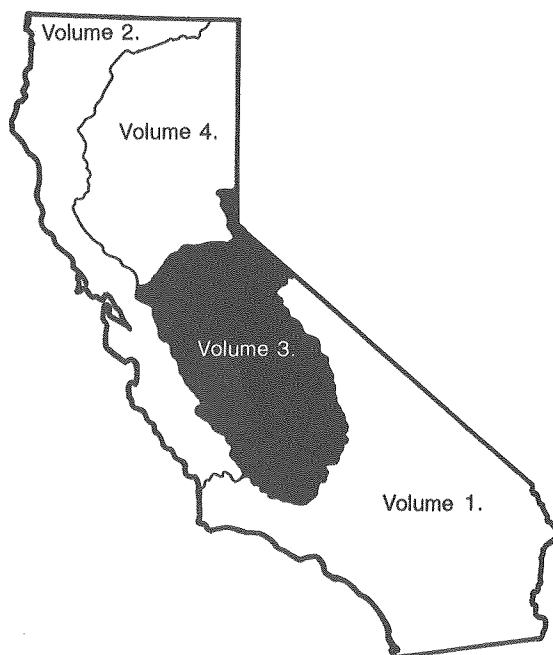




Water Resources Data California Water Year 1992

Volume 3. Southern Central Valley Basins and
The Great Basin from Walker River
to Truckee River



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-92-3
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1992

1991

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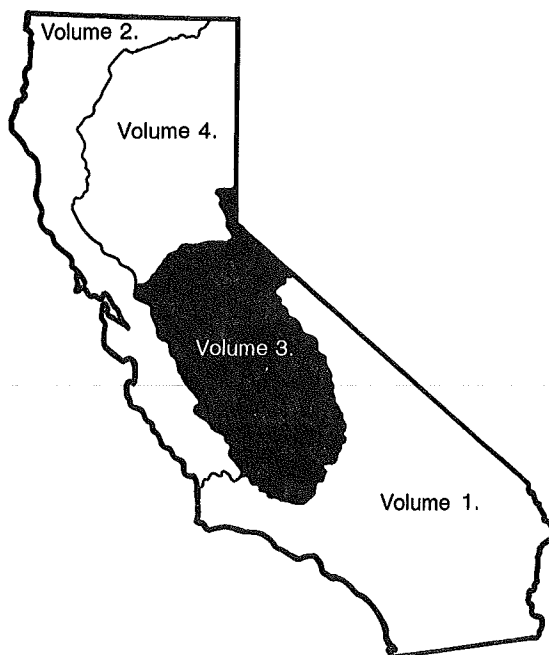
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Water Resources Data California Water Year 1992

Volume 3. Southern Central Valley Basins and The Great Basin from Walker River to Truckee River

by S.W. Anderson, T.C. Hunter, E.B. Hoffman, and J.R. Mullen



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-92-3
Prepared in cooperation with the California Department of
Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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Sacramento, CA 95825

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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			14.
16. Abstract (Limit: 200 words) Water resources data for the 1992 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 3 contains discharge records for 169 streamflow-gaging stations, 3 crest-stage partial-record streamflow stations and 44 miscellaneous measurement stations; stage and contents records for 46 lakes and reservoirs; water-quality records for 37 streamflow-gaging stations; and precipitation records for one gaging station. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and with other agencies.			
17. Document Analysis			
a. Descriptors *California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Chemical analyses, Sediment, Water temperature, Sampling sites, Water analyses, Lakes, Reservoirs			
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SURFACE-WATER AND WATER-QUALITY STATIONS
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

IX

[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]

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Relief Reservoir near Baker Station (l).....	11291000	393
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Middle Fork Stanislaus River below Sand Bar diversion dam (d).....	11293200	405
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Utica Canal at pressure tap, near Hathaway Pines (d).....	11295240	426
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North Fork Stanislaus River below Beaver Creek, near Hathaway Pines (d).....	11295300	431
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South Fork Stanislaus River at Strawberry (d).....	11296500	437
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South Fork Stanislaus River near Strawberry (d).....	11297200	440
Tuolumne Canal near Long Barn (d).....	11297500	441
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South Fork Stanislaus River near Long Barn (d).....	11298000	443
Angels Creek below Utica ditch diversion dam, near Murphys (d).....	11298700	445
New Melones Reservoir near Sonora (l).....	11299000	446
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Tulloch Reservoir near Knights Ferry (l).....	11299995	449
Stanislaus River below Tulloch powerplant, near Knights Ferry (t).....	11299997	450
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Stanislaus River below Goodwin Dam, near Knights Ferry (dt).....	11302000	454
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Stanislaus River at Ripon (d).....	11303000	460
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Calaveras River below New Hogan Dam, near Valley Springs (t).....	11308900	474
Delta-Mendota Canal at Tracy pumping plant, near Tracy (d).....	11313000	476
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DISCONTINUED GAGING STATIONS

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

Station No.	Station name	Drainage area (mi ²)	Period of record
10295200	West Walker River at Leavitt Meadows, near Coleville	73.4	1945-64
10303000	Silver King Creek near Coleville	31.8	1947-51
10303500	East Fork Carson River at Silver King Valley, near Markleeville	--	1947-51
10336600	Upper Truckee River near Meyers	33.1	1961-86
10336626	Taylor Creek near Camp Richardson	16.7	1968-92
10336759	Edgewood Creek near Stateline, NV	3.20	1983-87
10338000	Truckee River near Truckee	553	1945-61, 1977-82
10339400	Martis Creek near Truckee	39.9	1958-90
10342000	Little Truckee River near Hobart Mills	37.1	1947-72
11185000	Grayson Creek near Hookston	1.96	1955-60
11185100	Grayson Creek near Pacheco	4.35	1954-58
11185300	Golden Trout Creek near Cartago	23.6	1957-67, 1969
11185350	Kern River near Quaking Aspen Camp	530	1961-71, 1973-74
11185400	Little Kern River near Quaking Aspen Camp	132	1957-69
11185600	Packsaddle Canyon Creek near Fairview	4.05	1960-66
11186340	Salmon Creek tributary B near Fairview	.46	1963-69
11186360	Salmon Creek tributary C near Fairview	.30	1963-69
11186380	Salmon Creek tributary E near Fairview	.23	1963-69
11186500	Salmon Creek near Kernville	25.8	1922-23
11188000	Kern River at Isabella	1,068	1911, 1926-35
11188200	South Fork Kern River near Olancho	146	1956-67, 1969
11189700	Kelso Creek near Weldon	101	1958-66
11190000	South Fork Kern River at Isabella	982	1929-52
11191000	Kern River below Isabella Dam	2,974	1945-90
11193000	Kern River below Kern Canyon powerhouse, near Bakersfield	2,307	1954-64
11194000	Kern River near Bakersfield	2,407	1894-1976
11194200	Wagon Wheel Creek near Reward	1.38	1966-71
11195500	San Emigdio Creek at San Emigdio Ranchhouse	48.8	1959-81
11195600	Pastoria Creek near Lebec	27.5	1965-71
11196000	Tejon Creek at Tejon Ranchhouse	48.7	1895-96
11196400	Caliente Creek above Tehachapi Creek, near Caliente	165	1962-83
11196420	Tehachapi Creek near Tehachapi	53.2	1963-85
11197250	Avenal Creek near Avenal	57.1	1962-86
11197800	Poso Creek near Oildale	230	1959-85
11199000	White River near Ornia Hot Springs	14.0	1911-13
11200000	Deer Creek at California Hot Springs	16.8	1911-15, 1917-34
11201200	Deer Creek diversion near Terra Bella	--	1971-87
11201500	Pacific Gas & Electric Co. conduit near Springville	--	1940-54, 1966-67, 1969-71, 1976-83
11201800	North Fork of Middle Fork Tule River below Hossack Creek, near Springville	33.8	1909-13
11202750	Middle Fork Tule River above Springville	92.4	1979-88
11203000	Bear Creek near Springville	13.5	1911-16
11203100	North Fork Tule River at Springville	97.6	1957-67
11203190	Tule River diversion ditch near Springville	--	1968-88
11203200	Tule River near Springville	247	1958-68
11203220	Tule River at Highway 190, near Springville	247	1968-90
11203500	Tule River near Porterville	253	1902-60
11204000	South Fork Tule River near Porterville	80.3	1911-23, 1925, 1928-32
11204500	South Fork Tule River near Success	109	1930-54, 1956-90
11204680	Pioneer Ditch below Success Dam	--	1959-90
11204900	Tule River below Success Dam	393	1953-90
11205000	Tule River at Worth Bridge, near Porterville	395	1954-60
11208500	Middle Fork Kaweah River tributary near Hammond	1.90	1967-70, 1972-73
11208610	Monarch Creek near Hammond	1.89	1968-73
11208620	East Fork Kaweah River below Mosquito Creek, near Hammond	16.0	1968-73
11208625	East Fork Kaweah River at Sequoia National Park boundary, near Hammond	23.7	1968-71
11208720	East Fork Kaweah River no 1 conduit near Three Rivers	--	1975-78
11208730	East Fork Kaweah River near Three Rivers	85.8	1952-55, 1958-78
11209500	North Fork Kaweah River near Three Rivers	129	1911-60, 1980-81
11209900	Kaweah River at Three Rivers	418	1959-90
11210000	South Fork Kaweah River near Three Rivers	66.5	1912-24
11210100	South Fork Kaweah River at Three Rivers	86.7	1959-90
11210500	Kaweah River near Three Rivers	519	1904-18, 1921-61
11210850	Lemoncove Ditch below Terminus dam	--	1962-90
11210930	Foothill Ditch below Terminus dam	--	1962-90
11210950	Kaweah River below Terminus dam	561	1962-90
11211500	Kaweah River at McKay Point, near Lemoncove	647	1919-21
11211790	Cottonwood Creek near Elderwood	60.4	1971-85
11212500	South Fork Kings River near Cedar Grove	408	1951-57
11213000	Kings River near Hume	835	1922-36, 1952-58
11213500	Kings River above North Fork, near Trimmer	952	1927-28, 1932-82

DISCONTINUED GAGING STATIONS--Continued

Station no.	Station name	Drainage area (mi ²)	Period of record
11214000	North Fork Kings River below Meadowbrook	37.7	1922-35, 1957-81
11214200	Fleming Creek near Blackcap Mountain	15.0	1957-65
11214400	Post Corral Creek near Blackcap Mountain	27.9	1957-65
11214500	Helms Creek at Sand Meadows	34.7	1923-31, 1956-58
11215500	Rancheria Creek near Smith Meadows	21.3	1925-31
11215800	Teakettle Creek tributary no. 3 near Dinkey Creek	.86	1958-69, 1977-83
11215810	Teakettle Creek tributary no. 7 near Patterson Mountain	.11	1958-63
11215820	Teakettle Creek tributary no. 2 near Dinkey Creek	.85	1958-69, 1977-83
11215830	Teakettle Creek tributary no. 2a near Dinkey Creek	.27	1958-69, 1977-83
11215840	Teakettle Creek tributary no. 1 near Dinkey Creek	.77	1958-69, 1977-83
11216000	North Fork Kings River below Rancheria Creek	229	1927-50
11216800	Rock Creek at Dinkey Creek	7.60	1961-70
11217000	Dinkey Creek at Dinkey Meadow, near Shaver Lake	50.7	1922-35, 1977-87
11217500	Dear Creek below east Fork, near Shaver Lake	19.0	1924-31
11218000	Dinkey Creek at mouth, near Trimmer	132	1920-37
11219000	Big Creek near Tollhouse	19.8	1911-13
11220000	Big Creek above Pine Flat Lake, near Trimmer	70.0	1954-73
11220500	Sycamore Creek above Pine Flat Lake, near Trimmer	56.1	1953-73
11221500	Kings River below Pine Flat Dam	1,545	1954-90
11222000	Kings River at Piedra	1,693	1896-1959
11225000	Los Gatos Creek near Coalinga	105	1932-41
11226000	North Fork San Joaquin River below Iron Creek	35.5	1922-28, 1959-69
11226500	San Joaquin River at Miller Crossing	249	1921-28, 1951-91
11227000	West Fork Granite Creek near Timber Knob	26.4	1922-25
11227500	Middle Fork Granite Creek near Cattle Mountain	2.25	1922-23
11228000	East Fork Granite Creek near Cattle Mountain	14.6	1922-25
11228500	Granite Creek near Cattle Mountain	47.8	1922-28, 1966-86
11230000	South Fork San Joaquin River near Florence Lake	171	1922-81, 1984
11230650	Bolsillo Creek above diversion dam, near Big Creek	1.3	1986
11232000	South Fork San Joaquin River near Hoffman Meadow	424	1922-28
11232500	Jackass Creek near Bass Lake	12.1	1922-28, 1961-68
11234500	Chiquito Creek near Bass Lake	60.1	1922-28, 1956-70
11235000	San Joaquin River above Big Creek	1,050	1913-15, 1922-62
11236080	Huntington-Shaver conduit at Huntington Lake	--	1975-83
11238000	Pitman Creek at Big Creek	23.7	1910-16, 1922-27
11239000	Huntington-Shaver conduit near Shaver Lake	--	1929-85
11242350	Soquel diversion near Sugar Pine	--	1970-77
11245000	South Fork Willow Creek near North Fork	39.8	1910-17
11245500	Whiskey Creek near North Fork	11.6	1911-16
11246000	Cascadel Creek near North Fork	3.31	1910-12
11247000	San Joaquin River below Kerckhoff powerhouse, near Prather	1,480	1910-14, 1937, 1943-82, 1988-89
11247200	Big Sandy Creek tributary near Tollhouse	.46	1969-71
11247500	Big Sandy Creek near Auberry	27.3	1947-51
11248000	Fine Gold Creek near Friant	92.7	1937-58
11250500	Cottonwood Creek near Friant	35.6	1942-51
11251500	Little Dry Creek near Friant	57.9	1942-56
11251600	Little Dry Creek at mouth, near Friant	77.4	1957-61
11252500	San Joaquin River at Herndon	1,802	1895-1901
11253000	San Joaquin River near Biola	1,811	1953-61
11254000	San Joaquin River near Mendota	3,940	1940-54
11255500	Panoche Creek below Silver Creek, near Panoche	293	1950-53, 1959-70
11255550	Little Panoche Creek tributary no. 1, near Panoche	.33	1959-64
11256000	San Joaquin River near Dos Palos	4,669	1941-54
11257100	Miami Creek near Oakhurst	10.6	1961-80
11257500	Fresno River near Knowles	133	1911-13, 1915-90
11257700	Picayune Creek near Coarsegold	8.17	1965-68
11258000	Fresno River below Hidden Dam, near Daulton	237	1942-90
11258800	East Fork Chowchilla River near Ahwahnee	57.8	1958-67
11258900	West Fork Chowchilla River near Mariposa	33.6	1958-80
11258920	North Fork Chowchilla River near Nippinnawassie	13.6	1959-67
11258960	Chowchilla River above Willow Creek, near Raymond	173	1980-90
11258980	Chowchilla River near Raymond	201	1972-80
11259000	Chowchilla River below Buchanan Dam, near Raymond	236	1922-23, 1931-72, 1976-90
11259300	Chowchilla River below Raynor Creek, near Raymond	254	1973-75
11259900	Chamberlain Slough near El Nido	--	1940-49
11260000	San Joaquin River above Sand Slough, near El Nido	6,447	1940-49
11260000	San Joaquin River near El Nido	6,443	1940-49
11260001	San Joaquin River plus Chamberlain Slough, near El Nido	6,450	1940-49
11260200	Bear Creek near Catheys Valley	24.9	1958-69
11260225	Burns Creek at Hornitos	26.7	1965-69
11260480	Mariposa Creek near Catheys Valley	65.7	1959-80
11261000	Salt Slough near Los Banos	--	1941-68
11261500	San Joaquin River at Fremont Ford Bridge	7,615	1937-70, 1986-89
11262800	Los Banos Creek near Los Banos	159	1959-66
11263000	San Luis Creek near Los Banos	84.6	1950-63
11265000	Tenaya Creek near Yosemite	46.9	1912-58

DISCONTINUED GAGING STATIONS--Continued

Station no.	Station name	Drainage area (mi ²)	Period of record
11265500	Merced River at Yosemite	236	1912-17
11266000	Yosemite Creek at Yosemite	42.7	1912-16, 1918
11267300	South Fork Merced River at Wawona	100	1959-68
11267500	South Fork Merced River near Wawona	132	1912, 1914-15, 1918-21
11268000	South Fork Merced River near El Portal	241	1951-75
11268200	Merced River near Briceburg	691	1966-74
11268500	Merced River at Bagby	911	1923-30, 1932-66
11269300	Maxwell Creek at Coulterville	17	1960-74, 1976-80
11270000	Merced River at Exchequer	1,037	1901-14, 1916-64
11271320	Dry Creek near Snelling	67.6	1966-92
11271500	Merced River near Livingston	1,259	1922-24, 1926-44
11273000	Merced River Slough near Newman	1,276	1942-72
11274600	Del Puerto Creek tributary no. 1 near Patterson	.71	1964-69
11274610	Del Puerto Creek tributary no. 2 near Patterson	.024	1959-63
11274710	Maclure Creek below Maclure Glacier, near Tuolumne Meadows	.37	1967-72
11274800	Tuolumne River at Hetch Hetchy Cabin, near Sequoia	404	1911-16
11275000	Falls Creek near Hetch Hetchy	46	1916-83
11277000	Cherry Creek near Hetch Hetchy	111	1910-55
11278500	Jawbone Creek near Tuolumne	19.1	1911
11279500	South Fork Tuolumne River at Italian Flat, near Sequoia	64.9	1925-30, 1932-33
11280000	South Fork Tuolumne River near Sequoia	68.3	1914-17
11281500	Middle Tuolumne River near Mather	52.4	1925-29, 1932-33
11282500	South Fork Tuolumne River near Buck Meadows	164	1912, 1914, 1917-21
11283000	Tuolumne River near Buck Meadows	924	1908, 1911-36
11283100	Lily Creek near Pinecrest	11.9	1964-74
11283200	Bell Creek near Pinecrest	9.11	1964-79
11284500	Big Creek near Groveland	25	1932-33, 1960-74
11284700	North Fork Tuolumne River near Long Barn	23.1	1962-86
11285000	North Fork Tuolumne River above Dyer Creek, near Tuolumne	69.2	1959-66
11286500	Woods Creek near Jacksonville	97.2	1926-68
11288000	Tuolumne River above La Grange Dam, near La Grange	1,532	1896-1970
11288500	Tuolumne River at La Grange	1,539	1896-1911
11291500	Relief Creek near Baker Station	24.4	1911-18
11292680	Cascade Creek near Pinecrest	4.97	1963-65
11293000	Middle Fork Stanislaus River at Sand Bar Flat, near Avery	325	1906-66
11293500	North Fork Stanislaus River below Silver Creek	27.8	1953-88
11294300	North Fork Stanislaus River below Ganns dams, near Big Meadow	111	1961-67
11295000	Utica Canal near Avery	--	1970, 1976-89
11299500	Stanislaus River below Melones powerhouse, near Sonora	905	1931-67
11300000	Stanislaus River near Knights Ferry	980	1916-33
11300600	South San Joaquin main canal below diversion point, near Knights Ferry	--	1983-89
11300700	South San Joaquin main canal below Woodward Reservoir, near Oakdale	--	1982-89
11300800	North main canal below diversion point, near Knights Ferry	--	1983-89
11304000	Corral Hollow Creek near Tracy	61.6	1959-66
11305000	San Domingo Creek near San Andreas	26.2	1950-62
11305500	San Antonio Creek near San Andreas	48.0	1950-59
11306000	South Fork Calaveras River near San Andreas	118	1950-79
11306500	Calaveritas Creek near San Andreas	53	1950-66
11307000	Esperanza Creek near Mokelumne Hill	16.6	1951-59
11307500	Jesus Maria Creek near Mokelumne Hill	34.6	1950-59
11308000	North Fork Calaveras River near San Andreas	85.2	1950-79
11308500	Murray Creek near San Andreas	23.6	1950-59
11308900	Calaveras River below New Hogan Dam, near Valley Springs	363	1961-90
11309000	Cosgrove Creek near Valley Springs	21.6	1930-69
11309500	Calaveras River at Jenny Lind	393	1907-66
11310500	Calaveras River near Stockton	--	1926, 1944-50
11311000	Stockton diverting canal at Stockton	--	1944-53
11311500	Bear Creek near Clements	42.2	1927
11312000	Bear Creek near Lockeford	47.4	1931-85
11312500	Bear Creek at Harmony School, near Lockeford	51.1	1927-31
11315500	Bear River at Pardoe Camp	33	1928-51
11316000	Bear River near Salt Springs Dam	48	1952-87
11316500	North Fork Mokelumne River near West Point	273	1924-32
11317500	South Fork Mokelumne River near Railroad Flat	38.7	1912-34
11318000	Licking Fork Mokelumne River near Railroad Flat	6.32	1912-13, 1915-16
11321000	Mokelumne River at Lancha Plana	587	1926-63
11321500	Camanche Creek near Camanche	5.19	1933-34
11322000	Rabbit Creek near Camanche	8.55	1932-34
11326300	Dry Creek above Sutter Creek, near Ione	70.9	1960-70
11326500	Sutter Creek near Volcano	29.8	1924-27
11327000	Sutter Creek near Sutter Creek	48.1	1936-41, 1961-80
11327500	Sutter Creek at Sutter Creek	50.7	1922-36
11328000	Dry Creek near Ione	266	1912, 1926-32
11329000	Goose Creek near Elliott	8.26	1928-33

DISCONTINUED GAGING STATIONS--Continued

Station no.	Station name	Drainage area (mi ²)	Period of record
11329500	Dry Creek near Galt	324	1927-33, 1945-87
11330000	North Fork Cosumnes River at Cosumnes Mine	38.7	1949-53
11331000	Camp Creek near Sly Park	8.59	1924
11331500	Camp Creek near Camino	32.4	1949-56
11332500	Sly Park Creek near Pollock Pines	18.2	1947-55
11333500	North Fork Cosumnes River near El Dorado	205	1884, 1912-41, 1949-83, 1985-87
11334200	Middle Fork Cosumnes River near Somerset	107	1958-71
11334300	South Fork Cosumnes River near River Pines	64.3	1958-80
11334500	Cosumnes River near Plymouth	436	1952-60
11335700	Deer Creek near Sloughhouse	46	1961-66, 1968-77
11336000	Cosumnes River at McConnell	724	1942-82
11336500	Hadselville Creek at Clay	18.1	1931
11336580	Morrison Creek near Sacramento	53.4	1959-87
11337500	Marsh Creek near Byron	42.6	1953-83

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
10336625	Fallen Leaf Lake near Camp Richardson	16.7	1968-92
10339380	Martis Creek Lake near Truckee	39.6	1972-90
11190500	Isabella Lake near Lake Isabella	2,074	1954-90
11197000	Tulare Lake in Kings County	--	1969-82
11204700	Success Lake near Success	391	1962-90
11210900	Lake Kaweah near Lemoncove	560	1962-90
11221000	Pine Flat Lake near Piedra	1,545	1952-90
11257950	Hensley Lake near Daulton	236	1976-90
11258990	H.V. Eastman Lake near Raymond	235	1976-90
11308700	New Hogan Lake near Valley Springs	362	1964-90

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
10336593	Grass Lake Creek near Meyers	6.99	T,S	1972-74
10336610	Upper Truckee River at South Lake Tahoe	54.9	C,T,S	1972-74, 1978, 1980-92
10336630	Eagle Creek near Camp Richardson	6.38	T,S	1972-74
10336640	Meeks Creek at Meeks Bay	8.08	T,S	1971-74
10336645	General Creek near Meeks Bay	7.44	C,T,S	1981-92
10336650	Quail Lake Creek at Homewood	.95	T,S	1972-74
10336655	Madden Creek near Homewood	1.40	T,S	1972-74
10336658	Madden Creek at Homewood	2.06	T,S	1972-73
10336660	Blackwood Creek near Tahoe City	11.2	C,T,S	1975-78, 1980-92
10336670	Ward Creek near Tahoe Pines	2.03	T,S	1973-76
10336672	Ward Creek tributary near Tahoe Pines	.91	T,S	1973-76
10336676	Ward Creek at State Highway 89, near Tahoe Pines	9.70	C,T,S	1972-92
10336684	Dollar Creek near Tahoe City	1.07	T,S	1972-74
10336689	Snow Creek at Tahoe Vista	4.43	C,T,S	1981-85
10336740	Logan House Creek near Glenbrook, NV	2.08	S	1984-87
10336759	Edgewood Creek near Stateline, NV	3.20	S	1983-87
10336780	Trout Creek near Tahoe Valley	36.7	C,T,S	1971-74, 1977, 1980-85, 1987-88
10336790	Trout Creek at South Lake Tahoe		T,S	1972-74, 1989-92
10337000	Lake Tahoe at Tahoe City	506	WQ	1969, 1978-79
10337500	Truckee River at Tahoe City	507	WQ	1978-81
10338000	Truckee River near Truckee	553	C,T	1977-82
10345900	Truckee River at Floriston	932	T	1968-71

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station no.	Station name	Drainage area (mi ²)	Type of record	Period of record
10346000	Truckee River at Farad	932	WQ,B,C T,S	1951-61, 1964-81
11185350	Kern River near Quaking Aspen Camp	530	T	1966-74
11187000	Kern River at Kernville	1,009	T	1962-66
11206500	Middle Fork Kaweah River near Potwisha Camp	102	C	1958-63, 1972, 1979-81
11208000	Marble Fork Kaweah River at Potwisha Camp	51.4	C	1962-72, 1980-81
11208610	Monarch Creek near Hammond	1.89	T	1969-73
11208620	East Fork Kaweah River below Mosquito Creek, near Hammond	16.0	T	1968-73
11208625	East Fork Kaweah River at Sequoia National Park boundary, near Hammond	23.7	T	1968-71
11208730	East Fork Kaweah River near Three Rivers	85.8	T	1968-76
11209500	North Fork Kaweah River near Three Rivers	129	T	1980-81
11209900	Kaweah River at Three Rivers	418	T	1966, 1968-88
11213500	Kings River above North Fork, near Trimmer	952	T	1966-79
11216500	North Fork Kings River above Dinkey Creek, at Balch Camp	250	T	1968-79
11218500	Kings River below North Fork, near Trimmer	1,342	T,S	1967-91
11230000	South Fork San Joaquin River near Florence Lake	171	T	1961
11235000	San Joaquin River above Big Creek	1050	T	1961-62
11237000	Big Creek below Huntington Lake	81.1	T	1961-70
11245000	South Fork Willow Creek near North Fork	39.8	T	1961
11246500	Willow Creek at mouth, near Auberry	130	T	1961-72
11247000	San Joaquin River below Kerckhoff powerhouse, near Prather	1,480	T	1961-68, 1970-74
11253500	Fresno Slough bypass near San Joaquin	--	T	1969-71
11257500	Fresno River near Knowles	133	T	1971-88
11258000	Fresno River below Hidden Dam, near Daulton	237	T	1976-90
11258960	Chowchilla River above Willow Creek, near Raymond	173	T	1980-88
11258980	Chowchilla River near Raymond	201	T	1971-80
11268000	South Fork Merced River near El Portal	241	T	1975-78
11268200	Merced River near Briceburg	691	T	1976-77
11283100	Lily Creek near Pinecrest	11.9	T	1965-74
11292700	Middle Fork Stanislaus River at Hells Half Acre bridge, near Pinecrest	287	T	1966-71, 1973-78
11294500	North Fork Stanislaus River near Avery	163	T	1990-91
11295400	Stanislaus River near Hathaway Pines	629	T	1970-83
11306000	South Fork Calaveras River near San Andreas	118	T	1974-79
11308000	North Fork Calaveras River near San Andreas	85.2	T	1974-79
11308600	Calaveras River above New Hogan Reservoir, near San Andreas	307	T	1970-82, 1984-88
11312000	Bear Creek near Lockeford	47.4	C	1976
11313010	Delta-Mendota Canal below Tracy pump plant, near Tracy	--	T	1960-66
11319500	Mokelumne River near Mokelumne Hill	544	T	1961-79
11323500	Mokelumne River below Camanche Dam	627	T	1961-68, 1970-76
11325500	Mokelumne River at Woodbridge	661	C,T	1960-86
11335000	Cosumnes River at Michigan Bar	536	T,S	1963-70, 1973-79

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

WATER RESOURCES DATA--CALIFORNIA, WATER YEAR 1992

VOLUME 3--SOUTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN

FROM WALKER RIVER TO TRUCKEE RIVER

By S.W. Anderson, T.C. Hunter, E.B. Hoffman, and J.R. Mullen

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable 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 169 streamflow-gaging stations, 3 crest-stage partial-record streamflow stations and 44 miscellaneous measurement stations; (2) stage and contents records for 46 lakes and reservoirs; (3) water-quality records for 37 streamflow-gaging stations; and (4) precipitation records for one gaging station. Records included for stream stages are only a small fraction of those obtained during the water year.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Map Distribution, Box 25286, MS 306, Denver 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-92-3." 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. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (916) 978-4668. A limited number of CD-ROM discs will be available for purchase from U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

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:

California Department of Pesticide Regulation, James W. Wells, Interim Director.
 California Department of Water Resources, David N. Kennedy, Director.
 California State Water Resources Control Board, James Baetge, Executive Director.
 East Bay Municipal Utility District, Thomas Linville, Manager, Water Operations.
 Madera Irrigation District, Robert L. Stanfield, General Manager-Chief Engineer.
 Merced, City of, Stevan M. Stroud, City Engineer.
 Merced Irrigation District, Ross Rogers, Manager.
 San Francisco, City and County, Hetch-Hetchy Water and Power, Andrew B. Moran, General Manager of Public Utilities.
 Tahoe Regional Planning Agency, Davie Ziegler, Executive Director.
 Tulare County Flood Control District, Douglas C. Wilson, Public Works Director.
 Turlock Irrigation District, Russell Deluca, Irrigation System Administrator.
 Woodbridge Irrigation District, Andy Christensen, Manager-Secretary.

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

The following organizations aided in collecting records: Calaveras County Water District; Five Bears Hydroelectric Project; Olcese Water District; Pacific Gas & Electric Co.; Southern California Edison Co.; Tuolumne County; Turlock Irrigation District; and Merced and Oakdale-South San Joaquin Irrigation Districts.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Runoff during the 1992 water year in the area covered by this volume was 62 percent of the median for the 1961-90 water years based on five representative streamflow records. Total runoff in percent of median, at selected stations in California is shown in figure 1. Runoff ranged from 46 percent of median at Orestimba Creek near Newman (station 11274500) to 105 percent at Los Gatos Creek above Nunez Canyon (station 11224500). In figure 2, monthly mean discharge in the 1992 water year is compared with the 1961-90 median, maximum, and minimum monthly mean discharge at four representative gaging stations. In addition, monthly precipitation in the 1992 water year is compared with the long-term average. A comparison of peak discharge for the 1992 water year with peaks for period of record for selected stations is given in table 1. A comparison of low-flow data for various years is given in table 2. No peak discharges for streams in the area covered by this volume exceeded the peaks of record, and few exceeded peak bases. Annual departure from 1961-90 mean discharge for four selected gaging stations is shown in figure 3.

Table 1. Comparison of peak discharge for 1992 water year with those for period of record for selected stations

Station No.	Station name	1992 water year		Period of record	
		Date	Peak discharge (ft ³ /s)	Water year	Peak discharge (ft ³ /s)
11186001	Kern River near Kernville	May 13	1,570	1966	60,000
11224500	Los Gatos Creek above Nunez Canyon, near Coalinga	Feb. 12	1,490	1969	4,360
11230500	Bear Creek near Lake Thomas A. Edison	May 8	387	1982	3,660
11266500	Merced River at Pohono Bridge, near Yosemite	Apr. 29	2,550	1955	23,400

Table 2. Comparison of 7-day and 1-day low flow for 1992 water year with 7-day, 1-day, and minimum daily flow for 30-year base period 1961-90 for selected stations

Station No.	Station name	7-day low flow (ft ³ /s)		1-day low flow (ft ³ /s)		Period of record	
		1992 water year	Base period 1961-90	1992 water year	Base period 1961-90	Water year	Minimum daily (ft ³ /s)
11186001	Kern River near Kernville	109	84	108	76	1990, 91	76
11224500	Los Gatos Creek above Nunez Canyon, near Coalinga	0	0	0	0	many	0
11230500	Bear Creek near Lake Thomas A. Edison	5.0	2.06	5.0	1.8	1924	1.2
11266500	Merced River at Pohono Bridge, near Yosemite	13	5.6	13	5.4	1977	5.4

¹Maximum daily discharge.

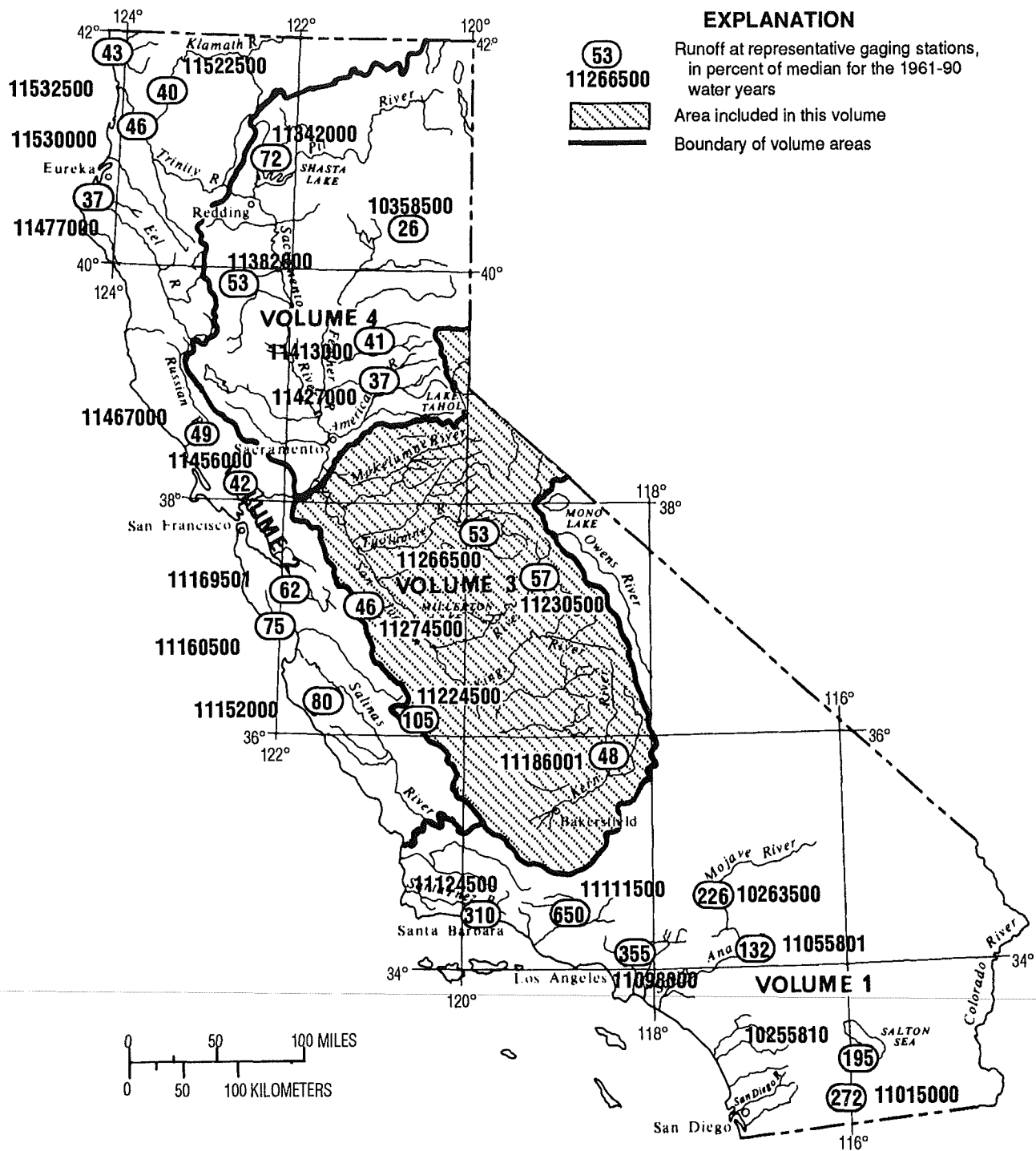


Figure 1. Runoff, in percent of median, for the 1992 water year.

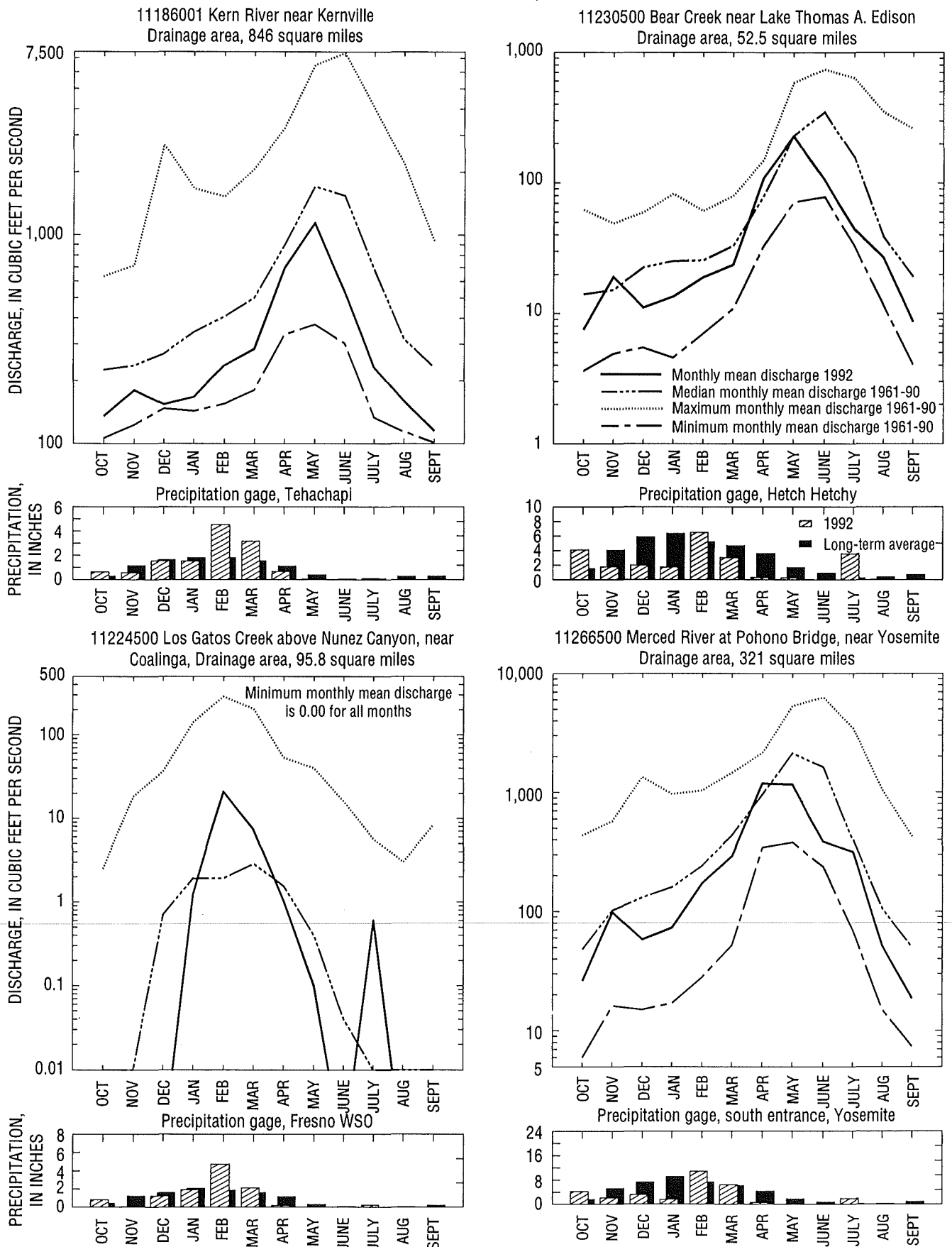


Figure 2. Discharge and precipitation during water year 1992 and long-term average at four representative gaging stations. Precipitation data from National Oceanic and Atmospheric Administration, 1992, Climatological Data, annual summary: v. 96.

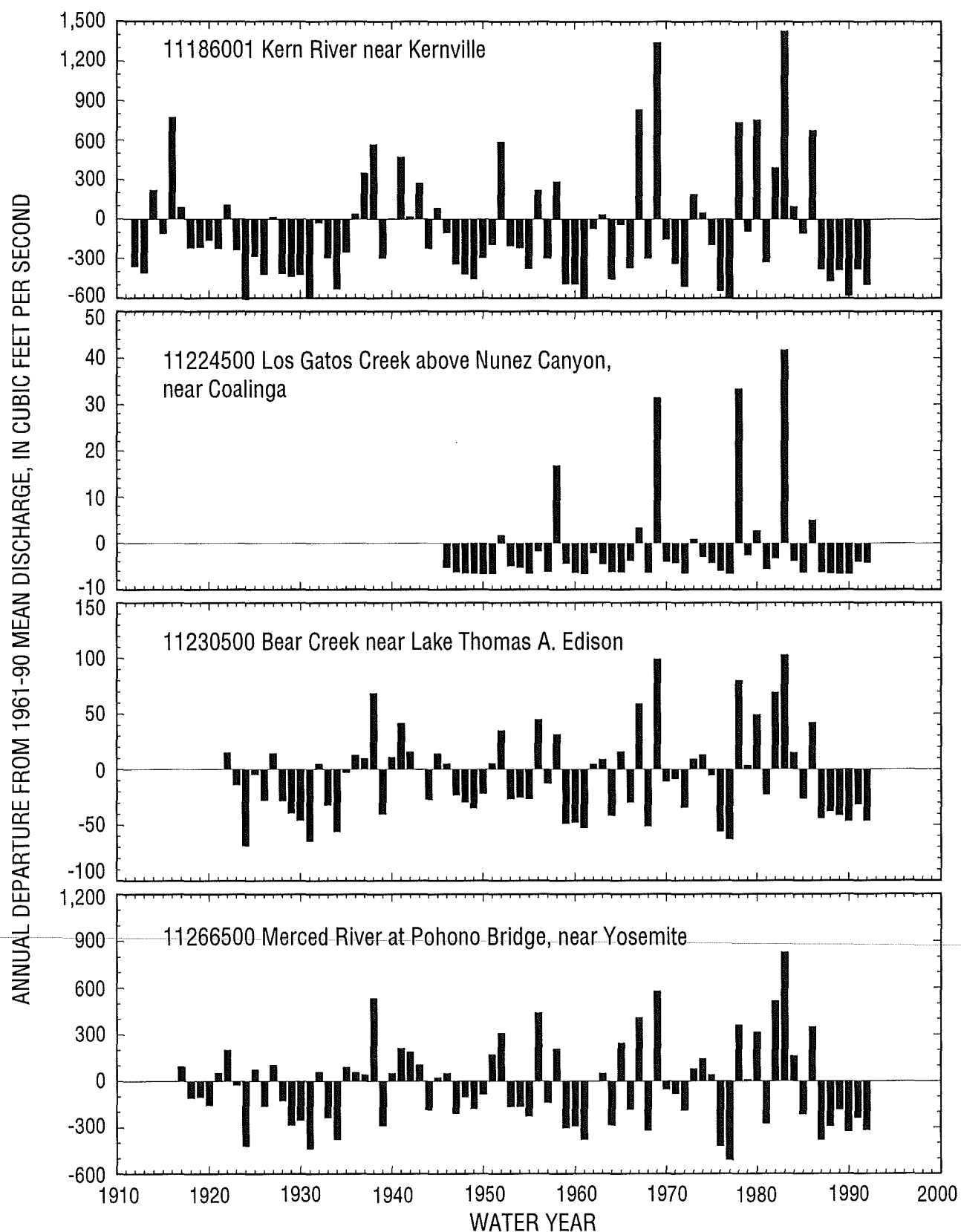


Figure 3. Annual departure from 1961-90 mean discharge for period of record at selected gaging stations.

Precipitation in the area covered by this volume was below normal during the 1992 water year, extending hydrologic drought conditions into a sixth consecutive year. Water year 1992 is considered a 'critically dry' year, based on flows in the Sacramento River basin. Precipitation, based on 10 representative rain gages, was 85 percent of the long-term average. The average April 1 water content of the Sierra Nevada snowpack was about 50 percent of average. There were significant storms in February that produced above average precipitation throughout the region.

The water year began with many reservoir levels below average. In anticipation of a sixth consecutive less-than-normal water year, many water agencies limited reservoir releases to maximize storage. Most demands for water were met in 1992, although supplies were limited. In the Sierra Nevada foothills, population has increased about 69 percent since 1977 and water use has increased 30 percent. In the Central Valley areas, population has increased about 38 percent, but there were no concomitant increases in reservoir storage capacity. Many reservoirs had 50 percent of average or less in storage. Both mandatory and voluntary water-conservation programs were kept in force by those agencies serving metropolitan water districts that rely on water imported from Sierra Nevada reservoirs. The State Water Project cut deliveries to agricultural customers by 50 percent, and the Central Valley Project cut deliveries to most customers by 25 to 50 percent. The drought was severe in the southern end of the San Joaquin Valley, but the impact was cushioned in many areas by ground-water supplies.

Water Quality

Water samples collected at four NASQAN and two Hydrologic Benchmark stations reported in this volume were analyzed for water-quality constituents. Median dissolved-solids concentrations of the samples increased slightly from the previous year. Figure 4 shows the monthly mean dissolved-solids concentrations during water year 1992 compared with long term dissolved-solids concentration at two selected stations. The largest densities of fecal-coliform (130 colonies per 100 milliliters) and fecal-streptococcus bacteria (400 colonies per 100 milliliters) were in water samples collected from Mokelumne River at Woodbridge (station 11325500).

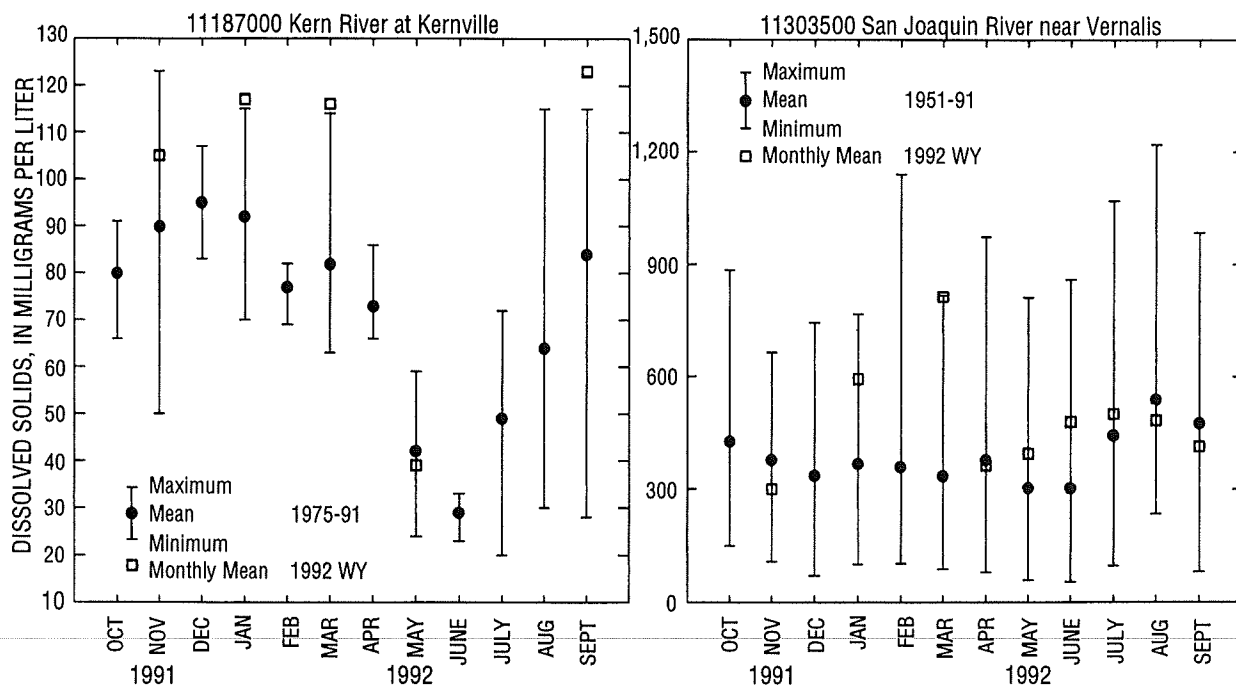


Figure 4. Comparison of monthly mean dissolved-solids concentrations during water year 1992 with long-term dissolved-solids concentrations at two selected stations.

Sediment

Suspended-sediment discharge and concentration were monitored daily at 6 stations and periodically at 12 stations in the area covered by this volume. Five of the daily stations monitored sediment transport into Lake Tahoe. The high resistance to erosion of the granitic and volcanic rock surrounding the lake, as well as the presence of snowcover during a significant part of the year, generally resulted in relatively low sediment discharge rates and concentrations. The stations monitored periodically are in an area extending from as far north as Truckee to as far south as Kernville.

During the 1992 water year, sediment discharge for all stations in the area was significantly less than normal. Sediment discharge for four stations in the Lake Tahoe basin ranged from 4 to 13 percent of the mean sediment discharge for the 1981-91 water years. Sediment discharge for the San Joaquin River near Vernalis (station 11303500) was 26 percent of the long-term mean (1957-91).

Sediment discharge for the daily stations ranged from 18 tons per year for General Creek near Meeks Bay (station 10336645) to 88,700 tons per year for the San Joaquin River near Vernalis (station 11303500). Annual sediment discharge per square mile of drainage area ranged from a minimum of 1.6 tons per square mile for Trout Creek at South Lake Tahoe (station 10336790) to a maximum of 9.9 tons per square mile for Blackwood Creek near Tahoe City (station 10336660).

Most sediment transport in the Tahoe basin was the result of snowmelt runoff in April and May. Sediment discharge at the San Joaquin River station was more evenly distributed during the year because of flow regulation.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark 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 located generally 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 1992 water year that began October 1, 1991, and ended September 30, 1992. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11218500, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "218500." 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 (fig. 5). 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.

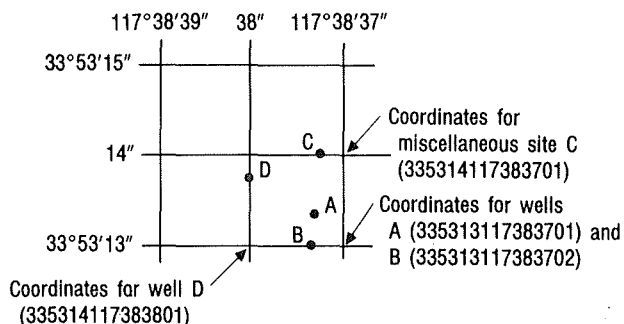


Figure 5. System for numbering miscellaneous sites (latitude and longitude).

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 crest-stage partial-record stations for which data are given in this report are shown, by county, in figures 6 through 25.

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 records, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following records, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

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

Station manuscript

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

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

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

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

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

GAGE.--The type of gage 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 paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

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

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

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 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 District Office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District Office.

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. 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 25.

Arrangement of Records

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

Onsite Measurements and Sample Collection

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

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

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

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

Historical and current (1992) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter (ng/L). If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter ($\mu\text{g/L}$) and could reflect contamination introduced during some phase of the procedure.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at the 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.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN and Hydrologic benchmark stations during various seasons and surface-water discharges. Documentation of cross-sectional variations 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 laboratory 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 more than 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 more than 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 more than 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 and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. 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.) A limited number of CD-ROM discs will be available for purchase from U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

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 precept at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Drainage area of a stream at a specified location 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 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 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

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

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

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

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

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

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

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

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

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

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

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:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024-0.004	Sedimentation
Silt.....	0.004-0.062	Sedimentation
Sand.....	0.062-2.0	Sedimentation or sieve
Gravel.....	2.0-64.0	Sieve

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

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

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

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

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

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

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

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

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

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

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, 1992, is called the "1992 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, Map Distribution, Box 25286, MS 306, Denver Federal Center, 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. Scott, 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. Rathburn, 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-B7. Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow, by Eliezer J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. Fluvial sediment concepts, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. Field methods for measurement of fluvial sediment, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. Computation of fluvial sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. Some statistical tools in hydrology, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. Low-flow investigations by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. Storage analyses for water supply, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. Regional analyses of streamflow characteristics, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. Computation of rate and volume of stream depletion by wells, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. Methods for determination of inorganic substances in water and fluvial sediments, 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. [variously paged]
- 6-A2. Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model, by S.A. Leake and D.E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 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.

EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY STATION
- ◆ GAGING AND WATER-QUALITY (TEMPERATURE, SEDIMENT) STATION

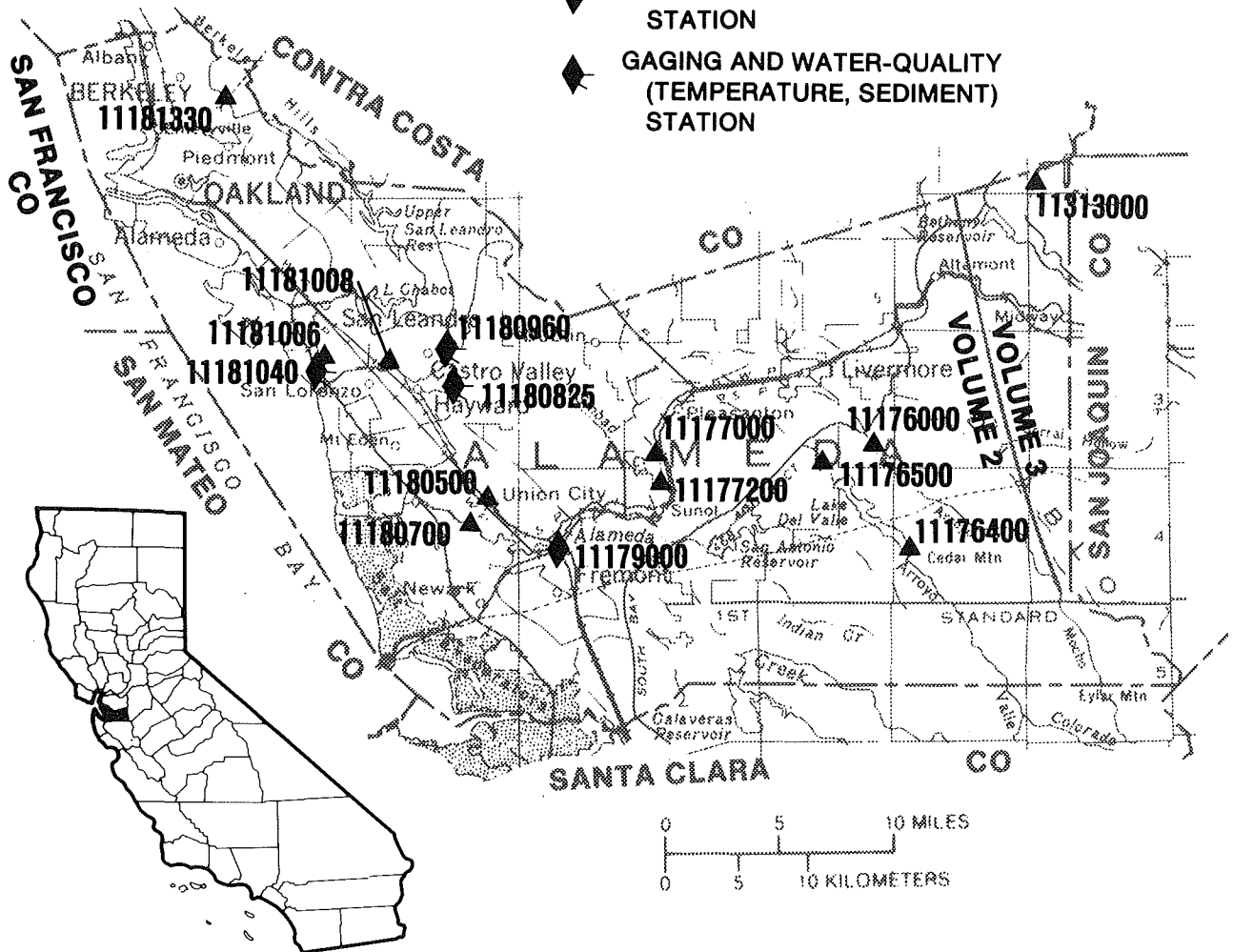


Figure 6. Location of discharge and water-quality stations in Alameda County.
(NOTE: Records for stations 11176000 through 11181330 published in volume 2.)

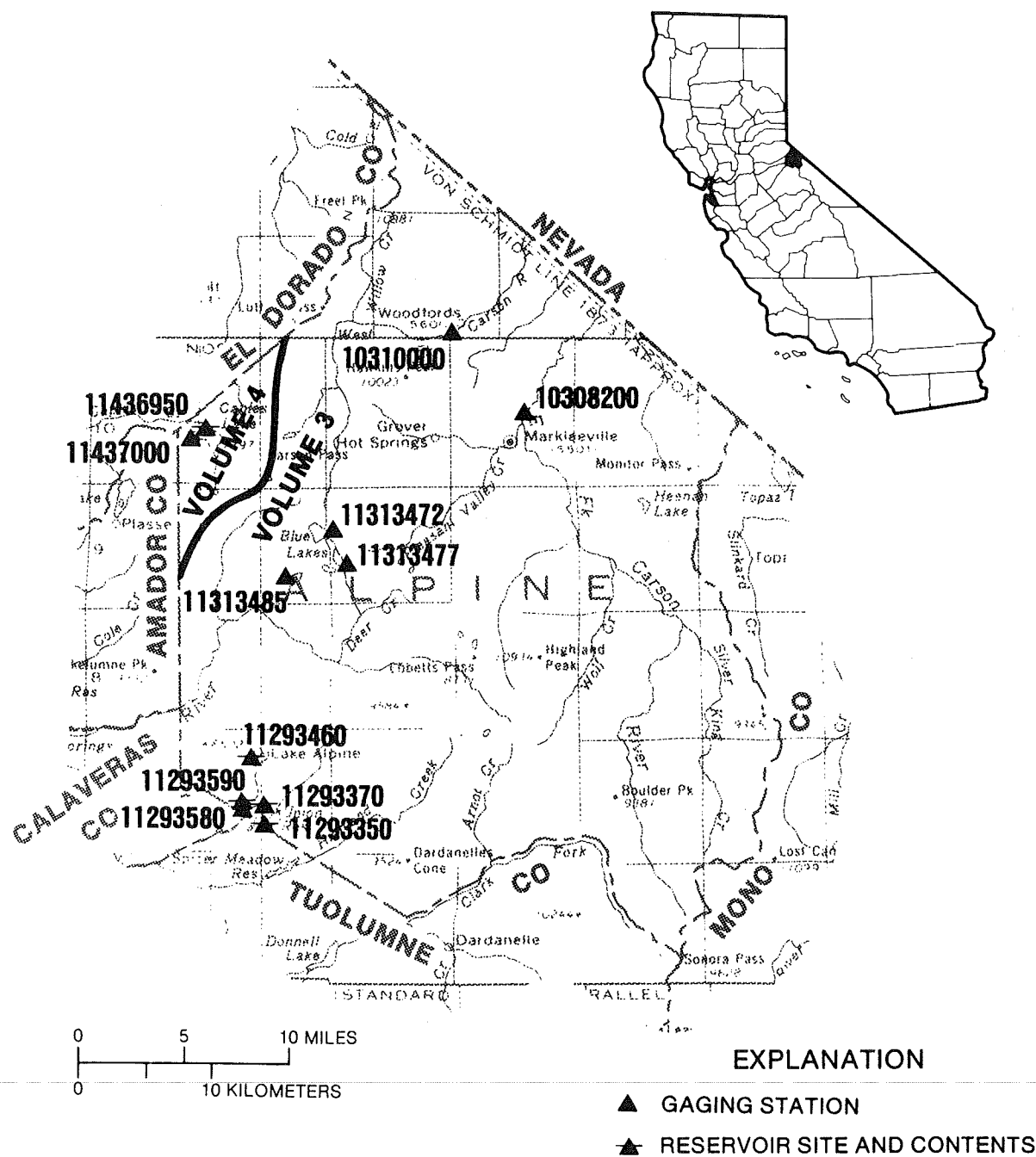


Figure 7. Location of discharge stations in Alpine County.
 (NOTE: Station 10297000 in Douglas County, Nevada, not shown on this map. Record for stations 11436950 and 11437000 published in volume 4.)

EXPLANATION

- ▲ GAGING STATION
- POWERHOUSE
- ▲ RESERVOIR SITE AND CONTENTS

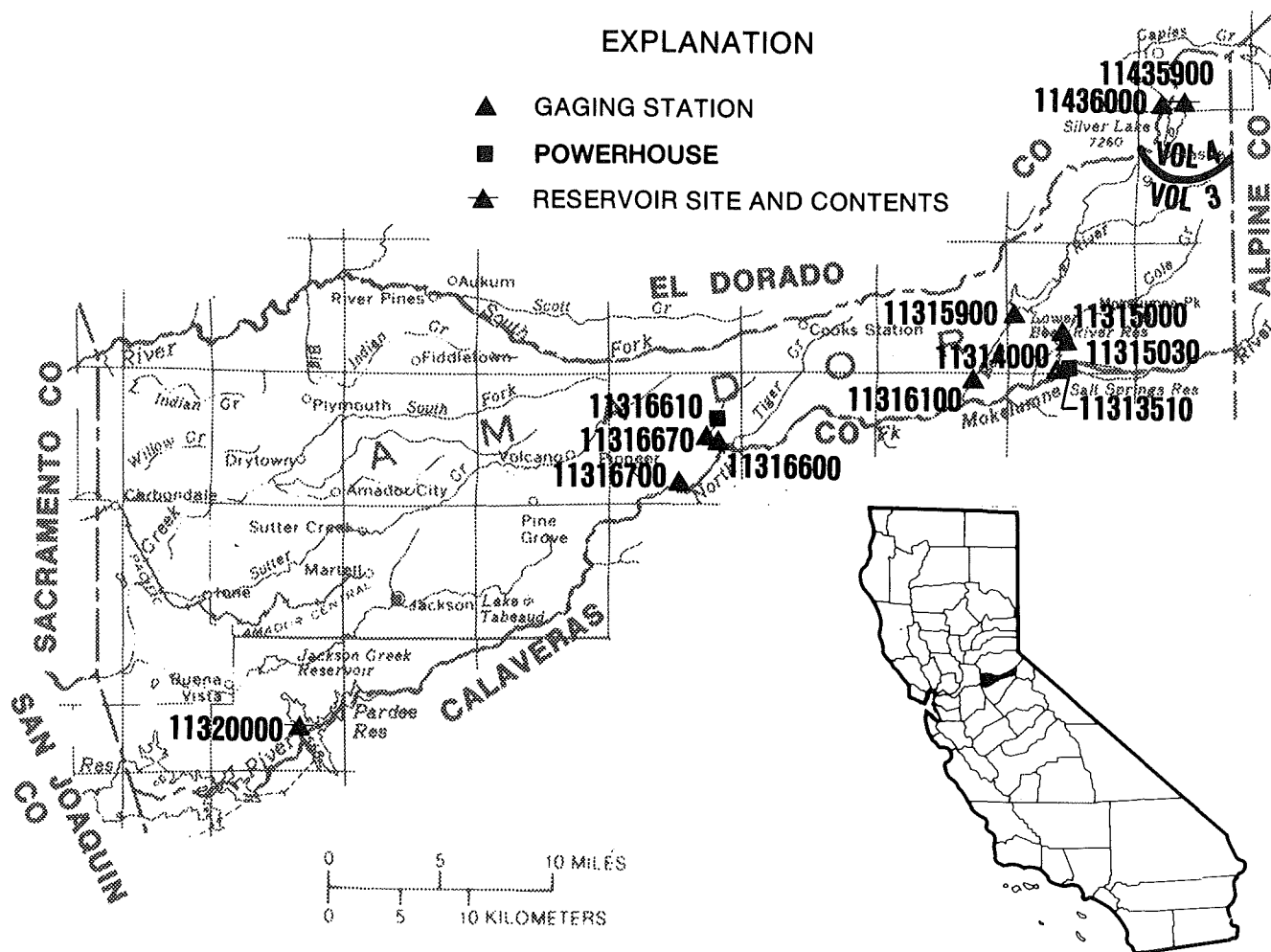


Figure 8. Location of discharge stations in Amador County.
 (NOTE: Record for stations 11435900 and 11436000 published
 in volume 4.)

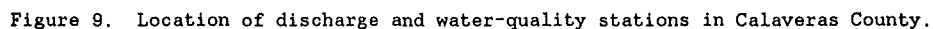


Figure 9. Location of discharge and water-quality stations in Calaveras County.

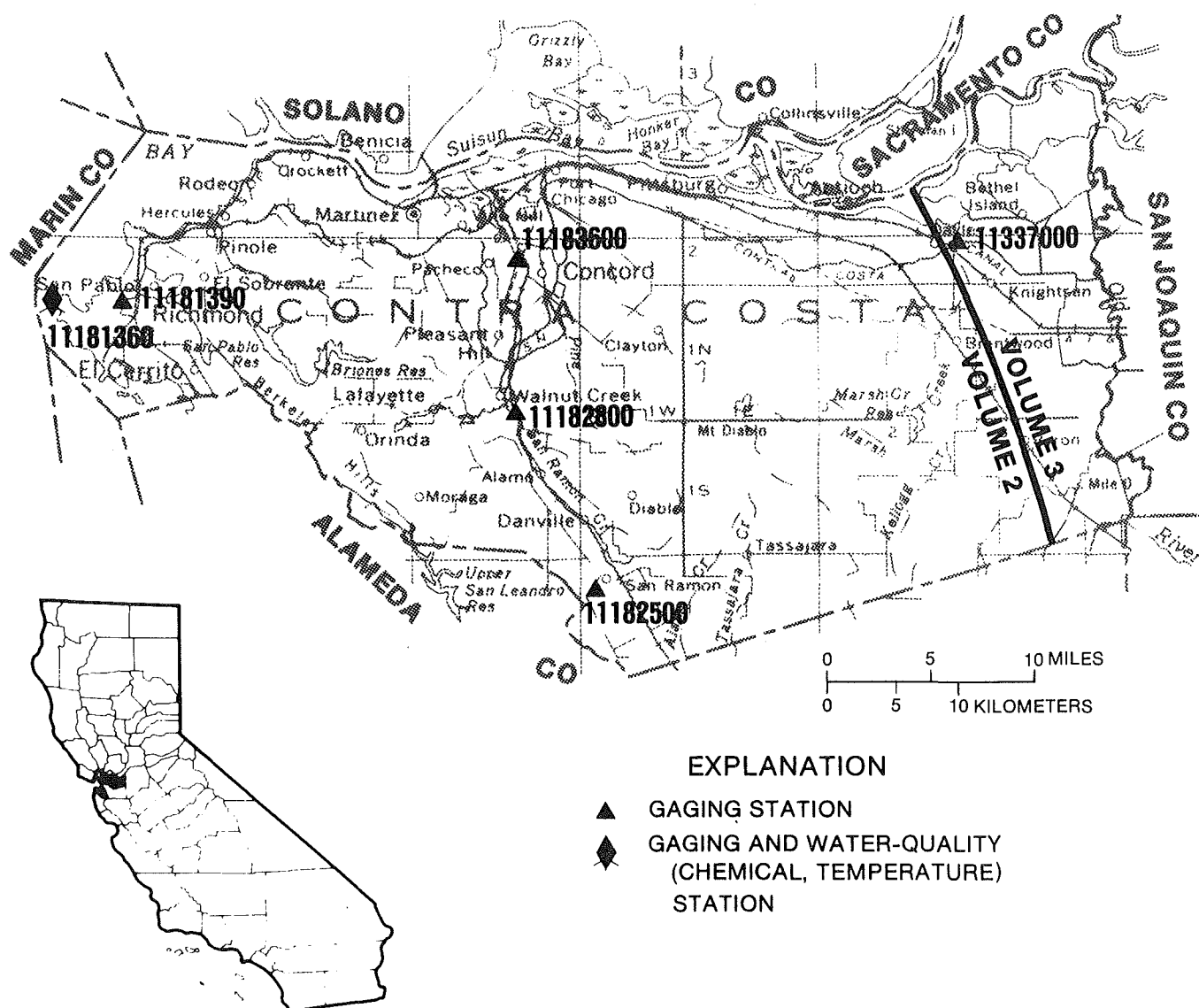


Figure 10. Location of discharge and water-quality stations in Contra Costa County.
 (NOTE: Records for stations 11181360 through 11183600 published in volume 2.)



Figure 11. Location of discharge and water-quality stations in El Dorado County.
 (NOTE: Records for stations 11427940 through 11445500 published in volume 4.)

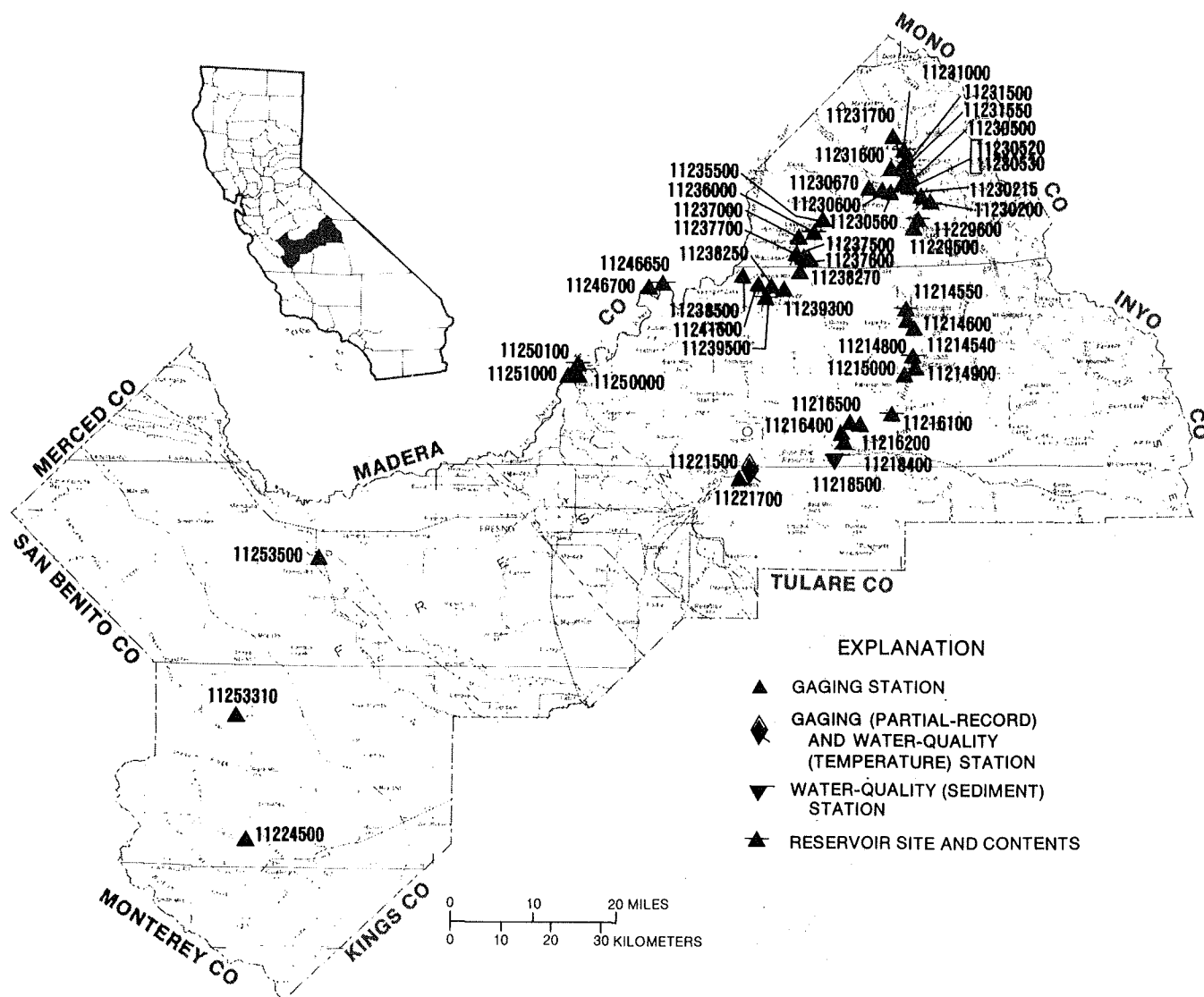


Figure 12. Location of discharge and water-quality stations in Fresno County.

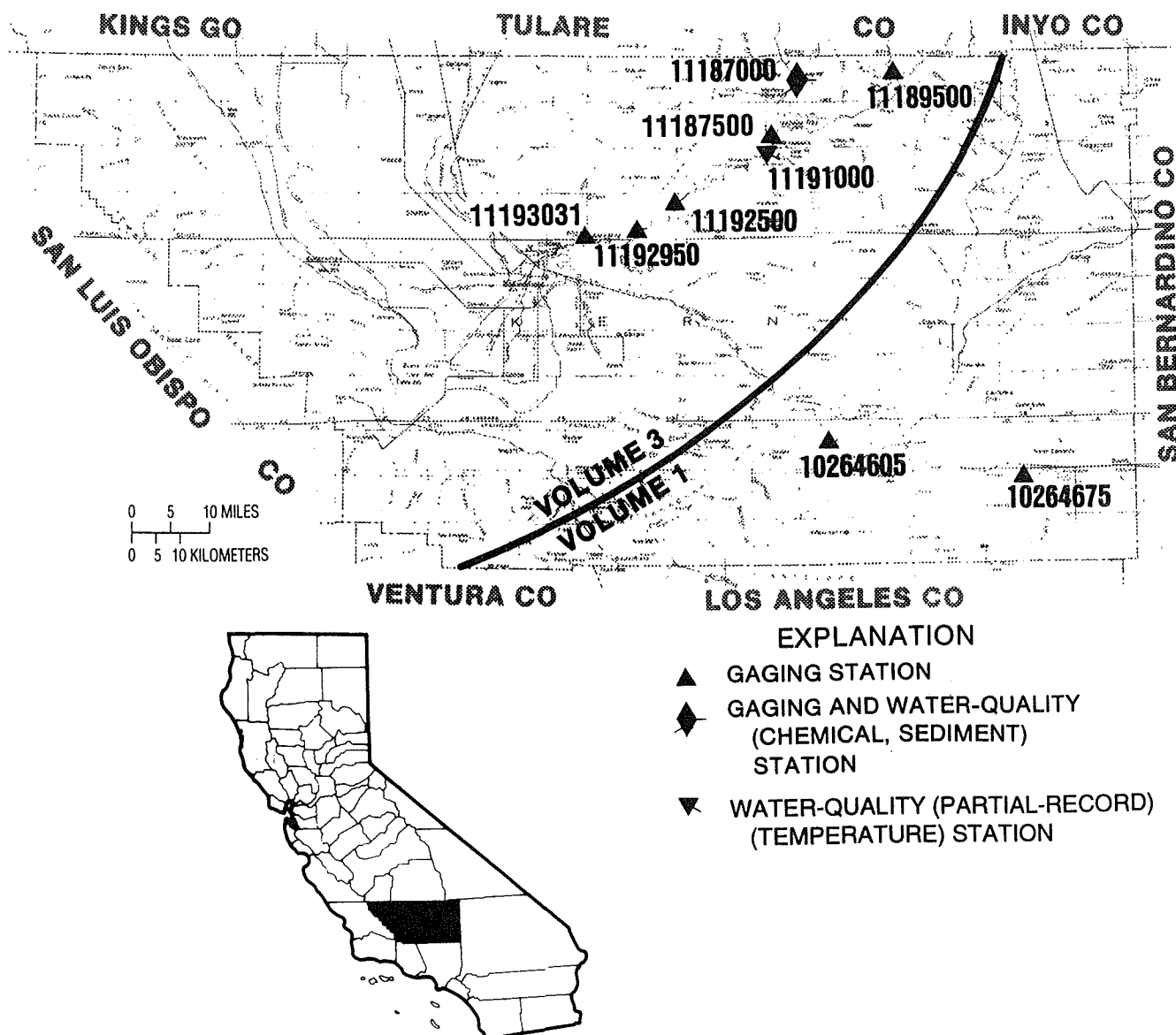


Figure 13. Location of discharge and water-quality stations in Kern County.
(NOTE: Records for stations 10264605 and 10264675 published in volume 1.)

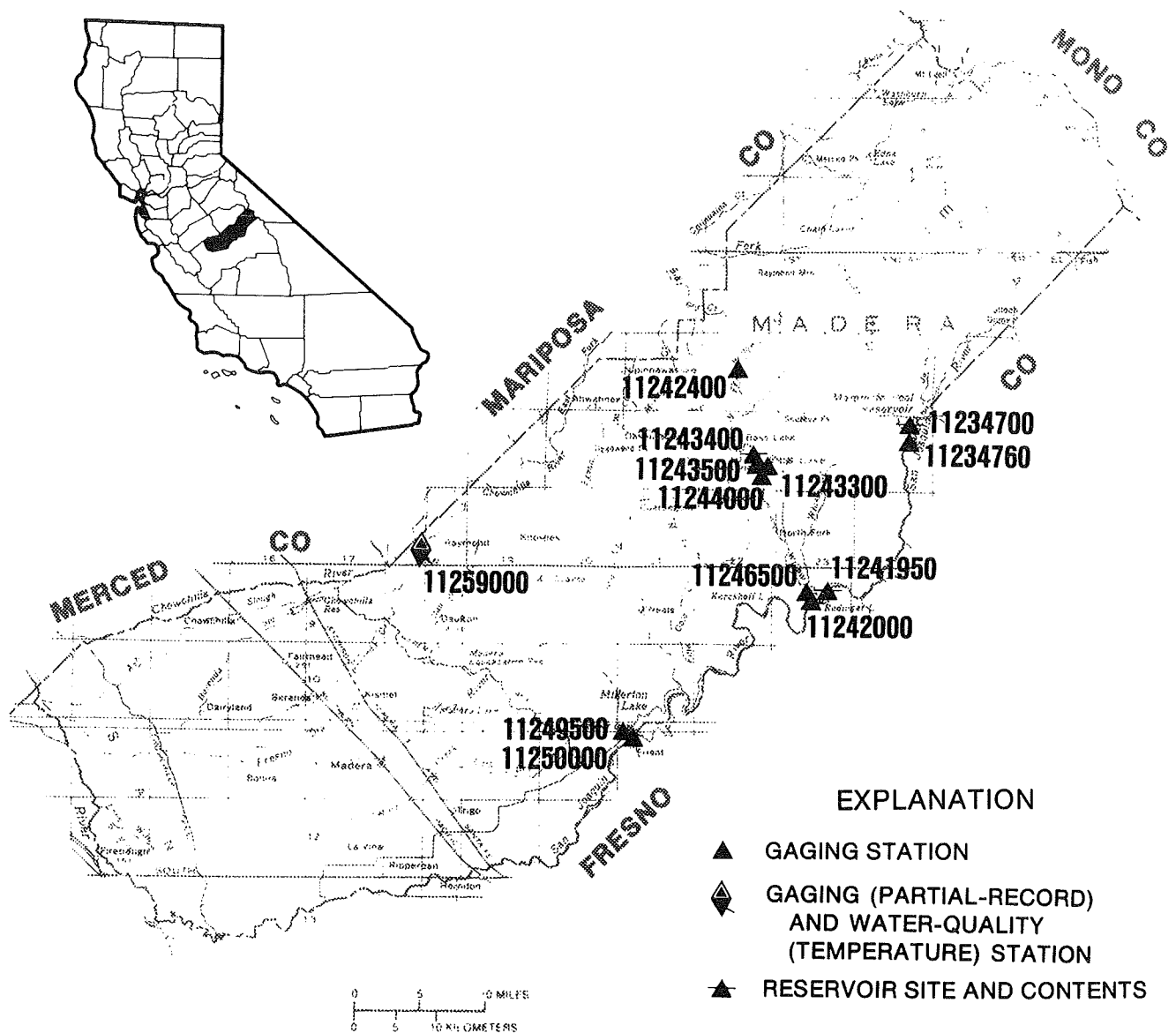


Figure 14. Location of discharge and water-quality stations in Madera County.

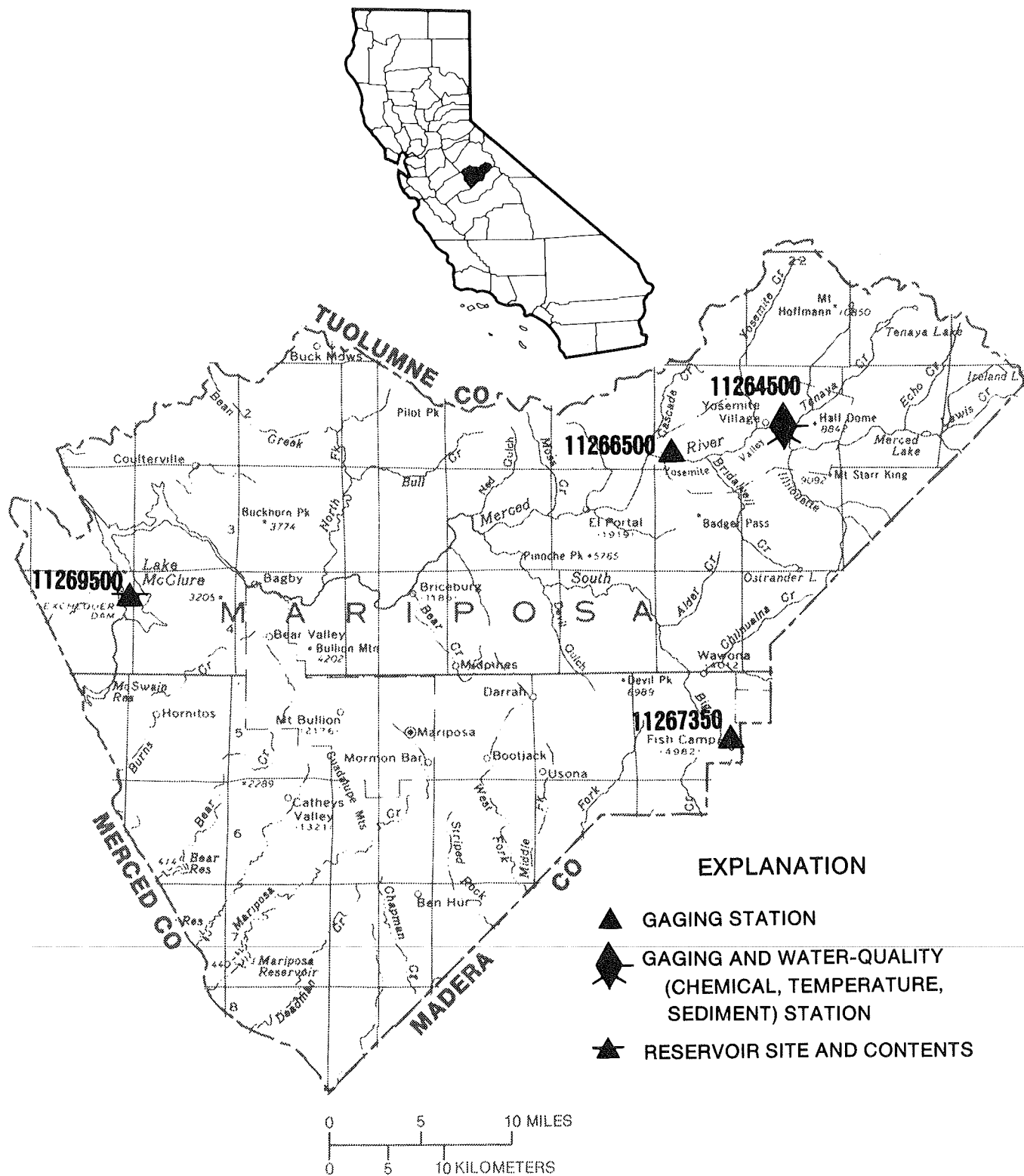


Figure 15. Location of discharge and water-quality stations in Mariposa County.

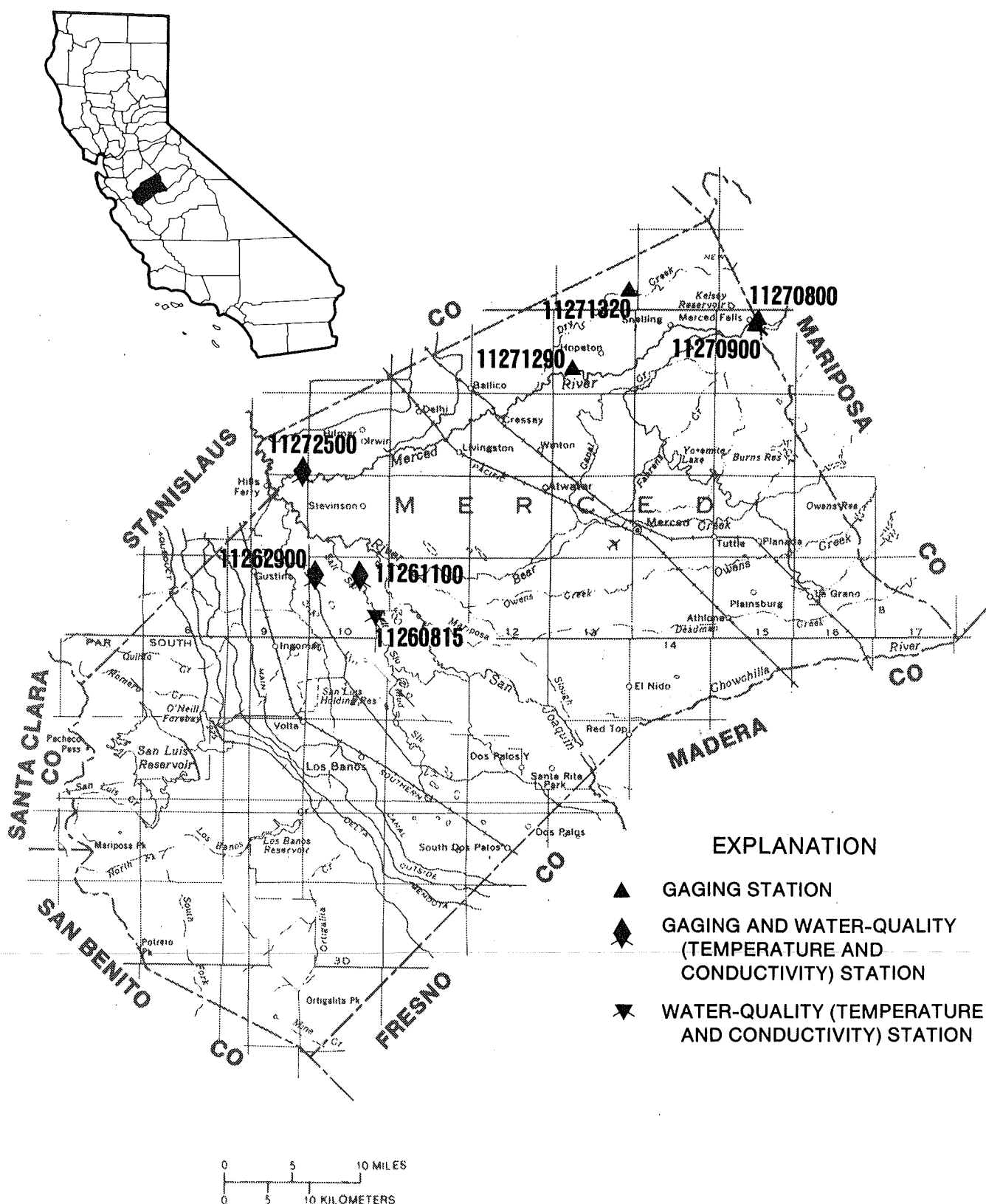
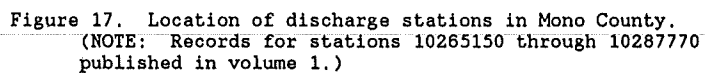


Figure 16. Location of discharge and water-quality stations in Merced County.



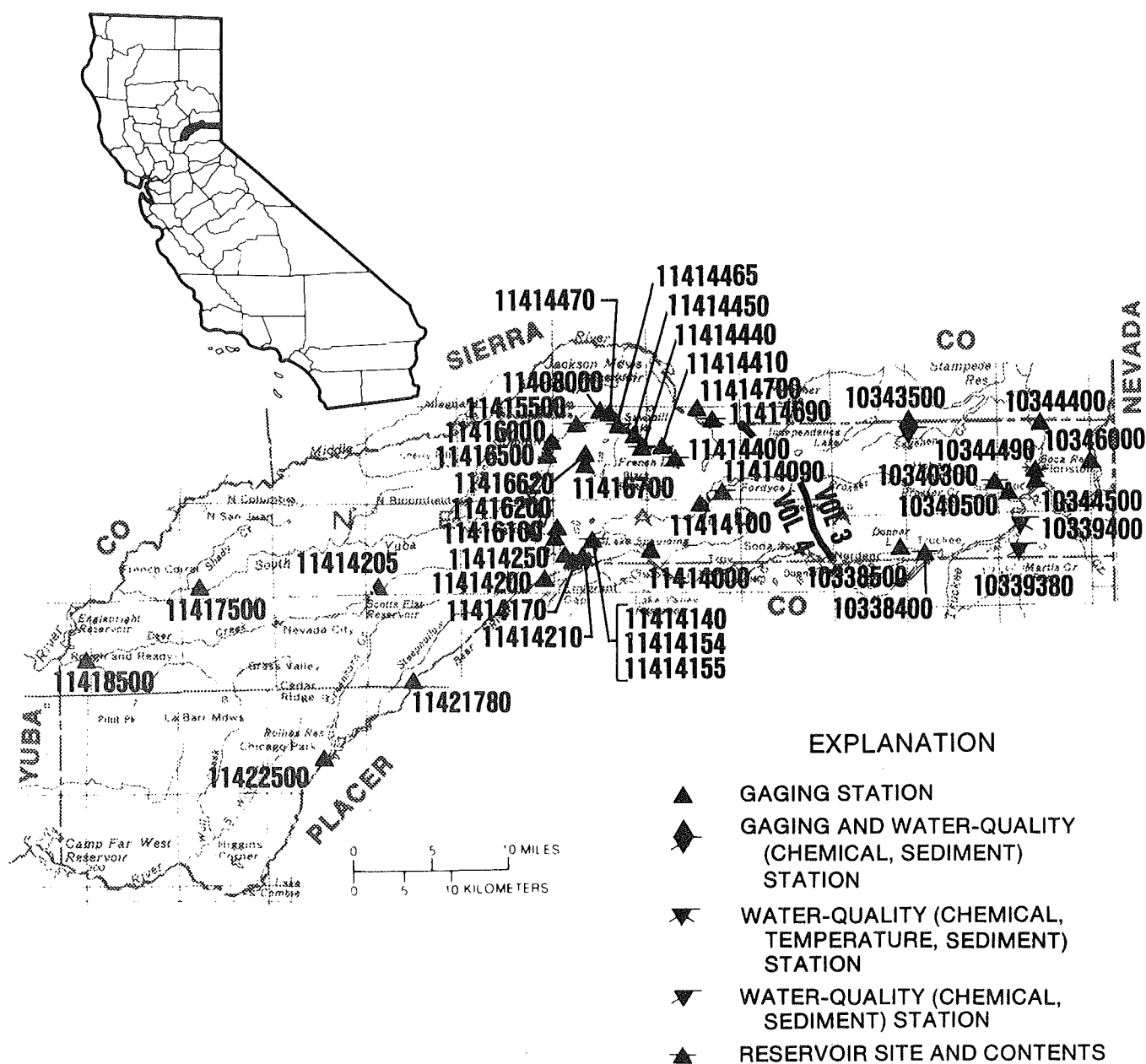


Figure 18. Location of discharge and water-quality stations in Nevada County.
 (NOTE: Records for stations 11408000 through 11422500 published in volume 4.)

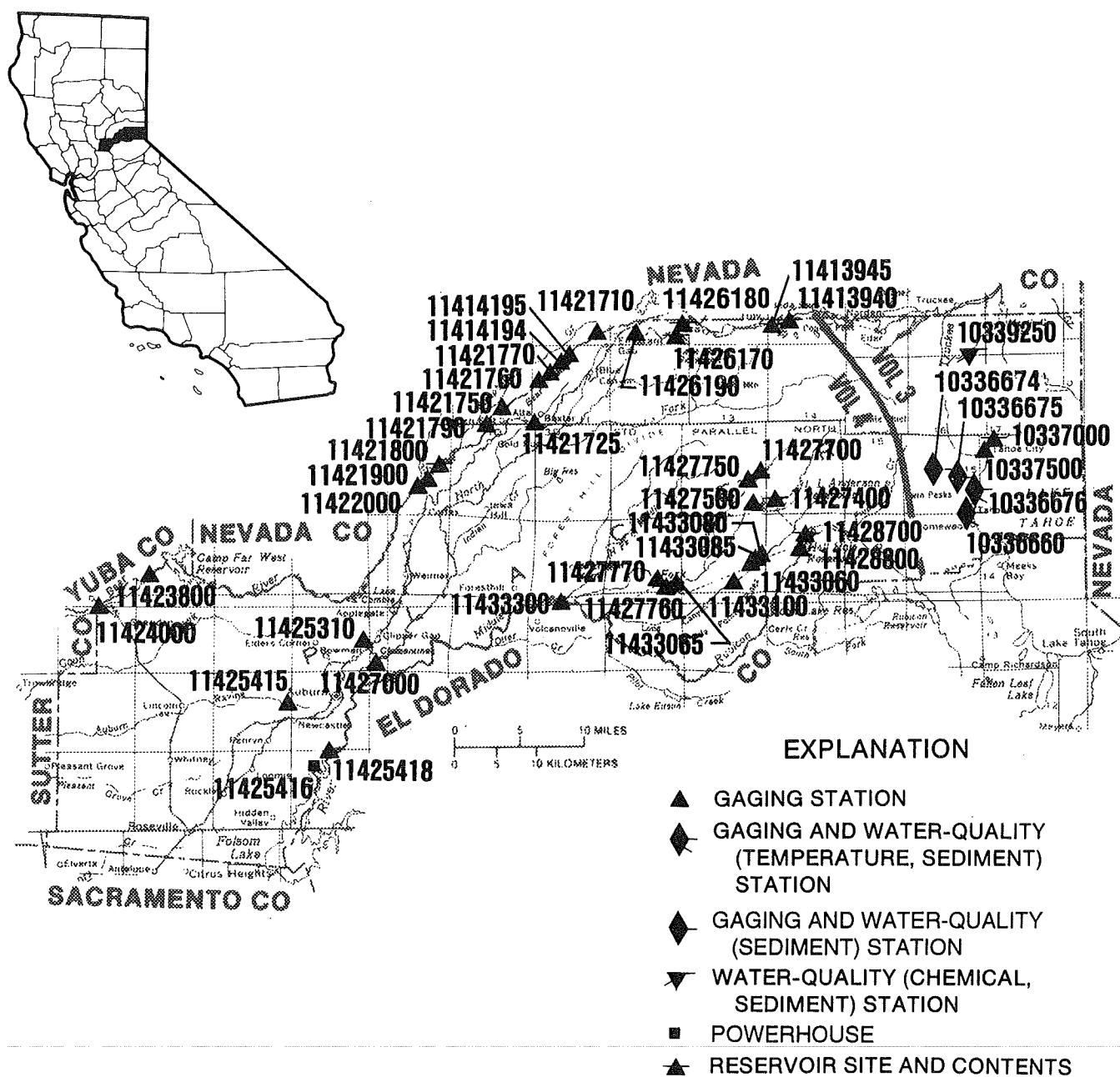
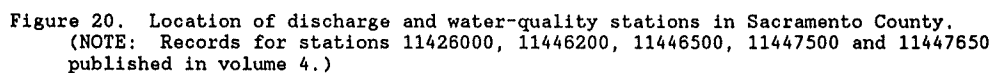


Figure 19. Location of discharge and water-quality stations in Placer County.
 (NOTE: Records for stations 11414190 through 11433300 published in volume 4.)



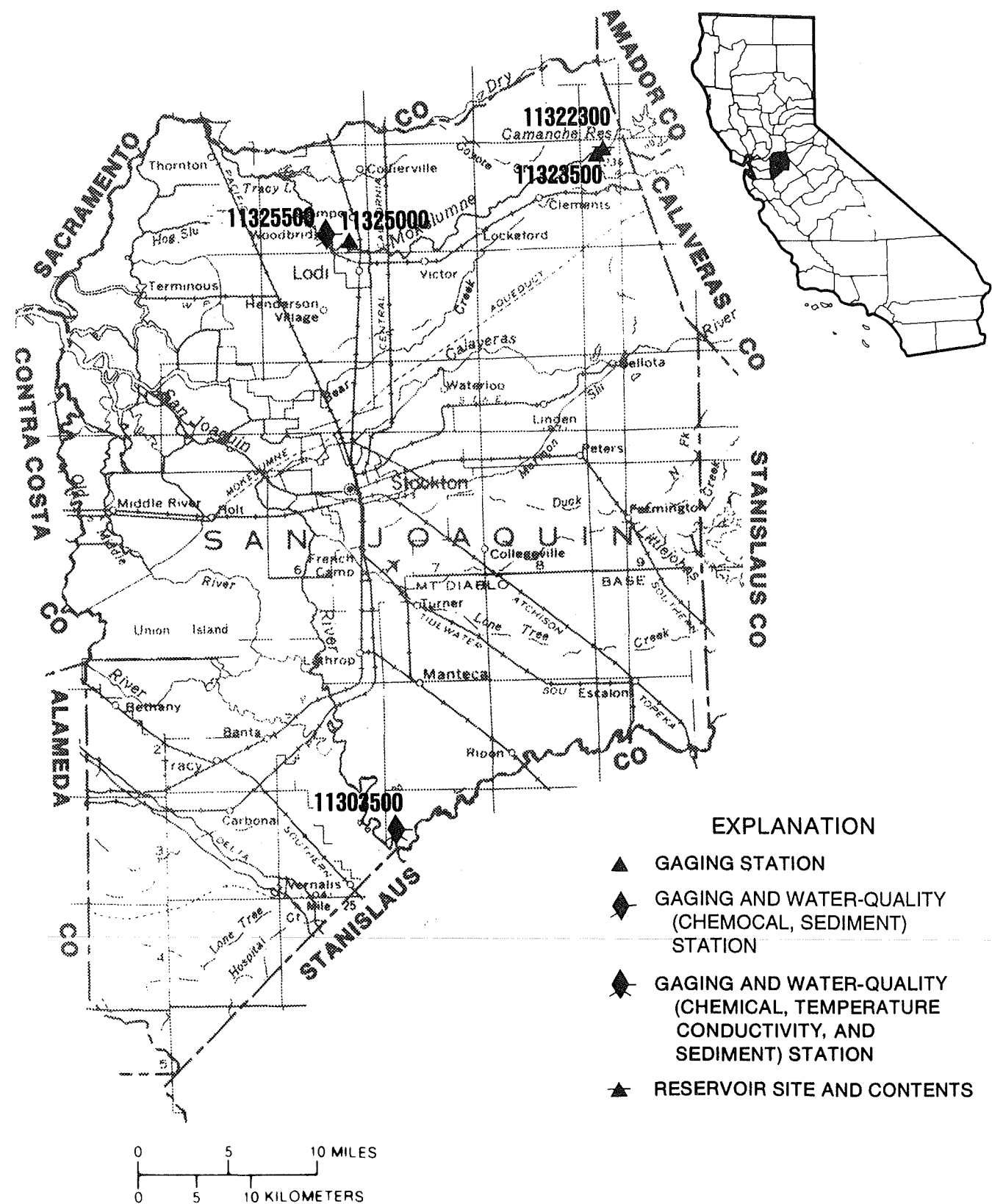


Figure 21. Location of discharge and water-quality stations in San Joaquin County.

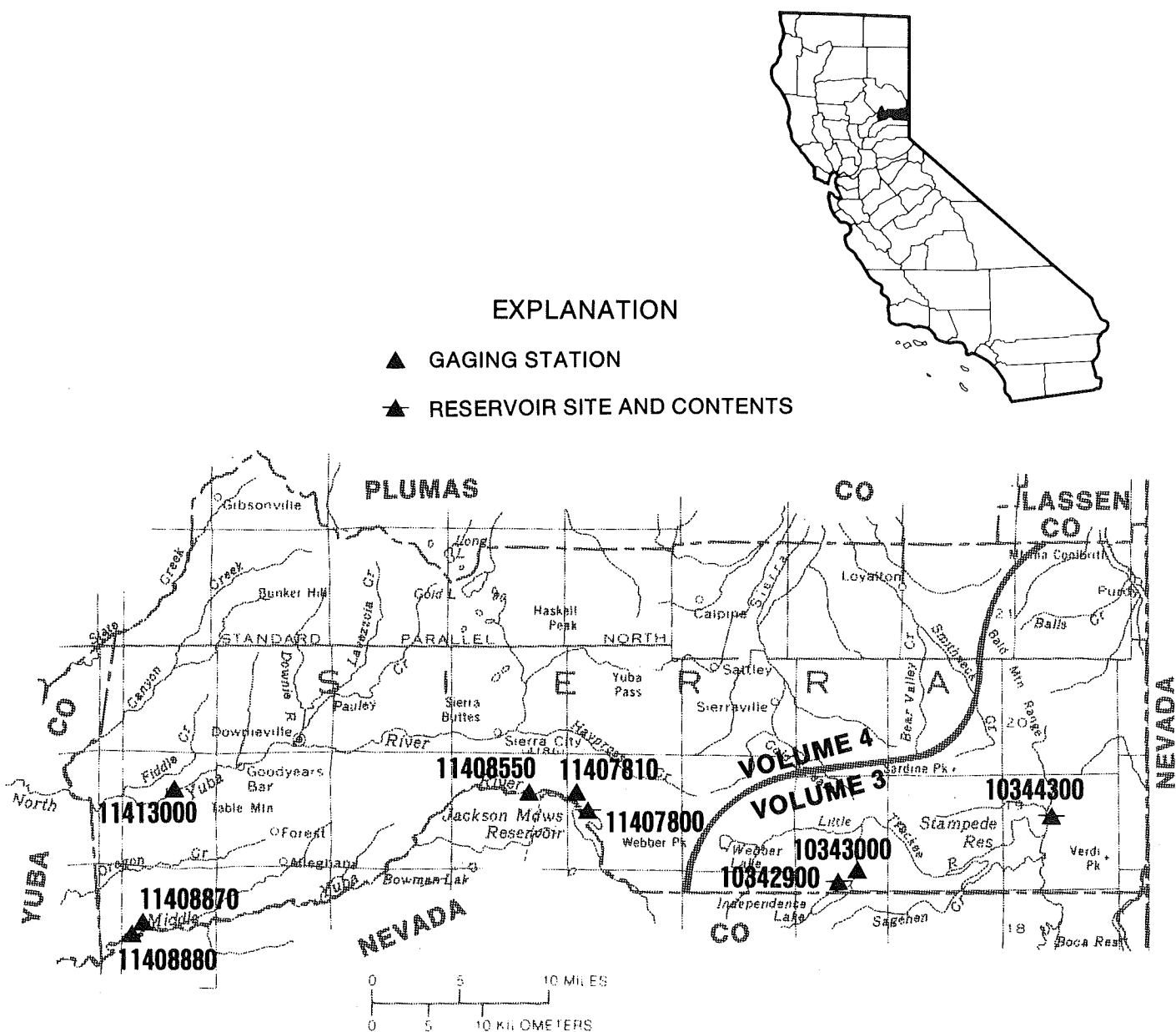


Figure 22. Location of discharge stations in Sierra County.
 (NOTE: Records for stations 11407800 through 11413000
 published in volume 4.)

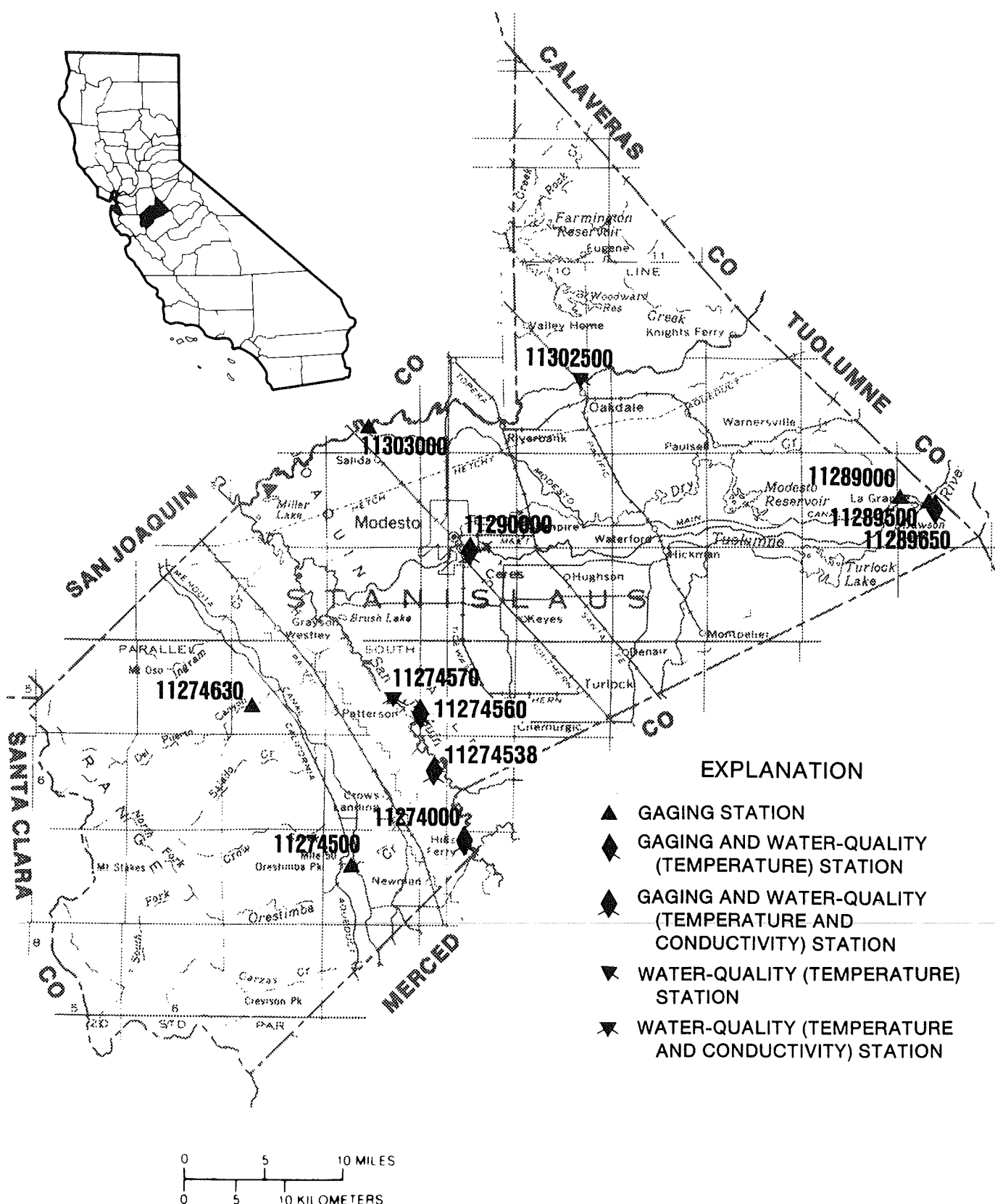


Figure 23. Location of discharge and water-quality stations in Stanislaus County.

EXPLANATION

- ▲ GAGING STATION
- ▲ GAGING (PARTIAL-RECORD)
- ◆ GAGING (PARTIAL-RECORD) AND WATER-QUALITY (TEMPERATURE) STATION

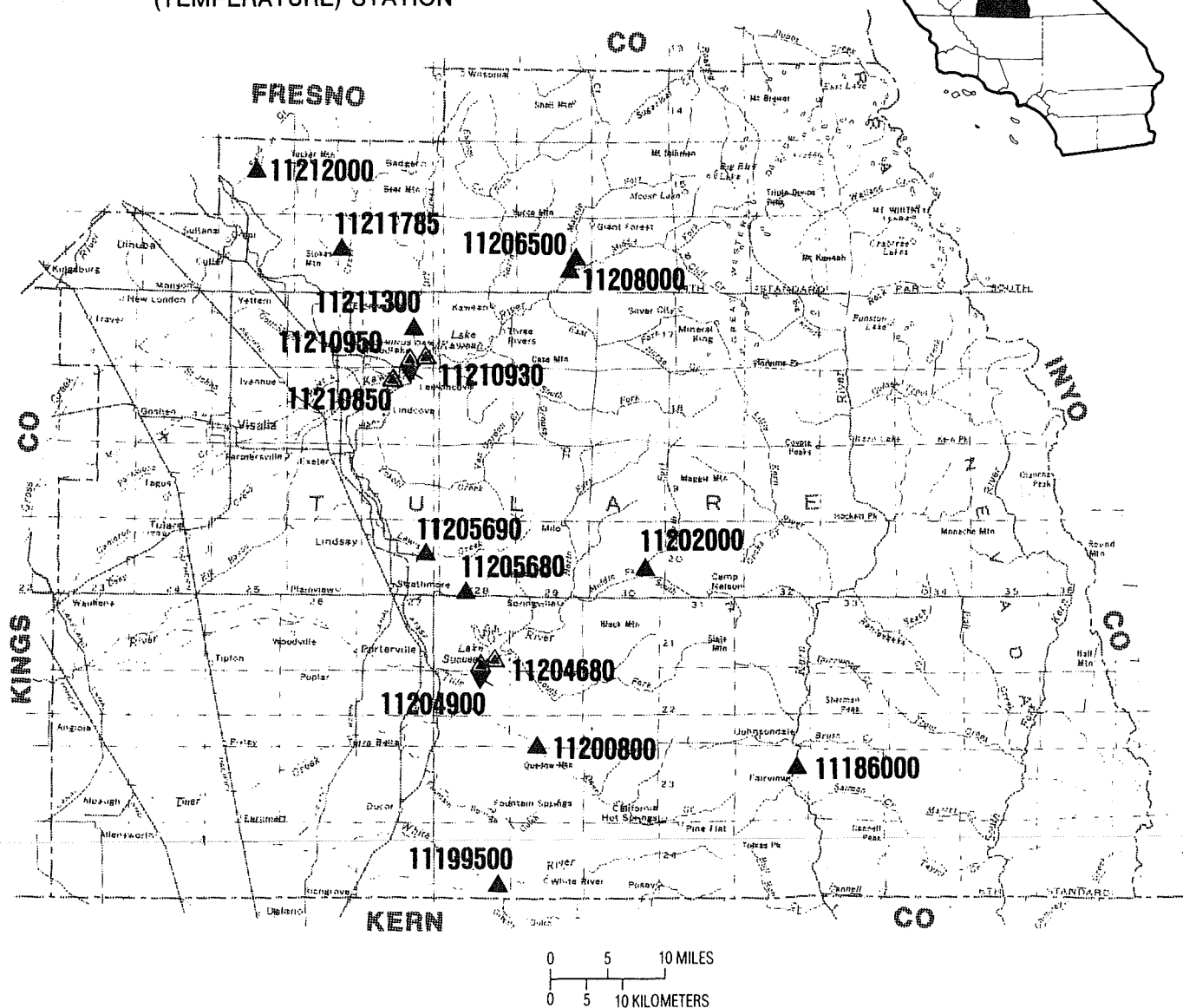


Figure 24. Location of discharge and water-quality stations in Tulare County.

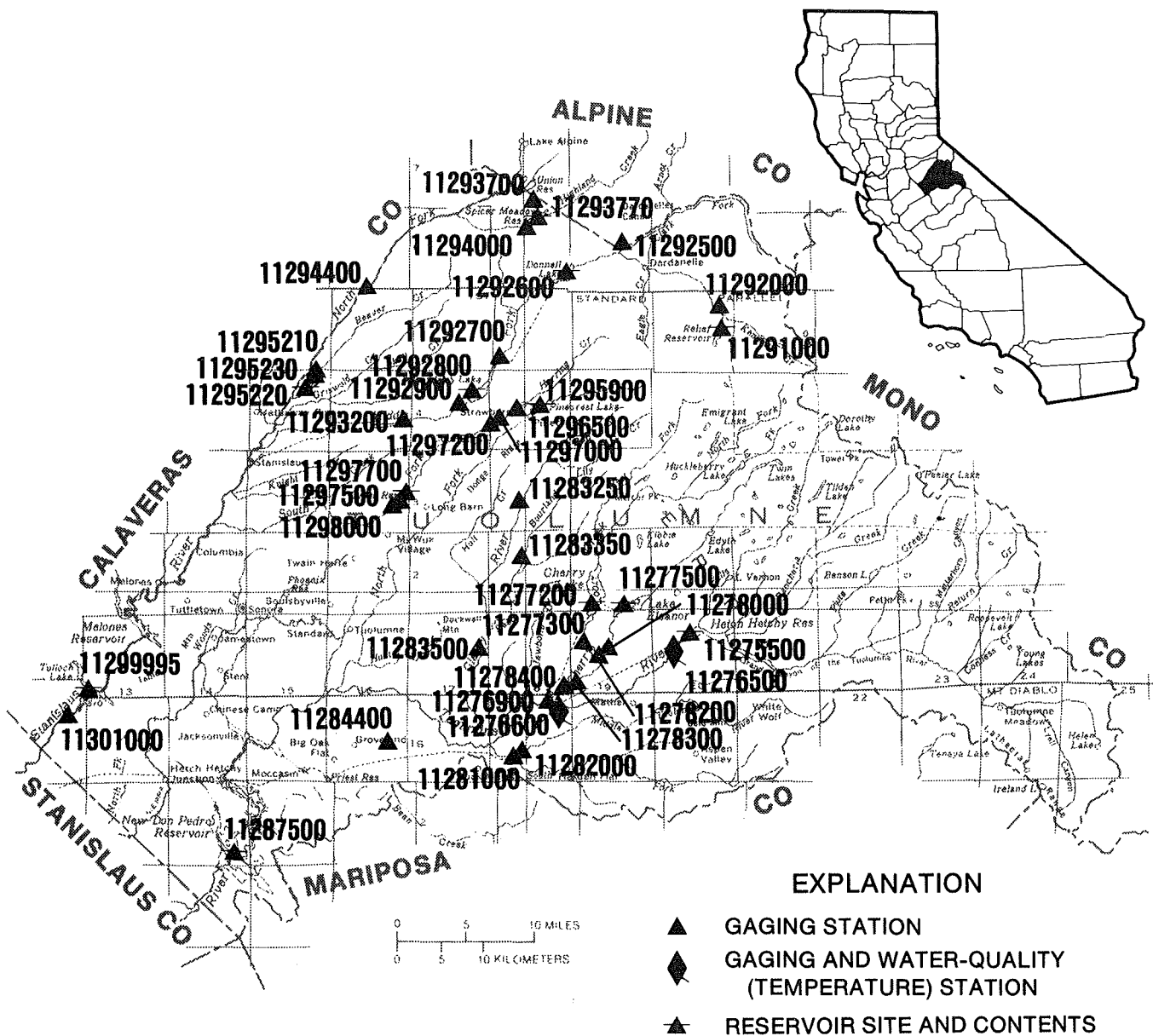


Figure 25. Location of discharge and water-quality stations in Tuolumne County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

PRINTED OUTPUTREMARK

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 measurement
1	Laboratory value
A	Samples collected by another agency

WALKER LAKE BASIN

10290300 UPPER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°09'15", long 119°20'58", in NW 1/4 NE 1/4 sec.5, T.3 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at outlet of upper lake dam on Robinson Creek, and 10 mi southwest of Bridgeport.

DRAINAGE AREA.--29.5 mi².

PERIOD OF RECORD.--December 1961 to February 1964, September 1964 to current year.

GAGE.--Non-recording gage. Datum of gage is 7,212.86 ft above National Geodetic Vertical Datum of 1929, (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet. Figures given represent usable contents. Usable contents, 2,070 acre-ft between elevations 7,200 ft, natural rim, and 7,207 ft, spillway crest.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 2,990 acre-ft, July 7, 1983, elevation, 7,209.85 ft; minimum observed, 30 acre-ft, Nov. 1, 1990, elevation, 7,200.11 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--No contents observed Oct. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,430 acre-ft, May 28, elevation, 7,208.12 ft; minimum observed, 128 acre-ft, Oct. 3, elevation, 7,200.46 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	7,200.53	148	--
Oct. 31.	7,200.68	190	42
Nov. 30.	7,201.68	470	280
Dec. 31.	7,203.69	1,040	570
CAL YR 1991.	--	--	51
Jan. 31.	7,205.52	1,600	560
Feb. 28.	7,206.84	2,020	420
Mar. 31.	7,207.34	2,180	160
Apr. 30.	7,207.84	2,340	160
May 31.	7,208.03	2,400	60
June 30.	7,206.94	2,050	-350
July 31.	7,202.98	834	-1,216
Aug. 31.	7,201.46	408	-426
Sept. 30.	7,200.87	243	-165
WTR YR 1992.	--	--	95

NOTE: Monthend elevations and contents are interpolated from readings made during the year.

10290400 LOWER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°10'05", long 119°19'33", in NE 1/4 NE 1/4 sec.33, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at outlet of lower lake dam on Robinson Creek, and 8 mi southwest of Bridgeport.

DRAINAGE AREA.--38.9 mi².

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

GAGE.--Non-recording gage. Datum of gage is 7,205.45 ft above National Geodetic Vertical Datum of 1929, (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet and by Upper Twin Lake. Figures given represent usable contents. Usable contents, 4,010 acre-ft between elevations 7,190 ft, natural rim, and 7,200 ft, spillway crest. One transarea diversion out of Tamarack Creek into Summers Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,560 acre-ft, June 19, 1983, elevation, 7,203.58 ft; no contents, Nov. 17, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,440 acre-ft, Apr. 28, elevation, 7,196.10 ft; minimum observed, 740 acre-ft, Nov. 4, elevation 7,191.85 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	7,192.30	920	--
Oct. 31.	7,191.88	750	-170
Nov. 30.	7,192.80	1,120	370
Dec. 31.	7,193.12	1,250	130
CAL YR 1991.	--	--	583
Jan. 31.	7,193.53	1,410	160
Feb. 28.	7,194.59	1,840	430
Mar. 31.	7,194.88	1,950	110
Apr. 30.	7,196.02	2,410	460
May 31.	7,195.08	2,030	-380
June 30.	7,195.10	2,040	10
July 31.	7,194.70	1,880	-160
Aug. 31.	7,193.34	1,340	-540
Sept. 30.	7,192.95	1,180	-160
WTR YR 1992.	--	--	260

NOTE: Monthend elevations and contents are interpolated from readings made during the year.

10290500 ROBINSON CREEK AT TWIN LAKES OUTLET, NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°10'20", long 119°19'25", in SE 1/4 SE 1/4 sec.28, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, on left bank, 0.2 mi downstream from Lower Twin Lake, and 8 mi southwest of Bridgeport.

DRAINAGE AREA.--39.1 mi².

PERIOD OF RECORD.--October 1953 to September 1975, May to September 1992.

REVISED RECORDS.--WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Upper and Lower Twin Lakes. No flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known, 660 ft³/s, June 21, 1911, gage height, 5.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 112 ft³/s, May 11, 12, gage height, 2.96 ft; minimum daily, 14.0 ft³/s, Sept. 23-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e60	85	61	59	21
2	---	---	---	---	---	---	---	e65	85	61	58	20
3	---	---	---	---	---	---	---	e68	88	61	57	19
4	---	---	---	---	---	---	---	e70	93	60	56	18
5	---	---	---	---	---	---	---	e74	95	60	55	18
6	---	---	---	---	---	---	---	e78	96	59	54	18
7	---	---	---	---	---	---	---	81	92	59	54	18
8	---	---	---	---	---	---	---	86	90	59	52	18
9	---	---	---	---	---	---	---	97	87	59	49	17
10	---	---	---	---	---	---	---	108	81	61	42	16
11	---	---	---	---	---	---	---	111	75	62	29	16
12	---	---	---	---	---	---	---	107	73	63	29	16
13	---	---	---	---	---	---	---	102	61	64	30	15
14	---	---	---	---	---	---	---	100	55	64	29	15
15	---	---	---	---	---	---	---	95	55	64	29	15
16	---	---	---	---	---	---	---	94	55	64	29	15
17	---	---	---	---	---	---	---	94	53	64	29	15
18	---	---	---	---	---	---	---	94	52	64	29	15
19	---	---	---	---	---	---	---	94	52	64	29	15
20	---	---	---	---	---	---	---	95	53	64	29	15
21	---	---	---	---	---	---	---	96	55	64	28	15
22	---	---	---	---	---	---	---	95	54	64	28	15
23	---	---	---	---	---	---	---	92	55	64	28	14
24	---	---	---	---	---	---	---	88	55	63	25	14
25	---	---	---	---	---	---	---	83	55	63	22	14
26	---	---	---	---	---	---	---	80	57	62	22	14
27	---	---	---	---	---	---	---	80	59	62	22	14
28	---	---	---	---	---	---	---	80	60	61	22	14
29	---	---	---	---	---	---	---	82	60	61	22	14
30	---	---	---	---	---	---	---	84	60	60	22	14
31	---	---	---	---	---	---	---	84	---	60	21	---
TOTAL	---	---	---	---	---	---	---	2717	2046	1921	1089	477
MEAN	---	---	---	---	---	---	---	87.6	68.2	62.0	35.1	15.9
MAX	---	---	---	---	---	---	---	111	96	64	59	21
MIN	---	---	---	---	---	---	---	60	52	59	21	14
AC-FT	---	---	---	---	---	---	---	5390	4060	3810	2160	946

e Estimated.

10290500 ROBINSON CREEK AT TWIN LAKES OUTLET, NEAR BRIDGEPORT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.8	7.61	4.93	9.51	13.1	14.3	47.9	101	183	154	96.1	51.2
MAX	37.5	25.0	21.9	39.0	63.4	25.5	79.4	187	349	337	144	89.0
(WY)	1970	1968	1968	1970	1963	1970	1959	1969	1969	1967	1969	1974
MIN	9.80	.67	.000	.000	.000	.000	22.3	59.1	68.2	62.0	35.1	15.9
(WY)	1956	1958	1954	1954	1954	1955	1975	1955	1992	1992	1992	1992

SUMMARY STATISTICS

WATER YEARS 1954 - 1992

ANNUAL MEAN	60.0	
HIGHEST ANNUAL MEAN	99.5	1969
LOWEST ANNUAL MEAN	33.8	1961
HIGHEST DAILY MEAN	478	Jun 20 1963
LOWEST DAILY MEAN	.00	Nov 3 1953
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 3 1953
INSTANTANEOUS PEAK FLOW	492	Jun 20 1963
INSTANTANEOUS PEAK STAGE	4.62	Jun 6 1969
ANNUAL RUNOFF (AC-FT)	43460	
10 PERCENT EXCEEDS	149	
50 PERCENT EXCEEDS	26	
90 PERCENT EXCEEDS	.20	

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'30", long 119°12'40", in SE 1/4 NE 1/4 sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at Bridgeport Dam on East Walker River, and 4.5 mi north of Bridgeport.

DRAINAGE AREA.--358 mi².

PERIOD OF RECORD.--March 1926 to current year. Monthend contents only for some periods, published in WSP 1314.

REVISED RECORDS.--WSP 1180: 1949. WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,466.44 ft above National Geodetic Vertical Datum of 1929, (project datum).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between elevations 6,415 ft, approximate elevation of bottom of reservoir, and 6,461 ft, crest of spillway is at elevation 6,460.75 ft; however, there are four siphons that become operative prior to reaching this spillway. Elevation of sill of outlet gate, 6,412 ft. No dead storage. Figures given represent total contents. Water is used for irrigation by Walker River Irrigation District.

EXTREMES FOR CURRENT YEAR.--Maximum recorded contents, 10,590 acre-ft, Mar. 14, elevation, 6,444.33 ft; minimum 1,550 acre-feet, Sept. 30, elevation, 6,431.48 ft.

Capacity table, (elevation, in feet, and contents, in acre-feet)

6,425	334	6,440	6,240
6,430	1,130	6,445	11,380
6,435	2,920	6,450	18,780

RESERVOIR STORAGE (AC-FT) WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATIONS AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	2270	4580	6140	7340	10080	9800	8520	7000	4210	2470	2330
2	1700	2330	4630	6180	7400	10140	9800	8460	7030	4180	2410	2360
3	1690	2400	4700	6220	7450	10220	9790	8390	7010	4120	2330	2350
4	1670	2470	4750	6270	7490	10250	9730	8320	6930	4030	2270	2360
5	1670	2540	4800	6330	7560	10250	9720	8260	6830	3970	2210	2350
6	1660	2620	4870	6370	7640	10220	9690	8280	6760	3890	2160	2340
7	1660	2700	4910	6420	7710	10240	9680	8360	6710	3820	2090	2320
8	1650	2770	4970	6430	7770	10270	9690	8440	6640	3720	2030	2310
9	1650	2860	5020	6490	7840	10310	9660	8420	6540	3630	1960	2300
10	1650	2950	5060	6510	7920	10290	9650	8420	6420	3510	1910	2280
11	1650	3030	5130	6570	8030	10320	9580	8370	6340	3410	1870	2260
12	1650	3120	5160	6570	8090	10340	9520	8250	6190	3380	1880	2230
13	1650	3180	5210	6610	8180	10350	9430	8080	6040	3370	1900	2210
14	1650	3240	5270	6650	8240	10390	9340	7920	5920	3330	1940	2180
15	1650	3320	5340	6690	8310	10370	9290	7780	5780	3310	2000	2170
16	1640	3410	5410	6740	8410	10330	9250	7650	5670	3320	2070	2170
17	1640	3540	5490	6770	8450	10260	9210	7570	5540	3420	2110	2160
18	1630	3640	5570	6810	8540	10220	9190	7460	5430	3440	2150	2150
19	1620	3740	5600	6850	8630	10160	9180	7340	5340	3440	2170	2130
20	1620	3860	5620	6870	8780	10070	9170	7270	5240	3410	2190	2110
21	1620	3960	5650	6910	9010	10000	9110	7240	5160	3370	2200	2090
22	1620	4070	5700	6930	9190	9960	9020	7170	5050	3280	2190	2050
23	1610	4150	5740	6980	9310	9960	8980	7130	4940	3200	2190	2020
24	1640	4250	5790	7010	9430	9920	8910	7100	4840	3130	2210	1960
25	1660	4340	5820	7050	9540	9890	8840	7090	4740	3050	2210	1910
26	1870	4430	5890	7080	9650	9870	8810	7060	4640	2960	2220	1830
27	2000	4450	5930	7150	9770	9850	8770	7010	4510	2890	2230	1760
28	2050	4530	5990	7170	9880	9810	8710	6990	4430	2810	2230	1690
29	2100	4490	6010	7210	9980	9800	8630	7000	4290	2740	2240	1620
30	2150	4560	6070	7240	---	9790	8550	6990	4250	2650	2280	1550
31	2210	---	6100	7290	---	9800	---	7010	---	2570	2300	---
MAX	2210	4560	6100	7290	9980	10390	9800	8520	7030	4210	2470	2360
MIN	1610	2270	4580	6140	7340	9790	8550	6990	4250	2570	1870	1550
a	6433.39	6437.78	6439.82	6441.18	6443.80	6443.64	6442.46	6440.87	6437.30	6434.25	6433.62	6431.48
b	+490	+2350	+1540	+1120	+2760	-180	-1250	-1540	-2760	-1680	-270	-750

CAL YR 1991 MAX 6100 MIN 1210 b +4820
WTR YR 1992 MAX 10390 MIN 1550 b +170

a Elevation, in feet above sea level, at end of month.
b Change in contents, in acre-feet.

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'40", long 119°12'50", in SW 1/4 NE 1/4 sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank 1,500 ft downstream from Bridgeport Reservoir, 5 mi north of Bridgeport, and 10 mi upstream from Sweetwater Creek.

DRAINAGE AREA.--359 mi².

PERIOD OF RECORD.--July 1911 to September 1914 (gage height only), October and November 1921, May 1922 to September 1924, March to July 1925, October 1925 to current year.

REVISED RECORDS.--WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1921, nonrecording gage at site 0.5 mi upstream at different datum. Oct. 1, 1921 to Feb. 21, 1924, water-stage recorder at site 1 mi downstream at different datum. Feb. 22, 1924 to Sept. 30, 1931, water-stage recorder, and Oct. 1, 1931 to May 25, 1939, nonrecording gage at present site at datum 2.34 ft lower. May 26, 1939 to Nov. 27, 1988, water-stage recorder at datum 2.00 ft higher.

REMARKS.--No estimated discharges. Records fair. Diversions for irrigation of meadow pasturelands near Bridgeport. Flow regulated by Bridgeport Reservoir (10292500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 137 ft³/s, May 13-16, gage height, 3.28 ft; minimum daily, 21 ft³/s, Feb. 1-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	28	33	30	21	22	27	51	60	76	57	34
2	42	24	33	31	21	27	27	61	60	73	51	34
3	42	23	33	30	21	34	27	65	69	69	50	37
4	42	22	33	30	21	53	27	61	86	67	44	42
5	42	22	33	31	21	66	27	51	89	67	41	42
6	42	22	33	31	21	66	27	47	94	67	47	42
7	42	22	33	31	21	58	27	48	94	70	46	42
8	42	22	33	31	21	41	29	59	105	77	46	41
9	42	22	33	31	21	44	31	74	126	82	45	40
10	42	23	33	32	21	47	37	86	115	81	45	40
11	42	23	33	32	21	41	48	100	115	74	41	40
12	42	23	33	32	21	38	61	127	115	65	38	40
13	42	23	28	31	21	31	57	137	120	62	38	40
14	42	23	23	31	21	31	44	137	131	62	37	38
15	42	23	23	31	21	31	47	136	131	62	35	31
16	42	23	23	31	21	34	39	117	128	58	31	31
17	42	23	23	31	22	41	24	82	123	53	31	31
18	42	23	22	31	22	41	36	83	117	53	31	37
19	41	23	26	31	22	47	42	76	108	53	32	39
20	41	23	32	31	22	67	42	63	96	52	32	39
21	41	24	32	31	22	56	44	59	96	51	32	39
22	41	24	31	31	22	32	50	59	93	56	32	42
23	41	24	31	31	22	32	50	57	88	60	32	47
24	38	24	31	32	22	32	50	50	92	53	32	47
25	36	24	30	32	22	32	50	50	96	56	32	53
26	37	24	30	32	22	30	50	54	96	59	33	62
27	37	24	30	32	22	27	56	60	95	59	34	62
28	38	29	30	32	22	27	71	60	96	60	34	61
29	38	35	30	32	22	27	70	60	91	59	34	60
30	34	34	30	32	---	27	64	60	83	59	33	60
31	29	---	30	29	---	27	---	60	---	59	33	---
TOTAL	1248	726	931	966	622	1209	1281	2290	3008	1954	1179	1293
MEAN	40.3	24.2	30.0	31.2	21.4	39.0	42.7	73.9	100	63.0	38.0	43.1
MAX	42	35	33	32	22	67	71	137	131	82	57	62
MIN	29	22	22	29	21	22	24	47	60	51	31	31
AC-FT	2480	1440	1850	1920	1230	2400	2540	4540	5970	3880	2340	2560

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.6	28.3	34.7	35.2	44.2	86.1	174	252	309	298	237	152
MAX	301	325	398	260	200	417	721	880	1001	797	638	406
(WY)	1984	1983	1984	1942	1963	1983	1952	1938	1938	1967	1983	1983
MIN	7.35	1.10	2.50	.50	.62	5.39	27.5	57.5	36.0	20.4	13.3	17.1
(WY)	1931	1956	1960	1950	1950	1927	1961	1991	1924	1924	1924	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1922 - 1992	
ANNUAL TOTAL	19661		16707			
ANNUAL MEAN	53.9		45.6		142	
HIGHEST ANNUAL MEAN					443	
LOWEST ANNUAL MEAN					37.5	
HIGHEST DAILY MEAN	205	Jun 17	137	May 13	1360	Jun 20 1963
LOWEST DAILY MEAN	22	Nov 4	21	Feb 1	.20	Nov 2 1955
ANNUAL SEVEN-DAY MINIMUM	22	Nov 3	21	Feb 1	.20	Nov 2 1955
INSTANTANEOUS PEAK FLOW			137	May 13	1390	Jun 19 1963
INSTANTANEOUS PEAK STAGE			3.28	May 13	4.95	Jan 22 1943
ANNUAL RUNOFF (AC-FT)	39000		33140		102900	
10 PERCENT EXCEEDS	112		82		341	
50 PERCENT EXCEEDS	38		38		91	
90 PERCENT EXCEEDS	23		22		6.6	

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA

LOCATION.--Lat 38°22'47", long 119°26'57", in NE 1/4 SE 1/4 sec.9, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on left bank, 50 ft downstream from Little Walker River, 160 ft upstream from bridge on U.S. Highway 395, and 13 mi southeast of Coleville.

DRAINAGE AREA.--180 mi².

PERIOD OF RECORD.--April 1938 to current year. Prior to October 1958, published as "below East Fork."

REVISED RECORDS.--WDR NV-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,591.39 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1939, at site, 125 ft downstream at datum 1.00 ft higher. Oct. 1, 1939, to Sept. 30, 1969, at present site and datum. Oct. 1, 1969, to July 10, 1987, at site 100 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poore Lake Reservoir, capacity, 1,200 acre-ft, 7 mi upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed prior to 1938, 5,800 ft³/s, Dec. 11, 1937, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,120 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 8	0215	*820	*3.18				

Minimum daily, 17 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	35	e58	e39	35	69	109	512	402	166	56	34
2	25	36	e56	e41	e34	66	128	435	398	132	54	33
3	25	38	e52	e39	e34	64	159	454	358	114	51	31
4	24	39	e50	40	e34	60	196	464	334	104	49	33
5	24	43	e47	39	e34	62	186	490	309	95	47	32
6	23	52	e47	e37	35	61	177	537	284	89	45	29
7	23	54	48	e36	36	61	189	724	250	84	43	28
8	23	55	e48	e39	35	60	209	712	241	78	39	27
9	23	65	e48	e38	33	57	216	665	252	75	35	26
10	23	72	e49	e37	34	55	221	534	225	73	34	25
11	23	64	e48	e37	33	57	242	552	204	72	33	24
12	24	58	e47	e38	34	60	231	561	196	272	39	23
13	24	55	e46	e38	36	63	281	557	178	231	38	23
14	23	51	e45	e36	36	64	291	563	165	167	39	23
15	22	46	e44	e36	36	66	290	553	167	144	53	22
16	22	49	e44	e36	38	64	261	545	158	140	48	22
17	22	65	e45	e37	42	61	438	540	154	178	38	21
18	22	51	43	e37	39	58	477	522	148	134	35	22
19	22	59	37	e36	40	59	364	483	141	118	32	21
20	22	74	e38	e37	51	60	359	390	135	107	30	20
21	22	79	e45	e36	63	59	399	346	139	100	e32	20
22	22	64	50	e36	79	60	348	332	133	93	e31	19
23	24	60	e42	e36	63	57	305	337	129	87	e31	19
24	23	61	e41	38	59	58	379	354	150	83	e30	18
25	25	59	e40	38	61	60	465	375	152	80	e29	18
26	78	57	46	e39	63	63	505	381	136	75	e28	19
27	44	58	e44	e39	65	69	526	419	124	73	26	19
28	38	49	e42	42	71	77	594	517	117	69	26	18
29	41	38	e42	e50	71	87	574	487	118	66	27	18
30	36	e52	e39	e64	---	93	633	404	160	64	31	17
31	33	---	e41	45	---	97	---	388	---	60	33	---
TOTAL	851	1638	1412	1216	1324	2007	9752	15133	6057	3423	1162	704
MEAN	27.5	54.6	45.5	39.2	45.7	64.7	325	488	202	110	37.5	23.5
MAX	78	79	58	64	79	97	633	724	402	272	56	34
MIN	22	35	37	36	33	55	109	332	117	60	26	17
AC-FT	1690	3250	2800	2410	2630	3980	19340	30020	12010	6790	2300	1400

e Estimated

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA--California

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.7	70.1	73.6	68.0	74.6	102	293	746	922	466	144	72.4
MAX	219	539	448	204	246	369	600	1655	2066	1383	663	246
(WY)	1983	1951	1951	1956	1963	1986	1938	1969	1983	1983	1983	1983
MIN	16.6	22.2	20.0	18.1	26.0	32.1	108	139	188	41.1	18.5	12.3
(WY)	1978	1978	1991	1977	1991	1977	1975	1977	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1938 - 1992		
ANNUAL TOTAL	59545			44679					
ANNUAL MEAN	163			122			254		
HIGHEST ANNUAL MEAN							537		
LOWEST ANNUAL MEAN							65.3		
HIGHEST DAILY MEAN	1440			Jun 11			3800		
LOWEST DAILY MEAN	17			Jan 26			9.7		
ANNUAL SEVEN-DAY MINIMUM	22			Oct 15			10		
INSTANTANEOUS PEAK FLOW				18			Sep 24		
INSTANTANEOUS PEAK STAGE				3.18			May 8		
INSTANTANEOUS LOW FLOW				8.8			May 8		
ANNUAL RUNOFF (AC-FT)	118100			88620			Feb 14		
10 PERCENT EXCEEDS	453			383			785		
50 PERCENT EXCEEDS	48			54			88		
90 PERCENT EXCEEDS	24			24			34		

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.--Lat 38°30'55", long 119°27'15", in NW 1/4 NE 1/4 sec.28, T.8 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Tiyoabe National Forest, on left bank 0.2 mi downstream from Rock Creek, and 5 mi southeast of Coleville.

DRAINAGE AREA.--250 mi².

PERIOD OF RECORD.--October 1902 to July 1908 (published as West Fork of Walker River near Coleville, 1903, 1905-8 and as Walker River (West Fork) near Coleville, 1904), March 1909 to September 1910, June 1915 to March 1938, May 1957 to current year. Monthly discharge only for some periods published in WSP 1314.

REVISED RECORDS.--WSP 880: 1917 (runoff in acre-ft). WSP 1514: 1918, 1923. WDR NV-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,520 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 31, 1908, nonrecording gage at site 0.5 mi upstream at different datum. Mar. 1, 1909, to Aug. 31, 1910, nonrecording gage, and June 18, 1915, to Aug. 15, 1919, water-stage recorder near present site at different datums. Aug. 16, 1919, to Mar. 31, 1938, water-stage recorder at site 1,000 ft upstream at different datum. May 26, 1957, to Sept. 10, 1963, water-stage recorder at site 10 ft downstream at datum 0.38 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poore Lake Reservoir, capacity, 1,200 acre-ft, 17 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,120 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 8	0500	*794	*2.54				

Minimum daily, 23 ft³/s, Sept. 24, 25, 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	45	68	e45	44	85	116	565	374	183	64	39
2	32	45	59	e45	44	82	138	483	376	153	62	36
3	31	46	57	e45	40	80	166	492	342	132	59	35
4	31	47	53	e44	44	76	235	499	322	120	56	35
5	31	51	52	e44	45	79	220	520	304	111	54	36
6	31	59	55	e43	45	78	208	551	284	104	53	35
7	30	62	54	e43	45	80	218	719	260	100	51	33
8	29	64	52	40	44	76	242	706	243	96	49	e32
9	30	71	49	e43	42	73	251	663	257	92	44	e31
10	31	80	51	e41	43	69	249	526	237	90	43	e30
11	31	75	55	e43	42	71	268	534	218	87	42	e29
12	30	68	50	e45	43	75	257	547	207	234	44	e28
13	29	64	51	e43	44	79	291	538	194	266	48	e28
14	29	61	51	e40	43	79	302	544	180	194	48	e28
15	29	53	50	e42	46	82	309	527	180	164	59	e27
16	28	55	48	e43	43	81	287	513	177	156	63	e27
17	28	72	e47	e45	46	76	391	510	169	201	49	e26
18	28	59	e48	e44	47	73	503	497	166	157	45	e27
19	28	59	46	e44	49	73	386	469	160	137	41	e26
20	28	73	45	e43	55	76	371	394	154	121	40	e25
21	28	83	e52	e44	65	76	416	351	154	113	38	e25
22	28	68	e50	e45	84	75	386	329	147	103	36	e24
23	28	63	e48	e46	79	75	340	330	143	99	36	e24
24	29	64	48	e45	73	77	352	343	159	95	36	e23
25	29	61	48	e46	75	e78	406	359	167	90	34	e23
26	74	58	e47	e46	78	e79	482	369	154	82	33	e24
27	66	59	47	e45	81	83	523	387	137	78	32	e24
28	50	53	48	e45	85	90	543	473	130	77	31	e23
29	53	44	45	e54	86	98	616	465	130	76	33	e23
30	47	47	45	e66	---	103	688	387	165	75	37	e23
31	43	---	44	e54	---	106	---	371	---	70	40	---
TOTAL	1071	1809	1563	1401	1600	2483	10160	14961	6290	3856	1400	849
MEAN	34.5	60.3	50.4	45.2	55.2	80.1	339	483	210	124	45.2	28.3
MAX	74	83	68	66	86	106	688	719	376	266	64	39
MIN	28	44	44	40	40	69	116	329	130	70	31	23
AC-FT	2120	3590	3100	2780	3170	4930	20150	29680	12480	7650	2780	1680

e Estimated.

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	66.1	70.1	66.1	66.7	78.0	114	292	757	934	443	144	76.9
MAX	236	214	270	189	280	403	636	1756	2055	1404	676	262
(WY)	1983	1974	1965	1980	1963	1986	1910	1969	1983	1983	1983	1982
MIN	21.5	25.4	28.7	26.9	32.0	42.1	118	149	106	26.9	17.4	16.1
(WY)	1978	1930	1960	1930	1929	1933	1975	1977	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1903 - 1992			
ANNUAL TOTAL	69172				47443							
ANNUAL MEAN	190				130							
HIGHEST ANNUAL MEAN									271			
LOWEST ANNUAL MEAN									563			
HIGHEST DAILY MEAN	1580				719				74.5			
LOWEST DAILY MEAN	21				23				2950			
ANNUAL SEVEN-DAY MINIMUM	24				23				14			
INSTANTANEOUS PEAK FLOW					794				6500			
INSTANTANEOUS PEAK STAGE					2.54				unknown			
INSTANTANEOUS LOW FLOW									5.0			
ANNUAL RUNOFF (AC-FT)	137200				94100				196300			
10 PERCENT EXCEEDS	503				375				793			
50 PERCENT EXCEEDS	58				61				92			
90 PERCENT EXCEEDS	30				30				36			

WALKER LAKE BASIN

10297000 TOPAZ LAKE NEAR TOPAZ, CA

LOCATION.--Lat 38°41'35", long 119°31'10", in NW 1/4 NE 1/4 sec.33, T.10 N., R.22 E., Douglas County, Hydrologic Unit 16050301, at outlet works of Topaz Lake on West Walker River, and 5.5 mi north of Topaz.

PERIOD OF RECORD.--December 1921 to September 1931 (monthly contents only published in WSP 1734), October 1931 to current year.

GAGE.--Water-stage recorder read once daily. Datum of gage is above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at datum 4.62 ft higher.

REMARKS.--Topaz Lake, formerly known as Alkali Lake and Topaz Reservoir, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began about December 1921. Usable capacity, 59,440 acre-ft, between elevations 4,967.68 ft (lowest practical elevation for diversion through tunnel) and 5,000.38 ft (3 ft below top of levee). Useable capacity of reservoir was increased from about 45,000 acre-ft to 59,440 acre-ft in October 1937 by an earthfill, rock-faced levee at south end. Figures given represent usable contents. There is 65,000 acre-ft of lake volume below the point of controllable storage. Water is used for irrigation in Walker River Irrigation District.

EXTREMES FOR CURRENT YEAR.--Maximum contents 12,580 acre-ft, Apr. 21, elevation, 4,975.66 ft; no contents, Oct. 1 to Nov. 12.

Capacity table (elevation, in feet, and contents, in acre-feet)

4,967	0	4,975	11,520
4,968	490	4,980	19,760
4,970	3,580	4,985	28,310

RESERVOIR STORAGE (AC-FT) WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
INSTANTANEOUS OBSERVATIONS AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1580	4640	7750	11260	12210	12240	9340	e6210	4850	1890
2	.00	.00	1680	4740	7850	11370	12240	12050	9500	e6180	4750	1840
3	.00	.00	1750	4850	7940	11470	12180	11860	9540	e6150	4630	1740
4	.00	.00	1860	4930	8020	11520	12130	11680	9500	e6100	4500	1710
5	.00	.00	1950	4970	8130	11550	12080	11550	9440	e6060	4360	1640
6	.00	.00	1840	5180	8240	11610	12020	11470	9380	e6040	4250	1580
7	.00	.00	2140	5290	8350	11640	11970	11660	9330	e6010	4160	1520
8	.00	.00	2250	5370	8480	11660	11920	11900	9260	e5960	3970	1490
9	.00	.00	2340	5460	8580	11710	11890	11920	9220	e5920	3770	1440
10	.00	.00	2400	5600	8660	11730	11840	11630	9070	e5900	3600	1380
11	.00	.00	2500	5660	8820	11790	11810	11370	8930	e5870	3410	1340
12	.00	.00	2560	5730	8930	11840	11710	11110	8720	e5840	3260	1280
13	.00	61	2680	5850	9040	11840	11690	10920	8510	e5770	3130	1210
14	.00	184	2760	5960	9120	11840	11710	10680	8320	e5740	3010	1150
15	.00	199	2850	6090	9300	11820	11760	10440	8200	e5710	2990	1110
16	.00	260	2980	6170	9340	11840	11740	10240	8100	e5700	2850	1060
17	.00	413	3100	6260	9460	11820	11820	10160	7970	e5650	2760	1040
18	.00	459	3210	6370	9570	11810	12210	10080	7910	e5600	2650	1030
19	.00	551	3300	6450	9520	11770	12420	10020	7830	e5570	2570	1010
20	.00	659	3400	6550	9810	11760	12520	9820	7770	e5540	2420	1010
21	.00	767	3490	6640	9920	11730	12520	9600	7690	e5510	2290	998
22	.00	844	3600	6740	10080	11760	12490	9330	7640	e5460	2220	998
23	.00	921	3720	6820	10230	11760	12360	9060	7500	e5430	2200	906
24	.00	998	3800	6930	10370	11790	12260	8770	7380	e5400	2170	921
25	.00	1110	3900	7050	10500	11840	12200	8550	7230	e5370	2140	875
26	.00	1030	4040	7130	10640	11890	12260	8470	7070	e5330	2090	859
27	.00	1260	4130	7230	10790	11900	12340	8420	6910	e5260	2060	859
28	.00	1400	4250	7310	10970	11950	12240	8640	6640	e5190	2050	844
29	.00	1430	4360	7450	11110	11970	12230	8930	6530	e5110	1970	859
30	.00	1510	4440	7510	---	12020	12280	9090	6250	e5040	1970	844
31	.00	---	4530	7650	---	12120	---	9180	---	e4960	1940	---
MAX	.00	1510	4530	7650	11110	12120	12520	12240	9540	6210	4850	1890
MIN	.00	.00	1580	4640	7750	11260	11690	8420	6250	4960	1940	844
a	4967.24	4968.66	4970.61	4972.59	4974.75	4975.37	4975.47	4973.55	4971.70	4970.88	4968.94	4968.23
b	0	+1510	+3020	+3120	+3460	+1010	+160	-3100	-2930	-1290	-3020	-1096

CAL YR 1991 MAX 21610 MIN .00 b +2240

WTR YR 1992 MAX 12580 MIN .00 b +844

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°42'50", long 119°45'50", in SW 1/4 NE 1/4 sec.15, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on right bank, 0.5 mi downstream from Markleeville Creek, and 1.5 mi north-northeast of Markleeville.

DRAINAGE AREA.--276 mi.²

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1967, at present site at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	----	*948	*3.83				
Minimum daily, 29 ft ³ /s, Sept. 8, 24.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	59	65	e52	64	157	234	555	232	116	62	50
2	55	60	e87	e51	63	146	286	486	220	100	66	e46
3	45	63	e80	e52	60	142	346	468	198	91	62	e44
4	44	65	e76	e54	e61	137	404	462	185	91	60	40
5	44	70	e72	e62	e62	139	365	463	175	84	60	34
6	43	79	e68	e69	64	142	327	496	169	80	50	31
7	43	79	e79	e69	65	136	339	588	166	77	47	30
8	49	83	e72	e63	67	128	366	593	159	73	46	29
9	51	108	e64	e61	66	122	380	559	151	65	47	34
10	51	118	e64	e56	66	118	369	472	139	63	57	47
11	51	94	e64	e54	67	122	405	466	130	70	57	46
12	52	80	67	e53	71	130	370	455	129	103	62	36
13	51	74	e64	e54	71	138	495	439	127	109	76	31
14	50	71	e66	e52	68	146	478	440	126	96	68	31
15	44	60	e66	e50	72	144	449	417	140	93	59	31
16	40	58	67	e54	64	135	386	414	136	81	48	33
17	40	96	66	e56	67	128	682	427	130	83	45	40
18	39	79	71	e54	69	123	662	385	130	74	46	38
19	39	73	66	e52	79	124	494	359	120	68	e46	35
20	39	90	61	e50	162	123	485	317	109	66	e42	33
21	39	128	e59	e50	163	122	525	282	102	63	e38	32
22	39	106	e62	e56	220	126	463	268	95	60	e38	31
23	39	92	e60	e62	171	123	409	258	94	61	e39	30
24	39	92	e62	e60	143	122	422	256	103	60	e36	29
25	39	88	e66	e59	139	132	491	262	102	60	e36	30
26	317	86	e72	e62	147	147	559	260	98	60	e35	32
27	101	86	e64	67	156	158	579	257	89	59	e39	31
28	68	76	e62	66	170	183	617	279	83	59	e42	31
29	70	74	e58	65	169	204	713	257	89	67	e44	30
30	59	68	e62	70	---	221	687	243	130	67	59	30
31	51	---	e56	67	---	210	---	256	---	66	59	---
TOTAL	1788	2455	2068	1802	2906	4428	13787	12139	4056	2365	1571	1045
MEAN	57.7	81.8	66.7	58.1	100	143	460	392	135	76.3	50.7	34.8
MAX	317	128	87	70	220	221	713	593	232	116	76	50
MIN	39	58	56	50	60	118	234	243	83	59	35	29
AC-FT	3550	4870	4100	3570	5760	8780	27350	24080	8050	4690	3120	2070

e Estimated.

CARSON RIVER BASIN

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.4	117	142	169	208	264	529	1082	948	363	140	88.4
MAX	346	476	718	545	917	983	1121	2447	2996	1428	477	239
(WY)	1983	1984	1965	1980	1986	1986	1982	1969	1983	1983	1983	1983
MIN	24.0	32.6	41.4	44.2	43.9	58.7	183	197	135	58.0	33.0	18.0
(WY)	1978	1977	1991	1977	1991	1977	1977	1977	1992	1977	1977	1987

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1960 - 1992

ANNUAL TOTAL	64951	50410	
ANNUAL MEAN	178	138	
HIGHEST ANNUAL MEAN			345
LOWEST ANNUAL MEAN			809
HIGHEST DAILY MEAN	1110	May 25	713
LOWEST DAILY MEAN	31	Jan 6	29
ANNUAL SEVEN-DAY MINIMUM	36	Jan 6	30
INSTANTANEOUS PEAK FLOW			948
INSTANTANEOUS PEAK STAGE			3.83
INSTANTANEOUS LOW FLOW			29
ANNUAL RUNOFF (AC-FT)	128800	99990	249800
10 PERCENT EXCEEDS	481	391	909
50 PERCENT EXCEEDS	74	71	143
90 PERCENT EXCEEDS	43	39	50

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION.--Lat 38°46'10", long 119°49'55", in NW 1/4 SE 1/4 sec.34, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, in Toiyabe National Forest, on left bank, 0.3 mi downstream from bridge on State Highway 88-89, 0.6 mi southwest of Woodfords, and 3.8 mi downstream from Willow Creek.

DRAINAGE AREA.--65.4 mi².

PERIOD OF RECORD.--October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to current year. January 1890 to March 1892, June 1907 to September 1920 (except parts of 1910-11), at site 0.7 mi downstream; records not equivalent owing to diversions for irrigation. Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WDR NV-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,754.5 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at about the same site at different datum. Oct. 1, 1938, to Nov. 11, 1958, water-stage recorder at same site at datum 1.02 ft lower. Nov. 13, 1958, to Jan. 30, 1963, water-stage recorder at site 150 ft downstream at datum 3.06 ft lower.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 11, 1937, reached a stage of 8.0 ft, present datum, from floodmarks, discharge, 3,500 ft³/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	2200	*304	*2.61				

Minimum daily, 7.9 ft³/s, several days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	20	21	17	41	132	151	50	32	34	15
2	13	18	19	21	16	39	142	129	47	41	23	13
3	13	19	19	21	17	38	156	124	44	44	13	16
4	13	19	18	21	17	38	147	121	43	30	12	22
5	13	19	17	20	16	39	119	121	43	24	11	21
6	13	20	19	20	16	36	106	129	42	23	11	17
7	13	21	19	20	16	36	110	144	42	22	11	15
8	13	21	18	21	16	34	118	149	43	22	11	17
9	13	25	18	e20	17	33	120	140	39	21	11	19
10	13	28	19	21	18	34	115	112	37	21	11	18
11	13	23	18	21	17	35	122	109	36	24	11	15
12	13	21	19	21	17	38	115	109	34	43	17	12
13	13	21	18	e20	17	41	178	103	34	29	32	9.1
14	13	20	19	20	17	45	154	106	35	25	22	8.6
15	13	19	18	20	17	43	143	97	38	37	21	8.5
16	13	19	18	20	17	41	120	90	42	36	17	8.3
17	13	25	19	20	17	39	227	86	50	39	13	8.3
18	13	18	19	20	18	39	201	82	46	27	12	8.7
19	13	19	17	21	17	40	149	78	44	20	11	8.5
20	13	24	20	21	21	40	142	74	42	18	11	8.2
21	13	32	20	16	24	39	150	65	34	17	10	8.2
22	14	26	20	e16	35	41	130	61	30	16	11	7.9
23	14	23	20	e16	37	42	112	58	27	16	11	7.9
24	14	23	20	16	42	45	113	58	30	15	11	7.9
25	15	22	20	15	41	47	123	59	31	15	13	7.9
26	41	21	19	15	41	56	139	60	28	15	18	7.9
27	28	20	20	15	41	71	140	59	26	14	19	8.0
28	19	18	20	16	43	86	153	60	25	14	18	7.9
29	19	17	20	15	43	104	177	54	26	18	16	7.9
30	17	17	20	16	---	109	201	53	35	20	15	7.9
31	16	---	22	16	---	109	---	52	---	30	17	---
TOTAL	470	635	592	582	688	1518	4254	2893	1123	768	474	347.6
MEAN	15.2	21.2	19.1	18.8	23.7	49.0	142	93.3	37.4	24.8	15.3	11.6
MAX	41	32	22	21	43	109	227	151	50	44	34	22
MIN	13	17	17	15	16	33	106	52	25	14	10	7.9
AC-FT	932	1260	1170	1150	1360	3010	8440	5740	2230	1520	940	689

e Estimated.

CARSON RIVER BASIN

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.7	40.0	47.4	44.2	50.6	68.9	197	349	235	91.2	43.8	28.7
MAX	79.1	321	347	140	258	283	390	791	996	433	213	120
(WY)	1983	1951	1951	1970	1963	1986	1986	1969	1983	1983	1983	1983
MIN	8.27	13.1	12.8	13.7	16.3	18.2	46.6	56.4	37.4	18.1	11.1	7.00
(WY)	1989	1991	1991	1961	1977	1977	1975	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1901 - 1992	
ANNUAL TOTAL	20403		14344.6			
ANNUAL MEAN	55.9		39.2		109	
HIGHEST ANNUAL MEAN					244	
LOWEST ANNUAL MEAN					26.1	
HIGHEST DAILY MEAN	415		227		3000	
LOWEST DAILY MEAN	10		7.9		5.3	
ANNUAL SEVEN-DAY MINIMUM	11		7.9		5.4	
INSTANTANEOUS PEAK FLOW			304		4890	
INSTANTANEOUS PEAK STAGE			2.61		9.00	
INSTANTANEOUS LOW FLOW			7.9		5.0	
ANNUAL RUNOFF (AC-FT)	40470		28450		78970	
10 PERCENT EXCEEDS	177		112		271	
50 PERCENT EXCEEDS	20		21		42	
90 PERCENT EXCEEDS	13		13		17	

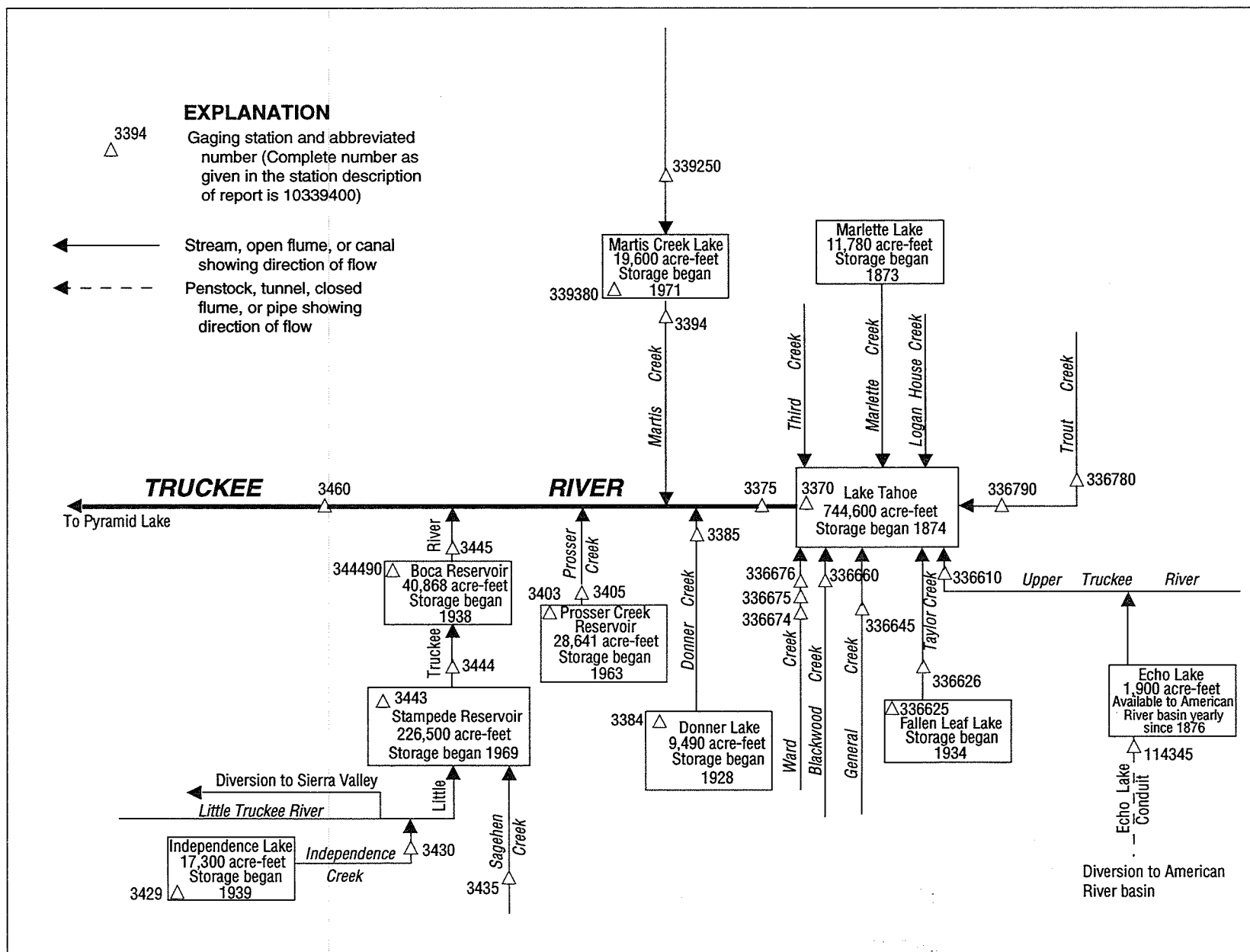


Figure 26. Diversions and storage in Truckee River basin.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336608 ECHO LAKE NEAR PHILLIPS, CA

LOCATION.--Lat 38°50'05", long 120°02'36", in NE 1/4 NE 1/4 sec.1, T.11 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, at right end of dam on Lower Echo Lake near valve outlet to Echo Lake Conduit and 2.0 mi northeast of Phillips.

DRAINAGE AREA.--4.84 mi².

PERIOD OF RECORD.--October 1991 to September 1992. Unpublished records for 1981-91 water years are available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Prior to Dec. 3, 1991, nonrecording gage read periodically. Elevation of gage is 7,414 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Reservoir is formed by concrete dam completed in 1922 and rebuilt in 1992; storage began in 1922. Usable capacity, 1,890 acre-ft between gage heights 0.0 ft, spillway crest, and 6.0 ft, top of spillway gates. Water is released via Echo Lake Conduit (station 11434500) to the South Fork American River for power and domestic use. Records from Dec. 3, 1991, including extremes, represent usable contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,651 acre-ft, July 16, 17, 1992, gage height, 5.25 ft; minimum, 48 acre-ft, Sept. 10, 1992, gage height, 0.16 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1934)

0	0	4	1,255
2	625	5	1,570
3	940	6	1,890

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1045	---	---	130	148	262	259	1207	1589	1596	1563	235
2	---	---	---	141	151	250	265	1267	1589	1589	1557	220
3	---	---	108	137	148	247	295	1329	1589	1583	1544	179
4	---	---	105	158	151	235	313	1389	1586	1573	1534	137
5	---	---	105	173	151	253	322	1451	1583	1567	1531	111
6	762	155	111	173	151	259	319	1511	1583	1560	1521	93
7	---	---	130	170	151	241	307	1557	1576	1557	1508	75
8	---	148	123	170	151	229	307	1580	1573	1554	1499	78
9	---	---	117	167	151	216	307	1573	1570	1628	1499	60
10	---	---	114	164	158	209	307	1544	1560	1557	1496	48
11	500	---	111	158	173	206	307	1528	1550	1589	1487	---
12	---	---	108	158	179	199	313	1515	1544	1619	1481	---
13	419	185	105	161	182	199	343	1515	1541	1638	1478	---
14	---	173	99	155	199	206	350	1528	1544	1648	1436	---
15	---	---	99	155	216	209	350	1541	1563	1645	1392	---
16	310	---	96	155	232	223	350	1576	1563	1651	1320	---
17	---	---	108	158	229	223	449	1583	1567	1651	1240	---
18	268	---	120	151	235	213	479	1567	1576	1641	1148	---
19	---	---	111	151	262	213	458	1557	1583	1638	1062	---
20	---	---	111	151	265	202	429	1541	1583	1625	985	---
21	---	---	111	151	316	199	412	1541	1580	1622	922	---
22	---	---	111	151	331	199	395	1563	1576	1609	815	---
23	141	---	111	144	331	199	382	1580	1570	1609	723	---
24	---	---	111	144	316	192	405	1596	1576	1606	643	---
25	120	---	111	144	301	195	500	1593	1576	1599	566	---
26	---	---	105	144	289	195	593	1593	1567	1596	497	---
27	---	---	105	144	277	199	709	1596	1570	1596	436	---
28	---	---	120	144	271	209	830	1596	1573	1596	379	---
29	---	---	127	144	262	229	985	1596	1576	1586	343	---
30	---	---	130	141	---	238	1121	1589	1596	1573	316	---
31	---	---	130	144	---	250	---	1583	---	1567	316	---
MAX	---	---	---	173	331	262	1121	1596	1596	1651	1563	---
MIN	---	---	---	130	148	192	259	1207	1541	1554	316	---
a	---	---	.43	.47	.84	.80	3.57	5.04	5.08	4.99	1.02	---
b	---	---	---	+14	+118	-12	+871	+462	+13	-29	-1251	---

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

LOCATION.--Lat 38°55'22", long 119°59'23", in NW 1/4 SE 1/4 sec.4, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, near center of bridge span on downstream side of U.S. Highway 50 bridge, 1.0 mi northeast of South Lake Tahoe Post Office, and 1.4 mi upstream from Lake Tahoe.

DRAINAGE AREA.--54.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to September 1974, October 1976 to June 1977, October 1977 to June 1978, March 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6,229.04 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 26, 1984, at datum 2.00 ft higher.

REMARKS.--Records fair. Two small dams may cause slight regulation at times. Some small diversions for domestic use upstream from station. Echo Lake conduit (station 11434500) diverts from Echo Lake, capacity 1,900 acre-ft, to South Fork American River basin. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,740 ft³/s, Mar. 8, 1986, gage height, 9.08 ft; maximum gage height, 10.12 ft, present datum, Feb. 16, 1982; minimum daily, 0.94 ft³/s, Oct. 5, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	2345	*284	*4.44				

Minimum daily, 2.1 ft³/s, Oct. 5, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	13	21	e18	16	59	75	123	38	24	5.3	7.4
2	3.7	14	22	e18	15	54	83	106	37	20	5.1	7.3
3	2.8	15	20	e18	14	53	94	107	35	18	5.1	9.4
4	2.3	16	19	17	14	50	111	104	34	16	4.5	10
5	2.1	17	18	17	14	49	101	108	31	15	4.2	9.4
6	2.3	19	18	21	14	53	92	123	27	15	4.2	8.2
7	2.1	20	19	20	14	50	92	142	28	16	3.2	7.4
8	2.2	20	18	19	15	45	97	173	26	14	2.6	7.6
9	2.2	26	17	20	14	43	101	176	24	13	2.4	8.1
10	2.4	26	18	20	14	43	96	150	23	13	2.4	7.5
11	e2.4	20	17	19	15	43	106	140	19	14	2.5	7.2
12	e2.8	17	16	18	16	46	98	134	19	33	2.7	7.5
13	e3.2	16	16	19	16	46	137	119	18	26	3.2	9.1
14	e3.3	16	16	19	16	50	125	113	18	23	3.1	8.5
15	e3.5	18	15	18	16	53	116	102	22	21	4.2	9.2
16	e3.6	17	15	19	21	51	99	83	26	17	4.4	10
17	e3.6	21	16	19	20	47	199	92	30	17	5.4	13
18	e3.6	25	16	19	19	44	220	101	26	15	7.2	15
19	3.6	24	17	17	23	43	174	98	24	14	9.3	12
20	3.6	26	e16	18	58	43	157	80	23	13	7.6	14
21	4.1	34	e17	18	65	43	160	66	20	11	5.8	12
22	4.7	30	e17	17	102	45	144	53	17	8.4	7.7	13
23	4.6	28	e17	17	91	47	133	49	16	7.8	7.8	13
24	5.6	26	e17	18	71	44	123	52	17	7.3	8.3	e14
25	9.5	25	e17	18	65	44	111	61	19	6.9	7.3	e15
26	86	25	e17	17	62	46	123	52	17	6.5	7.2	15
27	24	28	e17	17	60	49	122	50	15	6.5	7.7	14
28	11	27	e18	17	62	56	130	63	15	6.7	7.1	14
29	15	23	e18	16	61	63	147	53	16	6.1	7.0	14
30	15	22	e18	16	---	69	154	48	24	6.0	7.6	15
31	12	---	e18	16	---	71	---	45	---	5.7	7.6	---
TOTAL	250.5	654	541	560	1003	1542	3720	2966	704	435.9	169.7	326.8
MEAN	8.08	21.8	17.5	18.1	34.6	49.7	124	95.7	23.5	14.1	5.47	10.9
MAX	86	34	22	21	102	71	220	176	38	33	9.3	15
MIN	2.1	13	15	16	14	43	75	45	15	5.7	2.4	7.2
AC-FT	497	1300	1070	1110	1990	3060	7380	5880	1400	865	337	648

e Estimated.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.0	48.0	54.6	50.2	70.3	99.8	158	282	230	71.7	18.5	12.6
MAX	72.1	225	218	165	307	305	300	567	795	365	102	55.3
(WY)	1983	1984	1982	1974	1986	1986	1982	1982	1983	1983	1983	1983
MIN	2.60	7.36	8.07	8.00	10.5	21.2	64.0	55.3	23.5	5.10	2.02	1.39
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1987	1981	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1972 - 1992	
ANNUAL TOTAL	17252.0		12872.9			
ANNUAL MEAN	47.3		35.2		94.7	
HIGHEST ANNUAL MEAN					203	
LOWEST ANNUAL MEAN					29.2	
HIGHEST DAILY MEAN	328		220		2010	
LOWEST DAILY MEAN	2.1		2.1		.94	
ANNUAL SEVEN-DAY MINIMUM	2.2		2.2		1.0	
INSTANTANEOUS PEAK FLOW			284		2740	
INSTANTANEOUS PEAK STAGE			4.44		10.12	
ANNUAL RUNOFF (AC-FT)	34220		25530		68640	
10 PERCENT EXCEEDS	147		101		257	
50 PERCENT EXCEEDS	17		18		36	
90 PERCENT EXCEEDS	3.7		5.0		6.9	

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-74, 1978, 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to September 1983.

WATER TEMPERATURE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1992 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1992 (discontinued).

REMARKS.--Sediment samples were collected during most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 416 mg/L, Mar. 4, 1991; minimum daily mean, 0 mg/L, several days during most years.

SEDIMENT LOAD: Maximum daily, 781 tons, Mar. 8, 1986; minimum daily, 0 ton, several days during most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 68 mg/L (estimated), Feb. 22; minimum daily mean, 2 mg/L, Mar. 8, June 1-4.

SEDIMENT LOAD: Maximum daily, 31 tons (estimated), Apr. 17; minimum daily, 0.02 ton, Oct. 7-9, 12.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	22.5	---
3	---	8.0	1.0	.5	---	3.5	---	---	17.5	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	16.0	---	---
7	---	---	---	---	---	---	---	14.0	---	---	---	21.0
8	---	---	.0	---	---	4.0	---	9.0	17.5	---	---	---
9	---	---	---	---	---	---	6.5	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	20.5	---
11	---	---	---	---	---	---	---	---	---	19.0	---	---
12	---	---	---	.0	---	---	5.0	8.0	13.0	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	3.0	---	---	---	---	---	---	---	---	---	---
16	---	---	---	.5	---	---	---	---	---	19.0	24.0	---
17	---	---	---	---	---	---	---	9.0	---	---	---	---
18	---	---	---	---	---	7.5	---	---	---	---	---	---
19	---	---	.5	---	---	---	3.0	---	---	21.0	---	16.0
20	---	3.0	---	---	2.0	---	---	---	---	---	---	---
21	---	---	---	---	---	---	7.5	---	21.0	---	22.0	---
22	---	---	---	---	---	5.0	---	15.0	---	---	---	---
23	6.5	---	---	---	1.0	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	22.0	---	---
25	---	---	---	---	---	---	---	11.0	16.0	---	---	14.5
26	---	---	---	.0	---	---	6.0	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	8.0	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	6.0	---	---	.5	---	7.0	---	12.0	---	---	---	---

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	3.7	6	.06	13	5	.18	21	5	.28
2	3.7	6	.06	14	4	.15	22	5	.30
3	2.8	5	.04	15	4	.16	20	5	.27
4	2.3	5	.03	16	4	.17	19	5	.26
5	2.1	5	.03	17	4	.18	18	5	.24
6	2.3	5	.03	19	4	.21	18	5	.24
7	2.1	4	.02	20	4	.22	19	5	.26
8	2.2	4	.02	20	5	.27	18	5	.24
9	2.2	4	.02	26	5	.35	17	6	.28
10	2.4	4	.03	26	5	.35	18	8	.39
11	e2.4	4	.03	20	4	.22	17	10	.46
12	e2.8	3	.02	17	4	.18	16	12	.52
13	e3.2	3	.03	16	4	.17	16	14	.60
14	e3.3	3	.03	16	4	.17	16	15	.65
15	e3.5	3	.03	18	4	.19	15	16	.65
16	e3.6	3	.03	17	4	.18	15	17	.69
17	e3.6	3	.03	21	5	.28	16	18	.78
18	e3.6	3	.03	25	5	.34	16	19	.82
19	3.6	3	.03	24	6	.39	17	20	.92
20	3.6	3	.03	26	6	.42	e16	13	.56
21	4.1	3	.03	34	7	.64	e17	9	.41
22	4.7	3	.04	30	6	.49	e17	7	.32
23	4.6	3	.04	28	5	.38	e17	6	.28
24	5.6	4	.06	26	5	.35	e17	6	.28
25	9.5	5	.13	25	5	.34	e17	6	.28
26	86	34	9.0	25	5	.34	e17	6	.28
27	24	16	1.0	28	5	.38	e17	6	.28
28	11	8	.24	27	5	.36	e18	6	.29
29	15	5	.20	23	5	.31	e18	6	.29
30	15	5	.20	22	5	.30	e18	6	.29
31	12	5	.16	---	---	---	e18	6	.29
TOTAL	250.5	---	11.73	654	---	8.67	541	---	12.70
JANUARY			FEBRUARY			MARCH			
1	e18	6	.29	16	4	.17	59	4	.64
2	e18	6	.29	15	4	.16	54	4	.58
3	e18	6	.29	14	4	.15	53	4	.57
4	17	6	.28	14	4	.15	50	4	.54
5	17	6	.28	14	4	.15	49	3	.40
6	21	6	.34	14	4	.15	53	3	.43
7	20	5	.27	14	4	.15	50	3	.40
8	19	5	.26	15	4	.16	45	2	.24
9	20	4	.22	14	4	.15	43	3	.35
10	20	4	.22	14	4	.15	43	3	.35
11	19	3	.15	15	4	.16	43	3	.35
12	18	3	.15	16	4	.17	46	4	.50
13	19	3	.15	16	4	.17	46	4	.50
14	19	3	.15	16	4	.17	50	4	.54
15	18	3	.15	16	4	.17	53	4	.57
16	19	3	.15	21	4	.23	51	4	.55
17	19	3	.15	20	4	.22	47	4	.51
18	19	3	.15	19	4	.21	44	4	.48
19	17	3	.14	23	5	.31	43	5	.58
20	18	3	.15	58	36	6.1	43	5	.58
21	18	3	.15	65	37	6.5	43	5	.58
22	17	3	.14	102	68	19	45	5	.61
23	17	3	.14	91	30	7.4	47	5	.63
24	18	3	.15	71	15	2.9	44	5	.59
25	18	3	.15	65	8	1.4	44	5	.59
26	17	3	.14	62	5	.84	46	5	.62
27	17	3	.14	60	4	.65	49	6	.79
28	17	3	.14	62	4	.67	56	6	.91
29	16	4	.17	61	4	.66	63	6	1.0
30	16	4	.17	---	---	---	69	6	1.1
31	16	4	.17	---	---	---	71	6	1.2
TOTAL	560	---	5.89	1003	---	49.47	1542	---	18.28

e Estimated.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

e Estimated.

10336625 FALLEN LEAF LAKE NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°54'00", long 120°04'14", in NE 1/4 SW 1/4 sec.11, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, 200 ft north of Cathedral Creek, 1.5 mi south of Fallen Leaf Dam, 2.9 mi southwest of Camp Richardson, and 3.7 mi west of South Lake Tahoe Post Office.

DRAINAGE AREA.--16.7 mi².

PERIOD OF RECORD.--October 1968 to September 1992 (discontinued). Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,372.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake levels regulated by a concrete dam at the outlet constructed in 1934. Regulation is for maintenance of lake level and enhancement of fishery. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 5.85 ft, Jan. 13, 1980; minimum, 1.31 ft, Feb. 2, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.20 ft, Apr. 19; minimum, 2.42 ft, Feb. 10.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.14	2.73	2.97	2.79	2.48	2.80	2.91	4.05	3.90	3.94	3.83	3.33
2	3.13	2.72	2.96	2.79	2.47	2.78	2.98	3.96	3.91	3.96	3.81	3.32
3	3.11	2.71	2.95	2.77	2.45	2.77	3.06	3.90	3.91	3.95	3.77	3.29
4	3.09	2.69	2.95	2.75	2.44	2.76	3.16	3.84	3.92	3.94	3.74	3.27
5	3.07	2.68	2.94	2.79	2.44	2.81	3.22	3.80	3.92	3.92	3.73	3.25
6	3.03	2.67	2.90	2.78	2.44	2.80	3.26	3.80	3.92	3.89	3.73	3.23
7	3.00	2.67	2.95	2.78	2.45	2.77	3.30	3.82	3.92	3.89	3.71	3.21
8	2.97	2.67	2.94	2.77	2.44	2.75	3.35	3.84	3.92	3.88	3.68	3.20
9	2.95	2.72	2.93	2.76	2.43	2.73	3.39	3.83	3.91	3.88	3.67	3.19
10	2.92	2.75	2.92	2.75	2.43	2.71	3.43	3.80	3.90	3.87	3.65	3.17
11	2.90	2.76	2.91	2.73	2.47	2.69	3.49	3.75	3.86	3.93	3.64	3.15
12	2.88	2.76	2.91	2.73	2.48	2.69	3.60	3.72	3.82	3.98	3.64	3.13
13	2.86	2.75	2.90	2.72	2.47	2.67	3.69	3.71	3.80	3.99	3.63	3.12
14	2.84	2.74	2.89	2.71	2.51	2.68	3.75	3.69	3.80	4.01	3.62	3.09
15	2.82	2.74	2.89	2.70	2.55	2.67	3.80	3.67	3.85	4.01	3.62	3.07
16	2.78	2.72	2.88	2.69	2.59	2.67	3.84	3.70	3.85	4.03	3.61	3.05
17	2.75	2.91	2.85	2.67	2.57	2.66	4.09	3.70	3.86	4.03	3.59	3.07
18	2.72	2.91	2.91	2.66	2.58	2.65	4.19	3.68	3.86	4.02	3.58	3.06
19	2.69	2.91	2.89	2.65	2.69	2.64	4.18	3.68	3.87	4.01	3.56	3.04
20	2.65	2.95	2.89	2.64	2.76	2.63	4.14	3.69	3.87	3.99	3.55	3.03
21	2.61	2.97	2.88	2.63	2.82	2.63	4.11	3.71	3.87	3.97	3.50	3.02
22	2.56	2.99	2.87	2.62	2.87	2.63	4.06	3.72	3.87	3.95	3.44	3.00
23	2.51	2.99	2.87	2.61	2.88	2.63	4.00	3.73	3.86	3.93	3.42	2.97
24	2.47	3.00	2.86	2.59	2.87	2.63	3.96	3.75	3.91	3.93	3.41	2.93
25	2.56	3.00	2.85	2.57	2.85	2.63	3.95	3.77	3.91	3.93	3.39	2.91
26	2.87	2.99	2.84	2.56	2.83	2.65	3.97	3.78	3.91	3.91	3.37	e2.89
27	2.84	3.03	2.82	2.55	2.83	2.67	3.99	3.83	3.90	3.91	3.36	e2.87
28	2.83	3.03	2.82	2.53	2.82	2.69	4.03	3.85	3.88	3.89	3.36	e2.85
29	2.80	3.00	2.81	2.53	2.81	2.75	4.10	3.86	3.92	3.89	3.36	e2.83
30	2.77	2.99	2.81	2.51	---	2.82	4.12	3.87	3.93	3.86	3.35	e2.82
31	2.75	---	2.80	2.49	---	2.85	---	3.89	---	3.84	3.34	---
MEAN	2.83	2.84	2.89	2.67	2.61	2.71	3.70	3.79	3.88	3.94	3.57	3.08
MAX	3.14	3.03	2.97	2.79	2.88	2.85	4.19	4.05	3.93	4.03	3.83	3.33
MIN	2.47	2.67	2.80	2.49	2.43	2.63	2.91	3.67	3.80	3.84	3.34	2.82

CAL YR 1991 MEAN 3.01 MAX 4.24 MIN 1.32
WTR YR 1992 MEAN 3.21 MAX 4.19 MIN 2.43

e Estimated.

