creek.

DRAINAGE AREA.--48.4 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-87, 1989 to March 1991 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
MAR											
01...	0835	e3.7	73	7.0	12.5	6.3	740	9.9	96	24	6.6
17...	1210	139	50	7.8	10.0	150	--	--	--	17	4.5
24...	1000	16	41	8.0	11.0	15	760	10.5	95	14	4.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
MAR										
01...	1.9	4.7	28	0.4	1.8	22	0	19	5.3	5.1
17...	1.3	2.7	25	0.3	1.0	--	--	[1]17	3.9	2.9
24...	1.0	2.4	25	0.3	1.2	--	--	[1]14	2.6	2.2

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
MAR										
01...	<0.10	2.2	39	0.05	0.370	0.040	0.030	0.410	0.170	0.170
17...	<0.10	1.5	29	0.04	0.280	0.030	0.020	0.310	0.110	0.090
24...	<0.10	1.2	23	0.03	0.190	0.030	0.010	0.220	0.140	0.120

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)
MAR										
01...	0.63	0.80	0.50	0.180	0.160	0.150	0.150	7.2	0.5	--
17...	2.2	2.3	0.40	0.630	0.100	0.140	0.100	5.3	4.1	--
24...	0.86	1.0	0.60	0.170	0.100	0.110	0.080	14	1.4	<1

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR										
01...	--	30	--	--	--	44	--	--	--	--
17...	--	20	--	--	--	100	--	--	--	--
24...	<100	10	6	8	1900	54	50	10	0.10	90

COYOTE CREEK BASIN

11171500 COYOTE CREEK NEAR EDENVALE, CA

LOCATION.--Lat 37°16'15", long 121°47'47", at east boundary of Santa Teresa Grant, Santa Clara County, Hydrologic Unit 18050003, at "THE NARROWS," 1.5 mi northeast of Edenvale, and 7 mi south of San Jose.
DRAINAGE AREA.--229 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1916-62. Published as Coyote River near Edenvale 1916-26.
CHEMICAL DATA: Water years 1979-88, 1990 to March 1991 (discontinued).
SEDIMENT DATA: Water years 1985-87.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
MAR												
24...	1215	10	36	7.7	11.5	60	755	10.4	96	14	3.6	1.2

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
MAR												
24...	1.6	19	0.2	1.1	1.5	1.5	<0.10	1.6	22	0.03	0.170	0.030

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
MAR												
24...	0.010	0.200	0.120	0.100	0.88	1.0	0.40	0.290	0.120	0.130	0.100	5.5

DATE	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR												
24...	2.4	<1	<100	20	28	13	6800	110	150	56	0.10	110

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GPO 687-026/79133

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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