10336626 TAYLOR CREEK NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°55'18", Long 120°03'37", in NE 1/4 NW 1/4 sec.2, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, on left bank 0.1 mi downstream from Fallen Leaf Lake outlet and 1.4 mi southwest of Camp Richardson.

DRAINAGE AREA.--16.7 mi².

PERIOD OF RECORD.--October 1968 to September 1992 (discontinued). Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,361.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for discharges less than 2 ft³/s, which are fair. Flow regulated by Fallen Leaf Lake (station 10336625). See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft³/s, Jan. 14, 1980, gage height, 6.33 ft; minimum daily, 0.13 ft³/s, Sept. 12, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s, Apr. 30, gage height, 4.22 ft; minimum daily, 0.34 ft³/s, Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.8	10	12	11	e12	35	12	151	6.7	3.1	3.6	2.2
2	4.5	9.9	12	11	e12	34	13	137	4.9	3.4	3.7	2.8
3	7.1	9.9	12	11	e12	33	14	125	4.6	3.6	3.7	2.8
4	e8.9	9.9	12	11	e12	32	17	117	3.9	3.3	3.7	2.7
5	e11	10	12	11	e12	32	19	107	3.7	3.4	3.4	2.4
6	e14	9.9	12	11	e12	36	21	95	3.5	3.4	3.2	2.2
7	e11	10	12	11	e12	34	22	92	3.4	3.3	3.0	2.1
8	e7.9	10	12	11	e12	32	25	94	3.1	3.5	3.3	2.2
9	e7.9	11	12	11	e12	31	27	94	2.3	3.6	3.1	2.3
10	e8.2	11	12	11	e12	30	22	92	1.4	3.8	3.0	2.5
11	e8.5	11	12	11	e12	28	20	85	6.6	3.8	2.8	2.6
12	e8.5	11	12	11	e12	28	22	74	9.9	3.7	2.9	2.3
13	e8.5	11	12	11	e14	27	28	65	9.3	4.0	2.9	2.2
14	e10	11	11	11	e18	27	32	63	7.9	3.3	2.9	1.5
15	e13	11	11	11	21	27	35	57	7.6	2.3	2.8	.34
16	e13	11	11	11	22	27	38	43	6.9	1.8	2.5	.37
17	e13	11	11	11	23	26	48	42	6.6	2.7	2.5	.39
18	e13	11	12	11	22	26	80	37	6.3	3.5	2.2	1.2
19	13	11	12	11	24	23	109	29	6.9	2.8	2.3	1.8
20	16	12	11	11	32	21	123	18	4.7	2.6	2.5	1.7
21	15	12	11	11	35	21	117	9.9	3.8	2.7	2.6	1.5
22	11	12	11	11	39	21	111	9.7	3.1	2.6	2.5	2.6
23	9.8	12	11	11	41	21	104	9.6	2.3	2.5	2.3	3.7
24	9.6	12	11	11	41	21	98	9.5	2.2	2.7	2.3	3.6
25	9.6	12	11	e12	39	15	94	9.5	3.2	2.7	2.5	4.8
26	11	12	11	e12	38	12	95	8.9	3.8	2.8	2.7	4.1
27	12	13	11	e12	37	12	99	8.9	3.3	3.7	2.5	3.0
28	12	13	11	e12	37	12	103	8.6	3.3	4.2	2.7	4.9
29	11	13	11	e12	36	12	111	8.7	3.2	3.8	2.3	6.6
30	10	12	11	e12	---	12	126	8.6	3.1	3.8	2.1	6.3
31	10	---	11	e12	---	12	---	8.5	---	3.7	1.9	---
TOTAL	321.8	335.6	356	348	663	760	1785	1717.4	141.5	100.1	86.4	79.70
MEAN	10.4	11.2	11.5	11.2	22.9	24.5	59.5	55.4	4.72	3.23	2.79	2.66
MAX	16	13	12	12	41	36	126	151	9.9	4.2	3.7	6.6
MIN	3.8	9.9	11	11	12	12	12	8.5	1.4	1.8	1.9	.34
AC-FT	638	666	706	690	1320	1510	3540	3410	281	199	171	158

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336626 TAYLOR CREEK NEAR CAMP RICHARDSON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.8	32.3	30.8	41.0	32.5	34.5	53.0	122	105	29.1	9.35	7.23
MAX	72.7	144	148	200	154	124	139	238	309	166	71.3	35.5
(WY)	1983	1974	1982	1980	1986	1986	1989	1969	1983	1983	1983	1982
MIN	4.28	5.00	2.72	2.99	2.59	3.59	2.40	35.6	4.72	.89	1.54	1.03
(WY)	1970	1975	1977	1977	1991	1977	1977	1977	1992	1979	1977	1979

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992	
ANNUAL TOTAL	8600.42		6694.50			
ANNUAL MEAN	23.6		18.3		42.7	
HIGHEST ANNUAL MEAN					88.4	
LOWEST ANNUAL MEAN					9.58	
HIGHEST DAILY MEAN	185	May 27	151	May 1	1220	Jan 14 1980
LOWEST DAILY MEAN	.45	Jan 28	.34	Sep 15	.13	Sep 12 1989
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 25	1.0	Sep 14	.25	Oct 1 1969
INSTANTANEOUS PEAK FLOW			157	Apr 30	1530	Jan 14 1980
INSTANTANEOUS PEAK STAGE			4.22	Apr 30	6.33	Jan 14 1980
ANNUAL RUNOFF (AC-FT)	17060		13280		30950	
10 PERCENT EXCEEDS	74		38		117	
50 PERCENT EXCEEDS	11		11		18	
90 PERCENT EXCEEDS	2.7		2.5		3.2	

10336645 GENERAL CREEK NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'07", long 120°07'03", in NE 1/4 NE 1/4 sec.20, T.14 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, on right bank 200 ft upstream from State Highway 89, 0.4 mi upstream from Lake Tahoe, and 1.1 mi north of Meeks Bay.

DRAINAGE AREA.--7.44 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,250.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges and discharges less than 0.5 ft³/s, which are fair. No known diversion or regulation upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 765 ft³/s, Dec. 20, 1981, gage height, 5.43 ft, from rating curve extended above 180 ft³/s on basis of computation of flow through culvert; minimum daily, 0.31 ft³/s, Sept. 11, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 17	2015	*99	*2.03				

Minimum daily, 0.31 ft³/s, Sept. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.87	1.2	.93	1.4	8.8	31	22	1.7	2.9	.47	.47
2	.62	.87	1.1	.94	1.4	8.4	34	18	1.6	2.3	.50	.42
3	.62	.87	1.1	.98	1.4	8.0	39	16	1.6	1.9	.49	.42
4	.60	.91	1.1	.88	1.3	8.1	43	14	1.4	1.6	.47	.44
5	.60	.98	1.1	1.1	1.4	8.0	36	13	1.3	1.3	.49	.40
6	.64	.98	.98	1.1	1.4	7.9	26	13	1.2	1.1	.50	.39
7	.63	.92	1.1	.98	1.6	7.3	25	12	1.1	1.1	.54	.37
8	.65	.89	1.0	.96	1.7	7.0	29	12	1.1	.98	.58	.38
9	.65	1.1	1.0	1.0	1.8	6.9	31	10	1.1	.94	.64	.37
10	.64	.95	.98	1.1	1.8	6.9	29	8.4	.98	.87	.64	.34
11	.67	.87	.98	1.0	1.8	6.9	31	7.2	.98	.87	.64	.31
12	.69	.87	1.0	1.0	1.8	7.4	33	6.4	.98	.87	.65	.32
13	.69	.87	1.0	1.1	1.8	8.3	52	6.1	.98	.87	.81	.33
14	.68	.87	1.0	1.2	1.9	9.4	45	5.7	1.2	.87	.85	.32
15	.69	.96	.93	1.2	e2.1	9.4	38	5.3	2.1	.87	.90	.33
16	.64	.98	.87	1.2	e2.3	8.9	31	4.9	3.2	.87	.80	.33
17	.61	e1.1	.87	1.2	e2.5	8.1	70	5.1	5.0	.85	.81	.37
18	.66	e1.3	.90	1.3	2.5	7.8	53	4.5	8.0	.78	.73	.56
19	.69	1.1	1.1	1.1	2.3	7.6	35	4.2	5.9	.78	.68	.46
20	.72	1.5	1.1	1.1	6.3	7.6	35	4.2	4.1	.73	.64	.44
21	.71	1.6	1.5	1.2	8.9	7.7	40	4.2	3.3	.64	.61	.43
22	.77	1.3	1.2	1.2	12	8.1	32	3.8	2.6	.62	.59	.43
23	.79	1.1	.97	1.4	11	8.2	25	3.4	2.1	.67	.53	.42
24	.85	1.0	.98	1.8	8.8	8.1	26	3.1	1.9	.59	.55	.38
25	1.1	.93	.98	1.9	8.0	8.7	32	2.9	2.0	.55	.50	.39
26	5.3	1.0	.98	1.7	8.5	10	36	2.5	2.0	.55	.50	.40
27	1.5	1.7	.98	1.4	8.3	12	33	2.3	1.7	.56	.46	.40
28	1.0	1.8	.89	1.4	8.8	16	33	2.4	1.4	.56	.50	.38
29	.93	1.5	.98	1.2	9.1	19	36	2.2	1.4	.54	.47	.37
30	.94	1.4	.98	1.2	---	20	30	1.9	3.0	.55	.56	.39
31	.87	---	.97	1.3	---	21	---	1.9	---	.54	.53	---
TOTAL	27.77	33.09	31.82	37.07	123.9	297.5	1069	222.6	66.92	29.72	18.63	11.76
MEAN	.90	1.10	1.03	1.20	4.27	9.60	35.6	7.18	2.23	.96	.60	.39
MAX	5.3	1.8	1.5	1.9	12	21	70	22	8.0	2.9	.90	.56
MIN	.60	.87	.87	.88	1.3	6.9	25	1.9	.98	.54	.46	.31
AC-FT	55	66	63	74	246	590	2120	442	133	59	37	23

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.68	9.98	10.5	6.43	13.4	17.5	37.9	52.6	28.1	5.98	1.27	1.35
MAX	15.5	45.4	58.7	19.4	64.2	60.1	70.4	111	158	49.6	4.72	4.36
(WY)	1983	1982	1982	1984	1986	1986	1989	1982	1983	1983	1983	1983
MIN	.76	1.01	.89	.90	.99	5.88	15.9	7.18	2.23	.73	.58	.39
(WY)	1991	1991	1991	1991	1991	1987	1991	1992	1992	1981	1988	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1981 - 1992	
ANNUAL TOTAL	3021.48		1969.78			
ANNUAL MEAN	8.28		5.38		15.6	
HIGHEST ANNUAL MEAN					34.7	
LOWEST ANNUAL MEAN					4.96	
HIGHEST DAILY MEAN	95	May 25	70	Apr 17	588	Dec 20 1981
LOWEST DAILY MEAN	.36	Sep 19	.31	Sep 11	.31	Sep 11 1992
ANNUAL SEVEN-DAY MINIMUM	.39	Sep 18	.33	Sep 10	.33	Sep 10 1992
INSTANTANEOUS PEAK FLOW			99	Apr 17	765	Dec 20 1981
INSTANTANEOUS PEAK STAGE			2.03	Apr 17	5.43	Dec 20 1981
ANNUAL RUNOFF (AC-FT)	5990		3910		11320	
10 PERCENT EXCEEDS	28		16		44	
50 PERCENT EXCEEDS	1.0		1.1		3.2	
90 PERCENT EXCEEDS	.60		.50		.76	

WATER-QUALITY RECORDS

SEDIMENT LOAD: Maximum daily, 3.0 tons, Apr. 17; minimum daily, 0 ton, many days.

[illegible]

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	.62	1	.00	.87	1	.00	1.2	1	.00
2	.62	2	.00	.87	1	.00	1.1	1	.00
3	.62	2	.00	.87	1	.00	1.1	1	.00
4	.60	2	.00	.91	2	.00	1.1	1	.00
5	.60	1	.00	.98	2	.00	1.1	1	.00
6	.64	1	.00	.98	2	.00	.98	1	.00
7	.63	1	.00	.92	2	.00	1.1	1	.00
8	.65	1	.00	.89	2	.00	1.0	1	.00
9	.65	1	.00	1.1	2	.00	1.0	1	.00
10	.64	1	.00	.95	2	.00	.98	1	.00
11	.67	1	.00	.87	2	.00	.98	1	.00
12	.69	1	.00	.87	1	.00	1.0	2	.00
13	.69	1	.00	.87	1	.00	1.0	2	.00
14	.68	1	.00	.87	1	.00	1.0	2	.00
15	.69	1	.00	.96	1	.00	.93	2	.00
16	.64	1	.00	.98	1	.00	.87	2	.00
17	.61	1	.00	e1.1	1	.00	.87	2	.00
18	.66	1	.00	e1.3	1	.00	.90	2	.00
19	.69	1	.00	1.1	1	.00	1.1	1	.00
20	.72	1	.00	1.5	2	.01	1.1	1	.00
21	.71	1	.00	1.6	1	.00	1.5	1	.00
22	.77	1	.00	1.3	1	.00	1.2	1	.00
23	.79	1	.00	1.1	1	.00	.97	1	.00
24	.85	1	.00	1.0	1	.00	.98	1	.00
25	1.1	1	.01	.93	1	.00	.98	1	.00
26	5.3	11	.18	1.0	1	.00	.98	1	.00
27	1.5	3	.01	1.7	2	.01	.98	1	.00
28	1.0	2	.01	1.8	2	.01	.89	2	.00
29	.93	1	.00	1.5	2	.01	.98	2	.00
30	.94	1	.00	1.4	1	.00	.98	2	.00
31	.87	1	.00	---	---	---	.97	2	.00
TOTAL	27.77	---	0.21	33.09	---	0.04	31.82	---	0.00
JANUARY			FEBRUARY			MARCH			
1	.93	2	.00	1.4	2	.01	8.8	1	.03
2	.94	2	.00	1.4	2	.01	8.4	2	.03
3	.98	2	.00	1.4	2	.01	8.0	2	.04
4	.88	2	.00	1.3	2	.01	8.1	2	.04
5	1.1	2	.01	1.4	2	.01	8.0	2	.04
6	1.1	2	.01	1.4	2	.01	7.9	2	.04
7	.98	2	.00	1.6	2	.01	7.3	2	.03
8	.96	2	.00	1.7	1	.01	7.0	2	.03
9	1.0	2	.01	1.8	1	.00	6.9	2	.03
10	1.1	2	.01	1.8	1	.00	6.9	1	.03
11	1.0	2	.00	1.8	1	.00	6.9	1	.03
12	1.0	2	.01	1.8	1	.00	7.4	1	.03
13	1.1	2	.00	1.8	1	.00	8.3	1	.03
14	1.2	1	.00	1.9	1	.00	9.4	1	.03
15	1.2	1	.00	e2.1	1	.01	9.4	1	.03
16	1.2	1	.00	e2.3	1	.01	8.9	1	.02
17	1.2	1	.00	e2.5	1	.01	8.1	1	.02
18	1.3	1	.00	2.5	1	.01	7.8	1	.02
19	1.1	1	.00	2.3	1	.01	7.6	1	.02
20	1.1	1	.00	6.3	5	.09	7.6	1	.03
21	1.2	1	.00	8.9	4	.10	7.7	1	.03
22	1.2	1	.00	12	3	.09	8.1	2	.03
23	1.4	1	.00	11	2	.05	8.2	2	.04
24	1.8	1	.00	8.8	1	.03	8.1	2	.04
25	1.9	1	.01	8.0	1	.03	8.7	2	.05
26	1.7	1	.00	8.5	1	.02	10	2	.05
27	1.4	1	.00	8.3	1	.02	12	2	.08
28	1.4	1	.00	8.8	1	.03	16	3	.12
29	1.2	1	.00	9.1	1	.03	19	3	.16
30	1.2	1	.00	---	---	---	20	4	.22
31	1.3	2	.00	---	---	---	21	3	.17
TOTAL	37.07	---	0.06	123.9	---	0.62	297.5	---	1.59

e Estimated.

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	31	4	.37	22	2	.11	1.7	1	.01
2	34	4	.40	18	2	.08	1.6	1	.01
3	39	4	.49	16	1	.06	1.6	1	.00
4	43	4	.48	14	1	.05	1.4	1	.00
5	36	5	.45	13	1	.04	1.3	1	.00
6	26	4	.29	13	2	.08	1.2	2	.01
7	25	3	.20	12	2	.07	1.1	3	.01
8	29	3	.26	12	2	.07	1.1	5	.02
9	31	3	.27	10	3	.07	1.1	6	.02
10	29	2	.18	8.4	3	.06	.98	6	.02
11	31	2	.21	7.2	3	.06	.98	6	.02
12	33	2	.22	6.4	4	.06	.98	6	.02
13	52	7	.95	6.1	4	.06	.98	6	.02
14	45	5	.62	5.7	4	.07	1.2	6	.02
15	38	3	.33	5.3	4	.06	2.1	5	.02
16	31	2	.18	4.9	4	.05	3.2	3	.03
17	70	14	3.0	5.1	4	.05	5.0	4	.05
18	53	4	.69	4.5	4	.05	8.0	4	.08
19	35	2	.23	4.2	4	.05	5.9	4	.07
20	35	4	.37	4.2	4	.04	4.1	5	.05
21	40	5	.57	4.2	3	.04	3.3	5	.05
22	32	4	.36	3.8	3	.03	2.6	5	.04
23	25	3	.20	3.4	3	.03	2.1	6	.03
24	26	2	.17	3.1	3	.02	1.9	6	.03
25	32	3	.27	2.9	2	.02	2.0	5	.03
26	36	3	.35	2.5	2	.02	2.0	5	.03
27	33	3	.26	2.3	2	.01	1.7	5	.02
28	33	3	.26	2.4	2	.01	1.4	4	.02
29	36	2	.19	2.2	2	.01	1.4	4	.02
30	30	1	.09	1.9	2	.01	3.0	7	.05
31	---	---	---	1.9	1	.01	---	---	---
TOTAL	1069	---	12.91	222.6	---	1.45	66.92	---	0.80
JULY			AUGUST			SEPTEMBER			
1	2.9	5	.04	.47	1	.00	.47	1	.00
2	2.3	3	.02	.50	1	.00	.42	1	.00
3	1.9	3	.01	.49	1	.00	.42	1	.00
4	1.6	2	.01	.47	1	.00	.44	1	.00
5	1.3	1	.00	.49	1	.00	.40	1	.00
6	1.1	2	.00	.50	1	.00	.39	1	.00
7	1.1	2	.00	.54	1	.00	.37	1	.00
8	.98	2	.00	.58	1	.00	.38	1	.00
9	.94	2	.00	.64	1	.00	.37	1	.00
10	.87	2	.00	.64	1	.00	.34	1	.00
11	.87	1	.00	.64	1	.00	.31	1	.00
12	.87	1	.00	.65	1	.00	.32	1	.00
13	.87	1	.00	.81	1	.00	.33	1	.00
14	.87	1	.00	.85	1	.00	.32	1	.00
15	.87	1	.00	.90	1	.00	.33	1	.00
16	.87	1	.00	.80	1	.00	.33	1	.00
17	.85	1	.00	.81	1	.00	.37	1	.00
18	.78	1	.00	.73	1	.00	.56	1	.00
19	.78	1	.00	.68	1	.00	.46	1	.00
20	.73	1	.00	.64	1	.00	.44	1	.00
21	.64	1	.00	.61	1	.00	.43	1	.00
22	.62	1	.00	.59	1	.00	.43	1	.00
23	.67	1	.00	.53	1	.00	.42	1	.00
24	.59	1	.00	.55	1	.00	.38	1	.00
25	.55	1	.00	.50	1	.00	.39	1	.00
26	.55	1	.00	.50	1	.00	.40	1	.00
27	.56	1	.00	.46	1	.00	.40	1	.00
28	.56	1	.00	.50	1	.00	.38	1	.00
29	.54	1	.00	.47	1	.00	.37	1	.00
30	.55	1	.00	.56	1	.00	.39	1	.00
31	.54	1	.00	.53	1	.00	---	---	---
TOTAL	29.72	---	0.08	18.63	---	0.00	11.76	---	0.00
YEAR	1969.78		17.76						

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA

LOCATION.--Lat 39°06'27", long 120°09'40", in NW 1/4 NE 1/4 sec.36, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, on right bank 300 ft upstream from bridge on State Highway 89, 1,000 ft upstream from Lake Tahoe, and 4.6 mi south of Tahoe City.

DRAINAGE AREA.--11.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6,234.59 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to Sept. 30, 1964, at datum 10.25 ft lower and Oct. 1, 1964, to Aug. 27, 1970, at datum 12 ft lower, at site 400 ft downstream.

REMARKS.--Records good except for estimated daily discharges, which are fair. No known diversion or regulation upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, Dec. 22 or 24, 1964, on basis of computation of flow through culvert; maximum gage height, 9.90 ft, site and datum then in use, Dec. 22, 1964; minimum discharge, 0.30 ft³/s, Sept. 19, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	1900	*159	*2.26				

Minimum daily, 1.0 ft³/s, Sept. 25, 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.5	e5.2	e3.8	3.9	20	46	59	10	7.4	1.9	1.5
2	1.8	2.3	5.1	e3.8	3.9	19	45	54	9.9	6.1	1.8	1.4
3	1.8	2.4	4.9	3.8	3.9	17	52	51	9.2	5.3	1.9	1.3
4	1.9	2.3	4.7	3.8	3.8	18	56	52	8.5	4.6	1.8	1.3
5	1.9	2.1	e4.6	e3.8	3.8	18	49	56	8.1	4.3	1.8	1.3
6	1.9	2.3	4.5	3.8	3.9	17	41	64	7.6	3.9	1.8	1.3
7	2.0	3.0	e4.5	3.8	3.9	16	40	71	7.3	3.8	1.8	1.2
8	2.0	4.1	4.5	e3.8	4.4	15	43	66	6.8	3.5	1.8	1.2
9	2.2	12	e4.1	e3.7	4.5	15	44	58	6.5	3.2	1.8	1.3
10	2.0	9.7	e3.9	3.7	4.4	15	41	46	6.0	3.1	1.8	1.3
11	1.9	7.3	e3.7	e3.7	e4.8	16	43	44	5.7	3.3	1.7	1.3
12	2.0	5.8	e3.6	3.7	4.4	17	48	42	5.5	3.4	1.8	1.2
13	1.9	5.0	e3.6	e3.7	4.5	19	69	40	5.8	3.7	1.8	1.2
14	1.9	4.7	e3.6	e3.7	4.1	22	60	38	6.2	3.4	1.7	1.1
15	1.9	4.4	e3.5	3.6	e5.0	21	53	34	8.9	3.1	1.7	1.2
16	2.0	4.1	e3.5	3.6	e5.0	20	48	32	9.4	3.1	1.6	1.2
17	2.0	e4.2	e3.5	3.3	e4.8	17	115	31	10	3.3	1.6	1.1
18	2.1	e4.3	e3.5	3.3	4.4	17	91	28	9.6	3.1	1.6	1.4
19	2.2	4.2	e3.5	e3.4	6.5	16	69	27	8.2	2.6	1.5	1.3
20	2.0	e5.5	e3.5	e3.4	18	16	66	25	6.9	2.5	1.5	1.3
21	1.9	e5.7	e3.5	3.5	20	16	69	22	6.1	2.5	1.5	1.2
22	2.0	e5.7	e3.5	e3.5	34	17	59	20	5.6	2.4	1.5	1.1
23	2.2	e5.5	e3.5	e3.5	25	17	51	18	5.3	2.3	1.5	1.2
24	2.2	e5.3	e3.5	e3.5	21	17	51	17	5.7	2.3	1.5	1.1
25	3.0	e5.1	e3.5	3.5	19	17	59	17	6.1	2.2	1.5	1.0
26	19	e5.0	e3.5	3.4	20	19	67	17	5.4	2.2	1.5	1.1
27	5.7	8.6	e3.5	3.4	21	23	69	16	4.9	2.1	1.4	1.1
28	3.0	7.3	e3.6	3.5	22	27	75	15	4.6	2.1	1.3	1.0
29	2.7	e6.3	e3.6	e3.8	22	32	89	13	5.3	2.0	1.4	1.0
30	2.6	e5.5	e3.7	e3.8	---	33	74	12	11	2.0	1.5	1.0
31	2.5	---	e3.7	3.8	---	36	---	11	---	1.8	1.6	---
TOTAL	86.0	152.2	120.6	112.4	305.9	605	1782	1096	216.1	100.6	50.9	36.2
MEAN	2.77	5.07	3.89	3.63	10.5	19.5	59.4	35.4	7.20	3.25	1.64	1.21
MAX	19	12	5.2	3.8	34	36	115	71	11	7.4	1.9	1.5
MIN	1.8	2.1	3.5	3.3	3.8	15	40	11	4.6	1.8	1.3	1.0
AC-FT	171	302	239	223	607	1200	3530	2170	429	200	101	72

e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.47	14.4	21.1	22.7	21.2	28.9	59.2	125	96.6	25.7	5.35	2.93
MAX	28.1	94.8	157	166	116	122	124	312	320	149	36.1	10.3
(WY)	1963	1984	1965	1970	1986	1986	1989	1969	1983	1983	1983	1982
MIN	1.31	1.68	1.90	2.00	2.27	3.82	13.6	29.7	7.20	3.11	1.53	1.21
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	1987	1981	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	6834.3		4663.9			
ANNUAL MEAN	18.7		12.7		35.7	
HIGHEST ANNUAL MEAN					73.4	
LOWEST ANNUAL MEAN					8.71	
HIGHEST DAILY MEAN	150	Mar 4	115	Apr 17	1370	Dec 20 1981
LOWEST DAILY MEAN	1.7	Sep 13	1.0	Sep 25	.50	Sep 24 1968
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 19	1.0	Sep 24	.54	Sep 23 1968
INSTANTANEOUS PEAK FLOW			159	Apr 17	2100	Dec 22 1964
INSTANTANEOUS PEAK STAGE			2.26	Apr 17	9.90	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	13560		9250		25880	
10 PERCENT EXCEEDS	62		43		102	
50 PERCENT EXCEEDS	4.1		4.0		9.9	
90 PERCENT EXCEEDS	2.0		1.5		2.2	

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-78, 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1980 to September 1983.

WATER TEMPERATURE: October 1974 to June 1978 (1977-78 storm season only), October 1979 to September 1992 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to June 1978 (1977-78 storm season only), October 1979 to September 1992 (discontinued).

REMARKS.--Sediment samples were collected during most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water-temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,200 mg/L, Jan. 13, 1980; minimum daily mean, 0 mg/L, many days during most years.

SEDIMENT LOAD: Maximum daily, 2,710 tons, Mar. 8, 1986; minimum daily, 0 ton, many days during most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 80 mg/L, Apr. 17; minimum daily mean, 0 mg/L, Sept. 8-17.

SEDIMENT LOAD: Maximum daily, 27 tons, Apr. 17; minimum daily, 0 ton, many days.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

[illegible]

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	1.8	2	.01	2.5	3	.02	e5.2	2	.03
2	1.8	1	.00	2.3	3	.02	5.1	2	.03
3	1.8	1	.01	2.4	2	.02	4.9	2	.03
4	1.9	2	.01	2.3	2	.01	4.7	2	.02
5	1.9	2	.01	2.1	2	.01	e4.6	2	.02
6	1.9	2	.01	2.3	2	.01	4.5	2	.02
7	2.0	3	.02	3.0	2	.02	e4.5	2	.03
8	2.0	3	.02	4.1	3	.05	4.5	2	.02
9	2.2	3	.02	12	12	.42	e4.1	2	.02
10	2.0	3	.02	9.7	5	.14	e3.9	2	.02
11	1.9	3	.02	7.3	3	.05	e3.7	2	.02
12	2.0	3	.02	5.8	2	.03	e3.6	2	.02
13	1.9	3	.02	5.0	2	.02	e3.6	2	.02
14	1.9	3	.02	4.7	2	.02	e3.6	2	.02
15	1.9	4	.02	4.4	1	.02	e3.5	2	.02
16	2.0	4	.02	4.1	1	.02	e3.5	2	.02
17	2.0	4	.02	e4.2	2	.02	e3.5	2	.02
18	2.1	4	.02	e4.3	2	.02	e3.5	2	.02
19	2.2	4	.02	4.2	1	.01	e3.5	1	.01
20	2.0	4	.02	e5.5	3	.04	e3.5	1	.01
21	1.9	4	.02	e5.7	2	.03	e3.5	1	.01
22	2.0	4	.02	e5.7	2	.03	e3.5	1	.01
23	2.2	4	.02	e5.5	2	.01	e3.5	1	.01
24	2.2	4	.02	e5.3	1	.03	e3.5	1	.01
25	3.0	6	.06	e5.1	1	.01	e3.5	1	.01
26	19	23	1.3	e5.0	1	.01	e3.5	1	.01
27	5.7	10	.18	8.6	3	.07	e3.5	1	.01
28	3.0	4	.04	7.3	2	.05	e3.6	1	.01
29	2.7	3	.02	e6.3	2	.03	e3.6	1	.01
30	2.6	3	.02	e5.5	2	.03	e3.7	1	.01
31	2.5	3	.02	---	---	---	e3.7	1	.01
TOTAL	86.0	---	2.05	152.2	---	1.27	120.6	---	0.53
JANUARY			FEBRUARY			MARCH			
1	e3.8	1	.01	3.9	1	.01	20	2	.13
2	e3.8	1	.01	3.9	1	.01	19	2	.12
3	3.8	1	.01	3.9	1	.01	17	2	.10
4	3.8	1	.01	3.8	1	.01	18	2	.10
5	e3.8	1	.01	3.8	1	.01	18	2	.10
6	3.8	1	.01	3.9	1	.01	17	2	.09
7	3.8	1	.01	3.9	1	.01	16	2	.08
8	e3.8	2	.02	4.4	1	.01	15	2	.08
9	e3.7	2	.02	4.5	1	.01	15	2	.08
10	3.7	2	.02	4.4	1	.01	15	2	.08
11	e3.7	2	.02	e4.8	1	.01	16	2	.08
12	3.7	2	.02	4.4	1	.01	17	2	.09
13	e3.7	2	.02	4.5	1	.02	19	2	.10
14	e3.7	1	.01	4.1	1	.02	22	2	.12
15	3.6	1	.01	e5.0	2	.03	21	2	.11
16	3.6	1	.01	e5.0	2	.03	20	2	.11
17	3.3	1	.01	e4.8	2	.03	17	2	.09
18	3.3	1	.01	4.4	2	.03	17	2	.09
19	e3.4	1	.01	6.5	6	.12	16	2	.10
20	e3.4	1	.01	18	13	.65	16	2	.10
21	3.5	1	.01	20	8	.48	16	2	.11
22	e3.5	1	.01	34	20	1.8	17	3	.12
23	e3.5	1	.01	25	8	.55	17	3	.12
24	e3.5	1	.01	21	4	.22	17	3	.13
25	3.5	1	.01	19	3	.16	17	3	.14
26	3.4	1	.01	20	3	.16	19	3	.16
27	3.4	1	.01	21	3	.16	23	3	.21
28	3.5	1	.01	22	3	.16	27	6	.41
29	e3.8	1	.01	22	3	.15	32	7	.61
30	e3.8	1	.01	---	---	---	33	7	.62
31	3.8	1	.01	---	---	---	36	12	1.2
TOTAL	112.4	---	0.37	305.9	---	4.89	605	---	5.78

e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	46	20	2.6	59	6	1.0	10	4	.11
2	45	17	2.2	54	6	.81	9.9	4	.11
3	52	20	3.0	51	5	.70	9.2	4	.10
4	56	18	2.8	52	5	.65	8.5	4	.09
5	49	12	1.7	56	4	.63	8.1	4	.08
6	41	8	.88	64	9	1.6	7.6	3	.06
7	40	7	.80	71	7	1.3	7.3	3	.05
8	43	6	.76	66	6	1.0	6.8	2	.04
9	44	4	.47	58	5	.86	6.5	2	.03
10	41	4	.47	46	5	.66	6.0	2	.03
11	43	4	.50	44	5	.59	5.7	2	.03
12	48	6	.85	42	4	.46	5.5	2	.03
13	69	10	1.9	40	3	.35	5.8	2	.03
14	60	8	1.3	38	3	.35	6.2	2	.04
15	53	6	.91	34	4	.37	8.9	4	.09
16	48	7	.86	32	4	.37	9.4	4	.11
17	115	80	27	31	4	.37	10	5	.13
18	91	22	5.8	28	5	.36	9.6	3	.07
19	69	14	2.6	27	5	.37	8.2	3	.06
20	66	12	2.3	25	5	.34	6.9	2	.05
21	69	13	2.5	22	5	.30	6.1	2	.04
22	59	9	1.4	20	5	.27	5.6	2	.03
23	51	8	1.1	18	5	.25	5.3	2	.03
24	51	6	.87	17	5	.24	5.7	2	.03
25	59	8	1.3	17	5	.23	6.1	2	.03
26	67	8	1.6	17	5	.22	5.4	2	.03
27	69	8	1.6	16	7	.33	4.9	2	.03
28	75	8	1.8	15	8	.34	4.6	2	.02
29	89	12	3.1	13	5	.17	5.3	3	.04
30	74	8	1.7	12	4	.13	11	9	.27
31	---	---	---	11	4	.12	---	---	---
TOTAL	1782	---	76.67	1096	---	15.74	216.1	---	1.89
JULY			AUGUST			SEPTEMBER			
1	7.4	4	.09	1.9	3	.02	1.5	1	.00
2	6.1	3	.06	1.8	3	.02	1.4	1	.00
3	5.3	3	.04	1.9	3	.02	1.3	1	.00
4	4.6	3	.03	1.8	3	.01	1.3	1	.00
5	4.3	2	.03	1.8	3	.02	1.3	1	.00
6	3.9	4	.04	1.8	3	.01	1.3	1	.00
7	3.8	6	.06	1.8	2	.01	1.2	1	.00
8	3.5	6	.05	1.8	2	.01	1.2	0	.00
9	3.2	5	.05	1.8	1	.01	1.3	0	.00
10	3.1	5	.04	1.8	1	.00	1.3	0	.00
11	3.3	5	.04	1.7	1	.00	1.3	0	.00
12	3.4	5	.04	1.8	1	.00	1.2	0	.00
13	3.7	5	.05	1.8	1	.00	1.2	0	.00
14	3.4	4	.04	1.7	1	.00	1.1	0	.00
15	3.1	4	.04	1.7	1	.00	1.2	0	.00
16	3.1	4	.03	1.6	1	.00	1.2	0	.00
17	3.3	4	.03	1.6	1	.00	1.1	0	.00
18	3.1	4	.03	1.6	1	.00	1.4	1	.00
19	2.6	4	.03	1.5	1	.00	1.3	1	.00
20	2.5	4	.02	1.5	1	.00	1.3	1	.00
21	2.5	4	.02	1.5	1	.00	1.2	1	.00
22	2.4	4	.02	1.5	1	.00	1.1	1	.00
23	2.3	3	.02	1.5	1	.00	1.2	1	.00
24	2.3	3	.02	1.5	1	.00	1.1	1	.00
25	2.2	3	.02	1.5	1	.00	1.0	1	.00
26	2.2	3	.02	1.5	1	.00	1.1	1	.00
27	2.1	3	.02	1.4	1	.00	1.1	1	.00
28	2.1	3	.02	1.3	1	.00	1.0	1	.00
29	2.0	3	.02	1.4	1	.00	1.0	1	.00
30	2.0	3	.02	1.5	1	.00	1.0	1	.00
31	1.8	3	.02	1.6	1	.00	---	---	---
TOTAL	100.6	---	1.06	50.9	---	0.13	36.2	---	0.00
YEAR	4663.9		110.38						

10336674 WARD CREEK BELOW CONFLUENCE NEAR TAHOE CITY, CA

LOCATION.--Lat 39°08'27", long 120°12'40", in SE 1/4 SE 1/4 sec.16, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on left bank 0.1 mi downstream from confluence with unnamed tributary, 3.2 mi west of William Kent campground, and 4.8 mi southwest of Tahoe City.

DRAINAGE AREA.--4.96 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No storage or diversion upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	0700	*51	*5.78				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	e.90	e.90	e.85	e.80	e5.7	e20	32	7.8	2.6	.07	.02
2	.04	e.90	e.90	e.85	e.80	e5.5	e24	30	6.6	2.2	.05	.02
3	.04	e.90	e.90	e.85	e.80	e5.5	e23	30	5.8	1.9	.05	.02
4	.04	e.90	e.90	e.85	e.80	e5.3	e21	30	5.2	1.7	.04	.02
5	.04	e.90	e.90	e.85	e.80	e5.2	e19	30	4.8	1.6	.04	.02
6	.04	e.90	e.90	e.85	e.80	e5.0	e19	36	4.5	1.4	.04	.01
7	.03	e1.0	e.90	e.85	e.80	e5.0	e19	40	4.3	1.3	.03	.01
8	.04	e1.2	e.90	e.85	e.80	e5.0	e19	36	3.9	1.2	.03	.01
9	.04	e1.8	e.90	e.85	e.80	e5.0	e19	32	3.6	1.1	.03	.00
10	.04	e1.3	e.90	e.85	e.80	e5.2	e19	28	3.3	1.0	.02	.00
11	.05	e1.1	e.90	e.85	e.80	e5.5	e20	25	3.1	1.2	.02	.00
12	.05	e1.0	e.90	e.80	e.80	e5.8	e27	23	3.0	1.5	.02	.00
13	.05	e.90	e.90	e.80	e.80	e6.0	34	21	2.8	1.3	.02	.00
14	.05	e.90	e.90	e.80	e.80	e6.0	33	19	3.0	1.1	.03	.00
15	.05	e.90	e.90	e.80	e.70	e6.0	31	18	4.1	.98	.03	.00
16	.05	e.90	e.90	e.80	e.80	e6.0	30	17	5.8	.89	.02	.00
17	.06	e.90	e1.0	e.80	e.80	e5.8	47	16	4.1	.79	.01	.00
18	.07	e.90	e1.0	e.80	e.90	e5.8	38	15	3.6	.69	.01	.10
19	.08	e.90	e.90	e.80	e1.2	e5.8	35	15	3.0	.61	.01	.01
20	.10	e1.2	e.90	e.80	e4.0	e5.8	35	15	2.7	.55	.01	.01
21	.13	e1.4	e.90	e.80	e5.5	e5.8	35	14	2.3	.50	.00	.00
22	.31	e1.0	e.90	e.80	e5.2	e5.8	33	13	2.1	.41	.01	.00
23	.23	e1.0	e.90	e.80	e5.2	e5.8	31	12	2.0	.37	.01	.00
24	.18	e1.0	e.90	e.80	e5.2	e5.9	31	11	2.8	.33	.01	.00
25	.82	e1.0	e.90	e.80	e5.2	e7.5	33	11	2.5	.28	.01	.00
26	10	e1.0	e.90	e.80	e5.2	e9.0	34	11	2.1	.22	.01	.00
27	2.9	e1.4	e.90	e.80	e5.5	e11	34	13	1.8	.18	.01	.00
28	1.2	e1.2	e.90	e.80	e5.6	e12	35	13	1.8	.14	.00	.00
29	.95	e1.0	e.90	e.80	e5.6	e13	38	11	3.4	.11	.04	.00
30	.66	e.90	e.85	e.80	---	e15	35	10	4.4	.09	.04	.00
31	e.70	---	e.85	e.80	---	e16	---	9.1	---	.08	.04	---
TOTAL	19.09	31.20	28.00	25.35	67.80	217.7	871	636.1	110.2	28.32	0.76	0.25
MEAN	.62	1.04	.90	.82	2.34	7.02	29.0	20.5	3.67	.91	.025	.008
MAX	10	1.8	1.0	.85	5.6	16	47	40	7.8	2.6	.07	.10
MIN	.03	.90	.85	.80	.70	5.0	19	9.1	1.8	.08	.00	.00
AC-FT	38	62	56	50	134	432	1730	1260	219	56	1.5	.5

e Estimated.

SUMMARY STATISTICS

FOR 1992 WATER YEAR

ANNUAL TOTAL	2035.77
ANNUAL MEAN	5.56
HIGHEST DAILY MEAN	47 Apr 17
LOWEST DAILY MEAN	.00 Aug 21
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 9
ANNUAL RUNOFF (AC-FT)	4040
10 PERCENT EXCEEDS	20
50 PERCENT EXCEEDS	.90
90 PERCENT EXCEEDS	.02

10336674 WARD CREEK BELOW CONFLUENCE NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1991 to September 1992.

SEDIMENT DATA: January 1991 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JAN					
23...	1230	0.25 ^b	0.0	0	0.0
FEB					
21...	1345	0.67 ^b	3.5	0	0.0
MAR					
05... ^a	1515	19 ^b	0.0	72	3.7
APR					
16... ^a	1215	9.1 ^b	2.5	3	0.07
MAY					
16... ^a	1400	50 ^b	4.0	50	6.8
31... ^a	1330	44 ^b	7.0	6	0.71
JUN					
11...	1130	52 ^b	7.5	8	1.1
JUL					
17... ^a	1245	2.8 ^b	14.0	0	0.0
AUG					
26...	1105	0.15	--	1	0.00

^b Discharge provided by University of California.^a Single vertical sample.^e Estimated.

10336674 WARD CREEK BELOW CONFLUENCE NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT					
07...	1120	0.03	10.5	0	0.0
26...	1100	18	1.5	53	2.6
26... ^a	1450	9.8	--	10	0.26
NOV					
05...	1120	0.94	4.5	1	0.0
21...	1200	e1.4	2.0	0	0.0
DEC					
06...	1020	e0.90	0.5	2	e0.0
31...	1200	e0.85	1.0	0	0.0
JAN					
10...	1210	e0.85	1.0	1	e0.0
24...	1245	e0.80	1.0	2	e0.0
FEB					
20...	1410	e4.0	0.0	10	e0.11
21...	1005	5.5	0.0	2	0.03
MAR					
18... ^a	1220	e5.8	3.0	0	0.0
23...	1000	5.8	2.0	1	0.02
APR					
08... ^a	1745	e19	3.0	10	e0.51
16... ^a	1345	28	4.5	1	0.08
17... ^a	1340	50	4.0	48	6.5
20... ^a	1305	32	6.0	4	0.35
29... ^a	1110	37	6.5	6	0.60
MAY					
06...	1745	43	7.0	16	1.9
06...	1810	43	7.0	16	1.9
13... ^a	1345	21	11.0	6	0.34
14...	1035	18	6.5	4	0.19
29... ^a	1140	11	11.0	4	0.12
JUN					
04...	1150	5.2	12.5	1	0.01
08...	1125	4.0	12.0	0	0.0
15...	1045	4.2	2.0	0	0.0
JUL					
07...	1045	1.4	11.0	0	0.0
16...	1200	0.86	17.0	0	0.0
AUG					
05...	1305	0.04	20.5	0	0.0
21...	1040	0.02	16.5	0	0.0
SEP					
03...	0920	0.03	9.5	0	0.0

^a Single vertical sample.
^e Estimated.

10336675 WARD CREEK AT STANFORD ROCK TRAIL CROSSING NEAR TAHOE CITY, CA

LOCATION.--Lat 39°08'13", long 120°10'48", in NE 1/4 NW 1/4 sec.23, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on left bank 1.5 mi west of William Kent campground, 1.7 mi upstream from mouth, and 3.6 mi southwest of Tahoe City.

DRAINAGE AREA.--8.97 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 6,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No storage or diversion upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	1700	*101	*5.07				

Minimum daily, 0.34 ft³/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	2.2	2.8	e2.3	2.4	12	31	38	7.9	e4.2	.70	.48
2	.72	2.3	2.7	2.2	2.5	11	34	35	7.2	e3.3	.68	.46
3	.71	2.3	e2.7	2.2	e2.4	11	41	33	6.7	e2.9	.63	.47
4	.72	2.1	e2.7	2.3	2.4	11	40	33	6.0	e2.5	.58	.49
5	.71	2.1	e2.7	e2.4	2.4	11	35	35	5.7	e2.3	.59	.47
6	.72	2.1	2.6	2.4	2.4	10	31	42	5.3	e2.1	.61	.45
7	.71	2.2	2.9	2.3	2.5	9.4	31	44	5.0	e2.1	.60	.43
8	.71	2.4	2.6	e2.3	e2.4	9.2	33	40	4.7	2.0	.56	.43
9	.71	4.7	e2.7	2.3	e2.4	9.1	33	35	4.7	1.8	.58	.40
10	.71	3.3	2.7	2.2	e2.3	9.5	32	29	4.3	1.8	.49	.41
11	.74	2.5	2.9	2.1	e2.3	10	32	27	3.8	2.3	.48	.37
12	.77	2.1	e2.8	2.1	e2.4	11	38	25	3.7	3.2	.50	.36
13	.77	1.9	e2.7	2.2	e2.3	13	48	25	3.6	2.8	.50	.34
14	.75	1.9	e2.7	2.1	e2.3	14	41	24	3.7	2.3	.52	.35
15	.77	1.7	e2.6	2.1	e1.5	13	36	22	5.7	2.1	.56	.36
16	.76	1.6	2.5	2.2	e2.0	12	33	20	e7.3	2.0	.54	.35
17	.76	e1.8	2.6	2.3	e2.2	11	83	19	e6.2	1.9	.53	.49
18	.75	e1.8	e2.8	2.2	e2.5	11	58	17	e5.3	1.9	.47	.71
19	.79	2.2	e2.6	2.3	3.9	11	48	17	e4.4	1.6	.46	.54
20	.79	2.9	2.6	2.3	e8.0	11	48	17	e3.6	1.5	.42	.49
21	.82	3.8	2.6	2.2	14	11	49	14	e3.2	1.4	.42	.48
22	.88	3.4	2.5	2.3	e13	11	41	13	e2.8	1.2	.38	.45
23	.96	3.2	2.4	2.3	e13	11	37	12	e2.6	1.2	.38	.42
24	.97	3.1	2.4	2.3	e13	11	37	11	e3.4	1.2	.43	.41
25	1.6	3.3	2.4	2.3	12	12	39	11	e3.7	1.2	.40	.42
26	15	3.2	2.4	2.3	12	15	42	10	e2.9	1.1	.36	.45
27	3.8	4.2	2.4	2.3	13	17	43	14	e2.4	1.0	.35	.47
28	2.4	e3.4	2.4	2.3	14	21	47	14	e2.2	.87	.36	.43
29	2.2	e2.8	2.4	e2.3	14	24	58	11	e3.1	.82	.36	.43
30	1.8	e2.8	2.4	e2.3	---	23	48	9.5	e6.9	.76	.56	.44
31	1.7	---	2.3	2.4	---	25	---	8.7	---	.74	.57	---
TOTAL	46.91	79.3	80.5	70.1	171.5	401.2	1247	705.2	138.0	58.09	15.57	13.25
MEAN	1.51	2.64	2.60	2.26	5.91	12.9	41.6	22.7	4.60	1.87	.50	.44
MAX	15	4.7	2.9	2.4	14	25	83	44	7.9	4.2	.70	.71
MIN	.71	1.6	2.3	2.1	1.5	9.1	31	8.7	2.2	.74	.35	.34
AC-FT	93	157	160	139	340	796	2470	1400	274	115	31	26

e Estimated.

SUMMARY STATISTICS

FOR 1992 WATER YEAR

ANNUAL TOTAL	3026.62
ANNUAL MEAN	8.27
HIGHEST DAILY MEAN	83 Apr 17
LOWEST DAILY MEAN	.34 Sep 13
ANNUAL SEVEN-DAY MINIMUM	.36 Sep 10
ANNUAL RUNOFF (AC-FT)	6000
10 PERCENT EXCEEDS	31
50 PERCENT EXCEEDS	2.4
90 PERCENT EXCEEDS	.48

10336675 WARD CREEK AT STANFORD ROCK TRAIL CROSSING NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1991 to September 1992.

SEDIMENT DATA: January 1991 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JAN					
23... ^c	1430	1.4 ^b	0.0	0	0.0
FEB					
21... ^c	1145	2.5 ^b	2.0	0	0.0
MAR					
04... ^c	1430	--	0.0	206	--
05... ^{ac}	1715	29 ^b	0.0	14	1.1
APR					
16... ^{ac}	1405	16 ^b	3.5	7	0.30
MAY					
16... ^c	1645	65 ^b	6.5	15	2.6
31... ^{ac}	1550	58 ^b	10.0	2	0.31
JUN					
11... ^c	1340	66 ^b	11.5	3	0.53
JUL					
17... ^{ac}	1530	4.5 ^b	19.0	0	0.0
AUG					
07... ^a	1140	1.2 ^b	16.5	1	0.0
14... ^a	1935	--	14.0	27	--
26... ^a	1225	e0.69	18.0	1	0.00
SEP					
20... ^a	1035	0.81	12.0	0	0.0

^c Sample at site 300 yards downstream.^b Discharge provided by University of California.^a Single vertical sample.^e Estimated.

10336675 WARD CREEK AT STANFORD ROCK TRAIL CROSSING NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT					
02...	1410	0.75	16.0	0	0.0
07...	1250	0.69	13.0	2	0.0
26... ^a	1215	30	3.0	27	2.2
26... ^a	1550	12	--	14	0.45
NOV					
05... ^a	0950	2.0	4.0	2	0.01
21... ^a	1340	3.8	2.5	3	0.03
DEC					
06... ^a	1220	2.6	2.0	1	0.01
31...	1355	2.4	1.0	1	0.01
JAN					
10...	1410	2.1	0.5	2	0.01
24...	1405	2.1	1.0	0	0.0
FEB					
20... ^a	1535	8.0	0.0	22	0.48
21...	1140	9.3	0.0	7	0.18
MAR					
18... ^a	1345	10	5.0	2	0.05
23...	1205	11	4.5	2	0.06
APR					
08... ^a	1845	40	5.5	6	0.65
16... ^a	1450	29	6.5	3	0.23
17... ^a	1440	93	6.5	42	11
20...	1445	43	9.0	3	0.35
29... ^a	1230	53	9.5	5	0.72
MAY					
13...	1455	25	12.5	2	0.13
14... ^a	1245	22	10.5	3	0.18
29... ^a	1250	10	14.5	1	0.03
JUN					
04... ^a	1020	6.7	11.5	6	0.11
08... ^a	1245	4.9	15.0	1	0.01
15... ^a	1150	5.5	5.0	3	0.05
JUL					
07... ^a	1535	2.1	18.0	2	0.01
16... ^a	1245	1.7	20.0	0	0.0
AUG					
05...	1055	0.75	14.0	0	0.0
21...	1140	0.42	15.0	0	0.0
SEP					
03...	1020	0.52	11.0	0	0.0
28...	1250	0.47	12.0	0	0.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY						
06...	1910	57	8.5	65	10	88

^a Single vertical sample.^e Estimated.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA

LOCATION.--Lat 39°07'56", long 120°09'24", in NW 1/4 SE 1/4 sec.24, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on right bank 165 ft downstream from State Highway 89 bridge, 2.1 mi north of Tahoe Pines, and 2.6 mi southwest of Tahoe City.

DRAINAGE AREA.--9.70 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges and discharges less than 1 ft³/s, which are fair. Minor diversion for local water supply upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s, Dec. 19, 1981, gage height, 8.05 ft, from rating curve extended above 800 ft³/s; no flow for many days during 1977-78, 1981, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 20	2245	Unknown	*a5.99	Apr. 17	1030	*110	5.33

(a) Backwater from ice.

Minimum daily, 0.01 ft³/s, Aug. 28.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	1.7	e2.7	2.3	2.2	12	30	36	8.6	4.1	.30	.25
2	.34	1.9	2.6	2.4	2.1	11	34	33	7.8	3.2	.28	.18
3	.33	1.9	2.6	2.4	e2.1	11	40	31	7.0	2.8	.25	.19
4	.35	1.8	e2.6	2.4	2.1	11	39	32	6.4	2.4	.21	.22
5	.34	1.7	e2.6	2.3	2.0	11	35	33	5.9	2.1	.21	.19
6	.34	1.8	2.7	2.5	2.0	10	31	40	5.5	1.9	.18	.15
7	.36	1.8	2.8	2.3	2.1	9.6	31	44	5.1	1.8	.16	.14
8	.39	2.0	2.7	2.2	2.3	9.3	33	40	4.6	1.6	.14	.12
9	.41	4.3	e2.6	2.2	2.3	9.0	33	34	4.2	1.5	.15	.10
10	.37	3.2	e2.5	2.2	2.2	9.3	31	29	3.8	1.5	.12	.08
11	.39	2.4	2.5	2.2	2.1	10	32	27	3.4	2.0	.09	.09
12	.41	2.0	e2.4	2.2	2.3	11	37	26	3.3	3.2	.09	.11
13	.41	1.8	e2.4	2.2	2.2	13	48	26	3.4	2.7	.12	.08
14	.41	1.8	e2.4	2.1	2.2	14	41	24	3.5	1.9	.12	.14
15	.41	1.7	e2.4	2.1	1.3	13	36	22	5.8	1.7	.18	.16
16	.43	e1.7	e2.4	2.1	2.0	12	33	21	7.3	1.6	.16	.15
17	.45	1.7	e2.4	2.1	2.2	11	92	20	6.2	1.5	.10	.19
18	.45	1.6	e2.4	2.1	2.5	11	62	18	5.3	1.2	.07	.67
19	.45	1.7	e2.4	2.2	e5.0	11	47	18	4.4	1.1	.04	.35
20	.48	2.7	e2.4	2.0	e8.0	11	46	18	3.6	.96	.04	.30
21	.53	3.2	e2.4	2.0	e13	11	47	15	3.1	.90	.06	.26
22	.59	2.9	e2.4	2.0	e13	11	39	14	2.7	.89	.09	.21
23	.78	2.8	e2.4	2.0	e13	11	35	13	2.5	.86	.09	.19
24	.78	2.4	e2.4	2.1	e13	11	35	12	3.4	.82	.10	.22
25	1.4	2.5	e2.4	2.2	13	12	39	12	3.7	.76	.09	.25
26	20	2.7	e2.4	2.2	13	14	42	11	2.8	.62	.07	.26
27	5.9	3.6	e2.4	2.1	12	17	42	14	2.3	.51	.03	.25
28	2.9	e3.4	e2.4	2.2	13	21	46	15	2.1	.47	.01	.24
29	2.1	e2.8	2.4	2.1	13	24	55	12	3.0	.43	.03	.22
30	1.7	e2.8	2.3	2.3	---	24	44	10	6.9	.36	.27	.20
31	1.9	---	2.3	2.3	---	25	---	9.3	---	.31	.41	---
TOTAL	46.43	70.3	76.7	68.0	167.2	401.2	1235	709.3	137.6	47.69	4.26	6.16
MEAN	1.50	2.34	2.47	2.19	5.77	12.9	41.2	22.9	4.59	1.54	.14	.21
MAX	20	4.3	2.8	2.5	13	25	92	44	8.6	4.1	.41	.67
MIN	.33	1.6	2.3	2.0	1.3	9.0	30	9.3	2.1	.31	.01	.08
AC-FT	92	139	152	135	332	796	2450	1410	273	95	8.4	12

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.76	13.4	13.1	13.8	15.0	19.6	40.4	83.4	68.8	19.7	3.57	1.84
MAX	22.4	73.9	92.5	74.0	77.7	80.3	89.2	155	265	123	26.9	7.93
(WY)	1983	1982	1982	1980	1982	1986	1989	1982	1983	1983	1983	1983
MIN	.15	1.06	.80	1.10	1.24	2.52	8.06	18.7	4.59	1.14	.003	.005
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1973 - 1992	
ANNUAL TOTAL	4202.35		2969.84			
ANNUAL MEAN	11.5		8.11		24.7	
HIGHEST ANNUAL MEAN					59.0	1983
LOWEST ANNUAL MEAN					5.29	1977
HIGHEST DAILY MEAN	120	Mar 4	92	Apr 17	784	Jan 13 1980
LOWEST DAILY MEAN	.21	Sep 3	.01	Aug 28	.00	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	.27	Aug 28	.06	Aug 23	.00	Aug 4 1977
INSTANTANEOUS PEAK FLOW			110	Apr 17	1800	Dec 19 1981
INSTANTANEOUS PEAK STAGE			5.99	Feb 20	8.05	Dec 19 1981
ANNUAL RUNOFF (AC-FT)	8340		5890		17890	
10 PERCENT EXCEEDS	37		31		70	
50 PERCENT EXCEEDS	2.4		2.4		6.6	
90 PERCENT EXCEEDS	.34		.19		.80	

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-78, 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983.

WATER TEMPERATURE: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to September 1992 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to September 1992 (discontinued).

REMARKS.--Sediment samples were collected during most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water-temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,510 mg/L, Dec. 19, 1981; minimum daily mean, 0 mg/L, many days during each year.

SEDIMENT LOAD: Maximum daily, 3,720 tons, Dec. 19, 1981; minimum daily, 0 ton, many days during each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 58 mg/L, Apr. 17; minimum daily mean, 0 mg/L, Oct. 1, 2.

SEDIMENT LOAD: Maximum daily, 15 tons, Apr. 17; minimum daily, 0 ton, many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY						
06...	1930	56	9.0	128	19	96

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.0	11.0	---	---	---	17.5
2	15.0	---	---	---	---	---	---	---	---	---	---	---
3	---	---	.0	---	---	---	2.0	8.0	---	---	---	12.5
4	---	---	---	---	---	---	---	---	10.5	---	---	---
5	---	5.5	---	---	.0	3.0	---	7.5	---	---	11.0	---
6	---	---	---	---	---	---	6.5	9.0	---	15.5	---	---
7	12.5	4.0	---	---	---	---	---	6.0	---	19.0	---	---
8	---	---	---	---	---	---	6.5	10.0	18.0	---	---	---
9	---	---	---	---	---	---	4.0	---	---	---	---	---
10	---	---	---	.5	1.0	---	---	---	---	---	24.5	---
11	---	---	---	---	---	---	---	14.0	---	---	---	16.0
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	.0	---	---	---	13.5	---	---	---	---
14	---	---	---	.5	---	---	---	13.0	---	---	---	---
15	---	---	---	---	---	---	---	---	6.0	---	---	---
16	---	---	---	---	---	---	7.0	---	---	22.5	---	---
17	---	---	.0	---	---	---	4.0	---	---	---	---	---
18	---	---	---	---	.0	5.0	2.0	---	---	---	---	---
19	---	---	---	---	.0	---	---	8.0	---	---	---	---
20	---	.5	.5	---	.0	---	9.5	---	---	---	---	---
21	5.5	1.0	---	---	.0	---	---	---	---	---	17.0	---
22	---	.5	---	---	.0	---	4.5	---	---	---	---	---
23	---	---	---	---	---	4.5	4.0	---	19.0	---	---	---
24	---	---	---	.0	---	---	10.0	---	---	---	---	---
25	4.0	---	---	---	---	---	---	---	---	---	---	---
26	4.5	---	---	---	.0	---	9.5	---	---	---	---	---
27	---	---	---	---	---	4.5	6.0	---	---	---	---	---
28	2.5	---	---	---	---	---	3.5	---	---	---	---	13.5
29	---	---	---	---	---	---	10.0	15.5	11.0	---	---	---
30	2.5	---	---	---	---	---	3.5	---	---	24.0	---	---
31	---	---	.0	---	---	4.0	---	---	---	---	---	---

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.33	0	.00	1.7	1	.00	e2.7	1	.01
2	.34	0	.00	1.9	1	.01	2.6	1	.01
3	.33	1	.00	1.9	1	.01	2.6	1	.01
4	.35	1	.00	1.8	1	.00	e2.6	1	.01
5	.34	2	.00	1.7	1	.00	e2.6	1	.01
6	.34	2	.00	1.8	1	.00	2.7	1	.01
7	.36	2	.00	1.8	1	.00	2.8	1	.01
8	.39	2	.00	2.0	1	.01	2.7	1	.01
9	.41	2	.00	4.3	3	.03	e2.6	1	.01
10	.37	2	.00	3.2	1	.01	e2.5	1	.01
11	.39	2	.00	2.4	1	.01	2.5	1	.01
12	.41	2	.00	2.0	1	.01	e2.4	1	.01
13	.41	2	.00	1.8	1	.00	e2.4	1	.01
14	.41	2	.00	1.8	1	.00	e2.4	1	.01
15	.41	2	.00	1.7	1	.00	e2.4	1	.01
16	.43	2	.00	e1.7	1	.00	e2.4	1	.01
17	.45	2	.00	1.7	2	.01	e2.4	1	.01
18	.45	2	.00	1.6	2	.01	e2.4	1	.01
19	.45	2	.00	1.7	2	.01	e2.4	1	.01
20	.48	2	.00	2.7	2	.01	e2.4	1	.01
21	.53	2	.00	3.2	1	.01	e2.4	1	.01
22	.59	2	.00	2.9	1	.01	e2.4	1	.01
23	.78	2	.00	2.8	1	.01	e2.4	1	.01
24	.78	2	.00	2.4	1	.01	e2.4	1	.01
25	1.4	5	.02	2.5	1	.01	e2.4	2	.01
26	20	32	1.7	2.7	1	.01	e2.4	2	.01
27	5.9	2	.03	3.6	1	.01	e2.4	2	.01
28	2.9	1	.01	e3.4	1	.01	e2.4	2	.01
29	2.1	1	.01	e2.8	1	.01	2.4	2	.01
30	1.7	1	.00	e2.8	1	.01	2.3	2	.01
31	1.9	2	.01	---	---	---	2.3	2	.01
TOTAL	46.43	---	1.78	70.3	---	0.23	76.7	---	0.31
JANUARY			FEBRUARY			MARCH			
1	2.3	2	.01	2.2	1	.01	12	2	.06
2	2.4	2	.01	2.1	1	.01	11	2	.06
3	2.4	2	.01	e2.1	1	.01	11	2	.06
4	2.4	2	.01	2.1	1	.01	11	1	.03
5	2.3	1	.01	2.0	1	.01	11	1	.03
6	2.5	1	.01	2.0	1	.01	10	1	.03
7	2.3	1	.01	2.1	1	.01	9.6	1	.03
8	2.2	1	.01	2.3	1	.01	9.3	1	.03
9	2.2	1	.01	2.3	1	.01	9.0	1	.02
10	2.2	1	.01	2.2	1	.01	9.3	1	.03
11	2.2	1	.01	2.1	1	.01	10	1	.03
12	2.2	1	.01	2.3	1	.01	11	1	.03
13	2.2	1	.01	2.2	1	.01	13	1	.04
14	2.1	1	.01	2.2	1	.01	14	1	.04
15	2.1	1	.01	1.3	1	.00	13	1	.04
16	2.1	1	.01	2.0	1	.01	12	1	.03
17	2.1	1	.01	2.2	1	.01	11	1	.03
18	2.1	1	.01	2.5	1	.01	11	1	.03
19	2.2	1	.01	e5.0	4	.05	11	1	.03
20	2.0	1	.01	e8.0	6	.13	11	1	.03
21	2.0	1	.01	e13	5	.18	11	2	.06
22	2.0	1	.01	e13	4	.14	11	2	.06
23	2.0	1	.01	e13	4	.14	11	2	.06
24	2.1	1	.01	e13	5	.18	11	2	.06
25	2.2	1	.01	13	5	.18	12	2	.06
26	2.2	1	.01	13	6	.21	14	3	.11
27	2.1	1	.01	12	5	.16	17	4	.18
28	2.2	1	.01	13	4	.14	21	5	.28
29	2.1	1	.01	13	3	.11	24	6	.39
30	2.3	1	.01	---	---	---	24	5	.32
31	2.3	1	.01	---	---	---	25	8	.54
TOTAL	68.0	---	0.31	167.2	---	1.79	401.2	---	2.83

e Estimated.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	30	11	.89	36	1	.10	8.6	2	.05
2	34	17	1.6	33	2	.18	7.8	2	.04
3	40	33	3.6	31	3	.25	7.0	1	.02
4	39	28	2.9	32	3	.26	6.4	3	.05
5	35	7	.66	33	3	.27	5.9	3	.05
6	31	4	.33	40	19	2.8	5.5	3	.04
7	31	5	.42	44	6	.71	5.1	2	.03
8	33	5	.45	40	6	.65	4.6	2	.02
9	33	5	.45	34	6	.55	4.2	2	.02
10	31	3	.25	29	5	.39	3.8	2	.02
11	32	3	.26	27	4	.29	3.4	2	.02
12	37	5	.50	26	4	.28	3.3	2	.02
13	48	7	.91	26	4	.28	3.4	2	.02
14	41	4	.44	24	3	.19	3.5	2	.02
15	36	3	.29	22	4	.24	5.8	3	.05
16	33	4	.36	21	4	.23	7.3	4	.08
17	92	58	15	20	4	.22	6.2	3	.05
18	62	12	2.0	18	4	.19	5.3	3	.04
19	47	6	.76	18	4	.19	4.4	3	.04
20	46	6	.75	18	4	.19	3.6	3	.03
21	47	6	.76	15	3	.12	3.1	2	.02
22	39	5	.53	14	3	.11	2.7	2	.01
23	35	4	.38	13	3	.11	2.5	2	.01
24	35	4	.38	12	3	.10	3.4	2	.02
25	39	4	.42	12	2	.06	3.7	2	.02
26	42	5	.57	11	2	.06	2.8	2	.02
27	42	6	.68	14	12	.69	2.3	2	.01
28	46	7	.87	15	16	.65	2.1	2	.01
29	55	6	.89	12	9	.29	3.0	3	.02
30	44	2	.24	10	4	.11	6.9	11	.20
31	---	---	---	9.3	3	.08	---	---	---
TOTAL	1235	---	38.54	709.3	---	10.84	137.6	---	1.05
JULY			AUGUST			SEPTEMBER			
1	4.1	2	.02	.30	1	.00	.25	1	.00
2	3.2	2	.02	.28	1	.00	.18	1	.00
3	2.8	2	.02	.25	1	.00	.19	1	.00
4	2.4	2	.01	.21	1	.00	.22	1	.00
5	2.1	1	.01	.21	1	.00	.19	1	.00
6	1.9	1	.01	.18	1	.00	.15	1	.00
7	1.8	1	.00	.16	1	.00	.14	1	.00
8	1.6	1	.00	.14	1	.00	.12	2	.00
9	1.5	1	.00	.15	1	.00	.10	2	.00
10	1.5	1	.00	.12	1	.00	.08	2	.00
11	2.0	1	.01	.09	1	.00	.09	2	.00
12	3.2	3	.03	.09	1	.00	.11	2	.00
13	2.7	2	.01	.12	1	.00	.08	2	.00
14	1.9	2	.01	.12	1	.00	.14	2	.00
15	1.7	2	.01	.18	1	.00	.16	2	.00
16	1.6	2	.01	.16	1	.00	.15	2	.00
17	1.5	2	.01	.10	1	.00	.19	3	.00
18	1.2	2	.01	.07	1	.00	.67	4	.01
19	1.1	2	.01	.04	1	.00	.35	2	.00
20	.96	2	.01	.04	1	.00	.30	2	.00
21	.90	2	.00	.06	1	.00	.26	2	.00
22	.89	1	.00	.09	1	.00	.21	2	.00
23	.86	1	.00	.09	1	.00	.19	2	.00
24	.82	1	.00	.10	1	.00	.22	2	.00
25	.76	1	.00	.09	1	.00	.25	2	.00
26	.62	1	.00	.07	1	.00	.26	2	.00
27	.51	1	.00	.03	1	.00	.25	2	.00
28	.47	1	.00	.01	1	.00	.24	2	.00
29	.43	1	.00	.03	1	.00	.22	2	.00
30	.36	1	.00	.27	1	.00	.20	2	.00
31	.31	1	.00	.41	1	.00	---	---	---
TOTAL	47.69	---	0.21	4.26	---	0.00	6.16	---	0.01
YEAR	2969.84		57.90						

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

LOCATION.--Lat 38°55'12", long 119°58'17", in NW 1/4 SE 1/4 sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 5 ft upstream from Martin Avenue Bridge, 500 ft upstream from Heavenly Valley Creek, and 1.8 mi east of Tahoe Valley.

DRAINAGE AREA.--36.7 mi².

PERIOD OF RECORD.--October 1960 to current year.

SPECIFIC CONDUCTANCE: March 1981 to September 1983.

WATER TEMPERATURE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1985, October 1987 to September 1988.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1985, October 1987 to September 1988.

GAGE.--Water-stage recorder and sharp-crested weir in culvert at bridge. Datum of gage is 6,241.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except for estimated daily discharges, which are fair. Minor diversions for local water supply upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 535 ft³/s, Feb. 1, 1963, gage height, 11.14 ft, from rating curve extended above 250 ft³/s on basis of computation of peak flow (weir formula); no flow for part of Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 26	1130	*71	*6.92				

Minimum daily, 4.9 ft³/s, Aug. 10, Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	12	e13	11	e10	14	19	25	14	12	5.4	7.1
2	6.3	11	13	11	10	13	21	24	14	11	6.3	6.5
3	6.2	12	e13	11	13	13	21	24	13	11	6.2	6.2
4	6.2	12	e13	10	16	13	22	24	12	10	6.2	6.4
5	6.3	12	e13	11	18	13	20	24	12	9.9	6.1	6.3
6	6.2	12	e13	11	14	14	19	24	12	9.1	8.2	6.1
7	6.0	12	e12	11	13	13	19	26	13	8.6	7.0	5.8
8	6.2	12	e12	11	12	13	20	27	13	9.6	5.6	5.7
9	6.2	15	e12	11	12	12	20	27	14	8.7	5.5	5.6
10	6.0	14	12	11	11	12	20	25	12	8.6	4.9	5.7
11	5.9	12	11	10	10	12	22	24	11	10	5.5	5.0
12	6.1	12	9.5	11	11	13	21	23	11	16	6.1	5.3
13	6.3	11	9.1	12	11	13	26	23	12	12	10	5.5
14	5.9	11	9.1	12	11	14	23	23	13	13	14	5.6
15	6.2	10	8.8	12	11	14	22	23	17	12	9.1	5.9
16	6.2	e11	9.8	12	13	13	20	23	18	11	7.6	5.5
17	6.3	e12	11	12	13	13	27	25	20	13	9.4	6.1
18	6.4	e13	11	12	13	12	27	23	19	10	6.4	9.1
19	6.6	e14	e12	12	12	12	23	22	17	9.1	5.8	7.0
20	6.7	15	e12	12	16	12	23	22	13	8.3	5.1	8.1
21	6.8	17	e12	12	16	13	24	20	12	8.4	5.2	5.1
22	6.7	14	e12	11	21	13	22	19	11	8.0	5.4	6.0
23	8.5	e14	12	11	17	13	21	18	10	7.8	5.7	5.6
24	8.8	13	12	11	15	12	22	18	12	7.9	5.8	5.3
25	9.8	13	11	10	14	13	24	18	14	7.9	5.8	5.2
26	43	13	10	10	14	14	26	18	12	7.6	5.7	5.4
27	17	13	11	10	14	14	27	17	10	7.5	5.6	5.3
28	13	e13	11	e10	14	16	28	17	9.9	7.0	5.7	5.2
29	12	e13	11	e10	14	16	28	16	12	7.1	6.9	4.9
30	11	e13	11	e10	---	17	29	15	14	6.8	7.9	5.1
31	e11	---	e11	e10	---	18	---	15	---	7.9	7.9	---
TOTAL	272.1	381	353.3	341	389	417	686	672	396.9	296.8	208.0	177.6
MEAN	8.78	12.7	11.4	11.0	13.4	13.5	22.9	21.7	13.2	9.57	6.71	5.92
MAX	43	17	13	12	21	18	29	27	20	16	14	9.1
MIN	5.9	10	8.8	10	10	12	19	15	9.9	6.8	4.9	4.9
AC-FT	540	756	701	676	772	827	1360	1330	787	589	413	352

e Estimated.

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.0	19.8	21.1	22.8	24.8	28.4	41.9	74.8	87.8	44.5	22.3	16.4
MAX	37.6	61.1	64.0	60.3	68.7	85.0	81.9	184	286	186	88.7	49.6
(WY)	1983	1984	1984	1970	1986	1986	1982	1969	1983	1983	1983	1983
MIN	5.19	7.43	8.18	8.00	8.02	11.0	15.7	14.2	10.9	5.21	3.43	3.71
(WY)	1989	1978	1991	1991	1991	1977	1988	1988	1988	1988	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	5588.1		4590.7		35.1	
ANNUAL MEAN	15.3		12.5		85.3	
HIGHEST ANNUAL MEAN					10.2	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	53	Mar 4	43	Oct 26	352	Feb 1 1963
LOWEST DAILY MEAN	5.8	Sep 24	4.9	Aug 10	2.5	Sep 7 1988
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 21	5.2	Sep 24	3.0	Sep 9 1977
INSTANTANEOUS PEAK FLOW			71	Oct 26	535	Feb 1 1963
INSTANTANEOUS PEAK STAGE			6.92	Oct 26	11.14	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	11080		9110		25450	
10 PERCENT EXCEEDS	32		22		77	
50 PERCENT EXCEEDS	12		12		22	
90 PERCENT EXCEEDS	6.3		6.0		8.5	

PYRAMID AND WINNEMUCCA LAKES BASIN

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 38°55'56", long 119°58'40", in SE 1/4 NW 1/4 sec. 3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, near center of bridge span on downstream side of U.S. Highway 50 bridge, 1.2 mi upstream from Lake Tahoe, and 1.9 mi northeast of South Lake Tahoe Post Office.

PERIOD OF RECORD.--Water years 1972-74, 1989 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1971 to June 1974, October 1988 to September 1992 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1988 to September 1992 (discontinued).

REMARKS.--Sediment samples were collected during most days where a water temperature is published. Discharge record used to compute sediment based on sum of Trout Creek near Tahoe Valley (station 10336780) and Heavenly Valley Creek near Tahoe Valley. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 300 mg/L, Jan. 15, 1974; minimum daily mean, 0 mg/L, at times in most years.

SEDIMENT LOAD: Maximum daily, 52 tons, Jan. 15, 1974; minimum daily, 0 ton, at times in most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 18 mg/L (estimated), Oct. 26; minimum daily mean, 2 mg/L, many days.

SEDIMENT LOAD: Maximum daily, 2.5 ton (estimated), Oct. 26; minimum daily, 0.05 ton, several days.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	21.0	---
3	---	4.5	1.0	.5	---	3.5	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	14.5	---	---
7	---	---	---	---	---	---	---	15.0	---	---	---	18.0
8	---	---	.0	---	---	3.0	---	13.0	16.0	---	---	---
9	---	---	---	---	---	---	5.0	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	16.0	---	---
12	---	---	---	.0	---	---	6.0	9.0	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	2.0	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	17.5	20.0	---
17	---	---	---	---	---	---	---	9.0	---	---	---	---
18	---	---	---	---	---	4.5	---	---	---	---	---	---
19	---	---	.5	---	---	---	4.0	---	---	17.5	---	15.0
20	---	1.0	---	---	1.5	---	---	---	---	---	---	---
21	---	---	---	---	---	---	9.5	---	16.5	---	16.0	---
22	---	---	---	---	---	4.0	---	12.0	---	---	---	---
23	---	---	---	---	1.0	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	11.5	14.0	---	---	---
26	---	---	---	.0	---	---	7.5	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	9.0	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	1.0	---	---	1.0	---	8.0	---	13.0	---	---	---	---

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	6.3	4	.07	12	4	.13	13	2	.07
2	6.3	4	.07	11	3	.09	13	2	.07
3	6.2	4	.07	12	3	.10	13	2	.07
4	6.2	4	.07	12	3	.10	13	2	.07
5	6.3	4	.07	12	3	.10	13	2	.07
6	6.2	4	.07	12	3	.10	13	2	.07
7	6.0	4	.06	12	3	.10	12	2	.06
8	6.2	4	.07	12	3	.10	12	2	.06
9	6.2	4	.07	15	4	.16	12	2	.06
10	6.0	4	.06	14	3	.11	12	2	.06
11	5.9	4	.06	12	3	.10	11	2	.06
12	6.1	4	.07	12	2	.06	9.5	2	.05
13	6.3	4	.07	11	2	.06	9.1	2	.05
14	5.9	4	.06	11	2	.06	9.1	2	.05
15	6.2	4	.07	10	2	.05	8.8	2	.05
16	6.2	4	.07	11	3	.09	9.8	2	.05
17	6.3	4	.07	12	3	.10	11	2	.06
18	6.4	4	.07	13	3	.11	11	2	.06
19	6.6	4	.07	14	4	.15	12	2	.06
20	6.7	4	.07	15	5	.20	12	2	.06
21	6.8	4	.07	17	5	.23	12	2	.06
22	6.7	5	.09	14	4	.15	12	2	.06
23	8.5	6	.14	14	4	.15	12	2	.06
24	8.8	6	.14	13	4	.14	12	2	.06
25	9.8	6	.16	13	4	.14	11	2	.06
26	43	18	2.5	13	3	.11	10	2	.05
27	17	7	.32	13	3	.11	11	2	.06
28	13	6	.21	13	3	.11	11	2	.06
29	12	5	.16	13	3	.11	11	2	.06
30	11	4	.12	13	2	.07	11	2	.06
31	11	4	.12	---	---	---	11	2	.06
TOTAL	272.1	---	5.39	381	---	3.39	353.3	---	1.86
JANUARY			FEBRUARY			MARCH			
1	11	2	.06	10	3	.08	14	4	.15
2	11	2	.06	10	3	.08	13	4	.14
3	11	2	.06	13	3	.11	13	4	.14
4	10	2	.05	16	3	.13	13	4	.14
5	11	2	.06	18	3	.15	13	4	.14
6	11	2	.06	14	3	.11	14	4	.15
7	11	2	.06	13	3	.11	13	4	.14
8	11	2	.06	12	3	.10	13	4	.14
9	11	2	.06	12	3	.10	12	4	.13
10	11	2	.06	11	3	.09	12	4	.13
11	10	2	.05	10	3	.08	12	4	.13
12	11	2	.06	11	3	.09	13	4	.14
13	12	2	.06	11	3	.09	13	5	.18
14	12	2	.06	11	3	.09	14	5	.19
15	12	2	.06	11	3	.09	14	5	.19
16	12	2	.06	13	4	.14	13	5	.18
17	12	3	.10	13	4	.14	13	5	.18
18	12	3	.10	13	4	.14	12	5	.16
19	12	3	.10	12	5	.16	12	5	.16
20	12	3	.10	16	8	.35	12	5	.16
21	12	3	.10	16	5	.22	13	5	.18
22	11	4	.12	21	6	.34	13	5	.18
23	11	4	.12	17	4	.18	13	5	.18
24	11	4	.12	15	3	.12	12	5	.16
25	10	4	.11	14	3	.11	13	5	.18
26	10	4	.11	14	3	.11	14	5	.19
27	10	4	.11	14	3	.11	14	6	.23
28	10	4	.11	14	4	.15	16	6	.26
29	10	3	.08	14	4	.15	16	6	.26
30	10	3	.08	---	---	---	17	6	.28
31	10	3	.08	---	---	---	18	6	.29
TOTAL	341	---	2.48	389	---	3.92	417	---	5.46

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	19	7	.36	25	5	.34	14	2	.08
2	21	9	.51	24	4	.26	14	3	.11
3	21	7	.40	24	4	.26	13	3	.11
4	22	7	.42	24	5	.32	12	4	.13
5	20	6	.32	24	6	.39	12	4	.13
6	19	6	.31	24	6	.39	12	5	.16
7	19	7	.36	26	7	.49	13	5	.18
8	20	6	.32	27	8	.58	13	6	.21
9	20	5	.27	27	7	.51	14	6	.23
10	20	6	.32	25	6	.40	12	6	.19
11	22	6	.36	24	5	.32	11	6	.18
12	21	7	.40	23	5	.31	11	6	.18
13	26	9	.63	23	5	.31	12	6	.19
14	23	7	.43	23	5	.31	13	7	.25
15	22	7	.42	23	4	.25	17	8	.37
16	20	6	.32	23	4	.25	18	8	.39
17	27	16	1.3	25	4	.27	20	7	.38
18	27	11	.80	23	4	.25	19	7	.36
19	23	5	.31	22	4	.24	17	7	.32
20	23	5	.31	22	4	.24	13	7	.25
21	24	7	.45	20	4	.22	12	7	.23
22	22	5	.30	19	4	.21	11	7	.21
23	21	5	.28	18	4	.19	10	7	.19
24	22	6	.36	18	4	.19	12	8	.26
25	24	5	.32	18	4	.19	14	6	.23
26	26	7	.49	18	4	.19	12	6	.19
27	27	8	.58	17	4	.18	10	6	.16
28	28	7	.53	17	3	.14	9.9	6	.16
29	28	6	.45	16	3	.13	12	8	.26
30	29	6	.47	15	2	.08	14	5	.19
31	---	---	---	15	2	.08	---	---	---
TOTAL	686	---	13.10	672	---	8.49	396.9	---	6.48
JULY			AUGUST			SEPTEMBER			
1	12	5	.16	5.4	5	.07	7.1	4	.08
2	11	5	.15	6.3	4	.07	6.5	4	.07
3	11	4	.12	6.2	4	.07	6.2	4	.07
4	10	4	.11	6.2	4	.07	6.4	4	.07
5	9.9	4	.11	6.1	4	.07	6.3	4	.07
6	9.1	4	.10	8.2	6	.13	6.1	4	.07
7	8.6	4	.09	7.0	6	.11	5.8	4	.06
8	9.6	6	.16	5.6	5	.08	5.7	4	.06
9	8.7	4	.09	5.5	5	.07	5.6	4	.06
10	8.6	4	.09	4.9	4	.05	5.7	4	.06
11	10	6	.16	5.5	4	.06	5.0	4	.05
12	16	9	.39	6.1	4	.07	5.3	4	.06
13	12	7	.23	10	6	.16	5.5	4	.06
14	13	8	.28	14	7	.26	5.6	4	.06
15	12	6	.19	9.1	5	.12	5.9	4	.06
16	11	7	.21	7.6	4	.08	5.5	4	.06
17	13	7	.25	9.4	7	.18	6.1	5	.08
18	10	6	.16	6.4	5	.09	9.1	7	.17
19	9.1	4	.10	5.8	5	.08	7.0	6	.11
20	8.3	4	.09	5.1	5	.07	8.1	7	.15
21	8.4	4	.09	5.2	5	.07	5.1	5	.07
22	8.0	4	.09	5.4	5	.07	6.0	5	.08
23	7.8	4	.08	5.7	5	.08	5.6	5	.08
24	7.9	4	.09	5.8	5	.08	5.3	4	.06
25	7.9	4	.09	5.8	5	.08	5.2	4	.06
26	7.6	4	.08	5.7	5	.08	5.4	4	.06
27	7.5	4	.08	5.6	5	.08	5.3	4	.06
28	7.0	4	.08	5.7	5	.08	5.2	4	.06
29	7.1	4	.08	6.9	5	.09	4.9	4	.05
30	6.8	4	.07	7.9	4	.09	5.1	4	.06
31	7.9	6	.13	7.9	4	.09	---	---	---
TOTAL	296.8	---	4.20	208.0	---	2.85	177.6	---	2.17
YEAR	4590.7		59.79						

10337000 LAKE TAHOE AT TAHOE CITY, CA

LOCATION.--Lat 39°10'51", long 120°07'06", in NE 1/4 NE 1/4 sec.5, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050101, on U.S. Coast Guard pier at Lake Forest, 1.1 mi northeast of Tahoe City, and 1.8 mi northeast of Lake Tahoe outlet dam on Truckee River at Tahoe City.

DRAINAGE AREA.--506 mi², at lake outlet.

PERIOD OF RECORD.--April 1900 to current year. Monthend elevations only for October 1943 to September 1957, published in WSP 1734. Prior to October 1961, published as "at Tahoe."

CHEMICAL DATA: Water year 1969, bimonthly; 1978, biannually; 1979, annually.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,220.00 ft above U.S. Bureau of Reclamation datum, 6,218.86 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1957, nonrecording gages at several sites near outlet of lake at same datum except for water years 1907, 1908 which were at a datum 5.5 ft higher.

Oct. 1, 1957, to May 8, 1958, water-stage recorder on left wingwall of dam at outlet of lake at same datum. May 9, 1958, to Sept. 30, 1968, water-stage recorder on pier, 1,000 ft east of dam at lake outlet.

REMARKS.--Lake levels regulated by a 17-gate concrete dam at outlet of lake; storage began about 1874. Monthly figures given represent usable contents. Usable capacity, 744,600 acre-ft between elevations 6,223 ft, natural rim of lake, and 6,229.1 ft, maximum permissible elevation by Federal Court decree. Lake elevations are referred to U.S. Bureau of Reclamation datum because that datum is used as the official reference point by all local, State, and Federal agencies. There are minor diversions for domestic purposes, irrigation, and power. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,231.26 ft, July 14, 15, 17, 18, 1907; minimum, 6,220.80 ft, Sept. 30, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,222.04 ft, Oct. 1, 2; minimum, 6,220.80 ft, Sept. 30.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on topographic information available in April 1959)

6,223	0	6,227	486,800
6,224	121,400	6,228	609,300
6,225	243,000	6,229.1	744,600
6,226	364,800		

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.04	1.75	1.61	1.50	1.35	1.58	1.70	1.81	1.86	1.72	1.52	1.16
2	2.04	1.75	1.59	1.50	1.36	1.58	1.70	1.81	1.85	1.71	1.50	1.12
3	2.03	1.74	1.60	1.50	1.35	1.56	1.70	1.81	1.84	1.70	1.49	1.09
4	2.02	1.74	1.58	1.54	1.34	1.57	1.69	1.81	1.84	1.68	1.48	1.12
5	2.01	1.74	1.58	1.51	1.34	1.62	1.69	1.82	1.83	1.64	1.46	1.08
6	1.99	1.74	1.56	1.48	1.34	1.63	1.70	1.84	1.82	1.65	1.44	1.06
7	1.99	1.73	1.60	1.49	1.35	1.64	1.70	1.85	1.81	1.66	1.45	1.04
8	1.97	1.73	1.57	1.48	1.35	1.64	1.70	1.86	1.81	1.64	1.44	1.04
9	1.95	1.75	1.56	1.48	1.37	1.64	1.69	1.86	1.79	1.64	1.43	1.04
10	1.94	1.73	1.57	1.48	1.36	1.64	1.69	1.85	1.78	1.63	1.45	1.05
11	1.92	1.73	1.54	1.50	1.41	1.64	1.68	1.85	1.75	1.65	1.43	e1.04
12	1.93	1.72	1.54	1.43	1.37	1.64	1.71	1.86	1.74	1.65	1.44	e1.03
13	1.92	1.71	1.54	1.48	1.39	1.63	1.71	1.86	1.70	1.66	1.42	e1.02
14	1.90	1.70	1.53	1.44	1.44	1.62	1.72	1.86	1.73	1.66	1.45	e1.01
15	1.90	1.66	1.54	1.43	1.46	1.62	1.72	1.86	1.81	1.67	1.43	e1.00
16	1.89	1.68	1.54	1.45	1.48	1.63	1.82	1.87	1.79	1.66	1.40	e.99
17	1.87	1.76	1.55	1.46	1.49	1.64	1.74	1.87	1.80	1.65	1.39	e.98
18	1.86	1.72	1.55	1.42	1.49	1.63	1.76	1.86	1.79	1.64	1.37	e.97
19	1.85	1.75	1.55	1.42	1.52	1.63	1.76	1.84	1.80	1.63	1.37	e.96
20	1.82	1.71	1.53	1.41	1.52	1.62	1.76	1.86	1.80	1.60	1.34	e.95
21	1.81	1.71	1.52	1.42	1.53	1.62	1.75	1.85	1.80	1.59	1.34	e.94
22	1.78	1.71	1.51	1.41	1.54	1.65	1.76	1.85	1.78	1.58	1.29	e.93
23	1.71	1.71	1.51	1.39	1.57	1.65	1.77	1.86	1.77	1.56	1.27	e.92
24	1.68	1.70	1.51	1.37	1.58	1.64	1.77	1.86	1.78	1.59	1.23	e.91
25	1.73	1.70	1.50	1.39	1.56	1.65	1.79	1.85	1.77	1.56	1.23	e.89
26	1.89	1.70	1.50	1.40	1.57	1.66	1.79	1.86	1.78	1.57	1.21	e.87
27	1.84	1.70	1.49	1.43	1.57	1.66	1.80	1.84	1.76	1.55	1.19	e.85
28	1.83	1.64	1.49	1.39	1.58	1.66	1.80	1.86	1.77	1.55	1.18	e.83
29	1.84	1.66	1.52	1.37	1.58	1.66	1.77	1.85	1.76	1.54	1.17	e.81
30	1.76	1.65	1.51	1.38	---	1.69	1.80	1.86	1.72	1.53	1.17	e.80
31	1.75	---	1.49	1.39	---	1.70	---	1.85	---	1.53	1.16	---
MEAN	1.89	1.71	1.54	1.44	1.45	1.63	1.74	1.85	1.79	1.62	1.36	.98
MAX	2.04	1.76	1.61	1.54	1.58	1.70	1.82	1.87	1.86	1.72	1.52	1.16
MIN	1.68	1.64	1.49	1.37	1.34	1.56	1.68	1.81	1.70	1.53	1.16	.80
a	0	0	0	0	0	0	0	0	0	0	0	0
b	0	0	0	0	0	0	0	0	0	0	0	0
CAL YR 1991	MEAN 2.13	MAX 2.71	MIN 1.49	b 0								
WTR YR 1992	MEAN 1.59	MAX 2.04	MIN .80	b 0								

e Estimated.

a Usable contents, in acre-feet, at end of month.

b Change in contents, in acre-feet.

NOTE.--Add 6,220 ft to obtain elevation, U.S. Bureau of Reclamation datum, at 2400 hours.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA

LOCATION.--Lat 39°09'59", long 120°08'36", in NE 1/4 NW 1/4 sec.7, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050102, on left bank 510 ft downstream from dam at outlet of Lake Tahoe at Tahoe City.

DRAINAGE AREA.--507 mi².

PERIOD OF RECORD.--July 1895 to February 1896, March 1900 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Prior to October 1961, published as "at Tahoe."

CHEMICAL DATA: Water years 1978 to 1981, monthly.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,216.59 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1912, nonrecording gage at site 370 ft upstream at different datum. Nov. 12, 1912, to Sept. 30, 1937, nonrecording gage; Oct. 1, 1937, to Aug. 21, 1957, water-stage recorder at datum 2.26 ft higher; and Aug. 22, 1957, to July 10, 1960, at datum 2.42 ft higher; all at site 270 ft upstream.

REMARKS.--Records poor. Stage-discharge relation affected by beaver dams and ice. Flow completely regulated by dam at outlet of Lake Tahoe (station 10337000), 510 ft upstream. There are several diversions for irrigation, power, and domestic water supply. In addition, sewer effluent is pumped from the Lake Tahoe basin. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s, June 19, 1969, gage height, 9.32 ft; no flow for parts of many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, Oct. 26, gage height, 2.86 ft; minimum daily, 0.10 ft³/s many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.20	e.20 X	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
2	e.20	e.20	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
3	e.20	e.20	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
4	e.20	e.20	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
5	e.20	e.20	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
6	e.20	e.20	e.20	e.20	e.20	e.40	e.35	e.10	e.10	e.20	e.20	e.10
7	e.20	e.20	e.20	e.20	e.20	e.40	e.30	e.30	e.10	e.20	e.20	e.10
8	e.20	e.20	e.20	e.20	e.20	e.40	e.30	e.60	e.10	e.20	e.20	e.10
9	e.20	e.20	e.20	e.20	e.20	e.40	e.30	e.30	e.10	e.20	e.20	e.15
10	e.20	e.20	e.20	e.20	e.20	e.40	e.30	e.10	e.10	e.20	e.20	e.15
11	e.20	e.20	e.20	e.20	e.20	e.40	e.30	e.10	e.10	e.20	e.20	e.15
12	e.20	e.20	e.20	e.20	e.20	e.40	e.50	e.10	e.10	e.50	e.20	e.15
13	e.20	e.20	e.20	e.20	e.20	e.35	e.40	e.10	e.10	e.20	e.20	e.15
14	e.20	e.20	e.20	e.20	e.20	e.35	e.35	e.10	e.10	e.20	e.20	e.15
15	e.20	e.20	e.20	e.20	e.20	e.35	e.30	e.10	e.20	e.20	e.20	e.15
16	e.20	e.20	e.20	e.20	e.20	e.35	e.50	e.10	e.40	e.20	e.20	e.15
17	e.20	e.20	e.20	e.20	e.20	e.35	e.40	e.10	e.20	e.20	e.20	e.30
18	e.20	e.20	e.20	e.20	e.20	e.35	e.35	e.10	e.20	e.20	e.20	e.15
19	e.20	e.20	e.20	e.20	e.40	e.35	e.30	e.10	e.20	e.20	e.15	e.15
20	e.20	e.50	e.20	e.20	e.10	e.35	e.30	e.10	e.20	e.20	e.15	e.15
21	e.20	e.20	e.20	e.20	e.15	e.35	e.25	e.10	e.20	e.20	e.15	e.15
22	e.20	e.20	e.20	e.20	e.10	e.35	e.25	e.10	e.20	e.20	e.15	e.15
23	e.20	e.20	e.20	e.20	e.40	e.35	e.25	e.10	e.20	e.20	e.15	e.15
24	e.20	e.20	e.20	e.20	e.40	e.35	e.20	e.10	e.20	e.20	e.15	e.20
25	e.50	e.20	e.20	e.20	e.40	e.35	e.20	e.10	e.20	e.20	e.15	e.20
26	e.2.5	e.20	e.20	e.20	e.40	e.35	e.20	e.10	e.20	e.20	e.15	e.20
27	e.50	e.20	e.20	e.20	e.40	e.35	e.15	e.10	e.20	e.20	e.15	e.20
28	e.20	e.20	e.20	e.20	e.40	e.35	e.15	e.10	e.30	e.20	e.10	e.20
29	e.20	e.20	e.20	e.20	e.40	e.35	e.15	e.10	e.50	e.20	e.10	e.20
30	e.20	e.20	e.20	e.20	---	e.35	e.10	e.10	e.30	e.20	e.10	e.20
31	e.20	---	e.20	e.20	---	e.35	---	e.10	---	e.20	e.10	---
TOTAL	9.10	6.30	6.20	6.20	10.30	11.45	8.90	4.00	5.30	6.50	5.35	4.60
MEAN	.29	.21	.20	.20	.36	.37	.30	.13	.18	.21	.17	.15
MAX	2.5	.50	.20	.20	1.5	.40	.50	.60	.50	.50	.20	.30
MIN	.20	.20	.20	.20	.20	.35	.10	.10	.10	.20	.10	.10
AC-FT	18	12	12	12	20	23	18	7.9	11	13	11	9.1

e Estimated.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	190	206	229	225	277	248	169	151	222	281	324	275
MAX	413	1575	2209	2088	1767	2235	1806	1746	1673	1071	638	687
(WY)	1910	1983	1984	1984	1983	1986	1983	1958	1969	1983	1918	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1932	1927	1925	1925	1925	1925	1919	1919	1921	1931	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1909 - 1992	
ANNUAL TOTAL	120.20		84.20		231	
ANNUAL MEAN	.33		.23		1150	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	10	Mar 4	2.5	Oct 26	2620	Jun 20 1969
LOWEST DAILY MEAN	.20	Jan 1	.10	Apr 30	.00	Jan 4 1914
ANNUAL SEVEN-DAY MINIMUM	.20	Jan 1	.10	Apr 30	.00	Jan 23 1914
INSTANTANEOUS PEAK FLOW			unknown		2630	Jun 19 1969
INSTANTANEOUS PEAK STAGE			2.86	Oct 26	9.32	Jun 19 1969
ANNUAL RUNOFF (AC-FT)	238		167		167100	
10 PERCENT EXCEEDS	.70		.35		471	
50 PERCENT EXCEEDS	.20		.20		148	
90 PERCENT EXCEEDS	.20		.10		.00	

PYRAMID AND WINNEMUCCA LAKES BASIN

10338400 DONNER LAKE NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'30", long 120°16'53", in SE 1/4 NW 1/4 sec.14, T.17 N., R.15 E., Nevada County, Hydrologic Unit 16050102, on north shore 2.5 mi upstream from outlet gates and 4.9 mi west of Truckee.

DRAINAGE AREA.--14.0 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Westpac Utilities).

REMARKS.--Lake levels regulated by a concrete dam at the outlet constructed in 1928. Usable capacity, 9,490 acre-ft between elevations 5,923.8 and 5,935.8 ft, maximum storage level. Water is used for irrigation and power development downstream. Records, including extremes, represent usable contents. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,490 acre-ft, May 5, June 7-9, 1989, elevation, 5,935.8 ft; minimum, 2,510 acre-ft, Jan. 24, 28-31, 1991, elevation, 5,927.23 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,630 acre-ft, May 27, 28, 30, elevation, 5,934.79 ft; minimum, 2,770 acre-ft, several days, elevation, 5,927.58 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Westpac Utilities, dated Aug. 22, 1980)

5,923.8	0	5,932	6,310
5,926.0	1,600	5,934	7,970
5,928.0	3,120	5,936	9,670
5,930.0	4,690		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3760	3140	2930	2850	2780	3580	4460	7900	8610	7780	6170	5530
2	3720	3120	2920	2840	2780	3590	4630	7940	8620	7680	6160	5530
3	3670	3100	2910	2840	2770	3570	4820	7980	8610	7570	6150	5470
4	3630	3090	2900	2840	2770	3560	4960	8030	8610	7490	6110	5430
5	3560	3060	2890	2880	2790	3630	5070	8120	8590	7410	6100	5400
6	3530	3040	2860	2870	2800	3650	5170	8150	8580	7310	6080	5370
7	3480	3030	2900	2850	2810	3620	5250	8260	8570	7180	6060	5350
8	3430	3020	2880	2850	2810	3620	5340	8320	8580	7000	6010	5330
9	3400	3030	2890	2850	2820	3590	5460	8390	8540	6830	5990	5280
10	3370	3030	2860	2840	2850	3590	5540	8390	8530	6690	5960	5250
11	3330	3030	2870	2830	2880	3580	5650	8420	8500	6560	5950	5120
12	3290	3000	2860	2830	2920	3580	5830	8470	8470	6460	5940	4970
13	3270	2970	2850	2830	2930	3580	5970	8490	8450	6370	5930	4800
14	3240	2930	2850	2810	2970	3600	6110	8520	8450	6360	5910	4660
15	3220	2930	2840	2820	3000	3620	6230	8530	8470	6360	5890	4460
16	3190	2880	2840	2820	3080	3630	6340	8550	8470	6380	5860	4330
17	3160	3050	2830	2800	3070	3590	6630	8540	8470	6360	5850	4190
18	3130	3030	2890	2800	3080	3590	6780	8560	8470	6360	5810	4030
19	3090	3020	2870	2800	3160	3590	6880	8570	8440	6340	5800	3900
20	3040	3070	2880	2800	3260	3590	6970	8600	8420	6330	5770	3780
21	3000	3060	2880	2790	3340	3580	7090	8610	8420	6320	5720	3670
22	2980	3030	2870	2790	3430	3590	7160	8590	8410	6300	5690	3580
23	2950	3030	2860	2780	3460	3580	7240	8600	8400	6280	5670	3510
24	2920	3010	2840	2770	3480	3580	7310	8600	8410	6290	5650	3450
25	3030	3010	2850	2770	3500	3600	7400	8590	8360	6270	5640	3380
26	3290	2990	2840	2770	3510	3670	7480	8610	8240	6240	5620	3320
27	3260	2990	2830	2770	3540	3780	7570	8630	8140	6240	5610	3270
28	3240	3000	2840	2780	3560	3890	7670	8630	8010	6220	5590	3240
29	3170	2950	2880	2770	3580	4010	7710	8610	7960	6220	5600	3210
30	3180	2930	2870	2770	---	4160	7820	8630	7870	6210	5580	3160
31	3160	---	2860	2770	---	4300	---	8620	---	6200	5570	---
MAX	3760	3140	2930	2880	3580	4300	7820	8630	8620	7780	6170	5530
MIN	2920	2880	2830	2770	2770	3560	4460	7900	7870	6200	5570	3160
a	5928.06	5927.77	5927.69	5927.58	5928.61	5929.53	5933.83	5934.78	5933.89	5931.87	5931.10	5928.06
b	-650	-230	-70	-90	+810	+720	+3520	+800	-750	-1670	-630	-2410

CAL YR 1991 MAX 9450 MIN 2510 b +280
WTR YR 1992 MAX 8630 MIN 2770 b -650

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'25", long 120°14'00", in SW 1/4 NW 1/4 sec.17, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, in Donner Memorial State Park, on left bank 10 ft downstream from bridge on Donner Memorial State Park Road, 0.2 mi downstream from outlet of Donner Lake, 0.7 mi upstream from Cold Creek, and 2.5 mi west of Truckee.

DRAINAGE AREA.--14.3 mi².

PERIOD OF RECORD.--November 1909 to August 1910, January 1929 to October 1935, January 1936 to March 1938, July to October 1938, January 1939 to February 1943, June 1943 to December 1953, May 1955 to December 1957, October 1958 to current year. Monthly discharge only prior to October 1958, published in WSP 1314 and 1734.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder and concrete control, completed Oct. 3, 1989. Datum of gage is 5,924.40 ft above National Geodetic Vertical Datum of 1929. Nov. 1, 1909, to Aug. 31, 1910, nonrecording gage at different datum. January 1929 to December 1957, water-stage recorder at same site at unknown datum.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated at dam at outlet of Donner Lake (station 10338400) since 1928. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 707 ft³/s, Feb. 19, 1986; gage height, 4.83 ft; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 88 ft³/s, July 7, Sept. 11, gage height, 3.76 ft; minimum daily, 0.65 ft³/s, July 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992¹
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	12	10	7.3	4.9	32	1.5	6.0	2.5	50	1.8	3.6
2	20	11	9.4	6.9	5.0	32	1.5	4.2	2.4	49	1.1	7.6
3	20	11	9.4	6.7	4.9	31	1.4	3.0	2.2	48	.78	12
4	20	11	8.9	6.4	5.0	31	1.1	2.8	2.0	37	4.6	11
5	19	11	8.9	7.2	5.1	32	.81	2.7	1.8	43	5.8	11
6	18	10	8.6	7.3	5.5	34	2.7	2.5	2.3	47	2.2	11
7	17	10	9.2	7.3	5.5	33	5.0	2.2	2.7	67	5.1	9.8
8	17	10	9.0	7.1	5.8	32	5.0	2.1	2.4	84	11	9.6
9	16	10	8.9	6.9	6.0	32	5.0	1.9	2.7	82	10	9.8
10	15	10	8.4	6.8	6.3	31	5.0	1.9	2.6	72	3.5	30
11	15	10	8.4	6.5	7.8	31	5.5	1.9	2.4	65	4.9	61
12	14	9.6	7.9	6.4	8.6	31	5.5	2.0	2.6	64	7.8	76
13	14	10	7.8	6.4	9.3	31	5.5	2.0	2.2	29	7.9	78
14	14	11	7.5	6.0	9.4	31	5.9	2.0	2.2	2.5	7.4	79
15	13	10	7.3	5.9	12	31	5.9	2.0	2.3	1.3	6.4	78
16	13	9.4	7.3	5.9	13	33	6.0	2.6	2.2	1.0	6.0	72
17	12	11	7.0	5.7	13	32	6.4	2.7	2.3	.92	5.9	76
18	12	13	7.6	5.7	13	30	6.9	2.4	2.4	1.4	5.8	75
19	11	12	8.1	5.9	14	30	6.9	2.2	2.3	.98	5.7	66
20	11	13	7.8	5.9	19	29	6.9	2.0	2.3	1.3	5.5	59
21	10	13	7.7	5.7	22	29	6.9	1.9	2.3	1.1	5.2	54
22	9.9	13	7.3	5.5	26	29	6.5	1.9	2.3	.65	4.6	36
23	9.3	12	7.3	5.5	29	30	6.4	2.6	2.1	1.0	4.3	25
24	8.8	12	7.1	5.4	30	30	6.3	2.6	2.4	1.1	4.1	28
25	8.7	12	6.9	5.5	30	14	6.0	1.9	2.8	1.2	3.9	31
26	14	11	6.8	5.3	30	1.9	6.1	1.9	50	1.2	3.9	28
27	14	12	6.4	5.1	31	1.9	5.9	2.1	53	1.4	3.9	25
28	14	12	6.6	4.9	31	2.0	5.9	2.1	52	3.1	3.8	23
29	14	11	7.4	5.0	32	1.9	6.1	2.2	51	2.9	3.8	21
30	13	10	7.7	5.0	---	1.8	6.4	3.1	50	1.1	3.7	19
31	12	---	7.3	4.8	---	1.7	---	4.3	---	1.0	3.7	---
TOTAL	439.7	333.0	245.9	187.9	434.1	772.2	152.91	77.7	339.9	762.15	154.08	1125.4
MEAN	14.2	11.1	7.93	6.06	15.0	24.9	5.10	2.51	11.3	24.6	4.97	37.5
MAX	21	13	10	7.3	32	34	6.9	6.0	53	84	11	79
MIN	8.7	9.4	6.4	4.8	4.9	1.7	.81	1.9	1.8	.65	.78	3.6
AC-FT	872	661	488	373	861	1530	303	154	674	1510	306	2230

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.0	28.8	31.4	29.7	30.8	33.5	49.8	84.4	44.4	11.8	8.21	23.1
MAX	85.7	195	214	174	197	182	144	243	244	67.2	52.7	99.1
(WY)	1973	1951	1951	1970	1986	1986	1940	1952	1983	1934	1932	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1929	1929	1929	1929	1929	1929	1937	1936	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1929 - 1992	
ANNUAL TOTAL	7021.19		5024.94			
ANNUAL MEAN	19.2		13.7		34.7	
HIGHEST ANNUAL MEAN					83.3	
LOWEST ANNUAL MEAN					7.71	
HIGHEST DAILY MEAN	108	Aug 14	84	Jul 8	700	Nov 21 1950
LOWEST DAILY MEAN	.28	Aug 25	.65	Jul 22	.00	Jan 1 1929
ANNUAL SEVEN-DAY MINIMUM	.72	Apr 15	1.0	Jul 19	.00	Jan 1 1929
INSTANTANEOUS PEAK FLOW			88	Jul 7	707	Feb 19 1986
INSTANTANEOUS PEAK STAGE			3.76	Jul 7	4.83	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	13930		9970		25160	
10 PERCENT EXCEEDS	67		32		95	
50 PERCENT EXCEEDS	7.3		7.3		12	
90 PERCENT EXCEEDS	1.7		2.0		.00	

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 39°18'08", long 120°07'13", in SW 1/4 SW 1/4 sec.20, T.17 N., R.17 E., Placer County, Hydrologic Unit 16050102, 4.0 mi southeast of Truckee. Water-quality samples are collected 300 ft upstream from State Highway 267.

DRAINAGE AREA.--25.8 mi².

PERIOD OF RECORD.--Water years 1975 to current year.

CHEMICAL DATA: Water years 1975 to current year.

WATER TEMPERATURE: Water years 1975 to September 1988.

SEDIMENT DATA: Water years 1975, 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October to November 1974, August 1975 to September 1988.

REVISED RECORDS.--WDR CA-80-3: Drainage area.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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 SATUR- ATION
OCT 08...	1030	1.8	153	7.9	7.5	2.6	620	9.6	99
JAN 07...	1145	3.8	137	8.0	0.0	--	613	11.6	99
APR 07...	1050	9.8	110	7.8	4.5	2.4	620	10.7	102
JUN 16...	1130	3.0	135	8.2	10.0	--	620	10.4	114
AUG 13...	0950	1.5	145	7.9	14.0	3.0	623	7.7	92

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (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)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 08...	87	72	<0.050	0.020	<0.20	0.030	--	9	2
JAN 07...	79	65	<0.050	0.010	<0.20	0.080	0.020	<1	1
APR 07...	61	50	<0.050	<0.010	0.20	0.020	<0.010	6	1
JUN 16...	83	68	<0.050	0.020	<0.20	<0.010	0.020	2	<1
AUG 13...	93	76	<0.050	0.040	<0.20	0.020	<0.010	2	<1

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 08...	590	360	7	<1	<4	40	32	20	4
JAN 07...	260	140	1	<1	<4	20	14	<10	3
APR 07...	310	190	<1	<1	<4	20	15	<10	3
JUN 16...	470	280	<1	<1	<4	30	14	<10	<3
AUG 13...	760	370	1	<1	<4	100	68	20	<3

PYRAMID AND WINNEMUCCA LAKES BASIN

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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)
OCT					
08...	1030	1.8	7.5	2	0.01
JAN					
07...	1145	3.8	0.0	2	0.02
APR					
07...	1050	9.8	4.5	3	0.08
JUN					
16...	1130	3.0	10.0	4	0.03
AUG					
13...	0950	1.5	14.0	6	0.02

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 39°19'38", long 120°06'48", in NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, near intake structure at Martis Creek Dam, 2.0 mi upstream from mouth, and 3.5 mi east of Truckee.

DRAINAGE AREA.--39.6 mi².

PERIOD OF RECORD.--

WATER-CONTENT DATA: Water years 1972-90.

CHEMICAL DATA: Water years 1975 to current year.

SEDIMENT DATA: Water years 1975-76, 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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, (PER- CENT SATUR- ATION)	BICAR- BONATE WATER DIS IT MG/L AS HCO3	CAR- BONATE WATER DIS IT MG/L AS CO3
OCT										
08...	1100	159	8.6	16.0	3.7	620	8.2	103	91	1
JAN										
07...	1415	103	8.0	1.0	2.9	615	10.2	89	62	0
APR										
07...	1130	128	8.3	10.5	2.6	620	10.0	110	73	0
JUN										
16...	1210	130	9.7	16.5	--	620	8.2	104	34	22
AUG										
13...	1030	149	10.1	21.0	2.3	625	10.3	142	23	33

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT										
08...	76	<0.050	0.020	0.48	0.50	--	0.040	0.010	3	<1
JAN										
07...	51	0.220	0.060	0.64	0.70	0.92	0.140	0.030	1	1
APR										
07...	60	<0.050	<0.010	--	0.30	--	0.020	<0.010	2	1
JUN										
16...	64	<0.050	0.020	0.28	0.30	--	0.020	0.020	6	2
AUG										
13...	73	<0.050	<0.010	--	1.2	--	0.080	<0.010	3	<1

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT									
08...	140	45	2	<1	<4	30	8	<10	<3
JAN									
07...	--	120	<1	<1	<4	60	5	10	<3
APR									
07...	380	140	3	<1	<4	30	4	10	5
JUN									
16...	230	77	--	4	<4	30	2	10	<3
AUG									
13...	140	45	2	<1	<4	40	8	20	<3

PYRAMID AND WINNEMUCCA LAKES BASIN

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA--Continued

SUSPENDED-SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)
OCT 08...	1100	16.0	2
JAN 07...	1415	1.0	27
APR 07...	1130	10.5	7
JUN 16...	1210	16.5	1
AUG 13...	1030	21.0	7

10339400 MARTIS CREEK NEAR TRUCKEE, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 39°19'44", long 120°07'00", in NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.2 mi downstream from Martis Creek Lake Dam, 1.8 mi upstream from mouth, and 3.5 mi east of Truckee.

DRAINAGE AREA.--39.9 mi².

PERIOD OF RECORD.--

WATER-DISCHARGE DATA: Water years 1959-90.

CHEMICAL DATA: Water years 1975 to current year.

WATER TEMPERATURE: Water years 1975 to current year.

SEDIMENT DATA: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1974 to current year.

INSTRUMENTATION.--Digital water-temperature recorder since October 1974.

REMARKS.--Water temperature is affected by regulation from Martis Creek Lake Dam (station 10339380). Missing record Sept. 2-30 due to equipment malfunction. Unpublished chemical-quality, water temperature, and sediment data prior to October 1974, available at U.S. Geological Survey office in Carson City, NV.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 24.5°C, July 22, Aug. 9, 1992; minimum recorded, 0.0°C, Feb. 16, 17, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 24.5°C, July 22, Aug. 9; minimum recorded, 1.0°C, Nov. 21-23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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)	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	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)
OCT 08...	1215	3.4	157	9.0	16.0	2.0	620	10.7	134	75
JAN 07...	1230	5.9	152	8.5	4.5	0.10	615	10.6	102	91
APR 07...	1350	16	128	8.6	11.5	2.7	620	10.5	119	68
JUN 16...	1430	4.3	131	9.8	18.5	--	620	10.0	132	26
AUG 13...	1310	2.2	143	9.3	22.0	2.5	625	9.5	133	68
OCT 08...	7	74	<0.050	0.020	0.28	0.30	--	0.030	<0.010	3
JAN 07...	1	76	0.055	<0.010	--	0.20	0.26	0.030	0.020	<1
APR 07...	2	59	<0.050	<0.010	--	0.30	--	0.040	<0.010	2
JUN 16...	27	66	<0.050	0.020	0.18	0.20	--	0.010	0.010	<1
AUG 13...	11	76	0.097	0.060	0.64	0.70	0.80	0.070	0.030	1

10339400 MARTIS CREEK NEAR TRUCKEE, CA-Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 08...	<1	230	58	2	<1	<4	50	19	<10	<3
JAN 07...	1	220	90	<1	<1	<4	30	19	30	<3
APR 07...	<1	380	160	1	<1	<4	40	15	10	<3
JUN 16...	<1	240	100	<1	<1	<4	40	7	<10	<3
AUG 13...	<1	280	80	<1	<1	<4	110	44	10	5

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 08...	1215	3.4	16.0	3	0.03
JAN 07...	1230	5.9	4.5	2	0.03
APR 07...	1350	16	11.5	6	0.27
JUN 16...	1430	4.3	18.5	3	0.03
AUG 13...	1310	2.2	22.0	9	0.05

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	13.0	9.0	6.0	4.5	2.5	5.0	3.5	4.5	2.5	5.0	3.5
2	17.5	12.0	8.5	5.5	5.0	3.0	5.0	3.0	5.0	2.5	5.0	4.0
3	16.5	12.0	8.5	6.0	5.5	3.0	4.5	3.0	5.0	2.5	5.5	4.0
4	17.0	11.5	9.0	6.0	5.5	3.0	5.0	3.5	5.5	3.0	5.5	4.0
5	17.0	12.0	9.5	6.5	5.5	3.0	4.5	3.0	4.0	2.5	6.0	4.0
6	17.0	12.0	9.5	6.5	5.5	4.0	5.5	3.0	4.5	3.0	5.5	4.0
7	16.5	12.0	9.5	6.5	4.5	3.0	4.5	3.0	5.0	3.5	5.5	4.5
8	16.5	12.0	10.0	7.0	5.0	3.0	5.0	2.5	4.5	3.5	6.0	4.5
9	16.0	11.5	9.5	7.5	5.5	3.0	5.0	2.5	5.0	3.0	6.0	4.5
10	15.5	11.0	9.5	7.5	5.5	3.5	5.0	3.0	5.0	3.5	6.5	4.5
11	16.5	11.0	9.5	7.0	5.5	3.5	4.5	2.5	5.0	2.5	6.5	4.5
12	16.5	12.0	9.5	7.0	5.5	3.0	5.0	2.5	4.0	3.0	6.5	4.5
13	16.0	11.5	9.5	6.5	5.5	3.0	4.5	2.5	4.5	3.0	7.0	4.5
14	16.5	11.0	7.5	6.0	5.5	3.5	5.0	2.5	5.0	2.0	7.0	4.5
15	16.0	11.0	8.0	5.5	5.5	3.5	5.0	3.0	4.5	2.5	6.5	4.5
16	15.5	11.0	8.0	5.0	5.0	3.5	4.5	3.0	4.5	2.5	6.5	4.5
17	16.0	11.0	6.0	5.0	4.5	3.5	5.0	3.0	4.5	3.0	7.0	5.0
18	15.5	11.0	6.0	4.5	4.5	3.0	5.0	2.5	4.0	3.0	7.5	5.0
19	15.0	11.0	6.0	4.5	5.0	3.0	5.0	2.5	4.5	3.5	7.5	5.0
20	14.5	10.5	6.0	4.5	5.0	3.0	5.0	2.5	4.0	3.0	8.0	5.5
21	14.5	10.0	5.5	1.0	5.0	3.0	5.0	2.5	3.5	2.5	8.0	5.5
22	13.5	10.0	5.0	1.0	5.0	3.5	5.0	2.5	3.0	2.5	7.0	5.0
23	12.5	9.5	3.5	1.0	5.5	3.5	5.0	2.5	3.5	2.5	7.5	5.5
24	12.5	9.0	6.5	3.5	5.5	3.0	5.0	2.5	4.0	2.5	8.0	6.0
25	11.0	9.5	6.5	4.5	5.5	3.5	5.5	3.0	4.5	2.5	8.5	6.0
26	10.0	9.5	6.0	4.0	5.0	3.5	5.0	2.5	4.5	2.5	8.5	6.5
27	10.0	8.0	5.0	4.0	5.0	3.5	5.5	2.5	4.5	3.0	8.5	6.5
28	9.5	7.0	5.5	3.5	5.0	3.5	5.0	2.5	5.0	3.0	9.5	7.0
29	9.0	7.0	4.0	3.0	4.5	3.5	5.5	2.5	5.0	3.5	9.5	7.5
30	9.5	6.5	4.5	3.0	5.0	3.5	5.0	2.5	---	---	9.0	8.0
31	9.0	6.0	---	---	5.0	3.0	5.0	3.0	---	---	9.5	8.0
MONTH	17.5	6.0	10.0	1.0	5.5	2.5	5.5	2.5	5.5	2.0	9.5	3.5
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	8.0	15.5	13.0	21.0	16.0	19.5	14.0	24.0	15.5	20.5	14.0
2	11.5	8.0	16.5	12.5	22.5	16.0	20.5	14.0	23.0	15.5	---	---
3	12.0	9.0	17.0	12.5	23.0	16.0	20.0	14.5	23.5	15.0	---	---
4	12.0	9.5	17.0	13.0	23.0	16.0	21.0	14.5	24.0	15.0	---	---
5	11.5	9.5	17.5	13.0	23.0	16.0	21.0	14.0	24.0	15.0	---	---
6	11.0	9.5	17.5	13.5	22.5	16.0	19.5	14.0	23.5	15.0	---	---
7	12.0	9.0	19.0	14.0	22.5	16.0	22.0	14.0	23.5	15.0	---	---
8	12.0	9.5	18.5	14.0	23.0	16.0	22.0	14.0	24.0	15.5	---	---
9	12.5	10.0	18.0	14.0	23.0	16.0	22.0	14.0	24.5	15.5	---	---
10	12.0	10.5	19.0	13.5	22.0	16.0	22.0	14.5	23.0	15.5	---	---
11	13.0	10.0	19.0	14.0	23.0	16.5	21.0	15.0	24.0	16.0	---	---
12	10.5	10.0	18.5	14.0	20.0	15.0	19.5	15.5	23.5	17.0	---	---
13	12.0	9.5	19.0	14.5	20.5	14.0	22.0	15.5	22.5	16.5	---	---
14	12.0	10.0	19.5	14.5	17.5	14.5	22.0	16.0	22.5	17.0	---	---
15	12.0	10.0	20.0	14.5	17.0	14.0	22.5	16.0	22.0	17.5	---	---
16	12.0	10.0	20.0	14.5	19.0	14.0	20.5	16.5	23.0	17.0	---	---
17	13.0	10.5	19.5	15.0	18.5	14.0	21.5	16.5	23.0	16.5	---	---
18	12.5	10.5	19.5	14.5	18.5	14.0	22.0	16.0	23.0	16.5	---	---
19	13.0	10.0	19.0	14.5	19.0	14.0	22.5	15.5	23.0	16.0	---	---
20	13.0	10.5	18.5	14.5	20.0	14.0	22.0	15.5	23.0	16.0	---	---
21	14.5	10.5	19.5	14.0	20.5	14.5	23.0	15.5	22.0	15.5	---	---
22	14.0	11.0	20.0	13.5	21.0	14.5	24.5	14.5	22.0	15.0	---	---
23	14.0	11.0	20.0	14.0	20.0	15.0	23.5	9.0	22.0	14.0	---	---
24	14.0	10.5	19.5	14.0	20.0	15.5	23.0	16.0	20.0	14.0	---	---
25	15.0	11.0	19.5	14.5	18.5	15.0	22.5	16.0	21.5	13.5	---	---
26	15.0	12.0	20.5	15.0	22.0	15.0	23.0	15.5	21.5	13.5	---	---
27	16.0	12.0	21.0	15.0	21.5	15.0	23.5	16.0	21.5	13.5	---	---
28	16.5	12.5	20.0	15.0	18.5	16.0	24.0	16.0	21.0	14.0	---	---
29	18.0	13.0	21.5	15.0	17.5	15.0	24.0	16.0	21.0	15.0	---	---
30	17.0	13.5	21.0	15.5	18.5	14.5	24.0	16.0	20.0	14.5	---	---
31	---	---	22.0	16.0	---	---	23.5	15.5	20.5	14.5	---	---
MONTH	18.0	8.0	22.0	12.5	23.0	14.0	24.5	9.0	24.5	13.5	---	---

10340300 PROSSER CREEK RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'46", long 120°08'12", in NW 1/4 SW 1/4 sec.30, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house on Prosser Creek Dam on Prosser Creek, 1.4 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.--50.3 mi².

PERIOD OF RECORD.--January 1963 to current year. January 1963 to September 1987 (monthend elevations and contents only). Prior to October 1976, published as "near Boca."

REVISED RECORDS.--WDR CA-76-3: 1975. WDR CA-79-3: Drainage area.

GAGE.--Nonrecording gage read five times weekly. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Jan. 30, 1963. Usable capacity, 28,641 acre-ft between elevations 5,660.6 ft, top of inactive contents, and 5,741.2 ft, crest of spillway. Inactive contents, 1,201 acre-ft, includes 83 acre-ft dead contents below elevation 5,637.0 ft. Figures given represent total contents at 0800 hours. Reservoir is used for flood control, enhancement of fishery, and recreation. See schematic diagram of Truckee River basin.

COOPERATION.--Gage readings and capacity table were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 32,269 acre-ft, June 1, 1973, elevation, 5,744.33 ft; minimum since reservoir first filled, 66 acre-ft, Oct. 10-12, 1983, elevation, 5,635.75 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents observed, 10,216 acre-ft, Nov. 12, elevation, 5,704.82 ft; minimum observed, 9,595 acre-ft, Aug. 11-13, elevation, 5,703.00 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated August 1962)

5,630	17	5,680	3,791	5,720	16,643
5,640	143	5,690	5,901	5,730	22,220
5,650	491	5,700	8,636	5,740	28,949
5,660	1,148	5,710	12,147	5,750	37,046
5,670	2,230				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9784	10105	---	---	---	---	9987	9811	---	9821	---	9655
2	9790	---	9831	9703	---	9706	9991	---	9764	9831	---	9655
3	9790	---	9845	9710	9872	9716	9939	---	9764	---	9662	9662
4	9787	10112	9824	---	9868	9737	---	9693	9757	---	9649	9662
5	---	---	9804	---	9872	9764	---	9710	9744	---	9636	---
6	---	10126	9784	9771	9865	9811	9737	9757	---	9824	9629	---
7	9771	---	---	9787	9865	---	9652	9767	---	9817	9622	---
8	9764	10119	---	9797	---	---	9676	9777	9720	9811	---	9662
9	9757	---	9831	9811	---	9655	9716	---	9706	9800	---	9662
10	9750	---	9838	9824	9885	9649	9747	---	9703	9790	9598	9662
11	9747	---	9851	---	9905	9649	---	9676	9716	---	9595	9669
12	---	10216	9865	---	9912	9676	---	9655	9716	---	9595	---
13	---	10167	9872	9862	9918	9689	9872	9682	---	9784	9595	---
14	9750	10098	---	9875	9905	---	9912	9723	---	9790	9642	9669
15	9754	10022	---	9885	---	---	9885	9744	9737	9790	---	9669
16	9757	---	9898	9898	---	9757	9814	---	9764	9790	---	9669
17	9750	---	9918	9912	---	9750	9747	---	9777	9794	9655	9669
18	9750	9872	9918	---	9872	9730	---	9757	9787	---	9655	9682
19	---	9797	9918	---	9858	9703	---	9747	9797	---	9655	---
20	---	9744	9901	---	9888	9703	10036	9727	---	9771	9655	---
21	9757	9787	---	9946	10001	---	9974	9706	---	9761	9652	9696
22	9757	9824	---	9932	---	---	9905	9676	9807	9750	---	9703
23	9757	---	9855	9901	---	9730	9790	---	9807	9744	---	9703
24	9764	---	9838	9878	9797	9737	9797	---	9807	9737	9642	9703
25	9767	9784	---	---	9784	9740	---	9730	9804	---	9642	9703
26	---	9757	9804	---	9777	9764	---	9767	9804	---	9642	---
27	---	9733	9790	9885	9787	9794	9851	9790	---	9720	9642	---
28	10085	---	---	9878	9811	9824	9851	9817	---	9716	9642	9710
29	10098	---	---	9872	---	9872	9865	9834	9787	9706	---	9716
30	10102	---	9757	9865	---	9946	9905	---	9797	9703	---	9716
31	10105	---	9744	9878	---	9960	---	---	---	9689	9649	---

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'24", long 120°07'50", in NW 1/4 NE 1/4 sec.31, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 300 ft downstream from Station Creek, 0.5 mi downstream from Prosser Creek Dam, 0.9 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.--52.9 mi².

PERIOD OF RECORD.--October 1902 to June 1903 (gage heights only), October 1942 to December 1950, June 1951 to current year. Prior to October 1976, published as "near Boca." Monthly discharge only for October 1942 to December 1950 published in WSP 1734; daily discharge in files of U.S. Geological Survey. Records for April 1889 to November 1890, published in the 11th and 12th Annual Reports, Part 2, have been found to be unreliable and should not be used.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,602.31 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). See WSP 2127 for history of changes prior to September 1956. October 1956 to May 1976, water-stage recorder at site 0.8 mi downstream at datum 29.69 ft lower.

REMARKS.--No estimated daily discharges. Records good except for discharges less than 10 ft³/s, which are fair. Flow regulated by Prosser Creek Reservoir (station 10340300) since Jan. 30, 1963. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Water years 1943-63, prior to construction of Prosser Creek Dam, maximum discharge, 4,560 ft³/s, Dec. 23, 1955, gage height, 10.13 ft, present datum, from rating curve extended above 910 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 11.0 ft from floodmarks, present datum, Nov. 20, 1950; minimum discharge, 0.4 ft³/s, July 18, 1961, result of work on dam upstream. Maximum discharge since construction of Prosser Creek Dam in 1963, 1,790 ft³/s, Feb. 20-22, 1986, gage height, 6.66 ft, from rating curve extended above 880 ft³/s on basis of valve setting at Prosser Creek Dam; minimum daily, 0.02 ft³/s, Jan. 2, 1975, result of temporary closing of Prosser Creek Dam for spillway maintenance.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 166 ft³/s, Apr. 5, gage height, 3.48 ft; minimum daily, 1.9 ft³/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	9.9	9.0	20	18	79	129	131	44	9.9	6.1	2.1
2	4.4	9.4	9.0	14	18	59	148	110	36	9.9	6.1	1.9
3	7.9	9.4	18	8.4	18	50	163	110	36	9.9	6.0	1.9
4	7.9	9.4	22	8.4	18	50	164	97	36	9.9	5.9	1.9
5	7.9	9.4	22	8.7	18	54	164	87	32	9.9	5.3	1.9
6	7.9	13	14	9.0	18	71	145	109	29	9.9	4.7	1.9
7	7.9	16	9.0	9.0	18	81	101	126	29	9.9	4.7	1.9
8	7.9	16	9.0	9.0	18	81	84	124	29	9.9	4.7	2.0
9	7.9	16	9.0	9.8	18	64	88	119	23	9.9	4.9	2.1
10	7.0	16	9.0	10	18	53	88	119	13	8.8	5.1	2.1
11	5.2	16	9.0	11	18	51	88	105	12	7.4	3.7	2.1
12	4.2	28	9.0	15	23	55	88	79	12	7.4	1.9	2.1
13	4.2	45	9.0	14	31	59	99	70	12	7.8	3.5	2.0
14	4.2	45	9.0	14	32	60	117	72	12	7.9	3.0	1.9
15	4.8	45	9.0	16	32	55	124	71	11	7.9	2.7	1.9
16	5.3	45	9.5	16	32	57	129	71	11	7.9	2.6	1.9
17	5.3	46	14	16	32	63	117	71	11	7.9	2.5	2.2
18	5.2	46	20	15	33	62	110	71	11	7.9	2.6	2.2
19	4.9	46	20	15	34	58	110	71	11	7.4	2.6	1.9
20	4.9	19	20	15	36	56	131	67	10	7.4	2.5	1.9
21	4.3	9.9	20	26	88	57	147	64	10	7.4	2.6	1.9
22	3.8	14	21	33	126	58	147	52	9.9	6.4	2.6	1.9
23	3.8	30	21	33	117	59	110	40	9.9	5.5	2.5	1.9
24	3.8	31	21	28	83	58	92	40	9.9	5.6	2.3	1.9
25	4.1	31	22	19	63	57	102	39	9.9	5.8	2.5	1.9
26	6.0	31	21	18	61	53	102	39	9.9	6.3	2.4	1.9
27	4.9	15	20	17	59	62	116	39	9.9	6.5	2.6	1.9
28	7.8	9.0	20	18	75	67	126	39	9.9	6.5	2.5	1.9
29	9.9	9.0	20	18	82	69	132	48	9.9	6.1	2.4	1.9
30	9.9	9.0	20	14	---	96	153	54	9.9	6.1	2.6	1.9
31	9.9	---	20	15	---	114	---	54	---	6.2	2.6	---
TOTAL	185.6	694.4	484.5	492.3	1237	1968	3614	2388	519.1	243.2	108.7	58.8
MEAN	5.99	23.1	15.6	15.9	42.7	63.5	120	77.0	17.3	7.85	3.51	1.96
MAX	9.9	46	22	33	126	114	164	131	44	9.9	6.1	2.2
MIN	2.5	9.0	9.0	8.4	18	50	84	39	9.9	5.5	1.9	1.9
AC-FT	368	1380	961	976	2450	3900	7170	4740	1030	482	216	117

PYRAMID AND WINNEMUCCA LAKES BASIN

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.1	34.5	47.9	36.1	45.1	75.4	203	261	157	48.5	12.1	8.45
MAX	22.4	268	321	155	89.7	175	406	669	395	176	44.5	19.6
(WY)	1946	1951	1956	1956	1943	1943	1952	1952	1952	1952	1952	1952
MIN	6.63	8.62	9.81	10.0	11.0	20.0	94.5	106	55.9	10.0	3.79	3.90
(WY)	1961	1960	1960	1948	1948	1948	1955	1959	1947	1961	1961	1947

SUMMARY STATISTICS

WATER YEARS 1943 - 1962

ANNUAL MEAN	76.8
HIGHEST ANNUAL MEAN	162
LOWEST ANNUAL MEAN	38.1
HIGHEST DAILY MEAN	3490
LOWEST DAILY MEAN	2.7
ANNUAL SEVEN-DAY MINIMUM	3.1
INSTANTANEOUS PEAK FLOW	4560
INSTANTANEOUS PEAK STAGE	11.00
ANNUAL RUNOFF (AC-FT)	55620
10 PERCENT EXCEEDS	212
50 PERCENT EXCEEDS	27
90 PERCENT EXCEEDS	7.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	103	44.6	60.0	69.6	74.3	106	122	200	105	49.2	36.8	114
MAX	282	214	361	321	397	371	372	545	494	167	117	477
(WY)	1983	1982	1965	1970	1986	1986	1969	1983	1983	1985	1970	1983
MIN	5.41	6.84	5.32	7.96	17.5	27.1	21.7	17.2	8.39	6.33	3.51	1.96
(WY)	1989	1989	1989	1989	1991	1977	1977	1985	1966	1966	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	15084.9	11993.6	
ANNUAL MEAN	41.3	32.8	90.5
ANNUAL MEAN, ADJUSTED a	41.3	32.7	
HIGHEST ANNUAL MEAN			214
LOWEST ANNUAL MEAN			24.4
HIGHEST DAILY MEAN	183	May 25	164
LOWEST DAILY MEAN	2.5	Oct 1	1.9
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 25	1.9
INSTANTANEOUS PEAK FLOW			166
INSTANTANEOUS PEAK STAGE			3.48
ANNUAL RUNOFF (AC-FT)	29920	23790	65540
10 PERCENT EXCEEDS	119	98	218
50 PERCENT EXCEEDS	20	15	43
90 PERCENT EXCEEDS	5.2	2.5	9.0

a Adjusted for change in contents in Prosser Creek Reservoir.

10342900 INDEPENDENCE LAKE NEAR TRUCKEE, CA

LOCATION.--Lat 39°27'07", long 120°17'23", in NW 1/4 SW 1/4 sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on right bank of outlet channel, 60 ft upstream from outlet gates, and 10.5 mi northwest of Truckee.

DRAINAGE AREA.--7.51 mi².

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sierra Pacific Power Co.).

REMARKS.--Lake levels regulated by an earthfill dam at the outlet constructed in 1939. Usable capacity, 17,300 acre-ft between elevations 6,921.0 ft, invert of outlet gate and 6,949.0 ft, normal maximum storage level. Water is used for irrigation and power development downstream. Records, including extremes, represent usable contents. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,400 acre-ft, June 7-13, 1989, elevation, 6,949.19 ft; minimum, 4,750 acre-ft, Nov. 10, 11, 1988, elevation, 6,929.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,700 acre-ft, May 8, elevation, 6,948.10 ft; minimum, 7,840 acre-ft, Sept. 25, 28-30, elevation, 6,934.55 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sierra Pacific Power Co., dated Nov. 5, 1941)

6,921	0	6,940	11,240
6,925	2,220	6,945	14,530
6,930	5,110	6,950	18,000
6,935	8,110		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13500	13200	13400	13500	13600	14200	14800	16500	16200	15500	13200	9310
2	13500	13200	13400	13500	13600	14200	14800	16600	16200	15400	13100	9190
3	13400	13200	13400	13500	13600	14200	14900	16600	16200	15400	12900	9090
4	13400	13200	13400	13500	13600	14200	14900	16600	16200	15300	12800	8990
5	13400	13200	13400	13600	13600	14300	14900	16600	16100	15200	12600	8870
6	13400	13200	13400	13600	13600	14300	15000	16600	16100	15100	12500	8770
7	13400	13200	13400	13600	13600	14300	15000	16600	16100	15100	12300	8670
8	13400	13300	13400	13600	13700	14300	15100	16700	16100	15000	12200	8570
9	13400	13300	13400	13600	13700	14300	15100	16600	16100	14900	12000	8470
10	13300	13300	13400	13600	13700	14300	15100	16600	16100	14900	11900	8390
11	13300	13300	13400	13600	13700	14300	15200	16600	16000	14800	11800	8250
12	13300	13300	13400	13600	13800	14400	15300	16600	16000	14800	11600	8160
13	13300	13300	13400	13600	13800	14400	15300	16600	16000	14800	11500	8060
14	13300	13200	13400	13600	13800	14400	15400	16600	16000	14800	11400	7970
15	13300	13200	13400	13600	13900	14400	15400	16600	16000	14800	11200	7940
16	13300	13200	13400	13600	13900	14400	15400	16500	16100	14800	11100	7930
17	13200	13400	13400	13600	13900	14400	15600	16500	16100	14800	11000	7930
18	13200	13400	13500	13600	13900	14400	15700	16400	16100	14700	10800	7930
19	13200	13400	13400	13600	14000	14500	15700	16400	16100	14700	10700	7930
20	13200	13400	13500	13600	14100	14500	15800	16300	16100	14700	10600	7920
21	13200	13400	13500	13600	14100	14500	15900	16300	16000	14600	10400	7920
22	13200	13400	13500	13600	14100	14500	15900	16200	16000	14500	10300	7950
23	13100	13400	13500	13600	14100	14500	16000	16200	16000	14400	10200	7890
24	13100	13400	13500	13600	14100	14500	16000	16200	15900	14300	10200	7870
25	13200	13400	13500	13600	14100	14500	16100	16200	15900	14200	10100	7840
26	13300	13400	13500	13600	14100	14600	16200	16200	15800	14100	9960	7860
27	13300	13400	13500	13600	14200	14600	16300	16200	15700	13900	9840	7850
28	13300	13400	13500	13600	14200	14600	16400	16200	15700	13800	9730	7840
29	13300	13400	13500	13600	14200	14600	16500	16200	15600	13700	9630	7840
30	13200	13400	13500	13600	---	14700	16500	16200	15500	13500	9520	7840
31	13200	---	13500	13600	---	14700	---	16200	---	13400	9420	---
MAX	13500	13400	13500	13600	14200	14700	16500	16700	16200	15500	13200	9310
MIN	13100	13200	13400	13500	13600	14200	14800	16200	15500	13400	9420	7840
a	6943.05	6943.27	6943.49	6943.59	6944.49	6945.27	6947.85	6947.47	6946.48	6943.28	6937.12	6934.55
b	-300	+200	+100	+100	+600	+500	+1800	-300	-700	-2100	-3980	-1580

CAL YR 1991 MAX 16400 MIN 13100 b -700
WTR YR 1992 MAX 16700 MIN 7840 b -5660

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°27'24", long 120°17'10", in SW 1/4 NW 1/4 sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on left bank 0.4 mi downstream from Independence Lake outlet and 10.5 mi northwest of Truckee.

DRAINAGE AREA.--8.10 mi².

PERIOD OF RECORD.--November 1902 to September 1907, November 1909 to June 1910, August 1968 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,920 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 1, 1904, to June 30, 1910, nonrecording gage 75 ft downstream from Independence Lake outlet; prior to July 1, 1904, nonrecording gage 600 ft downstream at approximately same datum.

REMARKS.--No estimated daily discharges. Records good except for winter months, which are poor. Flow regulated by Independence Lake (station 10342900) since 1939. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291 ft³/s, Dec. 20, 1981, gage height, 6.12 ft; no flow Sept. 28 to Nov. 10, 1905, June 1, 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft³/s, July 29, 30, gage height, 3.65 ft; minimum daily, 0.19 ft³/s, Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.4	2.6	3.0	2.4	2.7	3.0	12	8.6	36	79	57
2	5.9	3.7	2.9	3.0	2.2	2.6	3.3	14	7.1	36	78	57
3	6.1	3.7	3.0	3.0	2.1	2.7	3.3	16	6.8	36	78	56
4	6.1	3.7	2.6	3.1	2.1	2.6	3.0	25	14	36	77	56
5	5.1	3.7	2.6	3.3	2.1	2.3	3.0	35	16	35	77	55
6	5.3	4.0	2.6	3.4	2.1	2.4	3.0	36	11	35	76	55
7	5.2	4.1	2.5	3.7	2.1	2.4	3.1	37	6.9	35	76	54
8	5.0	4.0	2.6	3.7	2.1	2.4	3.0	39	3.7	35	75	54
9	5.1	4.1	2.6	3.7	1.9	2.4	2.7	39	2.8	35	75	53
10	5.0	3.6	2.6	3.9	1.9	2.4	2.6	38	2.0	35	74	53
11	5.0	3.4	2.6	4.1	1.9	2.5	2.6	36	1.7	21	74	52
12	5.1	3.3	2.6	4.2	1.9	2.6	3.1	34	1.4	12	73	52
13	5.1	3.1	2.8	3.7	2.1	2.6	3.0	33	1.3	12	73	51
14	5.5	2.9	3.0	3.3	2.1	2.6	2.7	33	1.1	11	73	44
15	4.6	2.8	3.0	2.6	2.1	2.6	2.6	32	1.1	11	73	11
16	3.7	2.9	3.3	2.4	2.1	2.5	2.3	36	1.0	11	72	1.6
17	3.7	2.7	3.1	2.4	2.4	2.6	2.7	44	.94	11	71	.85
18	3.7	2.6	3.1	2.4	2.6	2.6	2.4	46	.94	11	71	.69
19	3.7	2.5	3.1	2.4	2.9	2.6	2.3	50	.98	11	70	.43
20	3.7	2.5	3.3	2.6	3.0	2.6	2.4	49	7.4	11	62	.29
21	3.5	2.5	3.3	2.6	3.0	2.6	2.5	40	14	24	48	.24
22	3.0	2.6	3.3	2.6	3.0	2.6	2.4	34	13	45	47	.22
23	3.0	2.5	3.3	2.4	3.0	2.6	2.4	33	19	61	47	.20
24	3.0	2.5	3.3	2.5	2.9	2.6	2.4	24	37	61	47	.19
25	3.2	2.4	3.3	2.4	2.9	2.6	2.4	14	37	60	51	6.2
26	3.2	2.4	3.3	2.4	3.0	2.5	2.3	4.9	36	60	60	7.6
27	3.0	2.4	3.3	2.4	2.9	2.6	2.3	3.2	36	59	59	1.5
28	3.0	2.4	3.3	2.4	3.0	2.5	2.4	3.0	36	59	59	1.2
29	2.8	2.6	3.3	2.4	3.0	2.6	9.0	3.0	36	68	58	1.0
30	3.3	2.6	3.0	2.4	---	2.6	11	2.9	36	80	58	.90
31	3.4	---	3.0	2.4	---	2.7	---	4.2	---	79	58	---
TOTAL	133.0	91.6	92.2	90.8	70.8	79.2	95.2	850.2	396.76	1132	2069	783.11
MEAN	4.29	3.05	2.97	2.93	2.44	2.55	3.17	27.4	13.2	36.5	66.7	26.1
MAX	6.1	4.1	3.3	4.2	3.0	2.7	11	50	37	80	79	57
MIN	2.8	2.4	2.5	2.4	1.9	2.3	2.3	2.9	.94	11	47	.19
AC-FT	264	182	183	180	140	157	189	1690	787	2250	4100	1550

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.0	24.1	11.5	8.23	11.0	13.1	16.9	39.0	55.9	25.9	21.5	22.6
MAX	45.8	97.6	58.2	25.1	58.0	79.2	72.9	112	188	89.2	114	133
(WY)	1976	1984	1982	1982	1986	1986	1986	1982	1983	1983	1988	1973
MIN	.47	1.36	1.39	1.47	1.07	1.45	1.50	1.51	2.09	1.78	2.05	.58
(WY)	1980	1989	1977	1977	1974	1977	1977	1977	1977	1977	1976	1979

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1968 - 1992			
ANNUAL TOTAL	4505.0				5883.87				22.1			
ANNUAL MEAN	12.3				16.1				46.7			
HIGHEST ANNUAL MEAN									7.63			
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	64 May 4				80 Jul 30				269 Dec 20 1981			
LOWEST DAILY MEAN	1.1 Feb 6				.19 Sep 24				.02 Sep 26 1973			
ANNUAL SEVEN-DAY MINIMUM	1.1 Feb 5				.32 Sep 18				.02 Sep 26 1973			
INSTANTANEOUS PEAK FLOW					80 Jul 29				291 Dec 20 1981			
INSTANTANEOUS PEAK STAGE					3.65 Jul 29				6.12 Dec 20 1981			
ANNUAL RUNOFF (AC-FT)	8940				11670				16030			
10 PERCENT EXCEEDS	55				57				61			
50 PERCENT EXCEEDS	3.0				3.3				9.8			
90 PERCENT EXCEEDS	1.4				2.1				2.0			

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA
(Hydrologic bench-mark station)

LOCATION.--Lat 39°25'54", long 120°14'13", in NE 1/4 NE 1/4 sec.7, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank 2.2 mi upstream from bridge on State Highway 89 and 7.5 mi north of Truckee.

DRAINAGE AREA.--10.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 2, 1953, nonrecording gage at site 100 ft upstream at different datum.

REMARKS.--Records excellent. No storage or diversion upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 765 ft³/s, Feb. 1, 1963, gage height, 4.64 ft, from floodmarks, from rating curve extended above 160 ft³/s on basis of slope-area measurement at gage height 4.28 ft; minimum, 0.6 ft³/s, Aug. 8, 1960, Aug. 7, 1961, result of temporary regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	0945	*18	*2.15				

Minimum daily, 1.2 ft³/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.0	2.2	2.2	2.3	4.4	10	5.8	2.1	1.9	1.2	1.3
2	1.5	2.0	2.2	e2.2	2.3	4.2	10	5.4	2.0	1.8	1.2	1.3
3	1.4	2.0	2.2	2.2	2.3	4.4	11	5.1	1.9	1.6	1.2	1.3
4	1.4	2.0	2.1	2.2	2.2	4.5	11	4.9	1.8	1.6	1.2	1.3
5	1.4	2.0	2.1	2.3	2.2	4.4	10	4.7	1.8	1.5	1.2	1.3
6	1.4	2.0	2.2	2.2	2.2	4.3	9.3	4.6	1.8	1.5	1.2	1.3
7	1.4	2.0	2.2	2.2	2.2	3.9	9.2	4.8	1.8	1.5	1.2	1.3
8	1.4	2.0	2.2	2.2	2.3	3.8	9.5	4.6	1.7	1.5	1.2	1.3
9	1.4	2.9	2.2	2.2	2.4	3.8	9.5	4.3	1.7	1.4	1.2	1.3
10	1.4	2.4	2.2	2.2	2.4	3.8	9.6	3.9	1.7	1.4	1.2	1.3
11	1.4	2.2	2.2	2.2	2.4	4.0	9.8	3.6	1.7	1.4	1.3	1.3
12	1.5	2.1	2.2	2.2	2.4	4.3	11	3.6	1.7	1.5	1.3	1.3
13	1.5	2.1	2.1	2.2	2.4	4.8	12	3.5	1.8	1.6	1.2	1.3
14	1.5	2.1	2.1	2.2	2.4	5.2	12	3.5	1.9	1.5	1.2	1.3
15	1.5	2.1	2.1	2.2	2.5	4.8	11	3.2	2.1	1.5	1.3	1.3
16	1.5	2.0	2.1	2.2	2.5	4.3	9.9	3.5	2.1	1.5	1.3	1.3
17	1.5	e2.1	2.2	2.2	2.4	4.2	12	3.7	2.0	1.5	1.2	1.3
18	1.5	e2.1	e2.3	2.2	2.4	4.2	11	3.1	2.0	1.4	1.2	1.4
19	1.5	e2.1	e2.3	2.2	4.1	4.2	10	3.0	1.9	1.4	1.2	1.3
20	1.5	3.2	e2.3	2.2	9.4	4.4	9.8	3.0	1.7	1.3	1.2	1.3
21	1.5	3.2	e2.3	2.2	7.5	4.9	9.7	2.8	1.6	1.3	1.2	1.3
22	1.5	2.6	2.2	2.2	7.2	5.3	8.9	2.7	1.6	1.3	1.2	1.3
23	1.6	2.4	2.2	2.2	5.3	5.1	8.1	2.5	1.5	1.3	1.2	1.3
24	1.6	2.4	2.2	2.2	4.4	5.1	7.8	2.4	1.8	1.4	1.3	1.3
25	2.2	2.4	2.2	2.2	4.2	5.6	7.6	2.3	1.8	1.3	1.2	1.3
26	11	2.4	2.2	2.2	4.4	6.1	7.5	2.3	1.6	1.2	1.2	1.3
27	3.1	3.1	2.2	2.2	4.5	6.7	7.1	2.3	1.5	1.2	1.2	1.3
28	2.4	2.7	2.2	2.2	4.7	7.5	6.9	2.3	1.6	1.2	1.2	1.3
29	2.3	2.4	2.3	2.3	4.5	8.5	6.9	2.2	1.9	1.2	1.3	1.3
30	2.1	2.2	2.2	2.2	---	9.0	6.3	2.2	2.4	1.2	1.4	1.3
31	2.0	---	2.2	2.2	---	9.9	---	2.1	---	1.2	1.4	---
TOTAL	60.4	69.2	68.1	68.4	102.4	159.6	284.4	107.9	54.5	44.1	38.2	39.1
MEAN	1.95	2.31	2.20	2.21	3.53	5.15	9.48	3.48	1.82	1.42	1.23	1.30
MAX	11	3.2	2.3	2.3	9.4	9.9	12	5.8	2.4	1.9	1.4	1.4
MIN	1.4	2.0	2.1	2.2	2.2	3.8	6.3	2.1	1.5	1.2	1.2	1.3
AC-FT	120	137	135	136	203	317	564	214	108	87	76	78

e Estimated.

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992, BY WATER YEAR (WY)

MEAN	3.59	5.35	7.47	7.31	8.43	10.3	23.8	41.4	24.4	6.95	3.12	2.74
MAX	11.9	27.7	44.0	33.8	51.0	50.1	51.6	117	142	37.4	11.8	7.56
(WY)	1963	1984	1965	1970	1963	1986	1986	1969	1983	1983	1983	1983
MIN	1.71	1.95	2.03	1.81	2.62	2.74	6.13	3.45	1.82	1.42	1.23	1.11
(WY)	1989	1962	1977	1962	1991	1962	1975	1988	1992	1992	1992	1960

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1954 - 1992		
ANNUAL TOTAL	1604.7		1096.3				
ANNUAL MEAN	4.40		3.00		12.1		
HIGHEST ANNUAL MEAN					30.0		
LOWEST ANNUAL MEAN			2		2.65		
HIGHEST DAILY MEAN	47	Mar 4	12	Apr 13	398	Dec 23	1955
LOWEST DAILY MEAN	1.3	Aug 25	1.2	Jul 26	1.0	Sep 13	1960
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 31	1.2	Jul 26	1.1	Sep 9	1960
INSTANTANEOUS PEAK FLOW			18	Oct 26	765	Feb 1	1963
INSTANTANEOUS PEAK STAGE			2.15	Oct 26	4.64	Feb 1	1963
ANNUAL RUNOFF (AC-FT)	3180		2170		8750		
10 PERCENT EXCEEDS	12		6.9		31		
50 PERCENT EXCEEDS	2.3		2.2		4.4		
90 PERCENT EXCEEDS	1.4		1.3		1.9		

PRECIPITATION RECORDS

PERIOD OF RECORD.--December 1990 to current year.

INSTRUMENTATION.--Recording weighing rain gage since Dec. 1, 1990.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 3.36 in, Mar. 4, 1991; no precipitation for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 2.04 in, Oct. 26; no precipitation for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.15	.00	.00	.00	.00	.01	.00	.04
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
4	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.36	.11	.61	.00	.00	.00	.01	.00	.00
6	.00	.00	.04	.00	.11	.37	.00	.06	.00	.00	.00	.00
7	.00	.00	.40	.21	.00	.00	.00	.01	.00	.00	.00	.00
8	.00	.13	.00	.00	.06	.00	.00	.01	.01	.00	.00	.00
9	.00	.18	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
10	.00	.02	.00	.00	.22	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.64	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.49	.00	.65	.00	.00	.06	.00	.00
13	.00	.02	.00	.00	.11	.00	.05	.00	.00	.03	.00	.00
14	.00	.07	.00	.00	.69	.03	.00	.00	.06	.08	.00	.00
15	.00	.00	.00	.00	.44	.14	.00	.00	.09	.03	.00	.00
16	.00	.04	.00	.00	.63	.11	.04	.11	.02	.12	.00	.00
17	.00	1.71	.02	.03	.20	.00	.11	.01	.01	.00	.00	.22
18	.00	.12	.83	.00	.18	.00	.02	.00	.03	.03	.00	.00
19	.00	.15	.03	.00	1.32	.00	.00	.02	.00	.00	.00	.00
20	.03	.33	.00	.00	.26	.00	.00	.01	.00	.00	.00	.00
21	.00	.00	.00	.00	.25	.11	.00	.00	.00	.00	.00	.00
22	.10	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00
23	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00
25	1.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	2.04	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.05	.40	.08	.00	.00	.00	.00	.02	.00	.00	.00	.00
28	.00	.00	.22	.03	.00	.00	.00	.00	.03	.00	.00	.00
29	.00	.04	.61	.00	.00	.00	.00	.00	.51	.00	.09	.00
30	.00	.00	.04	.00	---	.39	.00	.00	.02	.00	.13	.00
31	.07	---	.10	.00	---	.03	---	.00	---	.00	.00	---
TOTAL	3.42	3.24	2.37	0.68	5.90	2.04	0.87	0.25	1.00	0.38	0.22	0.26

CAL YR 1991 TOTAL 33.47
WTR YR 1992 TOTAL 20.63

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-75, 1981 to current year.

CHEMICAL DATA: Water years 1968-72, October 1985 to current year.

WATER TEMPERATURE: Water years 1970-74.

SEDIMENT DATA: Water years 1968-75, 1981 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1969 to September 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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, (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 1991												
14...	1030	2.0	129	8.0	3.0	3.5	600	10.7	101	K5	63	54
FEB 1992												
25...	1040	4.1	98	8.0	2.0	5.8	613	11.0	99	K2	K2	43
MAY												
05...	1135	4.8	82	8.1	8.5	1.0	612	9.5	101	K2	K2	36
AUG												
11...	1025	1.3	149	8.2	10.5	1.4	610	9.0	101	37	69	59

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- LITY 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)
NOV 1991												
14...	0	14	4.6	6.1	19	0.4	2.3	83	68	0.10	1.0	<0.10
FEB 1992												
25...	0	11	3.8	5.0	19	0.3	1.6	67	55	<0.10	0.80	<0.10
MAY												
05...	0	9.2	3.1	4.2	20	0.3	1.3	55	45	0.20	0.50	<0.10
AUG												
11...	0	15	5.1	7.3	20	0.4	2.7	95	78	0.10	0.60	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 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)
NOV 1991												
14...	31	94	101	0.13	0.004	0.143	0.061	0.073	0.050	<0.20	0.039	0.051
FEB 1992												
25...	27	92	--	--	--	--	--	--	--	--	--	--
MAY												
05...	27	65	73	0.09	0.002	0.005	0.007	0.008	0.007	<0.20	0.011	0.008
AUG												
11...	32	110	110	0.15	0.005	0.009	0.014	0.005	0.009	<0.20	0.014	0.016

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
NOV 1991											
14...	0.035	0.032	60	23	<3	93	<4	2	<10	<1	<1
FEB 1992											
25...	--	--	--	19	<3	100	<4	2	<10	<1	<1
MAY											
05...	0.007	0.005	50	17	<3	50	<4	2	<10	<1	<1
AUG											
11...	0.012	0.011	<10	27	<3	55	<4	5	<10	<1	<1

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	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)
NOV 1991											
14...	<1.0	150	<6	--	--	--	--	--	--	--	--
FEB 1992											
25...	<1.0	120	<6	--	--	--	--	--	--	--	--
MAY											
05...	<1.0	110	<6	<0.6	<0.6	1.2	<0.6	1.0	<0.6	0.03	0.28
AUG											
11...	<1.0	170	<6	1.2	<0.6	2.4	<0.6	2.0	<0.6	0.04	0.69

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDE (MG/L)
MAY										
05...*	1105	0.80	0.60	83	8.2	8.5	612	9.3	99	1
05...*	1110	0.80	1.80	83	8.2	8.5	612	9.3	99	2
05...*	1115	0.80	2.70	83	8.2	8.5	612	9.3	99	3
05...*	1120	0.85	4.20	83	8.2	8.5	612	9.3	99	2
05...*	1125	0.60	5.70	83	8.2	8.5	612	9.3	99	2
AUG										
11...*	1030	0.45	0.60	148	8.3	10.5	610	9.0	101	0
11...*	1035	0.55	1.50	149	8.3	10.5	610	9.0	101	0
11...*	1040	0.62	2.40	149	8.3	10.5	610	9.0	101	0
11...*	1045	0.58	3.60	149	8.3	10.5	610	9.0	101	0
11...*	1050	0.55	5.10	149	8.3	10.5	610	9.0	101	0

* Instantaneous discharge at the time of cross-sectional measurement: May 5, 4.8 ft³/s; Aug 11, 1.3 ft³/s.

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT					
26...	1320	11	--	12	0.36
26...	1615	7.7	--	30	0.62
27...	1015	3.0	2.0	4	0.03
NOV					
14...	1030	2.0	3.0	2	0.01
FEB					
20...	0950	9.3	--	85	2.1
20...	1230	9.0	--	11	0.27
20...	1630	9.0	--	8	0.19
25...	1040	4.1	2.0	4	0.04
MAY					
05...	1135	4.8	8.5	2	0.03
AUG					
11...	1025	1.3	10.5	0	0

10344300 STAMPEDE RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°28'14", long 120°06'11", in SE 1/4 NE 1/4 sec.29, T.19 N., R.17 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, in control house near base of spillway of Stampede Dam on Little Truckee River, 0.2 mi upstream from Worn Mill Canyon, and 11.0 mi northeast of Truckee.

DRAINAGE AREA.--136 mi².

PERIOD OF RECORD.--August 1969 to current year. August 1969 to September 1977 (monthend elevations and contents only). October 1977 to September 1987 (daily contents). Prior to October 1976, published as "near Boca."

GAGE.--Nonrecording gage read five times weekly. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Aug. 1, 1969. Total capacity, 226,500 acre-ft at elevation 5,948.7 ft, spillway crest. Inactive contents, 5,010 acre-ft, includes 660 acre-ft dead contents below elevation 5,798.3 ft. Figures given, including extremes, represent total contents at 0800 hours. Reservoir is used for flood control, municipal water supply, enhancement of fishery, and recreation. See schematic diagram of Truckee River basin.

COOPERATION.--Records and capacity table were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 254,493 acre-ft, June 1, 1983, elevation, 5,956.55 ft; minimum since reservoir first filled, 30,772 acre-ft, Jan. 31, Feb. 1, 1978, elevation, 5,853.60 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents observed, 81,332 acre-ft, May 8, elevation, 5,893.03 ft; minimum observed, 75,922 acre-ft, Sept. 30, elevation, 5,889.95 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated July 1971)

5,850	27,915	5,880	60,185	5,910	115,865	5,940	197,630
5,860	36,470	5,890	76,008	5,920	140,141	5,950	231,005
5,870	47,204	5,900	94,535	5,930	167,355	5,960	267,386

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80347	79369	---	---	---	---	81099	81278	79830	78787	---	77179
2	80311	---	79016	78646	---	79617	81081	---	---	78805	---	77161
3	80275	---	78981	78558	78033	79688	81081	---	79759	---	78067	77144
4	80222	79299	78946	---	78033	79759	---	81224	79724	---	78015	77092
5	---	---	78928	---	78015	79866	---	81260	79671	---	77963	---
6	---	79263	78928	78558	78033	80044	81099	81260	---	78822	77910	---
7	80062	---	---	78576	78050	---	81027	81278	---	78805	77858	---
8	80008	79228	---	78488	---	---	80955	81332	79529	78805	---	76953
9	79955	---	78857	78471	---	80258	80883	---	79493	78787	---	76953
10	79902	---	78840	78471	78067	80311	80830	---	79405	78787	77736	76936
11	79902	---	78822	---	78085	80347	---	81081	79334	---	77701	76902
12	---	79193	78805	---	78120	80382	---	80973	79228	---	77666	---
13	---	79193	78769	78383	78172	80400	80955	81009	---	78734	77683	---
14	79742	79157	---	78348	78172	---	81045	81009	---	78699	77666	76798
15	79706	79104	---	78330	---	---	80991	80991	79016	78681	---	76798
16	79671	---	78734	78348	---	80579	80865	---	78981	78646	---	76729
17	79600	---	78717	78348	---	80615	80794	---	78963	78594	77631	76694
18	79547	79246	78734	---	78313	80597	---	80901	79016	---	77596	76642
19	---	79193	78752	---	78365	80651	---	80883	78981	---	77544	---
20	---	79193	78717	---	78488	80704	81135	80812	---	78453	77492	---
21	79405	79210	---	78243	78629	---	81099	80740	---	78348	77439	76487
22	79352	79175	---	78225	---	---	81045	80686	78893	78330	---	76435
23	79281	---	78664	78190	---	81063	80955	---	78840	78243	---	76383
24	79210	---	78629	78172	78998	81081	80794	---	78857	78278	77266	76297
25	79157	79157	---	---	79087	81027	---	---	78857	---	77214	76194
26	---	79140	78629	---	79157	80991	---	80329	78840	---	77196	---
27	---	79175	78629	78137	79246	80991	80937	80186	---	78225	77196	---
28	79511	---	---	78120	79334	80955	80991	80044	---	---	77196	76008
29	79511	---	---	78102	---	80937	81081	79919	78805	78190	---	75974
30	79423	---	78646	78085	---	80973	81242	---	78769	---	---	75922
31	---	---	78594	78102	---	81153	---	---	---	78208	77214	---

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA

LOCATION.--Lat 39°26'09", long 120°05'00", in SW 1/4 SW 1/4 sec.3, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 1 mi upstream from Boca Reservoir, 1.5 mi upstream from Dry Creek, 3.0 mi downstream from Stampede Dam, and 5.5 mi northeast of Truckee.

DRAINAGE AREA.--146 mi².

PERIOD OF RECORD.--June 1903 to October 1910, September 1939 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Published as "at Pine Station", June 1903 to December 1907, as "at Starr," January 1908 to October 1910, and as "near Boca," September 1939 to September 1976.

REVISED RECORDS.--WSP 1564: 1903-4, 1906-7, 1910, drainage area at site used in 1903-7.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,618.67 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation benchmark). June 1903 to October 1910, nonrecording gages at different sites and datums.

REMARKS.--Records excellent except for estimated daily discharges, which are good. Flow regulated by Independence Lake (station 10342900) since 1939 and Stampede Reservoir (station 10344300) since 1969. There is one transbasin diversion to Sierra Valley. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s, Feb. 1, 1963, gage height, 9.00 ft, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft³/s, Sept. 16-21, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 196 ft³/s, Apr. 17, gage height, 1.41 ft; minimum daily, 14 ft³/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	30	29	27	26	30	146	142	28	33	83	62
2	29	30	29	27	26	30	151	142	28	32	83	62
3	29	30	29	27	29	30	150	142	28	32	83	62
4	29	30	29	27	26	30	151	142	28	32	83	62
5	29	30	29	28	27	31	150	154	27	32	83	62
6	29	30	29	27	26	31	149	159	27	32	83	62
7	29	30	e29	27	27	31	148	162	27	32	83	62
8	29	30	29	e27	27	30	148	181	27	32	83	62
9	26	31	e29	e27	27	30	148	193	27	32	83	62
10	14	30	29	27	27	30	133	193	27	32	83	62
11	18	30	28	e27	28	40	122	172	26	32	84	62
12	29	30	e28	e27	28	44	123	123	27	33	85	62
13	29	30	28	e27	27	46	136	98	27	33	85	62
14	29	30	28	e28	28	46	174	98	27	33	82	47
15	29	30	28	e28	29	46	193	98	28	32	78	30
16	30	30	28	28	28	52	193	81	27	33	78	29
17	30	31	28	28	27	51	177	87	29	31	77	29
18	30	31	29	27	27	49	163	90	28	29	79	29
19	30	30	28	e27	28	36	163	86	28	29	79	29
20	30	31	e28	e26	34	28	179	85	27	29	79	29
21	30	30	e28	26	33	28	189	83	27	29	64	29
22	30	30	28	e26	33	29	189	84	27	39	52	29
23	30	30	28	e26	31	41	189	83	28	46	52	30
24	30	29	e28	e26	30	88	151	83	28	58	52	28
25	31	30	28	26	31	88	119	83	28	59	52	28
26	37	32	27	26	30	87	118	82	30	60	52	28
27	32	32	27	27	30	85	133	81	32	58	52	28
28	31	30	27	26	30	89	147	78	33	58	56	28
29	31	30	28	e26	30	89	147	52	33	60	62	29
30	31	29	27	e26	---	76	142	27	33	60	62	29
31	30	---	27	26	---	90	---	27	---	71	62	---
TOTAL	900	906	874	831	830	1531	4621	3391	847	1233	2254	1314
MEAN	29.0	30.2	28.2	26.8	28.6	49.4	154	109	28.2	39.8	72.7	43.8
MAX	37	32	29	28	34	90	193	193	33	71	85	62
MIN	14	29	27	26	26	28	118	27	26	29	52	28
AC-FT	1790	1800	1730	1650	1650	3040	9170	6730	1680	2450	4470	2610

e Estimated.

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1968, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.0	83.5	123	87.3	131	170	399	543	310	78.1	29.8	25.8
MAX	394	630	725	264	835	374	855	1304	1045	433	180	76.5
(WY)	1963	1951	1965	1956	1963	1967	1952	1952	1967	1967	1940	1959
MIN	13.5	13.0	11.6	9.45	22.0	39.0	106	171	45.7	6.06	4.45	5.93
(WY)	1962	1940	1960	1962	1948	1948	1961	1961	1954	1949	1949	1948

SUMMARY STATISTICS

WATER YEARS 1939 - 1968

ANNUAL MEAN	170
HIGHEST ANNUAL MEAN	321
LOWEST ANNUAL MEAN	58.9
HIGHEST DAILY MEAN	8810
LOWEST DAILY MEAN	3.0
ANNUAL SEVEN-DAY MINIMUM	4.0
INSTANTANEOUS PEAK FLOW	13300
INSTANTANEOUS PEAK STAGE	9.00
ANNUAL RUNOFF (AC-FT)	123200
10 PERCENT EXCEEDS	454
50 PERCENT EXCEEDS	70
90 PERCENT EXCEEDS	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.0	46.3	79.1	80.4	68.1	120	288	545	326	155	116	63.0
MAX	503	132	711	349	149	368	923	1214	1733	1301	573	359
(WY)	1974	1975	1984	1984	1975	1983	1986	1985	1983	1983	1975	1971
MIN	15.7	19.7	5.47	16.7	28.6	18.2	30.8	30.6	28.1	24.1	24.8	18.0
(WY)	1978	1983	1980	1980	1992	1980	1988	1988	1988	1981	1981	1983

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1971 - 1992

ANNUAL TOTAL	28799	19532	
ANNUAL MEAN	78.9	53.4	165
ANNUAL MEAN, ADJUSTED ^a	67.6	47.2	
HIGHEST ANNUAL MEAN			427
LOWEST ANNUAL MEAN			53.4
HIGHEST DAILY MEAN	285	May 9	2460
LOWEST DAILY MEAN	14	Oct 10	1.6
ANNUAL SEVEN-DAY MINIMUM	25	Oct 5	1.7
INSTANTANEOUS PEAK FLOW		196	2830
INSTANTANEOUS PEAK STAGE		1.41	3.82
ANNUAL RUNOFF (AC-FT)	57120	38740	119800
10 PERCENT EXCEEDS	278	133	453
50 PERCENT EXCEEDS	30	30	44
90 PERCENT EXCEEDS	29	27	28

^a Adjusted for change in contents in Stampede Reservoir.

10344490 BOCA RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'20", long 120°05'43", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house at Boca Dam on Little Truckee River, 1,800 ft upstream from mouth, and 6.3 mi northeast of Truckee.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--December 1938 to current year. Prior to October 1976 published as "at Boca." Monthend contents only for December 1938 to September 1957, published in WSP 1734.

REVISED RECORDS.--WSP 1634: Drainage area.

GAGE.--Pressure gage with mercury column read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1938. Usable capacity, 40,868 acre-ft between elevations 5,521 ft, outlet sill, and 5,605 ft, top of spillway gates. Elevation of spillway (gate open) is 5,589.01 ft. Dead contents, 241 acre-ft. Records, including extremes, represent usable contents at 0800 hours. Water is used for irrigation in the State of Nevada and for power development. See schematic diagram of Truckee River basin.

COOPERATION.--Records and capacity table were provided by U.S. Bureau of Reclamation; not rounded to U.S. Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 41,440 acre-ft, Dec. 23, 1955, elevation, 5,605.55 ft; minimum, 37 acre-ft, Mar. 4-9, 1955, elevation, 5,521.65 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 13,104 acre-ft, May 12, elevation, 5,568.80 ft; minimum, 2,447 acre-ft, Aug 1,2, elevation, 5,540.45 ft.

Capacity table (elevation, in feet, and contents in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated November 1970)

5,540	2,356	5,570	13,768
5,545	3,513	5,580	20,002
5,550	4,970	5,590	27,488
5,555	6,725	5,600	36,128
5,560	8,778	5,605	40,868

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5810	7310	7191	6936	6898	7714	6706	11094	5568	2932	2447	2478
2	5863	7350	7151	6917	6936	7797	6782	11320	4970	2955	2447	2478
3	5916	7410	7112	6917	6975	7797	6936	11446	4367	2967	2457	2488
4	5952	7450	7073	6898	6975	7776	7014	11547	3754	2967	2488	2520
5	6005	7511	7034	6898	6975	7756	7191	11573	3062	2955	2509	2563
6	6041	7551	6995	6898	6975	7694	7310	11675	2805	2943	2478	2595
7	6095	7612	6995	6878	6975	7714	7350	11907	2839	2920	2488	2638
8	6149	7673	6975	6878	6995	7673	7290	12220	2828	2908	2488	2671
9	6185	7673	6975	6859	6995	7612	7290	12591	2816	2967	2509	2715
10	6222	7694	6975	6840	6995	7470	7290	12913	2828	3014	2541	2760
11	6277	7714	6956	6840	7014	7370	7230	13049	2816	3050	2573	2794
12	6295	7714	6956	6840	7014	7310	7171	13104	2805	3050	2584	2828
13	6332	7714	6936	6840	7034	7230	7112	12967	2771	3050	2573	2920
14	6369	7694	6936	6840	7034	7171	7290	12778	2715	3074	2573	2990
15	6424	7653	6956	6859	7034	7092	7571	12591	2715	3074	2584	3038
16	6461	7612	6975	6859	7034	7034	7797	12351	2771	3086	2595	3062
17	6517	7592	6995	6859	7034	7014	8005	12063	2828	3050	2638	3086
18	6555	7592	6995	6859	7014	6975	8194	11778	2862	2990	2693	3110
19	6611	7551	7014	6859	6995	6898	8516	11471	2897	2920	2704	3147
20	6668	7531	7034	6859	6995	6782	8734	11144	2897	2851	2704	3171
21	6706	7511	7034	6859	7014	6649	9049	10798	2897	2782	2715	3183
22	6763	7490	7014	6859	7132	6536	9451	10410	2897	2704	2693	3208
23	6802	7450	7014	6859	7250	6424	9680	9982	2897	2671	2671	3220
24	6840	7430	6995	6859	7350	6369	9912	9520	2897	2682	2671	3233
25	6878	7410	6995	6859	7430	6387	9819	9045	2874	2606	2627	3258
26	6975	7390	6975	6859	7490	6369	9889	8581	2862	2563	2573	3270
27	7073	7370	6975	6859	7531	6313	10053	8131	2851	2531	2552	3283
28	7112	7330	6956	6859	7551	6277	10266	7673	2874	2509	2520	3295
29	7171	7290	6956	6859	7633	6277	10530	7210	2885	2499	2499	3333
30	7210	7250	6956	6859	---	6350	10822	6687	2920	2488	2499	3308
31	7270	---	6936	6878	---	6499	---	6131	---	2457	2499	---
MAX	7270	7714	7191	6936	7633	7797	10822	13104	5568	3086	2715	3333
MIN	5810	7250	6936	6840	6898	6277	6706	6131	2715	2457	2447	2478
a	5556.40	5556.35	5555.55	5555.40	5557.30	5554.40	5564.40	5553.40	5542.60	5540.50	5540.70	5544.20
b	+1530	-20	-314	-58	+755	-1134	+4323	-4691	-3211	-463	+42	+809

CAL YR 1991 MAX 27084 MIN 4396 b -2312

WTR YR 1992 MAX 13104 MIN 2447 b -2432

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'13", long 120°05'40", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank 800 ft upstream from mouth, 1,000 ft downstream from Boca Dam, and 6.2 mi northeast of Truckee.

DRAINAGE AREA.--173 mi².

PERIOD OF RECORD.--April to October 1890 (monthly discharge only), January 1911 to September 1915, January 1939 to current year. Prior to October 1976 published as "at Boca." Monthly discharge only for January 1939 to September 1957, published in WSP 1734.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Jan. 1, 1911, to Sept. 30, 1915, nonrecording gage at site 650 ft downstream at different datum. January 1939 to September 1957, records computed from daily log of rated settings of needle valve in dam, and from computed flow over spillway.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Boca Reservoir (station 10344490) since 1938, Independence Lake (station 10342900) since 1939, and Stampede Reservoir (station 10344300) since 1969. There is one transmountain diversion to Sierra Valley of about 6,000 acre-ft per year. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft³/s, Dec. 24, 1955, from records of Washoe County Water Conservation District; no flow for many days in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 361 ft³/s, June 4, gage height, 3.05 ft; minimum daily, 0.05 ft³/s, on several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.5	e2.9	e48	e31	e18	e.05	94	31	331	21	81	59
2	e3.5	e2.9	e48	e31	e15	e40	94	68	333	21	78	50
3	e3.5	e2.9	e48	e31	e23	e50	99	80	339	26	68	40
4	e3.5	e2.9	e48	e31	e28	e50	88	104	350	35	72	35
5	e3.5	e2.9	e48	e31	e28	e70	104	102	266	41	82	35
6	e2.9	e2.9	e40	e31	e28	e55	127	63	10	41	84	35
7	e2.9	e2.9	e35	e31	e28	e60	139	17	28	41	84	35
8	e2.9	e16	e35	e31	e28	e75	145	e.05	34	12	77	35
9	e2.9	e25	e35	e31	e28	e85	139	21	26	2.7	64	34
10	e2.9	e25	e35	e28	e28	e80	138	80	27	10	64	34
11	e2.9	e25	e35	e26	e28	e75	138	118	36	30	76	34
12	e2.9	e25	e35	e26	e28	e85	138	147	39	32	80	19
13	e2.9	e37	e29	e26	e28	e80	73	161	46	32	82	13
14	e2.9	e48	e25	e26	e36	e75	37	168	33	32	78	14
15	e2.9	e48	e25	e26	e40	e68	64	182	9.0	27	70	14
16	e2.9	e48	e25	e26	e40	e62	89	200	e.05	46	54	14
17	e2.9	e48	e25	e26	e40	e68	72	206	7.5	65	53	14
18	e2.9	e48	e25	e26	e40	e75	20	215	12	62	65	8.0
19	e2.9	e48	e25	e26	e40	e82	23	230	21	62	71	14
20	e2.9	e48	e29	e26	e40	e90	24	236	26	63	71	19
21	e2.9	e48	e31	e26	e14	e90	11	249	26	63	71	19
22	e2.9	e48	e31	e26	e.05	e90	9.5	274	27	63	71	19
23	e2.9	e48	e31	e26	e.05	e85	84	292	28	62	56	19
24	e2.9	e48	e31	e26	e.05	e80	121	301	34	70	52	18
25	e2.9	e48	e31	e26	e7.3	e90	96	306	35	75	61	18
26	e2.9	e48	e31	e26	e27	e105	48	306	35	75	61	18
27	e2.9	e48	e31	e26	e27	e105	25	306	25	72	60	18
28	e2.9	e48	e31	e26	e10	e85	9.2	306	21	65	63	18
29	e2.9	e48	e31	e26	e.05	e65	e.05	306	21	65	62	17
30	e2.9	e48	e31	e22	---	e30	e.05	315	21	72	52	15
31	e2.9	---	e31	e20	---	e10	---	321	---	80	66	---
TOTAL	92.9	989.3	1039	843	697.50	2160.05	2248.80	5711.05	2246.55	1463.7	2129	734.0
MEAN	3.00	33.0	33.5	27.2	24.1	69.7	75.0	184	74.9	47.2	68.7	24.5
MAX	3.5	48	48	31	40	105	145	321	350	80	84	59
MIN	2.9	2.9	25	20	.05	.05	.05	.05	.05	2.7	52	8.0
AC-FT	184	1960	2060	1670	1380	4280	4460	11330	4460	2900	4220	1460

e Estimated.

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1915, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.8	38.1	29.2	83.4	75.5	196	721	790	582	169	36.5	26.3
MAX	34.2	58.4	39.3	283	173	558	1367	1260	1211	435	66.3	35.7
(WY)	1915	1913	1914	1914	1914	1914	1914	1911	1911	1911	1911	1912
MIN	14.1	28.4	23.2	20.5	28.4	56.3	106	379	212	50.7	20.1	14.4
(WY)	1914	1915	1912	1913	1912	1912	1912	1912	1913	1912	1915	1915

SUMMARY STATISTICS

WATER YEARS 1911 - 1915

ANNUAL MEAN	193
HIGHEST ANNUAL MEAN	387
LOWEST ANNUAL MEAN	94.7
HIGHEST DAILY MEAN	2360
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
ANNUAL RUNOFF (AC-FT)	140100
10 PERCENT EXCEEDS	800
50 PERCENT EXCEEDS	49
90 PERCENT EXCEEDS	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1969, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.7	106	144	156	160	132	264	426	315	159	146	120
MAX	303	611	856	649	606	442	808	1647	974	389	408	414
(WY)	1968	1951	1951	1965	1963	1967	1952	1952	1967	1967	1958	1952
MIN	.000	.12	.20	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1940	1967	1960	1939	1939	1939	1939	1939	1939	1939	1939	1939

SUMMARY STATISTICS

WATER YEARS 1939 - 1969

ANNUAL MEAN	190
HIGHEST ANNUAL MEAN	435
LOWEST ANNUAL MEAN	65.8
HIGHEST DAILY MEAN	5520
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	8800
ANNUAL RUNOFF (AC-FT)	137700
10 PERCENT EXCEEDS	430
50 PERCENT EXCEEDS	107
90 PERCENT EXCEEDS	02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	79.8	104	89.6	71.2	121	264	479	299	190	148	105
MAX	441	327	568	410	256	470	975	1148	1788	1131	585	418
(WY)	1972	1984	1984	1984	1975	1983	1986	1985	1983	1983	1975	1971
MIN	.035	.020	.11	.10	4.19	.54	.39	.31	2.63	.75	13.6	.55
(WY)	1991	1991	1978	1978	1978	1979	1988	1988	1977	1981	1984	1970

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1970 - 1992

ANNUAL TOTAL	29607.30	20354.85	
ANNUAL MEAN	81.1	55.6	173
HIGHEST ANNUAL MEAN			470
LOWEST ANNUAL MEAN			55.6
HIGHEST DAILY MEAN	451	Jul 18	2240
LOWEST DAILY MEAN	.05	Mar 5	.02
ANNUAL SEVEN-DAY MINIMUM	.05	May 23	.02
INSTANTANEOUS PEAK FLOW			361
INSTANTANEOUS PEAK STAGE			3.05
ANNUAL RUNOFF (AC-FT)	58730	40370	125300
10 PERCENT EXCEEDS	252	104	432
50 PERCENT EXCEEDS	35	34	78
90 PERCENT EXCEEDS	2.0	2.9	.56

10346000 TRUCKEE RIVER AT FARAD, CA

LOCATION.--Lat 39°25'41", long 120°01'59", in SE 1/4 NE 1/4 sec.12, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.5 mi upstream from Mystic Canyon, 0.7 mi downstream from Farad powerplant, 2.5 mi north of Floriston, and 3.5 mi upstream from California-Nevada State line.

DRAINAGE AREA.--932 mi².

PERIOD OF RECORD.--March to October 1890 (monthly discharge only), September 1899 to current year. Monthly discharge only for January 1944 to July 1957, published in WSP 1734. Published as "near Boca", March to October 1890, "at or near Nevada-California State line," September 1899 to August 1912, and as "at Iceland" August 1912 to December 1937.

CHEMICAL DATA: Water years 1951-61, 1964-81. Published as Truckee River at Floriston (station 10345900) January 1964 to September 1971.

BIOLOGICAL DATA: Water years 1975-77.

SPECIFIC CONDUCTANCE: Water years 1964-80.

WATER TEMPERATURE: Water years 1964-81.

SUSPENDED SEDIMENT: Water years 1974, 1978.

REVISED RECORDS.--WSP 1714: Drainage area. WDR CA-88-3: 1906-07 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 5,153.21 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Tahoe and Donner, Martis Creek, and Independence Lakes, and Prosser Creek, Stampede, and Boca Reservoirs (stations 10337000, 10338400, 10339380, 10342900, 10340300, 10344300, and 10344490), and by several powerplants. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s, Nov. 21, 1950, gage height, 14.5 ft, present datum, from floodmarks, from slope-area measurement of peak flow; minimum, 28 ft³/s, Dec. 18, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 749 ft³/s, Apr. 18, gage height, 3.62 ft; minimum daily, 54 ft³/s, Oct. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	74	131	119	93	276	452	463	441	139	108	108
2	67	73	137	112	88	272	512	446	433	131	108	93
3	70	73	137	106	91	279	532	451	432	129	95	91
4	70	72	146	108	104	288	554	461	439	128	95	85
5	70	73	144	108	105	306	522	468	405	126	112	85
6	69	75	136	107	109	324	518	464	106	136	118	84
7	67	82	112	108	109	313	475	470	112	136	115	83
8	66	92	106	99	111	332	476	436	123	154	115	83
9	66	123	102	104	116	341	481	426	115	132	105	83
10	64	136	113	107	115	332	477	431	84	136	98	82
11	63	120	104	97	121	310	482	455	92	136	109	108
12	61	114	102	95	128	318	495	452	95	146	114	135
13	62	158	99	105	145	340	501	450	105	161	127	127
14	59	177	92	101	147	341	450	465	103	126	131	128
15	58	166	91	98	162	329	466	456	84	85	114	133
16	59	161	90	99	167	315	479	462	79	80	98	125
17	59	190	91	100	165	321	594	462	82	106	89	120
18	58	195	111	97	160	326	580	460	88	101	95	129
19	57	182	111	95	168	326	448	465	86	98	108	117
20	57	167	111	96	279	330	453	463	92	94	111	116
21	60	151	131	107	392	331	481	452	86	100	111	107
22	56	146	124	111	463	351	457	457	82	98	111	98
23	58	163	118	112	392	340	458	457	80	95	102	77
24	56	165	116	117	303	327	483	457	89	100	90	73
25	54	165	119	107	253	328	477	463	89	110	98	77
26	212	165	120	106	281	339	464	454	126	109	100	77
27	171	163	118	104	282	349	447	447	131	106	99	75
28	97	160	120	108	288	356	461	443	123	95	100	72
29	86	142	122	104	285	342	498	439	125	93	112	71
30	78	135	124	102	---	337	532	444	137	97	91	68
31	76	---	118	93	---	349	---	444	---	109	114	---
TOTAL	2274	4058	3596	3232	5622	10068	14705	14063	4664	3592	3293	2910
MEAN	73.4	135	116	104	194	325	490	454	155	116	106	97.0
MAX	212	195	146	119	463	356	594	470	441	161	131	135
MIN	54	72	90	93	88	272	447	426	79	80	89	68
AC-FT	4510	8050	7130	6410	11150	19970	29170	27890	9250	7120	6530	5770

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	391	435	536	556	632	770	1273	1705	1248	645	509	464
MAX	982	2469	3596	3053	2394	4073	3887	5674	5214	2921	1084	1482
(WY)	1972	1984	1984	1984	1986	1986	1952	1952	1983	1983	1975	1983
MIN	51.0	55.6	80.4	77.7	85.3	142	369	349	142	53.9	53.9	47.3
(WY)	1978	1991	1991	1991	1933	1933	1977	1934	1931	1931	1931	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1909 - 1992	
ANNUAL TOTAL	94493		72077			
ANNUAL MEAN	259		197		756	
HIGHEST ANNUAL MEAN					2443	
LOWEST ANNUAL MEAN					184	
HIGHEST DAILY MEAN	1090	Mar 4	594	Apr 17	13400	Dec 23 1955
LOWEST DAILY MEAN	54	Oct 25	54	Oct 25	37	Sep 15 1933
ANNUAL SEVEN-DAY MINIMUM	57	Oct 19	57	Oct 19	40	Sep 9 1933
INSTANTANEOUS PEAK FLOW			749	Apr 18	17500	Nov 21 1950
INSTANTANEOUS PEAK STAGE			3.62	Apr 18	14.50	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	187400		143000		547600	
10 PERCENT EXCEEDS	521		459		1660	
50 PERCENT EXCEEDS	142		118		504	
90 PERCENT EXCEEDS	72		76		213	

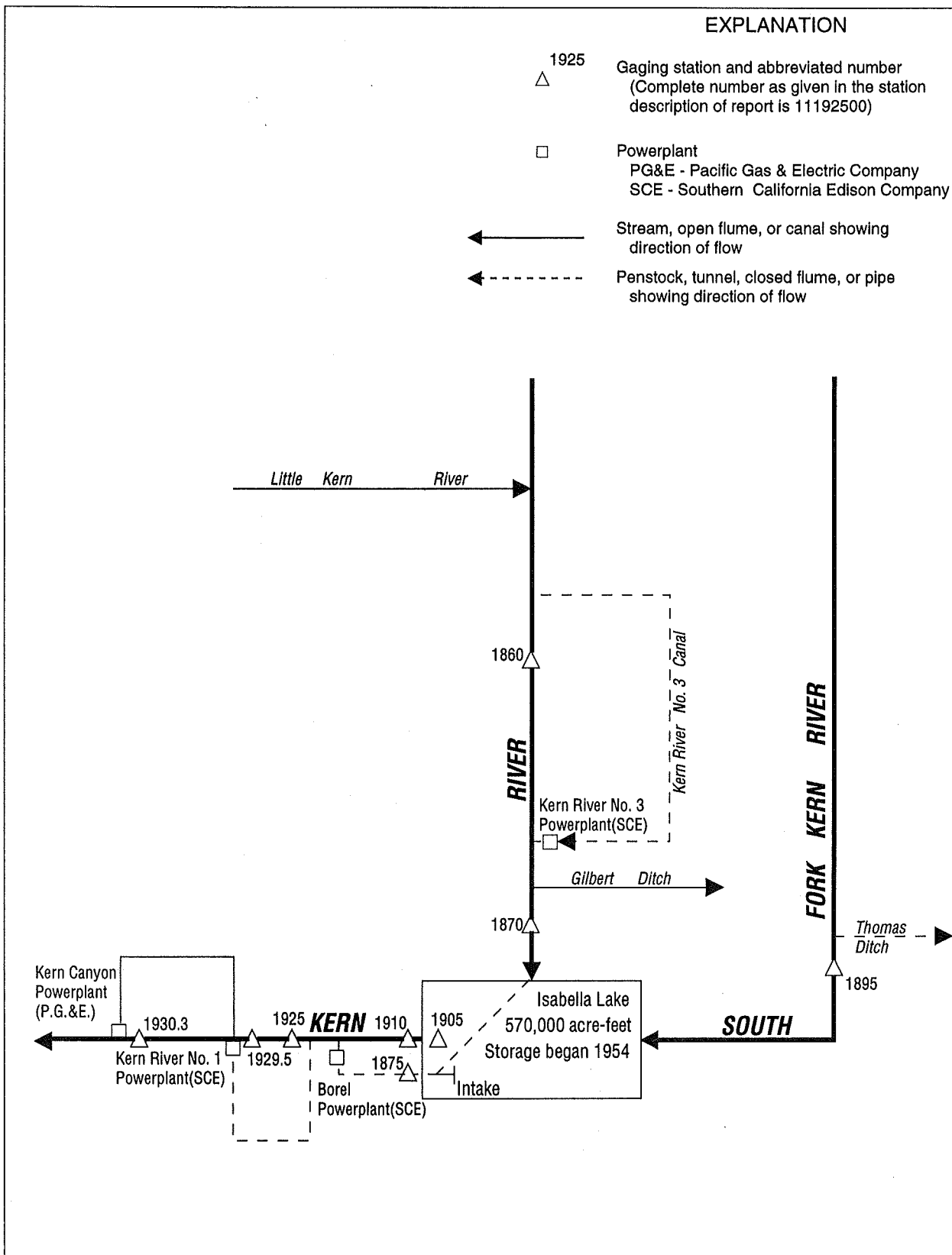


Figure 27. Diversions and storage in Kern River basin.

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA

LOCATION.--Lat 35°56'43", long 118°28'36", unsurveyed, Tulare County, Hydrologic Unit 18030001, on left bank at Packsaddle Canyon Creek, 100 ft downstream from diversion dam, and 13.4 mi north of Kernville.
DRAINAGE AREA.--846 mi².

PERIOD OF RECORD.--January 1912 to current year. Records for water year 1912 incomplete; yearly estimates published in WSP 1315-A. March 1921 to October 1953, records for river and canal published separately; combined flow only, October 1953 to September 1960.

REVISED RECORDS.--WSP 1445: 1912, 1916(M). WSP 1930: 1914(M), 1918(M).

GAGE.--Water-stage recorder on river; water-stage recorder and rectangular concrete-lined flume for canal diversion. Elevation of gage is 3,620 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 1, 1913, at site 1.4 mi downstream at different datum. Apr. 1 to Sept. 14, 1913, nonrecording gage, and Sept. 15, 1913, to Sept. 30, 1967, water-stage recorder, at site 1.2 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Since 1921, Kern River No. 3 Canal diverts up to 630 ft³/s 100 ft upstream from station, from left bank of Kern River for power development; water is returned to river 15 mi downstream from station. See schematic diagram of Kern River basin. For records of combined discharge of river and canal, see following page.

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

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 60,000 ft³/s, Dec. 6, 1966, gage height, 22.77 ft, site and datum then in use, from floodmarks, from rating curve extended above 6,000 ft³/s on basis of computed flow over dam at gage height 17.55 ft (basic data for computation provided by Southern California Edison Co.) and slope-area measurement of peak flow; no flow for many days in 1924 and 1925.

Combined river and diversion: Maximum discharge, 60,000 ft³/s, Dec. 6, 1966; minimum daily, 76 ft³/s, Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 1,150 ft³/s, May 13, gage height, 5.26 ft; minimum daily, 43 ft³/s, for several days in February.

Combined river and diversion: Maximum daily discharge, 1,570 ft³/s, May 13; minimum daily, 108 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	51	48	47	46	79	106	628	379	91	79	69
2	57	50	45	47	44	81	109	513	374	90	78	68
3	56	50	45	48	45	79	106	506	344	91	77	68
4	56	50	45	48	43	77	108	517	348	89	78	68
5	56	49	45	47	45	79	108	503	335	89	78	68
6	56	49	46	46	44	74	109	533	268	91	77	69
7	56	49	46	46	46	70	109	641	238	96	78	69
8	56	49	46	47	44	70	108	629	151	94	78	68
9	56	49	46	48	44	70	109	760	104	92	79	69
10	57	49	46	48	45	70	110	822	102	91	79	72
11	56	49	46	49	45	71	110	897	102	92	78	70
12	56	50	46	49	45	72	109	949	99	92	78	70
13	56	52	46	55	43	72	109	989	95	91	79	73
14	56	52	46	51	44	72	108	922	94	91	79	71
15	56	49	46	52	43	72	107	824	92	91	80	70
16	56	44	46	56	43	72	106	759	92	85	79	68
17	56	45	46	57	43	74	120	715	92	79	79	68
18	56	46	46	57	44	75	246	637	92	80	79	69
19	56	45	46	60	44	74	280	553	93	85	79	69
20	56	44	46	49	44	74	305	480	92	83	78	69
21	56	44	46	45	48	74	374	359	92	81	78	69
22	56	45	46	46	46	74	293	249	97	82	83	70
23	56	45	46	48	46	75	180	220	98	80	82	71
24	56	45	46	48	45	74	175	252	99	81	80	70
25	57	45	47	50	44	73	260	304	99	79	78	70
26	57	45	49	51	43	75	394	321	97	80	79	71
27	58	45	48	46	44	75	482	341	97	82	80	71
28	56	46	53	46	45	74	586	404	97	81	78	71
29	56	46	53	45	45	72	724	404	98	80	77	72
30	56	46	47	50	---	72	733	376	97	81	77	71
31	56	---	48	44	---	74	---	408	---	80	79	---
TOTAL	1745	1423	1447	1526	1290	2289	6883	17415	4557	2670	2440	2091
MEAN	56.3	47.4	46.7	49.2	44.5	73.8	229	562	152	86.1	78.7	69.7
MAX	59	52	53	60	48	81	733	989	379	96	83	73
MIN	56	44	45	44	43	70	106	220	92	79	77	68
AC-FT	3460	2820	2870	3030	2560	4540	13650	34540	9040	5300	4840	4150

BUENA VISTA LAKE BASIN--Continued

11186000 KERN RIVER NEAR KERNVILLE, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.0	47.7	136	132	153	244	577	1440	1607	706	213	108
MAX	197	194	2488	1370	967	1480	2631	5874	6819	3482	1583	538
(WY)	1983	1984	1967	1969	1986	1986	1969	1969	1983	1983	1983	1982
MIN	2.01	1.36	.98	2.01	1.51	1.84	1.93	6.68	7.22	2.66	12.5	2.70
(WY)	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1961 - 1992			
ANNUAL TOTAL	78647				45776							
ANNUAL MEAN	215				125				452			
HIGHEST ANNUAL MEAN									1727			
LOWEST ANNUAL MEAN									3.65			
HIGHEST DAILY MEAN	3100				989				33600			
LOWEST DAILY MEAN	29				43				.20			
ANNUAL SEVEN-DAY MINIMUM	29				43				.26			
INSTANTANEOUS PEAK FLOW					1150				60000			
INSTANTANEOUS PEAK STAGE					5.26				22.77			
ANNUAL RUNOFF (AC-FT)	156000				90800				327700			
10 PERCENT EXCEEDS	560				337				1400			
50 PERCENT EXCEEDS	79				71				77			
90 PERCENT EXCEEDS	31				45				26			

BUENA VISTA LAKE BASIN

11186001 KERN RIVER NEAR KERNVILLE, CA--Continued

KERN RIVER AND KERN RIVER NO. 3 CANAL NEAR KERNVILLE,
 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	159	148	162	162	310	314	1210	965	309	167	131
2	132	158	159	162	160	306	328	1090	960	291	161	128
3	129	157	160	165	158	305	342	1090	930	273	156	125
4	127	160	160	169	154	296	376	1100	934	267	153	125
5	125	161	158	187	154	293	413	1090	922	255	150	124
6	125	167	157	183	161	321	417	1110	854	247	149	123
7	124	171	157	175	168	298	429	1220	822	247	149	120
8	124	173	162	158	175	282	462	1210	734	246	144	118
9	124	172	160	172	169	270	497	1350	669	245	143	117
10	123	189	159	185	180	265	527	1400	630	249	140	115
11	120	191	156	179	239	269	545	1480	610	245	137	114
12	121	181	156	159	273	274	550	1530	567	249	139	113
13	122	173	152	156	265	286	549	1570	522	266	143	113
14	121	169	150	169	249	298	591	1500	466	293	187	112
15	118	162	150	168	235	287	606	1400	428	295	262	112
16	116	154	149	170	226	283	618	1340	403	276	258	112
17	115	177	151	174	237	276	693	1290	373	252	212	112
18	115	283	154	176	243	269	830	1220	346	246	192	114
19	114	204	158	176	251	263	866	1130	333	235	177	115
20	114	205	145	162	288	264	897	1060	331	220	165	113
21	114	208	143	157	316	276	962	937	338	210	159	112
22	116	210	153	156	304	269	877	831	326	203	153	110
23	126	195	155	156	302	285	764	804	318	196	149	110
24	120	187	154	159	285	275	759	837	339	190	145	109
25	124	184	148	163	285	271	845	889	337	182	139	110
26	160	182	146	166	290	268	978	906	327	176	137	110
27	299	179	147	163	298	274	1070	927	308	171	134	110
28	181	174	161	164	311	279	1170	987	305	169	129	110
29	174	159	161	164	315	288	1310	985	328	169	128	109
30	171	157	161	162	---	297	1320	954	326	167	129	108
31	164	---	155	160	---	297	---	992	---	165	131	---
TOTAL	4193	5401	4785	5177	6853	8794	20905	35439	16051	7204	4917	3454
MEAN	135	180	154	167	236	284	697	1143	535	232	159	115
MAX	299	283	162	187	316	321	1320	1570	965	309	262	131
MIN	114	154	143	156	154	263	314	804	305	165	128	108
AC-FT	8320	10710	9490	10270	13590	17440	41470	70290	31840	14290	9750	6850

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	250	267	373	417	508	666	1099	2006	2153	1115	508	314
MAX	634	715	2696	1668	1524	2075	3235	6475	7401	4059	2175	934
(WY)	1983	1984	1967	1969	1980	1986	1969	1969	1983	1983	1983	1978
MIN	106	112	109	121	120	181	333	373	303	133	114	100
(WY)	1962	1991	1991	1991	1991	1977	1976	1977	1976	1961	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1961 - 1992
ANNUAL TOTAL	170101	123173	
ANNUAL MEAN	466	337	807
HIGHEST ANNUAL MEAN			2264
LOWEST ANNUAL MEAN			228
HIGHEST DAILY MEAN	3470	1570	33600
LOWEST DAILY MEAN	110	108	76
ANNUAL SEVEN-DAY MINIMUM	112	109	84
ANNUAL RUNOFF (AC-FT)	337400	244300	584600
10 PERCENT EXCEEDS	1140	923	1990
50 PERCENT EXCEEDS	187	183	379
90 PERCENT EXCEEDS	118	122	155

11187000 KERN RIVER AT KERNVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 35°45'16", long 118°25'21", in NE 1/4 SW 1/4 sec.15, T.25 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 300 ft downstream from highway bridge at Kernville, 1.1 mi upstream from Caldwell Creek, 8.9 mi upstream from Isabella Dam, and 42 mi northeast of Bakersfield.
DRAINAGE AREA.--1,009 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1912, October 1953 to current year. Monthly discharge only for September to December 1912, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,621.57 ft above National Geodetic Vertical Datum of 1929.

January 1905 to September 1912, non-recording gage at two sites 3.5 mi downstream at different datums. October 1953 to Feb. 20, 1967, at present site and datum. Feb. 20, 1967, to Oct. 11, 1976, water-stage recorder 0.6 mi upstream at datum 2,634.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Slight regulation at times by operation of Kern River No. 3 Canal and powerplant. A few small diversions for irrigation upstream from station. Gilbert irrigation ditch diverts up to 7 ft³/s around station during irrigation season.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s, Dec. 6, 1966, gage height, 22.2 ft, from floodmarks, present site, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 70 ft³/s, Sept. 29, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known from at least 1912 to December 1966, 18.4 ft, from floodmarks, Nov. 19, 1950, discharge, 38,700 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 13	1630	*1,840	*6.80				

Minimum daily, 107 ft³/s, Sept. 28-30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	171	148	180	182	374	359	1260	912	318	167	146
2	136	167	172	184	185	376	394	1140	920	322	153	140
3	133	164	172	187	181	368	414	1100	902	308	147	138
4	131	165	171	196	176	352	453	1130	895	292	154	131
5	125	167	171	220	170	345	480	1120	891	278	169	129
6	124	170	168	226	185	377	481	1130	832	261	150	124
7	124	181	165	212	196	349	503	1260	813	265	147	123
8	124	182	173	189	211	330	546	1230	735	249	146	122
9	124	182	177	197	203	320	601	1340	676	256	143	118
10	125	191	172	216	208	322	620	1390	621	267	151	113
11	124	198	166	211	281	319	634	1460	596	250	160	114
12	122	193	167	189	349	326	638	1500	562	258	147	111
13	123	185	160	173	361	336	634	1560	539	276	159	110
14	123	182	157	197	319	343	678	1480	489	303	192	111
15	124	178	156	191	301	333	696	1390	457	297	279	112
16	122	172	158	188	297	331	703	1260	426	278	309	112
17	122	190	161	193	312	317	725	1200	386	258	244	112
18	122	370	165	197	317	298	869	1150	349	240	215	113
19	122	232	175	189	317	299	938	1060	336	227	197	114
20	122	214	155	181	380	295	915	1000	323	214	183	112
21	122	209	147	178	444	314	958	942	330	206	176	111
22	123	216	161	177	432	307	944	831	318	211	162	109
23	134	204	164	172	435	322	819	739	300	199	162	109
24	130	196	169	178	397	304	780	757	322	190	159	109
25	130	185	161	181	389	309	842	857	321	175	151	111
26	156	186	158	181	393	305	973	877	310	170	145	110
27	e500	185	160	184	405	312	1070	831	292	159	144	108
28	e200	181	176	183	399	324	1160	922	285	161	139	107
29	177	166	183	185	395	327	1300	1000	313	169	138	107
30	174	169	192	177	---	336	1350	960	313	163	138	107
31	171	---	177	188	---	350	---	947	---	168	135	---
TOTAL	4547	5751	5157	5900	8820	10220	22477	34823	15764	7388	5261	3493
MEAN	147	192	166	190	304	330	749	1123	525	238	170	116
MAX	500	370	192	226	444	377	1350	1560	920	322	309	146
MIN	122	164	147	172	170	295	359	739	285	159	135	107
AC-FT	9020	11410	10230	11700	17490	20270	44580	69070	31270	14650	10440	6930

e Estimated.

11187000 KERN RIVER AT KERNVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	273	409	492	597	753	1228	2062	2231	1187	510	302
MAX	654	815	3541	1939	2100	2571	3685	6748	7768	4538	2172	948
(WY)	1983	1984	1967	1969	1986	1983	1969	1969	1983	1906	1983	1982
MIN	90.3	114	123	144	138	186	344	366	281	118	113	94.9
(WY)	1962	1962	1991	1991	1991	1977	1977	1977	1976	1961	1960	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1905 - 1992		
ANNUAL TOTAL	185822			129601					
ANNUAL MEAN	509			354			864		
HIGHEST ANNUAL MEAN							2504		
LOWEST ANNUAL MEAN							223		
HIGHEST DAILY MEAN	4540			Mar 4			44500		
LOWEST DAILY MEAN	122			Oct 12			70		
ANNUAL SEVEN-DAY MINIMUM	122			Oct 16			81		
INSTANTANEOUS PEAK FLOW							1840		
INSTANTANEOUS PEAK STAGE							6.80		
ANNUAL RUNOFF (AC-FT)	368600			257100			626100		
10 PERCENT EXCEEDS	1210			905			2190		
50 PERCENT EXCEEDS	200			199			412		
90 PERCENT EXCEEDS	134			124			160		

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

CHEMICAL DATA: Water years 1975 to current year.

BIOLOGICAL DATA: Water years 1978-81.

WATER TEMPERATURE: Water years 1962-88.

SEDIMENT DATA: Water years 1967-74, 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1962 to September 1988.

REMARKS.--Quality of water samples obtained at the gage.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 20...	1150	210	148	8.2	8.0	1.8	697	13.6	126	K8	K140
JAN 07...	1110	205	156	8.0	5.0	1.6	686	14.8	129	20	320
MAR 11...	1140	317	133	8.4	9.0	1.0	694	11.4	108	10	<1
MAY 13...	1300	1700	45	7.7	15.0	1.5	690	10.6	116	8	92
SEP 16...	1250	111	195	8.5	20.0	1.0	701	9.0	108	18	21

DATE	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 DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- LITY TOT IT FIELD (MG/L AS CACO3)
NOV 20...	44	0	14	2.2	15	41	1	1.8	70	0	58
JAN 07...	48	0	15	2.5	15	40	0.9	1.5	79	0	65
MAR 11...	41	0	13	2.1	13	40	0.9	1.6	62	2	54
MAY 13...	12	0	3.9	0.56	3.4	37	0.4	0.50	22	0	18
SEP 16...	56	0	18	2.6	18	40	1	2.0	89	1	74

DATE	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)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 20...	10	9.1	0.30	17	105	104	0.14	<0.010	<0.010	0.060
JAN 07...	9.7	5.8	0.20	18	117	107	0.16	<0.010	<0.010	<0.050
MAR 11...	8.1	5.4	0.30	17	98	93	0.16	<0.010	<0.010	<0.050
MAY 13...	2.5	1.5	0.20	8.0	39	32	0.05	<0.010	<0.010	<0.050
SEP 16...	14	8.9	0.20	15	123	124	0.17	<0.010	<0.010	<0.050

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 20...	0.057	0.020	<0.010	<0.20	0.020	<0.010	0.010	<0.010	30	14
JAN 07...	<0.050	0.040	0.030	<0.20	0.020	0.010	<0.010	<0.010	--	--
MAR 11...	<0.050	<0.010	0.010	0.70	<0.010	<0.010	<0.010	<0.010	<10	13
MAY 13...	<0.050	0.020	0.040	<0.20	<0.010	<0.010	0.010	<0.010	30	4
SEP 16...	<0.050	<0.010	0.020	<0.20	<0.010	<0.010	<0.010	<0.010	<10	18
DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)
NOV 20...	<3	85	29	7	<10	2	<1	<1.0	93	<6
JAN 07...	--	--	--	--	--	--	--	--	--	--
MAR 11...	<3	55	25	6	<10	<1	<1	<1.0	92	<6
MAY 13...	<3	33	6	4	<10	<1	<1	<1.0	27	<6
SEP 16...	<3	46	35	5	<10	<1	<1	<1.0	110	<6

11187000 KERN RIVER AT KERNVILLE, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (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- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
13...	1240	4.50	156	45	7.7	15.0	690	10.6	116	24	62
13...	1250	4.40	140	45	7.5	15.0	690	10.6	116	24	61
13...	1255	3.80	122	44	7.7	15.0	690	10.6	116	27	64
13...	1305	3.40	97.0	45	7.6	15.0	690	10.6	116	28	64
13...	1315	2.50	65.0	47	7.8	15.0	690	10.4	114	30	58
SEP											
16...	1305	0.75	40.0	202	8.3	20.5	701	8.9	108	2	--
16...	1307	1.23	54.0	202	8.5	20.0	701	9.0	108	2	--
16...	1309	1.54	62.0	201	8.5	20.0	701	9.0	108	3	--
16...	1312	1.10	71.0	198	8.5	20.0	701	9.0	108	3	--
16...	1314	1.14	82.0	201	8.6	20.0	701	8.9	107	3	--

* Instantaneous discharge at the time of cross sectional measurement: May 13, 1590 ft³/s; Sept. 18, 118 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
20...	1200	210	8.0	7	4.0	84
JAN						
07...	1320	217	5.0	4	2.3	82
MAR						
11...	1200	321	9.0	5	4.3	92
MAY						
13...	1300	1700	15.0	27	124	62
SEP						
16...	1250	111	20.0	3	0.90	--

11187500 BOREL CANAL BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'32", long 118°28'09", in SW 1/4 NE 1/4 sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 500 ft downstream from Isabella Dam and 3 mi upstream from point where canal crosses Erskine Creek.

PERIOD OF RECORD.--January 1910 to September 1914, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Kern River Power Co.'s Canal at or near Kernville 1910-14. Published as "at Tillie Creek" 1925-51.

GAGE.--Water-stage recorder. Elevation of gage is 2,540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 29, 1952, at site 4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Canal diverts from right bank of Kern River 5.5 mi upstream from Isabella Dam and above South Fork Kern River. When contents of Isabella Reservoir are above 110,000 acre-ft, diversion is at the dam. Canal is used to supply Borel powerplant of Southern California Edison Co., 6 mi downstream from station, at which point water is returned to the Kern River.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 634 ft³/s, Mar. 13, 14, 1952; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	125	288	505	495	606	600	582	219
2	.00	.00	.00	.00	122	306	515	516	606	604	583	225
3	.00	.00	.00	.00	126	243	521	482	605	602	584	245
4	.00	.00	.00	.00	126	391	523	445	606	600	583	279
5	.00	.00	.00	.00	127	273	458	432	607	599	583	243
6	.00	.00	.00	.00	132	337	409	421	603	600	586	220
7	.00	.00	.00	.00	129	338	408	420	608	598	585	208
8	.00	.00	.00	.00	125	325	410	415	603	594	586	197
9	.00	.00	.00	.00	129	286	410	451	603	592	585	216
10	.00	.00	.00	.00	127	257	406	476	604	592	586	224
11	.00	.00	.00	.00	127	251	406	482	606	590	581	193
12	.00	.00	.00	.00	127	298	409	477	606	600	584	216
13	.00	.00	.00	.00	128	368	408	463	603	598	584	219
14	.00	.00	.00	.00	131	347	408	424	602	595	585	185
15	.00	.00	.00	.00	136	334	411	411	603	593	584	175
16	.00	.00	.00	.00	139	306	410	407	603	591	583	181
17	.00	.00	.00	101	142	308	409	431	603	592	582	172
18	.00	.00	.00	137	138	313	407	440	605	591	581	176
19	.00	.00	.00	136	131	375	407	421	605	585	579	189
20	.00	.00	.00	139	131	388	406	433	605	585	484	227
21	.00	.00	.00	137	133	370	406	445	604	585	382	250
22	.00	.00	.00	135	134	347	434	451	603	586	378	251
23	.00	.00	.00	127	133	362	461	475	607	587	372	229
24	.00	.00	.00	132	132	368	433	493	608	587	388	205
25	.00	.00	.00	135	130	384	407	490	607	585	388	197
26	.00	.00	.00	134	130	415	406	477	609	582	388	185
27	.00	.00	.00	134	133	409	405	537	610	582	365	180
28	.00	.00	.00	134	166	406	405	584	599	582	316	164
29	.00	.00	.00	130	---	430	407	603	596	582	287	157
30	.00	.00	.00	122	---	486	446	606	595	582	252	164
31	.00	---	.00	134	---	506	---	606	---	584	218	---
TOTAL	0.00	0.00	0.00	1967.00	3689	10815	12856	14709	18130	18325	15304	6191
MEAN	.000	.000	.000	63.5	132	349	429	474	604	591	494	206
MAX	.00	.00	.00	139	166	506	523	606	610	604	586	279
MIN	.00	.00	.00	.00	122	243	405	407	595	582	218	157
AC-FT	.00	.00	.00	3900	7320	21450	25500	29180	35960	36350	30360	12280

CAL YR 1990 TOTAL 20842.28 MEAN 57.1 MAX 350 MIN .00 AC-FT 41340
WTR YR 1991 TOTAL 101986.00 MEAN 279 MAX 610 MIN .00 AC-FT 202300

11187500 BOREL CANAL BELOW ISABELLA DAM, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	.00	143	161	165	347	347	517	591	573	558	114
2	185	.00	162	166	169	354	389	487	589	568	557	110
3	197	.00	164	168	164	351	398	445	590	569	557	107
4	64	.00	164	177	159	336	409	445	590	571	557	105
5	.00	.00	162	197	155	329	406	446	590	571	552	106
6	.00	.00	159	215	166	358	406	459	592	569	524	103
7	.00	112	158	196	179	346	407	476	593	568	490	102
8	.16	145	167	179	190	320	407	466	592	570	456	100
9	8.4	146	164	176	186	308	408	454	592	553	423	98
10	28	158	160	198	186	299	410	454	592	536	389	96
11	54	167	158	196	262	298	411	500	591	546	359	97
12	87	161	159	177	317	302	412	560	591	557	337	96
13	127	156	152	161	369	312	413	560	577	518	318	95
14	172	156	150	177	324	326	415	498	527	532	300	94
15	211	154	149	178	300	318	412	448	498	579	283	94
16	4.1	146	148	175	297	311	413	430	501	572	272	97
17	.81	154	149	177	311	304	415	447	488	573	259	98
18	.00	360	155	178	314	294	414	494	532	573	236	100
19	.00	236	163	172	311	287	415	553	588	573	215	102
20	.00	206	149	164	348	286	418	588	568	573	199	101
21	.00	211	136	163	369	308	417	591	569	573	185	99
22	.00	218	150	164	323	299	417	597	587	573	167	96
23	.00	201	152	160	323	318	424	592	560	574	155	96
24	.00	192	152	164	326	310	420	592	560	573	146	95
25	.00	187	146	166	7.0	301	417	597	573	571	135	97
26	.00	186	145	165	.00	296	418	595	545	572	124	96
27	.00	183	144	168	158	303	420	595	522	570	111	94
28	.00	180	154	166	369	312	408	595	553	574	107	95
29	.00	164	164	167	372	322	430	595	582	573	106	94
30	.00	163	178	163	---	330	479	593	577	572	106	94
31	.00	---	164	167	---	344	---	595	---	566	108	---
TOTAL	1309.47	4342.00	4820	5401	7119.00	9829	12375	16264	17000	17535	9291	2971
MEAN	42.2	145	155	174	245	317	412	525	567	566	300	99.0
MAX	211	360	178	215	372	358	479	597	593	579	558	114
MIN	.00	.00	136	160	.00	286	347	430	488	518	106	94
AC-FT	2600	8610	9560	10710	14120	19500	24550	32260	33720	34780	18430	5890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	238	237	266	305	383	455	502	517	534	478	380	283
MAX	588	584	576	584	590	611	605	607	614	605	607	585
(WY)	1979	1984	1951	1984	1984	1985	1984	1989	1989	1985	1952	1978
MIN	.000	.000	.000	.000	.000	.000	.000	.000	9.23	2.25	.000	.000
(WY)	1973	1946	1973	1952	1951	1973	1990	1914	1914	1990	1972	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1910 - 1992
ANNUAL TOTAL	112457.47	108256.47	
ANNUAL MEAN	308	296	381
HIGHEST ANNUAL MEAN			585
LOWEST ANNUAL MEAN			106
HIGHEST DAILY MEAN	610	597	634
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	223100	214700	275700
10 PERCENT EXCEEDS	599	573	586
50 PERCENT EXCEEDS	252	284	425
90 PERCENT EXCEEDS	.00	94	124

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA

LOCATION.--Lat 35°44'15", long 118°10'22", unsurveyed, T.25 S., R.35 E., Kern County, Hydrologic Unit 18030002, on left bank 0.8 mi north of State Highway 178, 1.6 mi upstream from Canebrake Creek, and 5 mi northeast of Onyx.

DRAINAGE AREA.--530 mi².

PERIOD OF RECORD.--September 1911 to August 1914, January 1919 to September 1942, October 1947 to current year. Yearly estimate for water year 1927 (incomplete) and monthly discharges for incomplete water years 1914, 1919, 1926, 1928, 1929, published in WSP 1315-A.

REVISED RECORDS.--WSP 1151: 1948(M). WSP 1445: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 12, 1911, to Aug. 31, 1914, nonrecording gage and Jan. 23, 1919, to Apr. 17, 1936, water-stage recorder, 140 ft upstream at datum 2.88 ft lower. Apr. 18, 1936, to September 1942, and October 1947 to Feb. 8, 1967, at datum 6.88 ft higher. Feb. 9, 1967, to May 31, 1972, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Lowell and Thomas ditches divert upstream from station for irrigation downstream of station, combined capacity, 7 ft³/s. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft³/s, Dec. 6, 1966, gage height, 18.9 ft, from floodmarks, present datum, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; no flow for several days in 1929, 1934, 1960-61.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 18	1830	*392	*5.43				

Minimum daily, 3.0 ft³/s, Aug. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	17	16	20	24	73	146	181	52	8.4	4.1	3.6
2	5.4	17	17	20	24	87	143	165	49	8.4	3.9	3.8
3	5.2	17	17	27	24	104	147	155	42	8.7	3.9	4.1
4	5.1	17	18	26	23	84	171	136	36	11	3.7	4.2
5	4.9	17	19	29	23	83	191	129	33	10	3.5	4.3
6	5.0	17	18	31	27	86	201	157	32	9.6	3.4	4.2
7	4.8	17	19	28	40	80	231	209	31	9.0	3.4	4.1
8	4.9	17	22	24	40	74	295	193	30	8.9	3.4	4.0
9	5.0	17	22	26	36	69	309	183	31	9.2	3.5	4.0
10	5.2	18	19	30	37	67	318	169	29	10	3.4	4.0
11	5.1	19	22	30	51	67	326	147	27	10	3.3	3.9
12	5.5	19	21	25	83	68	310	136	26	11	3.3	4.0
13	5.7	19	19	22	77	70	285	128	25	10	3.3	4.0
14	5.7	18	18	28	60	76	288	119	25	11	3.4	4.0
15	5.6	18	17	29	57	73	290	113	24	11	4.0	4.0
16	5.6	17	17	26	54	72	284	109	24	12	4.6	4.1
17	5.8	17	18	27	51	71	300	95	24	11	5.8	4.2
18	5.9	30	19	26	53	68	333	82	26	8.8	5.3	4.3
19	5.9	28	21	27	52	66	320	72	26	8.7	4.7	4.3
20	6.0	23	20	24	67	67	288	69	26	7.8	4.2	4.4
21	6.1	27	16	24	92	83	276	68	24	7.3	3.8	4.5
22	6.5	28	17	25	91	79	269	65	23	6.8	3.6	4.6
23	7.0	28	19	25	91	83	251	62	22	6.5	3.5	4.5
24	7.4	26	20	25	77	85	234	59	22	6.2	3.3	4.6
25	7.8	25	19	26	71	81	231	56	19	5.8	3.3	4.7
26	10	25	18	26	72	79	225	53	17	5.7	3.3	4.6
27	19	25	19	25	72	81	211	49	17	5.4	3.2	4.7
28	20	23	22	25	74	86	198	48	16	5.2	3.1	4.8
29	20	20	24	25	75	94	197	53	11	4.8	3.0	4.7
30	19	17	24	25	---	98	194	55	8.2	4.6	3.1	4.8
31	18	---	26	24	---	119	---	53	---	4.4	3.3	---
TOTAL	248.8	623	603	800	1618	2473	7462	3368	797.2	257.2	114.6	128.0
MEAN	8.03	20.8	19.5	25.8	55.8	79.8	249	109	26.6	8.30	3.70	4.27
MAX	20	30	26	31	92	119	333	209	52	12	5.8	4.8
MIN	4.8	17	16	20	23	66	143	48	8.2	4.4	3.0	3.6
AC-FT	493	1240	1200	1590	3210	4910	14800	6680	1580	510	227	254

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.3	36.0	58.7	61.1	93.2	155	344	434	170	48.6	23.6	18.9
MAX	98.9	143	942	426	448	686	1583	2896	1311	349	184	90.2
(WY)	1984	1984	1967	1969	1980	1978	1969	1969	1983	1983	1983	1978
MIN	1.00	8.92	12.4	14.0	17.3	24.1	23.4	9.52	1.00	.19	.20	.10
(WY)	1962	1930	1949	1931	1961	1961	1961	1961	1924	1961	1934	1961

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1912 - 1992	
ANNUAL TOTAL	20774.9		18492.8		122	
ANNUAL MEAN	56.9		50.5		605	
HIGHEST ANNUAL MEAN					11.5	
LOWEST ANNUAL MEAN					14000	
HIGHEST DAILY MEAN	703	Mar 4	333	Apr 18		Dec 6 1966
LOWEST DAILY MEAN	2.7	Sep 4	3.0	Aug 29	.00	Sep 1 1934
ANNUAL SEVEN-DAY MINIMUM	3.3	Aug 30	3.2	Aug 24	.00	Jul 23 1961
INSTANTANEOUS PEAK FLOW			392	Apr 18	28700	Dec 6 1966
INSTANTANEOUS PEAK STAGE			5.43	Apr 18	18.90	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	41210		36680		88530	
10 PERCENT EXCEEDS	184		147		280	
50 PERCENT EXCEEDS	19		23		41	
90 PERCENT EXCEEDS	4.7		4.1		6.9	

11191000 KERN RIVER BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'21", long 118°29'02", in SW 1/4 NW 1/4 sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank 200 ft downstream from highway bridge, 0.6 mi downstream from Isabella Dam, and 1.6 mi southwest of town of Lake Isabella.

DRAINAGE AREA.--2,074 mi².

PERIOD OF RECORD.--Water years 1956-66, 1971 to current year.

WATER-DISCHARGE RECORDS: Water years 1945-90.

CHEMICAL DATA: Water years 1956-66.

WATER TEMPERATURE: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Interruptions in the record were due to malfunction of the recording instrument. Water temperature is affected by regulation from Isabella Dam and the powerplant.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 24, 1981; minimum recorded, 2.5°C, Feb. 25, 26, 1989, Dec. 25, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 25.0°C, July 10, 12, 13; minimum recorded, 6.0°C, Jan. 15-19.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.5	20.0	15.0	14.5	11.0	10.5	9.0	8.0	8.0	7.5	10.5	9.5
2	24.0	20.0	15.0	14.5	11.0	10.0	9.0	8.5	8.5	7.5	---	---
3	23.5	20.0	14.5	14.5	10.5	10.0	9.0	8.5	8.5	7.5	11.0	10.0
4	23.5	20.0	14.5	14.5	10.5	10.0	9.5	8.5	8.5	7.5	11.5	10.0
5	24.0	20.0	14.5	14.5	10.5	9.5	9.0	8.0	8.5	8.0	11.0	10.0
6	24.5	20.0	14.5	14.5	10.0	9.5	9.5	7.5	8.5	8.5	11.5	10.5
7	24.0	19.0	15.0	14.0	10.0	9.5	8.0	7.0	9.0	8.5	11.0	10.0
8	22.5	19.0	15.0	14.0	10.0	9.5	8.5	6.5	11.5	8.5	11.5	10.5
9	23.0	18.5	15.0	14.5	10.5	9.5	8.5	8.0	10.0	7.5	12.0	11.0
10	23.5	18.5	15.0	14.5	10.5	9.5	9.0	8.0	9.0	8.5	12.0	10.5
11	20.5	18.5	15.0	14.0	10.0	9.5	8.5	7.5	11.0	8.5	12.0	11.0
12	23.5	19.0	15.0	14.0	10.0	9.5	8.0	7.5	9.5	8.5	12.0	11.0
13	23.5	18.5	15.0	14.0	10.0	9.5	8.0	7.5	11.5	8.5	12.0	11.0
14	23.0	18.0	14.5	14.0	10.0	9.5	10.0	7.0	9.5	7.5	12.0	11.0
15	23.0	18.0	14.5	13.5	10.0	9.5	9.5	6.0	9.5	9.0	12.0	11.0
16	21.0	20.5	14.5	13.5	9.5	9.5	9.5	6.0	9.0	9.0	12.0	11.0
17	21.0	20.5	14.0	13.5	10.0	9.5	8.5	6.0	9.5	9.0	12.0	11.0
18	21.0	20.5	14.0	12.0	10.0	9.0	8.5	6.0	9.5	9.0	12.5	11.5
19	21.0	20.5	14.5	11.5	10.0	7.5	10.0	6.0	9.5	9.0	12.5	11.5
20	20.5	20.5	14.5	11.0	9.5	7.0	8.5	7.5	10.0	9.0	12.5	12.0
21	20.5	20.5	14.0	11.0	9.5	8.5	8.0	7.0	12.5	9.0	12.5	12.0
22	20.5	20.0	14.5	11.0	9.5	9.0	8.0	7.0	10.0	9.5	12.5	12.0
23	20.0	20.0	13.5	10.5	9.5	8.5	8.0	7.0	10.5	9.5	13.0	11.5
24	20.0	19.5	13.5	10.0	9.5	8.5	8.0	7.0	11.0	10.0	12.5	11.5
25	19.5	18.5	13.5	10.5	9.5	8.0	8.0	7.0	11.0	10.5	12.5	12.0
26	18.5	17.5	13.5	10.0	9.5	8.0	8.0	7.0	11.0	10.5	12.5	12.0
27	17.5	17.0	12.0	9.5	9.5	8.5	9.5	7.0	12.0	9.5	12.5	12.0
28	17.0	16.5	11.5	11.0	10.0	8.5	9.0	7.0	13.5	9.5	12.5	12.0
29	16.5	15.5	11.5	11.0	9.0	8.5	9.0	6.5	12.5	9.0	12.5	12.0
30	16.0	15.5	11.5	10.5	10.5	8.0	8.0	6.5	---	---	12.5	12.0
31	15.5	15.0	---	---	9.5	7.0	8.5	7.5	---	---	12.5	12.0
MONTH	24.5	15.0	15.0	9.5	11.0	7.0	10.0	6.0	13.5	7.5	---	---

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	12.0	19.5	14.5	18.5	18.0	19.5	18.0	---	---	---	---
2	16.5	11.5	19.5	14.5	19.0	18.0	19.0	18.0	---	---	---	---
3	16.5	11.5	19.5	14.5	19.0	18.5	19.0	18.0	---	---	---	---
4	16.0	11.5	18.0	15.0	---	---	19.5	18.5	---	---	---	---
5	15.5	11.0	19.0	15.0	---	---	20.0	18.0	---	---	---	---
6	15.5	11.0	18.0	15.5	---	---	20.0	18.5	---	---	---	---
7	16.0	11.0	19.5	15.0	---	---	19.5	18.5	---	---	---	---
8	16.5	11.0	20.5	15.5	---	---	20.0	19.0	---	---	---	---
9	17.0	11.5	20.0	16.0	---	---	23.5	18.5	---	---	---	---
10	16.0	12.0	20.0	15.0	---	---	25.0	18.5	---	---	---	---
11	17.0	11.5	20.5	15.5	---	---	24.5	18.5	---	---	---	---
12	17.0	12.0	20.5	15.5	---	---	25.0	18.5	---	---	---	---
13	17.0	12.5	20.0	15.5	---	---	25.0	18.5	---	---	---	---
14	15.5	13.0	20.0	15.5	---	---	23.5	18.5	---	---	---	---
15	17.0	12.5	20.0	15.5	---	---	23.0	18.5	---	---	---	---
16	17.5	12.5	20.0	15.5	---	---	20.0	19.0	---	---	---	---
17	17.5	13.5	20.5	15.0	---	---	20.0	19.0	---	---	---	---
18	18.0	13.0	20.5	15.5	---	---	20.0	19.5	---	---	---	---
19	17.5	13.0	18.5	15.5	---	---	20.5	19.5	---	---	---	---
20	18.0	13.0	20.0	16.0	---	---	20.0	19.5	---	---	---	---
21	17.5	13.5	21.0	15.5	---	---	20.5	20.0	---	---	---	---
22	17.0	13.0	20.0	15.5	---	---	21.0	20.5	---	---	---	---
23	17.5	13.0	21.5	15.5	---	---	21.5	20.0	---	---	---	---
24	18.0	13.5	19.0	16.0	---	---	21.0	20.0	---	---	---	---
25	19.0	14.0	18.0	17.0	---	---	21.5	20.0	---	---	---	---
26	19.0	14.0	19.5	17.0	---	---	21.5	19.5	22.0	21.5	---	---
27	19.0	14.0	21.0	16.5	---	---	21.5	20.0	22.0	21.5	---	---
28	19.0	14.0	20.0	17.0	---	---	21.5	20.5	22.0	21.5	---	---
29	19.5	14.5	18.0	17.0	---	---	21.5	21.0	22.0	21.5	---	---
30	18.5	14.0	18.5	17.5	---	---	21.5	21.0	---	---	---	---
31	---	---	18.5	18.0	---	---	---	---	---	---	---	---
MONTH	19.5	11.0	21.5	14.5	---	---	---	---	---	---	---	---

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA

LOCATION.--Lat 35°31'15", long 118°40'34", in NE 1/4 SE 1/4 sec.6, T.28 S., R.31 E., Kern County, Hydrologic Unit 18030003, on left bank 1.0 mi southwest of Democrat Springs and 2.1 mi upstream from Cow Creek.

DRAINAGE AREA.--2,258 mi².

PERIOD OF RECORD.--July 1950 to current year. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder for conduit diversion. Datum of gage is 1,837.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Kern River No. 1 conduit diverts up to about 420 ft³/s from left bank of Kern River 0.4 mi upstream from station in sec.13, T.28 S., R.30 E., for power development; water is returned to river 10 mi below station. Flow regulated by Isabella Lake 22 mi upstream beginning in 1954 (station 11190500). Many diversions upstream from station for irrigation. See schematic diagram of Kern River basin. For records of combined discharge of river and conduit, see following page.

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

EXTREMES FOR PERIOD OF RECORD.--River only, prior to regulation by Isabella Lake in 1954: Maximum discharge, 40,000 ft³/s, Nov. 19, 1950, gage height, 30.7 ft, from rating curve extended above 8,700 ft³/s on basis of computation of peak flow over dam (basic data for computation provided by Southern California Edison Co.); minimum daily, 0.7 ft³/s, Nov. 17-19, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft³/s, Dec. 6, 1966, gage height, 18.55 ft; no flow May 26-28, 1977. Combined flow, prior to regulation by Isabella Lake: Maximum discharge, 40,000 ft³/s, Nov. 19, 1950; minimum daily, 123 ft³/s, Sept. 22, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft³/s, Dec. 6, 1966; minimum daily, 10 ft³/s, Dec. 17, 1968.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 484 ft³/s, July 31, gage height, 6.96 ft; minimum daily, 22 ft³/s, for many days. Combined flow: Maximum daily discharge, 847 ft³/s, July 31; minimum daily, 120 ft³/s, Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	28	23	24	22	22	29	118	432	252	408	70
2	29	28	23	25	23	36	29	134	441	238	369	69
3	28	28	23	25	22	24	29	50	438	292	367	69
4	28	28	23	25	22	22	29	52	428	270	358	69
5	28	28	23	26	23	23	29	51	423	227	389	69
6	28	27	23	31	23	24	29	53	407	245	369	67
7	28	27	23	25	23	24	29	79	443	228	391	67
8	28	28	23	25	23	24	28	77	360	265	391	66
9	28	28	23	26	22	24	28	56	339	220	373	67
10	28	28	23	25	22	23	28	55	357	152	403	65
11	28	28	23	25	22	24	28	73	342	146	291	64
12	28	27	23	64	22	24	28	160	317	165	78	64
13	28	27	24	24	32	24	28	198	263	153	73	63
14	28	27	24	24	23	24	28	134	162	106	73	62
15	28	27	23	23	28	24	28	59	104	187	95	61
16	28	27	24	23	41	25	28	38	106	244	67	62
17	28	27	24	23	26	25	28	40	105	256	81	62
18	28	64	24	23	24	25	28	81	93	274	233	62
19	28	25	24	23	24	25	28	153	191	263	161	61
20	28	24	24	23	37	25	28	244	185	350	69	60
21	28	24	24	23	69	26	28	216	153	344	67	62
22	28	24	25	22	24	26	28	217	198	431	67	61
23	28	24	24	22	53	26	28	232	180	420	67	62
24	28	24	24	22	63	27	32	208	153	326	67	62
25	28	24	24	22	27	27	29	294	190	281	66	62
26	28	24	24	22	24	27	28	291	164	224	66	62
27	28	24	24	23	24	27	28	219	135	312	66	61
28	28	24	25	22	24	27	28	215	132	357	66	59
29	28	24	25	22	23	28	28	276	198	378	66	59
30	28	23	25	22	---	28	63	388	174	467	66	58
31	28	---	25	22	---	29	---	399	---	470	90	---
TOTAL	873	820	736	776	835	789	887	4860	7613	8543	5793	1907
MEAN	28.2	27.3	23.7	25.0	28.8	25.5	29.6	157	254	276	187	63.6
MAX	32	64	25	64	69	36	63	399	443	470	408	70
MIN	28	23	23	22	22	22	28	38	93	106	66	58
AC-FT	1730	1630	1460	1540	1660	1560	1760	9640	15100	16950	11490	3780

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	325	227	139	187	265	506	785	989	1481	1449	1005	435
MAX	1455	1298	1052	1967	1394	3289	5306	5512	6446	5712	3435	2115
(WY)	1984	1983	1984	1967	1969	1969	1969	1983	1983	1983	1967	1983
MIN	.53	.18	.13	.16	2.19	2.37	1.94	1.69	50.5	57.6	53.1	50.4
(WY)	1978	1977	1977	1977	1977	1961	1961	1977	1961	1961	1961	1981

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	68509.9		34432		651	
ANNUAL MEAN	188		94.1		2837	
HIGHEST ANNUAL MEAN					23.7	
LOWEST ANNUAL MEAN					1961	
HIGHEST DAILY MEAN	1070	Jul 25	470	Jul 31	6640	Jun 7 1969
LOWEST DAILY MEAN	4.4	Jan 7	22	Jan 22	.00	May 26 1977
ANNUAL SEVEN-DAY MINIMUM	4.8	Jan 7	22	Jan 22	.01	May 16 1977
INSTANTANEOUS PEAK FLOW			484	Jul 31	10100	Dec 6 1966
INSTANTANEOUS PEAK STAGE			6.96	Jul 31	18.55	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	135900		68300		471900	
10 PERCENT EXCEEDS	754		291		1860	
50 PERCENT EXCEEDS	29		28		222	
90 PERCENT EXCEEDS	5.7		23		1.8	

11192501 KERN RIVER NEAR DEMOCRAT SPRINGS, CA--Continued

KERN RIVER AND KERN RIVER NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	201	194	186	199	359	396	501	815	626	785	265
2	181	201	233	236	227	416	419	517	823	612	745	222
3	201	194	243	220	205	415	406	432	820	664	744	224
4	196	193	245	229	204	377	416	433	809	641	736	210
5	195	193	244	219	220	382	418	433	805	599	767	194
6	159	193	243	261	222	419	410	440	789	617	749	172
7	177	178	248	212	222	409	408	469	825	599	773	167
8	178	206	261	209	212	406	409	467	743	635	772	158
9	188	233	215	255	207	379	407	442	722	593	754	152
10	182	230	211	252	214	350	407	441	740	530	782	130
11	172	239	233	211	271	377	409	461	724	526	671	132
12	149	211	288	250	309	370	409	547	699	545	463	133
13	182	211	269	233	389	369	407	586	645	533	455	132
14	210	218	295	229	363	366	412	521	544	487	452	129
15	222	204	287	198	387	359	408	445	487	569	470	120
16	237	186	297	173	407	362	407	424	489	625	384	153
17	206	205	268	186	392	376	408	427	487	636	421	175
18	194	311	216	186	374	370	408	470	476	658	613	158
19	187	299	188	185	380	360	406	543	573	648	543	124
20	184	188	174	184	404	360	413	632	565	734	390	128
21	181	221	166	229	438	376	413	603	531	727	356	182
22	185	222	205	220	396	362	406	605	576	813	364	186
23	199	211	193	196	407	376	412	620	558	801	344	227
24	184	205	162	201	432	348	415	597	532	707	307	208
25	186	190	178	198	406	373	411	682	567	657	294	256
26	148	198	168	207	400	394	412	678	543	600	278	247
27	152	183	164	211	398	396	410	606	513	687	271	231
28	220	235	187	177	394	398	405	601	508	739	293	174
29	227	223	184	185	376	401	397	662	574	756	265	156
30	246	207	237	177	---	403	445	772	549	844	265	150
31	203	---	181	208	---	412	---	787	---	847	260	---
TOTAL	5912	6389	6877	6523	9455	11820	12309	16844	19031	20255	15766	5295
MEAN	191	213	222	210	326	381	410	543	634	653	509	176
MAX	246	311	297	261	438	419	445	787	825	847	785	265
MIN	148	178	162	173	199	348	396	424	476	487	260	120
AC-FT	11730	12670	13640	12940	18750	23440	24410	33410	37750	40180	31270	10500

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	590	490	414	494	615	858	1162	1372	1857	1827	1372	723
MAX	1835	1689	1432	2338	1785	3644	5695	5922	6850	6110	3824	2501
(WY)	1984	1983	1984	1967	1969	1969	1969	1983	1983	1983	1967	1983
MIN	116	127	131	154	152	221	260	256	311	400	334	127
(WY)	1962	1991	1991	1991	1991	1961	1961	1961	1961	1961	1961	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1961 - 1992
ANNUAL TOTAL	167437	136476	
ANNUAL MEAN	459	373	983
HIGHEST ANNUAL MEAN			3173
LOWEST ANNUAL MEAN			246
HIGHEST DAILY MEAN	1340	847	7030
LOWEST DAILY MEAN	124	120	10
ANNUAL SEVEN-DAY MINIMUM	130	133	12
ANNUAL RUNOFF (AC-FT)	332100	270700	712100
10 PERCENT EXCEEDS	1140	673	2220
50 PERCENT EXCEEDS	295	362	601
90 PERCENT EXCEEDS	150	181	195

11192950 KERN RIVER FISHWATER RELEASE AT KERN CANYON POWERHOUSE DIVERSION DAM, NEAR BAKERSFIELD, CA

LOCATION.--Lat 35°27'37", long 118°46'43", in SE 1/4 SE 1/4 sec.29, T.28 S., R.30 E., Kern County, Hydrologic Unit 18030003, Sequoia National Forest, on left bank at diversion dam 16.4 mi northeast of Bakersfield.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder and sharp-crested rectangular weir. Elevation of gage is 975 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated at diversion dam immediately upstream and does not include leakage through diversion dam radial gates. Discharge exceeding fishwater requirement bypassed the gage Nov. 2 to Feb. 18 when maintenance was being performed. Bypass flow entered the main channel immediately downstream from the gage. See schematic diagram of Kern River basin. No records computed above 36 ft³/s.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Minimum daily, 6.0 ft³/s, Dec. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Minimum daily, 15 ft³/s, May 14-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	19	---	---	---	26	32	30	18	16	19	17
2	31	---	---	---	---	26	31	30	18	17	19	17
3	31	---	---	---	---	25	31	29	17	17	18	17
4	31	---	---	---	---	25	32	31	17	16	18	17
5	31	---	---	---	---	26	32	20	17	16	19	17
6	31	---	---	---	---	33	31	16	17	16	18	17
7	31	---	---	---	---	33	31	16	18	16	18	17
8	31	---	---	---	---	30	31	16	18	16	18	17
9	31	---	---	---	---	32	30	16	18	16	19	17
10	31	---	---	---	---	33	30	16	18	17	18	17
11	31	---	---	---	---	32	30	16	18	17	17	17
12	31	---	---	---	---	33	30	16	18	16	16	16
13	31	---	---	---	---	32	30	16	17	17	16	17
14	31	---	---	---	---	32	30	15	17	16	16	17
15	31	---	---	---	---	32	30	15	17	16	16	17
16	31	---	---	---	---	33	30	15	16	16	16	16
17	31	---	---	---	---	32	30	15	17	17	16	16
18	32	---	---	---	---	31	30	15	17	18	17	16
19	31	---	---	---	16	28	30	16	16	19	17	16
20	32	---	---	---	29	27	30	16	16	19	17	16
21	32	---	---	---	26	e35	30	16	16	19	17	16
22	32	---	---	---	26	e35	30	16	16	19	17	16
23	32	---	---	---	26	e34	30	16	16	20	17	16
24	33	---	---	---	26	33	30	16	16	21	17	16
25	32	---	---	---	26	32	30	16	16	21	17	16
26	24	---	---	---	25	32	30	16	16	21	17	16
27	32	---	---	---	26	32	30	17	16	20	17	16
28	33	---	---	---	26	32	30	16	16	19	17	16
29	31	---	---	---	26	32	30	16	16	19	17	16
30	32	---	---	---	---	32	30	17	16	19	17	17
31	32	---	---	---	---	32	---	17	---	19	17	---
TOTAL	967	---	---	---	---	962	911	554	505	551	535	495
MEAN	31.2	---	---	---	---	31.0	30.4	17.9	16.8	17.8	17.3	16.5
MAX	33	---	---	---	---	35	32	31	18	21	19	17
MIN	24	---	---	---	---	25	30	15	16	16	16	16
AC-FT	1920	---	---	---	---	1910	1810	1100	1000	1090	1060	982

The following table is for random instantaneous discharges for leakage around radial gates and is in addition to recorded discharge:

Date	Discharge (ft ³ /s)	Date	Discharge (ft ³ /s)	Date	Discharge (ft ³ /s)	Date	Discharge (ft ³ /s)	Date	Discharge (ft ³ /s)
Oct. 1	1.0	Oct. 25	1.0	Apr. 16	.88	May 18	.74	June 24	.74
Oct. 3	1.0	Oct. 29	1.0	Apr. 17	.88	May 19	.74	June 26	.74
Oct. 4	1.0	Oct. 30	1.0	Apr. 20	.88	May 20	.74	June 29	.56
Oct. 7	1.0	Oct. 31	1.0	Apr. 21	.88	May 23	.74	July 1	.50
Oct. 8	1.0	Mar. 23	.88	Apr. 22	.88	May 24	.56	July 2	.56
Oct. 9	1.0	Mar. 24	1.1	Apr. 24	.88	May 26	.63	July 3	.56
Oct. 10	1.0	Apr. 1	.88	Apr. 27	.88	May 28	.74	July 6	.56
Oct. 11	1.0	Apr. 2	.88	Apr. 29	.88	May 29	.74	July 7	.56
Oct. 14	1.0	Apr. 3	.88	Apr. 30	.88	June 1	.74	July 9	.56
Oct. 15	1.0	Apr. 6	.88	May 1	.88	June 15	.74	July 10	.56
Oct. 16	1.0	Apr. 7	.88	May 6	.88	June 16	.74	July 13	.56
Oct. 18	1.0	Apr. 9	.88	May 7	.88	June 17	.74	July 16	.56
Oct. 22	1.0	Apr. 10	.88	May 9	.88	June 19	.74	July 17	.56
Oct. 23	1.0	Apr. 11	.88	May 12	.63	June 22	.74		
Oct. 24	1.0	Apr. 15	.88	May 15	.63	June 23	.74		

e Estimated.

11193031 KERN RIVER AT RIO BRAVO POWERPLANT NEAR BAKERSFIELD, CA

LOCATION.--Lat 35°25'49", Long 118°49'18", in NE 1/4 SW 1/4 SW 1/4 sec.1, T.29 S., R.29 E., Kern County, Hydrologic Unit 18030012, on left bank at diversion to Rio Bravo powerplant, and 15.5 mi northeast of Bakersfield.

DRAINAGE AREA.--Not determined.

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

GAGE.--Water-stage recorder and broad-crested weir; water-stage recorder and Parshall flume. Datum of gage is 678.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Isabella Lake, capacity 570,000 acre-ft. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11193020) and flow through a Parshall flume (station 11193030). Water is diverted upstream from weir through a channel to Rio Bravo Powerplant (station 11193010), returning to Kern River about one mile downstream. See schematic diagram of Kern River basin.

COOPERATION.--Records provided by Rio Bravo Hydro Project, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 959 ft³/s, Mar. 5, 1991; minimum daily, 47 ft³/s, June 14-17, 1991.

EXTREMES FOR 1990 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum observed daily discharge, 701 ft³/s, Feb. 26; minimum observed daily, 50 ft³/s, Mar. 30, Apr. 2.

EXTREMES FOR 1991 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 959 ft³/s, Mar. 5; minimum daily, 47 ft³/s, June 14-17.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 597 ft³/s, Aug. 9; minimum daily, 51 ft³/s, Aug. 10.

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	284	182	357	229	---	287	51	61	87	58	54	291
2	244	181	331	235	---	152	50	62	87	57	55	271
3	249	179	321	227	---	350	56	63	103	61	51	274
4	250	194	337	221	---	391	57	---	90	63	51	282
5	242	208	342	194	---	534	51	---	73	61	51	304
6	192	201	395	258	452	639	51	62	70	56	161	310
7	196	197	403	299	448	524	51	64	69	60	180	322
8	198	214	382	307	387	408	57	59	66	59	52	313
9	227	264	388	308	367	400	61	---	69	58	53	312
10	248	273	376	345	371	366	52	---	75	54	52	311
11	247	230	---	360	375	335	59	63	84	54	52	303
12	186	209	---	357	428	494	58	61	70	58	52	291
13	244	209	---	364	435	604	58	64	---	54	52	274
14	292	205	334	420	430	563	63	65	---	54	52	271
15	295	193	331	428	421	598	71	64	69	54	53	247
16	346	249	278	---	422	286	52	67	79	55	52	255
17	386	313	239	---	478	215	52	69	74	61	55	193
18	345	324	263	---	455	202	54	77	---	59	53	195
19	319	329	258	---	442	235	53	81	---	65	53	207
20	287	354	245	---	475	235	53	84	82	90	55	202
21	278	361	191	---	488	171	62	95	93	60	167	230
22	289	325	171	---	488	143	58	142	108	53	400	235
23	295	300	177	---	357	105	60	86	156	53	438	220
24	341	293	174	---	535	72	76	97	93	52	370	218
25	468	293	176	---	576	67	63	103	61	55	342	216
26	245	297	179	---	701	69	62	103	67	52	326	230
27	152	273	196	---	584	77	62	94	---	52	339	226
28	113	372	209	---	554	53	62	96	---	52	427	232
29	176	271	209	---	---	53	59	89	62	52	388	237
30	175	329	209	---	---	50	60	112	65	55	415	277
31	179	---	207	---	---	51	---	114	---	53	373	---
TOTAL	7988	7822	---	---	---	8729	1734	---	---	1780	5274	7749
MEAN	258	261	---	---	---	282	57.8	---	---	57.4	170	258
MAX	468	372	---	---	---	639	76	---	---	90	438	322
MIN	113	179	---	---	---	50	50	---	---	52	51	193
AC-FT	15840	15510	---	---	---	17310	3440	---	---	3530	10460	15370

11193031 KERN RIVER AT RIO BRAVO POWERPLANT NEAR BAKERSFIELD, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	114	117	122	141	287	49	50	60	50	54	197
2	206	109	118	120	126	427	49	52	53	49	54	244
3	157	110	114	126	134	291	49	50	53	49	53	252
4	164	112	128	140	141	340	49	50	53	49	53	293
5	162	126	138	161	139	623	48	50	53	49	52	282
6	158	118	137	204	143	406	49	50	52	48	51	231
7	146	125	133	211	149	485	49	49	52	49	51	224
8	115	126	135	175	138	479	49	49	51	49	52	197
9	99	129	131	146	134	465	50	50	50	50	52	203
10	121	143	131	148	140	454	49	50	70	50	52	227
11	111	137	126	151	131	424	49	50	55	51	53	221
12	126	147	122	133	132	227	49	50	51	50	53	176
13	94	156	123	138	132	49	49	50	67	50	52	254
14	111	141	118	139	120	49	49	50	47	51	52	205
15	129	138	114	133	127	54	49	50	47	52	51	172
16	124	135	110	131	132	49	50	51	47	55	51	191
17	110	130	125	108	139	49	50	52	47	53	51	146
18	126	123	139	137	152	49	50	53	48	56	52	162
19	137	119	101	92	137	49	50	53	48	53	53	185
20	143	117	116	99	96	49	50	53	48	51	53	212
21	150	112	104	102	119	49	50	53	49	53	75	272
22	144	105	84	101	145	49	50	53	49	69	181	260
23	89	102	93	93	133	49	50	54	49	53	379	273
24	72	103	89	94	124	48	50	54	50	52	393	216
25	103	103	74	103	124	50	50	53	50	53	391	208
26	121	117	69	109	130	50	50	53	50	53	382	204
27	119	97	79	110	161	49	50	53	50	53	382	196
28	120	123	137	113	184	50	50	54	50	53	321	177
29	121	123	124	114	---	50	50	53	49	54	276	160
30	122	120	136	122	---	50	49	54	49	54	266	156
31	102	---	133	127	---	50	---	52	---	54	204	---
TOTAL	3972	3660	3598	4002	3803	5849	1484	1598	1547	1615	4295	6396
MEAN	128	122	116	129	136	189	49.5	51.5	51.6	52.1	139	213
MAX	206	156	139	211	184	623	50	54	70	69	393	293
MIN	72	97	69	92	96	48	48	49	47	48	51	146
AC-FT	7880	7260	7140	7940	7540	11600	2940	3170	3070	3200	8520	12690
a	0	0	0	0	0	15530	23640	26890	57450	58690	38500	0

SUMMARY STATISTICS

FOR 1991 WATER YEAR

ANNUAL TOTAL	41819	
ANNUAL MEAN	115	
HIGHEST DAILY MEAN	623	Mar 5
LOWEST DAILY MEAN	47	Jun 14
ANNUAL SEVEN-DAY MINIMUM	47	Jun 14
INSTANTANEOUS PEAK FLOW	959	Mar 5
ANNUAL RUNOFF (AC-FT)	82950	
ANNUAL DIVERSION (AC-FT) a	220700	
10 PERCENT EXCEEDS	207	
50 PERCENT EXCEEDS	102	
90 PERCENT EXCEEDS	49	

a Diversion, in acre-feet, through Rio Bravo Powerplant.

BUENA VISTA LAKE BASIN

11193031 KERN RIVER AT RIO BRAVO POWERPLANT NEAR BAKERSFIELD, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	198	219	217	241	54	54	56	108	55	58	250
2	176	187	250	258	259	54	54	56	68	56	56	207
3	202	177	257	247	238	54	54	56	59	67	55	204
4	201	173	264	256	233	55	55	57	58	56	55	203
5	190	179	259	265	244	54	61	60	59	57	61	191
6	160	174	261	275	241	54	57	56	59	57	53	176
7	182	164	265	228	237	55	58	56	58	71	52	151
8	197	185	265	213	227	54	56	56	58	56	52	138
9	194	210	218	266	218	54	57	56	58	56	66	127
10	177	211	211	274	221	54	56	57	59	57	51	102
11	188	208	235	233	276	54	57	57	60	90	53	105
12	159	180	299	255	329	54	60	57	59	60	55	107
13	207	178	292	249	422	54	63	57	59	55	56	106
14	253	184	316	245	411	54	57	57	59	55	57	102
15	227	165	304	217	416	54	56	57	59	55	58	101
16	224	149	316	184	447	54	57	57	59	55	58	142
17	185	168	292	192	441	54	57	57	59	55	58	171
18	173	278	244	192	409	54	57	57	58	54	59	154
19	164	339	219	199	413	56	57	58	60	53	60	120
20	163	163	203	193	431	236	57	76	58	52	60	121
21	156	204	187	247	485	444	57	58	58	54	59	169
22	161	218	233	242	424	423	58	58	58	56	60	163
23	174	234	228	221	114	352	56	59	57	57	60	173
24	162	234	194	229	76	102	56	58	56	57	59	135
25	168	227	212	226	64	54	56	58	56	97	59	214
26	125	231	202	238	64	54	56	59	56	57	175	227
27	112	206	191	237	64	55	56	60	56	169	267	211
28	221	259	222	215	56	54	56	58	56	78	295	157
29	214	245	218	219	54	54	56	61	56	57	260	137
30	247	226	270	215	---	54	77	63	56	56	265	135
31	182	---	212	245	---	54	---	64	---	57	250	---
TOTAL	5742	6154	7558	7192	7755	2966	1724	1812	1799	1967	2942	4699
MEAN	185	205	244	232	267	95.7	57.5	58.5	60.0	63.5	94.9	157
MAX	253	339	316	275	485	444	77	76	108	169	295	250
MIN	112	149	187	184	54	54	54	56	56	52	51	101
AC-FT	11390	12210	14990	14270	15380	5880	3420	3590	3570	3900	5840	9320
a	0	0	0	0	4610	18260	21190	29200	34470	36020	24840	0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	157	164	180	181	203	142	53.5	55.0	55.8	57.8	117	185
MAX	185	205	244	232	267	189	57.5	58.5	60.0	63.5	139	213
(WY)	1992	1992	1992	1992	1992	1991	1992	1992	1992	1992	1991	1991
MIN	128	122	116	129	136	95.7	49.5	51.5	51.6	52.1	94.9	157
(WY)	1991	1991	1991	1991	1991	1992	1991	1991	1991	1991	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	50043	52310	
ANNUAL MEAN	137	143	129
HIGHEST ANNUAL MEAN			143
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	623	Mar 5	485
LOWEST DAILY MEAN	47	Jun 14	51
ANNUAL SEVEN-DAY MINIMUM	47	Jun 14	54
INSTANTANEOUS PEAK FLOW			597
ANNUAL RUNOFF (AC-FT)	99260	103800	93290
ANNUAL DIVERSION (AC-FT) a	360700	168590	194640
10 PERCENT EXCEEDS	260	259	250
50 PERCENT EXCEEDS	124	106	103
90 PERCENT EXCEEDS	49	55	50

a Diversion, in acre-feet, through Rio Bravo Powerplant.

11199500 WHITE RIVER NEAR DUCOR, CA

LOCATION.--Lat 35°48'36", long 118°55'03", in NW 1/4 SE 1/4 sec.26, T.24 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi upstream from Tyler Gulch and 9.0 mi southeast of Ducor.

DRAINAGE AREA.--90.6 mi².

PERIOD OF RECORD.--October 1942 to September 1953, February 1971 to current year. Monthly discharge only for October 1942 to September 1944, published in WSP 1315-A.

GAGE.--Water-stage recorder. Elevation of gage is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1942 to September 1946, at site 3,800 ft downstream; October 1946 to September 1953, at site 4,300 ft downstream; and October 1971 to November 1978, at site 4,000 ft downstream, all at different datums.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s, estimated by U.S. Bureau of Reclamation, Mar. 9, 1943; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	1100	*46	*1.58				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.65	4.5	4.6	.61	.00	.00	.00	.00
2	.00	.00	.00	.00	.58	4.5	3.9	.57	.00	.00	.00	.00
3	.00	.00	.00	.00	.64	5.2	3.5	.47	.00	.00	.00	.00
4	.00	.00	.00	.00	.66	5.0	3.2	.40	.00	.00	.00	.00
5	.00	.00	.00	.35	.66	4.6	3.3	.40	.00	.00	.00	.00
6	.00	.00	.00	3.7	.67	6.7	3.2	.55	.00	.00	.00	.00
7	.00	.00	.00	2.3	.71	6.1	3.0	.92	.00	.00	.00	.00
8	.00	.00	.00	1.5	.75	11	2.8	.60	.00	.00	.00	.00
9	.00	.00	.00	1.5	1.0	8.8	2.6	.40	.00	.00	.00	.00
10	.00	.00	.00	1.1	1.1	6.1	2.5	.24	.00	.00	.00	.00
11	.00	.00	.00	.92	1.2	5.2	2.5	.14	.00	.00	.00	.00
12	.00	.00	.00	.85	2.8	4.6	2.2	.11	.00	.00	.00	.00
13	.00	.00	.00	.74	5.3	4.2	2.2	.09	.00	.00	.00	.00
14	.00	.00	.00	.64	4.0	3.9	2.2	.09	.00	.00	.00	.00
15	.00	.00	.00	.60	14	3.7	2.3	.09	.00	.00	.00	.00
16	.00	.00	.00	.59	14	3.5	2.0	.06	.00	.00	.00	.00
17	.00	.00	.00	.65	22	3.5	1.9	.01	.00	.00	.00	.00
18	.00	.00	.00	.60	10	3.5	2.1	.00	.00	.00	.00	.00
19	.00	.00	.00	.58	6.9	3.2	2.3	.00	.00	.00	.00	.00
20	.00	.00	.00	.58	5.6	3.3	2.1	.00	.00	.00	.00	.00
21	.00	.00	.00	.55	6.9	3.9	1.8	.00	.00	.00	.00	.00
22	.00	.00	.00	.51	6.6	4.8	1.6	.00	.00	.00	.00	.00
23	.00	.00	.00	.51	6.0	4.2	1.5	.00	.00	.00	.00	.00
24	.00	.00	.00	.54	5.4	3.8	1.4	.00	.00	.00	.00	.00
25	.00	.00	.00	.64	4.9	3.5	1.2	.00	.00	.00	.00	.00
26	.00	.00	.00	.47	4.8	3.3	1.1	.00	.00	.00	.00	.00
27	.00	.00	.00	.51	4.7	3.3	.89	.00	.00	.00	.00	.00
28	.00	.00	.00	.53	4.5	3.1	.86	.00	.00	.00	.00	.00
29	.00	.00	.00	.53	4.4	3.0	.78	.00	.00	.00	.00	.00
30	.00	.00	.00	.57	---	3.4	.63	.00	.00	.00	.00	.00
31	.00	---	.00	.61	---	4.5	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	23.17	141.42	141.9	66.16	5.75	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.75	4.88	4.58	2.21	.19	.000	.000	.000	.000
MAX	.00	.00	.00	3.7	22	11	4.6	.92	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.58	3.0	.63	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	46	281	281	131	11	.00	.00	.00	.00

e Estimated.

TULARE LAKE BASIN

11199500 WHITE RIVER NEAR DUCOR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.46	2.45	5.95	12.0	17.3	34.5	21.6	11.0	4.02	.85	.26	.23
MAX	8.05	20.6	36.5	52.0	103	260	131	55.3	31.2	12.6	8.30	5.35
(WY)	1984	1984	1984	1983	1983	1943	1943	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.084	.76	1.79	.85	.19	.000	.000	.000	.000
(WY)	1943	1943	1948	1949	1991	1977	1977	1992	1950	1947	1943	1943

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1943 - 1992	
ANNUAL TOTAL	685.25		378.40			
ANNUAL MEAN	1.88		1.03		9.34	
HIGHEST ANNUAL MEAN					44.5	
LOWEST ANNUAL MEAN					.58	
HIGHEST DAILY MEAN	40	Mar 5	22	Feb 17	1320	Mar 9 1943
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1942
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1942
INSTANTANEOUS PEAK FLOW			46	Feb 15	2300	Mar 9 1943
INSTANTANEOUS PEAK STAGE			1.58	Feb 15	Unknown	
ANNUAL RUNOFF (AC-FT)	1360		751		6770	
10 PERCENT EXCEEDS	6.1		3.9		20	
50 PERCENT EXCEEDS	.00		.00		2.0	
90 PERCENT EXCEEDS	.00		.00		.00	

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA

LOCATION.--Lat 35°56'30", long 118°49'19", in SE 1/4 NE 1/4 sec.10, T.23 S., R.29 E., Tulare County, Hydrologic Unit 18030005, on left bank 1.0 mi upstream from Pothole Creek, 6.3 mi northeast of Fountain Springs, and 12 mi east of Terra Bella.

DRAINAGE AREA.--83.3 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s, Feb. 24, 1969, gage height, 9.85 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurements at gage heights 8.83 ft in gage well, 9.18 ft from floodmarks, and 12.54 ft from floodmarks; no flow for periods in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1966, reached a stage of 12.54 ft, from floodmarks, discharge, 5,330 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 17	0215	*66	*3.46				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.6	5.5	6.7	7.0	14	13	5.4	.85	.16	.00	.00
2	.00	4.3	5.6	6.2	7.0	13	12	5.7	.54	.97	.00	.00
3	.00	3.8	5.6	6.3	7.1	13	11	4.8	.93	1.3	.00	.00
4	.00	4.0	5.7	6.5	6.6	14	11	2.5	1.5	1.7	.00	.00
5	.00	4.2	5.6	15	7.0	12	11	4.0	1.3	.97	.00	.00
6	.00	4.1	5.5	18	6.7	24	11	4.8	1.3	.65	.00	.00
7	.00	4.0	5.5	13	7.1	20	10	5.2	.73	1.3	.00	.23
8	.00	3.8	5.9	13	7.7	22	10	4.6	.54	1.4	.00	.67
9	.00	3.7	5.9	10	7.6	18	10	3.8	.53	1.5	.00	.78
10	.00	4.0	5.8	9.2	7.8	16	9.5	3.0	1.3	.68	.00	.55
11	.00	4.0	5.7	9.3	12	15	9.5	2.0	.72	.66	.00	.38
12	.00	4.3	5.7	9.0	18	14	8.9	3.2	.81	.73	.00	.43
13	.00	4.0	5.6	8.1	34	13	8.9	3.7	1.0	1.5	.00	.53
14	.00	4.0	5.6	7.8	23	13	9.4	3.7	.70	1.4	.00	.89
15	.00	4.2	5.4	7.6	31	12	9.4	3.5	.60	2.8	.00	.88
16	.00	4.3	5.4	7.4	42	12	9.1	3.3	1.8	3.3	.00	.79
17	.00	4.9	5.3	7.7	45	12	8.9	2.8	1.5	2.3	.00	1.2
18	.00	21	5.3	7.9	28	12	8.8	1.5	1.5	1.8	.00	1.1
19	.00	12	5.5	7.8	23	11	8.7	1.9	1.1	.95	.00	.99
20	.00	8.0	6.2	7.6	23	11	7.0	2.6	.97	1.1	.00	.94
21	.00	6.8	5.8	7.4	33	13	8.1	3.4	.56	.81	.00	.78
22	.00	6.4	6.1	7.1	25	14	7.7	3.3	.24	.74	.00	.87
23	.00	6.1	5.3	7.0	24	14	7.6	2.7	.06	1.7	.00	.78
24	.00	5.7	5.7	6.9	21	13	7.5	2.0	.02	1.5	.00	.61
25	.00	5.5	5.7	6.9	19	12	7.4	1.2	.00	1.5	.00	.47
26	2.2	5.4	5.7	6.8	18	11	6.4	.73	.00	.69	.00	.77
27	25	5.4	5.6	6.9	17	11	4.9	1.7	.00	.52	.00	.90
28	8.1	5.3	5.9	7.0	16	11	6.7	1.6	.00	.39	.00	1.2
29	5.9	5.3	6.5	6.9	15	11	6.1	.91	.12	.30	.00	1.1
30	5.2	5.5	7.4	7.0	---	11	5.8	1.2	.04	.20	.00	1.0
31	5.2	---	7.2	7.1	---	14	---	1.1	---	.05	.00	---
TOTAL	51.60	168.6	179.2	261.1	538.6	426	265.3	91.84	21.26	35.57	0.00	18.84
MEAN	1.66	5.62	5.78	8.42	18.6	13.7	8.84	2.96	.71	1.15	.000	.63
MAX	25	21	7.4	18	45	24	13	5.7	1.8	3.3	.00	1.2
MIN	.00	3.7	5.3	6.2	6.6	11	4.9	.73	.00	.05	.00	.00
AC-FT	102	334	355	518	1070	845	526	182	42	71	.00	37

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.12	13.1	21.7	45.2	67.4	82.7	66.5	39.0	20.2	8.32	3.81	3.42
MAX	23.5	62.8	120	229	353	443	254	182	120	53.5	32.1	19.6
(WY)	1984	1984	1984	1969	1969	1983	1983	1983	1983	1983	1983	1983
MIN	.77	3.35	4.88	6.69	4.65	8.38	4.12	2.96	.71	.000	.000	.000
(WY)	1978	1991	1991	1991	1991	1977	1977	1992	1992	1972	1972	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1968 - 1992		
ANNUAL TOTAL	3770.34			2057.91					
ANNUAL MEAN	10.3			5.62			31.3		
HIGHEST ANNUAL MEAN							143		
LOWEST ANNUAL MEAN							4.29		
HIGHEST DAILY MEAN	223	Mar	4	45	Feb	17	1610	Feb	25 1969
LOWEST DAILY MEAN	.00	Jul	31	.00	Oct	1	.00	Jun	24 1972
ANNUAL SEVEN-DAY MINIMUM	.00	Aug	7	.00	Oct	1	.00	Jun	30 1972
ANNUAL RUNOFF (AC-FT)	7480			4080			22650		
10 PERCENT EXCEEDS	25			13			69		
50 PERCENT EXCEEDS	5.3			4.1			11		
90 PERCENT EXCEEDS	.00			.00			.62		

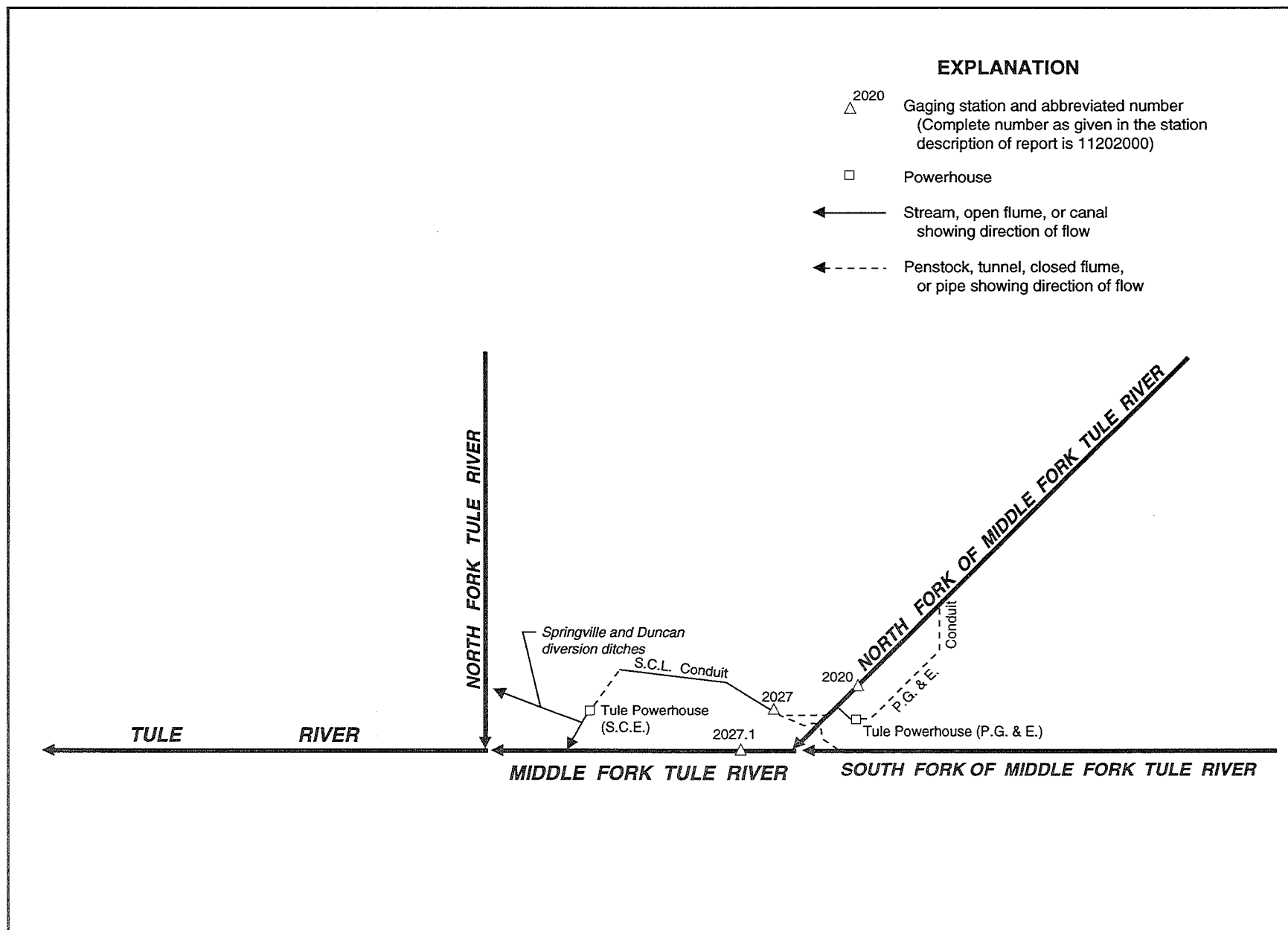


Figure 28. Diversions and storage in Tule River basin.

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°10'29", long 118°41'41", unsurveyed, in T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, on right bank 1.2 mi upstream from mouth, 2.2 mi downstream from Hossack Creek, and 7.4 mi northeast of Springville.

DRAINAGE AREA.--39.3 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-A. January 1909 to December 1912 at site 2 mi upstream, records not equivalent. Prior to October 1954, records for river and Pacific Gas & Electric Co. Conduit published separately; combined flow only, October 1954 to September 1960. Prior to October 1982, combined flow consisted of river and conduit. October 1982 to present, combined flow consists of river and Pacific Gas & Electric Co. Tule River Powerplant.

REVISED RECORDS.--WSP 1445: 1951. WSP 1930: Drainage area. WDR CA-91-3: Adjusted data for 1990.

GAGE.--Water-stage recorder. Concrete control on river since Aug. 6, 1958. Rectangular weir and concrete control on river since July 10, 1991. Elevation of gage is 2,920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Pacific Gas and Electric Co. conduit diverts 2.5 mi above station; water is returned to river 1.1 mi below station after passing through Tule River Powerplant. See schematic diagram of Tule River basin. For records of combined discharge of river and powerplant, see following page.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 16,900 ft³/s, Dec. 6, 1966, gage height, 13.83 ft, from floodmarks, from rating curve extended above 1,820 ft³/s on basis of critical-depth determinations at gage heights 9.67 and 12.47 ft; no flow Sept. 10, 11, 1955.

Combined flow: Maximum discharge, 16,900 ft³/s, Dec. 6, 1966; minimum daily, 6.7 ft³/s, Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 29 ft³/s, July 12, gage height, 3.13 ft; minimum daily, 0.43 ft³/s, several days.

Combined flow: Maximum daily discharge, 64 ft³/s, Apr. 28; minimum daily, 5.3 ft³/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	.89	.98	1.1	.89	1.5	2.1	1.5	.59	.73	5.9	.43
2	9.0	.81	.95	1.1	.89	1.5	2.0	1.5	.59	.66	6.0	.43
3	9.0	.81	.95	1.2	.89	1.5	2.0	1.3	.59	.58	6.1	.43
4	9.0	.81	1.0	1.4	.89	1.5	2.0	1.2	.89	.53	6.1	.48
5	9.0	.81	1.1	2.8	.73	1.5	2.0	1.1	.66	.53	6.1	.48
6	9.0	.81	1.1	2.3	.81	4.3	1.9	1.2	.48	.48	6.1	.43
7	9.0	.73	1.1	2.9	.81	2.3	1.8	1.3	.53	.43	6.1	.48
8	9.0	.81	1.1	2.4	1.0	2.1	1.9	1.3	.53	.46	6.4	.43
9	7.4	2.0	.99	2.0	.95	2.0	2.0	1.2	.53	.43	6.4	.48
10	3.4	1.3	.89	1.9	1.5	1.7	2.0	1.2	.53	.48	6.1	.43
11	.89	1.9	.89	1.8	2.2	1.6	2.0	1.1	.59	.48	6.4	.46
12	1.1	2.8	.89	1.5	4.1	1.7	1.9	1.1	.73	2.0	6.1	.53
13	.81	1.5	.89	1.5	3.4	1.5	2.0	1.1	.73	3.2	6.1	.53
14	.95	2.4	1.0	1.5	3.3	1.5	2.0	1.1	.81	14	6.4	.48
15	5.3	1.1	1.0	1.5	6.1	1.5	2.1	1.5	.89	14	6.1	.48
16	5.6	2.1	.95	1.4	13	1.5	4.3	1.5	.81	13	6.1	.48
17	5.6	3.0	.95	1.3	9.2	1.5	1.4	1.0	.73	11	6.1	.48
18	5.3	8.5	.95	1.2	4.5	1.5	1.4	.95	.66	10	6.1	.43
19	1.2	1.7	1.1	1.1	4.5	1.4	1.5	.89	.66	9.8	2.6	.53
20	.89	1.3	1.1	1.1	6.1	1.3	1.6	1.0	.59	9.4	2.2	.48
21	.95	1.1	1.0	1.0	4.7	1.4	1.8	1.0	.53	9.4	2.3	.48
22	.81	1.1	1.0	1.0	3.5	1.5	1.7	.89	.48	6.7	2.3	.66
23	.73	1.0	1.0	1.0	2.9	2.0	1.6	.73	.43	2.8	2.3	.66
24	.73	1.0	.95	.95	2.3	1.7	1.5	.66	.48	.53	2.2	.73
25	.66	1.0	.95	.95	2.0	1.6	1.5	.66	.43	.81	2.1	.73
26	7.1	.95	.95	.95	1.9	1.6	1.5	.65	.48	2.3	2.2	.66
27	4.9	.95	1.1	.95	1.8	1.7	1.6	.66	.53	2.2	2.2	.59
28	1.8	.95	1.7	.89	1.7	1.9	1.6	.66	.59	3.0	2.1	.53
29	1.2	.95	1.6	.95	1.6	1.7	1.5	.66	.66	5.9	2.1	.53
30	.89	.95	1.6	.89	---	2.1	1.8	.66	.66	6.1	2.1	.59
31	.89	---	1.2	.89	---	2.2	---	.59	---	5.9	1.5	---
TOTAL	128.20	46.03	32.93	43.42	88.16	54.3	56.0	31.86	18.39	137.83	138.9	15.54
MEAN	4.14	1.53	1.06	1.40	3.04	1.75	1.87	1.03	.61	4.45	4.48	.52
MAX	9.0	8.5	1.7	2.9	13	4.3	4.3	1.5	.89	14	6.4	.73
MIN	.66	.73	.89	.89	.73	1.3	1.4	.59	.43	.43	1.5	.43
AC-FT	254	91	65	86	175	108	111	63	36	273	276	31

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.70	12.6	28.1	25.0	27.1	33.4	50.2	80.8	44.2	9.56	3.95	3.15
MAX	19.1	362	786	266	182	337	229	381	316	121	14.4	22.7
(WY)	1953	1951	1967	1980	1986	1943	1969	1969	1983	1983	1983	1952
MIN	.53	.76	.73	.81	.80	1.21	1.13	1.03	.61	.34	.32	.31
(WY)	1965	1963	1991	1991	1991	1977	1977	1992	1992	1961	1964	1961

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	2615.87		791.56		26.4	
ANNUAL MEAN	7.17		2.16		129	
HIGHEST ANNUAL MEAN					1.25	
LOWEST ANNUAL MEAN					1967	
HIGHEST DAILY MEAN	629	Mar 4	14	Jul 14	13300	Dec 6 1966
LOWEST DAILY MEAN	.57	Jul 28	.43	Jun 23	.06	Nov 2 1979
ANNUAL SEVEN-DAY MINIMUM	.61	Sep 19	.45	Sep 1	.20	Aug 24 1964
INSTANTANEOUS PEAK FLOW			29	Jul 12	16900	Dec 6 1966
INSTANTANEOUS PEAK STAGE			3.13	Jul 12	13.83	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	5190		1570		19110	
10 PERCENT EXCEEDS	16		6.1		74	
50 PERCENT EXCEEDS	1.0		1.2		4.3	
90 PERCENT EXCEEDS	.67		.53		.79	

11202001 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

NORTH FORK OF MIDDLE FORK TULE RIVER AND PACIFIC GAS & ELECTRIC CO. TULE RIVER POWERPLANT
 COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	16	16	15	16	32	33	57	21	16	13	10
2	9.0	15	15	15	15	31	33	55	20	9.2	13	10
3	9.0	15	15	14	15	32	34	53	19	14	13	10
4	9.0	15	15	15	15	29	49	47	18	15	12	10
5	9.0	14	14	18	14	27	46	52	18	14	13	10
6	9.0	15	14	19	15	36	46	51	17	13	13	10
7	9.0	14	14	19	15	31	40	51	18	12	13	10
8	9.0	13	14	17	15	28	45	49	18	13	14	11
9	7.4	14	14	17	16	27	49	53	17	13	14	10
10	9.6	13	14	18	16	26	52	53	18	14	13	10
11	9.8	14	14	19	24	28	53	53	16	13	13	10
12	12	15	15	15	32	32	48	38	17	18	13	9.7
13	12	13	13	15	27	30	48	42	17	11	13	8.4
14	8.8	13	13	17	22	32	52	40	17	14	13	9.0
15	5.3	14	13	15	29	30	40	38	17	14	13	8.7
16	5.6	14	14	16	24	29	38	34	17	13	13	10
17	5.6	18	14	16	25	27	36	35	16	11	13	10
18	10	39	14	16	23	25	55	34	16	10	14	10
19	11	20	14	16	22	25	61	29	14	9.8	11	9.4
20	12	19	14	15	41	24	56	27	15	9.4	12	10
21	12	18	13	16	41	24	61	28	17	9.4	11	10
22	11	19	14	15	36	19	61	27	14	6.7	12	9.9
23	13	17	14	15	35	26	50	25	13	9.7	11	9.9
24	14	16	13	15	36	25	52	24	14	12	12	9.9
25	13	17	13	16	38	23	54	24	13	12	12	11
26	25	15	14	15	38	23	54	19	14	13	12	9.9
27	51	15	13	15	41	27	55	23	15	13	12	10
28	21	15	16	15	46	29	64	22	15	11	12	10
29	16	15	15	16	39	28	59	20	15	13	12	9.7
30	15	15	16	15	---	31	63	20	15	12	12	9.8
31	15	---	15	15	---	33	---	22	---	12	11	---
TOTAL	384.2	485	439	495	771	869	1487	1145	491	380.2	388	296.3
MEAN	12.4	16.2	14.2	16.0	26.6	28.0	49.6	36.9	16.4	12.3	12.5	9.88
MAX	51	39	16	19	46	36	64	57	21	18	14	11
MIN	5.3	13	13	14	14	19	33	19	13	6.7	11	8.4
AC-FT	762	962	871	982	1530	1720	2950	2270	974	754	770	588

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	MEAN	17.8	28.4	50.9	50.5	59.3	72.8	103	139	89.7	37.8	21.6	18.0
MAX	44.3	375	794	317	241	381	296	445	384	187	72.3	42.6	
(WY)	1983	1951	1967	1980	1980	1943	1969	1969	1983	1983	1983	1983	
MIN	8.66	10.5	11.9	13.3	12.5	16.7	21.8	25.1	16.4	10.1	8.99	8.63	
(WY)	1962	1962	1991	1961	1991	1977	1977	1977	1992	1961	1977	1961	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1940 - 1992

ANNUAL TOTAL	12174.8	7630.7	
ANNUAL MEAN	33.4	20.8	57.4
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			15.1
HIGHEST DAILY MEAN	663	Mar 4	13300
LOWEST DAILY MEAN	5.3	Oct 15	5.0
ANNUAL SEVEN-DAY MINIMUM	8.3	Oct 13	5.2
INSTANTANEOUS PEAK FLOW		64	16900
ANNUAL RUNOFF (AC-FT)	24150	15140	41560
10 PERCENT EXCEEDS	81	43	130
50 PERCENT EXCEEDS	15	15	28
90 PERCENT EXCEEDS	12	10	13

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA

LOCATION.--Lat 36°09'40", long 118°42'25", unsurveyed, T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, Sequoia National Forest, on right bank immediately downstream from intake to Southern California Edison Co.'s Tule River conduit, 1.9 mi upstream from Coffee Canyon and 6.5 mi northeast of Springville.

DRAINAGE AREA.--85.3 mi².

PERIOD OF RECORD.--October 1988 to September 1990, October 1991 to September 1992.

GAGE.--Water-stage recorder and 90° V-notch control on river; water-stage recorder and metal flume for conduit diversion. Elevation of gage is 2,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Southern California Edison Co.'s Tule River Conduit (station 11202700) diverts from the right bank of Middle Fork Tule River immediately upstream from station. Flow from this conduit passes through Tule River Powerplant of Southern California Edison Co. Diversions are made from powerplant tailrace ditch to Springville diversion and Duncan diversion ditches. Diversion during the water year 1992 occurred Oct. 1 to Sept. 30. Remaining water is returned to the Tule River 1.5 mi upstream from confluence of Middle and North Forks. See schematic diagram of Tule River basin. For records of combined discharge of river and conduit, see following page.

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

EXTREMES FOR PERIOD OF RECORD.--River only; maximum discharge, 818 ft³/s, Mar. 2, 1989, gage height, 4.39 ft; minimum daily, 5.6 ft³/s, Oct. 4, 1988.
Combined flow, maximum daily discharge, 269 ft³/s, Mar. 2, 1989; minimum daily, 6.5 ft³/s, Dec. 12, 1991.

EXTREMES FOR CURRENT YEAR.--River only; maximum discharge, 227 ft³/s, Oct. 26, gage height, 3.68 ft; minimum daily, 6.1 ft³/s, Oct. 20.
Combined flow, maximum daily discharge, 91 ft³/s, Apr. 20, 21; minimum daily, 6.5 ft³/s, Dec. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	7.1	7.0	6.4	6.7	23	28	47	11	12	13	14
2	16	7.1	7.0	6.4	6.6	17	33	42	13	12	13	14
3	16	7.0	6.9	6.3	6.6	16	40	39	13	12	13	14
4	16	7.0	6.9	6.4	6.6	15	42	38	12	12	13	14
5	13	6.9	6.9	12	6.6	15	41	39	12	12	12	e14
6	8.7	6.9	6.9	7.1	6.6	37	41	47	12	12	13	e14
7	6.6	6.8	6.9	8.2	6.7	20	45	46	12	12	13	e13
8	6.5	6.9	6.9	6.8	6.8	15	48	40	12	12	13	e13
9	6.9	6.8	6.8	6.6	6.8	13	50	42	12	12	13	e14
10	9.1	6.7	6.7	6.6	7.5	12	48	39	12	12	13	e14
11	7.6	7.1	6.7	6.6	13	13	45	35	12	12	13	e14
12	7.7	7.1	6.5	6.7	42	14	42	34	12	16	13	e15
13	7.3	7.1	6.6	6.6	42	16	40	30	12	16	13	e15
14	6.7	7.3	6.6	6.6	18	18	44	21	12	16	12	e14
15	6.9	7.3	6.5	6.5	24	15	36	17	12	13	13	e14
16	7.3	7.3	6.5	6.6	38	14	37	16	12	13	13	e14
17	7.1	26	6.4	6.5	21	12	44	13	12	12	12	13
18	8.5	46	6.4	6.5	15	11	52	12	12	12	13	13
19	7.7	9.8	7.0	6.5	13	9.6	54	11	12	12	13	14
20	6.1	7.4	6.6	6.5	37	9.4	55	10	12	12	12	e13
21	6.2	7.1	6.6	6.5	45	11	55	10	12	12	12	13
22	6.9	7.1	6.5	6.5	35	12	52	7.9	12	12	13	13
23	6.4	7.0	6.5	6.5	32	14	45	7.1	12	12	13	13
24	7.1	7.1	6.5	6.6	29	11	43	6.9	12	12	13	14
25	7.2	7.1	6.4	6.7	29	12	43	6.9	12	12	13	14
26	65	7.1	6.4	6.7	30	12	45	6.9	13	13	13	14
27	44	7.0	6.4	6.7	33	14	45	6.9	12	13	13	13
28	12	7.0	6.6	6.7	34	15	47	6.9	12	e13	13	13
29	6.9	7.1	6.5	6.8	31	17	48	6.8	12	e13	13	13
30	6.7	7.0	6.5	6.7	---	25	51	6.8	12	13	13	13
31	6.9	---	6.4	6.6	---	24	---	9.1	---	13	14	---
TOTAL	363.0	272.2	206.0	211.4	628.5	482.0	1339	700.2	362	392	399	410
MEAN	11.7	9.07	6.65	6.82	21.7	15.5	44.6	22.6	12.1	12.6	12.9	13.7
MAX	65	46	7.0	12	45	37	55	47	13	16	14	15
MIN	6.1	6.7	6.4	6.3	6.6	9.4	28	6.8	11	12	12	13
AC-FT	720	540	409	419	1250	956	2660	1390	718	778	791	813

e Estimated.

TULARE LAKE BASIN

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.5	9.51	7.92	7.58	15.6	36.5	54.2	32.4	14.7	12.5	13.0	13.2
MAX	16.0	11.6	9.87	8.24	21.7	69.0	85.0	51.6	16.8	12.7	14.6	13.9
(WY)	1990	1989	1989	1990	1992	1989	1989	1989	1990	1990	1990	1990
MIN	6.78	7.86	6.65	6.82	8.21	15.5	32.9	22.6	12.1	12.0	11.6	12.0
(WY)	1989	1990	1992	1992	1990	1992	1990	1992	1992	1989	1989	1989

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1989 - 1992

ANNUAL TOTAL	5765.3											
ANNUAL MEAN	15.8								19.0			
HIGHEST ANNUAL MEAN									25.8			1989
LOWEST ANNUAL MEAN									15.6			1990
HIGHEST DAILY MEAN	65	Oct 26							235	Mar 2		1989
LOWEST DAILY MEAN	6.1	Oct 20							5.6	Oct 4		1988
ANNUAL SEVEN-DAY MINIMUM	6.4	Dec 29							6.4	Oct 2		1988
INSTANTANEOUS PEAK FLOW	227	Oct 26							818	Mar 2		1989
INSTANTANEOUS PEAK STAGE	3.68	Oct 26							4.39	Mar 2		1989
ANNUAL RUNOFF (AC-FT)	11440								13780			
10 PERCENT EXCEEDS	40								45			
50 PERCENT EXCEEDS	12								12			
90 PERCENT EXCEEDS	6.6								6.8			

11202711 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA--Continued

MIDDLE FORK TULE RIVER BELOW INTAKE AND SOUTHERN CALIFORNIA EDISON CO.'S TULE RIVER CONDUIT ABOVE SPRINGVILLE, CA
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	25	24	25	26	58	59	81	29	32	18	16
2	16	24	24	25	26	52	61	77	28	28	18	16
3	16	24	24	25	25	51	67	74	27	29	17	16
4	16	23	23	30	25	49	74	71	26	28	17	16
5	17	23	23	40	24	49	73	72	26	27	17	16
6	21	21	22	35	25	71	73	80	26	26	18	16
7	22	21	23	36	27	54	73	78	27	24	18	15
8	21	20	23	33	29	48	77	73	26	24	18	15
9	22	22	22	32	27	46	80	76	25	25	18	16
10	20	21	12	34	33	45	87	73	25	27	17	15
11	18	20	6.7	33	46	46	85	69	24	26	17	15
12	19	20	6.5	30	77	48	83	67	24	41	17	16
13	18	19	17	29	77	50	81	62	25	30	17	16
14	16	21	23	28	52	52	85	54	26	32	16	15
15	16	20	22	27	59	49	77	50	27	31	17	15
16	17	21	21	29	73	47	74	49	27	26	17	15
17	17	44	22	28	56	45	81	46	26	22	16	14
18	18	72	22	28	49	43	89	45	25	20	17	14
19	19	39	25	27	47	42	90	44	25	19	17	15
20	18	34	24	26	72	41	91	42	26	19	15	14
21	18	32	23	26	81	43	91	42	26	19	15	14
22	18	31	22	25	71	43	88	38	25	20	15	14
23	18	28	22	25	68	46	80	34	26	22	17	14
24	19	27	22	26	65	42	78	32	30	19	15	15
25	19	27	22	26	64	42	77	32	28	18	15	15
26	81	26	22	26	66	41	79	32	27	17	15	15
27	65	25	21	26	68	45	79	32	27	16	15	13
28	36	26	28	26	69	46	81	33	27	17	15	13
29	31	25	26	26	66	49	81	33	30	17	15	13
30	28	24	28	26	---	57	84	32	32	17	15	13
31	26	---	25	26	---	55	---	30	---	18	16	---
TOTAL	722	805	670.2	884	1493	1495	2378	1653	798	736	510	445
MEAN	23.3	26.8	21.6	28.5	51.5	48.2	79.3	53.3	26.6	23.7	16.5	14.8
MAX	81	72	28	40	81	71	91	81	32	41	18	16
MIN	16	19	6.5	25	24	41	59	30	24	16	15	13
AC-FT	1430	1600	1330	1750	2960	2970	4720	3280	1580	1460	1010	883

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.0	26.4	25.5	31.2	45.8	71.6	90.7	65.9	37.3	22.1	17.4	16.5
MAX	23.3	29.8	33.5	35.6	51.5	105	123	86.8	44.9	23.7	20.1	19.7
(WY)	1992	1989	1989	1989	1992	1989	1989	1989	1989	1992	1989	1989
MIN	18.2	22.7	21.4	28.5	34.7	48.2	69.6	53.3	26.6	19.2	15.8	14.8
(WY)	1989	1990	1990	1992	1990	1992	1990	1992	1992	1990	1990	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1989 - 1992

ANNUAL TOTAL	12589.2	
ANNUAL MEAN	34.4	39.2
HIGHEST ANNUAL MEAN		49.2
LOWEST ANNUAL MEAN		34.0
HIGHEST DAILY MEAN	91	269
LOWEST DAILY MEAN	6.5	6.5
ANNUAL SEVEN-DAY MINIMUM	14	14
ANNUAL RUNOFF (AC-FT)	24970	28410
10 PERCENT EXCEEDS	73	79
50 PERCENT EXCEEDS	26	27
90 PERCENT EXCEEDS	16	17

11204900 TULE RIVER BELOW SUCCESS DAM, CA

LOCATION.--Lat 36°03'23", long 118°55'22", in NW 1/4 SW 1/4 sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on right bank 1,000 ft downstream from Success Dam and 5 mi east of Porterville.

DRAINAGE AREA.--393 mi².

PERIOD OF RECORD.--Water years 1962-69, 1971 to current year.

CHEMICAL DATA: Water years 1962-69, 1971-79.

WATER TEMPERATURE: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Interruptions in record were due to malfunction of recording instrument. Water temperature is affected by regulation from Success Dam and the powerplant.

EXTREMES PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 34.5°C, Aug. 23, 1990; minimum recorded, 3.0°C, Jan. 3, 1975.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 32.0°C, Sept. 6; minimum recorded, 7.5°C, on several days in November through January.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	22.0	13.5	13.0	7.5	13.5	7.5	---	---	20.0	14.5
2	---	---	21.5	13.0	13.0	7.5	11.5	9.0	---	---	19.5	15.0
3	---	---	21.5	13.5	13.0	12.0	12.5	9.5	---	---	16.5	14.0
4	25.5	24.0	21.5	14.0	12.5	12.0	15.5	10.5	---	---	20.0	14.5
5	26.0	24.0	22.0	14.5	12.5	12.0	12.0	10.0	---	---	20.0	13.5
6	25.5	24.5	22.5	15.0	12.5	11.5	10.5	8.5	---	---	20.5	14.0
7	25.5	24.0	18.5	15.0	12.0	11.5	10.0	10.0	---	---	18.5	14.0
8	25.5	24.5	19.0	17.5	12.0	11.5	10.5	10.0	---	---	17.5	14.0
9	25.5	24.5	18.5	17.5	17.0	11.0	10.0	9.0	---	---	21.0	14.0
10	25.5	24.5	18.5	17.5	13.5	10.0	---	---	---	---	21.5	13.5
11	25.5	24.5	22.5	17.5	13.0	11.0	---	---	---	---	21.0	14.0
12	25.5	24.5	22.5	14.5	15.5	8.5	---	---	---	---	23.0	14.0
13	25.5	24.0	21.0	14.5	11.0	10.0	---	---	---	---	24.0	14.0
14	25.0	24.0	17.0	13.5	12.5	9.5	---	---	---	---	23.5	13.5
15	25.0	24.5	17.5	10.5	13.5	9.0	---	---	16.0	13.0	20.5	15.0
16	25.0	24.5	18.0	9.5	13.0	8.0	---	---	15.0	12.5	19.5	13.5
17	25.0	24.0	15.0	12.0	14.5	8.0	---	---	19.0	12.5	20.0	12.0
18	24.5	24.0	18.5	12.5	15.0	10.0	---	---	20.5	12.0	21.0	18.0
19	24.5	24.0	19.0	11.5	12.0	8.0	---	---	21.0	13.0	20.0	12.5
20	24.5	24.0	19.0	11.0	13.0	7.5	---	---	19.5	15.5	19.0	13.5
21	24.5	23.5	16.5	12.0	13.0	7.5	---	---	21.5	15.0	20.5	18.5
22	24.0	23.5	18.5	13.5	13.5	7.5	---	---	19.0	16.0	23.5	16.0
23	23.5	23.0	19.5	11.0	12.0	9.0	---	---	22.5	15.0	23.5	14.5
24	23.0	22.5	18.0	11.0	13.0	7.5	---	---	22.0	13.0	23.5	14.0
25	22.5	22.0	18.0	10.5	13.5	7.5	---	---	22.5	13.0	21.0	19.0
26	22.0	21.0	18.5	11.0	13.0	7.5	---	---	23.0	13.5	23.5	14.0
27	21.0	20.5	16.5	10.5	14.0	7.5	---	---	23.0	14.0	23.5	13.5
28	20.5	19.5	15.5	9.0	14.0	10.0	---	---	22.5	14.5	23.5	14.0
29	20.0	19.0	15.0	8.0	11.5	9.5	---	---	20.5	14.5	23.5	15.5
30	19.5	19.0	13.5	7.5	14.5	9.5	---	---	---	---	22.5	22.0
31	22.5	15.5	---	---	14.0	7.5	---	---	---	---	22.0	19.0
MONTH	---	---	22.5	7.5	17.0	7.5	---	---	---	---	24.0	12.0

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

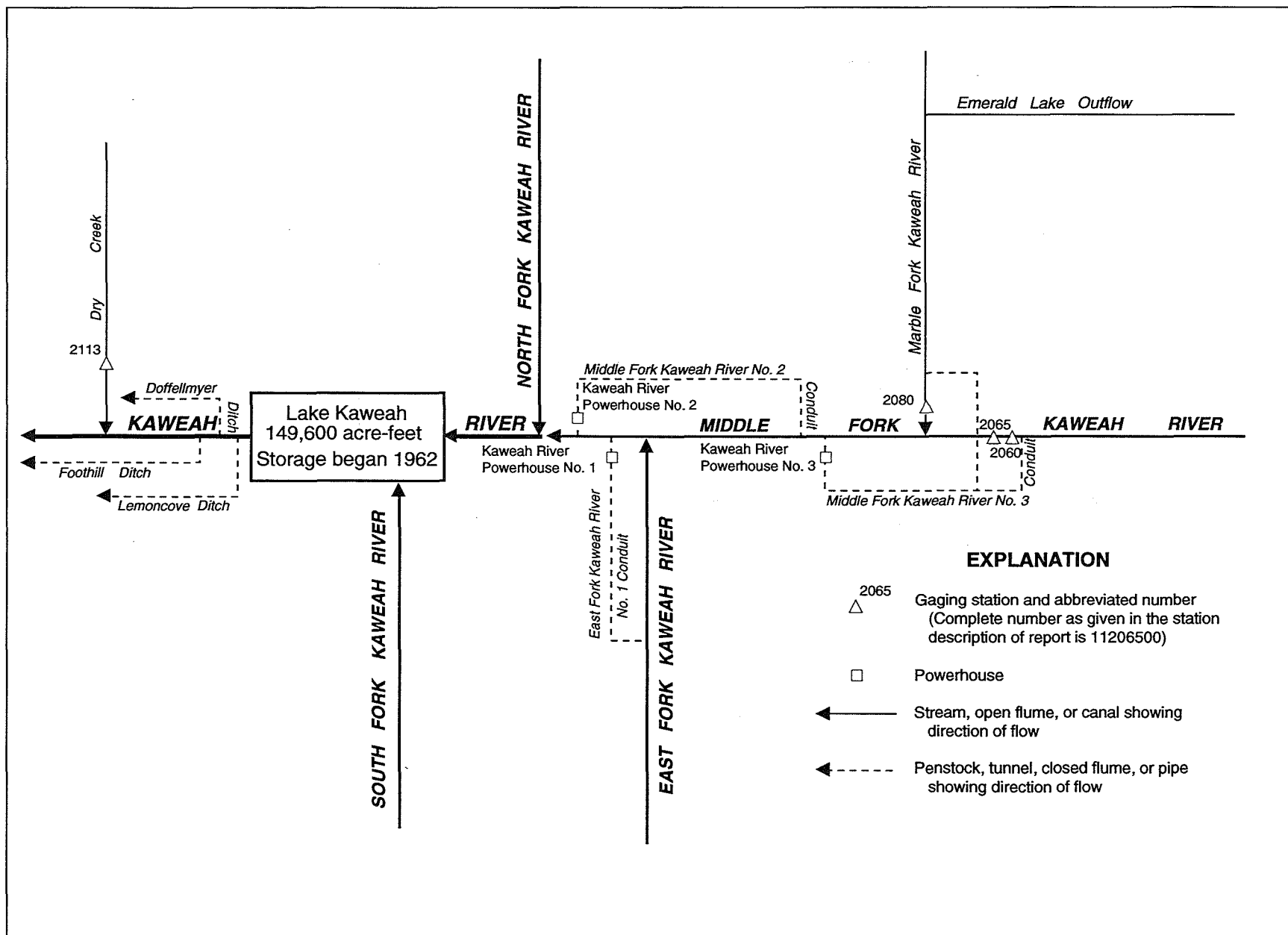


Figure 29. Diversions and storage in Kaweah River basin.

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION.--Lat 36°30'48", long 118°47'27", unsurveyed, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on right bank 0.5 mi southeast of Potwisha Camp and 0.7 mi upstream from confluence with Marble Fork Kaweah River.

DRAINAGE AREA.--102 mi².

PERIOD OF RECORD.--July 1949 to current year. Monthly discharge only for water years 1956-57, published in WSP 1735. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder and rectangular flume on river; water-stage recorder and concrete-lined channel for conduit diversion. Elevation of gage is 2,100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1955, at datum 0.70 ft higher.

REMARKS.--No estimated daily discharges. Middle Fork No. 3 Conduit (station 11206000) diverts from left bank of Middle Fork Kaweah River, 0.1 mi upstream from station. Flow from this conduit joins with that of Marble Fork Kaweah River No. 3 Conduit, and passes through Kaweah River No. 3 Powerplant of Southern California Edison Co. Diversion during water year 1992 occurred Oct. 26 to Aug. 3, Aug. 15-18. Water is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. See schematic diagram of Kaweah River basin. For records of combined discharge of river and diversion to Middle Fork Kaweah No. 3 Conduit, see following page.

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

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 46,800 ft³/s, Dec. 23, 1955, gage height, 29.0 ft, from floodmarks, datum then in use, on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft³/s, Nov. 12-15, 1949.

Combined flow, maximum discharge, 46,800 ft³/s, Dec. 23, 1955; minimum daily, 7.0 ft³/s, Sept. 16, 17, 1990.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 625 ft³/s, Oct. 26, gage height, 6.72 ft; minimum daily, 7.4 ft³/s, Sept. 30.

Combined flow, maximum daily discharge, 325 ft³/s, Apr. 30; minimum daily, 7.4 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	13	17	17	43	55	236	79	20	17	13
2	13	13	14	16	17	35	64	208	83	17	17	13
3	13	13	13	16	16	35	83	211	80	17	17	13
4	13	13	13	16	16	32	98	203	79	16	16	13
5	12	13	13	16	16	27	103	196	73	16	16	13
6	12	14	13	16	16	50	113	247	57	16	16	12
7	12	13	13	16	17	34	130	245	41	16	16	11
8	11	12	13	16	17	29	139	264	34	16	16	11
9	11	17	13	16	17	27	153	245	49	16	15	11
10	11	20	13	16	17	27	162	227	33	16	15	10
11	11	13	13	16	18	29	162	215	27	16	14	10
12	11	13	13	16	23	34	154	207	24	52	15	10
13	11	12	13	16	21	37	146	206	24	27	15	10
14	11	12	13	17	18	40	161	194	23	17	17	10
15	11	12	13	17	18	35	153	173	24	47	33	9.5
16	10	12	13	17	19	30	153	157	23	18	29	9.1
17	10	27	13	17	18	28	187	160	23	17	24	9.1
18	10	29	13	17	18	28	222	148	23	16	22	9.3
19	10	14	13	17	18	29	221	140	22	16	20	9.5
20	10	17	13	17	43	28	228	115	22	16	18	9.3
21	9.8	23	13	17	41	32	224	89	22	16	17	9.1
22	10	16	13	17	40	31	168	79	22	16	16	8.6
23	11	12	13	17	36	38	156	74	23	16	16	8.4
24	11	12	13	17	35	32	171	84	25	16	15	8.4
25	12	11	13	17	40	31	200	86	24	16	14	8.6
26	164	34	13	17	44	30	230	87	24	16	14	8.6
27	50	33	13	17	49	33	243	92	24	16	13	8.2
28	13	14	13	17	55	34	265	109	24	18	13	7.9
29	14	14	13	17	54	34	273	96	24	19	13	7.7
30	14	14	13	17	---	46	276	88	24	18	13	7.4
31	14	---	16	17	---	42	---	78	---	18	13	---
TOTAL	548.8	485	407	515	774	1040	5093	4959	1079	593	525	298.7
MEAN	17.7	16.2	13.1	16.6	26.7	33.5	170	160	36.0	19.1	16.9	9.96
MAX	164	34	16	17	55	50	276	264	83	52	33	13
MIN	9.8	11	13	16	16	27	55	74	22	16	13	7.4
AC-FT	1090	962	807	1020	1540	2060	10100	9840	2140	1180	1040	592

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.8	26.5	59.5	83.6	101	129	231	423	383	163	47.1	23.9
MAX	125	145	732	528	489	504	630	1178	1271	786	354	157
(WY)	1983	1983	1967	1980	1986	1986	1982	1969	1983	1983	1983	1982
MIN	.92	1.07	1.08	.36	.60	12.8	64.3	78.6	27.1	1.07	2.43	1.56
(WY)	1962	1962	1962	1961	1961	1961	1976	1977	1976	1961	1962	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	41141.8		16317.5			
ANNUAL MEAN	113		44.6		141	
HIGHEST ANNUAL MEAN					417	
LOWEST ANNUAL MEAN					25.2	
HIGHEST DAILY MEAN	1770	Mar 4	276	Apr 30	10500	Dec 6 1966
LOWEST DAILY MEAN	9.8	Oct 21	7.4	Sep 30	.30	Dec 27 1960
ANNUAL SEVEN-DAY MINIMUM	10	Oct 16	8.1	Sep 24	.30	Dec 27 1960
INSTANTANEOUS PEAK FLOW			673	Oct 26	23300	Dec 6 1966
INSTANTANEOUS PEAK STAGE			6.72	Oct 26	17.70	Dec. 6 1966
ANNUAL RUNOFF (AC-FT)	81600		32370		101800	
10 PERCENT EXCEEDS	296		153		411	
50 PERCENT EXCEEDS	22		17		29	
90 PERCENT EXCEEDS	13		11		9.7	

11206501 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

MIDDLE FORK KAWEAH RIVER AND MIDDLE FORK KAWEAH RIVER NO. 3 CONDUIT NEAR POTWISHA CAMP, CA,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	35	30	27	25	95	108	285	139	43	18	13
2	13	33	30	26	25	88	115	257	143	40	18	13
3	13	33	29	26	23	89	135	259	140	38	17	13
4	13	34	28	31	22	85	150	252	139	36	16	13
5	12	36	28	39	22	78	152	245	135	35	16	13
6	12	42	27	33	22	106	160	296	121	33	16	12
7	12	43	26	32	24	89	177	294	104	32	16	11
8	11	42	27	32	29	83	185	313	95	32	16	11
9	11	58	26	34	26	78	199	294	113	32	15	11
10	11	60	26	37	34	78	214	276	94	31	15	10
11	11	45	26	35	52	81	208	265	83	31	14	10
12	11	39	25	30	64	88	200	257	79	77	15	10
13	11	35	24	31	71	92	192	256	72	57	15	10
14	11	35	23	30	53	94	207	244	64	46	17	10
15	11	35	23	30	62	86	199	223	64	87	34	9.5
16	10	33	22	30	64	83	199	207	59	54	32	9.1
17	10	58	21	30	62	79	233	210	53	44	27	9.1
18	10	78	22	29	62	75	269	199	50	38	22	9.3
19	10	56	25	28	67	71	268	191	49	35	20	9.5
20	10	63	23	27	100	67	275	168	51	32	18	9.3
21	9.8	73	24	27	99	83	272	144	50	30	17	9.1
22	10	63	24	26	98	77	215	134	48	29	16	8.6
23	11	55	24	26	94	92	203	132	49	28	16	8.4
24	11	50	23	26	93	82	218	143	57	38	15	8.4
25	12	47	23	26	98	82	248	145	52	25	14	8.6
26	164	48	22	26	103	77	278	145	49	24	14	8.6
27	71	45	22	26	108	83	291	151	47	23	13	8.2
28	39	38	27	25	112	87	313	168	48	22	13	7.9
29	40	35	26	25	109	87	321	155	48	21	13	7.7
30	38	31	28	26	---	100	325	147	47	20	13	7.4
31	36	---	26	25	---	95	---	138	---	20	13	---
TOTAL	667.8	1378	780	901	1823	2630	6529	6593	2342	1133	534	298.7
MEAN	21.5	45.9	25.2	29.1	62.9	84.8	218	213	78.1	36.5	17.2	9.96
MAX	164	78	30	39	112	106	325	313	143	87	34	13
MIN	9.8	31	21	25	22	67	108	132	47	20	13	7.4
AC-FT	1320	2730	1550	1790	3620	5220	12950	13080	4650	2250	1060	592

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.1	50.3	102	116	139	173	278	471	432	195	69.4	40.2
MAX	177	201	743	565	540	556	683	1225	1318	826	395	201
(WY)	1983	1983	1956	1980	1986	1986	1982	1969	1983	1983	1983	1982
MIN	9.58	11.1	12.2	18.9	17.2	40.4	124	139	75.6	25.1	13.7	8.93
(WY)	1991	1960	1991	1991	1991	1977	1976	1977	1976	1961	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992	
ANNUAL TOTAL	42734.8		25609.5			
ANNUAL MEAN	117		70.0		175	
HIGHEST ANNUAL MEAN					468	
LOWEST ANNUAL MEAN					53.5	
HIGHEST DAILY MEAN	1770		325		10500	
LOWEST DAILY MEAN	9.8		7.4		7.0	
ANNUAL SEVEN-DAY MINIMUM	10		8.1		7.1	
INSTANTANEOUS PEAK FLOW					46800	
ANNUAL RUNOFF (AC-FT)	84760		50800		126800	
10 PERCENT EXCEEDS	297		199		463	
50 PERCENT EXCEEDS	36		35		83	
90 PERCENT EXCEEDS	14		11		16	

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION.--Lat 36°31'08", long 118°48'03", in NE 1/4 SW 1/4 sec.23, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on left bank 0.1 mi north of Potwisha Camp, 0.3 mi upstream from confluence with Middle Fork Kaweah River, and 7.9 mi northeast of Three Rivers.

DRAINAGE AREA.--51.4 mi².

PERIOD OF RECORD.--March 1950 to current year. Monthly discharge only for March 1950, published in WSP 1315-A. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder and concrete control for conduit diversion. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Marble Fork Kaweah River No. 3 Conduit diverts from left bank of Marble Fork 0.3 mi upstream from station. Water is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. Diversion during water year 1992 occurred Oct. 1, Oct. 26 to July 30, and Sept. 4-30. See schematic diagram of Kaweah River basin. For records of combined discharge of river and conduit, see following page.

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

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,500 ft³/s, Dec. 23, 1955, gage height, 13.4 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement of peak flow; no flow Sept. 5-15, Oct. 24-28, 1953, Oct. 26-31, 1957.
Combined flow, maximum discharge, 12,500 ft³/s, Dec. 23, 1955; minimum daily, 0.82 ft³/s, Oct. 4, 5, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 310 ft³/s, Apr. 29, gage height, 4.60 ft; minimum daily, 1.6 ft³/s, Dec. 5.
Combined flow, maximum daily discharge, 247 ft³/s, Apr. 30; minimum daily, 1.9 ft³/s, Sept. 29,30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	2.2	2.7	9.9	8.4	12	19	164	33	9.9	5.7	3.2
2	3.8	2.2	2.9	11	8.2	11	25	143	41	8.2	5.3	3.3
3	3.5	2.2	2.9	11	8.1	12	38	149	28	8.6	5.0	3.1
4	3.5	2.1	2.1	11	7.6	13	55	137	26	8.3	4.7	2.4
5	3.4	2.4	1.6	11	7.0	13	56	125	24	8.2	4.7	2.4
6	3.4	4.4	2.4	11	7.4	13	61	166	19	7.7	4.7	2.2
7	3.3	2.6	3.4	9.6	7.5	12	74	185	13	7.5	4.7	2.0
8	3.3	2.0	3.6	8.6	7.5	12	83	169	11	8.2	4.7	1.9
9	3.4	2.4	3.7	8.6	7.3	12	90	162	10	8.7	4.6	1.9
10	3.4	4.2	3.6	8.6	7.4	13	91	164	10	8.4	4.3	1.8
11	3.5	2.2	3.5	8.6	7.3	13	89	145	10	8.5	3.9	1.9
12	3.5	2.2	3.4	8.3	7.3	13	81	142	10	34	4.1	1.8
13	3.5	2.2	3.6	8.2	7.2	13	79	141	10	18	4.8	1.9
14	3.6	2.0	3.7	8.5	7.0	15	96	128	9.8	17	5.1	1.9
15	3.6	2.0	3.7	8.4	7.3	12	84	112	10	35	5.5	1.9
16	3.5	2.0	3.7	8.0	7.5	11	82	105	10	17	5.2	1.9
17	3.5	3.3	3.7	7.8	7.2	10	116	105	9.8	10	4.7	1.8
18	3.7	4.0	4.1	7.8	7.4	10	148	94	10	10	4.5	1.9
19	3.8	2.0	4.8	7.8	7.5	9.8	144	86	10	10	4.2	1.9
20	4.1	2.0	4.8	8.2	7.7	9.9	151	64	10	9.7	3.8	2.0
21	4.1	2.8	4.3	7.9	8.7	10	146	40	11	9.6	3.4	1.9
22	4.3	2.0	4.4	7.8	9.3	10	98	41	12	9.1	3.6	1.9
23	4.7	2.9	4.5	7.8	10	10	97	39	12	9.2	3.4	1.8
24	4.8	3.3	4.5	8.6	13	10	114	47	12	9.3	3.4	1.8
25	5.3	3.3	4.5	8.6	16	10	143	57	12	8.6	3.2	1.9
26	56	12	4.3	8.6	18	10	167	61	12	8.0	3.2	1.9
27	21	9.9	4.1	8.6	23	10	174	58	12	7.5	3.1	1.8
28	3.1	2.2	4.8	8.6	23	11	198	68	12	7.3	2.9	1.8
29	2.0	2.3	4.3	8.6	18	12	199	48	12	6.7	2.8	1.7
30	2.3	2.3	3.4	8.6	---	15	201	39	12	6.5	2.8	1.7
31	2.2	---	6.9	8.6	---	12	---	35	---	6.2	3.0	---
TOTAL	181.2	93.6	117.9	274.2	288.8	359.7	3199	3219	433.6	340.9	129.0	61.3
MEAN	5.85	3.12	3.80	8.85	9.96	11.6	107	104	14.5	11.0	4.16	2.04
MAX	56	12	6.9	11	23	15	201	185	41	35	5.7	3.3
MIN	2.0	2.0	1.6	7.8	7.0	9.8	19	35	9.8	6.2	2.8	1.7
AC-FT	359	186	234	544	573	713	6350	6380	860	676	256	122

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.22	9.96	32.9	37.4	44.1	58.8	133	275	240	85.3	18.7	9.88
MAX	60.5	72.5	385	262	259	278	396	812	784	441	135	103
(WY)	1983	1983	1956	1980	1986	1986	1982	1969	1983	1969	1983	1978
MIN	.38	.39	.44	.15	.17	.92	32.7	46.5	9.58	.57	.83	.38
(WY)	1963	1963	1962	1961	1961	1961	1975	1977	1976	1961	1962	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992	
ANNUAL TOTAL	23083.1		8698.2			
ANNUAL MEAN	63.2		23.8		79.3	
HIGHEST ANNUAL MEAN					235	
LOWEST ANNUAL MEAN					10.9	
HIGHEST DAILY MEAN	636	Mar 4	201	Apr 30	5700	Dec 23 1955
LOWEST DAILY MEAN	1.6	Dec 5	1.6	Dec 5	.10	Jan 10 1961
ANNUAL SEVEN-DAY MINIMUM	2.2	Oct 29	1.8	Sep 24	.10	Jan 10 1961
INSTANTANEOUS PEAK FLOW			310	Apr 29	12500	Dec 23 1955
INSTANTANEOUS PEAK STAGE			4.60	Apr 29	13.40	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	45790		17250		57450	
10 PERCENT EXCEEDS	193		87		239	
50 PERCENT EXCEEDS	7.7		8.2		12	
90 PERCENT EXCEEDS	2.7		2.2		1.5	

TULARE LAKE BASIN

11208001 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

MARBLE FORK KAWEAH RIVER AND MARBLE FORK KAWEAH RIVER NO. 3 CONDUIT AT POTWISHA CAMP, CA,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	8.7	10	12	12	49	59	209	66	13	5.7	3.2
2	3.8	8.7	11	13	12	44	68	188	77	12	5.3	3.3
3	3.5	9.3	11	13	11	42	81	194	60	11	5.0	3.1
4	3.5	10	10	14	10	40	98	181	55	11	4.7	2.7
5	3.4	11	10	15	10	40	99	169	51	10	4.7	3.0
6	3.4	16	9.6	13	11	46	105	210	42	9.1	4.7	2.7
7	3.3	19	9.3	13	11	41	118	229	33	8.7	4.7	2.4
8	3.3	18	9.6	12	13	37	127	213	29	9.0	4.7	2.3
9	3.4	25	9.7	14	12	34	135	206	29	9.2	4.6	2.3
10	3.4	29	9.7	15	15	38	135	208	27	8.8	4.3	2.2
11	3.5	19	9.4	15	17	40	133	189	24	8.9	3.9	2.3
12	3.5	15	9.0	12	25	46	125	186	22	35	4.1	2.2
13	3.5	13	8.7	13	26	51	123	185	20	27	4.8	2.3
14	3.6	12	8.4	13	22	54	141	172	19	34	5.1	2.2
15	3.6	11	8.3	13	24	46	128	156	18	69	5.5	2.2
16	3.5	10	7.8	13	23	43	126	149	18	49	5.2	2.1
17	3.5	15	8.3	13	23	38	160	149	17	27	4.7	2.0
18	3.7	29	8.4	13	22	36	193	137	15	21	4.5	2.2
19	3.8	22	10	12	22	34	189	129	14	18	4.2	2.2
20	4.1	24	8.5	12	32	34	197	106	14	15	3.8	2.3
21	4.1	31	9.1	12	40	38	192	80	15	13	3.4	2.2
22	4.3	27	9.5	11	40	37	143	79	15	12	3.6	2.1
23	4.7	22	9.9	11	41	42	142	78	14	11	3.4	2.0
24	4.8	19	9.2	12	44	42	159	85	16	10	3.4	2.0
25	5.3	18	8.9	12	48	44	189	92	15	9.5	3.2	2.1
26	56	17	8.7	12	50	43	213	97	14	8.7	3.2	2.2
27	27	16	8.7	12	58	45	220	95	13	8.0	3.1	2.0
28	13	15	12	12	63	48	244	107	13	7.6	2.9	2.0
29	12	13	12	12	60	51	245	84	13	6.9	2.8	1.9
30	12	10	11	12	---	56	247	73	13	6.6	2.8	1.9
31	9.3	---	11	13	---	52	---	69	---	6.2	3.0	---
TOTAL	224.4	512.7	296.7	394	797	1331	4534	4504	791	505.2	129.0	69.6
MEAN	7.24	17.1	9.57	12.7	27.5	42.9	151	145	26.4	16.3	4.16	2.32
MAX	56	31	12	15	63	56	247	229	77	69	5.7	3.3
MIN	3.3	8.7	7.8	11	10	34	59	69	13	6.2	2.8	1.9
AC-FT	445	1020	589	781	1580	2640	8990	8930	1570	1000	256	138

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.0	21.6	46.5	52.4	66.4	85.5	162	304	268	104	29.5	17.4
MAX	88.8	103	385	300	295	315	426	840	839	487	184	134
(WY)	1983	1983	1956	1980	1986	1986	1982	1969	1983	1983	1983	1978
MIN	2.02	2.77	2.61	5.25	6.67	16.9	57.2	78.4	24.9	4.09	2.43	1.40
(WY)	1962	1991	1991	1991	1991	1977	1975	1977	1976	1961	1977	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1955 - 1992

ANNUAL TOTAL	23777.6	14088.6	
ANNUAL MEAN	65.1	38.5	97.6
HIGHEST ANNUAL MEAN			257
LOWEST ANNUAL MEAN			24.7
HIGHEST DAILY MEAN	636	247	5700
LOWEST DAILY MEAN	2.0	1.9	.82
ANNUAL SEVEN-DAY MINIMUM	3.4	2.0	1.0
ANNUAL RUNOFF (AC-FT)	47160	27940	70680
10 PERCENT EXCEEDS	193	130	268
50 PERCENT EXCEEDS	13	13	32
90 PERCENT EXCEEDS	4.6	3.3	4.8

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'51", long 119°00'42", in SE 1/4 SE 1/4 sec.26, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi downstream from Terminus Dam and 2.2 mi northeast of Lemoncove.

DRAINAGE AREA.--561 mi².

PERIOD OF RECORD.--Water years 1962 to current year.

CHEMICAL DATA: Water years 1962-79.

WATER TEMPERATURE: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Interruptions in record were due to malfunction of recording instrument or no flow. Water temperature is affected by regulation from Terminus Dam and the powerplant.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 31.5°C, Aug. 26, 1988; minimum recorded, 4.5°C, Feb. 26, 1986 and on several days during December 1990 and January 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 19; minimum recorded, 6.5°C, Jan. 14, 20, 22, 25, 26.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	28.0	22.0	17.0	13.0	12.0	8.0	10.0	8.5	---	---	12.5	11.5
2	28.0	22.0	17.0	13.0	12.0	9.5	9.5	8.5	---	---	12.5	11.5
3	28.0	21.5	17.5	13.5	12.5	10.0	9.5	9.0	---	---	12.5	11.5
4	28.0	22.0	17.5	14.0	12.0	9.5	10.5	9.0	---	---	17.0	11.5
5	27.5	21.5	17.5	14.5	11.5	10.0	9.5	9.0	10.5	7.0	15.5	11.5
6	27.0	21.5	18.0	14.5	11.5	10.5	10.0	8.5	9.5	8.0	15.5	10.5
7	27.0	21.0	18.5	15.0	11.0	10.5	9.0	9.0	10.5	8.5	15.0	11.0
8	26.0	20.5	18.5	16.5	11.5	11.0	9.0	8.5	12.5	9.0	14.5	11.0
9	26.5	20.5	18.5	17.0	11.5	11.0	9.5	8.5	12.0	8.5	17.0	11.5
10	26.5	20.0	18.0	16.0	11.5	11.0	9.0	8.5	11.0	8.5	17.5	10.5
11	23.0	20.5	18.0	15.0	11.0	11.0	8.5	8.0	10.5	8.5	18.0	11.5
12	26.0	20.5	18.5	14.0	11.0	10.5	9.5	7.5	10.5	10.0	18.0	11.0
13	26.0	20.0	17.5	14.0	11.0	10.5	10.0	7.5	10.5	10.0	17.0	11.0
14	26.0	20.0	16.5	14.5	10.5	10.5	8.5	6.5	10.5	10.0	16.5	11.0
15	26.0	19.5	16.0	12.0	10.5	10.0	10.0	7.5	10.0	9.5	14.0	11.5
16	26.0	19.0	15.0	11.0	11.0	9.5	8.5	7.0	10.0	9.5	15.0	11.0
17	25.5	19.0	14.5	12.5	11.5	8.5	8.0	7.0	10.5	9.0	15.5	10.5
18	25.0	19.5	16.0	13.0	12.0	9.5	8.5	7.0	10.0	9.5	15.0	11.0
19	25.0	19.0	15.5	12.0	10.0	9.0	10.0	7.0	10.0	9.5	14.0	11.0
20	24.5	19.0	15.0	11.5	11.0	8.0	9.5	6.5	10.5	10.0	14.0	11.5
21	24.5	19.0	14.5	12.0	11.0	8.0	8.5	7.0	11.0	10.0	14.0	11.5
22	23.5	19.0	15.0	13.0	11.0	8.5	8.0	6.5	10.5	10.5	15.5	11.5
23	22.0	20.0	15.0	11.5	11.0	9.0	8.5	7.0	11.5	10.5	15.0	11.5
24	21.5	17.5	15.0	12.0	10.5	8.5	10.0	7.0	11.5	11.0	16.0	11.5
25	20.5	17.0	14.5	11.5	10.5	8.5	8.5	6.5	12.0	11.0	14.5	12.0
26	18.5	16.5	15.0	12.0	10.5	8.5	9.5	6.5	12.0	11.0	17.0	11.5
27	18.0	16.0	14.5	12.0	10.5	8.5	9.5	7.0	12.0	11.0	17.5	11.5
28	18.0	14.5	14.0	11.5	10.5	9.0	10.0	7.0	12.0	11.5	17.0	12.0
29	17.5	14.0	13.5	11.0	10.0	8.5	11.0	7.0	12.0	11.5	16.5	12.5
30	17.5	14.5	12.5	10.0	10.0	9.0	---	---	---	---	13.5	12.0
31	17.0	13.5	---	---	10.5	8.5	---	---	---	---	15.0	12.0
MONTH	28.0	13.5	18.5	10.0	12.5	8.0	---	---	---	---	18.0	10.5

TULARE LAKE BASIN

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11211300 DRY CREEK NEAR LEMONCOVE, CA

LOCATION.--Lat 36°26'51", long 119°01'38", in NE 1/4 SE 1/4 sec.15, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on right bank 0.5 mi downstream from Bequette Canyon, 2.9 mi upstream from mouth, and 4.4 mi north of Lemoncove.

DRAINAGE AREA.--75.6 mi².

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

REVISED RECORDS.--WSP 2130: 1960(M).

GAGE.--Water-stage recorder. Elevation of gage is 570 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 8, 1969, 1.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s, Dec. 6, 1966, gage height, 7.30 ft in gage well, 8.94 ft from floodmarks, site and datum then in use; no flow for several months most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a discharge of 6,070 ft³/s, from slope-area measurement. Flood of 1867 is believed to have exceeded that of December 1955, from information provided by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	1315	*167	*2.97	Mar. 23	0645	105	2.62

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.32	6.3	15	2.2	.17	.00	.00	.00
2	.00	.00	.00	.00	.32	6.0	12	2.1	.15	.00	.00	.00
3	.00	.00	.00	.00	.30	5.9	9.2	1.9	.10	.00	.00	.00
4	.00	.00	.00	.00	.26	5.8	8.0	1.8	.04	.00	.00	.00
5	.00	.00	.00	.00	.29	5.6	7.2	1.7	.01	.00	.00	.00
6	.00	.00	.00	1.3	.33	8.7	6.6	1.6	.00	.00	.00	.00
7	.00	.00	.00	2.6	.39	8.8	6.3	1.6	.00	.00	.00	.00
8	.00	.00	.00	1.3	.40	7.4	5.8	2.0	.00	.00	.00	.00
9	.00	.00	.00	.61	.40	7.2	5.3	2.4	.00	.00	.00	.00
10	.00	.00	.00	.35	1.1	6.4	5.0	1.6	.00	.00	.00	.00
11	.00	.00	.00	.24	5.9	6.0	4.7	1.3	.00	.00	.00	.00
12	.00	.00	.00	.23	16	5.7	4.5	1.1	.00	.00	.00	.00
13	.00	.00	.00	.20	49	5.4	4.2	1.1	.00	.00	.00	.00
14	.00	.00	.00	.20	22	5.1	3.9	.95	.00	.00	.00	.00
15	.00	.00	.00	.19	79	4.9	3.9	.90	.00	.00	.00	.00
16	.00	.00	.00	.17	56	5.0	3.7	.83	.00	.00	.00	.00
17	.00	.00	.00	.18	47	5.5	3.8	.73	.00	.00	.00	.00
18	.00	.00	.00	.20	23	5.2	3.9	.64	.00	.00	.00	.00
19	.00	.00	.00	.20	16	4.9	4.0	.62	.00	.00	.00	.00
20	.00	.00	.00	.20	13	4.8	4.0	.61	.00	.00	.00	.00
21	.00	.00	.00	.22	12	5.3	3.9	.57	.00	.00	.00	.00
22	.00	.00	.00	.23	11	7.3	3.7	.51	.00	.00	.00	.00
23	.00	.00	.00	.23	9.7	55	3.6	.45	.00	.00	.00	.00
24	.00	.00	.00	.25	8.8	21	3.4	.40	.00	.00	.00	.00
25	.00	.00	.00	.34	8.0	13	3.2	.36	.00	.00	.00	.00
26	.00	.00	.00	.32	7.5	11	3.2	.34	.00	.00	.00	.00
27	.00	.00	.00	.28	7.1	9.5	3.0	.33	.00	.00	.00	.00
28	.00	.00	.00	.28	6.7	8.0	2.8	.28	.00	.00	.00	.00
29	.00	.00	.00	.28	6.5	7.7	2.6	.23	.00	.00	.00	.00
30	.00	.00	.00	.31	---	10	2.3	.20	.00	.00	.00	.00
31	.00	---	.00	.32	---	27	---	.18	---	.00	.00	---
TOTAL	0.00	0.00	0.00	11.23	408.31	295.4	152.7	31.53	0.47	0.00	0.00	0.00
MEAN	.000	.000	.000	.36	14.1	9.53	5.09	1.02	.016	.000	.000	.000
MAX	.00	.00	.00	2.6	79	55	15	2.4	.17	.00	.00	.00
MIN	.00	.00	.00	.00	.26	4.8	2.3	.18	.00	.00	.00	.00
AC-FT	.00	.00	.00	22	810	586	303	63	.9	.00	.00	.00

11211300 DRY CREEK NEAR LEMONCOVE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.62	4.17	20.7	43.8	63.7	62.6	48.5	17.5	5.97	1.45	.29	.33
MAX	9.38	63.4	263	386	441	419	254	113	35.9	13.5	5.42	3.84
(WY)	1983	1983	1967	1969	1969	1983	1982	1967	1967	1983	1983	1978
MIN	.000	.000	.000	.000	.000	1.14	.30	.000	.000	.000	.000	.000
(WY)	1960	1960	1960	1960	1961	1977	1977	1961	1960	1960	1960	1960

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1960 - 1992

ANNUAL TOTAL	2390.32		899.64									
ANNUAL MEAN	6.55		2.46							22.2		
HIGHEST ANNUAL MEAN										129		1983
LOWEST ANNUAL MEAN										.19		1961
HIGHEST DAILY MEAN	224	Mar 4				79	Feb 15			6370	Dec 6	1966
LOWEST DAILY MEAN	.00	Jan 1				.00	Oct 1			.00	Oct 1	1959
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1				.00	Oct 1			.00	Oct 1	1959
INSTANTANEOUS PEAK FLOW						167	Feb 15			14500	Dec 6	1966
INSTANTANEOUS PEAK STAGE						2.97	Feb 15			8.94	Dec 6	1966
ANNUAL RUNOFF (AC-FT)	4740					1780				16110		
10 PERCENT EXCEEDS	12					6.6				41		
50 PERCENT EXCEEDS	.00					.00				1.3		
90 PERCENT EXCEEDS	.00					.00				.00		

11211785 COTTONWOOD CREEK ABOVE COLLIER CREEK, NEAR ELDERWOOD, CA

LOCATION.--Lat 36°32'33", long 119°06'40", in NW 1/4 NE 1/4 sec.14, T.16 S., R.26 E., Tulare County, Hydrologic Unit 18030012, on left bank, 4.0 mi north of Elderwood and 8.0 mi north of Woodlake, on State Highway 245.

DRAINAGE AREA.--52.3 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft³/s, Feb. 15, 1986, gage height, 5.81 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 35 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	1215	*366	*3.27	Mar. 30	2045	180	2.67
Mar. 23	0300	155	2.56				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.77	2.6	10	.51	.00	.00	.00	.00
2	.00	.00	.00	.00	.77	2.6	7.5	.51	.00	.00	.00	.00
3	.00	.00	.00	.00	.77	3.2	5.5	.48	.00	.00	.00	.00
4	.00	.00	.00	.00	.77	3.0	4.4	.44	.00	.00	.00	.00
5	.00	.00	.00	2.1	.77	2.6	3.6	.43	.00	.00	.00	.00
6	.00	.00	.00	6.6	.77	3.8	3.0	.37	.00	.00	.00	.00
7	.00	.00	.00	2.4	.89	3.0	2.9	.43	.00	.00	.00	.00
8	.00	.00	.00	1.6	.95	3.5	2.7	.53	.00	.00	.00	.00
9	.00	.00	.00	1.3	.87	2.8	2.5	.41	.00	.00	.00	.00
10	.00	.00	.00	1.1	3.1	2.5	2.3	.30	.00	.00	.00	.00
11	.00	.00	.00	1.1	8.2	2.4	2.2	.24	.00	.00	.00	.00
12	.00	.00	.00	1.0	14	2.3	2.2	.20	.00	.00	.00	.00
13	.00	.00	.00	.87	35	2.2	2.0	.13	.00	.00	.00	.00
14	.00	.00	.00	.87	9.1	2.2	2.0	.11	.00	.00	.00	.00
15	.00	.00	.00	.87	90	2.3	1.9	.10	.00	.00	.00	.00
16	.00	.00	.00	.87	33	2.5	1.7	.09	.00	.00	.00	.00
17	.00	.00	.00	.87	29	2.6	1.6	.08	.00	.00	.00	.00
18	.00	.00	.00	.87	12	2.4	1.6	.07	.00	.00	.00	.00
19	.00	.00	.00	.84	8.3	2.4	1.5	.03	.00	.00	.00	.00
20	.00	.00	.00	.77	6.3	2.4	1.3	.00	.00	.00	.00	.00
21	.00	.00	.00	.71	5.4	3.1	1.2	.00	.00	.00	.00	.00
22	.00	.00	.00	.68	4.3	3.5	1.1	.00	.00	.00	.00	.00
23	.00	.00	.00	.68	3.8	49	1.1	.00	.00	.00	.00	.00
24	.00	.00	.00	.72	3.3	9.5	1.1	.00	.00	.00	.00	.00
25	.00	.00	.00	.77	3.1	5.8	1.0	.00	.00	.00	.00	.00
26	.00	.00	.00	.76	2.9	3.8	.90	.00	.00	.00	.00	.00
27	.00	.00	.00	.70	2.7	3.0	.75	.00	.00	.00	.00	.00
28	.00	.00	.00	.71	2.6	2.3	.68	.00	.00	.00	.00	.00
29	.00	.00	.00	.73	2.6	2.1	.67	.00	.00	.00	.00	.00
30	.00	.00	.00	.77	---	27	.60	.00	.00	.00	.00	.00
31	.00	---	.00	.77	---	28	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	32.03	286.03	190.4	71.50	5.46	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	1.03	9.86	6.14	2.38	.18	.000	.000	.000	.000
MAX	.00	.00	.00	6.6	90	49	10	.53	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.77	2.1	.60	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	64	567	378	142	11	.00	.00	.00	.00

11211785 COTTONWOOD CREEK ABOVE COLLIER CREEK, NEAR ELDERWOOD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	1.21	1.93	4.10	21.2	23.1	6.27	2.18	.66	.24	.076	.36
MAX	3.00	3.80	4.99	10.7	117	92.0	24.7	10.1	4.24	1.70	.53	2.53
(WY)	1987	1986	1986	1988	1986	1986	1986	1986	1986	1986	1986	1986
MIN	.000	.000	.000	.000	.36	2.45	.96	.18	.000	.000	.000	.000
(WY)	1988	1990	1991	1991	1991	1990	1990	1992	1989	1987	1987	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1986 - 1992

ANNUAL TOTAL	1528.94		585.42									
ANNUAL MEAN	4.19		1.60						5.07			
HIGHEST ANNUAL MEAN									21.9			1986
LOWEST ANNUAL MEAN									.81			1990
HIGHEST DAILY MEAN	232	Mar 25	90	Feb 15					481	Feb 16		1986
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1					.00	Oct 1		1985
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1					.00	Jun 16		1987
INSTANTANEOUS PEAK FLOW			366	Feb 15					1920	Feb 15		1986
INSTANTANEOUS PEAK STAGE			3.27	Feb 15					5.81	Feb 15		1986
ANNUAL RUNOFF (AC-FT)	3030		1160						3670			
10 PERCENT EXCEEDS	6.6		3.0						6.2			
50 PERCENT EXCEEDS	.00		.00						.53			
90 PERCENT EXCEEDS	.00		.00						.00			

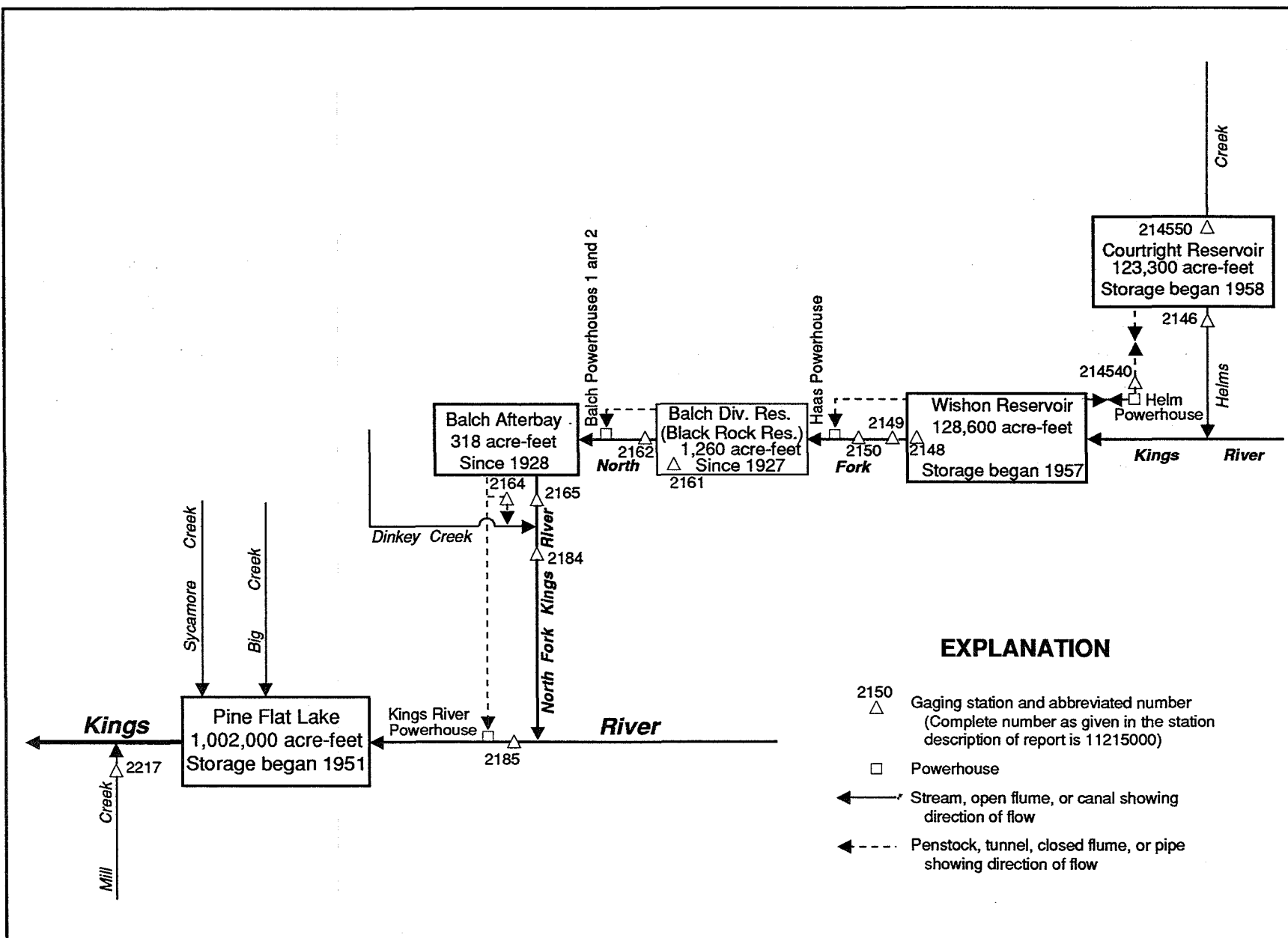


Figure 30. Diversions and storage in Kings River basin.

11214540 HELMS POWERPLANT NEAR WISHON RESERVOIR, CA

LOCATION.--Lat 37°02'22", long 118°57'16", unsurveyed, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, underground facility, 2.4 mi north of Wishon Dam, and 2.8 mi south of Courtright Dam.

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

GAGE.--Acoustic-velocity meter in penstock. Elevation of powerplant, approximately 1,000 ft below land surface, is 6,286.0 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.)

REMARKS.--No estimated daily discharges. Flow is diverted from Courtright Reservoir (station 11214550) through a tunnel to the powerplant which generates electricity during peak power demand, then to Wishon Reservoir (station 11214800). During periods of low power demand, reversible turbines pump water from Wishon Reservoir to Courtright Reservoir. Turbines draft up to 9,000 ft³/s and pump up to 7,200 ft³/s. Figures shown represent the net daily flow from Courtright Reservoir to Wishon Reservoir. Negative values represent net flow pumped to Courtright Reservoir. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,250 ft³/s, Nov. 1, 1991; maximum daily pumpage, 3,650 ft³/s, May 28, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	4250	-1400	.00	-382	.00	.00	-560	1220	533	439	317
2	1610	-1630	-945	.00	-379	371	.00	-302	1830	1120	1280	.00
3	1100	-1900	201	.00	173	308	.00	-1670	677	227	.00	.00
4	1230	-994	302	.00	696	340	.00	-400	1480	.00	130	418
5	1370	-1140	.00	.00	1980	299	.00	-901	-982	-229	.00	.00
6	168	-542	.00	131	1170	425	186	-1010	-931	667	.00	.00
7	96	-524	.00	659	-5.0	89	496	-995	-158	287	.00	.00
8	286	-526	-173	1690	-356	207	.00	-408	-453	642	.00	456
9	527	-1150	.00	660	-1610	144	.00	-1200	-304	952	1400	.00
10	897	-2560	.00	.00	-716	332	.00	-1520	.00	734	1190	.00
11	.00	-1050	.00	.00	116	55	.00	-336	.00	264	784	.00
12	.00	-494	.00	-497	102	69	.00	-1090	.00	.00	483	305
13	.00	-479	112	169	-156	.00	89	-903	.00	1430	475	1000
14	107	-395	.00	54	361	-178	335	-1120	.00	636	217	.00
15	100	.00	.00	90	647	138	.00	-1040	-219	664	240	.00
16	.00	-21	70	125	.00	-779	.00	-1340	-66	737	517	68
17	.00	-1470	.00	53	179	-544	.00	-1800	818	516	594	.00
18	.00	-914	.00	.00	274	684	-413	-483	458	246	316	226
19	.00	-526	.00	58	850	.00	-1350	-710	705	.00	1760	.00
20	.00	-420	.00	307	-164	46	-555	-935	1660	564	1470	619
21	.00	-371	.00	234	-289	.00	-897	-847	207	521	288	425
22	.00	-405	.00	377	.00	89	-822	-1090	-343	264	-230	305
23	.00	-1020	.00	1700	.00	1760	-302	-1090	256	359	-534	243
24	.00	-468	.00	144	.00	218	-675	-1180	499	668	-571	.00
25	.00	-816	.00	-291	.00	42	691	-1130	-721	1090	-413	.00
26	143	-503	-190	-1100	257	69	-357	-583	72	1710	-70	274
27	.00	-879	.00	-714	111	.00	-246	-473	440	293	97	185
28	39	-2170	.00	936	.00	.00	1400	-196	.00	710	-131	1020
29	.00	-1550	97	514	.00	.00	-22	286	435	747	.00	414
30	1670	-1340	.00	502	---	.00	-371	1510	666	89	.00	2090
31	2200	---	.00	120	---	.00	---	1120	---	.00	.00	---
TOTAL	12573.00	-22007.00	-1926.00	5921.00	2859.00	4184.00	-2813.00	-22396	7246.00	16441.00	9731.00	8365.00
MEAN	406	-734	-62.1	191	98.6	135	-93.8	-722	242	530	314	279
MAX	2200	4250	302	1700	1980	1760	1400	1510	1830	1710	1760	2090
MIN	.00	-2560	-1400	-1100	-1610	-779	-1350	-1800	-982	-229	-571	.00
AC-FT	24940	-43650	-3820	11740	5670	8300	-5580	-44420	14370	32610	19300	16590
CAL YR 1991	TOTAL	-436.00	MEAN	-1.19	MAX	4250	MIN	-3550	AC-FT	-865		
WTR YR 1992	TOTAL	18178.00	MEAN	49.7	MAX	4250	MIN	-2560	AC-FT	36060		

11214550 COURTRIGHT RESERVOIR NEAR NELSON MOUNTAIN, CA

LOCATION.--Lat 37°04'45", long 119°58'07", in NW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, at left end of dam on Helms Creek, 2.5 mi upstream from mouth, 4.6 mi east of Nelson Mountain, and 9.7 mi west of Blackcap Mountain.

DRAINAGE AREA.--39.7 mi².

PERIOD OF RECORD.--October 1958 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in 1958. Usable capacity, 123,286 acre-ft between elevations 7,902 ft, invert of tunnel, and 8,184 ft, elevation of spillway. Dead storage negligible. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Records not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,220 acre-ft, Sept. 26, 1982, elevation, 8,184.57 ft; no contents in 1961-62, 1968, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 114,000 acre-ft, May 28, elevation, 8,178.16 ft; minimum, 5,800 acre-ft, Nov. 1, elevation, 8,032.31.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Apr. 13, 1959)

7,902	0	7,970	736	8,035	6,269	8,115	42,141
7,950	267	7,990	1,617	8,060	12,298	8,150	75,878
7,960	462	8,010	3,129	8,085	22,584	8,184	123,286

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37581	5800	59943	60851	50308	44633	36893	56665	106206	91978	58603	39180
2	34349	9085	61830	60831	51046	43898	36957	57796	102713	89229	56133	39157
3	32164	12954	61455	60841	50563	43304	37044	61546	101391	88759	56114	39118
4	29766	14942	60851	60831	49317	42637	37123	63034	98629	88733	55831	38294
5	27079	17088	60841	60922	45409	42086	37224	65329	100478	89229	55812	38264
6	26727	18146	60821	60671	43113	41245	36928	67917	102324	87915	55709	38242
7	26517	19194	60811	59399	43137	41075	36138	70440	102612	87231	55672	38213
8	25940	20234	61153	56199	43697	40667	36381	71897	103495	85760	55643	37297
9	24888	22505	61143	54942	46944	40368	36640	74826	104062	83682	52915	37268
10	22705	27548	61123	54942	48518	39722	36920	78226	104047	82256	50089	37239
11	22699	29572	61106	54920	48476	39616	37203	79349	104018	81739	48913	37210
12	22684	30567	61100	55850	48416	39488	37479	81948	103989	81776	47956	36589
13	22663	31506	60851	55512	48775	39495	37640	84045	103945	79049	47070	34605
14	22422	32284	60841	55399	48058	39873	37290	86474	103916	77800	46634	34577
15	22214	32250	60821	55222	46927	39593	37662	88850	104354	76250	46160	34549
16	22193	32316	60661	54970	46969	41191	38058	91725	104471	74861	45082	34384
17	22173	35184	60641	54859	46618	42298	38524	95399	102901	73887	44042	34404
18	22152	36986	60661	54859	46102	40951	40018	96665	101993	73409	43416	33957
19	22128	38006	60661	54729	44479	40951	43169	98181	100578	73386	39934	33930
20	22110	38882	60661	54138	44829	40867	44951	100223	97469	72245	37058	32717
21	22085	39553	60601	53679	45385	40895	47255	102151	97053	71205	36431	31860
22	22059	40338	60581	52951	45385	40774	49291	104179	97692	70694	36884	31251
23	22043	42338	60571	49733	45385	37305	50334	106414	97233	69977	37867	30759
24	21987	43233	60551	49447	45434	36884	52184	108909	96292	68697	38993	30753
25	21977	44837	60541	49993	45327	36827	51328	111230	96831	66620	39782	30720
26	21840	45738	60861	52175	44821	36697	52715	112487	96776	63342	39904	30158
27	21828	47465	60850	53515	44601	36661	53926	113520	95921	62777	39684	29772
28	21757	51613	60952	51684	44601	36683	51889	114000	95893	61425	39919	27782
29	21757	54618	60892	50685	44617	36719	52679	113504	94479	59705	39881	26938
30	18497	57123	60872	49802	---	36786	54202	110620	93213	59497	39866	22857
31	14350	---	60861	49551	---	36834	---	108563	---	59478	39828	---
MAX	37581	57123	61830	60922	51046	44633	54202	114000	106206	91978	58603	39180
MIN	14350	5800	59943	49447	43113	36661	36138	56665	93213	59478	36431	22857
a	8066.23	8132.30	8136.11	8123.98	8118.10	8107.95	8129.19	8174.60	8163.82	8134.72	8112.00	8085.52
b	-25259	+42773	+3738	-11310	-4934	-7783	+17368	+54361	-15350	-33735	-19650	-16971

CAL YR 1991 b +28171
WTR YR 1992 b -16752

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

TULARE LAKE BASIN

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA

LOCATION.--Lat 37°04'35", long 118°58'04", in SW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 500 ft downstream from Courtright Dam, 2.5 mi upstream from North Fork Kings River, and 17 mi southeast of town of Huntington Lake.

DRAINAGE AREA.--39.7 mi².

PERIOD OF RECORD.--October 1958 to current year. Record for water year 1986 is incomplete.

REVISED RECORDS.--WSP 1715: 1959. WSP 2130: 1959.

GAGE.--Water-stage recorder and broad-crested weir (with low-water 90° V-notch weir since Nov. 13, 1990). Elevation of gage is 7,836 ft above National Geodetic Vertical Datum of 1929, from photogrammetry survey.

REMARKS.--No estimated daily discharges. Flow regulated since October 1958 by Courtright Reservoir (station 11214550) 500 ft upstream and by Helms Creek Project pump/generator facility since June 1984. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft³/s, Aug. 29, 1969, gage height, 5.81 ft; maximum gage height, 7.70 ft, Aug. 23, 1978; no flow on several days in 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16 ft³/s, Aug. 22, gage height, 4.07 ft; minimum daily, 3.7 ft³/s, Mar. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.4	11	4.6	4.3	4.1	6.4	7.6	12	11	5.8	6.4
2	10	10	7.6	4.6	4.3	4.1	6.5	7.7	12	11	5.8	6.3
3	9.8	11	5.0	4.7	4.3	4.1	6.6	7.9	12	11	5.6	6.2
4	9.4	8.2	5.0	4.7	4.3	4.0	6.5	8.2	12	11	5.6	6.2
5	8.9	6.6	4.9	4.8	4.2	4.0	6.4	8.6	11	11	5.5	6.1
6	8.6	6.7	4.9	4.8	4.0	3.9	6.4	8.8	12	11	6.4	6.1
7	8.4	6.8	4.9	4.8	3.9	3.8	6.3	9.1	12	11	6.9	6.1
8	8.2	6.9	4.9	4.6	3.9	3.8	6.3	9.4	12	11	6.9	6.1
9	7.8	7.1	4.9	4.5	4.1	3.8	6.3	9.5	12	10	6.8	6.1
10	6.7	7.7	4.9	4.5	4.3	3.8	6.2	9.8	12	9.8	6.5	6.1
11	7.1	8.4	4.8	4.5	4.3	3.7	6.2	10	12	9.8	6.3	6.1
12	7.1	8.4	4.5	4.5	4.3	3.7	6.2	10	12	9.8	6.2	6.1
13	6.9	8.6	4.5	4.5	4.3	3.8	6.4	11	12	9.7	6.2	6.0
14	6.9	8.7	4.5	4.5	4.3	3.8	6.4	9.5	12	9.0	6.0	5.8
15	6.9	8.7	4.5	4.5	4.3	3.8	6.3	7.5	12	8.3	5.9	5.7
16	6.8	8.7	4.5	4.5	4.2	3.8	6.3	8.2	12	7.8	5.8	5.7
17	6.8	8.9	4.5	4.5	4.2	3.8	6.3	9.1	12	7.7	5.7	5.5
18	6.7	9.1	4.5	4.5	4.1	3.8	6.4	9.7	12	7.4	5.6	5.7
19	6.7	9.3	4.5	4.5	4.1	3.8	6.4	10	12	6.9	5.5	5.6
20	6.7	9.4	4.5	4.5	4.1	3.8	6.5	10	12	6.8	5.2	5.6
21	6.7	9.6	4.5	4.5	4.1	3.8	6.7	11	12	6.7	5.0	5.5
22	6.7	9.8	4.5	4.4	4.1	3.8	6.7	11	11	6.7	5.3	5.4
23	6.7	9.8	4.5	4.3	4.1	3.7	6.8	11	11	6.5	6.3	5.7
24	6.6	9.8	4.6	4.2	4.1	5.8	6.8	12	11	6.5	6.4	5.8
25	6.6	9.8	4.6	4.2	4.2	9.1	6.9	12	11	6.4	6.5	5.8
26	6.8	10	4.6	4.3	4.2	9.2	6.9	12	11	6.2	6.5	5.8
27	6.6	10	4.6	4.4	4.2	9.2	7.1	12	11	6.1	6.4	5.7
28	6.6	10	4.6	4.4	4.2	8.2	7.2	12	11	6.1	6.4	5.6
29	6.6	10	4.6	4.3	4.1	6.2	7.0	12	11	5.9	6.4	5.6
30	6.5	11	4.6	4.3	---	6.2	7.3	12	11	5.8	6.4	5.5
31	6.3	---	4.6	4.2	---	6.3	---	12	---	5.8	6.4	---
TOTAL	229.1	266.4	153.6	139.1	121.1	148.7	196.7	310.6	350	259.7	188.2	175.9
MEAN	7.39	8.88	4.95	4.49	4.18	4.80	6.56	10.0	11.7	8.38	6.07	5.86
MAX	10	11	11	4.8	4.3	9.2	7.3	12	12	11	6.9	6.4
MIN	6.3	6.6	4.5	4.2	3.9	3.7	6.2	7.5	11	5.8	5.0	5.4
AC-FT	454	528	305	276	240	295	390	616	694	515	373	349

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1983, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.4	25.7	25.0	43.0	31.3	43.3	77.0	83.9	73.4	111	209	146
MAX	235	145	212	373	408	642	645	488	410	576	734	890
(WY)	1970	1964	1979	1979	1979	1983	1983	1961	1961	1968	1980	1969
MIN	2.29	.42	.051	.095	.17	.42	1.53	3.35	4.02	3.38	2.39	1.97
(WY)	1973	1971	1971	1971	1971	1971	1971	1971	1971	1976	1977	1977

SUMMARY STATISTICS

WATER YEARS 1959 - 1983

ANNUAL MEAN	75.4
HIGHEST ANNUAL MEAN	185 1983
LOWEST ANNUAL MEAN	2.29 1971
HIGHEST DAILY MEAN	986 Aug 29 1969
LOWEST DAILY MEAN	.00 Nov 21 1970
ANNUAL SEVEN-DAY MINIMUM	.00 Dec 3 1970
INSTANTANEOUS PEAK FLOW	1340 Aug 29 1969
INSTANTANEOUS PEAK STAGE	7.70 Aug 23 1978
ANNUAL RUNOFF (AC-FT)	54610
10 PERCENT EXCEEDS	287
50 PERCENT EXCEEDS	10
90 PERCENT EXCEEDS	2.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	5.76	4.26	4.50	4.12	4.89	5.67	7.73	11.5	11.6	9.28	6.83
MAX	58.3	8.88	5.15	7.46	4.92	7.65	8.27	11.7	17.5	21.6	18.0	10.5
(WY)	1985	1992	1989	1989	1989	1989	1989	1989	1991	1991	1991	1991
MIN	5.32	4.15	2.92	3.47	3.30	3.48	3.73	5.15	6.80	6.82	6.07	5.71
(WY)	1991	1986	1987	1987	1991	1991	1991	1990	1990	1990	1992	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1985 - 1992

ANNUAL TOTAL	3353.0	2539.1	
ANNUAL MEAN	9.19	6.94	7.54
HIGHEST ANNUAL MEAN			9.98 1985
LOWEST ANNUAL MEAN			5.65 1987
HIGHEST DAILY MEAN	22 Jul 7	12 May 24	679 Oct 13 1984
LOWEST DAILY MEAN	3.0 Jan 25	3.7 Mar 11	2.4 Dec 3 1986
ANNUAL SEVEN-DAY MINIMUM	3.1 Jan 21	3.8 Mar 7	2.5 Dec 10 1986
INSTANTANEOUS PEAK FLOW		16 Aug 22	
INSTANTANEOUS PEAK STAGE		4.07 Aug 22	
ANNUAL RUNOFF (AC-FT)	6650	5040	5460
10 PERCENT EXCEEDS	21	11	12
50 PERCENT EXCEEDS	6.7	6.4	5.9
90 PERCENT EXCEEDS	3.3	4.2	3.7

11214800 WISHON RESERVOIR NEAR CLIFF CAMP, CA

LOCATION.--Lat 37°00'19", long 118°58'07", in NW 1/4 NW 1/4 sec.6, T.11 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right end of dam on North Fork Kings River, 1.2 mi north of Cliff Camp, and 20 mi southeast of Big Creek.

DRAINAGE AREA.--177 mi².

PERIOD OF RECORD.--December 1957 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in 1957. Capacity, 128,600 acre-ft between elevations 6,317 ft, bottom of slide gates, and 6,550 ft, operating crest of spillway gates. Dead storage negligible. Water is diverted to Haas Powerplant. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Records not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 129,700 acre-ft, July 29, 1958, elevation, 6,551.1 ft; no contents in 1960.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 112,385 acre-ft, Nov. 1, elevation, 6,533.57 ft; minimum, 41,052 acre-ft, Sept. 3, elevation, 6,442.67 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Apr. 13, 1959)

6,317	40	6,385	11,618	6,440	39,471	6,520	99,807
6,360	2,810	6,400	18,359	6,460	51,900	6,550	129,118
6,370	5,738	6,420	28,362	6,490	74,128	6,551.1	129,733

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93757	112385	46948	44971	43707	42059	54325	79106	50003	43074	47332	41932
2	96533	108494	44706	45002	42989	42324	54835	79753	53500	45026	49049	41512
3	97990	104409	45094	45045	42523	42481	55528	78189	54522	44331	48206	41052
4	99970	101429	45422	45094	42959	42771	56276	78221	57081	43184	47641	41410
5	102622	98654	45150	45199	46942	42898	56940	77439	54767	41422	46823	41410
6	102933	97050	44848	45502	49293	43166	58095	77357	52630	41572	45980	41404
7	102512	95305	44848	46879	49344	43324	59471	76635	51933	41070	45100	41386
8	102494	93704	44565	50289	48831	43903	60221	77135	50738	41494	44209	42300
9	102951	91640	44344	51630	45590	44270	61162	75500	49725	42439	46316	42288
10	104290	86561	44356	51176	43866	45094	62157	73055	49389	42826	47907	41968
11	104133	83957	44387	51091	43616	45442	63168	73804	48876	42185	48397	41638
12	103849	82374	44405	50139	43592	45787	64111	73353	48397	41159	48359	42239
13	103821	80918	44645	49693	42844	46067	65060	72438	47895	43196	48244	42466
14	103390	79537	44479	49068	43099	45973	66539	70712	47383	43799	47578	43793
15	103033	78982	44485	48461	44350	46516	67063	68951	46447	44252	46854	43348
16	102366	78899	44638	47914	44448	45137	67605	66631	45787	44755	46735	42911
17	101720	76201	44645	47256	44903	44240	68460	63371	46960	44681	46685	42445
18	101083	73853	44688	47288	44934	45768	68897	62403	46841	44019	46453	42487
19	101065	72246	44706	47452	46054	45936	67636	61066	47105	42904	49132	42487
20	100911	70854	44706	47294	45242	46185	67372	59000	49332	43014	51209	43701
21	100512	69601	44755	47049	44184	46385	66631	56814	48601	43044	50875	44270
22	99961	68242	44768	47017	43738	46810	65511	54597	46754	42723	49499	44258
23	99375	66216	44786	49531	43720	50562	65526	52138	46547	42692	48461	44188
24	98834	65343	44805	49042	43336	51196	65068	49415	46628	43190	46453	43604
25	98223	63341	44811	48295	42856	51524	67931	46879	44117	44534	44454	43062
26	98950	62067	44466	46067	42898	51913	69186	45360	43159	47977	43299	43555
27	99014	59944	44497	43726	42674	52204	70435	44062	42929	47641	42959	43915
28	98448	55638	44583	44761	42257	52723	75353	43336	41758	48168	42179	45397
29	97838	52630	44866	44743	41836	53104	77538	43518	41806	48812	41674	45440
30	100540	50068	44909	44755	---	53574	79164	46085	42547	48111	41674	49544
31	104380	---	44934	44454	---	53878	---	47946	---	47282	41674	---
MAX	104380	112385	46948	51630	49344	53878	79164	79753	57081	48812	51209	49544
MIN	93757	50068	44344	43726	41836	42059	54325	43336	41758	41070	41674	41052
a	6525.02	6457.20	6449.07	6448.29	6443.98	6462.96	6496.15	6453.89	6445.16	6452.84	6443.71	6456.39
b	+12267	-54312	-5134	-480	-2618	+12042	+25286	-31218	-5399	+4735	-5608	+7870

CAL YR 1991 b +3098
WTR YR 1992 b -42569

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11214900 NORTH FORK KINGS RIVER BELOW WISHON RESERVOIR, CA

LOCATION.--Lat 37°00'05", long 118°58'20", in SE 1/4 NE 1/4 sec.1, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank 1,700 ft downstream from Wishon Dam and 20 mi southeast of Big Creek.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--October 1986 to current year (since October 1990, no records above 25 ft³/s).

GAGE.--Water-stage recorder and 90° V-notch steel weir and concrete control. Elevation of gage is 6,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Wishon Reservoir (station 11214800) and Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas Powerplant. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	19	16	12	12	13	15	17	13	12	13	12
2	19	19	13	12	12	13	15	17	14	12	13	12
3	17	18	12	12	12	14	15	17	14	13	13	12
4	16	18	12	12	12	14	15	17	14	12	13	12
5	17	18	12	12	12	14	15	17	14	12	13	12
6	17	17	12	12	13	14	15	17	14	12	13	12
7	17	17	12	12	13	13	15	17	14	12	13	12
8	17	17	12	12	13	13	15	16	14	12	12	12
9	17	17	12	13	13	13	15	16	14	12	12	12
10	17	17	12	13	13	14	15	16	14	12	13	12
11	17	16	12	13	13	14	15	16	13	12	13	12
12	17	16	12	13	13	14	15	16	13	12	13	12
13	17	16	12	13	13	14	15	16	13	12	13	12
14	17	16	12	13	12	14	15	16	13	12	13	12
15	17	16	12	13	13	14	15	16	13	12	13	12
16	17	16	12	13	13	13	15	16	13	12	13	12
17	17	16	12	13	13	13	16	15	13	12	13	12
18	17	16	12	13	13	13	16	15	13	12	13	12
19	17	16	12	13	13	13	15	15	13	12	13	12
20	17	17	12	13	14	13	15	15	13	12	13	12
21	17	17	12	13	14	14	15	15	13	12	13	12
22	17	17	12	13	14	14	15	14	13	12	13	12
23	17	16	12	13	14	15	15	14	13	12	13	12
24	17	16	12	13	14	14	15	14	13	12	13	12
25	17	16	12	13	14	15	15	13	13	12	12	12
26	---	16	12	13	14	15	15	13	12	12	12	12
27	18	16	12	12	14	15	16	13	12	13	12	12
28	18	16	12	12	14	15	16	13	12	13	12	12
29	18	16	12	12	14	15	16	13	12	13	12	12
30	18	16	12	12	---	16	17	13	12	13	12	12
31	18	---	12	12	---	15	---	13	---	13	12	---
TOTAL	---	500	377	390	381	433	457	471	394	378	394	360
MEAN	---	16.7	12.2	12.6	13.1	14.0	15.2	15.2	13.1	12.2	12.7	12.0
MAX	---	19	16	13	14	16	17	17	14	13	13	12
MIN	---	16	12	12	12	13	15	13	12	12	12	12
AC-FT	---	992	748	774	756	859	906	934	781	750	781	714

11214900 NORTH FORK KINGS RIVER BELOW WISHON RESERVOIR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1990, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.7	18.2	16.5	16.5	16.6	17.3	16.7	19.5	20.0	15.3	13.5	13.6
MAX	22.9	23.5	22.8	22.0	21.5	22.5	20.3	25.6	28.3	19.5	17.0	17.1
(WY)	1987	1987	1987	1987	1987	1987	1989	1987	1987	1989	1989	1989
MIN	14.9	16.2	8.60	8.23	8.52	9.84	8.74	10.2	8.67	9.01	8.40	8.20
(WY)	1988	1988	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS

WATER YEARS 1987 - 1990

ANNUAL MEAN	16.8	
HIGHEST ANNUAL MEAN	20.9	1987
LOWEST ANNUAL MEAN	10.1	1990
HIGHEST DAILY MEAN	30	Mar 6 1987
LOWEST DAILY MEAN	7.2	Feb 18 1990
ANNUAL SEVEN-DAY MINIMUM	7.8	Jan 5 1990
INSTANTANEOUS PEAK FLOW	35	Nov 23 1988
INSTANTANEOUS PEAK STAGE	3.59	Nov 23 1988
ANNUAL RUNOFF (AC-FT)	12150	
10 PERCENT EXCEEDS	23	
50 PERCENT EXCEEDS	17	
90 PERCENT EXCEEDS	8.6	

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[illegible]

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.3	49.3	84.9	62.2	93.6	197	709	1670	1177	211	27.7	9.45
MAX	121	550	605	300	212	402	1210	3232	3395	1161	131	37.4
(WY)	1946	1951	1956	1956	1945	1956	1926	1952	1938	1938	1938	1938
MIN	5.54	6.25	7.00	11.6	20.3	36.0	306	357	35.7	5.52	1.83	1.60
(WY)	1956	1930	1931	1924	1948	1924	1948	1934	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1922 - 1957

ANNUAL MEAN	360	
HIGHEST ANNUAL MEAN	749	1938
LOWEST ANNUAL MEAN	80.2	1924
HIGHEST DAILY MEAN	7460	Dec 23 1955
LOWEST DAILY MEAN	1.3	Sep 9 1924
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 9 1924
INSTANTANEOUS PEAK FLOW	14000	Dec 11 1937
INSTANTANEOUS PEAK STATE	18.00	Dec 11 1937
ANNUAL RUNOFF (AC-FT)	260600	
10 PERCENT EXCEEDS	1240	
50 PERCENT EXCEEDS	63	
90 PERCENT EXCEEDS	6.5	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1990, BY WATER YEAR (WY)

MEAN	16.3	17.5	15.8	17.8	18.4	20.7	36.1	96.1	173	97.3	17.9	19.1
MAX	24.5	29.4	41.0	49.8	66.9	49.2	298	1170	1339	918	27.0	84.1
(WY)	1987	1966	1967	1969	1986	1986	1986	1969	1983	1967	1986	1978
MIN	7.67	7.53	7.45	7.62	8.20	9.21	8.62	8.45	8.21	7.37	7.56	7.83
(WY)	1960	1960	1963	1964	1964	1961	1961	1961	1961	1964	1961	1964

SUMMARY STATISTICS

WATER YEARS 1960 - 1990

ANNUAL MEAN	45.5	
HIGHEST ANNUAL MEAN	241	1969
LOWEST ANNUAL MEAN	10.0	1964
HIGHEST DAILY MEAN	3040	Jul 1 1967
LOWEST DAILY MEAN	3.9	Dec 9 1967
ANNUAL SEVEN-DAY MINIMUM	4.2	Dec 6 1967
INSTANTANEOUS PEAK FLOW	5110	Sep 5 1978
INSTANTANEOUS PEAK STAGE	11.96	Sep 5 1978
ANNUAL RUNOFF (AC-FT)	32970	
10 PERCENT EXCEEDS	29	
50 PERCENT EXCEEDS	17	
90 PERCENT EXCEEDS	8.6	

11216100 BLACK ROCK RESERVOIR NEAR BALCH CAMP, CA

LOCATION.--Lat 36°55'13", long 119°01'20", in NW 1/4 NW 1/4 sec.6, T.12 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank at intake tower on North Fork Kings River, 5.6 mi east-northeast of Balch Camp.

DRAINAGE AREA.--233 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete arch-type dam, completed to elevation 4,054 ft in 1927 and raised to 4,098 ft in 1958. Storage began in 1927. Spillway is ungated. Capacity, 1,260 acre-ft between elevation 4,054 ft, fish release valve, and 4,098 ft, top of spillway crest. Water is diverted from reservoir through tunnel to Balch Powerplant 3.7 mi downstream and returns to the North Fork Kings River at Balch Afterbay. Flow is again diverted from Balch Afterbay in a closed conduit to Kings River Powerplant. See schematic diagram of Kings River basin. Records, including extremes, represent contents at 2400 hours.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Records not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,275 acre-ft, Mar. 4, 1991, elevation, 4,098.43 ft; minimum, 359 acre-ft, Nov. 3, 1986, elevation 4,064.51 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,239 acre-ft, June 26, elevation, 4,097.41 ft; minimum, 363 acre-ft, Mar. 10, elevation, 4,064.64 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas and Electric Co., dated Dec. 1, 1958)

4,050	165	4,065	367	4,080	706	4,095	1,157
4,055	219	4,070	465	4,085	846	4,100	1,331
4,060	286	4,075	579	4,090	996	4,108	1,635

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1028	973	1131	1125	1148	1079	966	997	1073	1105	1115	900
2	924	1118	1185	1141	1195	1003	1101	1154	1215	976	1076	856
3	1060	1009	1199	973	1138	1089	1012	1158	1069	954	1089	942
4	1076	1131	1145	862	1118	1028	1054	1188	1099	951	1057	963
5	1060	1165	1216	938	988	997	1057	1141	1192	1063	1112	981
6	1042	1141	1066	997	1038	976	856	856	1158	1102	1165	1003
7	1041	1121	1105	1055	1031	1051	991	1208	1069	1125	1138	997
8	1031	1182	1116	1105	1079	1151	1063	1205	1060	1115	1192	930
9	1125	1128	1201	1138	1003	924	1003	1115	1011	1138	1121	951
10	1118	1095	1141	1073	1000	363	1028	1060	1076	1041	1060	1035
11	1145	1086	1151	1019	1043	418	1105	844	1054	1158	1102	921
12	1172	1131	1099	1073	793	611	982	759	939	1205	1050	942
13	1151	1054	1099	1102	801	799	1134	1060	1066	1219	948	963
14	1122	1161	1102	1105	775	966	997	973	1086	1219	1226	939
15	1106	1159	1118	1086	756	1102	1128	838	1102	1226	1178	880
16	1138	1175	1108	1099	773	1185	1001	793	1049	1192	1009	980
17	1125	1219	1118	1092	759	1131	1096	804	942	1199	880	1000
18	1151	1095	1138	1145	822	1128	1054	924	1226	1192	1000	888
19	1131	1115	1154	1192	897	1145	786	1145	1158	1158	1145	879
20	1125	976	1148	1202	850	1003	1031	945	1192	966	1122	909
21	1109	1141	1141	1172	821	1151	1014	856	1175	936	1063	787
22	1070	1125	1181	1099	877	1066	1035	847	1185	871	1066	862
23	1079	1158	1199	1158	1063	994	948	987	1158	969	1094	957
24	1109	1185	1138	1145	1151	1168	880	961	985	841	1028	957
25	1147	1186	1145	1171	1134	1131	836	981	1155	936	1044	966
26	981	1028	994	1028	1105	942	1108	954	1239	930	927	957
27	933	1035	1031	1158	1054	1145	581	976	1092	1041	1079	856
28	891	1035	1082	1076	1076	1092	734	1000	1192	1054	1016	787
29	951	1054	1003	1051	1054	1047	831	939	1158	1041	1003	960
30	957	1073	1063	1175	---	1073	1044	1066	933	1145	1024	982
31	969	---	1070	1099	---	1012	---	1136	---	1079	1051	---
MAX	1172	1219	1216	1202	1195	1185	1134	1208	1239	1226	1226	1035
MIN	891	973	994	862	756	363	581	759	933	841	880	787
a	4089.12	4092.44	4092.35	4093.24	4091.85	4090.52	4091.53	4094.37	4087.93	4092.63	4091.75	4089.54
b	-47	+104	-3	+29	-45	-7	-42	+92	-203	+146	-28	-69

CAL YR 1991 b -98
WTR YR 1992 b -73

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA

LOCATION.--Lat 36°54'10", long 119°03'00", in NE 1/4 sec.8, T.12 S., R.27 E., Fresno County, Hydrologic Unit 18030010, on right bank 2.0 mi downstream from Balch Diversion Dam (Black Rock Reservoir), 400 ft upstream from Weir Creek, and 4 mi east of Balch Camp.

DRAINAGE AREA.--238 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Black Rock Reservoir (station 11216100). Water diverted past station from Black Rock Reservoir through tunnel to Balch powerplant 1.7 mi downstream and returns to the North Fork Kings River at Balch Afterbay. Flow is again diverted from Balch Afterbay in a closed conduit to Kings River powerplant.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,360 ft³/s, Mar. 4, 1991, gage height, 8.84 ft, from rating curve extended above 827 ft³/s on basis of computation of spill over Balch Diversion Dam; minimum daily, 0.89 ft³/s, Oct. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s, Apr. 4, gage height, 1.88 ft; minimum daily, 3.5 ft³/s, Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	6.8	7.2	4.7	4.4	6.9	6.1	7.3	6.7	4.6	4.5	4.9
2	6.7	6.8	7.2	4.6	4.4	6.9	5.8	7.2	6.5	4.7	4.5	4.8
3	6.4	7.0	7.4	5.1	4.4	6.7	5.9	7.4	6.6	4.5	4.5	4.6
4	6.7	6.9	7.1	5.3	4.3	6.2	6.1	7.4	6.5	4.2	4.5	4.7
5	6.8	7.2	5.3	7.5	4.3	6.0	5.8	7.5	6.5	4.2	4.5	4.7
6	6.8	7.2	4.6	5.8	4.2	9.5	5.6	7.6	6.6	4.3	4.5	4.8
7	6.7	7.2	4.5	5.3	4.5	6.9	5.3	7.2	6.6	4.4	4.6	4.8
8	6.8	7.2	4.7	5.0	4.5	6.6	5.2	7.5	6.6	4.4	4.5	4.8
9	6.8	7.4	4.6	5.0	4.4	6.2	5.0	7.3	6.4	4.4	4.7	4.7
10	7.0	7.2	4.6	5.1	10	5.6	4.8	7.1	6.3	4.4	4.5	4.8
11	7.0	7.0	4.6	4.9	15	7.1	4.8	6.8	6.3	4.3	4.4	4.9
12	7.0	7.0	4.4	4.6	17	8.6	4.8	6.7	6.2	7.2	4.4	4.8
13	7.2	7.1	6.0	4.6	15	10	4.8	6.8	6.1	4.9	4.2	4.9
14	7.0	7.4	9.4	4.6	9.1	11	4.8	7.2	6.5	6.1	4.3	4.9
15	6.9	7.4	7.6	4.5	11	12	4.7	7.1	6.4	6.0	4.6	4.9
16	6.9	7.4	6.0	4.5	9.5	13	4.7	6.7	5.0	5.0	4.5	4.8
17	6.9	9.2	6.0	4.5	9.2	13	4.7	6.6	5.0	4.9	4.3	4.9
18	6.9	9.3	6.1	4.4	9.0	11	4.8	6.6	4.9	4.8	4.4	5.1
19	7.0	7.5	4.6	4.5	10	7.4	4.6	7.1	5.1	4.7	4.7	4.9
20	7.0	7.2	4.4	4.6	13	6.9	4.2	7.1	5.1	4.7	4.8	4.8
21	7.0	7.0	4.4	4.5	11	6.7	4.4	6.8	4.9	4.6	4.8	4.8
22	7.0	7.3	4.3	4.4	10	6.7	4.3	6.6	4.9	4.5	4.5	4.6
23	7.0	7.4	4.4	4.4	9.3	10	4.3	6.6	5.0	4.4	4.7	4.7
24	6.9	7.4	4.4	4.4	8.2	8.2	4.3	6.6	4.9	4.4	4.8	4.9
25	7.0	7.3	4.3	4.4	7.2	5.9	4.1	6.6	4.6	4.4	4.7	4.9
26	13	7.3	4.3	4.4	7.4	5.5	4.1	6.7	4.7	4.5	4.5	4.9
27	7.2	7.1	4.2	4.3	7.2	5.7	4.2	6.6	4.8	4.4	4.5	4.8
28	6.8	7.0	7.2	4.4	7.3	5.5	3.5	6.6	4.5	4.5	4.7	4.6
29	6.5	7.0	8.2	4.3	7.2	6.3	6.2	6.6	4.6	4.5	4.8	4.4
30	6.7	7.1	6.9	4.3	---	11	6.8	6.6	4.7	4.4	4.8	4.7
31	6.8	---	4.9	4.4	---	6.9	---	6.7	---	4.5	4.9	---
TOTAL	219.0	219.3	173.8	147.3	242.0	243.9	148.7	215.2	169.5	145.8	141.6	143.8
MEAN	7.06	7.31	5.61	4.75	8.34	7.87	4.96	6.94	5.65	4.70	4.57	4.79
MAX	13	9.3	9.4	7.5	17	13	6.8	7.6	6.7	7.2	4.9	5.1
MIN	6.4	6.8	4.2	4.3	4.2	5.5	3.5	6.6	4.5	4.2	4.2	4.4
AC-FT	434	435	345	292	480	484	295	427	336	289	281	285

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.42	8.31	5.88	5.92	26.9	61.2	65.4	72.4	94.9	6.67	5.40	5.22
MAX	7.06	26.4	18.8	10.2	193	441	541	615	810	19.0	7.79	6.75
(WY)	1992	1984	1984	1986	1986	1986	1986	1986	1986	1986	1991	1989
MIN	3.48	3.54	3.18	3.16	4.69	5.43	3.59	3.25	2.84	3.10	3.14	3.06
(WY)	1988	1991	1987	1987	1985	1988	1987	1987	1987	1987	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1984 - 1992	
ANNUAL TOTAL	4158.6		2209.9		30.2	
ANNUAL MEAN	11.4		6.04		221	
HIGHEST ANNUAL MEAN					3.97	
LOWEST ANNUAL MEAN					2210	
HIGHEST DAILY MEAN	1330	Mar 4	17	Feb 12	2210	Mar 8 1986
LOWEST DAILY MEAN	3.2	Feb 24	3.5	Apr 28	.89	Oct 21 1984
ANNUAL SEVEN-DAY MINIMUM	3.4	Jan 15	4.1	Apr 22	2.5	May 24 1984
INSTANTANEOUS PEAK FLOW			34	Apr 4	5360	Mar 4 1991
INSTANTANEOUS PEAK STAGE			1.88	Apr 4	8.84	Mar 4 1991
ANNUAL RUNOFF (AC-FT)	8250		4380		21870	
10 PERCENT EXCEEDS	11		7.4		9.6	
50 PERCENT EXCEEDS	7.0		5.5		5.4	
90 PERCENT EXCEEDS	3.6		4.4		3.3	

TULARE LAKE BASIN

11216400 DINKEY CREEK SIPHON FISH RELEASE AT BALCH CAMP, CA

LOCATION.--Lat 36°54'29", long 119°07'27", in NW 1/4 NE 1/4 sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, in concrete vault on right bank of Dinkey Creek, 200 ft downstream from Dinkey Creek Siphon at invert of Kings River Powerplant Conduit, and 1,700 ft northwest of Balch Camp.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Pressure-differential flowmeter. Elevation of gage is 1,320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Water diverted from the North Fork Kings River is released into Dinkey Creek for fishery enhancement from June 1 to Sept. 30 when natural flow of Dinkey Creek is equal to or less than 60 ft³/s. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 15 ft³/s, several days in October 1990, September to October 1991 and many days in September 1992; no flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	.00	.00	.00	.00	.00	.00	.00	.00	6.6	6.3	15
2	15	.00	.00	.00	.00	.00	.00	.00	.00	6.8	6.3	15
3	15	.00	.00	.00	.00	.00	.00	.00	.00	6.8	6.3	15
4	15	.00	.00	.00	.00	.00	.00	.00	1.6	6.8	6.3	15
5	14	.00	.00	.00	.00	.00	.00	.00	6.3	6.8	8.0	15
6	14	.00	.00	.00	.00	.00	.00	.00	6.3	6.7	9.0	15
7	14	.00	.00	.00	.00	.00	.00	.00	6.3	6.4	9.0	15
8	14	.00	.00	.00	.00	.00	.00	.00	6.3	6.4	9.0	15
9	15	.00	.00	.00	.00	.00	.00	.00	6.3	6.3	9.0	15
10	14	.00	.00	.00	.00	.00	.00	.00	6.4	6.2	9.0	15
11	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.1	9.0	15
12	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.0	10	15
13	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.0	11	15
14	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.0	11	15
15	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.0	11	15
16	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.2	11	15
17	14	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	11	15
18	14	.00	.00	.00	.00	.00	.00	.00	6.4	6.3	11	15
19	14	.00	.00	.00	.00	.00	.00	.00	6.4	6.3	12	15
20	14	.00	.00	.00	.00	.00	.00	.00	6.4	6.3	13	15
21	11	.00	.00	.00	.00	.00	.00	.00	6.4	6.3	13	15
22	8.6	.00	.00	.00	.00	.00	.00	.00	6.4	6.3	13	15
23	8.6	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	14	15
24	8.7	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	13	15
25	8.7	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	13	15
26	8.6	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	13	15
27	8.6	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	14	15
28	4.2	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	13	15
29	.00	.00	.00	.00	.00	.00	.00	.00	6.5	6.3	14	15
30	.00	.00	.00	.00	---	.00	.00	.00	6.5	6.3	14	15
31	.00	---	.00	.00	---	.00	---	.00	---	6.3	14	---
TOTAL	352.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	169.00	196.6	336.2	450
MEAN	11.4	.000	.000	.000	.000	.000	.000	.000	5.63	6.34	10.8	15.0
MAX	15	.00	.00	.00	.00	.00	.00	.00	6.5	6.8	14	15
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.0	6.3	15
AC-FT	698	.00	.00	.00	.00	.00	.00	.00	335	390	667	893

11216400 DINKEY CREEK SIPHON FISH RELEASE AT BALCH CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.98	1.79	.87	.31	.23	.000	.000	.000	3.58	7.73	9.22	10.5
MAX	14.4	7.09	3.20	1.71	1.41	.000	.000	.000	5.63	11.0	11.2	15.0
(WY)	1991	1991	1991	1990	1991	1987	1987	1987	1992	1990	1990	1992
MIN	.22	.000	.000	.000	.000	.000	.000	.000	.000	5.00	5.57	5.33
(WY)	1987	1987	1987	1987	1987	1987	1987	1987	1991	1987	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1987 - 1992
ANNUAL TOTAL	1331.50	1503.80	
ANNUAL MEAN	3.65	4.11	3.45
HIGHEST ANNUAL MEAN			4.76
LOWEST ANNUAL MEAN			1.71
HIGHEST DAILY MEAN	15 Sep 27	15 Oct 1	15 Oct 12
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 29	.00 Oct 3
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 29	.00 Oct 3
ANNUAL RUNOFF (AC-FT)	2640	2980	2500
10 PERCENT EXCEEDS	11	14	11
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA

LOCATION.--Lat 36°54'12", long 119°07'14", in SE 1/4 NE 1/4 sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 12 ft downstream from bridge at Balch Camp, 300 ft upstream from Dinkey Creek, and 9.3 mi east of Trimmer.

DRAINAGE AREA.--250 mi².

PERIOD OF RECORD.--October 1919 to September 1930 (published as "above Dinkey Creek"), March 1960 to current year. Records for water year 1920 incomplete; yearly estimate and monthly discharge only for some months, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder and Cippoletti weir since May 9, 1988. Concrete control Apr. 15, 1966, to May 9, 1988. Elevation of gage is 1,240 ft above National Geodetic Vertical Datum of 1929, from river-profile map. October 1919 to Sept. 30, 1930, and Mar. 24, 1960, to Apr. 14, 1966, at site 100 ft downstream at different datum.

REMARKS.--Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Black Rock Reservoir (station 11216100); Balch Afterbay, capacity, 318 acre-ft; and Haas and Balch powerplants. Water is diverted from Balch Afterbay to Kings River Powerplant, beginning Mar. 1, 1962. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon and Courtright Reservoirs):--Maximum discharge, 6,080 ft³/s, June 4, 1922, gage height, 12.18 ft, site and datum then in use; minimum, 4.0 ft³/s, Aug. 29 to Sept. 1, 1924.
1960 to current year: Maximum discharge, 14,000 ft³/s, Feb. 1, 1963, gage height, 13.24 ft, site and datum then in use, backwater from Dinkey Creek, from rating curve extended above 890 ft³/s; minimum daily, 0.30 ft³/s, Nov. 3, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42 ft³/s, Feb. 15, gage height, 1.57 ft; minimum daily, 11 ft³/s, on several days from January to September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	e18	17	15	12	14	15	12	12	12	12	11
2	18	e19	17	15	12	14	15	12	12	e12	12	13
3	18	e18	17	14	12	13	14	12	12	e12	12	13
4	18	e18	15	12	12	14	13	12	12	e12	12	13
5	18	e18	13	14	12	14	13	12	12	e12	12	13
6	19	e17	13	13	12	15	13	12	12	e12	12	12
7	19	e17	13	12	12	14	13	12	12	12	12	11
8	19	e17	13	11	12	14	13	12	12	12	12	11
9	19	e17	13	12	12	14	13	12	12	12	12	12
10	19	e18	12	13	15	12	13	12	11	12	12	12
11	19	e18	12	14	18	12	13	12	12	12	12	13
12	19	17	14	13	19	12	13	12	12	17	12	13
13	19	17	16	13	19	12	13	12	11	12	12	12
14	19	17	16	13	16	12	13	12	12	13	12	12
15	19	17	16	13	25	13	13	12	12	12	12	13
16	19	17	16	13	20	15	13	12	12	12	12	13
17	19	17	16	13	18	16	13	12	12	12	12	13
18	19	17	16	13	17	15	13	12	12	12	12	13
19	19	17	16	13	16	13	13	12	12	12	12	13
20	19	17	16	13	16	13	12	12	12	12	12	12
21	19	17	17	13	15	14	12	12	12	12	12	12
22	19	17	16	14	14	14	12	12	12	12	12	13
23	19	17	16	14	14	15	12	12	12	12	12	13
24	19	17	17	13	14	14	12	12	12	12	12	13
25	19	17	18	12	15	14	12	12	12	12	12	13
26	20	17	17	12	14	13	12	12	12	12	12	12
27	18	17	17	12	14	13	12	12	12	12	12	12
28	17	17	18	12	14	13	12	12	12	12	12	12
29	14	17	18	13	14	13	12	12	12	12	12	13
30	12	17	17	12	---	16	12	12	12	11	12	13
31	16	---	16	12	---	16	---	12	---	12	11	---
TOTAL	567	518	484	401	435	426	384	372	358	377	371	374
MEAN	18.3	17.3	15.6	12.9	15.0	13.7	12.8	12.0	11.9	12.2	12.0	12.5
MAX	20	19	18	15	25	16	15	12	12	17	12	13
MIN	12	17	12	11	12	12	12	12	11	11	11	11
AC-FT	1120	1030	960	795	863	845	762	738	710	748	736	742

e Estimated.

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1930, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.2	69.3	65.4	66.4	132	280	779	1877	1136	164	29.0	15.3
MAX	52.1	225	130	111	397	498	1434	3040	3200	472	73.8	41.2
(WY)	1921	1928	1923	1923	1927	1921	1926	1922	1922	1922	1922	1923
MIN	10.0	11.2	18.7	24.1	42.2	54.6	389	552	42.2	9.50	5.40	5.09
(WY)	1922	1922	1930	1926	1924	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1920 - 1930

ANNUAL MEAN	387	
HIGHEST ANNUAL MEAN	646	1922
LOWEST ANNUAL MEAN	102	1924
HIGHEST DAILY MEAN	4890	Jun 4 1922
LOWEST DAILY MEAN	4.0	Aug 29 1924
ANNUAL SEVEN-DAY MINIMUM	4.2	Aug 28 1924
INSTANTANEOUS PEAK FLOW	6080	Jun 4 1922
INSTANTANEOUS PEAK STAGE	12.18	Jun 4 1922
ANNUAL RUNOFF (AC-FT)	280500	
10 PERCENT EXCEEDS	1300	
50 PERCENT EXCEEDS	74	
90 PERCENT EXCEEDS	11	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

MEAN	17.8	20.8	27.6	46.8	47.8	40.3	64.4	210	295	160	52.2	30.4
MAX	60.5	92.3	332	408	239	405	490	1838	2042	1176	822	331
(WY)	1962	1962	1967	1969	1962	1986	1986	1969	1983	1967	1960	1960
MIN	5.80	5.42	5.87	8.07	7.32	7.29	7.18	4.54	6.81	7.34	8.86	8.72
(WY)	1978	1978	1978	1977	1964	1971	1971	1977	1977	1968	1976	1964

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1960 - 1992

ANNUAL TOTAL	7141		5067		
ANNUAL MEAN	19.6		13.8		80.6
HIGHEST ANNUAL MEAN					406
LOWEST ANNUAL MEAN					8.47
HIGHEST DAILY MEAN	1290	Mar 4	25	Feb 15	7680
LOWEST DAILY MEAN	11	Feb 11	11	Jan 8	30
ANNUAL SEVEN-DAY MINIMUM	11	Feb 11	12	Jun 7	4.3
INSTANTANEOUS PEAK FLOW			42	Feb 15	14000
INSTANTANEOUS PEAK STAGE			1.57	Feb 15	13.24
ANNUAL RUNOFF (AC-FT)	14160		10050		58380
10 PERCENT EXCEEDS	19		18		162
50 PERCENT EXCEEDS	16		13		15
90 PERCENT EXCEEDS	12		12		8.2

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA

LOCATION.--Lat 36°52'47", long 119°07'40", in NE 1/4 NW 1/4 sec.22, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank 1.1 mi upstream from mouth, 1.7 mi south of Balch Camp, 2.1 mi downstream from Dinkey Creek, and 9 mi east of Trimmer.

DRAINAGE AREA.--387 mi².

PERIOD OF RECORD.--March 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,035 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Black Rock Reservoir (station 11216100); Balch Afterbay, capacity, 318 acre-ft; and Haas and Balch Powerplants. Water is diverted from Balch Afterbay to Kings River Powerplant, beginning Mar. 1, 1962. Some water diverted from Balch Afterbay returns upstream from station at a release to Dinky Creek. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s, Feb. 1, 1963, gage height, 19.20 ft, from rating curve extended above 10,100 ft³/s; minimum daily, 6.4 ft³/s, Oct. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 903 ft³/s, Apr. 29, gage height, 4.94 ft; minimum daily, 31 ft³/s, Aug. 3, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	e41	37	48	55	193	356	593	104	52	35	34
2	41	e40	39	48	53	181	405	515	97	49	32	36
3	41	e39	39	48	50	169	487	494	90	48	31	36
4	41	e38	38	53	50	164	518	490	84	46	33	37
5	41	e37	36	69	50	173	490	467	83	44	33	37
6	41	e37	35	56	49	191	473	517	80	43	32	36
7	41	e37	35	52	53	161	493	536	81	42	32	35
8	41	e37	38	48	82	145	525	506	77	41	32	35
9	41	e58	38	49	66	130	544	504	72	40	32	35
10	41	e58	36	54	91	140	544	459	68	40	31	35
11	41	e46	35	55	157	159	527	410	65	40	32	36
12	41	41	36	48	186	187	476	398	63	40	33	35
13	41	38	37	50	198	211	661	379	64	90	34	35
14	41	37	37	49	126	231	585	341	64	95	33	34
15	41	37	37	50	194	204	476	305	66	62	33	36
16	41	36	36	51	153	186	489	284	67	85	32	35
17	41	37	36	53	128	164	573	266	64	85	32	35
18	41	58	37	52	110	159	598	246	60	65	32	36
19	41	62	40	51	104	151	602	228	57	55	32	37
20	41	60	38	51	125	150	631	214	55	49	32	37
21	40	64	37	52	174	169	652	194	54	46	33	35
22	37	66	37	51	184	176	529	177	52	43	33	35
23	37	57	37	51	195	210	481	166	51	42	33	35
24	e34	51	38	52	175	189	513	158	54	41	33	35
25	e34	50	39	53	180	196	582	152	55	40	33	35
26	e34	49	38	54	198	245	624	148	55	40	33	35
27	e42	48	37	53	210	242	640	144	51	39	33	34
28	e184	46	52	53	224	266	655	137	49	38	33	34
29	e72	42	55	53	217	281	650	131	48	37	33	34
30	e42	40	59	53	---	369	699	122	50	36	33	34
31	e35	---	48	55	---	334	---	112	---	36	33	---
TOTAL	1411	1387	1217	1615	3837	6126	16478	9793	1980	1549	1011	1058
MEAN	45.5	46.2	39.3	52.1	132	198	549	316	66.0	50.0	32.6	35.3
MAX	184	66	59	69	224	369	699	593	104	95	35	37
MIN	34	36	35	48	49	130	356	112	48	36	31	34
AC-FT	2800	2750	2410	3200	7610	12150	32680	19420	3930	3070	2010	2100

e Estimated.

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.1	90.6	143	216	277	336	586	985	803	272	59.3	49.8
MAX	288	347	920	1187	1269	1329	2163	4253	4210	1894	422	233
(WY)	1983	1984	1967	1980	1986	1986	1982	1969	1983	1983	1961	1978
MIN	10.6	17.6	19.3	26.3	30.0	48.1	111	129	47.3	21.9	16.2	14.1
(WY)	1978	1978	1977	1991	1991	1977	1977	1977	1976	1976	1968	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1961 - 1992		
ANNUAL TOTAL	63157			47462					
ANNUAL MEAN	173			130			322		
HIGHEST ANNUAL MEAN							1045		
LOWEST ANNUAL MEAN							49.2		
HIGHEST DAILY MEAN	3090			Mar 4			699		
LOWEST DAILY MEAN	22			Jan 2			31		
ANNUAL SEVEN-DAY MINIMUM	24			Jan 1			32		
INSTANTANEOUS PEAK FLOW							903		
INSTANTANEOUS PEAK STAGE							4.94		
ANNUAL RUNOFF (AC-FT)	125300			94140			233100		
10 PERCENT EXCEEDS	509			469			764		
50 PERCENT EXCEEDS	44			51			92		
90 PERCENT EXCEEDS	29			34			28		

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°52'29", long 119°08'27", in SW 1/4 NE 1/4 sec.21, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, on right bank 0.8 mi downstream from North Fork, 2.4 mi southwest of Balch Camp, and 8.5 mi southeast of Trimmer.²

DRAINAGE AREA.--1,342 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year. Prior to January 1952 monthly discharge only, published in WSP 1735. Published as Kings River below North Fork, October 1951 to September 1965. Published records for 1962 to 1984 for station 11218500 include flow diverted to Kings River powerplant.

REVISED RECORDS.--WSP 1930: Drainage area. WDR CA-72-2: Adjusted data for 1971.

GAGE.--Water-stage recorder. Datum of gage is 942.42 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Courtright and Wishon Reservoirs (stations 11214550 and 11214800). Water is diverted from Balch Afterbay on the North Fork Kings River to Kings River Powerplant, beginning Mar. 1, 1962. This station measures inflow to Pine Flat Lake (station 11221000). See schematic diagram of Kings River basin. For records of combined discharge of river and powerplant, see following page.

COOPERATION.--Records of diversion to Kings River powerplant and contents for Courtright and Wishon Reservoirs were provided by Pacific Gas & Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,200 ft³/s, Dec. 23, 1955, gage height, 23.08 ft, from rating curve extended above 22,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 86 ft³/s, Oct. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1950, reached a stage of 21.6 ft from floodmarks, discharge, 74,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 4,730 ft³/s, Apr. 30, gage height, 7.41 ft; minimum daily, 121 ft³/s, Sept. 30.

Combined river and powerplant: Maximum daily discharge, 4,620 ft³/s, May 9, 10; minimum daily, 121 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	216	240	231	214	712	1000	3790	1920	605	254	172
2	166	215	243	231	212	673	1070	3200	2000	553	247	174
3	164	217	234	228	204	653	1210	3190	1870	509	241	171
4	161	233	225	255	197	656	1380	3140	1860	492	234	169
5	160	248	220	324	195	633	1430	3120	1860	461	229	169
6	156	266	224	317	194	748	1440	3460	1700	435	226	163
7	155	272	225	282	206	674	1530	3680	1570	418	223	156
8	151	307	220	272	247	632	1660	3690	1420	408	220	150
9	149	426	216	266	229	595	1800	3830	1370	406	216	145
10	148	405	208	287	296	586	1850	3840	1270	397	207	141
11	146	356	205	283	586	600	1890	3760	1230	401	200	140
12	146	323	201	254	701	638	1810	3730	1120	619	198	140
13	145	300	199	239	779	678	1960	3750	998	726	202	137
14	145	297	194	245	544	732	2130	3610	872	776	234	135
15	144	277	199	243	753	688	2020	3330	797	945	265	133
16	141	258	213	237	678	658	1970	3140	744	716	278	130
17	141	311	195	238	597	617	2250	3020	664	618	260	129
18	140	512	200	238	552	587	2570	2880	612	579	243	138
19	139	377	197	231	535	560	2630	2670	585	513	230	152
20	138	383	198	227	639	543	2710	2400	581	463	219	153
21	137	393	193	223	742	566	2950	1970	593	427	212	143
22	134	378	191	222	720	581	2390	1720	571	397	204	139
23	134	347	192	219	723	720	2090	1660	558	373	199	134
24	136	327	192	219	661	650	2240	1720	605	354	193	133
25	139	318	188	219	667	658	2700	1760	687	334	187	132
26	413	316	186	219	704	713	3220	1860	717	316	181	131
27	589	307	184	217	724	708	3390	1960	642	300	177	127
28	277	277	238	216	756	758	3720	2210	636	289	170	123
29	230	263	251	217	759	802	4020	2060	662	281	167	122
30	222	227	298	214	---	958	4140	1930	653	269	167	121
31	218	---	236	213	---	999	---	1950	---	261	168	---
TOTAL	5634	9352	6605	7526	15014	20976	67170	88030	31367	14641	6651	4302
MEAN	182	312	213	243	518	677	2239	2840	1046	472	215	143
MAX	589	512	298	324	779	999	4140	3840	2000	945	278	174
MIN	134	215	184	213	194	543	1000	1660	558	261	167	121
AC-FT	11180	18550	13100	14930	29780	41610	133200	174600	62220	29040	13190	8530

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

MEAN	343	456	677	944	1111	1420	2592	5371	5494	2686	937	515
MAX	1542	1691	3530	4060	4814	4497	6599	14570	16130	9602	4309	2625
(WY)	1983	1983	1967	1969	1986	1986	1982	1969	1983	1967	1983	1982
MIN	115	138	131	150	140	242	859	984	739	326	178	101
(WY)	1978	1991	1977	1991	1991	1977	1976	1977	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1962 - 1992		
ANNUAL TOTAL	420361			277268					
ANNUAL MEAN	1152			758			1875		
ADJUSTED MEAN a	1434			948					
HIGHEST ANNUAL MEAN							4775		
LOWEST ANNUAL MEAN							450		
HIGHEST DAILY MEAN	8610			4140			45300		
LOWEST DAILY MEAN	126			121			73		
ANNUAL SEVEN-DAY MINIMUM	130			127			79		
INSTANTANEOUS PEAK FLOW				4730			85200		
INSTANTANEOUS PEAK STAGE				7.41			23.08		
ANNUAL RUNOFF (AC-FT)	833800			550000			1358000		
ADJUSTED MEAN RUNOFF (AC-FT) a	1038000			68820					
10 PERCENT EXCEEDS	3170			2070			5040		
50 PERCENT EXCEEDS	324			316			761		
90 PERCENT EXCEEDS	140			149			205		

a Adjusted for diversion to Kings River Powerplant and change in contents in Wishon and Courtright Reservoirs.

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

CHEMICAL DATA: Water years 1956-66, 1968-70, 1973 to current year.

BIOLOGICAL DATA: Water years 1978-81.

WATER TEMPERATURE: Water years 1967-88.

SEDIMENT DATA: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1966 to September 1988.

REMARKS.--Quality of water samples are obtained at the gaging station upstream from the powerplant. There was no backwater during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (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, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
NOV 19...	1250	384	48	7.7	9.5	0.70	744	11.5	103	K7	26
JAN 08...	1045	269	56	7.8	6.5	0.80	739	12.5	105	<1	K2
MAR 10...	1030	598	47	7.9	10.5	0.50	740	14.2	131	<1	<1
MAY 12...	1440	3970	18	6.8	15.5	0.70	735	11.4	119	K3	K7
SEP 15...	1240	135	52	7.9	20.5	0.60	740	8.6	98	K3	K44

DATE	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)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)
NOV 19...	17	0	5.6	0.72	3.8	31	0.4	1.0	23	0	19
JAN 08...	19	0	6.3	0.81	4.0	30	0.4	0.80	26	0	22
MAR 10...	16	0	5.2	0.66	3.5	31	0.4	0.80	21	0	17
MAY 12...	5	0	1.8	0.20	1.0	28	0.2	0.30	6	0	5
SEP 15...	17	0	5.7	0.63	7.3	47	0.8	0.90	24	0	20

DATE	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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 19...	3.4	2.5	0.20	10	35	39	0.05	<0.010	<0.010	0.089
JAN 08...	4.1	1.9	0.10	12	48	43	0.06	0.010	0.010	0.092
MAR 10...	3.1	1.8	0.20	11	34	37	0.05	<0.010	<0.010	<0.050
MAY 12...	1.2	0.50	0.20	5.0	--	13	0.01	<0.010	<0.010	<0.050
SEP 15...	3.9	2.3	0.10	8.7	42	41	0.06	<0.010	<0.010	<0.050

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 19...	0.089	0.010	<0.010	<0.20	<0.010	<0.010	<0.010	<0.010	20	8
JAN 08...	0.093	<0.010	<0.010	<0.20	<0.010	0.020	<0.010	<0.010	--	--
MAR 10...	<0.050	<0.010	0.020	<0.20	<0.010	<0.010	<0.010	<0.010	10	7
MAY 12...	<0.050	0.040	0.030	<0.20	<0.010	<0.010	0.010	<0.010	20	2
SEP 15...	<0.050	<0.010	0.020	<0.20	<0.010	<0.010	<0.010	<0.010	10	8
DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)
NOV 19...	<3	24	<4	1	<10	<1	<1	<1.0	35	<6
JAN 08...	--	--	--	--	--	--	--	--	--	--
MAR 10...	<3	17	<4	2	<10	<1	<1	<1.0	34	<6
MAY 12...	<3	15	<4	<1	<10	<1	<1	<1.0	12	<6
SEP 15...	<3	16	<4	2	<10	<1	<1	<1.0	37	<6

TULARE LAKE BASIN

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
12...*	1420	5.30	203	17	7.1	15.5	735	11.4	119	7	59
12...*	1435	5.10	172	17	7.1	15.5	735	11.4	119	9	44
12...*	1439	5.60	144	17	7.0	15.5	735	11.4	119	15	27
12...*	1445	5.70	121	18	6.9	15.5	735	11.4	119	8	46
12...*	1450	4.80	94.0	17	7.0	15.5	735	11.4	119	6	66
SEP											
15...*	1340	1.70	24.0	55	7.6	20.5	740	8.7	100	6	--
15...*	1343	2.28	46.0	56	7.8	20.5	740	8.5	97	1	--
15...*	1346	2.25	64.0	54	7.8	20.5	740	8.6	98	0	--
15...*	1349	2.40	85.0	53	7.9	20.5	740	8.6	98	0	--
15...*	1352	1.61	122	54	7.9	20.5	740	8.5	97	1	--

* Instantaneous discharge at the time of cross-sectional measurement: May 12, 3,630 ft³/s; Sept. 15, 134 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
19...	1315	385	9.5	3	3.1	74
JAN						
08...	1200	277	6.5	1	0.75	90
MAR						
10...	1130	598	10.5	2	3.2	77
MAY						
12...	1440	3970	15.5	9	88	48
SEP						
15...	1240	135	20.5	3	1.1	--

11218501 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

KINGS RIVER BELOW NORTH FORK AND KINGS RIVER POWERPLANT
 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401	492	337	231	214	813	1160	4010	2320	975	638	409
2	428	445	394	231	212	1170	1170	3480	2280	1010	659	402
3	442	467	234	358	667	960	1400	3330	2280	1110	647	356
4	388	619	430	364	679	1050	1520	3600	2190	1070	653	393
5	233	494	360	324	316	1060	1590	3670	2140	1000	599	169
6	156	552	467	317	194	1280	1670	3800	2000	937	605	163
7	435	635	225	282	206	816	1800	4060	1950	986	676	156
8	433	576	220	272	301	632	1830	4290	1720	999	620	150
9	378	515	355	266	330	818	1990	4620	1730	1030	589	145
10	353	485	286	581	581	847	2000	4620	1480	996	597	238
11	214	659	205	410	918	696	1990	4120	1580	912	667	351
12	278	614	277	254	1180	638	2010	3900	1500	1230	692	140
13	145	610	199	631	1120	678	2260	4110	1240	1280	749	137
14	452	549	315	651	860	732	2560	4130	1170	1360	628	325
15	407	568	199	657	978	688	2360	3940	1110	1530	865	373
16	424	258	213	656	777	658	2390	3610	1100	1250	912	347
17	441	368	195	665	696	738	2570	3480	1080	1250	823	350
18	437	906	200	238	857	685	2750	3290	928	1170	593	399
19	139	700	197	231	895	644	2910	3050	1210	1080	559	152
20	204	774	198	662	1130	697	3070	2980	1110	1020	618	153
21	308	633	193	568	1210	566	3310	2480	1170	967	671	311
22	414	680	191	669	1050	727	2810	2180	1130	799	617	387
23	392	347	192	652	820	895	2510	2080	948	702	199	334
24	370	327	192	619	980	650	2640	2200	1210	828	593	430
25	431	529	188	359	1090	780	3070	2230	1220	702	735	381
26	705	616	305	340	1130	908	3290	2290	1230	316	691	201
27	668	529	184	642	1160	708	3940	2410	1270	675	371	206
28	620	277	238	739	1210	906	3870	2660	1230	711	444	402
29	532	263	332	697	1170	951	4140	2530	1220	692	426	391
30	569	227	298	651	---	1140	4230	2320	1240	659	167	121
31	473	---	236	542	---	1150	---	2340	---	671	168	---
TOTAL	12270	15714	8055	14759	22931	25681	74810	101810	43986	29917	18471	8472
MEAN	396	524	260	476	791	828	2494	3284	1466	965	596	282
MAX	705	906	467	739	1210	1280	4230	4620	2320	1530	912	430
MIN	139	227	184	231	194	566	1160	2080	928	316	167	121
AC-FT	24340	31170	15980	29270	45480	50940	148400	201900	87250	59340	36640	16800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1992, BY WATER YEAR (WY)

MEAN	574	611	900	1100	1308	1639	3062	5935	6046	3017	1322	826
MAX	1739	2137	4695	4607	5473	5377	7328	15510	17070	10420	5104	3440
(WY)	1983	1983	1956	1969	1986	1986	1982	1969	1983	1967	1983	1982
MIN	130	136	139	167	146	352	915	1042	832	471	333	159
(WY)	1955	1960	1960	1991	1991	1977	1977	1977	1976	1976	1954	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1952 - 1992	
ANNUAL TOTAL	507824		376876			
ANNUAL MEAN	1391		1030		2161	
HIGHEST ANNUAL MEAN					5567	
LOWEST ANNUAL MEAN					547	
HIGHEST DAILY MEAN	9270		4620		52500	
LOWEST DAILY MEAN	126		121		86	
ANNUAL SEVEN-DAY MINIMUM	130		188		99	
ANNUAL RUNOFF (AC-FT)	1007000		747500		1565000	
10 PERCENT EXCEEDS	3460		2520		5620	
50 PERCENT EXCEEDS	614		667		1120	
90 PERCENT EXCEEDS	144		214		248	

LOCATION.--Lat 36°49'50", long 119°20'07", in SW 1/4 NW 1/4 sec.2, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030012, on right bank 0.6 mi downstream from Pine Flat Dam and 2.9 mi northeast of Piedra.

WATER TEMPERATURE: Water years 1970 to current year.

WATER TEMPERATURE: October 1969 to current year.

INSTRUMENTATION.--Temperature recorder since October 1969.

REMARKS.--Interruptions in record were due to malfunction of recording instrument. Water temperature is affected by regulation from Pine Flat Dam and the powerplant.

WATER TEMPERATURE: Maximum recorded, 26.0°C, Aug. 7, 26-28, Sept. 10, 1990; minimum recorded, 6.0°C, Feb. 13-16, 1989, Dec. 24, 1990, Mar. 8, 1992.

WATER TEMPERATURE: Maximum recorded, 24.0°C, on several days in August and September; minimum recorded, 6.0°C, Mar. 8.

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	18.0	15.5	12.5	10.0	---	---	9.0	8.0	11.5	7.0
2	---	---	17.5	15.5	11.0	11.0	---	---	9.0	7.5	10.0	6.5
3	---	---	18.0	15.5	11.5	11.0	---	---	10.0	8.0	9.5	8.5
4	---	---	17.5	15.0	11.5	10.5	---	---	9.5	8.0	11.5	8.0
5	---	---	17.5	15.0	11.5	10.5	---	---	10.5	7.5	10.5	7.5
6	---	---	17.5	15.0	11.0	11.0	---	---	12.0	7.5	12.0	7.0
7	---	---	17.5	15.0	11.5	11.0	---	---	12.0	8.0	12.0	7.0
8	---	---	17.5	15.0	11.5	11.0	11.0	9.0	12.5	8.0	9.5	6.0
9	---	---	17.5	15.0	11.5	11.0	10.5	9.0	11.5	8.0	12.0	8.5
10	22.0	20.0	17.0	15.0	11.5	11.0	9.5	9.0	11.5	7.5	12.0	8.0
11	21.5	20.0	16.5	14.5	11.5	11.0	9.0	9.0	11.5	8.0	11.5	7.0
12	22.0	20.0	14.5	14.0	11.5	11.0	10.5	8.0	---	---	12.0	7.0
13	22.0	20.0	16.0	13.5	11.5	10.5	10.0	8.5	---	---	12.0	8.0
14	22.0	20.0	16.0	13.0	11.0	10.0	10.0	8.5	---	---	11.5	6.5
15	22.0	19.5	15.5	13.0	11.0	10.0	9.5	8.5	---	---	11.0	6.5
16	22.0	19.5	15.5	13.0	11.0	10.0	9.5	8.0	---	---	12.0	7.5
17	21.5	19.5	15.0	12.5	11.5	10.5	8.5	7.5	---	---	11.5	7.5
18	21.5	19.5	15.0	12.5	11.5	9.5	9.5	7.5	---	---	10.5	8.0
19	21.5	19.0	15.0	12.5	12.0	9.5	9.5	7.5	---	---	11.0	6.5
20	21.0	19.0	15.0	12.5	11.5	9.5	9.5	7.5	---	---	12.0	7.0
21	21.0	19.0	15.0	12.5	11.0	9.5	9.0	7.5	---	---	13.5	8.0
22	21.0	19.0	14.0	12.5	12.0	9.5	9.5	7.5	---	---	12.5	8.0
23	21.0	19.0	14.0	12.0	11.0	10.0	9.5	7.5	---	---	12.0	7.0
24	20.5	18.5	13.5	11.5	10.5	10.0	9.0	7.5	---	---	12.5	7.5
25	20.5	18.5	13.5	11.5	11.5	9.5	8.5	7.5	---	---	9.5	8.5
26	18.5	17.5	13.5	11.0	11.5	9.5	9.5	7.5	---	---	9.5	7.5
27	20.0	17.0	13.5	11.0	11.5	9.5	9.5	7.5	---	---	9.0	8.5
28	19.0	16.0	13.5	10.5	10.0	9.5	9.0	7.5	11.0	7.5	9.5	8.5
29	18.5	16.0	13.0	10.5	---	---	9.0	8.0	11.0	7.0	9.0	8.5
30	18.0	16.0	13.0	10.0	---	---	9.0	8.0	---	---	9.0	9.0
31	18.0	16.0	---	---	---	---	9.0	8.0	---	---	9.0	9.0
MONTH	---	---	18.0	10.0	---	---	---	---	---	---	13.5	6.0

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	9.0	11.0	10.5	13.5	13.0	18.5	18.0	22.5	22.0	---	---
2	9.0	9.0	11.5	10.5	13.5	13.0	18.5	18.0	22.5	22.0	24.0	22.5
3	9.0	9.0	11.5	11.0	13.5	13.5	19.0	18.0	22.5	22.5	23.5	22.5
4	9.0	9.0	11.5	10.5	13.5	13.5	19.0	18.5	23.0	22.5	24.0	22.5
5	---	---	12.0	10.5	14.0	13.5	19.5	18.5	23.0	22.5	24.0	22.5
6	---	---	11.5	11.0	14.0	13.5	19.5	19.0	23.0	22.5	23.5	22.0
7	---	---	12.0	11.5	14.0	13.5	19.5	19.0	23.0	22.5	23.5	22.0
8	---	---	12.0	11.5	14.0	14.0	20.0	19.5	23.0	22.5	24.0	22.0
9	---	---	12.0	10.5	14.5	14.0	20.5	15.0	23.5	23.0	24.0	22.0
10	---	---	12.0	9.5	14.5	14.0	17.5	15.0	23.5	23.0	23.5	22.5
11	9.5	9.0	12.0	11.5	14.5	14.0	18.5	17.5	23.5	23.0	23.5	22.0
12	9.5	9.0	12.0	11.5	14.5	14.0	19.0	18.5	23.5	23.0	24.0	22.0
13	9.5	9.0	12.5	10.0	14.5	14.5	19.5	19.0	24.0	23.0	24.0	22.0
14	9.5	9.0	12.5	10.5	15.0	14.5	20.0	19.5	24.0	23.0	23.5	21.5
15	9.5	9.0	12.5	12.0	15.0	14.5	20.5	20.0	24.0	23.0	23.5	21.5
16	9.5	9.0	12.5	12.0	15.0	15.0	---	---	24.0	23.0	23.0	21.5
17	9.5	9.0	12.5	12.0	15.5	15.0	---	---	24.0	23.0	23.0	21.5
18	9.5	9.5	12.5	12.0	15.5	15.0	---	---	23.5	23.0	23.0	21.5
19	10.0	9.5	13.0	12.0	15.5	15.5	---	---	23.5	22.5	23.0	21.5
20	10.0	9.5	13.0	12.0	15.5	15.5	---	---	23.5	23.0	23.0	21.0
21	10.0	9.5	13.0	12.5	16.0	15.5	---	---	23.5	22.5	23.0	21.0
22	10.0	9.5	13.0	12.5	16.5	16.0	20.5	20.5	23.0	22.0	22.5	21.0
23	10.0	9.5	13.0	12.5	16.5	16.0	21.0	20.5	24.0	22.0	23.0	21.0
24	10.5	10.0	13.0	12.5	17.0	16.5	21.0	21.0	---	---	22.5	21.0
25	10.5	10.0	13.5	12.5	17.0	17.0	21.5	21.0	---	---	23.5	21.0
26	10.5	10.0	13.5	12.5	17.5	17.0	21.5	21.5	---	---	23.0	20.5
27	10.5	10.0	13.5	13.0	17.5	17.0	22.0	21.5	---	---	23.5	20.5
28	11.0	10.5	---	---	17.5	17.5	22.0	21.5	---	---	23.5	20.5
29	11.0	10.0	---	---	18.0	17.5	22.0	21.5	---	---	23.5	20.0
30	11.0	10.5	13.5	13.0	18.0	17.5	22.5	22.0	---	---	23.0	20.0
31	---	---	13.5	13.0	---	---	22.5	22.0	---	---	---	---
MONTH	---	---	---	---	18.0	13.0	---	---	---	---	---	---

11221700 MILL CREEK NEAR PIEDRA, CA

LOCATION.--Lat 36°49'07", long 119°20'27", in NE 1/4 NE 1/4 sec.10, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030008, on left bank 150 ft upstream from road bridge, 0.7 mi upstream from mouth, and 2.3 mi east of Piedra.

DRAINAGE AREA.--127 mi².

PERIOD OF RECORD.--October 1957 to current year. November 1938 to September 1957 in reports of Kings River Water Association.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 14, 1958, at site 150 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharge, which is fair. Some small diversions upstream from station for irrigation. See schematic diagram of Kings River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s, Dec. 6, 1966, gage height, 9.53 ft in gage well, 10.2 ft from floodmarks; maximum gage height, 9.65 ft in gage well (backwater from debris), Jan. 19, 1969; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	1800	*768	*4.11				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	2.3	14	43	4.6	.00	.00	.00	.00
2	.00	.00	.00	.00	2.3	13	33	4.3	.00	.00	.00	.00
3	.00	.00	.00	.00	2.3	14	29	4.1	.00	.00	.00	.00
4	.00	.00	.00	.00	2.2	13	26	3.7	.00	.00	.00	.00
5	.00	.00	.00	6.6	2.0	13	23	3.4	.00	.00	.00	.00
6	.00	.00	.00	24	2.0	22	21	3.1	.00	.00	.00	.00
7	.00	.00	.00	11	2.7	22	19	3.1	.00	.00	.00	.00
8	.00	.00	.00	6.7	3.0	18	18	3.6	.00	.00	.00	.00
9	.00	.00	.00	5.2	3.0	18	16	3.6	.00	.00	.00	.00
10	.00	.00	.00	4.4	8.7	15	15	3.0	.00	.00	.00	.00
11	.00	.00	.00	3.9	e46	13	14	2.7	.00	.00	.00	.00
12	.00	.00	.00	3.8	101	12	13	2.3	.00	.00	.00	.00
13	.00	.00	.00	3.4	236	12	13	1.9	.00	.00	.00	.00
14	.00	.00	.00	3.1	91	11	13	1.7	.00	.00	.00	.00
15	.00	.00	.00	3.0	403	12	12	1.6	.00	.00	.00	.00
16	.00	.00	.00	2.8	248	11	11	1.6	.00	.00	.00	.00
17	.00	.00	.00	2.6	136	10	11	1.4	.00	.00	.00	.00
18	.00	.00	.00	2.6	75	9.8	10	1.5	.00	.00	.00	.00
19	.00	.00	.00	2.6	52	9.6	9.8	1.3	.00	.00	.00	.00
20	.00	.00	.00	2.6	44	9.3	9.5	1.3	.00	.00	.00	.00
21	.00	.00	.00	2.3	44	12	8.8	1.1	.00	.00	.00	.00
22	.00	.00	.00	2.3	36	17	7.9	.89	.00	.00	.00	.00
23	.00	.00	.00	2.3	30	113	7.5	.34	.00	.00	.00	.00
24	.00	.00	.00	2.3	24	54	7.3	.00	.00	.00	.00	.00
25	.00	.00	.00	2.3	21	35	7.0	.00	.00	.00	.00	.00
26	.00	.00	.00	2.3	18	30	6.8	.00	.00	.00	.00	.00
27	.00	.00	.00	2.3	16	26	6.2	.00	.00	.00	.00	.00
28	.00	.00	.00	2.1	15	22	5.7	.00	.00	.00	.00	.00
29	.00	.00	.00	2.0	15	21	5.3	.00	.00	.00	.00	.00
30	.00	.00	.00	2.0	---	25	4.9	.00	.00	.00	.00	.00
31	.00	---	.00	2.2	---	65	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	112.70	1681.5	691.7	426.7	56.13	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	3.64	58.0	22.3	14.2	1.81	.000	.000	.000	.000
MAX	.00	.00	.00	24	403	113	43	4.6	.00	.00	.00	.00
MIN	.00	.00	.00	.00	2.0	9.3	4.9	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	224	3340	1370	846	111	.00	.00	.00	.00

e Estimated.

11221700 MILL CREEK NEAR PIEDRA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.99	7.65	32.0	91.1	122	119	93.9	28.4	8.42	1.83	.34	.45
MAX	12.3	110	296	1048	756	709	463	169	51.7	18.8	9.57	7.11
(WY)	1983	1983	1967	1969	1969	1983	1967	1967	1967	1983	1983	1983
MIN	.000	.000	.000	.000	.000	3.61	1.78	1.22	.000	.000	.000	.000
(WY)	1958	1958	1960	1991	1991	1977	1977	1972	1966	1959	1959	1958

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1958 - 1992	
ANNUAL TOTAL	6367.21		2968.73			
ANNUAL MEAN	17.4		8.11		41.7	
HIGHEST ANNUAL MEAN					211	
LOWEST ANNUAL MEAN					1.35	
HIGHEST DAILY MEAN	728	Mar 19	403	Feb 15	7400	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1957
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1957
INSTANTANEOUS PEAK FLOW			768	Feb 15	11000	Dec 6 1966
INSTANTANEOUS PEAK STAGE			4.11	Feb 15	9.65	Jan 19 1969
ANNUAL RUNOFF (AC-FT)	12630		5890		30200	
10 PERCENT EXCEEDS	29		18		76	
50 PERCENT EXCEEDS	.00		.00		3.9	
90 PERCENT EXCEEDS	.00		.00		.00	

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA

LOCATION.--Lat 36°12'53", long 120°28'11", in NW 1/4 SE 1/4 sec.5, T.20 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank 50 ft downstream from highway bridge, 1.1 mi upstream from Nunez Canyon, 3.0 mi downstream from White Creek, and 8.1 mi northwest of Coalinga.

DRAINAGE AREA.--95.8 mi².

PERIOD OF RECORD.--May 1945 to current year. Prior to October 1949 monthly discharge only, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1950. WSP 1735: 1952(M), 1956(M). WSP 1930: Drainage area. WDR CA-72-2: 1971(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,065.2 ft above National Geodetic Vertical Datum of 1929. Aug. 2, 1959, to Jan. 11, 1985, at site on right bank at datum 2.00 ft higher. Prior to Aug. 2, 1959, at site 100 ft downstream on right bank at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Minor diversion for irrigation and stock ponds.

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).--Maximum discharge, 4,360 ft³/s, Feb. 24, 1969, gage height, 12.34 ft, present datum, in gage well, 13.30 ft from floodmarks, from rating curve extended above 800 ft³/s on basis of slope-area measurement at gage height 12.34 ft; maximum gage height, 12.65 ft in gage well, 13.95 ft from floodmarks, Jan. 16, 1978; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 5	0830	243	4.66	Mar. 5	2230	140	4.33
Feb. 12	1300	*1,490	*6.81	Mar. 22	2330	169	4.43
Feb. 15	0630	816	5.83	July 14	2315	243	4.66

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.30	3.5	.19	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.54	2.5	.19	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.75	2.0	.19	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.40	1.7	.19	.00	.00	.00	.00
5	.00	.00	.00	35	.00	8.6	1.7	.19	.00	.00	.00	.00
6	.00	.00	.00	1.9	.00	27	1.6	.19	.00	.00	.00	.00
7	.00	.00	.00	.08	.00	7.1	1.4	.19	.00	.00	.00	.00
8	.00	.00	.00	.83	.00	5.8	1.2	.18	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	4.0	1.0	.16	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	2.8	.98	.15	.00	.00	.00	.00
11	.00	.00	.00	.00	21	2.1	.96	.14	.00	.00	.00	.00
12	.00	.00	.00	.00	270	1.6	.93	.14	.00	.00	.00	.00
13	.00	.00	.00	.00	125	1.1	.96	.14	.00	.00	.00	.00
14	.00	.00	.00	.00	16	.71	.99	.14	.00	14	.00	.00
15	.00	.00	.00	.00	122	.87	.88	.12	.00	10	.00	.00
16	.00	.00	.00	.00	18	.79	.88	.12	.00	.75	.00	.00
17	.00	.00	.00	.00	10	.86	.78	.09	.00	.26	.00	.00
18	.00	.00	.00	.00	5.9	.66	.76	.08	.00	.06	.00	.00
19	.00	.00	.00	.00	4.0	.55	.71	.10	.00	.00	.00	.00
20	.00	.00	.00	.00	2.8	2.6	.68	.08	.00	.00	.00	.00
21	.00	.00	.00	.00	1.9	41	.59	.05	.00	.00	.00	.00
22	.00	.00	.00	.00	1.3	27	.59	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	1.1	40	.61	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.94	9.8	.60	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.69	8.0	.53	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.50	10	.45	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.30	5.5	.38	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.21	4.0	.32	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.22	3.2	.25	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	4.2	.19	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	6.6	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	37.81	601.86	228.43	30.62	3.02	0.00	25.07	0.00	0.00
MEAN	.0000	.0000	.0000	1.22	20.8	7.37	1.02	.097	.0000	.81	.0000	.0000
MAX	.00	.00	.00	35	270	41	3.5	.19	.00	14	.00	.00
MIN	.00	.00	.00	.00	.00	.30	.19	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	75	1190	453	61	6.0	.00	50	.00	.00

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.25	.96	3.89	9.69	22.1	16.4	8.51	2.26	.75	.20	.077	.26
MAX	7.15	18.2	36.3	139	287	204	160	40.0	16.4	5.71	2.92	8.33
(WY)	1946	1966	1967	1969	1978	1983	1958	1983	1983	1983	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1947	1948	1948	1948	1948	1961	1949	1948	1948	1947	1945	1945

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1945 - 1992	
ANNUAL TOTAL	988.08		926.81			
ANNUAL MEAN	2.71		2.53		5.36	
HIGHEST ANNUAL MEAN					48.5	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	227	Mar 20	270	Feb 12	2190	Feb 24 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jul 5 1945
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Jul 5 1945
INSTANTANEOUS PEAK FLOW			1490	Feb 12	4360	Feb 24 1969
INSTANTANEOUS PEAK STAGE			6.81	Feb 12	13.95	Jan 16 1978
ANNUAL RUNOFF (AC-FT)	1960		1840		3880	
10 PERCENT EXCEEDS	.41		1.9		4.8	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

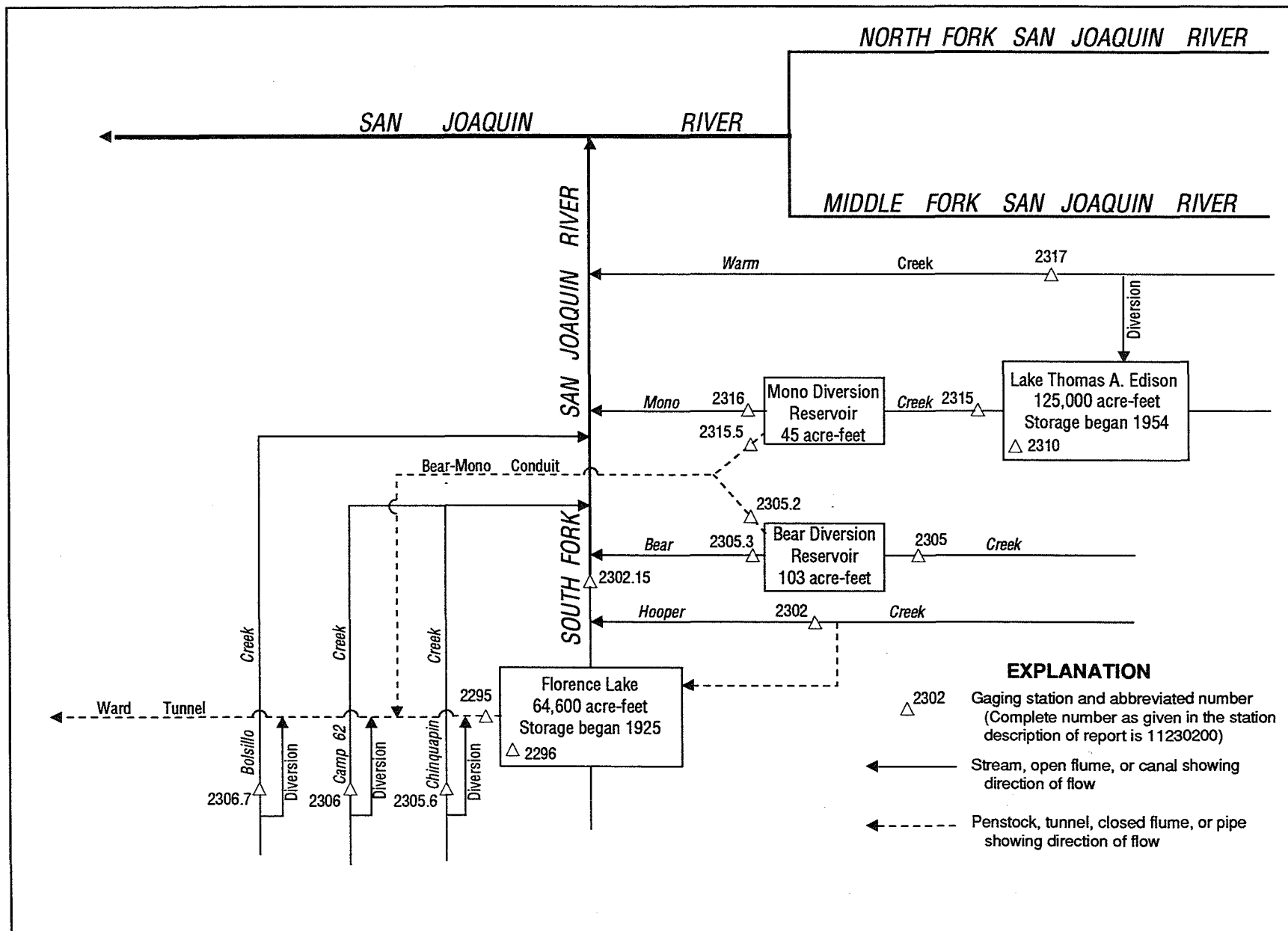


Figure 31. Diversions and storage in upper San Joaquin River basin.

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA

LOCATION (REVISED).--Lat 37°16'20", long 118°58'17", unsurveyed, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse at entrance of tunnel, 0.4 mi south of left abutment of Florence Lake dam, and 16 mi northeast of town of Big Creek.

PERIOD OF RECORD.--April 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Florence Lake tunnel at intake 1925-36 and as Ward tunnel at intake 1937-60.

REVISED RECORDS.--WSP 1515: 1931.

GAGE.--Water-stage recorder, concrete control, and Venturi meter. Datum of gage is 7,213.89 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharges. Ward tunnel diverts from Florence Lake (station 11229600), a reservoir on South Fork San Joaquin River, to Huntington Lake (station 11236000) via Portal powerplant (station 11235500). Water used again in Big Creek powerplants. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,990 ft³/s, Apr. 30, 1926; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	31	16	17	12	73	105	264	251	209	414	220
2	4.6	26	20	20	12	64	110	270	251	208	412	210
3	56	25	22	21	11	57	129	276	253	208	294	203
4	158	25	20	21	11	55	163	282	254	207	297	204
5	157	26	18	21	10	53	163	284	256	208	298	200
6	191	30	17	22	11	57	154	292	262	207	298	197
7	203	32	17	24	11	57	170	285	327	207	180	196
8	201	33	17	24	12	58	187	184	113	207	3.4	196
9	200	46	17	26	11	55	204	152	189	191	237	195
10	197	58	16	27	14	54	208	154	375	158	385	194
11	195	51	16	25	16	54	229	157	401	157	232	143
12	193	44	14	20	22	57	213	199	403	157	232	3.1
13	190	39	14	20	26	64	241	273	403	158	233	3.1
14	187	33	14	19	32	68	273	307	403	143	234	3.0
15	185	25	14	18	44	64	255	331	402	102	234	2.9
16	183	22	12	18	39	61	216	337	401	131	234	2.9
17	180	32	13	18	45	55	253	351	398	197	234	2.9
18	176	39	14	17	56	51	333	404	397	197	233	2.9
19	175	42	13	16	60	48	327	406	407	197	232	2.9
20	172	49	10	15	59	47	337	413	433	197	232	2.7
21	168	50	12	15	62	48	377	333	431	197	230	3.0
22	165	42	11	14	68	53	347	176	431	196	231	234
23	161	38	12	14	66	59	288	178	430	249	231	367
24	159	36	11	14	65	59	323	180	276	415	228	175
25	155	35	10	14	73	60	389	181	203	431	228	175
26	152	32	9.8	13	80	62	311	164	204	406	227	174
27	150	30	9.8	13	82	64	291	152	204	403	225	172
28	355	22	12	13	84	79	318	154	204	399	224	171
29	429	20	13	12	83	84	309	177	206	398	223	170
30	93	17	13	12	---	89	256	248	208	333	223	168
31	44	---	13	12	---	92	---	249	---	441	222	---
TOTAL	5239.4	1030	440.6	555	1177	1901	7479	7813	9376	7514	7640.4	3993.4
MEAN	169	34.3	14.2	17.9	40.6	61.3	249	252	313	242	246	133
MAX	429	58	22	27	84	92	389	413	433	441	414	367
MIN	4.6	17	9.8	12	10	47	105	152	113	102	3.4	2.7
AC-FT	10390	2040	874	1100	2330	3770	14830	15500	18600	14900	15150	7920

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	237	138	114	79.7	76.3	107	268	448	545	521	403	339
MAX	522	745	1064	546	240	297	573	949	1161	1199	788	778
(WY)	1943	1938	1946	1939	1986	1986	1962	1974	1974	1967	1965	1983
MIN	.000	.47	3.04	2.13	.64	22.5	35.4	.85	1.49	90.1	48.3	1.50
(WY)	1946	1965	1991	1991	1991	1977	1991	1939	1938	1931	1977	1949

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1925 - 1992
ANNUAL TOTAL	79244.04	54158.8	
ANNUAL MEAN	217	148	275
HIGHEST ANNUAL MEAN			460
LOWEST ANNUAL MEAN			98.1
HIGHEST DAILY MEAN	1320 May 31	441 Jul 31	1990 Apr 30 1926
LOWEST DAILY MEAN	.53 Feb 1	2.7 Sep 20	.00 Oct 7 1925
ANNUAL SEVEN-DAY MINIMUM	.58 Feb 1	2.9 Sep 14	.00 Nov 5 1925
ANNUAL RUNOFF (AC-FT)	157200	107400	199200
10 PERCENT EXCEEDS	694	334	646
50 PERCENT EXCEEDS	77	154	162
90 PERCENT EXCEEDS	.89	13	12

LOCATION (REVISED).--Lat 37°16'20", long 118°58'17", unsurveyed, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of Ward tunnel intake, 0.3 mi west of dam on South Fork San Joaquin River and 16 mi northeast of town of Big Creek.

DRAINAGE AREA.--171 mi².

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,757 acre-ft, June 10, elevation, 7,310.54 ft; minimum, 1,069 acre-ft, Dec. 26, 27, elevation, 7,231.16 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)					
(Based on table provided by Southern California Edison Co., dated Aug. 26, 1926)					
7,220.94	0	7,240	2,976	7,270	17,755
	63	7,245	4,666	7,280	24,588
7,225	281	7,250	6,648	7,290	31,966
7,230	887	7,255	8,950	7,310	48,284
7,235	1,774	7,260	11,608	7,330	66,826

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11919	1108	1090	1090	1095	1185	1230	7331	42930	42796	33914	22027
2	11947	1103	1098	1093	1095	1173	1246	8088	43886	42646	33164	21619
3	11878	1103	1098	1096	1093	1166	1280	8955	44782	42479	32648	21221
4	11552	1103	1095	1095	1093	1161	1293	9965	45676	42288	32104	20811
5	11241	1112	1091	1100	1091	1163	1280	11113	46507	42064	31563	20410
6	10856	1120	1090	1098	1091	1168	1287	12454	47189	41824	31025	20006
7	10439	1122	1090	1098	1090	1166	1303	13856	47536	41575	30715	19596
8	10023	1127	1090	1098	1088	1163	1323	15816	48214	41344	30790	19181
9	9600	1158	1090	1098	1088	1159	1327	17755	48704	41129	30405	18769
10	9187	1159	1090	1100	1091	1159	1346	19629	48757	40989	29669	18358
11	8774	1146	1086	1098	1098	1161	1343	21509	48678	40882	29252	18063
12	8363	1136	1086	1098	1115	1168	1334	23359	48512	40907	28858	18063
13	7961	1127	1085	1098	1120	1176	1395	25052	48214	40998	28524	18063
14	7560	1110	1083	1098	1125	1175	1382	26509	47832	41088	28406	18063
15	7166	1102	1081	1098	1125	1170	1355	27787	47397	41261	28376	18063
16	6752	1102	1081	1098	1127	1163	1343	29043	46930	41352	28184	18056
17	6367	1132	1079	1098	1127	1153	1427	30232	46430	41311	27941	18076
18	5987	1130	1079	1098	1127	1147	1443	31123	45907	41237	27654	18141
19	5610	1146	1071	1096	1136	1144	1434	31814	45361	41121	27332	18174
20	5231	1147	1078	1095	1170	1142	1473	32257	44790	40973	26996	18200
21	4841	1142	1076	1095	1178	1151	1516	32586	44207	40783	26632	18220
22	4451	1132	1074	1095	1187	1158	1419	33233	43617	40578	26248	17736
23	4067	1127	1076	1095	1187	1163	1408	33969	43055	40227	25843	16979
24	3689	1124	1073	1096	1187	1161	1481	34818	42846	39542	25432	16600
25	3328	1122	1071	1096	1193	1164	1709	35774	42905	38805	25009	16223
26	3096	1119	1069	1096	1198	1166	2327	36843	42947	38104	24588	15842
27	2807	1112	1069	1096	1204	1180	3093	38056	42947	37407	24156	15464
28	2163	1098	1074	1096	1207	1198	4196	39266	42938	36708	23717	15088
29	1302	1093	1079	1095	1200	1200	5483	40227	42921	36019	23288	14710
30	1156	1083	1074	1095	---	1205	6501	41113	42888	35445	22861	14330
31	1122	---	1079	1095	---	1214	---	41940	---	34662	22442	---
MAX	11947	1159	1098	1100	1207	1214	6501	41940	48757	42796	33914	22027
MIN	1122	1083	1069	1090	1088	1142	1230	7331	42846	34662	22442	14330
a	7231.47	7231.24	7231.22	7231.31	7231.93	7232.01	7249.65	7302.54	7303.68	7293.49	7276.95	7264.59
b	-10779	-39	-4	+16	+105	+14	+5287	+35439	+948	-8226	-12220	-8112
CAL YR 1991 MAX 59697 MIN 1002 b +57												
WTR YR 1992 MAX 48757 MIN 1069 b +2429												
a Elevation, in feet, at end of month.												
b Change in contents, in acre-feet.												

11230200 HOOPER CREEK BELOW DIVERSION DAM, NEAR FLORENCE LAKE, CA
(Formerly published as Hooper Creek at diversion dam near Florence Lake)

LOCATION (REVISED).--Lat 37°18'21", long 118°56'59", unsurveyed, T.7 S., R.28 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 300 ft downstream from diversion dam, 0.7 mi upstream from mouth, 2.5 mi north of Florence Lake, and 17.6 mi northeast of town of Big Creek.

DRAINAGE AREA.--7.22 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by diversion dam 300 ft upstream. Most of the water is diverted at the diversion dam to Florence Lake (station 11229600). See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20 ft³/s, Apr. 18, 1989; minimum daily, 1.2 ft³/s, Apr. 25, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 7.0 ft³/s, May 26; minimum daily, 1.6 ft³/s, Nov. 15-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.3	e2.0	1.9	1.8	2.4	2.8	2.9	4.4	4.1	3.4	2.4
2	2.2	2.3	e2.0	1.9	1.8	2.2	3.1	3.1	4.2	3.9	3.3	2.5
3	2.2	2.3	e2.0	1.9	1.8	2.2	3.4	3.7	4.3	4.1	3.3	2.6
4	2.2	2.4	e2.0	1.9	1.7	2.4	4.0	3.7	4.0	4.0	3.0	2.5
5	2.5	2.5	2.0	1.8	1.7	2.7	4.1	3.2	3.6	4.2	3.2	2.4
6	2.3	2.4	2.0	1.8	1.7	2.5	4.0	3.8	3.9	4.5	3.2	2.3
7	2.3	2.4	2.0	1.8	1.7	2.3	e4.2	3.7	4.1	4.4	3.1	2.4
8	2.2	2.4	2.1	1.8	1.8	2.2	e4.5	3.3	4.0	4.3	3.1	2.3
9	2.0	2.5	2.0	1.9	2.1	2.1	e4.8	3.0	3.8	4.7	3.0	2.3
10	2.0	2.6	2.1	1.9	1.8	2.2	e5.1	3.2	3.9	4.6	2.8	2.3
11	2.0	2.2	2.0	1.9	2.1	2.2	e5.3	3.3	4.0	4.6	2.8	2.3
12	2.0	2.2	2.0	e1.9	2.2	2.2	e5.6	3.6	4.0	4.5	3.2	2.3
13	1.9	2.1	2.0	1.9	2.3	2.2	e5.9	3.6	3.9	4.4	4.2	2.0
14	1.9	1.9	2.0	1.9	2.4	2.2	e6.2	4.0	4.0	4.1	4.7	3.1
15	2.0	1.6	1.9	1.9	2.1	2.2	e6.5	4.1	4.1	4.0	5.4	2.0
16	2.0	1.6	2.0	1.8	2.2	2.1	6.6	4.0	4.0	3.8	4.7	2.2
17	1.8	1.6	2.0	1.9	2.1	2.0	6.4	3.8	4.0	3.5	4.1	2.0
18	1.7	1.6	2.1	1.9	2.0	2.2	4.1	3.5	3.9	3.4	3.7	2.6
19	1.7	e1.6	2.4	1.8	1.9	2.2	3.9	4.1	3.8	3.5	3.5	2.5
20	1.8	e1.6	2.3	1.9	2.0	2.2	3.9	4.3	3.9	3.8	3.3	2.4
21	1.8	e1.7	1.7	1.9	2.0	2.3	3.9	3.9	3.8	3.8	3.2	2.3
22	1.9	e1.7	1.7	1.9	2.0	2.2	3.8	3.2	3.9	3.8	3.1	2.2
23	1.9	e1.7	1.7	1.8	2.0	2.3	3.8	3.9	4.1	4.2	3.0	2.1
24	1.9	e1.7	1.9	1.8	2.1	2.2	3.8	3.5	4.1	3.8	2.8	2.1
25	2.1	e1.8	1.8	1.8	2.4	2.2	3.6	2.9	4.1	3.5	2.8	2.1
26	2.8	e1.8	1.7	1.8	2.4	2.2	3.5	7.0	4.1	3.4	2.7	2.1
27	2.8	e1.8	1.7	1.9	2.4	2.2	3.0	4.1	4.0	3.5	2.6	2.1
28	2.4	e1.9	1.9	1.9	2.3	2.4	2.3	3.5	4.2	3.8	2.6	2.1
29	2.4	e1.9	1.8	1.9	2.3	2.4	2.1	3.3	4.1	3.1	2.6	2.1
30	2.1	e2.0	2.1	2.0	---	2.5	2.7	4.5	4.1	3.8	2.7	1.9
31	2.3	---	2.1	1.9	---	2.8	---	4.3	---	3.6	2.6	---
TOTAL	65.3	60.1	61.0	58.0	59.1	70.6	126.9	116.0	120.3	122.7	101.7	68.5
MEAN	2.11	2.00	1.97	1.87	2.04	2.28	4.23	3.74	4.01	3.96	3.28	2.28
MAX	2.8	2.6	2.4	2.0	2.4	2.8	6.6	7.0	4.4	4.7	5.4	3.1
MIN	1.7	1.6	1.7	1.8	1.7	2.0	2.1	2.9	3.6	3.1	2.6	1.9
AC-FT	130	119	121	115	117	140	252	230	239	243	202	136

e Estimated.

11230200 HOOPER CREEK BELOW DIVERSION DAM, NEAR FLORENCE LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

MEAN	2.17	2.15	2.00	1.86	1.99	2.61	5.28	3.05	3.10	3.33	2.88	2.33
MAX	3.28	2.69	2.87	2.22	2.50	3.73	9.50	3.74	4.01	3.96	3.28	2.95
(WY)	1987	1987	1987	1987	1988	1988	1989	1992	1992	1992	1992	1991
MIN	1.68	1.82	1.59	1.55	1.55	2.10	3.23	2.50	2.46	2.66	2.32	1.91
(WY)	1991	1991	1989	1991	1991	1990	1991	1991	1989	1989	1989	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	910.9		1030.2			
ANNUAL MEAN	2.50		2.81		2.73	
HIGHEST ANNUAL MEAN					3.12	
LOWEST ANNUAL MEAN					2.42	
HIGHEST DAILY MEAN	5.0	Mar 4	7.0	May 26	20	Apr 18 1989
LOWEST DAILY MEAN	1.4	Feb 21	1.6	Nov 15	1.2	Apr 25 1989
ANNUAL SEVEN-DAY MINIMUM	1.5	Feb 20	1.6	Nov 15	1.3	Oct 10 1990
ANNUAL RUNOFF (AC-FT)	1810		2040		1980	
10 PERCENT EXCEEDS	3.8		4.1		3.9	
50 PERCENT EXCEEDS	2.3		2.4		2.4	
90 PERCENT EXCEEDS	1.6		1.8		1.7	

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA

LOCATION (REVISED).--Lat 37°18'35", long 118°57'40", unsurveyed, T.7 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.1 mi downstream from Hooper Creek, 3.5 mi downstream from Florence Lake Dam, and 17 mi northeast of town of Big Creek.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--October 1978 to current year. October 1946 to September 1978, operated as a low-flow station only, in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 6,949.41 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Flow regulated by Florence Lake (station 11229600) 3.5 mi upstream, and Hooper Creek diversion dam (capacity less than 2 acre-ft) 0.7 mi upstream. Most of the water is diverted at Florence Lake to Ward Tunnel (station 11229500). See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft³/s, Sept. 26, 1982, gage height, 11.42 ft, from rating curve extended above 1,300 ft³/s on basis of spill flow at Florence Lake; minimum daily, 3.9 ft³/s, Oct. 24, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57 ft³/s, Oct. 5, gage height, 4.60 ft; minimum daily, 11 ft³/s, Nov. 30, Dec. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	11	e14	13	20	26	25	25	23	22	23
2	16	16	12	e14	13	19	26	26	24	23	22	23
3	16	14	13	14	e13	19	26	26	25	23	22	23
4	16	14	13	13	e13	20	25	26	25	23	26	23
5	22	14	13	14	e13	21	24	26	24	23	27	23
6	19	14	14	14	13	21	22	26	24	23	24	23
7	17	14	14	e14	13	19	22	26	25	22	23	23
8	16	14	14	e14	13	19	22	26	25	22	23	23
9	15	15	14	e14	13	19	22	25	25	23	23	23
10	14	15	14	14	e14	19	22	25	24	23	23	23
11	15	14	14	e14	e14	19	22	26	25	23	23	22
12	16	14	13	e14	e14	20	22	26	24	24	23	22
13	16	13	13	e14	e14	20	23	26	24	26	25	23
14	16	13	13	e14	e14	21	24	27	24	26	26	24
15	16	12	13	e14	e14	19	23	27	24	25	26	24
16	16	12	13	e14	e14	19	23	26	25	24	25	24
17	17	15	13	e13	e14	18	23	26	24	23	24	24
18	17	15	13	e13	e14	17	22	23	24	23	24	24
19	17	14	13	e13	13	17	18	23	23	23	23	24
20	17	15	e13	e13	14	17	16	23	23	23	23	24
21	16	15	e13	e13	15	18	16	22	23	23	23	24
22	16	14	13	e13	16	19	16	22	23	23	23	24
23	16	14	13	e13	16	21	16	24	23	23	23	23
24	16	14	13	e13	17	20	15	24	24	22	22	23
25	17	14	13	13	17	20	16	23	23	22	22	23
26	22	14	13	13	18	21	16	25	23	21	22	23
27	19	13	13	13	19	20	15	24	23	22	23	23
28	17	12	14	13	20	23	14	24	23	22	23	23
29	18	12	14	e13	20	23	15	24	23	21	23	23
30	16	e11	e14	e13	---	23	19	25	23	22	23	23
31	16	---	e14	e13	---	25	---	25	---	22	23	---
TOTAL	526	416	410	418	428	616	611	772	717	711	727	697
MEAN	17.0	13.9	13.2	13.5	14.8	19.9	20.4	24.9	23.9	22.9	23.5	23.2
MAX	23	16	14	14	20	25	26	27	25	26	27	24
MIN	14	11	11	13	13	17	14	22	23	21	22	22
AC-FT	1040	825	813	829	849	1220	1210	1530	1420	1410	1440	1380

e Estimated.

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.5	15.8	15.5	15.9	19.8	23.8	28.5	43.2	423	277	77.8	42.9
MAX	30.5	24.9	25.3	20.5	42.6	43.8	51.3	164	2429	1292	661	268
(WY)	1990	1984	1984	1984	1986	1986	1982	1983	1983	1983	1983	1982
MIN	7.87	11.8	8.93	11.9	12.2	17.8	18.4	20.9	20.5	21.4	13.1	7.19
(WY)	1980	1979	1979	1979	1991	1990	1990	1981	1981	1981	1979	1979

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	7342		7049		83.5	
ANNUAL MEAN	20.1		19.3		396	
HIGHEST ANNUAL MEAN					18.5	
LOWEST ANNUAL MEAN					1979	
HIGHEST DAILY MEAN	49	Apr 5	27	May 14	5200	Sep 26 1982
LOWEST DAILY MEAN	11	Feb 27	11	Nov 30	3.9	Oct 24 1979
ANNUAL SEVEN-DAY MINIMUM	12	Feb 21	12	Nov 27	4.4	Oct 13 1979
INSTANTANEOUS PEAK FLOW			57	Oct 5	5950	Sep 26 1982
INSTANTANEOUS PEAK STAGE			4.60	Oct 5	11.42	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	14560		13980		60460	
10 PERCENT EXCEEDS	27		25		42	
50 PERCENT EXCEEDS	20		20		22	
90 PERCENT EXCEEDS	13		13		14	

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA

LOCATION (REVISED).--Lat 37°20'22", long 118°58'21", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.2 mi upstream from diversion dam, 1.7 mi upstream from mouth, 2.1 mi south of Lake Thomas A. Edison, and 2.4 mi northeast of Mono Hot Springs.

DRAINAGE AREA.--52.5 mi².

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 611: 1922(M). WSP 1345: 1931-35. WSP 1515: 1922-30. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,366.94 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No storage or diversion upstream from station. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,660 ft³/s, Sept. 26, 1982, gage height, 8.35 ft, from rating curve extended above 570 ft³/s; minimum daily, 1.2 ft³/s, Sept. 29 to Oct. 5, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 387 ft³/s, May 8, gage height, 4.93 ft; minimum daily, 5.0 ft³/s, Oct. 19, 21-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	12	e13	e14	e10	25	39	226	220	63	22	15
2	8.2	13	e15	e15	e10	23	40	206	251	52	21	14
3	8.2	13	e14	e16	e9.8	21	52	216	228	47	19	13
4	7.7	14	e14	e14	e9.7	20	61	233	222	43	18	13
5	7.3	16	e12	e15	e9.3	20	52	247	209	39	17	11
6	7.2	19	e12	e16	e9.3	21	51	258	174	37	16	9.9
7	6.9	19	12	e17	e9.2	22	62	266	143	35	16	9.5
8	6.4	19	12	e18	e9.3	21	70	312	136	35	14	9.1
9	6.4	30	13	e17	e9.2	21	72	302	128	35	14	8.8
10	6.1	30	12	e17	e9.5	21	72	284	126	36	13	7.8
11	5.9	25	e12	e16	e11	22	75	295	116	37	12	7.6
12	5.7	22	e11	e15	e12	24	66	300	104	50	16	7.6
13	6.0	20	e11	e15	e15	27	87	288	84	74	32	7.4
14	6.0	15	e11	e14	e18	27	92	284	67	69	72	7.0
15	5.7	15	e11	e14	e21	24	82	259	57	58	119	6.6
16	5.5	17	e10	e14	e21	24	73	242	53	69	73	6.3
17	5.3	18	e10	e13	e23	21	102	223	51	109	52	6.0
18	5.1	18	11	e13	e25	21	111	219	48	73	41	11
19	5.0	29	e11	e13	e26	22	105	204	46	57	34	10
20	5.2	25	e12	e12	e26	21	121	176	49	48	30	9.0
21	5.0	24	e11	e12	e25	21	130	142	52	42	26	8.6
22	5.0	22	e10	e11	e27	22	99	141	52	36	23	8.2
23	5.0	22	e10	e11	e25	22	96	157	55	33	20	7.6
24	5.0	21	e9.3	e11	e25	23	126	176	68	31	17	7.6
25	5.1	21	e8.9	e11	e29	24	171	191	71	29	16	7.5
26	9.6	20	e8.7	e11	e32	25	198	206	62	27	14	6.6
27	10	17	e8.6	e11	e33	25	207	214	60	25	13	6.4
28	19	15	e8.8	e10	32	29	252	233	70	24	12	6.3
29	16	13	e9.2	e10	29	30	270	207	74	23	13	6.0
30	13	e11	e10	e11	---	32	268	201	73	23	12	5.8
31	13	---	e12	e11	---	34	---	193	---	23	17	---
TOTAL	234.5	575	345.5	418	550.3	735	3302	7101	3149	1382	834	260.2
MEAN	7.56	19.2	11.1	13.5	19.0	23.7	110	229	105	44.6	26.9	8.67
MAX	19	30	15	18	33	34	270	312	251	109	119	15
MIN	5.0	11	8.6	10	9.2	20	39	141	46	23	12	5.8
AC-FT	465	1140	685	829	1090	1460	6550	14080	6250	2740	1650	516

e Estimated.

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.5	15.2	19.6	21.3	23.3	32.0	86.1	252	343	193	62.9	27.6
MAX	62.2	56.1	71.2	82.5	61.0	79.8	172	586	740	637	349	260
(WY)	1983	1951	1956	1980	1986	1986	1926	1969	1983	1967	1983	1982
MIN	2.71	3.10	4.86	4.50	5.80	9.00	33.1	71.3	42.2	12.2	3.15	1.63
(WY)	1925	1930	1930	1924	1991	1924	1975	1977	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1922 - 1992	
ANNUAL TOTAL	24880.9		18886.5			
ANNUAL MEAN	68.2		51.6		91.0	
HIGHEST ANNUAL MEAN					201	
LOWEST ANNUAL MEAN					29.2	
HIGHEST DAILY MEAN	618	Jun 12	312	May 8	2610	Sep 26 1982
LOWEST DAILY MEAN	4.5	Feb 2	5.0	Oct 19	1.2	Sep 29 1924
ANNUAL SEVEN-DAY MINIMUM	4.7	Jan 29	5.0	Oct 18	1.2	Sep 29 1924
INSTANTANEOUS PEAK FLOW			387	May 8	3660	Sep 26 1982
INSTANTANEOUS PEAK STAGE			4.93	May 8	8.35	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	49350		37460		65950	
10 PERCENT EXCEEDS	243		180		287	
50 PERCENT EXCEEDS	21		21		29	
90 PERCENT EXCEEDS	5.3		7.7		6.9	

11230520 BEAR CREEK CONDUIT NEAR LAKE THOMAS A. EDISON, CA

LOCATION (REVISED).--Lat 37°20'10", long 118°58'28", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank at diversion dam, 2.2 mi northeast of Mono Hot Springs, and 2.5 mi south of Lake Thomas A. Edison.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Discharge computed as difference between flows at Bear Creek near Lake Thomas A. Edison (station 11230500) and Bear Creek below diversion dam (station 11230530). Datum of conduit invert, 7,340 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Conduit diverts at diversion dam on Bear Creek to Ward tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 462 ft³/s, June 11, 12, 1991; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	10	e11	e12	e8.4	23	37	223	218	60	19	12
2	5.5	11	e13	e13	e8.4	21	38	203	248	49	18	11
3	5.9	11	e12	e14	e8.2	19	50	213	225	44	17	10
4	6.0	12	e12	e12	e8.1	18	59	230	219	40	16	10
5	5.6	14	e10	e13	e7.8	18	50	244	206	36	15	8.5
6	5.6	17	e10	e14	e7.8	19	49	255	171	34	14	7.4
7	5.3	17	10	e15	e7.6	20	60	263	140	32	14	7.0
8	4.7	17	10	e16	e7.7	19	68	309	133	32	12	6.6
9	4.7	28	11	e15	e7.6	19	70	299	125	32	12	6.3
10	4.4	28	10	e15	e7.9	19	70	281	123	34	11	5.3
11	4.2	23	e10	e14	e9.4	20	73	292	113	35	9.6	5.1
12	4.0	20	e9.4	e13	e10	22	64	297	101	47	14	5.1
13	4.3	18	e9.4	e13	e13	25	85	285	81	71	29	4.9
14	4.2	13	e9.4	e12	e16	25	90	281	65	66	69	4.5
15	3.9	13	e9.4	e12	e19	22	80	256	55	55	116	4.1
16	3.7	15	e8.5	e12	e19	22	71	239	51	66	70	3.8
17	3.5	16	e8.4	e11	e21	19	100	220	49	106	49	3.5
18	3.4	16	9.4	e11	e23	19	109	216	46	70	38	8.5
19	3.2	27	e9.4	e11	e24	20	103	201	44	54	31	e3.1
20	3.4	23	e10	e10	e24	19	119	173	47	45	27	.00
21	3.2	22	e9.4	e10	e23	19	128	139	50	39	23	.00
22	3.3	20	e8.4	e9.5	e25	20	97	e138	50	34	20	e22
23	3.3	20	e8.4	e9.5	e23	20	94	e154	53	31	17	5.2
24	3.3	19	e7.8	e9.5	e23	21	124	e173	66	29	14	5.2
25	3.4	19	e7.4	e9.5	e27	22	169	e188	69	27	13	5.1
26	7.9	18	e7.2	e9.5	e30	23	197	e203	60	24	11	4.2
27	8.3	15	e7.1	e9.5	e31	23	206	e211	57	22	10	4.0
28	17	13	e7.3	e8.4	30	27	251	230	67	21	9.5	3.9
29	14	11	e7.7	e8.4	27	28	269	204	71	20	10	3.6
30	11	e9.5	e8.5	e9.4	---	30	266	199	70	20	9.5	3.4
31	11	---	e10	e9.4	---	32	---	191	---	20	14	---
TOTAL	177.5	515.5	291.5	360.6	496.9	673	3246	7010	3073	1295	751.6	183.30
MEAN	5.73	17.2	9.40	11.6	17.1	21.7	108	226	102	41.8	24.2	6.11
MAX	17	28	13	16	31	32	269	309	248	106	116	22
MIN	3.2	9.5	7.1	8.4	7.6	18	37	138	44	20	9.5	.00
AC-FT	352	1020	578	715	986	1330	6440	13900	6100	2570	1490	364

e Estimated.

11230520 BEAR CREEK CONDUIT NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.60	10.3	7.36	8.87	11.8	28.2	97.5	188	192	64.0	20.7	8.02
MAX	19.0	19.0	15.5	19.3	22.4	40.2	138	226	326	137	30.8	13.8
(WY)	1987	1988	1988	1988	1988	1988	1989	1992	1991	1991	1991	1991
MIN	3.23	3.68	3.23	3.46	4.12	17.4	43.2	150	102	41.8	10.6	4.53
(WY)	1989	1991	1991	1991	1991	1987	1991	1990	1992	1992	1989	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	23195.8		18073.90			
ANNUAL MEAN	63.6		49.4		53.9	
HIGHEST ANNUAL MEAN					61.8	
LOWEST ANNUAL MEAN					49.2	
HIGHEST DAILY MEAN	462	Jun 11	309	May 8	462	Jun 11 1991
LOWEST DAILY MEAN	2.8	Feb 2	.00	Sep 20	.00	Oct 18 1988
ANNUAL SEVEN-DAY MINIMUM	3.0	Jan 28	3.3	Sep 15	.90	Oct 17 1988
ANNUAL RUNOFF (AC-FT)	46010		35850		39030	
10 PERCENT EXCEEDS	240		177		173	
50 PERCENT EXCEEDS	19		19		18	
90 PERCENT EXCEEDS	3.6		5.3		3.6	

SAN JOAQUIN RIVER BASIN

11230530 BEAR CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA
(Formerly published as Bear Creek at Diversion Dam, near Lake Thomas A. Edison)

LOCATION (REVISED).--Lat 37°20'08", long 118°58'29", unsurveyed, T.7 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 60 ft downstream from diversion dam, 2.5 mi south of Lake Thomas A. Edison, and 18.3 mi east of town of Big Creek.

DRAINAGE AREA.--52.8 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 7,338.30 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Low and medium flow regulated at diversion dam. Most of the flow is diverted at the diversion dam to Bear Creek conduit (station 11230520), then to Ward tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 156 ft³/s, June 12, 1991; minimum daily, 0.94 ft³/s, Oct. 15, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.8 ft³/s, Aug. 17-19, gage height 0.52 ft; minimum daily, 1.3 ft³/s, Apr. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.8	1.5	1.5	1.6	1.6	1.6	2.6	2.4	2.6	2.6	2.5
2	2.7	1.8	1.5	1.5	1.6	1.6	1.6	2.6	2.5	2.6	2.5	2.5
3	2.3	1.8	1.5	1.6	1.6	1.5	1.5	2.5	2.5	2.5	2.4	2.5
4	1.7	1.8	1.5	1.7	1.6	1.5	1.5	2.6	2.5	2.5	2.4	2.5
5	1.7	1.7	1.5	1.8	1.5	1.5	1.5	2.6	2.5	2.5	2.4	2.5
6	1.6	1.7	1.5	1.8	1.5	1.5	1.5	2.6	2.5	2.5	2.4	2.5
7	1.6	1.7	1.5	1.8	1.6	1.6	1.5	2.7	2.5	2.5	2.4	2.5
8	1.7	1.7	1.6	1.7	1.6	1.6	1.5	2.7	2.5	2.5	2.4	2.5
9	1.7	1.6	1.5	1.8	1.6	1.6	1.5	2.7	2.5	2.5	2.4	2.5
10	1.7	1.7	1.5	1.7	1.6	1.6	1.5	2.6	2.5	2.4	2.4	2.5
11	1.7	1.7	1.5	1.8	1.6	1.7	1.5	2.6	2.5	2.4	2.4	2.5
12	1.7	1.6	1.6	1.8	1.7	1.7	1.5	2.6	2.5	2.5	2.4	2.5
13	1.7	1.5	1.6	1.8	1.7	1.7	1.5	2.6	2.5	2.5	2.5	2.5
14	1.8	1.5	1.6	1.7	1.6	1.7	1.5	2.6	2.4	2.5	2.5	2.5
15	1.8	1.5	1.6	1.5	1.6	1.7	1.5	2.6	2.4	2.5	2.5	2.5
16	1.8	1.5	1.5	1.5	1.6	1.7	1.5	2.6	2.4	2.5	2.6	2.5
17	1.8	1.6	1.6	1.5	1.7	1.6	1.5	2.6	2.4	2.6	2.8	2.5
18	1.7	1.6	1.6	1.5	1.7	1.6	1.5	2.6	2.4	2.6	2.8	2.5
19	1.8	1.6	1.6	1.5	1.7	1.6	1.5	2.6	2.4	2.6	2.8	2.5
20	1.8	1.6	1.6	1.5	1.7	1.6	1.5	2.6	2.4	2.5	2.7	2.6
21	1.8	1.6	1.6	1.5	1.6	1.6	1.5	2.5	2.4	2.5	2.7	2.7
22	1.7	1.6	1.6	1.5	1.7	1.6	1.5	e2.6	2.4	2.4	2.7	2.6
23	1.7	1.5	1.6	1.5	1.7	1.5	1.5	e2.6	2.4	2.3	2.5	2.4
24	1.7	1.5	1.5	1.5	1.7	1.5	1.5	e2.6	2.4	2.2	2.5	2.4
25	1.7	1.5	1.5	1.5	1.7	1.5	1.5	e2.6	2.4	2.3	2.5	2.4
26	1.7	1.5	1.5	1.5	1.7	1.5	1.4	e2.6	2.4	2.6	2.5	2.4
27	1.7	1.5	1.5	1.5	1.6	1.5	1.3	e2.6	2.6	2.6	2.5	2.4
28	1.7	1.5	1.5	1.6	1.6	1.5	1.4	2.5	2.6	2.6	2.5	2.4
29	1.7	1.5	1.5	1.6	1.5	1.5	1.4	2.5	2.6	2.6	2.5	2.4
30	1.7	1.5	1.5	1.6	---	1.5	1.9	2.4	2.6	2.6	2.5	2.4
31	1.8	---	1.5	1.6	---	1.5	---	2.4	---	2.6	2.5	---
TOTAL	55.9	48.2	47.7	49.9	47.2	48.9	45.1	80.1	74.0	77.6	78.2	74.6
MEAN	1.80	1.61	1.54	1.61	1.63	1.58	1.50	2.58	2.47	2.50	2.52	2.49
MAX	2.7	1.8	1.6	1.8	1.7	1.7	1.9	2.7	2.6	2.6	2.8	2.7
MIN	1.6	1.5	1.5	1.5	1.5	1.5	1.3	2.4	2.4	2.2	2.4	2.4
AC-FT	111	96	95	99	94	97	89	159	147	154	155	148

e Estimated.

11230530 BEAR CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.87	1.64	1.70	1.73	1.70	1.75	1.95	2.98	7.21	2.68	2.70	3.29
MAX	2.34	2.18	2.27	2.15	2.28	2.32	2.98	4.00	29.7	2.75	2.85	6.43
(WY)	1987	1987	1987	1987	1987	1987	1991	1987	1991	1989	1989	1989
MIN	1.33	1.38	1.43	1.49	1.46	1.48	1.42	2.57	2.47	2.50	2.52	2.46
(WY)	1988	1990	1988	1990	1988	1988	1990	1991	1992	1992	1992	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	1624.5		727.4			
ANNUAL MEAN	4.45		1.99		2.60	
HIGHEST ANNUAL MEAN					4.44	1991
LOWEST ANNUAL MEAN					1.98	1990
HIGHEST DAILY MEAN	156	Jun 12	2.8	Aug 17	156	Jun 12 1991
LOWEST DAILY MEAN	1.5	Apr 25	1.3	Apr 27	.94	Oct 15 1987
ANNUAL SEVEN-DAY MINIMUM	1.5	Nov 23	1.4	Apr 23	1.0	Oct 10 1987
INSTANTANEOUS PEAK FLOW			2.8	Aug 17		
INSTANTANEOUS PEAK STAGE			.52	Aug 17		
ANNUAL RUNOFF (AC-FT)	3220		1440		1880	
10 PERCENT EXCEEDS	2.9		2.6		2.8	
50 PERCENT EXCEEDS	1.8		1.7		2.2	
90 PERCENT EXCEEDS	1.6		1.5		1.5	

SAN JOAQUIN RIVER BASIN

11230560 CHINQUAPIN CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA
(Formerly published as Chinquapin Creek at Diversion Dam, near Big Creek)

LOCATION (REVISED).--Lat 37°18'26", long 119°01'08", unsurveyed, T.7 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 30 ft downstream from diversion dam to Ward tunnel, 0.7 mi upstream from mouth, 1.7 mi south of Mono Hot Springs, and 14.0 mi northeast of town of Big Creek.

DRAINAGE AREA.--1.65 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records of fishery release normally computed only during periods of diversion to Ward tunnel. During the current year diversion occurred from Apr. 18 to June 16, July 12-17. Estimated daily discharges include spill water bypassing the station. See schematic diagram of upper San Joaquin River basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.4	1.4	---	---	---
2	---	---	---	---	---	---	---	1.4	1.3	---	---	---
3	---	---	---	---	---	---	---	1.4	1.3	---	---	---
4	---	---	---	---	---	---	---	1.3	1.3	---	---	---
5	---	---	---	---	---	---	---	1.3	1.3	---	---	---
6	---	---	---	---	---	---	---	1.3	1.3	---	---	---
7	---	---	---	---	---	---	---	1.3	1.3	---	---	---
8	---	---	---	---	---	---	---	1.3	1.3	---	---	---
9	---	---	---	---	---	---	---	1.3	1.3	---	---	---
10	---	---	---	---	---	---	---	1.3	1.2	---	---	---
11	---	---	---	---	---	---	---	1.4	1.2	---	---	---
12	---	---	---	---	---	---	---	1.4	1.3	.83	---	---
13	---	---	---	---	---	---	---	1.3	1.3	1.1	---	---
14	---	---	---	---	---	---	---	1.3	1.3	1.1	---	---
15	---	---	---	---	---	---	---	1.2	1.3	1.1	---	---
16	---	---	---	---	---	---	---	1.3	1.2	1.1	---	---
17	---	---	---	---	---	---	---	1.3	---	1.0	---	---
18	---	---	---	---	---	---	e.86	1.3	---	---	---	---
19	---	---	---	---	---	---	.83	1.3	---	---	---	---
20	---	---	---	---	---	---	.85	1.3	---	---	---	---
21	---	---	---	---	---	---	.85	1.3	---	---	---	---
22	---	---	---	---	---	---	.82	1.4	---	---	---	---
23	---	---	---	---	---	---	.80	1.4	---	---	---	---
24	---	---	---	---	---	---	.80	1.4	---	---	---	---
25	---	---	---	---	---	---	.79	1.4	---	---	---	---
26	---	---	---	---	---	---	.69	1.4	---	---	---	---
27	---	---	---	---	---	---	.61	e5.0	---	---	---	---
28	---	---	---	---	---	---	e.66	e9.6	---	---	---	---
29	---	---	---	---	---	---	e1.6	e5.5	---	---	---	---
30	---	---	---	---	---	---	e1.7	1.3	---	---	---	---
31	---	---	---	---	---	---	---	1.4	---	---	---	---
TOTAL	---	---	---	---	---	---	---	57.5	---	---	---	---
MEAN	---	---	---	---	---	---	---	1.85	---	---	---	---
MAX	---	---	---	---	---	---	---	9.6	---	---	---	---
MIN	---	---	---	---	---	---	---	1.2	---	---	---	---
AC-FT	---	---	---	---	---	---	---	114	---	---	---	---

e Estimated.

11230600 CAMP 62 CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA
(Formerly published as Camp 62 Creek at Diversion Dam, near Big Creek)

LOCATION (REVISED).--Lat 37°18'32", long 119°01'37", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 30 ft downstream from diversion dam, 1.4 mi southwest of Mono Hot Springs, and 13.5 mi northeast of town of Big Creek.

DRAINAGE AREA.--1.97 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,320 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records of fishery release normally are computed only during periods of diversion to Ward tunnel. Diversion during the current year occurred Apr. 18 to July 9, July 12-20, Aug. 14-18. Estimated daily discharges include leakage and spill water bypassing the station. See schematic diagram of upper San Joaquin River basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e.88	e1.1	e.76	---	---
2	---	---	---	---	---	---	---	.83	e1.1	e.75	---	---
3	---	---	---	---	---	---	---	.74	e1.1	e.74	---	---
4	---	---	---	---	---	---	---	.70	e1.1	e.74	---	---
5	---	---	---	---	---	---	---	e1.2	e1.1	e.74	---	---
6	---	---	---	---	---	---	---	e3.6	e.93	e.74	---	---
7	---	---	---	---	---	---	---	e7.0	e.70	e.72	---	---
8	---	---	---	---	---	---	---	e5.9	e.93	e.59	---	---
9	---	---	---	---	---	---	---	e3.1	e1.2	e.59	---	---
10	---	---	---	---	---	---	---	e.82	e1.2	---	---	---
11	---	---	---	---	---	---	---	e.89	e1.0	---	---	---
12	---	---	---	---	---	---	---	e.92	e.79	e.54	---	---
13	---	---	---	---	---	---	---	.71	e.80	e.65	---	---
14	---	---	---	---	---	---	---	.51	e.79	e.76	e.45	---
15	---	---	---	---	---	---	---	.81	e.79	e.76	.44	---
16	---	---	---	---	---	---	---	.82	e.79	e.74	.44	---
17	---	---	---	---	---	---	---	.87	e.79	e.74	.42	---
18	---	---	---	---	---	---	e3.3	.85	e.77	e.70	.41	---
19	---	---	---	---	---	---	.76	.83	e.76	e.70	---	---
20	---	---	---	---	---	---	.76	.83	e.76	e.60	---	---
21	---	---	---	---	---	---	.75	.84	e.76	---	---	---
22	---	---	---	---	---	---	.79	.83	e.76	---	---	---
23	---	---	---	---	---	---	.78	.78	e.76	---	---	---
24	---	---	---	---	---	---	.75	.72	e.76	---	---	---
25	---	---	---	---	---	---	e1.7	.73	e.76	---	---	---
26	---	---	---	---	---	---	e2.9	.74	e.76	---	---	---
27	---	---	---	---	---	---	e1.3	e14	e.76	---	---	---
28	---	---	---	---	---	---	e2.9	e15	e.76	---	---	---
29	---	---	---	---	---	---	e.72	e6.4	e.76	---	---	---
30	---	---	---	---	---	---	e.61	e13	e.76	---	---	---
31	---	---	---	---	---	---	---	e4.2	---	---	---	---
TOTAL	---	---	---	---	---	---	---	90.05	26.10	---	---	---
MEAN	---	---	---	---	---	---	---	2.90	.87	---	---	---
MAX	---	---	---	---	---	---	---	15	1.2	---	---	---
MIN	---	---	---	---	---	---	---	.51	.70	---	---	---
AC-FT	---	---	---	---	---	---	---	179	52	---	---	---

e Estimated.

SAN JOAQUIN RIVER BASIN

11230670 BOLSILLO CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°18'43", long 119°02'23", unsurveyed, T.7 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 50 ft downstream from diversion dam, 1.5 mi upstream from mouth, 1.7 mi southwest of Mono Hot Springs, and 13.3 mi northeast of town of Big Creek.

DRAINAGE AREA.--1.40 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records of fishery release normally computed only during periods of diversion to Ward tunnel. Diversion during the current water year occurred Oct. 26, Apr. 20 to June 18, June 23, 24, July 12-16, and Aug. 13, 14. See schematic diagram of upper San Joaquin River basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	.59	.56	---	---	---
2	---	---	---	---	---	---	---	.59	.56	---	---	---
3	---	---	---	---	---	---	---	.59	.56	---	---	---
4	---	---	---	---	---	---	---	.59	.56	---	---	---
5	---	---	---	---	---	---	---	.59	.54	---	---	---
6	---	---	---	---	---	---	---	.59	.54	---	---	---
7	---	---	---	---	---	---	---	.59	.54	---	---	---
8	---	---	---	---	---	---	---	.59	.54	---	---	---
9	---	---	---	---	---	---	---	.59	.54	---	---	---
10	---	---	---	---	---	---	---	.59	.54	---	---	---
11	---	---	---	---	---	---	---	.59	.54	---	---	---
12	---	---	---	---	---	---	---	.59	.54	.50	---	---
13	---	---	---	---	---	---	---	.59	.54	.53	.39	---
14	---	---	---	---	---	---	---	.59	.54	.54	.41	---
15	---	---	---	---	---	---	---	.59	.54	.54	---	---
16	---	---	---	---	---	---	---	.59	.54	.53	---	---
17	---	---	---	---	---	---	---	.59	.54	---	---	---
18	---	---	---	---	---	---	---	.59	.54	---	---	---
19	---	---	---	---	---	---	---	.58	---	---	---	---
20	---	---	---	---	---	---	.56	.56	---	---	---	---
21	---	---	---	---	---	---	.56	.56	---	---	---	---
22	---	---	---	---	---	---	.56	.56	---	---	---	---
23	---	---	---	---	---	---	.54	.56	.44	---	---	---
24	---	---	---	---	---	---	.56	.56	.54	---	---	---
25	---	---	---	---	---	---	.56	.56	---	---	---	---
26	.34	---	---	---	---	---	.56	.56	---	---	---	---
27	---	---	---	---	---	---	.57	.78	---	---	---	---
28	---	---	---	---	---	---	.59	.60	---	---	---	---
29	---	---	---	---	---	---	.59	.56	---	---	---	---
30	---	---	---	---	---	---	.59	.56	---	---	---	---
31	---	---	---	---	---	---	---	.56	---	---	---	---
TOTAL	---	---	---	---	---	---	---	18.18	---	---	---	---
MEAN	---	---	---	---	---	---	---	.59	---	---	---	---
MAX	---	---	---	---	---	---	---	.78	---	---	---	---
MIN	---	---	---	---	---	---	---	.56	---	---	---	---
AC-FT	---	---	---	---	---	---	---	36	---	---	---	---

11231000 LAKE THOMAS A. EDISON NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°22'09", long 118°59'17", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in outlet works of Vermillion Valley dam on Mono Creek 18.1 mi northeast of town of Big Creek.

DRAINAGE AREA.--90.0 mi².

PERIOD OF RECORD.--October 1954 to current year. Prior to 1960, maximum and minimum daily contents were published.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by earthfill dam; dam completed and storage began Oct. 12, 1954. Usable capacity, 125,035 acre-ft between elevations 7,508.9 ft, invert of outlet works, and 7,642.50 ft, top of gates in service spillway. Water is diverted at times into lake from Warm Creek (station 11231700). Water is released for diversion to Ward tunnel via Mono Creek Conduit (station 11231550). See schematic diagram of upper San Joaquin River basin. Records, including extremes, represent contents at 2400 hours.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 125,983 acre-ft, Sept. 26, 1982, elevation, 7,643.55 ft; minimum since appreciable storage was attained, 4,553 acre-ft, Dec. 27, 1987, elevation, 7,552.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 46,732 acre-ft, June 24, elevation, 7,594.84 ft; minimum, 11,541 acre-ft, Feb. 6, elevation, 7,562.56 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated July 22, 1955)

7,550	3,567	7,580	28,515	7,620	85,006
7,555	6,147	7,590	40,454	7,630	102,367
7,560	9,521	7,600	53,769	7,640	120,424
7,570	18,137	7,610	68,616	7,644	127,820

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44611	43219	30854	21757	12941	12510	12745	22216	41052	44309	38186	30785
2	44584	42831	30477	21686	12611	12552	12830	22784	41637	43920	37875	30728
3	44519	42343	30079	21554	12268	12602	12984	23366	42176	43530	37579	30637
4	44506	41855	29636	21472	11959	12636	13138	23964	42703	43128	37284	30557
5	44479	41446	29255	21462	11656	12703	13283	24600	43154	42715	36976	30466
6	44453	41001	28829	21320	11541	12753	13420	25303	43608	42291	36607	30386
7	44427	40594	28493	21016	11558	12796	13582	26047	43985	41880	36436	30284
8	44414	40177	28072	20677	11558	12839	13757	26895	44296	41510	36412	30182
9	44388	39825	27674	20308	11558	12873	13958	27674	44597	41281	36339	30091
10	44361	39434	27288	19980	11623	12907	14177	28404	44886	41014	35924	30000
11	44335	39008	26873	19647	11672	12941	14386	29165	45109	40810	35461	29909
12	44335	38572	26491	19304	11753	12984	14617	29954	45318	40543	35015	29863
13	44309	38161	26100	18973	11770	13027	14876	30728	45463	40416	34653	29829
14	44283	37752	25723	18646	11786	13087	15126	31558	45607	40303	34243	29795
15	44257	37296	25335	18329	11900	13129	15358	32350	45766	40114	33970	29761
16	44231	36865	24940	18005	11933	13172	15595	33054	45898	40215	33553	29738
17	44205	36558	24557	17684	11967	13215	15886	33720	46004	40353	33208	29784
18	44192	36144	24143	17345	12000	13249	16223	34291	46097	40441	33042	29795
19	44166	35753	23775	17027	12042	13283	16509	34846	46189	40518	32866	29772
20	44140	35376	23419	16712	12076	13335	16851	35437	46295	40619	32690	29761
21	44114	34996	23042	16398	12117	13215	17203	35863	46414	40683	32503	29750
22	44075	34556	22670	16068	12151	12950	17505	36217	46547	40708	32339	29727
23	44049	34160	22392	15749	12176	12652	17760	36632	46692	40594	32116	29716
24	44010	33767	22299	15431	12209	12377	18090	37074	46732	40454	31893	29693
25	44010	33375	22206	15117	12251	12293	18531	37505	46428	40139	31685	29681
26	44153	32960	22113	14795	12301	12259	18992	37999	46083	39787	31489	29647
27	44153	32561	22011	14474	12351	12326	19519	38510	45713	39447	31293	29625
28	44153	32104	22001	14168	12410	12418	20168	39021	45384	39120	31131	29602
29	44205	31697	21990	13862	12460	12477	20866	39472	45043	38771	31016	29569
30	44062	31293	21929	13548	---	12577	21584	39963	44702	38497	30946	29546
31	43621	---	21848	13240	---	12669	---	40454	---	38497	30865	---
MAX	44611	43219	30854	21757	12941	13335	21584	40454	46732	44309	38186	30785
MIN	43621	31293	21848	13240	11541	12259	12745	22216	41052	38497	30865	29546
a	7592.47	7582.45	7573.76	7564.59	7563.67	7563.92	7573.50	7590.00	7593.30	7588.44	7582.08	7580.92
b	-990	-12328	-9445	-8608	-780	+209	+8915	+18870	+4248	-6205	-7632	-1319

CAL YR 1991 MAX 66806 MIN 12813 b +9069

WTR YR 1992 MAX 46732 MIN 11541 b -15065

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA

LOCATION (REVISED).--Lat 37°21'41", Long 118°59'28", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 0.5 mi upstream from diversion dam, 0.9 mi downstream from Vermilion Valley Dam, and 1.0 mi south of Lake Thomas A. Edison.

DRAINAGE AREA.--92.5 mi².

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 1011: 1943. WSP 1515: 1956. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,380 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Lake Thomas A. Edison (station 11231000) 1 mi upstream beginning Oct. 12, 1954. Water is diverted at times into the basin from Warm Creek (station 11231700) to Lake Thomas A. Edison. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft³/s, Sept. 26, 1982, gage height, 8.87 ft; minimum daily, 0.3 ft³/s, Nov. 11, 12, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 430 ft³/s, Aug. 10, gage height, 6.50 ft; minimum daily, 17 ft³/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	232	228	68	185	21	20	21	24	263	182	56
2	17	232	228	68	185	21	20	21	24	263	182	55
3	18	231	225	68	185	21	20	21	24	263	182	55
4	19	233	225	68	185	21	20	21	24	263	182	55
5	18	234	226	68	185	22	20	21	24	263	180	55
6	18	234	228	113	83	22	20	21	24	263	180	55
7	17	234	228	192	22	22	20	21	24	263	101	55
8	17	234	228	193	22	22	20	22	24	245	28	55
9	18	234	228	193	22	21	21	22	24	185	54	55
10	18	234	228	193	22	21	21	22	24	185	203	55
11	18	234	228	193	22	21	21	22	24	185	242	45
12	18	234	228	193	22	21	21	22	24	185	240	26
13	18	234	228	193	22	21	21	22	24	186	238	26
14	18	234	226	193	22	21	21	22	24	172	237	21
15	18	234	225	193	22	21	21	22	25	175	237	17
16	19	234	225	193	22	21	21	22	26	119	237	18
17	19	234	225	193	22	20	21	22	26	22	209	18
18	18	233	223	193	22	20	21	23	26	22	102	18
19	18	231	222	192	22	20	21	23	26	22	104	18
20	18	231	222	190	22	20	21	23	26	22	109	18
21	18	231	222	190	22	122	21	23	26	22	113	18
22	18	231	222	190	22	190	21	23	26	22	113	18
23	18	231	176	190	22	189	21	23	27	72	113	18
24	18	231	69	188	22	177	21	24	143	90	112	17
25	18	229	68	187	22	75	21	24	266	147	111	17
26	19	228	68	187	22	62	22	24	266	205	109	17
27	19	228	68	187	22	20	22	24	266	204	108	17
28	19	228	68	187	22	20	22	24	266	204	96	17
29	19	228	68	187	22	20	22	24	266	204	61	17
30	64	228	68	186	---	20	22	24	264	154	55	17
31	229	---	68	185	---	20	---	24	---	143	56	---
TOTAL	818	6958	5689	5214	1514	1335	627	697	2307	5033	4476	949
MEAN	26.4	232	184	168	52.2	43.1	20.9	22.5	76.9	162	144	31.6
MAX	229	234	228	193	185	190	22	24	266	263	242	56
MIN	17	228	68	68	22	20	20	21	24	22	28	17
AC-FT	1620	13800	11280	10340	3000	2650	1240	1380	4580	9980	8880	1880

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1954, BY WATER YEAR (WY)

MEAN	24.4	29.4	31.4	33.3	39.8	59.4	170	457	548	270	79.6	31.3
MAX	60.8	124	127	76.8	74.4	94.8	282	714	1135	672	233	86.6
(WY)	1946	1951	1951	1951	1951	1934	1926	1952	1938	1938	1938	1938
MIN	11.3	10.5	12.0	14.0	17.0	25.0	77.8	197	79.6	36.6	17.6	11.5
(WY)	1925	1930	1931	1949	1949	1924	1948	1933	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1922 - 1954

ANNUAL MEAN	148	
HIGHEST ANNUAL MEAN	268	1938
LOWEST ANNUAL MEAN	52.8	1924
HIGHEST DAILY MEAN	1550	Jun 3 1938
LOWEST DAILY MEAN	8.0	Sep 29 1924
ANNUAL SEVEN-DAY MINIMUM	8.1	Sep 28 1924
INSTANTANEOUS PEAK FLOW	1760	Jun 2 1938
INSTANTANEOUS PEAK STAGE	8.62	Jun 2 1938
ANNUAL RUNOFF (AC-FT)	107300	
10 PERCENT EXCEEDS	470	
50 PERCENT EXCEEDS	48	
90 PERCENT EXCEEDS	18	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.6	157	211	231	217	171	118	63.1	74.1	193	218	156
MAX	240	349	437	467	472	479	647	515	577	635	414	392
(WY)	1986	1981	1968	1984	1973	1973	1983	1983	1969	1983	1983	1968
MIN	11.0	12.1	9.05	9.95	10.4	13.8	12.7	12.7	11.5	12.1	12.2	14.0
(WY)	1972	1982	1991	1991	1991	1990	1966	1966	1977	1977	1981	1966

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1956 - 1992

ANNUAL TOTAL	32453.2		35617	
ANNUAL MEAN	88.9		97.3	
HIGHEST ANNUAL MEAN				158
LOWEST ANNUAL MEAN				366
HIGHEST DAILY MEAN				53.2
LOWEST DAILY MEAN	420	Aug 4	266	Jun 25
ANNUAL SEVEN-DAY MINIMUM	4.4	Jan 1	17	Oct 1
INSTANTANEOUS PEAK FLOW	4.6	Jan 1	17	Sep 24
INSTANTANEOUS PEAK STAGE			430	Aug 10
ANNUAL RUNOFF (AC-FT)	64370		70650	114500
10 PERCENT EXCEEDS	234		232	420
50 PERCENT EXCEEDS	25		26	92
90 PERCENT EXCEEDS	10		18	13

11231550 MONO CREEK CONDUIT NEAR MONO HOT SPRINGS, CA

LOCATION (REVISED).--Lat 37°21'36", long 118°59'51", unsurveyed, T.6 1/2 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 40 ft upstream from diversion dam, 1.0 mi southwest of Lake Thomas A. Edison, and 2.5 mi northeast of Mono Hot Springs.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Discharge computed as difference between flow at Mono Creek below Lake Thomas A. Edison (station 11231500) and Mono Creek below diversion dam (station 11231600). Datum of conduit invert is 7,338 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Conduit diverts at diversion dam on Mono Creek to Ward tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 442 ft³/s, Aug. 7, 9, 10, 1989; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	226	222	62	178	15	14	11	14	253	172	46
2	4.0	226	222	62	179	15	14	11	14	253	172	45
3	7.0	225	219	62	179	15	14	11	14	253	172	45
4	12	227	219	62	179	15	14	11	14	253	172	45
5	11	228	220	62	179	16	14	11	14	253	170	45
6	11	228	222	106	77	16	14	11	14	253	170	45
7	10	228	222	185	16	16	14	11	14	253	90	45
8	10	228	222	186	16	16	14	12	14	235	17	45
9	11	228	222	186	16	15	15	12	14	175	44	45
10	11	228	222	186	16	15	15	12	14	175	192	45
11	11	228	222	186	16	15	15	12	14	175	232	35
12	11	228	222	186	16	15	15	12	14	175	230	16
13	11	228	222	186	16	15	15	12	14	176	228	16
14	11	228	220	186	16	15	15	12	14	162	227	11
15	11	228	219	186	16	15	15	12	15	165	227	7.2
16	12	228	219	186	16	15	15	12	16	108	227	8.2
17	12	228	219	186	16	14	15	12	16	11	199	8.2
18	11	227	217	186	16	14	15	13	16	11	93	8.2
19	11	225	216	185	16	14	15	13	16	11	94	8.0
20	11	225	216	183	16	14	15	13	16	11	99	7.0
21	11	225	216	183	16	116	15	13	15	11	103	6.0
22	11	225	216	183	16	184	15	13	15	11	e103	7.0
23	11	225	170	183	16	183	15	13	16	61	e103	8.0
24	11	225	63	181	16	171	15	14	133	79	e102	7.0
25	11	223	62	180	16	69	15	14	256	136	e101	7.0
26	12	222	62	180	16	56	16	14	256	194	e99	7.0
27	12	222	62	180	16	14	16	14	256	194	e98	7.0
28	12	222	62	180	16	14	16	14	256	194	e86	7.0
29	12	222	62	180	16	14	16	14	256	193	e51	7.0
30	57	222	62	179	---	14	14	14	254	143	e45	7.0
31	222	---	62	178	---	14	---	14	---	132	e46	---
TOTAL	585.0	6778	5503	5002	1339	1149	445	387	2004	4709	4164	645.8
MEAN	18.9	226	178	161	46.2	37.1	14.8	12.5	66.8	152	134	21.5
MAX	222	228	222	186	179	184	16	14	256	253	232	46
MIN	4.0	222	62	62	16	14	14	11	14	11	17	6.0
AC-FT	1160	13440	10920	9920	2660	2280	883	768	3970	9340	8260	1280

e Estimated.

11231550 MONO CREEK CONDUIT NEAR MONO HOT SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.9	99.0	114	71.1	17.2	51.4	89.9	47.3	78.7	193	265	95.7
MAX	125	226	421	213	46.2	185	214	124	155	417	383	308
(WY)	1988	1992	1987	1987	1992	1987	1987	1988	1989	1989	1989	1987
MIN	13.8	12.6	1.39	4.08	3.72	8.00	14.8	6.07	8.45	9.30	134	11.8
(WY)	1990	1989	1991	1991	1991	1990	1992	1989	1990	1990	1992	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1987 - 1992
ANNUAL TOTAL	29530.90	32710.8	
ANNUAL MEAN	80.9	89.4	98.7
HIGHEST ANNUAL MEAN			204
LOWEST ANNUAL MEAN			50.5
HIGHEST DAILY MEAN	410	256	442
LOWEST DAILY MEAN	.00	4.0	.00
ANNUAL SEVEN-DAY MINIMUM	.00	7.0	.00
ANNUAL RUNOFF (AC-FT)	58570	64880	71530
10 PERCENT EXCEEDS	228	226	374
50 PERCENT EXCEEDS	16	16	17
90 PERCENT EXCEEDS	3.8	11	6.1

11231600 MONO CREEK BELOW DIVERSION DAM, NEAR MONO HOT SPRINGS, CA
(Formerly published as Mono Creek at Diversion Dam, near Mono Hot Springs)

LOCATION (REVISED).--Lat 37°21'36", long 118°59'51", unsurveyed, T.6 1/2 S, R.27 E, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 20 ft downstream from diversion dam, 1.0 mi southwest of Lake Thomas A. Edison, and 2.5 mi northeast of Mono Hot Springs.

DRAINAGE AREA.--92.8 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Elevation of gage is 7,340 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1991, at datum 10 ft higher.

REMARKS.--Flow regulated by diversion reservoir and Lake Thomas A. Edison (station 11231000). Most of the flow is diverted at the diversion dam to Mono Creek Conduit (station 11231550), then to Ward tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 38 ft³/s, June 21, 1989; minimum daily, 4.1 ft³/s, Dec. 12-16, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s, Oct. 1-3 gage height, 11.53 ft; minimum daily, 5.5 ft³/s, Nov. 29 to Dec. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.9	5.5	6.3	6.5	5.8	5.8	10	10	10	10	9.9
2	13	5.6	5.5	6.3	6.3	5.8	5.8	10	10	10	10	9.9
3	11	5.6	5.5	6.2	6.3	5.8	5.8	10	10	10	10	9.9
4	7.2	5.7	5.5	6.2	6.3	5.8	5.8	10	10	10	10	9.9
5	7.2	5.7	5.6	6.2	6.3	5.9	5.8	10	10	10	10	9.9
6	7.0	5.7	5.8	6.5	6.0	5.9	5.8	10	10	9.9	10	9.9
7	7.0	5.7	5.8	6.6	5.8	5.9	5.8	10	10	10	11	9.9
8	6.9	5.7	5.8	6.6	5.8	5.9	5.8	10	10	10	11	9.8
9	6.9	5.7	5.8	6.6	5.9	5.9	5.7	10	10	9.8	9.7	9.9
10	6.8	5.6	5.8	6.6	5.9	5.9	5.7	10	10	9.8	11	9.9
11	6.8	5.6	5.8	6.6	5.9	5.8	5.7	10	10	10	10	10
12	6.9	5.6	5.8	6.5	5.9	5.8	5.7	10	10	10	10	10
13	6.9	5.6	5.8	6.5	5.9	5.8	5.8	10	10	10	10	9.8
14	6.9	5.6	5.8	6.5	5.9	5.8	5.8	10	10	10	10	9.7
15	6.9	5.6	5.8	6.5	5.9	5.8	5.8	10	10	10	10	9.8
16	6.9	5.6	5.8	6.5	6.3	5.8	5.8	10	10	11	9.9	9.8
17	6.9	5.6	5.8	6.5	5.8	5.8	5.8	10	10	11	9.5	9.8
18	7.0	5.6	5.8	6.5	5.8	5.8	5.9	10	10	11	9.2	9.8
19	7.0	5.6	5.8	6.5	5.8	5.8	5.9	10	10	11	9.8	10
20	7.0	5.6	5.9	6.5	5.9	5.8	5.9	10	10	11	10	11
21	7.0	5.6	5.9	6.5	5.9	6.2	5.9	10	11	11	10	12
22	7.0	5.6	6.0	6.5	5.9	6.3	5.9	10	11	11	e10	11
23	7.2	5.6	5.8	6.5	5.9	6.3	5.9	10	11	11	e10	10
24	7.2	5.6	5.7	6.5	5.9	6.3	5.9	10	10	11	e10	10
25	7.2	5.6	5.7	6.5	5.9	6.4	5.9	10	10	11	e10	10
26	7.2	5.6	5.9	6.5	5.8	5.9	5.8	10	9.8	11	e10	10
27	7.2	5.6	6.2	6.5	5.8	5.8	5.8	10	9.9	10	e10	10
28	7.2	5.6	6.2	6.5	5.8	5.8	5.8	10	10	10	e9.8	10
29	7.2	5.5	6.2	6.5	5.8	5.8	5.8	10	10	11	e10	10
30	7.3	5.5	6.2	6.5	---	5.8	7.8	10	10	11	e9.9	10
31	6.9	---	6.3	6.5	---	5.8	---	10	---	11	e9.9	---
TOTAL	233.8	168.7	180.8	200.7	172.9	183.0	176.4	310	302.7	323.5	310.7	301.6
MEAN	7.54	5.62	5.83	6.47	5.96	5.90	5.88	10.0	10.1	10.4	10.0	10.1
MAX	13	5.9	6.3	6.6	6.5	6.4	7.8	10	11	11	11	12
MIN	6.8	5.5	5.5	6.2	5.8	5.8	5.7	10	9.8	9.8	9.2	9.7
AC-FT	464	335	359	398	343	363	350	615	600	642	616	598

e Estimated.

11231600 MONO CREEK AT DIVERSION DAM, NEAR MONO HOT SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.16	6.99	6.78	6.44	6.55	6.53	6.75	10.4	11.2	10.9	10.7	10.8
MAX	10.5	9.32	8.47	8.15	8.42	9.20	9.55	11.1	12.9	14.1	12.7	12.5
(WY)	1987	1991	1987	1987	1987	1987	1987	1987	1987	1987	1987	1989
MIN	6.96	5.62	5.83	5.81	5.86	5.84	5.88	9.94	9.98	9.91	10.0	10.1
(WY)	1990	1992	1992	1990	1990	1990	1992	1991	1990	1991	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	2894.1		2864.8			
ANNUAL MEAN	7.93		7.83		8.52	
HIGHEST ANNUAL MEAN					10.4	
LOWEST ANNUAL MEAN					7.83	
HIGHEST DAILY MEAN	13	Oct 1	13	Oct 1	38	Jun 21 1989
LOWEST DAILY MEAN	4.4	Jan 1	5.5	Nov 29	4.1	Dec 12 1990
ANNUAL SEVEN-DAY MINIMUM	4.6	Jan 1	5.5	Nov 28	4.2	Dec 12 1990
INSTANTANEOUS PEAK FLOW			13	Oct 1		
INSTANTANEOUS PEAK STAGE			11.53	Oct 1		
ANNUAL RUNOFF (AC-FT)	5740		5680		6170	
10 PERCENT EXCEEDS	11		10		11	
50 PERCENT EXCEEDS	7.0		6.8		8.5	
90 PERCENT EXCEEDS	5.6		5.7		5.8	

11231700 WARM CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA
(Formerly published as Warm Creek at Diversion Dam, near Lake Thomas A. Edison)

LOCATION (REVISED).--Lat 37°23'31", long 119°01'39", unsurveyed, T.6 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 40 ft downstream from diversion dam, 1.5 mi northwest of Lake Thomas A. Edison, and 17.4 mi northeast of town of Big Creek.

DRAINAGE AREA.--2.14 mi² (revised).

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 8,030 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records of fishery release normally computed only during periods of diversion to Lake Thomas A. Edison. During the current year, diversion occurred from Apr. 18 to July 3, July 11-18. See schematic diagram of upper San Joaquin River basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	.46	.40	.28	---	---
2	---	---	---	---	---	---	---	.46	.38	.27	---	---
3	---	---	---	---	---	---	---	.46	.38	.26	---	---
4	---	---	---	---	---	---	---	.46	.38	---	---	---
5	---	---	---	---	---	---	---	.46	.38	---	---	---
6	---	---	---	---	---	---	---	.46	.38	---	---	---
7	---	---	---	---	---	---	---	.46	.38	---	---	---
8	---	---	---	---	---	---	---	.46	.38	---	---	---
9	---	---	---	---	---	---	---	.46	.38	---	---	---
10	---	---	---	---	---	---	---	.46	.38	---	---	---
11	---	---	---	---	---	---	---	.46	.38	.24	---	---
12	---	---	---	---	---	---	---	.46	.37	.29	---	---
13	---	---	---	---	---	---	---	.44	.36	.29	---	---
14	---	---	---	---	---	---	---	.44	.36	.30	---	---
15	---	---	---	---	---	---	---	.44	.36	.30	---	---
16	---	---	---	---	---	---	---	.44	.36	.30	---	---
17	---	---	---	---	---	---	---	.44	.33	.30	---	---
18	---	---	---	---	---	---	1.3	.44	.29	.28	---	---
19	---	---	---	---	---	---	.44	.44	.29	---	---	---
20	---	---	---	---	---	---	.44	.44	.29	---	---	---
21	---	---	---	---	---	---	.44	.44	.29	---	---	---
22	---	---	---	---	---	---	.44	.44	.27	---	---	---
23	---	---	---	---	---	---	.44	.42	.28	---	---	---
24	---	---	---	---	---	---	.45	.42	.31	---	---	---
25	---	---	---	---	---	---	.46	.42	.29	---	---	---
26	---	---	---	---	---	---	.46	.42	.29	---	---	---
27	---	---	---	---	---	---	.46	.42	.28	---	---	---
28	---	---	---	---	---	---	.46	.42	.27	---	---	---
29	---	---	---	---	---	---	.46	.42	.28	---	---	---
30	---	---	---	---	---	---	.46	.42	.28	---	---	---
31	---	---	---	---	---	---	---	.40	---	---	---	---
TOTAL	---	---	---	---	---	---	---	13.68	10.05	---	---	---
MEAN	---	---	---	---	---	---	---	.44	.33	---	---	---
MAX	---	---	---	---	---	---	---	.46	.40	---	---	---
MIN	---	---	---	---	---	---	---	.40	.27	---	---	---
AC-FT	---	---	---	---	---	---	---	27	20	---	---	---

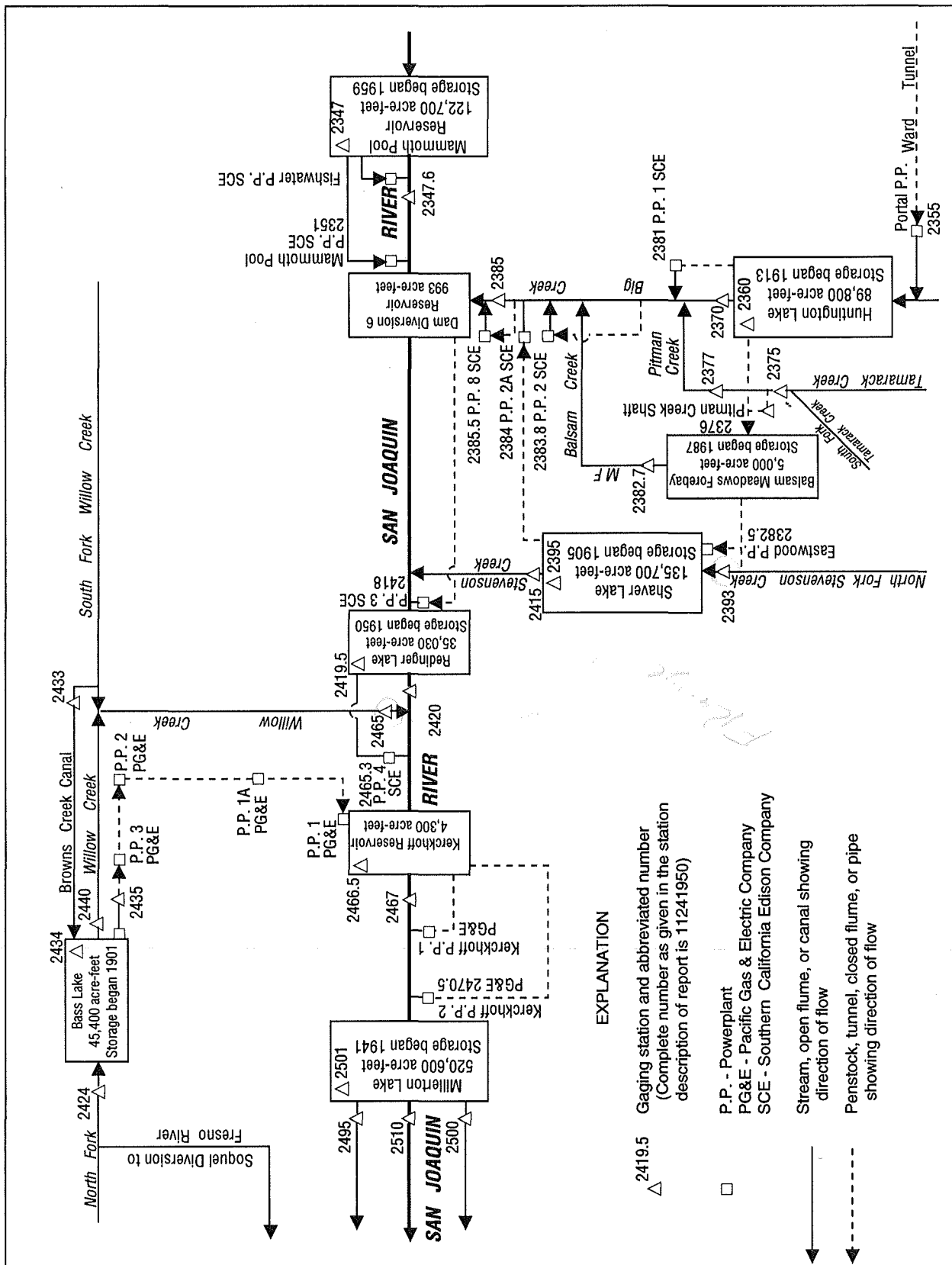


Figure 32. Diversions and storage in lower San Joaquin River basin.

11234700 MAMMOTH POOL RESERVOIR NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°19'40", long 119°19'38", in SE 1/4 SE 1/4 sec.10, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of power tunnel intake 0.7 mi northwest of dam on San Joaquin River, 9.0 mi northwest of town of Big Creek.
DRAINAGE AREA.--995 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by an earthfill dam; storage began Oct. 8, 1959. Usable capacity, 119,940 acre-ft between elevations 3,100.00 ft, invert of power tunnel, and 3,330.00 ft, crest of spillway. Additional storage of 2,780 acre-ft is not available for release. Water is diverted from basin through Ward tunnel (stations 11229500 and 11235500). Water is diverted from Mammoth Pool through tunnel for power development and returned to river 8.5 mi downstream from dam. Records, including extremes, represent usable contents at 2400 hours. See schematic diagrams of upper and lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 126,503 acre-ft, June 2, 3, 1969; maximum elevation, 3,335.86 ft, June 3, 1969; minimum contents since appreciable storage was attained, 1,134 acre-ft, Sept. 25, 1992, elevation, 3,112.82 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,423 acre-ft, June 7, elevation, 3,304.94 ft; minimum, 1,134 acre-ft, Sept. 25, elevation, 3,112.82 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Nov. 6, 1959)

3,100	0	3,130	3,114	3,180	14,060	3,260	56,381
3,105	417	3,140	4,605	3,190	17,414	3,280	72,109
3,110	861	3,150	6,402	3,200	21,400	3,300	89,781
3,115	1,355	3,160	8,618	3,220	31,109	3,320	109,336
3,120	1,900	3,170	11,165	3,240	42,787	3,336	126,661

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21074	7995	19430	27705	22655	21226	9475	50279	89466	90163	53714	18555
2	19841	8266	19724	27924	22571	20329	10315	51691	90117	89262	52231	17780
3	18719	8561	20003	28268	22336	19453	11807	53429	90797	88780	50757	16917
4	17833	8885	20280	28263	21829	18817	13607	54470	91256	87923	48850	16368
5	16461	9238	20530	28749	19918	18062	15813	55754	91781	86566	47327	15198
6	15271	9683	20805	28510	18269	17425	16519	57178	93183	85019	45311	14221
7	14347	10137	21082	28351	16657	16984	16543	59254	94423	83292	43825	13300
8	13440	10579	21366	27126	15126	16892	17569	61979	94338	81570	42322	12538
9	12340	11106	21642	25864	13977	15894	18536	64375	94072	79825	40891	11620
10	11041	11731	21916	25464	11900	15218	19374	66065	92872	78247	38978	10632
11	10274	12178	22196	25203	10619	14672	20003	67114	92627	77522	37012	9648
12	9688	12536	22452	24961	10412	14208	20051	68278	92128	77178	35859	9607
13	9081	12858	22700	24648	9477	13786	20659	69612	92307	76895	34108	9570
14	8476	13166	22959	24308	9660	13573	21846	71484	92260	76320	32797	9325
15	7831	13437	23205	24166	9954	13128	22460	72092	92166	75840	31618	8664
16	7133	13688	23436	24016	10212	12610	22376	72109	92664	75164	30392	7998
17	6311	14057	23695	23844	10433	11748	24144	73440	92533	74296	28863	7395
18	5457	14582	23966	23790	10453	10658	26473	73643	92110	73263	27202	6376
19	4767	14992	24226	24139	11217	9502	28068	74729	91912	72227	26120	5792
20	4807	15426	24444	23640	12636	8683	29673	75814	92307	70669	24970	4832
21	4338	15891	24685	23541	14005	8217	31250	75746	92580	69399	24121	3627
22	3993	16357	24942	23459	15326	7833	32478	76123	92504	68131	24244	2655
23	4087	16772	25208	23391	16626	7591	33389	76989	91856	66726	24185	1751
24	4218	17167	25455	23287	17595	7211	33846	78108	91490	65158	23464	1152
25	4398	17561	25691	23309	17791	6635	35664	79387	91321	63679	22834	1134
26	5556	17959	25941	23364	18458	6347	38346	80459	91537	62518	22148	1304
27	6437	18342	26195	23237	19069	6400	40139	81508	91059	61237	21375	1462
28	6844	18665	26543	23309	20136	6759	42379	82394	90182	60206	20893	1632
29	7172	18950	26954	23129	20738	7340	45046	83617	89725	58668	20234	1796
30	7468	19203	27303	22896	---	7711	48071	85709	90219	57089	19664	1954
31	7729	---	27526	22776	---	8398	---	87950	---	55305	19097	---
MAX	21074	19203	27526	28749	22655	21226	48071	87950	94423	90163	53714	18555
MIN	3993	7995	19430	22776	9477	6347	9475	50279	89466	55305	19097	1134
a	3156.17	3194.64	3213.15	3203.14	3198.43	3159.07	3248.15	3298.02	3300.47	3258.52	3194.37	3120.48
b	-14432	+11474	+8323	-4750	-2038	-12340	+39673	+39879	+2269	-34914	-36208	-17143

CAL YR 1991 MAX 113887 MIN 3993 b +13192

WTR YR 1992 MAX 94423 MIN 1134 b -20207

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°19'00", long 119°19'43", in NE 1/4 SE 1/4 sec.15, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft upstream from Shakeflat Creek, 4,900 ft downstream from Mammoth Pool Dam, and 9.0 mi northwest of town of Big Creek.

DRAINAGE AREA.--1,003 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 2,865.50 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Since 1961, supplementary water-stage recorder and sharp-crested weir at different datum at outlet of dam 4,900 ft upstream, used for low flows.

REMARKS.--No estimated daily discharges. Flow regulated by Mammoth Pool Reservoir (station 11234700) 4,900 ft upstream. Diversions upstream through Ward tunnel (see stations 11229500 and 11235500). Since March 1960, most of the water is diverted past this station to Mammoth Pool Powerplant (station 11235100). See schematic diagrams of upper and lower San Joaquin River basins.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s, June 3, 1969, gage height, 18.38 ft; minimum daily, 0.3 ft³/s, Oct. 14, Dec. 5, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s, Feb. 11, gage height, 2.98 ft; minimum daily, 12 ft³/s, on many days in November and December.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	17	12	13	13	13	16	16	14	15	14	14
2	15	17	12	13	13	13	16	15	14	15	14	14
3	16	17	12	13	13	13	15	15	14	15	15	14
4	16	16	12	13	13	13	15	15	14	15	14	14
5	16	14	12	13	13	13	16	16	14	15	14	14
6	16	12	12	15	14	13	16	19	14	15	14	14
7	15	12	12	18	14	13	16	19	14	14	14	14
8	15	12	12	18	13	13	16	19	14	14	14	14
9	15	12	12	18	13	13	16	19	14	14	14	13
10	15	12	12	18	17	13	16	19	14	14	14	13
11	15	13	12	18	22	13	15	17	14	16	14	13
12	15	13	12	18	23	13	15	14	14	20	14	13
13	15	12	12	16	20	13	15	14	14	19	15	13
14	15	12	12	13	15	13	15	14	14	20	15	13
15	16	12	12	13	20	13	15	14	15	19	15	13
16	16	12	12	13	20	13	15	14	15	20	15	13
17	16	12	12	13	18	13	15	14	15	20	15	14
18	16	12	13	13	17	13	15	14	15	20	15	21
19	16	12	15	13	17	13	15	14	15	20	15	21
20	16	12	13	13	18	13	15	14	15	17	15	21
21	16	12	13	13	18	13	15	15	15	15	15	20
22	16	12	13	13	18	13	15	14	15	15	15	20
23	15	12	13	13	18	13	15	14	15	15	15	19
24	16	12	13	13	15	13	15	14	15	15	15	14
25	16	12	13	13	13	13	15	14	15	15	15	14
26	16	12	13	13	13	16	16	14	15	15	15	14
27	16	12	13	13	13	16	16	14	15	14	14	14
28	16	12	13	13	13	16	16	14	15	14	14	14
29	16	12	13	13	13	16	16	14	15	14	14	14
30	16	12	13	13	---	16	16	16	15	14	14	14
31	16	---	13	13	---	16	---	16	---	14	14	---
TOTAL	485	383	388	438	460	421	463	474	436	497	449	450
MEAN	15.6	12.8	12.5	14.1	15.9	13.6	15.4	15.3	14.5	16.0	14.5	15.0
MAX	16	17	15	18	23	16	16	19	15	20	15	21
MIN	15	12	12	13	13	13	15	14	14	14	14	13
AC-FT	962	760	770	869	912	835	918	940	865	986	891	893
a	22140	0	0	15940	28260	53620	83220	72140	29870	55620	43190	21100

a Diversion, in acre-feet, to Mammoth Pool Powerplant, provided by Southern California Edison Co.

SAN JOAQUIN RIVER BASIN

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.6	12.8	15.3	29.3	59.6	80.8	166	1275	1957	737	66.0	22.1
MAX	61.9	20.1	66.3	422	754	1032	1724	9681	12400	5992	1184	45.3
(WY)	1960	1974	1967	1967	1980	1986	1980	1969	1983	1983	1983	1978
MIN	12.6	.82	3.06	10.2	10.8	10.9	12.3	12.9	11.8	12.4	12.8	12.4
(WY)	1961	1960	1960	1986	1985	1960	1964	1961	1961	1961	1972	1960

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1960 - 1992	
ANNUAL TOTAL	5514		5344		371	
ANNUAL MEAN	15.1		14.6		2022	
HIGHEST ANNUAL MEAN					13.2	
LOWEST ANNUAL MEAN					16400	
HIGHEST DAILY MEAN	48	Jun 14	23	Feb 12	16400	Jun 2 1969
LOWEST DAILY MEAN	12	Jan 1	12	Nov 6	.30	Oct 14 1959
ANNUAL SEVEN-DAY MINIMUM	12	Feb 20	12	Nov 13	.57	Dec 1 1959
INSTANTANEOUS PEAK FLOW			39	Feb 11	18400	Jun 3 1969
INSTANTANEOUS PEAK STAGE			2.98	Feb 11	18.38	Jun 3 1969
ANNUAL RUNOFF (AC-FT)	10940		10600		268700	
TOTAL DIVERSION (AC-FT) a	525600		425100			
10 PERCENT EXCEEDS	16		17		82	
50 PERCENT EXCEEDS	14		14		15	
90 PERCENT EXCEEDS	12		12		12	

a Diversion, in acre-feet, to Mammoth Pool Powerplant, provided by Southern California Edison Co.

11235500 PORTAL POWERPLANT AT HUNTINGTON LAKE, CA
(Formerly published as Ward Tunnel Outlet at Huntington Lake)

LOCATION (REVISED).--Lat 37°15'25", long 119°09'30", in SE 1/4 SW 1/4 sec.5, T.8 S., R.26 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in powerplant at tunnel outlet at east end of Huntington Lake, 0.9 mi east of Lakeshore Post Office, and 6 mi northeast of town of Big Creek.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1960, published as Ward tunnel at outlet.

GAGE.--Acoustic-velocity meter since Dec. 1, 1987. Oct. 1, 1968, to Nov. 30, 1987, pressure-differential recorder recorded discharge through penstock. November 1927 to May 23, 1956, water-stage recorder at datum 6,999.00 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). May 24, 1956, to Sept. 30, 1968, no recorder, see REMARKS below.

REMARKS.--No estimated daily discharges. Daily discharge for the period May 24, 1956, to Sept. 30, 1968, computed as the sum of Ward tunnel at intake, Mono-Bear conduit, Camp Creek conduit, and corrected for change in contents of Portal Forebay. Powerplant receives water from Florence Lake (station 11229600) via Ward tunnel, receives diversions from Bear and Mono Creeks (stations 11230500 and 11231550), and at times from several other small tributaries to South Fork San Joaquin River. See schematic diagrams of upper and lower San Joaquin River basins.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,080 ft³/s, June 21, 1935; no flqw at times many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	304	283	95	216	58	193	574	543	651	659	320
2	.00	302	273	70	212	191	184	626	572	575	658	299
3	62	302	275	130	200	93	234	602	536	514	565	270
4	200	280	270	120	202	101	279	603	576	574	526	230
5	212	276	224	97	203	91	270	683	566	562	526	305
6	216	303	318	164	198	111	266	649	528	582	513	293
7	208	303	246	226	6.6	103	281	719	523	485	354	310
8	248	302	247	239	3.5	118	314	658	344	568	.00	186
9	269	305	248	239	103	101	318	593	342	466	260	316
10	220	345	243	239	3.5	105	363	560	564	422	708	360
11	173	328	251	239	61	111	357	579	557	398	470	224
12	212	346	250	239	96	106	369	631	544	453	583	3.5
13	240	265	238	239	3.5	124	356	670	598	431	490	3.5
14	179	339	251	224	135	142	460	722	509	449	572	3.5
15	218	270	275	219	10	116	453	700	547	373	716	3.5
16	213	254	246	221	113	126	362	720	472	301	630	3.5
17	218	337	247	299	131	99	315	721	549	406	492	3.5
18	218	325	247	195	131	102	586	750	471	291	362	97
19	203	295	313	188	112	108	569	672	520	310	446	3.5
20	227	318	241	261	95	101	528	728	494	294	386	205
21	184	321	199	258	120	187	661	603	585	279	383	.00
22	185	321	295	228	114	306	484	378	529	231	405	70
23	182	325	213	148	143	278	483	424	552	374	393	447
24	149	294	45	220	70	297	491	427	482	532	384	225
25	157	299	133	219	158	192	698	461	604	681	374	216
26	196	281	93	218	160	120	677	465	613	664	368	218
27	212	283	92	218	153	151	587	450	563	665	357	194
28	371	212	73	218	215	142	697	438	607	664	370	220
29	575	318	100	218	153	156	735	483	566	628	298	207
30	165	263	95	203	---	166	664	523	516	529	250	145
31	301	---	107	193	---	153	---	532	---	612	357	---
TOTAL	6413.00	9016	6631	6284	3521.1	4355	13234	18344	15972	14964	13855.00	5381.50
MEAN	207	301	214	203	121	140	441	592	532	483	447	179
MAX	575	346	318	299	216	306	735	750	613	681	716	447
MIN	.00	212	45	70	3.5	58	184	378	342	231	.00	.00
AC-FT	12720	17880	13150	12460	6980	8640	26250	36390	31680	29680	27480	10670

11235500 PORTAL POWERPLANT AT HUNTINGTON LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	322	267	277	259	254	273	511	832	905	814	620	471
MAX	734	908	1102	793	806	815	953	1459	1665	1321	1126	1104
(WY)	1970	1983	1946	1985	1985	1985	1936	1946	1974	1956	1982	1983
MIN	.82	.81	5.29	13.4	10.3	78.8	98.9	119	3.93	150	147	2.00
(WY)	1946	1946	1991	1991	1991	1976	1991	1983	1938	1931	1934	1949

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	143563.00		117970.60			
ANNUAL MEAN	393		322		485	
HIGHEST ANNUAL MEAN					742	
LOWEST ANNUAL MEAN					196	
HIGHEST DAILY MEAN	1750	May 27	750	May 18	2080	Jun 21 1935
LOWEST DAILY MEAN	.00	May 3	.00	Oct 1	.00	Sep 18 1961
ANNUAL SEVEN-DAY MINIMUM	3.3	Feb 26	17	Sep 12	.00	Dec 2 1969
ANNUAL RUNOFF (AC-FT)	284800		234000		351400	
10 PERCENT EXCEEDS	1120		603		1060	
50 PERCENT EXCEEDS	246		280		455	
90 PERCENT EXCEEDS	3.5		101		61	

11236000 HUNTINGTON LAKE NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°14'04", long 119°12'44", in SW 1/4 sec.14, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gate tower of dam 1 on Big Creek, 2.7 mi northeast of town of Big Creek.

DRAINAGE AREA.--80.5 mi².

PERIOD OF RECORD.--April 1913 to current year. Prior to October 1926, monthly contents only, published in WSP 1315-A; 1926-31, published in WSP 721. Maximum and minimum daily contents (water years 1913-39) were summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Prior to June 19, 1920, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by four dams; storage began Apr. 11, 1913. Dams were raised in 1914 and again in 1917. Usable capacity, 89,166 acre-ft between elevations 6,819.90 ft, invert of outlet tunnel No. 1, and 6,950.00 ft, spillway crest at dam 1. Additional storage of 600 acre-ft is not available for release. Lake receives water from South Fork San Joaquin River basin via Ward tunnel through Portal Powerplant (station 11235500). Water is diverted from lake through Huntington-Shaver Conduit and Eastwood Powerplant (station 11238250) to Shaver Lake (station 11239500) since Apr. 21, 1928. Water is also diverted to Big Creek Powerplant No. 1 (station 11238100) on Big Creek. See schematic diagram of lower San Joaquin River basin. Records, including extremes, represent contents at 2400 hours.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 90,491 acre-ft, May 31, 1926, elevation, 6,950.92 ft; minimum, 2,103 acre-ft, Nov. 6, 1937, elevation, 6,838.53 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 88,036 acre-ft, July 17, elevation, 6,949.21 ft; minimum, 41,507 acre-ft, Apr. 2, elevation, 6,911.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Sept. 24, 1964)

6,835	1,552	6,870	11,293	6,920	50,812
6,840	2,354	6,880	16,370	6,930	62,555
6,845	3,324	6,890	22,882	6,940	75,344
6,850	4,480	6,900	30,861	6,950	89,166
6,860	7,427	6,910	40,216	6,951	90,606

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81766	73099	69771	57136	51700	50623	41639	60155	77796	85458	87027	87225
2	81009	73243	69437	56688	51846	50645	41507	61077	78391	85697	86984	87112
3	80460	73454	69039	56581	51959	50456	41588	61992	78459	85923	87027	86941
4	80187	73335	68655	55506	52050	50289	41874	62863	78432	85866	87438	86714
5	80378	73059	68146	54798	52084	49700	42118	63455	78093	86120	87693	86672
6	80679	72613	67878	54821	52095	49678	42220	64447	78622	86162	87679	86629
7	80651	72404	67496	54555	51576	49238	42868	65808	79042	86233	86998	86572
8	80474	71764	67143	54219	51318	48841	43395	66246	79178	86530	86092	86261
9	80392	71947	66739	53772	51273	48392	43614	66511	78622	86658	85782	86204
10	80228	72156	66322	53818	51205	48098	43885	66777	78961	86729	85655	86162
11	79927	72352	65996	53405	50913	47728	44229	67802	80569	86984	85697	85951
12	79600	72534	65695	53473	51048	47338	44639	68528	80624	87481	86134	85796
13	79682	72521	65369	53531	50913	46939	45155	68975	81422	87637	86106	85514
14	79682	72691	64919	53554	50947	46583	45728	69399	82166	87865	86176	85205
15	79273	72574	64546	53004	51037	46197	46240	69489	83026	87965	86587	84685
16	78730	71699	64086	53049	51284	45846	46680	69861	83053	87908	86856	84224
17	78025	72065	63628	53004	51453	45419	47111	70545	83456	88036	86856	83665
18	77312	72286	62814	53083	51621	45060	48033	70843	83414	87993	86601	83525
19	76773	72430	62261	53244	51633	44639	49061	70856	82609	87922	86501	82970
20	75771	72613	61662	53244	51655	44208	50022	71921	83039	87750	86303	82346
21	75185	72560	60932	53278	51722	43958	51183	72809	83539	87622	86035	81835
22	74364	72260	60434	53359	51745	43937	51543	72993	83247	87239	86007	81422
23	74589	72012	60410	53152	51857	43854	51824	73427	83275	86374	86204	81807
24	74112	71673	59951	53175	51767	43791	51160	73822	83109	86402	86345	81752
25	74311	71360	59518	53244	51857	43551	52163	74350	82970	87041	86473	81711
26	74668	71050	59121	53301	51059	43188	53703	74761	83525	87339	86487	81628
27	74311	70739	58893	53164	50924	42930	55099	75212	84420	87310	86445	81463
28	74032	70519	58607	52300	50981	42570	57525	75411	84727	87097	86459	81312
29	74191	70403	58179	52061	50891	42312	58059	75878	84797	87055	86870	81133
30	73703	70015	57893	51824	---	42067	59302	76452	85120	87012	87183	80487
31	73269	---	57655	51610	---	41792	---	77177	---	87026	87353	---
MAX	81766	73454	69771	57136	52095	50645	59302	77177	85120	88036	87693	87225
MIN	73269	70015	57655	51610	50891	41792	41507	60155	77796	85458	85655	80487
a	6938.43	6935.93	6925.94	6920.71	6920.07	6911.56	6927.32	6941.37	6947.15	6948.50	6948.73	6943.81
b	-9340	-3254	-12360	-6045	-719	-9099	+17510	+17875	+7943	+1906	+327	-6866

CAL YR 1991 MAX 87993 MIN 2534 b +342

WTR YR 1992 MAX 88036 MIN 41507 b -2122

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA

LOCATION (REVISED).--Lat 37°13'17", long 119°12'42", in SE 1/4 NW 1/4 sec.23, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 800 ft upstream from Grouse Creek, 1.0 mi south of main dam of Huntington Lake, and 2.1 mi northeast of town of Big Creek.

DRAINAGE AREA.--81.1 mi².

PERIOD OF RECORD.--June 1925 to September 1970, October 1986 to current year.

REVISED RECORDS.--WSP 1315-A: 1943(M). WSP 1635: 1925-29. WSP 1930: Drainage area.

GAGE.--Water-stage recorder with Parshall flume control. Elevation of gage is 6,630 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1942, at datum 1.00 ft lower and Oct. 1, 1942, to Sept. 30, 1948, at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Flow regulated by Huntington Lake (station 11236000). Diversion to Big Creek Powerplant No. 1 (station 11238100) and Eastwood Powerplant (station 11238250) bypass this station. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,040 ft³/s, June 23, 1925, gage height, 11.3 ft, present datum; minimum daily, 0.1 ft³/s, Jan. 18-21, Aug. 21 to Sept. 24, Oct. 7-18, Dec. 5-16, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.3 ft³/s, Oct. 26, gage height, 2.69 ft; minimum daily, 3.1 ft³/s, Feb. 2-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.6	3.6	3.2	3.2	3.5	4.0	3.9	3.9	4.2	4.0	4.3
2	3.8	3.6	3.6	3.2	3.1	3.5	4.0	3.8	3.9	4.3	4.0	4.3
3	3.7	3.7	3.5	3.2	3.1	3.5	4.1	3.8	3.9	4.3	4.0	4.3
4	3.6	3.7	3.4	3.2	3.1	3.5	4.1	3.7	3.9	4.2	3.9	4.3
5	3.6	3.8	3.4	3.3	3.1	3.4	4.1	3.6	3.9	4.2	3.9	4.3
6	3.6	3.8	3.3	3.2	3.1	3.4	4.0	3.7	3.9	4.2	4.0	4.3
7	3.6	3.7	3.3	3.2	3.3	3.4	4.0	3.7	3.9	4.3	4.0	4.3
8	3.7	3.7	3.3	3.2	3.3	3.4	4.0	3.7	3.9	4.3	4.0	4.3
9	3.7	3.7	3.3	3.2	3.2	3.4	4.0	3.7	3.9	4.2	4.0	4.3
10	3.7	3.7	3.3	3.2	3.2	3.4	4.0	3.7	3.9	4.2	4.0	4.3
11	3.7	3.7	3.3	3.2	3.2	3.5	4.0	3.7	3.9	4.6	4.0	4.3
12	3.7	3.7	3.3	3.3	3.2	3.5	3.9	3.8	3.9	4.7	4.0	4.3
13	3.6	3.7	3.3	3.3	3.2	3.6	4.4	3.8	3.9	4.2	4.0	4.3
14	3.6	3.7	3.3	3.3	3.2	3.6	4.1	3.8	4.0	4.1	4.1	4.3
15	3.6	3.7	3.3	3.3	3.3	3.5	4.0	3.8	4.0	4.1	4.1	4.3
16	3.5	3.7	3.3	3.3	3.3	3.5	4.0	3.8	4.0	4.1	4.1	4.3
17	3.5	4.0	3.3	3.3	3.3	3.5	4.0	3.8	4.1	4.1	4.1	4.3
18	3.5	3.9	3.3	3.3	3.3	3.5	4.0	3.8	4.1	4.1	4.1	4.3
19	3.6	3.9	3.3	3.3	3.3	3.4	3.9	3.8	4.1	4.1	4.1	4.3
20	3.6	3.9	3.3	3.3	3.7	3.4	3.9	3.9	4.2	4.1	4.1	4.3
21	3.6	3.9	3.3	3.2	3.6	3.5	4.0	3.8	4.2	4.0	4.1	4.3
22	3.6	3.9	3.2	3.2	3.6	3.4	3.9	3.9	4.3	4.0	4.1	4.2
23	3.6	3.9	3.2	3.2	3.6	3.4	3.9	3.8	4.2	4.0	4.1	4.2
24	3.7	3.8	3.2	3.3	3.6	3.5	3.9	3.9	4.2	4.0	4.1	4.1
25	3.7	3.8	3.2	3.3	3.5	3.7	3.9	3.9	4.1	4.0	4.1	4.1
26	4.6	3.8	3.3	3.2	3.6	3.9	3.9	3.8	4.1	4.0	4.1	4.1
27	3.9	3.8	3.3	3.3	3.6	3.9	3.9	3.9	4.1	4.0	4.1	4.2
28	3.8	3.7	3.3	3.2	3.6	3.9	3.9	3.8	4.2	4.0	4.1	4.2
29	3.8	3.7	3.3	3.2	3.5	3.9	3.9	3.9	4.2	4.0	4.1	4.2
30	3.7	3.6	3.2	3.2	---	3.9	3.8	4.0	4.3	4.1	4.1	4.2
31	3.6	---	3.2	3.2	---	3.9	---	4.0	---	4.0	4.1	---
TOTAL	114.3	112.8	102.7	100.5	96.9	110.3	119.5	118.0	121.1	128.7	125.6	127.8
MEAN	3.69	3.76	3.31	3.24	3.34	3.56	3.98	3.81	4.04	4.15	4.05	4.26
MAX	4.6	4.0	3.6	3.3	3.7	3.9	4.4	4.0	4.3	4.7	4.1	4.3
MIN	3.5	3.6	3.2	3.2	3.1	3.4	3.8	3.6	3.9	4.0	3.9	4.1
AC-FT	227	224	204	199	192	219	237	234	240	255	249	253
a	418	14710	19490	10890	4810	18820	18620	20670	12950	20140	14940	12880

a Diversion, in acre-ft, to Big Creek Powerplant No. 1, provided by Southern California Edison Co.

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.17	1.21	1.25	1.04	1.15	1.49	2.48	9.21	8.36	10.9	1.76	1.26
MAX	3.69	3.76	4.70	3.24	3.34	4.21	4.80	297	242	293	8.34	4.26
(WY)	1992	1992	1956	1992	1992	1991	1991	1926	1926	1925	1969	1992
MIN	.16	.23	.18	.20	.30	.38	.47	.46	.43	.31	.16	.12
(WY)	1932	1932	1932	1932	1931	1948	1934	1934	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1925 - 1992	
ANNUAL TOTAL	1524.1		1378.2			
ANNUAL MEAN	4.18		3.77		2.98	
HIGHEST ANNUAL MEAN					45.9	1926
LOWEST ANNUAL MEAN					.35	1931
HIGHEST DAILY MEAN	13	May 27	4.7	Jul 12	1160	May 23 1926
LOWEST DAILY MEAN	1.1	Feb 19	3.1	Feb 2	.10	Jan 18 1931
ANNUAL SEVEN-DAY MINIMUM	1.3	Feb 15	3.1	Jan 31	.10	Aug 21 1931
INSTANTANEOUS PEAK FLOW			8.3	Oct 26	2040	Jun 23 1925
INSTANTANEOUS PEAK STAGE			2.69	Oct 26	11.30	Jun 23 1925
ANNUAL RUNOFF (AC-FT)	3020		2730		2160	
ANNUAL TOTAL, DIVERSION a	172700		169300			
10 PERCENT EXCEEDS	7.0		4.2		3.3	
50 PERCENT EXCEEDS	3.7		3.8		1.2	
90 PERCENT EXCEEDS	2.4		3.3		.30	

a Diversion, in acre-ft, to Big Creek Powerplant No. 1, provided by Southern California Edison Co.

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA

LOCATION (REVISED).--Lat 37°11'55", long 119°12'46", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 250 ft upstream from Huntington-Shaver conduit tunnel, 0.8 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.4 mi upstream from mouth, and 1.9 mi east of town of Big Creek.

DRAINAGE AREA.--22.9 mi².

PERIOD OF RECORD.--October 1927 to current year. Records for water year 1928 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.--WSP 931: 1940. WSP 1315-A: 1944. WSP 1395: 1928-29, 1938. WSP 1515: 1929. WSP 1930: Drainage area.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Elevation of gage is 7,020 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 29, 1940, at site 10 ft downstream at same datum.

REMARKS.--No diversion upstream from station; practically all flow is diverted downstream from station to Huntington-Shaver conduit. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s, Dec. 23, 1955, gage height, 11.20 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement at gage height 10.77 ft; no flow, Oct. 15-18, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft³/s, Apr. 29, gage height, 5.76 ft; minimum daily, 0.17 ft³/s, Oct. 9, Sept. 16, 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	1.3	1.0	1.5	e2.0	9.5	37	159	18	6.7	1.6	.29
2	.22	1.3	1.1	1.6	e2.1	9.0	45	145	17	6.2	1.3	.29
3	.20	1.3	1.2	1.5	e2.1	8.0	62	141	15	5.5	1.2	.29
4	.20	1.4	1.2	1.5	e2.0	8.2	76	139	14	4.4	1.1	.29
5	.20	1.4	1.3	1.4	e2.1	8.4	76	142	13	3.6	1.0	.29
6	.19	1.4	1.2	1.7	2.1	8.7	75	144	13	3.1	.98	.27
7	.20	1.4	1.3	1.7	2.1	8.5	83	146	13	2.8	.93	.25
8	.19	1.3	1.4	1.7	2.4	8.3	90	148	12	2.5	.90	.24
9	.17	1.8	1.4	1.8	2.6	8.2	98	139	11	2.4	.82	.22
10	.19	1.6	1.3	1.9	2.4	8.3	103	125	10	2.3	.74	.20
11	.19	1.3	1.3	1.8	2.2	9.3	108	114	9.5	4.4	.69	.20
12	.20	1.1	1.2	e1.7	2.2	10	102	110	9.7	23	.69	.20
13	.22	.96	1.1	e1.7	2.4	11	158	98	9.7	13	.65	.20
14	.22	.94	1.1	e1.7	2.5	13	129	84	10	14	.61	.20
15	.21	.85	1.1	e1.8	2.4	13	111	75	10	14	.60	.19
16	.20	.82	1.0	e1.8	2.8	13	122	68	10	9.4	.54	.17
17	.20	e1.7	1.2	e1.6	2.9	12	135	62	9.4	7.7	.49	.21
18	.21	e1.7	1.4	e1.8	3.2	12	144	56	8.0	6.8	.45	.53
19	.21	e1.7	1.4	e1.9	4.5	11	151	52	8.0	6.1	.40	.37
20	.22	e1.7	e1.2	e1.9	7.1	11	165	49	7.6	5.6	.35	.28
21	.22	e1.6	e.92	e1.9	10	12	157	43	7.4	4.6	.32	.25
22	.22	e1.6	e1.1	e1.9	12	12	134	39	6.8	3.9	.31	.22
23	.22	e1.5	e1.4	e2.0	12	13	130	35	6.9	3.6	.29	.20
24	.24	e1.5	e1.3	e1.9	11	13	148	33	8.3	3.2	.30	.19
25	.30	e1.4	e1.2	e1.9	9.8	14	173	30	7.7	2.9	.29	.19
26	9.4	e1.4	e1.3	e1.9	9.7	16	179	29	7.2	2.5	.29	.19
27	5.0	e1.3	e1.1	e1.9	10	17	184	27	6.4	2.3	.26	.19
28	1.9	e1.3	e1.2	e1.9	11	19	185	25	6.0	2.1	.24	.17
29	1.8	e1.2	e1.4	e1.9	11	24	197	24	6.2	1.9	.26	.17
30	1.6	e1.1	e1.5	e2.0	---	27	200	22	7.1	1.7	.26	.17
31	1.4	---	e1.4	e1.8	---	29	---	20	---	1.6	.29	---
TOTAL	26.36	40.87	38.22	55.0	150.6	396.4	3757	2523	297.9	173.8	19.15	7.12
MEAN	.85	1.36	1.23	1.77	5.19	12.8	125	81.4	9.93	5.61	.62	.24
MAX	9.4	1.8	1.5	2.0	12	29	200	159	18	23	1.6	.53
MIN	.17	.82	.92	1.4	2.0	8.0	37	20	6.0	1.6	.24	.17
AC-FT	52	81	76	109	299	786	7450	5000	591	345	38	14

e Estimated.

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.96	5.52	11.0	9.60	13.6	25.9	89.7	195	111	17.2	2.21	1.42
MAX	42.0	110	135	91.1	91.1	136	264	550	648	170	21.4	18.9
(WY)	1983	1951	1951	1980	1986	1986	1982	1969	1983	1983	1983	1978
MIN	.13	.18	.20	.20	.20	.30	16.6	24.3	7.82	.67	.11	.10
(WY)	1989	1930	1932	1930	1949	1949	1975	1977	1976	1934	1931	1928

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	10087.92		7485.42		40.7	
ANNUAL MEAN	27.6		20.5		118	
HIGHEST ANNUAL MEAN					6.16	
LOWEST ANNUAL MEAN					1590	
HIGHEST DAILY MEAN	271	May 24	200	Apr 30	1590	Dec 23 1955
LOWEST DAILY MEAN	.17	Oct 9	.17	Oct 9	.00	Oct 15 1931
ANNUAL SEVEN-DAY MINIMUM	.19	Oct 5	.18	Sep 24	.04	Oct 13 1931
INSTANTANEOUS PEAK FLOW			280	Apr 29	3670	Dec 23 1955
INSTANTANEOUS PEAK STAGE			5.76	Apr 29	11.20	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	20010		14850		29470	
10 PERCENT EXCEEDS	116		86		124	
50 PERCENT EXCEEDS	1.4		2.0		5.3	
90 PERCENT EXCEEDS	.24		.22		.30	

11237600 PITMAN CREEK SHAFT BELOW TAMARACK CREEK, CA

LOCATION (REVISED).--Lat 37°11'54", long 119°12'48", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank at Huntington-Shaver conduit tunnel, 0.8 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.4 mi upstream from mouth, and 1.9 mi east of town of Big Creek.

PERIOD OF RECORD.--October 1986 to February 1989, March 1989 to current year.

GAGE.--Discharge computed as difference between Pitman Creek below Tamarack Creek (station 11237500) and Pitman Creek near Tamarack Mountain (station 11237700). The diversion gates were closed on Nov. 22, 1991, and reopened on Apr. 6, 1992. Elevation of diversion point is 7,010 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--Flow is diversion from Pitman Creek into Huntington-Shaver conduit for power development in Big Creek powerplants. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 269 ft³/s, May 24, 1991; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	157	17	6.0	1.2	.00
2	.00	.00	.00	.00	.00	.00	.00	143	16	5.5	.94	.00
3	.00	.00	.00	.00	.00	.00	.00	139	14	4.8	.84	.00
4	.00	.00	.00	.00	.00	.00	.00	137	13	3.7	.74	.00
5	.00	.00	.00	.00	.00	.00	.00	140	12	2.9	.42	.00
6	.00	.00	.00	.00	.00	.00	e30	142	12	2.4	.23	.00
7	.00	.00	.00	.00	.00	.00	81	144	12	2.1	.19	.00
8	.00	.00	.00	.00	.00	.00	88	146	11	1.8	.14	.00
9	.00	.50	.00	.00	.00	.00	96	137	10	1.7	.06	.00
10	.00	.30	.00	.00	.00	.00	101	124	9.3	1.6	.00	.00
11	.00	.10	.00	.00	.00	.00	106	113	8.8	3.7	.00	.00
12	.00	.00	.00	.00	.00	.00	100	109	9.0	22	.00	.00
13	.00	.00	.00	.00	.00	.00	156	97	9.0	12	.00	.00
14	.00	.00	.00	.00	.00	.00	127	83	9.3	14	.00	.00
15	.00	.00	.00	.00	.00	.00	109	74	9.3	14	.00	.00
16	.00	.00	.00	.00	.00	.00	120	67	9.3	9.0	.00	.00
17	.00	e.60	.00	.00	.00	.00	133	61	8.7	7.3	.00	.00
18	.00	e.60	.00	.00	.00	.00	142	55	7.3	6.4	.00	.00
19	.00	e.70	.00	.00	.00	.00	149	51	7.3	5.7	.00	.00
20	.00	e.40	.00	.00	.00	.00	163	48	6.9	5.2	.00	.00
21	.00	e.40	.00	.00	.00	.00	155	42	6.7	4.2	.00	.00
22	.00	.00	.00	.00	.00	.00	132	38	6.1	3.5	.00	.00
23	.00	.00	.00	.00	.00	.00	128	34	6.2	3.2	.00	.00
24	.00	.00	.00	.00	.00	.00	146	32	7.6	2.8	.00	.00
25	.00	.00	.00	.00	.00	.00	171	29	7.0	2.5	.00	.00
26	7.2	.00	.00	.00	.00	.00	177	28	6.5	2.1	.00	.00
27	2.6	.00	.00	.00	.00	.00	182	26	5.7	1.9	.00	.00
28	.00	.00	.00	.00	.00	.00	183	24	5.3	1.7	.00	.00
29	.00	.00	.00	.00	.00	.00	195	23	5.5	1.5	.00	.00
30	.00	.00	.00	.00	---	.00	198	21	6.4	1.3	.00	.00
31	.00	---	.00	.00	---	.00	---	19	---	1.2	.00	---
TOTAL	9.80	3.60	0.00	0.00	0.00	0.00	3368.00	2483	274.2	157.7	4.76	0.00
MEAN	.32	.12	.000	.000	.000	.000	112	80.1	9.14	5.09	.15	.000
MAX	7.2	.70	.00	.00	.00	.00	198	157	17	22	1.2	.00
MIN	.00	.00	.00	.00	.00	.00	.00	19	5.3	1.2	.00	.00
AC-FT	19	7.1	.00	.00	.00	.00	6680	4930	544	313	9.4	.00

e Estimated.

11237600 PITMAN CREEK SHAFT BELOW TAMARACK CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.33	.59	.38	.80	2.16	13.2	91.9	81.6	24.1	3.08	.10	.026
MAX	1.03	2.76	2.25	4.78	9.95	34.1	124	160	79.6	8.09	.43	.13
(WY)	1990	1988	1988	1988	1988	1988	1989	1991	1991	1991	1991	1989
MIN	.000	.000	.000	.000	.000	.000	47.4	57.4	9.14	.87	.000	.000
(WY)	1989	1989	1989	1987	1987	1992	1991	1987	1992	1989	1988	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1987 - 1992
ANNUAL TOTAL	9745.71	6301.06	
ANNUAL MEAN	26.7	17.2	18.3
HIGHEST ANNUAL MEAN			26.7 1991
LOWEST ANNUAL MEAN			13.5 1987
HIGHEST DAILY MEAN	269 May 24	198 Apr 30	269 May 24 1991
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Nov 12 1986
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Dec 5 1986
ANNUAL RUNOFF (AC-FT)	19330	12500	13240
10 PERCENT EXCEEDS	114	84	74
50 PERCENT EXCEEDS	.52	.00	.06
90 PERCENT EXCEEDS	.00	.00	.00

11237700 PITMAN CREEK NEAR TAMARACK MOUNTAIN, CA

LOCATION (REVISED).--Lat 37°11'57", long 119°12'51", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 400 ft downstream from Huntington-Shaver conduit tunnel, 0.9 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.3 mi upstream from mouth, and 1.8 mi east of town of Big Creek.

DRAINAGE AREA.--23.0 mi².

PERIOD OF RECORD.--October 1986 to February 1989, March 1989 to current year. No record of release for fishery maintenance Feb. 19 to Mar. 24, 1989.

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Elevation of gage is 7,000 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Most of the flow is diverted upstream from station at Pitman Creek Shaft below Tamarack Creek (station 11237600) to Huntington-Shaver conduit. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 76 ft³/s, Mar. 27, 1990, Apr. 4, 5, 1992; no flow, Feb. 15 to Apr. 4, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 76 ft³/s, Apr. 4, 5; minimum daily, 0.17 ft³/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	1.3	e1.0	e1.5	e2.0	e9.5	e37	2.0	.89	.70	.36	.30
2	.21	1.2	e1.1	e1.6	e2.1	e9.0	e45	2.0	.79	.70	.36	.30
3	.21	1.2	e1.2	e1.5	e2.1	e8.0	e62	1.9	.79	.70	.36	.30
4	.20	1.3	e1.2	e1.5	e2.0	e8.2	e76	1.8	.76	.70	.36	.30
5	.20	1.3	e1.3	e1.4	e2.1	e8.4	e76	1.5	.73	.70	.58	.30
6	.20	1.3	e1.2	e1.7	e2.1	e8.7	e45	1.5	.73	.67	.75	.29
7	.20	1.3	e1.3	e1.7	e2.1	e8.5	2.2	1.5	.73	.67	.74	.27
8	.20	1.2	e1.4	e1.7	e2.4	e8.3	2.1	1.5	.73	.67	.76	.25
9	.19	1.3	e1.4	e1.8	e2.6	e8.2	2.1	1.5	.70	.67	.76	.25
10	.18	1.3	e1.3	e1.9	e2.4	e8.3	2.1	1.4	.70	.67	.75	.22
11	.17	1.2	e1.3	e1.8	e2.2	e9.3	2.1	1.4	.70	.73	.76	.21
12	.19	1.1	e1.2	e1.7	e2.2	e10	2.1	1.4	.70	.75	.74	.21
13	.21	1.1	e1.1	e1.7	e2.4	e11	2.3	1.4	.70	.51	.70	.21
14	.20	1.1	e1.1	e1.7	e2.5	e13	2.1	1.3	.70	.44	.65	.21
15	.19	.98	e1.1	e1.8	e2.4	e13	2.0	1.4	.70	.45	.65	.21
16	.19	.85	e1.0	e1.8	e2.8	e13	2.0	1.3	.70	.44	.61	.19
17	.19	1.1	e1.2	e1.6	e2.9	e12	2.0	1.3	.70	.44	.55	.25
18	.19	1.1	e1.4	e1.8	e3.2	e12	2.0	1.3	.70	.42	.48	.55
19	.19	1.0	e1.4	e1.9	e4.5	e11	2.1	1.2	.70	.42	.42	.41
20	.19	1.3	e1.2	e1.9	e7.1	e11	2.1	1.2	.70	.42	.38	.30
21	.18	1.2	e.90	e1.9	e10	e12	2.1	1.2	.70	.40	.34	.26
22	.18	e1.6	e1.1	e1.9	e12	e12	2.0	1.2	.70	.40	.35	.24
23	.20	e1.5	e1.4	e2.0	e12	e13	2.0	1.1	.70	.40	.36	.21
24	.21	e1.5	e1.3	e1.9	e11	e13	2.0	1.1	.70	.40	.34	.21
25	.26	e1.4	e1.2	e1.9	e9.8	e14	2.1	1.1	.70	.40	.33	.21
26	2.2	e1.4	e1.3	e1.9	e9.7	e16	2.1	1.1	.70	.38	.31	.19
27	2.4	e1.3	e1.1	e1.9	e10	e17	2.1	1.1	.70	.38	.29	.18
28	2.0	e1.3	e1.2	e1.9	e11	e19	2.0	1.0	.70	.38	.29	.19
29	1.9	e1.2	e1.4	e1.9	e11	e24	2.1	1.0	.70	.38	.29	.18
30	1.6	e1.2	e1.5	e2.0	---	e27	2.0	1.0	.70	.38	.28	.18
31	1.4	---	e1.4	e1.8	---	e29	---	1.0	---	.38	.27	---
TOTAL	16.44	37.13	38.20	55.0	150.6	396.4	390.8	41.7	21.55	16.15	15.17	7.58
MEAN	.53	1.24	1.23	1.77	5.19	12.8	13.0	1.35	.72	.52	.49	.25
MAX	2.4	1.6	1.5	2.0	12	29	76	2.0	.89	.75	.76	.55
MIN	.17	.85	.90	1.4	2.0	8.0	2.0	1.0	.70	.38	.27	.18
AC-FT	33	74	76	109	299	786	775	83	43	32	30	15

e Estimated.

11237700 PITMAN CREEK NEAR TAMARACK MOUNTAIN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.63	.84	1.03	1.43	2.34	8.33	3.59	2.19	1.01	.88	.46	.32
MAX	1.40	1.74	1.50	2.17	5.19	24.8	13.0	4.82	1.30	1.23	.79	.76
(WY)	1987	1990	1990	1990	1992	1990	1992	1989	1991	1991	1991	1989
MIN	.13	.31	.41	.56	.35	.000	1.31	1.22	.66	.52	.25	.13
(WY)	1989	1991	1991	1991	1991	1991	1988	1990	1990	1992	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	351.65		1186.72			
ANNUAL MEAN	.96		3.24		1.91	
HIGHEST ANNUAL MEAN					3.32	1990
LOWEST ANNUAL MEAN					.79	1991
HIGHEST DAILY MEAN	2.7	Apr 30	76	Apr 4	76	Mar 27 1990
LOWEST DAILY MEAN	.00	Feb 15	.17	Oct 11	.00	Feb 15 1991
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 15	.19	Oct 16	.00	Feb 15 1991
ANNUAL RUNOFF (AC-FT)	697		2350		1390	
10 PERCENT EXCEEDS	2.1		9.4		2.2	
50 PERCENT EXCEEDS	.92		1.2		.98	
90 PERCENT EXCEEDS	.00		.21		.18	

SAN JOAQUIN RIVER BASIN

11238250 EASTWOOD POWERPLANT ABOVE SHAVER LAKE, NEAR BIG CREEK, CA

LOCATION.--Lat 37°07'55", long 119°15'39", in NE 1/4 SW 1/4 sec.20, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 0.25 mi upstream from Shaver Lake and 5.0 mi south of Big Creek.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Acoustic flow meter in powerplant penstock. Elevation of gage is 5,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharge. Flow is diverted from Huntington Lake (station 11236000) and Pitman Creek (station 11237600) to Balsam Meadows Forebay, thence through a tunnel to the powerplant. Water is returned to Shaver Lake (station 11239500) 0.25 mi downstream for further power development in Big Creek powerplants. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,750 ft³/s, May 19, 1989; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	505	0	317	0	0	0	526	124	194	285	105
2	180	184	0	250	0	155	0	393	471	211	191	14
3	260	36	0	490	313	0	0	433	456	273	93	0
4	177	217	0	698	65	184	0	550	497	155	0	1
5	210	272	0	330	69	243	0	570	421	279	302	231
6	155	331	0	368	210	307	0	442	390	308	335	0
7	343	297	0	463	0	0	0	357	428	273	384	0
8	129	386	0	268	27	321	0	781	217	0	142	0
9	406	164	0	255	52	0	0	683	461	0	398	0
10	376	20	0	321	248	0	0	654	480	0	276	0
11	287	278	0	267	44	0	0	518	327	0	239	0
12	351	261	0	311	60	0	0	566	273	0	229	0
13	583	341	302	348	0	0	0	522	295	0	48	0
14	500	398	0	260	0	0	0	555	372	0	169	503
15	466	519	377	142	0	0	176	746	232	0	249	86
16	532	482	325	144	193	0	231	374	371	0	315	67
17	510	166	281	345	0	0	470	384	302	0	252	24
18	462	431	612	271	59	0	320	595	274	0	185	0
19	533	189	716	238	0	0	240	494	384	0	192	335
20	606	0	630	232	0	0	0	0	222	0	230	70
21	472	0	317	0	0	0	177	0	201	0	237	34
22	585	0	3	0	154	0	321	369	354	397	157	38
23	458	0	332	0	0	0	523	91	287	416	199	98
24	334	0	257	0	237	0	796	0	221	8	0	0
25	463	0	3	0	311	0	463	103	292	379	190	79
26	573	0	537	0	195	0	226	0	169	356	110	94
27	475	0	215	353	178	0	442	0	150	404	210	0
28	668	0	258	217	0	0	453	6	176	276	0	102
29	330	0	254	222	62	0	656	492	195	154	0	106
30	454	0	270	148	---	0	534	129	0	368	0	464
31	539	---	235	0	---	0	---	7	---	379	0	---
TOTAL	12633	5477	5929	7258	2477	1210	6028	11340	9042	4830	5617	2451
MEAN	408	183	191	234	85.4	39.0	201	366	301	156	181	81.7
MAX	668	519	716	698	313	321	796	781	497	416	398	503
MIN	129	0	0	0	0	0	0	0	0	0	0	0
AC-FT	25060	10860	11760	14400	4910	2400	11960	22490	17930	9580	11140	4860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989	1988	1989
MEAN	146	99.7	159	235	240	222	369	501	590	450	366	279
MAX	408	271	375	400	406	534	852	1113	917	758	523	477
(WY)	1992	1989	1988	1989	1988	1989	1989	1989	1991	1989	1989	1988
MIN	.000	.000	21.4	6.19	85.4	19.5	29.3	159	270	156	181	81.7
(WY)	1988	1988	1991	1990	1992	1991	1991	1991	1990	1992	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1988 - 1992

ANNUAL TOTAL	110701	74292	
ANNUAL MEAN	303	203	305
HIGHEST ANNUAL MEAN			534
LOWEST ANNUAL MEAN			141
HIGHEST DAILY MEAN	1588	796	1750
LOWEST DAILY MEAN	0	0	0
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	219600	147400	220800
10 PERCENT EXCEEDS	731	493	668
50 PERCENT EXCEEDS	237	187	261
90 PERCENT EXCEEDS	.00	.00	.00

11238270 MIDDLE FORK BALSAM CREEK BELOW BALSAM MEADOWS FOREBAY, NEAR BIG CREEK, CA

LOCATION.--Lat 37°09'46", long 119°15'12", in NE 1/4 NW 1/4 sec.9, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 80 ft downstream from control house at base of Balsam Meadows Dam, 2.6 mi south of Big Creek.

DRAINAGE AREA.--Not determined.

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

GAGE.--Water-stage recorder, 90° V-notch weir and concrete control. Elevation of gage is 6,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow consists of fishery maintenance release and spill over Balsam Meadows Dam. No record of flow over spillway Apr. 15, 1989. Diversion from Balsam Meadows Dam through penstock to Eastwood Powerplant. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown, Apr. 15, 1989, as there was no record of flow over spillway; minimum daily, 0.31 ft³/s, Feb. 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.0 ft³/s, Apr. 2, gage height, 1.13 ft; minimum daily, 0.65 ft³/s, Apr. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.92	2.1	.80	.79	.81	3.3	e.67	1.6	1.4	e1.4	e1.5
2	.93	.94	2.2	.79	.84	.79	3.4	e.67	2.1	1.4	e1.4	e1.5
3	.95	.95	2.2	.84	.84	.81	3.3	e.67	1.7	1.3	e1.4	e1.5
4	.94	.95	2.1	.83	.82	.77	3.2	e.67	1.3	1.3	e1.4	e1.5
5	.89	.92	2.1	.80	.81	.75	3.1	e.67	1.3	1.3	e1.4	e1.5
6	.95	.91	2.1	.79	.79	.76	3.3	e.67	1.2	1.3	e1.4	e1.5
7	.99	.92	2.0	.79	.81	.81	3.3	e.67	1.3	1.2	e1.5	e1.5
8	.94	.90	2.0	.81	.78	.83	3.3	e.67	1.2	e1.4	e1.5	e1.5
9	.92	.91	2.0	.84	.78	.83	3.3	e.67	1.3	e1.4	e1.5	e1.5
10	.94	.91	2.0	.76	.76	1.5	3.3	e.67	1.3	e1.4	e1.5	e1.5
11	.95	.91	2.0	.75	.78	2.3	3.3	e.67	1.3	e1.4	e1.5	e1.5
12	.95	.91	2.0	.76	.80	2.3	3.2	e.67	1.4	e1.4	e1.5	e1.5
13	.95	.92	2.0	.76	.79	2.3	3.2	e.67	1.4	e1.4	e1.5	e1.5
14	.94	.91	1.9	.76	.78	2.4	3.2	e.67	1.3	e1.4	e1.5	e1.5
15	.89	.95	2.1	.74	.80	2.3	3.3	e.67	1.4	e1.4	e1.5	e1.5
16	.91	.98	1.5	.73	.82	2.5	3.2	e.67	1.4	e1.4	e1.5	e1.5
17	.90	1.0	.80	.74	.84	3.0	3.2	e.67	1.4	e1.4	e1.5	e1.5
18	.89	.97	.81	.75	.84	3.0	2.9	e.67	1.4	e1.4	e1.5	e1.5
19	.89	.96	.84	.80	.84	3.0	2.7	e.67	1.5	e1.4	e1.5	e1.5
20	.90	.95	.83	.80	.84	3.1	3.0	e.67	1.4	e1.4	e1.5	e1.5
21	.91	.95	.83	.82	.84	3.0	3.4	e.67	1.4	e1.4	e1.5	e1.5
22	.91	.94	.84	.83	.84	3.0	3.2	e.67	1.5	e1.4	e1.5	e1.5
23	.92	.96	.84	.84	.84	3.0	3.2	e.67	1.4	e1.4	e1.5	e1.5
24	.91	.96	.84	.84	.84	2.9	3.2	e.67	1.4	e1.4	e1.5	e1.5
25	.89	1.5	.81	.82	.84	2.8	2.1	e.67	1.4	e1.4	e1.5	e1.5
26	.92	2.1	.78	.84	.86	2.9	.72	e.67	1.5	e1.4	e1.5	e1.5
27	.96	2.1	.79	.88	.85	2.9	.72	e.67	1.4	e1.4	e1.5	e1.5
28	.95	2.1	.84	.86	.82	3.1	.67	1.0	1.4	e1.4	e1.5	e1.5
29	.95	2.1	.83	.84	.84	3.2	.65	1.3	1.4	e1.4	e1.5	e1.5
30	.95	2.1	.81	.84	---	3.2	.70	1.3	1.4	e1.4	e1.5	e1.5
31	.95	---	.79	.82	---	3.2	---	1.2	---	e1.4	e1.5	---
TOTAL	28.94	34.50	44.58	24.87	23.72	68.06	82.56	22.89	42.4	42.8	45.9	45.0
MEAN	.93	1.15	1.44	.80	.82	2.20	2.75	.74	1.41	1.38	1.48	1.50
MAX	1.1	2.1	2.2	.88	.86	3.2	3.4	1.3	2.1	1.4	1.5	1.5
MIN	.89	.90	.78	.73	.76	.75	.65	.67	1.2	1.2	1.4	1.5
AC-FT	57	68	88	49	47	135	164	45	84	85	91	89

e Estimated.

SAN JOAQUIN RIVER BASIN

11238270 MIDDLE FORK BALSAM CREEK BELOW BALSAM MEADOWS FOREBAY, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	.91	1.01	.79	.82	1.14	1.47	.81	1.35	1.35	1.37	1.36
MAX	.93	1.15	1.44	.80	.83	2.20	2.75	.85	1.43	1.38	1.48	1.50
(WY)	1992	1992	1992	1992	1991	1992	1992	1991	1990	1990	1992	1992
MIN	.82	.77	.78	.78	.80	.76	.81	.74	1.25	1.29	1.26	1.22
(WY)	1990	1991	1991	1991	1990	1991	1991	1992	1989	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	383.70	506.22	
ANNUAL MEAN	1.05	1.38	1.12
HIGHEST ANNUAL MEAN			1.38 1992
LOWEST ANNUAL MEAN			.96 1991
HIGHEST DAILY MEAN	2.2 Dec 2	3.4 Apr 2	3.4 Apr 2 1992
LOWEST DAILY MEAN	.71 Mar 9	.65 Apr 29	.31 Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	.72 Mar 6	.67 May 1	.58 Jan 30 1989
INSTANTANEOUS PEAK FLOW		4.0 Apr 2	
INSTANTANEOUS PEAK STAGE		1.13 Apr 2	
ANNUAL RUNOFF (AC-FT)	761	1000	809
10 PERCENT EXCEEDS	1.3	2.9	1.5
50 PERCENT EXCEEDS	.92	1.3	.89
90 PERCENT EXCEEDS	.75	.75	.76

11238500 BIG CREEK NEAR MOUTH, NEAR BIG CREEK, CA

LOCATION.--Lat 37°12'28", long 119°19'13", in SE 1/4 NW 1/4 sec.26, T.8 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.6 mi upstream from mouth and 3.9 mi west of town of Big Creek.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--June 1923 to May 1932, October 1986 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Elevation of gage is 2,620 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Huntington Lake (station 11236000) and diversions for power development in Big Creek powerplants. Most of the water is diverted past this station to Big Creek Powerplant No. 8 (station 11238550). See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s, June 23, 1925, gage height, 6.25 ft, from rating curve extended above 1,200 ft³/s; no flow several days in 1925 and 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 814 ft³/s, Apr. 8, gage height, 4.42 ft; minimum daily, 1.4 ft³/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.2	1.5	1.7	1.4	1.6	3.5	6.7	4.0	3.9	3.9	4.0
2	3.2	3.2	1.5	1.7	1.4	1.8	3.4	6.3	4.1	4.0	3.9	3.9
3	3.0	3.2	1.5	1.8	1.4	1.8	2.9	6.6	4.1	3.9	3.9	3.7
4	3.0	3.2	1.4	1.8	1.4	1.8	2.8	6.5	4.0	3.9	3.9	3.7
5	3.1	3.2	1.5	3.2	1.4	1.8	2.3	6.6	4.1	3.8	4.0	3.5
6	3.1	3.2	1.5	2.0	1.4	2.1	2.3	6.2	4.2	3.8	4.0	3.8
7	3.2	3.2	1.5	1.9	1.5	1.8	39	5.8	4.1	3.9	3.9	3.8
8	3.2	3.2	1.5	1.8	1.4	1.7	193	5.9	4.0	4.0	3.8	3.7
9	3.2	3.1	1.5	1.8	1.4	1.7	5.0	6.1	4.1	4.1	3.8	3.5
10	3.2	3.1	1.5	1.8	2.2	1.7	9.2	6.2	4.1	4.1	3.7	3.5
11	3.1	3.1	1.5	1.7	2.8	1.7	8.9	6.4	3.9	4.4	3.8	3.6
12	3.1	3.1	1.6	1.6	6.9	1.6	7.4	6.4	4.0	4.8	3.8	3.7
13	3.0	3.1	1.6	1.5	5.8	1.5	6.8	5.7	4.2	4.0	3.8	3.7
14	3.0	3.1	1.5	1.5	2.8	1.5	6.0	25	4.2	4.1	3.9	3.6
15	3.0	3.1	1.5	1.5	6.1	1.5	6.1	5.8	3.9	4.2	3.9	3.7
16	3.0	3.1	1.5	1.5	3.7	1.6	6.0	5.8	3.9	4.0	3.9	3.6
17	3.0	3.4	1.5	1.5	2.8	1.5	5.9	5.8	3.9	3.9	3.9	3.6
18	3.0	3.3	1.6	1.5	2.3	1.5	5.7	5.7	3.9	3.9	3.9	3.5
19	3.0	3.2	1.5	1.5	2.1	1.4	5.8	5.7	3.9	3.9	3.9	3.7
20	3.0	3.2	1.5	1.5	2.2	1.4	5.6	5.7	3.9	3.8	3.9	3.7
21	3.1	3.2	1.5	1.5	2.0	1.5	5.6	5.6	4.0	3.8	3.9	3.6
22	3.1	2.8	1.5	1.5	1.9	1.8	5.6	5.6	3.9	3.7	3.9	3.8
23	3.1	1.6	1.6	1.5	1.8	1.8	5.6	5.6	3.9	3.7	3.9	3.8
24	3.1	1.6	1.7	1.5	1.7	1.6	5.7	5.5	3.8	3.7	3.9	3.7
25	3.1	1.6	1.7	1.5	1.7	1.9	5.7	5.5	3.9	3.7	3.9	3.9
26	4.3	1.5	1.5	1.5	1.6	3.0	5.8	4.9	3.9	3.8	4.1	3.8
27	3.3	1.5	1.7	1.4	1.7	3.7	5.8	3.9	3.8	3.9	3.9	3.7
28	3.2	1.6	2.2	1.4	1.6	3.6	5.9	4.0	3.8	3.9	3.8	3.7
29	3.3	1.5	2.8	1.4	1.6	3.5	20	4.1	3.7	3.9	3.9	3.7
30	3.3	1.5	1.9	1.4	---	3.8	6.9	4.3	3.8	4.0	3.8	3.6
31	3.3	---	1.7	1.4	---	3.7	---	4.3	---	3.9	3.9	---
TOTAL	97.7	81.9	50.0	50.8	68.0	62.9	400.2	194.2	119.0	122.4	120.4	110.8
MEAN	3.15	2.73	1.61	1.64	2.34	2.03	13.3	6.26	3.97	3.95	3.88	3.69
MAX	4.3	3.4	2.8	3.2	6.9	3.8	193	25	4.2	4.8	4.1	4.0
MIN	3.0	1.5	1.4	1.4	1.4	1.4	2.3	3.9	3.7	3.7	3.7	3.5
AC-FT	194	162	99	101	135	125	794	385	236	243	239	220
a	24610	25230	27410	23620	20000	46180	24460	31880	29190	40410	37160	31780

a Diversion, in acre-feet, to Big Creek Powerplant No. 8, provided by Southern California Edison Co.

SAN JOAQUIN RIVER BASIN

11238500 BIG CREEK NEAR MOUTH, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.85	2.55	1.86	2.06	2.03	2.49	4.41	3.26	2.91	2.79	2.76	2.76
MAX	3.33	2.87	2.62	2.76	2.66	3.25	13.3	6.26	3.97	3.95	3.88	3.69
(WY)	1987	1989	1987	1987	1987	1991	1992	1992	1992	1992	1992	1992
MIN	2.44	1.97	1.61	1.61	1.69	2.03	2.35	2.23	2.23	2.20	2.27	2.33
(WY)	1988	1988	1992	1989	1988	1992	1989	1987	1987	1987	1988	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	969.8		1478.3			
ANNUAL MEAN	2.66		4.04		2.73	
HIGHEST ANNUAL MEAN					4.04	1992
LOWEST ANNUAL MEAN					2.34	1988
HIGHEST DAILY MEAN	8.3	Mar 19	193	Apr 8	193	Apr 8 1992
LOWEST DAILY MEAN	1.4	Dec 4	1.4	Dec 4	1.3	Nov 17 1987
ANNUAL SEVEN-DAY MINIMUM	1.5	Nov 29	1.4	Jan 27	1.4	Jan 27 1992
INSTANTANEOUS PEAK FLOW			814	Apr 8	814	Apr 8 1992
INSTANTANEOUS PEAK STAGE			4.42	Apr 8	4.42	Apr 8 1992
ANNUAL RUNOFF (AC-FT)	1920		2930		1980	
TOTAL DIVERSION (AC-FT) a	341400		361900			
10 PERCENT EXCEEDS	3.2		5.7		3.5	
50 PERCENT EXCEEDS	2.9		3.5		2.5	
90 PERCENT EXCEEDS	1.7		1.5		1.7	

a Diversion, in acre-feet, to Big Creek Powerplant No. 8, provided by Southern California Edison Co.

11239300 NORTH FORK STEVENSON CREEK AT PERIMETER ROAD, NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°08'13", long 119°15'13", in SE 1/4 NW 1/4 sec.21, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 100 ft upstream from Perimeter Road and 4.8 mi south of town of Big Creek.

DRAINAGE AREA.--4.42 mi².

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

GAGE.--Water-stage recorder, modified Parshall flume, and concrete control. Elevation of gage is 5,740 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Releases for fishery maintenance from Balsam Meadows Forebay on Balsam Creek enter creek upstream from station. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 261 ft³/s, Apr. 13, 1992, gage height, 4.62 ft; minimum daily, 1.6 ft³/s, Feb. 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 261 ft³/s, Apr. 13, gage height, 4.62 ft; minimum daily, 3.8 ft³/s, Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.5	36	4.6	e4.5	6.9	13	21	6.1	4.7	6.2	5.4
2	4.4	4.2	32	4.8	e4.5	7.1	17	19	5.9	4.7	6.3	5.4
3	4.3	4.3	30	4.5	e4.5	7.5	23	18	6.0	4.5	6.0	5.4
4	4.2	4.2	45	4.9	e4.5	7.3	23	18	5.9	4.9	5.5	5.4
5	4.0	4.3	41	e4.8	4.5	7.1	23	16	6.2	4.7	5.5	5.2
6	3.8	4.5	21	e4.7	4.9	7.0	46	11	5.8	4.8	5.9	5.1
7	3.9	4.5	21	4.6	5.9	6.3	117	10	6.0	4.7	6.1	5.1
8	4.1	4.6	21	e4.6	5.3	6.0	125	9.8	5.4	5.9	5.8	5.1
9	4.2	4.3	21	e4.7	4.9	5.8	130	9.2	5.7	5.8	5.3	5.1
10	4.2	4.1	21	e5.0	e5.2	6.5	143	8.1	5.6	5.8	6.3	5.1
11	4.2	4.1	21	e4.8	e6.0	7.9	148	7.2	5.2	6.4	5.7	5.0
12	4.3	4.0	20	e4.7	e6.7	8.5	140	6.9	5.2	11	5.2	5.0
13	4.1	4.0	20	e4.6	e6.0	9.2	209	6.4	5.3	7.5	5.4	4.9
14	4.0	4.1	11	e4.5	e5.0	9.3	121	6.0	5.4	7.4	5.5	4.9
15	4.3	4.1	4.3	e4.5	e5.4	8.9	19	5.6	5.5	7.3	5.5	5.2
16	4.4	4.7	4.2	e4.5	e8.8	8.4	19	5.1	5.3	6.6	5.5	5.3
17	4.5	5.0	4.1	e4.5	e5.6	8.1	20	4.6	5.2	6.3	5.5	5.3
18	4.6	4.6	5.1	e4.5	e4.9	7.9	21	5.0	4.9	6.1	5.6	5.4
19	4.3	4.4	5.2	e4.5	5.2	7.9	21	6.4	5.8	6.0	5.6	5.4
20	4.7	4.4	5.1	e4.5	6.5	8.0	21	6.1	4.8	5.9	5.6	6.1
21	4.4	4.3	4.9	e4.5	6.4	8.4	22	5.5	4.6	5.9	5.6	5.7
22	4.6	4.2	5.0	e4.5	6.8	8.8	21	5.0	5.0	6.0	5.7	5.4
23	4.2	4.0	4.3	e4.5	6.9	9.0	21	4.7	5.1	6.9	5.6	5.4
24	4.2	4.0	4.4	e4.5	6.6	8.7	22	4.4	5.2	6.7	5.4	5.4
25	4.2	11	4.5	e4.5	6.6	10	23	4.3	5.5	6.1	5.3	5.4
26	9.3	33	4.3	e4.5	7.2	11	22	4.9	4.9	6.3	5.4	5.4
27	5.8	37	4.4	e4.5	7.4	10	22	6.8	4.5	6.4	5.3	5.3
28	4.9	36	e4.3	e4.5	7.1	11	21	6.7	4.6	6.7	5.4	5.4
29	4.9	36	e4.3	e4.5	7.0	12	22	6.6	5.0	6.4	5.2	5.4
30	4.6	36	e4.3	e4.5	---	13	22	6.5	5.1	6.1	5.3	5.2
31	4.6	---	4.5	e4.5	---	12	---	6.3	---	6.0	5.5	---
TOTAL	140.4	292.4	438.2	142.3	170.8	265.5	1617	261.1	160.7	190.5	173.7	158.8
MEAN	4.53	9.75	14.1	4.59	5.89	8.56	53.9	8.42	5.36	6.15	5.60	5.29
MAX	9.3	37	45	5.0	8.8	13	209	21	6.2	11	6.3	6.1
MIN	3.8	4.0	4.1	4.5	4.5	5.8	13	4.3	4.5	4.5	5.2	4.9
AC-FT	278	580	869	282	339	527	3210	518	319	378	345	315

e Estimated.

SAN JOAQUIN RIVER BASIN

11239300 NORTH FORK STEVENSON CREEK AT PERIMETER ROAD, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.15	6.43	8.19	5.04	5.30	8.66	22.7	10.6	6.61	5.07	4.61	4.49
MAX	4.53	9.75	14.1	5.51	5.89	10.8	53.9	21.0	11.1	6.15	5.60	5.29
(WY)	1992	1992	1992	1991	1992	1989	1992	1991	1991	1992	1992	1992
MIN	3.65	4.21	4.47	4.59	3.89	7.15	11.4	5.80	4.66	4.00	4.08	4.14
(WY)	1991	1990	1990	1992	1991	1991	1990	1990	1989	1989	1989	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	3180.9		4011.4			
ANNUAL MEAN	8.71		11.0		8.04	
HIGHEST ANNUAL MEAN					11.0	
LOWEST ANNUAL MEAN					5.57	
HIGHEST DAILY MEAN	45	Dec 4	209	Apr 13	209	Apr 13 1992
LOWEST DAILY MEAN	1.6	Feb 14	3.8	Oct 6	1.6	Feb 14 1991
ANNUAL SEVEN-DAY MINIMUM	2.0	Feb 14	4.1	Oct 4	2.0	Feb 14 1991
INSTANTANEOUS PEAK FLOW			261	Apr 13	261	Apr 13 1992
INSTANTANEOUS PEAK STAGE			4.62	Apr 13	4.62	Apr 13 1992
ANNUAL RUNOFF (AC-FT)	6310		7960		5830	
10 PERCENT EXCEEDS	20		21		13	
50 PERCENT EXCEEDS	5.3		5.4		5.1	
90 PERCENT EXCEEDS	4.1		4.3		4.0	

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81355	80493	77449	78392	74892	69627	51492	66672	76207	73310	63745	52597
2	81131	80390	77482	77887	74496	69452	51354	67450	76507	72984	63473	51821
3	81045	80217	77415	77937	74809	69055	51423	68281	76491	72804	62912	51011
4	80821	80200	77482	78392	74644	68975	51588	69261	76591	72772	62233	50180
5	80562	80303	77550	78733	74496	69087	51794	70376	76758	72706	62008	49921
6	80252	80441	77584	78631	74331	69166	51807	71262	76658	72674	61843	49921
7	80390	80493	77668	78562	74051	68673	52151	71956	76591	72478	61723	49120
8	79756	80648	77685	78579	73770	68785	52457	73622	76374	71891	61272	48401
9	79671	80029	77718	78545	73490	68281	52527	74925	76307	71213	61317	47686
10	79602	79415	77735	78207	73919	67732	52905	76224	76708	70682	60972	46837
11	79517	79483	77752	78190	73836	67090	53227	76741	76674	70056	60689	46049
12	79517	79244	77786	77803	73952	66409	53521	77752	76758	69802	60361	45251
13	79193	78989	78359	77482	73671	65652	53961	78291	76641	69214	59750	44524
14	78699	78648	78375	77129	73359	64857	54217	78886	76474	68689	59437	43790
15	78631	78579	78477	76893	73114	64125	54730	79790	76624	67920	59437	43931
16	78682	78920	78699	76207	73049	63336	55217	80080	76491	67184	59631	43342
17	78716	78545	78938	76391	72462	62504	56232	80390	76174	66703	59422	42617
18	78614	78494	79330	76441	71940	61693	56962	81045	76007	66254	59009	42099
19	78699	77988	79824	76893	71616	60853	57402	81562	76090	65729	58639	41558
20	79227	77331	80046	76960	71278	60003	57226	81131	76040	65162	58403	41721
21	79637	77112	80183	76792	70956	59319	57681	80303	75907	64384	58092	41272
22	79858	77112	79739	76541	70924	58728	58388	80234	75907	64369	57945	40651
23	79534	77112	79790	76191	70682	57959	58935	79961	75740	64354	57813	40305
24	79347	77112	79773	75957	70779	57152	60048	79466	75740	63851	57182	40072
25	79449	77129	79279	75673	71004	56406	61017	79176	75657	64094	56815	39729
26	80441	77179	79244	75473	71004	55652	61527	78767	75273	64247	56275	39644
27	80579	77213	78767	75824	70891	54901	62383	78342	74941	64308	55898	39644
28	80424	77314	78989	75857	70408	54260	63291	77853	74578	64094	55159	39301
29	80217	77348	79279	75874	70056	53549	64552	78140	74249	63760	54545	39166
30	80200	77415	78767	75690	---	52947	65590	77718	73539	63836	53847	39190
31	80321	---	78241	75206	---	52192	---	76859	---	63881	531	

11241500 STEVENSON CREEK AT SHAVER LAKE, CA

LOCATION.--Lat 37°08'41", long 119°18'27", in NE 1/4 SW 1/4 sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 400 ft downstream from Hwy 168 (revised), 1,600 ft downstream from Shaver Lake dam, 2.6 mi north of town of Shaver Lake, and 5.1 mi southwest of town of Big Creek.

DRAINAGE AREA.--29.4 mi².

PERIOD OF RECORD.--October 1916 to September 1920, May 1922 to September 1928, and October 1986 to current year. Prior to October 1986, published as "at Shaver."

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Elevation of gage is 5,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1315-A for history of changes prior to October 1986.

REMARKS.--Flow regulated by Shaver Lake (station 11239500). Flow diverted into basin through Eastwood Powerplant (station 11238250). Diversion to Big Creek Powerplant No. 2A (station 11238400) bypasses station and returns to Big Creek. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, Nov. 27, 1926, gage height, 3.65 ft, site and datum then in use; no flow at times in 1924, 1925, 1927.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6.5 ft³/s, Oct. 26, gage height, 3.89 ft; minimum daily, 1.2 ft³/s, Dec. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.6	1.2	2.4	2.3	2.7	4.0	3.4	3.4	3.4	3.4	3.2
2	3.5	3.6	1.2	2.4	2.3	2.8	3.7	3.4	3.5	3.4	3.4	3.2
3	3.6	3.6	2.5	2.4	2.3	2.9	3.7	3.4	3.5	3.4	3.4	3.2
4	3.6	3.6	5.0	2.4	2.3	2.9	3.7	3.4	3.5	3.4	3.4	3.2
5	3.6	3.5	4.0	2.5	2.3	2.7	3.5	3.4	3.5	3.4	3.4	3.2
6	3.6	3.6	4.0	2.4	2.3	3.0	3.5	3.5	3.5	3.4	3.3	3.2
7	3.6	3.6	3.2	2.4	2.5	2.9	3.5	3.5	3.5	3.4	3.3	3.2
8	3.6	3.6	2.3	2.4	2.5	2.7	3.5	3.5	3.5	3.4	3.3	3.1
9	3.5	3.6	2.3	2.4	2.5	2.7	3.5	3.5	3.5	3.4	3.3	3.1
10	3.5	3.6	2.3	2.4	2.6	2.7	3.4	3.5	3.5	3.4	3.3	3.2
11	3.5	3.5	2.3	2.4	3.0	2.7	3.4	3.5	3.5	3.5	3.3	3.6
12	3.5	3.5	2.3	2.4	3.6	2.7	3.4	3.5	3.5	3.9	3.3	3.6
13	3.5	3.5	2.3	2.4	3.1	2.7	3.5	3.5	3.5	3.5	3.3	3.6
14	3.5	3.5	2.3	2.4	2.9	2.7	3.4	3.5	3.5	3.5	3.3	3.5
15	3.5	3.5	2.3	2.4	2.7	2.7	3.4	3.5	3.5	3.5	3.3	3.5
16	3.5	3.5	2.3	2.4	2.6	2.7	3.4	3.4	3.5	3.5	3.3	3.5
17	3.5	3.6	2.3	2.4	2.6	2.6	3.4	3.4	3.5	3.4	3.3	3.5
18	3.5	3.6	2.3	2.4	2.6	2.6	3.4	3.5	3.5	3.4	3.3	3.5
19	3.5	3.6	2.3	2.4	2.6	2.6	3.4	3.5	3.4	3.4	3.3	3.5
20	3.5	3.4	2.3	2.4	2.9	2.6	3.4	3.5	3.4	3.4	3.2	3.5
21	3.5	2.8	2.3	2.4	2.8	2.7	e3.4	3.5	3.4	3.4	3.3	3.5
22	3.5	2.5	2.3	2.4	2.8	2.7	e3.4	3.4	3.4	3.5	3.3	3.5
23	3.6	2.5	2.3	2.4	2.7	2.9	3.5	3.4	3.4	3.5	3.3	3.5
24	3.6	2.5	2.3	2.4	2.7	2.8	3.5	3.4	3.4	3.5	3.3	3.5
25	3.6	2.5	2.3	2.4	2.7	2.8	3.4	3.4	3.4	3.5	3.3	3.5
26	4.2	2.5	2.3	2.4	2.7	3.0	3.4	3.4	3.4	3.4	3.3	3.5
27	3.7	2.5	2.3	2.4	2.7	4.0	3.4	3.4	3.4	3.5	3.3	3.4
28	3.7	2.4	2.4	2.4	2.7	4.0	3.4	3.4	3.4	3.5	3.3	3.4
29	3.6	2.1	2.4	2.4	2.7	4.0	3.4	3.4	3.4	3.5	3.2	3.5
30	3.6	1.6	2.4	2.4	---	4.2	3.4	3.4	3.4	3.4	3.2	3.5
31	3.6	---	2.4	2.4	---	4.1	---	3.4	---	3.4	3.2	---
TOTAL	110.8	95.0	76.7	74.5	77.0	91.8	104.3	106.8	103.7	107.1	102.4	101.9
MEAN	3.57	3.17	2.47	2.40	2.66	2.96	3.48	3.45	3.46	3.45	3.30	3.40
MAX	4.2	3.6	5.0	2.5	3.6	4.2	4.0	3.5	3.5	3.9	3.4	3.6
MIN	3.5	1.6	1.2	2.4	2.3	2.6	3.4	3.4	3.4	3.4	3.2	3.1
AC-FT	220	188	152	148	153	182	207	212	206	212	203	202
a	23720	10360	7580	12430	13800	25840	4240	10890	16000	20020	22010	18810

e Estimated.

a Diversion, in acre-feet, to Big Creek Powerplant No. 2A, provided by Southern California Edison Co.

11241500 STEVENSON CREEK AT SHAVER LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 1928, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.88	7.91	6.91	4.49	11.1	26.6	47.1	46.0	16.6	5.34	4.12	3.30
MAX	6.39	45.5	33.5	15.1	40.7	86.4	132	203	61.3	16.5	12.7	10.9
(WY)	1928	1927	1927	1920	1927	1918	1918	1922	1922	1920	1927	1927
MIN	.48	.30	.13	.15	.25	.37	.46	.27	.070	.000	.000	.000
(WY)	1926	1928	1928	1928	1928	1924	1928	1928	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1918 - 1928

ANNUAL MEAN	13.5
HIGHEST ANNUAL MEAN	39.0
LOWEST ANNUAL MEAN	.76
HIGHEST DAILY MEAN	854
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	1390
INSTANTANEOUS PEAK STAGE	3.65
ANNUAL RUNOFF (AC-FT)	9790
10 PERCENT EXCEEDS	26
50 PERCENT EXCEEDS	3.8
90 PERCENT EXCEEDS	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

MEAN	3.61	3.26	2.60	2.68	2.81	3.07	3.57	3.53	3.53	3.46	3.39	3.44
MAX	3.80	3.84	3.00	3.01	3.34	3.68	3.80	3.68	3.65	3.63	3.61	3.52
(WY)	1987	1988	1991	1991	1991	1991	1991	1988	1988	1989	1989	1989
MIN	3.48	3.01	2.22	2.40	2.39	2.58	3.43	3.45	3.42	3.33	3.26	3.37
(WY)	1991	1990	1990	1992	1990	1990	1989	1992	1990	1987	1988	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	1233.5	1152.0	
ANNUAL MEAN	3.38	3.15	3.25
HIGHEST ANNUAL MEAN			3.43
LOWEST ANNUAL MEAN			3.06
HIGHEST DAILY MEAN	5.0	5.0	11
LOWEST DAILY MEAN	1.2	1.2	1.2
ANNUAL SEVEN-DAY MINIMUM	1.9	1.9	1.9
INSTANTANEOUS PEAK FLOW		6.5	590
INSTANTANEOUS PEAK STAGE		3.89	5.51
ANNUAL RUNOFF (AC-FT)	2450	2280	2350
TOTAL DIVERSION (AC-FT) a	158900	185700	
10 PERCENT EXCEEDS	3.7	3.6	3.7
50 PERCENT EXCEEDS	3.5	3.4	3.4
90 PERCENT EXCEEDS	2.7	2.4	2.6

a Diversion, in acre-feet, to Big Creek Powerplant No. 2A, provided by Southern California Edison Co.

11241950 REDINGER LAKE NEAR AUBERRY, CA

LOCATION (REVISED).--Lat 37°08'42", long 119°26'58", in NE 1/4 SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at intake structure on dam No. 7 on San Joaquin River, 4.2 mi northeast of Auberry.

DRAINAGE AREA.--1,295 mi².

PERIOD OF RECORD.--November 1950 to current year. Prior to October 1965, monthend contents only, published in WSP 1930.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by a concrete dam; storage began Nov. 19, 1950. Usable capacity, 26,120 acre-ft between elevations 1,320.00 ft, invert of tunnel, and 1,403.00 ft, top of radial gates, NGVD. Additional storage of 8,914 acre-ft not available for release. Water is used for power development in Big Creek Powerplant No. 4 (station 11246530). See schematic diagram of lower San Joaquin River basin. Records, including extremes, represent contents at 2400 hours.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 26,586 acre-ft, Aug. 5, 1978, elevation, 1,404.00 ft; minimum since appreciable storage was attained, 5,985 acre-ft, Nov. 22, 1981, elevation, 1,346.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,809 acre-ft, May 13, elevation, 1,402.33 ft; minimum, 17,883 acre-ft, Oct. 27, elevation, 1,383.70 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Oct. 27, 1950)

1,340	4,284	1,380	16,455
1,350	6,809	1,390	20,427
1,360	9,651	1,400	24,748
1,370	12,858	1,405	27,058

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24340	22344	19567	23315	24789	25164	24560	21367	24457	24969	25123	25051
2	24591	22555	19535	23167	24717	24870	25214	20719	24902	24811	25287	24721
3	24811	22378	19567	22866	24757	24717	25006	24363	25105	24511	25305	24457
4	24623	22353	19576	22365	24820	24569	24703	25150	25502	23821	25337	24153
5	25037	22310	19576	22331	25246	24735	24300	25101	25360	24034	25141	24233
6	25305	22374	19743	22758	25155	24784	24425	25383	23949	23945	25015	24176
7	25150	22456	19600	22797	25346	24699	25051	25227	22516	24555	24461	24118
8	25123	22663	19580	22871	25232	24340	25634	25287	22771	24784	24309	23998
9	25689	22447	19633	22975	25314	24127	25346	25015	23442	24739	24273	24034
10	25319	22365	19547	23097	24988	24011	25483	25150	24251	24699	24569	24087
11	25287	22267	19567	23101	24390	23715	25460	25369	24042	24780	24843	23772
12	25110	22215	19780	22840	24238	23636	25447	25460	24056	25177	25015	23905
13	25055	22150	20134	22905	24555	23649	24951	25809	24025	25269	25150	23989
14	25010	21847	19961	23093	24452	23794	24757	24309	24242	25024	24775	24318
15	24870	22520	19994	23246	24087	24003	24564	24251	24264	25241	24870	24430
16	25046	23385	19912	23403	24672	23967	24721	23892	24511	24528	24730	24560
17	25137	23420	20320	23522	24870	24047	24717	24038	24933	24488	24825	24784
18	25287	23198	20727	24091	25019	24074	25141	24416	25383	24861	25060	25287
19	25227	22763	20979	24291	24983	24269	25584	23759	25479	25069	25078	22983
20	25164	21481	21363	24011	24189	24560	25534	22996	25105	24870	25273	22953
21	24875	21384	21702	24291	24511	24569	25419	23856	25173	24555	25305	23228
22	24911	21168	22082	24385	24546	24875	24717	24434	25410	24065	24798	23451
23	25520	20836	22581	24524	24475	25305	24372	24672	25146	24542	24587	23592
24	25497	20673	22888	24753	23399	25028	24816	24861	24762	24416	24775	23667
25	23473	20460	22910	24762	23592	24960	24278	24924	24416	24623	24884	23491
26	20715	20406	22862	24766	23976	24983	24502	25269	24735	24879	24906	23412
27	17883	20287	23276	24902	24313	24493	24636	25092	24897	24974	24600	23416
28	18799	20010	23246	24911	25460	24511	23750	25264	25195	24703	24667	23715
29	19678	19793	23355	24969	24988	24600	23412	25360	25607	24793	24820	22473
30	20644	19748	23517	24997	---	24807	22871	24798	25128	24744	25419	21396
31	21511	---	23671	24789	---	23927	---	24475	---	24924	25019	---
MAX	25689	23420	23671	24997	25460	25305	25634	25809	25607	25269	25419	25287
MIN	17883	19748	19535	22331	23399	23636	22871	20719	22516	23821	24273	21396
a	1392.58	1388.35	1397.58	1400.09	1400.53	1398.16	1395.75	1399.39	1400.84	1400.39	1400.60	1392.31
b	-2727	-1763	+3923	+1118	+199	-1061	-1056	+1604	+653	-204	+95	-3623

CAL YR 1991 MAX 25740 MIN 14736 b -505

WTR YR 1992 MAX 25809 MIN 17883 b -2842

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA

LOCATION.--Lat 37°08'40", long 119°27'13", in SW 1/4 SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,000 ft downstream from Redinger Lake Dam, 0.4 mi upstream from Willow Creek, and 4.2 mi northeast of Auberry.

DRAINAGE AREA.--1,295 mi².

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

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,175.54 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharge. Flow regulated by Redinger Lake (station 11241950). Most of the flow, since June 1951, is diverted at Redinger Lake to Big Creek No. 4 Powerplant (station 11246530). See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,200 ft³/s, Dec. 23, 1955, gage height, 54.2 ft, from floodmarks, from rating curve extended above 7,000 ft³/s on basis of computed flow over dam; no flow Sept. 25, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 236 ft³/s, Jan. 24, gage height, 6.16 ft; minimum daily, 6.4 ft³/s, Mar. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	23	22	23	23	23	6.9	21	21	22	22	22
2	23	23	22	23	23	23	6.9	16	21	22	22	22
3	23	23	22	23	24	23	6.9	16	21	22	22	22
4	23	23	22	23	23	23	6.9	14	21	22	22	22
5	23	23	22	23	23	23	6.9	15	22	21	22	22
6	24	23	23	23	23	23	6.9	13	22	21	22	22
7	24	23	23	22	23	23	6.9	13	21	21	22	22
8	24	23	22	22	23	23	6.9	13	21	22	22	22
9	24	23	22	22	23	23	6.9	14	21	22	22	22
10	23	23	22	22	24	23	6.9	14	21	22	22	22
11	23	23	22	23	24	23	6.9	15	21	22	22	22
12	23	23	22	23	24	23	6.9	17	21	22	27	22
13	23	23	22	23	24	23	7.1	17	21	22	26	22
14	23	23	22	23	23	23	6.9	17	21	22	47	22
15	24	23	22	23	24	23	6.9	17	21	22	30	22
16	23	23	22	23	23	23	6.9	17	21	22	29	22
17	24	23	23	23	23	23	6.9	17	21	22	29	22
18	24	23	23	23	23	23	6.9	17	21	22	27	22
19	24	23	23	23	23	23	6.9	17	21	22	23	22
20	24	23	23	23	23	23	7.1	17	21	22	23	21
21	24	23	23	23	23	24	8.7	17	21	22	23	21
22	24	23	23	23	23	24	8.7	17	21	22	23	22
23	24	23	23	23	23	24	8.7	18	21	22	23	22
24	24	22	23	28	23	19	8.7	18	21	22	22	22
25	24	22	23	23	23	6.4	8.7	21	21	22	22	22
26	24	22	23	23	24	7.1	9.2	22	21	22	22	22
27	23	22	23	23	23	7.1	9.9	23	21	22	22	22
28	22	22	24	23	23	7.1	21	21	21	22	22	22
29	22	22	23	23	23	7.1	22	22	21	22	22	22
30	22	22	23	23	---	7.4	22	22	21	22	22	22
31	23	---	23	23	---	7.1	---	22	---	22	22	---
TOTAL	724	683	700	714	674	600.3	266.0	540	632	679	748	658
MEAN	23.4	22.8	22.6	23.0	23.2	19.4	8.87	17.4	21.1	21.9	24.1	21.9
MAX	24	23	24	28	24	24	22	23	22	22	47	22
MIN	22	22	22	22	23	6.4	6.9	13	21	21	22	21
AC-FT	1440	1350	1390	1420	1340	1190	528	1070	1250	1350	1480	1310
a	49320	26400	23380	38620	56390	103100	114200	105100	59050	97970	80540	56630

a Diversion, in acre-feet, to Big Creek No. 4 Powerplant, provided by Southern California Edison Co.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.8	19.7	119	70.5	107	131	404	1573	2068	710	65.9	21.1
MAX	25.9	76.2	3501	679	1255	1456	2739	10410	12700	6141	1343	33.9
(WY)	1990	1983	1956	1980	1986	1983	1951	1969	1983	1983	1983	1952
MIN	8.15	8.55	5.66	3.83	3.37	2.86	3.27	4.76	8.59	13.3	16.5	2.79
(WY)	1983	1985	1966	1965	1966	1968	1955	1971	1971	1979	1984	1951

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1951 - 1992	
ANNUAL TOTAL	7385.0		7618.3			
ANNUAL MEAN	20.2		20.8		435	
HIGHEST ANNUAL MEAN					2409	
LOWEST ANNUAL MEAN					11.4	
HIGHEST DAILY MEAN	56 Jul 9		47 Aug 14		47700	
LOWEST DAILY MEAN	5.6 Jul 24		6.4 Mar 25		.00	
ANNUAL SEVEN-DAY MINIMUM	6.6 Mar 27		6.9 Apr 1		.38	
INSTANTANEOUS PEAK FLOW			236 Jan 24		73200	
INSTANTANEOUS PEAK STAGE			6.16 Jan 24		54.20	
ANNUAL RUNOFF (AC-FT)	14650		15110		315200	
ANNUAL TOTAL, DIVERSION (AC-FT) a	893400		810700			
10 PERCENT EXCEEDS	26		23		984	
50 PERCENT EXCEEDS	23		22		20	
90 PERCENT EXCEEDS	7.1		13		4.6	

a Diversion, in acre-feet, to Big Creek No. 4 Powerplant, provided by Southern California Edison Co.

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA

LOCATION.--Lat 37°23'52", long 119°33'55", in SW 1/4 NE 1/4 sec.21, T.6 S., R.22 E., Madera County, Hydrologic Unit 18040006, on right bank at road bridge 0.6 mi downstream from Soquel Campground, 3.0 mi upstream from Chilkoot Creek, and 4.7 mi southeast of Sugar Pine.

DRAINAGE AREA.--16.9 mi².

PERIOD OF RECORD.--August 1965 to current year.

REVISED RECORDS.--WDR CA-72-2: 1970, 1971. WDR CA-85-3: 1983, 1984(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No storage upstream from station. Madera Irrigation District has water rights to divert up to 50 ft³/s from North Fork Willow Creek through Soquel ditch into Nelder Creek (Fresno River basin) from October through July each year. See schematic diagram of lower San Joaquin River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s, Jan. 13, 1980, gage height, 7.41 ft, from rating curve extended above 1,100 ft³/s on basis of a step-backwater survey; minimum daily, 0.27 ft³/s, Oct. 4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	1430	*315	*4.27	Apr. 29	1945	102 *	3.68

Minimum daily, 0.63 ft³/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.7	3.0	3.8	4.1	16	21	56	9.1	5.7	2.3	2.5
2	1.8	3.7	3.0	3.6	3.9	17	24	47	8.4	5.4	2.1	2.0
3	1.8	3.7	3.0	3.7	3.9	17	25	46	8.0	4.8	2.1	1.8
4	1.8	3.6	3.0	3.6	3.8	13	23	44	7.7	4.5	1.9	2.5
5	1.7	3.4	3.0	7.0	4.1	14	26	43	7.3	4.3	1.8	1.6
6	1.7	2.9	3.0	9.0	4.3	15	24	44	7.4	4.0	1.9	1.3
7	1.7	2.7	3.3	4.4	6.5	11	25	44	7.6	3.8	1.9	1.4
8	1.7	2.6	3.3	4.0	6.5	12	42	39	8.1	3.6	2.1	1.1
9	1.7	2.8	3.0	4.3	5.7	8.3	43	36	7.5	3.5	2.1	.85
10	1.7	2.9	3.0	4.5	6.6	7.0	42	31	7.3	3.5	2.0	.87
11	1.7	2.5	3.0	4.1	9.5	7.2	40	28	7.1	7.3	1.9	.92
12	1.8	2.3	2.8	4.0	24	8.1	34	26	7.1	39	1.7	.99
13	1.7	2.3	2.7	4.5	20	8.8	62	24	7.2	13	1.5	.96
14	1.7	2.4	2.7	4.1	16	9.9	45	22	7.3	9.7	1.5	.88
15	1.7	2.4	2.6	4.1	13	15	34	21	7.6	9.1	1.5	1.1
16	1.7	2.3	2.6	4.1	20	8.9	36	20	7.3	6.3	1.6	1.1
17	1.7	10	2.6	4.1	14	10	49	19	6.8	5.8	1.5	.96
18	1.7	7.7	3.7	4.1	8.0	9.5	60	18	6.4	5.2	1.5	1.1
19	1.7	5.1	3.5	4.0	8.1	8.2	60	18	6.3	4.7	1.5	.96
20	1.6	5.2	2.9	3.8	21	10	65	17	6.4	3.7	1.4	.96
21	1.6	4.8	2.9	3.8	13	14	68	16	6.4	4.5	1.5	.80
22	1.7	4.4	2.8	3.7	12	13	55	14	5.9	3.4	1.6	.80
23	2.1	3.7	2.9	3.8	8.7	13	49	13	5.8	5.7	1.7	.80
24	2.2	3.5	2.8	4.0	7.6	9.9	53	12	6.1	7.7	1.7	.93
25	2.4	3.5	2.8	3.8	8.0	13	62	12	5.8	6.5	1.5	1.1
26	66	3.5	2.8	3.9	8.0	17	66	11	5.4	5.2	1.9	.99
27	11	3.5	2.8	3.8	8.0	19	68	11	5.2	4.4	1.3	.70
28	5.4	3.2	4.7	3.9	9.1	18	72	10	5.0	4.0	1.3	.63
29	4.7	3.1	5.0	3.9	12	16	71	10	5.1	3.5	1.7	.66
30	4.3	2.8	5.0	4.0	---	17	68	9.9	7.5	2.7	1.5	.76
31	4.0	---	3.9	4.1	---	16	---	9.6	---	2.1	3.1	---
TOTAL	139.9	110.2	98.1	131.5	289.4	391.8	1412	771.5	206.1	196.6	54.6	34.02
MEAN	4.51	3.67	3.16	4.24	9.98	12.6	47.1	24.9	6.87	6.34	1.76	1.13
MAX	66	10	5.0	9.0	24	19	72	56	9.1	39	3.1	2.5
MIN	1.6	2.3	2.6	3.6	3.8	7.0	21	9.6	5.0	2.1	1.3	.63
AC-FT	277	219	195	261	574	777	2800	1530	409	390	108	67

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.55	9.40	14.1	23.5	27.6	36.5	45.7	68.0	45.1	14.4	5.37	4.26
MAX	17.8	43.0	69.2	147	178	151	176	207	214	109	26.9	14.3
(WY)	1983	1984	1984	1980	1986	1986	1982	1969	1983	1983	1983	1978
MIN	.41	1.63	1.20	1.84	2.07	2.04	1.78	2.40	1.84	.99	.66	.38
(WY)	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	5966.6		3835.72			
ANNUAL MEAN	16.3		10.5		24.8	
HIGHEST ANNUAL MEAN					82.7	
LOWEST ANNUAL MEAN					1.57	
HIGHEST DAILY MEAN	226	Mar 4	72	Apr 28	1360	Jan 13 1980
LOWEST DAILY MEAN	1.6	Oct 20	.63	Sep 28	.27	Oct 4 1987
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 15	.82	Sep 24	.29	Oct 11 1977
INSTANTANEOUS PEAK FLOW			315	Oct 26	2750	Jan 13 1980
INSTANTANEOUS PEAK STAGE			4.27	Oct 26	7.41	Jan 13 1980
ANNUAL RUNOFF (AC-FT)	11830		7610		17990	
10 PERCENT EXCEEDS	46		27		67	
50 PERCENT EXCEEDS	4.5		4.3		7.1	
90 PERCENT EXCEEDS	2.2		1.5		1.7	

11243300 BROWNS CREEK CANAL AT BASS LAKE, CA

LOCATION.--Lat 37°17'19", long 119°31'09", in SE 1/4 SW 1/4 sec.25, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 900 ft upstream from Bass Lake, and 3.0 mi southeast of town of Bass Lake.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and concrete canal. Elevation of gage is 3,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Canal diverts from South Fork Willow Creek at diversion dam 1.5 mi upstream from gage, in NW 1/4 NE 1/4 sec.30, T.7 S., R.23 E. Flow enters Bass Lake for power development in San Joaquin River powerplants. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 86 ft³/s, Mar. 8, 1989; no flow at times in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	3.7	3.7	5.0	7.4	48	74	41	7.6	3.1	.00	.00
2	.00	3.5	3.0	5.2	7.3	46	78	37	7.2	3.0	.00	.00
3	.00	3.0	3.0	5.2	6.8	49	83	34	6.8	2.6	.00	.00
4	.00	2.3	3.0	5.5	6.7	50	82	31	6.5	2.5	.00	.00
5	.00	1.9	3.1	6.9	6.3	43	81	30	6.3	2.0	.00	.00
6	.00	1.2	3.1	7.0	6.4	46	78	29	5.9	1.8	.00	.00
7	.00	.98	3.4	7.5	12	39	75	29	6.2	1.7	.00	.00
8	.00	.98	4.2	6.8	16	34	77	28	6.4	1.5	.00	.00
9	.00	.88	4.0	7.0	11	32	76	26	6.0	1.4	.00	.00
10	.00	1.1	3.8	7.9	16	34	76	24	5.2	1.4	.00	.00
11	.00	1.5	3.6	7.7	32	40	71	21	4.9	3.1	.00	.00
12	.00	1.6	3.1	6.9	56	47	62	20	4.7	52	.00	.00
13	.00	1.6	2.5	6.8	46	53	82	20	4.7	16	.00	.00
14	.00	1.6	2.2	6.5	30	56	78	19	4.7	8.9	.00	.00
15	.00	1.6	2.2	6.7	22	67	69	18	4.8	6.9	.00	.00
16	.00	1.7	2.3	6.7	19	58	64	17	5.0	5.5	.00	.00
17	.00	7.9	2.4	7.2	19	46	68	16	4.9	4.6	.00	.00
18	.00	16	2.5	7.2	19	41	70	14	4.6	4.0	.00	.00
19	.00	9.2	3.4	7.7	22	39	68	14	4.4	3.3	.00	.00
20	.00	7.7	3.2	7.3	50	38	68	14	4.2	2.2	.00	.00
21	.00	7.0	2.9	7.4	58	40	68	13	4.0	2.0	.00	.00
22	.00	7.1	2.9	7.2	50	44	61	12	3.8	1.9	.00	.00
23	.00	5.6	2.8	7.3	52	53	53	11	3.6	1.9	.00	.00
24	.00	5.3	2.8	6.8	50	48	50	11	3.5	2.0	.00	.00
25	.00	4.8	2.8	6.5	54	49	50	10	3.5	2.0	.05	.00
26	29	4.0	2.7	6.6	58	63	49	9.7	3.4	1.7	.00	.00
27	21	3.8	2.6	7.0	59	57	50	9.5	3.1	.69	.00	.00
28	8.6	3.8	3.8	7.2	59	67	48	9.3	2.9	.01	.00	.00
29	5.9	4.0	5.9	7.1	55	69	46	9.1	2.6	.00	.00	.00
30	4.9	4.2	5.5	7.2	---	83	44	8.9	3.0	.00	.00	.00
31	4.3	---	5.0	7.4	---	70	---	8.4	---	.00	.00	---
TOTAL	73.70	119.54	101.4	212.4	905.9	1549	1999	593.9	144.4	139.70	0.05	0.00
MEAN	2.38	3.98	3.27	6.85	31.2	50.0	66.6	19.2	4.81	4.51	.002	.000
MAX	29	16	5.9	7.9	59	83	83	41	7.6	52	.05	.00
MIN	.00	.88	2.2	5.0	6.3	32	44	8.4	2.6	.00	.00	.00
AC-FT	146	237	201	421	1800	3070	3970	1180	286	277	.1	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992
MEAN	2.50	4.21	4.49	9.66	18.7	42.0
MAX	6.53	5.89	10.5	21.9	31.2	64.5
(WY)	1990	1989	1988	1987	1992	1991
MIN	.000	1.74	1.07	3.01	2.87	25.3
(WY)	1989	1991	1991	1991	1991	1988

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1987 - 1992

	1991	1992	1987-1992
ANNUAL TOTAL	6233.86	5838.99	
ANNUAL MEAN	17.1	16.0	14.4
HIGHEST ANNUAL MEAN			16.5
LOWEST ANNUAL MEAN			10.5
HIGHEST DAILY MEAN	77	83	86
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	12360	11580	10430
10 PERCENT EXCEEDS	66	55	49
50 PERCENT EXCEEDS	3.3	4.9	4.9
90 PERCENT EXCEEDS	.00	.00	.00

11243400 BASS LAKE NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'33", long 119°31'43", in SE 1/4 NE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at outlet tower at dam on North Fork Willow Creek, 2.2 mi southeast of town of Bass Lake, and 5 mi north of North Fork.

DRAINAGE AREA.--50.4 mi².

PERIOD OF RECORD.--January 1911 to September 1982 (monthend contents only), October 1982 to current year. Bass Lake was formerly called Crane Valley Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir formed by earthfill and rockfill dam; completed in 1901 and raised in 1910. Since 1910 usable contents 45,100 acre-ft between elevations 3,280.22 ft, invert of outlet conduit No. 3, and 3,376.40 ft, top of spillway gates. Additional storage of 300 acre-ft not available for release. Water is released through Crane Valley Powerplant below dam for use in three small powerplants before being discharged into Kerckhoff Reservoir station 11246650) at Wishon Powerplant. Water is diverted from South Fork Willow Creek via Browns Creek ditch into Bass Lake near left end of dam. Madera Irrigation District has water rights to divert up to 50 ft³/s from North Fork Willow Creek through Soquel ditch into Nelder Creek (Fresno River basin) from October through July each year. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,960 acre-ft, June 17, 1923, elevation, 3,376.8 ft; minimum, 35 acre-ft, Nov. 19, 1953, elevation, 3,270.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 44,522 acre-ft, July 12, elevation, 3,375.63 ft; minimum, 20,172 acre-ft, Nov. 29, elevation, 3,350.68 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated March 1937)

3,280	290	3,310	3,404	3,340	13,227	3,370	38,218
3,290	890	3,320	5,584	3,350	19,663	3,376.4	45,410
3,300	1,896	3,330	8,717	3,360	28,121		

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30015	26941	20255	21363	22703	28921	32241	40642	43841	44175	39472	30725
2	29996	26969	20278	21403	22753	29126	32530	40899	43865	44187	39188	30446
3	29996	26987	20278	21451	22795	29333	32830	41052	43901	44187	38905	30168
4	29958	26851	20362	21483	22821	29502	33142	41237	43913	44187	38610	29882
5	29920	26581	20385	21668	22854	29683	33418	41434	43925	44175	38349	29607
6	29968	26284	20408	21725	22888	29901	33703	41619	43945	44175	38055	29324
7	29939	25987	20424	21798	22972	30091	33980	41817	43972	44135	37782	29060
8	29939	25729	20516	21822	23022	30293	34248	41993	43996	44175	37488	28753
9	29920	25445	20493	21862	23081	30439	34516	42159	44020	44163	37215	28484
10	29863	25162	20539	21911	23493	30590	34797	42308	44020	44151	36923	28195
11	29588	24943	20539	21944	23935	30552	35070	42444	44032	44187	36653	27907
12	29286	24717	20546	21985	24674	30465	35376	42570	44032	44522	36361	27665
13	29005	24458	20546	22017	25250	30398	35727	42695	44032	44414	36091	27656
14	28698	24145	20570	22058	25453	30398	36037	42798	44032	44246	35813	27646
15	28428	23850	20608	22091	25809	30456	36307	42902	44044	44079	35535	27646
16	28140	23561	20608	22140	25060	30494	36566	42994	44056	43877	35260	27628
17	27851	23367	20631	22181	26230	30446	36847	43076	44068	43640	34976	27628
18	27508	23182	20678	22206	26356	30369	37150	43134	44079	43369	34693	27619
19	27205	22921	20700	22247	26509	30283	37433	43215	44091	43087	34402	27610
20	26978	22661	20716	22288	26851	30293	37760	43298	44091	42798	34124	27600
21	26680	22395	20724	22329	27096	30504	38087	43357	44115	42513	33826	27600
22	26365	22099	20747	22362	27333	30812	38360	43416	44115	42228	33530	27582
23	26167	21814	20755	22404	27554	31054	38610	43475	44127	41949	33244	27582
24	26167	21507	20777	22429	27758	31122	38850	43515	44127	41674	32940	27563
25	26158	21219	20809	22462	27935	31151	39101	43560	44139	41401	32640	27563
26	26563	20924	20824	22503	28121	31248	39341	43617	44151	41128	32380	27563
27	26797	20616	20870	22537	28354	31238	39602	43664	44163	40856	32102	27535
28	26824	20316	21003	22578	28558	31307	39853	43699	44151	40583	31826	27535
29	26851	20172	21235	22603	28744	31346	40147	43746	44151	40289	31532	27526
30	26833	20225	21283	22636	---	31650	40398	43782	44175	40017	31277	27508
31	26923	---	21331	22669	---	31964	---	43818	---	39744	30986	---
MAX	30015	26987	21331	22669	28744	31964	40398	43818	44175	44522	39472	30725
MIN	26158	20172	20255	21363	22703	28921	32241	40642	43841	39744	30986	27508
a	3358.70	3350.75	3352.17	3353.81	3360.67	3364.03	3372.00	3375.04	3375.34	3371.40	3363.03	3359.34
b	-3064	-6698	+1106	+1338	+6075	+3220	+8434	+3420	+357	-4431	-8758	-3478
CAL YR 1991	b	-1578										
WTR YR 1992	b	-2479										

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11243500 PACIFIC GAS & ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'21", long 119°31'44", in NE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 1,000 ft downstream from Crane Valley powerplant and dam and 2.5 mi southeast of town of Bass Lake.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1954, published as "near Crane Valley Reservoir."

GAGE.--Water-stage recorder and concrete flume. Elevation of gage is 3,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Conduit diverts from Bass Lake in sec.26, T.7 S., R.22 E. Water passes through Crane Valley Powerplant, then to Powerplant No. 3, and is stored temporarily at Manzanita Lake on North Fork Willow Creek; flow then diverts to Powerplants No. 2 and No. 1A before it enters San Joaquin River at Kerckhoff Reservoir through San Joaquin Powerplant No. 1. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 167 ft³/s, June 23, 24, 1965; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.62	.60	.35	.48	.41	.61	.77	.97	.91	143	137
2	.35	.62	.55	.35	.48	.42	.97	1.2	.97	.91	143	138
3	.35	.55	.48	.35	.48	.41	1.0	1.3	.75	.91	143	139
4	.35	.85	.43	.35	.48	.41	1.1	.72	.55	.91	143	139
5	.35	147	.39	1.3	.48	.42	1.1	1.0	.55	.91	143	139
6	.35	147	.41	1.6	.48	.41	1.1	1.0	.55	.91	143	140
7	.35	147	.35	1.5	.48	.41	1.1	1.0	.51	.91	142	140
8	.35	146	.29	1.5	.48	.41	.86	1.0	.50	.91	142	140
9	1.4	146	.28	1.5	.48	.41	.76	1.0	.49	1.2	142	140
10	.41	141	.21	1.5	2.8	.44	1.0	1.0	.48	1.4	142	140
11	147	120	.34	1.5	2.4	.72	.75	1.0	1.3	1.4	142	141
12	147	120	.35	1.5	.42	130	.73	.97	.48	.49	142	122
13	147	137	.37	1.0	.41	130	.86	.91	.48	101	142	.55
14	147	150	.40	.41	1.8	130	.86	.91	.48	101	141	.55
15	147	152	.35	.41	4.1	121	.86	.91	.67	101	141	.55
16	147	152	.42	.41	2.9	116	.86	.91	.97	101	141	.55
17	146	151	.52	.41	.41	122	.86	.91	.97	126	141	.55
18	146	151	.89	.41	.36	129	.86	.91	.97	145	140	.55
19	146	151	3.0	.41	.37	128	.86	.91	1.1	145	139	.55
20	146	151	.65	.41	.41	54	.86	.91	1.2	145	139	.55
21	146	151	.70	.43	.41	.52	.86	.91	1.2	145	139	.28
22	146	150	.35	.48	.41	.52	.86	.91	1.5	145	139	.01
23	.81	150	.35	.48	.41	.55	.91	.91	1.8	145	139	.00
24	.48	150	.35	.48	.41	.73	.97	.91	1.2	145	139	.00
25	.48	150	.35	.48	.41	132	.97	.91	.44	144	139	.00
26	.55	149	.35	.48	.41	132	.97	.91	.48	144	138	.00
27	.48	149	.35	.48	.41	132	.97	.83	.48	145	138	.00
28	.48	149	.35	.48	.41	132	.88	.76	.67	145	138	.00
29	.48	.44	.36	.48	.41	133	.73	.87	.91	145	137	.00
30	.62	.62	.35	.48	---	39	.71	.97	.91	144	137	.00
31	.62	---	.35	.48	---	.41	---	.97	---	144	137	---
TOTAL	1888.39	3638.41	15.49	22.40	24.39	1911.15	26.79	29.10	24.53	2616.28	4354	1659.69
MEAN	60.9	121	.50	.72	.84	61.6	.89	.94	.82	84.4	140	55.3
MAX	147	152	3.0	1.6	4.1	133	1.1	1.3	1.8	145	143	141
MIN	.35	.55	.21	.35	.36	.41	.61	.72	.44	.91	137	.00
AC-FT	3750	7220	31	44	48	3790	53	58	49	5190	8640	3290

11243500 PACIFIC GAS & ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.2	42.6	58.4	61.5	68.0	72.8	62.0	57.1	57.9	81.4	106	90.5
MAX	152	148	157	157	161	162	158	157	160	153	155	154
(WY)	1951	1984	1983	1956	1956	1956	1956	1958	1952	1983	1958	1980
MIN	.000	.000	.042	.19	.079	.12	.12	.090	.060	.52	9.43	.47
(WY)	1988	1968	1954	1954	1977	1947	1947	1977	1942	1977	1977	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	17473.65	16210.62	
ANNUAL MEAN	47.9	44.3	68.3
HIGHEST ANNUAL MEAN			128
LOWEST ANNUAL MEAN			14.4
HIGHEST DAILY MEAN	152	Nov 15	152
LOWEST DAILY MEAN	.00	Jan 29	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 29	.00
ANNUAL RUNOFF (AC-FT)	34660	32150	49490
10 PERCENT EXCEEDS	145	145	151
50 PERCENT EXCEEDS	.86	.91	62
90 PERCENT EXCEEDS	.00	.35	.03

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'20", long 119°31'45", in SE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft downstream from Bass Lake spillway and 2.5 mi southeast of town of Bass Lake.

DRAINAGE AREA.--50.8 mi².

PERIOD OF RECORD.--May 1940 to current year. Prior to October 1944, published as Willow Creek below Crane Valley Reservoir. October 1944 to September 1954, published as "below Crane Valley Reservoir."

GAGE.--Water-stage recorder. Broad-crested weir with V-notch Dec. 21, 1961, to Jan. 16, 1969, and since Mar. 26, 1971. Elevation of gage is 3,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by Bass Lake (station 11243400) 1,500 ft upstream and by diversion into Pacific Gas & Electric Co. conduit No. 3 near Bass Lake (station 11243500). Soquel ditch diverts up to 50 ft³/s from North Fork Willow Creek into Nelder Creek in Fresno River basin. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,100 ft³/s, Feb. 19, 1986; minimum daily, 0.01 ft³/s, Dec. 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7.0 ft³/s, Oct. 26, gage height, 2.12 ft; minimum daily, 0.18 ft³/s, Feb. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.28	.23	.29	.19	.33	.69	1.7	1.2	1.0	.66	.31
2	.28	.28	.22	.26	.19	.36	.65	1.7	1.2	.99	.64	.30
3	.28	.27	.22	.26	.19	.39	.65	1.7	1.2	.98	.64	.29
4	.28	.26	.22	.26	.19	.37	.65	1.6	1.2	.99	.62	.29
5	.28	.26	.22	.51	.18	.46	.65	1.4	1.2	1.0	.61	.28
6	.28	.26	.22	.47	.18	.67	.66	1.3	1.2	1.0	.61	.27
7	.28	.25	.23	.43	.19	.44	.66	1.3	1.2	1.0	.59	.26
8	.28	.25	.24	.37	.19	.41	.68	1.3	1.2	1.0	.58	.26
9	.28	.25	.22	.32	.19	.44	.69	1.3	1.2	1.0	.57	.25
10	.28	.25	.22	.30	.99	.38	.72	1.3	1.2	1.0	.56	.25
11	.28	.24	.21	.28	2.5	.37	.77	1.3	1.2	1.1	.55	.25
12	.27	.23	.21	.27	3.1	.37	.81	1.3	1.2	1.4	.54	.25
13	.27	.23	.21	.25	3.3	.35	.92	1.3	1.1	1.1	.53	.25
14	.26	.24	.21	.24	1.1	.42	.95	e1.3	1.2	1.1	.52	.24
15	.26	.23	.20	.23	1.9	.67	1.0	e1.3	1.2	1.0	.50	.24
16	.25	.23	.21	.23	1.7	.53	1.1	e1.3	1.2	1.0	.48	.24
17	.24	.33	.21	.23	1.4	.48	1.1	e1.3	1.2	.96	.47	.24
18	.24	.44	.21	.22	.99	.45	1.2	e1.2	1.2	.94	.46	.24
19	.24	.30	.21	.22	.82	.42	1.2	e1.2	1.2	.91	.45	.24
20	.24	.27	.21	.22	1.1	.40	1.2	e1.2	1.2	.89	.44	.24
21	.23	.26	.20	.22	.71	.62	1.3	1.3	1.2	.87	.42	.33
22	.24	.25	.19	.21	.57	1.0	1.3	1.2	1.1	.86	.42	.42
23	.24	.24	.19	.21	.49	1.6	1.3	1.2	1.1	.84	.41	.43
24	.24	.23	.19	.21	.43	.78	1.4	1.2	1.0	.82	.40	.43
25	.24	.23	.19	.21	.41	.77	1.4	1.2	1.0	.81	.38	.44
26	1.8	.23	.19	.21	.37	.89	1.4	1.2	1.0	.78	.37	.44
27	.58	.23	.20	.20	.35	.73	1.4	1.2	1.0	.75	.36	.44
28	.38	.23	.46	.20	.34	.66	1.4	1.2	1.0	.74	.35	.44
29	.34	.23	.83	.19	.34	.63	1.7	1.2	1.0	.72	.34	.44
30	.31	.23	.51	.19	---	.92	1.7	1.2	1.0	.69	.33	.43
31	.29	---	.34	.19	---	.75	---	1.2	---	.67	.32	---
TOTAL	10.23	7.71	7.82	8.10	24.60	18.06	31.25	40.6	34.3	28.91	15.12	9.43
MEAN	.33	.26	.25	.26	.85	.58	1.04	1.31	1.14	.93	.49	.31
MAX	1.8	.44	.83	.51	3.3	1.6	1.7	1.7	1.2	1.4	.66	.44
MIN	.23	.23	.19	.19	.18	.33	.65	1.2	1.0	.67	.32	.24
AC-FT	20	15	16	16	49	36	62	81	68	57	30	19

e Estimated.

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.81	4.08	7.01	16.4	27.5	28.1	19.8	24.7	17.3	3.88	2.92	3.28
MAX	77.8	54.6	106	194	380	297	272	234	189	73.6	66.4	103
(WY)	1949	1958	1947	1956	1986	1983	1982	1967	1983	1983	1963	1963
MIN	.18	.26	.21	.22	.18	.24	.30	.23	.24	.21	.24	.26
(WY)	1991	1992	1987	1991	1991	1977	1977	1977	1977	1977	1977	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	269.39	236.13	
ANNUAL MEAN	.74	.65	13.1
HIGHEST ANNUAL MEAN			80.8 1983
LOWEST ANNUAL MEAN			.26 1977
HIGHEST DAILY MEAN	6.7 Mar 4	3.3 Feb 13	2100 Feb 19 1986
LOWEST DAILY MEAN	.15 Feb 16	.18 Feb 5	.01 Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	.15 Feb 19	.19 Jan 31	.11 Oct 1 1990
INSTANTANEOUS PEAK FLOW		7.0 Oct 26	
INSTANTANEOUS PEAK STAGE		2.12 Oct 26	
ANNUAL RUNOFF (AC-FT)	534	468	9460
10 PERCENT EXCEEDS	2.1	1.3	6.3
50 PERCENT EXCEEDS	.37	.44	.70
90 PERCENT EXCEEDS	.19	.22	.30

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA

LOCATION.--Lat 37°09'03", long 119°27'34", in SE 1/4 NE 1/4 sec.16, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 40 ft upstream from bridge, 0.4 mi upstream from mouth, 1.3 mi downstream from Whiskey Creek, and 4.3 mi northeast of Auberry.

DRAINAGE AREA.--130 mi².

PERIOD OF RECORD.--January 1952 to September 1988, October 1989 to current year.

GAGE.--Water-stage recorder. Concrete control since Oct. 22, 1964. Datum of gage is 1,174.69 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharges. Flow regulated by Bass Lake (station 11243400) 10 mi upstream. Soquel ditch diverts up to 50 ft³/s from North Fork Willow Creek into Nelder Creek in Fresno River basin. Flow diverted out of basin by Pacific Gas & Electric Co. Conduit No. 3. See schematic diagram of lower San Joaquin River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s, Dec. 23, 1955, gage height, 28.5 ft, from floodmarks, from rating curve extended above 4,700 ft³/s; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 360 ft³/s, Feb. 13, gage height, 7.66 ft; no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	1.6	4.9	3.4	2.8	15	51	13	3.4	2.3	.20	.03
2	.04	1.5	3.7	3.1	2.7	15	51	12	3.2	1.9	.16	.02
3	.03	1.4	4.3	3.0	2.7	16	51	11	3.0	1.7	.13	.03
4	.03	1.3	3.6	3.3	2.7	21	51	11	2.8	1.5	.12	.03
5	.02	1.2	3.6	10	2.6	18	46	10	2.6	1.3	.12	.02
6	.02	1.2	3.4	9.6	2.6	22	42	10	2.5	1.2	.12	.00
7	.01	1.1	3.2	6.4	3.1	19	39	10	2.8	1.2	.10	.01
8	.02	1.0	2.8	4.9	7.1	18	39	10	2.9	1.1	.10	.02
9	.01	1.0	2.5	3.4	6.0	15	38	10	2.7	1.0	.09	.00
10	.00	1.0	2.2	3.2	10	14	37	9.6	2.5	.97	.08	.00
11	.00	1.0	2.1	2.9	44	15	35	8.8	2.3	1.2	.07	.00
12	.00	.96	2.0	2.9	84	17	33	8.3	2.3	5.7	.06	.00
13	.00	.92	2.0	2.9	166	18	41	8.4	2.4	22	.06	.00
14	.00	.96	1.9	2.8	37	20	37	8.2	2.5	8.2	.46	.00
15	.00	.97	1.9	2.9	65	36	33	7.9	2.7	8.8	.91	.00
16	.00	.94	1.8	2.9	56	30	31	7.5	2.8	4.0	.33	.04
17	.00	2.7	1.8	2.8	36	21	30	7.1	2.6	2.8	.18	.03
18	.00	11	1.8	2.7	24	18	30	6.5	2.3	2.3	.12	.03
19	.00	8.6	2.0	2.7	19	17	28	6.3	2.1	2.0	.09	.10
20	.00	6.0	2.4	2.7	22	17	25	6.8	2.0	1.8	.08	.11
21	.00	8.7	2.0	2.7	27	25	24	6.8	2.0	1.6	.08	.08
22	.00	4.9	1.9	2.7	19	28	21	6.0	1.8	3.1	.06	.07
23	.00	3.7	1.9	2.8	18	75	19	5.0	1.7	1.7	.06	.04
24	.00	3.9	1.9	2.9	16	38	18	4.7	1.6	1.2	.05	.03
25	.00	3.4	2.0	2.7	15	34	18	4.5	1.7	.92	.03	.03
26	19	2.6	1.9	2.5	16	48	17	4.4	1.7	.93	.03	.02
27	33	3.0	1.9	2.6	16	46	16	4.2	1.6	.70	.03	.01
28	5.4	2.9	4.4	2.6	16	38	15	4.0	1.4	.53	.03	.00
29	3.0	4.7	6.8	2.7	16	39	14	3.9	1.4	.41	.02	.01
30	2.0	7.1	8.6	2.7	---	59	13	3.8	1.7	.33	.00	.04
31	1.6	---	4.6	2.8	---	70	---	3.6	---	.27	.02	---
TOTAL	64.21	91.25	91.8	108.2	754.3	882	943	233.3	69.0	84.66	3.99	0.80
MEAN	2.07	3.04	2.96	3.49	26.0	28.5	31.4	7.53	2.30	2.73	.13	.027
MAX	33	11	8.6	10	166	75	51	13	3.4	22	.91	.11
MIN	.00	.92	1.8	2.5	2.6	14	13	3.6	1.4	.27	.00	.00
AC-FT	127	181	182	215	1500	1750	1870	463	137	168	7.9	1.6

SAN JOAQUIN RIVER BASIN

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.41	15.1	58.8	104	128	127	140	144	49.5	8.29	2.14	2.71
MAX	24.6	138	652	837	1255	1033	995	747	504	88.8	12.6	28.3
(WY)	1983	1984	1956	1969	1986	1983	1982	1967	1983	1983	1983	1982
MIN	.000	.54	1.13	2.13	1.89	2.63	2.36	3.61	1.93	.000	.000	.000
(WY)	1956	1978	1991	1991	1991	1977	1977	1977	1961	1961	1959	1960

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1952 - 1992	
ANNUAL TOTAL	5179.01		3326.51			
ANNUAL MEAN	14.2		9.09		63.0	
HIGHEST ANNUAL MEAN					344	
LOWEST ANNUAL MEAN					1.71	
HIGHEST DAILY MEAN	779	Mar 4	166	Feb 13	7500	Dec 23 1955
LOWEST DAILY MEAN	.00	Oct 10	.00	Oct 10	.00	Sep 4 1955
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 10	.00	Oct 10	.00	Sep 4 1955
INSTANTANEOUS PEAK FLOW			360	Feb 13	15700	Dec 23 1955
INSTANTANEOUS PEAK STAGE			7.66	Feb 13	28.50	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	10270		6600		45610	
10 PERCENT EXCEEDS	31		30		137	
50 PERCENT EXCEEDS	2.7		2.7		8.0	
90 PERCENT EXCEEDS	.16		.02		.25	

11246650 KERCKHOFF RESERVOIR NEAR AUBERRY, CA

LOCATION.--Lat 37°07'40", long 119°31'25", in SE 1/4 SW 1/4 sec.24, R.9 S., T.22 E., Fresno County, Hydrologic Unit 18040006, near center of Kerckhoff Dam on San Joaquin River, 2.0 mi downstream from A.G. Wishon powerplant, and 7.9 mi northwest of Auberry.

DRAINAGE AREA.--1,460 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete arch dam with spillway completed in 1920. Usable contents, 4,247 acre-ft between elevations 900.14 ft, invert of sluice gates, and 985.68 ft, top of spillway gates. Water is released for use in Kerckhoff Powerplants No. 1 and No. 2 before being discharged into the San Joaquin River above Millerton Lake. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,188 acre-ft, Nov. 16, 1992, elevation, 985.3 ft; minimum, 2,104 acre-ft, Nov. 14-17, 1988, elevation, 970.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,188 acre-ft, Nov. 16, elevation, 985.3 ft; minimum, 3,104 acre-ft, Apr. 1, elevation, 978.0 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas and Electric Co., dated July 16, 1919)

960	1,090	970	2,092	980	3,387	990	4,964
965	1,549	975	2,703	985	4,140		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3922	3202	4077	3830	3841	3968	3104	3845	3876	3876	3953	3709
2	3754	3664	3937	3679	3650	3780	3650	4109	3860	3860	3769	3937
3	3876	3517	3906	3389	3906	3902	3830	4038	3845	3754	3968	3972
4	3790	3968	3769	3815	3953	3900	3922	3679	3953	3860	3968	3960
5	3830	3644	3860	3694	3473	3709	3815	3650	3891	3784	3984	3895
6	3860	3644	3922	3830	3605	3784	3906	3739	3906	3860	3953	3955
7	3830	3664	3953	3964	3906	3830	3968	4015	3815	3644	3724	3922
8	3679	3769	3906	3794	3910	3968	3968	3992	4015	3968	3937	3860
9	3830	4030	3810	3754	3830	3860	4015	3784	4062	3724	3937	3922
10	3860	3968	3937	3815	3992	3906	4015	3769	3845	3784	3709	3769
11	3891	3815	3872	3860	3891	3784	3992	3739	3754	3754	3922	3815
12	3754	3709	3502	3968	3876	3860	4030	3922	3940	3605	3984	3769
13	3876	3546	3815	3372	3815	3830	3890	3754	4114	3876	3664	3739
14	3937	3906	4006	3387	3800	3830	3980	3984	4012	3754	4015	3860
15	3885	4188	3860	3830	3739	3968	3876	3891	3860	3694	3992	3810
16	3986	4188	3754	3922	3769	3876	3876	3984	3860	3694	4046	3830
17	3387	3698	3876	3891	3784	3891	3984	3984	4062	3739	4040	3784
18	3430	3876	3860	3876	3906	3937	3709	3860	3992	3650	3770	3984
19	3754	3968	3885	3906	3860	3715	3777	3891	3876	3709	4060	3937
20	3724	3724	3845	3855	3739	3680	3845	3754	3830	3906	3953	3815
21	3937	3769	3860	3810	3694	3650	3876	3679	3876	3922	3937	3876
22	3664	3815	3876	3830	3845	3724	3922	3769	3876	3620	3876	3876
23	3473	3815	3800	3906	3679	3815	4062	3876	3970	3920	3694	4015
24	3830	3800	3784	3984	3709	3922	3968	3784	4003	3925	3830	3968
25	3754	3788	3937	3679	3784	3984	3937	3922	3769	3650	3845	3784
26	3664	3815	3769	3953	3984	3891	3590	3925	3968	3950	3709	3953
27	3174	3784	3815	3784	3845	3784	3876	4015	3876	3984	3620	3891
28	3142	3800	3760	3891	4062	3769	3532	3922	4030	3906	3860	3968
29	3182	3644	3774	3830	3620	3876	3968	3922	3906	4046	3840	3773
30	3190	3709	3815	3984	---	3747	3922	3953	3968	3984	3891	3664
31	3202	---	3731	4015	---	3694	---	3876	---	3845	3922	---
MAX	3986	4188	4077	4015	4062	3984	4062	4109	4114	4046	4060	4015
MIN	3142	3202	3502	3372	3473	3650	3104	3650	3754	3605	3620	3664
a	978.7	982.2	982.3	984.2	981.6	982.1	983.6	983.3	983.9	983.1	983.6	981.9
b	-674	+507	+22	+284	-395	+74	+228	-46	+92	-123	+77	-258

CAL YR 1991 b +261

WTR YR 1992 b -212

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA

LOCATION.--Lat 37°07'56", long 119°31'50", in NW 1/4 SW 1/4 sec.24, T.9 S., R.22 E., Fresno County, Hydrologic Unit 18040006, on left bank 2,300 ft downstream from Kerckhoff Dam, 2.8 mi northwest of Auberry, and 6.7 mi south of town of North Fork.

DRAINAGE AREA.--1,461 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 870.11 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--No estimated daily discharges. Flow regulated by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,450 ft³/s, Dec. 21, 1990, gage height, 12.85 ft; minimum daily, 16 ft³/s, May 9-18, 1987, Sept. 29, 30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 555 ft³/s, Nov. 15, gage height, 6.98 ft; minimum daily, 27 ft³/s, Oct. 23, 29-31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	28	30	30	30	29	55	29	30	30	30	30
2	28	29	31	30	30	30	29	29	30	30	30	30
3	28	30	30	30	30	30	30	30	30	30	30	31
4	28	29	30	30	30	31	30	29	30	30	31	31
5	28	31	30	31	30	44	30	36	30	30	30	31
6	28	30	30	30	29	30	29	30	30	30	30	30
7	28	30	30	30	30	30	30	30	30	30	30	30
8	28	30	30	30	30	30	30	30	30	30	30	30
9	28	30	30	30	30	30	30	30	30	30	30	30
10	28	31	30	30	31	30	30	30	30	30	30	30
11	29	31	30	30	31	30	30	30	30	31	30	30
12	29	31	30	30	31	30	30	30	30	31	30	30
13	28	31	30	30	32	30	30	30	30	30	30	30
14	29	32	30	28	30	30	30	29	30	30	30	30
15	29	65	30	29	31	30	30	29	30	30	30	30
16	28	139	30	30	31	30	29	29	30	29	30	30
17	29	34	30	30	30	30	29	30	30	29	31	30
18	28	31	30	30	30	30	30	30	31	30	31	30
19	28	30	30	30	30	30	29	30	31	30	30	30
20	28	30	30	30	30	30	29	30	30	30	31	30
21	28	30	30	30	30	30	29	35	30	30	31	30
22	28	30	30	30	30	30	29	30	30	30	31	30
23	27	30	30	30	30	30	29	29	30	29	31	30
24	28	30	30	30	29	30	29	30	31	30	31	31
25	28	30	30	30	30	30	29	30	30	30	31	31
26	30	30	30	29	30	30	29	30	30	30	31	31
27	28	30	30	30	30	30	29	30	31	30	30	31
28	28	30	30	30	30	30	29	30	30	30	30	32
29	27	30	31	30	30	30	29	30	30	30	30	30
30	27	30	30	30	---	66	29	30	35	30	31	29
31	27	---	30	30	---	84	---	30	---	30	30	---
TOTAL	871	1052	932	927	875	1034	909	934	909	929	941	908
MEAN	28.1	35.1	30.1	29.9	30.2	33.4	30.3	30.1	30.3	30.0	30.4	30.3
MAX	30	139	31	31	32	84	55	36	35	31	31	32
MIN	27	28	30	28	29	29	29	29	30	29	30	29
AC-FT	1730	2090	1850	1840	1740	2050	1800	1850	1800	1840	1870	1800

11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.0	26.7	28.8	25.0	24.4	25.5	26.2	24.8	24.2	26.8	28.6	25.6
MAX	35.7	37.4	43.1	33.3	33.0	33.4	32.9	30.1	30.7	34.9	38.0	35.9
(WY)	1990	1990	1991	1990	1990	1992	1990	1992	1989	1989	1990	1989
MIN	17.5	17.4	18.2	18.0	18.0	17.8	19.1	18.7	17.3	17.2	17.3	17.1
(WY)	1988	1988	1988	1989	1988	1988	1988	1988	1987	1987	1988	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	10119		11221			
ANNUAL MEAN	27.7		30.7		26.0	
HIGHEST ANNUAL MEAN					31.1	
LOWEST ANNUAL MEAN					18.2	
HIGHEST DAILY MEAN	139	Nov 16	139	Nov 16	740	Dec 21 1990
LOWEST DAILY MEAN	17	Feb 8	27	Oct 23	16	May 9 1987
ANNUAL SEVEN-DAY MINIMUM	18	Feb 5	28	Oct 27	16	May 9 1987
INSTANTANEOUS PEAK FLOW			555	Nov 15	6450	Dec 21 1990
INSTANTANEOUS PEAK STAGE			6.98	Nov 15	12.85	Dec 21 1990
ANNUAL RUNOFF (AC-FT)	20070		22260		18840	
10 PERCENT EXCEEDS	34		31		35	
50 PERCENT EXCEEDS	29		30		26	
90 PERCENT EXCEEDS	19		29		18	

11249500 MADERA CANAL AT FRIANT, CA

LOCATION.--Lat 37°00'10", long 119°42'21", in NW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Madera County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi northeast of Friant.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for October 1943 to September 1948 published in WSP 1315-A. October 1954 to September 1966 published as Friant-Madera Canal at Friant.

REVISED RECORDS.--WSP 1151: 1944-48.

GAGE.--Discharge computed on basis of valve openings in dam and head on valves. Prior to Oct. 1, 1948, water-stage recorder at several sites at various datums. Oct. 1, 1948, to Sept. 30, 1949, water-stage recorder at site 8.8 mi downstream.

REMARKS.--No estimated daily discharges. Canal diverts from Millerton Lake (station 11250100) at right end of Friant Dam for irrigation between San Joaquin and Chowchilla Rivers. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,330 ft³/s, July 2, 1983; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
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	509	878	627	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	533	847	500	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	540	840	577	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	553	840	460	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	560	840	281	.00
6	.00	.00	.00	.00	.00	.00	.00	265	560	840	215	.00
7	.00	.00	.00	.00	.00	.00	.00	429	560	808	215	.00
8	.00	.00	.00	.00	.00	.00	.00	597	560	790	190	.00
9	.00	.00	.00	.00	.00	.00	.00	553	560	803	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	500	560	810	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	468	721	791	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	450	971	767	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	450	1060	760	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	450	995	760	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	450	947	760	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	450	862	747	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	437	820	714	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	430	973	674	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	430	1110	660	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	430	1140	686	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	443	1130	700	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	450	1140	700	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	437	1110	726	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	430	1060	760	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	430	988	791	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	430	934	804	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	456	920	800	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	470	933	787	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	483	940	780	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	477	921	755	.00	.00
31	.00	---	.00	.00	---	.00	---	483	---	676	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11778.00	25170	23894	3065.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	380	839	771	98.9	.000
MAX	.00	.00	.00	.00	.00	.00	.00	597	1140	878	627	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	509	660	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	23360	49920	47390	6080	.00

11249500 MADERA CANAL AT FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.4	12.5	1.15	21.4	114	292	320	462	777	976	723	328
MAX	599	143	49.0	473	659	1094	1258	1261	1277	1293	1233	1153
(WY)	1984	1987	1970	1974	1986	1980	1980	1982	1978	1973	1967	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	13.8	356	76.7	.000
(WY)	1950	1949	1949	1949	1949	1952	1964	1961	1977	1981	1977	1959

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1949 - 1992
ANNUAL TOTAL	78852.00	63907.00	
ANNUAL MEAN	216	175	345
HIGHEST ANNUAL MEAN			736 1983
LOWEST ANNUAL MEAN			43.8 1977
HIGHEST DAILY MEAN	1170 Jul 28	1140 Jun 20	1330 Jul 2 1973
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 3 1948
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 3 1948
INSTANTANEOUS PEAK FLOW			1330 Jul 2 1983
ANNUAL RUNOFF (AC-FT)	156400	126800	250000
10 PERCENT EXCEEDS	998	762	1070
50 PERCENT EXCEEDS	.00	.00	79
90 PERCENT EXCEEDS	.00	.00	.00

11250000 FRIANT-KERN CANAL AT FRIANT, CA

LOCATION.--Lat 36°59'53", long 119°42'11", in SE 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi northeast of Friant.

PERIOD OF RECORD.--March 1949 to current year.

GAGE.--Discharge computed on basis of megawatt meter reading, efficiency of generator coefficient, and net head on turbines. Prior to January 1986, discharge computed on basis of valve openings and head on valves. Prior to July 8, 1949, nonrecording gages at various sites and datums. July 8 to Sept. 30, 1949, water-stage recorder at site 0.2 mi downstream.

REMARKS.--No estimated daily discharges. Canal diverts from Millerton Lake (station 11250100) at left end of Friant Dam for irrigation in upper San Joaquin Valley. See schematic diagram of lower San Joaquin River basin.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,330 ft³/s, June 25, 1982; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	150	.00	.00	1000	240	368	870	2330	1730	1760	997
2	1150	149	.00	.00	204	75	357	750	2660	1840	1920	940
3	1180	167	.00	.00	118	100	350	768	2760	1840	2070	890
4	1100	180	.00	.00	326	133	340	932	2830	1860	2120	823
5	984	263	.00	.00	400	.00	386	1150	2850	2270	2180	712
6	1050	345	.00	.00	400	.00	460	1230	2950	2270	2280	695
7	1160	361	.00	.00	267	.00	505	1220	3270	2330	2170	780
8	1180	317	.00	.00	208	100	575	1090	3480	2330	1870	875
9	1200	221	.00	.00	209	147	623	1000	3490	2250	1910	933
10	1200	249	.00	.00	211	254	588	1050	3430	2050	2090	925
11	1090	284	.00	.00	214	256	550	1150	3270	1930	2210	849
12	899	286	.00	.00	127	257	590	1200	3090	2040	2330	765
13	942	325	.00	.00	.00	249	653	1220	2800	2130	2360	736
14	999	353	.00	.00	.00	178	720	1200	2770	2130	1870	801
15	997	312	.00	.00	.00	191	788	1130	2800	2010	1340	882
16	993	250	.00	.00	.00	138	800	1090	2730	1540	1390	928
17	966	250	.00	.00	.00	175	742	1140	2780	1360	1600	912
18	878	253	.00	.00	.00	238	571	1260	2820	1240	1690	837
19	802	188	.00	.00	160	300	625	1350	2560	1350	1680	715
20	805	142	.00	.00	234	250	800	1420	2060	1440	1630	713
21	824	144	.00	.00	234	175	990	1400	2010	1510	1550	830
22	825	145	.00	.00	108	200	1000	1310	2120	1600	1320	929
23	765	147	.00	.00	172	200	920	1280	2190	1510	1270	978
24	696	148	.00	.00	236	256	844	1350	2250	1340	1370	941
25	611	149	.00	.00	237	250	790	1400	2190	1220	1360	844
26	458	62	.00	.00	262	162	813	1450	2060	1280	1330	719
27	431	.00	.00	.00	279	188	900	1530	2050	1420	1280	681
28	337	.00	.00	.00	263	250	950	1610	1970	1500	1140	755
29	238	.00	.00	667	239	300	950	1690	2060	1670	1010	841
30	220	.00	.00	1000	---	300	932	1800	1930	1590	1040	863
31	193	---	.00	1000	---	329	---	1860	---	1720	1060	---
TOTAL	26273	5840.00	0.00	2667.00	6108.00	5891.00	20480	38900	78560	54300	52200	25089
MEAN	848	195	.000	86.0	211	190	683	1255	2619	1752	1684	836
MAX	1200	361	.00	1000	1000	329	1000	1860	3490	2330	2360	997
MIN	193	.00	.00	.00	.00	.00	340	750	1930	1220	1010	681
AC-FT	52110	11580	.00	5290	12120	11680	40620	77160	155800	107700	103500	49760

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	817	313	64.5	197	1295	1208	1309	1565	2535	2811	2512	1489
MAX	3084	1364	629	1348	4505	3551	4475	3954	4408	4466	4339	4033
(WY)	1979	1979	1970	1966	1965	1965	1962	1975	1982	1982	1967	1967
MIN	.000	.000	.000	.000	.000	5.13	141	87.5	598	262	384	1.33
(WY)	1950	1950	1950	1950	1950	1991	1977	1977	1977	1949	1949	1950

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1949 - 1992
ANNUAL TOTAL	336904.00	316308.00	
ANNUAL MEAN	923	864	1354
HIGHEST ANNUAL MEAN			2321
LOWEST ANNUAL MEAN			270
HIGHEST DAILY MEAN	3560 Jul 10	3490 Jun 9	5330 Jun 25 1982
LOWEST DAILY MEAN	.00 Jan 1	.00 Nov 27	.00 Jul 5 1949
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Nov 27	.00 Sep 11 1949
INSTANTANEOUS PEAK FLOW			5330 Jun 25 1982
ANNUAL RUNOFF (AC-FT)	668200	627400	981200
10 PERCENT EXCEEDS	2740	2120	3430
50 PERCENT EXCEEDS	611	760	947
90 PERCENT EXCEEDS	.00	.00	.00

11250100 MILLERTON LAKE AT FRIANT, CA

LOCATION.--Lat 37°00'00", long 119°42'13", in SW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, near center of Friant Dam on San Joaquin River just upstream from Cottonwood Creek, 0.9 mi northeast of Friant.

DRAINAGE AREA.--1,638 mi².

PERIOD OF RECORD.--October 1941 to current year. Monthend contents only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to May 29, 1944, nonrecording gage on left bank at same datum.

REMARKS.--Reservoir is formed by gravity-type concrete dam with spillway near center, completed in December 1942. Control valves installed in February 1944, and spillway gates installed in November 1947. Usable capacity, 503,200 acre-ft between elevations 375.4 ft, invert of river outlet, and 578.0 ft, top of drum-type spillway gates. Not available for release, 17,400 acre-ft. Millerton Lake is one of the storage units in the Central Valley Project. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 528,700 acre-ft, June 12, 1973, elevation, 579.66 ft; minimum since lake first filled, 133,600 acre-ft, Apr. 11, 1969, elevation, 467.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 460,000 acre-ft, May 18, elevation, 565.23 ft; minimum, 162,500 acre-ft, Oct. 24, elevation, 480.32 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated 1921)

400	36,400	440	83,300	480	161,700	520	279,400	560	436,500
420	57,000	460	117,500	500	215,000	540	353,000	580	530,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174000	166700	182200	201100	229200	283800	380300	446800	431500	271700	204400	168600
2	173500	166300	183000	202000	230000	287200	381400	449000	427000	269600	202300	169000
3	172400	166400	183700	202800	230400	290200	383400	447300	422600	266900	199600	169600
4	171900	166100	184500	204600	230700	292900	385300	449100	417600	264200	197600	170300
5	171400	166900	185000	206100	232600	296100	386900	450900	412900	260900	196000	171400
6	170600	167100	185600	206900	234300	299300	389000	451800	407900	257500	194600	172200
7	170100	167100	186400	208200	235700	302300	390800	452200	402300	254200	193600	173000
8	169600	167100	187100	210800	237900	304800	392000	452800	396000	250500	192400	173500
9	168300	167400	187900	213200	239600	308200	394400	453900	389400	248100	191000	173900
10	168400	168000	188600	214700	243400	310700	396800	454300	383000	245200	190100	174600
11	167700	168600	189200	216200	248100	313700	399700	455000	376700	241800	188400	175500
12	167900	169000	190100	217700	252700	316600	402000	455500	369600	238900	186500	174800
13	167500	169500	190000	219800	258800	319700	405800	456200	362500	236100	185000	173800
14	167200	169700	190500	221100	261300	322800	408000	457300	355800	233700	183900	172700
15	167100	169000	191300	221800	265800	325800	410600	458500	349200	230900	183400	172200
16	166500	168500	192200	222800	268200	329300	413000	458600	342700	230100	183000	171800
17	166600	169700	192400	224000	270400	332700	414200	459800	336500	229100	182500	171200
18	166700	170300	192700	224300	272200	336800	417400	460000	330400	227800	181700	170900
19	166400	171200	193100	224500	273200	339500	419700	459800	324800	225900	180400	172300
20	165600	173400	193400	225300	275100	342400	421700	459100	319400	224900	179300	172500
21	165000	174100	193700	226000	275600	345300	423900	457900	314100	224000	178400	172100
22	164700	175000	194000	226800	276200	348100	425700	456600	308900	223000	176700	171600
23	163900	175900	194300	227600	277100	351400	427900	454600	304500	220800	175300	170500
24	162500	176800	194800	228300	278600	354500	430200	452600	300000	219500	174000	169800
25	164200	177600	195300	229400	279800	358000	432600	450400	296100	218100	172800	168900
26	167100	178400	196300	229800	280300	361500	434000	448100	291000	215600	172100	167500
27	169800	179400	196600	230800	281400	365400	435900	446200	286300	213800	172000	166500
28	169100	180300	196300	231700	280800	368300	439100	444500	282200	212000	171000	165000
29	168400	181300	198600	231700	283100	370700	440800	442000	278300	209800	170000	164900
30	167800	182000	199400	230800	---	374000	443300	439000	274300	208100	168600	164600
31	167200	---	200200	230100	---	377600	---	435700	---	206400	168500	---
MAX	174000	182000	200200	231700	283100	377600	443300	460000	431500	271700	204400	175500
MIN	162500	166100	182200	201100	229200	283800	380300	435700	274300	206400	168500	164600
a	482.21	487.96	494.63	504.82	521.08	546.16	561.53	559.82	518.52	496.81	482.72	481.16
b	-7500	+14800	+18200	+29900	+53000	+94500	+65700	-7600	-161400	-67900	-37900	-3900
c	1,037	337	270	169	549	815	1609	2872	2967	2380	2148	1400

CAL YR 1991 b +26500

WTR YR 1992 b -10100

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, published as provided, not reviewed by U.S. Geological Survey.

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA

LOCATION.--Lat 36°59'04", long 119°43'24", in SW 1/4 SW 1/4 sec.7, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040001, on left bank 0.5 mi west of Friant, 1.5 mi downstream from Cottonwood Creek, 2 mi downstream from Friant Dam, and at mile 268.1.

DRAINAGE AREA.--1,676 mi².

PERIOD OF RECORD.--October 1907 to current year. Published as "near Pollasky" October 1907 to December 1908, and as "near Friant" January 1909 to September 1938. Monthly discharge only for October 1907 to November 1908, published in WSP 1315-A.

REVISED RECORDS.--WSP 843: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 294.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Oct. 18, 1907, to Nov. 9, 1913, nonrecording gage at site 4.5 mi upstream at different datum. Nov. 10, 1913, to Sept. 30, 1938, water-stage recorder at site 2.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Millerton Lake (station 11250100) beginning in 1941, and by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. Diversion for irrigation to Madera and Friant-Kern Canals (stations 11249500 and 11250000) began in 1943 and 1949, respectively. See schematic diagram of lower San Joaquin River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,200 ft³/s, Dec. 11, 1937, gage height, 23.8 ft, site and datum then in use; minimum, 38 ft³/s, regulated, July 29, 1940. Maximum discharge since construction of Friant Dam in 1941, 15,500 ft³/s, Feb. 18, 1986, gage height, 13.41 ft; minimum, 5.5 ft³/s, Oct. 20, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 398 ft³/s, Aug. 24, gage height, 3.63 ft; minimum daily, 40 ft³/s, Jan. 9-12, Feb. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	116	110	96	104	99	115	177	189	281	270	289
2	153	116	111	97	104	97	114	177	193	277	268	289
3	154	116	112	97	105	97	113	177	204	261	270	282
4	154	118	112	95	106	97	112	168	230	260	270	254
5	154	116	114	101	106	98	112	147	250	260	271	244
6	156	116	114	96	106	116	111	147	277	260	271	244
7	156	118	116	68	106	105	110	146	276	263	271	244
8	156	118	118	42	108	101	110	147	263	263	270	242
9	157	118	117	40	108	101	116	154	251	264	267	241
10	157	118	116	40	113	103	129	155	248	255	266	240
11	156	118	116	40	85	114	129	171	247	255	271	238
12	156	118	108	40	54	115	132	186	254	256	271	233
13	155	119	101	47	55	116	132	195	263	255	270	230
14	152	120	101	60	40	116	131	208	267	251	271	228
15	157	121	101	60	105	116	132	207	270	252	271	224
16	173	122	100	60	90	116	139	207	268	253	272	214
17	171	121	99	75	65	115	152	198	267	269	270	213
18	172	119	96	97	49	114	149	188	267	298	271	213
19	172	118	92	97	44	114	149	187	266	294	270	213
20	171	120	92	99	52	109	149	188	267	289	267	213
21	172	123	92	100	90	107	146	188	267	288	280	213
22	170	123	92	100	116	102	147	189	265	287	309	214
23	155	125	93	100	112	100	166	190	265	288	312	216
24	154	125	93	103	108	82	180	190	263	285	301	224
25	148	116	93	104	106	79	182	190	280	285	270	240
26	140	110	93	104	105	89	182	189	309	284	267	243
27	137	110	93	105	102	123	180	188	313	283	277	244
28	136	110	96	105	101	136	179	190	313	280	302	247
29	125	103	99	105	100	135	179	190	301	273	299	247
30	116	110	96	104	---	134	179	190	281	268	297	240
31	116	---	96	104	---	122	---	190	---	268	291	---
TOTAL	4754	3521	3182	2581	2645	3368	4256	5614	7874	8405	8603	7116
MEAN	153	117	103	83.3	91.2	109	142	181	262	271	278	237
MAX	173	125	118	105	116	136	182	208	313	298	312	289
MIN	116	103	92	40	40	79	110	146	189	251	266	213
AC-FT	9430	6980	6310	5120	5250	6680	8440	11140	15620	16670	17060	14110

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1940, BY WATER YEAR (WY)

MEAN	628	609	868	1276	1704	2246	3805	5876	6085	2765	1166	772
MAX	1678	1317	3589	4507	4391	6854	8010	11170	15870	9635	2312	1361
(WY)	1919	1928	1910	1909	1937	1938	1916	1938	1911	1911	1914	1938
MIN	164	196	301	333	393	419	1262	1703	635	335	264	156
(WY)	1932	1932	1909	1918	1924	1924	1912	1934	1924	1924	1924	1931

SUMMARY STATISTICS

WATER YEARS 1908 - 1940

ANNUAL MEAN	2343	
HIGHEST ANNUAL MEAN	4961	1938
LOWEST ANNUAL MEAN	698	1924
HIGHEST DAILY MEAN	38800	Jan 31 1911
LOWEST DAILY MEAN	54	Sep 15 1924
ANNUAL SEVEN-DAY MINIMUM	105	Sep 16 1931
INSTANTANEOUS PEAK FLOW	77200	Dec 11 1937
INSTANTANEOUS PEAK STAGE	23.80	Dec 11 1937
ANNUAL RUNOFF (AC-FT)	1698000	
10 PERCENT EXCEEDS	6100	
50 PERCENT EXCEEDS	1190	
90 PERCENT EXCEEDS	394	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

MEAN	380	279	423	675	1033	1204	1750	1905	1741	980	633	498
MAX	1663	1623	3798	5376	7100	7705	7701	9107	9438	5164	2807	2392
(WY)	1946	1983	1983	1956	1969	1969	1983	1941	1941	1941	1945	1948
MIN	47.2	37.3	32.5	30.0	33.9	33.0	43.2	43.9	78.6	101	91.1	67.2
(WY)	1970	1972	1971	1966	1966	1968	1971	1971	1970	1970	1970	1969

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	52347		61919	
ANNUAL MEAN	143		169	
HIGHEST ANNUAL MEAN				956
LOWEST ANNUAL MEAN				4385
HIGHEST DAILY MEAN	243	Jul 25	313	Jun 27
LOWEST DAILY MEAN	36	Mar 24	40	Jan 9
ANNUAL SEVEN-DAY MINIMUM	67	Mar 18	44	Jan 8
INSTANTANEOUS PEAK FLOW			398	Aug 24
INSTANTANEOUS PEAK STAGE			3.63	Aug 24
ANNUAL RUNOFF (AC-FT)	103800		122800	
10 PERCENT EXCEEDS	207		271	
50 PERCENT EXCEEDS	144		149	
90 PERCENT EXCEEDS	92		96	

a Adjusted for change in contents and evaporation from Millerton Lake and for diversions to Madera and Friant-Kern canals.

NOTE: Records of evaporation provided by U.S. Bureau of Reclamation, not reviewed by the U.S. Geological Survey.

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA

LOCATION.--Lat 36°24'08", long 120°25'57", in SE 1/4 SE 1/4 sec.34, T.17 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank 9.2 mi southwest of town of Cantua Creek and 19 mi north of Coalinga.

DRAINAGE AREA.--46.4 mi².

PERIOD OF RECORD.--Water years 1958-65 (annual maximum), October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1966, crest-stage gage at datum 2.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some small dams for stock use upstream from station. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,420 ft³/s, Mar. 1, 1983, gage height, 5.72 ft; maximum gage height, 6.60 ft, Feb. 24, 1969; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*), from floodmarks:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	0945	108	2.55	Mar. 21	0215	270	2.90
Feb. 12	unknown	*680	*3.52	Mar. 30	1845	70	2.41

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e.80	.00	1.3	4.5	1.2	.05	e.00	.01	.00
2	.00	.00	.00	.00	.00	1.5	e4.1	1.1	.05	e.00	.01	.00
3	.00	.00	.00	.00	.00	1.9	e3.8	.98	.05	e.00	.01	.00
4	.00	.00	.00	.00	.00	1.6	e3.5	.88	.05	e.00	.00	.00
5	.00	.00	.00	.00	.00	4.5	e3.3	.84	.04	e.00	.00	.00
6	.00	.00	.00	.00	.00	17	3.2	.86	.05	e.00	.00	.00
7	.00	.00	.00	.00	.00	7.6	3.1	.94	.08	e.00	.00	.00
8	.00	.00	.00	.00	.00	4.4	2.9	.86	.08	e.00	.00	.00
9	.00	.00	.00	.00	.00	3.4	2.8	.72	.06	e.00	.00	.00
10	.00	.00	.00	.00	.30	2.8	2.7	.71	.05	e.00	.00	.00
11	.00	.00	.00	.00	1.1	2.4	2.6	.64	.04	.00	.00	.00
12	.00	.00	.00	.00	e115	2.2	2.6	.63	.04	.00	.00	.00
13	.00	.00	.00	.00	e60	2.1	2.5	.64	.03	.00	.00	.00
14	.00	.00	.00	.00	e7.7	2.0	2.4	.59	.03	.00	.00	.00
15	.00	.00	.00	.00	e54	2.1	2.3	.63	.02	1.6	.00	.00
16	.00	.00	.00	.00	e30	2.0	2.1	.55	.02	1.4	.00	.00
17	.00	.00	.00	.00	e16	1.9	2.0	.50	.02	.91	.00	.00
18	.00	.00	.00	.00	e10	1.8	1.9	.42	.01	.76	.00	.00
19	.00	.00	.00	.00	e6.0	1.7	1.9	.35	.01	.62	.00	.00
20	.00	.00	.00	.00	e4.3	3.4	1.8	.51	.01	.42	.00	.00
21	.00	.00	.00	.00	e3.3	e40	1.6	.46	.01	.27	.00	.00
22	.00	.00	.00	.00	2.7	13	1.6	.37	.00	.19	.00	.00
23	.00	.00	.00	.00	2.3	e10	1.7	.33	.00	.13	.00	.00
24	.00	.00	.00	.00	2.0	e9.2	1.6	.29	.00	.09	.00	.00
25	.00	.00	.00	.00	1.7	8.3	1.5	.24	.00	.07	.00	.00
26	.00	.00	.00	.00	1.5	8.2	1.4	.23	.00	.05	.00	.00
27	.00	.00	.00	.00	1.4	5.8	1.3	.16	.00	.04	.00	.00
28	.00	.00	.00	.00	1.3	5.0	1.2	.11	.00	.03	.00	.00
29	.00	.00	36	.00	1.3	4.6	1.1	.09	.00	.03	.00	.00
30	.00	.00	11	.00	---	16	1.1	.07	.00	.02	.00	.00
31	.00	---	.20	.00	---	7.9	---	.05	---	.02	.00	---
TOTAL	0.00	0.00	47.20	0.80	321.90	195.6	70.1	16.95	0.80	6.65	0.03	0.00
MEAN	.000	.000	1.52	.026	11.1	6.31	2.34	.55	.027	.21	.001	.000
MAX	.00	.00	36	.80	115	40	4.5	1.2	.08	1.6	.01	.00
MIN	.00	.00	.00	.00	.00	1.3	1.1	.05	.00	.00	.00	.00
AC-FT	.00	.00	94	1.6	638	388	139	34	1.6	13	.06	.00

e Estimated.

SAN JOAQUIN RIVER BASIN

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.092	.39	1.46	4.96	9.21	10.9	4.26	2.21	.92	.33	.080	.15
MAX	1.40	2.82	11.2	44.0	53.9	87.0	23.2	17.4	7.64	3.83	1.83	1.41
(WY)	1984	1973	1984	1969	1969	1983	1983	1983	1983	1983	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1967	1967	1969	1975	1976	1989	1972	1972	1968	1968	1968	1968

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1967 - 1992

ANNUAL TOTAL	784.54		660.03									
ANNUAL MEAN	2.15		1.80							2.88		
HIGHEST ANNUAL MEAN										18.9		1983
LOWEST ANNUAL MEAN										.003		1989
HIGHEST DAILY MEAN	136	Mar 20				115	Feb 12			671	Mar 1	1983
LOWEST DAILY MEAN	.00	Jan 1				.00	Oct 1			.00	Oct 1	1966
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1				.00	Oct 1			.00	Oct 1	1966
INSTANTANEOUS PEAK FLOW						680	Feb 12			3420	Mar 1	1983
INSTANTANEOUS PEAK STAGE						3.52	Feb 12			5.72	Mar 1	1983
ANNUAL RUNOFF (AC-FT)	1560					1310				2090		
10 PERCENT EXCEEDS	1.1					3.0				5.1		
50 PERCENT EXCEEDS	.00					.00				.02		
90 PERCENT EXCEEDS	.00					.00				.00		

11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA

LOCATION.--Lat 36°39'09", long 120°10'49", in NE 1/4 SW 1/4 sec.1, T.15 S., R.16 E., Fresno County, Hydrologic Unit 18030012, on right bank 3.2 mi north of San Joaquin.

PERIOD OF RECORD.--October 1947 to current year. Published as "Fresno Slough bypass" in WSP 1315-A and 1735. Daily discharge data for period October 1954 to September 1972 are in files of U.S. Bureau of Reclamation. Monthly totals published in WDR CA-72-2.

GAGE.--Water-stage recorder. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversion upstream from station for irrigation. James Bypass carries overflow from Kings River to San Joaquin River.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation; rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,570 ft³/s, June 7, 1969; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.--No flow for 1992 water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.8	182	273	340	277	611	693	769	494	175	44.9	33.8
MAX	1723	2364	3648	3551	4688	5192	5066	4932	4913	2985	1077	811
(WY)	1984	1984	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1948	1948	1948	1948	1948	1948	1948	1954	1953	1948	1948	1949

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1948 - 1992 a
ANNUAL MEAN			331
HIGHEST ANNUAL MEAN			3189
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN			5360
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Mar 3 1983
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1947
INSTANTANEOUS PEAK FLOW			.00 Oct 1 1947
ANNUAL RUNOFF (AC-FT)			5570 Jun 7 1969
10 PERCENT EXCEEDS	.00	.00	239500
50 PERCENT EXCEEDS	.00	.00	802
90 PERCENT EXCEEDS	.00	.00	.00

a Does not include water years 1955 to 1972, (See Period of Record).

LOCATION.--Lat 37°12'56", long 119°59'25", in SE 1/4 SW 1/4 sec.22, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, on left bank 1,800 ft downstream from Buchanan Dam and 4.6 mi west of Raymond.

WATER TEMPERATURE: Water years 1976 to current year.

WATER TEMPERATURE: October 1975 to current year.

REMARKS.--Water temperatures since October 1985 for periods when discharge was less than 1 ft³/s are not reliable and are not published. Water temperature is affected by regulation from Buchanan Dam.

WATER TEMPERATURE: Maximum recorded, 33.5°C, June 7, 1977; minimum recorded, 0.0°C, Jan. 2, 4, 1976.

WATER TEMPERATURE: Maximum recorded, 29.0°C, May 15, 1987; minimum recorded, 0.5°C, Dec. 25-27, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum recorded, 25.0°C, Aug. 4; minimum recorded, 11.5°C, July 7-9.

[illegible]

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 37°14'52", long 120°51'00", in NE 1/4 SE 1/4 sec.27, T.7 S., R.10 E., Merced County, Hydrologic Unit 18040001, on left bank at bridge on Highway 165 and 2.0 mi south of Stevinson.

DRAINAGE AREA.--7,388 mi², approximately.

PERIOD OF RECORD.--Water year 1989 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

SPECIFIC CONDUCTANCE: Water year 1989 to current year.

WATER TEMPERATURE: Water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1985.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Maximum and minimum values are affected by upstream regulation of flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,040 microsiemens, Sept. 30, 1992; minimum recorded, 61 microsiemens, Nov. 1, 2, 1991.

WATER TEMPERATURE: Maximum recorded, 31.0°C, Aug. 9, 10, 1990, July 14, 1992; minimum recorded, 3.0°C, Dec. 26, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,040 microsiemens, Sept. 30; minimum recorded, 61 microsiemens, Nov. 1, 2.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 14; minimum recorded, 5.5°C, Jan. 24.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3160	3060	130	61	1870	1820	2300	2260	1310	1260	930	840
2	3190	3100	95	61	1890	1860	2290	2250	1360	1260	980	920
3	3210	3140	140	86	1890	1870	2260	2220	1360	1310	1000	950
4	3270	3200	200	130	1930	1890	2360	2220	1380	1350	1000	950
5	3310	3240	310	170	1940	1890	---	---	1380	1360	1110	970
6	3370	3270	310	200	1980	1930	---	---	1390	1370	1150	1030
7	3380	3320	300	200	1980	1890	---	---	1390	1340	1130	1050
8	3430	3370	340	270	2050	1930	---	---	1400	1370	1090	380
9	3480	3380	510	330	2090	2040	---	---	1410	1390	380	250
10	3480	3390	540	480	2080	2040	---	---	1450	1380	390	250
11	3500	3430	630	540	2070	2060	---	---	1450	1420	570	370
12	3530	3470	650	580	2100	2060	---	---	1450	470	800	550
13	3550	3490	690	590	2100	2070	---	---	1460	610	1040	780
14	3550	3500	990	590	2120	2100	---	---	610	170	1160	1020
15	3560	3500	1040	980	2130	2110	---	---	280	170	1440	1160
16	3620	3560	1090	1040	2130	2120	---	---	270	140	1530	1400
17	3620	3550	1150	1060	2170	2130	1170	1070	150	130	1540	1470
18	3630	3560	1230	1130	2170	2110	1200	1170	140	120	1570	1520
19	3630	3570	1250	1200	2300	2100	1230	1190	210	120	1580	1530
20	3640	3610	1260	1230	2310	2290	1210	1200	---	---	1570	1510
21	3670	3580	1410	1250	2310	2300	1210	1190	---	---	1560	1500
22	3680	3630	1410	1400	2320	2300	1210	1150	---	---	1500	1450
23	3680	3640	1470	1400	2320	2300	1210	1150	360	320	1480	1430
24	3690	3640	1470	1460	2320	2310	1230	1170	420	330	1500	1440
25	3660	3560	1550	1470	2320	2310	1280	1220	470	410	1540	1460
26	---	---	1580	1520	2320	2310	1280	1230	550	450	1590	1530
27	3600	1540	1710	1550	2340	2310	1250	1220	650	540	1640	1580
28	2110	1110	1760	1710	2410	2340	1290	1230	800	630	1710	1630
29	1110	420	1820	1720	2410	2120	1300	1240	850	760	1710	1680
30	420	170	1860	1820	2310	2300	1260	1230	---	---	1720	1700
31	220	120	---	---	2300	2290	1290	1250	---	---	1730	1710
MONTH	---	---	1860	61	2410	1820	---	---	---	---	1730	250

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1730	1720	1470	1330	2350	2260	3330	3250	3800	3730	3900	3850
2	1750	1730	1520	1430	2400	2320	3350	3290	3810	3750	3900	3860
3	1770	1740	1540	1470	2460	2350	3360	3310	3820	3740	3890	3850
4	1780	1750	1500	1450	2500	2450	3390	3340	3840	3640	3920	3860
5	1830	1760	1490	1440	2550	2490	3450	3360	3840	3780	3900	3850
6	1860	1820	1590	1490	2600	2530	3440	3360	3990	3800	3910	3840
7	1890	1850	1660	1580	2610	2570	3470	3390	3990	3730	3910	3880
8	1940	1880	1740	1650	2630	2590	3450	3300	3890	3830	3910	3880
9	2040	1910	1850	1680	2660	2610	3510	3400	3910	3840	3950	3880
10	2130	2020	1920	1850	2690	2640	3490	3370	3910	3850	3940	3900
11	2220	2090	1980	1910	2760	2670	3410	3340	3940	3860	3940	3900
12	2230	2210	2050	1950	2820	2670	3480	3350	3940	3870	3950	3910
13	2220	2100	2070	2000	2860	2740	3540	3290	3940	3880	4000	3930
14	2160	2090	2120	1930	2910	2830	3470	3370	3950	3880	3970	3930
15	2150	2100	2170	2080	2940	2890	3470	3360	3970	3900	3980	3930
16	2120	2060	2210	2080	3020	2930	3470	3340	3980	3920	3990	3940
17	2070	2000	2210	2130	3010	2940	3530	3440	3990	3920	3990	3940
18	2060	2000	2270	2130	3020	2910	3540	3480	4000	3930	4010	3960
19	2050	2010	2270	2230	3070	2990	3570	3500	4020	3950	4010	3970
20	2020	1960	2370	2200	3090	3030	3570	3520	4010	3950	4010	3980
21	1980	1960	2360	2280	3110	3060	3580	3530	4010	3950	4000	3920
22	2000	1960	2350	2320	3090	3010	3620	3540	4010	3930	4010	3970
23	2010	1960	2350	2260	3040	3000	3610	3560	4030	3970	4020	3980
24	2000	1850	2270	1920	3180	3020	3650	3570	3990	3890	4010	3820
25	1880	1410	1990	1900	3180	3040	3660	3590	3930	3870	4020	3980
26	1410	1170	2070	1950	3140	3010	3670	3630	3940	3820	4030	3980
27	1190	1090	2130	2050	3190	3090	3700	3650	3880	3840	4030	3960
28	1200	1090	2190	2050	3270	3170	3730	3660	3880	3840	4020	3980
29	1300	1190	2220	2170	3270	3220	3740	3670	3880	3830	4030	3970
30	1380	1290	2240	2210	3290	3220	3750	3690	3890	3830	4040	3980
31	---	---	2280	2230	---	---	3780	3710	3900	3840	---	---
MONTH	2230	1090	2370	1330	3290	2260	3780	3250	4030	3640	4040	3820

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.0	22.5	13.5	12.5	8.0	7.0	9.0	8.0	9.5	8.0	16.0	14.5
2	24.5	22.5	14.0	13.0	7.5	6.5	8.5	8.0	9.5	8.5	16.0	15.0
3	24.5	22.5	14.5	13.0	7.5	6.5	8.0	8.0	9.5	9.0	15.5	15.0
4	24.5	22.5	15.0	13.5	7.5	6.5	8.5	8.0	9.5	8.5	16.5	14.5
5	24.0	22.0	15.0	14.0	7.5	7.0	8.5	8.5	9.5	8.5	15.5	14.5
6	23.5	21.5	15.5	14.0	7.5	6.5	8.5	8.5	9.5	9.0	15.5	14.0
7	23.0	21.5	16.0	14.5	7.5	7.5	9.0	8.5	10.0	9.0	15.5	13.5
8	23.0	21.5	16.5	15.5	8.5	7.5	9.0	8.5	11.0	10.0	15.5	14.0
9	23.0	21.0	16.5	15.5	8.0	7.0	8.5	8.5	11.5	11.0	15.5	14.0
10	23.0	21.0	17.0	15.5	8.5	7.0	8.5	7.5	11.5	11.0	16.5	14.0
11	23.0	21.5	16.0	15.5	8.5	8.0	8.5	7.5	12.0	11.0	16.0	14.5
12	23.0	21.5	16.5	15.0	8.0	7.5	8.0	6.5	12.0	11.5	16.0	14.5
13	22.5	21.5	16.0	15.5	8.0	7.5	7.0	6.0	11.5	11.0	17.5	15.5
14	22.0	21.5	15.5	13.5	7.5	7.5	7.5	6.0	12.5	11.0	17.0	15.5
15	23.0	21.0	13.5	12.5	7.5	7.0	7.0	6.5	11.5	11.0	17.0	15.0
16	23.0	21.0	12.5	12.0	7.5	7.0	7.0	6.5	11.5	10.5	18.0	15.5
17	22.5	21.0	12.5	12.0	7.0	6.5	7.0	6.5	11.0	10.5	17.5	15.0
18	22.0	20.5	12.5	11.5	8.0	7.0	7.0	7.0	12.0	11.5	16.5	15.0
19	22.0	20.5	12.5	11.5	7.5	7.0	7.0	7.0	13.5	12.0	16.5	15.5
20	21.5	20.5	12.5	11.5	7.5	6.5	7.0	6.5	14.0	12.0	16.5	15.5
21	21.5	20.0	12.5	12.0	7.5	6.5	6.5	6.5	14.0	12.0	17.5	15.5
22	20.5	19.5	12.0	11.5	7.5	6.5	6.5	6.0	14.5	12.5	17.0	16.0
23	19.5	18.5	12.0	11.0	7.5	6.5	6.5	6.0	14.5	13.5	17.5	16.0
24	18.5	17.5	12.0	11.0	7.0	6.5	6.0	5.5	14.5	13.0	18.0	16.0
25	18.0	17.5	12.0	11.0	7.0	6.5	7.0	6.0	14.5	13.0	18.5	16.5
26	17.5	16.5	11.5	11.0	7.5	6.5	7.5	7.0	14.5	13.5	19.0	17.0
27	16.5	15.0	11.5	10.5	7.5	7.0	7.5	7.0	15.0	13.5	19.5	17.5
28	15.5	14.0	10.5	9.5	8.0	7.5	8.0	7.0	15.0	14.5	20.5	17.0
29	15.0	13.5	9.5	8.5	8.5	8.0	8.5	8.0	15.5	14.5	20.5	17.0
30	13.5	12.0	8.5	7.5	9.0	8.5	8.0	7.5	---	---	20.0	17.5
31	12.5	12.0	---	---	9.5	8.5	8.5	8.0	---	---	18.0	17.0
MONTH	24.5	12.0	17.0	7.5	9.5	6.5	9.0	5.5	15.5	8.0	20.5	13.5

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA

LOCATION.--Lat 37°14'52", long 120°51'04", in SE 1/4 SE 1/4, sec.10, T.8 S., R.10 E., Merced County, Hydrologic Unit 18040001, on right bank at bridge on Highway 165 and 5.5 mi south of Stevinson.
DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--No estimated daily discharges. Records good. During major storm events record can be affected by backwater from the San Joaquin River. Discharge is affected by irrigation return and drainage from Kesterson Wildlife Refuge.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 810 ft³/s, Feb. 20, 1986; minimum daily, 24 ft³/s, Sept. 6, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 422 ft³/s, Mar. 25, elevation, 67.83 ft; minimum daily, 24 ft³/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	86	117	86	88	132	256	127	72	60	56	47
2	29	73	120	84	87	140	226	122	64	77	74	46
3	30	73	106	75	87	142	196	121	60	92	80	41
4	32	81	82	78	88	139	190	111	55	79	88	35
5	32	86	80	86	85	135	177	96	61	75	65	29
6	34	101	82	101	82	150	162	78	67	67	47	24
7	37	115	75	107	86	201	157	65	73	58	45	32
8	33	123	93	110	96	216	163	73	61	55	43	36
9	37	115	96	111	97	202	162	75	64	52	72	38
10	36	105	98	102	97	179	144	69	69	53	81	36
11	35	98	90	87	115	154	158	68	78	48	62	26
12	43	96	90	82	164	144	170	65	78	53	54	38
13	54	95	83	85	189	158	191	56	83	75	39	37
14	46	90	75	91	177	158	192	57	78	73	34	45
15	43	90	77	112	195	183	172	63	82	60	44	43
16	43	112	84	104	192	214	173	63	92	50	50	35
17	41	111	92	97	201	209	178	68	79	65	61	35
18	36	105	101	90	215	189	187	80	75	53	45	43
19	31	106	102	86	191	168	194	76	82	51	52	55
20	33	111	94	84	153	176	209	83	85	48	73	48
21	36	112	93	84	144	230	181	93	92	52	62	58
22	35	110	90	83	135	276	137	74	88	48	45	49
23	36	111	95	78	131	341	119	71	85	52	55	36
24	39	110	91	81	121	401	128	66	65	82	79	32
25	42	107	91	91	119	419	119	66	68	72	69	33
26	49	99	87	89	123	406	106	65	60	64	50	37
27	61	109	74	90	117	400	114	56	59	64	49	45
28	80	110	74	90	121	378	136	53	58	63	47	45
29	91	116	81	85	129	344	128	50	62	64	46	40
30	88	116	94	84	---	299	120	56	66	57	50	39
31	100	---	92	85	---	277	---	65	---	51	54	---
TOTAL	1394	3072	2799	2798	3825	7160	4945	2331	2161	1913	1771	1183
MEAN	45.0	102	90.3	90.3	132	231	165	75.2	72.0	61.7	57.1	39.4
MAX	100	123	120	112	215	419	256	127	92	92	88	58
MIN	29	73	74	75	82	132	106	50	55	48	34	24
AC-FT	2760	6090	5550	5550	7590	14200	9810	4620	4290	3790	3510	2350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
MEAN	178	182	123	123	214	339	275	231	235	252	268	191
MAX	255	273	194	176	291	466	419	355	339	376	411	289
(WY)	1990	1990	1990	1990	1986	1987	1986	1987	1987	1986	1986	1986
MIN	45.0	102	63.4	60.6	83.4	231	165	75.2	72.0	61.7	57.1	39.4
(WY)	1992	1992	1991	1991	1991	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1986 - 1992

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ANNUAL TOTAL	41685	35352										
ANNUAL MEAN	114	96.6										
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	451	Mar 22	419	Mar 25	810	Feb 20	1986					
LOWEST DAILY MEAN	25	Sep 5	24	Sep 6	24	Sep 6	1992					
ANNUAL SEVEN-DAY MINIMUM	32	Sep 29	32	Sep 5	32	Sep 29	1991					
INSTANTANEOUS PEAK FLOW			422	Mar 25	unknown	Feb 20	1986					
INSTANTANEOUS PEAK STAGE			67.83	Mar 25	unknown	Feb 20	1986					
ANNUAL RUNOFF (AC-FT)	82680	70120										
10 PERCENT EXCEEDS	193	177			372							
50 PERCENT EXCEEDS	94	82			211							
90 PERCENT EXCEEDS	45	39			72							

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1989 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

SPECIFIC CONDUCTANCE: Water year 1989 to current year.

WATER TEMPERATURE: Water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,330 microsiemens, Jan. 16, 1991; minimum recorded, 943 microsiemens, Aug. 16, 1991.

WATER TEMPERATURE: Maximum recorded, 32.5°C, July 15, 1992; minimum recorded, 0.5°C, Dec. 23, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 3,640 microsiemens, Jan. 31; minimum recorded, 1,170 microsiemens, Aug. 3.

WATER TEMPERATURE: Maximum recorded, 32.5°C, July 15; minimum recorded, 4.5°C, Nov. 30, Dec. 1, 2.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2180	1820	1690	1490	1860	1770	3210	3020	3580	3470	3270	2970
2	1960	1730	2060	1690	1840	1780	3380	3200	3490	3450	2970	2870
3	2090	1940	2200	2070	1950	1840	3480	3170	3490	3370	3040	2840
4	2090	1810	2190	1980	2520	1980	3580	3450	3370	3280	3070	2830
5	2110	1810	2340	2010	2640	2140	3610	3340	3380	3280	3180	2900
6	2390	2120	2320	1820	2110	2020	3510	3120	3370	3290	2990	2750
7	2250	1670	1920	1760	2250	2080	3210	3060	3350	3240	2680	2410
8	1790	1670	1920	1710	2270	1970	3200	3070	3230	3010	2490	2360
9	2010	1770	1910	1700	2160	1950	3210	3060	3070	2990	2690	2460
10	1980	1640	2250	1740	2300	2050	3290	2940	3270	2990	2910	2650
11	1980	1780	2300	2070	2440	2320	3370	2960	3180	2840	3060	2860
12	2120	1700	2140	2050	2450	2360	3450	3310	2830	2140	3080	2790
13	1670	1450	2190	2130	2660	2330	3420	3230	2780	2500	2860	2750
14	1620	1470	2410	2190	2760	2670	3240	3160	2820	2670	2980	2850
15	1880	1630	2470	2140	2810	2640	3280	2550	2790	2370	3130	2770
16	1850	1680	2250	2000	2920	2640	3350	3030	2640	2360	2760	2500
17	2030	1890	2110	2020	2630	2540	3390	3350	2590	2440	2810	2500
18	2280	1930	2190	2120	2570	2340	3360	3240	2670	2490	2940	2690
19	2400	2170	2160	2000	2610	2280	3470	3290	2880	2690	3020	2890
20	2660	2400	2140	2070	2760	2580	3530	3420	3060	2880	3120	2740
21	2650	2340	2420	2090	2740	2600	3430	3380	3040	2980	2720	2360
22	2460	2240	2410	1930	2710	2520	3490	3390	3080	2910	2340	2130
23	2470	2360	2070	1930	2630	2480	3560	3490	3370	3090	2130	1890
24	2480	2410	2020	1840	2760	2540	3560	3500	3470	3380	2040	1900
25	2400	2180	1910	1800	2940	2680	3440	3180	3490	3380	2100	2030
26	2170	1910	2000	1920	2960	2710	3310	3160	3430	3270	2190	2030
27	2020	1690	1970	1840	3190	2960	3330	3160	3320	3260	2280	2160
28	1820	1370	1850	1810	3230	3100	3320	3230	3350	3250	2430	2290
29	1540	1360	1920	1830	3310	3200	3530	3300	3340	3190	2440	2380
30	1600	1400	1930	1840	3340	2890	3620	3500	---	---	2550	2450
31	1500	1410	---	---	3030	2860	3640	3480	---	---	2550	2510
MONTH	2660	1360	2470	1490	3340	1770	3640	2550	3580	2140	3270	1890

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2700	2550	2780	2470	2630	2470	1650	1530	1430	1320	1400	1320
2	2930	2650	2420	2150	2530	2300	1620	1410	1320	1200	1390	1310
3	2980	2930	2770	2420	2810	2540	1420	1330	1200	1170	1560	1360
4	3020	2840	2880	2750	3030	2580	1380	1290	1230	1180	1710	1550
5	3040	2970	2980	2800	3220	2580	1480	1390	1360	1250	1800	1710
6	3170	3000	3160	2970	2850	2510	1480	1430	1440	1360	1750	1650
7	3130	3030	3080	2560	2580	2280	1460	1440	1480	1390	1820	1460
8	3140	2990	3060	2570	2750	2470	1690	1400	1470	1400	1440	1380
9	3140	3020	2880	2380	3030	2670	1840	1570	1610	1380	1390	1360
10	3230	3110	2550	2410	3010	2690	1910	1760	1340	1240	1440	1370
11	3170	3010	2780	2550	2760	2510	2100	1830	1460	1330	1660	1440
12	3060	2930	2550	2430	2580	2370	1940	1440	1650	1470	1640	1430
13	2960	2620	2770	2520	2350	2170	1400	1210	1600	1530	1430	1370
14	2790	2570	2930	2740	2350	2030	1290	1190	1600	1550	1360	1270
15	2830	2570	2730	2470	2140	1900	1290	1200	1560	1500	1340	1260
16	2710	2560	2670	2520	2290	2000	1480	1310	1530	1470	1380	1180
17	2700	2610	2990	2600	2210	2040	1590	1370	1520	1430	1880	1570
18	2890	2620	2600	2170	2300	1740	1400	1320	1460	1420	1890	1830
19	2780	2480	2330	2140	1760	1650	1550	1400	1450	1380	1920	1760
20	2510	2350	2290	2060	1900	1660	1680	1480	1380	1290	1910	1780
21	2680	2400	2590	2110	1900	1420	1590	1420	1330	1300	1920	1690
22	2720	2510	2630	2500	1610	1470	1470	1330	1340	1290	1680	1490
23	2820	2610	2670	2380	1920	1510	1660	1400	1310	1290	1790	1600
24	2630	2490	2690	2270	1690	1580	1390	1200	1290	1250	1880	1790
25	2620	2460	2700	2430	1660	1420	1340	1230	1250	1200	1940	1890
26	2610	2510	2760	2450	1530	1420	1400	1320	1310	1250	1880	1680
27	2540	2220	2680	2460	1530	1420	1460	1400	1310	1260	1770	1550
28	2550	2380	3050	2720	1560	1460	1440	1310	1270	1220	1540	1480
29	2600	2490	3070	2630	1560	1470	1440	1300	1390	1220	1600	1510
30	2820	2630	2780	2370	1660	1470	1390	1320	1390	1310	1640	1570
31	---	---	2940	2590	---	---	1420	1330	1370	1300	---	---
MONTH	3230	2220	3160	2060	3220	1420	2100	1190	1650	1170	1940	1180

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26.5	20.5	15.0	11.0	6.5	4.5	10.0	8.5	12.5	9.5	17.5	15.5
2	27.0	20.0	15.5	11.5	7.0	4.5	9.0	8.0	12.5	9.5	16.5	15.0
3	27.0	20.5	16.5	12.5	8.0	5.0	10.0	8.0	12.0	9.0	17.0	15.0
4	27.0	20.5	17.0	13.0	8.5	5.5	11.0	8.5	11.5	8.5	17.0	14.5
5	26.0	20.0	17.5	13.5	8.5	6.0	11.0	10.0	11.0	8.5	16.0	14.5
6	24.5	18.5	18.0	14.0	8.5	6.0	10.0	9.0	11.0	10.5	15.0	13.5
7	24.5	18.5	17.5	14.5	9.5	8.5	10.0	9.0	13.5	10.5	15.0	12.5
8	24.5	18.0	17.5	16.0	10.0	8.5	10.0	7.5	14.5	12.0	16.0	13.5
9	24.5	18.0	18.0	15.0	10.0	7.5	9.0	8.5	13.5	12.5	16.5	14.5
10	25.0	18.5	17.5	14.5	9.5	7.5	9.0	8.5	13.0	11.5	17.5	15.0
11	24.0	19.5	17.0	14.0	10.0	8.5	10.0	8.0	14.0	11.5	18.5	15.5
12	25.0	19.5	17.0	14.0	8.5	7.5	8.5	6.5	13.5	12.0	19.5	16.0
13	24.5	19.5	16.5	13.5	8.0	7.5	8.5	6.0	14.0	12.0	19.5	16.5
14	25.0	19.5	14.5	10.5	7.5	7.5	8.5	6.0	13.5	12.0	17.5	16.0
15	25.0	19.0	11.0	8.5	7.5	7.0	7.5	7.5	13.5	12.0	17.0	14.5
16	24.5	19.0	11.5	8.5	7.5	6.5	7.5	7.5	12.5	11.5	17.5	15.0
17	24.0	18.5	12.0	10.5	7.0	6.0	8.0	7.0	13.5	12.0	17.5	15.0
18	23.5	18.0	13.0	10.0	10.0	7.0	7.5	7.5	14.0	12.0	17.5	15.0
19	23.0	17.5	12.5	10.0	8.5	7.0	7.5	7.0	15.0	13.5	17.5	15.0
20	22.5	17.0	12.5	10.0	8.0	5.5	7.5	7.0	16.0	14.5	17.5	15.5
21	23.0	17.0	13.5	11.5	7.5	5.5	7.5	7.0	15.5	14.5	17.5	15.5
22	19.0	17.0	12.0	10.0	7.5	5.5	7.0	6.5	17.0	15.0	18.0	16.5
23	18.0	14.5	12.0	9.5	8.5	6.5	6.5	6.0	16.5	13.5	18.0	16.0
24	17.5	12.0	12.5	10.0	9.0	6.5	6.5	6.0	17.0	13.5	18.5	16.5
25	18.5	14.5	12.5	10.0	8.5	6.5	8.5	5.5	17.0	13.5	19.0	17.0
26	17.0	14.5	12.5	10.0	8.5	7.0	9.0	7.5	17.5	14.5	20.5	17.5
27	15.5	12.0	12.5	9.5	9.0	7.5	9.0	8.0	18.5	15.5	21.0	18.0
28	13.5	10.5	9.5	7.5	11.0	8.5	10.5	8.0	18.0	16.0	20.5	18.0
29	15.0	12.0	8.5	6.5	10.5	10.0	11.5	9.0	17.5	16.0	19.5	17.5
30	13.5	10.0	6.5	4.5	11.5	10.0	10.0	8.5	---	---	19.0	17.5
31	14.0	10.5	---	---	11.0	9.0	10.5	9.0	---	---	19.0	17.0
MONTH	27.0	10.0	18.0	4.5	11.5	4.5	11.5	5.5	18.5	8.5	21.0	12.5

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11262900 MUD SLOUGH NEAR GUSTINE, CA

LOCATION.--Lat 37°15'45", long 120°54'20", in SE 1/4 SE 1/4 sec.6, T.8 S., R.10 E., Merced County, Hydrologic Unit 18040001, Kesterson National Wildlife Refuge, on right bank at footbridge 400 ft northwest of terminus of San Luis Drain and 5.2 mi east of Gustine.
DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for those less than 1.0 ft³/s, which are pogr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 570 ft³/s, Mar. 16, 1986; minimum daily, 0.01 ft³/s, Sept. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 184 ft³/s, Feb. 18, gage height, 6.75 ft; minimum daily, 0.06 ft³/s, Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	7.8	11	10	19	67	65	2.6	2.9	39	8.1	.34
2	9.8	12	14	9.3	17	65	61	2.9	2.9	30	11	.31
3	1.7	13	13	9.2	14	61	52	2.9	4.4	21	13	.33
4	.84	13	8.7	10	14	49	44	2.2	4.4	12	12	3.7
5	1.2	13	6.7	21	14	45	36	1.8	2.6	6.9	8.5	1.6
6	10	6.0	6.4	27	15	57	28	1.6	6.0	8.2	4.6	.56
7	9.3	5.3	8.4	39	17	52	27	1.4	5.8	7.8	11	6.9
8	6.3	5.5	15	46	18	46	25	1.9	2.0	6.1	13	12
9	6.1	4.0	11	51	18	36	23	1.8	1.9	7.0	10	18
10	14	4.2	8.2	48	20	33	22	1.5	1.8	4.7	8.6	33
11	7.4	4.1	8.2	38	27	34	19	1.3	1.7	12	7.2	29
12	4.7	4.4	8.5	35	58	37	18	1.4	1.7	28	5.2	18
13	3.4	5.2	7.9	32	116	45	17	1.3	1.6	44	4.6	6.0
14	2.7	5.2	8.0	29	146	54	16	1.4	1.8	45	2.7	.59
15	2.6	4.4	7.3	22	157	54	15	1.2	1.6	57	2.7	.22
16	3.3	4.4	7.2	16	169	62	15	1.3	1.8	46	3.3	2.0
17	4.5	3.9	7.2	16	177	73	14	1.4	4.7	37	3.8	.85
18	4.2	3.9	7.2	16	176	61	10	1.4	2.9	32	2.7	.32
19	5.1	4.2	10	16	163	55	13	1.4	12	13	1.1	.37
20	5.6	5.0	9.9	17	145	52	11	1.4	34	14	4.7	.30
21	5.7	8.0	8.3	17	133	52	9.7	1.4	46	24	25	.19
22	5.7	17	6.2	17	123	59	9.4	1.5	59	16	39	.11
23	5.8	11	6.3	17	126	66	5.6	1.3	62	6.0	40	.10
24	5.6	9.9	5.9	18	104	73	4.3	1.5	57	3.3	45	.06
25	8.4	9.0	5.0	18	94	87	3.6	1.6	53	3.8	28	.09
26	7.5	7.9	4.2	18	87	81	3.2	1.3	52	3.1	12	.19
27	7.9	9.1	3.9	18	81	66	2.8	1.6	45	8.5	5.5	.15
28	9.0	8.9	3.5	20	75	57	2.8	1.5	37	5.1	1.9	.13
29	14	9.2	5.4	20	68	46	2.5	2.2	25	6.0	.85	.10
30	6.5	11	8.1	20	---	44	2.5	3.4	35	6.3	.57	3.7
31	6.0	---	10	20	---	45	---	3.3	---	6.4	.45	---
TOTAL	188.94	229.5	250.6	710.5	2391	1714	577.4	54.7	569.5	559.2	336.07	139.21
MEAN	6.09	7.65	8.08	22.9	82.4	55.3	19.2	1.76	19.0	18.0	10.8	4.64
MAX	14	17	15	51	177	87	65	3.4	62	57	45	33
MIN	.84	3.9	3.5	9.2	14	33	2.5	1.2	1.6	3.1	.45	.06
AC-FT	375	455	497	1410	4740	3400	1150	108	1130	1110	667	276

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992
MEAN	25.8	32.6	43.9	50.7	78.2	106	69.9
MAX	57.1	68.5	111	95.8	163	335	229
(WY)	1990	1988	1986	1986	1986	1986	1986
MIN	6.09	7.53	5.86	6.17	6.96	28.0	19.2
(WY)	1992	1991	1991	1991	1991	1990	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1986 - 1992
ANNUAL TOTAL	6483.38	7720.62	
ANNUAL MEAN	17.8	21.1	47.0
HIGHEST ANNUAL MEAN			120
LOWEST ANNUAL MEAN			17.6
HIGHEST DAILY MEAN	70	177	570
LOWEST DAILY MEAN	.01	.06	.01
ANNUAL SEVEN-DAY MINIMUM	.52	.12	.12
INSTANTANEOUS PEAK FLOW		184	unknown
INSTANTANEOUS PEAK STAGE		6.75	unknown
ANNUAL RUNOFF (AC-FT)	12860	15310	34070
10 PERCENT EXCEEDS	44	57	116
50 PERCENT EXCEEDS	9.1	8.9	27
90 PERCENT EXCEEDS	2.3	1.4	4.4

11262900 MUD SLOUGH NEAR GUSTINE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1989 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

SPECIFIC CONDUCTANCE: Water year 1989 to current year.

WATER TEMPERATURE: Water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1985.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Maximum and minimum values are affected by the drainage of holding ponds located immediately upstream from the station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 15,900 microsiemens, Feb. 25, 1991; minimum recorded, 560 microsiemens, Oct. 5, 6, 1990.

WATER TEMPERATURE: Maximum recorded, 34.5°C, Aug. 6, 1990; minimum recorded, 2.5°C, Dec. 24, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 8,960 microsiemens, June 15; minimum recorded, 600 microsiemens, Oct. 10.

WATER TEMPERATURE: Maximum recorded, 34.0°C, Aug. 16, 17; minimum recorded, 3.5°C, Nov. 30.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1170	1020	1460	1010	2710	2260	2820	2710	3710	3610	2360	2310
2	1010	920	990	950	2730	2290	2980	2810	3920	3710	2360	2280
3	970	820	1050	990	3090	2400	3130	2980	3870	3820	2440	2280
4	830	800	1090	1050	3610	2910	3170	2780	3850	3790	2790	2430
5	850	830	1220	1050	3940	3330	2720	2260	3870	3820	3050	2610
6	830	760	2050	1230	3990	3620	2260	2140	3880	3800	2980	2720
7	760	710	2150	2060	4040	3570	2160	1940	3810	3610	2790	2720
8	730	720	2120	1900	4000	3000	2030	1990	3610	3550	2910	2790
9	720	660	2250	1910	3320	2920	2000	1970	3570	3470	3260	2890
10	650	600	2300	2200	3420	2780	2120	2000	3580	3300	3210	3080
11	730	630	2500	2320	3220	3100	2270	2120	3420	2870	3070	3000
12	830	730	2500	2440	3420	3150	2320	2240	3040	2330	3000	2830
13	900	780	2460	2260	3610	3430	2370	2260	2560	1900	2830	2490
14	910	830	2810	2320	3790	3600	2430	2370	1920	1730	2560	2500
15	960	810	3060	2820	3830	3490	3330	2430	2060	1870	2610	2560
16	1130	970	3180	3050	3860	3770	3380	3320	2040	1900	2590	2320
17	1070	920	3280	3150	3800	3640	3440	3360	1920	1840	2500	2350
18	980	890	3400	2890	3820	3690	3500	3430	1860	1820	2560	2500
19	900	830	3500	3340	3830	3310	3570	3490	2010	1860	2640	2550
20	830	760	3450	3060	3750	3310	3600	3560	2080	2010	2730	2630
21	770	730	3410	2440	3500	3060	3670	3610	2110	2070	2740	2680
22	750	730	2340	1860	3490	3120	3740	3650	2270	2070	2760	2640
23	790	730	2310	2010	3680	3210	3780	3730	2130	1880	2760	2590
24	920	800	2510	1950	3830	3680	3740	3710	2160	2100	2750	2580
25	960	760	2580	2110	3970	3390	3770	3690	2160	2130	2580	2380
26	1110	980	2930	2330	4210	3960	3770	3680	2250	2130	2680	2430
27	960	870	3150	2550	4280	4170	3710	3670	2230	2200	---	---
28	880	720	3720	3190	4220	3960	3690	3630	2410	2210	---	---
29	920	780	3810	3390	3930	3420	3700	3610	2340	2280	---	---
30	1320	930	3830	2680	3410	2740	3640	3610	---	---	---	---
31	1460	1340	---	---	2740	2650	3660	3610	---	---	---	---
MONTH	1460	600	3830	950	4280	2260	3780	1940	3920	1730	---	---

11262900 MUD SLOUGH NEAR GUSTINE, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	3830	3420	4430	4090	3280	3050
2	---	---	---	---	---	---	3870	3470	4070	3740	3390	3130
3	---	---	---	---	---	---	3990	3400	4370	4110	3440	3200
4	---	---	---	---	---	---	4010	3660	4240	3850	3250	2750
5	---	---	---	---	5160	3630	3860	3680	3990	3800	3040	2800
6	---	---	---	---	6000	2410	3930	3870	4000	3680	3500	3060
7	---	---	---	---	3910	2490	4280	3930	3730	3520	3630	3300
8	---	---	---	---	6110	4040	4320	4220	3990	3670	3920	3260
9	---	---	---	---	7180	6130	4320	4170	4020	3800	4020	3510
10	---	---	---	---	7650	7080	4250	4160	3970	3280	4000	3340
11	---	---	---	---	8270	7490	4250	4000	3450	3220	3320	2020
12	---	---	---	---	8340	7870	4070	3720	3630	3430	2000	1590
13	---	---	---	---	8750	7960	3710	3420	3840	3660	1740	1590
14	---	---	---	---	8890	8080	3410	3020	4030	3790	1800	1730
15	---	---	---	---	8960	8300	3330	3140	4060	3880	1980	1780
16	---	---	---	---	8750	7730	3800	3220	3890	3710	2760	1910
17	---	---	---	---	8890	1970	3900	3710	4050	3780	1860	1500
18	---	---	---	---	4680	2440	3720	3290	4200	4050	1490	1380
19	---	---	---	---	7110	1750	3470	3260	4770	4210	1530	1400
20	---	---	---	---	3850	3060	3780	3140	4250	3960	1380	1220
21	---	---	---	---	3750	3540	4040	3740	4250	3750	1260	1230
22	---	---	---	---	3760	3450	3780	3340	4020	3310	1330	1260
23	---	---	---	---	3850	3700	4500	3380	3310	2990	1320	1270
24	---	---	---	---	3910	3820	4010	3870	2980	2930	1300	1240
25	---	---	---	---	3950	3690	4170	3880	2940	2740	1380	1240
26	---	---	---	---	3840	3530	4130	4040	2780	2730	1250	1060
27	---	---	---	---	3780	3660	4570	3970	2760	2730	1070	1050
28	---	---	---	---	3790	3750	4080	3890	2850	2730	1120	1070
29	---	---	---	---	3820	3730	4580	3980	2930	2830	1120	1060
30	---	---	---	---	3730	3490	4420	4060	3020	2920	1170	870
31	---	---	---	---	---	---	4430	4280	3110	3010	---	---
MONTH	---	---	---	---	---	---	4580	3020	4770	2730	4020	870

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27.0	20.0	17.5	9.5	8.5	4.5	11.5	7.5	13.5	9.5	18.0	15.0
2	27.5	21.0	17.5	11.5	9.5	4.5	9.0	7.5	14.0	8.5	16.5	15.0
3	27.5	19.5	18.0	12.5	10.0	5.0	11.0	8.0	14.0	8.0	18.0	14.5
4	27.5	20.0	19.0	13.0	11.0	5.5	12.5	8.5	14.0	8.0	19.0	14.0
5	27.0	19.0	19.0	13.5	11.0	5.5	11.0	9.0	13.0	8.0	16.0	13.5
6	26.0	20.0	19.5	13.0	11.5	6.0	9.5	8.5	11.5	10.5	15.5	12.5
7	26.0	18.0	19.0	13.5	11.5	9.5	10.0	8.5	15.0	10.5	16.5	12.0
8	25.0	17.5	19.0	15.5	11.5	7.5	10.0	7.0	16.0	12.0	19.0	13.5
9	25.0	17.0	19.5	15.0	12.0	7.0	8.5	8.0	13.5	12.0	19.5	14.0
10	25.5	20.0	19.0	13.5	12.0	7.0	8.0	7.5	14.0	11.0	20.0	14.0
11	25.0	20.0	18.5	13.0	12.5	8.5	9.5	7.0	15.0	11.0	21.0	14.5
12	26.5	19.5	18.0	12.5	10.0	7.0	8.5	5.5	13.0	11.0	21.5	15.5
13	26.0	18.5	18.0	13.0	9.0	8.0	8.5	5.5	13.5	11.0	21.5	16.0
14	26.0	17.5	14.0	9.5	8.5	7.5	8.5	5.0	12.5	11.5	17.5	15.5
15	26.5	17.5	12.5	7.0	8.5	7.5	8.5	6.5	12.5	11.0	18.0	14.0
16	24.5	17.5	14.0	7.0	8.5	7.0	8.0	7.5	12.0	11.0	18.5	14.5
17	24.5	17.0	14.0	11.5	9.5	6.5	8.5	7.0	13.5	11.0	18.5	14.5
18	24.0	17.0	15.0	10.5	13.0	8.0	8.5	7.5	13.5	11.5	19.0	14.5
19	23.0	16.5	14.5	8.5	10.0	6.5	8.0	7.0	14.5	13.0	18.0	15.5
20	23.0	16.5	14.5	9.5	10.0	5.5	8.5	6.5	16.0	14.0	18.0	15.5
21	24.0	16.5	15.0	11.0	10.5	5.0	8.0	6.5	15.5	14.5	18.5	15.5
22	20.0	16.5	13.5	10.0	10.0	5.5	7.5	6.5	17.0	14.5	19.0	15.5
23	19.0	14.5	14.5	9.5	11.5	6.5	7.0	6.0	15.5	13.0	20.0	15.0
24	18.0	10.5	15.0	9.5	11.5	6.0	7.0	5.5	17.0	12.5	20.0	16.0
25	20.0	14.5	15.0	9.5	11.0	6.0	10.0	6.0	17.5	13.5	20.0	17.0
26	17.0	14.5	15.0	9.5	11.0	7.5	10.0	8.0	18.5	14.5	22.0	17.5
27	16.5	12.0	14.0	9.0	11.0	8.0	10.0	8.0	19.5	15.0	---	---
28	16.0	10.5	11.0	6.0	13.0	9.0	12.5	8.0	18.5	16.0	---	---
29	17.5	12.0	9.5	5.5	11.0	10.0	12.0	8.5	18.5	15.5	---	---
30	14.5	9.0	8.5	3.5	12.5	10.0	10.5	8.0	---	---	---	---
31	15.5	8.5	---	---	12.0	8.0	11.5	8.5	---	---	---	---
MONTH	27.5	8.5	19.5	3.5	13.0	4.5	12.5	5.0	19.5	8.0	---	---

11262900 MUD SLOUGH NEAR GUSTINE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	28.0	21.0	30.0	22.5	30.0	19.0
2	---	---	---	---	---	---	29.5	21.5	29.5	23.0	29.0	20.0
3	---	---	---	---	---	---	30.0	22.0	28.5	23.0	27.5	19.0
4	---	---	---	---	---	---	29.5	21.5	29.5	22.5	27.5	17.5
5	---	---	---	---	32.5	22.0	29.5	19.5	30.5	22.5	28.5	18.5
6	---	---	---	---	30.5	19.5	28.5	20.5	31.5	21.5	28.0	20.0
7	---	---	---	---	31.5	20.5	30.5	19.5	30.0	23.0	27.5	17.5
8	---	---	---	---	33.0	21.5	30.0	21.5	30.0	24.0	28.0	19.5
9	---	---	---	---	32.0	21.0	30.0	23.0	31.0	23.5	28.0	20.0
10	---	---	---	---	31.0	20.0	32.0	23.5	31.5	24.0	26.5	21.5
11	---	---	---	---	31.0	18.5	30.0	24.5	32.5	24.0	26.0	21.5
12	---	---	---	---	28.0	17.5	28.5	24.5	33.0	24.0	26.5	21.0
13	---	---	---	---	28.0	17.0	29.5	24.5	33.0	24.0	25.5	19.0
14	---	---	---	---	28.5	16.5	30.5	26.0	32.0	23.5	27.5	17.5
15	---	---	---	---	23.0	16.5	30.5	26.0	32.5	23.5	26.0	16.5
16	---	---	---	---	29.0	15.5	30.0	26.0	34.0	23.5	26.5	17.0
17	---	---	---	---	32.0	18.5	32.0	26.5	34.0	23.5	27.0	19.5
18	---	---	---	---	30.5	19.5	29.5	25.0	33.0	22.5	27.0	18.5
19	---	---	---	---	29.5	19.5	31.0	23.5	32.5	22.0	28.5	19.0
20	---	---	---	---	30.0	24.5	29.5	22.5	32.5	21.5	28.0	19.0
21	---	---	---	---	31.0	25.0	29.0	23.5	28.5	24.0	29.0	19.0
22	---	---	---	---	30.5	25.5	29.0	23.0	26.0	23.0	28.5	20.0
23	---	---	---	---	27.5	25.5	29.5	21.5	24.5	21.5	28.0	20.0
24	---	---	---	---	30.0	24.5	31.0	22.0	25.0	21.0	26.0	19.0
25	---	---	---	---	30.0	25.0	30.5	23.0	26.0	21.0	23.0	16.5
26	---	---	---	---	30.0	24.0	30.5	22.0	28.5	21.0	26.0	16.5
27	---	---	---	---	30.0	23.5	29.5	23.5	30.0	21.0	26.5	18.0
28	---	---	---	---	27.0	22.5	31.5	22.5	28.5	20.0	27.0	18.0
29	---	---	---	---	26.0	21.5	31.0	23.0	28.5	20.0	28.0	19.0
30	---	---	---	---	27.5	21.5	31.0	22.5	29.5	20.0	27.5	19.5
31	---	---	---	---	---	---	31.0	22.5	29.5	19.5	---	---
MONTH	---	---	---	---	---	---	32.0	19.5	34.0	19.5	30.0	16.5

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA
(Hydrologic bench-mark station)

LOCATION.--Lat 37°43'54", long 119°33'28", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on right bank 10 ft downstream from footbridge at Happy Isles, 0.4 mi downstream from Illilouette Creek, and 2.0 mi southeast of Yosemite National Park Headquarters.

DRAINAGE AREA.--181 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to current year.

REVISED RECORDS.--WSP 1215: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 4,016.58 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1916, nonrecording gage at datum 0.55 ft lower.

REMARKS.--No estimated daily discharges. Records good except for discharges below 10 ft³/s, which are fair. Up to 5 ft³/s can be diverted upstream from station for Yosemite Valley water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft³/s, Dec. 23, 1955, gage height, 12.73 ft, from rating curve extended above 4,000 ft³/s on basis of contracted-opening measurements at gage heights 10.4 and 11.55 ft; minimum daily, 1.5 ft³/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 8	2400	*1,490	*5.42				

Minimum daily, 5.4 ft³/s, Oct. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	32	42	35	38	157	236	968	642	236	63	16
2	8.2	34	39	34	35	142	276	828	651	176	58	15
3	7.9	38	38	36	32	136	369	854	569	140	54	14
4	7.7	41	37	37	34	131	444	908	538	128	50	14
5	7.4	47	35	37	33	126	427	932	488	118	46	13
6	7.1	64	34	38	33	127	396	994	432	108	43	12
7	6.8	72	35	39	37	117	439	1120	411	100	39	11
8	6.6	77	37	38	39	110	488	1250	434	96	37	11
9	6.5	100	36	39	37	107	502	1200	541	96	35	10
10	6.3	102	35	39	40	106	500	1040	421	97	32	10
11	6.2	81	34	39	44	111	554	990	367	102	31	9.6
12	6.1	67	32	37	56	122	460	1020	316	316	30	8.9
13	6.1	59	31	39	60	138	557	945	267	627	30	8.4
14	6.1	54	29	38	59	146	541	902	210	675	82	8.1
15	6.1	45	28	38	64	146	502	823	177	954	117	7.8
16	6.1	40	26	38	65	139	453	788	157	818	91	7.8
17	6.1	60	27	38	65	127	677	789	136	665	72	7.9
18	6.1	65	28	38	71	118	865	732	124	391	60	8.3
19	6.0	68	27	38	69	114	780	650	126	276	50	8.1
20	5.8	80	27	35	91	110	817	539	139	211	43	8.1
21	5.6	91	27	38	102	109	858	437	160	172	38	8.0
22	5.4	88	27	36	115	109	710	412	165	145	33	7.8
23	5.6	79	26	36	120	113	623	440	172	128	30	7.8
24	5.6	73	25	37	122	113	696	485	226	113	27	7.8
25	5.6	70	24	39	137	118	895	527	266	101	24	7.8
26	83	68	24	39	154	127	1050	512	206	92	22	7.8
27	60	65	23	36	168	138	1060	587	173	85	20	7.8
28	38	53	26	38	177	186	1150	682	181	79	18	7.8
29	39	49	29	36	171	196	1260	610	196	74	17	7.7
30	37	37	31	37	---	211	1250	572	252	70	16	7.7
31	31	---	33	37	---	197	---	673	---	66	16	---
TOTAL	449.5	1899	952	1159	2268	4147	19835	24209	9143	7455	1324	287.0
MEAN	14.5	63.3	30.7	37.4	78.2	134	661	781	305	240	42.7	9.57
MAX	83	102	42	39	177	211	1260	1250	651	954	117	16
MIN	5.4	32	23	34	32	106	236	412	124	66	16	7.7
AC-FT	892	3770	1890	2300	4500	8230	39340	48020	18140	14790	2630	569

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.6	62.0	85.5	78.0	103	179	533	1245	1205	446	106	42.6
MAX	267	818	736	366	401	575	1007	2675	3317	2101	775	360
(WY)	1919	1951	1965	1980	1986	1986	1926	1969	1983	1983	1983	1978
MIN	2.58	4.89	4.49	6.56	8.89	25.2	173	231	120	28.6	7.79	3.18
(WY)	1956	1933	1977	1991	1991	1977	1975	1977	1924	1931	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1916 - 1992	
ANNUAL TOTAL	86348.2		73127.5			
ANNUAL MEAN	237		200			
HIGHEST ANNUAL MEAN					344	
LOWEST ANNUAL MEAN					802	
HIGHEST DAILY MEAN	1960 Jun 4		1260 Apr 29		84.9	
LOWEST DAILY MEAN	5.2 Jan 29		5.4 Oct 22		7480	
ANNUAL SEVEN-DAY MINIMUM	5.4 Jan 27		5.7 Oct 19		1.5	
INSTANTANEOUS PEAK FLOW			1490 May 8		1.9	
INSTANTANEOUS PEAK STAGE			5.42 May 8		9860	
ANNUAL RUNOFF (AC-FT)	171300		145000		12.73	
10 PERCENT EXCEEDS	719		667		249300	
50 PERCENT EXCEEDS	45		66		1100	
90 PERCENT EXCEEDS	6.5		8.1		97	
					11	

WATER-QUALITY RECORDS

SEDIMENT DATA: Water years 1970-71, 1973 to current year.

WATER TEMPERATURE: October 1965 to September 1977, October 1978 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1977 and since October 1978.

REMARKS.--Water-quality samples were obtained 1.0 mi downstream of the gage at or below Clarks Bridge.

WATER TEMPERATURE: Maximum recorded, 20.0°C, July 15, 1979, July 13, 1990; minimum recorded, 0.0°C, on many days during winter period most years.

WATER TEMPERATURE: Maximum recorded, 18.5°C, Aug. 14, 15; minimum recorded, 0.0°C, Jan. 5, Feb. 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
NOV 05...	<0.010	0.020	0.020	10	3	<3	85	7	2	<10	<1	<1
JAN 16...	<0.010	<0.010	<0.010	<10	<2	<3	36	10	<1	<10	<1	<1
MAY 28...	0.040	<0.010	<0.010	30	<2	<3	22	<4	3	<10	<1	<1
JUL 16...	<0.010	<0.010	<0.010	40	<2	<3	28	<4	2	<10	<1	<1
29...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	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)
NOV 05...	<1.0	51	<6	--	--	--	--	--	--	--	--
JAN 16...	<1.0	65	<6	1.3	<0.6	1.0	<0.6	1.0	<0.6	0.05	1.1
MAY 28...	<1.0	10	<6	--	--	--	--	--	--	--	--
JUL 16...	<1.0	12	<6	0.8	1.8	1.0	<0.6	1.0	<0.6	0.05	0.83
29...	--	--	--	--	--	--	--	--	--	--	--

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SED- IMENT, SUS- PENDED (MG/L)
NOV 05...*	1525	1.40	29.0	32	7.0	8.0	659	11.2	2
05...*	1527	1.30	39.0	32	7.1	8.0	659	11.3	2
05...*	1529	1.30	50.0	32	6.9	8.0	659	11.4	2
05...*	1531	1.30	56.0	31	6.9	8.0	659	11.3	2
05...*	1534	1.30	67.0	31	6.9	8.0	659	11.3	2
MAY 28...*	1133	2.10	13.0	9	6.6	13.0	654	10.8	4
28...*	1135	2.80	34.0	9	6.6	12.5	654	10.7	3
28...*	1137	2.10	46.0	9	6.6	13.0	654	10.6	5
28...*	1139	2.50	60.0	9	6.6	13.0	654	10.6	5
28...*	1141	2.00	79.0	9	6.6	13.0	654	10.5	5

* Instantaneous streamflow at the time of cross-sectional measurements: Nov. 5, 49 ft³/s; May 28, 705 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 05...	1545	49	8.0	2	0.27	--
JAN 16...	1000	38	1.0	4	0.43	46
MAY 28...	1215	690	12.5	4	7.8	--
JUL 16...	1045	838	12.5	7	16	39

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	11.5	5.5	4.0	2.0	1.0	1.5	1.0	2.5	2.0	5.0	4.0
2	13.0	11.5	6.5	5.0	1.5	1.0	1.5	1.0	2.0	1.0	5.5	4.0
3	13.5	11.5	7.0	6.0	2.0	1.5	2.0	1.5	2.0	1.0	5.5	4.5
4	13.5	11.5	7.5	6.0	2.5	2.0	2.0	1.5	2.5	1.0	5.0	2.5
5	13.0	11.5	9.0	7.0	2.5	2.0	2.0	.0	2.5	1.5	4.5	3.0
6	12.5	11.0	9.0	7.0	3.0	2.0	1.5	1.0	3.5	2.0	3.5	2.0
7	12.0	10.5	9.5	7.0	3.0	2.5	1.5	.5	3.5	3.0	4.0	1.5
8	11.5	10.0	9.5	8.0	2.5	2.0	1.0	.5	4.0	3.0	4.5	2.0
9	11.5	10.0	9.5	8.5	3.0	2.0	1.5	.5	3.5	2.0	5.5	2.0
10	12.0	10.0	8.5	6.5	3.0	2.0	1.5	1.0	3.0	1.5	6.0	2.5
11	11.5	10.0	7.5	5.5	3.0	2.0	1.0	.5	2.0	.5	6.5	2.5
12	11.5	10.0	8.0	6.0	2.0	1.5	1.0	.5	2.5	1.5	6.0	3.0
13	11.5	10.0	7.5	6.0	2.5	2.0	1.0	.5	2.0	1.5	6.5	4.0
14	11.5	9.5	6.5	3.5	2.5	2.0	1.0	.5	2.0	1.0	5.5	3.5
15	11.5	9.5	3.5	2.5	2.5	2.0	1.5	1.0	1.5	.0	5.5	4.0
16	11.0	9.5	3.5	2.0	2.5	2.0	1.5	1.0	1.0	.5	4.5	3.0
17	11.0	9.5	4.5	3.5	3.5	2.0	2.0	1.0	1.5	1.0	5.0	1.5
18	11.0	9.5	3.5	2.5	4.0	3.5	1.5	1.0	1.5	1.0	5.5	2.0
19	11.0	9.5	4.0	2.0	3.5	1.5	1.5	1.0	3.0	1.5	5.5	2.5
20	10.5	9.0	6.5	4.0	1.5	1.0	1.5	.5	4.5	2.5	5.5	3.5
21	10.5	9.0	6.0	5.0	1.5	1.0	1.5	1.0	4.5	2.0	6.0	4.5
22	10.5	8.5	5.0	3.0	2.0	1.5	1.5	.5	4.5	3.0	5.5	4.5
23	10.0	8.5	4.5	3.0	2.0	1.5	1.5	.5	3.5	1.5	5.5	3.5
24	8.5	7.0	5.0	3.5	2.0	1.5	1.5	1.0	4.5	2.5	6.5	3.5
25	9.0	8.0	6.0	4.0	2.0	1.5	1.5	1.0	5.0	3.0	6.5	4.0
26	8.5	4.0	5.5	3.5	2.5	1.5	2.0	1.0	5.0	2.5	7.5	4.5
27	4.5	3.5	4.0	2.0	2.5	1.5	2.0	1.0	5.5	2.5	8.0	4.0
28	5.0	3.0	2.0	1.0	2.5	1.5	2.5	1.5	5.5	3.0	7.5	4.5
29	5.5	4.5	1.5	1.0	1.5	1.0	2.0	1.0	5.0	3.5	7.5	5.0
30	4.5	3.0	2.5	1.0	1.5	1.0	2.5	1.5	---	---	6.0	5.0
31	4.5	3.5	---	---	1.5	1.0	2.5	1.5	---	---	8.0	4.5
MONTH	13.5	3.0	9.5	1.0	4.0	1.0	2.5	.0	5.5	1.0	8.0	1.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	5.0	9.5	4.5	16.0	12.0	13.5	9.5	16.5	13.5	14.0	12.0
2	9.0	4.5	10.0	5.5	15.0	12.0	14.5	11.0	16.5	14.0	14.0	12.5
3	9.0	4.5	10.5	6.5	15.5	11.5	15.0	11.5	16.0	13.5	14.0	12.0
4	7.5	3.5	11.0	7.0	15.5	12.0	15.0	12.5	16.0	13.0	13.0	10.5
5	7.0	3.0	11.0	7.5	15.0	11.5	14.5	11.0	15.5	13.0	13.5	11.0
6	8.0	3.5	11.0	8.0	14.5	12.5	14.0	11.5	15.5	13.5	13.5	11.0
7	8.5	4.0	11.5	8.0	15.0	11.0	15.0	11.5	15.5	13.5	13.5	10.5
8	8.0	3.5	12.0	8.5	15.0	11.0	15.0	13.0	15.5	13.0	13.0	10.5
9	8.0	3.5	12.5	8.0	15.0	11.5	16.0	12.5	16.5	14.5	13.5	11.0
10	8.5	3.5	12.0	7.0	14.5	11.0	16.0	14.5	17.0	15.0	13.5	11.0
11	8.0	4.0	12.0	8.0	14.5	11.0	16.5	15.5	17.0	15.0	13.5	11.5
12	7.0	4.0	12.5	7.5	12.5	9.5	16.0	14.5	18.0	16.0	13.5	11.0
13	8.0	6.0	12.5	8.5	10.5	7.0	16.5	13.5	17.5	16.0	13.5	11.0
14	8.5	5.5	12.0	8.0	9.5	7.5	16.0	13.5	18.5	16.0	13.5	11.0
15	8.5	5.5	12.0	8.0	9.5	8.0	17.0	13.5	18.5	16.5	13.0	10.0
16	7.5	5.5	12.5	9.0	11.5	6.5	17.0	13.5	18.0	15.5	13.0	10.5
17	9.0	5.0	12.5	8.5	13.0	10.0	17.0	13.5	18.0	16.0	12.5	10.5
18	9.0	7.0	12.5	8.5	13.0	9.5	16.5	13.0	17.0	15.0	13.5	11.0
19	9.5	4.0	11.0	8.5	14.5	11.0	16.0	12.5	16.0	14.0	13.5	11.0
20	10.0	4.0	11.5	7.0	13.5	11.5	16.0	12.0	15.5	13.5	13.0	10.5
21	10.0	5.5	12.0	7.0	15.0	11.0	16.0	11.5	15.5	13.5	13.5	11.0
22	9.0	3.5	12.5	8.0	15.5	11.5	15.5	13.0	14.0	12.5	13.5	11.0
23	9.0	3.5	13.0	8.0	15.5	13.5	14.5	11.0	12.5	10.5	13.5	11.0
24	10.0	5.5	13.5	9.5	14.5	11.5	16.0	12.5	13.0	11.0	13.5	11.0
25	10.5	6.0	14.0	10.0	13.5	10.0	16.5	13.5	12.5	10.5	13.0	10.5
26	10.5	6.0	14.0	10.0	15.5	11.0	17.5	14.0	13.5	11.5	13.0	10.5
27	10.5	5.5	14.0	10.5	16.0	13.0	17.5	14.5	14.5	12.0	12.5	10.0
28	11.5	6.0	13.5	10.5	15.5	12.5	18.0	15.0	14.0	12.5	12.5	10.5
29	11.0	6.5	14.5	10.0	13.5	11.5	18.0	15.5	14.0	12.5	12.5	10.0
30	9.5	7.0	14.5	11.0	13.0	11.0	17.5	14.5	13.5	12.5	13.0	10.5
31	---	---	15.0	11.0	---	---	16.0	14.0	14.0	11.5	---	---
MONTH	11.5	3.0	15.0	4.5	16.0	6.5	18.0	9.5	18.5	10.5	14.0	10.0

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA

LOCATION.--Lat 37°43'01", long 119°39'55", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on left bank 150 ft upstream from Pohono bridge, 0.4 mi upstream from Artist Creek, and 4.8 mi southwest of Yosemite National Park Headquarters.

DRAINAGE AREA.--321 mi².

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 3,861.66 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 5, 1918, at datum 1.8 ft higher. Sept. 5, 1918, to Sept. 30, 1955, at datum 1.0 ft higher.

REMARKS.--Records good. No diversions between stations at Happy Isles bridge and Pohono bridge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft³/s, Dec. 23, 1955, gage height, 21.52 ft, from floodmarks in well, from rating curve extended above 17,000 ft³/s on basis of computation of flow over diversion dam for Yosemite powerplant 1 mi downstream at gage heights 20.1 and 21.98 ft, present datum; minimum daily 5.4 ft³/s, Oct. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 29	unknown	*2,550	*6.65				

Minimum daily, 13 ft³/s, for several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	47	70	66	65	e382	e455	1660	798	345	77	26
2	19	51	66	66	60	e337	e527	1430	802	258	72	26
3	19	56	64	68	53	e317	e706	1410	721	198	68	25
4	19	62	61	69	56	e301	e848	1460	673	172	63	24
5	19	68	59	76	53	e285	e804	1480	622	158	60	23
6	18	96	56	70	54	e287	e733	1540	550	143	56	22
7	18	106	59	80	e64	e256	e811	1680	525	130	53	21
8	15	108	62	76	e69	e234	e900	1770	559	120	50	21
9	15	130	62	83	e61	e223	e920	1870	678	116	48	20
10	14	149	61	88	e69	e219	e906	1590	546	114	45	20
11	14	115	63	83	e79	e232	e1100	1500	454	121	42	19
12	14	93	61	75	e113	263	e807	1490	389	345	41	19
13	14	82	60	77	e123	302	e994	1400	340	767	40	18
14	14	76	58	76	e118	325	e953	1330	280	856	55	18
15	14	69	56	77	e132	319	e865	1210	240	1270	112	17
16	13	60	53	78	e133	296	e757	1130	215	1060	94	17
17	13	77	55	79	e131	268	e1200	1120	187	873	75	17
18	13	118	56	80	e148	248	e1570	1050	167	529	64	17
19	13	105	57	75	e140	245	e1390	957	162	372	56	17
20	13	128	53	71	e203	236	e1460	841	176	295	50	17
21	13	152	55	74	e234	234	e1530	714	192	245	45	17
22	13	157	56	68	e271	238	e1220	641	193	209	41	16
23	14	137	54	66	e284	248	e1040	652	198	182	39	16
24	13	123	51	67	e289	252	e1170	696	230	161	36	16
25	13	117	50	70	e331	263	e1570	727	347	143	34	16
26	120	113	51	71	e380	290	e1870	722	279	127	32	15
27	109	109	49	68	e419	e303	e1880	747	221	115	30	15
28	57	93	56	70	e444	e391	e2060	864	212	105	29	15
29	52	84	61	66	e425	e402	e2270	824	231	97	28	14
30	54	66	63	66	---	e423	e2240	743	378	90	27	14
31	47	---	63	64	---	e386	---	860	---	84	26	---
TOTAL	815	2947	1801	2263	5001	9005	35556	36108	11565	9800	1588	558
MEAN	26.3	98.2	58.1	73.0	172	290	1185	1165	385	316	51.2	18.6
MAX	120	157	70	88	444	423	2270	1870	802	1270	112	26
MIN	13	47	49	64	53	219	455	641	162	84	26	14
AC-FT	1620	5850	3570	4490	9920	17860	70530	71620	22940	19440	3150	1110

e Estimated.

11266500 MERCED RIVER AT FOHONO BRIDGE, NEAR YOSEMITE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.2	124	188	174	237	397	1083	2293	1879	601	142	63.7
MAX	436	1587	1666	967	1035	1459	2136	5305	6279	3460	1045	426
(WY)	1983	1951	1951	1980	1986	1986	1982	1969	1983	1983	1983	1978
MIN	5.89	13.9	15.1	17.3	21.0	51.5	343	379	148	47.2	14.7	7.38
(WY)	1978	1930	1977	1977	1991	1977	1977	1977	1924	1931	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1917 - 1992	
ANNUAL TOTAL	149615		117007			
ANNUAL MEAN	410		320		605	
HIGHEST ANNUAL MEAN					1466	
LOWEST ANNUAL MEAN					127	
HIGHEST DAILY MEAN	3130	Jun 4	2270	Apr 29	18000	Dec 23 1955
LOWEST DAILY MEAN	13	Oct 16	13	Oct 16	5.4	Oct 26 1977
ANNUAL SEVEN-DAY MINIMUM	13	Oct 16	13	Oct 16	5.6	Oct 20 1977
INSTANTANEOUS PEAK FLOW			2550	Apr 29	23400	Dec 23 1955
INSTANTANEOUS PEAK STAGE			6.65	Apr 29	21.52	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	296800		232100		438000	
10 PERCENT EXCEEDS	1340		968		1850	
50 PERCENT EXCEEDS	69		107		176	
90 PERCENT EXCEEDS	18		18		25	

11267350 BIG CREEK DIVERSION NEAR FISH CAMP, CA

LOCATION.--Lat 37°28'10", long 119°36'51", in SE 1/4 NE 1/4 sec.25, T.5 S., R.21 E., Mariposa County, Hydrologic Unit 18040008, Sierra National Forest, on right bank 0.5 mi downstream from diversion weir, 0.5 mi upstream from Rainier Creek, and 1.2 mi southeast of Fish Camp.

PERIOD OF RECORD.--October 1969 to June 1977, April 1987 to current year.

GAGE.--Water-stage recorder, crest-stage gage and culvert control. Elevation of gage is 5,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow is diverted from the left bank of Big Creek, a tributary to South Fork of the Merced River, to Lewis Fork of the Fresno River. Flow is used for domestic and irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 66 ft³/s, June 1, 2, 1975; no flow for several days in summer months of most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	2.6	3.5	3.4	4.1	12	34	34	8.5	3.9	e.80	.52
2	.42	2.5	3.5	3.5	3.1	12	37	32	7.9	3.3	e.78	.52
3	.66	2.5	3.6	3.4	3.9	13	42	32	7.4	2.7	e.75	.51
4	.67	2.5	3.9	3.3	3.2	13	42	31	6.9	2.5	e.70	.48
5	.66	2.5	3.8	2.8	3.0	12	40	30	6.7	2.4	e.65	.48
6	.64	2.5	3.4	4.3	3.2	12	40	29	6.7	2.3	e.63	.46
7	.61	2.4	2.5	4.4	5.3	10	41	29	7.3	2.1	e.68	.44
8	.60	2.4	1.9	4.4	5.0	9.4	42	28	6.6	2.1	e.72	.44
9	.58	2.5	2.1	5.2	4.2	9.6	38	26	6.2	2.2	e.72	.44
10	.57	2.5	2.3	5.2	3.6	11	35	24	5.7	2.1	e.72	.42
11	.58	2.3	2.0	5.3	2.8	12	35	21	5.3	e3.4	e.77	.45
12	.60	2.2	2.0	5.4	5.7	14	34	20	5.4	e9.9	.65	.41
13	.56	2.1	2.5	4.6	4.9	16	37	19	5.6	6.0	.64	.37
14	.53	1.9	2.1	4.3	4.8	16	35	18	5.7	e13	.74	.37
15	.46	1.7	2.3	3.8	3.9	18	34	17	6.0	e7.6	.73	.38
16	.42	1.7	2.3	4.0	3.4	15	34	16	6.3	e3.1	.69	.38
17	.40	2.1	2.0	4.1	3.7	13	36	15	5.3	e2.3	.65	.36
18	.42	2.2	2.4	3.8	3.7	13	36	14	4.7	e1.5	.65	.37
19	.39	2.2	2.2	4.2	4.0	12	36	14	4.4	e1.7	.67	.37
20	.39	2.1	2.6	4.0	8.6	12	36	14	4.3	e1.3	.63	.37
21	.40	2.0	2.7	3.9	13	12	36	13	4.3	e1.3	.64	.37
22	.42	1.9	2.5	4.1	12	13	35	12	3.8	e1.3	.57	.36
23	.41	1.8	2.5	4.6	12	14	34	12	3.8	1.3	.63	.36
24	.40	1.8	2.4	4.6	12	14	35	11	4.0	1.3	.64	.36
25	.42	1.8	2.5	5.1	12	17	35	11	3.5	1.2	.62	.36
26	.55	2.0	2.5	5.5	12	25	35	10	2.7	1.3	.58	.36
27	.02	2.1	2.6	5.1	13	23	35	10	e2.7	1.2	.58	.36
28	2.6	2.4	2.1	5.5	13	26	35	9.8	e2.5	e1.2	.57	.36
29	1.8	2.0	2.5	5.4	13	25	35	9.7	2.8	e1.0	.55	.36
30	1.8	2.7	3.0	5.8	---	31	35	9.4	e6.7	e.86	.51	.33
31	2.5	---	3.1	5.9	---	30	---	9.1	---	e.77	.53	---
TOTAL	21.56	65.9	81.3	138.9	196.1	485.0	1094	580.0	159.7	88.13	20.39	12.12
MEAN	.70	2.20	2.62	4.48	6.76	15.6	36.5	18.7	5.32	2.84	.66	.40
MAX	2.6	2.7	3.9	5.9	13	31	42	34	8.5	13	.80	.52
MIN	.02	1.7	1.9	2.8	2.8	9.4	34	9.1	2.5	.77	.51	.33
AC-FT	43	131	161	276	389	962	2170	1150	317	175	40	24

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	1.86	3.61	5.25	7.25	8.85	16.8	21.3	25.8	14.8	3.12	1.19	.89											
MAX	7.61	7.65	13.1	35.8	32.7	37.3	36.7	56.2	46.1	9.39	3.14	2.08											
(WY)	1970	1970	1970	1970	1970	1972	1971	1975	1975	1975	1973	1971											
MIN	.026	1.10	.75	.82	.71	.38	3.44	6.07	1.96	.90	.025	.000											
(WY)	1989	1991	1991	1974	1974	1974	1974	1977	1987	1987	1988	1987											

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1970 - 1992
ANNUAL TOTAL	3051.51	2943.10	
ANNUAL MEAN	8.36	8.04	10.0
HIGHEST ANNUAL MEAN			18.4
LOWEST ANNUAL MEAN			5.34
HIGHEST DAILY MEAN	43 May 25	42 Apr 3	66 Jun 1 1975
LOWEST DAILY MEAN	.02 Oct 27	.02 Oct 27	.00 Jul 1 1973
ANNUAL SEVEN-DAY MINIMUM	.06 Sep 13	.36 Sep 24	.00 Aug 1 1987
ANNUAL RUNOFF (AC-FT)	6050	5840	7260
10 PERCENT EXCEEDS	29	30	30
50 PERCENT EXCEEDS	2.2	3.3	3.9
90 PERCENT EXCEEDS	.15	.45	.31

11269500 LAKE MCCLURE AT EXCHEQUER, CA

LOCATION.--Lat 37°35'02", long 120°16'09", in NW 1/4 SE 1/4 sec.13, T.4 S., R.15 E., Mariposa County, Hydrologic Unit 18040008, on left end of New Exchequer Dam on Merced River, 0.9 mi east of Exchequer, and 5.5 mi northeast of Merced Falls.
DRAINAGE AREA.--1,037 mi².

PERIOD OF RECORD.--April 1926 to September 1930 (daily gage heights; also summary of yearly contents in WSP 881), October 1930 to current year.

REVISED RECORDS.--WSP 881: 1926-32 (yearly summaries only). WSP 1345: 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Levels by Merced Irrigation District). Prior to Oct. 1, 1964, indicator in powerplant at same datum. Oct. 1, 1964, to July 31, 1966, nonrecording gage at center of upstream face of dam at same datum.

REMARKS.--Reservoir is formed by a rockfill dam with a reinforced concrete face completed in March 1967. Dam is downstream from and connected to the original concrete arch and gravity-type dam which was completed in April 1926. Usable capacity, 1,024,000 acre-ft between elevations 440.0 ft, invert entrance to outlet tunnel, and 867.0 ft, top of spillway gates. Dead storage, 300 acre-ft. Water is released through a series of powerplants down the Merced River to a diversion dam for Merced Irrigation District's main canal. Records, including extremes, represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,026,000 acre-ft, July 14, 15, 1969, elevation, 867.2 ft; practically no storage at times in 1926, 1930-31, 1964-65 when reservoir was drained for inspection or construction. Minimum since construction of New Exchequer Dam in 1966 and since lake first filled, 66,100 acre-ft, Feb. 28, 1991, elevation, 588.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 353,000 acre-ft, May 19, 20, elevation, 731.5 ft; minimum, 135,400 acre-ft, Sept. 30, elevation, 638.6 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Merced Irrigation District, dated June 1966)

590	67,900	640	137,800	720	317,800	840	845,800
600	79,900	660	173,500	750	415,900	860	975,700
610	92,800	680	215,200	780	534,500	870	1,046,000
620	106,700	700	263,000	820	729,600		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192400	164700	160100	153500	150800	197800	232900	320900	346100	297700	245700	172400
2	191000	164100	160100	153000	150600	198600	234900	323200	345700	296900	243500	170700
3	189900	163900	160300	153200	150400	199800	237500	325600	345200	295300	240600	169100
4	188400	163800	160500	153000	150100	200400	240900	327600	345000	293400	238200	167400
5	187100	163800	160700	153500	150000	201400	243600	330000	342600	291300	235600	165800
6	186000	163600	160900	153800	149800	203900	246300	332600	341600	289500	233000	164100
7	184500	163300	160900	153700	149600	205700	249400	336000	340100	287200	230600	162500
8	183700	163500	160800	153500	149400	207000	252800	338300	338400	285300	228200	161000
9	181900	163400	160800	153500	149400	207900	255700	341700	337100	283300	225800	159700
10	180500	163400	160800	153500	149500	209000	258300	344100	336200	281200	223000	157800
11	179100	163200	160600	153500	151100	209500	260900	345900	334800	279000	220700	156200
12	177300	163400	160300	153700	155300	210400	263000	348100	333000	277300	218100	154200
13	175900	163300	160000	153800	160400	211100	265000	349200	331200	276500	215300	152900
14	174300	162900	159700	153500	162500	212400	267800	350700	329800	275700	212700	151300
15	173000	162200	159400	153300	170200	213600	269700	351400	328100	276800	210300	149200
16	171600	162100	159100	153000	175500	214900	272000	351700	326400	277100	208400	147500
17	170700	162200	158900	152900	178600	216200	274300	352200	324200	277000	206100	145700
18	169200	162000	158600	153000	180500	217400	278100	352800	322200	276200	203800	143900
19	168300	162000	158200	152900	182000	217500	281600	353000	320100	275200	203300	142000
20	167500	162100	157100	152900	184100	218400	284800	353000	318200	273200	199300	140400
21	166400	162100	155500	152800	186200	219400	288400	352600	315600	271600	197000	139000
22	165900	161900	155400	152500	187700	220400	291300	352000	313600	269400	194500	138900
23	165300	161900	154400	152000	189200	221500	293300	351100	311700	267700	192100	138500
24	164600	161900	154300	151700	190500	222400	295000	350600	309500	265400	189600	138100
25	163800	162000	154100	151600	191600	223500	297600	349700	307600	263400	187600	137600
26	164400	161400	153700	151500	193100	224400	300900	349800	305900	260600	185200	137100
27	165700	161000	153500	151400	194400	225500	304700	349000	305100	259100	183000	136900
28	165700	161100	153400	151500	195800	226600	308600	348100	303100	256300	181000	136600
29	165300	160600	153100	151700	196800	228200	312600	347800	300400	253500	178800	136100
30	165100	160300	153600	151100	---	229600	317200	347200	298800	250800	176500	135400
31	165200	---	153900	151000	---	231400	---	346800	---	248600	174600	---
MAX	192400	164700	160900	153800	196800	231400	317200	353000	346100	297700	245700	172400
MIN	163800	160300	153100	151000	149400	197800	232900	320900	298800	248600	174600	135400
a	655.6	652.9	649.4	647.8	671.5	687.1	719.8	729.5	713.4	694.2	660.5	638.6
b	-28900	-4900	-6400	-2900	+45800	+34600	+85800	+29600	-48000	-50200	-74000	-39200

CAL YR 1991 MAX 390500 MIN 66100 b +77000

WTR YR 1992 MAX 353000 MIN 135400 b -58700

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11270800 NORTHSIDE CANAL AT MERCED FALLS, CA

LOCATION.--Lat 37°31'22", long 120°20'00", in SE 1/4 SW 1/4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on left bank 1,200 ft downstream from Merced Falls Dam, 0.2 mi west of Merced Falls, and 5.8 mi east of Snelling.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and sharp-crested rectangular weir. Elevation of gage is 340 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow diverted at Merced Falls Dam for irrigation of 4,100 acres below gage. Flow regulated by three powerplants and Lake McClure (station 11269500) and McSwain Reservoir, combined capacity, 1,035,000 acre-ft.

COOPERATION.--Records were provided by Merced Irrigation District 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, 72 ft³/s, July 21, 1987; no flow for many days in 1988 and several days in February 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	1.1	3.1	1.7	.50	.30	.57	52	47	51	52	42
2	32	1.1	4.2	1.8	.50	.16	.50	47	49	47	49	45
3	32	1.1	3.1	1.8	.50	.37	.50	47	50	43	47	41
4	32	.99	2.6	1.7	.50	.40	.50	46	50	41	51	34
5	31	.93	2.3	1.7	.50	.41	.50	46	50	44	57	32
6	31	.90	2.2	1.6	.50	.49	.63	46	50	48	58	35
7	27	1.1	2.3	1.4	.50	.50	.70	48	50	50	55	34
8	25	1.0	2.2	1.3	.34	.70	.71	51	50	53	48	33
9	30	1.1	2.0	1.3	.00	.70	.70	51	54	55	46	33
10	34	1.1	2.1	1.3	.00	.64	.70	48	57	52	46	33
11	29	1.1	2.2	1.2	.00	.58	.70	47	58	50	49	33
12	25	2.4	3.6	1.1	.00	.49	.67	47	56	50	49	30
13	28	2.7	5.7	1.1	.00	.50	4.9	48	50	49	43	28
14	30	1.7	5.7	1.1	.00	.58	17	50	47	49	41	28
15	30	1.2	6.1	1.0	.00	.61	26	49	46	49	41	28
16	30	1.1	5.9	.90	.00	.55	29	48	49	49	43	31
17	27	.90	6.1	.89	.00	.50	29	48	57	49	43	34
18	22	.88	6.2	.89	.00	.57	29	48	60	48	43	33
19	20	.75	6.3	.85	.07	.68	29	49	57	49	51	33
20	20	.70	6.5	.70	.27	.70	34	50	51	49	56	33
21	20	.60	6.8	.74	.37	.70	39	50	47	53	51	33
22	20	.65	7.0	.85	.34	.63	48	49	47	57	48	16
23	20	.53	7.1	.90	.40	.50	52	48	50	59	44	5.1
24	21	.57	6.9	.90	.35	.50	54	48	56	55	41	7.9
25	20	.48	6.9	.91	.40	.51	45	48	58	52	44	12
26	12	.45	6.6	.90	.37	.52	22	48	58	52	49	12
27	3.0	.57	6.5	.89	.08	.52	40	50	56	52	49	12
28	1.7	.56	6.5	.70	.00	.50	50	51	54	52	46	11
29	1.6	.57	6.6	.70	.23	.50	55	51	54	52	40	10
30	1.4	.55	6.9	.70	---	.49	55	50	55	55	38	10
31	1.3	---	4.3	.65	---	.58	---	48	---	56	38	---
TOTAL	688.0	29.38	152.5	34.17	6.72	16.38	665.28	1507	1573	1570	1456	802.0
MEAN	22.2	.98	4.92	1.10	.23	.53	22.2	48.6	52.4	50.6	47.0	26.7
MAX	34	2.7	7.1	1.8	.50	.70	55	52	60	59	58	45
MIN	1.3	.45	2.0	.65	.00	.16	.50	46	46	41	38	5.1
AC-FT	1360	58	302	68	13	32	1320	2990	3120	3110	2890	1590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992
MEAN	11.3	4.40	3.51	2.83	2.49	8.39	35.9	54.0	56.8	61.2	54.5	29.1
MAX	22.2	8.16	4.92	4.84	4.66	31.4	48.5	67.0	67.7	70.1	64.0	48.9
(WY)	1992	1989	1992	1991	1990	1988	1987	1987	1987	1987	1987	1987
MIN	4.93	.98	1.32	.000	.23	.53	12.0	45.5	47.1	50.6	43.7	12.6
(WY)	1990	1992	1989	1988	1992	1992	1991	1991	1990	1992	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	8787.48	8500.43	
ANNUAL MEAN	24.1	23.2	27.2
HIGHEST ANNUAL MEAN			33.6
LOWEST ANNUAL MEAN			23.2
HIGHEST DAILY MEAN	66	Aug 1	72
LOWEST DAILY MEAN	.45	Nov 26	.00
ANNUAL SEVEN-DAY MINIMUM	.53	Nov 23	.00
ANNUAL RUNOFF (AC-FT)	17430	16860	19680
10 PERCENT EXCEEDS	53	52	65
50 PERCENT EXCEEDS	20	20	12
90 PERCENT EXCEEDS	1.1	.50	1.3

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA

LOCATION.--Lat 37°31'18", long 120°19'53", in SE 1/4 SW 1/4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on right bank 0.1 mi south of Merced Falls, 0.2 mi downstream from Merced Falls Dam, and 5.8 mi east of Snelling.

DRAINAGE AREA.--1,061 mi².

PERIOD OF RECORD.--April 1901 to current year. Records for water years 1914-16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901-13; as "at Exchequer" 1916-64. Records at present site are about equivalent when adjusted for diversion to Northside Canal (station 11270800) and change in contents in Lake McClure (station 11269500) and McSwain Reservoir.

REVISED RECORDS.--WSP 1315-A: 1901-9, 1911(M). WSP 1515: 1918-20, 1942-43 (published as station 11270000). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 310.55 ft above National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.--No estimated daily discharges. Records good. Merced Falls Dam diverts water to Northside Canal for irrigation downstream from station. Flow regulated by Exchequer, McSwain, and Merced Falls powerplants, Lake McClure since 1926, enlarged 1967, and McSwain Reservoir since 1966, capacity, 9,200 acre-ft.

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-92):--Maximum discharge observed, 47,700 ft³/s, Jan. 31, 1911, gage height, 23.3 ft, site and datum then in use; no flow for part of Nov. 21, 1901. Maximum discharge since construction of Exchequer Dam in 1926, 46,200 ft³/s, Dec. 4, 1950, gage height, 22.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 16,000 ft³/s on basis of computation of peak flow over dam; minimum daily, 3.4 ft³/s, Mar. 5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft³/s, June 6, gage height, 7.00 ft; minimum daily, 114 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	601	227	230	238	240	239	236	1130	1220	1070	1380	971
2	602	228	233	237	239	238	236	1180	1220	1070	1340	890
3	616	227	230	240	237	239	237	1150	1230	1120	1300	861
4	637	227	230	239	237	239	188	1120	1220	1150	1290	837
5	637	227	230	240	237	239	189	1120	1280	1210	1290	819
6	637	227	229	240	237	240	189	1150	1360	1150	1300	809
7	633	227	230	246	237	240	189	1210	1350	1090	1320	787
8	629	227	230	237	237	239	189	1230	1270	1120	1320	796
9	664	227	234	237	236	239	192	1250	1270	1140	1320	802
10	681	227	237	237	237	241	391	1260	1250	1180	1300	817
11	710	227	237	237	240	240	635	1260	1220	1210	1290	839
12	747	227	239	237	240	240	752	1260	1210	1220	1280	865
13	747	227	240	236	236	240	853	1260	1210	1210	1280	858
14	712	227	236	238	235	240	857	1260	1210	1210	1290	850
15	662	228	233	241	314	240	814	1260	1210	1190	1240	852
16	648	230	238	240	259	240	714	1290	1210	1170	1180	872
17	568	230	240	240	237	238	770	1310	1210	1180	1160	907
18	485	230	241	240	234	238	844	1310	1230	1220	1160	952
19	455	230	240	240	234	238	846	1180	1250	1220	1200	914
20	471	230	240	240	235	239	946	1120	1270	1240	1260	852
21	473	230	240	239	237	239	1090	1240	1320	1240	1260	663
22	465	230	240	240	236	239	981	1170	1310	1240	1250	361
23	345	230	241	240	236	239	990	1150	1230	1250	1200	139
24	261	230	241	240	237	239	1020	1160	1220	1280	1180	138
25	239	230	238	240	237	236	1070	1160	1210	1300	1130	138
26	187	230	237	240	237	241	1110	1180	1210	1260	1120	138
27	140	230	237	240	237	238	1080	1210	1220	1320	1090	137
28	141	229	237	239	236	237	1010	1200	1230	1350	1090	129
29	195	228	237	239	236	238	1020	1210	1170	1350	1090	117
30	228	230	237	240	---	237	1060	1210	1080	1350	1080	114
31	227	---	237	240	---	236	---	1230	---	1380	1030	---
TOTAL	15443	6854	7319	7417	6967	7405	20698	37430	37100	37700	38020	19234
MEAN	498	228	236	239	240	239	690	1207	1237	1216	1226	641
MAX	747	230	241	246	314	241	1110	1310	1360	1380	1380	971
MIN	140	227	229	236	234	236	188	1120	1080	1070	1030	114
AC-FT	30630	13590	14520	14710	13820	14690	41050	74240	73590	74780	75410	38150

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1925, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	222	396	1095	1290	2102	2644	4362	3719	1261	306	144
MAX	1522	531	1676	4409	3232	6995	5749	6768	8225	5867	958	302
(WY)	1905	1910	1910	1911	1909	1907	1907	1922	1906	1906	1906	1904
MIN	49.4	58.5	83.7	100	208	314	774	1478	212	61.3	29.9	20.5
(WY)	1914	1922	1906	1918	1913	1924	1912	1924	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1901 - 1925

ANNUAL MEAN	1443
HIGHEST ANNUAL MEAN	2937
LOWEST ANNUAL MEAN	348
HIGHEST DAILY MEAN	37200
LOWEST DAILY MEAN	1.0
ANNUAL SEVEN-DAY MINIMUM	20
INSTANTANEOUS PEAK FLOW	47700
INSTANTANEOUS PEAK STAGE	23.30
ANNUAL RUNOFF (AC-FT)	1045000
10 PERCENT EXCEEDS	4340
50 PERCENT EXCEEDS	488
90 PERCENT EXCEEDS	80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1964, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	223	57.8	267	402	694	1059	1892	3143	2737	1739	1400	884
MAX	638	385	4698	3869	3155	5375	3876	7249	7426	2384	1713	1313
(WY)	1945	1951	1951	1956	1938	1938	1958	1952	1938	1938	1963	1952
MIN	20.8	25.2	26.0	20.7	35.1	33.3	275	1049	1090	210	171	17.2
(WY)	1932	1932	1934	1940	1960	1948	1948	1955	1934	1931	1961	1931

SUMMARY STATISTICS

WATER YEARS 1927 - 1964

ANNUAL MEAN	1210
HIGHEST ANNUAL MEAN	2738
LOWEST ANNUAL MEAN	360
HIGHEST DAILY MEAN	24000
LOWEST DAILY MEAN	4.5
ANNUAL SEVEN-DAY MINIMUM	8.7
INSTANTANEOUS PEAK FLOW	46200
INSTANTANEOUS PEAK STAGE	22.60
ANNUAL RUNOFF (AC-FT)	876500
10 PERCENT EXCEEDS	2510
50 PERCENT EXCEEDS	1150
90 PERCENT EXCEEDS	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	787	410	563	646	853	1225	1747	2199	2266	1992	1704	1361
MAX	3143	1396	2451	2936	4247	4680	5278	5701	6975	5177	2761	3049
(WY)	1984	1970	1983	1984	1983	1983	1983	1982	1983	1983	1983	1983
MIN	76.4	118	120	133	113	139	394	528	813	922	636	83.1
(WY)	1978	1969	1969	1977	1977	1977	1991	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1968 - 1992

ANNUAL TOTAL	219859	241587	
ANNUAL MEAN	602	660	1315
HIGHEST ANNUAL MEAN			3779
LOWEST ANNUAL MEAN			363
HIGHEST DAILY MEAN	1530	Aug 3	7860
LOWEST DAILY MEAN	101	Jan 20	46
ANNUAL SEVEN-DAY MINIMUM	106	Jan 17	74
INSTANTANEOUS PEAK FLOW			9360
INSTANTANEOUS PEAK STAGE			12.40
ANNUAL RUNOFF (AC-FT)	436100	479200	952500
10 PERCENT EXCEEDS	1320	1260	2730
50 PERCENT EXCEEDS	497	472	1130
90 PERCENT EXCEEDS	116	229	173

11271290 MERCED RIVER AT SHAFFER BRIDGE, NEAR CRESSEY, CA

LOCATION.--Lat 37°27'15", long 120°36'28", in NW 1/4 SW 1/4 sec.36, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, near center of span on downstream side of county road bridge, 0.6 mi upstream from Dry Creek, and 4.0 mi northeast of Cressey.

DRAINAGE AREA.--1,117 mi².

PERIOD OF RECORD.--October 1965 to current year (low flow only).

GAGE.--Water-stage recorder. Datum of gage is 116.79 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Most water released from Lake McClure (station 11269500) is diverted upstream into the main canal of Merced Irrigation District. Flow past station consists of releases from diversion dam, irrigation return flow, and tributary inflow. No records computed above 200 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	---	---	---	196	---	---	115	112	52	46	79
2	53	---	---	---	196	---	---	111	61	57	55	69
3	49	---	---	---	194	---	---	132	64	63	56	59
4	45	---	---	---	193	---	---	146	55	94	30	57
5	45	---	---	---	190	---	174	109	50	103	36	61
6	57	---	---	---	194	---	173	97	47	90	45	69
7	64	---	---	---	198	---	168	110	74	60	53	68
8	61	---	---	---	195	---	159	123	68	52	64	63
9	58	---	---	---	195	---	157	110	51	57	81	53
10	56	---	---	---	---	---	144	143	52	54	97	56
11	47	---	---	---	---	---	154	149	44	59	73	63
12	57	---	---	---	---	---	178	160	70	71	55	62
13	85	---	---	---	---	---	172	128	91	84	52	63
14	78	---	---	---	---	---	157	124	94	74	57	70
15	71	---	---	---	---	---	134	129	103	84	74	61
16	74	---	---	---	---	---	118	147	100	63	91	57
17	89	---	---	---	---	---	99	154	102	34	83	60
18	93	---	---	---	---	---	114	171	102	29	57	63
19	102	---	---	200	---	---	129	172	101	55	52	65
20	114	---	---	---	---	---	126	172	100	71	57	76
21	117	---	---	---	---	---	134	150	113	49	69	64
22	111	---	---	199	---	---	142	134	124	41	70	49
23	100	---	---	197	---	---	112	122	123	45	67	41
24	100	---	---	198	---	---	109	111	97	40	63	45
25	119	---	---	198	---	---	107	112	65	40	60	58
26	148	---	---	198	---	---	110	110	46	60	54	60
27	160	---	---	198	---	---	103	119	49	82	57	76
28	128	---	---	198	---	---	87	121	60	68	53	76
29	126	---	---	197	---	---	96	99	93	72	56	50
30	154	---	---	194	---	---	117	101	75	77	74	40
31	---	---	---	196	---	---	---	121	---	57	84	---
TOTAL	---	---	---	---	---	---	---	4002	2386	1937	1921	1833
MEAN	---	---	---	---	---	---	---	129	79.5	62.5	62.0	61.1
MAX	---	---	---	---	---	---	---	172	124	103	97	79
MIN	---	---	---	---	---	---	---	97	44	29	30	40
AC-FT	---	---	---	---	---	---	---	7940	4730	3840	3810	3640

11271320 DRY CREEK NEAR SNELLING, CA

LOCATION.--Lat 37°33'18", long 120°27'44", in NE 1/4 SE 1/4 sec.30, T.4 S., R.14 E., Merced County, Hydrologic Unit 18040002, on left bank 650 ft downstream from Fields Road and 2.8 mi northwest of Snelling.

DRAINAGE AREA.--67.6 mi².

PERIOD OF RECORD.--October 1966 to September 1992 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Small weir upstream from gage regulates storage for stock pond and irrigation pumping.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,710 ft³/s, Jan. 21, 1969, gage height, 17.01 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	0730	*1,820	*9.80				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	1.1	3.5	.01	.00	.00	.00	.00
2	.00	.00	.00	.00	.02	.91	3.0	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.02	.67	2.4	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.02	.47	1.8	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.02	.54	1.4	.00	.00	.00	.00	.00
6	.00	.00	.00	9.6	.02	240	.95	.00	.00	.00	.00	.00
7	.00	.00	.00	6.2	.04	82	.81	.00	.00	.00	.00	.00
8	.00	.00	.00	10	.03	29	.65	.00	.00	.00	.00	.00
9	.00	.00	.00	4.1	.04	18	.52	.00	.00	.00	.00	.00
10	.00	.00	.00	1.2	.06	14	.45	.00	.00	.00	.00	.00
11	.00	.00	.00	.45	33	11	.41	.00	.00	.00	.00	.00
12	.00	.00	.00	.25	66	8.8	.41	.00	.00	.00	.00	.00
13	.00	.00	.00	.16	35	7.4	.38	.00	.00	.00	.00	.00
14	.00	.00	.00	.12	17	6.3	.30	.00	.00	.00	.00	.00
15	.00	.00	.00	.09	505	7.0	.25	.00	.00	.00	.00	.00
16	.00	.00	.00	.07	209	8.9	.22	.00	.00	.00	.00	.00
17	.00	.00	.00	.07	84	6.6	.20	.00	.00	.00	.00	.00
18	.00	.00	.00	.06	34	5.2	.17	.00	.00	.00	.00	.00
19	.00	.00	.00	.05	19	4.3	.14	.00	.00	.00	.00	.00
20	.00	.00	.00	.04	36	4.0	.13	.00	.00	.00	.00	.00
21	.00	.00	.00	.04	30	3.9	.12	.00	.00	.00	.00	.00
22	.00	.00	.00	.04	16	30	.10	.00	.00	.00	.00	.00
23	.00	.00	.00	.04	12	42	.07	.00	.00	.00	.00	.00
24	.00	.00	.00	.04	8.5	18	.06	.00	.00	.00	.00	.00
25	.00	.00	.00	.04	6.3	12	.05	.00	.00	.00	.00	.00
26	.00	.00	.00	.03	4.5	11	.05	.00	.00	.00	.00	.00
27	.00	.00	.00	.03	3.0	14	.03	.00	.00	.00	.00	.00
28	.00	.00	.00	.03	2.0	8.2	.02	.00	.00	.00	.00	.00
29	.00	.00	.00	.07	1.4	5.7	.02	.00	.00	.00	.00	.00
30	.00	.00	.00	.06	---	4.6	.01	.00	.00	.00	.00	.00
31	.00	---	.00	.04	---	4.0	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	32.92	1122.00	609.59	18.62	0.01	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	1.06	38.7	19.7	.62	.000	.000	.000	.000	.000
MAX	.00	.00	.00	10	505	240	3.5	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.02	.47	.01	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	65	2230	1210	37	.02	.00	.00	.00	.00

11271320 DRY CREEK NEAR SNELLING, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.076	5.12	15.0	56.3	69.8	58.9	17.5	.67	.090	.10	.071	.061
MAX	.89	70.4	134	351	238	315	244	6.76	1.43	2.22	1.75	.67
(WY)	1968	1984	1984	1969	1969	1983	1967	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1967	1967	1977	1976	1976	1977	1971	1971	1968	1968	1968	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1967 - 1992
ANNUAL TOTAL	2808.24	1783.14	
ANNUAL MEAN	7.69	4.87	18.4
HIGHEST ANNUAL MEAN			72.9
LOWEST ANNUAL MEAN			.034
HIGHEST DAILY MEAN	549 Mar 19	505 Feb 15	2770 Jan 21 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1966
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1966
INSTANTANEOUS PEAK FLOW		1820 Feb 15	6710 Jan 21 1969
INSTANTANEOUS PEAK STAGE		9.80 Feb 15	17.01 Jan 21 1969
ANNUAL RUNOFF (AC-FT)	5570	3540	13330
10 PERCENT EXCEEDS	1.0	6.2	15
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11272500 MERCED RIVER NEAR STEVINSON, CA

LOCATION.--Lat 37°22'15", long 120°55'46", in SW 1/4 NE 1/4 sec.36, T.6 S., R.9 E., Merced County, Hydrologic Unit 18040002, on right bank 4.4 mi upstream from mouth and 5.3 mi northwest of Stevinson.

DRAINAGE AREA.--1,273 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. October 1940 to Aug. 15, 1955, at datum 55.74 ft higher; Aug. 16, 1955, to Sept. 30, 1959, at datum 54.74 ft higher.

REMARKS.--Records fair except those for summer months, which are poor. Practically entire flow is diverted upstream from station for irrigation of 120,000 acres during low runoff years. Some return flow enters upstream from station. Flow regulated by three reservoirs, combined capacity, 1,035,000 acre-ft, the largest of which is Lake McClure (station 11269500).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s, Dec. 5, 1950, elevation, 73.79 ft, present datum; no flow July 19 to Aug. 21, 1961, result of temporary dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 846 ft³/s, Feb. 16, elevation, 60.17 ft; minimum daily, 11 ft³/s, Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	205	211	233	211	258	239	78	75	35	27	68
2	49	207	214	228	210	259	231	100	61	37	19	63
3	37	206	205	228	207	257	228	105	51	37	27	59
4	37	210	209	225	207	253	227	126	34	31	32	71
5	44	209	216	236	207	256	226	116	39	30	23	57
6	42	208	210	244	207	274	206	106	40	42	17	53
7	28	211	225	257	210	391	190	93	25	50	11	53
8	28	204	230	251	210	406	183	83	44	56	17	43
9	28	203	233	253	211	334	172	77	61	46	23	34
10	37	216	228	243	216	302	166	95	60	36	22	29
11	29	211	225	234	227	284	161	109	43	30	30	27
12	33	200	222	227	270	275	157	101	43	28	32	26
13	30	199	218	226	433	264	191	90	33	26	23	22
14	23	197	216	224	489	250	177	87	41	28	27	21
15	40	195	230	223	379	249	171	87	46	30	26	23
16	54	194	221	224	673	251	172	71	53	35	36	32
17	59	198	211	227	645	246	147	71	77	25	45	41
18	56	206	208	225	532	244	170	74	83	22	40	55
19	72	206	209	225	437	244	145	76	71	30	49	50
20	60	206	214	223	381	244	155	98	95	22	41	37
21	51	209	219	221	349	241	141	100	76	38	37	40
22	54	207	223	221	338	247	134	105	98	31	38	47
23	52	205	223	216	322	254	114	102	117	27	62	43
24	65	205	226	210	305	268	114	111	99	32	82	37
25	90	206	228	213	296	274	95	107	83	33	60	31
26	123	206	228	216	288	e270	87	96	75	41	51	47
27	151	208	229	216	288	e268	82	88	56	31	47	26
28	144	209	231	215	281	e266	79	82	45	37	62	20
29	153	208	238	214	263	e264	76	63	39	33	58	31
30	194	208	239	212	---	e262	80	65	28	23	59	60
31	210	---	240	212	---	e260	---	66	---	38	61	---
TOTAL	2151	6162	6879	7022	9292	8415	4716	2828	1791	1040	1184	1246
MEAN	69.4	205	222	227	320	271	157	91.2	59.7	33.5	38.2	41.5
MAX	210	216	240	257	673	406	239	126	117	56	82	71
MIN	23	194	205	210	207	241	76	63	25	22	11	20
AC-FT	4270	12220	13640	13930	18430	16690	9350	5610	3550	2060	2350	2470

e Estimated.

SAN JOAQUIN RIVER BASIN

11272500 MERCED RIVER NEAR STEVINSON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	354	300	532	727	867	1035	1012	1277	1068	356	216	298
MAX	2739	1314	4718	4568	4695	5478	4949	5792	4545	3593	1192	1716
(WY)	1984	1970	1951	1956	1983	1983	1983	1952	1983	1983	1983	1983
MIN	11.4	69.9	105	109	69.2	94.4	59.7	65.1	19.2	6.18	8.91	11.3
(WY)	1978	1962	1962	1962	1991	1977	1961	1977	1977	1991	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1941 - 1992	
ANNUAL TOTAL	42123.1		52726		669	
ANNUAL MEAN	115		144		3155	
HIGHEST ANNUAL MEAN					78.8	
LOWEST ANNUAL MEAN					12000	
HIGHEST DAILY MEAN	873	Mar 26	673	Feb 16	Dec 10 1950	
LOWEST DAILY MEAN	1.1	Jul 18	11	Aug 7	Jul 19 1961	
ANNUAL SEVEN-DAY MINIMUM	1.9	Jul 16	20	Aug 5	Jul 19 1961	
INSTANTANEOUS PEAK FLOW			846	Feb 16	Dec 5 1950	
INSTANTANEOUS PEAK STAGE			60.17	Feb 16	Dec 5 1950	
ANNUAL RUNOFF (AC-FT)	83550		104600		484500	
10 PERCENT EXCEEDS	221		257		1790	
50 PERCENT EXCEEDS	92		115		227	
90 PERCENT EXCEEDS	9.0		30		99	

11272500 MERCED RIVER NEAR STEVINSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1989 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

SPECIFIC CONDUCTANCE: Water year 1989 to current year.

WATER TEMPERATURE: Water year 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

WATER TEMPERATURES: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1985.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Specific conductance and water temperature values are affected by irrigation return flow. The specific conductance and water temperature gage was relocated 3 mi downstream to an old bridge near George J. Hatfield State Park and operation began Apr. 15, 1992.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,270 microsiemens, July 19, 1991; minimum recorded, 66 microsiemens, Apr. 24, 1991.

WATER TEMPERATURE: Maximum recorded, 34.0°C, July 17, 1991; minimum recorded, 3.0°C, several days in December 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 974 microsiemens, Oct. 22; minimum recorded, 70 microsiemens, Nov. 29.

WATER TEMPERATURE: Maximum recorded, 32.5°C, July 14, 15, Aug. 12; minimum recorded, 5.5°C, Jan. 24, 25.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	436	189	671	293	---	---	---	---	97	93	111	95
2	470	194	703	291	---	---	---	---	94	92	125	108
3	627	267	709	263	---	---	---	---	93	88	131	98
4	644	256	693	226	---	---	---	---	92	86	147	120
5	661	232	540	220	---	---	---	---	90	85	166	141
6	375	176	723	175	---	---	---	---	89	84	168	165
7	723	291	742	347	---	---	---	---	88	85	343	168
8	784	360	504	231	---	---	---	---	89	84	334	183
9	820	256	361	187	---	---	---	---	87	82	185	169
10	876	243	226	179	---	---	---	---	84	80	176	155
11	876	328	242	184	---	---	---	---	82	80	167	142
12	957	566	244	172	---	---	---	---	84	75	170	145
13	771	362	232	169	---	---	---	---	76	72	159	126
14	818	367	248	183	---	---	---	---	81	75	161	128
15	669	179	404	180	---	---	---	---	82	79	218	158
16	579	181	428	208	---	---	112	110	125	82	221	199
17	470	168	745	221	---	---	112	111	125	121	214	200
18	353	171	672	533	---	---	114	111	122	114	235	201
19	264	171	634	352	---	---	115	113	114	105	235	226
20	446	192	468	165	---	---	116	113	106	103	244	222
21	939	298	690	161	---	---	115	107	104	97	243	218
22	974	321	696	301	---	---	107	105	108	98	246	229
23	547	390	476	306	---	---	106	104	108	87	252	246
24	834	269	395	300	---	---	106	104	98	87	262	251
25	387	209	361	129	---	---	106	101	99	87	268	253
26	254	151	248	163	---	---	103	101	99	89	268	124
27	329	128	315	123	---	---	102	100	106	91	125	121
28	526	217	315	92	---	---	101	98	106	91	122	120
29	440	72	315	70	---	---	99	97	104	90	123	120
30	277	92	520	80	---	---	99	96	---	---	123	121
31	293	86	---	---	---	---	98	95	---	---	122	120
MONTH	974	72	745	70	---	---	---	---	125	72	343	95

SAN JOAQUIN RIVER BASIN

11272500 MERCED RIVER NEAR STEVINSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	105	101	365	279	408	231	707	414	467	349	366	203
2	---	---	332	209	280	235	568	444	532	463	272	180
3	---	---	210	181	287	131	765	458	539	447	266	205
4	---	---	283	189	572	177	508	453	541	433	266	193
5	---	---	207	175	731	520	554	357	669	487	337	255
6	---	---	249	186	569	476	357	224	660	522	607	254
7	---	---	240	194	724	514	369	224	910	503	385	243
8	---	---	299	229	660	412	441	291	801	609	467	336
9	---	---	314	236	498	289	463	433	611	420	450	358
10	---	---	316	203	466	286	521	459	633	519	561	407
11	---	---	258	169	592	425	654	445	527	366	533	422
12	---	---	200	168	638	398	701	453	388	277	481	405
13	---	---	285	197	682	459	665	457	535	368	624	388
14	---	---	265	244	589	452	498	416	666	505	699	508
15	---	---	273	234	566	441	485	292	614	528	---	---
16	---	---	432	273	441	262	569	330	596	391	---	---
17	---	---	378	266	364	188	702	569	432	338	---	---
18	---	---	333	238	307	201	693	612	433	303	---	---
19	---	---	289	205	294	232	670	555	377	277	---	---
20	---	---	249	170	307	265	735	555	417	328	---	---
21	---	---	216	153	354	257	695	509	393	346	---	---
22	---	---	234	155	344	150	593	328	421	356	---	---
23	---	---	242	185	265	176	505	408	369	236	---	---
24	---	---	265	187	248	191	560	409	255	230	---	---
25	340	268	249	199	378	230	563	415	281	230	---	---
26	331	298	325	203	346	240	500	344	311	281	---	---
27	344	280	328	230	477	317	454	331	326	282	---	---
28	346	280	---	---	532	424	544	427	317	282	---	---
29	445	325	---	---	507	409	459	390	315	271	---	---
30	485	326	353	222	685	500	530	384	348	271	---	---
31	---	---	314	181	---	---	560	390	326	269	---	---
MONTH	---	---	---	---	731	131	765	224	910	230	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.0	22.5	17.0	14.0	10.0	10.0	---	---	11.0	9.0	16.0	14.5
2	24.5	23.0	17.0	14.5	10.0	9.5	---	---	11.0	9.0	16.0	15.0
3	24.5	22.5	16.5	15.0	10.0	10.0	---	---	10.5	8.5	17.0	15.0
4	25.0	22.5	16.5	15.5	10.0	10.0	---	---	10.5	8.5	16.5	14.5
5	24.0	22.5	16.5	16.0	10.0	9.5	---	---	10.5	8.5	16.0	14.5
6	23.5	---	16.5	16.0	10.0	9.5	---	---	10.5	10.0	16.0	14.0
7	23.5	---	16.5	16.0	9.5	8.5	---	---	11.5	10.0	15.5	14.5
8	---	---	17.0	16.5	9.5	9.5	---	---	12.5	11.0	15.5	14.5
9	23.5	---	17.0	16.5	---	---	---	---	12.0	11.5	16.0	14.5
10	23.0	21.0	17.0	16.5	---	---	---	---	12.5	11.0	16.0	14.5
11	23.0	21.0	16.5	16.0	---	---	---	---	13.5	11.5	16.5	15.0
12	23.0	21.0	16.5	16.0	---	---	---	---	13.0	12.0	17.0	15.5
13	23.0	20.5	16.5	16.0	---	---	---	---	12.5	11.0	17.5	16.0
14	23.0	19.5	16.0	15.5	---	---	---	---	12.0	11.5	17.0	16.0
15	22.5	20.5	15.5	14.5	---	---	---	---	12.5	11.0	16.5	15.0
16	22.5	18.5	14.5	14.0	---	---	7.0	6.5	11.5	11.0	18.0	16.0
17	22.0	18.0	14.0	13.5	---	---	8.0	7.0	11.5	10.5	18.0	15.5
18	22.5	19.0	14.5	13.5	---	---	8.0	7.0	12.0	10.5	18.0	15.0
19	21.5	17.5	14.5	14.0	---	---	7.5	7.0	12.5	11.5	17.5	15.5
20	21.5	---	14.0	13.5	---	---	7.5	6.5	13.5	12.5	17.5	16.0
21	22.0	16.0	13.5	13.5	---	---	6.5	6.5	13.5	13.0	18.0	16.0
22	20.5	14.5	13.5	13.0	---	---	6.5	6.0	14.5	13.0	18.5	16.5
23	19.5	14.0	13.0	12.5	---	---	6.0	6.0	14.5	13.0	19.0	16.0
24	19.0	15.5	13.0	12.5	---	---	6.0	5.5	14.5	13.0	19.0	16.5
25	18.5	17.0	12.5	12.5	---	---	7.5	5.5	15.0	13.0	19.5	17.0
26	18.0	17.0	12.5	12.0	---	---	8.0	7.0	15.5	13.5	20.5	17.5
27	17.0	15.5	12.0	12.0	---	---	7.5	7.0	16.0	14.0	20.5	17.5
28	16.5	14.0	12.0	11.0	---	---	9.0	7.0	16.0	14.5	---	---
29	16.5	14.5	11.0	10.5	---	---	9.5	8.0	16.0	14.5	---	---
30	15.5	14.0	10.5	10.0	---	---	8.5	8.0	---	---	---	---
31	15.5	13.5	---	---	---	---	9.5	8.0	---	---	---	---
MONTH	---	---	17.0	10.0	---	---	---	---	16.0	8.5	---	---

11272500 MERCED RIVER NEAR STEVINSON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

SAN JOAQUIN RIVER BASIN

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA

LOCATION.--Lat 37°21'02", long 120°58'34", in NW 1/4 SW 1/4 sec.3, T.7 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 600 ft downstream from bridge on Hills Ferry Road, 650 ft downstream from Merced River, and 3.5 mi northeast of Newman.

DRAINAGE AREA.--9,520 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1912 to current year. Water years 1938 to 1943 include flows through Merced River Slough.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Mar. 3, 1931, gage at various sites within 240 ft of bridge. Mar. 3, 1931, to Sept. 30, 1959, water-stage recorder within 300 ft of bridge, at datum 47.31 ft higher. Oct. 1, 1959, to Aug. 9, 1960, water-stage recorder at site 70 ft upstream, at present datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and imported water; low flows consist mainly of return water from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (river only), 30,700 ft³/s, Mar. 4, 1983, elevation, 65.78 ft; minimum daily, 15 ft³/s, Aug. 9, 10, 1924. Maximum discharge (including flow in Merced River Slough in water years 1938-43), 33,000 ft³/s, Mar. 7, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 2, 1868, reached a stage of 69.0 ft from floodmarks; flood of February 1886 reached a stage of 67.1 ft from floodmarks; and flood of 1911 reached a stage of 66.3 ft from floodmarks. All stages referred to current datum. Discharges unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,330 ft³/s, Feb. 18, elevation, 53.32 ft; minimum daily, 82 ft³/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	359	331	370	381	671	743	235	169	129	109	135
2	113	373	338	364	384	665	731	256	158	120	104	128
3	104	337	340	360	374	659	700	262	146	128	118	122
4	98	313	331	357	368	650	664	273	132	126	129	123
5	95	306	316	371	378	638	629	261	118	115	138	110
6	91	302	303	398	378	669	590	241	126	122	124	108
7	90	325	311	447	378	763	548	217	121	127	106	105
8	85	329	317	485	381	859	529	199	132	124	102	106
9	82	325	330	512	385	854	514	204	130	111	101	103
10	86	320	337	518	399	792	490	215	132	97	112	99
11	86	315	332	497	429	716	464	215	128	91	122	102
12	87	301	324	458	507	657	445	213	130	93	123	98
13	91	297	315	428	786	640	474	199	128	95	117	101
14	99	301	305	422	1080	640	477	183	138	124	110	100
15	101	298	312	421	1270	656	452	185	132	131	105	104
16	101	289	323	431	1550	684	421	167	140	128	104	103
17	110	306	318	421	1980	718	384	167	153	122	110	100
18	106	315	318	410	2310	739	410	173	150	133	119	107
19	104	313	332	400	2150	710	382	191	143	124	115	112
20	108	313	335	395	1730	669	395	197	164	115	109	112
21	101	323	333	388	1350	669	386	213	162	108	113	109
22	103	323	337	384	1140	703	351	211	178	122	121	115
23	105	325	340	380	1010	752	294	192	196	107	131	109
24	105	327	343	371	915	802	280	193	177	107	160	101
25	117	325	345	377	838	853	281	194	162	125	189	92
26	135	324	344	389	778	875	263	181	163	113	165	102
27	164	317	340	386	748	858	239	178	143	109	130	93
28	176	329	331	388	718	832	244	159	134	109	123	92
29	209	333	340	389	690	803	249	140	130	115	124	102
30	250	335	353	387	---	779	241	147	126	110	125	100
31	313	---	366	384	---	754	---	157	---	108	127	---
TOTAL	3737	9598	10240	12688	25785	22729	13270	6218	4341	3588	3785	3193
MEAN	121	320	330	409	889	733	442	201	145	116	122	106
MAX	313	373	366	518	2310	875	743	273	196	133	189	135
MIN	82	289	303	357	368	638	239	140	118	91	101	92
AC-FT	7410	19040	20310	25170	51140	45080	26320	12330	8610	7120	7510	6330

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1937, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	290	362	796	1857	3623	3223	3395	5010	5490	1888	328	209
MAX	1422	1233	2907	8356	11840	13000	11780	14210	15700	8803	1370	442
(WY)	1919	1928	1923	1914	1916	1916	1916	1916	1922	1914	1914	1936
MIN	55.0	85.5	136	228	278	233	122	115	92.5	29.1	21.3	26.7
(WY)	1914	1932	1913	1918	1913	1913	1931	1931	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1912 - 1937

ANNUAL MEAN	2208
HIGHEST ANNUAL MEAN	6585
LOWEST ANNUAL MEAN	196
HIGHEST DAILY MEAN	20700
LOWEST DAILY MEAN	15
ANNUAL SEVEN-DAY MINIMUM	17
INSTANTANEOUS PEAK FLOW	20700
INSTANTANEOUS PEAK STAGE	65.30
ANNUAL RUNOFF (AC-FT)	1599000
10 PERCENT EXCEEDS	7040
50 PERCENT EXCEEDS	590
90 PERCENT EXCEEDS	112

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1943, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	447	494	1558	3378	7512	10070	7308	8025	9334	3383	686	482
MAX	708	1065	2832	5111	14350	23500	11480	15310	21010	8625	1745	768
(WY)	1939	1939	1938	1942	1938	1938	1938	1938	1938	1938	1938	1938
MIN	226	190	423	1967	2442	679	959	627	333	234	225	278
(WY)	1940	1940	1940	1939	1939	1939	1939	1939	1939	1939	1939	1939

SUMMARY STATISTICS

WATER YEARS 1938 - 1943

ANNUAL MEAN	4366
HIGHEST ANNUAL MEAN	8643
LOWEST ANNUAL MEAN	904
HIGHEST DAILY MEAN	33000
LOWEST DAILY MEAN	170
ANNUAL SEVEN-DAY MINIMUM	171
INSTANTANEOUS PEAK FLOW	33000
INSTANTANEOUS PEAK STAGE	65.81
ANNUAL RUNOFF (AC-FT)	3163000
10 PERCENT EXCEEDS	11900
50 PERCENT EXCEEDS	1580
90 PERCENT EXCEEDS	291

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	657	656	1219	2049	2802	2912	2799	2639	2116	830	475	602
MAX	5831	4039	10880	12490	21100	24170	18860	14050	15280	11320	2683	3786
(WY)	1984	1984	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983
MIN	25.2	122	202	230	180	212	159	141	48.7	45.9	80.4	41.2
(WY)	1978	1978	1950	1991	1991	1948	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1944 - 1992

ANNUAL TOTAL	107678	119172	
ANNUAL MEAN	295	326	1639
HIGHEST ANNUAL MEAN			11620
LOWEST ANNUAL MEAN			200
HIGHEST DAILY MEAN	2010	Mar 28	2310
LOWEST DAILY MEAN	82	Oct 9	82
ANNUAL SEVEN-DAY MINIMUM	87	Oct 6	87
INSTANTANEOUS PEAK FLOW			2330
INSTANTANEOUS PEAK STAGE			53.32
ANNUAL RUNOFF (AC-FT)	213600	236400	1187000
10 PERCENT EXCEEDS	513	701	3720
50 PERCENT EXCEEDS	200	253	553
90 PERCENT EXCEEDS	129	104	209

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1989, July 1992 to September 1992. Data for the period July 1987 to September 1988 are available in the files of the U.S. Geological Survey.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Water year 1989, July 1992 to September 1992.

WATER TEMPERATURE: Water year 1989, July 1992 to September 1992.

INSTRUMENTATION.--Water-quality monitor October 1988 to September 1989 and since July 1992.

REMARKS.--The water-quality monitor for this site is located 1.2 mi downstream from the gage. Specific conductance and water temperature values are affected by an irrigation return flow canal upstream or by a pump located by monitor electrodes.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,900 microsiemens, July 13, 1992; minimum recorded, 1,000 microsiemens, Oct. 22, 1988.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 14, 1992; minimum recorded, 5.5°C, several days during December and January 1989.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,900 microsiemens, July 13; minimum recorded, 1,200 microsiemens, Aug. 18.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 14; minimum recorded, 19.0°C, Sept. 25.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	2020	1730	1570	1440
2	---	---	---	---	---	---	---	---	2080	1940	1470	1340
3	---	---	---	---	---	---	---	---	1950	1740	1540	1450
4	---	---	---	---	---	---	---	---	1750	1660	1550	1370
5	---	---	---	---	---	---	---	---	1780	1620	1630	1550
6	---	---	---	---	---	---	---	---	2000	1750	1750	1600
7	---	---	---	---	---	---	---	---	2220	2000	1730	1610
8	---	---	---	---	---	---	---	---	2220	2090	2030	1730
9	---	---	---	---	---	---	2070	1830	2190	2050	1970	1740
10	---	---	---	---	---	---	2450	2030	2160	1710	2050	1880
11	---	---	---	---	---	---	2510	2220	1710	1530	2130	1920
12	---	---	---	---	---	---	2570	2180	1640	1500	2180	1950
13	---	---	---	---	---	---	2900	2570	1780	1630	2230	1900
14	---	---	---	---	---	---	2580	1900	1920	1780	1960	1790
15	---	---	---	---	---	---	1970	1720	1950	1520	1870	1670
16	---	---	---	---	---	---	1980	1770	1990	1530	1670	1540
17	---	---	---	---	---	---	2260	1950	1590	1460	1580	1520
18	---	---	---	---	---	---	2290	2050	1570	1200	1830	1560
19	---	---	---	---	---	---	2200	2100	1710	1530	1630	1490
20	---	---	---	---	---	---	2180	1980	1710	1520	1690	1560
21	---	---	---	---	---	---	2140	1920	1520	1380	1740	1600
22	---	---	---	---	---	---	2120	1910	1930	1510	1660	1490
23	---	---	---	---	---	---	2220	2110	1960	1860	1510	1380
24	---	---	---	---	---	---	2220	1830	1920	1530	1620	1510
25	---	---	---	---	---	---	1830	1550	1530	1390	1790	1560
26	---	---	---	---	---	---	1830	1660	1520	1450	1760	1650
27	---	---	---	---	---	---	1960	1680	1710	1520	2000	1660
28	---	---	---	---	---	---	2090	1840	1740	1550	2120	1830
29	---	---	---	---	---	---	1910	1800	1600	1500	1930	1400
30	---	---	---	---	---	---	1960	1770	1600	1430	1520	1300
31	---	---	---	---	---	---	1960	1760	1620	1490	---	---
MONTH	---	---	---	---	---	---	---	---	2220	1200	2230	1300

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	29.0	22.5	27.0	22.5
2	---	---	---	---	---	---	---	---	29.5	23.5	27.0	23.0
3	---	---	---	---	---	---	---	---	28.5	23.0	26.0	22.0
4	---	---	---	---	---	---	---	---	28.5	22.5	26.5	21.0
5	---	---	---	---	---	---	---	---	28.5	22.5	27.5	21.5
6	---	---	---	---	---	---	---	---	29.0	22.5	27.0	22.5
7	---	---	---	---	---	---	---	---	29.0	23.0	26.0	21.0
8	---	---	---	---	---	---	---	---	29.5	23.5	27.5	21.0
9	---	---	---	---	---	---	29.0	24.0	30.0	23.5	28.0	22.0
10	---	---	---	---	---	---	30.0	24.5	30.5	24.5	27.0	22.0
11	---	---	---	---	---	---	29.0	25.5	30.5	25.0	27.0	22.0
12	---	---	---	---	---	---	28.5	24.5	31.0	25.5	26.5	21.0
13	---	---	---	---	---	---	31.5	25.0	30.5	24.5	25.0	21.0
14	---	---	---	---	---	---	32.0	26.0	29.0	25.0	25.5	20.5
15	---	---	---	---	---	---	31.5	26.0	30.0	25.0	24.5	20.0
16	---	---	---	---	---	---	30.0	25.0	31.0	25.0	25.5	20.5
17	---	---	---	---	---	---	31.0	24.5	30.0	25.5	26.0	21.0
18	---	---	---	---	---	---	30.0	24.0	30.5	24.5	25.5	21.0
19	---	---	---	---	---	---	29.5	23.5	31.0	24.5	26.0	22.0
20	---	---	---	---	---	---	29.0	23.0	31.5	25.0	25.5	22.0
21	---	---	---	---	---	---	29.0	22.5	28.5	24.0	26.5	22.0
22	---	---	---	---	---	---	28.5	22.5	25.0	21.0	26.5	23.0
23	---	---	---	---	---	---	28.0	22.0	25.0	20.5	26.5	22.5
24	---	---	---	---	---	---	29.5	22.5	26.5	21.5	25.5	22.0
25	---	---	---	---	---	---	29.5	23.5	26.0	22.0	23.5	19.0
26	---	---	---	---	---	---	29.0	23.0	26.5	22.5	24.0	19.5
27	---	---	---	---	---	---	29.0	23.5	27.5	23.0	25.0	21.0
28	---	---	---	---	---	---	30.0	24.0	26.5	23.5	27.5	21.5
29	---	---	---	---	---	---	29.5	23.5	26.5	22.5	28.0	22.5
30	---	---	---	---	---	---	29.0	22.5	26.0	22.5	28.5	22.5
31	---	---	---	---	---	---	28.5	22.0	26.0	22.0	---	---
MONTH	---	---	---	---	---	---	---	---	31.5	20.5	28.5	19.0

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA

LOCATION.--Lat 37°18'56", long 121°07'27", in NE 1/4 NE 1/4 sec.19, T.7 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 20 ft downstream from bridge at California Aqueduct siphon, 3 mi downstream from Oso Creek, and 5.5 mi west of Newman.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--January 1932 to current year.

REVISED RECORDS.--WSP 1445: 1932(M), 1938(P), 1940-41(M), 1945, 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 216.01 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, at site 1,080 ft downstream at datum 24.14 ft lower. Oct. 1, 1958, to Aug. 13, 1969, at site 960 ft downstream at datum 27.14 ft lower. Aug. 13, 1969, to Feb. 6, 1984, at site 240 ft upstream, present datum.

REMARKS.--Records good except for estimated daily discharges and discharges below 1 ft³/s which are fair. No storage or diversion upstream from station except for minor stock ponds.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s, Apr. 2, 1958, gage height, 6.57 ft, site and datum then in use, from rating curve extended above 5,000 ft³/s; no flow for all or parts of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	1345	359	4.84	Feb. 15	0600	*888	*5.91

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4.4	4.3	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	5.5	3.7	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	5.4	3.0	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	3.9	2.3	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	4.4	1.7	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	7.6	1.4	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	12	1.3	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	9.0	1.3	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	6.8	1.2	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	5.7	1.0	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	4.9	.96	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	e132	4.0	.93	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	67	3.4	1.1	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	9.2	2.8	.93	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	368	2.6	.76	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	195	2.5	.66	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	75	2.2	.52	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	20	2.0	.32	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	9.6	1.7	.08	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	19	2.0	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	27	3.3	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	15	3.9	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	8.4	23	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	5.3	29	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	4.2	18	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	3.7	18	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	3.6	14	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	3.7	9.1	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	4.0	6.6	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	5.2	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	4.6	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	969.70	227.5	27.46	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	33.4	7.34	.92	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	368	29	4.3	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1920	451	54	.00	.00	.00	.00	.00

e Estimated.

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	1.04	11.5	37.6	74.2	44.6	22.7	3.06	.64	.12	.001	.000
MAX	.000	31.0	181	264	482	335	362	46.9	15.1	5.32	.045	.000
(WY)	1933	1951	1956	1983	1980	1983	1958	1983	1941	1941	1958	1932
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1933	1933	1933	1936	1935	1933	1933	1933	1932	1932	1932	1932

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1932 - 1992	
ANNUAL TOTAL	1804.42		1224.66			
ANNUAL MEAN	4.94		3.35		16.0	
HIGHEST ANNUAL MEAN					89.4	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	445	Mar 25	368	Feb 15	3170	Dec 23 1955
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	May 9 1932
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	May 9 1932
INSTANTANEOUS PEAK FLOW			888	Feb 15	10200	Apr 2 1958
INSTANTANEOUS PEAK STAGE			5.91	Feb 15	6.57	Apr 2 1958
ANNUAL RUNOFF (AC-FT)	3580		2430		11590	
10 PERCENT EXCEEDS	.29		3.9		17	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA

LOCATION.--Lat 37°24'49", long 121°00'54", in Orestimba Grant, Stanislaus County, Hydrologic Unit 18040002, on right bank at downstream side of River Road bridge, 0.8 mi upstream of mouth, and 3.4 mi northeast of Crows Landing.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1992 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges which are poor. Flows during summer and fall consist mainly of return water from irrigated areas.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68 ft³/s, May 12, 13, gage height, 1.97 ft; minimum daily, 0.50 ft³/s, Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	10	3.7	e6.3	16	12
2	---	---	---	---	---	---	---	9.2	2.8	e6.0	14	3.6
3	---	---	---	---	---	---	---	15	3.4	e13	13	1.3
4	---	---	---	---	---	---	---	14	3.6	e21	9.0	1.4
5	---	---	---	---	---	---	---	29	1.8	e31	13	1.4
6	---	---	---	---	---	---	---	15	1.4	e43	22	4.9
7	---	---	---	---	---	---	---	7.2	3.5	e25	16	26
8	---	---	---	---	---	---	---	6.6	4.8	e11	13	4.3
9	---	---	---	---	---	---	---	5.9	1.1	e11	19	1.8
10	---	---	---	---	---	---	---	9.0	3.8	e11	36	3.0
11	---	---	---	---	---	---	---	16	4.9	e13	18	1.0
12	---	---	---	---	---	---	---	31	16	e15	14	.82
13	---	---	---	---	---	---	---	38	31	e17	8.6	1.5
14	---	---	---	---	---	---	---	26	18	e19	14	4.6
15	---	---	---	---	---	---	3.6	13	7.9	e14	7.1	8.0
16	---	---	---	---	---	---	3.8	31	8.3	e12	3.7	4.5
17	---	---	---	---	---	---	5.6	9.6	e7.4	e10	3.7	6.5
18	---	---	---	---	---	---	13	5.3	e7.2	e10	6.6	1.2
19	---	---	---	---	---	---	7.1	9.7	e7.6	e11	6.2	.89
20	---	---	---	---	---	---	19	13	e7.6	e11	5.3	1.0
21	---	---	---	---	---	---	12	27	e7.9	e11	6.4	.95
22	---	---	---	---	---	---	8.4	5.9	e7.9	e20	5.4	.67
23	---	---	---	---	---	---	14	5.8	e8.3	e14	6.3	2.1
24	---	---	---	---	---	---	16	2.3	e8.3	e9.4	14	1.1
25	---	---	---	---	---	---	26	1.9	e7.9	e8.3	4.3	.50
26	---	---	---	---	---	---	11	2.9	e7.6	e6.9	8.3	2.8
27	---	---	---	---	---	---	11	4.3	e7.2	e6.0	11	1.7
28	---	---	---	---	---	---	11	5.0	e6.9	e11	3.2	14
29	---	---	---	---	---	---	13	2.6	e6.9	13	1.2	4.4
30	---	---	---	---	---	---	10	6.2	e6.6	14	3.7	3.3
31	---	---	---	---	---	---	---	2.4	---	14	25	---
TOTAL	---	---	---	---	---	---	---	379.8	221.3	437.9	347.0	121.23
MEAN	---	---	---	---	---	---	---	12.3	7.38	14.1	11.2	4.04
MAX	---	---	---	---	---	---	---	38	31	43	36	26
MIN	---	---	---	---	---	---	---	1.9	1.1	6.0	1.2	.50
AC-FT	---	---	---	---	---	---	---	753	439	869	688	240

e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1992.

CHEMICAL DATA: April to September 1992.

SEDIMENT DATA: April to September 1992.

SPECIFIC CONDUCTANCE: April to September 1992.

WATER TEMPERATURE: April to September 1992.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April to September 1992.

WATER TEMPERATURE: April to September 1992.

INSTRUMENTATION.--Water-quality monitor since April 1992.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Specific conductance, water temperature and chemical values are affected by irrigation return flow from a drainage pipe located 30 ft upstream from gage.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,890 microsiemens, Sept. 13; minimum recorded 830 microsiemens, May 6.

WATER TEMPERATURE: Maximum recorded, 30.0°C, June 3, July 27; minimum recorded, 12.5°C, Apr. 23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR											
15...	1055	3.4	987	8.3	15.5	764	9.0	90	340	73	38
17...	1030	8.6	1260	8.4	19.0	764	8.7	94	450	100	49
20...	1120	14	1250	8.2	17.0	771	9.1	93	420	92	47
22...	1003	11	1190	8.2	15.5	761	9.5	96	400	87	44
24...	1000	15	1060	8.2	15.5	761	9.1	92	300	65	33
24...	1030	16	1060	8.2	15.5	760	9.1	92	300	66	33
27...	0950	11	1070	8.3	15.0	763	9.6	95	330	71	37
29...	0945	15	1080	8.3	16.5	758	9.0	93	340	72	39
MAY											
01...	0900	14	1090	8.1	16.0	757	9.3	95	340	73	38
04...	1000	19	955	8.2	14.5	756	9.1	90	260	56	28
06...	0945	14	860	8.0	20.5	754	8.0	90	200	42	23
08...	0945	9.0	1100	8.1	19.5	761	7.8	85	310	67	35
11...	1000	17	982	8.1	20.0	762	7.9	87	250	54	29
13...	0930	48	1010	8.1	20.0	760	8.1	90	250	55	27
15...	1000	14	1050	8.2	18.5	760	8.4	90	310	68	34
18...	1015	6.6	1060	8.3	19.0	761	8.0	87	350	76	40
20...	0930	18	1050	8.2	18.0	760	8.5	90	350	76	38
22...	0945	8.6	1070	8.2	18.5	759	8.1	87	350	75	40
27...	1157	4.0	980	8.5	21.5	756	9.2	105	400	88	44
JUN											
03...	1245	2.7	1140	6.9	23.0	762	7.4	87	320	70	35
10...	1140	4.7	1300	8.3	21.0	757	9.1	103	360	78	40
17...	1420	7.9	1200	8.3	22.0	759	7.5	86	400	90	42
24...	0900	7.9	1070	7.6	19.5	761	8.0	88	340	75	37
JUL											
02...	1015	5.9	1240	8.9	24.0	760	7.3	87	330	72	36
06...	1115	43	1200	8.4	21.0	762	8.0	90	300	64	33
08...	0845	11	1310	8.4	21.0	763	8.0	90	370	79	41
10...	0945	11	1190	8.3	22.0	760	7.8	90	390	86	42
14...	0930	19	1200	8.2	23.0	760	7.6	89	310	68	34
15...	1100	14	1050	8.1	23.5	760	7.4	88	330	71	37
17...	1715	10	1250	8.2	23.0	759	7.0	82	390	85	42
21...	0845	11	1040	8.1	20.0	765	7.7	85	370	79	43
22...	1120	20	1070	8.2	20.5	760	8.4	94	320	69	36
24...	1110	9.4	1020	8.1	23.0	760	9.2	108	310	68	33
27...	1245	6.0	1100	8.6	27.0	760	13.0	164	350	77	39
29...	0855	17	1060	8.2	21.5	761	8.2	93	320	72	35
31...	0850	14	1030	8.3	20.0	761	8.4	93	340	74	37
AUG											
01...	0910	21	1070	8.3	20.0	760	8.6	95	290	64	32
03...	0850	17	1070	8.3	20.0	760	8.5	94	330	71	36
05...	1500	14	1190	8.2	23.5	760	8.1	96	340	72	38
06...	0820	28	1100	8.2	23.5	760	8.2	97	--	--	--
06...	1130	19	1100	8.3	22.5	760	8.0	93	--	--	--
06...	1430	15	1110	8.3	25.0	760	7.8	95	--	--	--
06...	1730	16	1060	8.3	26.0	760	7.4	92	--	--	--
06...	2030	14	1130	8.3	25.0	761	7.2	88	--	--	--
06...	2330	11	1160	8.2	25.0	760	7.0	85	--	--	--
07...	0330	14	1200	8.3	23.0	758	7.5	88	--	--	--
07...	0630	17	1100	8.3	22.0	761	7.6	87	300	63	34
10...	0945	48	1020	8.2	23.5	761	7.6	90	250	52	29
12...	1025	15	1380	8.0	23.0	760	7.0	82	400	85	45
14...	0940	14	1220	8.1	23.0	764	7.3	85	360	78	41
19...	1200	8.3	930	8.2	23.0	762	7.8	91	320	69	35
26...	1130	12	1330	8.2	21.0	766	7.3	82	340	73	39

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
APR											
15...	61	--	1	--	166	48	216	140	100	0.30	15
17...	88	--	2	--	256	2	214	260	110	0.20	18
20...	96	--	2	--	229	0	188	230	110	0.20	19
22...	89	--	2	--	469	0	384	220	120	<0.10	19
24...	93	40	2	5.0	191	0	156	170	120	<0.10	17
24...	93	40	2	4.8	191	0	156	170	120	<0.10	17
27...	83	35	2	4.5	220	0	180	180	120	0.20	18
29...	82	34	2	3.8	250	0	205	160	120	0.20	19
MAY											
01...	89	36	2	3.9	237	0	194	200	120	0.20	19
04...	80	40	2	5.2	195	0	160	140	110	0.20	17
06...	80	46	2	4.4	143	0	117	120	110	0.20	17
08...	94	39	2	5.9	209	0	171	200	120	<0.10	18
11...	94	44	3	5.2	165	0	135	160	120	<0.10	18
13...	110	49	3	4.0	165	0	135	180	130	<0.10	17
15...	97	40	2	4.3	200	0	164	170	130	<0.10	17
18...	87	35	2	3.7	270	0	221	160	110	0.10	17
20...	86	35	2	4.0	251	0	206	160	130	0.30	17
22...	84	34	2	4.7	256	0	210	160	110	0.10	16
27...	70	27	2	3.7	255	0	209	170	110	0.20	19
JUN											
03...	92	38	2	9.0	234	0	192	160	120	0.20	14
10...	92	35	2	4.4	181	30	198	160	130	0.20	13
17...	90	33	2	5.4	228	0	187	230	120	0.30	19
24...	77	33	2	4.1	248	0	203	140	110	<0.10	19
JUL											
02...	98	39	2	4.5	256	8	210	200	150	0.30	15
06...	110	44	3	4.4	132	30	158	160	150	0.20	17
08...	89	34	2	4.2	190	30	206	200	120	<0.10	17
10...	95	34	2	3.9	248	5	203	210	130	0.20	18
14...	110	43	3	4.5	206	0	169	180	140	<0.10	17
15...	110	42	3	5.4	206	0	169	180	140	0.20	18
17...	110	38	2	4.7	238	0	195	220	140	0.10	18
21...	110	39	2	4.1	209	0	171	280	140	0.30	18
22...	100	40	2	4.6	193	0	158	220	140	0.30	17
24...	95	40	2	4.9	195	0	160	160	140	0.20	17
27...	98	37	2	5.1	183	5	158	230	140	0.20	18
29...	84	--	2	--	210	0	172	170	130	0.20	16
31...	92	37	2	4.4	183	6	159	160	140	0.20	17
AUG											
01...	89	39	2	4.3	185	0	151	150	140	0.20	16
03...	96	39	2	4.1	266	2	221	180	140	0.20	17
05...	99	39	2	4.1	189	0	155	200	140	0.20	18
06...	--	--	--	--	172	0	141	--	--	--	--
06...	--	--	--	--	172	0	141	--	--	--	--
06...	--	--	--	--	168	1	139	--	--	--	--
06...	--	--	--	--	171	1	142	--	--	--	--
06...	--	--	--	--	190	1	157	--	--	--	--
06...	--	--	--	--	181	0	148	--	--	--	--
07...	--	--	--	--	190	0	155	--	--	--	--
07...	100	42	3	4.8	159	0	130	160	100	0.20	16
10...	96	45	3	4.3	176	0	144	140	140	0.20	16
12...	110	37	2	5.1	217	0	178	270	130	0.30	18
14...	110	39	3	5.4	190	0	155	260	150	0.30	18
19...	84	36	2	3.7	186	0	153	140	130	0.20	16
26...	100	38	2	5.3	197	0	161	220	150	0.30	16

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR							
15...	576	--	--	7.24	0.060	7.30	0.400
17...	816	--	--	9.35	0.050	9.40	0.050
20...	678	--	--	8.82	0.080	8.90	0.080
22...	750	--	--	8.94	0.160	9.10	0.220
24...	632	622	0.86	5.42	0.080	5.50	0.260
24...	640	623	0.87	5.42	0.080	5.50	0.270
27...	658	654	0.89	7.02	0.080	7.10	0.090
29...	666	642	0.91	5.16	0.040	5.20	0.110
MAY							
01...	692	689	0.94	6.30	0.100	6.40	0.110
04...	566	550	0.77	3.73	0.070	3.80	0.100
06...	478	480	0.65	2.84	0.060	2.90	0.110
08...	704	666	0.96	5.75	0.150	5.90	0.290
11...	576	580	0.78	3.50	0.100	3.60	0.320
13...	664	617	0.90	2.85	0.050	2.90	0.080
15...	670	640	0.91	4.66	0.040	4.70	0.050
18...	666	655	0.91	6.28	0.020	6.30	0.020
20...	656	662	0.89	6.04	0.060	6.10	0.040
22...	646	647	0.88	6.94	0.060	7.00	0.030
27...	692	666	0.94	7.97	0.030	8.00	0.030
JUN							
03...	648	634	0.88	3.45	0.350	3.80	0.570
10...	670	669	0.91	7.15	0.050	7.20	0.020
17...	804	747	1.09	8.30	0.100	8.40	0.090
24...	634	612	0.86	6.07	0.030	6.10	0.050
JUL							
02...	730	720	0.99	3.96	0.040	4.00	0.100
06...	676	656	0.92	4.86	0.040	4.90	0.300
08...	760	712	1.03	8.33	0.170	8.50	0.090
10...	746	712	1.01	--	--	--	--
14...	678	674	0.92	4.14	0.060	4.20	0.050
15...	692	687	0.94	5.20	0.100	5.30	0.110
17...	758	767	1.03	6.74	0.060	6.80	0.030
21...	796	807	1.08	6.56	0.040	6.60	0.040
22...	694	707	0.94	5.47	0.030	5.50	0.040
24...	640	635	0.87	4.57	0.030	4.60	0.080
27...	736	726	1.00	5.15	0.050	5.20	0.030
29...	--	--	--	5.97	0.030	6.00	0.020
31...	646	648	0.88	6.06	0.040	6.10	0.080
AUG							
01...	666	610	0.91	5.26	0.040	5.30	0.090
03...	684	702	0.93	5.47	0.030	5.50	0.060
05...	718	694	0.98	6.57	0.030	6.60	0.040
06...	--	--	--	3.48	0.020	3.50	0.060
06...	--	--	--	3.68	0.020	3.70	0.040
06...	--	--	--	3.58	0.020	3.60	0.040
06...	--	--	--	3.82	0.080	3.90	0.080
06...	--	--	--	4.62	0.080	4.70	0.080
06...	--	--	--	5.17	0.030	5.20	0.040
07...	--	--	--	5.67	0.030	5.70	0.040
07...	626	577	0.85	4.57	0.030	4.60	0.040
10...	602	580	0.82	3.37	0.030	3.40	0.170
12...	836	810	1.14	8.50	0.200	8.70	0.480
14...	756	785	1.03	6.38	0.120	6.50	0.080
19...	602	600	0.82	6.71	0.090	6.80	0.200
26...	740	728	1.01	6.07	0.030	6.10	0.040

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
APR									
15...	--	0.60	0.110	0.090	0.090	8	6	3.5	1.4
17...	0.90	0.40	0.120	0.110	0.090	<3	7	--	--
20...	--	0.30	0.170	0.120	0.110	4	8	--	--
22...	--	0.70	0.350	0.210	0.210	10	11	4.0	4.0
24...	0.90	0.80	0.180	0.160	0.150	4	8	4.1	2.7
24...	0.90	0.80	0.190	0.160	0.140	10	8	4.6	2.8
27...	0.80	0.50	0.280	0.180	0.140	9	6	3.3	2.8
29...	0.40	0.40	0.150	0.150	0.100	9	5	2.8	1.0
MAY									
01...	0.40	0.50	0.210	0.190	0.140	12	8	8.4	1.2
04...	0.70	0.80	0.220	0.260	0.190	13	7	5.2	1.6
06...	0.70	0.50	0.220	0.160	0.140	10	9	6.6	2.4
08...	0.80	0.70	0.290	0.220	0.220	11	13	8.6	2.2
11...	0.90	0.70	0.240	0.200	0.180	13	6	4.9	2.1
13...	0.40	0.40	0.130	0.090	0.100	9	7	4.5	2.4
15...	0.50	0.40	0.210	0.130	0.130	9	9	8.4	1.9
18...	0.30	0.30	0.130	0.110	0.100	10	20	8.1	1.0
20...	0.70	0.30	0.230	0.180	0.020	5	9	5.2	1.4
22...	0.50	0.70	0.170	0.180	0.160	10	13	6.2	0.8
27...	0.40	0.30	0.130	0.130	0.080	11	11	3.2	0.6
JUN									
03...	2.3	1.7	0.440	0.390	0.390	22	25	2.0	1.4
10...	0.60	0.40	0.120	0.110	0.090	5	15	4.0	0.4
17...	0.60	0.40	0.160	0.160	0.150	17	14	6.4	1.2
24...	1.0	0.30	0.460	0.150	0.130	5	7	3.0	3.3
JUL									
02...	1.0	0.40	0.460	0.180	0.190	16	18	3.6	1.6
06...	2.1	0.80	0.820	0.130	0.120	5	3	7.1	4.5
08...	1.3	0.40	0.570	0.120	0.120	8	5	3.3	3.0
10...	--	--	--	--	--	22	6	--	--
14...	1.1	0.50	0.440	0.200	0.160	12	6	6.8	3.6
15...	1.3	0.70	0.500	0.210	0.200	6	12	5.4	2.5
17...	1.5	<0.20	0.530	0.120	0.130	<3	6	5.7	3.7
21...	0.30	0.40	0.160	0.140	0.130	<3	5	4.4	2.9
22...	0.30	0.50	0.220	0.200	0.180	9	8	6.0	3.9
24...	1.5	0.90	0.310	0.130	0.100	14	14	7.3	0.6
27...	0.60	0.40	0.250	0.190	0.170	23	28	41	6.0
29...	1.1	0.30	0.480	0.140	0.120	6	6	3.9	3.9
31...	1.4	0.50	0.590	0.100	0.110	21	5	5.6	1.7
AUG									
01...	1.2	0.50	0.430	0.120	0.110	9	9	3.9	2.9
03...	0.60	0.40	0.280	0.090	0.090	15	9	3.5	1.9
05...	0.30	0.30	0.150	0.120	0.110	17	32	14	1.4
06...	0.30	0.50	0.110	0.110	0.100	--	--	--	--
06...	0.40	0.30	0.100	0.120	0.100	--	--	--	--
06...	0.40	0.30	0.120	0.120	0.110	--	--	--	--
06...	0.30	0.40	0.390	0.330	0.230	--	--	--	--
06...	0.30	0.50	0.250	0.260	0.240	--	--	--	--
06...	0.40	0.30	0.150	0.140	0.120	--	--	--	--
07...	0.30	0.30	0.170	0.150	0.130	--	--	--	--
07...	0.40	0.50	0.160	0.140	0.130	62	5	5.0	0.3
10...	1.1	0.70	0.370	0.120	0.110	10	16	4.9	5.4
12...	1.2	1.0	0.230	0.170	0.150	6	11	4.7	2.5
14...	1.2	0.70	0.480	0.180	0.140	8	14	4.9	1.0
19...	--	--	0.170	0.320	0.160	8	14	7.8	2.9
26...	0.50	0.40	0.200	0.210	0.160	33	14	4.3	6.5

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
APR					
24...	1000	15	15.5	333	13
27...	0950	11	15.0	330	9.8
29...	0945	15	16.5	214	8.7
MAY					
01...	0900	14	16.0	191	7.2
04...	1000	19	14.5	216	11
06...	0945	14	20.5	236	8.9
08...	0945	9.0	19.5	204	5.0
11...	1000	17	20.0	272	12
13...	0930	48	20.0	229	30
15...	1000	14	18.5	140	5.3
18...	1015	6.6	19.0	78	1.4
20...	0930	18	18.0	120	5.8
22...	0945	8.6	18.5	54	1.3
27...	1157	4.0	21.5	33	0.36
JUN					
10...	1140	4.7	21.0	72	0.91
17...	1420	7.9	22.0	359	7.7
24...	0900	7.9	19.5	441	9.4
JUL					
02...	1015	5.9	24.0	584	9.3
06...	1115	43	21.0	704	82
08...	0845	11	21.0	323	9.6
10...	0945	11	22.0	438	13
14...	0930	19	23.0	321	16
15...	1100	14	23.5	264	10
17...	1715	10	23.0	594	16
21...	0845	11	20.0	477	14
22...	1120	20	20.5	759	41
24...	1110	9.4	23.0	235	6.0
27...	1245	6.0	27.0	1050	17
29...	0855	17	21.5	393	18
31...	0850	14	20.0	353	13
AUG					
01...	0910	21	20.0	396	22
03...	0850	17	20.0	255	12
05...	1500	14	23.5	1190	45
06...	0820	28	23.5	397	30
06...	1130	19	22.5	403	21
06...	1430	15	25.0	351	14
06...	1730	16	26.0	383	17
06...	2030	14	25.0	613	23
06...	2330	11	25.0	556	17
07...	0330	14	23.0	556	21
07...	0630	17	22.0	436	20
10...	0945	48	23.5	727	94
12...	1025	15	23.0	265	11
14...	0940	14	23.0	310	12
19...	1200	8.3	23.0	318	7.1
26...	1130	12	21.0	615	20

11274538 ORESTIMBA CREEK AT RIVER ROAD NEAR CROWS LANDING, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	1140	1040	1250	1100	1240	1220	---	---	1360	1250
2	---	---	1090	973	1180	1100	1260	1220	---	---	1280	1210
3	---	---	1110	973	1200	1130	1250	1210	---	---	1420	1280
4	---	---	1150	950	1240	1120	1260	1180	1180	960	1630	1390
5	---	---	995	835	1250	1180	1210	1160	1190	1060	1640	1380
6	---	---	940	830	1260	1210	1240	1190	1160	1050	1580	1420
7	---	---	1180	940	1230	1130	1280	1190	1230	1100	1450	1320
8	---	---	1200	1040	1200	1100	1310	1250	1270	1040	1340	1280
9	---	---	1150	1010	1130	1110	1260	1200	1210	1030	1380	1300
10	903	860	1140	997	1290	1120	1200	1180	1120	994	1430	1290
11	913	899	1000	939	1330	1210	1190	1180	1250	1070	1410	1280
12	956	899	1070	913	1390	1240	1200	1190	1380	1150	1360	1310
13	1030	915	1030	960	1240	1210	1210	1190	1210	1070	1890	1350
14	1340	1030	1050	1020	1240	1210	1200	1110	1260	1060	1730	1510
15	1480	957	1060	1050	1230	1190	1110	1050	1110	1020	1510	1310
16	1280	1030	1070	1040	1220	1200	1180	1090	1090	935	1390	1220
17	1420	1210	1060	1030	1240	1200	1250	1180	1070	951	1380	1290
18	1410	1030	1060	1050	1300	1210	1270	1230	1190	875	1350	1270
19	1190	1010	1060	1020	1230	1200	1270	1170	942	860	1430	1300
20	1310	1030	1060	1040	1260	1230	1170	1160	1110	929	1580	1410
21	1140	974	1060	1020	1240	1210	1200	1010	1110	940	1450	1370
22	1230	1070	1290	1050	1210	1060	1100	970	1150	975	1400	1350
23	1190	1070	1260	1150	1090	1060	1080	1050	1200	1020	1510	1310
24	1130	1050	1190	1100	1080	951	1290	1020	1170	1070	1510	1440
25	1080	916	1170	1100	1040	920	1180	1060	1330	1080	1460	1360
26	1050	927	1210	985	1050	920	1340	1090	1360	1190	1550	1340
27	1110	1040	1120	928	1090	1050	1370	1050	1220	1170	1390	1250
28	1170	992	998	932	1140	1080	---	---	1230	1160	1300	1120
29	1220	986	998	928	1160	1100	---	---	1450	1230	1150	1100
30	1170	1020	1190	965	1220	1160	---	---	1610	1330	1200	1090
31	---	---	1210	1140	---	---	---	---	1790	1290	---	---
MONTH	---	---	1290	830	1390	920	---	---	---	---	1890	1090

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11274560 TURLOCK IRRIGATION DISTRICT LATERAL NO. 5 NEAR PATTERSON, CA

LOCATION.--Lat 37°27'52", long 121°01'52", in SE 1/4 SE 1/4 sec.25, T.5 S, R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank at upstream side of abandoned bridge upstream of bridge crossing on Carpenter Road, and 7.2 mi east of Patterson.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1992.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flows consist mainly of return water from irrigation areas.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 96 ft³/s, July 4, gage height, 2.27 ft; minimum daily, 23 ft³/s, May 31, Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	35	49	54	23
2	---	---	---	---	---	---	---	---	34	45	40	36
3	---	---	---	---	---	---	---	---	41	42	42	63
4	---	---	---	---	---	---	---	---	46	58	43	48
5	---	---	---	---	---	---	---	---	47	56	49	45
6	---	---	---	---	---	---	---	---	67	41	55	33
7	---	---	---	---	---	---	---	---	42	41	44	37
8	---	---	---	---	---	---	---	---	52	29	60	39
9	---	---	---	---	---	---	---	---	55	40	48	37
10	---	---	---	---	---	---	---	---	44	47	35	37
11	---	---	---	---	---	---	---	---	48	37	47	35
12	---	---	---	---	---	---	---	---	49	34	43	35
13	---	---	---	---	---	---	---	---	60	46	48	48
14	---	---	---	---	---	---	---	---	55	38	58	47
15	---	---	---	---	---	---	---	---	32	37	47	37
16	---	---	---	---	---	---	---	---	38	39	55	37
17	---	---	---	---	---	---	---	32	34	38	61	39
18	---	---	---	---	---	---	---	30	27	46	48	38
19	---	---	---	---	---	---	---	28	33	48	40	43
20	---	---	---	---	---	---	---	28	42	45	47	35
21	---	---	---	---	---	---	---	33	52	52	50	45
22	---	---	---	---	---	---	---	49	53	52	43	31
23	---	---	---	---	---	---	---	39	31	47	48	28
24	---	---	---	---	---	---	---	39	40	44	50	27
25	---	---	---	---	---	---	---	36	41	39	55	53
26	---	---	---	---	---	---	---	25	39	43	39	44
27	---	---	---	---	---	---	---	34	34	40	44	36
28	---	---	---	---	---	---	---	29	36	34	49	42
29	---	---	---	---	---	---	---	40	43	52	38	41
30	---	---	---	---	---	---	---	32	57	27	29	44
31	---	---	---	---	---	---	---	23	---	39	41	---
TOTAL	---	---	---	---	---	---	---	---	1307	1325	1450	1183
MEAN	---	---	---	---	---	---	---	---	43.6	42.7	46.8	39.4
MAX	---	---	---	---	---	---	---	---	67	58	61	63
MIN	---	---	---	---	---	---	---	---	27	27	29	23
AC-FT	---	---	---	---	---	---	---	---	2590	2630	2880	2350

11274560 TURLOCK IRRIGATION DISTRICT LATERAL NO. 5 NEAR PATTERSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1992.

CHEMICAL DATA: April to September 1992.

SPECIFIC CONDUCTANCE: April to September 1992.

WATER TEMPERATURE: April to September 1992.

SEDIMENT DATA: April to September 1992.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May to September 1992.

WATER TEMPERATURE: May to September 1992.

INSTRUMENTATION.--Water-quality monitor since May 1992.

REMARKS.--Flows consist mainly of return water from irrigation areas.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,580 microsiemens, May 20; minimum recorded, 247 microsiemens, June 6.

WATER TEMPERATURE: Maximum recorded, 30.5°C, May 31, July 13; minimum recorded, 18.0°C, May 20, June 16.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED 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)
APR										
22...	1151	--	470	7.8	18.5	763	8.3	89	85	23
29...	1215	21	693	8.0	20.0	760	7.3	81	120	34
MAY										
06...	1130	18	547	8.3	22.0	757	8.1	93	110	30
13...	1200	22	803	7.9	21.0	763	6.6	74	160	46
20...	1100	12	1180	7.8	19.5	760	4.3	47	190	52
27...	0945	42	756	7.8	21.5	761	7.6	86	170	47
JUN										
03...	1015	64	732	7.9	22.5	759	5.1	59	140	39
10...	0930	68	383	7.7	21.0	757	6.3	71	70	19
17...	1140	46	460	7.5	20.5	761	6.5	72	110	30
24...	1130	44	729	7.4	22.0	762	6.5	75	130	38
JUL										
02...	0800	50	492	9.0	22.0	760	5.5	63	91	25
08...	1115	44	518	7.7	21.5	764	6.1	69	83	23
15...	0845	46	602	8.0	22.5	759	5.3	62	120	34
22...	0835	74	454	7.8	20.5	760	6.8	76	85	23
24...	1030	67	406	7.4	22.0	760	6.6	76	--	--
29...	1125	43	803	7.8	23.5	760	8.6	102	160	45
AUG										
05...	1635	67	698	7.9	27.0	760	6.8	86	120	33
12...	0900	70	686	7.9	22.0	759	6.2	71	110	31
19...	0940	44	368	7.7	22.5	761	6.1	71	80	22
26...	0915	53	593	7.8	21.0	763	6.2	70	120	32

11274560 TURLOCK IRRIGATION DISTRICT LATERAL NO. 5 NEAR PATTERSON, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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)
APR										
22...	6.7	59	--	3	--	143	0	117	21	69
29...	9.1	78	56	3	8.5	206	0	169	29	92
MAY										
06...	8.7	63	54	3	6.1	190	0	156	27	55
13...	12	81	51	3	6.3	226	0	185	32	98
20...	14	150	61	5	14	298	0	244	48	180
27...	13	99	54	3	8.7	253	0	207	36	100
JUN										
03...	11	82	53	3	14	419	0	162	28	100
10...	5.4	38	52	2	5.8	95	0	78	17	40
17...	8.4	55	51	2	4.9	156	0	128	22	47
24...	9.5	91	58	3	5.4	162	0	133	30	120
JUL										
02...	7.0	56	55	3	8.1	150	0	127	21	59
08...	6.3	46	53	2	4.2	111	2	91	17	56
15...	9.5	68	53	3	3.8	176	0	144	26	81
22...	6.6	47	53	2	3.8	178	0	146	21	49
24...	--	--	--	--	--	--	--	--	--	--
29...	11	92	55	3	5.5	204	0	167	33	120
AUG										
05...	8.9	90	60	4	10	212	0	173	31	84
12...	8.0	58	52	2	4.1	151	0	123	21	68
19...	6.2	44	53	2	4.3	106	0	87	14	51
26...	8.8	64	53	3	7.2	181	0	149	25	76

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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR									
22...	<0.10	21	281	--	--	1.73	0.170	1.90	2.10
29...	0.20	26	416	400	0.57	2.69	0.310	3.00	1.40
MAY									
06...	0.20	29	320	343	0.44	5.16	0.240	5.40	0.680
13...	0.20	31	448	456	0.61	6.95	0.250	7.20	0.620
20...	0.20	44	688	694	0.94	5.19	0.410	5.60	1.60
27...	0.20	41	524	511	0.71	7.35	0.250	7.60	0.690
JUN									
03...	0.20	31	434	436	0.59	4.75	0.250	5.00	3.20
10...	0.10	20	192	213	0.26	3.36	0.140	3.50	0.500
17...	0.20	27	278	306	0.38	6.48	0.120	6.60	0.390
24...	<0.10	28	422	425	0.57	3.67	0.130	3.80	0.300
JUL									
02...	0.20	27	278	304	0.38	3.01	0.390	3.40	2.30
08...	0.10	21	236	246	0.32	2.66	0.240	2.90	0.600
15...	<0.10	24	352	359	0.48	4.90	0.200	5.10	1.50
22...	0.20	22	224	281	0.30	3.68	0.120	3.80	0.490
24...	--	--	--	--	--	--	--	--	--
29...	0.20	31	454	463	0.62	5.08	0.220	5.30	0.660
AUG									
05...	0.20	37	418	423	0.57	3.26	0.440	3.70	1.30
12...	0.10	25	330	312	0.45	3.83	0.270	4.10	0.860
19...	<0.10	19	206	228	0.28	2.02	0.180	2.20	0.990
26...	0.10	27	322	356	0.44	4.09	0.410	4.50	2.10

11274560 TURLOCK IRRIGATION DISTRICT LATERAL NO. 5 NEAR PATTERSON, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
APR									
22...	--	2.7	2.90	2.60	2.70	45	37	16	2.3
29...	3.0	2.5	3.20	2.70	2.30	25	44	6.4	1.2
MAY									
06...	1.9	1.3	2.50	2.20	1.90	13	29	4.9	2.5
13...	1.8	1.4	2.00	2.00	1.90	22	34	7.7	1.3
20...	2.4	2.6	7.30	7.40	6.10	69	92	13	2.0
27...	2.6	2.0	2.80	--	2.40	--	65	7.8	1.1
JUN									
03...	6.0	4.7	5.00	3.40	2.90	43	70	7.4	0.5
10...	1.2	1.1	1.90	1.70	1.70	32	24	6.5	0.9
17...	1.4	0.90	2.00	2.00	1.80	16	16	12	0.7
24...	1.5	1.0	2.50	2.20	2.10	23	45	10	1.0
JUL									
02...	4.7	3.5	3.70	3.50	3.00	28	24	4.9	1.9
08...	1.8	1.1	1.90	1.50	1.30	23	22	4.2	1.5
15...	3.0	2.2	0.950	0.750	0.650	16	30	6.5	2.6
22...	2.2	1.2	1.40	1.20	1.00	24	22	3.9	1.0
24...	--	--	--	--	--	--	--	--	--
29...	2.0	1.4	0.470	0.330	0.280	15	41	6.0	1.6
AUG									
05...	3.0	2.4	2.70	2.40	2.10	43	43	12	1.8
12...	1.9	1.3	1.30	1.10	1.00	22	33	4.2	1.2
19...	2.2	1.8	1.60	1.50	1.40	17	21	5.0	1.8
26...	3.7	3.4	1.80	1.70	1.50	18	22	6.1	1.9

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
APR					
29...	1215	21	20.0	36	2.0
MAY					
06...	1130	18	22.0	12	0.58
13...	1200	22	21.0	10	0.59
20...	1100	12	19.5	15	0.49
27...	0945	42	21.5	81	9.2
JUN					
10...	0930	68	21.0	51	9.4
17...	1140	46	20.5	9	1.1
24...	1130	44	22.0	18	2.1
JUL					
02...	0800	50	22.0	25	3.4
08...	1115	44	21.5	16	1.9
15...	0845	46	22.5	53	6.6
22...	0835	74	20.5	98	20
29...	1125	43	23.5	23	2.7
AUG					
05...	1635	67	27.0	48	8.7
12...	0900	70	22.0	75	14
19...	0940	44	22.5	21	2.5
26...	0915	53	21.0	23	3.3

11274560 TURLOCK IRRIGATION DISTRICT LATERAL NO. 5 NEAR PATTERSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	853	405	849	265	832	488	782	536
2	---	---	---	---	952	486	911	458	1060	683	663	519
3	---	---	---	---	1090	615	1130	419	1140	427	588	486
4	---	---	---	---	1040	639	871	417	911	578	680	466
5	---	---	---	---	830	408	871	369	851	405	622	513
6	---	---	---	---	539	247	1000	661	764	283	602	532
7	---	---	---	---	917	308	1180	652	856	416	635	598
8	---	---	---	---	823	341	1220	498	980	472	629	548
9	---	---	---	---	721	345	1190	595	1200	685	630	596
10	---	---	---	---	792	375	1320	569	1240	635	637	596
11	---	---	---	---	1250	429	1270	585	978	566	624	557
12	---	---	---	---	892	317	1090	501	1010	598	590	428
13	---	---	---	---	1020	322	821	453	1090	614	466	394
14	---	---	---	---	897	291	877	414	1010	624	508	466
15	---	---	---	---	774	499	906	584	929	568	538	397
16	---	---	---	---	763	508	1030	525	807	373	552	477
17	---	---	1070	406	702	411	1060	654	612	313	583	438
18	---	---	929	482	912	375	894	592	847	425	704	486
19	---	---	1480	735	1010	505	893	532	604	332	645	481
20	---	---	1580	735	1030	322	622	397	707	313	850	454
21	---	---	904	597	1030	311	549	405	738	368	842	364
22	---	---	997	385	903	350	515	416	673	350	851	598
23	---	---	958	583	734	378	542	294	673	454	830	673
24	---	---	810	494	733	455	583	391	641	486	894	679
25	---	---	910	405	827	625	887	583	583	389	715	403
26	---	---	1140	827	999	544	859	479	825	563	1020	447
27	---	---	1000	584	958	704	919	651	828	565	1210	624
28	---	---	782	481	933	646	1050	668	797	433	831	297
29	---	---	960	319	905	472	1040	614	748	400	832	342
30	---	---	985	387	814	391	1310	807	752	464	1080	672
31	---	---	860	615	---	---	1250	716	607	348	---	---
MONTH	---	---	---	---	1250	247	1320	265	1240	283	1210	297

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	29.5	21.5	27.0	19.0	27.5	20.0	27.0	20.0
2	---	---	---	---	29.0	22.0	27.5	20.0	28.0	21.0	26.5	21.0
3	---	---	---	---	30.0	22.5	26.0	20.5	27.5	20.5	24.0	20.0
4	---	---	---	---	29.0	21.5	24.5	20.0	27.0	20.0	24.5	19.5
5	---	---	---	---	28.0	22.0	25.0	19.5	28.0	20.5	25.5	20.5
6	---	---	---	---	26.5	21.5	24.5	20.0	26.5	21.0	25.5	20.5
7	---	---	---	---	28.0	21.0	25.0	19.0	28.0	20.0	25.5	19.5
8	---	---	---	---	27.0	21.0	27.0	21.0	27.0	20.5	26.0	19.5
9	---	---	---	---	27.5	21.5	26.5	21.0	27.5	20.5	27.0	20.0
10	---	---	---	---	27.0	21.0	28.5	21.0	30.0	21.5	25.5	20.0
11	---	---	---	---	24.5	19.0	27.5	22.0	29.5	22.0	25.5	20.0
12	---	---	---	---	23.5	18.5	28.0	22.0	28.0	21.5	25.0	19.5
13	---	---	---	---	23.5	18.5	30.5	22.0	29.5	21.5	24.0	19.5
14	---	---	---	---	24.5	19.0	28.5	22.5	26.5	22.0	24.0	19.0
15	---	---	---	---	22.0	18.5	30.0	22.0	27.5	23.0	25.0	18.5
16	---	---	---	---	25.5	18.0	28.5	21.0	29.0	22.0	24.5	19.0
17	---	---	27.5	19.0	26.5	18.5	28.5	22.0	28.0	22.0	25.5	20.0
18	---	---	28.0	19.0	26.5	19.5	28.0	21.5	29.0	21.5	24.5	19.0
19	---	---	26.5	19.0	26.5	20.5	28.0	21.0	29.5	22.0	26.0	20.0
20	---	---	26.0	18.0	27.0	21.0	28.5	20.5	29.0	21.5	24.5	20.0
21	---	---	27.5	19.0	28.0	21.0	27.0	20.0	27.0	21.0	26.0	20.0
22	---	---	25.0	19.0	27.5	22.0	26.5	20.0	24.0	19.0	26.0	21.0
23	---	---	27.5	19.5	25.5	21.5	27.0	20.0	25.0	18.5	26.0	20.0
24	---	---	28.0	20.5	25.5	20.5	27.5	20.5	25.0	19.0	25.5	20.0
25	---	---	26.5	20.0	27.0	21.5	28.5	21.0	26.5	19.5	22.0	18.5
26	---	---	28.0	19.5	26.5	20.5	29.0	21.0	27.0	20.0	23.5	18.5
27	---	---	27.5	21.5	28.0	21.5	29.5	21.0	26.5	20.5	24.0	19.0
28	---	---	29.0	21.0	24.5	20.5	29.5	22.0	26.0	21.0	24.5	20.0
29	---	---	29.0	21.0	23.0	20.5	28.5	21.0	26.0	21.0	25.0	20.0
30	---	---	29.0	21.5	25.0	19.5	29.5	20.5	26.0	20.0	24.5	20.0
31	---	---	30.5	22.5	---	---	28.0	20.0	26.0	20.0	---	---
MONTH	---	---	---	---	30.0	18.0	30.5	19.0	30.0	18.5	27.0	18.5

SAN JOAQUIN RIVER BASIN

11274570 SAN JOAQUIN RIVER AT PATTERSON BRIDGE, NEAR PATTERSON, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 37°29'54", long 121°04'54", in SW 1/4 SW 1/4 sec.15, T.5 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.2 mi below bridge on Palm Avenue, 2.3 mi northeast of Patterson.

DRAINAGE AREA.--9,760 mi², approximately.

PERIOD OF RECORD.--October 1988 to September 1989, January 1990 to current year. Data for the period

October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

SPECIFIC CONDUCTANCE: October 1988 to September 1989, January 1990 to current year.

WATER TEMPERATURE: October 1988 to September 1989, January 1990 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to September 1989, January 1990 to current year.

WATER TEMPERATURE: October 1988 to September 1989, January 1990 to current year.

INSTRUMENTATION.--Water-quality monitor October 1985 to September 1989 and since January 1990.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument. Specific conductance data for Sept. 5-30, 1989, published in WDR CA-89-3, are unreliable, should not be used, and have been deleted from the files of the U.S. Geological Survey. Operation of pumping station and canal outlet located just downstream from the gage may affect specific conductance and water temperature during low-flow periods.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,660 microsiemens, Apr. 15, 1991; minimum recorded, 300 microsiemens, Aug. 10, 1992.

WATER TEMPERATURE: Maximum recorded, 36.0°C, July 18, 1992; minimum recorded, 2.0°C, Dec. 23, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,210 microsiemens, May 2; minimum recorded, 300 microsiemens, Aug. 10.

WATER TEMPERATURE: Maximum recorded, 36.0°C, July 18; minimum recorded, 4.5°C, Jan. 23-25.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1510	1340	910	830	1140	1090	1400	1370	1510	1410	---	---
2	1560	1330	800	690	1160	1110	1360	1310	1540	1450	---	---
3	1550	1340	720	660	1150	1120	1350	1310	1550	1520	---	---
4	1550	1390	810	710	1160	1120	1380	1350	1560	1520	---	---
5	1680	1400	870	750	1150	1120	1360	1280	1550	1510	---	---
6	1600	1360	940	870	1190	1130	1410	1290	1520	1460	---	---
7	1560	1400	950	880	1300	1190	1380	1330	1480	1450	---	---
8	1540	1340	980	930	1320	1160	1410	1320	1510	1470	---	---
9	1590	1450	1020	920	1210	1140	1310	1280	1520	1480	---	---
10	1630	1460	1090	950	1200	1150	1310	1280	---	---	---	---
11	1650	1400	1040	960	1160	1120	1320	1290	---	---	---	---
12	1540	1260	1070	980	1240	1150	1370	1320	---	---	---	---
13	1500	1330	1090	1030	1250	1170	1390	1320	---	---	---	---
14	1510	1350	1090	1050	1270	1220	1420	1380	---	---	---	---
15	1500	1290	1150	1070	1240	1210	1420	1400	---	---	---	---
16	1480	1290	1200	1110	1300	1230	1410	1390	---	---	---	---
17	1440	1300	1230	1140	1360	1270	1460	1360	---	---	---	---
18	1400	1270	1250	1140	1400	1310	1440	1390	---	---	---	---
19	1420	1300	1150	1100	1440	1320	1480	1430	---	---	---	---
20	1480	1420	1170	1110	1380	1290	1470	1420	---	---	---	---
21	1450	1260	1180	1140	1360	1280	1430	1400	---	---	---	---
22	1470	1260	1170	1130	1370	1330	1480	1410	---	---	---	---
23	1510	1450	1190	1130	1380	1310	1470	1450	---	---	---	---
24	1530	1320	1280	1200	1330	1300	1480	1440	---	---	---	---
25	1480	1400	1230	1120	1380	1320	1540	1470	---	---	---	---
26	1480	1050	1180	1120	1320	1280	1540	1480	---	---	---	---
27	1190	1010	1140	1070	1360	1280	1530	1470	---	---	1540	1480
28	1090	1050	1180	1080	1350	1270	1480	1450	---	---	1630	1540
29	1060	970	1160	1100	1280	1200	1490	1420	---	---	1720	1630
30	1000	850	1140	1080	1340	1280	1480	1450	---	---	1760	1730
31	910	810	---	---	1390	1330	1470	1430	---	---	1770	1720
MONTH	1680	810	1280	660	1440	1090	1540	1280	---	---	---	---

11274570 SAN JOAQUIN RIVER AT PATTERSON BRIDGE, NEAR PATTERSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1790	1750	2090	1910	1760	1540	1660	1490	1560	1370	1490	1410
2	1780	1740	2210	2010	1710	1650	1660	1600	1510	1420	1490	1400
3	1830	1780	2200	1980	1710	1600	1690	1580	1520	1360	1440	1240
4	1940	1830	2080	1760	1730	1560	1670	1340	1550	1430	1430	1300
5	1970	1940	1880	1790	1710	1610	1640	1380	1510	1410	1490	920
6	1980	1910	1990	1840	1690	1320	1580	1470	1470	1290	1530	1340
7	2020	1960	2080	2000	1720	1540	1570	1450	1540	1390	1650	1500
8	2000	1950	2060	1940	1850	1520	1640	1440	1630	1390	1670	930
9	2050	1900	2090	1950	1800	1660	1740	1440	1670	1540	1760	990
10	2100	2040	2120	1860	1760	1490	1760	1460	1680	300	1750	1650
11	2160	2040	1870	1720	1800	1490	1780	1550	1630	1420	1740	1590
12	2180	2030	1790	1740	1760	1500	1820	1510	1520	1300	1840	1580
13	2170	2000	1750	1640	1840	1450	1830	1510	1580	1330	1730	1360
14	2000	1840	1820	1680	1660	1410	1770	1590	1470	1350	1830	1600
15	2020	1840	1830	1650	1690	1570	1900	1670	1500	1350	1700	1570
16	1930	1810	1870	1750	1730	1590	1670	1480	1580	1340	1670	1460
17	2010	1910	2000	1790	1690	1540	1680	1610	1470	1320	1720	1390
18	2080	1980	1970	1750	1630	1470	1690	1470	1490	1330	1620	1490
19	2020	1690	1960	1860	1630	1440	1700	1610	1470	1350	1540	1450
20	2100	1930	1950	1780	1470	460	1630	1520	1450	1340	1520	1390
21	2030	1810	1780	1560	460	350	1650	1400	1520	1340	1490	1310
22	1940	1780	1590	1460	1470	320	1620	1400	1460	1300	1590	1460
23	2010	1860	1640	1480	1530	1420	1670	1360	1390	1260	1650	1590
24	2100	1850	1680	1560	1400	1300	1620	1390	1490	1380	1590	1460
25	2120	1990	1710	1560	1440	1340	1700	1470	1420	1140	1550	1330
26	2100	2020	1660	1580	1590	1420	1680	1350	1430	1260	1500	1350
27	2100	1900	1680	1580	1520	1480	1570	1460	1450	1370	1640	1520
28	2180	2020	1730	1650	1590	1480	1600	1460	1570	1350	1630	1360
29	2160	2060	1770	1450	1620	1420	1630	1450	1560	970	1630	1470
30	2130	1950	1780	1550	1490	1380	1670	1580	1480	1030	1600	1480
31	---	---	1800	1700	---	---	1690	1560	1470	880	---	---
MONTH	2180	1690	2210	1450	1850	320	1900	1340	1680	300	1840	920

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.5	22.0	15.0	13.0	7.5	6.0	9.5	8.5	9.0	7.0	---	---
2	25.5	22.0	15.5	13.5	8.0	6.5	8.5	7.5	8.5	7.0	---	---
3	26.0	21.5	16.0	14.0	8.5	6.5	9.0	7.5	8.5	7.0	---	---
4	26.5	22.0	16.0	14.0	8.5	7.0	10.0	8.5	8.5	7.0	---	---
5	26.0	22.5	17.0	15.0	8.5	7.0	10.0	9.5	8.0	6.5	---	---
6	25.5	22.0	17.0	15.5	9.0	7.0	9.5	9.0	7.5	7.0	---	---
7	25.0	21.5	17.5	15.5	9.5	8.5	9.5	9.0	8.5	7.0	---	---
8	24.5	21.0	17.5	16.5	9.5	8.0	9.5	8.0	10.5	8.5	---	---
9	25.0	20.5	18.0	16.5	9.5	8.0	8.5	8.0	10.0	9.0	---	---
10	25.0	21.0	17.5	16.0	9.5	8.0	8.0	8.0	---	---	---	---
11	24.5	21.0	17.0	15.5	10.0	9.0	8.5	7.5	---	---	---	---
12	25.0	21.0	17.0	15.0	9.0	8.5	8.0	7.0	---	---	---	---
13	24.5	21.0	16.5	15.0	8.5	8.0	8.0	6.5	---	---	---	---
14	24.5	20.5	15.0	12.0	8.0	7.5	7.5	6.0	---	---	---	---
15	24.5	20.0	12.0	10.5	8.0	7.5	7.0	7.0	---	---	---	---
16	24.5	20.0	12.0	10.0	7.5	7.0	7.0	7.0	---	---	---	---
17	24.0	20.0	12.5	11.5	7.5	6.5	7.0	6.5	---	---	---	---
18	23.5	19.5	13.5	11.5	9.5	7.5	7.0	6.5	---	---	---	---
19	23.0	19.5	13.0	11.5	9.0	7.5	6.5	6.5	---	---	---	---
20	22.5	19.0	13.0	11.5	8.0	7.0	6.5	6.0	---	---	---	---
21	22.5	19.0	13.5	12.0	8.0	6.5	6.0	5.5	---	---	---	---
22	21.0	18.5	12.5	11.0	8.0	6.5	5.5	5.5	---	---	---	---
23	19.5	17.0	12.5	11.0	8.5	7.0	5.5	4.5	---	---	---	---
24	18.5	15.0	12.5	11.0	8.5	7.0	5.0	4.5	---	---	---	---
25	19.0	16.0	12.5	10.5	8.5	7.0	6.0	4.5	---	---	---	---
26	17.5	16.5	12.5	11.0	8.5	7.5	7.0	5.5	---	---	---	---
27	16.5	14.5	12.5	10.5	8.5	7.5	6.5	6.5	---	---	18.0	15.5
28	15.0	13.0	10.0	9.0	10.0	8.5	7.5	6.0	---	---	18.5	16.5
29	16.0	13.5	9.5	7.5	10.0	9.5	8.0	6.5	---	---	18.0	15.5
30	14.5	13.0	7.5	6.0	11.0	9.5	7.0	6.5	---	---	17.0	15.5
31	14.5	12.5	---	---	10.5	9.5	7.5	6.5	---	---	17.5	15.0
MONTH	26.5	12.5	18.0	6.0	11.0	6.0	10.0	4.5	---	---	---	---

SAN JOAQUIN RIVER BASIN

11274570 SAN JOAQUIN RIVER AT PATTERSON BRIDGE, NEAR PATTERSON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.0	15.5	21.5	18.5	29.5	25.0	27.5	21.5	30.5	25.5	26.0	21.5
2	19.5	16.5	23.0	18.5	30.5	24.5	28.5	22.5	31.0	26.5	25.5	22.0
3	20.0	17.0	24.0	20.5	30.5	25.0	28.5	23.5	30.0	26.0	24.0	21.0
4	19.0	17.0	24.0	20.5	30.5	25.0	27.5	23.5	29.5	24.5	24.5	19.5
5	17.5	16.0	24.5	21.0	29.5	24.5	27.5	22.5	29.5	24.0	25.5	20.5
6	17.5	15.0	25.0	21.5	28.5	24.0	26.0	22.5	28.5	24.0	24.5	21.0
7	18.0	15.0	25.0	21.0	29.0	23.0	27.5	21.5	30.0	24.5	24.5	19.5
8	18.5	16.0	25.0	21.0	28.5	23.5	25.0	22.0	30.0	24.5	25.0	20.0
9	19.0	16.0	23.0	19.0	28.5	24.0	29.0	24.5	30.5	25.0	26.0	20.5
10	19.5	17.0	22.5	17.5	27.5	23.0	30.5	24.5	34.5	23.5	25.5	20.5
11	19.5	17.0	25.0	20.0	27.0	21.5	30.0	25.5	30.5	21.5	25.0	20.5
12	18.0	17.0	25.0	21.5	24.0	20.5	30.0	25.0	30.0	25.5	25.0	20.0
13	19.0	16.0	24.0	20.5	24.0	19.5	32.5	26.5	30.0	25.5	23.5	19.5
14	19.5	17.0	24.0	20.0	24.5	20.5	33.5	28.0	30.0	26.5	24.0	19.0
15	19.0	17.0	23.5	19.5	22.0	20.0	33.5	28.5	31.0	26.0	24.0	18.5
16	20.0	17.0	24.5	19.5	25.0	18.5	32.5	28.0	31.5	26.5	24.0	19.0
17	21.5	19.0	25.0	20.0	27.0	21.0	34.0	28.5	31.0	26.0	24.5	19.5
18	19.0	16.0	25.5	20.0	27.5	22.5	36.0	29.5	31.0	25.0	24.5	19.5
19	18.0	14.5	24.5	19.5	28.5	23.0	35.0	30.5	31.0	25.5	25.5	20.0
20	20.5	16.5	23.5	19.5	29.5	21.5	34.0	29.5	30.5	25.0	25.5	20.5
21	20.5	18.5	23.0	18.5	35.0	18.0	34.0	29.0	29.0	23.5	26.0	20.5
22	19.5	17.0	24.5	19.5	30.5	17.5	33.0	28.5	25.5	21.0	26.0	21.0
23	18.0	16.0	26.5	21.0	27.0	25.5	33.0	28.5	24.0	20.0	26.0	21.0
24	19.0	16.0	26.5	21.5	28.5	24.0	33.0	28.0	25.0	20.0	24.5	20.5
25	21.0	17.0	26.5	22.5	29.0	25.0	34.0	28.0	24.5	21.0	22.0	18.0
26	21.0	18.0	26.5	21.5	28.5	24.0	33.5	28.0	26.0	21.0	23.5	18.5
27	22.0	18.0	28.0	22.5	29.0	24.0	33.5	28.5	26.5	22.0	24.5	19.5
28	23.5	19.0	28.0	23.5	25.5	23.0	34.5	29.0	26.0	18.5	25.0	20.0
29	25.0	20.5	28.0	23.5	25.0	22.5	33.5	28.5	25.5	21.0	25.5	21.0
30	23.0	20.0	30.5	23.5	26.5	21.5	33.0	27.5	25.5	21.0	25.5	21.0
31	---	---	30.5	24.5	---	---	31.5	27.0	25.5	21.0	---	---
MONTH	25.0	14.5	30.5	17.5	35.0	17.5	36.0	21.5	34.5	18.5	26.0	18.0

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA

LOCATION.--Lat 37°29'12", long 121°12'29", in SE 1/4 NW 1/4 sec.21, T.5 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 1.0 mi upstream from California Aqueduct crossing and 4.4 mi west of Patterson.

DRAINAGE AREA.--72.6 mi².

PERIOD OF RECORD.--October 1958 to May 1965 (maximums only), June 1965 to current year.

REVISED RECORDS.--WSP 1930: 1959-60(M), drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 1965, crest-stage gage at site 1.0 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some stock ponds and small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s, Feb. 16, 1959, gage height, 14.68 ft, site and datum then in use, from rating curve extended above 690 ft³/s; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	Unknown	*614	*5.07	Feb. 15	0500	471	4.32

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e1.9	4.3	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e6.3	e4.0	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	5.2	e3.8	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	4.3	e3.6	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	5.5	e3.4	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	11	e2.7	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	15	e2.4	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	9.2	e2.2	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	6.8	e2.3	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	5.6	e2.4	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	42	4.9	e2.6	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	e262	4.6	e2.5	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	28	4.2	e2.4	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	3.3	4.1	e2.5	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	201	4.1	e3.0	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	54	4.3	1.9	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	36	3.8	1.2	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	19	3.5	.70	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	15	3.0	.41	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	19	3.0	.24	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	20	4.4	.12	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	14	5.4	.06	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	10	7.9	.03	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	7.2	5.5	.02	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	5.2	4.3	.02	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	3.2	6.3	.01	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	e2.0	6.2	.01	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	e1.6	4.2	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	e1.8	2.9	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.9	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	10	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	744.30	170.3	48.82	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	25.7	5.49	1.63	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	262	15	4.3	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1480	338	97	.00	.00	.00	.00	.00

e Estimated.

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	1.03	3.26	13.2	24.6	21.7	8.38	3.49	1.78	.26	.075	.20
MAX	2.15	9.38	31.8	99.6	122	218	54.1	31.5	31.3	5.56	2.06	4.48
(WY)	1984	1983	1984	1983	1986	1983	1983	1983	1983	1983	1983	1990
MIN	.000	.000	.000	.000	.000	.062	.002	.000	.000	.000	.000	.000
(WY)	1966	1967	1969	1977	1977	1977	1990	1992	1966	1965	1965	1965

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	868.50		963.42		6.42	
ANNUAL MEAN	2.38		2.63		47.7	
HIGHEST ANNUAL MEAN					.030	
LOWEST ANNUAL MEAN					1983	
HIGHEST DAILY MEAN	230	Mar 25	262	Feb 12	973	Mar 1 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jul 1 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Jul 1 1965
INSTANTANEOUS PEAK FLOW			614	Feb 12	1800	Feb 16 1959
INSTANTANEOUS PEAK STAGE			5.07	Feb 12	14.68	Feb 16 1959
ANNUAL RUNOFF (AC-FT)	1720		1910		4650	
10 PERCENT EXCEEDS	2.7		4.2		10	
50 PERCENT EXCEEDS	.00		.00		.03	
90 PERCENT EXCEEDS	.00		.00		.00	

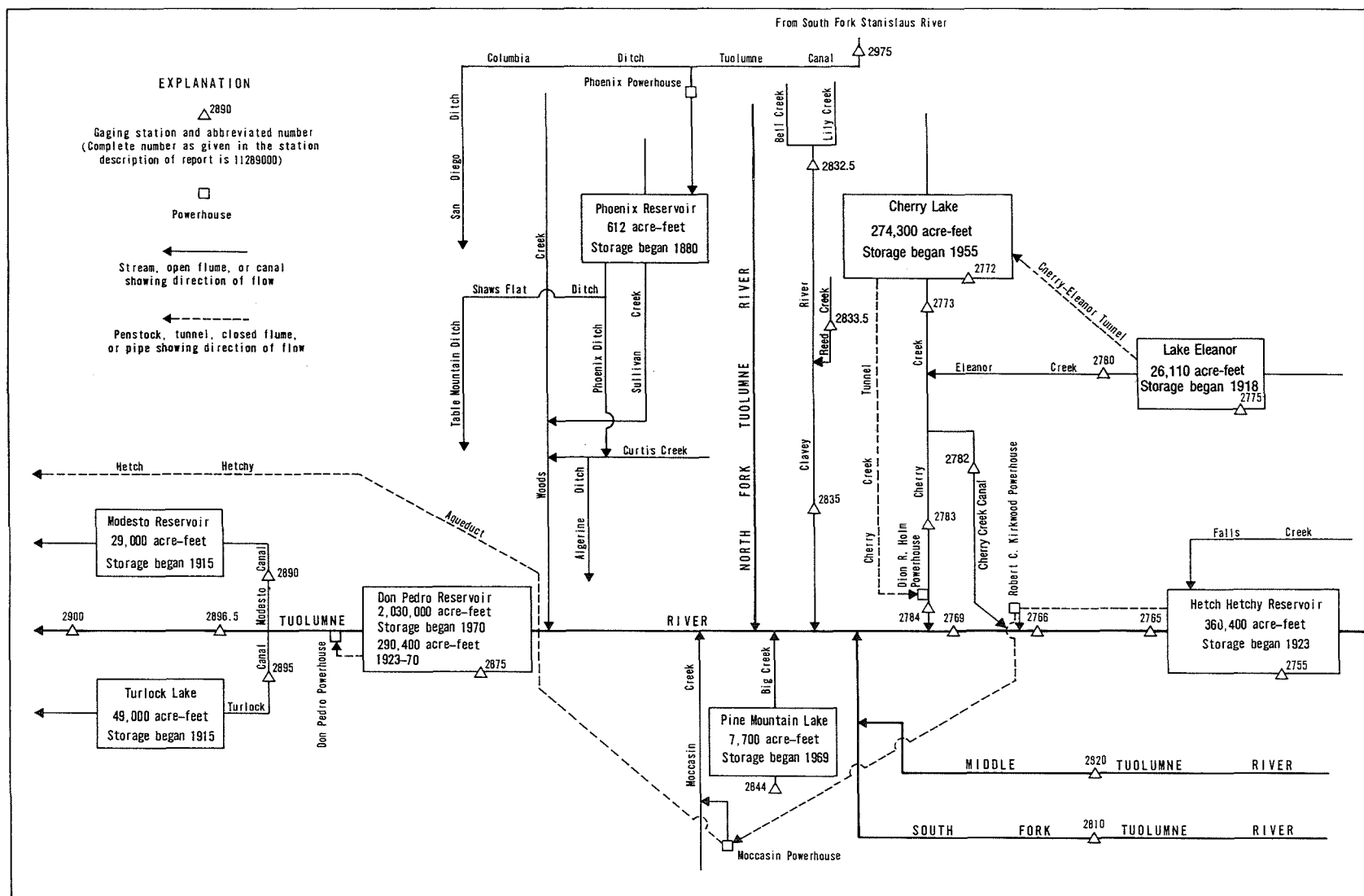


Figure 33. Diversions and storage in Tuolumne River basin.

11275500 HETCH HETCHY RESERVOIR AT HETCH HETCHY, CA

LOCATION.--Lat 37°56'52", long 119°47'13", in NW 1/4 NW 1/4 sec.16, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, near center of O'Shaughnessy Dam on Tuolumne River at Hetch Hetchy, 1.5 mi downstream from Falls Creek.

DRAINAGE AREA.--455 mi².

PERIOD OF RECORD.--May 1923 to current year. Prior to October 1930 monthend contents published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 1.84 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage at same site and datum. Oct. 1, 1927, to July 9, 1972, water-stage recorder at same site and datum. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by concrete gravity-type dam, completed to crest gage height 3,726.5 ft in 1923 and raised to 3,812.0 ft in 1937. Storage began Apr. 6, 1923. Ten-foot drum gates were installed on spillway in 1949. Capacity, 360,400 acre-ft between gage heights 3,512.0 ft, bottom outlet, and 3,806.0 ft, top of drum-type spillway gates. Water is diverted from reservoir through tunnel to Robert C. Kirkwood powerplant 15 mi downstream. Flow is diverted from powerplant tailrace in a closed conduit through Hetch Hetchy aqueduct to Moccasin Powerplant with flows in excess of aqueduct capacity being spilled to the river. At Moccasin Creek diversion dam, water re-enters Hetch Hetchy aqueduct and flows into Crystal Springs Reservoir, which supplies city of San Francisco. Surplus water is spilled into Don Pedro Reservoir (station 11287500) at Red Mountain Bar. Flow downriver is for State Department of Fish and Game and Raker Act requirements. Hetch Hetchy Reservoir is the main storage unit of Hetch Hetchy water-supply system for San Francisco. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 0800 hours.

COOPERATION.--Records were provided by city and county of San Francisco.

EXTREMES (AT 0800) FOR PERIOD OF RECORD.--Maximum contents, 369,100 acre-ft, Dec. 3, 1950, gage height, 3,810.4 ft; no contents at times in 1929-31.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 255,600 acre-ft, June 11, gage height, 3,749.7 ft; minimum, 111,200 acre-ft, Mar. 28, 29, gage height, 3,652.6 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 20, 1971)

3,512	0	3,530	3,300	3,600	57,400	3,680	146,200	3,760	273,700
3,513	51	3,540	8,700	3,620	76,500	3,700	175,000	3,780	310,400
3,515	154	3,560	22,900	3,640	97,000	3,720	206,000	3,800	348,600
3,520	410	3,580	39,500	3,660	119,900	3,740	238,900	3,810.4	369,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234700	203300	182300	e154600	125700	124500	111500	176800	251200	248600	243700	215800
2	233500	202000	181700	153800	125100	124300	111700	180000	252400	248500	243000	214800
3	232300	201300	180800	152500	124800	123900	112200	183100	253300	248300	243000	214000
4	231200	200500	179900	151500	124300	123500	113300	186100	254200	248100	240800	212900
5	230200	199700	178800	150700	123700	122700	114500	189100	254500	248000	239600	212100
6	229300	198900	178000	149700	123400	122600	115300	192400	254400	247600	238700	211800
7	228200	198300	177100	148700	123000	122200	116200	196500	254900	246800	237500	211300
8	227000	197600	176500	148000	122700	121600	117000	201700	255000	245900	236900	210600
9	226000	197000	176100	147200	122500	121100	118000	207100	255200	245200	235900	209500
10	224800	196500	175200	146200	121800	120000	119200	211100	255400	244700	235200	208600
11	223800	196000	174300	145500	121400	119700	120300	214800	255600	244200	233800	207800
12	222900	195300	173400	144700	121800	119100	121600	218800	255200	244000	232700	206600
13	221700	194300	172300	143800	121800	118800	123100	222400	254900	245700	231800	206000
14	220600	193800	171300	142800	121900	118400	125000	e225200	254700	246400	230800	205500
15	219200	192900	171000	142000	121900	118000	127100	228000	254200	248100	230200	204100
16	218100	192100	170100	141200	121800	117800	128200	230800	253700	249700	229500	203200
17	217300	191100	169200	140100	121900	117400	129900	233200	253300	250500	229200	202400
18	216000	190400	168200	138900	121800	116900	134000	235700	253000	251200	228000	201400
19	214700	189600	167500	138100	121700	116300	137300	237500	252400	251400	227300	200500
20	213400	189000	166100	137200	121800	115700	139700	239100	252100	251600	226300	199800
21	212600	188800	165100	136100	122500	115200	142800	239900	251600	251100	225500	198900
22	211500	188100	164000	134900	123400	114500	145900	240400	251200	250700	224500	197800
23	210200	187800	163000	134000	124100	113900	147500	241300	250500	249900	223700	197000
24	209200	187500	162000	133000	124800	113100	149000	241800	249900	249500	222900	196000
25	208100	186900	e161600	132100	125000	112400	151100	242600	249700	248500	221700	195300
26	207400	186200	160100	131200	124900	111900	154500	243500	249500	247800	221100	194000
27	207300	185500	159100	130300	124800	111500	158200	244200	249300	247600	219900	193200
28	206600	e184900	158000	129400	124800	111200	162400	245000	249200	247100	219200	192600
29	206000	184300	157000	128200	124800	111200	167300	247400	248500	245900	218100	191600
30	204900	183100	156300	127500	---	111500	172200	249000	248500	245400	217500	190700
31	204300	---	155300	126400	---	111500	---	250200	---	244500	217100	---
MAX	234700	203300	182300	154600	125700	124500	172200	250200	255600	251600	243700	215800
MIN	204300	183100	155300	126400	121400	111200	111500	176800	248500	244000	217100	190700
a	3718.9	3705.3	3686.5	3665.1	3663.8	3652.8	3698.1	3746.6	3745.6	3743.3	3726.9	3710.3
b	-31400	-21200	-27800	-28900	-1600	-13300	+60700	+78000	-1700	-4000	-27400	-26400

CAL YR 1991 b +96000

WTR YR 1992 b -45000

e Estimated.

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°56'15", long 119°47'50", in SW 1/4 SE 1/4 sec.17, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on left bank 0.9 mi downstream from O'Shaughnessy Dam at Hetch Hetchy and 2.5 mi downstream from Falls Creek.
DRAINAGE AREA.--457 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Hetch Hetchy damsite, near Sequoia" 1910-14 and as "below Hetch Hetchy damsite, near Sequoia" 1915-18.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage with concrete control since May 5, 1970. Elevation of gage is 3,480 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 1, 1915, water-stage recorder at site 1 mi upstream, at damsite, at different datum. Jan. 1, 1915, to Sept. 30, 1968, water-stage recorder, at same site and datum. Oct. 1, 1968, to May 4, 1970, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 0.9 mi upstream beginning in April 1923. Flow diverted upstream from station through tunnel to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct beginning Apr. 26, 1967. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft³/s, June 1, 1943, gage height, 13.90 ft; no flow at times in 1968-70.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s, July 22, gage height, 3.75 ft; minimum daily, 40 ft³/s, Dec. 28, 29, and Feb. 23-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	54	49	41	41	49	55	58	67	77	129	107
2	81	50	45	41	41	49	63	57	76	77	129	102
3	80	49	42	41	41	50	64	59	73	77	128	101
4	80	52	42	41	41	50	64	59	73	78	127	101
5	60	54	41	42	41	51	64	60	73	77	128	101
6	48	53	41	42	41	51	64	60	73	78	129	101
7	48	53	41	42	41	50	64	60	73	77	129	101
8	48	53	41	42	41	50	64	60	73	78	129	101
9	49	52	41	41	41	50	64	53	73	77	130	101
10	52	52	41	41	42	50	64	48	75	77	130	85
11	52	52	41	41	43	51	64	48	75	78	130	75
12	52	52	41	42	45	51	64	48	75	79	129	75
13	52	52	41	42	46	50	64	49	75	78	129	75
14	52	52	41	42	44	50	64	49	75	82	129	75
15	52	52	41	41	44	50	64	49	75	78	120	58
16	53	52	41	41	43	50	64	49	75	78	117	47
17	54	52	41	41	42	50	64	49	75	78	116	50
18	54	52	41	41	42	50	64	49	75	79	114	51
19	56	52	41	41	42	50	65	49	75	79	115	51
20	60	52	41	41	43	50	65	49	75	78	115	51
21	60	52	41	41	42	50	65	49	75	78	115	51
22	60	52	41	41	41	50	65	49	75	111	116	51
23	59	52	41	41	40	51	66	49	75	130	118	51
24	58	52	41	41	40	51	69	49	75	130	117	51
25	57	51	41	41	40	51	67	49	74	130	117	51
26	58	51	41	41	44	51	64	49	75	130	117	51
27	56	51	41	41	46	51	64	49	75	129	116	51
28	56	50	40	41	47	52	64	49	76	129	116	51
29	59	49	40	41	49	52	65	49	77	129	117	50
30	62	48	41	41	---	52	66	50	78	129	118	50
31	62	---	41	41	---	52	---	50	---	129	116	---
TOTAL	1817	1550	1283	1278	1234	1565	1927	1603	2234	2914	3785	2117
MEAN	58.6	51.7	41.4	41.2	42.6	50.5	64.2	51.7	74.5	94.0	122	70.6
MAX	87	54	49	42	49	52	69	60	78	130	130	107
MIN	48	48	40	41	40	49	55	48	67	77	114	47
AC-FT	3600	3070	2540	2530	2450	3100	3820	3180	4430	5780	7510	4200

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1966, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	534	516	544	528	519	620	971	2005	3149	1396	636	548
MAX	813	780	2281	1221	1556	1078	2803	5336	7859	4624	1320	1143
(WY)	1949	1939	1951	1965	1965	1916	1952	1919	1911	1911	1939	1939
MIN	13.8	1.52	1.83	2.51	34.2	11.2	507	493	480	279	27.1	5.83
(WY)	1925	1924	1924	1924	1924	1925	1937	1961	1924	1919	1924	1923

SUMMARY STATISTICS

WATER YEARS 1911 - 1966

ANNUAL MEAN	997
HIGHEST ANNUAL MEAN	1724
LOWEST ANNUAL MEAN	516
HIGHEST DAILY MEAN	11400
LOWEST DAILY MEAN	1.3
ANNUAL SEVEN-DAY MINIMUM	1.4
INSTANTANEOUS PEAK FLOW	12900
INSTANTANEOUS PEAK STAGE	13.90
ANNUAL RUNOFF (AC-FT)	722600
10 PERCENT EXCEEDS	2230
50 PERCENT EXCEEDS	721
90 PERCENT EXCEEDS	115

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.8	65.5	65.1	62.1	65.5	68.0	254	1007	1765	752	161	72.9
MAX	164	561	555	319	305	489	1371	3327	5885	5149	1263	125
(WY)	1987	1987	1983	1974	1974	1983	1986	1969	1983	1983	1983	1989
MIN	31.1	33.6	34.1	33.5	31.7	29.9	33.6	49.0	71.2	68.2	66.7	31.6
(WY)	1969	1991	1991	1977	1971	1974	1981	1990	1977	1968	1974	1970

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1968 - 1992

ANNUAL TOTAL	27868	23307	
ANNUAL MEAN	76.4	63.7	366
HIGHEST ANNUAL MEAN			1433
LOWEST ANNUAL MEAN			49.5
HIGHEST DAILY MEAN	151	Aug 18	130
LOWEST DAILY MEAN	33	Jan 2	40
ANNUAL SEVEN-DAY MINIMUM	34	Mar 7	41
INSTANTANEOUS PEAK FLOW			140
INSTANTANEOUS PEAK STAGE			3.75
ANNUAL RUNOFF (AC-FT)	55280	46230	265100
10 PERCENT EXCEEDS	144	115	887
50 PERCENT EXCEEDS	66	52	59
90 PERCENT EXCEEDS	35	41	35

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1987 to current year.

INSTRUMENTATION.--Temperature recorder since August 1987.

REMARKS.--Temperature recorder installed Aug. 13, 1987, located 0.6 mi upstream from gaging station on left bank at road bridge. Water temperature is affected by releases from O'Shaughnessy Dam. Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 14.5°C, Oct. 29-31, 1990; minimum recorded, 4.0°C, Mar. 25, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 12.5°C, July 14, several days in September; minimum recorded, 5.5°C, Feb. 16.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	10.0	11.0	10.0	11.0	9.5	9.0	7.5	7.5	6.5	7.5	7.0
2	11.5	10.5	11.5	9.5	11.0	9.5	9.0	8.0	7.5	6.0	7.0	6.5
3	11.5	10.0	11.5	10.5	11.0	9.5	9.0	8.0	7.5	6.5	7.0	6.5
4	11.0	10.0	11.5	10.0	10.5	9.5	9.0	8.0	7.5	6.5	7.5	6.5
5	11.5	10.0	12.0	10.5	10.5	9.5	8.5	7.0	7.5	6.0	7.5	6.5
6	11.5	10.0	12.0	10.5	10.5	9.5	8.5	7.5	8.0	6.5	7.5	6.5
7	11.5	9.5	12.0	10.5	10.5	9.5	8.5	7.5	7.5	6.5	7.5	6.0
8	11.5	9.5	11.5	10.5	11.0	9.5	8.5	7.0	7.5	6.5	7.5	6.5
9	11.5	9.0	12.0	11.0	10.5	9.5	8.5	7.0	7.5	6.0	8.0	6.5
10	11.0	10.0	11.5	10.5	10.5	9.5	8.5	7.5	7.5	6.0	8.0	6.5
11	11.5	10.0	11.5	10.5	10.5	9.0	8.0	7.0	7.5	6.5	8.0	6.0
12	11.5	10.0	12.0	10.0	10.5	9.0	8.0	6.5	7.0	6.0	8.0	6.5
13	11.5	9.5	11.5	10.5	10.5	9.0	8.0	6.5	7.5	6.5	8.0	6.5
14	11.0	10.0	11.0	10.5	10.5	9.0	8.0	6.5	7.5	6.0	8.0	6.5
15	11.5	10.0	11.0	9.5	10.0	9.0	8.0	7.0	7.0	6.0	7.5	6.5
16	11.5	10.0	11.0	9.5	10.0	8.5	8.0	6.5	7.0	5.5	7.5	6.5
17	11.5	9.5	11.0	10.0	10.0	9.0	8.0	7.0	7.5	6.0	7.5	6.5
18	11.5	10.0	11.0	10.0	10.0	9.0	8.5	7.0	7.5	6.0	8.0	6.5
19	11.5	10.0	11.5	9.5	9.5	8.5	8.0	6.5	7.5	6.0	8.0	6.5
20	11.5	10.0	11.5	10.5	9.5	8.5	8.0	7.0	8.0	6.5	---	---
21	11.5	10.0	11.5	10.0	9.5	8.0	8.0	6.5	7.5	7.0	---	---
22	11.5	10.0	11.5	9.5	10.0	8.5	8.0	6.5	7.5	7.0	---	---
23	11.5	10.5	11.0	10.0	9.5	8.5	7.5	6.5	7.5	6.0	---	---
24	11.0	10.0	11.5	9.5	9.5	8.5	8.0	6.5	7.5	6.5	---	---
25	11.0	10.0	11.5	10.0	9.5	8.0	8.0	6.5	7.0	6.5	---	---
26	11.0	10.0	11.5	10.0	9.5	8.0	8.0	6.5	8.0	6.0	---	---
27	11.5	10.0	11.0	9.5	9.5	8.0	8.0	6.5	8.0	6.5	---	---
28	11.0	9.5	11.0	9.5	9.0	8.0	7.5	6.5	7.0	6.5	---	---
29	11.0	10.0	10.5	9.5	9.0	8.5	7.5	6.0	7.5	6.5	---	---
30	11.0	9.5	11.0	9.5	9.0	8.0	8.0	6.5	---	---	---	---
31	11.0	9.5	---	---	9.0	8.0	8.0	6.5	---	---	---	---
MONTH	11.5	9.0	12.0	9.5	11.0	8.0	9.0	6.0	8.0	5.5	---	---

SAN JOAQUIN RIVER BASIN

11276500 TUOLUMNE RIVER NEAR HETCH-HETCHY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	10.0	8.0	11.0	9.5	11.5	9.5	11.0	10.0	12.0	11.0
2	---	---	9.5	8.0	11.0	9.5	11.5	9.5	11.0	10.0	12.5	10.5
3	---	---	10.0	8.5	11.0	9.0	11.5	10.0	11.0	10.0	12.0	10.5
4	---	---	10.0	8.5	10.5	9.5	11.5	9.5	11.0	10.0	12.0	10.5
5	---	---	10.0	8.5	11.0	9.5	11.5	9.5	11.0	10.0	11.5	10.5
6	---	---	10.5	9.0	11.0	9.5	11.5	9.5	11.0	10.5	11.5	10.5
7	---	---	10.5	9.0	11.0	9.5	11.5	9.5	11.5	10.5	11.5	10.5
8	---	---	10.5	9.0	11.0	9.5	11.0	9.5	11.5	10.0	12.0	10.5
9	---	---	10.5	8.5	11.0	9.5	11.5	10.0	11.5	10.0	12.0	10.5
10	---	---	10.5	8.5	11.0	9.0	11.5	10.0	11.5	10.5	12.0	10.5
11	9.0	7.5	10.5	8.5	11.0	9.0	11.5	10.0	12.0	11.0	12.5	11.0
12	9.0	7.5	11.0	9.5	10.5	9.0	11.0	10.5	12.0	10.5	12.0	10.5
13	9.0	7.5	10.5	9.0	11.0	9.5	12.0	11.0	12.0	11.0	12.0	10.5
14	9.5	7.5	11.0	9.0	10.5	9.5	12.5	10.0	12.0	10.5	12.0	10.5
15	9.0	7.5	10.5	9.5	10.0	9.5	12.0	10.0	12.0	10.5	12.5	11.0
16	9.5	7.5	11.0	9.5	11.0	9.5	12.0	10.5	11.5	10.5	12.0	11.0
17	9.5	8.0	10.5	9.0	11.0	9.5	11.5	10.5	11.5	11.0	12.5	11.0
18	9.0	8.0	10.5	9.0	11.0	9.5	11.5	10.0	11.5	10.5	12.5	11.0
19	9.5	8.0	10.0	9.0	11.0	9.5	11.0	10.0	11.5	10.5	12.5	11.0
20	9.5	8.0	11.0	9.0	11.0	9.5	11.5	10.0	11.5	10.5	12.0	11.0
21	9.0	8.0	11.0	9.0	10.5	9.5	11.5	9.5	11.5	10.5	12.5	11.0
22	9.5	8.0	10.5	8.5	11.0	9.5	11.5	9.5	11.5	10.5	12.5	11.0
23	9.0	7.5	10.5	8.5	11.0	10.0	11.0	9.5	12.0	10.5	12.5	11.0
24	9.5	8.0	10.5	9.0	11.0	9.5	11.0	9.5	11.5	10.5	12.5	11.0
25	9.5	8.0	11.0	9.0	11.5	9.5	11.0	10.0	12.0	10.0	12.5	11.0
26	9.5	8.0	11.5	9.5	11.5	9.5	11.0	10.5	11.5	10.5	12.0	11.0
27	9.5	8.5	11.0	9.5	11.0	9.5	11.0	10.0	12.0	10.5	12.5	10.5
28	9.5	8.5	11.0	9.5	11.5	9.5	11.5	10.0	12.0	11.0	12.5	10.5
29	9.5	8.5	11.5	9.5	10.5	9.5	11.0	10.0	12.0	10.5	12.5	11.5
30	10.0	8.5	11.0	9.5	11.5	9.5	11.0	10.0	12.0	11.0	12.5	11.0
31	---	---	11.0	9.5	---	---	11.0	10.0	12.0	11.0	---	---
MONTH	---	---	11.5	8.0	11.5	9.0	12.5	9.5	12.0	10.0	12.5	10.5

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'46", long 119°56'46", in SE 1/4 SW 1/4 sec.1, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.5 mi upstream from Early Intake, 2.4 mi upstream from Cherry Creek, and 5.0 mi west of Mather.

DRAINAGE AREA.--484 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 2,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 12 mi upstream. Flow diverted upstream from station through tunnel to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s, July 7, 1983, gage height, 21.38 ft; minimum daily, 25 ft³/s, Oct. 11, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1943, reached a stage of 22.1 ft, discharge, 12,900 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 195 ft³/s, July 14, gage height, 13.06 ft; minimum daily, 43 ft³/s, on several days in December.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	66	52	e46	46	68	69	73	53	83	138	120
2	88	55	55	e46	47	67	79	61	78	83	138	107
3	86	53	47	e46	46	67	80	64	77	83	138	106
4	86	53	44	e47	46	70	80	64	77	83	136	106
5	84	57	44	e51	46	70	79	65	77	82	137	106
6	55	56	44	e51	46	111	78	66	77	82	138	106
7	50	56	46	e52	48	96	78	65	77	82	139	106
8	50	56	46	e52	47	84	78	66	77	82	139	105
9	50	56	44	e52	46	78	77	66	77	82	139	105
10	53	55	44	e52	52	74	76	54	77	82	139	103
11	54	55	44	e52	75	72	76	51	78	83	138	77
12	54	55	44	e51	103	70	77	51	78	115	138	75
13	54	55	43	e51	121	68	77	51	78	87	138	75
14	54	54	43	e50	95	67	75	51	78	92	138	75
15	54	54	43	e49	105	71	75	51	79	117	134	73
16	54	54	43	e49	102	75	75	51	79	87	126	51
17	57	59	43	48	97	78	75	52	78	85	122	47
18	58	66	45	48	94	72	75	51	78	84	122	49
19	58	57	45	47	91	69	75	52	78	84	121	49
20	62	56	43	47	117	68	75	52	81	84	122	49
21	64	56	44	47	106	70	75	52	80	82	119	49
22	64	55	44	46	90	70	75	52	79	85	119	49
23	63	55	44	46	80	73	75	52	79	141	123	49
24	60	55	44	46	72	70	76	52	81	138	123	49
25	59	55	43	46	67	68	78	52	83	139	123	49
26	95	55	43	47	63	70	73	52	80	140	123	49
27	77	55	43	47	67	68	72	52	80	140	122	48
28	62	55	49	47	65	73	73	52	80	139	122	49
29	61	54	e47	46	66	68	73	52	83	139	122	48
30	66	52	e47	46	---	69	73	52	88	138	123	48
31	66	---	e46	46	---	73	---	52	---	138	124	---
TOTAL	1999	1675	1396	1497	2146	2267	2272	1729	2345	3161	4023	2177
MEAN	64.5	55.8	45.0	48.3	74.0	73.1	75.7	55.8	78.2	102	130	72.6
MAX	101	66	55	52	121	111	80	73	88	141	139	120
MIN	50	52	43	46	46	67	69	51	53	82	119	47
AC-FT	3970	3320	2770	2970	4260	4500	4510	3430	4650	6270	7980	4320

e Estimated.

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.1	80.5	96.1	105	130	143	308	979	1737	747	174	81.6
MAX	142	552	708	376	341	814	1564	3339	6142	5282	1319	132
(WY)	1987	1987	1983	1974	1974	1983	1983	1982	1983	1983	1983	1989
MIN	33.3	36.6	38.7	39.7	38.5	38.5	39.7	55.8	78.0	74.3	73.7	56.7
(WY)	1989	1991	1991	1977	1977	1977	1977	1992	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	32543		26687			
ANNUAL MEAN	89.2		72.9		386	
HIGHEST ANNUAL MEAN					1584	
LOWEST ANNUAL MEAN					53.5	
HIGHEST DAILY MEAN	227	Mar 25	141	Jul 23	9810	Jul 7 1983
LOWEST DAILY MEAN	37	Feb 21	43	Dec 13	25	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	38	Feb 15	43	Dec 11	27	Oct 11 1988
INSTANTANEOUS PEAK FLOW			195	Jul 14	10700	Jul 7 1983
INSTANTANEOUS PEAK STAGE			13.06	Jul 14	21.38	Jul 7 1983
ANNUAL RUNOFF (AC-FT)	64550		52930		279800	
10 PERCENT EXCEEDS	142		122		945	
50 PERCENT EXCEEDS	93		68		80	
90 PERCENT EXCEEDS	40		46		40	

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1987 to current year.

INSTRUMENTATION.--Temperature recorder since Aug. 12, 1987.

REMARKS.--Temperature recorder located 150 ft upstream from gaging station on right bank. Water temperature is affected by regulation from O'Shaughnessy Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 25.5°C, June 1, 1992; minimum recorded, 0.0°C, Dec. 24, 25, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 25.5°C, June 1; minimum recorded, 3.0°C, Jan. 12-15, 23.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	14.5	10.0	8.5	5.5	4.5	5.0	4.5	7.0	5.5	11.0	9.5
2	16.5	14.5	10.0	8.5	5.5	4.5	5.5	4.0	6.5	5.5	11.0	9.5
3	17.0	15.0	10.5	9.0	5.0	4.5	5.5	5.0	6.0	4.5	10.5	9.5
4	17.0	15.0	11.0	9.0	5.0	4.5	6.0	5.0	6.5	4.5	10.5	8.5
5	17.0	15.0	11.0	9.5	5.5	4.5	6.0	4.5	7.0	5.0	10.0	9.0
6	17.0	15.0	11.5	10.0	6.0	4.5	6.0	5.0	8.0	6.5	9.5	8.5
7	17.5	14.5	12.0	10.5	6.5	6.0	6.0	5.0	8.5	7.0	9.5	7.5
8	17.0	14.5	13.0	11.0	6.5	6.0	5.0	4.5	9.0	7.5	9.0	8.0
9	17.0	14.5	13.0	12.0	6.0	5.5	4.5	4.0	9.0	8.0	10.0	8.0
10	17.0	14.5	12.5	11.5	6.0	5.0	5.5	4.0	8.5	8.0	11.0	8.0
11	16.5	14.5	12.0	10.5	6.0	5.5	4.5	4.0	8.5	7.5	11.5	8.5
12	16.5	14.5	11.5	10.5	5.5	5.0	4.0	3.0	8.0	7.5	12.0	9.0
13	16.5	14.0	11.5	10.0	5.0	4.5	4.0	3.0	7.5	7.0	12.0	9.5
14	16.0	14.0	11.0	9.5	5.5	4.5	4.0	3.0	8.0	6.5	12.0	9.5
15	16.0	14.0	9.5	8.5	5.5	5.0	4.5	3.0	7.0	6.0	11.5	10.0
16	16.0	14.0	9.0	8.0	6.0	4.5	5.0	3.5	6.0	5.5	11.0	9.5
17	16.0	14.0	9.0	8.5	6.5	5.0	5.0	4.0	7.0	5.5	11.5	9.0
18	16.0	13.5	9.0	8.5	7.0	6.5	5.0	4.0	7.5	6.0	11.5	9.0
19	15.5	13.5	8.5	7.5	6.5	5.5	4.5	4.0	8.0	7.0	11.0	9.0
20	15.0	13.5	9.5	8.0	5.5	4.5	4.5	3.5	9.0	7.5	11.0	9.5
21	15.0	13.0	10.0	9.0	5.0	4.5	5.0	4.0	9.5	8.5	11.0	9.5
22	14.5	13.0	9.5	8.5	5.5	4.5	4.5	3.5	10.5	9.0	12.0	9.5
23	14.5	13.0	9.0	8.0	6.0	4.5	4.5	3.0	10.0	8.0	12.0	9.5
24	13.0	11.5	9.0	8.0	5.0	4.5	5.0	3.5	10.5	8.0	12.5	10.0
25	13.0	11.5	9.0	7.5	5.5	4.0	5.5	4.0	10.5	8.0	12.0	10.0
26	12.0	11.0	8.5	7.5	6.0	4.5	5.5	4.5	10.5	8.0	13.0	10.5
27	11.5	10.0	8.5	7.5	6.0	5.0	5.5	4.5	11.0	8.5	14.5	10.5
28	11.0	9.5	7.5	7.0	6.5	6.0	6.5	5.0	11.0	8.5	14.0	11.5
29	10.5	9.5	6.5	5.5	6.5	6.0	6.0	4.5	11.0	9.0	13.5	11.5
30	10.0	8.5	5.5	5.0	6.0	5.5	6.0	4.5	---	---	13.5	11.5
31	10.0	8.0	---	---	5.5	5.0	6.5	5.0	---	---	14.0	11.0
MONTH	17.5	8.0	13.0	5.0	7.0	4.0	6.5	3.0	11.0	4.5	14.5	7.5

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'54", long 119°58'09", in NW 1/4 SW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.6 mi upstream from Cherry Creek, 0.7 mi downstream from Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct, and 6.3 mi west of Mather.

DRAINAGE AREA.--487 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 13 mi upstream and Robert C. Kirkwood powerplant beginning Apr. 26, 1967. Water is diverted to Hetch Hetchy aqueduct from the tailrace of the powerplant through a closed conduit. Flow in excess of aqueduct capacity is diverted to river. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s, June 4, 1969, gage height, 9.82 ft; minimum daily, 12 ft³/s, Nov. 28-30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 205 ft³/s, Aug. 10, gage height, 3.82 ft; minimum daily, 42 ft³/s, many days during December and February.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	60	51	46	44	61	65	e66	49	78	132	115
2	87	56	50	46	43	62	70	e54	58	78	132	101
3	84	53	49	45	43	63	72	e56	71	77	137	101
4	84	50	46	45	43	64	72	e51	70	77	132	101
5	81	49	44	46	43	65	72	e59	70	77	130	99
6	61	49	44	50	43	110	72	e60	72	76	130	99
7	56	50	42	50	42	93	71	60	72	76	131	99
8	54	50	42	51	42	78	69	60	71	76	132	99
9	52	50	42	51	42	73	69	60	71	76	132	98
10	52	50	42	51	43	69	68	54	71	76	133	97
11	52	50	42	51	53	67	68	51	71	77	133	75
12	52	50	42	50	102	65	69	50	71	110	132	71
13	52	50	42	48	128	64	70	50	71	83	132	71
14	52	50	42	47	100	62	70	49	71	82	132	74
15	52	50	42	46	103	64	70	49	72	115	130	71
16	52	50	42	45	103	71	70	49	72	82	116	56
17	53	50	42	45	96	74	70	49	72	80	115	53
18	54	57	42	45	89	69	70	49	73	79	115	52
19	54	55	42	45	82	67	70	49	73	78	114	51
20	55	54	42	45	113	64	71	49	76	78	114	50
21	58	53	42	45	111	64	70	49	75	78	114	50
22	60	53	42	45	86	67	70	49	73	79	114	50
23	61	53	42	45	75	68	70	49	73	134	114	50
24	60	51	42	45	67	68	70	49	74	130	115	49
25	59	51	42	44	64	67	71	49	78	130	115	49
26	93	51	42	44	61	66	68	49	74	130	115	49
27	81	51	42	44	63	64	e66	49	74	131	115	49
28	58	51	43	44	63	67	e66	49	74	132	115	49
29	56	51	45	44	60	64	e68	49	75	132	114	49
30	59	51	47	44	---	64	e68	49	82	132	114	49
31	60	---	47	44	---	69	---	49	---	132	115	---
TOTAL	1941	1549	1348	1436	2047	2133	2085	1613	2149	2971	3814	2126
MEAN	62.6	51.6	43.5	46.3	70.6	68.8	69.5	52.0	71.6	95.8	123	70.9
MAX	97	60	51	51	128	110	72	66	82	134	137	115
MIN	52	49	42	44	42	61	65	49	49	76	114	49
AC-FT	3850	3070	2670	2850	4060	4230	4140	3200	4260	5890	7570	4220

e Estimated.

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	91.4	118	144	169	202	252	418	1153	1915	854	234	131
MAX	247	313	876	462	616	964	1694	3727	6260	5530	1726	370
(WY)	1984	1984	1983	1969	1969	1983	1983	1986	1983	1983	1983	1983
MIN	30.0	34.8	29.4	31.1	34.8	37.5	33.7	52.0	36.9	29.9	31.1	28.7
(WY)	1989	1988	1977	1977	1977	1977	1977	1992	1976	1976	1976	1976

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1968 - 1992		
ANNUAL TOTAL	33026			25212					
ANNUAL MEAN	90.5			68.9			474		
HIGHEST ANNUAL MEAN							1778		
LOWEST ANNUAL MEAN							49.2		
HIGHEST DAILY MEAN	231			Mar 25			10600		
LOWEST DAILY MEAN	35			Feb 21			12		
ANNUAL SEVEN-DAY MINIMUM	36			Feb 21			13		
INSTANTANEOUS PEAK FLOW				205			Aug 10		
INSTANTANEOUS PEAK STAGE				3.82			Aug 10		
ANNUAL RUNOFF (AC-FT)	65510			50010			343100		
10 PERCENT EXCEEDS	151			114			1130		
50 PERCENT EXCEEDS	94			64			132		
90 PERCENT EXCEEDS	38			44			44		

11277200 CHERRY LAKE NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'33", long 119°54'47", in SE 1/4 NW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on upstream face of Cherry Valley Dam on Cherry Creek, 4.2 mi upstream from Eleanor Creek, 7 mi north of Early Intake, and 7.3 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--117 mi².

PERIOD OF RECORD.--August 1956 to current year. Prior to October 1959, published as Lake Lloyd near Hetch Hetchy.

GAGE.--Water-stage recorder. Datum of gage is 2.42 ft above National Geodetic Vertical Datum of 1929. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by a rockfill dam completed in 1956. Storage began in December 1955. Capacity, 274,300 acre-ft between gage heights 4,430 ft, bottom of sluice gates, and 4,703 ft, top of flashboard gates on concrete spillway. No dead storage. Installation of flashboard gates on top of concrete spillway completed in 1979. Water is released down Cherry Creek for power development and domestic supply as part of Hetch Hetchy system of city and county of San Francisco. Unmeasured diversion from Lake Eleanor (station 11277500) into Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake through tunnel to Dion R. Holm powerplant near mouth of Cherry Creek began Aug. 1, 1960. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 274,300 acre-ft, June 25-28, 1986, gage height, 4,703.0 ft; minimum since reservoir first filled, 7,660 acre-ft, Jan. 24, 1960, gage height, 4,502.1 ft. Reservoir drained for inspection in 1961, 1964, and 1989.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 133,100 acre-ft, May 18, gage height, 4,615.23 ft; minimum, 86,500 acre-ft, Sept. 30, gage height, 4,581.03 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 15, 1971)

4,440	0	4,490	3,020	4,560	60,800	4,660	201,100
4,450	75	4,500	6,030	4,580	85,100	4,680	234,100
4,460	250	4,510	11,700	4,600	111,800	4,700	268,800
4,470	675	4,520	19,700	4,620	139,900	4,705	277,900
4,480	1,530	4,540	38,900	4,640	169,700		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e96800	e102000	e104000	e100600	97700	95200	e97500	123300	125100	e110400	105200	92300
2	e98000	e102000	e104000	e100400	97600	95500	e98400	123600	124500	e110300	105000	91800
3	e98700	e102100	e104000	e100400	97000	95300	e99800	123800	123800	e110200	104500	91500
4	e99300	e102100	e103900	e100600	96300	95200	e101000	124100	123200	e110100	104000	91100
5	e100000	e102000	e103900	e100600	95700	95000	e102100	124600	122500	e110000	103500	91000
6	e100600	e102000	e103900	e100400	94900	94700	e102900	125200	121900	e109800	103100	90900
7	e101300	e102000	e104000	e100300	94400	95200	e103600	126500	121600	110000	102600	90800
8	e102000	e101800	e104100	e100000	94300	95800	104600	127400	120800	109200	102500	90100
9	e102500	e101800	e104100	e99900	94300	95600	104900	128200	120100	108200	102400	90000
10	e103000	e102200	e104000	e100000	93900	95400	105200	129400	119200	107300	101800	90400
11	e103300	e102400	e103900	e100000	93500	94900	105400	130000	118400	107000	101100	90700
12	e103400	e102400	e103700	e100300	93100	94900	106200	130500	117600	109100	100100	91600
13	e103600	e102200	e103600	e100400	92800	95000	107600	131100	117100	109600	98900	92400
14	e103600	e102100	e103400	100200	92400	95900	108500	131500	116700	110400	98500	92300
15	e103400	e101800	e103600	100000	92700	96900	109300	131900	116300	111100	98600	91900
16	e103200	e101500	e103400	99900	93000	97200	109600	132200	116000	111300	98500	91400
17	e102800	e101700	e103200	99800	93100	97000	111500	133000	115600	111100	97700	90700
18	e102500	e102000	e102900	99600	92700	96700	113100	133100	115000	110900	97200	90600
19	e102000	e102200	e102800	99600	92300	96500	113900	132800	114500	110900	96600	90600
20	e101700	e102100	e102500	99500	92300	96300	114900	132100	113500	110700	95900	90600
21	e101400	e102200	e102500	99400	92500	96300	115800	131400	113400	110400	95300	89900
22	e101100	e102500	e102200	99200	92900	96900	116300	130700	e113100	110000	95100	89200
23	e100800	e102900	e102000	98900	93400	96700	116400	130000	e112400	109400	94800	88600
24	e100600	e103300	e101500	98800	93600	96400	116400	129800	e111400	108600	94300	88300
25	e100400	e103600	e101300	98800	93700	96100	116900	128900	e111000	108200	93900	88100
26	e101800	e103900	e101000	98800	93800	95800	118200	128200	e110500	108200	93400	88000
27	e102500	e104100	e100800	98600	93800	95600	119100	127600	e110100	107700	92900	87900
28	e102400	e104700	e100700	98400	94000	95800	120100	126900	e109300	107300	92700	87500
29	e102200	e104300	e100700	98200	94600	96200	121400	126400	e109700	106800	92600	87100
30	e102100	e103900	e100700	98100	---	e96600	122800	126100	e110200	106300	92800	86500
31	e102000	---	e100700	97900	---	e96800	---	125900	---	105300	92700	---
MAX	103600	104700	104100	100600	97700	97200	122800	133100	125100	111300	105200	92400
MIN	96800	101500	100700	97900	92300	94700	97500	123300	109300	105300	92600	86500
a	4592.80	4594.20	4591.90	4589.84	4587.31	4589.00	4607.91	4610.13	4598.80	4595.28	4585.79	4581.03
b	+5500	+1900	-3200	-2800	-3300	+2200	+26000	+3100	-15700	-4900	-12600	-6200

CAL YR 1991 b +68700

WTR YR 1992 b -10000

e Estimated.

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'04", long 119°54'59", in SE 1/4 SW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 0.7 mi downstream from Cherry Valley Dam, 3.5 mi upstream from Eleanor Creek, 6.7 mi north of Early Intake, and 7.2 mi west of Hetch Hetchy.

DRAINAGE AREA.--118 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 4,337.08 ft above National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Cherry Lake (station 11277200) 0.7 mi upstream. Diversion between Lake Eleanor (station 11277500) and Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,210 ft³/s, July 10, 1974, gage height, 10.53 ft; minimum daily, 0.77 ft³/s, Dec. 1-4, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s, Aug. 7, gage height, 3.78 ft; minimum daily, 4.4 ft³/s, Oct. 2-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.9	7.9	8.3	6.7	7.5	7.5	7.2	7.0	12	17	15
2	4.4	7.9	7.9	8.3	6.7	7.8	7.5	7.2	7.0	18	17	15
3	4.4	7.9	7.9	8.3	6.4	7.9	7.5	7.2	6.8	18	17	15
4	4.4	7.9	7.9	8.3	6.4	7.7	7.5	7.2	6.8	18	17	15
5	4.4	7.5	7.9	8.5	6.4	7.8	7.5	7.3	6.8	18	19	15
6	4.4	7.5	7.9	8.3	6.5	8.4	7.5	7.2	6.8	18	25	15
7	4.4	7.9	8.2	8.3	6.8	8.3	7.5	7.2	6.8	18	21	15
8	4.4	7.9	8.0	8.3	6.8	8.0	7.5	7.2	6.8	17	17	15
9	4.4	7.9	7.9	8.3	6.8	7.9	7.4	7.2	7.0	17	17	15
10	4.4	7.9	7.9	8.3	7.0	7.9	7.2	7.2	6.8	17	17	15
11	4.4	7.9	7.9	8.3	7.7	7.9	7.2	7.2	6.8	17	17	15
12	4.4	7.8	7.9	8.3	8.5	7.8	7.3	7.2	6.8	18	17	15
13	4.4	7.5	7.9	8.0	8.4	7.5	7.3	7.2	6.6	18	17	15
14	4.4	7.5	7.9	6.9	8.0	7.7	7.2	7.2	6.6	18	16	15
15	4.4	7.8	7.9	7.4	8.1	7.9	7.2	7.2	7.0	18	15	15
16	4.4	7.9	7.9	7.5	7.8	8.0	7.2	7.2	6.8	18	15	15
17	4.4	8.5	7.9	7.5	7.5	7.9	7.2	7.1	6.8	18	15	15
18	4.4	8.3	8.3	7.0	7.5	7.9	7.2	7.2	6.7	18	15	15
19	4.4	7.9	8.1	6.4	7.6	7.8	7.2	7.2	6.6	18	15	15
20	4.4	7.9	7.9	6.4	8.9	7.5	7.2	7.2	6.5	18	16	15
21	4.4	7.9	7.9	6.4	8.5	7.9	7.2	7.2	6.5	18	16	15
22	4.4	7.9	7.9	6.4	8.3	7.9	7.2	7.3	6.5	18	16	15
23	4.4	7.9	7.9	6.4	8.2	7.7	7.2	7.5	6.4	18	16	15
24	4.4	7.9	7.9	6.4	7.9	7.5	7.2	7.5	6.8	18	16	15
25	4.4	7.9	7.9	6.4	7.9	7.6	7.2	7.4	6.6	18	16	15
26	9.1	7.9	7.9	6.4	7.9	7.5	7.2	7.3	6.4	18	17	15
27	4.9	7.8	8.0	6.4	7.8	7.6	7.2	7.2	6.4	18	16	15
28	4.6	7.9	8.3	6.9	7.5	7.5	7.2	7.2	6.4	18	15	15
29	4.6	7.9	8.3	7.2	7.5	7.5	7.2	7.2	6.6	18	15	15
30	6.5	7.9	8.3	6.8	---	7.7	7.2	7.2	6.8	18	16	15
31	7.9	---	8.3	6.8	---	7.5	---	7.2	---	18	16	---
TOTAL	153.2	236.1	247.6	229.4	218.0	241.0	218.8	224.2	201.2	548	517	450
MEAN	4.94	7.87	7.99	7.40	7.52	7.77	7.29	7.23	6.71	17.7	16.7	15.0
MAX	10	8.5	8.3	8.5	8.9	8.4	7.5	7.5	7.0	18	25	15
MIN	4.4	7.5	7.9	6.4	6.4	7.5	7.2	7.1	6.4	12	15	15
AC-FT	304	468	491	455	432	478	434	445	399	1090	1030	893

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	13.7	12.4	12.3	12.2	16.8	15.4	37.1	136	86.9	30.9	23.3
MAX	166	135	155	155	134	171	167	359	1198	993	176	139
(WY)	1978	1977	1977	1977	1977	1969	1969	1978	1983	1983	1977	1977
MIN	4.61	3.99	4.82	4.71	4.51	4.45	4.58	4.40	4.46	10.9	12.0	10.6
(WY)	1973	1970	1970	1961	1961	1972	1990	1973	1973	1978	1961	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1961 - 1992

ANNUAL TOTAL	3338.7	3484.5	
ANNUAL MEAN	9.15	9.52	34.0
HIGHEST ANNUAL MEAN			195
LOWEST ANNUAL MEAN			7.08
HIGHEST DAILY MEAN	23	Mar 4	2640
LOWEST DAILY MEAN	4.4	Oct 2	.77
ANNUAL SEVEN-DAY MINIMUM	4.4	Oct 2	.79
INSTANTANEOUS PEAK FLOW		25	Aug 7
INSTANTANEOUS PEAK STAGE		3.78	Aug 7
ANNUAL RUNOFF (AC-FT)	6620	6910	24650
10 PERCENT EXCEEDS	17	17	18
50 PERCENT EXCEEDS	7.4	7.9	7.3
90 PERCENT EXCEEDS	4.9	6.4	5.0

11277500 LAKE ELEANOR NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'27", long 119°52'48", in SE 1/4 NW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, 710 ft from left bank on upstream side of dam on Eleanor Creek, 1.7 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--78.1 mi².

PERIOD OF RECORD.--June 1918 to current year. Prior to October 1930, published in WSP 1315-A. Published as "near Sequoia" 1919-20.

REVISED RECORDS.--WSP 1445: 1938(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.39 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage on upstream side of dam at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch dam completed in 1918; storage began June 23, 1918. Capacity, 26,110 acre-ft between gage heights 4,620.9 ft, natural outlet of old lake, and 4,660.0 ft, top of 5-ft flashboards. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of Tuolumne River basin.

COOPERATION.--Periodic observations of gage height were provided by city and county of San Francisco.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,000 acre-ft, Dec. 11, 1937, from capacity table then in use, gage height, 4,663.4 ft; no usable contents at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,300 acre-ft, Oct. 1, gage height, 4,645.71 ft; minimum, 599 acre-ft, Sept. 30, gage height, 4,626.15 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 1941)

4,608	0	4,620	36	4,628	1,480	4,646	13,500
4,610	6	4,622	49	4,630	2,450	4,650	17,000
4,612	12	4,624	92	4,632	3,580	4,655	21,500
4,614	18	4,625	211	4,635	5,270	4,660	26,100
4,616	24	4,626	550	4,638	7,330	4,663	29,100
4,618	27	4,627	996	4,642	10,300		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13300	1680	1470	1240	1320	2890	3250	3030	4660	6140	9120	7800
2	11900	1620	1410	1240	1310	2780	3410	2890	4760	6260	9080	7750
3	e10600	1590	1370	1260	1290	2720	3630	2780	4850	6330	9030	7690
4	e9500	1570	e1290	1280	1270	2660	3780	2700	4910	6370	8990	7670
5	e8570	1560	e1240	1340	1260	2640	3740	2650	4980	6390	8950	7620
6	7790	1570	e1240	1360	1250	2650	3560	2640	5010	6400	8910	7570
7	6880	1570	e1240	1390	1270	2570	3400	2760	5050	6400	8870	e7430
8	5880	1550	e1240	1400	1320	2490	3350	2820	5090	6400	8820	e7370
9	4920	1530	e1190	1420	1360	2420	3290	2850	5120	6400	8790	e6840
10	e3970	1520	e1190	1450	1450	2400	3210	2750	5130	6380	8750	e5820
11	3110	1490	e1190	1460	1560	2400	3180	2620	5130	6360	8690	4900
12	2500	1450	e1190	1460	1750	2470	3150	2530	5130	6920	8650	e3800
13	2160	1390	e1140	1450	1870	2570	3610	2460	5150	7390	8610	3010
14	1910	1340	e1140	1440	1920	2690	3690	2400	5150	7960	8570	2430
15	1730	1290	e1140	1430	1990	2790	3570	2350	5150	8490	8520	2080
16	1570	1250	e1090	1430	2020	2790	3390	2290	5170	8770	8490	1840
17	1440	1320	e1090	1430	2020	2670	3520	2240	5200	8980	8450	1650
18	1340	1390	1150	1440	2000	2550	3720	2360	5200	9100	8410	1490
19	1250	1450	1180	1430	1990	2440	3530	2610	5200	9190	8390	1370
20	e1190	1530	1190	1420	2450	2380	3380	2830	5210	9230	8320	1260
21	e1090	1650	1200	1410	2790	2330	3330	3000	5230	9260	8250	1170
22	e1040	1770	1190	1400	3030	2310	3190	e3180	5250	9260	8190	1060
23	e996	1800	1190	1380	3060	2320	3010	3290	5260	9280	8160	996
24	e949	1800	1180	1370	3010	2330	2880	3400	5330	9280	8110	923
25	e996	1770	1170	1370	2990	2330	2850	3520	5370	9280	8080	861
26	1910	1750	1160	1360	3030	2380	2880	3630	5410	9260	8040	809
27	2030	1720	1140	1350	3050	2570	2960	3760	5430	9250	8000	759
28	1990	1660	1160	1340	3060	2870	3000	3890	5440	9240	7950	706
29	1920	1590	1190	1340	3000	3100	3040	4050	5460	9210	7910	645
30	1840	1550	1200	1340	---	3170	3100	4320	5910	9170	7860	599
31	1750	---	1210	1330	---	3110	---	4510	---	9150	7830	---
MAX	13300	1800	1470	1460	3060	3170	3780	4510	5910	9280	9120	7800
MIN	949	1250	1090	1240	1250	2310	2850	2240	4660	6140	7830	599
a	4628.56	4628.16	4627.45	4627.70	4630.98	4631.18	4631.16	4633.66	4635.92	4640.52	4638.65	4626.15
b	-12150	-200	-340	+120	+1670	+110	-10	+1410	+1400	+3240	-1320	-7231

CAL YR 1991 b +1180

WTR YR 1992 b -13301

e Estimated.

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'09", long 119°52'52", in NW 1/4 SW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on right bank 0.5 mi downstream from Lake Eleanor Dam, 1.1 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--78.4 mi².

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Sequoia" 1910-18.

REVISED RECORDS.--WSP 1315-A: 1923(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1909 to November 1915, nonrecording gage and water-stage recorder at site 1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Eleanor (station 11277500) 0.5 mi upstream beginning in 1918. Diversion from Lake Eleanor to Cherry Lake (station 11277200) began in March 1960. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, Nov. 19, 1950, gage height, 14.95 ft, from rating curve extended above 1,600 ft³/s on basis of slope-area measurements at gage heights 9.94 and 12.24 ft; no flow at times in 1910, 1930-31, 1933, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s, Sept. 9, gage height, 2.11 ft; minimum daily, 5.2 ft³/s, Apr. 27 and June 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.5	6.3	7.2	6.3	7.2	6.7	5.9	6.3	13	16	16
2	7.4	8.5	6.3	7.4	6.1	7.2	6.7	5.9	5.7	19	16	17
3	7.2	8.5	6.3	7.6	5.9	7.2	6.7	5.9	5.2	18	16	17
4	8.4	8.5	6.3	6.1	5.9	7.2	6.4	5.9	5.2	18	16	17
5	9.4	8.5	6.3	5.7	5.9	7.4	6.3	6.1	5.2	18	16	18
6	9.1	8.5	6.3	7.6	5.9	8.0	6.3	6.1	5.7	18	16	17
7	8.9	8.5	6.7	7.6	5.9	7.7	6.6	5.9	5.9	17	15	17
8	8.7	8.5	6.7	7.6	5.9	7.3	6.7	5.7	5.9	17	16	17
9	8.5	8.5	6.7	7.6	5.9	7.2	6.3	5.6	5.9	17	16	18
10	8.5	8.5	6.7	7.7	6.7	7.2	6.3	5.6	5.9	17	16	17
11	8.5	8.5	6.4	7.9	8.9	7.2	6.6	5.6	5.9	17	15	18
12	7.9	8.5	6.3	8.1	12	7.2	6.5	5.6	5.9	18	15	18
13	7.6	8.5	6.3	8.1	10	7.2	7.2	5.6	5.9	17	16	17
14	7.6	8.5	6.3	8.1	7.4	7.2	7.0	5.6	5.9	18	17	17
15	7.6	8.5	6.3	8.1	7.2	7.2	6.6	5.6	5.9	18	17	17
16	7.6	8.5	6.3	7.6	6.9	7.2	6.1	5.4	5.9	18	16	17
17	7.6	9.2	6.3	7.2	6.7	7.2	5.9	5.9	5.9	18	16	18
18	7.4	9.5	6.5	7.1	6.7	7.2	6.0	6.3	5.9	17	16	18
19	7.7	8.6	6.7	6.7	6.9	7.2	6.3	6.3	6.1	17	16	18
20	8.1	8.1	6.7	6.7	13	7.2	6.3	6.3	6.5	17	16	17
21	8.1	8.1	6.7	7.0	8.2	7.2	6.3	6.7	6.7	17	15	17
22	8.1	8.1	6.7	6.7	7.4	7.3	6.3	6.7	6.7	16	15	17
23	8.1	8.1	6.7	6.7	6.9	7.6	6.3	6.5	6.7	16	15	17
24	8.1	8.1	6.7	6.7	6.7	7.6	5.9	6.3	7.2	16	16	17
25	7.9	8.1	6.7	6.7	7.0	7.4	5.9	6.3	7.2	16	16	17
26	11	8.1	6.7	6.7	7.2	7.2	5.6	6.3	7.2	16	16	17
27	9.0	7.7	6.7	6.7	7.2	7.5	5.2	6.3	6.9	16	16	17
28	8.7	6.3	6.9	6.5	7.2	6.8	5.6	6.3	6.7	16	16	17
29	8.5	6.3	6.5	6.3	7.2	6.7	5.9	6.3	6.9	16	16	17
30	8.5	6.3	6.7	6.3	---	7.4	5.9	6.3	7.3	16	16	17
31	8.5	---	7.0	6.3	---	7.1	---	6.3	---	16	16	---
TOTAL	259.2	246.6	202.7	220.3	211.1	225.4	188.4	187.1	186.2	524	492	516
MEAN	8.36	8.22	6.54	7.11	7.28	7.27	6.28	6.04	6.21	16.9	15.9	17.2
MAX	11	9.5	7.0	8.1	13	8.0	7.2	6.7	7.3	19	17	18
MIN	7.2	6.3	6.3	5.7	5.9	6.7	5.2	5.4	5.2	13	15	16
AC-FT	514	489	402	437	419	447	374	371	369	1040	976	1020

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1917, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.2	62.5	97.2	208	175	320	610	742	640	190	25.7	8.81
MAX	157	287	358	485	307	516	806	945	1207	484	65.4	25.8
(WY)	1917	1910	1910	1914	1911	1916	1916	1914	1911	1911	1911	1913
MIN	.081	.19	12.4	33.6	66.6	116	264	536	230	36.5	6.06	2.10
(WY)	1916	1916	1912	1913	1912	1912	1912	1913	1910	1910	1910	1915

SUMMARY STATISTICS

WATER YEARS 1910 - 1917

ANNUAL MEAN	259	
HIGHEST ANNUAL MEAN	386	1911
LOWEST ANNUAL MEAN	144	1913
HIGHEST DAILY MEAN	5000	Jan 30 1911
LOWEST DAILY MEAN	.00	Sep 8 1910
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 8 1910
ANNUAL RUNOFF (AC-FT)	187300	
10 PERCENT EXCEEDS	770	
50 PERCENT EXCEEDS	109	
90 PERCENT EXCEEDS	5.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1959, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.0	75.5	105	94.5	134	224	460	696	409	144	98.9	103
MAX	145	931	826	490	454	708	794	1330	981	471	204	179
(WY)	1929	1951	1951	1956	1945	1928	1936	1952	1922	1958	1958	1933
MIN	3.68	1.65	1.74	2.50	6.64	1.70	44.5	138	46.0	20.7	16.4	4.16
(WY)	1932	1928	1932	1957	1930	1920	1924	1931	1924	1959	1959	1931

SUMMARY STATISTICS

WATER YEARS 1920 - 1959

ANNUAL MEAN	218	
HIGHEST ANNUAL MEAN	356	1938
LOWEST ANNUAL MEAN	86.2	1924
HIGHEST DAILY MEAN	8270	Nov 19 1950
LOWEST DAILY MEAN	.00	Oct 15 1930
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 15 1930
INSTANTANEOUS PEAK FLOW	11700	Nov 19 1950
INSTANTANEOUS PEAK STAGE	14.95	Nov 19 1950
ANNUAL RUNOFF (AC-FT)	158200	
10 PERCENT EXCEEDS	584	
50 PERCENT EXCEEDS	113	
90 PERCENT EXCEEDS	8.5	

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.6	39.4	31.2	41.0	48.1	18.3	59.3	230	313	105	25.6	27.2
MAX	333	565	314	459	586	198	916	968	1605	677	176	137
(WY)	1983	1984	1984	1970	1986	1986	1982	1982	1983	1983	1983	1982
MIN	.15	2.54	4.30	4.27	3.76	4.15	4.44	4.81	4.72	12.0	2.43	.40
(WY)	1967	1978	1964	1978	1974	1972	1973	1972	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1961 - 1992

ANNUAL TOTAL	3298.8	3459.0	
ANNUAL MEAN	9.04	9.45	79.8
HIGHEST ANNUAL MEAN			320
LOWEST ANNUAL MEAN			4.73
HIGHEST DAILY MEAN	22	Mar 4	19
LOWEST DAILY MEAN	3.5	May 26	5.2
ANNUAL SEVEN-DAY MINIMUM	4.2	May 25	5.5
INSTANTANEOUS PEAK FLOW			25
INSTANTANEOUS PEAK STAGE			2.11
ANNUAL RUNOFF (AC-FT)	6540	6860	57780
10 PERCENT EXCEEDS	16	17	218
50 PERCENT EXCEEDS	6.7	7.2	7.2
90 PERCENT EXCEEDS	5.6	5.9	4.4

11278200 CHERRY CREEK CANAL NEAR EARLY INTAKE, CA

LOCATION.--Lat 37°53'36", long 119°57'17", in SW 1/4 SW 1/4 sec.36, T.1 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 1.3 mi northeast of Early Intake and 10 mi southwest of Hetch Hetchy Reservoir.

PERIOD OF RECORD.--April 1956 to May 1971, July 1987 to current year.

GAGE.--Water-stage recorder and concrete canal. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from left bank of Cherry Creek in NW 1/4 SW 1/4 sec.31, T.1 N., R.19 E., to supplement Tuolumne River flows exported to city of San Francisco via the Hetch Hetchy Aqueduct. No diversions for export have been made since September 1988. Canal was originally constructed in 1915 to provide flow for domestic use and power development at Early Intake powerplant during initial construction of Hetch Hetchy project facilities.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 194 ft³/s, July 30, 1959; no flow at times in 1964, 1969, 1971, 1988-91.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.09	.00	.01	.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	.01	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.08	.00	.00	.00	.00	.09	.00	.00
13	.00	.00	.00	.00	.04	.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	.13	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
17	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.01	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.17	0.02	0.06	0.09	2.25	0.01	0.00	0.00	0.01	0.09	0.00	0.00
MEAN	.005	.001	.002	.003	.078	.000	.000	.000	.000	.003	.000	.000
MAX	.17	.01	.05	.09	1.9	.01	.00	.00	.01	.09	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.3	.04	.1	.2	4.5	.02	.00	.00	.02	.2	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	37.6	38.8	33.5	33.0	38.8	39.9	48.2	55.5	58.7	63.3	51.0	46.8
MEAN												
MAX	182	189	186	177	180	181	183	184	189	190	182	182
(WY)	1959	1959	1959	1958	1959	1959	1959	1959	1959	1959	1958	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1991	1990	1991	1988	1990	1989	1989	1989	1989	1989	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1956 - 1992

ANNUAL TOTAL	0.66	2.70	
ANNUAL MEAN	.002	.007	43.1
HIGHEST ANNUAL MEAN			179
LOWEST ANNUAL MEAN			.001
HIGHEST DAILY MEAN	.17 Oct 26	1.9 Feb 27	194 Jul 30 1959
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jun 19 1964
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 May 25 1971
ANNUAL RUNOFF (AC-FT)	1.3	5.4	31250
10 PERCENT EXCEEDS	.00	.00	178
50 PERCENT EXCEEDS	.00	.00	8.4
90 PERCENT EXCEEDS	.00	.00	.00

11278300 CHERRY CREEK NEAR EARLY INTAKE, CA

LOCATION.--Lat 37°53'40", long 119°57'42", in NW 1/4 SE 1/4 sec.35, T.1 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 1.2 mi upstream from mouth, 1.3 mi north of Early Intake, and 10.3 mi southwest of Hetch Hetchy.

DRAINAGE AREA.--226 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 2,272.00 ft above National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--Records good. Flow regulated by Cherry Lake (station 11277200) 10 mi upstream and Lake Eleanor (station 11277500) 9.8 mi upstream. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. Water is returned to creek 1.2 mi below station. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s, Feb. 1, 1963, gage height, 14.50 ft, from rating curve extended above 4,600 ft³/s; minimum daily, 0.30 ft³/s, Apr. 5, 6, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94 ft³/s, Feb. 20, gage height, 3.92 ft; minimum daily, 9.9 ft³/s, Oct. 16-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e25	15	14	16	14	36	30	18	15	14	33	32
2	e13	15	14	16	15	35	28	17	14	34	33	31
3	e11	15	14	15	14	37	27	17	13	37	33	31
4	e10	15	14	16	14	36	26	17	13	37	33	31
5	e11	15	14	20	14	35	25	17	13	37	33	32
6	e12	15	14	18	14	57	25	19	13	37	40	31
7	e12	15	16	20	15	54	24	18	13	36	41	31
8	e11	15	16	19	16	48	23	17	13	35	34	31
9	e11	15	15	18	15	44	23	17	13	34	34	31
10	11	15	15	18	20	39	22	16	13	34	34	31
11	10	15	14	18	31	37	22	16	13	34	33	31
12	10	15	14	17	46	34	22	16	13	60	33	32
13	10	15	14	17	49	33	24	16	13	40	33	32
14	10	15	14	16	39	32	22	16	13	39	34	31
15	10	15	14	16	44	36	21	16	13	40	32	31
16	9.9	15	14	16	39	41	20	16	14	38	31	30
17	9.9	20	14	16	34	40	19	15	13	37	31	32
18	9.9	27	16	16	33	36	19	16	13	36	31	32
19	9.9	19	18	15	34	33	19	16	13	36	31	32
20	10	17	15	14	66	31	19	17	13	35	31	32
21	10	16	15	14	77	31	19	17	14	35	33	32
22	10	16	15	14	63	30	19	16	13	34	33	32
23	11	16	14	14	63	33	18	16	13	33	32	31
24	11	16	14	14	52	31	18	16	13	34	32	31
25	11	16	14	14	47	30	18	15	16	33	32	31
26	47	16	14	14	46	30	18	15	14	33	33	31
27	26	16	15	14	41	29	17	15	13	33	33	31
28	15	15	19	14	40	34	17	15	13	33	32	31
29	13	14	22	14	38	30	17	15	13	33	31	31
30	13	14	19	14	---	30	18	15	18	33	31	31
31	15	---	17	14	---	33	---	15	---	33	33	---
TOTAL	408.6	478	471	491	1033	1115	639	503	404	1097	1023	939
MEAN	13.2	15.9	15.2	15.8	35.6	36.0	21.3	16.2	13.5	35.4	33.0	31.3
MAX	47	27	22	20	77	57	30	19	18	60	41	32
MIN	9.9	14	14	14	14	29	17	15	13	14	31	30
AC-FT	810	948	934	974	2050	2210	1270	998	801	2180	2030	1860

e Estimated.

11278300 CHERRY CREEK NEAR EARLY INTAKE, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.4	54.3	59.0	92.1	121	101	130	285	446	181	40.5	38.9
MAX	341	610	390	591	922	399	1298	1342	2845	1699	229	164
(WY)	1983	1984	1965	1970	1986	1983	1982	1982	1983	1983	1983	1978
MIN	2.95	4.85	3.07	3.27	2.70	2.71	2.12	2.16	2.88	9.55	10.3	11.0
(WY)	1961	1961	1977	1977	1977	1977	1977	1977	1977	1977	1963	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	9625.6		8601.6		131	
ANNUAL MEAN	26.4		23.5		634	
HIGHEST ANNUAL MEAN					8.08	
LOWEST ANNUAL MEAN					9350	
HIGHEST DAILY MEAN	138	Mar 4	77	Feb 21		Apr 11 1982
LOWEST DAILY MEAN	9.9	Oct 16	9.9	Oct 16		Apr 5 1964
ANNUAL SEVEN-DAY MINIMUM	9.9	Oct 13	9.9	Oct 13		Oct 6 1970
INSTANTANEOUS PEAK FLOW			94	Feb 20	16500	Feb 1 1963
INSTANTANEOUS PEAK STAGE			3.92	Feb 20	14.50	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	19090		17060		94750	
10 PERCENT EXCEEDS	42		37		319	
50 PERCENT EXCEEDS	22		18		30	
90 PERCENT EXCEEDS	13		13		8.4	

11278400 CHERRY CREEK BELOW DION R. HOLM POWERPLANT, NEAR MATHER, CA

LOCATION.--Lat 37°53'24", long 119°58'08", in NE 1/4 NW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 600 ft upstream from mouth, 0.5 mi downstream from powerplant, 0.8 mi northwest of Early Intake, and 6.2 mi west of Mather.

DRAINAGE AREA.--234 mi².

PERIOD OF RECORD.--March 1963 to current year. Prior to October 1965, published as "below Cherry powerhouse, near Mather."

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,133.50 ft above National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--Records good! Flow regulated by Cherry Lake (station 11277200) 11 mi upstream and Lake Eleanor (station 11277500) 10 mi upstream. Flow diverted, at times, into Cherry Creek Canal (station 11278200) 2 mi upstream from station for domestic use and to supplement flow to Hetch Hetchy aqueduct. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s, Apr. 11, 1982, gage height, 15.36 ft, from rating curve extended above 4,400 ft³/s on basis of combined peak flow for Cherry Creek near Early Intake (station 11278300) and Dion R. Holm powerplant; minimum daily, 1.6 ft³/s, June 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 934 ft³/s, Mar. 6, Sept. 1, gage height, 8.27 ft; minimum daily, 14 ft³/s, Nov. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	187	15	106	208	330	726	910	613	e173	120	265
2	161	215	102	133	95	575	724	910	465	e214	56	242
3	191	65	94	214	349	604	724	911	461	e220	350	217
4	148	228	94	68	352	586	732	911	459	e165	269	210
5	117	251	106	214	428	673	728	909	456	e449	219	35
6	161	238	104	166	438	755	727	907	351	e268	210	33
7	126	247	16	237	432	240	727	906	309	e278	250	68
8	127	240	15	209	237	181	729	909	462	e472	35	372
9	199	184	171	166	102	578	911	907	419	e519	34	352
10	110	17	136	186	446	609	909	376	481	460	330	240
11	166	192	154	67	518	717	910	568	480	192	359	319
12	214	151	149	34	572	546	732	628	474	70	544	34
13	114	159	154	128	543	519	910	560	249	512	564	39
14	105	218	88	160	500	270	906	569	279	296	331	378
15	135	212	17	153	275	144	909	582	161	318	157	318
16	213	250	171	175	131	568	907	483	163	290	121	395
17	213	14	187	198	328	610	910	317	347	342	397	414
18	217	136	240	214	497	659	910	594	e312	195	301	138
19	180	152	208	161	503	537	910	574	e309	56	353	33
20	84	414	154	134	650	517	910	583	e233	259	362	48
21	94	186	103	204	674	288	911	597	e119	202	298	400
22	72	192	209	176	610	207	910	597	e427	260	158	393
23	112	40	209	190	529	607	909	479	e295	395	118	362
24	75	17	176	175	663	582	908	319	e446	398	311	155
25	41	115	215	77	775	600	911	645	e313	187	168	136
26	132	146	226	164	723	592	636	598	e416	35	259	31
27	47	144	218	188	745	737	906	563	e173	271	275	45
28	145	15	291	237	692	731	907	573	e189	212	101	250
29	183	199	50	189	417	738	908	576	e265	308	35	179
30	127	175	133	196	---	733	907	440	e243	226	33	335
31	227	---	127	196	---	733	---	350	---	471	253	---
TOTAL	4474	4999	4332	5115	13432	16766	25364	19751	10369	8713	7371	6436
MEAN	144	167	140	165	463	541	845	637	346	281	238	215
MAX	238	414	291	237	775	755	911	911	613	519	564	414
MIN	41	14	15	34	95	144	636	317	119	35	33	31
AC-FT	8870	9920	8590	10150	26640	33260	50310	39180	20570	17280	14620	12770

e Estimated.

11278400 CHERRY CREEK BELOW DION R. HOLM POWERPLANT, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	454	482	473	609	607	628	720	938	1105	712	531	493
MAX	962	1445	1394	1335	1528	1303	2199	2209	3728	2643	1161	753
(WY)	1983	1984	1984	1970	1986	1983	1982	1982	1983	1983	1983	1968
MIN	18.4	18.4	5.56	4.22	3.84	3.71	2.63	2.67	4.08	11.3	25.8	20.4
(WY)	1965	1988	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	129546		127122			
ANNUAL MEAN	355		347		645	
HIGHEST ANNUAL MEAN					1437	
LOWEST ANNUAL MEAN					47.9	
HIGHEST DAILY MEAN					9790	
LOWEST DAILY MEAN	946	Jul 8	911	Apr 9	1.6	Apr 11 1982
ANNUAL SEVEN-DAY MINIMUM	13	Feb 24	14	Nov 17	2.1	Jun 4 1977
INSTANTANEOUS PEAK FLOW	14	Feb 21	76	Dec 1	16300	Apr 21 1977
INSTANTANEOUS PEAK STAGE			934	Mar 6	15.36	Apr 11 1982
ANNUAL RUNOFF (AC-FT)			8.27	Mar 6	467100	Apr 11 1982
10 PERCENT EXCEEDS	257000		252100			
50 PERCENT EXCEEDS	914		732		1120	
90 PERCENT EXCEEDS	221		250		615	
	17		82		87	

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'18", long 120°00'43", in SE 1/4 SE 1/4 sec.29, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 75 ft downstream from highway bridge on Big Oak Flat Road, 0.5 mi southwest of Oakland Recreation Camp, and 0.6 mi upstream from Middle Tuolumne River.

DRAINAGE AREA.--87.0 mi².

PERIOD OF RECORD.--March 1923 to current year.

REVISED RECORDS.--WSP 1445: 1923, 1925(M), 1926-28, 1929-30(M), 1932(M), 1935-36(M), 1937-38, 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 22, 1931, at site 50 ft upstream at same datum. Nov. 22, 1931, to July 19, 1977, at present site, datum 1.00 ft higher.

REMARKS.--No estimated daily discharge. Records good. No diversion upstream from station. One small recreation reservoir (capacity unknown) is located approximately 3.5 mi upstream. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s, Dec. 23, 1955, gage height, 11.9 ft, from floodmarks, present datum, from rating curve extended above 3,300 ft³/s on basis of slope-area measurements at gage heights 9.08 and 11.9 ft; minimum, 0.3 ft³/s, Aug 23, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	1045	*278	*4.62				

Minimum daily, 1.3 ft³/s, Sept. 25-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	11	9.9	14	15	61	81	102	17	18	5.9	4.3
2	4.7	10	11	14	15	57	92	87	17	15	5.8	4.2
3	4.7	9.7	11	15	13	57	106	83	16	13	5.6	4.2
4	4.6	9.6	10	14	14	58	123	91	15	11	5.4	4.2
5	4.5	9.5	10	18	14	60	109	82	14	11	5.2	4.3
6	4.4	9.6	10	18	14	118	99	83	14	10	5.1	4.2
7	4.4	10	11	18	16	86	99	96	15	9.6	5.1	4.1
8	4.3	10	13	16	20	74	107	78	15	8.9	5.2	3.9
9	4.3	10	12	16	18	64	109	71	14	8.6	5.1	3.9
10	4.2	10	11	16	39	59	107	62	13	8.1	5.1	3.8
11	4.2	11	11	15	105	57	113	54	13	8.2	5.1	3.7
12	4.1	9.8	11	13	189	59	107	50	13	35	5.0	3.7
13	4.0	9.3	10	15	149	61	134	47	13	31	5.0	3.6
14	4.0	9.0	10	14	86	65	145	44	14	21	5.0	3.5
15	4.0	8.7	10	14	95	73	118	41	14	39	5.0	3.5
16	3.9	8.7	9.7	14	72	72	106	38	15	25	4.9	3.5
17	3.9	12	10	14	60	65	123	35	14	19	4.9	3.5
18	3.9	23	12	15	53	58	149	32	13	16	4.9	4.2
19	4.0	17	15	14	49	54	130	26	12	13	4.8	4.1
20	4.0	14	12	14	94	52	139	30	12	12	5.2	3.9
21	4.0	13	11	14	105	55	148	28	12	11	7.0	3.9
22	4.1	13	12	13	88	58	131	26	13	10	6.1	3.8
23	4.5	13	11	13	82	65	106	23	11	9.9	4.7	3.6
24	4.5	13	11	14	69	58	107	22	11	9.5	4.6	1.9
25	4.6	12	11	14	65	55	120	21	12	9.1	4.6	1.3
26	4.3	11	11	14	64	64	129	20	15	8.7	4.6	1.3
27	4.3	12	11	14	64	64	125	20	12	8.0	4.6	1.3
28	18	13	18	14	65	69	122	19	11	7.6	4.5	1.3
29	14	11	28	14	63	74	127	19	11	7.1	4.4	1.3
30	13	10	22	14	---	83	121	18	17	6.8	4.4	1.3
31	13	---	16	14	---	84	---	18	---	6.3	4.4	---
TOTAL	250.6	342.9	381.6	453	1795	2039	3532	1466	408	426.4	157.2	99.3
MEAN	8.08	11.4	12.3	14.6	61.9	65.8	118	47.3	13.6	13.8	5.07	3.31
MAX	43	23	28	18	189	118	149	102	17	39	7.0	4.3
MIN	3.9	8.7	9.7	13	13	52	81	18	11	6.3	4.4	1.3
AC-FT	497	680	757	899	3560	4040	7010	2910	809	846	312	197

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.6	32.1	64.7	87.7	133	156	222	249	125	32.1	12.6	9.57
MAX	50.6	229	516	652	725	750	730	760	656	242	57.9	32.9
(WY)	1983	1951	1956	1969	1986	1983	1982	1969	1983	1983	1983	1983
MIN	1.53	3.66	6.04	8.05	8.74	11.1	15.7	26.0	12.7	2.56	.48	.75
(WY)	1978	1930	1991	1977	1991	1977	1977	1977	1976	1931	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1923 - 1992	
ANNUAL TOTAL	16139.6		11351.0			
ANNUAL MEAN	44.2		31.0		94.0	
HIGHEST ANNUAL MEAN					330	
LOWEST ANNUAL MEAN					9.25	
HIGHEST DAILY MEAN	509	Mar 4	189	Feb 12	6960	Dec 23 1955
LOWEST DAILY MEAN	3.9	Oct 16	1.3	Sep 25	.40	Aug 22 1934
ANNUAL SEVEN-DAY MINIMUM	4.0	Oct 13	1.4	Sep 24	.45	Aug 12 1977
INSTANTANEOUS PEAK FLOW			278	Feb 12	11900	Dec 23 1955
INSTANTANEOUS PEAK STAGE			4.62	Feb 12	11.90	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	32010		22510		68110	
10 PERCENT EXCEEDS	134		94		249	
50 PERCENT EXCEEDS	11		14		30	
90 PERCENT EXCEEDS	5.3		4.2		6.0	

11282000 MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'42", long 120°00'38", in SW 1/4 NW 1/4 sec.28, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 1,000 ft downstream from Oakland Recreation Camp, 0.8 mi upstream from South Fork Tuolumne River, and 2.7 mi east of Buck Meadows Post Office.

DRAINAGE AREA.--73.5 mi².

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A. Published as Middle Fork of Tuolumne River near Buck Meadows 1917-32 and as "near Buck Meadows" 1933-40.

REVISED RECORDS.--WSP 1395: 1919(M), 1938(M), 1951(P). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges and those below 1 ft³/s, which are fair. No regulation but small diversion upstream from station for irrigation. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft³/s, Dec. 23, 1955, gage height, 11.75 ft from flood profile, 11.05 ft from floodmarks inside gage well, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; no flow at times in 1924, 1931, 1934, 1961, 1977, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 25	2330	*235	*3.52				

Minimum daily, 0.01 ft³/s, Sept. 22-24, 26-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	3.7	3.2	5.3	6.2	21	41	e120	16	17	2.5	.38
2	.17	3.2	3.8	5.1	6.0	20	48	e112	15	11	2.0	.21
3	.14	3.0	3.9	5.8	5.1	20	57	e107	13	9.0	1.7	.22
4	.09	3.0	3.9	5.5	5.7	21	71	e111	12	7.3	1.6	.22
5	.08	3.0	3.6	8.1	6.0	29	70	116	11	6.3	1.4	.21
6	.07	3.1	3.6	7.2	6.1	54	64	128	10	5.4	1.2	.28
7	.07	3.1	4.1	7.8	7.0	33	63	127	12	4.9	1.1	.29
8	.16	3.7	5.2	6.5	8.4	28	68	120	15	4.4	.96	.29
9	.18	4.1	4.4	6.1	8.0	23	72	127	14	4.0	.90	.24
10	.17	4.4	4.1	6.5	15	22	73	95	12	3.3	.82	.20
11	.16	5.2	3.9	5.4	51	21	79	87	10	3.3	.73	.18
12	.15	4.7	3.8	4.7	102	22	77	79	9.4	18	.72	.15
13	.10	3.8	3.5	5.2	59	23	87	72	9.7	27	.71	.13
14	.07	3.4	3.5	6.3	25	.25	109	65	10	19	.67	.14
15	.08	3.0	3.7	5.8	76	28	98	58	11	60	.63	.09
16	.17	2.9	3.3	5.8	37	30	91	52	11	38	.54	.06
17	.16	3.6	3.7	5.8	22	27	100	47	10	51	.48	.13
18	.17	6.5	4.7	5.9	17	23	130	42	8.8	28	.49	.05
19	.12	6.7	5.7	5.5	16	22	114	39	8.0	18	.56	.03
20	.05	5.1	4.8	5.5	25	21	122	37	7.8	13	.46	.02
21	.06	5.0	3.3	5.7	26	23	140	35	8.7	11	.41	.02
22	.10	5.4	4.8	5.0	22	25	125	31	9.8	9.1	.38	.01
23	.25	5.2	4.6	4.9	21	25	138	27	7.8	7.9	.36	.01
24	.34	5.0	4.2	5.3	18	23	160	25	7.1	7.1	.32	.01
25	1.0	5.0	3.9	5.8	17	24	175	23	14	6.4	.27	.02
26	10	4.5	4.4	5.7	16	28	172	21	13	5.7	.21	.01
27	e23	4.5	4.4	5.5	18	28	138	20	9.4	5.1	.17	.01
28	e12	4.9	7.1	6.0	20	31	e132	22	7.7	4.4	.12	.01
29	e8.0	4.2	11	5.4	20	36	e140	20	7.3	4.0	.09	.01
30	e6.0	3.6	8.4	5.9	---	40	e133	19	9.7	3.4	.18	.01
31	e4.8	---	6.1	5.8	---	41	---	17	---	2.9	.54	---
TOTAL	68.00	126.5	142.6	180.8	681.5	837	3087	2001	320.2	414.9	23.22	3.64
MEAN	2.19	4.22	4.60	5.83	23.5	27.0	103	64.5	10.7	13.4	.75	.12
MAX	23	6.7	11	8.1	102	54	175	128	16	60	2.5	.38
MIN	.05	2.9	3.2	4.7	5.1	20	41	17	7.1	2.9	.09	.01
AC-FT	135	251	283	359	1350	1660	6120	3970	635	823	46	7.2

e Estimated.

11282000 MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.31	15.8	33.2	42.0	65.7	82.5	153	287	181	33.5	6.38	3.27
MAX	36.9	181	318	248	345	341	476	747	875	361	60.7	23.5
(WY)	1983	1951	1951	1956	1986	1983	1982	1969	1983	1983	1983	1983
MIN	083	.80	1.71	2.49	3.51	4.87	16.9	24.0	10.7	.85	.011	.000
(WY)	1978	1930	1991	1991	1991	1977	1977	1977	1992	1924	1977	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1917 - 1992	
ANNUAL TOTAL	13359.70		7886.36		75.6	
ANNUAL MEAN	36.6		21.5		246	
HIGHEST ANNUAL MEAN					6.49	
LOWEST ANNUAL MEAN					4000	
HIGHEST DAILY MEAN	315	Jun 4	175	Apr 25		Dec 23 1955
LOWEST DAILY MEAN	.05	Oct 20	.01	Sep 22	.00	Sep 4 1924
ANNUAL SEVEN-DAY MINIMUM	.10	Sep 25	.01	Sep 22	.00	Sep 4 1924
INSTANTANEOUS PEAK FLOW			235	Apr 25	4920	Dec 23 1955
INSTANTANEOUS PEAK STAGE			3.52	Apr 25	11.75	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	26500		15640		54790	
10 PERCENT EXCEEDS	122		72		229	
50 PERCENT EXCEEDS	4.6		6.1		18	
90 PERCENT EXCEEDS	.32		.16		1.6	

SAN JOAQUIN RIVER BASIN

11283250 CLAVEY RIVER NEAR LONG BARN, CA

LOCATION.--Lat 38°04'36", long 120°00'37", in NW 1/4 NW 1/4 sec.33, T.3 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 10 ft upstream from Forest Service Road bridge, 0.4 mi downstream from Trout Creek, and 7.0 mi east of town of Long Barn.

DRAINAGE AREA.--48.9 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No storage or diversion upstream from station. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s, Mar. 8, 1989, gage height, 6.97 ft; minimum daily, 0.07 ft³/s, Sept. 9, 15-19, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 13	0700	*636	*4.09	July 12	1000	482	3.63

Minimum daily, 0.31 ft³/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	11	e14	15	18	115	275	184	26	40	5.1	3.6
2	.34	14	e15	15	18	108	310	163	22	24	4.8	3.5
3	.38	17	e14	15	18	127	370	154	19	16	4.6	2.8
4	.37	18	e12	15	17	117	361	154	17	12	4.3	2.6
5	.35	19	e12	16	16	110	295	158	16	11	4.0	2.1
6	.34	25	e12	15	15	103	239	179	15	9.3	3.8	1.8
7	.34	22	11	17	20	91	240	215	18	8.1	3.7	1.6
8	.33	20	e12	18	26	84	261	182	17	6.4	3.5	1.4
9	.34	23	e12	19	26	82	255	163	15	5.4	3.1	1.3
10	.33	26	e12	18	26	90	240	132	13	4.8	3.0	1.2
11	.31	18	e12	21	e40	108	247	119	12	5.1	2.8	1.1
12	.40	14	e12	21	e60	130	227	113	12	232	2.7	1.1
13	.62	12	e12	19	e50	145	478	107	12	88	2.6	1.0
14	.58	11	e12	19	e38	157	313	104	11	71	2.4	1.0
15	.55	10	e11	20	e34	140	261	93	13	63	30	.92
16	.61	8.5	e11	21	e32	121	212	86	14	67	12	.86
17	.63	12	e12	22	e30	104	412	83	14	96	7.4	.89
18	.56	13	e12	21	e28	101	330	74	12	44	5.1	.89
19	.69	15	e16	20	27	101	258	67	10	28	3.9	.86
20	.73	18	e13	20	63	99	289	54	9.3	21	3.3	.80
21	.64	32	e14	20	92	99	279	46	12	17	2.8	.73
22	.71	46	e13	19	130	106	228	44	9.3	15	2.6	.69
23	.99	30	e14	19	144	107	183	41	7.8	13	2.4	.63
24	1.0	25	e12	19	116	107	196	38	9.3	12	2.2	.60
25	1.1	24	e12	19	130	120	229	39	11	11	2.0	.58
26	35	24	e13	20	146	143	251	36	9.3	9.8	1.9	.59
27	19	22	e13	19	148	164	248	32	7.8	8.6	1.7	.59
28	12	18	11	19	146	212	241	60	6.9	7.6	1.6	.50
29	11	e15	12	19	131	210	267	38	8.7	6.9	1.5	.47
30	11	e13	e13	20	---	213	255	31	72	6.3	1.8	.43
31	9.3	---	14	19	---	199	---	30	---	5.8	2.4	---
TOTAL	110.91	575.5	390	579	1785	3913	8250	3019	451.4	965.1	135.0	37.13
MEAN	3.58	19.2	12.6	18.7	61.6	126	275	97.4	15.0	31.1	4.35	1.24
MAX	35	46	16	22	148	213	478	215	72	232	30	3.6
MIN	.31	8.5	11	15	15	82	183	30	6.9	4.8	1.5	.43
AC-FT	220	1140	774	1150	3540	7760	16360	5990	895	1910	268	74

e Estimated.

11283250 CLAVEY RIVER NEAR LONG BARN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.04	9.83	12.7	17.7	39.0	140	229	169	54.1	10.5	1.56	1.75
MAX	44.9	21.8	25.7	40.9	62.7	331	371	362	157	31.1	4.35	7.70
(WY)	1990	1990	1988	1988	1988	1989	1989	1991	1991	1992	1992	1989
MIN	.11	1.04	1.47	2.68	4.95	67.7	151	97.4	15.0	2.12	.30	.11
(WY)	1989	1991	1987	1991	1991	1987	1988	1992	1992	1987	1987	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	25660.73		20211.04			
ANNUAL MEAN	70.3		55.2		57.8	
HIGHEST ANNUAL MEAN					90.3	
LOWEST ANNUAL MEAN					33.6	
HIGHEST DAILY MEAN	717	May 8	478	Apr 13	1470	Mar 8 1989
LOWEST DAILY MEAN	.31	Oct 11	.31	Oct 11	.07	Sep 9 1988
ANNUAL SEVEN-DAY MINIMUM	.33	Oct 5	.33	Oct 5	.07	Sep 13 1988
INSTANTANEOUS PEAK FLOW			636	Apr 13	1990	Mar 8 1989
INSTANTANEOUS PEAK STAGE			4.09	Apr 13	6.97	Mar 8 1989
ANNUAL RUNOFF (AC-FT)	50900		40090		41870	
10 PERCENT EXCEEDS	232		183		182	
50 PERCENT EXCEEDS	12		17		14	
90 PERCENT EXCEEDS	.72		.89		.40	

11283350 REED CREEK NEAR LONG BARN, CA

LOCATION.--Lat 38°00'17", long 120°01'16", in NW 1/4 NE 1/4 sec.29, T.2 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 1.0 mi upstream from Niagara Creek and 8.7 mi southeast of town of Long Barn.

DRAINAGE AREA.--27.2 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,575 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1987, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. No storage or diversion upstream from station. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348 ft³/s, Mar. 8, 1989, gage height, 4.13 ft; minimum daily, 0.25 ft³/s, Sept. 9, 10, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 175 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 13	0530	*166	*3.59				
Minimum daily, 0.32 ft ³ /s, Sept. 30.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	e3.6	4.6	5.0	7.4	44	94	59	10	9.3	2.3	.95
2	.63	e4.2	4.4	4.9	7.1	44	99	55	9.2	7.7	2.2	.78
3	.61	e4.5	4.3	5.0	6.5	55	112	52	8.7	6.3	2.0	.77
4	.60	e5.0	4.1	5.1	7.1	52	113	51	8.3	5.6	1.9	.83
5	.58	e5.6	3.9	5.1	6.8	50	103	49	8.0	5.2	1.8	.74
6	.59	e5.2	3.9	5.9	7.3	49	94	53	7.9	4.8	1.7	.65
7	.57	e4.8	4.4	5.6	10	41	92	52	8.1	4.5	1.7	.59
8	.56	e4.5	4.3	5.2	14	41	93	48	8.0	4.2	1.6	.55
9	.58	e6.0	4.1	5.5	14	39	92	42	7.6	3.8	1.4	.51
10	.59	e3.9	4.0	5.6	13	41	90	36	7.0	3.7	1.4	.49
11	.57	e3.1	3.9	5.5	13	46	90	33	6.6	3.7	1.3	.46
12	.58	e2.8	3.8	5.4	20	53	88	31	6.7	3.1	1.2	.46
13	.59	2.7	3.6	5.6	19	57	140	29	6.9	15	1.1	.46
14	.54	2.6	3.7	5.5	16	60	112	27	6.7	12	1.0	.47
15	.47	2.5	3.5	5.6	9.3	59	99	25	7.8	11	1.1	.45
16	.46	2.4	3.4	5.8	11	55	90	23	8.1	8.9	1.1	.45
17	.47	7.0	3.7	6.2	14	48	103	21	7.3	7.9	.95	.45
18	.60	8.8	7.3	6.2	13	47	100	20	6.3	6.9	.83	.48
19	.65	6.7	5.8	6.3	13	47	91	19	5.9	5.9	.71	.49
20	.66	7.2	4.6	6.4	35	46	93	20	5.7	5.3	.65	.45
21	.61	8.2	4.6	6.4	48	48	92	18	5.6	4.9	.63	.41
22	e.90	8.0	4.5	6.3	41	54	83	17	5.0	4.8	.65	.40
23	e.92	6.7	4.4	6.3	38	55	75	16	4.8	4.4	.66	.36
24	e.98	6.2	4.2	6.3	35	53	74	14	5.8	4.2	.65	.37
25	e2.5	5.9	4.2	6.5	39	60	74	13	7.4	3.9	.60	.38
26	e15	5.7	4.2	6.9	44	69	75	12	5.5	3.6	.63	.38
27	e5.0	5.9	4.1	6.9	46	68	72	11	4.9	3.3	.59	.37
28	e3.2	5.3	4.5	7.4	48	78	72	11	4.5	3.1	.54	.36
29	e3.1	4.5	3.9	7.0	46	79	72	11	5.7	2.9	.52	.34
30	e2.7	3.9	5.2	7.3	---	85	67	10	17	2.7	.58	.32
31	e2.9	---	5.1	7.3	---	86	---	11	---	2.5	1.3	---
TOTAL	49.33	153.4	134.2	186.0	641.5	1709	2744	889	217.0	203.0	35.29	15.17
MEAN	1.59	5.11	4.33	6.00	22.1	55.1	91.5	28.7	7.23	6.55	1.14	.51
MAX	15	8.8	7.3	7.4	48	86	140	59	17	31	2.3	.95
MIN	.46	2.4	3.4	4.9	6.5	39	67	10	4.5	2.5	.52	.32
AC-FT	98	304	266	369	1270	3390	5440	1760	430	403	70	30

e Estimated.

11283350 REED CREEK NEAR LONG BARN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.35	4.24	4.81	7.78	15.9	60.6	83.0	52.5	17.3	5.07	1.26	.94
MAX	12.5	9.15	9.38	14.9	22.3	138	143	137	47.5	10.4	2.61	2.63
(WY)	1990	1990	1990	1988	1988	1989	1989	1991	1991	1991	1991	1989
MIN	.49	1.35	1.48	2.34	3.94	34.0	44.0	20.2	5.03	1.51	.56	.36
(WY)	1989	1991	1991	1991	1991	1987	1988	1987	1987	1987	1988	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	10334.21		6976.89			
ANNUAL MEAN	28.3		19.1		21.4	
HIGHEST ANNUAL MEAN					33.1	
LOWEST ANNUAL MEAN					11.6	
HIGHEST DAILY MEAN	205	May 8	140	Apr 13	293	Mar 8 1989
LOWEST DAILY MEAN	.46	Oct 16	.32	Sep 30	.25	Sep 9 1988
ANNUAL SEVEN-DAY MINIMUM	.53	Oct 11	.36	Sep 24	.26	Sep 8 1988
INSTANTANEOUS PEAK FLOW			166	Apr 13	348	Mar 8 1989
INSTANTANEOUS PEAK STAGE			3.59	Apr 13	4.13	Mar 8 1989
ANNUAL RUNOFF (AC-FT)	20500		13840		15500	
10 PERCENT EXCEEDS	102		62		68	
50 PERCENT EXCEEDS	4.5		5.8		5.9	
90 PERCENT EXCEEDS	.90		.59		.62	

11283500 CLAVEY RIVER NEAR BUCK MEADOWS, CA

LOCATION.--Lat 37°54'02", long 120°04'15", in SW 1/4 NE 1/4 sec.35, T.1 N., R.17 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 300 ft upstream from Forest Service Road bridge, 1.7 mi downstream from Quilty Creek, and 6 mi north of Buck Meadows Post Office.

DRAINAGE AREA.--144 mi².

PERIOD OF RECORD.--October 1959 to September 1983, October 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,374.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft³/s, Jan. 13, 1980, gage height, 21.47 ft, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement at gage height 21.40 ft; minimum daily, 1.2 ft³/s Sept. 11, 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 13	0915	*727	*7.34				
Minimum daily, 3.3 ft ³ /s, Sept. 29, 30.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	20	23	31	36	261	440	284	46	86	12	6.4
2	4.0	22	25	30	34	237	471	241	39	46	11	6.5
3	4.0	25	23	31	31	304	523	227	35	33	10	7.4
4	4.0	28	22	30	34	286	541	226	32	27	9.8	6.9
5	3.9	29	21	43	33	275	486	217	30	23	9.2	6.5
6	3.9	31	21	41	32	333	411	232	28	21	9.0	6.1
7	3.8	33	23	43	40	277	396	268	28	19	8.7	5.6
8	3.8	31	24	39	59	253	414	250	31	17	8.5	5.2
9	3.8	29	22	38	64	234	408	236	29	16	8.3	5.0
10	3.8	34	22	38	87	232	390	181	26	15	8.1	4.7
11	3.8	32	22	35	135	249	394	162	24	14	7.7	4.5
12	3.8	26	21	33	250	281	372	155	23	235	7.2	4.4
13	3.8	22	20	37	257	301	575	144	23	173	6.8	4.3
14	3.8	20	20	35	173	327	499	140	24	108	6.8	4.3
15	3.8	18	20	34	178	320	430	128	24	96	12	4.2
16	3.8	17	18	35	148	293	366	117	28	74	26	4.1
17	3.8	22	19	36	135	254	474	111	28	135	15	3.9
18	3.8	53	27	36	129	235	507	103	25	78	11	3.9
19	3.8	34	36	35	125	228	401	95	22	48	8.7	3.9
20	3.8	30	23	34	281	220	417	88	21	36	7.4	3.9
21	3.8	37	23	36	329	221	432	76	20	30	6.6	3.9
22	3.8	58	25	32	325	243	369	68	21	27	6.1	3.9
23	3.8	50	24	33	337	254	302	63	18	24	5.8	3.7
24	4.1	39	22	34	275	241	303	60	18	22	5.7	3.6
25	4.7	37	21	36	270	250	329	57	21	21	5.6	3.4
26	165	36	22	35	293	306	358	56	22	19	5.5	3.5
27	98	36	21	35	299	313	357	53	19	17	5.3	3.4
28	39	34	34	36	305	384	345	72	17	16	5.2	3.4
29	28	29	51	35	281	390	369	63	18	15	4.9	3.3
30	25	23	41	36	---	413	372	52	71	13	4.7	3.3
31	23	---	34	36	---	390	---	47	---	12	5.3	---
TOTAL	475.2	935	770	1098	4975	8805	12451	4272	811	1516	263.9	137.1
MEAN	15.3	31.2	24.8	35.4	172	284	415	138	27.0	48.9	8.51	4.57
MAX	165	58	51	43	337	413	575	284	71	235	26	7.4
MIN	3.8	17	18	30	31	220	302	47	17	12	4.7	3.3
AC-FT	943	1850	1530	2180	9870	17460	24700	8470	1610	3010	523	272

11283500 CLAVEY RIVER NEAR BUCK MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.1	76.4	155	268	320	417	602	687	334	85.4	23.5	17.6
MAX	226	339	999	1331	1426	1482	2057	1754	1746	566	101	69.4
(WY)	1983	1983	1965	1980	1982	1983	1982	1983	1983	1983	1983	1982
MIN	2.89	7.65	8.67	10.8	15.4	39.0	84.4	117	27.0	5.06	1.66	2.28
(WY)	1978	1991	1991	1991	1991	1977	1977	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1960 - 1992		
ANNUAL TOTAL	47205.1			36509.2					
ANNUAL MEAN	129			99.8			251		
HIGHEST ANNUAL MEAN							771		
LOWEST ANNUAL MEAN							31.0		
HIGHEST DAILY MEAN	923	May	8	575	Apr	13	12000	Feb	16 1982
LOWEST DAILY MEAN	3.8	Oct	7	3.3	Sep	29	1.2	Sep	10 1977
ANNUAL SEVEN-DAY MINIMUM	3.8	Oct	7	3.4	Sep	24	1.3	Sep	7 1977
INSTANTANEOUS PEAK FLOW				727	Apr	13	19400	Jan	13 1980
INSTANTANEOUS PEAK STAGE				7.34	Apr	13	21.47	Jan	13 1980
ANNUAL RUNOFF (AC-FT)	93630			72420			181500		
10 PERCENT EXCEEDS	457			326			648		
50 PERCENT EXCEEDS	24			32			71		
90 PERCENT EXCEEDS	4.4			4.0			8.7		

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA

LOCATION.--Lat 37°50'31", long 120°11'02", in SW 1/4 NE 1/4 sec.23, T.1 S., R.16 E., Tuolumne County, Hydrologic Unit 18040009, on right bank 500 ft upstream from Whites Gulch and 2.5 mi east of Groveland.

DRAINAGE AREA.--16.4 mi².

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

REVISED RECORDS.--WDR CA-85-3: 1980-84(P).

GAGE.--Water-stage recorder. Datum of gage is 2,561.79 ft above National Geodetic Vertical Datum of 1929 (levels by Boise-Cascade Corp.).

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s, Feb. 17, 1986, gage height, 7.03 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement at gage height 6.51 ft; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of 6.4 ft from floodmarks, discharge, 1,850 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	0500	*333	*4.17				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.01	1.2	.44	3.3	2.3	.48	.02	.00	.00	.00
2	.00	.01	.01	.83	.39	3.0	2.0	.46	.01	.00	.00	.00
3	.00	.01	.01	.66	.36	2.8	1.8	.42	.01	.00	.00	.00
4	.00	.01	.01	.57	.36	2.8	1.7	.36	.01	.00	.00	.00
5	.00	.01	.01	2.5	.36	4.3	1.6	.31	.01	.00	.00	.00
6	.00	.01	.01	3.3	.36	30	1.4	.30	.00	.00	.00	.00
7	.00	.01	.01	3.6	.41	13	1.4	.30	.00	.00	.00	.00
8	.00	.01	.01	4.4	.52	9.3	1.3	.29	.00	.00	.00	.00
9	.00	.01	.01	2.6	.56	6.6	1.2	.27	.00	.00	.00	.00
10	.00	.01	.01	1.8	2.5	5.3	1.1	.24	.00	.00	.00	.00
11	.00	.01	.01	1.5	22	4.6	1.1	.21	.00	.00	.00	.00
12	.00	.01	.01	1.2	81	4.2	1.1	.19	.00	.00	.00	.00
13	.00	.01	.01	.91	122	3.7	1.1	.18	.00	.00	.00	.00
14	.00	.01	.01	.81	32	4.5	1.1	.16	.00	.00	.00	.00
15	.00	.01	.01	.76	161	8.4	1.1	.14	.00	.00	.00	.00
16	.00	.00	.01	.75	99	6.2	1.1	.12	.00	.00	.00	.00
17	.00	.01	.01	.75	58	5.3	1.1	.11	.00	.00	.00	.00
18	.00	.02	.01	.75	32	4.4	1.0	.09	.00	.00	.00	.00
19	.00	.01	.01	.71	19	3.9	.94	.08	.00	.00	.00	.00
20	.00	.01	.01	.64	50	3.6	.88	.07	.00	.00	.00	.00
21	.00	.01	.01	.62	28	4.0	.84	.07	.00	.00	.00	.00
22	.00	.01	.01	.57	17	4.6	.78	.06	.00	.00	.00	.00
23	.00	.01	.01	.53	11	4.6	.73	.05	.00	.00	.00	.00
24	.00	.01	.01	.51	7.8	3.7	.70	.05	.00	.00	.00	.00
25	.00	.01	.01	.49	6.0	3.3	.69	.05	.00	.00	.00	.00
26	.04	.01	.01	.49	4.9	2.9	.65	.04	.00	.00	.00	.00
27	.18	.01	.02	.49	4.2	2.8	.62	.03	.00	.00	.00	.00
28	.04	.01	.05	.48	3.8	2.6	.59	.03	.00	.00	.00	.00
29	.02	.01	7.7	.46	3.5	2.4	.55	.03	.00	.00	.00	.00
30	.02	.01	5.9	.44	---	2.4	.52	.03	.00	.00	.00	.00
31	.01	---	2.0	.44	---	2.4	---	.02	---	.00	.00	---
TOTAL	0.31	0.30	15.93	35.76	768.46	164.9	32.99	5.24	0.06	0.00	0.00	0.00
MEAN	.010	.010	.51	1.15	26.5	5.32	1.10	.17	.002	.000	.000	.000
MAX	.18	.02	7.7	4.4	161	30	2.3	.48	.02	.00	.00	.00
MIN	.00	.00	.01	.44	.36	2.4	.52	.02	.00	.00	.00	.00
AC-FT	.6	.6	32	71	1520	327	65	10	.1	.00	.00	.00

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	4.13	8.93	19.2	30.8	23.4	10.9	3.13	.87	.21	.038	.021
MAX	1.05	43.2	80.3	84.8	173	126	74.1	26.2	6.41	2.42	.82	.42
(WY)	1983	1983	1984	1980	1986	1983	1982	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.038	.014	.018	.000	.000	.000	.000
(WY)	1971	1977	1977	1991	1991	1977	1977	1977	1977	1972	1971	1969

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992	
ANNUAL TOTAL	1432.73		1023.95			
ANNUAL MEAN	3.93		2.80		8.35	
HIGHEST ANNUAL MEAN					38.2	
LOWEST ANNUAL MEAN					.011	
HIGHEST DAILY MEAN	267	Mar 25	161	Feb 15	1340	Feb 17 1986
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Aug 27 1969
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Aug 27 1969
INSTANTANEOUS PEAK FLOW			333	Feb 15	2620	Feb 17 1986
INSTANTANEOUS PEAK STAGE			4.17	Feb 15	7.03	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	2840		2030		6050	
10 PERCENT EXCEEDS	2.8		3.9		13	
50 PERCENT EXCEEDS	.01		.01		.26	
90 PERCENT EXCEEDS	.00		.00		.00	

11287500 DON PEDRO RESERVOIR NEAR LA GRANGE, CA

LOCATION.--Lat 37°42'06", long 120°25'16", in NE 1/4 SW 1/4 sec.3, T.3 S., R.14 E., Tuolumne County, Hydrologic Unit 18040009, on left end of New Don Pedro Dam on Tuolumne River, 500 ft downstream from Mexican Gulch, and 3.4 mi northeast of La Grange.

DRAINAGE AREA.--1,533 mi².

PERIOD OF RECORD.--September 1923 to current year. Year-end contents only 1923-24 and October 1924 to September 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). Prior to Feb. 1, 1941, nonrecording gage at site 1.5 mi upstream at same datum. Feb. 2, 1941, to Nov. 3, 1970, water-stage recorder at site 1.5 mi upstream at same datum. Nov. 4, 1970, to Apr. 26, 1972, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed June 23, 1971. Storage began Nov. 3, 1970. Total capacity, 2,030,000 acre-ft at elevation 830.0 ft, top of uncontrolled spillway, of which 309,000 acre-ft below elevation 600.0 ft, mutually agreed-upon minimum, is not available for release. Water passes through powerplant at dam and down Tuolumne River to La Grange Dam, 2.5 mi downstream, where it is diverted into Turlock and Modesto Canals (stations 11289500 and 11289000) for irrigation. This reservoir is operated jointly by Turlock and Modesto Irrigation Districts. Prior to June 1971, reservoir was formed by a concrete gravity-type dam completed Jan. 1, 1923, capacity, 290,400 acre-ft. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,025,000 acre-ft, Aug. 4-6, 13, 1983, elevation, 829.6 ft; minimum, 29,200 acre-ft, Sept. 1-3, 5, 1934; minimum elevation, 475.0 ft, Sept. 1, 2, 1934. Minimum since reservoir first filled, 302,600 acre-ft, Oct. 14, 15, 1977, elevation, 598.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,176,000 acre-ft, Apr. 12-15, elevation, 749.72 ft; minimum, 776,700 acre-ft, Sept. 30, elevation, 696.00 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Modesto and Turlock Irrigation Districts, dated August 1970)

550	158,700	650	517,400	770	1,359,000
570	212,900	680	679,000	800	1,669,000
590	274,800	710	869,700	830	2,030,000
620	384,100	740	1,095,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	945100	934800	955400	977700	1005000	1080000	1161000	1160000	1099000	1013000	907300	812900
2	945100	935500	956100	978500	1005000	1083000	1164000	1159000	1096000	1010000	902400	810700
3	945100	935500	956900	979200	1006000	1086000	1166000	1158000	1093000	1006000	898600	808700
4	944400	936300	957600	980000	1007000	1088000	1169000	1155000	1091000	1004000	894800	807200
5	945100	937000	958300	982200	1007000	1095000	1172000	1154000	1090000	1001000	891500	805300
6	945100	937700	959100	983700	1007000	1101000	1172000	1153000	1090000	998300	887800	803000
7	945100	939200	959100	985200	1009000	1104000	1173000	1152000	1089000	994300	884900	800400
8	944400	939200	959100	986700	1010000	1106000	1173000	1151000	1088000	989500	879800	798000
9	943600	939900	959800	988300	1010000	1110000	1174000	1150000	1086000	985700	875500	795500
10	941400	940700	960600	989000	1011000	1112000	1175000	1148000	1085000	982600	870600	794200
11	939200	941400	961300	989800	1013000	1115000	1175000	1145000	1082000	979200	867600	792800
12	937000	941400	962000	990500	1018000	1118000	1176000	1143000	1080000	976500	864300	791500
13	934100	942900	962800	991300	1022000	1119000	1176000	1143000	1077000	973100	861700	790000
14	931900	943600	963500	992000	1025000	1121000	1176000	1141000	1074000	969300	857600	787900
15	929000	943600	963500	992800	1034000	1124000	1176000	1139000	1071000	965400	853300	786800
16	928300	945100	964300	993600	1038000	1126000	1175000	1137000	1067000	961400	848800	785100
17	927600	945800	965000	995100	1041000	1129000	1174000	1134000	1061000	957400	843300	784400
18	927600	946600	966500	995100	1044000	1130000	1173000	1130000	1058000	953600	839400	784200
19	927600	947300	967200	996600	1046000	1131000	1173000	1129000	1054000	950800	834900	783400
20	926800	948800	968700	997400	1050000	1132000	1172000	1128000	1051000	946900	830800	783200
21	925400	949500	969500	998100	1054000	1134000	1170000	1126000	1047000	944400	829000	781900
22	925400	950200	969500	997400	1056000	1136000	1169000	1124000	1045000	943000	828200	781700
23	924700	951000	970200	998100	1060000	1137000	1168000	1122000	1042000	939600	827200	781900
24	925400	951000	971000	999000	1062000	1139000	1167000	1120000	1038000	935300	825000	782000
25	926100	951700	971000	999600	1065000	1143000	1166000	1119000	1035000	932800	823900	781700
26	929000	953200	971700	1000000	1069000	1145000	1164000	1117000	1033000	928700	822200	781400
27	930500	953200	972500	1001000	1072000	1148000	1161000	1115000	1030000	924400	820400	e780600
28	931200	953900	973200	1002000	1076000	1151000	1160000	1112000	1026000	921000	819600	e779300
29	931900	953900	975500	1003000	1079000	1154000	1160000	1109000	1022000	918600	818100	e778300
30	932600	955400	976200	1003000	---	1156000	1160000	1105000	1018000	914800	816600	e776700
31	934100	---	977000	1004000	---	1160000	---	1101000	---	911500	814300	---
MAX	945100	955400	977000	1004000	1079000	1160000	1176000	1160000	1099000	1013000	907300	812900
MIN	924700	934800	955400	977700	1005000	1080000	1160000	1101000	1018000	911500	814300	776700
a	719.10	722.00	725.00	728.45	738.00	747.90	747.76	740.80	730.25	715.96	701.80	696.00
b	-12500	+21300	+21600	+27000	+75000	+81000	0	-59000	-83000	-106500	-97200	-37600

CAL YR 1991 b -43000

WTR YR 1992 b -169900

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11289000 MODESTO CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°40'21", long 120°28'26", in NE 1/4 SW 1/4 sec.18, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.9 mi northwest of La Grange and 1.7 mi downstream from intake at La Grange Dam.

PERIOD OF RECORD.--April 1903 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1904-9 (monthly figures only).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 267.47 ft above National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). See WSP 1930 for history of changes prior to March 1932. March 1932 to Apr. 27, 1988, at site 1.1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from right bank of Tuolumne River at La Grange Dam for irrigation in Modesto and Waterford Irrigation Districts. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,820 ft³/s, July 1, 1935; no flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	515	10	9.6	9.6	4.7	4.7	450	474	698	610	939	154
2	270	10	9.6	9.6	5.0	4.7	323	578	1000	598	861	281
3	118	9.5	9.6	9.6	5.0	4.7	399	1040	592	588	561	401
4	125	9.1	9.6	9.6	5.0	4.7	464	911	479	559	606	400
5	112	9.1	9.6	10	5.0	5.0	479	670	339	228	596	387
6	109	9.1	9.6	9.6	150	5.0	509	514	148	517	669	448
7	111	9.2	9.4	9.6	22	4.4	684	379	194	628	739	480
8	284	9.1	9.6	9.6	5.9	4.2	628	945	191	877	598	342
9	510	9.1	9.6	90	5.0	4.2	583	584	377	996	687	326
10	607	7.0	9.6	24	3.7	4.2	589	1100	335	628	875	380
11	506	5.2	9.6	7.8	3.9	4.2	536	763	664	556	549	379
12	560	5.2	9.6	7.8	3.7	4.2	629	539	611	575	447	518
13	375	5.1	9.6	7.4	3.7	5.5	665	305	728	671	713	393
14	434	5.1	9.6	7.4	4.2	.07	637	645	755	752	901	483
15	364	5.2	9.6	7.4	5.0	.02	727	725	505	723	828	569
16	389	5.4	9.6	7.4	4.4	.02	879	770	549	738	948	704
17	280	5.5	9.6	7.4	4.4	1.4	605	798	819	694	940	273
18	130	5.5	9.6	7.4	4.4	281	546	943	680	700	834	448
19	98	5.2	9.6	7.4	4.4	549	468	746	912	479	971	296
20	96	5.3	9.6	7.4	4.4	295	691	525	804	543	971	136
21	256	4.9	9.6	61	4.4	97	499	621	570	546	293	626
22	111	4.4	9.6	643	4.4	104	422	914	323	240	189	407
23	99	4.8	9.6	255	4.4	330	475	1010	552	646	183	177
24	102	4.5	9.6	51	4.4	110	693	827	600	903	436	101
25	103	4.9	9.6	4.4	4.4	88	800	583	570	611	215	306
26	102	4.9	9.6	4.4	4.7	295	717	555	573	657	188	258
27	101	4.8	9.6	4.4	4.7	152	970	1040	788	658	375	205
28	104	7.5	9.6	4.7	4.4	95	924	848	617	791	377	585
29	59	9.3	9.6	4.7	4.4	379	965	875	712	464	182	668
30	11	9.6	9.6	4.7	---	90	547	929	633	932	190	480
31	10	---	9.6	4.7	---	439	---	952	---	939	249	---
TOTAL	7051	203.5	297.4	1308.0	294.0	3365.21	18503	23108	17318	20047	18110	11611
MEAN	227	6.78	9.59	42.2	10.1	109	617	745	577	647	584	387
MAX	607	10	9.6	643	150	549	970	1100	1000	996	971	704
MIN	10	4.4	9.4	4.4	3.7	.02	323	305	148	228	182	101
AC-FT	13990	404	590	2590	583	6670	36700	45830	34350	39760	35920	23030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1992, BY WATER YEAR (WY)

	233	108	80.2	52.2	88.2	301	670	843	898	781	624	422
MEAN	233	108	80.2	52.2	88.2	301	670	843	898	781	624	422
MAX	633	579	416	465	407	799	1198	1349	1244	1194	977	901
(WY)	1968	1983	1980	1976	1976	1932	1949	1946	1943	1956	1983	1980
MIN	.000	.000	.000	.000	.000	.000	220	224	450	186	12.1	.000
(WY)	1913	1910	1910	1910	1920	1938	1991	1977	1926	1919	1918	1917

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1909 - 1992

ANNUAL TOTAL	114999.1	121216.11	
ANNUAL MEAN	315	331	428
HIGHEST ANNUAL MEAN			570
LOWEST ANNUAL MEAN			198
HIGHEST DAILY MEAN	1370	Aug 20	1100
LOWEST DAILY MEAN	1.1	Mar 11	.02
ANNUAL SEVEN-DAY MINIMUM	4.4	Apr 1	2.2
ANNUAL RUNOFF (AC-FT)	228100		240400
10 PERCENT EXCEEDS	725		801
50 PERCENT EXCEEDS	285		276
90 PERCENT EXCEEDS	4.9		4.7
			.00

11289500 TURLOCK CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'49", long 120°26'23", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 0.7 mi downstream from intake at La Grange Dam and 1.2 mi east of La Grange.

PERIOD OF RECORD.--October 1898 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1899-1908 (monthly figures only). WSP 1445: 1917-20, 1922.

GAGE.--Electromagnetic flow meter and concrete control. Datum of gage is 274.98 ft above National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). See WSP 1930 for history of changes prior to Apr. 17, 1924. Prior to May 17, 1984, water-stage recorder at site 0.2 mi upstream at datum 2.72 ft higher.

REMARKS.--Records good. Canal diverts from left bank of Tuolumne River at La Grange Dam for irrigation in Turlock Irrigation District and to supply town of La Grange. Capacity of canal increased in March 1980 and in March 1984. During autumn and winter some unmeasured flow is diverted from canal at tunnel 0.3 mi upstream from gage, passed through La Grange powerplant, and returned to river. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,400 ft³/s several days in May 1984; no diversion for irrigation during some periods in some years; prior to 1939, unmeasured small discharge during winter called zero. No flow Jan. 27, 1984, to Mar. 14, 1984, when canal was drained for construction and installation of electromagnetic flow meter and many days during 1989-91.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	477	23	.00	57	54	38	884	486	1370	2000	1640	1170
2	598	21	.00	144	55	50	100	488	1370	1730	1850	1260
3	487	33	.00	103	124	14	33	409	1690	1600	1950	934
4	504	34	.00	72	48	127	447	1670	1090	564	1790	806
5	216	16	.00	73	5.0	102	366	1320	835	1730	1620	887
6	164	14	.00	113	8.9	82	426	1050	531	1290	1810	852
7	273	12	.00	143	14	178	806	1050	576	1810	2060	1110
8	386	13	.00	53	9.5	35	1210	1220	1150	2160	1740	1270
9	587	9.7	.00	112	26	17	922	825	1280	1730	1750	1300
10	807	6.8	.00	54	46	247	1170	1080	955	1910	2180	918
11	1000	26	.00	55	72	429	1310	1530	1120	1720	1800	805
12	1150	3.6	.00	56	e94	478	1160	1580	1510	1290	1780	605
13	1510	8.7	.00	59	e94	419	1320	1180	1180	1970	1590	419
14	1340	11	.00	210	e95	41	1670	1180	1180	1930	2120	763
15	1080	11	.00	87	24	81	1800	1650	1420	2060	1860	624
16	643	10	.00	53	20	480	1770	1350	2090	2080	1880	733
17	558	6.8	.00	50	20	434	1890	1700	2650	1980	2110	575
18	255	35	.00	177	60	499	2110	2340	1350	1920	1620	393
19	272	33	.16	60	34	467	1640	1060	1460	1110	1870	251
20	338	24	38	160	45	463	2320	936	1490	1800	1750	67
21	621	11	56	137	106	465	2260	1280	1730	1380	1020	422
22	447	27	237	95	52	406	2310	1190	1160	887	603	346
23	252	7.8	263	84	50	514	2050	1250	1130	1590	657	330
24	39	11	193	72	11	159	1820	938	1950	1900	967	101
25	28	39	251	88	13	6.0	1760	812	1730	1240	801	151
26	24	6.3	252	138	45	6.6	923	1030	1180	1710	1050	212
27	23	.00	298	64	30	6.9	1330	1260	1330	2030	1120	115
28	56	.00	131	53	14	6.2	582	1830	1430	1790	654	180
29	61	.36	286	51	128	38	515	1700	1690	1260	561	224
30	24	.00	67	53	---	17	517	1660	1930	1740	626	929
31	48	---	68	102	---	292	---	1910	---	1430	1150	---
TOTAL	14268	454.06	2140.16	2828	1397.4	6597.7	37421	38964	41557	51341	45979	18752
MEAN	460	15.1	69.0	91.2	48.2	213	1247	1257	1385	1656	1483	625
MAX	1510	39	298	210	128	514	2320	2340	2650	2160	2180	1300
MIN	23	.00	.00	50	5.0	6.0	33	409	531	564	561	67
AC-FT	28300	901	4250	5610	2770	13090	74220	77290	82430	101800	91200	37190

e Estimated.

11289500 TURLOCK CANAL NEAR LA GRANGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	282	154	137	68.3	116	454	1015	1255	1335	1236	1030	680
MAX	867	1008	1210	467	855	1350	1874	1829	1883	2098	1991	1604
(WY)	1987	1976	1984	1971	1976	1972	1949	1984	1981	1980	1983	1967
MIN	.000	.000	.000	.000	.000	2.72	90.3	27.4	71.0	.000	25.4	.000
(WY)	1901	1901	1900	1900	1905	1973	1900	1977	1900	1914	1901	1901

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1899 - 1992
ANNUAL TOTAL	258208.52	261699.32	
ANNUAL MEAN	707	715	652
HIGHEST ANNUAL MEAN			1082
LOWEST ANNUAL MEAN			54.3
HIGHEST DAILY MEAN	2960	Jul 10	2650
LOWEST DAILY MEAN	.00	Nov 27	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 30	.00
ANNUAL RUNOFF (AC-FT)	512200	519100	472100
10 PERCENT EXCEEDS	1740	1800	1650
50 PERCENT EXCEEDS	402	466	434
90 PERCENT EXCEEDS	12	9.6	.00

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'59", long 120°26'28", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.5 mi downstream from La Grange Dam and 1.1 mi east of La Grange.

DRAINAGE AREA.--1,538 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 170.19 ft above National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District).

REMARKS.--No estimated daily discharges. Records good. Flow diverted into Modesto Canal (station 11289000) and Turlock Canal (station 11289500) at La Grange Dam. Flow regulated by Don Pedro powerplant, Don Pedro Reservoir (station 11287500), 4.5 mi upstream, Hetch Hetchy Reservoir (station 11275500), Cherry Lake (station 11277200), and Lake Eleanor (station 11277500). Tuolumne Canal (station 11297500) diverts water from the Stanislaus River basin into the Tuolumne River basin for power, irrigation, and domestic supply in the vicinity of Sonora, upstream from station. Diversion through Hetch Hetchy aqueduct to San Francisco began Oct. 19, 1934; an average of 264 ft³/s was diverted during the current year. See schematic diagram of Tuolumne River basin. For records of combined discharge of river and Modesto and Turlock canals, see following page.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 10,400 ft³/s, Apr. 24, 1983, gage height, 15.09 ft; no flow for several days during September and October 1977.
Combined flow, maximum daily discharge, 13,800 ft³/s, May 26, 1983; minimum daily, 0.45 ft³/s, Nov. 2, 1970.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,490 ft³/s, May 2, gage height, 6.71 ft; minimum daily, 8.1 ft³/s, May 21, 22.
Combined flow, maximum daily discharge, 2,110 ft³/s, May 3; minimum daily, 119 ft³/s, Nov. 16.

CORRECTIONS.--The maximum discharge for water year 1990 is 886 ft³/s, Oct. 15, 1989, gage height 5.46 ft; the previously published figure was not the maximum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	146	116	115	114	118	118	1090	17	21	20	23
2	22	146	115	117	114	118	118	1150	16	26	20	23
3	21	146	113	118	116	119	122	1070	16	20	20	23
4	21	146	112	117	132	121	119	658	17	19	20	24
5	21	145	112	117	120	122	119	632	16	19	20	25
6	21	145	115	118	125	123	119	605	16	19	21	24
7	22	146	111	119	118	117	119	606	16	19	21	23
8	21	146	110	119	120	117	120	623	15	18	20	22
9	20	144	118	118	122	121	117	618	15	18	20	22
10	24	144	117	123	121	121	118	304	15	17	20	22
11	29	144	115	120	120	125	118	241	15	17	20	22
12	29	146	115	123	122	126	118	80	15	17	19	23
13	29	149	115	124	115	126	118	79	15	17	34	22
14	31	148	115	123	116	123	118	22	15	16	22	23
15	85	126	115	125	116	120	118	10	15	16	21	23
16	81	114	116	120	116	119	118	9.4	15	16	21	22
17	76	115	116	119	115	124	118	9.4	15	16	20	22
18	77	115	117	119	115	127	118	9.1	14	16	20	22
19	187	115	119	117	116	122	130	9.0	22	16	21	23
20	340	116	123	117	116	122	233	8.4	22	16	20	23
21	205	115	121	121	116	119	227	8.1	22	16	23	24
22	146	115	120	121	115	118	224	8.1	22	16	23	26
23	142	115	121	125	115	122	224	8.3	22	16	21	23
24	143	115	121	126	115	121	233	9.6	22	16	21	23
25	142	115	123	119	115	120	394	10	22	16	21	23
26	144	115	119	116	115	120	1060	10	22	16	21	26
27	140	117	118	117	115	120	1060	10	22	16	23	30
28	144	119	116	120	115	120	1070	9.4	20	16	23	24
29	144	114	116	120	116	123	1070	9.2	20	15	23	22
30	143	119	117	132	---	121	1080	9.3	22	17	22	22
31	147	---	117	117	---	120	---	13	---	20	22	---
TOTAL	2819	3901	3614	3722	3406	3755	9138	7938.3	538	539	663	699
MEAN	90.9	130	117	120	117	121	305	256	17.9	17.4	21.4	23.3
MAX	340	149	123	132	132	127	1080	1150	22	26	34	30
MIN	20	114	110	115	114	117	117	8.1	14	15	19	22
AC-FT	5590	7740	7170	7380	6760	7450	18130	15750	1070	1070	1320	1390

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	766	412	950	1392	1430	1532	1294	1124	510	301	157	462
MAX	4187	905	4327	5563	5265	6636	8900	9744	5161	3808	1747	3491
(WY)	1984	1984	1983	1984	1983	1983	1983	1983	1983	1983	1983	1983
MIN	1.02	8.16	10.2	9.78	21.6	93.9	40.9	8.73	8.43	7.46	5.63	4.42
(WY)	1978	1978	1978	1978	1978	1989	1977	1972	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	41145		40732.3			
ANNUAL MEAN	113		111		859	
HIGHEST ANNUAL MEAN					4786	
LOWEST ANNUAL MEAN					84.3	
HIGHEST DAILY MEAN	1190	Apr 29	1150	May 2	10400	Apr 25 1983
LOWEST DAILY MEAN	18	Jun 7	8.1	May 21	.00	Sep 26 1977
ANNUAL SEVEN-DAY MINIMUM	20	Sep 6	8.6	May 17	.00	Oct 12 1977
INSTANTANEOUS PEAK FLOW			1490	May 2	10400	Apr 24 1983
INSTANTANEOUS PEAK STAGE			6.71	May 2	15.09	Apr 24 1983
ANNUAL RUNOFF (AC-FT)	81610		80790		622200	
10 PERCENT EXCEEDS	146		145		2790	
50 PERCENT EXCEEDS	94		115		198	
90 PERCENT EXCEEDS	22		16		11	

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Water temperature can be affected by releases from La Grange Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 29.0°C, Sept. 27, Oct. 15, 1977; minimum recorded, 6.0°C, Feb. 6-8, 10, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 23.0°C, May 28, 30, 31; minimum recorded, 9.5°C, several days in December and January.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11289651 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

TUOLUMNE RIVER, MODESTO CANAL NEAR LA GRANGE, AND TURLOCK CANAL NEAR LA GRANGE,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537	156	126	125	119	123	568	1560	715	631	959	177
2	292	156	125	127	119	123	441	1730	1020	624	881	304
3	139	155	123	128	121	124	521	2110	608	608	581	424
4	146	155	122	127	137	126	583	1570	496	578	626	424
5	133	154	122	127	125	127	598	1300	355	247	616	412
6	130	154	125	128	275	128	628	1120	164	536	690	472
7	133	155	120	129	140	121	803	985	210	647	760	503
8	305	155	120	129	126	121	748	1570	206	895	618	364
9	530	153	128	208	127	125	700	1200	392	1010	707	348
10	631	151	127	147	125	125	707	1400	350	645	895	402
11	535	149	125	128	124	129	654	1000	679	573	569	401
12	589	151	125	131	126	130	747	619	626	592	466	541
13	404	154	125	131	119	131	783	384	743	688	747	415
14	465	153	125	130	120	123	755	667	770	768	923	506
15	449	131	125	132	121	120	845	735	520	739	849	592
16	470	119	126	127	120	119	997	779	564	754	969	726
17	356	120	126	126	119	125	723	807	834	710	960	295
18	207	120	127	126	119	408	664	952	694	716	854	470
19	285	120	129	124	120	671	598	755	934	495	992	319
20	436	121	133	124	120	417	924	533	826	559	991	159
21	461	120	131	182	120	216	726	629	592	562	316	650
22	257	119	130	764	119	222	646	922	345	256	212	433
23	241	120	131	380	119	452	699	1020	574	662	204	200
24	245	119	131	177	119	231	926	837	622	919	457	124
25	245	120	133	123	119	208	1190	593	592	627	236	329
26	246	120	129	120	120	415	1780	565	595	673	209	284
27	241	122	128	121	120	272	2030	1050	810	674	398	235
28	248	126	126	125	119	215	1990	857	637	807	400	609
29	203	123	126	125	120	502	2030	884	732	479	205	690
30	154	129	127	137	---	211	1630	938	655	949	212	502
31	157	---	127	122	---	559	---	965	---	959	271	---
TOTAL	9870	4100	3923	5030	3697	7119	27634	31036	17860	20582	18773	12310
MEAN	318	137	127	162	127	230	921	1001	595	664	606	410
MAX	631	156	133	764	275	671	2030	2110	1020	1010	992	726
MIN	130	119	120	120	119	119	441	384	164	247	204	124
AC-FT	19580	8130	7780	9980	7330	14120	54810	61560	35430	40820	37240	24420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

MEAN	1347	967	1439	1547	1586	2304	2946	3014	2715	2848	2388	1713
MAX	4693	2383	5327	5968	5292	6677	9873	11840	7644	6670	4715	5429
(WY)	1984	1983	1983	1984	1983	1983	1983	1983	1983	1983	1983	1983
MIN	107	35.9	115	76.8	97.8	230	921	262	595	664	606	305
(WY)	1978	1978	1989	1978	1989	1992	1992	1977	1992	1992	1992	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	397438		161934			
ANNUAL MEAN	1089		442		2079	
HIGHEST ANNUAL MEAN					6186	
LOWEST ANNUAL MEAN					442	
HIGHEST DAILY MEAN	3860		2110		13800	
LOWEST DAILY MEAN	116		119		.45	
ANNUAL SEVEN-DAY MINIMUM	120		119		.61	
ANNUAL RUNOFF (AC-FT)	788300		321200		1506000	
10 PERCENT EXCEEDS	2600		922		4450	
50 PERCENT EXCEEDS	662		317		1770	
90 PERCENT EXCEEDS	126		121		223	

11290000 TUOLUMNE RIVER AT MODESTO, CA

LOCATION.--Lat 37°37'38", long 120°59'11", in SE 1/4 SW 1/4 sec.33, T.3 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank at bridge on Ninth Street in Modesto and 0.2 mi downstream from Dry Creek.

DRAINAGE AREA.--1,884 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1878-84, 1891-94, 1897 (gage heights only), January 1895 to December 1896, April 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). Prior to July 11, 1947, at site 1,700 ft downstream at same datum; July 11, 1947, to Nov. 16, 1953, at site 1,000 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by reservoirs and powerplants upstream from station. Several major diversions for power, irrigation, and municipal supply upstream of station, including Modesto and Turlock Canals (stations 11289000 and 11289500). See REMARKS for Tuolumne River below La Grange Dam (station 11289650) and schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD (water years 1895-96, 1941-92).--Maximum discharge observed, 57,000 ft³/s, Dec. 9, 1950, elevation, 69.19 ft; minimum daily, 56 ft³/s, Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,090 ft³/s, Feb. 16, elevation, 45.57 ft; minimum daily, 72 ft³/s, Aug. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	247	183	189	192	e227	190	879	133	108	89	124
2	102	226	183	185	180	e221	186	895	128	112	98	108
3	97	222	181	186	176	e217	205	933	122	107	91	109
4	94	216	181	187	175	e214	222	883	110	112	73	116
5	90	210	179	248	180	e255	219	658	114	119	72	110
6	89	209	178	222	191	e430	224	592	119	107	91	127
7	96	208	198	222	185	e846	225	569	111	104	99	130
8	97	206	179	216	180	e413	219	594	104	100	94	117
9	88	204	173	207	177	e299	221	588	104	127	91	120
10	97	204	172	199	220	e261	231	583	103	109	99	129
11	107	201	177	203	268	e247	241	470	110	101	92	121
12	106	200	179	199	479	239	221	382	108	98	87	125
13	105	208	176	191	e1890	236	214	284	103	106	97	135
14	104	213	175	189	e1040	231	217	226	106	e100	89	127
15	96	214	175	187	e1030	224	211	211	111	e95	101	121
16	111	209	175	188	e2100	217	212	174	116	e91	106	97
17	127	191	175	187	e923	216	221	165	113	e91	108	100
18	139	194	181	185	e593	218	235	151	115	e101	87	107
19	142	187	181	183	e427	223	237	161	112	e93	83	105
20	146	184	178	182	e342	223	237	150	118	e92	93	113
21	247	183	179	181	e395	212	277	138	110	94	88	122
22	286	184	179	180	e349	230	312	126	113	85	89	120
23	230	188	178	183	e296	219	311	123	111	82	99	113
24	212	190	184	185	e270	210	324	141	94	82	108	108
25	208	188	184	187	e251	218	331	147	93	82	102	107
26	303	185	182	186	e239	214	382	137	103	84	98	118
27	260	185	183	183	e230	205	711	138	102	93	107	132
28	234	183	187	189	e222	194	825	125	110	86	101	131
29	240	185	219	194	e218	200	854	133	107	84	118	124
30	236	185	200	195	---	198	858	113	117	84	122	121
31	229	---	194	189	---	199	---	119	---	82	128	---
TOTAL	4827	6009	5648	6007	13418	7956	9573	10988	3320	3011	3000	3537
MEAN	156	200	182	194	463	257	319	354	111	97.1	96.8	118
MAX	303	247	219	248	2100	846	858	933	133	127	128	135
MIN	88	183	172	180	175	194	186	113	93	82	72	97
AC-FT	9570	11920	11200	11910	26610	15780	18990	21790	6590	5970	5950	7020

e Estimated.

11290000 TUOLUMNE RIVER AT MODESTO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	891	1086	1639	1807	1888	1911	1809	1839	1591	590	332	517
MAX	4760	4124	8677	8054	7606	7658	9268	10420	7665	4244	2225	4041
(WY)	1984	1951	1951	1956	1969	1983	1983	1983	1942	1983	1983	1983
MIN	78.2	93.1	110	154	166	199	169	138	94.5	78.8	67.5	72.6
(WY)	1978	1978	1978	1991	1991	1961	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	75827		77294		1313	
ANNUAL MEAN	208		211		5518	
HIGHEST ANNUAL MEAN					185	
LOWEST ANNUAL MEAN					185	
HIGHEST DAILY MEAN	1280	Apr 30	2100	Feb 16	43800	Dec 9 1950
LOWEST DAILY MEAN	66	Jun 16	72	Aug 5	56	Aug 6 1977
ANNUAL SEVEN-DAY MINIMUM	74	Jun 14	84	Jul 30	62	Aug 2 1977
INSTANTANEOUS PEAK FLOW			2530	Feb 16	57000	Dec 9 1950
INSTANTANEOUS PEAK STAGE			44.65	Feb 16	69.19	Dec 9 1950
ANNUAL RUNOFF (AC-FT)	150400		153300		951500	
10 PERCENT EXCEEDS	324		300		3400	
50 PERCENT EXCEEDS	164		181		630	
90 PERCENT EXCEEDS	97		95		178	

11290000 TUOLUMNE RIVER AT MODESTO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1989 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.
 SPECIFIC CONDUCTANCE: October 1988 to current year.
 WATER TEMPERATURE: October 1988 to current year.

PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: Water year 1989 to current year.
 WATER TEMPERATURE: Water year 1989 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1985.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Large variations between daily maximums and minimums may be caused by irrigation return flow or urban runoff.

EXTREMES FOR PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: Maximum recorded, 546 microsiemens, June 24, 1991; minimum recorded, 35 microsiemens, Apr. 29, 1989.
 WATER TEMPERATURE: Maximum recorded, 34.5°C, July 3-5, 1991; minimum recorded, 3.5°C, several days during December 1990.

EXTREMES FOR CURRENT YEAR.--
 SPECIFIC CONDUCTANCE: Maximum recorded, 345 microsiemens, Aug. 5; minimum recorded, 54 microsiemens, Apr. 29.
 WATER TEMPERATURE: Maximum recorded, 34.0°C, July 17; minimum recorded, 6.5°C, Jan. 24.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	153	141	185	179	183	179	203	190	---	---
2	---	---	156	145	230	179	183	181	205	192	---	---
3	---	---	---	---	184	180	186	182	209	196	---	---
4	---	---	---	---	192	180	190	184	200	197	---	---
5	---	---	---	---	211	183	190	149	197	190	---	---
6	---	---	---	---	189	181	151	149	190	182	---	---
7	---	---	---	---	189	181	153	151	182	179	---	---
8	---	---	---	---	204	182	156	153	196	180	---	---
9	---	---	---	---	204	182	160	156	201	192	---	---
10	---	---	---	---	208	184	161	158	207	156	---	---
11	---	---	---	---	193	186	163	157	158	139	---	---
12	---	---	---	---	211	183	165	159	148	139	---	---
13	---	---	---	---	184	181	168	163	---	---	---	---
14	---	---	---	---	184	182	168	164	---	---	---	---
15	---	---	---	---	186	182	169	166	---	---	---	---
16	---	---	---	---	189	184	171	169	---	---	---	---
17	---	---	---	---	189	185	175	169	---	---	---	---
18	---	---	---	---	190	187	176	172	---	---	---	---
19	---	---	---	---	190	188	178	172	---	---	---	---
20	275	265	---	---	190	186	181	176	---	---	---	---
21	271	218	---	---	189	186	181	179	---	---	---	---
22	218	162	---	---	191	187	183	179	---	---	---	---
23	162	126	---	---	191	189	186	181	---	---	---	---
24	127	117	---	---	192	190	186	184	---	---	---	---
25	157	119	---	---	192	188	193	184	---	---	---	---
26	157	113	---	---	189	182	193	189	---	---	---	---
27	142	123	---	---	189	187	193	189	---	---	---	---
28	150	142	212	178	189	187	202	191	---	---	---	---
29	148	138	185	181	194	174	203	197	---	---	---	---
30	145	133	185	179	178	176	197	190	---	---	---	---
31	153	139	---	---	181	176	217	187	---	---	---	---
MONTH	---	---	---	---	230	174	217	149	---	---	---	---

11290000 TUOLUMNE RIVER AT MODESTO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	321	301	324	288	285	270
2	---	---	---	---	---	---	315	288	323	296	286	270
3	---	---	---	---	301	287	304	282	313	278	306	284
4	---	---	---	---	331	280	314	288	332	302	302	283
5	---	---	---	---	337	311	295	248	345	307	307	291
6	---	---	---	---	314	279	272	254	315	262	300	288
7	---	---	---	---	306	277	295	265	278	252	315	300
8	---	---	---	---	326	301	304	292	280	253	303	290
9	---	---	---	---	314	303	320	274	308	280	296	290
10	---	---	---	---	318	293	322	293	322	307	307	287
11	---	---	---	---	303	283	300	287	321	313	312	288
12	---	---	---	---	289	259	299	265	316	300	315	305
13	---	---	---	---	277	242	307	278	327	306	305	287
14	---	---	---	---	264	244	308	280	340	318	299	238
15	---	---	---	---	306	251	293	281	336	291	274	248
16	---	---	---	---	302	270	296	279	317	288	291	252
17	---	---	---	---	281	266	315	293	318	300	302	286
18	---	---	---	---	302	269	302	264	307	285	303	286
19	---	---	---	---	314	282	284	207	319	298	310	289
20	---	---	---	---	293	258	260	234	323	294	315	299
21	---	---	---	---	304	282	279	250	322	283	309	301
22	---	---	---	---	305	286	296	270	340	315	304	291
23	160	140	---	---	311	286	303	279	329	307	302	293
24	153	127	---	---	313	301	294	250	322	305	304	298
25	154	122	---	---	307	288	288	261	323	310	311	303
26	154	107	---	---	308	287	316	284	319	310	308	259
27	113	97	---	---	309	298	319	309	327	312	281	248
28	100	60	---	---	318	297	318	302	322	305	299	267
29	118	54	---	---	328	313	308	288	312	286	308	274
30	---	---	---	---	336	294	327	283	298	282	317	275
31	---	---	---	---	---	---	339	319	291	275	---	---
MONTH	---	---	---	---	---	---	339	207	345	252	317	238

11290000 TUOLUMNE RIVER AT MODESTO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	---	---	15.5	12.5	10.0	7.5	11.5	9.0	13.0	10.0	18.5	15.0
2	27.5	21.0	16.0	13.0	10.5	7.5	9.5	9.0	13.5	10.0	17.5	15.5
3	28.0	21.0	16.0	13.0	10.5	7.5	11.0	9.0	13.5	9.5	19.5	15.5
4	28.0	21.0	16.5	13.0	10.0	7.0	11.5	9.5	13.5	9.5	18.5	12.0
5	27.0	21.0	16.5	13.5	10.0	7.0	11.0	9.5	13.0	10.0	15.5	12.0
6	26.5	20.0	17.0	14.0	10.0	7.0	10.0	9.5	12.0	11.5	17.0	12.0
7	25.5	19.5	17.5	14.5	10.0	8.5	11.0	9.5	13.5	11.0	15.0	10.0
8	25.5	19.5	17.0	15.0	10.5	8.0	11.0	9.0	14.5	12.0	16.5	11.0
9	26.5	19.5	18.0	15.0	10.5	8.0	9.5	9.0	13.5	12.5	17.0	14.5
10	26.5	19.5	18.0	15.0	11.0	8.0	9.5	9.0	13.5	12.0	17.5	14.0
11	25.5	20.5	17.5	14.5	11.0	9.0	10.5	8.5	14.5	11.5	19.0	15.0
12	26.0	20.5	17.5	15.0	10.0	8.5	10.0	7.5	13.5	12.5	19.5	15.5
13	26.0	20.0	17.5	15.0	9.5	9.0	10.0	7.0	13.0	11.5	20.0	16.0
14	26.0	20.0	16.0	13.0	9.0	8.5	10.0	7.5	12.5	11.5	18.0	15.5
15	26.0	19.5	14.5	12.0	9.0	8.5	9.0	8.0	12.5	11.0	18.5	15.0
16	25.5	19.5	14.5	12.0	9.0	7.5	8.5	8.0	11.5	10.5	19.0	15.5
17	24.5	19.0	14.0	13.0	8.5	7.5	9.0	8.0	12.0	11.0	18.5	15.0
18	24.5	19.0	15.0	12.0	11.0	8.5	9.0	8.0	13.0	11.5	19.0	14.0
19	24.0	17.0	14.0	11.0	10.5	8.0	8.5	7.5	13.5	12.5	18.0	15.0
20	23.5	17.5	13.5	11.5	9.5	7.0	9.0	7.5	16.0	13.5	17.5	15.5
21	23.0	19.0	15.0	12.0	10.0	7.0	8.0	7.5	14.5	14.0	19.0	15.5
22	20.5	19.0	14.0	11.0	10.0	7.5	8.0	7.5	16.0	14.5	19.0	16.0
23	20.0	17.0	14.0	11.0	10.5	8.0	7.5	7.0	16.5	14.0	20.5	15.5
24	19.0	15.5	14.0	11.5	10.0	7.5	7.5	6.5	17.5	14.0	20.0	15.5
25	18.5	16.5	14.0	11.0	10.0	7.5	9.5	7.0	18.0	13.0	20.0	16.5
26	17.0	15.5	14.0	11.0	10.0	8.0	10.0	8.0	18.5	11.5	22.0	17.0
27	16.5	14.0	14.0	11.0	10.0	8.5	9.5	8.0	19.0	11.0	22.5	17.0
28	16.0	13.5	12.5	10.0	11.5	9.5	10.5	8.0	18.5	13.5	22.5	17.5
29	16.0	13.5	11.5	9.0	10.5	10.0	11.5	9.0	18.5	15.0	21.0	17.0
30	15.5	13.0	10.5	7.5	11.5	10.0	10.5	9.5	---	---	19.5	17.0
31	16.0	12.5	---	---	11.5	9.0	11.5	9.5	---	---	21.0	17.0
MONTH	---	---	18.0	7.5	11.5	7.0	11.5	6.5	19.0	9.5	22.5	10.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	22.5	17.0	---	---	---	---	29.5	21.0	31.0	22.5	27.5	21.5
2	24.0	17.5	17.5	12.5	---	---	29.5	21.5	31.5	23.0	26.5	21.5
3	24.0	18.0	17.5	15.0	32.0	24.5	30.5	22.5	31.0	23.0	25.5	21.0
4	---	---	18.0	15.5	32.5	24.0	29.0	22.0	31.5	22.0	26.0	20.0
5	---	---	19.0	16.0	31.0	24.5	29.5	21.5	31.0	21.5	26.5	21.0
6	---	---	20.0	17.5	30.0	23.5	28.5	22.0	30.5	22.0	26.5	21.0
7	---	---	20.5	18.0	30.5	23.0	30.5	21.0	30.5	22.5	26.5	21.0
8	---	---	20.0	15.0	31.0	23.0	29.5	23.0	31.0	23.0	26.5	20.5
9	22.5	13.5	19.5	18.0	31.0	23.0	30.5	23.5	31.5	23.0	26.5	21.0
10	23.0	16.0	---	---	30.0	22.5	31.5	24.5	32.0	24.5	26.0	21.0
11	21.5	13.5	21.0	16.0	28.0	21.5	31.0	25.0	32.5	24.5	26.0	21.0
12	20.0	18.0	22.5	18.0	27.0	19.5	30.0	24.5	32.5	24.5	26.0	20.5
13	22.5	16.5	23.0	18.0	27.0	19.5	32.5	24.5	32.0	24.5	26.0	21.0
14	23.0	16.0	23.5	19.0	26.5	19.0	33.0	25.0	31.5	25.0	25.5	20.0
15	---	---	25.0	19.0	21.5	19.5	33.0	25.0	31.5	25.5	24.5	19.5
16	---	---	26.0	19.0	27.0	18.0	32.5	24.5	32.5	25.5	26.0	20.0
17	24.5	17.0	26.5	19.5	28.5	20.5	34.0	25.0	32.0	25.0	25.5	20.5
18	---	---	27.0	19.0	29.0	21.5	32.0	24.0	32.0	24.0	25.5	20.5
19	---	---	26.0	18.0	30.0	22.0	32.0	23.5	32.0	24.0	26.5	21.0
20	---	---	---	---	31.0	23.5	31.0	23.0	31.5	24.0	26.5	21.0
21	22.5	18.5	---	---	32.5	24.0	31.0	22.5	30.0	24.0	27.0	21.0
22	---	---	---	---	32.0	24.0	30.5	22.0	27.5	21.0	26.5	21.5
23	---	---	---	---	27.5	24.0	31.0	22.0	27.5	21.0	27.0	21.5
24	---	---	---	---	31.5	23.0	31.5	22.0	28.5	21.0	26.0	21.5
25	22.5	16.0	---	---	31.0	23.0	32.0	22.5	28.5	21.5	24.5	20.0
26	21.5	18.5	---	---	30.5	22.5	32.0	23.0	29.5	21.5	25.0	19.5
27	20.0	18.0	---	---	30.5	23.0	32.0	23.5	29.0	22.5	26.5	20.5
28	18.5	15.5	---	---	26.0	22.5	33.0	24.0	27.5	23.0	25.5	20.5
29	18.0	15.5	---	---	25.5	22.0	32.0	23.5	26.5	22.0	25.5	21.0
30	18.0	15.5	---	---	28.0	21.5	32.0	23.0	27.0	21.5	26.0	21.0
31	---	---	---	---	---	---	31.0	22.5	27.0	21.0	---	---
MONTH	---	---	---	---	---	---	34.0	21.0	32.5	21.0	27.5	19.5

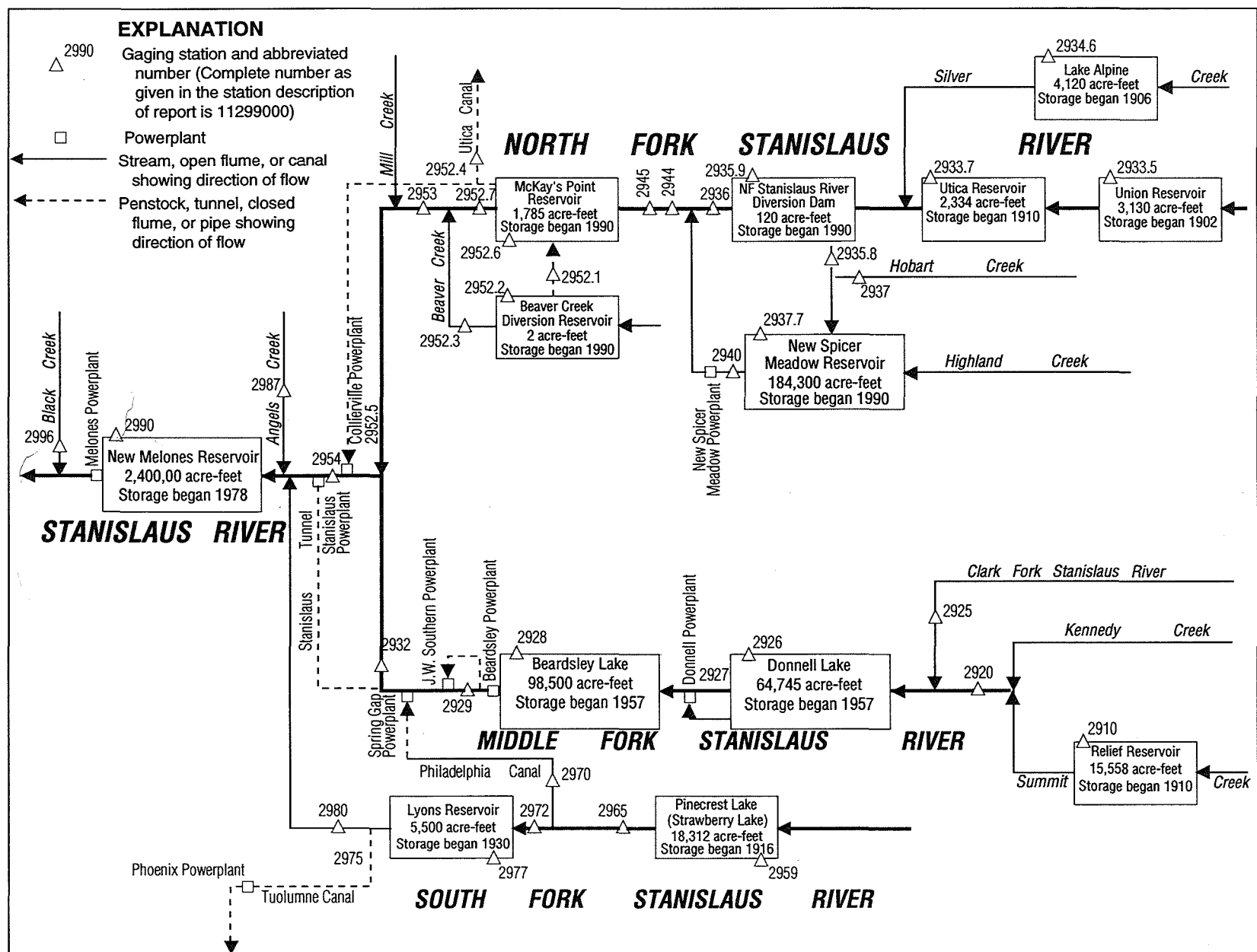


Figure 34. Diversions and storage in Stanislaus River basin.

11291000 RELIEF RESERVOIR NEAR BAKER STATION, CA

LOCATION.--Lat 38°16'52", long 119°43'57", in NW 1/4 SW 1/4 sec.13, T.5 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on dam near spillway (revised), 2.2 mi south of Kennedy Meadows, 3.6 mi southeast of Baker Station, and 7.0 mi southeast of Dardanelle.

DRAINAGE AREA.--24.4 mi².

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1981-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Prior to Dec. 9, 1991, nonrecording gage observed approximately weekly. Datum of gage is 7,200 ft (revised) above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam completed in 1910. Usable capacity, 12,348 acre-ft between gage height -1.37 ft, invert of outlet, and 123 ft, spillway crest. The spillway was lowered from a gage height of 130 ft to 123 ft in October 1990. Figures given represent total contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by the Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 15,558 acre-ft, June 24, 30, July 1, 1989, gage height, 138.03 ft; minimum observed, 33 acre-ft, Jan. 12, 1987, gage height, 6.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,887 acre-ft, May 8, gage height, 124.53 ft; minimum, 1,010 acre-ft, Feb. 9, gage height, 42.60 ft.

Capacity table (gage height, in feet, and contents, in acre-ft)
(Based on survey by Pacific Gas & Electric Co. in 1942)

10	53	50	1605	90	6579
20	105	60	2632	100	8105
30	308	70	3763	110	9947
40	842	80	5105	130	13947

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	1409	1017	1401	2476	10363	12677	12632	11509	5188
2	---	---	2395	1375	1013	1425	2614	10729	12657	12598	11349	5006
3	---	---	---	1334	1014	1453	2784	11104	12645	12572	11160	4820
4	---	1776	---	1301	1012	1472	2954	11467	12630	12544	10922	4642
5	---	---	---	1269	1011	1504	3097	11802	12613	12536	10675	4463
6	---	---	---	1245	1011	1526	3226	12324	12602	12529	10410	4287
7	2885	---	---	1214	1011	1549	3373	12802	12634	12525	10117	4113
8	---	---	---	1184	1011	1569	3533	12887	12706	12523	9848	3931
9	---	---	2151	1153	1010	1587	3701	12813	12640	12518	9621	3763
10	---	---	2120	1124	1013	1605	3871	12794	12604	12514	9387	3596
11	---	---	2089	1095	1019	1628	4045	12813	12589	12553	9160	3431
12	---	1696	2048	1066	1029	1652	4213	12788	12581	12813	8928	3270
13	---	---	2008	1031	1038	1683	4455	12800	12564	12708	8702	3115
14	2540	---	1978	1022	1045	1721	4677	12780	12549	12704	8578	2957
15	---	---	1948	1021	1056	1753	4879	12765	12566	12638	8379	2805
16	---	---	1909	1020	1065	1782	5076	12796	12568	12742	8160	2701
17	---	---	1870	1019	1071	1810	5515	12775	12559	12649	7945	2631
18	---	2190	1842	1018	1077	1833	5848	12752	12549	12606	7745	2554
19	---	---	1813	1018	1082	1856	6110	12700	12546	12581	7552	2476
20	---	---	1776	1019	1097	1875	6421	12670	12542	12559	7353	2402
21	2288	---	1748	1019	1117	1899	6713	12662	12542	12546	7158	2345
22	---	---	1712	1018	1155	1921	6925	12668	12544	12534	6962	2308
23	---	---	1605	1018	1182	1944	7106	12679	12542	12529	6773	2274
24	---	---	1676	1019	1202	1967	7331	12677	12576	12525	6582	2237
25	---	2301	1640	1018	1231	2001	7635	12683	12559	12516	6373	2202
26	---	---	1614	1018	1259	2035	8002	12683	12549	12514	6176	2169
27	---	---	1577	1018	1296	2087	8437	12681	12540	12399	5971	2133
28	1907	---	1532	1018	1334	2146	8893	12775	12529	12193	5776	2109
29	---	---	1505	1018	1371	2216	9470	12723	12634	11992	5581	2096
30	---	---	1478	1017	---	2289	9950	12708	12725	11818	5513	2080
31	---	---	1444	1017	---	2366	---	12685	---	11668	5363	---
MAX	---	---	---	1409	1371	2366	9950	12887	12725	12813	11509	5188
MIN	---	---	---	1017	1010	1401	2476	10363	12529	11668	5363	2080

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA

LOCATION.--Lat 38°17'51", long 119°44'25", in SW 1/4 NE 1/4 sec.11, T.5 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at upper end of Kennedy Meadows, 1.3 mi upstream from Deadman Creek, 1.6 mi downstream from Relief Reservoir, and 5.8 mi southwest of Dardanelle.

DRAINAGE AREA.--47.5 mi².

PERIOD OF RECORD.--October 1938 to current year. Records for water year 1946 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1960, published as "at Kennedy Meadows."

REVISED RECORDS.--WSP 1315-A: 1939(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,326.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Low and medium flow regulated by Relief Reservoir (station 11291000) 1.6 mi upstream. No diversion upstream from station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s, Nov. 20, 1950, gage height, 6.66 ft; maximum gage height, 6.67 ft, May 29, 1983; minimum daily, 7.1 ft³/s, Jan. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 463 ft³/s, July 16, gage height, 4.52 ft; minimum daily, 16 ft³/s, Feb. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	43	23	37	17	32	49	115	182	155	121	119
2	47	45	31	37	17	31	54	97	186	104	120	117
3	47	45	43	37	16	29	65	97	167	79	129	116
4	46	47	43	36	16	29	71	104	156	67	141	115
5	46	49	42	37	18	28	65	111	141	59	140	114
6	46	52	42	37	17	29	59	120	127	52	139	113
7	43	53	43	36	18	27	58	189	113	46	138	112
8	41	54	41	35	18	27	62	347	148	43	137	111
9	41	58	42	36	17	27	63	391	171	40	136	110
10	40	57	42	36	18	27	62	297	130	39	135	109
11	40	52	41	35	19	27	65	288	110	40	134	108
12	40	41	40	35	19	28	63	295	101	308	133	107
13	40	27	40	27	18	30	84	283	81	255	134	105
14	40	25	40	19	18	31	82	285	68	178	136	104
15	39	24	40	18	19	31	80	267	64	161	136	103
16	39	23	40	18	19	31	72	259	67	217	133	84
17	39	24	40	18	18	30	97	279	64	243	131	53
18	39	25	40	18	18	29	111	260	60	146	129	53
19	39	24	38	18	18	29	89	236	59	108	128	52
20	39	27	38	19	23	28	84	176	57	85	127	52
21	39	29	39	18	24	28	89	150	57	70	126	46
22	39	27	39	18	30	28	81	144	57	62	125	33
23	40	26	39	19	27	29	70	150	56	55	124	32
24	39	26	38	18	26	28	67	160	72	50	123	31
25	39	26	38	18	30	30	75	163	72	46	122	31
26	70	26	38	18	33	33	90	177	62	43	121	30
27	48	25	38	18	35	34	101	177	58	84	120	30
28	43	23	38	18	35	37	105	201	57	126	119	28
29	43	22	38	18	33	38	118	237	57	125	119	21
30	42	23	37	17	---	40	137	204	170	124	122	19
31	42	---	37	18	---	43	---	201	---	122	123	---
TOTAL	1322	1048	1208	787	634	948	2368	6460	2970	3332	4001	2258
MEAN	42.6	34.9	39.0	25.4	21.9	30.6	78.9	208	99.0	107	129	75.3
MAX	70	58	43	37	35	43	137	391	186	308	141	119
MIN	39	22	23	17	16	27	49	97	56	39	119	19
AC-FT	2620	2080	2400	1560	1260	1880	4700	12810	5890	6610	7940	4480

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.1	48.2	40.4	30.1	28.6	41.8	91.4	310	435	232	118	125
MAX	226	372	266	85.0	89.0	155	247	626	949	669	328	272
(WY)	1983	1951	1951	1951	1982	1980	1943	1969	1983	1983	1983	1983
MIN	10.4	9.85	10.0	9.23	8.81	12.6	23.7	28.0	68.1	43.1	24.9	12.2
(WY)	1967	1978	1960	1960	1991	1948	1975	1977	1977	1939	1961	1981

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	32574.8		27336		132	
ANNUAL MEAN	89.2		74.7		256	
HIGHEST ANNUAL MEAN					36.4	
LOWEST ANNUAL MEAN					1360	
HIGHEST DAILY MEAN	473	May 30	391	May 9	7.1	May 29 1983
LOWEST DAILY MEAN	7.3	Feb 25	16	Feb 3	7.5	Jan 14 1977
ANNUAL SEVEN-DAY MINIMUM	7.5	Feb 21	17	Jan 29	1700	Feb 21 1991
INSTANTANEOUS PEAK FLOW			463	Jul 16	6.67	Nov 20 1950
INSTANTANEOUS PEAK STAGE			4.52	Jul 16	May 29 1983	
ANNUAL RUNOFF (AC-FT)	64610		54220		95620	
10 PERCENT EXCEEDS	209		150		355	
50 PERCENT EXCEEDS	44		46		57	
90 PERCENT EXCEEDS	12		19		15	

11292500 CLARK FORK STANISLAUS RIVER NEAR DARDANELLE, CA

LOCATION.--Lat 38°21'50", long 119°52'13", in NE 1/4 NE 1/4 sec.22, T.6 N., R.19 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.5 mi upstream from mouth and 2.6 mi northwest of Dardanelle.

DRAINAGE AREA.--67.5 mi².

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,507.3 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,350 ft³/s, Nov. 20, 1950, gage height, 11.88 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 9.8 ft³/s, Sept. 11-15, 26-30, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 17	1230	*435	*4.61				

Minimum daily, 15 ft³/s, several days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	25	e28	44	25	55	98	282	146	61	23	21
2	17	27	e27	43	25	52	113	252	138	47	22	19
3	17	29	e27	41	24	51	138	246	125	42	22	19
4	17	30	30	33	24	50	151	244	116	39	21	19
5	16	35	32	32	24	50	136	242	106	37	21	18
6	17	42	34	40	25	50	128	280	101	35	21	18
7	16	41	30	33	26	47	133	354	96	34	20	17
8	17	42	29	e24	27	46	140	344	88	33	20	17
9	17	50	31	e20	26	45	143	321	81	32	20	17
10	16	45	38	e23	26	47	142	283	76	31	19	16
11	16	37	28	e22	26	50	152	288	71	58	19	16
12	17	34	31	e21	28	53	140	278	71	97	20	16
13	17	33	44	e21	27	57	174	274	66	61	19	16
14	16	31	45	e22	26	59	167	269	64	70	33	16
15	16	28	42	e25	26	58	164	255	69	67	33	16
16	16	28	45	e26	29	56	147	245	67	57	22	16
17	16	32	35	e26	30	53	344	237	63	51	21	16
18	16	30	29	27	27	52	289	230	59	43	19	17
19	16	39	27	e26	27	52	220	208	56	39	19	16
20	16	35	e20	e25	39	51	220	177	54	36	18	16
21	16	42	e22	e24	40	50	231	158	50	34	18	16
22	17	37	e25	e24	56	51	207	158	47	33	18	15
23	19	35	e26	e23	48	50	185	160	45	32	18	15
24	18	35	e25	e25	44	51	194	162	48	31	18	15
25	19	35	e25	e27	47	54	225	166	46	30	18	16
26	50	34	e24	27	53	59	258	161	45	28	17	15
27	28	34	26	26	58	64	273	178	41	27	17	15
28	24	e30	27	26	61	72	301	199	39	26	17	15
29	25	e26	30	28	59	79	343	174	43	25	18	15
30	23	e24	33	34	---	82	338	166	83	25	24	15
31	23	---	38	25	---	81	---	158	---	24	28	---
TOTAL	591	1025	953	863	1003	1727	5894	7149	2200	1285	643	494
MEAN	19.1	34.2	30.7	27.8	34.6	55.7	196	231	73.3	41.5	20.7	16.5
MAX	50	50	45	44	61	82	344	354	146	97	33	21
MIN	16	24	20	20	24	45	98	158	39	24	17	15
AC-FT	1170	2030	1890	1710	1990	3430	11690	14180	4360	2550	1280	980

e Estimated.

11292500 CLARK FORK STANISLAUS RIVER NEAR DARDANELLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.4	50.9	62.6	56.1	64.2	87.4	199	460	479	191	58.2	35.4
MAX	127	440	447	208	196	289	378	1018	1330	862	298	106
(WY)	1983	1951	1951	1980	1982	1986	1989	1969	1983	1983	1983	1983
MIN	12.1	19.6	16.7	19.0	16.7	25.9	71.3	78.6	73.3	23.0	12.7	10.2
(WY)	1978	1991	1977	1977	1991	1977	1977	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1951 - 1992	
ANNUAL TOTAL	28837		23827		148	
ANNUAL MEAN	79.0		65.1		335	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	574	Jun 4	354	May 7	2600	Nov 20 1950
LOWEST DAILY MEAN	13	Jan 27	15	Sep 22	9.8	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	13	Jan 25	15	Sep 22	9.8	Sep 24 1977
INSTANTANEOUS PEAK FLOW			435	Apr 17	4350	Nov 20 1950
INSTANTANEOUS PEAK STAGE			4.61	Apr 17	11.88	Nov 20 1950
ANNUAL RUNOFF (AC-FT)	57200		47260		107400	
10 PERCENT EXCEEDS	211		175		419	
50 PERCENT EXCEEDS	30		33		33	
90 PERCENT EXCEEDS	16		17		22	

SAN JOAQUIN RIVER BASIN

11292600 DONNELL LAKE NEAR DARDANELLE, CA

LOCATION.--Lat 38°19'46", long 119°57'37" unsurveyed, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank in hoist house of Donnell Dam on Middle Fork Stanislaus River, 1.2 mi downstream from Niagara Creek, and 6.9 mi west of Dardanelle.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1960, published as Donnell's Reservoir near Dardanelle.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.84 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Lake is formed by concrete arch-type dam completed in 1957. Usable capacity, 64,745 acre-ft, between gage heights 4,720.0 ft, minimum operating head, and 4,917.0 ft, top of spillway gates. Lake is for power and conservation storage. Water passes through a 7.2-mi tunnel to a powerplant and down the Middle Fork Stanislaus River to Beardsley Lake (station 11292800). Records, including extremes, represent total contents at 2400 hours, of which 2,150 acre-ft is below minimum operating head. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were provided by Oakdale and South San Joaquin Irrigation Districts, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 acre-ft, May 8, 1963, gage height, 4,917.3 ft; minimum since reservoir first filled, 2,220 acre-ft, Apr. 15, 1983, gage height, 4,720.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 61,700 acre-ft, June 2, 3, maximum gage height, 4,909.70 ft, June 3; minimum, 3,140 acre-ft, Mar. 20, gage height, 4,726.70 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Oct. 1, 1956)

4,720	2,150	4,740	5,830	4,780	16,200	4,850	38,700
4,725	2,850	4,750	8,220	4,790	19,100	4,880	49,800
4,730	3,730	4,760	10,800	4,800	22,100	4,917.3	64,900
4,735	4,730	4,770	13,400	4,820	28,400		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31100	18500	17200	11700	10400	8340	5140	33300	61600	50500	40000	25300
2	30500	18000	16800	11800	10500	8010	5450	34000	61700	50000	39800	24800
3	29900	17900	16300	11900	10000	7480	6630	35200	61700	50000	39200	24400
4	29300	17300	15800	12000	10000	6880	7920	36100	61100	49900	38700	24000
5	29300	16900	15400	12200	10200	6440	8980	37000	60500	50100	38100	24200
6	29400	16500	14900	12000	9740	5780	9620	38000	60500	49400	37500	24500
7	28900	16100	15000	11700	9830	6060	10200	39500	60100	48800	37000	24600
8	28300	15600	15200	11300	9970	6410	10600	41300	59700	48100	36400	24700
9	27700	15800	14700	11000	10100	5900	11300	43500	59500	47400	36200	24200
10	27100	16100	14300	10700	9980	5340	11900	45300	59100	46600	35600	23500
11	26500	15700	13800	10800	9820	4880	13000	46700	58600	46000	34900	22700
12	26400	15800	13100	10900	9660	4220	14000	48100	58100	47100	34200	22700
13	26500	16000	12600	10500	9170	3660	14800	49400	57700	47100	33600	22400
14	25900	16100	12700	10100	8640	4100	15700	50700	57100	46900	33000	21700
15	25300	16200	12800	9570	8600	4620	16400	51900	56600	46800	32400	21000
16	24700	16300	12400	8930	8750	4450	17000	53400	56000	46700	32200	20200
17	24200	16500	11900	8840	8770	4120	18500	54900	55500	46800	31700	19400
18	23600	16600	11400	8940	8170	3820	20300	55700	55000	46400	31100	18500
19	23500	16800	10900	9040	7540	3490	21700	56200	54500	46900	30400	18600
20	23500	16900	10400	9130	7500	3140	22700	56500	54100	46400	29800	18700
21	23000	17100	10400	9250	7550	3520	23700	56600	54100	45900	29100	18000
22	22400	17200	10600	9340	8070	3950	24400	57100	53500	45300	28600	17100
23	21800	17400	10700	9440	8530	3610	24900	58000	52800	44700	28900	16200
24	21200	17500	10900	9540	8320	3580	25800	58900	52400	44000	28200	15400
25	20600	17400	11000	9670	8040	3490	26500	59800	51900	43800	27600	14400
26	21100	17200	11200	9780	7840	3400	27800	60000	51200	43500	26900	14500
27	21300	16900	11300	9880	7640	3590	28600	60200	51500	42900	26200	14500
28	20700	17000	11400	9990	7460	4240	29400	60600	51700	42300	25600	13900
29	20200	17100	11400	10100	7900	4930	30700	60900	51100	41700	25800	13200
30	19600	17200	11400	10200	---	5020	32200	61200	50800	41100	26100	12700
31	19000	---	11500	10300	---	5010	---	61600	---	40600	25700	---
MAX	31100	18500	17200	12200	10500	8340	32200	61600	61700	50500	40000	25300
MIN	19000	15600	10400	8840	7460	3140	5140	33300	50800	40600	25600	12700
a	4789.74	4783.38	4782.87	4758.28	4748.71	4736.29	4831.29	4909.50	4882.60	4855.18	4811.47	4767.08
b	-12600	-1800	-5700	-1200	-2400	-2890	+27200	+29400	-10800	-10200	-14900	-13000

CAL YR 1991 b +1730

WTR YR 1992 b -18900

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA

LOCATION.--Lat 38°14'50", long 120°02'01", in NW 1/4 NE 1/4 sec.31, T.5 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 200 ft upstream from Donnell powerplant, 800 ft downstream from Hells Half Acre bridge, 1.1 mi upstream from Cow Creek, and 4.7 mi northwest of Pinecrest.

DRAINAGE AREA.--287 mi².

PERIOD OF RECORD.--February 1956 to current year. Prior to October 1965, published as Middle Fork Stanislaus River at Hells Half Acre bridge.

GAGE.--Water-stage recorder. Datum of gage is 3,418.31 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Aug. 9, 1961, at site 1,600 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Relief Reservoir (station 11291000), Donnell Lake (station 11292600) since April 1957, and diversion around station through Donnell powerplant. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s, Dec. 24, 1964, gage height, 13.64 ft in gage well, 14.2 ft outside, from floodmarks, from rating curve extended above 5,200 ft³/s on basis of slope-area measurement at gage height 12.20 ft; minimum daily, 3.3 ft³/s, Nov. 9, 10, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1905, 23 ft, Dec. 23, 1955, from floodmarks, at present site, discharge, 26,600 ft³/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 260 ft³/s, Apr. 13, gage height, 4.78 ft; minimum daily, 20 ft³/s, Sept. 19-22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	42	30	28	31	106	183	112	50	30	24	23
2	33	42	30	28	32	98	194	104	40	27	24	23
3	33	42	30	29	31	96	212	97	37	25	24	23
4	34	41	29	29	30	96	215	94	35	24	23	22
5	38	40	29	34	30	98	195	91	34	23	23	22
6	38	28	28	32	31	103	173	90	33	23	23	22
7	38	27	30	32	35	93	166	94	34	22	23	22
8	37	27	29	31	39	91	168	91	33	22	22	22
9	56	26	29	30	40	90	165	83	33	21	22	22
10	45	26	28	30	42	90	160	77	32	21	22	22
11	42	26	28	30	46	94	161	74	31	23	22	22
12	42	26	28	30	54	100	154	72	31	66	22	22
13	42	26	28	30	55	105	234	70	31	62	21	22
14	42	26	27	29	51	113	198	70	31	42	21	21
15	42	26	27	29	53	115	179	68	34	35	22	21
16	41	26	27	30	51	113	161	66	31	33	21	21
17	41	36	27	30	48	105	207	64	28	33	21	21
18	41	44	32	30	47	102	193	62	27	29	24	21
19	41	34	32	30	49	99	165	61	27	26	24	20
20	40	33	28	30	99	97	164	62	27	25	24	20
21	40	34	28	30	127	96	163	61	26	24	23	20
22	40	35	28	29	149	100	150	59	24	23	23	20
23	41	33	28	30	124	100	136	57	23	23	23	22
24	40	32	27	30	104	98	132	56	30	22	24	22
25	40	32	27	30	107	100	132	55	27	22	23	22
26	118	32	27	30	115	110	132	54	25	21	23	21
27	63	33	27	30	116	123	128	54	23	21	23	21
28	49	33	30	31	119	165	125	53	23	25	22	21
29	46	31	32	31	113	160	126	53	25	25	22	21
30	45	30	30	31	---	163	121	47	41	25	24	21
31	44	---	28	31	---	161	---	47	---	25	24	---
TOTAL	1365	969	888	934	1968	3380	4992	2198	926	868	706	645
MEAN	44.0	32.3	28.6	30.1	67.9	109	166	70.9	30.9	28.0	22.8	21.5
MAX	118	44	32	34	149	165	234	112	50	66	24	23
MIN	33	26	27	28	30	90	121	47	23	21	21	20
AC-FT	2710	1920	1760	1850	3900	6700	9900	4360	1840	1720	1400	1280

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.1	47.8	86.3	122	153	187	277	801	919	234	44.5	34.3
MAX	184	305	814	630	986	738	808	3144	4512	1885	320	72.8
(WY)	1983	1984	1965	1980	1986	1986	1986	1969	1983	1983	1983	1983
MIN	12.6	7.09	8.69	13.9	12.4	13.0	19.9	29.9	16.7	12.5	11.5	12.1
(WY)	1978	1958	1959	1961	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1958 - 1992	
ANNUAL TOTAL	27062		19839			
ANNUAL MEAN	74.1		54.2			
HIGHEST ANNUAL MEAN					245	
LOWEST ANNUAL MEAN					868	
HIGHEST DAILY MEAN	775		234		18.4	
LOWEST DAILY MEAN	19		20		7410	
ANNUAL SEVEN-DAY MINIMUM	19		20		3.3	
INSTANTANEOUS PEAK FLOW			260		3.7	
INSTANTANEOUS PEAK STAGE			4.78		10200	
ANNUAL RUNOFF (AC-FT)	53680		39350		13.64	
10 PERCENT EXCEEDS	193		123		177600	
50 PERCENT EXCEEDS	38		32		561	
90 PERCENT EXCEEDS	20		22		47	
					19	

11292800 BEARDSLEY LAKE NEAR STRAWBERRY, CA

LOCATION.--Lat 38°12'17", long 120°04'31", in SE 1/4 NW 1/4 sec.14, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, in hoist house of Beardsley Dam on Middle Fork Stanislaus River, 2.4 mi upstream from Spring Gap powerplant, 3.9 mi west of Strawberry, and 4.7 mi west of Pinecrest.

DRAINAGE AREA.--309 mi².

PERIOD OF RECORD.--June 1957 to current year. Prior to October 1960, published as Lake Hartley near Strawberry.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.84 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by rockfill, earth-core dam completed in 1957. Capacity, 98,500 acre-ft between gage heights 3,145.0 ft, tunnel invert, and 3,398.0 ft, top of spillway gates. No dead storage. Reservoir is used for power and conservation storage. Water passes through Beardsley powerplant, is diverted at Beardsley afterbay to J.W. Southern Powerplant at Sand Bar Flat on the Middle Fork Stanislaus River, and diverted again at Spring Gap Powerplant to Stanislaus Powerplant at the head of New Melones Reservoir (station 11299000). Records, including extremes, represent contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were provided by Oakdale and South San Joaquin Irrigation Districts, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 98,700 acre-ft, June 27, 1957, gage height, 3,398.2 ft; minimum since reservoir first filled, 3 acre-ft, Sept. 23, 1976, gage height, 3,154.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 51,400 acre-ft, June 5, gage height, 3,324.61 ft; minimum, 21,800 acre-ft, Feb. 9, gage height, 3,265.40 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)					
(Based on table provided by Pacific Gas & Electric Co., dated Oct. 3, 1956)					
3,154	2	3,200	2,370	3,290	33,100
3,160	41	3,210	3,790	3,320	48,800
3,170	267	3,220	5,720	3,350	66,400
3,180	693	3,240	11,600	3,370	79,200
3,190	1,370	3,260	19,500	3,398	98,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39200	42100	37500	25300	22300	25500	34500	41100	51100	45700	38600	35600
2	39300	42400	37400	25100	22100	26100	34900	41600	50900	45600	38000	35700
3	39400	42300	37600	24900	22500	26900	34900	41500	50700	45000	38200	35600
4	39600	42800	37800	24700	22300	27700	35000	41800	51000	44400	38000	35700
5	39000	43300	37400	24500	22100	28500	35200	42100	51400	43400	37900	35100
6	38500	43700	37000	24800	22400	29200	35500	42400	51200	43300	37800	34400
7	38600	44100	36200	25000	22200	29000	35600	42600	51200	43100	37700	33800
8	38800	44500	35200	25300	22000	28700	35900	42900	51100	43000	38100	33100
9	38900	44100	34900	25600	21800	29200	36000	42800	51000	42900	38000	32900
10	39100	43700	34600	25800	21900	29400	36400	42600	50900	42700	38100	32800
11	39200	44000	34400	25600	22100	29500	36400	42900	50900	42700	38100	32900
12	38700	43600	34100	25300	22300	29800	36500	43100	50800	41900	38300	32500
13	38100	43200	33800	25500	22900	30200	37200	43300	50700	41900	38200	32300
14	38200	42800	32900	25700	23300	30000	37400	43500	50600	41900	38200	32400
15	38300	42400	31900	25800	23300	29700	37600	43700	50500	41800	38000	32400
16	38400	42000	31600	26100	22900	30200	37800	43500	50400	41800	37500	32500
17	38500	41700	31300	26000	22700	30700	38200	43300	50200	41700	37400	32500
18	38600	41400	31100	25700	23100	31100	38300	43900	50000	41700	37300	32600
19	38100	41000	30800	25500	23600	31500	38400	44700	49900	40700	37200	31900
20	37500	40500	30600	25200	23700	32000	38700	45400	49500	40600	37200	31300
21	37800	40200	29600	25000	24000	31700	38900	46200	48800	40500	37300	31500
22	38200	39800	28700	24700	23800	31500	39200	46500	48700	40500	37400	31600
23	38700	39400	27900	24500	23600	31900	39300	46500	48600	40300	36900	31600
24	39100	39000	27500	24200	24100	32100	39300	46500	48400	40200	36900	31600
25	39500	39000	27100	24000	24600	32300	39500	46400	48300	39700	36800	31700
26	39700	39000	26700	23700	25000	32600	39300	47200	48100	39200	36700	31100
27	39600	39000	26300	23500	25500	32800	39700	47900	47100	39200	36600	30600
28	40100	38600	26100	23300	26000	32900	40100	48600	46000	39100	36600	30800
29	40700	38200	26200	23000	25800	33000	40300	49400	46000	39000	36100	31000
30	41200	37800	25900	22800	---	33600	40700	50100	45900	38800	35600	31000
31	41700	---	25600	22600	---	34000	---	50700	---	38700	35500	---
MAX	41700	44500	37800	26100	26000	34000	40700	50700	51400	45700	38600	35700
MIN	37500	37800	25600	22600	21800	25500	34500	41100	45900	38700	35500	30600
a	3306.96	3299.33	3273.88	3267.14	3274.33	3291.72	3304.98	3323.40	3314.72	3301.08	3294.81	3285.66
b	+2600	-3900	-12200	-3000	+3200	+8200	+6700	+10000	-4800	-7200	-3200	-4500

CAL YR 1991 b -2200

WTR YR 1992 b -8100

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA

LOCATION.--Lat 38°11'36", long 120°05'53", in NW 1/4 NW 1/4 sec.22, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.5 mi downstream from Beardsley Afterbay Dam, 1.5 mi downstream from Beardsley Dam, and 5.7 mi west of Pinecrest.

DRAINAGE AREA.--316 mi².

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

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,044.7 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good. Diversion from Beardsley Afterbay Dam, 0.5 mi upstream, to J.W. Southern powerplant, at Sand Bar Flat 3 mi downstream, began May 31, 1986. Flow regulated by Relief Reservoir (station 11291000) since 1909, Donnell Lake (station 11292600) since April 1957, and by Beardsley Lake (station 11292800) since January 1957. See schematic diagram of Stanislaus River basin. For records of combined discharge for river and powerplant, see following page.

COOPERATION.--Records of diversion to J.W. Southern Powerplant provided by Oakdale-South San Joaquin Irrigation Districts.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft³/s, May 30, 1983, gage height, 12.30 ft; minimum daily, 3.0 ft³/s, Oct. 10, 11, 1958.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 425 ft³/s, Dec. 4, gage height, 5.03 ft; minimum daily, 29 ft³/s, Sept. 30.
Combined flow, maximum daily discharge, 571 ft³/s, Aug. 17; minimum daily, 57 ft³/s, May 23, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	e140	146	138	146	147	149	146	60	58	60	57
2	148	e140	147	139	145	148	152	144	59	58	61	58
3	148	e140	152	140	144	148	151	145	61	58	61	59
4	147	e140	175	138	144	148	152	145	60	58	61	58
5	146	e140	140	140	144	148	152	145	61	58	61	57
6	146	e140	139	138	144	147	151	144	60	58	61	57
7	145	e138	139	138	141	147	150	142	60	58	62	57
8	145	e138	141	138	142	147	149	144	59	57	61	57
9	145	e138	141	139	142	149	150	143	58	57	63	58
10	143	e135	140	143	142	149	150	143	58	59	62	58
11	142	e135	140	147	141	149	151	144	58	58	62	58
12	142	e135	140	145	140	149	151	144	59	58	62	59
13	143	e132	139	147	140	150	151	144	61	60	61	59
14	141	140	138	147	141	150	152	145	60	61	61	58
15	140	145	139	147	140	151	152	144	60	62	61	59
16	140	145	139	147	140	150	154	143	61	60	62	59
17	139	146	140	146	140	150	151	144	61	61	62	58
18	139	143	139	145	141	149	144	119	60	61	62	58
19	141	145	138	146	142	150	145	77	60	59	62	59
20	143	144	138	145	141	149	146	60	61	59	58	59
21	142	145	138	145	142	147	147	59	61	59	59	58
22	144	146	137	146	141	148	147	59	60	60	57	59
23	142	146	138	145	e140	151	147	57	59	60	57	59
24	e145	146	140	146	e140	151	146	58	58	60	57	58
25	e145	146	139	147	e140	155	146	59	57	60	58	60
26	e150	146	141	145	143	151	145	60	57	61	58	59
27	e148	146	139	145	146	151	146	58	57	60	58	59
28	e145	144	139	144	146	150	146	59	57	60	59	58
29	e140	144	135	143	147	150	145	57	57	61	58	58
30	e140	147	138	144	---	150	145	59	56	60	57	29
31	e140	---	139	146	---	149	---	59	---	60	58	---
TOTAL	4452	4255	4373	4449	4125	4628	4463	3349	1776	1839	1862	1719
MEAN	144	142	141	144	142	149	149	108	59.2	59.3	60.1	57.3
MAX	150	147	175	147	147	155	154	146	61	62	63	60
MIN	139	132	135	138	140	147	144	57	56	57	57	29
AC-FT	8830	8440	8670	8820	8180	9180	8850	6640	3520	3650	3690	3410

e Estimated.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1985, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	396	410	449	432	478	494	588	1271	1607	819	523	488
MAX	651	1064	1322	1035	1322	1307	1378	3754	5325	2420	958	690
(WY)	1984	1983	1984	1984	1980	1983	1982	1969	1983	1983	1983	1983
MIN	23.3	19.9	18.8	18.9	21.0	22.4	180	168	348	77.5	44.5	39.5
(WY)	1977	1977	1977	1977	1977	1977	1957	1960	1976	1977	1977	1977

SUMMARY STATISTICS

WATER YEARS 1957 - 1985

ANNUAL MEAN	671	
HIGHEST ANNUAL MEAN	1507	1983
LOWEST ANNUAL MEAN	111	1977
HIGHEST DAILY MEAN	8630	May 30 1983
LOWEST DAILY MEAN	3.0	Oct 10 1958
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 16 1957
INSTANTANEOUS PEAK FLOW	9080	May 30 1983
INSTANTANEOUS PEAK STAGE	12.30	May 30 1983
ANNUAL RUNOFF (AC-FT)	485800	
10 PERCENT EXCEEDS	1270	
50 PERCENT EXCEEDS	500	
90 PERCENT EXCEEDS	110	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.1	101	102	102	114	133	146	129	145	91.9	89.6	86.2
MAX	144	152	154	154	158	157	159	326	480	165	154	148
(WY)	1992	1987	1990	1990	1990	1990	1990	1989	1989	1989	1989	1991
MIN	54.8	54.4	55.8	55.3	55.1	58.7	135	65.2	59.2	58.6	55.8	56.8
(WY)	1991	1991	1989	1989	1991	1991	1991	1987	1992	1990	1988	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	44543	41290	
ANNUAL MEAN	122	113	111
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			76.6
HIGHEST DAILY MEAN	175	Dec 4	1110
LOWEST DAILY MEAN	53	Feb 15	25
ANNUAL SEVEN-DAY MINIMUM	54	Feb 15	54
INSTANTANEOUS PEAK FLOW			425
INSTANTANEOUS PEAK STAGE			5.03
ANNUAL RUNOFF (AC-FT)	88350	81900	80680
10 PERCENT EXCEEDS	148	149	154
50 PERCENT EXCEEDS	141	140	133
90 PERCENT EXCEEDS	57	58	57

SAN JOAQUIN RIVER BASIN

11292901 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA--Continued

MIDDLE FORK STANISLAUS RIVER AND J.W. SOUTHERN POWERPLANT BELOW BEARDSLEY DAM,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	e140	243	159	146	246	330	146	328	548	557	353
2	299	e140	362	139	145	246	332	144	553	549	566	355
3	207	e140	267	140	144	185	234	145	528	549	412	356
4	294	e140	326	138	144	189	152	145	543	534	539	355
5	295	e140	518	140	144	220	152	145	550	541	552	354
6	297	e140	517	138	144	245	263	144	474	555	554	354
7	296	e138	517	138	141	246	329	142	555	548	503	354
8	296	e177	519	148	142	242	149	144	562	546	317	470
9	296	e234	519	139	142	371	328	143	555	546	318	538
10	294	e230	518	143	142	477	224	143	558	549	489	510
11	297	e232	518	147	141	487	151	144	558	537	564	560
12	308	e231	512	145	140	482	151	144	554	534	467	324
13	309	e227	507	215	140	360	263	144	548	526	520	403
14	307	235	506	252	184	252	332	145	553	515	569	500
15	306	241	507	254	224	253	329	144	564	513	560	426
16	306	240	507	254	240	251	332	143	554	508	560	485
17	305	241	508	195	241	253	267	144	453	514	571	486
18	311	237	514	145	241	253	144	119	547	495	563	483
19	317	240	520	146	242	254	145	77	557	514	563	310
20	327	239	521	165	241	252	262	60	518	527	473	301
21	239	240	524	145	242	251	318	59	545	510	493	426
22	144	241	522	146	242	252	319	59	555	514	309	475
23	142	241	422	145	e241	254	318	57	548	515	309	492
24	e145	240	256	146	e240	255	317	58	466	512	488	544
25	e145	239	234	147	e240	258	318	59	558	499	558	544
26	e150	239	235	145	243	254	317	60	570	513	550	324
27	e148	240	233	145	246	218	318	58	565	526	550	313
28	e145	238	185	144	245	150	317	59	545	525	486	350
29	e140	238	209	143	246	150	233	57	564	554	303	323
30	e140	244	138	144	---	263	145	59	544	556	299	314
31	e140	---	187	146	---	330	---	59	---	563	319	---
TOTAL	7645	6382	12571	4936	5653	8399	7789	3349	16072	16435	14881	12382
MEAN	247	213	406	159	195	271	260	108	536	530	480	413
MAX	327	244	524	254	246	487	332	146	570	563	571	560
MIN	140	138	138	138	140	150	144	57	328	495	299	301
AC-FT	15160	12660	24930	9790	11210	16660	15450	6640	31880	32600	29520	24560

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992
MEAN	279	221	327	160	254	393	469
MAX	484	538	500	461	939	1560	1448
(WY)	1986	1987	1988	1989	1990	1991	1992
MIN	57.6	58.1	55.8	55.3	55.1	58.7	146
(WY)	1989	1989	1989	1989	1991	1991	1988

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1986 - 1992

ANNUAL TOTAL	125220	116494	
ANNUAL MEAN	343	318	413
HIGHEST ANNUAL MEAN			973
LOWEST ANNUAL MEAN			221
HIGHEST DAILY MEAN	606	571	4890
LOWEST DAILY MEAN	53	57	25
ANNUAL SEVEN-DAY MINIMUM	54	58	27
ANNUAL RUNOFF (AC-FT)	248400	231100	299000
10 PERCENT EXCEEDS	564	549	615
50 PERCENT EXCEEDS	453	280	418
90 PERCENT EXCEEDS	57	142	59

11293200 MIDDLE FORK STANISLAUS RIVER BELOW SAND BAR DIVERSION DAM, CA

LOCATION.--Lat 38°10'59", long 120°09'28", in NW 1/4 SE 1/4 sec.24, T.4 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 100 ft downstream from Sand Bar diversion dam and 8.5 mi west of Strawberry.

DRAINAGE AREA.--332 mi².

PERIOD OF RECORD.--October 1985 to current year (low-flow records only). Unpublished records for water years 1970, 1971, and 1976-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and sharp-crested weir since February 1986. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No records computed above 70 ft³/s. Flow regulated by Relief Reservoir and Donnell and Beardsley Lakes (stations 11291000, 11292600, and 11292800). Most of the water is diverted at Sand Bar diversion dam for use at Stanislaus Powerplant. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	---	28	30	27	28	28	53	---	56	53	54
2	53	---	30	29	27	28	28	53	---	56	54	53
3	53	---	30	29	28	29	28	53	66	57	57	54
4	53	---	30	29	29	28	28	53	64	54	56	53
5	53	---	31	29	28	29	28	54	63	54	56	53
6	53	---	28	29	28	31	30	54	54	56	55	54
7	53	29	31	29	28	31	29	54	60	55	54	53
8	52	29	32	29	28	29	28	54	65	55	54	56
9	52	29	31	29	28	31	28	54	61	55	53	60
10	51	27	32	29	27	33	28	54	61	55	55	65
11	52	28	42	29	28	33	28	54	61	53	56	59
12	53	28	37	29	28	31	28	53	62	55	56	55
13	53	29	31	30	28	30	29	53	55	63	56	52
14	53	29	31	30	29	29	28	53	56	61	58	63
15	53	29	31	30	30	28	28	53	62	61	53	60
16	52	29	31	30	30	28	28	53	56	60	53	60
17	52	29	30	29	30	28	28	53	56	62	56	61
18	53	29	30	28	30	28	29	53	56	54	56	57
19	53	29	28	28	30	28	29	53	55	55	55	54
20	53	29	28	28	31	28	30	54	53	60	60	54
21	53	29	29	29	29	28	29	54	54	60	57	60
22	54	29	30	29	28	28	29	53	55	60	54	56
23	53	29	30	29	28	28	29	54	56	62	53	58
24	54	29	30	29	28	28	28	54	60	61	56	58
25	54	28	31	28	28	28	28	54	57	53	57	59
26	55	28	29	27	28	28	28	54	58	54	56	54
27	---	28	28	28	28	28	28	54	54	62	56	53
28	---	28	29	28	28	28	28	54	54	60	56	54
29	---	28	31	27	28	28	28	54	57	58	52	53
30	---	28	29	27	---	28	42	54	56	58	53	53
31	---	---	30	27	---	28	---	54	---	57	57	---
TOTAL	---	---	948	890	825	896	865	1661	---	1782	1713	1688
MEAN	---	---	30.6	28.7	28.4	28.9	28.8	53.6	---	57.5	55.3	56.3
MAX	---	---	42	30	31	33	42	54	---	63	60	65
MIN	---	---	28	27	27	28	28	53	---	53	52	52
AC-FT	---	---	1880	1770	1640	1780	1720	3290	---	3530	3400	3350

LOCATION.--Lat 38°25'50", long 119°59'47", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Union Dam on North Fork Stanislaus River and 6.4 mi east of Big Meadows.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1981-86 available in files of the U.S. Geological Survey.

REMARKS.--Reservoir is formed by concrete and rock dam completed in 1902. Usable capacity, 3,130 acre-ft between gage heights -1.9 ft, invert of outlet, and 26.9 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River basin.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1954)

0	4	20	1,756
5	81	25	2,754
10	359	27.6	3,283
15	938		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES[illegible]

SAN JOAQUIN RIVER BASIN

11293460 LAKE ALPINE NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°28'17", long 120°00'10", in NE 1/4 SW 1/4 sec.9, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Lake Alpine Dam on Silver Creek and 7.2 mi northeast of Big Meadows.

DRAINAGE AREA.--5.34 mi².

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1981-86 available in files of the U.S. Geological Survey.

GAGE.--Nonrecording gage, observed approximately weekly in the summer months. Elevation of gage is 7,260.07 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed on natural lake by concrete and rock dam completed in 1906. Usable capacity, 4,117 acre-ft between gage heights 0.0 ft, invert of outlet, and 42.07 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by the Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas and Electric Co. in 1948)

0	0	25	1,564
5	41	30	2,229
10	208	35	2,962
15	533	40	3,765
20	990	43	4,279

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	4105	---	---	---
2	3565	---	1770	---	---	1096	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	3765	---
4	---	2442	---	---	---	---	---	3715	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	3748	---
6	---	---	---	---	---	---	1577	---	---	3883	---	---
7	3227	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	4037	---	3698	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	3682	---
11	---	---	---	---	---	---	---	4020	---	---	3631	---
12	---	2229	---	---	---	---	---	---	---	---	3598	---
13	---	---	---	---	---	---	1981	---	---	3850	---	---
14	2886	---	---	---	---	---	---	---	---	---	---	3435
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	1692	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	3598	---
18	---	---	---	---	---	---	---	4071	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	2632	---	---	---	---	---	---	---	---	---	---	3322
22	---	---	---	---	---	---	---	---	3951	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	1654	---	---	---	---	---	---	---	---	---
25	---	1888	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	4071	---	---	---	---
27	---	---	---	---	---	---	3211	---	---	3799	---	---
28	2573	---	---	---	---	---	---	---	---	---	---	3148
29	---	---	---	---	---	---	---	---	3917	---	---	---
30	---	---	---	---	---	1539	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	3500	---

11293580 NORTH FORK STANISLAUS RIVER DIVERSION TUNNEL AT DIVERSION DAM, NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°26'17", long 120°00'59", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 50 ft upstream from diversion dam, at diversion tunnel entrance, and 5.6 mi southeast of Big Meadows.

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

GAGE.--Water-stage recorder and artificial control. Datum of tunnel invert is 6,684 ft above National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--No estimated daily discharges. Records good. Flow diverted from North Fork Stanislaus River diversion dam to New Spicer Meadow Reservoir (station 11293770) beginning Oct. 21, 1987. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 479 ft³/s, Apr. 8, 1989; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	17	.93	.02	.10	21	74	100	.01	.03	13	4.9
2	1.2	17	1.1	.03	.10	15	67	74	.02	.03	13	4.9
3	.01	17	.01	.04	.13	16	71	70	.02	.04	13	7.7
4	8.5	14	.00	.05	.06	18	81	62	.02	.04	13	14
5	13	8.5	.00	.10	.10	20	185	62	.02	.02	8.0	13
6	13	8.5	.00	.10	.10	17	145	65	.01	.03	.01	13
7	13	7.6	.00	.10	.10	14	147	94	.02	6.0	.01	12
8	12	6.7	.00	.10	1.1	10	173	86	.03	10	.01	12
9	12	6.7	.00	.10	4.3	11	171	70	.03	10	7.2	12
10	12	6.2	.00	.10	2.7	14	150	45	.02	10	13	12
11	12	5.5	.00	.10	1.5	18	168	41	.02	11	21	11
12	19	4.0	.00	.15	1.8	24	137	39	.00	13	17	11
13	22	1.5	.00	.12	1.3	29	235	34	.01	14	6.0	10
14	21	1.0	.00	.10	.83	28	208	32	.00	17	8.9	11
15	14	.86	.00	.10	.95	23	170	28	.00	18	7.1	14
16	14	.91	.00	.10	.97	15	129	23	.02	31	5.7	13
17	15	1.6	.00	.10	.57	12	304	19	.03	26	5.3	14
18	15	2.1	.00	.10	.28	13	263	17	.02	17	5.2	15
19	15	3.2	.00	.04	.21	14	154	13	.02	15	4.9	1.2
20	15	7.4	.00	.05	15	13	151	11	.02	14	5.0	.06
21	15	16	.00	.06	24	13	174	8.6	.04	14	5.0	.06
22	15	11	.00	.03	40	16	135	5.6	.02	13	5.1	.07
23	15	6.0	.00	.05	32	17	94	3.3	.03	17	5.0	.06
24	14	5.0	.01	.05	27	20	96	2.4	.01	14	4.9	.06
25	15	5.0	.00	.10	28	27	128	.62	.02	14	4.9	.05
26	29	4.6	.02	.04	34	44	151	.01	.02	14	4.9	.05
27	18	4.1	.03	.02	35	44	148	4.1	.04	14	5.0	.06
28	16	3.2	.04	.04	33	51	144	7.4	.03	14	4.9	.07
29	17	2.0	.04	.05	27	52	165	3.0	.04	14	5.0	.07
30	16	1.2	.00	.05	---	44	163	1.3	.04	13	5.2	.07
31	15	---	.00	.09	---	46	---	.24	---	13	5.1	---
TOTAL	440.01	195.37	2.18	2.28	312.20	719	4581	1021.57	0.63	366.19	221.33	206.38
MEAN	14.2	6.51	.070	.074	10.8	23.2	153	33.0	.021	11.8	7.14	6.88
MAX	29	17	1.1	.15	40	52	304	100	.04	31	21	15
MIN	.01	.86	.00	.02	.06	10	67	.01	.00	.02	.01	.05
AC-FT	873	388	4.3	4.5	619	1430	9090	2030	1.2	726	439	409

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	7.34	2.68	1.43	6.91	3.03	44.5	163	122	35.8	3.41	2.74	10.0
MEAN	7.34	2.68	1.43	6.91	3.03	44.5	163	122	35.8	3.41	2.74	10.0
MAX	14.2	6.51	4.22	27.5	10.8	130	301	206	70.6	11.8	7.14	18.5
(WY)	1992	1992	1990	1990	1992	1989	1989	1991	1991	1992	1992	1990
MIN	.33	.14	.010	.010	.039	7.28	39.3	33.0	.021	.10	.027	.013
(WY)	1990	1991	1991	1991	1991	1991	1991	1992	1992	1990	1990	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	11142.04		8068.14		25.7	
ANNUAL MEAN	30.5		22.0		29.4	
HIGHEST ANNUAL MEAN					22.0	
LOWEST ANNUAL MEAN					479	
HIGHEST DAILY MEAN	411	May 24	304	Apr 17	Apr 8 1989	
LOWEST DAILY MEAN	.00	Jun 25	.00	Dec 4	Dec 15 1988	
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 4	.00	Dec 4	Dec 15 1988	
ANNUAL RUNOFF (AC-FT)	22100		16000		18640	
10 PERCENT EXCEEDS	109		66		129	
50 PERCENT EXCEEDS	6.0		6.9		1.1	
90 PERCENT EXCEEDS	.01		.01		.01	

11293590 NORTH FORK STANISLAUS RIVER DIVERSION RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°26'18", long 120°01'00", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank of diversion dam on North Fork Stanislaus River, 5.6 mi southeast of Big Meadows.

PERIOD OF RECORD.--February 1990 to current year. Contents less than 12 acre-feet and end of month elevations for November 1990 to March 1991, published in WDR-CA 91-3 are unreliable and should not be used.

GAGE.--Water-stage recorder. Prior to Sept. 14, 1990, contents estimated on basis of periodic observations of non-recording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--Reservoir is formed by gravity-type concrete dam completed in October 1987. Capacity, 120 acre-ft between elevations 6,672.0 ft, sill of emergency release gate, and 6,695.0 ft, crest of spillway. Reservoir is used for power development and fishery enhancement. Flow is diverted through tunnel to New Spicer Meadow Reservoir (station 11293770). Records, including extremes, represent total contents at 2400 hours. Elevations below 6,678.9 ft are not recorded. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 122 acre-ft, Sept. 10, 11, 1990, elevation, 6,695.1 ft; minimum observed, 5 acre-ft, Feb. 1, 28, Mar. 1, 1990, elevation, 6,676.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 88 acre-ft, Apr. 17, elevation, 6,692.1 ft; minimum, not recorded.

REVISIONS.--Contents for Nov. 13, 1990 to Mar. 3, 1991 and end of month elevations for November 1990 to February 1991 are in error and should not be used because elevations below 6,678.9 ft are not recorded.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

6,672	0	6,685	31	6,695	120
6,675	4	6,690	67	6,695.1	122
6,680	12				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	36	29	23	22	32	45	45	24	---	31	30
2	24	35	28	24	22	32	44	43	22	---	31	30
3	25	35	24	24	21	33	45	43	19	---	31	31
4	31	31	23	23	20	34	53	42	16	---	31	31
5	31	31	21	24	20	32	53	42	15	---	23	31
6	31	30	21	24	21	32	52	46	14	22	12	31
7	31	30	21	24	26	31	54	51	14	31	---	31
8	31	30	22	23	30	31	54	45	13	31	23	31
9	31	30	23	24	29	32	53	41	13	32	31	31
10	31	30	24	25	29	33	54	38	12	32	32	31
11	33	30	24	26	29	35	52	38	12	32	33	31
12	35	29	23	25	29	36	56	37	12	33	30	31
13	35	28	22	24	28	37	65	36	12	34	30	31
14	33	29	21	24	28	35	59	36	12	35	31	32
15	33	29	20	26	28	33	53	35	12	34	30	31
16	33	29	20	27	28	32	50	33	12	42	30	31
17	33	30	20	27	28	32	88	33	12	36	30	33
18	33	30	21	26	28	32	57	32	12	36	30	30
19	33	31	21	26	28	32	52	32	12	37	30	22
20	33	32	22	25	34	32	55	31	12	38	30	17
21	33	33	22	24	37	32	55	30	12	38	30	16
22	34	31	22	23	36	32	49	30	---	38	30	16
23	33	31	22	22	35	34	46	29	---	31	30	15
24	33	31	22	22	35	34	48	28	---	31	30	14
25	34	31	22	22	37	39	54	28	---	31	30	14
26	35	30	22	23	37	39	54	26	---	31	30	14
27	34	30	21	22	37	40	54	31	---	31	30	14
28	34	30	22	23	36	42	56	29	---	31	30	14
29	35	29	22	23	34	41	60	28	---	31	30	15
30	34	29	22	23	---	36	51	28	12	31	30	16
31	35	---	23	23	---	43	---	27	---	31	30	---
MAX	35	36	29	27	37	43	88	51	---	---	---	33
MIN	24	28	20	22	20	31	44	26	---	---	---	14
a	6685.5	6684.3	6682.6	6682.7	6685.4	6686.7	6688.0	6683.7	6679.2	6684.9	6684.5	6680.7
b	+4	-6	-6	0	+11	+9	+8	-24	-15	+19	-1	-14

WTR YR 1992 b -15

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11293600 NORTH FORK STANISLAUS RIVER BELOW DIVERSION DAM, NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°26'04", long 120°01'04", unsurveyed, T.7 N., R.18 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.3 mi downstream from diversion dam and 5.6 mi northeast of Big Meadows.

DRAINAGE AREA.--28.8 mi².

PERIOD OF RECORD.--October 1987 to current year.

REVISED RECORDS.--WDR CA-89-3: 1988 (M).

GAGE.--Water-stage recorder, crest-stage gage, and artificial control. Elevation of gage is 6,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Low and medium flow regulated by Union and Utica Reservoirs and Lake Alpine (stations 11293350, 11293370, and 11293460). See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 530 ft³/s, Apr. 21, 1989, gage height 5.12 ft; minimum daily, 2.8 ft³/s, Dec. 9, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64 ft³/s, July 16, gage height, 3.55 ft; minimum daily, 5.9 ft³/s, June 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	17	15	16	19	21	21	16	8.1	17	17
2	e17	17	17	15	16	19	20	20	15	7.6	17	17
3	e12	17	16	16	16	19	20	20	14	7.2	17	17
4	e16	18	15	16	16	19	20	19	13	7.1	17	17
5	17	17	15	16	16	19	21	19	12	6.9	16	17
6	17	17	14	16	15	19	21	19	11	8.4	12	17
7	17	17	14	16	16	19	21	20	11	16	7.2	17
8	17	17	14	16	18	19	21	20	11	17	8.1	17
9	17	17	14	16	19	19	21	19	11	17	16	17
10	17	17	15	17	19	19	21	18	10	17	17	17
11	17	17	15	17	19	19	21	18	9.8	18	17	17
12	17	17	15	17	19	19	21	18	9.6	18	17	17
13	18	17	15	17	19	19	22	18	9.3	17	16	17
14	18	16	15	17	19	19	22	18	9.2	18	17	17
15	17	17	14	17	19	19	21	18	9.4	18	17	17
16	17	17	14	17	17	19	21	18	10	20	17	17
17	17	17	14	17	16	19	22	17	9.7	18	17	17
18	18	17	14	17	16	19	23	18	9.4	18	16	17
19	18	17	14	17	17	19	21	17	9.5	18	16	15
20	18	17	14	17	18	19	21	17	9.9	18	16	13
21	18	18	14	17	19	19	22	17	9.3	18	16	12
22	18	18	15	17	19	19	21	17	8.8	18	17	11
23	18	18	15	16	19	19	20	17	6.8	18	16	11
24	18	17	15	16	19	19	20	17	6.0	17	16	11
25	18	17	15	16	19	19	21	16	5.9	17	16	11
26	18	17	15	16	20	20	21	16	6.0	17	16	11
27	18	17	15	16	20	20	22	17	6.0	17	16	11
28	18	17	15	16	19	21	21	18	6.0	17	16	11
29	18	17	15	16	19	21	22	17	6.6	17	16	11
30	17	17	15	16	---	20	22	17	9.2	17	17	12
31	17	---	15	16	---	20	---	16	---	17	17	---
TOTAL	536	513	459	507	519	597	634	557	290.4	483.3	489.3	446
MEAN	17.3	17.1	14.8	16.4	17.9	19.3	21.1	18.0	9.68	15.6	15.8	14.9
MAX	18	18	17	17	20	21	23	21	16	20	17	17
MIN	12	16	14	15	15	19	20	16	5.9	6.9	7.2	11
AC-FT	1060	1020	910	1010	1030	1180	1260	1100	576	959	971	885

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992
MEAN	16.2	19.7	11.2	13.7	16.0
MAX	20.2	42.2	14.8	18.0	24.8
(WY)	1988	1990	1992	1988	1988
MIN	11.8	7.01	3.19	3.80	4.85
(WY)	1990	1991	1991	1991	1991

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1988 - 1992

	1991 CALENDAR YEAR	1992 WATER YEAR	WATER YEARS 1988 - 1992
ANNUAL TOTAL	5530.6	6031.0	
ANNUAL MEAN	15.2	16.5	19.6
HIGHEST ANNUAL MEAN			31.0
LOWEST ANNUAL MEAN			13.0
HIGHEST DAILY MEAN	24	23	130
LOWEST DAILY MEAN	3.2	5.9	2.8
ANNUAL SEVEN-DAY MINIMUM	3.5	6.2	3.0
INSTANTANEOUS PEAK FLOW		64	530
INSTANTANEOUS PEAK STAGE		3.55	5.12
ANNUAL RUNOFF (AC-FT)	10970	11960	14180
10 PERCENT EXCEEDS	20	20	28
50 PERCENT EXCEEDS	17	17	17
90 PERCENT EXCEEDS	4.5	11	5.5

11293700 HOBART CREEK AT NORTH FORK STANISLAUS RIVER DIVERSION TUNNEL OUTLET, NEAR NEW SPICER MEADOW DAM, CA

LOCATION.--Lat 38°24'42", long 119°59'37", unsurveyed, T.7 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 250 ft upstream from North Fork Stanislaus River diversion channel, 1.3 mi northwest of New Spicer Meadow Dam, and 7.5 mi east of Big Meadows.

DRAINAGE AREA.--1.13 mi².

PERIOD OF RECORD.--December 1988 to current year.

GAGE.--Water-stage recorder and culvert control. Elevation of gage is 6,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No storage or diversion upstream from station. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38 ft³/s, Mar. 28, 1989, gage height, 1.45 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	1400	(a)	*1.16	Apr. 3	1845	*11	0.96

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.92	7.1	.96	.07	.03	.00	.00
2	.00	.00	.00	.00	.00	1.5	7.6	.78	.06	.02	.00	.00
3	.00	.00	.00	.00	.00	e1.5	8.3	.62	.04	e.01	.00	.00
4	.00	.00	.00	.00	.00	e1.6	8.0	.55	.04	e.01	.00	.00
5	.00	.00	.00	.00	.00	1.7	6.7	.50	.03	e.01	.00	.00
6	.00	.00	.00	.00	.00	1.5	5.8	.50	.05	e.01	.00	.00
7	.00	.00	.00	.00	.00	1.8	5.8	.59	.05	e.01	.00	.00
8	.00	.00	.00	.00	.00	1.3	5.8	.56	.04	e.01	.00	.00
9	.00	.00	.00	.00	.00	1.2	5.5	.39	.02	e.01	.00	.00
10	.00	.00	.00	.00	.00	1.4	5.3	.34	.01	e.01	.00	.00
11	.00	.00	.00	.00	.00	1.7	5.3	.32	.01	e.01	.00	.00
12	.00	.00	.00	.00	.00	2.3	5.4	.30	.01	.06	.00	.00
13	.00	.00	.00	.00	.00	2.8	9.4	.28	.01	.06	.00	.00
14	.00	.00	.00	.00	.00	3.2	6.6	.26	.01	.05	e.01	.00
15	.00	.00	.00	.00	.00	2.8	5.4	.23	.05	.08	.00	.00
16	.00	.00	.00	.00	.00	2.4	4.5	.18	.06	.10	.00	.00
17	.00	.00	.00	.00	.00	2.2	6.3	.16	.04	.07	.00	.00
18	.00	.00	.00	.00	.00	2.2	4.8	.15	.02	.04	.00	.00
19	.00	.00	.00	.00	.00	2.3	3.9	.15	.01	.02	.00	.00
20	.00	.00	.00	.00	e.15	2.5	3.7	.15	.01	e.01	.00	.00
21	.00	.00	.00	.00	.01	2.4	3.4	.14	e.01	e.01	.00	.00
22	.00	.00	.00	.00	.04	2.5	2.9	.13	e.01	e.01	.00	.00
23	.00	.00	.00	.00	.06	2.6	2.5	.11	e.01	e.01	.00	.00
24	.00	.00	.00	.00	.06	2.9	2.3	.11	e.01	e.01	.00	.00
25	.00	.00	.00	.00	.06	3.5	2.1	.09	e.01	e.01	.00	.00
26	e.05	.00	.00	.00	.06	4.7	1.9	.08	e.01	e.01	.00	.00
27	e.01	.00	.00	.00	.06	4.6	1.7	.16	e.01	e.01	.00	.00
28	.00	.00	.00	.00	.07	5.2	1.5	.17	e.01	e.01	.00	.00
29	.00	.00	.00	.00	.13	5.3	1.3	.11	.02	e.01	.00	.00
30	.00	.00	.00	.00	---	5.0	1.1	.09	.06	e.01	.00	.00
31	.00	---	.00	.00	---	5.4	---	.08	---	e.01	.00	---
TOTAL	0.06	0.00	0.00	0.00	0.70	82.92	141.9	9.24	0.80	0.74	0.01	0.00
MEAN	.002	.000	.000	.000	.024	2.67	4.73	.30	.027	.024	.000	.000
MAX	.05	.00	.00	.00	.15	5.4	9.4	.96	.07	.10	.01	.00
MIN	.00	.00	.00	.00	.00	.92	1.1	.08	.01	.01	.00	.00
AC-FT	.1	.00	.00	.00	1.4	164	281	18	1.6	1.5	.02	.00

a Backwater from plugged culverts.

e Estimated.

11293700 HOBART CREEK AT NORTH FORK STANISLAUS RIVER DIVERSION TUNNEL OUTLET,
NEAR NEW SPICER MEADOW DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.025	.087	.026	.012	.14	3.98	6.78	2.43	.30	.038	.003	.002
MAX	.073	.26	.079	.050	.42	8.06	11.3	6.40	.53	.051	.012	.009
(WY)	1990	1990	1990	1990	1990	1989	1989	1991	1991	1991	1990	1989
MIN	.000	.000	.000	.000	.017	.65	3.62	.30	.027	.024	.000	.000
(WY)	1991	1991	1991	1989	1989	1991	1991	1992	1992	1992	1989	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	347.61	236.37	
ANNUAL MEAN	.95	.65	.93
HIGHEST ANNUAL MEAN			1.19
LOWEST ANNUAL MEAN			.65
HIGHEST DAILY MEAN	14 May 7	9.4 Apr 13	26 Mar 28 1989
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Dec 15 1988
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Dec 15 1988
INSTANTANEOUS PEAK FLOW		11 Apr 3	38 Mar 28 1989
INSTANTANEOUS PEAK STAGE		1.16 Mar 3	1.45 Mar 28 1989
ANNUAL RUNOFF (AC-FT)	689	469	674
10 PERCENT EXCEEDS	4.0	2.5	4.6
50 PERCENT EXCEEDS	.00	.00	.01
90 PERCENT EXCEEDS	.00	.00	.00

SAN JOAQUIN RIVER BASIN

11293770 NEW SPICER MEADOW RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°23'35", long 119°59'53", in NW 1/4 NE 1/4 sec.9, T.7 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of New Spicer Meadow Dam on Highland Creek and 7.7 mi eastsoutheast of Big Meadows.

DRAINAGE AREA.--45.4 mi².

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Vertical Geodetic Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--Reservoir is formed by rockfill dam with a reinforced concrete face completed in December 1988. Dam is 600 ft downstream from original concrete gravity-type dam which was completed in 1929. Usable capacity, 184,298 acre-ft between elevations 6,420.0 ft, minimum operating head, and 6,614.0 ft, crest of spillway. Released water is used for hydroelectric power and fishery maintenance. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 130,506 acre-ft, June 9, 1990, elevation, 6,582.9 ft; minimum, 45,236 acre-ft, Feb. 12, 1992, elevation, 6,513.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 83,450 acre-ft, May 21, elevation, 6,550.9 ft; minimum, 45,236 acre-ft, Feb. 12, elevation, 6,513.4 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

6,420	4,702	6,500	35,214	6,580	125,341
6,440	9,299	6,520	50,197	6,600	160,318
6,460	15,511	6,540	69,652	6,614	189,000
6,480	23,781	6,560	94,859		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64096	57637	54244	49580	46129	48076	54576	77371	82730	75330	68684	60607
2	63576	57496	54069	49567	46220	48147	55185	77921	82590	75088	68399	60312
3	63214	57527	53730	49249	46155	48284	55917	78351	82401	74875	68177	60002
4	62904	57306	53540	49328	46015	48433	56622	78829	82246	74592	67975	59735
5	62630	57190	53361	49251	45867	48608	57347	79306	81994	74312	67770	59528
6	62436	57088	53265	49228	45702	48707	58059	79639	81703	74002	67489	59266
7	62104	56977	53031	49032	45708	48831	58735	80302	81516	73836	67166	59018
8	61838	56831	52880	48991	45663	48920	59434	80903	81181	73705	66873	58787
9	61622	56678	52719	48997	45439	49015	60206	81346	80955	73391	66706	58582
10	61283	56654	52592	48837	45477	49156	60727	81702	80626	73170	66473	58247
11	60979	56577	52436	48679	45619	49269	61444	81930	80373	72862	66243	57993
12	60849	56425	52264	48833	45236	49480	62194	82198	79978	72703	65927	57726
13	60536	56224	52027	48278	45402	49590	63237	82449	79709	72666	65558	57384
14	60356	55870	51944	48386	45640	49899	64179	82705	79501	72491	65436	57048
15	60107	55692	51809	48134	45937	50020	64779	82906	79252	72410	65310	56834
16	59758	55604	51507	48001	e45964	50039	65403	83051	79118	72309	65019	56613
17	59481	55493	51467	47977	e46002	50149	66725	83311	79076	72265	64764	56248
18	59233	55483	51339	47914	e46039	50250	67748	83371	78732	71945	64478	56116
19	59043	55374	51109	47635	e46077	50481	68392	83221	78545	71707	64170	55843
20	58659	55285	51131	47507	e46114	50549	69075	83264	78357	71427	63913	55513
21	58356	55123	50907	47415	46174	50681	69795	83450	78239	71215	63526	55242
22	58082	55061	50741	47362	46441	50808	70461	83405	77910	70915	63294	54899
23	57803	54958	50488	47195	46678	50988	71168	83425	77592	70711	62951	54602
24	57611	54823	50377	47102	46844	51144	71814	83411	77181	70421	62742	54217
25	57509	54762	50185	47001	47040	51382	72616	83332	77058	70174	62541	53955
26	57963	54615	50007	46851	47264	51837	73445	83258	76805	69992	62207	53690
27	58004	54400	49970	46792	47516	52148	74185	83290	76515	69797	61947	53348
28	57856	54274	49777	46665	47748	52629	75170	83192	76097	69506	61766	53053
29	57701	54173	49791	46638	47950	53008	75935	83167	75869	69363	61385	52667
30	57694	54137	49875	46482	---	53465	76793	82992	75615	69057	61057	52393
31	57714	---	49753	46423	---	53873	---	82873	---	68937	60800	---
MAX	64096	57637	54244	49580	47950	53873	76793	83450	82730	75330	68684	60607
MIN	57509	54137	49753	46423	45236	48076	54576	77371	75615	68937	60800	52393
a	6527.7	6524.1	6519.4	6515.0	6517.0	6523.8	6545.7	6550.5	6544.7	6539.3	6530.9	6522.3
b	-6901	-3577	-4384	-3330	+1527	+5923	+22920	+6080	-7258	-6678	-8137	-8407

CAL YR 1991 b -8879

WTR YR 1992 b -12222

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11294000 HIGHLAND CREEK BELOW NEW SPICER MEADOW RESERVOIR, CA

LOCATION.--Lat 38°23'35", long 119°59'53", in NW 1/4 NE 1/4 sec.9, T.7 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank in New Spicer Meadow powerplant at downstream side of New Spicer Meadow dam, 5.4 mi upstream from mouth, and 6.5 mi eastsoutheast of Big Meadows.

DRAINAGE AREA.--45.4 mi².

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930: 1953. WRD CA-89-3: Drainage area, 1987(M), 1988(M).

GAGE.--Acoustic-flow meter, and water-stage recorder on New Spicer Meadow Reservoir (station 11293770). Elevation of gage is 6,362 ft above National Geodetic Vertical Datum of 1929, from topographic map. December 1986 to September 1990 at site 1,400 ft downstream at different datum. October 1952 to November 1986, at site 900 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Low and medium flows regulated by New Spicer Meadow Reservoir since 1988 and, prior to 1988, by Spicer Meadows Reservoir, capacity 4,060 acre-feet. Flow has been diverted to New Spicer Meadow Reservoir from North Fork Stanislaus River since October 21, 1987. Penstock diverts from New Spicer Meadow Reservoir to New Spicer Meadow Powerplant. At times flow may bypass New Spicer Meadow Powerplant. Discharges, including extremes, represent flow through or past powerplant, and flow over spillway of reservoir. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft³/s, Jan. 31, 1963, gage height, 11.88 ft, site and datum then in use, from rating curve extended above 1,200 ft³/s; no flow some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1950, reached a stage of 11.50 ft, site and datum then in use, from Pacific Gas & Electric Co. recorder chart, discharge, 8,800 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s, Oct. 1, 2; minimum daily, 17 ft³/s, Apr. 4, 5, 7, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	358	90	80	81	71	18	18	18	133	145	146	144
2	268	86	83	77	72	18	18	18	133	143	146	144
3	154	85	83	78	75	18	18	18	134	143	142	144
4	154	86	83	78	74	18	17	18	140	144	138	144
5	154	86	83	78	72	18	17	18	139	142	142	144
6	154	85	83	77	73	18	18	18	140	146	146	144
7	153	85	84	70	74	18	17	18	139	146	151	145
8	153	84	84	74	70	18	18	18	135	144	157	147
9	153	84	81	76	63	18	18	23	133	140	152	147
10	153	84	82	74	55	18	18	67	136	135	149	147
11	145	84	85	73	38	18	18	63	137	139	176	147
12	146	84	84	73	24	18	18	42	136	101	209	147
13	146	85	84	72	33	18	18	31	138	134	200	147
14	146	85	84	73	46	18	18	38	138	135	145	147
15	149	85	84	74	40	18	18	41	137	137	145	146
16	150	85	84	74	33	117	18	51	131	135	145	146
17	150	85	91	71	41	52	18	51	141	137	145	145
18	147	85	89	68	58	18	17	53	144	137	145	144
19	146	84	83	69	36	18	18	54	141	137	144	145
20	145	85	88	74	26	18	18	54	141	137	143	146
21	142	84	88	73	20	20	18	57	146	137	143	147
22	138	79	88	73	18	25	18	64	146	138	143	152
23	137	76	88	73	18	21	18	77	146	138	143	151
24	123	76	88	73	18	18	18	78	145	138	143	145
25	82	76	88	75	18	18	18	78	145	139	143	144
26	46	76	86	75	18	18	18	78	146	139	145	145
27	42	75	79	81	18	18	18	82	146	140	145	148
28	66	75	76	75	18	18	18	87	152	142	145	148
29	69	75	76	72	18	18	18	97	152	142	145	148
30	40	76	78	71	---	18	18	116	139	142	144	144
31	56	---	86	71	---	18	---	123	---	143	144	---
TOTAL	4265	2470	2603	2296	1238	703	536	1649	4209	4295	4649	4382
MEAN	138	82.3	84.0	74.1	42.7	22.7	17.9	53.2	140	139	150	146
MAX	358	90	91	81	75	117	18	123	152	146	209	152
MIN	40	75	76	68	18	18	17	18	131	101	138	144
AC-FT	8460	4900	5160	4550	2460	1390	1060	3270	8350	8520	9220	8690
a	8460	4900	5160	4550	2460	1390	1060	3270	8350	8520	9220	8690

a Diversion, in acre-feet, through New Spicer Meadow powerplant, provided by Calaveras County Water District.

11294000 HIGHLAND CREEK BELOW NEW SPICER MEADOW RESERVOIR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.9	31.9	53.0	55.9	66.8	101	234	438	294	84.7	39.7	30.5
MAX	203	217	399	317	301	369	455	1047	1097	471	305	251
(WY)	1990	1984	1965	1980	1963	1986	1962	1969	1983	1983	1990	1991
MIN	.000	.000	.50	.50	2.69	.83	17.9	21.9	37.7	5.23	1.63	1.34
(WY)	1965	1965	1961	1961	1960	1977	1992	1991	1987	1961	1961	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1953 - 1992	
ANNUAL TOTAL	39728		33295		121	
ANNUAL MEAN	109		91.0		256	
HIGHEST ANNUAL MEAN					25.3	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	368	Sep 17	358	Oct 1	5040	Dec 23 1955
LOWEST DAILY MEAN	18	May 15	17	Apr 4	.00	Sep 28 1964
ANNUAL SEVEN-DAY MINIMUM	19	May 24	18	Apr 1	.00	Sep 28 1964
INSTANTANEOUS PEAK FLOW			365	Oct 1	9860	Jan 31 1963
INSTANTANEOUS PEAK STAGE					11.88	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	78800		66040		87980	
10 PERCENT EXCEEDS	225		146		352	
50 PERCENT EXCEEDS	92		84		41	
90 PERCENT EXCEEDS	21		18		2.5	

11294400 NORTH FORK STANISLAUS RIVER AT SOURGRASS CAMPGROUND, NEAR DORRINGTON, CA

LOCATION.--Lat 38°19'14", long 120°13'05", in NE 1/4 NW 1/4 sec.04, T.5 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 1.1 mi downstream from Little Rattlesnake Creek, 1.5 mi upstream from Mill Creek, and 3.3 mi east of Dorrrington.

DRAINAGE AREA.--149 mi².

PERIOD OF RECORD.--February 1991 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Low and medium flows regulated by Union and Utica Reservoirs, Lake Alpine, North Fork Stanislaus River diversion reservoir, and New Spicer Meadow Reservoir (stations 11293350, 11293370, 11293460, 11293590, and 11293770), total combined usable capacity, 194,001 acre-ft. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s, Mar. 4, 1991, gage height, 12.81 ft; minimum daily, 75 ft³/s, Oct. 31, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 833 ft³/s, Apr. 17, gage height, 10.60 ft; minimum daily, 75 ft³/s, Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	108	114	124	117	237	491	266	171	166	170	167
2	402	117	121	116	115	207	519	236	171	167	170	166
3	208	117	120	117	117	205	572	224	168	161	168	165
4	202	117	118	117	118	208	586	226	171	163	163	166
5	206	116	117	127	117	217	526	203	171	159	164	167
6	205	115	117	120	115	231	427	194	169	160	165	166
7	206	114	121	121	133	202	414	204	167	166	166	167
8	206	114	119	110	142	198	440	198	165	171	169	169
9	206	114	119	118	141	194	435	175	159	168	172	170
10	206	113	114	122	134	196	409	172	159	165	171	170
11	201	113	120	115	133	208	419	184	160	164	172	170
12	196	113	119	117	141	237	395	161	159	182	217	170
13	197	113	118	114	124	244	613	135	159	189	228	170
14	198	114	118	115	131	264	533	131	161	185	184	169
15	199	114	117	117	136	261	486	130	167	178	174	170
16	202	114	117	119	118	278	412	130	160	206	168	170
17	202	129	118	119	109	313	617	130	158	220	167	170
18	202	129	147	114	125	215	557	126	169	186	167	168
19	196	122	124	114	135	207	437	124	163	176	167	167
20	197	128	123	116	361	197	450	126	164	171	165	168
21	196	138	124	119	307	197	462	122	164	169	165	165
22	189	136	124	117	357	211	381	120	167	169	164	169
23	189	118	123	117	271	220	313	128	163	168	163	171
24	182	116	122	116	232	213	309	134	163	167	163	167
25	141	116	122	119	250	218	332	132	163	167	163	162
26	353	116	122	119	277	267	344	129	162	166	165	162
27	100	120	119	121	278	289	335	127	161	165	165	165
28	90	118	119	127	280	376	332	135	165	168	167	167
29	113	114	119	117	256	375	344	135	172	168	167	167
30	91	111	114	117	---	394	316	154	191	168	171	166
31	75	---	119	117	---	370	---	166	---	167	171	---
TOTAL	6176	3537	3728	3658	5270	7649	13206	4957	4962	5345	5311	5026
MEAN	199	118	120	118	182	247	440	160	165	172	171	168
MAX	420	138	147	127	361	394	617	266	191	220	228	171
MIN	75	108	114	110	109	194	309	120	158	159	163	162
AC-FT	12250	7020	7390	7260	10450	15170	26190	9830	9840	10600	10530	9970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MEAN	199	118	120	118	155	241	425	381	222	202	220	238
MAX	199	118	120	118	182	247	440	603	278	232	268	308
(WY)	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1991
MIN	199	118	120	118	126	235	410	160	165	172	171	168
(WY)	1992	1992	1992	1992	1991	1991	1991	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	68825		
ANNUAL MEAN	188		188
HIGHEST ANNUAL MEAN			188
LOWEST ANNUAL MEAN			188
HIGHEST DAILY MEAN	617	Apr 17	1300
LOWEST DAILY MEAN	75	Oct 31	75
ANNUAL SEVEN-DAY MINIMUM	99	Oct 27	99
INSTANTANEOUS PEAK FLOW	833	Apr 17	2590
INSTANTANEOUS PEAK STAGE	10.60	Apr 17	12.81
ANNUAL RUNOFF (AC-FT)	136500		136200
10 PERCENT EXCEEDS	321		427
50 PERCENT EXCEEDS	166		190
90 PERCENT EXCEEDS	116		118

SAN JOAQUIN RIVER BASIN

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA

LOCATION.--Lat 38°14'38", long 120°17'24", in SW 1/4 NE 1/4 sec.35, T.5 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 1.1 mi upstream from McKay's Point Dam, 3.3 mi upstream from Beaver Creek, and 5.1 mi northeast of Avery.

DRAINAGE AREA.--163 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1914 to September 1925, November 1928 to current year. Yearly discharge only for some years, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M). WSP 1515: 1915(M), 1932(M), 1936(M), 1938, 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 3,388.3 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to September 1922, nonrecording gage at same site at datum 0.05 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Low and medium flows regulated by Union and Utica Reservoirs, Lake Alpine, North Fork Stanislaus River diversion reservoir, and New Spicer Meadow Reservoir (stations 11293350, 11293370, 11293460, 11293590, and 11293770), total combined usable capacity, 194,001 acre-ft. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s, Jan. 31, 1963, gage height, 15.00 ft, from floodmarks, from rating curve extended above 14,000 ft³/s on basis of slope-area measurement at gage height 13.8 ft; minimum daily, 5.5 ft³/s, Dec. 6, 7, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 856 ft³/s, Apr. 17, gage height, 4.44 ft; minimum daily, 71 ft³/s, Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	375	98	107	125	113	272	510	296	172	171	173	172
2	369	116	116	117	112	238	539	261	173	171	174	171
3	194	116	116	117	113	236	584	244	169	164	173	171
4	178	114	114	116	115	239	596	249	171	166	167	171
5	182	114	113	131	112	256	541	222	171	163	166	171
6	181	114	112	122	110	283	457	212	170	164	168	171
7	181	112	119	124	128	244	442	225	170	169	169	171
8	180	112	115	108	143	237	466	219	168	175	172	174
9	181	113	115	119	144	230	464	193	161	171	176	175
10	180	112	110	123	140	232	439	182	160	167	177	175
11	178	111	115	116	143	245	450	202	162	169	177	175
12	171	110	114	116	160	275	430	177	162	211	228	174
13	173	109	114	113	145	282	611	148	162	194	243	174
14	172	111	114	113	143	306	557	138	164	195	195	174
15	173	111	112	116	160	305	510	138	171	184	180	174
16	177	111	112	119	134	319	449	134	167	206	174	173
17	177	135	113	119	120	363	610	135	160	244	172	173
18	177	139	148	113	130	258	594	130	172	196	172	172
19	172	124	130	111	148	245	459	128	165	184	171	171
20	172	126	121	112	374	232	460	130	168	177	170	171
21	171	138	124	117	353	233	480	127	166	174	170	168
22	166	138	123	112	403	249	421	123	171	174	169	172
23	167	118	122	113	319	259	349	127	166	173	169	173
24	161	113	121	112	273	250	341	132	165	172	169	171
25	131	112	121	115	289	254	356	130	166	171	168	164
26	349	112	121	116	317	305	371	127	164	172	170	164
27	123	117	118	116	316	329	362	125	163	169	170	167
28	86	116	122	127	318	411	356	133	168	171	170	168
29	107	110	124	114	293	413	368	133	177	172	171	167
30	96	106	115	115	---	435	348	150	203	171	173	168
31	71	---	118	113	---	408	---	168	---	170	178	---
TOTAL	5571	3488	3659	3620	5768	8843	13920	5238	5047	5530	5474	5135
MEAN	180	116	118	117	199	285	464	169	168	178	177	171
MAX	375	139	148	131	403	435	611	296	203	244	243	175
MIN	71	98	107	108	110	230	341	123	160	163	166	164
AC-FT	11050	6920	7260	7180	11440	17540	27610	10390	10010	10970	10860	10190

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.7	131	221	234	319	479	981	1498	787	151	65.4	60.0
MAX	482	2103	1957	1691	2105	1785	2026	3299	3651	1231	337	273
(WY)	1983	1951	1965	1980	1986	1986	1982	1969	1983	1983	1990	1991
MIN	21.8	10.6	10.1	17.0	23.5	39.7	70.6	138	44.9	34.0	24.2	22.9
(WY)	1960	1960	1977	1977	1933	1977	1924	1924	1924	1924	1981	1924

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1915 - 1992		
ANNUAL TOTAL	85903			71293			416		
ANNUAL MEAN	235			195			1019		
HIGHEST ANNUAL MEAN							54.3		
LOWEST ANNUAL MEAN							1983		
HIGHEST DAILY MEAN	1230	Mar 4		611	Apr 13		23400	Dec 23	1955
LOWEST DAILY MEAN	71	Oct 31		71	Oct 31		5.5	Dec 6	1929
ANNUAL SEVEN-DAY MINIMUM	99	Oct 28		99	Oct 28		7.4	Dec 2	1929
INSTANTANEOUS PEAK FLOW				856	Apr 17		36000	Jan 31	1963
INSTANTANEOUS PEAK STAGE				4.44	Apr 17		15.00	Jan 31	1963
ANNUAL RUNOFF (AC-FT)	170400			141400			301200		
10 PERCENT EXCEEDS	442			354			1200		
50 PERCENT EXCEEDS	184			170			112		
90 PERCENT EXCEEDS	112			113			34		

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1990 to current year.

INSTRUMENTATION.--Temperature recorder since June 1990.

REMARKS.--Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 23.0°C, July 5, 27-30, 1991; minimum recorded, 0.5°C, Jan. 12-14, Feb. 15, 16, 1992.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 21.5°C, May 31-June 4, June 9; minimum recorded, 0.5°C, Jan. 12-14, Feb. 15, 16.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	11.0	6.0	4.5	2.5	1.5	2.0	1.0	4.0	3.0	6.5	5.0
2	12.0	11.0	7.5	5.5	3.0	1.5	2.0	1.5	4.0	2.5	6.5	5.0
3	13.5	11.0	8.5	7.0	4.0	3.0	3.0	2.0	4.0	2.5	6.5	5.5
4	13.5	11.0	8.5	7.0	4.5	3.5	3.5	2.5	4.0	2.5	6.5	4.5
5	13.5	11.0	9.0	7.5	4.0	3.5	3.5	1.0	4.5	2.5	6.0	4.0
6	13.5	11.0	10.0	8.5	5.0	3.5	2.0	1.5	5.5	4.0	4.0	2.5
7	12.5	10.5	10.0	8.5	5.0	4.5	2.0	1.0	6.0	5.0	3.5	2.5
8	12.5	10.0	10.0	9.5	4.5	3.5	2.0	1.0	6.5	5.5	---	---
9	12.0	10.0	10.5	9.5	3.5	2.5	1.5	1.0	6.0	5.5	---	---
10	12.0	9.5	10.0	8.5	3.5	2.5	2.0	1.0	5.5	4.5	---	---
11	12.0	10.5	9.5	8.0	3.5	2.5	2.0	1.0	4.5	2.5	---	---
12	12.0	10.5	8.5	7.5	3.0	2.5	1.5	.5	4.0	3.0	---	---
13	12.0	10.0	8.5	7.5	3.0	2.0	1.0	.5	3.5	2.5	7.0	---
14	12.0	10.0	8.0	6.0	3.0	2.5	1.5	.5	4.0	3.0	6.0	5.0
15	12.0	10.0	6.0	4.5	3.0	2.0	2.5	1.5	3.0	.5	5.0	4.5
16	11.5	9.5	5.0	3.5	3.0	2.0	3.0	2.0	1.5	.5	4.5	4.0
17	11.5	9.5	5.5	4.5	4.0	2.5	3.5	2.0	2.5	1.5	6.0	4.0
18	11.5	9.5	4.5	3.5	5.0	4.0	4.0	2.5	3.5	2.0	6.5	4.5
19	11.5	9.0	5.0	3.0	4.5	2.0	3.5	2.0	4.0	3.0	6.5	4.5
20	11.5	9.5	6.5	4.5	2.0	1.0	3.0	1.5	4.5	3.5	6.5	5.0
21	11.0	9.5	7.5	6.5	2.0	1.0	3.0	1.5	4.0	3.5	6.5	5.5
22	10.5	8.5	7.0	5.5	3.0	2.0	2.5	1.5	5.5	3.5	7.0	5.5
23	10.0	9.5	6.0	4.5	3.0	2.0	2.0	1.0	5.5	3.5	7.0	5.0
24	9.5	8.0	6.0	5.0	3.0	2.0	3.0	1.0	6.0	3.5	7.0	5.0
25	9.0	8.0	6.5	5.5	3.0	2.5	3.5	2.0	6.5	4.5	7.5	5.5
26	8.5	7.5	6.5	5.5	4.0	3.0	4.0	3.0	6.5	4.5	7.5	6.0
27	7.5	6.0	6.0	5.0	4.0	2.5	4.0	2.5	6.5	4.5	8.5	5.5
28	6.5	5.0	5.0	3.5	3.5	2.5	4.0	3.5	6.5	5.0	7.5	5.5
29	6.0	5.5	3.5	2.5	2.5	2.0	3.5	2.5	6.0	5.0	7.0	6.0
30	6.0	4.5	2.5	1.5	2.0	1.5	3.5	2.5	---	---	6.5	5.5
31	6.0	4.0	---	---	2.0	1.5	4.0	2.5	---	---	8.0	5.0
MONTH	13.5	4.0	10.5	1.5	5.0	1.0	4.0	.5	6.5	.5	---	---

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	6.0	12.0	8.5	21.5	18.0	15.0	10.5	---	---	14.5	11.0
2	8.0	5.5	13.0	9.5	21.5	17.5	15.5	11.0	---	---	14.5	12.0
3	8.5	6.0	14.0	10.5	21.5	17.5	16.0	12.5	---	---	13.5	11.5
4	8.0	6.0	14.5	11.5	21.5	18.0	16.0	12.5	---	---	13.0	9.5
5	7.5	5.5	14.0	11.0	21.0	17.5	16.0	12.0	---	---	13.5	10.0
6	8.0	5.5	14.5	12.0	20.5	18.0	15.5	12.5	---	---	13.5	10.5
7	8.5	5.5	15.5	12.5	20.5	17.0	16.0	12.0	---	---	13.5	10.0
8	8.5	6.0	17.0	13.0	21.0	17.0	16.0	12.5	---	---	12.5	10.0
9	8.5	6.0	17.0	13.5	21.5	17.5	16.5	12.5	---	---	13.0	10.0
10	8.5	6.0	16.5	12.5	20.5	17.0	17.5	13.5	---	---	13.5	10.5
11	8.5	6.5	16.5	12.5	19.5	16.5	16.5	14.5	18.0	14.0	14.0	11.0
12	7.5	6.5	16.5	13.0	18.0	15.5	15.5	13.5	17.5	14.5	13.5	10.5
13	7.5	6.0	17.0	13.5	15.5	13.0	17.0	13.5	17.5	14.0	13.0	10.0
14	8.0	6.0	17.0	14.0	15.0	12.5	16.0	---	17.0	13.5	13.0	10.0
15	8.5	7.0	17.5	13.5	14.5	13.0	17.5	---	18.0	14.5	13.0	9.5
16	8.0	6.0	17.5	14.0	15.0	11.5	17.5	14.0	18.0	---	12.5	9.5
17	10.0	7.5	17.5	14.0	17.5	13.0	18.0	14.5	17.5	---	12.5	10.0
18	9.0	6.5	17.5	14.0	18.5	14.5	18.0	14.0	17.0	13.5	12.5	10.0
19	10.0	6.5	16.0	13.5	17.0	13.5	18.0	---	16.0	13.0	13.0	10.0
20	11.0	8.0	14.5	11.5	16.0	13.5	17.0	---	15.0	12.5	13.0	10.0
21	10.5	8.5	15.5	11.0	17.0	12.5	---	---	14.5	11.5	13.0	10.0
22	9.5	7.5	16.5	12.0	17.5	13.5	---	---	14.0	11.0	13.5	10.5
23	9.5	6.5	17.5	13.5	17.0	14.5	---	---	13.5	10.0	13.0	10.5
24	10.5	7.5	18.5	14.5	16.0	13.5	---	---	13.5	10.0	12.5	10.0
25	12.0	8.5	19.5	15.5	15.0	12.5	---	---	13.5	10.0	12.0	9.0
26	12.0	9.5	20.0	16.0	16.0	12.0	---	---	14.0	10.5	12.0	9.5
27	12.5	9.0	20.0	16.5	17.0	13.0	---	---	14.5	11.0	12.0	9.5
28	14.0	10.0	20.5	17.0	16.5	13.5	---	---	15.0	11.5	12.5	9.5
29	14.0	10.5	20.5	17.0	13.5	11.0	---	---	14.5	12.0	12.5	9.5
30	13.0	10.5	21.0	16.5	13.0	10.0	---	---	15.0	12.5	12.5	9.5
31	---	---	21.5	18.0	---	---	---	---	14.5	11.5	---	---
MONTH	14.0	5.5	21.5	8.5	21.5	10.0	---	---	---	---	14.5	9.0

SAN JOAQUIN RIVER BASIN

11295210 BEAVER CREEK DIVERSION TO MCKAY'S POINT RESERVOIR NEAR ARNOLD, CA

LOCATION.--Lat 38°14'01", long 120°16'44", in NW 1/4 NW 1/4 sec.1, T.4 N., R.15 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at Beaver Creek diversion dam and 4.5 mi east-southeast of Arnold.

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,188.0 ft above National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--No estimated daily discharges. Diversion through tunnel and penstock to small turbine at McKay's Point Reservoir (station 11295260) and for further power development in Collierville Powerplant (station 11295250).

See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, 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, 138 ft³/s, May 8, 1991; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	32	86	18	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	34	92	14	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	34	96	12	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	32	95	10	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	38	83	9	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	39	77	4.8	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	33	72	4.3	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	31	73	4.4	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	30	67	1.7	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	31	58	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	33	59	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	14	38	54	.00	.00	37	.00	.00
13	.00	.00	.00	.00	11	36	80	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	3.6	51	70	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	45	66	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	40	55	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	5.7	39	70	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	18	38	72	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	3.1	38	51	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	38	36	51	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	57	37	44	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	59	41	34	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	39	35	34	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	30	34	31	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	36	38	32	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	33	45	30	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	34	50	28	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	43	66	26	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	36	71	24	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	82	25	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	78	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	463.40	1305	1735	78.20	0.00	37.00	0.00	0.00
MEAN	.000	.000	.000	.000	16.0	42.1	57.8	2.52	.000	1.19	.000	.000
MAX	.00	.00	.00	.00	59	82	96	18	.00	37	.00	.00
MIN	.00	.00	.00	.00	.00	30	24	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	919	2590	3440	155	.00	73	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

MEAN	.000	.000	.000	.000	8.13	33.0	61.2	34.9	5.90	.40	.000	.001
MAX	.000	.000	.000	.000	16.0	53.1	68.5	93.5	14.0	1.19	.000	.003
(WY)	1991	1991	1991	1991	1992	1990	1990	1991	1991	1992	1990	1991
MIN	.000	.000	.000	.000	.000	3.90	57.1	2.52	.000	.000	.000	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1992	1992	1990	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	5154.30	3618.60	
ANNUAL MEAN	14.1	9.89	12.0
HIGHEST ANNUAL MEAN			14.1
LOWEST ANNUAL MEAN			9.89
HIGHEST DAILY MEAN	138	May 8	96
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	10220	7180	8690
10 PERCENT EXCEEDS	71	39	63
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11295220 BEAVER CREEK DIVERSION RESERVOIR NEAR ARNOLD, CA

LOCATION.--Lat 38°13'58", long 120°16'43", in NW 1/4 NW 1/4 sec.1, T.4 N., R.15 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at outlet structure of Beaver Creek diversion dam on Beaver Creek and 4.5 mi eastsoutheast of Arnold.

DRAINAGE AREA.--29.3 mi².

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in July 1989. Usable capacity, 2 acre-ft between elevations 4,186.0 ft, minimum fishwater release elevation, and 4,191.5 ft, crest of spillway. Water is diverted through tunnel to McKay's Point Reservoir (station 11295260) on North Fork Stanislaus River. Released water is used for fishery maintenance. Reservoir was drained below minimum fishwater release elevation Sept. 7 to Oct. 25, 1991, to allow replacement of the fish screens. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 13 acre-ft, for many days in 1991, 1992, maximum elevation, 4,192.2 ft, Mar. 4, 1991; minimum, 7.2 acre-ft, Oct. 23-25, 1991, minimum elevation, 4,182.7 ft, for many days in 1991, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13 acre-ft, for many days, maximum elevation, 4,191.7 ft, Oct. 26; minimum, 7.2 acre-ft, Oct. 23-25, minimum elevation, 4,182.7 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

4,182	7	4,189	11	4,192	13
4,186	10	4,191	12		

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
2	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
3	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
4	7.3	10	10	10	10	12	11	12	10	10	9.9	9.9
5	7.3	10	10	10	10	12	12	13	10	10	9.9	9.9
6	7.3	10	10	10	10	12	12	13	10	10	9.9	9.9
7	7.3	10	10	10	10	13	12	12	10	10	9.9	9.9
8	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
9	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
10	7.3	10	10	10	10	12	12	12	10	10	9.9	9.9
11	7.3	10	10	10	11	12	12	12	10	10	9.9	9.9
12	7.3	10	10	10	11	11	12	10	10	11	9.9	9.9
13	7.3	10	10	10	11	12	12	10	10	11	9.9	9.9
14	7.3	10	10	10	11	11	12	10	10	10	9.9	9.8
15	7.3	10	10	10	11	12	12	10	10	10	9.9	9.8
16	7.3	10	10	10	12	12	12	10	10	10	9.9	9.8
17	7.3	11	10	10	13	12	12	10	10	10	9.9	9.8
18	7.3	10	10	10	12	11	12	10	10	10	9.9	9.9
19	7.3	10	10	10	11	12	12	10	10	10	9.9	9.9
20	7.3	10	10	10	11	12	12	10	10	10	9.9	9.8
21	7.3	10	10	10	12	12	12	10	10	10	9.9	9.8
22	7.3	10	10	10	12	11	11	10	10	10	9.9	9.8
23	7.2	10	10	10	11	11	12	10	10	10	9.9	9.8
24	7.2	10	10	10	12	11	12	10	10	10	9.9	9.8
25	7.2	10	10	10	11	11	12	10	10	10	9.9	9.8
26	13	10	10	10	12	12	12	10	10	10	9.9	9.9
27	11	10	10	10	12	12	12	10	10	10	9.9	9.8
28	10	10	10	10	11	12	12	10	10	9.9	9.9	9.8
29	10	10	10	10	11	12	13	10	10	9.9	9.9	9.8
30	10	10	10	10	---	11	11	10	10	9.9	9.9	9.8
31	10	---	10	10	---	12	---	10	---	9.9	9.9	---
MAX	13	11	10	10	13	13	13	13	10	11	9.9	9.9
MIN	7.2	10	10	10	10	11	11	10	10	9.9	9.9	9.8
a	4187.1	4187.1	4187.2	4187.2	4189.0	4190.4	4188.7	4187.2	4187.4	4186.9	4186.8	4186.8
b	2.7	0	0	0	+1.0	+1.0	-1.0	-1.0	0	-0.1	0	-0.1
CAL YR 1991	b +0.1											
WTR YR 1992	b +2.5											

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11295230 BEAVER CREEK BELOW DIVERSION DAM, NEAR ARNOLD, CA

LOCATION.--Lat 38°13'59", long 120°16'46", in NE 1/4 NW 1/4 sec.1, T.4 N., R.15 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, at Beaver Creek diversion dam, 4.5 mi eastsoutheast of Arnold.

DRAINAGE AREA.--29.3 mi².

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Acoustic-velocity meter on low-flow discharge, and water-stage recorder on Beaver Creek Diversion Reservoir (station 11295220). Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--Entire flow of Beaver Creek in excess of 16.5 ft³/s required for stream maintenance can be diverted through tunnel and penstock to turbine at McKay's Point Reservoir (stations 11295210 and 11295260). Capacity of tunnel and penstock is 400 ft³/s and flow in excess of that amount is either released or spilled at Beaver Creek diversion dam to the creek. Discharge, including extremes, represents the combined flow of Beaver Creek and spill or release at diversion dam. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 439 ft³/s (revised) Mar. 4, 1991; minimum daily, 2.0 ft³/s, Oct. 1-25, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft³/s, Oct. 26; minimum daily, 2.0 ft³/s, Oct. 1-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.0	6.4	6.4	7.3	9.0	19	18	20	8.2	9.6	4.0	2.8
2	e2.0	6.2	6.3	7.0	8.7	19	18	20	7.8	7.3	3.9	2.8
3	e2.0	6.1	6.2	7.7	8.0	19	17	20	7.3	6.4	3.7	2.8
4	e2.0	5.9	6.1	7.3	8.4	19	18	20	6.8	6.0	3.6	3.0
5	e2.0	5.7	5.9	7.4	8.2	20	17	26	6.7	5.6	3.5	2.9
6	e2.0	5.5	6.0	9.6	8.5	19	18	38	6.7	5.4	3.4	2.8
7	e2.0	5.3	7.1	8.9	11	19	18	36	7.2	5.3	3.4	2.7
8	e2.0	5.2	6.7	7.2	14	19	18	20	6.9	5.0	3.5	2.6
9	e2.0	5.3	6.0	8.0	15	19	18	20	6.5	4.8	3.4	2.7
10	e2.0	5.3	5.8	7.8	18	19	18	20	6.2	4.8	3.3	2.5
11	e2.0	5.2	5.9	6.9	19	19	18	20	6.1	5.7	3.1	2.5
12	e2.0	4.9	5.5	7.2	19	19	18	19	6.1	19	3.1	2.5
13	e2.0	4.8	5.5	7.7	19	20	17	17	6.4	20	3.0	2.6
14	e2.0	4.7	5.7	7.5	19	19	17	16	6.5	14	2.9	2.6
15	e2.0	4.6	5.5	7.7	19	19	17	16	7.4	11	3.0	2.4
16	e2.0	4.6	5.2	7.9	19	20	17	15	8.6	9.9	2.9	2.4
17	e2.0	11	5.9	8.1	20	19	17	14	7.4	8.9	2.7	2.4
18	e2.0	16	12	8.3	20	19	17	13	6.6	7.7	2.6	2.4
19	e2.0	9.7	12	7.9	19	19	17	13	6.2	6.8	2.6	2.4
20	e2.0	8.7	7.7	7.7	57	19	18	13	6.8	6.3	2.7	2.4
21	e2.0	9.7	8.1	8.4	19	20	19	12	7.8	6.0	2.8	2.3
22	e2.0	11	7.4	6.8	19	20	20	12	5.9	5.7	2.6	2.2
23	e2.0	9.4	6.9	7.9	19	19	20	11	5.5	5.5	2.6	2.2
24	e2.0	8.4	6.5	8.3	19	18	20	10	5.8	5.4	2.6	2.3
25	e2.0	8.1	6.6	8.7	19	18	20	10	5.9	5.3	2.5	2.2
26	58	8.0	6.5	8.5	22	18	20	9.8	5.8	5.1	2.5	2.3
27	36	8.5	6.4	8.2	19	18	20	9.4	5.4	4.9	2.4	2.3
28	12	8.4	8.8	8.8	19	18	20	9.1	5.4	4.6	2.3	2.3
29	9.0	7.3	9.2	8.4	19	18	20	8.9	6.9	4.5	2.4	2.1
30	8.4	6.2	8.7	8.6	---	18	20	8.6	15	4.3	2.5	2.1
31	7.0	---	7.3	8.9	---	18	---	8.3	---	4.1	2.9	---
TOTAL	180.4	216.1	215.8	246.6	512.8	586	550	505.1	207.8	224.9	92.4	74.5
MEAN	5.82	7.20	6.96	7.95	17.7	18.9	18.3	16.3	6.93	7.25	2.98	2.48
MAX	58	16	12	9.6	57	20	20	38	15	20	4.0	3.0
MIN	2.0	4.6	5.2	6.8	8.0	18	17	8.3	5.4	4.1	2.3	2.1
AC-FT	358	429	428	489	1020	1160	1090	1000	412	446	183	148

e Estimated.

11295230 BEAVER CREEK BELOW DIVERSION DAM, NEAR ARNOLD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.55	5.84	5.74	6.48	12.5	20.2	18.2	17.3	12.8	6.84	3.34	2.85
MAX	5.82	7.20	6.96	7.95	17.7	24.1	19.0	19.1	17.6	7.96	3.77	3.13
(WY)	1992	1992	1992	1992	1992	1991	1991	1991	1991	1991	1991	1991
MIN	3.28	4.48	4.53	5.00	6.32	17.6	17.2	16.3	6.93	5.29	2.98	2.48
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	1990	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1990 - 1992			
ANNUAL TOTAL	3835.9				3612.4							
ANNUAL MEAN	10.5				9.87				9.87			
HIGHEST ANNUAL MEAN									9.87			
LOWEST ANNUAL MEAN									9.86			
HIGHEST DAILY MEAN	158				58				158			
LOWEST DAILY MEAN	2.0				2.0				2.0			
ANNUAL SEVEN-DAY MINIMUM	2.0				2.0				2.0			
INSTANTANEOUS PEAK FLOW					117				439			
ANNUAL RUNOFF (AC-FT)	7610				7170				7150			
10 PERCENT EXCEEDS	19				19				19			
50 PERCENT EXCEEDS	6.5				7.4				7.2			
90 PERCENT EXCEEDS	3.0				2.4				2.9			

11295240 UTICA CANAL AT PRESSURE TAP, NEAR HATHAWAY PINES, CA

LOCATION.--Lat 38°11'33", Long 120°21'14", in SW 1/4 SW 1/4 sec.17, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, at pressure tap in Collierville tunnel and 0.5 mi east of Hathaway Pines.

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

GAGE.--Acoustic-velocity meter. Elevation of gage is 3,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow is diverted into Collierville tunnel at McKay's Point Reservoir (stations 11295250 and 11295260) and enters canal through pressure tap in the tunnel. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 89 ft³/s, Oct. 17, 1989; no flow in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	38	e62	63	73	74	58	84	86	76	32	35
2	52	60	e64	63	79	74	58	84	86	47	31	36
3	62	60	e64	63	79	74	58	85	86	47	32	36
4	62	60	e64	63	79	75	58	85	86	47	32	36
5	62	60	e64	63	79	71	58	85	86	47	32	36
6	62	60	e64	63	79	24	23	85	86	47	32	36
7	62	60	e64	63	79	58	.00	85	86	47	32	36
8	62	60	e64	63	79	69	.03	85	86	47	32	36
9	62	60	e64	63	79	65	.03	85	86	47	31	36
10	62	60	e64	63	70	68	.03	85	86	32	31	36
11	62	60	e64	63	61	70	.03	85	86	32	31	36
12	62	60	e64	63	53	72	.00	85	86	32	32	36
13	62	60	e64	63	39	73	.00	85	86	32	32	36
14	62	60	e64	63	45	74	.03	85	86	32	32	36
15	62	60	e64	63	39	70	.00	85	86	32	32	20
16	55	60	e64	63	40	62	.03	85	86	32	32	25
17	62	60	e64	63	45	61	80	85	86	32	31	38
18	62	60	e64	63	45	67	80	85	86	32	31	38
19	62	60	e64	63	51	70	80	85	86	32	e39	38
20	62	60	64	63	10	67	80	85	86	32	e49	38
21	62	60	64	63	28	65	80	85	86	32	e42	38
22	62	60	64	63	48	65	88	85	86	32	e31	38
23	62	60	64	63	61	65	80	86	86	32	e31	38
24	33	60	64	63	65	65	80	86	86	32	e31	38
25	.00	60	64	63	71	64	82	86	86	32	32	38
26	.00	60	64	63	73	62	83	86	86	32	32	38
27	.00	60	64	63	72	62	84	86	86	32	32	38
28	.00	60	64	63	74	62	85	86	86	32	32	38
29	.00	60	64	63	74	60	85	86	86	32	32	38
30	.00	60	64	63	---	58	85	86	86	32	32	24
31	.00	---	64	63	---	58	---	86	---	32	32	---
TOTAL	1410.00	1778	1982	1953	1769	2024	1465.18	2642	2580	1156	1017	1066
MEAN	45.5	59.3	63.9	63.0	61.0	65.3	48.8	85.2	86.0	37.3	32.8	35.5
MAX	62	60	64	63	79	75	88	86	86	76	49	38
MIN	.00	38	62	63	10	24	.00	84	86	32	31	20
AC-FT	2800	3530	3930	3870	3510	4010	2910	5240	5120	2290	2020	2110

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

MEAN	55.2	51.2	61.1	63.2	55.8	70.5	66.8	80.3	74.9	38.8	34.5	37.1
MAX	74.7	59.3	69.8	77.7	79.0	75.8	81.5	85.2	86.0	42.9	40.4	40.9
(WY)	1990	1992	1990	1990	1991	1990	1990	1992	1992	1991	1991	1991
MIN	45.3	38.1	49.6	48.9	27.4	65.3	48.8	72.6	66.3	36.2	30.4	35.0
(WY)	1991	1991	1991	1991	1990	1992	1992	1991	1990	1990	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	21412.00	20842.18	
ANNUAL MEAN	58.7	56.9	57.5
HIGHEST ANNUAL MEAN			59.8
LOWEST ANNUAL MEAN			55.7
HIGHEST DAILY MEAN	85 Jun 21	88 Apr 22	89 Oct 17 1989
LOWEST DAILY MEAN	.00 Oct 25	.00 Oct 25	.00 Feb 4 1990
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 25	.00 Oct 25	.00 Feb 4 1990
ANNUAL RUNOFF (AC-FT)	42470	41340	41630
10 PERCENT EXCEEDS	78	86	83
50 PERCENT EXCEEDS	62	62	62
90 PERCENT EXCEEDS	40	32	32

11295250 COLLIERVILLE POWERPLANT NEAR MURPHYS, CA

LOCATION.--Lat 38°08'33", long 120°22'39", in NE 1/4 SE 1/4 sec.1, T.3 N., R.14 E., Calaveras County, Hydrologic Unit 18040010, 800 ft upstream from Stanislaus River and 4.4 mi east of Murphys.

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Pressure-differential sensors in powerplant penstocks. Elevation of powerplant is 1,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow is diverted from McKay's Point Reservoir (station 11295260) through Collierville tunnel to the powerplant. A portion of the flow in the tunnel is diverted to Utica Canal (station 11295240) through a pressure tap near Mill Creek in SW 1/4 SW 1/4 sec.17, T.4 N., R.15 E. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, 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, 1,080 ft³/s, May 24, 1991; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	120	12	.00	.00	104	616	356	113	109	.00	188
2	212	.00	.00	.00	.00	270	713	189	43	194	.00	173
3	187	272	.00	.00	5.8	365	609	96	83	153	154	157
4	128	.00	.00	.00	7.0	86	369	145	70	.00	186	178
5	.00	.00	.00	199	.00	166	284	120	13	.00	157	38
6	.00	84	.00	.00	.00	234	513	52	.00	118	116	.00
7	154	.00	9.2	.00	.00	83	443	44	.00	124	132	.00
8	121	.00	122	.00	.00	67	403	143	85	122	.00	167
9	128	.00	.00	.00	71	148	488	4.3	77	152	.00	180
10	146	80	.00	.00	32	78	542	.00	70	232	206	116
11	148	.00	.00	73	60	121	339	130	52	.00	110	117
12	75	.00	.00	204	139	136	338	78	62	148	109	.00
13	71	86	.00	.00	100	166	611	59	.00	225	134	.00
14	.00	.00	.00	.00	110	112	548	63	.00	244	177	103
15	.00	.00	171	.00	37	130	584	88	69	183	108	123
16	116	.00	.00	53	35	365	524	.00	66	195	67	148
17	99	124	.00	.00	74	570	519	.00	70	121	170	147
18	.00	.00	.00	.00	117	321	350	.00	74	.00	181	317
19	158	.00	.00	169	101	193	206	.00	131	.00	174	110
20	144	.00	.00	.00	325	163	453	.00	.00	128	132	103
21	122	.00	.00	.00	494	58	420	.00	.00	121	85	182
22	96	.00	232	.00	233	38	434	.00	63	82	.00	98
23	258	.00	.00	.00	252	234	378	.00	64	211	.00	122
24	84	301	.00	41	353	243	327	.00	88	175	111	85
25	.00	.00	.00	21	148	240	73	.00	79	.00	64	89
26	.00	.00	.00	28	177	252	66	.00	110	.00	136	64
27	.00	.00	.00	45	180	271	330	.00	.00	201	222	26
28	.00	140	14	40	377	347	301	.00	.00	179	124	151
29	.00	.00	224	49	107	90	243	.00	72	114	.00	105
30	53	.00	.00	46	---	475	375	.00	111	142	.00	120
31	178	---	.00	34	---	406	---	.00	---	116	163	---
TOTAL	2883.00	1207.00	784.20	1002.00	3534.80	6532	12399	1567.30	1665.00	3789.00	3218.00	3407.00
MEAN	93.0	40.2	25.3	32.3	122	211	413	50.6	55.5	122	104	114
MAX	258	301	232	204	494	570	713	356	131	244	222	317
MIN	.00	.00	.00	.00	.00	38	66	.00	.00	.00	.00	.00
AC-FT	5720	2390	1560	1990	7010	12960	24590	3110	3300	7520	6380	6760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	1990	1991	1992	1990	1991	1992	1990	1991	1992	1990	1991	1992
MEAN	116	49.6	44.9	35.0	81.2	205	389	239	117	135	192	178
MAX	139	59.0	64.6	37.7	122	263	413	570	168	145	300	219
(WY)	1991	1991	1991	1991	1992	1990	1992	1991	1991	1990	1990	1990
MIN	93.0	40.2	25.3	32.3	9.79	140	342	50.6	55.5	122	104	114
(WY)	1992	1992	1992	1992	1991	1991	1991	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1990 - 1992
ANNUAL TOTAL	59494.20	41988.30	
ANNUAL MEAN	163	115	143
HIGHEST ANNUAL MEAN			172
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	1080	713	1080
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 5	.00 Feb 10 1990
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 7	.00 May 16	.00 Feb 7 1991
ANNUAL RUNOFF (AC-FT)	118000	83280	103700
10 PERCENT EXCEEDS	421	318	390
50 PERCENT EXCEEDS	86	83	116
90 PERCENT EXCEEDS	.00	.00	.00

SAN JOAQUIN RIVER BASIN

11295260 MCKAY'S POINT RESERVOIR NEAR AVERY, CA

LOCATION.--Lat 38°14'01", long 120°17'30", in NE 1/4 NW 1/4 sec.2, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at outlet structure near upstream face of McKay's Point Dam on North Fork Stanislaus River and 4.6 mi northeast of Avery.

DRAINAGE AREA.--166 mi².

PERIOD OF RECORD.--February 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Calaveras County Water District).

REMARKS.--Reservoir is formed by concrete arch-type dam completed in July 1989. Usable capacity, 1,928 acre-ft between elevations 3,280.0 ft, minimum operating head, and 3,370.0 ft, crest of spillway. Water is diverted from reservoir through tunnel to Utica Canal (station 11295240) and Collierville Powerplant (station 11295250, near the confluence of the middle and north forks of the Stanislaus River). Released water is used for fishery maintenance. New capacity table started on Sept. 1, 1991, based on inflow-outflow computations. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Calaveras County Water District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,264 acre-ft (revised) Mar. 4, 1991, elevation, 3,370.5 ft; minimum, 329 acre-ft, Oct. 24, 1991, elevation, 3,281.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,182 acre-ft, June 14, elevation, 3,368.0 ft; minimum, 329 acre ft, Oct. 24, elevation, 3,281.1 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on inflow-outflow computations provided by Calaveras County Water District in September 1991)

3,280	320	3,340	1,325	3,370	2,248
3,300	480	3,360	1,921	3,370.5	2,264
3,320	869				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1119	970	463	710	652	1169	1252	1194	1895	2114	1905	1863
2	1260	1016	487	775	679	938	809	1141	1930	1946	2100	1731
3	1087	479	535	837	695	474	652	1231	1892	1838	2026	1626
4	1002	530	578	898	712	644	1020	1222	1875	2005	1877	1483
5	1164	577	619	573	740	698	1406	1215	1957	2159	1784	1596
6	1319	458	657	661	763	758	1293	1306	2060	2113	1770	1791
7	1184	499	696	751	820	954	1299	1452	2153	2067	1726	1973
8	1110	570	469	800	906	1134	1429	1384	2107	2031	1927	1856
9	1025	642	509	867	852	1151	1396	1530	2064	1944	2121	1713
10	901	510	564	943	886	1302	1185	1660	2031	1704	1952	1695
11	768	578	626	855	891	1401	1399	1561	2030	1912	1955	1677
12	767	643	679	474	812	1541	1584	1533	2011	1982	2054	1873
13	777	500	729	540	805	1632	1553	1493	2097	1801	2127	2056
14	928	563	775	608	750	1895	1552	1429	2182	1578	2037	2058
15	1072	583	457	673	881	2100	1394	1313	2166	1469	2047	2055
16	1000	601	488	632	957	1887	1190	1359	2155	1365	2117	1988
17	969	465	550	709	922	1311	1184	1408	2127	1491	2009	1909
18	1120	595	683	772	813	1059	1488	1447	2107	1754	1872	1486
19	960	676	781	464	748	1023	1832	1480	1975	1977	1731	1467
20	822	760	843	514	847	1024	1677	1518	2079	1951	1618	1457
21	727	863	906	595	536	1235	1626	1552	2172	1942	1615	1282
22	675	970	473	659	850	1519	1434	1568	2170	1996	1805	1280
23	357	1033	551	721	883	1446	1208	1597	2156	1814	1974	1234
24	329	463	631	689	569	1330	1057	1637	2102	1678	1959	1263
25	459	502	707	712	720	1238	1433	1674	2080	1887	2032	1270
26	1103	566	777	719	864	1230	1854	1706	1982	2082	1979	1319
27	1311	634	839	690	1003	1236	1733	1735	2072	1910	1754	1449
28	1401	426	884	694	749	1259	1652	1777	2164	1774	1721	1332
29	1383	450	478	652	989	1807	1727	1821	2156	1768	1917	1311
30	1415	463	553	616	---	1648	1503	1888	2138	1708	2103	1291
31	1149	---	625	603	---	1560	---	1987	---	1698	2014	---
MAX	1410	1030	906	943	1000	2100	1850	1990	2180	2160	2130	2060
MIN	329	426	457	464	536	474	652	1140	1870	1360	1610	1230
a	3332.7	3297.8	3307.4	3306.3	3325.6	3348.4	3346.4	3362.0	3366.6	3352.9	3362.8	3338.6
b	+242	-686	+162	-22	+386	+571	-57	+484	+151	-440	+316	-723

CAL YR 1991 b -1255

WTR YR 1992 b +384

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11295270 NORTH FORK STANISLAUS RIVER BELOW MCKAY'S POINT DAM, NEAR AVERY, CA

LOCATION.--Lat 38°13'58", long 120°17'33", in NE 1/4 NW 1/4 sec.2, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank, 500 ft downstream from McKay's Point Dam and 4.5 mi northeast of Avery.

DRAINAGE AREA.--166 mi².

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

GAGE.--Water-stage recorder, crest-stage gage, and rectangular steel weir. Prior to Nov. 1, 1989, concrete control. Elevation of gage is 3,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REVISED RECORDS.--WDR CA-91: 1990.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Union and Utica Reservoirs, Lake Alpine (stations 11293350, 11293370, and 11293460), New Spicer Meadow Reservoir and McKay's Point Reservoir (stations 11293770 and 11295260) with combined capacity, 200,770 acre-ft. Collierville tunnel diverts at McKay's Point Reservoir to Utica Canal and Collierville Powerplant. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s, Mar. 4, 1991, gage height, 2.68 ft, from rating curve extended above 36 ft³/s on the basis of computation of flow over dam and discharge through minimum release valve; minimum daily, 3.4 ft³/s, Nov. 25, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36 ft³/s, on several days in October and November, maximum gage height, 2.00 ft, Oct. 26; minimum daily, 12 ft³/s, Nov. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	27	30	20	18	18	21	18	19	18	23	24
2	28	28	31	20	19	18	22	18	19	19	23	24
3	28	29	31	20	20	18	21	18	19	21	24	24
4	28	32	31	20	19	18	21	18	21	22	23	25
5	29	32	30	20	19	18	21	19	21	22	23	24
6	30	28	29	18	19	19	21	18	21	22	23	25
7	30	23	27	17	18	19	21	19	21	22	23	24
8	29	21	27	20	17	18	21	18	21	22	23	24
9	29	21	27	20	18	21	22	18	21	22	23	24
10	30	24	22	20	18	18	21	18	21	22	24	24
11	29	21	24	21	18	18	19	18	21	23	23	24
12	28	22	24	21	18	19	18	18	21	24	24	24
13	28	22	25	20	18	19	18	18	21	23	24	25
14	29	24	25	20	17	20	18	17	21	21	24	25
15	30	35	24	22	18	20	18	18	20	19	24	25
16	30	35	22	20	18	19	19	18	19	19	25	24
17	29	12	23	19	17	18	20	18	19	20	25	24
18	30	14	24	18	19	18	21	18	21	20	24	24
19	30	25	22	19	18	19	22	18	21	21	25	25
20	29	24	23	20	18	19	20	19	21	21	28	24
21	28	23	25	19	18	18	19	19	20	22	26	25
22	27	22	23	20	18	18	18	19	22	21	25	25
23	25	22	20	20	18	19	18	19	22	22	25	25
24	23	22	20	20	18	19	18	19	22	23	25	25
25	29	26	20	18	19	18	18	19	22	22	25	25
26	31	26	20	18	19	20	19	18	22	22	25	25
27	22	25	20	19	20	21	18	19	21	22	25	26
28	22	25	19	18	19	21	18	19	22	24	25	26
29	22	29	18	19	18	22	18	19	22	23	25	25
30	22	31	19	19	---	21	18	19	20	23	25	25
31	25	---	20	19	---	22	---	19	---	23	24	---
TOTAL	857	750	745	604	531	593	587	570	624	670	753	738
MEAN	27.6	25.0	24.0	19.5	18.3	19.1	19.6	18.4	20.8	21.6	24.3	24.6
MAX	31	35	31	22	20	22	22	19	22	24	28	26
MIN	22	12	18	17	17	18	18	17	19	18	23	24
AC-FT	1700	1490	1480	1200	1050	1180	1160	1130	1240	1330	1490	1460

SAN JOAQUIN RIVER BASIN

11295270 NORTH FORK STANISLAUS RIVER BELOW MCKAY'S POINT DAM, NEAR AVERY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.5	17.4	16.1	15.4	18.8	21.2	19.4	20.9	20.9	21.2	20.2	23.5
MAX	27.6	25.0	24.0	19.5	20.7	28.8	19.7	22.7	21.3	21.9	24.3	27.5
(WY)	1992	1992	1992	1992	1991	1991	1991	1990	1991	1990	1992	1991
MIN	20.3	6.06	5.55	7.93	17.4	15.8	18.9	18.4	20.5	20.0	10.6	18.9
(WY)	1990	1990	1990	1990	1990	1990	1990	1992	1990	1991	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	8465		8022			
ANNUAL MEAN	23.2		21.9		20.3	
HIGHEST ANNUAL MEAN					22.0	
LOWEST ANNUAL MEAN					16.9	
HIGHEST DAILY MEAN	325	Mar 4	35	Nov 15	325	Mar 4 1991
LOWEST DAILY MEAN	12	Nov 17	12	Nov 17	3.4	Nov 25 1989
ANNUAL SEVEN-DAY MINIMUM	17	Mar 6	18	Feb 8	4.2	Nov 15 1989
INSTANTANEOUS PEAK FLOW			36	Oct 26	1050	Mar 4 1991
INSTANTANEOUS PEAK STAGE			2.00	Oct 26	2.68	Mar 4 1991
ANNUAL RUNOFF (AC-FT)	16790		15910		14690	
10 PERCENT EXCEEDS	29		28		25	
50 PERCENT EXCEEDS	22		21		20	
90 PERCENT EXCEEDS	18		18		8.2	

11295300 NORTH FORK STANISLAUS RIVER BELOW BEAVER CREEK, NEAR HATHAWAY PINES, CA

LOCATION.--Lat 38°12'26", long 120°18'58", in SW 1/4 SW 1/4 sec.10, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, at confluence with Beaver Creek and 2.8 mi northeast of Hathaway Pines.

DRAINAGE AREA.--224 mi².

PERIOD OF RECORD.--February 1990 to current year.

REVISED RECORD.--WDR CA-91-3: 1990.

GAGE.--Discharge computed as the sum of North Fork Stanislaus River below McKay's Point Dam (station 11295270) and Beaver Creek below diversion dam (station 11295230). Elevation of gage is 2,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records consist of release and spill from McKay's Point Reservoir (station 11295260) and Beaver Creek Diversion Reservoir (station 11295220). See schematic diagram of Stanislaus River basin.

COOPERATION.--Records for Beaver Creek below diversion dam were collected by Calaveras County Water District, 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, 483 ft³/s, Mar. 4, 1991; minimum daily, 22 ft³/s, on several days in December 1990 and January 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	33	36	27	27	37	39	38	27	28	27	27
2	e30	34	37	27	28	37	40	38	27	26	27	27
3	e30	35	37	28	28	37	38	38	26	27	28	27
4	e30	38	37	27	27	37	39	38	28	28	27	28
5	e31	38	36	27	27	38	38	45	28	28	26	27
6	e32	33	35	28	27	38	39	56	28	27	26	28
7	e32	28	34	26	29	38	39	55	28	27	26	27
8	e31	26	34	27	31	37	39	38	28	27	26	27
9	e31	26	33	28	33	40	40	38	27	27	26	27
10	e32	29	28	28	36	37	39	38	27	27	27	26
11	e31	26	30	28	37	37	37	38	27	29	26	26
12	e30	27	29	28	37	38	36	37	27	43	27	26
13	e30	27	30	28	37	39	35	35	27	43	27	28
14	e31	29	31	27	36	39	35	33	27	35	27	28
15	e32	40	29	30	37	39	35	34	27	30	27	27
16	e32	40	27	28	37	39	36	33	28	29	28	26
17	e31	23	29	27	37	37	37	32	26	29	28	26
18	e32	30	36	26	39	37	38	31	28	28	27	26
19	e32	35	34	27	37	38	39	31	27	28	28	27
20	e31	33	31	28	75	38	38	32	28	27	31	26
21	e30	33	33	27	37	38	38	31	28	28	29	27
22	e29	33	30	27	37	38	38	31	28	27	28	27
23	e27	31	27	28	37	38	38	30	27	27	28	27
24	e25	30	26	28	37	37	38	29	28	28	28	27
25	e31	34	27	27	38	36	38	29	28	27	27	27
26	89	34	26	26	41	38	39	28	28	27	27	27
27	58	33	26	27	39	39	38	28	26	27	27	28
28	34	33	28	27	38	39	38	28	27	29	27	28
29	31	36	27	27	37	40	38	28	29	27	27	27
30	30	37	28	28	---	39	38	28	35	27	27	27
31	32	---	27	28	---	40	---	27	---	27	27	---
TOTAL	1037	964	958	850	1043	1179	1137	1075	830	894	844	809
MEAN	33.5	32.1	30.9	27.4	36.0	38.0	37.9	34.7	27.7	28.8	27.2	27.0
MAX	89	40	37	30	75	40	40	56	35	43	31	28
MIN	25	23	26	26	27	36	35	27	26	26	26	26
AC-FT	2060	1910	1900	1690	2070	2340	2260	2130	1650	1770	1670	1600

e Estimated.

11295300 NORTH FORK STANISLAUS RIVER BELOW BEAVER CREEK, NEAR HATHAWAY PINES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.7	28.9	27.0	25.6	31.2	41.4	37.6	38.3	33.6	28.0	26.6	27.9
MAX	33.5	32.1	30.9	27.4	36.0	52.8	38.7	40.8	38.9	28.8	27.2	30.7
(WY)	1992	1992	1992	1992	1992	1991	1991	1991	1991	1992	1992	1991
MIN	25.9	25.7	23.0	23.7	27.0	33.4	36.1	34.7	27.7	27.3	26.1	25.9
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	1990	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1990 - 1992			
ANNUAL TOTAL	12289				11620							
ANNUAL MEAN	33.7				31.7				31.8			
HIGHEST ANNUAL MEAN									31.8			
LOWEST ANNUAL MEAN									31.7			
HIGHEST DAILY MEAN	483				89				483			
LOWEST DAILY MEAN	22				23				22			
ANNUAL SEVEN-DAY MINIMUM	23				26				22			
INSTANTANEOUS PEAK FLOW					89				483			
ANNUAL RUNOFF (AC-FT)	24380				23050				23030			
10 PERCENT EXCEEDS	41				38				39			
50 PERCENT EXCEEDS	31				29				29			
90 PERCENT EXCEEDS	26				27				25			

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA

LOCATION.--Lat 38°08'29", long 120°22'19", in NW 1/4 SW 1/4 sec.6, T.3 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, on right bank 1,000 ft upstream from Stanislaus powerplant and 3.6 mi south of Hathaway Pines.

DRAINAGE AREA.--629 mi².

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

REVISED RECORDS.--WDR CA-80-3: 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,077.21 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.). Prior to Oct. 1, 1982, published at datum 47.21 ft higher.

REMARKS.--No estimated daily discharges. Records good. Many diversions upstream from station for hydroelectric powerplants. Small diversions for domestic water supply. Stanislaus tunnel diverts from left bank of Middle Fork Stanislaus River 13.7 mi upstream from station in SE 1/4 sec.24, T.4 N., R.16 E., to Stanislaus powerplant 1,000 ft downstream from station. See schematic diagram of Stanislaus River basin. For records of combined discharge of river and tunnel, see following page.

COOPERATION.--Records of diversion to Stanislaus powerplant were provided by Pacific Gas & Electric Co.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 46,200 ft³/s, Feb. 19, 1986, gage height, 23.5 ft, from outside highwater mark, from rating curve extended above 10,000 ft³/s on basis of computation of peak flow over a weir; minimum daily, 9.4 ft³/s, Aug. 7, 1977.
Combined flow, maximum discharge, 46,700 ft³/s, Feb. 19, 1986; minimum daily, 27 ft³/s, July 20, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,670 ft³/s, Mar. 16, gage height, 10.21 ft; minimum daily, 60 ft³/s, Nov. 12.
Combined flow, maximum discharge, 2,790 ft³/s, Mar. 17; minimum daily, 122 ft³/s, Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	311	84	77	72	295	816	479	194	198	79	268
2	299	184	72	73	72	463	922	304	145	284	76	249
3	274	469	74	73	76	553	809	201	175	235	231	232
4	212	181	76	71	79	260	562	260	160	85	269	258
5	82	180	74	317	71	369	458	221	106	81	233	113
6	82	245	73	97	71	561	688	158	94	194	187	77
7	241	122	86	102	75	325	611	149	86	200	206	77
8	207	67	199	93	84	281	563	251	168	201	78	244
9	213	62	76	86	158	347	634	109	163	232	76	263
10	232	140	68	82	142	279	696	101	156	316	289	193
11	233	63	69	151	190	320	483	243	139	82	188	199
12	158	60	79	286	306	332	476	177	150	298	184	81
13	153	146	70	78	303	358	774	153	94	352	213	77
14	85	62	68	76	282	304	700	155	86	365	265	179
15	85	67	242	76	356	337	731	178	154	288	187	205
16	200	77	64	131	284	602	664	96	155	299	141	234
17	193	214	61	77	283	814	659	95	152	217	246	230
18	82	103	80	75	290	526	496	93	157	94	262	408
19	244	85	95	244	255	384	332	93	214	82	253	185
20	225	80	74	73	657	342	590	93	86	212	214	178
21	204	80	73	75	805	228	550	93	86	206	166	268
22	177	81	312	71	535	224	559	92	141	170	81	182
23	349	80	70	71	525	429	497	90	144	301	77	204
24	169	383	67	113	586	425	443	89	170	272	183	162
25	195	75	67	95	370	416	168	89	166	90	137	164
26	348	74	67	99	406	435	160	87	192	79	211	141
27	190	75	65	113	403	454	437	87	86	286	308	104
28	178	213	97	111	597	530	407	86	82	272	198	230
29	183	73	343	119	304	260	338	86	152	198	79	184
30	229	73	93	116	---	673	472	86	217	221	76	197
31	367	---	80	104	---	616	---	85	---	192	241	---
TOTAL	6381	4125	3118	3425	8637	12742	16695	4579	4270	6602	5634	5786
MEAN	206	137	101	110	298	411	556	148	142	213	182	193
MAX	367	469	343	317	805	814	922	479	217	365	308	408
MIN	82	60	61	71	71	224	160	85	82	79	76	77
AC-FT	12660	8180	6180	6790	17130	25270	33110	9080	8470	13100	11180	11480

SAN JOAQUIN RIVER BASIN

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	145	300	381	687	878	1056	1412	2274	1751	469	128	120
MAX	688	2124	2757	2858	4869	3413	3996	7297	9509	3342	624	347
(WY)	1983	1984	1984	1980	1986	1986	1982	1969	1983	1983	1983	1983
MIN	13.9	21.9	19.2	24.3	33.6	41.0	112	148	29.3	11.8	12.1	14.1
(WY)	1978	1977	1977	1977	1977	1977	1977	1992	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR				FOR 1992 WATER YEAR				WATER YEARS 1967 - 1992			
ANNUAL TOTAL	101107				81994							
ANNUAL MEAN	277				224							
HIGHEST ANNUAL MEAN									798			
LOWEST ANNUAL MEAN									2551			
HIGHEST DAILY MEAN	1240				922				47.3			
LOWEST DAILY MEAN	54				60				23600			
ANNUAL SEVEN-DAY MINIMUM	61				74				9.4			
INSTANTANEOUS PEAK FLOW					1670				9.7			
INSTANTANEOUS PEAK STAGE					10.21				46200			
ANNUAL RUNOFF (AC-FT)	200500				162600				23.50			
10 PERCENT EXCEEDS	591				473				578300			
50 PERCENT EXCEEDS	206				183				2180			
90 PERCENT EXCEEDS	67				75				213			
									36			

11295401 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

STANISLAUS RIVER AND STANISLAUS TUNNEL AT OUTLET, NEAR HATHAWAY PINES, CA,
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	740	311	293	241	221	606	1180	608	486	696	583	616
2	648	184	424	282	212	721	1350	497	615	794	585	583
3	521	469	328	186	237	820	1060	360	738	716	571	570
4	532	181	433	178	210	469	826	388	693	570	773	565
5	381	180	543	469	215	573	603	399	594	644	760	424
6	395	245	577	221	194	828	962	324	715	706	705	392
7	545	122	602	255	189	652	974	313	559	751	623	401
8	519	236	702	226	213	585	934	417	636	711	388	638
9	514	303	596	228	276	796	1030	306	758	735	346	717
10	559	352	646	188	271	758	1020	189	681	803	702	782
11	539	237	581	336	284	899	679	428	646	632	711	606
12	462	257	642	416	434	897	671	336	675	823	570	290
13	576	346	531	299	461	751	1060	274	693	848	685	478
14	328	261	617	343	458	692	1060	315	610	877	783	765
15	427	288	795	330	612	628	1100	364	694	846	689	744
16	528	297	561	394	516	882	974	269	701	814	564	682
17	520	412	614	296	603	1130	1030	233	658	724	809	720
18	392	328	599	245	532	820	687	262	684	573	770	939
19	643	273	633	367	526	681	529	182	716	590	772	565
20	511	261	627	196	952	658	874	169	604	736	635	510
21	424	297	601	243	1040	514	944	161	574	767	652	623
22	347	315	812	253	826	529	913	164	672	642	331	686
23	513	281	362	264	822	783	795	162	651	734	328	739
24	322	623	556	242	844	715	793	152	630	830	641	693
25	287	276	270	231	689	719	521	155	676	661	637	656
26	468	273	343	272	727	750	527	173	723	597	662	484
27	318	303	303	327	697	659	744	159	536	825	837	372
28	220	424	285	251	925	722	822	127	676	811	685	576
29	183	264	550	245	527	536	617	151	719	701	345	545
30	229	292	189	276	---	912	656	173	743	737	350	474
31	367	---	305	240	---	1030	---	140	---	703	528	---
TOTAL	13958	8891	15920	8540	14713	22715	25935	8350	19756	22597	19020	17835
MEAN	450	296	514	275	507	733	864	269	659	729	614	594
MAX	740	623	812	469	1040	1130	1350	608	758	877	837	939
MIN	183	122	189	178	189	469	521	127	486	570	328	290
AC-FT	27690	17640	31580	16940	29180	45060	51440	16560	39190	44820	37730	35380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

MEAN	528	609	795	1060	1252	1473	1868	2734	2254	979	635	599
MAX	1108	2483	3283	3390	5388	3942	4516	7837	10020	3873	1156	879
(WY)	1983	1984	1984	1980	1986	1986	1982	1969	1983	1983	1983	1983
MIN	63.5	40.2	35.4	40.5	47.8	57.1	426	269	318	96.4	55.4	77.0
(WY)	1978	1977	1977	1977	1977	1977	1977	1992	1987	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992	
ANNUAL TOTAL	214578		198230			
ANNUAL MEAN	588		542		1230	
HIGHEST ANNUAL MEAN					3051	
LOWEST ANNUAL MEAN					165	
HIGHEST DAILY MEAN	1690	May 8	1350	Apr 2	24100	Feb 19 1986
LOWEST DAILY MEAN	86	Feb 22	122	Nov 7	27	Jul 20 1977
ANNUAL SEVEN-DAY MINIMUM	87	Feb 20	154	May 25	29	Aug 4 1977
INSTANTANEOUS PEAK FLOW			2790	Mar 17	46700	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	425600		393200		891400	
10 PERCENT EXCEEDS	1090		824		2700	
50 PERCENT EXCEEDS	572		570		700	
90 PERCENT EXCEEDS	122		230		190	

11295900 PINECREST LAKE AT PINECREST, CA

LOCATION.--Lat 38°11'59", long 119°59'11", in NE 1/4 SW 1/4 sec.15, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on south side of intake tower, 400 ft upstream from dam on South Fork Stanislaus River, and 0.7 mi north of Pinecrest.

DRAINAGE AREA.--26.5 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1981-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder since July 14, 1992. Oct. 1, 1985, to July 13, 1992, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam, completed in 1916; storage began in 1916. Capacity, 18,312 acre-ft between elevations 5,498.7 ft, outlet drain, and 5,617.5 ft, top of flash boards in spillway. Released water flows down South Fork Stanislaus River to diversion dam for Philadelphia Canal (station 11297000) for use at Spring Gap Powerplant on Middle Fork Stanislaus River. Figures given, including extremes, represent total contents. Records from July 14, 1992, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 18,483 acre-ft, July 16, 1992, elevation, 5,618.06 ft; minimum, 3,157 acre-ft, Mar. 3, 4, 1991, elevation, 5,546.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,483 acre-ft, July 16, elevation, 5,618.06 ft; minimum observed, 3,557 acre-ft, Feb. 3, elevation, 5,550.2 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated 1938)

5,520	792	5,550	3,534	5,580	8,576
5,530	1,558	5,560	4,738	5,600	13,537
5,540	2,475	5,570	6,395	5,618.5	18,615

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12249	7735	7450	---	---	---	5644	17073	18283	17672	17199	16501
2	12071	7669	7341	---	---	4792	5820	17351	18254	17672	17172	16490
3	11944	7603	7211	4411	3557	4819	6140	17644	18225	17672	17142	16459
4	11741	7559	7126	4337	3579	4860	---	18049	18167	17644	17104	16420
5	11539	7515	7041	4337	3591	4874	---	18312	18138	---	17073	16373
6	11388	7472	6956	4337	3614	4901	7126	18312	18079	17615	17040	16330
7	11186	7515	6851	4312	3636	5011	7385	18312	18049	17557	17006	16282
8	10987	7494	6745	4312	---	4997	7735	18312	18019	17528	16972	16205
9	10837	7450	6641	4288	---	4942	8072	18312	17929	17528	16935	16094
10	10639	7406	6538	4263	3740	4956	8345	18283	17899	17470	16907	15947
11	10466	7494	6436	4251	3786	4969	---	18167	17840	17440	16875	15732
12	10269	7559	6336	4227	3844	5011	---	18283	17757	18312	16846	15562
13	10098	7559	6237	4154	3892	5038	9375	18283	17729	18312	16811	15428
14	9952	7537	6082	4190	---	---	9734	18283	17672	18334	16781	15274
15	9807	7515	6005	4178	---	---	10049	18283	17615	18321	16752	15086
16	9614	7472	5909	4154	---	5188	10294	18312	17615	18483	16726	14939
17	9399	7450	5802	4142	3856	5188	10762	18312	17615	18266	16712	14761
18	9232	7450	5697	4070	3833	5188	---	18312	17586	18144	16698	14564
19	9067	7428	5644	4046	3833	5188	---	18283	17557	18102	16683	14401
20	8832	7406	5592	4022	3880	5173	12300	18254	17528	18031	16671	14217
21	8599	7450	5557	3986	3974	---	12786	18283	17499	17953	16656	13983
22	8391	7494	5392	3963	---	---	13147	18312	17499	17854	16639	13790
23	8230	7363	5235	3927	---	5142	13380	18312	17470	17768	16625	13607
24	8049	7319	5080	3892	4312	5126	---	18312	17440	17675	16613	13417
25	7869	7494	4983	3856	4361	5126	13511	18312	17440	17583	16598	13233
26	7891	7494	4915	3833	4435	5126	---	18312	17440	17484	16585	13045
27	8072	7494	4819	3798	4498	---	14974	18312	17381	17386	16570	12848
28	8026	7494	4738	3763	4586	---	15449	18312	17351	17323	16558	12658
29	7959	7494	4649	3728	---	---	16246	18312	17351	17296	16541	12459
30	7891	7472	4561	---	---	5455	16705	18283	17586	17263	16532	12256
31	7824	---	4460	3648	---	5523	---	18283	---	17226	16515	---
MAX	12249	7735	7450	---	---	---	---	18312	18283	---	17199	16501
MIN	7824	7319	4460	---	---	---	---	17073	17351	---	16515	12256
a	5576.7	5575.1	5557.8	5551.0	---	5565.3	5611.8	5617.4	5615.0	5613.76	5610.25	5595.03
b	-4630	-352	-3012	-812	---	---	+11182	+1578	-697	-360	-711	-4259

CAL YR 1991 b +24

WTR YR 1992 b -198

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA

LOCATION.--Lat 38°11'51", long 120°00'27", in SW 1/4 SW 1/4 sec.16, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.4 mi downstream from bridge on State Highway 108 at Strawberry, 0.6 mi downstream from Herring Creek, and 1.2 mi downstream from Pinecrest Lake.

DRAINAGE AREA.--44.8 mi².

PERIOD OF RECORD.--October 1911 to January 1917, August 1938 to current year. Monthly discharge only for October 1913 and yearly estimates for 1912-13, published in WSP 1315-A. Published as "near Confidence" 1911-13.

REVISED RECORDS.--WSP 1215: 1945(M). WSP 1515: 1916, 1943(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,235.1 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). October 1911 to January 1917, nonrecording gage at site 1 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Low and medium flows regulated beginning in 1916 by Pinecrest Lake (station 11295900) 1.2 mi upstream. No diversion upstream from station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s, Nov. 21, 1950, gage height, 9.25 ft, from rating curve extended above 1,100 ft³/s on basis of contracted-opening measurement of peak flow at bridge 0.3 mi downstream from station; minimum daily, 1.3 ft³/s, Nov. 22, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 492 ft³/s, May 9, gage height, 4.02 ft; minimum daily, 5.5 ft³/s, Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	52	33	36	35	50	92	128	60	29	18	14
2	90	52	47	32	35	55	96	121	57	25	18	14
3	90	53	57	28	18	58	105	121	60	24	18	14
4	90	53	57	28	5.7	56	110	132	60	23	18	14
5	89	42	57	28	5.5	56	103	271	54	22	17	14
6	89	37	56	29	5.6	55	84	350	51	22	17	13
7	88	38	56	28	6.7	53	78	452	52	21	16	13
8	88	35	56	28	6.9	53	86	410	49	19	16	28
9	88	35	56	28	6.7	52	88	392	48	19	16	38
10	87	35	60	28	6.9	56	90	289	46	18	16	51
11	87	32	64	28	7.5	61	92	279	45	20	16	73
12	87	31	64	29	8.6	64	84	272	45	199	15	75
13	91	31	63	28	17	67	133	252	45	173	15	75
14	93	30	63	28	31	71	105	243	44	118	15	83
15	93	30	63	33	31	68	91	201	34	102	15	90
16	92	29	62	36	31	66	84	183	27	133	15	90
17	92	31	63	36	30	63	155	191	28	264	15	96
18	91	31	63	36	30	62	134	190	25	122	15	100
19	90	30	62	36	30	63	118	170	24	66	15	99
20	90	30	62	36	34	62	129	110	24	57	14	98
21	89	32	61	36	37	62	131	90	24	63	14	98
22	93	33	61	36	44	61	111	93	22	64	14	98
23	96	32	61	35	46	61	97	95	22	64	14	97
24	95	32	61	35	49	60	104	97	23	64	14	97
25	72	32	61	35	57	61	121	89	24	64	14	98
26	64	32	60	35	59	62	133	93	22	63	14	97
27	55	32	59	35	62	66	136	88	22	62	14	97
28	53	31	59	35	65	74	146	86	21	35	14	97
29	53	32	59	35	39	76	160	76	22	19	14	100
30	53	33	59	35	---	78	148	68	39	18	14	103
31	53	---	46	35	---	76	---	63	---	18	14	---
TOTAL	2573	1058	1811	1006	840.1	1928	3344	5695	1119	2010	474	2074
MEAN	83.0	35.3	58.4	32.5	29.0	62.2	111	184	37.3	64.8	15.3	69.1
MAX	96	53	64	36	65	78	160	452	60	264	18	103
MIN	53	29	33	28	5.5	50	78	63	21	18	14	13
AC-FT	5100	2100	3590	2000	1670	3820	6630	11300	2220	3990	940	4110

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.3	52.9	57.2	50.9	52.4	64.3	131	412	371	102	51.1	61.0
MAX	121	344	338	161	229	212	386	874	1066	683	127	99.2
(WY)	1983	1951	1951	1956	1982	1986	1982	1969	1983	1983	1983	1968
MIN	6.43	12.0	6.30	11.0	5.91	5.24	29.0	36.8	37.3	9.17	12.8	8.09
(WY)	1945	1943	1969	1987	1987	1977	1977	1977	1992	1977	1988	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1938 - 1992	
ANNUAL TOTAL	27973.6		23932.1			
ANNUAL MEAN	76.6		65.4		122	
HIGHEST ANNUAL MEAN					259	
LOWEST ANNUAL MEAN					26.6	
HIGHEST DAILY MEAN	679	May 25	452	May 7	2470	Nov 21 1950
LOWEST DAILY MEAN	6.9	Jan 10	5.5	Feb 5	1.3	Nov 22 1946
ANNUAL SEVEN-DAY MINIMUM	6.9	Jan 10	6.3	Feb 4	2.3	Nov 9 1942
INSTANTANEOUS PEAK FLOW			492	May 9	3900	Nov 21 1950
INSTANTANEOUS PEAK STAGE			4.02	May 9	9.25	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	55490		47470		88700	
10 PERCENT EXCEEDS	131		118		315	
50 PERCENT EXCEEDS	53		56		61	
90 PERCENT EXCEEDS	15		16		21	

11297000 PHILADELPHIA CANAL NEAR STRAWBERRY, CA

LOCATION.--Lat 38°10'42", long 120°02'44", in NW 1/4 NW 1/4 sec.30, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 250 ft downstream from diversion dam on South Fork Stanislaus River and 2.8 mi southwest of Strawberry.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,960 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--No estimated daily discharges. Canal diverts from right bank of South Fork Stanislaus River for power development at Spring Gap Powerplant of Pacific Gas & Electric Co.; tailrace empties into Middle Fork Stanislaus River. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	3.1	9.8	28	29	46	57	58	54	16	11	6.3
2	58	3.1	20	26	28	51	58	57	51	16	9.9	6.4
3	58	3.1	34	22	14	55	59	58	51	16	9.0	6.8
4	58	3.1	34	22	.00	54	58	58	54	16	3.5	7.0
5	56	2.0	34	23	.00	53	57	58	48	15	.00	5.8
6	55	1.2	34	23	.00	53	58	58	48	13	.00	5.4
7	55	10	34	23	.00	51	59	59	56	13	.00	5.0
8	54	15	34	22	.00	50	57	58	53	13	.00	18
9	54	12	34	22	.00	49	58	57	52	13	.00	32
10	53	12	34	22	.00	52	58	57	45	13	.00	32
11	53	12	35	22	.00	56	57	58	39	13	.00	36
12	53	12	35	23	.00	58	58	58	39	36	.68	38
13	56	12	35	22	8.1	59	58	58	39	56	2.4	38
14	59	11	35	22	27	58	58	58	38	57	5.6	46
15	59	10	34	26	27	58	57	58	26	57	7.7	59
16	58	9.2	34	29	27	58	58	58	16	57	7.9	59
17	58	8.2	34	29	24	58	59	58	19	51	8.1	59
18	58	8.4	34	29	26	58	58	59	18	56	7.3	59
19	57	8.4	34	29	26	58	59	58	17	51	6.5	59
20	56	8.6	33	29	30	58	58	57	17	49	6.4	59
21	55	8.7	32	29	33	58	58	57	17	58	6.3	59
22	57	8.7	32	29	39	57	58	58	16	57	7.6	59
23	59	8.6	32	29	42	57	58	59	15	58	7.4	59
24	59	8.4	32	29	45	57	58	59	16	58	6.5	59
25	31	8.5	31	29	54	58	58	58	17	57	6.4	59
26	6.2	8.4	31	29	56	58	57	59	16	56	6.2	59
27	6.7	9.5	31	29	58	59	58	59	15	55	5.9	58
28	3.2	10	31	29	59	57	58	58	15	33	5.8	58
29	3.2	9.8	31	29	21	58	58	58	15	14	5.6	59
30	3.2	9.8	31	29	---	58	58	58	25	13	6.0	59
31	3.1	---	30	29	---	58	---	58	---	12	6.1	---
TOTAL	1412.6	254.8	988.8	812	673.10	1728	1738	1799	947	1098	155.78	1224.7
MEAN	45.6	8.49	31.9	26.2	23.2	55.7	57.9	58.0	31.6	35.4	5.03	40.8
MAX	59	15	35	29	59	59	59	59	56	58	11	59
MIN	3.1	1.2	9.8	22	.00	46	57	57	15	12	.00	5.0
AC-FT	2800	505	1960	1610	1340	3430	3450	3570	1880	2180	309	2430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	MEAN	41.9	31.8	33.6	34.8	38.2	45.3	51.9	52.2	49.3	40.5	38.0	44.9
MAX	60.9	60.1	60.1	58.8	60.7	60.8	61.8	62.1	61.9	61.2	60.0	60.9	60.9
(WY)	1968	1976	1984	1982	1984	1965	1987	1987	1984	1982	1969	1983	1983
MIN	.000	.41	1.05	.92	.000	.000	.42	.42	.16	.59	.76	.58	.58
(WY)	1945	1988	1977	1981	1949	1949	1977	1977	1941	1977	1977	1981	1981

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1940 - 1992

ANNUAL TOTAL	11129.85	12831.78	
ANNUAL MEAN	30.5	35.1	41.9
HIGHEST ANNUAL MEAN			57.5
LOWEST ANNUAL MEAN			4.78
HIGHEST DAILY MEAN	59 May 30	59 Oct 14	66 Jun 16
LOWEST DAILY MEAN	.00 Jan 4	.00 Feb 4	.00 Oct 3
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 4	.00 Feb 4	.00 May 28
ANNUAL RUNOFF (AC-FT)	22080	25450	30340
10 PERCENT EXCEEDS	58	58	60
50 PERCENT EXCEEDS	31	34	54
90 PERCENT EXCEEDS	1.2	6.0	3.0

11297200 SOUTH FORK STANISLAUS RIVER NEAR STRAWBERRY, CA

LOCATION.--Lat 38°10'40", long 120°02'45", in NW 1/4 NW 1/4 sec.30, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on right bank 400 ft downstream from diversion dam and 2.8 mi southwest of Strawberry.

DRAINAGE AREA.--48.5 mi².

PERIOD OF RECORD.--October 1985 to current year (low-flow records only). Unpublished records for water years 1970, 1976-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,915 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No records computed above 50 ft³/s. Flow regulated by Pinecrest Lake (station 11295900). Most of the water is diverted at diversion dam 400 ft upstream to Philadelphia Canal (station 11297000). See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	48	22	5.8	4.8	5.5	35	---	8.3	14	8.3	9.1
2	36	48	23	5.7	5.1	5.9	38	---	7.1	10	9.8	8.9
3	36	48	22	5.1	7.6	6.0	49	---	10	8.4	10	8.5
4	35	48	22	4.7	5.6	4.4	---	---	7.8	7.2	14	8.2
5	35	40	22	5.3	5.4	5.4	---	---	7.5	6.9	18	9.1
6	36	34	22	4.9	5.4	5.8	31	---	7.5	7.5	18	9.4
7	36	27	22	4.8	6.5	4.8	21	---	7.1	7.3	17	9.7
8	35	20	22	5.0	7.0	4.8	30	---	6.9	7.1	17	8.5
9	35	22	21	5.1	6.9	4.6	32	---	6.9	6.9	17	7.1
10	35	22	24	5.0	7.4	5.5	33	---	6.8	6.9	17	18
11	35	20	28	5.0	8.1	6.5	39	---	6.9	7.2	17	40
12	35	19	28	5.0	12	8.5	27	---	6.8	---	16	40
13	37	19	27	5.1	7.5	11	---	---	6.7	---	15	39
14	37	19	28	4.9	5.7	15	---	---	6.7	---	12	39
15	37	19	28	4.7	5.5	14	39	---	9.7	---	9.4	36
16	36	19	28	4.8	5.0	12	29	---	11	---	9.7	36
17	36	22	28	5.3	7.5	8.5	---	---	9.4	---	9.5	42
18	36	22	30	5.0	4.8	6.9	---	---	7.3	---	9.7	47
19	36	21	28	4.8	4.9	6.6	---	---	7.2	22	10	46
20	36	21	28	4.9	7.0	6.2	---	---	7.5	9.0	10	46
21	36	22	28	4.9	5.8	7.4	---	37	7.9	7.6	10	46
22	38	22	28	5.2	7.5	6.9	---	40	7.3	8.3	8.4	45
23	39	22	28	5.2	6.1	6.1	44	42	7.1	9.0	8.3	45
24	39	21	28	5.0	5.6	5.3	49	44	8.1	7.9	9.1	45
25	---	22	28	5.1	5.9	5.8	---	34	8.9	7.4	9.3	45
26	---	22	28	5.1	6.0	6.1	---	39	7.5	7.5	9.3	45
27	---	22	27	5.0	6.7	8.6	---	33	7.0	7.5	9.4	45
28	50	20	28	5.0	9.9	18	---	32	6.9	7.9	9.4	45
29	50	21	28	4.9	23	19	---	21	7.5	7.5	9.5	47
30	50	22	27	4.8	---	20	---	14	15	7.8	9.9	50
31	49	---	18	4.7	---	18	---	8.6	---	7.9	9.4	---
TOTAL	---	774	799	155.8	206.2	269.1	---	---	238.3	---	366.4	965.5
MEAN	---	25.8	25.8	5.03	7.11	8.68	---	---	7.94	---	11.8	32.2
MAX	---	48	30	5.8	23	20	---	---	15	---	18	50
MIN	---	19	18	4.7	4.8	4.4	---	---	6.7	---	8.3	7.1
AC-FT	---	1540	1580	309	409	534	---	---	473	---	727	1920

11297500 TUOLUMNE CANAL NEAR LONG BARN, CA

LOCATION.--Lat 38°05'35", long 120°10'03", in SE 1/4 SW 1/4 sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 300 ft downstream from intake, 350 ft downstream from Lyons Reservoir on South Fork Stanislaus River, 2 mi west of Long Barn, and 15 mi northeast of Sonora.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,110.0 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to June 1938, at site 200 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Canal diverts from left bank of South Fork Stanislaus River into Tuolumne River basin for power and domestic supply in vicinity of Sonora. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 59 ft³/s, May 11, 1975; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	18	15	18	15	42	44	45	27	35	36	38
2	34	18	15	18	15	43	44	45	29	35	36	39
3	34	18	15	18	15	44	44	45	29	35	36	39
4	34	18	15	19	15	42	44	45	30	35	36	38
5	34	18	15	25	15	42	44	46	31	35	36	38
6	34	17	15	25	15	36	44	47	29	35	36	38
7	34	16	15	24	16	42	44	47	30	35	36	39
8	34	15	15	24	16	42	44	47	33	35	36	39
9	33	15	15	21	15	42	44	48	34	35	36	30
10	33	15	15	18	23	43	45	48	35	35	36	38
11	33	15	17	18	29	44	45	48	36	35	37	38
12	33	15	18	18	26	44	45	48	35	35	37	38
13	18	15	18	18	24	45	45	46	35	35	37	38
14	.00	15	18	18	24	45	45	46	35	33	37	37
15	.00	15	18	18	25	45	45	45	35	33	37	35
16	.00	15	18	17	25	45	45	45	35	32	37	35
17	.00	15	18	17	25	45	45	47	35	33	37	35
18	12	15	18	17	25	45	45	48	34	33	37	35
19	35	15	18	17	25	45	45	48	34	33	36	35
20	34	15	18	17	25	45	45	48	34	33	38	35
21	.00	15	17	16	26	45	45	47	34	33	39	32
22	.00	15	18	15	26	45	45	48	34	33	38	29
23	.00	15	18	15	26	45	45	36	34	34	39	29
24	8.6	15	17	15	26	45	45	29	34	33	39	29
25	32	15	18	15	19	44	45	25	34	33	39	30
26	31	15	17	15	24	44	45	23	34	33	39	30
27	31	15	17	15	42	44	45	26	34	33	39	29
28	25	15	17	15	43	44	46	28	35	36	39	29
29	20	15	22	15	43	44	46	27	35	39	39	29
30	19	15	20	15	---	44	46	26	35	38	38	30
31	18	---	16	15	---	44	---	27	---	36	38	---
TOTAL	687.60	468	526	551	688	1354	1344	1274	998	1066	1156	1033
MEAN	22.2	15.6	17.0	17.8	23.7	43.7	44.8	41.1	33.3	34.4	37.3	34.4
MAX	35	18	22	25	43	45	46	48	36	39	39	39
MIN	.00	15	15	15	15	36	44	23	27	32	36	29
AC-FT	1360	928	1040	1090	1360	2690	2670	2530	1980	2110	2290	2050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

	MEAN	21.4	18.0	19.9	22.5	24.9	27.8	30.4	35.2	39.1	35.8	36.4	32.3
MAX	36.4	40.9	44.5	45.8	45.1	45.7	47.7	52.4	53.8	49.1	48.5	48.6	
(WY)	1947	1983	1974	1974	1973	1974	1973	1973	1973	1983	1983	1983	
MIN	12.2	8.41	8.15	8.16	9.86	7.98	.000	.000	20.6	18.6	20.0	20.1	
(WY)	1940	1941	1940	1948	1961	1977	1941	1938	1939	1944	1942	1941	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1938 - 1992
ANNUAL TOTAL	10054.60	11145.60	
ANNUAL MEAN	27.5	30.5	28.7
HIGHEST ANNUAL MEAN			43.5
LOWEST ANNUAL MEAN			18.1
HIGHEST DAILY MEAN	47	48	59
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	9.0	9.0	.00
ANNUAL RUNOFF (AC-FT)	19940	22110	20760
10 PERCENT EXCEEDS	43	45	44
50 PERCENT EXCEEDS	29	34	29
90 PERCENT EXCEEDS	14	15	12

11297700 LYONS RESERVOIR NEAR LONG BARN, CA

LOCATION.--Lat 38°05'38", long 120°09'59", in SW 1/4 NE 1/4 sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, at left abutment of dam (revised) and 1.6 mi west of Long Barn.
 DRAINAGE AREA.--66.8 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for 1981-85 water years are available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Prior to Dec. 10, 1990, nonrecording gage read three times weekly. Datum of gage is 4,134 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete arch dam completed in 1930; storage began in 1930. Usable capacity, 5,504 acre-ft between gage heights 0.0 ft, invert of outlet, and 86.0 ft, top of spillway gates. Dead storage, 4 acre-ft. Part of the released water is diverted to Tuolumne Canal (station 11297500) near the base of the dam. Records from Dec. 10, 1990, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 6,292 acre-ft, June 4, 5, 7, 9, 10, 1989, gage height, 90.4 ft; minimum observed, 847 acre-ft, Apr. 7, 1988, gage height, 41.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,255 acre-ft, May 17, 18, gage height, 90.20 ft; minimum, 1,525 acre-ft, Sept. 17, gage height, 53.38 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
 (Based on survey by Pacific Gas & Electric Co. in 1930)

20	210	50	1,299	80	4,541
25	309	60	2,070	90	6,219
30	437	70	3,153	92.5	6,680
40	785				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1613	2705	3251	3874	3269	4048	3312	4231	5965	4288	4057	2155
2	1608	2761	3265	3856	3250	4016	3319	4268	5917	4234	3991	2085
3	1604	2816	3286	3838	3234	3973	3327	4299	5867	4180	3930	2018
4	1599	2873	3296	3805	3217	3931	3365	4339	5817	4117	3867	1951
5	1592	2908	3308	3804	3200	3912	3395	4642	5760	4054	3821	1884
6	1588	2936	3315	3776	3183	3959	3406	5131	5708	3992	3776	1817
7	1583	2965	3338	3752	3173	3969	3365	5685	5655	3933	3731	1751
8	1580	2972	3345	3720	3163	3973	3340	5876	5598	3873	3685	1682
9	1574	2981	3354	3697	3149	3969	3319	6003	5536	3813	3638	1647
10	1571	2993	3364	3682	3153	3947	3296	6022	5468	3753	3592	1574
11	1566	2998	3386	3662	3191	3920	3288	6037	5399	3699	3543	1563
12	1562	3003	3401	3642	3341	3888	3266	6066	5337	3929	3493	1558
13	1586	3005	3422	3626	3452	3853	3307	6071	5276	4183	3437	1550
14	1652	3011	3435	3607	3512	3831	3347	6177	5214	4265	3381	1539
15	1716	3011	3452	3586	3586	3830	3350	6254	5156	4299	3317	1535
16	1779	3012	3466	3567	3615	3830	3322	6254	5110	4317	3249	1529
17	1841	3052	3484	3546	3631	3813	3381	6255	5057	4726	3186	1525
18	1883	3087	3530	3528	3649	3782	3491	6255	4997	4828	3122	1540
19	1873	3103	3559	3508	3680	3746	3522	6254	4938	4839	3057	1554
20	1866	3116	3583	3488	3837	3705	3577	6206	4882	4786	2972	1566
21	1928	3132	3605	3467	3922	3665	3658	6111	4824	4732	2906	1583
22	1994	3146	3625	3448	4019	3629	3697	6028	4763	4677	2837	1605
23	2066	3160	3645	3433	4069	3591	3703	5995	4699	4622	2765	1626
24	2125	3174	3666	3415	4094	3547	3701	6017	4647	4567	2693	1647
25	2139	3185	3685	3399	4126	3505	3714	6028	4595	4507	2625	1670
26	2375	3197	3707	3381	4150	3463	3779	6049	4536	4450	2557	1690
27	2429	3217	3728	3363	4130	3418	3855	6060	4477	4391	2490	1710
28	2478	3222	3777	3345	4099	3384	3936	6064	4418	4329	2422	1731
29	2538	3232	3824	3326	4090	3356	4062	6064	4373	4261	2353	1753
30	2593	3241	3855	3308	---	3340	4171	6046	4335	4189	2287	1787
31	2650	---	3880	3284	---	3320	---	6010	---	4124	2221	---
MAX	2650	3241	3880	3874	4150	4048	4171	6255	5965	4839	4057	2155
MIN	1562	2705	3251	3284	3149	3320	3266	4231	4335	3699	2221	1525
a	65.71	70.71	75.54	71.05	76.99	71.34	77.53	88.85	78.63	77.22	61.57	56.78
b	+1036	+591	+639	-596	+806	-770	+851	+1839	-1675	-211	-1903	-434

CAL YR 1991 MAX 6287 MIN 980 b +2290
 WTR YR 1992 MAX 6255 MIN 1525 b +173

a Gage height, in feet, at end of month.
 b Change in contents, in acre-feet.

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA

LOCATION.--Lat 38°05'33", long 120°10'04", in NE 1/4 NW 1/4 sec.25, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 600 ft downstream from Lyons Dam, 1.9 mi west of Long Barn, and 15 mi northeast of Sonora.

DRAINAGE AREA.--66.9 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 4,073.4 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--No estimated daily discharges. Flow regulated by Lyons Reservoir (station 11297700) 600 ft upstream and Pinecrest Lake (station 11295900). Tuolumne Canal (station 11297500) diverts at Lyons Dam. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft³/s, Nov. 21, 1950, gage height, 9.3 ft, from rating curve extended above 2,400 ft³/s, on basis of computation of peak flow over Lyons Dam; no flow at times in 1937-39, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s, May 9, gage height, 3.39 ft; minimum daily, 2.2 ft³/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.7	2.7	2.6	2.8	3.0	2.6	3.7	2.6	2.7	2.5	2.7
2	2.3	2.6	2.7	2.6	2.8	2.8	2.6	3.7	2.5	2.7	2.5	2.7
3	2.3	2.6	2.7	2.7	2.8	2.9	2.7	3.7	2.7	2.7	2.5	2.7
4	2.2	2.5	2.7	2.6	2.8	2.8	2.7	3.7	2.5	2.7	2.5	2.7
5	2.3	2.5	2.7	2.6	2.4	2.8	2.7	3.4	2.5	2.6	2.5	2.7
6	2.2	2.5	2.7	2.7	2.3	2.7	2.7	3.8	2.5	2.5	2.5	2.7
7	2.2	2.5	2.8	2.7	2.3	2.7	2.7	99	2.5	2.5	2.5	2.7
8	2.2	2.5	2.7	2.6	2.3	2.7	2.7	242	2.5	2.5	2.5	2.7
9	2.5	2.5	2.7	2.5	2.3	2.6	2.7	284	2.5	2.5	2.5	2.7
10	2.7	2.4	2.7	2.5	2.4	2.5	2.7	203	2.5	2.5	2.5	2.7
11	2.7	2.3	2.7	2.5	2.6	2.5	2.8	189	2.5	2.5	2.5	2.7
12	2.7	2.5	2.7	2.5	2.5	2.5	2.7	186	2.5	2.8	2.5	2.7
13	2.8	2.5	2.7	2.5	2.4	2.5	2.7	174	2.5	2.5	2.5	2.7
14	3.1	2.7	2.7	2.5	2.5	2.5	2.7	97	2.3	2.5	2.5	2.7
15	3.2	2.7	2.7	2.5	2.5	2.7	2.6	93	2.5	2.6	2.6	2.7
16	3.2	2.7	2.7	2.6	2.5	2.7	2.5	86	2.6	2.7	2.7	2.7
17	3.0	2.8	2.7	2.7	2.5	2.7	2.5	98	2.7	2.7	2.7	2.7
18	2.9	2.8	2.8	2.7	2.5	2.7	2.5	92	2.7	2.7	2.7	2.7
19	2.5	2.7	2.8	2.7	2.8	2.6	2.6	85	2.7	2.7	2.7	2.7
20	2.5	2.7	2.6	2.7	2.8	2.6	2.7	52	2.7	2.7	2.6	2.7
21	3.2	2.7	2.5	2.7	2.8	2.7	2.7	36	2.7	2.7	2.7	2.7
22	2.8	2.7	2.5	2.7	2.7	2.7	2.7	31	2.7	2.7	2.7	2.7
23	2.8	2.7	2.5	2.7	2.6	2.7	2.7	11	2.8	2.7	2.7	2.7
24	2.8	2.7	2.5	2.7	2.4	2.6	2.7	2.7	2.7	2.7	2.7	2.7
25	2.7	2.7	2.5	2.7	2.2	2.6	2.7	2.6	2.7	2.7	2.7	2.7
26	3.1	2.7	2.6	2.7	2.7	2.7	2.7	2.5	2.8	2.7	2.7	2.7
27	2.8	2.7	2.7	2.7	2.9	2.6	2.7	2.5	2.7	2.7	2.7	2.7
28	2.7	2.7	2.8	2.8	2.5	2.6	2.7	2.5	2.7	2.7	2.7	2.7
29	2.7	2.7	2.9	2.8	2.2	2.7	2.7	2.6	2.7	2.7	2.7	2.7
30	2.7	2.7	2.7	2.8	---	2.7	3.1	2.8	2.7	2.6	2.7	2.7
31	2.7	---	2.7	2.8	---	2.7	---	2.7	---	2.5	2.7	---
TOTAL	82.8	78.7	83.1	82.1	73.8	82.8	80.5	2100.9	78.2	81.7	80.7	81.0
MEAN	2.67	2.62	2.68	2.65	2.54	2.67	2.68	67.8	2.61	2.64	2.60	2.70
MAX	3.2	2.8	2.9	2.8	2.9	3.0	3.1	284	2.8	2.8	2.7	2.7
MIN	2.2	2.3	2.5	2.5	2.2	2.5	2.5	2.5	2.3	2.5	2.5	2.7
AC-FT	164	156	165	163	146	164	160	4170	155	162	160	161

SAN JOAQUIN RIVER BASIN

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.34	11.6	25.6	29.3	37.4	47.9	97.9	348	306	50.6	2.69	2.00
MAX	14.7	324	399	258	306	291	501	875	950	572	37.7	3.37
(WY)	1983	1951	1951	1956	1982	1938	1982	1969	1983	1983	1983	1947
MIN	.000	.023	.077	.013	.000	.23	.97	1.02	1.00	.92	.83	.71
(WY)	1938	1939	1939	1939	1939	1939	1977	1977	1977	1949	1940	1949

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1938 - 1992	
ANNUAL TOTAL	10073.11		2986.3			
ANNUAL MEAN	27.6		8.16		79.2	
HIGHEST ANNUAL MEAN					234	
LOWEST ANNUAL MEAN					1.50	
HIGHEST DAILY MEAN	656	May 26	284	May 9	3370	Nov 21 1950
LOWEST DAILY MEAN	.49	Mar 6	2.2	Oct 4	.00	Oct 1 1937
ANNUAL SEVEN-DAY MINIMUM	.66	Mar 5	2.2	Oct 2	.00	Oct 1 1937
INSTANTANEOUS PEAK FLOW			320	May 9	4900	Nov 21 1950
INSTANTANEOUS PEAK STAGE			3.39	May 9	9.30	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	19980		5920		57410	
10 PERCENT EXCEEDS	3.2		2.8		275	
50 PERCENT EXCEEDS	2.5		2.7		2.4	
90 PERCENT EXCEEDS	2.1		2.5		1.3	

11298700 ANGELS CREEK BELOW UTICA DITCH DIVERSION DAM, NEAR MURPHYS, CA

LOCATION.--Lat 38°07'51", long 120°29'03", in NW 1/4 NW 1/4 sec.7, T.3 N., R.14 E., Calaveras County, Hydrologic Unit 18040010, on right bank 120 ft (revised) downstream from diversion dam and 1.2 mi southwest of Murphys.

DRAINAGE AREA.--6.01 mi².

PERIOD OF RECORD.--October 1990 to current year (low-flow records only).

GAGE.--Water-stage recorder and 90° V-notch weir. Elevation of gage is 2,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No records computed above 2.5 ft³/s. Flow consists of fishery release and spill over diversion dam. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	---	---	---	---	---	---	---	---	---	1.0	.97
2	1.4	---	---	---	---	---	---	---	---	---	1.0	.99
3	---	---	---	---	---	---	---	---	---	---	.97	.88
4	---	---	---	---	---	---	---	---	---	e.87	.97	.87
5	---	---	---	---	---	---	---	---	---	e.90	1.2	.87
6	---	---	---	---	---	---	---	---	---	e1.2	1.0	.86
7	2.5	---	---	---	---	---	---	---	---	e1.2	1.0	.84
8	1.5	---	---	---	---	---	2.5	---	---	e1.2	1.0	.84
9	1.4	---	---	---	---	---	2.5	---	---	e1.2	.99	1.1
10	1.3	---	---	---	---	---	2.5	---	---	e1.6	1.0	1.1
11	1.2	---	---	---	---	---	2.1	---	---	e1.5	1.0	.83
12	1.4	---	---	---	---	---	---	---	---	e1.6	.99	.82
13	.74	---	---	---	---	---	2.2	---	---	e1.6	1.0	.89
14	.89	---	---	---	---	---	2.0	---	---	e.63	.99	.86
15	1.7	---	---	---	---	---	---	---	---	e1.7	.97	.93
16	---	---	---	---	---	---	1.7	---	---	e1.1	.97	1.0
17	---	---	---	---	---	---	---	---	---	e1.4	1.2	1.4
18	---	---	---	---	---	---	---	---	---	.98	1.2	1.1
19	---	---	---	---	---	---	---	---	---	1.0	1.1	.84
20	---	---	---	---	---	---	---	---	---	1.0	2.1	.84
21	2.5	---	---	---	---	---	---	---	---	1.0	2.2	.83
22	1.9	---	---	---	---	---	---	---	---	.99	1.5	1.1
23	2.3	---	---	---	---	---	---	---	---	.99	1.6	1.3
24	2.0	---	---	---	---	---	---	---	---	.99	1.6	1.1
25	1.5	---	---	---	---	---	---	---	---	.98	1.2	.91
26	---	---	---	---	---	---	---	---	---	1.0	.95	.87
27	---	---	---	---	---	---	---	---	---	1.0	.94	.87
28	---	---	---	---	---	---	---	---	---	1.0	.90	1.2
29	---	---	---	---	---	---	---	---	---	1.1	.89	---
30	---	---	---	---	---	---	---	---	---	1.1	.88	1.3
31	---	---	---	---	---	---	---	---	---	1.0	.88	---
TOTAL	---	---	---	---	---	---	---	---	---	---	35.19	---
MEAN	---	---	---	---	---	---	---	---	---	---	1.14	---
MAX	---	---	---	---	---	---	---	---	---	---	2.2	---
MIN	---	---	---	---	---	---	---	---	---	---	.88	---
AC-FT	---	---	---	---	---	---	---	---	---	---	70	---

e Estimated.

SAN JOAQUIN RIVER BASIN

11299000 NEW MELONES RESERVOIR NEAR SONORA, CA

LOCATION.--Lat 37°57'02", long 120°30'49", in NW 1/4 SE 1/4 sec.11, T.1 N., R.13 E., Calaveras County, Hydrologic Unit 18040010, at right abutment of New Melones Dam on Stanislaus River, 0.1 mi downstream from the old Melones Dam, and 7.6 mi southwest of Sonora.

DRAINAGE AREA.--904 mi².

PERIOD OF RECORD.--1926 (year-end contents only, published in WSP 1315-A), June 1927 to current year. Prior to October 1970, published as Melones Reservoir at Melones Dam. October 1970 to September 1978, published as Melones Lake near Sonora.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 28, 1961, nonrecording gage, and Mar. 1, 1961, to Nov. 26, 1978, water-stage recorder at site on left side of old Melones Dam, at same datum.

REMARKS.--Reservoir is formed by earth- and rockfill dam completed in November 1978. Dam is downstream from the original concrete dam which was completed in December 1926. Usable capacity 2,420,000 acre-ft between elevations 543.0 ft, invert entrance to outlet tunnel, and 1,088.0 ft, gross pool elevation. No dead storage. When elevation is above 808.0 ft, water is released through a powerplant to Tulloch Reservoir (station 11299995) where it is used for irrigation. Records for the 1971 water year represent contents at 1630 hours. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD (Subsequent to completion of New Melones Dam in 1978).--Maximum contents, 2,400,000 acre-ft, July 8-10, 1983, elevation, 1,086.42 ft; minimum since reservoir first filled in July 1983, 83,840 acre-ft, Sept. 30, 1992, elevation, 721.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 423,300 acre-ft, Apr. 1, elevation, 840.36 ft; minimum, 83,840 acre-ft, Sept. 30, elevation, 721.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Army Corps of Engineers, dated September 1978)

700	53,900	760	160,500	880	611,500	1,000	1,471,000
710	66,950	780	212,300	900	723,000	1,020	1,662,000
720	81,800	800	272,800	920	846,500	1,040	1,867,000
730	98,530	820	342,400	940	982,600	1,060	2,087,000
740	117,200	840	421,800	960	1,132,000	1,088	2,420,000
750	137,800	860	511,200	980	1,295,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295300	293300	289800	318200	327300	375700	423300	362800	282300	231400	174900	114600
2	294100	293500	290600	317900	326500	377300	423200	360800	280200	230000	173200	113300
3	292900	294000	291500	317600	325600	379200	421500	359100	279200	228300	171000	111800
4	291800	293500	292000	318200	324700	380400	419600	357100	276400	226600	169500	110200
5	290500	292400	292200	320200	323800	382700	419600	355800	274900	224400	168900	108600
6	289100	291300	292900	321200	324400	386800	416100	353700	272000	222900	167200	107000
7	288000	290200	293300	322300	324900	389000	414800	351500	270300	220800	165200	105000
8	287000	289000	294700	323000	325600	390900	412500	349800	268700	219200	163000	103200
9	285900	288000	296100	323600	326300	392800	409100	347700	266700	217500	160400	102200
10	284900	287200	297300	323300	326600	394900	406200	345600	264800	215800	157600	101700
11	284300	286200	297600	324100	328100	396900	403300	343100	263300	213900	155700	101100
12	284300	285200	298800	325100	331700	398800	400600	340400	261600	212300	153200	100700
13	284100	284200	300000	325800	334100	400800	398600	338000	259600	211000	151400	99560
14	284000	284200	301100	326600	336500	402500	396700	334500	257500	209900	149000	98510
15	283900	284300	302700	327400	342900	404200	395700	331100	255200	208000	146800	97350
16	283200	284300	304500	327600	345800	406500	392400	327400	253200	206200	144600	96670
17	283200	284100	305200	326900	348200	409100	389300	323000	251800	204400	142000	95920
18	284000	284600	306500	327500	350100	411000	387500	321000	250000	202500	140200	95260
19	285100	285300	307100	328400	351900	412600	385400	318500	248500	200600	138100	94240
20	286300	286100	306900	328900	355700	414100	384100	316200	246300	198200	136000	93230
21	287200	286400	308100	329200	358800	415500	382300	313900	244900	196200	134200	91690
22	287300	286400	309900	329800	361000	417100	381600	311500	243400	193500	132300	90520
23	287400	286400	311100	330300	363100	418100	380300	309300	243000	192100	130200	88980
24	287600	287000	311900	330200	365300	418500	377400	306700	241300	190800	127800	88500
25	288500	287100	312000	330100	367200	419200	374800	304000	239600	188800	126300	88120
26	291700	287000	312100	330300	368900	420000	371400	301200	238400	185900	124600	87250
27	292600	287300	313000	330100	370700	420600	370800	298400	236700	182700	123100	86080
28	292900	288000	313800	329700	372800	421100	369400	296100	234800	180900	121900	85060
29	292900	288700	315800	329100	374200	421300	367800	292700	233700	180200	120500	84670
30	292900	289200	316700	328900	---	422100	365100	289700	232100	178100	118500	83840
31	293100	---	317500	328200	---	422600	---	285900	---	176300	116300	---
MAX	295300	294000	317500	330300	374200	422600	423300	362800	282300	231400	174900	114600
MIN	283200	284100	289800	317600	323800	375700	365100	285900	232100	176300	116300	83840
a	806.11	804.97	813.14	816.11	828.32	840.20	825.98	803.97	786.88	766.45	739.53	721.28
b	-3200	-3900	+28300	+10700	+46000	+48400	-57500	-79200	-53800	-55800	-60000	-32460
c	1431	465	237	195	614	750	1396	2200	2036	1856	1779	963

CAL YR 1991 b -68400

WTR YR 1992 b -212460

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, published as provided; not reviewed by U.S. Geological Survey.

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA

LOCATION.--Lat 37°57'40", long 120°36'51", in SE 1/4 SE 1/4, sec.2, T.1 N., R.12 E., Calaveras County, Hydrologic Unit 18040010, on left bank 100 ft upstream from O'Byrnes Ferry Road bridge, 1,300 ft upstream from Copper Creek, and 2.1 mi southeast of Copperopolis.

DRAINAGE AREA.--14.4 mi².

PERIOD OF RECORD.--August 1983 to current year.

REVISED RECORDS.--WDR CA-86-3: 1984(M).

GAGE.--Water-stage recorder. Datum of gage is 746.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s, Feb. 19, 1986, gage height, 9.10 ft, from rating curve extended above 2,500 ft³/s on basis of contracted-opening measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 26	1145	284	3.82	Feb. 15	0045	1,280	4.92
Jan. 5	0830	64	3.08	Feb. 20	0800	553	4.23
Feb. 12	1730	*1,640	*5.23	Mar. 6	1045	226	3.69

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.16	.14	1.3	.65	8.3	3.0	.48	.00	.00	.00	.00
2	.00	.14	.13	1.0	.58	7.6	2.6	.46	.00	.00	.00	.00
3	.00	.12	.13	.89	.54	6.8	2.4	.40	.00	.00	.00	.00
4	.00	.12	.14	.75	.56	6.2	2.3	.35	.00	.00	.00	.00
5	.00	.13	.15	20	.55	10	2.1	.30	.00	.00	.00	.00
6	.00	.13	.16	6.2	.64	98	1.9	.27	.00	.00	.00	.00
7	.00	.13	.54	9.0	.72	27	1.9	.24	.00	.00	.00	.00
8	.00	.13	.50	6.0	.66	16	1.8	.25	.00	.00	.00	.00
9	.00	.13	.35	3.7	.68	12	1.8	.23	.00	.00	.00	.00
10	.00	.13	.31	2.8	3.0	9.8	1.8	.17	.00	.00	.00	.00
11	.00	.13	.30	2.3	35	8.3	1.8	.14	.00	.00	.00	.00
12	.00	.13	.30	1.8	516	7.3	2.4	.15	.00	.00	.00	.00
13	.00	.13	.30	1.5	93	6.5	2.9	.17	.00	.00	.00	.00
14	.00	.13	.30	1.3	71	8.3	1.9	.16	.00	.00	.00	.00
15	.00	.11	.30	1.2	347	8.8	1.7	.15	.00	.00	.00	.00
16	.00	.10	.30	1.1	94	7.0	1.6	.14	.00	.00	.00	.00
17	.00	.24	.30	1.1	58	6.7	1.7	.13	.00	.00	.00	.00
18	.00	.59	.42	.99	28	5.9	1.6	.14	.00	.00	.00	.00
19	.00	.32	.42	.88	21	5.3	1.4	.13	.00	.00	.00	.00
20	.00	.25	.34	.81	248	5.1	1.3	.15	.00	.00	.00	.00
21	.00	.25	.34	.74	54	4.7	1.2	.13	.00	.00	.00	.00
22	.00	.20	.34	.72	28	7.1	1.2	.10	.00	.00	.00	.00
23	.00	.18	.34	.66	19	6.2	1.1	.10	.00	.00	.00	.00
24	.00	.18	.36	.66	15	5.0	1.1	.08	.00	.00	.00	.00
25	.00	.18	.38	.70	12	4.5	1.0	.07	.00	.00	.00	.00
26	52	.18	.38	.66	11	4.2	.84	.07	.00	.00	.00	.00
27	2.5	.19	.39	.64	9.4	4.0	.76	.06	.00	.00	.00	.00
28	.45	.18	1.6	.72	8.6	3.6	.69	.05	.00	.00	.00	.00
29	.31	.15	9.1	.69	8.0	3.3	.60	.03	.00	.00	.00	.00
30	.24	.15	4.3	.59	---	3.4	.50	.01	.00	.00	.00	.00
31	.18	---	1.9	.59	---	3.2	---	.01	---	.00	.00	---
TOTAL	55.68	5.29	25.26	71.99	1684.58	320.1	48.89	5.32	0.00	0.00	0.00	0.00
MEAN	1.80	.18	.81	2.32	58.1	10.3	1.63	.17	.000	.000	.000	.000
MAX	52	.59	9.1	20	516	98	3.0	.48	.00	.00	.00	.00
MIN	.00	.10	.13	.59	.54	3.2	.50	.01	.00	.00	.00	.00
AC-FT	110	10	50	143	3340	635	97	11	.00	.00	.00	.00

SAN JOAQUIN RIVER BASIN

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.25	7.67	8.03	3.63	32.2	17.7	2.80	.72	.081	.000	.000	.011
MAX	1.80	53.1	59.4	12.1	170	53.4	6.86	1.83	.19	.000	.000	.11
(WY)	1992	1984	1984	1984	1986	1986	1986	1986	1986	1984	1984	1983
MIN	.000	.000	.000	.000	.16	.62	.62	.17	.000	.000	.000	.000
(WY)	1986	1991	1991	1991	1991	1988	1988	1992	1988	1984	1984	1984

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1983 - 1992

ANNUAL TOTAL	1302.14	2217.11	
ANNUAL MEAN	3.57	6.06	5.94
HIGHEST ANNUAL MEAN			19.7
LOWEST ANNUAL MEAN			.32
HIGHEST DAILY MEAN	249	516	1400
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		1640	5200
INSTANTANEOUS PEAK STAGE		5.23	9.10
ANNUAL RUNOFF (AC-FT)	2580	4400	4300
10 PERCENT EXCEEDS	2.9	7.0	7.8
50 PERCENT EXCEEDS	.10	.15	.15
90 PERCENT EXCEEDS	.00	.00	.00

11299995 TULLOCH RESERVOIR NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'12", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, in center of Tulloch Dam on Stanislaus River, 1.9 mi upstream from Goodwin Dam, and 5.3 mi northeast of Knights Ferry.

DRAINAGE AREA.--980 mi².

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

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by gravity-type concrete dam completed in October 1957. Usable capacity, 56,840 acre-ft between elevations 431.0 ft, normal minimum water surface, and 511.0 ft, top of radial gates. Dead storage, 11,560 acre-ft. Reservoir is used for irrigation and power. Water passes down Stanislaus River, first passing through Tulloch Powerplant at dam. Part of flow is diverted at Goodwin Dam to Oakdale Canal (station 11301000) and South San Joaquin Canal (station 11300500). Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by Oakdale and South San Joaquin Irrigation Districts, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 69,500 acre-ft, Jan. 7, 1965, elevation, 512.0 ft; minimum, 4,580 acre-ft, Oct. 3, 1960, elevation, 404.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 66,300 acre-ft, June 2, maximum elevation, 509.45 ft; minimum, 39,100 acre-ft, Oct. 1, elevation, 482.85 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated October 1956)

404	4,580	430	11,100	475	33,100
411	6,020	445	16,400	490	45,300
420	8,200	460	23,600	512	69,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39100	54700	54900	54400	55400	58800	57000	61900	66200	65200	65400	65200
2	40700	54700	54600	55100	55300	58600	57300	62100	66300	65100	65100	65200
3	42200	54700	54300	55700	55300	58300	58100	62100	65400	65200	64700	65200
4	43800	54700	54200	55500	55300	58100	58000	62100	65200	65200	64300	65300
5	45500	54700	55000	55500	55600	58300	57800	61200	65500	65100	64000	65300
6	46200	54700	55300	55400	55100	59100	57600	61100	66100	64900	63700	65400
7	48000	54600	56000	55300	54900	59100	56800	61000	65600	64800	63700	65500
8	49800	54600	55800	55200	54600	59000	56500	61100	65100	64500	63700	65400
9	51600	54600	55500	55100	54400	58900	57500	61200	65100	64500	63600	65100
10	53300	54700	55200	55800	55000	58700	57600	61500	65100	64400	63500	64700
11	54400	54700	55900	55500	55300	57600	58100	61800	64900	64400	63400	64400
12	55000	54700	55700	55300	57700	58400	58200	62200	64800	64300	63500	64100
13	55500	54700	55500	55100	58000	58100	58300	62200	64900	64100	63600	63700
14	56200	54500	55300	54900	58300	58000	58500	62200	65100	63700	63800	63500
15	56800	54600	55000	54700	59500	57800	57900	62300	65200	63500	64000	63500
16	57000	55200	54900	55200	59300	57600	59600	62900	65300	63300	64200	63500
17	56600	55800	54600	56400	59500	57400	60800	63300	65500	63300	64400	63500
18	56200	55700	54300	56100	59400	57300	60700	63600	65400	63500	64500	63600
19	55800	55300	54800	55800	59400	57000	60500	63900	65500	63600	64700	64000
20	55400	54900	56200	55800	60200	56800	60100	63800	65600	63800	64800	64400
21	55000	54700	55900	55700	60300	55900	60400	63800	65700	64000	64900	64700
22	55100	55000	55600	55600	60200	55100	60200	63900	65600	64300	65000	65000
23	55600	55200	55300	55500	60100	55000	60200	63700	64500	64500	65000	64900
24	55600	55500	55000	56000	59900	55500	60600	63600	64400	64700	65100	64500
25	55200	55800	55500	56400	59800	55600	60500	63700	64700	64900	65200	64700
26	55200	56200	55900	56700	59600	55600	60800	63800	64700	65100	65300	64800
27	54800	56600	55600	56700	59400	55700	60300	64000	64900	65300	65400	64800
28	54600	55900	55300	56100	59200	55900	60300	63300	65500	65500	65300	65100
29	54700	55500	55200	55900	59000	56100	60600	63700	65400	65700	65300	64900
30	54700	55100	55000	55500	---	56100	61700	64300	65600	65800	65200	64700
31	54900	---	54700	55500	---	56600	---	65300	---	65800	65200	---
MAX	57000	56600	56200	56700	60300	59100	61700	65300	66300	65800	65400	65500
MIN	39100	54500	54200	54400	54400	55000	56500	61000	64400	63300	63400	63500
a	499.42	499.84	499.42	500.16	503.30	501.15	505.65	508.63	508.87	509.03	508.55	508.17
b	+17400	+200	-400	+800	+3500	-2400	+5100	+3600	+300	+200	-600	-500

CAL YR 1991 b -700

WTR YR 1992 b +27200

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'15", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., on Calaveras-Tuolumne County line, Hydrologic Unit 18040010, temperature recorder in south corner of Tulloch powerplant at downstream side of Tulloch Dam, 5.2 mi northeast of Knights Ferry.

DRAINAGE AREA.--980 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1972 to current year.

INSTRUMENTATION.--Temperature recorder since June 1972.

REMARKS.--Water temperature is affected by regulation from Tulloch powerplant.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 27.5°C, Aug. 30, 1977; minimum recorded, 5.0°C, Jan. 13, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 20.5°C, Sept. 7-11; minimum recorded, 9.0°C, Jan. 25 to Feb. 3.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

SAN JOAQUIN RIVER BASIN

11300500 SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'16", long 120°38'14", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on left bank 0.8 mi downstream from headgate at Goodwin Dam and 3.0 mi northeast of Knights Ferry.

PERIOD OF RECORD.--May 1914 to current year. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 334.18 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale Irrigation District). Prior to Mar. 12, 1915, nonrecording gage 100 ft downstream. Mar. 12, 1915, to July 1, 1921, nonrecording gage at present site and datum.

REMARKS.--Records good. Canal diverts from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin Irrigation Districts.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992.
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e305	1.4	4.9	6.3	661	.00	5.8	837	1030	669	990	716
2	e302	1.3	4.9	4.4	663	.00	464	840	1030	973	991	714
3	e301	1.2	4.9	1.8	663	.00	715	843	1030	1000	991	712
4	e120	295	4.9	4.6	663	.00	716	844	1030	1000	1060	704
5	e6.0	629	4.9	4.7	462	.13	717	844	1030	1000	1100	698
6	e5.0	630	4.8	4.6	132	1.3	880	846	1040	1000	1110	697
7	e5.0	630	5.1	3.3	3.3	1.2	922	849	1040	1000	1100	699
8	e4.0	631	4.8	1.7	2.2	1.2	910	849	1040	1000	1110	699
9	e4.0	631	4.5	4.6	1.6	1.3	911	849	1040	1000	1100	583
10	e4.0	631	4.6	4.7	2.1	1.4	910	840	1050	1000	1100	525
11	e4.0	632	3.8	4.6	2.5	1.5	909	833	1060	1000	1100	527
12	e4.0	632	4.1	4.6	2.1	3.1	911	831	947	1000	1100	527
13	3.5	633	4.1	4.6	3.3	3.1	908	833	944	1000	1100	528
14	3.2	338	4.1	4.6	.96	3.3	907	828	940	1000	1100	531
15	164	3.5	4.1	4.8	3.3	3.2	910	818	942	1000	1100	533
16	516	4.3	.76	4.8	1.8	3.3	924	817	940	1000	1100	527
17	646	5.4	.04	4.9	.05	3.3	929	813	937	1000	1100	526
18	17	5.4	3.1	4.8	.00	3.3	954	804	937	1000	1100	527
19	4.9	5.4	3.9	4.6	.00	3.3	957	829	919	1000	1110	528
20	7.5	5.4	4.6	4.6	.05	3.3	954	831	916	1000	937	530
21	7.4	5.4	4.6	4.6	.00	3.3	941	830	917	999	780	531
22	6.2	5.4	4.6	4.6	.00	3.2	854	828	916	997	777	533
23	5.0	5.1	4.6	4.8	.00	3.2	769	829	708	991	776	535
24	5.6	5.1	4.6	4.9	.00	3.2	775	830	692	991	778	459
25	5.7	5.1	4.4	4.9	.00	3.2	779	830	693	987	777	265
26	5.9	5.1	4.4	4.9	.00	3.1	790	832	695	987	765	151
27	5.7	5.1	4.4	270	.00	3.1	782	830	671	987	749	153
28	4.5	5.1	4.4	659	.00	3.1	790	1040	669	987	745	148
29	1.6	5.0	4.4	658	.00	3.2	813	1040	673	989	747	141
30	1.4	4.9	4.4	660	---	3.2	827	1040	670	990	747	146
31	1.4	---	4.4	661	---	3.2	---	1030	---	991	724	---
TOTAL	2476.5	6396.6	130.10	3024.3	3267.26	72.23	24533.8	26637	27146	30538	29864	15093
MEAN	79.9	213	4.20	97.6	113	2.33	818	859	905	985	963	503
MAX	646	633	5.1	661	663	3.3	957	1040	1060	1000	1110	716
MIN	1.4	1.2	.04	1.7	.00	.00	5.8	804	669	669	724	141
AC-FT	4910	12690	258	6000	6480	143	48660	52830	53840	60570	59240	29940

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	153	47.9	26.0	80.2	131	246	694	904	937	859	736	460
MAX	490	324	238	363	456	1087	1160	1265	1259	1260	1251	1031	
(WY)	1981	1951	1969	1987	1985	1972	1984	1975	1978	1967	1978	1967	
MIN	.000	.000	.000	.000	.000	.000	.115	84.0	147	78.2	70.9	5.55	
(WY)	1920	1920	1920	1916	1916	1930	1967	1977	1924	1924	1924	1977	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1914 - 1992

ANNUAL TOTAL	167722.55	169178.79	
ANNUAL MEAN	460	462	445
HIGHEST ANNUAL MEAN			684
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	1130	1110	1320
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	332700	335600	322600
10 PERCENT EXCEEDS	1050	1000	1080
50 PERCENT EXCEEDS	470	530	330
90 PERCENT EXCEEDS	2.0	1.8	.00

LOCATION.--Lat 37°51'32", long 120°37'56", in SW 1/4 SE 1/4 sec.10, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 0.3 mi downstream from headgate at Goodwin Dam and 3.4 mi northeast of Knights Ferry.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 29, 1916, nonrecording gage at site 1,000 ft upstream at different datum. Apr. 29, 1916, to July 3, 1925, nonrecording gage and July 4, 1925, to Apr. 3, 1949, water-stage recorder at present site at datum 0.18 ft higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 556 ft³/s, July 8-11, 1967; maximum discharge, 595 ft³/s, June 10, 1991, gage height, 10.09 ft, result of damage to canal due to vandalism; no flow at times in most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	e1.0	.00	.00	.00	.85	148	445	439	403	395	349
2	1.4	e1.0	.00	.00	.00	.47	186	454	438	395	395	345
3	3.0	e1.0	.00	.00	.00	.41	235	459	438	e397	395	340
4	2.6	e1.0	.00	.00	.00	.22	235	459	438	e397	396	328
5	2.2	e1.0	.00	.11	.01	.11	273	459	439	e393	396	321
6	2.1	e1.0	1.8	.00	.64	.07	297	459	439	e397	396	321
7	.68	e1.0	4.5	.07	1.7	.05	324	459	439	e397	403	317
8	.00	e1.0	4.0	.00	4.4	.10	344	458	440	e394	410	311
9	.00	e1.0	1.5	.00	.56	.07	345	453	440	391	410	310
10	.00	e1.0	.00	.00	6.3	.02	364	444	440	396	410	309
11	2.0	e1.0	.00	.00	1.7	.01	374	443	433	397	406	308
12	4.1	e1.0	.00	.00	1.2	.02	375	442	421	397	398	308
13	4.1	e1.0	.00	.00	.88	.01	375	446	415	397	397	308
14	1.6	e.00	.00	.00	.22	.01	376	461	416	397	397	308
15	.00	e.00	.00	.00	.23	.01	377	460	416	397	397	308
16	.00	e1.0	.00	.00	.26	.01	377	461	416	397	397	318
17	.00	e1.0	.00	1.3	.20	.01	377	460	421	398	397	325
18	.00	e1.0	.00	3.9	.16	.03	378	455	429	398	397	325
19	.57	.00	.00	3.9	.10	.01	378	450	438	398	397	325
20	2.6	.00	.00	1.6	.08	.01	396	448	452	398	404	325
21	1.1	.00	.00	.00	.01	.01	410	442	452	396	413	325
22	.00	.20	.00	.00	.01	.01	416	442	455	394	408	325
23	.00	4.7	.00	.00	.01	.01	418	440	465	395	400	325
24	.00	4.7	2.7	.00	.01	.01	417	439	466	395	400	325
25	.88	1.6	6.3	.00	.02	.01	417	439	467	402	395	327
26	4.1	.00	9.8	.00	.01	.01	417	440	463	405	385	327
27	4.0	.00	11	.00	.01	.01	415	440	414	405	378	325
28	1.5	.00	11	.00	.01	6.5	425	440	415	406	365	325
29	e1.0	.00	11	.00	.06	16	446	440	415	400	365	315
30	e1.0	.00	3.3	.00	---	16	446	439	415	396	360	315
31	e1.0	---	.00	.00	---	34	---	439	---	395	356	---
TOTAL	41.61	27.20	66.90	10.88	18.59	75.07	10761	13915	13074	12323	12218	9643
MEAN	1.34	.91	2.16	.35	.64	2.42	359	449	436	398	394	321
MAX	4.1	4.7	11	3.9	6.3	34	446	461	467	406	413	349
MIN	.00	.00	.00	.00	.00	.01	148	439	414	391	356	308
AC-FT	83	54	133	22	37	149	21340	27600	25930	24440	24230	19130

MEAN	93.7	5.22	1.08	1.73	2.31	48.3	227	359	372	362	326	242
MAX	404	51.5	15.8	71.0	77.9	364	496	544	552	554	547	518
(WY)	1979	1940	1987	1987	1976	1972	1962	1965	1965	1967	1967	1958
MIN	.28	.000	.000	.000	.000	.000	.004	97.5	49.8	25.8	.62	1.20
(WY)	1978	1915	1916	1916	1915	1918	1983	1915	1924	1924	1977	1977

ANNUAL TOTAL	62554.66		72174.25				
ANNUAL MEAN	171		197		173		
HIGHEST ANNUAL MEAN					277		1979
LOWEST ANNUAL MEAN					52.8		1924
HIGHEST DAILY MEAN	482	Jul 17	467	Jun 25	556	Jul 8	1967
LOWEST DAILY MEAN	.00	Jan 3	.00	Oct 8	.00	Jun 21	1914
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 3	.00	Nov 26	.00	Oct 16	1914
INSTANTANEOUS PEAK FLOW					595	Jun 10	1991
INSTANTANEOUS PEAK STAGE					10.09	Jun 10	1991
ANNUAL RUNOFF (AC-FT)	124100		143200		125100		
10 PERCENT EXCEEDS	456		440		475		
50 PERCENT EXCEEDS	2.1		91		76		
90 PERCENT EXCEEDS	.00		.00		.00		

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'06", long 120°38'13", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on right bank 250 ft upstream from Owl Creek, 0.9 mi downstream from Goodwin Dam, and 2.9 mi northeast of Knights Ferry.

DRAINAGE AREA.--986 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1957 to current year. Records equivalent to those published as Stanislaus River at Knights Ferry, 1903-14, and as Stanislaus River near Knights Ferry, 1915-32, if adjusted for diversions in Stanislaus and San Joaquin Water Co.'s canal and Oakdale and South San Joaquin Canals.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by New Melones Reservoir (station 11299000) since 1978 and Tulloch Reservoir (station 11299995) since 1957. South San Joaquin Canal (station 11300500) and Oakdale Canal (station 11301000) divert at Goodwin Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s, Dec. 24, 1964, gage height, 28.85 ft in gage well, 31.2 ft outside, from floodmarks; minimum daily, 0.12 ft³/s, Feb. 8, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 37.7 ft, from floodmarks, discharge, 62,900 ft³/s, by computation of flow over Goodwin Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft³/s, Apr. 23, gage height, 10.94 ft; minimum daily, 55 ft³/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	211	149	140	130	127	703	214	190	256	249	277
2	131	211	142	144	131	128	698	213	151	227	247	275
3	127	211	141	141	131	127	772	211	150	206	247	273
4	156	206	141	139	130	127	799	215	149	205	251	277
5	224	208	141	146	130	132	811	211	166	205	247	277
6	734	208	141	139	139	131	809	208	208	205	246	276
7	191	208	144	e139	132	129	879	209	209	241	249	281
8	187	209	143	e140	130	128	905	207	208	261	249	280
9	192	210	144	e140	130	128	917	207	206	255	248	278
10	192	210	138	e140	135	130	915	208	214	250	247	273
11	220	210	139	e140	156	129	798	210	213	252	247	277
12	254	210	142	e140	170	129	780	207	244	250	256	272
13	254	210	141	e140	137	129	758	210	253	249	253	276
14	213	213	141	e140	136	132	713	853	254	247	247	276
15	55	208	141	e140	914	131	712	876	255	206	249	276
16	99	208	78	e140	529	130	640	884	223	206	250	276
17	212	208	145	140	133	130	562	880	207	254	252	278
18	212	208	143	141	132	130	507	280	174	254	253	277
19	210	208	144	141	131	130	508	152	158	249	254	278
20	211	208	145	140	133	128	461	152	155	252	254	279
21	210	208	140	139	130	485	366	149	155	253	244	281
22	208	208	146	139	130	505	383	150	157	250	243	276
23	208	208	146	139	136	502	860	205	192	253	249	277
24	208	208	141	139	135	505	854	209	245	247	250	276
25	208	207	140	139	133	505	863	207	258	255	251	274
26	213	208	140	139	132	506	872	254	256	257	254	590
27	208	208	142	140	132	506	309	252	253	253	266	622
28	211	208	145	140	132	506	206	256	257	254	280	288
29	211	208	147	139	132	505	208	255	257	257	275	273
30	211	208	140	141	---	505	211	214	252	249	276	278
31	211	---	139	140	---	701	---	215	---	251	280	---
TOTAL	6517	6262	4349	4344	5081	8316	19779	9173	6269	7509	7863	8967
MEAN	210	209	140	140	175	268	659	296	209	242	254	299
MAX	734	213	149	146	914	701	917	884	258	261	280	622
MIN	55	206	78	139	130	127	206	149	149	205	243	272
AC-FT	12930	12420	8630	8620	10080	16490	39230	18190	12430	14890	15600	17790

e Estimated.

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1978, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	215	690	1194	1103	1060	1154	1651	1249	96.4	4.18	17.8
MAX	749	681	3521	5040	4309	3265	3686	6233	5100	1063	22.5	231
(WY)	1976	1966	1965	1969	1969	1969	1967	1969	1967	1967	1967	1969
MIN	.19	4.56	.40	11.5	2.19	4.74	2.48	1.52	1.35	1.60	1.09	.51
(WY)	1977	1977	1978	1977	1960	1960	1972	1961	1961	1960	1960	1960

SUMMARY STATISTICS

WATER YEARS 1957 - 1978

ANNUAL MEAN	725	
HIGHEST ANNUAL MEAN	2131	1969
LOWEST ANNUAL MEAN	6.47	1977
HIGHEST DAILY MEAN	29400	Dec 24 1964
LOWEST DAILY MEAN	.14	Oct 6 1976
ANNUAL SEVEN-DAY MINIMUM	.15	Oct 13 1976
INSTANTANEOUS PEAK FLOW	40200	Dec 24 1964
INSTANTANEOUS PEAK STAGE	28.85	Dec 24 1964
ANNUAL RUNOFF (AC-FT)	525500	
10 PERCENT EXCEEDS	2300	
50 PERCENT EXCEEDS	43	
90 PERCENT EXCEEDS	1.9	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	403	491	823	815	615	1199	741	605	559	551	534	402
MAX	1228	2246	4581	4793	1693	4905	1582	1048	1080	1314	1152	1097
(WY)	1984	1984	1984	1984	1984	1986	1986	1986	1986	1985	1985	1986
MIN	172	161	140	132	140	143	236	275	185	229	157	155
(WY)	1991	1991	1992	1990	1990	1991	1991	1991	1984	1984	1991	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1984 - 1992

ANNUAL TOTAL	69629	94429	
ANNUAL MEAN	191	258	646
HIGHEST ANNUAL MEAN			1469
LOWEST ANNUAL MEAN			185
HIGHEST DAILY MEAN	882	Apr 30	917
LOWEST DAILY MEAN	55	Oct 15	55
ANNUAL SEVEN-DAY MINIMUM	114	May 26	129
INSTANTANEOUS PEAK FLOW			1900
INSTANTANEOUS PEAK STAGE			10.94
ANNUAL RUNOFF (AC-FT)	138100	187300	467900
10 PERCENT EXCEEDS	250	505	1250
50 PERCENT EXCEEDS	156	210	404
90 PERCENT EXCEEDS	131	132	142

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: February 1966 to current year.

INSTRUMENTATION.--Temperature recorder since February 1966.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument. Temperature recorder located 2,300 ft upstream from gaging station. Water temperature is affected by regulation from Goodwin Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 25, 1974; minimum recorded, 5.5°C, Feb. 3, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 21.0°C, Oct. 1, 2, Sept. 9-11; minimum recorded, 9.0°C, several days in January and February.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11302500 STANISLAUS RIVER AT OAKDALE, CA

LOCATION.--Lat 37°46'38", long 120°51'07", in Eight Square Leagues on Stanislaus River Grant, Stanislaus County, Hydrologic Unit 18040002, on left bank at State Highway 120 bridge at Oakdale.

DRAINAGE AREA.--1,032 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1985 to current year.

INSTRUMENTATION.--Water-temperature recorder since Aug. 28, 1985.

REMARKS.--Interruptions in record are due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 26.0°C, June 21, 22, 1992; minimum recorded, 5.0°C, Dec. 22-25, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 26.0°C, June 21, 22; minimum recorded, 7.0°C, Jan. 12, 13.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11302500 STANISLAUS RIVER AT OAKDALE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.0	18.5	15.5	22.5	20.0	23.5	20.5	22.0	19.0	23.0	20.5
2	14.0	11.5	19.0	15.5	24.0	20.0	24.0	21.0	22.0	19.0	22.5	21.0
3	14.0	12.0	19.5	16.5	25.0	21.0	24.5	21.5	21.5	19.0	22.0	20.5
4	13.5	12.0	19.5	17.0	25.5	21.0	24.5	21.5	21.5	19.0	22.0	20.0
5	13.5	11.5	19.5	17.0	24.5	21.0	24.0	21.0	22.0	19.0	22.5	20.5
6	13.5	11.5	20.0	17.0	23.0	20.0	23.0	21.0	22.0	19.5	22.5	20.5
7	14.0	12.0	20.0	17.0	22.5	19.0	23.0	19.5	22.5	19.5	22.5	20.5
8	14.5	12.5	20.5	17.5	23.0	19.5	21.5	20.0	22.5	20.0	22.5	20.0
9	14.5	13.0	20.0	17.5	23.5	20.0	22.0	19.5	22.5	20.0	22.5	20.5
10	14.5	13.0	20.0	16.5	23.0	20.0	22.5	20.0	23.0	20.5	22.5	20.5
11	14.5	13.5	20.0	17.0	22.0	19.0	22.0	20.5	23.0	20.5	22.5	20.5
12	14.0	13.0	20.0	17.5	22.0	19.0	21.0	20.0	23.0	21.0	22.5	20.5
13	15.0	13.0	19.5	17.0	21.5	19.0	22.5	19.5	23.5	21.0	22.5	20.5
14	15.0	13.0	18.5	15.0	21.5	19.0	22.5	20.5	23.0	21.0	22.0	20.0
15	14.5	13.0	17.0	14.5	20.5	19.0	22.5	19.5	23.5	21.0	21.5	20.0
16	15.0	13.0	17.0	15.0	22.0	18.5	22.5	20.0	24.0	21.0	22.0	20.0
17	16.0	14.0	17.5	15.5	23.5	20.0	22.5	20.0	24.0	21.0	22.0	20.0
18	15.5	13.5	19.0	16.0	24.0	21.0	22.0	19.0	23.5	21.0	22.0	20.0
19	15.5	13.0	20.5	17.5	25.0	21.0	22.0	19.0	23.5	21.0	22.5	20.5
20	16.0	13.5	21.0	18.0	25.5	22.0	21.5	19.0	23.5	21.0	22.0	20.0
21	16.5	14.0	21.5	18.0	26.0	22.5	21.5	19.0	23.0	21.0	22.0	20.0
22	16.0	14.0	22.0	18.0	26.0	22.5	21.5	18.5	22.0	20.0	22.5	20.5
23	15.0	13.0	22.0	18.5	25.0	23.0	21.5	18.5	22.0	19.5	22.5	20.5
24	15.0	13.0	21.5	19.0	25.0	22.0	21.5	18.5	22.5	20.0	22.0	20.5
25	15.5	13.5	21.0	18.5	24.5	22.0	21.5	19.0	22.0	20.0	21.0	19.5
26	15.5	14.0	21.0	19.0	24.5	22.0	21.5	19.0	23.0	23.5	20.5	19.0
27	17.0	14.0	21.0	19.0	24.5	22.0	22.0	19.0	23.0	21.0	20.0	18.5
28	19.0	16.0	21.0	19.0	23.0	21.5	22.0	19.5	22.5	21.0	20.0	17.5
29	19.5	17.5	21.0	18.5	21.5	21.0	22.0	19.5	22.5	20.5	20.0	18.5
30	18.5	16.5	22.0	19.0	23.0	20.5	22.0	19.0	22.0	20.0	20.5	18.5
31	---	---	22.5	19.5	---	---	21.5	19.0	22.5	20.0	---	---
MONTH	19.5	11.0	22.5	14.5	26.0	18.5	24.5	18.5	24.0	19.0	23.0	17.5

SAN JOAQUIN RIVER BASIN

11303000 STANISLAUS RIVER AT RIPON, CA

LOCATION.--Lat 37°43'47", long 121°06'34", in NW 1/4 SE 1/4 sec.29, T.2 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 15 ft downstream from railroad bridge, 1.1 mi southeast of Ripon, and 15 mi upstream from mouth.

DRAINAGE AREA.--1,075 mi².

PERIOD OF RECORD.--October 1940 to current year. April to September 1940 in reports of California Department of Water Resources.

SPECIFIC CONDUCTANCE: Water year 1989.

WATER TEMPERATURE: Water year 1989.

GAGE.--Water-stage recorder. Datum of gage is 0.72 ft above National Geodetic Vertical Datum of 1929. October 1940 to Nov. 17, 1953, at site 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by reservoirs and powerplants upstream from station. South San Joaquin and Oakdale Canals (stations 11300500 and 11301000) divert at Goodwin Dam 34 mi upstream for irrigation in the vicinity of Oakdale. See REMARKS for Stanislaus River below Goodwin Dam, near Knights Ferry (station 11302000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,500 ft³/s, Dec. 24, 1955, gage height, 63.25 ft; minimum daily, 0.11 ft³/s, Aug. 4-6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 12, 1938, reached a stage of 64.4 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s, Feb. 16, gage height, 42.70 ft; minimum daily, 145 ft³/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	415	298	168	164	168	549	316	255	271	275	312
2	184	392	238	163	161	164	599	322	256	260	268	297
3	153	383	202	166	156	161	630	316	247	257	263	287
4	158	379	187	165	154	158	698	295	237	240	262	290
5	145	376	184	183	154	159	723	297	227	229	267	299
6	187	380	179	190	157	211	748	312	208	224	286	284
7	426	380	185	186	162	395	769	286	221	217	274	284
8	323	379	187	189	160	274	808	273	239	231	287	277
9	221	381	178	192	149	213	840	268	244	259	280	285
10	201	385	175	172	165	189	854	300	244	268	302	286
11	201	379	172	171	198	178	861	309	239	266	272	278
12	211	379	169	168	360	175	811	276	244	284	262	297
13	238	381	171	169	707	167	778	280	248	289	258	297
14	242	376	172	168	619	165	768	258	285	269	270	315
15	284	369	170	163	534	164	715	569	288	267	261	293
16	228	364	169	163	1250	165	714	736	280	262	256	290
17	173	365	160	164	932	163	676	794	281	249	267	280
18	257	372	149	160	439	162	617	824	261	255	257	287
19	341	364	162	161	309	158	559	513	240	258	257	300
20	369	361	164	163	262	157	551	293	238	261	258	297
21	361	362	167	162	270	156	517	274	228	265	279	302
22	356	359	166	158	247	270	469	241	195	278	262	301
23	348	359	165	157	218	395	476	238	215	282	264	294
24	351	359	168	157	204	422	719	255	218	267	257	288
25	357	358	166	159	195	439	794	259	233	261	263	286
26	423	358	165	157	187	447	797	258	265	270	268	290
27	444	361	165	156	181	452	816	274	278	287	266	395
28	410	359	171	162	175	453	522	285	268	291	267	504
29	415	362	179	174	170	452	359	316	264	273	280	408
30	438	363	184	166	---	454	327	291	271	260	298	312
31	452	---	175	164	---	458	---	289	---	263	332	---
TOTAL	9109	11160	5542	5196	9039	8144	20064	10817	7417	8113	8418	9215
MEAN	294	372	179	168	312	263	669	349	247	262	272	307
MAX	452	415	298	192	1250	458	861	824	288	291	332	504
MIN	145	358	149	156	149	156	327	238	195	217	256	277
AC-FT	18070	22140	10990	10310	17930	16150	39800	21460	14710	16090	16700	18280

11303000 STANISLAUS RIVER AT RIPON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	351	477	922	1198	1164	1381	1576	2119	1499	494	338	324
MAX	1775	4518	7602	5163	4802	5094	5047	7703	5531	3633	2834	2041
(WY)	1984	1951	1951	1956	1969	1943	1983	1952	1967	1983	1983	1983
MIN	6.34	20.3	26.0	77.8	64.3	47.5	41.0	42.8	25.1	9.88	.63	2.95
(WY)	1978	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1941 - 1992	
ANNUAL TOTAL	93270		112234			
ANNUAL MEAN	256		307		986	
HIGHEST ANNUAL MEAN					2548	
LOWEST ANNUAL MEAN					44.9	
HIGHEST DAILY MEAN					47000	
LOWEST DAILY MEAN	859	May 21	1250	Feb 16		Dec 24 1955
ANNUAL SEVEN-DAY MINIMUM	145	Oct 5	145	Oct 5	.11	Aug 4 1977
INSTANTANEOUS PEAK FLOW	162	Dec 17	156	Feb 3	.13	Aug 2 1977
INSTANTANEOUS PEAK STAGE			1320	Feb 16	62500	Dec 24 1955
ANNUAL RUNOFF (AC-FT)			42.70	Feb 16	63.25	Dec 24 1955
10 PERCENT EXCEEDS	185000		222600		714000	
50 PERCENT EXCEEDS	379		507		2750	
90 PERCENT EXCEEDS	210		268		366	
	175		164		131	

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA
(National stream-quality accounting network station)

LOCATION.--Lat 37°40'34", long 121°15'55", in El Pescadero Grant, San Joaquin County, Hydrologic Unit 18040003, on left bank 12 ft downstream from Durham Ferry highway bridge, 2.6 mi downstream from Stanislaus River, and 3.2 mi northeast of Vernalis.

DRAINAGE AREA.--13,536 mi², includes about 2,100 mi² in James Bypass.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1922 to current year (1922-23 and 1925-29, low-flow records only).

REVISED RECORDS.--WSP 831: 1936. WSP 931: 1940. WSP 1930: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 2130 for history of changes prior to Nov. 30, 1967.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation; low flows consist mainly of return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 79,000 ft³/s, Dec. 9, 1950, elevation, 32.81 ft, present datum, including flow through breaks in levee; maximum elevation, 34.55 ft, Jan. 27, 1969; minimum discharge, 19 ft³/s, Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,570 ft³/s, Feb. 16, elevation, 13.93 ft; minimum daily, 390 ft³/s, June 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	657	1300	1050	910	940	1400	1570	1360	506	473	454	607
2	606	1260	1010	900	932	1350	1620	1420	518	457	547	595
3	589	1200	960	896	921	1320	1620	1420	527	426	546	597
4	549	1160	922	893	912	1290	1620	1480	508	447	439	592
5	518	1110	901	924	903	1280	1640	1420	450	492	426	602
6	558	1100	895	994	918	1370	1630	1250	438	484	434	646
7	616	1090	895	989	944	1770	1620	1150	474	461	468	629
8	747	1090	913	1000	945	2090	1620	1010	516	413	459	602
9	675	1110	892	1020	927	1760	1610	1040	488	398	485	564
10	621	1100	877	1040	950	1600	1550	1100	442	409	460	562
11	612	1080	879	1030	1150	1490	1520	1170	433	429	446	579
12	633	1070	881	1020	1320	1400	1580	1020	440	458	420	562
13	669	1060	884	1010	1930	1340	1530	868	488	501	418	608
14	723	1080	884	969	3650	1290	1510	743	536	476	433	631
15	692	1080	877	962	3390	1270	1420	717	588	441	469	636
16	698	1050	868	962	4550	1270	1340	921	579	430	482	585
17	650	1060	861	962	5110	1270	1330	954	544	405	489	582
18	666	1060	845	959	4350	1300	1230	985	478	406	466	571
19	753	1060	836	954	3900	1320	1180	911	449	443	423	567
20	817	1060	854	944	3510	1300	1190	678	479	467	411	659
21	830	1050	873	946	3070	1280	1010	583	488	433	448	667
22	872	1010	874	944	2730	1290	1000	575	471	438	474	631
23	907	1010	866	937	2340	1460	1020	542	390	462	506	626
24	863	1020	866	936	2080	1530	1070	563	421	463	550	604
25	883	1050	873	941	1890	1570	1270	589	428	459	502	597
26	989	1050	875	942	1750	1640	1330	566	451	473	497	623
27	1220	1040	881	947	1620	1700	1400	541	434	490	493	713
28	1180	1030	893	949	1530	1680	1610	516	453	439	507	862
29	1180	1040	908	952	1470	1670	1500	505	479	448	560	928
30	1210	1040	929	966	---	1650	1410	536	521	413	606	811
31	1260	---	916	939	---	1610	---	505	---	414	651	---
TOTAL	24443	32520	27738	29737	60632	45560	42550	27638	14417	13848	14969	19038
MEAN	788	1084	895	959	2091	1470	1418	892	481	447	483	635
MAX	1260	1300	1050	1040	5110	2090	1640	1480	588	501	651	928
MIN	518	1010	836	893	903	1270	1000	505	390	398	411	562
AC-FT	48480	64500	55020	58980	120300	90370	84400	54820	28600	27470	29690	37760

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2193	2351	3685	5000	6674	7256	7064	7652	6683	2463	1308	1661
MAX	13320	10680	25130	27050	32550	40040	36450	31770	36650	19230	9035	11310
(WY)	1984	1984	1951	1956	1969	1983	1983	1983	1938	1983	1983	1983
MIN	246	430	506	804	758	444	200	380	118	92.8	124	179
(WY)	1978	1978	1978	1962	1991	1961	1961	1961	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1924 - 1992	
ANNUAL TOTAL	323274		353090			
ANNUAL MEAN	886		965		4483	
HIGHEST ANNUAL MEAN					21280	1983
LOWEST ANNUAL MEAN					575	1977
HIGHEST DAILY MEAN	3980	Mar 28	5110	Feb 17	70000	Dec 9 1950
LOWEST DAILY MEAN	436	Sep 5	390	Jun 23	30	Aug 10 1961
ANNUAL SEVEN-DAY MINIMUM	500	Aug 23	432	Jul 16	59	Jul 19 1961
INSTANTANEOUS PEAK FLOW			5570	Feb 16	79000	Dec 9 1950
INSTANTANEOUS PEAK STAGE			13.93	Feb 16	34.55	Jan 27 1969
INSTANTANEOUS LOW FLOW					19	Aug 10 1961
ANNUAL RUNOFF (AC-FT)	641200		700400		3248000	
10 PERCENT EXCEEDS	1260		1570		12100	
50 PERCENT EXCEEDS	784		895		2000	
90 PERCENT EXCEEDS	530		450		630	

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, 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 1974-81.

SPECIFIC CONDUCTANCE: Water years 1951-63, 1973-81, 1989 to current year.

WATER TEMPERATURE: Water years 1951 to current year.

SEDIMENT DATA: Water years 1957 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: March 1951 to May 1963.

SPECIFIC CONDUCTANCE: March 1951 to May 1963, January 1973 to October 1981, October 1988 to current year.

WATER TEMPERATURE: March 1951 to current year.

SUSPENDED-SEDIMENT DISCHARGE: November 1956 to current year.

INSTRUMENTATION.--Conductivity recorder January 1973 to October 1981. Temperature recorder October 1961 to September 1963, and since December 1972. Water quality-monitor since June 1985.

REMARKS.--Mean daily specific conductance records January 1973 to October 1981, provided by U.S. Bureau of Reclamation. Maximum and minimum specific conductance values, June 1985 to September 1988, are available in files of the U.S. Geological Survey. Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,350 microsiemens, Aug. 11, 1961; minimum daily, 60 microsiemens, June 21, 1953.

WATER TEMPERATURE: Maximum recorded, 35.5°C, Aug. 9, 1990; minimum recorded, 2.0°C, Dec. 26, 1987.

SEDIMENT CONCENTRATION: Maximum daily mean, 1,590 mg/L, Dec. 25, 1964; minimum daily mean, 6 mg/L, Jan. 1, 1991.

SEDIMENT LOAD: Maximum daily, 54,100 tons, Dec. 25, 1964; minimum daily, 2 tons, Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,280 microsiemens, Mar. 18, 22; minimum recorded, 358 microsiemens, May 1.

WATER TEMPERATURE: Maximum recorded, 30.0°C, June 21, 22, July 14, Aug. 16; minimum recorded, 5.5°C, Jan. 24, 25.

SEDIMENT CONCENTRATION: Maximum daily mean, 495 mg/L, Feb. 13; minimum daily mean, 16 mg/L, Dec. 2.

SEDIMENT LOAD: Maximum daily, 4,960 tons, Feb. 16; minimum daily, 32 tons, Aug. 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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												
06...	1200	1100	525	7.7	16.0	18	761	9.9	101	200	110	120
JAN												
14...	1345	967	866	8.4	7.5	10	766	10.5	87	K69	120	210
MAR												
18...	1345	1310	1290	8.1	17.5	23	762	10.2	107	200	56	280
APR												
22...	1445	1010	804	8.2	19.5	--	763	10.1	110	--	--	180
29...	1530	1500	363	7.9	20.5	--	757	9.5	106	--	--	89
MAY												
06...	1345	1240	518	8.0	23.0	--	757	9.1	107	--	--	110
13...	1515	871	590	8.5	25.0	--	760	10.7	130	--	--	150
13...	1520	871	590	8.5	25.0	--	760	10.7	130	--	--	--
20...	1300	662	624	9.0	21.5	--	760	14.9	170	--	--	160
27...	1200	538	812	8.9	20.5	23	757	15.1	169	190	130	190
27...	1530	546	741	9.2	26.5	--	756	18.0	226	--	--	180
JUN												
03...	1600	534	864	9.6	26.5	--	755	19.1	241	--	--	180
10...	1442	429	899	9.6	25.5	--	758	17.9	221	--	--	210
17...	1720	554	780	9.4	26.0	--	759	>20.0	--	--	--	180
24...	1415	429	949	8.0	26.5	--	760	17.6	220	--	--	210
JUL												
02...	1400	473	791	9.9	25.5	--	760	17.2	211	--	--	190
08...	1400	405	1040	9.2	26.0	--	765	17.7	218	--	--	220
15...	1120	440	920	8.8	23.5	27	762	14.9	176	210	110	220
15...	1330	447	887	9.4	28.0	--	760	18.0	231	--	--	210
20...	1345	484	823	9.0	26.5	--	760	17.7	221	--	--	--
22...	1430	440	960	9.5	26.0	--	760	18.3	227	--	--	200
29...	1530	473	840	9.4	28.0	--	760	18.5	238	--	--	190
AUG												
05...	1140	437	583	9.0	23.5	--	761	12.2	144	--	--	210
12...	1400	422	942	9.0	28.0	--	759	15.6	201	--	--	210
19...	1500	426	787	9.2	28.5	--	762	19.0	246	--	--	190
26...	1400	499	941	8.6	25.5	--	765	14.9	182	--	--	200
SEP												
15...	1140	657	732	8.8	21.0	4.0	760	12.2	138	29	12	170

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WH IT FIELD (MG/L AS HCO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER WH IT FIELD (MG/L AS CO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- LITY WAT WH TOT IT FIELD (MG/L AS CACO3)
NOV												
06...	30	27	13	61	52	2	2.3	--	111	--	--	--
JAN												
14...	88	45	24	120	55	4	4.2	--	150	--	--	--
MAR												
18...	130	59	31	170	57	4	5.0	--	178	--	--	--
APR												
22...	--	39	20	91	--	3	--	121	--	--	--	99
29...	--	19	10	39	48	2	2.0	72	--	--	--	59
MAY												
06...	--	23	13	53	50	2	2.1	92	--	--	--	75
13...	--	32	16	69	50	2	2.6	98	--	--	--	91
13...	--	--	--	--	--	--	--	98	--	--	--	91
20...	--	33	18	73	50	3	2.4	98	--	12	--	100
27...	70	40	21	90	51	3	2.9	--	114	--	14	--
27...	--	39	20	85	50	3	3.5	118	--	25	--	138
JUN												
03...	--	36	21	87	51	3	3.2	81	--	30	--	116
10...	--	44	24	100	51	3	3.3	38	--	--	--	131
17...	--	37	21	88	51	3	3.0	55	--	36	--	105
24...	--	44	25	100	50	3	3.3	68	--	--	--	56
JUL												
02...	--	40	21	84	49	3	3.5	148	--	22	--	121
08...	--	46	26	100	49	3	3.6	121	--	24	--	139
15...	90	45	25	100	50	3	3.4	--	116	--	18	--
15...	--	43	24	95	50	3	3.2	85	--	34	--	126
20...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	41	24	99	51	3	3.1	101	--	26	--	127
29...	--	39	23	91	50	3	3.4	89	--	24	--	113
AUG												
05...	--	43	24	97	50	3	3.0	124	--	18	--	132
12...	--	44	24	96	50	3	3.2	126	--	20	--	137
19...	--	40	22	87	49	3	2.7	103	--	27	--	130
26...	--	44	23	97	50	3	3.5	163	--	1	--	135
SEP												
15...	49	36	19	82	51	3	3.1	--	113	--	16	--

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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, NITRATE DIS- SOLVED (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)
NOV												
06...	91	64	82	0.20	16	300	327	0.41	1.28	0.030	0.020	1.20
JAN												
14...	123	140	140	0.20	17	594	572	0.81	1.56	0.040	0.040	1.50
MAR												
18...	146	230	180	0.10	15	814	789	1.11	2.26	0.060	0.040	2.40
APR												
22...	--	120	110	<0.10	14	488	--	--	1.48	--	0.020	--
29...	--	54	53	0.10	10	238	226	0.32	0.620	--	0.010	--
MAY												
06...	--	65	84	0.10	11	300	301	0.41	0.830	--	0.020	--
13...	--	72	97	<0.10	12	374	353	0.51	0.770	--	0.020	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	72	110	0.10	12	392	383	0.53	0.520	--	0.020	--
27...	118	96	130	<0.10	11	467	465	0.64	0.790	0.040	0.030	0.830
27...	--	85	120	0.20	11	442	450	0.60	0.670	--	0.030	--
JUN												
03...	--	95	130	0.20	9.2	454	454	0.62	0.450	--	0.040	--
10...	--	110	150	0.10	9.3	510	461	0.69	0.340	--	0.040	--
17...	--	98	120	0.20	8.7	436	440	0.59	0.250	--	0.030	--
24...	--	110	140	<0.10	11	520	471	0.71	0.880	--	0.080	--
JUL												
02...	--	90	120	0.20	12	454	471	0.62	1.05	--	0.050	--
08...	--	110	160	<0.10	9.7	562	545	0.76	1.33	--	0.070	--
15...	125	100	140	0.20	9.0	516	502	0.70	0.840	0.080	0.080	0.930
15...	--	100	140	0.20	9.4	482	495	0.66	0.900	--	0.080	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	110	150	0.20	9.8	504	517	0.69	0.900	--	0.060	--
29...	--	99	140	0.20	9.4	488	476	0.66	0.730	--	0.050	--
AUG												
05...	--	110	150	0.20	13	500	524	0.68	0.910	--	0.040	--
12...	--	100	140	0.20	14	504	509	0.69	1.05	--	0.050	--
19...	--	51	80	0.10	12	436	374	0.59	0.280	--	0.030	--
26...	--	110	130	0.20	15	498	509	0.68	1.06	--	0.040	--
SEP												
15...	118	87	110	0.20	14	414	426	0.56	0.460	0.020	0.020	0.470

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)
NOV											
06...	1.30	0.050	0.040	0.50	0.260	0.120	0.110	0.120	<10	46	<3
JAN											
14...	1.60	0.290	0.270	0.90	0.250	0.140	0.170	0.130	--	--	--
MAR											
18...	2.30	0.040	0.020	0.80	0.470	0.230	0.270	0.210	<10	73	<3
APR											
22...	1.50	--	0.020	--	0.260	0.120	--	0.120	--	--	--
29...	0.630	--	0.020	0.30	0.120	0.130	--	0.080	--	--	--
MAY											
06...	0.850	--	0.020	0.40	0.160	0.100	--	0.090	--	--	--
13...	0.790	--	0.030	0.50	0.190	0.080	--	0.090	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
20...	0.540	--	0.010	0.50	0.140	0.080	--	0.070	--	--	--
27...	0.820	0.020	0.010	1.0	0.280	0.080	0.110	0.070	<10	48	<3
27...	0.700	--	0.040	0.80	0.170	--	--	0.080	--	--	--
JUN											
03...	0.490	--	0.020	0.50	0.170	0.070	--	0.070	--	--	--
10...	0.380	--	<0.010	0.50	0.170	0.080	--	0.070	--	--	--
17...	0.280	--	<0.010	1.5	0.210	0.020	--	0.020	--	--	--
24...	0.960	--	<0.010	1.4	0.330	0.090	--	0.090	--	--	--
JUL											
02...	1.10	--	0.020	1.7	0.340	0.080	--	0.080	--	--	--
08...	1.40	--	0.020	1.7	0.330	0.080	--	0.060	--	--	--
15...	0.920	0.010	<0.010	0.90	0.240	0.070	0.080	0.060	--	--	--
15...	0.980	--	0.020	2.0	0.420	0.090	--	0.080	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	0.960	--	0.010	0.40	0.150	0.050	--	0.060	--	--	--
29...	0.780	--	0.010	1.8	0.320	0.060	--	0.050	--	--	--
AUG											
05...	0.950	--	0.030	0.30	0.130	0.060	--	0.050	--	--	--
12...	1.10	--	<0.010	0.60	0.190	0.080	--	0.070	--	--	--
19...	0.310	--	<0.010	0.80	0.220	0.080	--	0.080	--	--	--
26...	1.10	--	0.010	0.30	0.130	0.090	--	0.070	--	--	--
SEP											
15...	0.480	0.020	0.020	0.80	0.200	0.090	0.100	0.090	<10	48	<3

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
NOV 06...	13	6	50	<10	<1	<1	<1.0	310	<6	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	7	20	39	<10	1	4	<1.0	750	<6	--	--
APR 22...	7	--	36	--	--	--	--	--	--	11	2.0
29...	31	--	15	--	--	--	--	--	--	5.6	1.9
MAY 06...	19	--	21	--	--	--	--	--	--	4.4	2.1
13...	12	--	21	--	--	--	--	--	--	11	4.7
13...	--	--	--	--	--	--	--	--	--	--	2.8
20...	16	--	68	--	--	--	--	--	--	3.6	2.8
27...	6	9	50	<10	2	<1	<1.0	470	6	--	--
27...	10	--	35	--	--	--	--	--	--	4.5	1.9
JUN 03...	16	--	26	--	--	--	--	--	--	7.9	3.5
10...	11	--	36	--	--	--	--	--	--	4.5	5.0
17...	27	--	18	--	--	--	--	--	--	4.6	3.1
24...	10	--	25	--	--	--	--	--	--	5.2	2.7
JUL 02...	20	--	17	--	--	--	--	--	--	3.9	3.2
08...	12	--	28	--	--	--	--	--	--	4.6	5.6
15...	--	--	--	--	--	--	--	--	--	--	--
15...	9	--	23	--	--	--	--	--	--	4.3	1.8
20...	--	--	--	--	--	--	--	--	--	--	--
22...	12	--	47	--	--	--	--	--	--	6.3	1.1
29...	8	--	24	--	--	--	--	--	--	8.3	1.6
AUG 05...	10	--	53	--	--	--	--	--	--	--	3.1
12...	17	--	51	--	--	--	--	--	--	3.8	4.5
19...	12	--	49	--	--	--	--	--	--	--	6.0
26...	15	--	68	--	--	--	--	--	--	5.0	3.0
SEP 15...	18	7	50	<10	<1	<1	<1.0	440	<6	--	--

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
18...*	1258	3.90	322	1250	8.1	17.5	762	10.3	108	67	93
18...*	1303	3.90	289	1270	8.1	17.5	762	10.3	108	76	94
18...*	1313	3.30	235	1310	8.2	17.5	762	10.2	107	80	92
18...*	1315	3.50	193	1330	8.1	17.5	762	10.1	106	88	90
18...*	1318	4.00	155	1340	8.1	17.5	762	10.2	107	86	90
SEP											
15...*	1149	2.90	29.0	933	8.7	20.5	760	13.2	148	28	93
15...*	1151	2.75	52.0	833	8.7	21.0	760	12.8	144	30	91
15...*	1154	2.60	87.0	722	8.7	21.0	760	12.2	138	31	90
15...*	1157	2.10	119	666	8.7	21.0	760	11.8	131	29	84
15...*	1159	2.20	160	628	8.7	21.0	760	11.7	130	25	95

* Instantaneous discharge at time of cross-sectional measurement: Mar. 18, 1,300 ft³/s; Sept. 15, 657 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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						
06...	1215	1100	16.5	66	196	90
JAN						
14...	1405	967	10.0	28	73	88
FEB						
27...	0845	1630	14.5	115	506	92
MAR						
18...	1320	1300	17.0	80	281	92
MAY						
27...	1205	538	21.0	65	94	94
JUL						
15...	1115	440	25.0	111	132	97
SEP						
15...	1120	657	21.0	28	50	90

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	968	900	495	454	699	663	975	936	970	953	1130	1080
2	1020	946	520	487	747	694	993	971	983	955	1170	1120
3	1070	956	507	467	808	743	991	953	1000	973	1190	1160
4	1080	1010	486	467	815	801	970	941	1020	995	1200	1180
5	1100	1020	504	472	814	802	969	950	1020	1000	1180	1160
6	1120	1070	540	496	820	803	963	821	1020	998	1160	1080
7	1090	924	574	527	819	800	899	835	998	973	1090	694
8	924	835	582	555	849	800	937	899	981	966	917	690
9	972	865	626	554	870	836	953	935	993	978	963	914
10	1040	920	607	580	840	826	962	948	998	973	985	918
11	1080	964	629	588	851	829	969	960	973	878	1030	960
12	1040	929	616	601	852	825	965	940	878	818	1090	1010
13	1000	827	633	597	863	832	958	936	818	651	1160	1080
14	871	809	654	614	872	839	962	945	651	457	1180	1130
15	947	840	658	627	890	872	974	959	575	488	1190	1170
16	887	830	651	627	883	868	979	970	588	419	1190	1160
17	969	883	656	625	895	867	981	969	503	419	1260	1180
18	939	880	701	648	958	889	988	970	502	453	1280	1220
19	880	745	702	685	968	953	980	963	517	440	1220	1180
20	781	707	702	663	983	943	982	966	611	517	1250	1190
21	732	690	695	667	959	937	976	958	721	611	1270	1230
22	725	628	711	687	939	910	959	944	766	721	1280	1220
23	631	561	704	683	957	921	957	942	827	766	1220	1070
24	669	587	706	680	961	938	959	950	872	826	1070	973
25	685	641	744	691	943	922	965	953	931	871	1030	955
26	668	556	739	670	949	927	974	953	974	925	960	902
27	556	481	697	679	952	924	985	963	1030	965	980	902
28	551	456	685	664	946	915	990	972	1080	1030	1010	930
29	551	493	692	656	942	895	984	956	1100	1080	1040	961
30	537	499	703	685	905	832	964	950	---	---	1060	1000
31	521	453	---	---	937	874	965	947	---	---	1080	1020
MONTH	1120	453	744	454	983	663	993	821	1100	419	1280	690
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1040	1000	417	358	741	706	734	698	922	865	808	769
2	1020	964	429	376	741	660	727	694	902	844	821	787
3	1000	925	400	369	832	659	810	712	844	816	822	775
4	1000	924	439	374	800	762	797	748	848	795	855	811
5	946	899	462	423	822	702	907	784	854	808	843	803
6	940	879	532	461	844	716	840	745	886	839	842	767
7	891	846	518	501	843	678	866	742	902	842	824	780
8	907	836	521	469	688	628	874	843	855	807	814	746
9	853	805	477	438	634	623	917	862	820	766	---	---
10	840	787	483	423	637	615	935	871	782	734	764	677
11	787	737	590	468	807	624	942	871	826	774	768	727
12	767	696	672	562	812	790	894	865	897	824	---	---
13	787	756	661	615	827	809	865	843	922	874	783	698
14	789	732	748	630	829	794	876	823	919	844	807	783
15	762	715	740	515	800	756	882	826	884	824	853	764
16	761	682	515	428	758	729	988	823	850	799	---	---
17	691	649	518	428	772	568	982	877	856	817	---	---
18	699	639	546	462	630	580	947	860	837	770	---	---
19	757	682	582	460	600	567	929	822	841	788	---	---
20	749	670	711	581	582	556	881	794	865	813	---	---
21	819	712	782	711	606	579	964	881	869	778	---	---
22	843	720	871	773	607	586	921	867	792	739	---	---
23	737	686	862	799	622	602	882	815	812	739	---	---
24	721	560	849	804	676	584	889	771	815	773	---	---
25	589	481	898	808	925	666	885	810	866	804	---	---
26	557	464	846	769	807	638	863	812	908	850	---	---
27	544	441	848	737	773	741	885	850	877	810	---	---
28	441	375	758	732	801	769	889	870	825	769	---	---
29	418	375	760	718	824	721	880	806	781	744	---	---
30	405	359	800	714	811	700	889	825	768	714	---	---
31	---	---	771	706	---	---	911	873	782	726	---	---
MONTH	1040	359	898	358	925	556	988	694	922	714	---	---

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.0	---	14.5	12.0	8.5	7.0	10.5	9.5	11.5	9.5	16.5	14.5
2	24.5	21.0	14.5	13.0	9.0	7.0	9.5	9.0	11.5	9.5	16.0	15.0
3	25.0	21.0	15.0	13.0	9.0	7.5	9.5	8.5	11.5	9.0	16.5	14.5
4	25.0	21.5	15.5	13.5	9.0	7.5	11.0	9.5	11.5	9.0	16.0	13.5
5	24.0	20.5	16.0	14.0	9.0	7.5	11.0	10.5	10.5	9.0	15.5	14.0
6	23.5	20.0	16.0	14.5	9.5	7.5	10.5	10.0	10.5	10.0	14.5	13.5
7	23.0	19.5	16.5	14.5	10.5	9.5	10.5	9.5	12.0	10.0	14.5	13.0
8	22.0	19.5	16.5	15.5	10.5	9.0	10.0	8.5	13.5	11.5	14.5	13.0
9	22.5	19.0	17.5	15.5	10.5	8.5	9.5	9.0	13.0	12.5	16.0	13.5
10	23.0	19.5	17.0	15.5	10.0	8.5	9.0	8.5	12.5	12.0	16.5	14.0
11	22.5	20.0	16.5	14.5	11.0	9.5	9.5	8.5	13.0	11.0	17.0	14.5
12	22.5	20.0	16.0	14.5	10.0	9.0	9.0	7.5	13.5	12.5	17.5	15.0
13	23.0	20.0	16.0	14.5	9.5	9.0	8.5	7.5	13.5	12.5	17.5	15.5
14	22.5	20.0	14.5	12.5	9.0	8.5	8.0	7.0	12.5	11.0	16.5	15.5
15	22.5	20.0	12.5	11.0	8.5	8.5	7.5	7.0	12.0	11.0	16.0	14.5
16	22.5	19.5	12.0	10.5	8.5	8.0	7.5	7.0	11.0	10.5	16.0	14.0
17	22.0	19.0	12.0	11.5	8.0	7.5	8.0	7.0	11.5	10.5	16.5	14.0
18	21.5	19.0	13.5	11.5	10.0	8.0	8.5	7.5	11.5	11.0	16.5	14.0
19	21.0	19.0	13.0	11.0	9.5	8.5	7.5	7.0	12.0	11.0	16.0	14.5
20	20.5	18.5	13.0	11.5	9.0	7.5	7.0	7.0	14.0	12.0	16.0	14.5
21	20.5	18.0	13.5	12.0	8.5	7.0	7.0	6.5	14.0	13.5	16.5	14.5
22	19.0	18.0	12.5	11.5	8.5	7.0	7.0	6.0	14.5	13.5	17.0	15.0
23	18.0	16.5	12.5	11.0	9.5	7.5	6.5	6.0	14.5	13.0	18.0	15.5
24	17.0	14.5	12.5	11.0	9.5	8.0	6.0	5.5	15.0	13.0	17.5	15.5
25	17.5	15.5	12.5	11.0	9.5	8.0	7.0	5.5	15.5	13.0	17.5	15.5
26	16.5	15.5	12.5	11.0	10.0	8.5	8.5	7.0	15.5	13.5	18.5	15.5
27	15.5	14.0	13.0	11.0	9.5	9.0	8.5	8.0	16.5	14.0	19.0	16.0
28	14.5	13.0	11.0	10.0	11.0	9.5	10.0	8.0	16.5	15.0	19.0	16.5
29	15.0	13.0	10.0	8.5	11.0	10.5	10.0	8.5	16.5	15.0	18.5	16.5
30	14.0	12.5	8.5	7.5	11.5	10.5	10.0	9.0	---	---	17.5	16.0
31	14.0	12.0	---	---	11.5	10.5	10.0	8.5	---	---	18.0	15.0
MONTH	25.0	---	17.5	7.5	11.5	7.0	11.0	5.5	16.5	9.0	19.0	13.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	16.0	21.0	17.5	29.0	24.0	26.5	21.0	28.0	22.5	25.5	21.5
2	19.0	16.0	21.5	18.0	29.5	24.5	27.5	22.0	28.0	23.5	24.5	21.5
3	19.5	16.5	22.0	18.5	29.5	24.5	27.5	22.5	27.5	23.0	24.0	20.5
4	18.5	16.5	22.0	19.0	29.5	24.0	26.5	22.0	27.0	22.0	24.5	20.0
5	17.5	15.5	23.0	19.0	28.5	24.0	26.5	21.5	27.0	21.5	25.0	21.0
6	17.0	14.5	23.5	20.0	28.5	23.0	25.0	22.5	27.0	21.5	24.5	21.0
7	17.5	14.5	24.0	20.5	28.0	22.5	27.0	21.0	27.5	22.5	24.5	21.0
8	18.0	15.0	24.5	20.5	28.0	23.0	28.0	23.0	28.0	23.0	25.0	21.0
9	18.5	15.5	23.0	20.0	27.5	23.0	29.0	23.5	28.5	23.0	25.5	21.0
10	18.5	15.5	23.5	19.0	26.0	22.0	29.0	24.0	29.5	24.0	24.5	21.5
11	18.0	16.0	24.5	20.5	24.5	20.5	28.0	24.5	29.0	24.5	24.5	21.0
12	16.5	16.0	25.0	21.0	24.5	19.0	28.0	24.0	29.0	24.5	24.5	20.5
13	18.0	15.5	24.5	21.0	24.0	19.5	29.5	24.5	29.0	24.0	24.0	20.5
14	18.5	16.0	24.0	20.5	24.0	19.0	30.0	25.0	28.5	24.5	23.5	20.0
15	18.5	16.0	24.0	20.0	21.5	19.5	29.5	25.0	29.5	25.0	23.0	19.5
16	19.0	16.5	23.0	20.0	24.5	18.5	29.0	24.5	30.0	25.0	23.5	19.5
17	20.5	17.5	23.0	19.0	26.5	21.0	29.5	24.5	29.5	25.0	23.5	20.0
18	19.0	16.0	23.0	19.5	26.5	22.0	29.5	23.0	29.5	23.5	24.0	20.0
19	19.5	16.0	21.5	19.0	27.5	22.0	28.5	23.5	29.5	24.0	24.5	20.5
20	21.0	17.0	23.5	19.0	29.0	23.5	27.5	23.0	29.0	24.0	24.5	21.0
21	20.5	17.5	24.0	19.5	30.0	25.0	27.5	22.0	26.5	23.0	25.0	21.0
22	19.5	16.5	25.5	20.0	30.0	25.0	26.5	22.0	24.5	20.5	24.5	21.5
23	19.0	16.0	27.0	21.5	27.0	24.5	27.5	22.0	25.0	20.5	24.5	21.5
24	19.5	16.5	26.5	22.0	28.5	23.0	28.0	22.0	26.0	21.0	24.0	21.0
25	20.0	16.5	26.5	22.5	28.5	23.5	28.0	22.5	26.0	21.5	22.0	19.5
26	20.0	17.0	26.5	22.0	28.0	23.0	28.0	23.0	27.0	21.5	23.0	19.0
27	20.5	17.0	27.5	23.0	27.5	23.0	28.5	23.5	26.5	22.0	23.5	20.0
28	22.0	18.5	27.5	23.0	25.0	22.5	29.5	24.0	26.0	22.5	23.5	20.5
29	21.5	19.0	27.5	23.0	24.5	22.5	28.5	23.5	25.0	22.0	23.0	20.5
30	21.0	18.5	28.5	23.5	25.5	22.0	28.5	22.5	25.0	21.5	23.5	20.5
31	---	---	29.0	24.0	---	---	28.0	22.5	25.0	21.0	---	---
MONTH	22.0	14.5	29.0	17.5	30.0	18.5	30.0	21.0	30.0	20.5	25.5	19.0

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	657	96	170	1300	71	248	1050	18	51
2	606	88	144	1260	64	218	1010	16	43
3	589	56	89	1200	61	198	960	19	50
4	549	44	66	1160	66	206	922	23	56
5	518	56	78	1110	73	220	901	23	56
6	558	66	99	1100	66	197	895	22	54
7	616	56	94	1090	67	196	895	25	61
8	747	43	87	1090	73	216	913	31	77
9	675	39	71	1110	72	215	892	29	69
10	621	44	73	1100	68	201	877	26	60
11	612	48	80	1080	68	200	879	26	61
12	633	50	86	1070	68	196	881	25	60
13	669	52	94	1060	66	188	884	25	60
14	723	52	101	1080	71	206	884	21	50
15	692	52	97	1080	41	118	877	20	46
16	698	63	118	1050	32	90	868	21	49
17	650	63	110	1060	39	112	861	18	42
18	666	57	104	1060	48	137	845	22	49
19	753	53	107	1060	48	138	836	21	49
20	817	54	120	1060	45	130	854	21	49
21	830	44	99	1050	43	122	873	23	54
22	872	44	105	1010	36	97	874	20	48
23	907	42	102	1010	31	84	866	19	44
24	863	34	80	1020	33	92	866	23	53
25	883	40	96	1050	43	122	873	24	57
26	989	50	136	1050	41	118	875	27	63
27	1220	53	174	1040	39	109	881	34	81
28	1180	44	141	1030	29	80	893	43	105
29	1180	45	145	1040	25	71	908	53	130
30	1210	50	164	1040	22	63	929	61	153
31	1260	60	204	---	---	---	916	56	137
TOTAL	24443	---	3434	32520	---	4588	27738	---	2017
JANUARY			FEBRUARY			MARCH			
1	910	36	89	940	50	126	1400	105	397
2	900	22	54	932	52	131	1350	109	398
3	896	20	49	921	47	116	1320	103	365
4	893	33	79	912	45	112	1290	94	328
5	924	56	140	903	50	122	1280	109	378
6	994	101	272	918	60	149	1370	118	437
7	989	72	193	944	64	163	1770	197	1010
8	1000	61	166	945	69	175	2090	196	1110
9	1020	62	171	927	73	183	1760	152	721
10	1040	57	159	950	80	207	1600	128	552
11	1030	52	145	1150	400	1250	1490	110	442
12	1020	39	108	1320	434	1590	1400	98	370
13	1010	34	92	1930	495	2540	1340	92	330
14	969	28	74	3650	469	4670	1290	89	308
15	962	30	77	3390	464	4240	1270	92	315
16	962	30	78	4550	404	4960	1270	79	270
17	962	38	99	5110	265	3650	1270	76	259
18	959	37	96	4350	270	3160	1300	83	291
19	954	38	98	3900	241	2530	1320	90	320
20	944	35	89	3510	213	2010	1300	81	283
21	946	31	79	3070	197	1630	1280	77	266
22	944	23	59	2730	161	1180	1290	88	308
23	937	22	56	2340	164	1030	1460	103	408
24	936	22	55	2080	136	760	1530	104	430
25	941	22	55	1890	144	735	1570	103	438
26	942	28	72	1750	121	570	1640	107	476
27	947	49	125	1620	110	483	1700	104	479
28	949	62	159	1530	108	446	1680	101	457
29	952	64	165	1470	106	418	1670	99	446
30	966	63	165	---	---	---	1650	97	430
31	939	55	140	---	---	---	1610	93	406
TOTAL	29737	---	3458	60632	---	39336	45560	---	13428

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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	1570	81	342	1360	86	316	506	72	99
2	1620	82	358	1420	84	321	518	41	58
3	1620	80	349	1420	82	316	527	44	62
4	1620	77	337	1480	79	315	508	60	82
5	1640	68	304	1420	78	298	450	37	45
6	1630	62	274	1250	73	246	438	43	51
7	1620	57	251	1150	70	215	474	61	78
8	1620	54	238	1010	76	207	516	65	91
9	1610	52	224	1040	92	258	488	73	96
10	1550	51	213	1100	89	265	442	66	78
11	1520	50	205	1170	83	263	433	62	72
12	1580	57	242	1020	75	207	440	51	61
13	1530	51	211	868	60	141	488	60	79
14	1510	54	220	743	60	119	536	66	97
15	1420	52	199	717	62	121	588	65	103
16	1340	53	191	921	62	153	579	42	65
17	1330	57	204	954	56	144	544	43	63
18	1230	69	227	985	51	135	478	40	52
19	1180	61	196	911	43	105	449	49	60
20	1190	64	204	678	35	64	479	63	82
21	1010	61	165	583	36	56	488	64	84
22	1000	59	159	575	40	63	471	57	72
23	1020	58	159	542	45	66	390	46	49
24	1070	65	190	563	50	76	421	62	71
25	1270	65	224	589	58	92	428	75	87
26	1330	61	220	566	49	75	451	83	102
27	1400	70	264	541	46	67	434	75	88
28	1610	100	435	516	42	59	453	78	96
29	1500	97	391	505	43	59	479	101	132
30	1410	96	366	536	47	68	521	86	121
31	---	---	---	505	59	81	---	---	---
TOTAL	42550	---	7562	27638	---	4971	14417	---	2376
JULY			AUGUST			SEPTEMBER			
1	473	77	99	454	87	108	607	55	90
2	457	56	69	547	119	178	595	55	89
3	426	65	75	546	103	152	597	56	90
4	447	72	87	439	95	112	592	57	91
5	492	80	107	426	94	108	602	62	101
6	484	96	125	434	93	109	646	63	109
7	461	91	113	468	95	120	629	58	99
8	413	88	98	459	89	110	602	45	73
9	398	92	99	485	86	112	564	40	60
10	409	95	105	460	83	103	562	37	56
11	429	82	94	446	70	85	579	34	53
12	458	78	96	420	58	66	562	40	61
13	501	68	92	418	60	67	608	33	54
14	476	72	93	433	65	76	631	32	55
15	441	81	96	469	75	96	636	30	51
16	430	72	83	482	79	103	585	31	49
17	405	84	92	489	79	104	582	29	46
18	406	54	59	466	44	55	571	27	41
19	443	42	50	423	28	32	567	26	40
20	467	60	77	411	44	49	659	30	53
21	433	38	44	448	58	70	667	28	50
22	438	40	47	474	53	68	631	41	69
23	462	44	55	506	56	77	626	36	60
24	463	54	68	550	54	80	604	31	51
25	459	73	91	502	69	93	597	37	59
26	473	64	82	497	60	80	623	43	72
27	490	36	48	493	53	71	713	55	106
28	439	68	80	507	52	71	862	43	101
29	448	65	78	560	56	85	928	41	103
30	413	67	75	606	64	104	811	44	95
31	414	78	88	651	58	103	---	---	---
TOTAL	13848	---	2565	14969	---	2847	19038	---	2127
YEAR	353090		88709						

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 38°08'53", long 120°49'26", in NW 1/4 NE 1/4 sec.1, T.3 N., R.10 E., Calaveras County, Hydrologic Unit 18040011, on right bank at county road bridge, 0.5 mi upstream from Cosgrove Creek, 0.8 mi downstream from New Hogan Dam, and 3.0 mi south of Valley Springs.

DRAINAGE AREA.--363 mi².

PERIOD OF RECORD.--Water years 1964-66, 1971 to current year.

WATER DISCHARGE: Water years 1961-90.

CHEMICAL DATA: Water years 1964-66.

WATER TEMPERATURE: Water year 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER DISCHARGE: January 1961 to September 1990.

WATER TEMPERATURE: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

REMARKS.--Water temperature is affected by regulation from New Hogan Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 24.0°C, Aug. 10, 28, 29, 1977, June 14, 17, 18, 22, 1989; minimum recorded, 4.0°C, Dec. 22-25, 29-31, 1990, Jan. 1, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 20.5°C, Oct. 14-21; minimum recorded, 5.0°C, Jan. 25.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	16.5	17.0	15.0	12.0	11.0	9.0	7.5	9.5	8.0	12.5	10.0
2	18.5	17.0	16.5	15.0	12.0	10.5	8.5	7.5	8.5	6.5	12.5	10.0
3	19.0	17.0	16.5	15.0	11.5	10.5	9.0	8.0	8.0	5.5	12.0	10.0
4	19.0	17.0	16.5	15.0	11.5	10.0	9.0	8.0	8.5	6.0	12.0	9.5
5	19.0	17.0	16.5	15.0	11.0	10.0	9.0	8.0	8.0	6.0	12.0	10.0
6	19.0	17.0	16.5	15.0	11.0	10.0	9.0	8.0	8.5	7.5	13.0	11.0
7	19.5	17.5	16.0	15.0	10.5	10.0	9.0	7.5	9.5	8.0	12.5	9.5
8	19.5	17.5	16.0	15.0	10.5	9.5	8.5	7.5	10.5	9.0	12.5	9.5
9	19.0	17.5	16.0	15.0	10.5	9.5	8.5	7.5	11.0	10.0	12.0	9.5
10	20.0	18.0	16.0	14.5	10.5	9.5	8.0	7.5	11.0	10.0	13.0	9.0
11	19.5	18.0	16.0	14.5	10.0	9.5	8.0	7.5	11.5	9.5	13.5	9.5
12	20.0	18.5	16.0	14.5	10.0	9.0	8.0	7.0	11.5	10.0	14.0	10.5
13	20.0	18.5	15.5	14.5	9.5	9.0	8.0	7.0	11.0	10.0	13.5	11.0
14	20.5	18.5	15.0	13.5	9.5	9.0	8.0	7.0	10.0	8.5	12.5	10.5
15	20.5	18.5	15.5	14.0	9.5	9.0	8.0	7.0	11.5	9.5	13.0	10.5
16	20.5	18.5	15.5	14.0	9.5	9.0	8.0	7.0	10.5	9.0	13.0	11.0
17	20.5	18.5	14.5	14.0	9.5	8.5	7.5	7.0	11.0	9.0	13.0	10.5
18	20.5	19.0	14.5	13.5	10.0	9.0	7.5	7.0	10.5	8.5	13.5	10.0
19	20.5	19.0	14.5	13.0	9.5	8.0	7.5	7.0	11.5	9.5	13.0	10.5
20	20.5	19.0	14.0	13.5	9.0	8.0	7.5	7.0	12.5	11.5	12.5	11.0
21	20.5	19.0	14.0	13.0	9.0	8.0	7.5	7.0	11.5	10.0	13.0	11.0
22	19.5	19.0	14.0	12.5	9.0	8.0	7.0	6.5	12.0	10.0	13.5	11.0
23	20.0	18.0	14.0	12.5	9.0	8.0	6.5	6.0	12.0	9.5	14.0	11.5
24	19.5	18.0	13.5	12.5	9.0	8.0	6.5	5.5	12.5	9.0	14.0	10.5
25	19.5	18.5	13.5	12.5	9.0	8.0	7.5	5.0	12.0	9.0	15.0	11.5
26	18.5	17.5	13.5	12.5	9.0	8.0	8.5	6.5	12.5	9.5	16.0	13.0
27	18.5	16.5	13.5	12.0	9.0	8.0	9.0	7.0	12.5	9.0	16.0	13.5
28	18.0	16.5	13.0	12.0	9.0	8.5	9.0	7.5	12.0	9.0	16.0	13.5
29	17.0	15.5	12.5	11.5	9.0	8.5	9.0	7.5	12.0	9.5	15.0	13.5
30	17.0	15.0	12.5	11.0	9.0	8.0	9.0	6.5	---	---	14.0	13.0
31	17.0	15.0	---	---	9.0	8.0	9.5	7.0	---	---	15.0	13.0
MONTH	20.5	15.0	17.0	11.0	12.0	8.0	9.5	5.0	12.5	5.5	16.0	9.0

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

11313000 DELTA-MENDOTA CANAL AT TRACY PUMPING PLANT, NEAR TRACY, CA

LOCATION.--Lat 37°47'49", long 121°35'03", in SW 1/4 SW 1/4 sec.31, T.1 S., R.4 E., Alameda County, Hydrologic Unit 18040003, at Tracy pumping plant at intake to canal, 6 mi southeast of Byron, and 10 mi northwest of Tracy.

PERIOD OF RECORD.--June 1951 to current year. Prior to October 1959, published as "near Tracy."

GAGE.--Water-stage recorder on forebay, pressure gages on pump discharge lines, and operating time of pumps.

Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--No estimated daily discharges. Discharge computed from records of operation of pumps. Water is diverted from Sacramento-San Joaquin Delta by way of Old River and a dredged channel to the Tracy pumping plant where it is lifted 200 ft into canal. Water, less intermediate diversions, flows into Mendota Pool on San Joaquin River to replace water diverted at Friant Dam. The canal is a part of the Central Valley Project.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation; rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,940 ft³/s, Aug. 11, 1969; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	2090	1750	3950	938	4090	4110	845	761	905	747	951
2	1690	2500	2140	3400	934	4090	4110	847	807	893	744	951
3	1710	2500	2530	3370	935	4090	4100	847	809	951	773	952
4	1700	2490	2530	3350	932	4090	4100	850	807	949	909	951
5	2210	2520	2540	3380	940	4090	3930	852	799	949	1120	951
6	1940	2130	2150	3380	932	4100	3630	851	792	893	799	1490
7	1690	1740	1760	3370	935	4100	3310	849	789	869	782	1760
8	1690	1220	1760	3780	933	4100	3320	844	776	938	782	1070
9	2210	843	1280	4050	935	4100	2940	851	747	962	781	951
10	2450	836	928	4050	389	4100	1670	845	749	955	812	950
11	2500	838	924	4050	.00	4100	913	845	761	956	907	951
12	1950	1350	925	4040	.00	4090	913	844	763	958	953	951
13	1980	1730	905	4020	.00	4100	911	845	760	953	925	1530
14	2480	1740	1420	4040	1390	4100	889	849	761	954	867	1250
15	2480	2210	1690	3590	3780	4090	766	848	758	955	943	953
16	2480	2490	1690	3380	4070	4090	766	845	751	953	953	1400
17	2550	3010	1170	3380	4120	4090	792	844	754	954	955	1780
18	2050	2340	924	3400	4140	4080	794	844	749	954	953	1790
19	1780	2230	910	2300	4120	4080	771	844	793	952	1360	1780
20	1780	2510	1370	1760	4110	4100	761	843	810	953	1320	1770
21	1290	2530	1690	2290	4110	4110	779	843	813	953	955	1780
22	943	2570	1790	2600	4100	4100	766	842	814	951	954	1780
23	848	2470	2080	3030	4100	4110	771	844	809	951	1500	1780
24	800	2530	2470	3290	4090	4120	790	844	812	820	1800	2180
25	799	2070	2510	3300	4100	4110	789	844	812	761	1350	2530
26	802	1750	2520	3300	4100	4110	788	842	816	766	957	2530
27	833	1760	2510	3300	4090	3920	825	844	813	766	953	2510
28	1310	1750	2520	2840	4090	4100	839	847	815	766	953	2520
29	1680	1750	2520	2060	4090	4130	847	846	814	769	955	2540
30	1680	1750	2520	1790	---	4120	844	848	875	760	953	2560
31	1680	---	3050	1220	---	4080	---	850	---	751	953	---
TOTAL	53595	60247	57476	99060	71403.00	126880	51534	26226	23689	27820	30668	47842
MEAN	1729	2008	1854	3195	2462	4093	1718	846	790	897	989	1595
MAX	2550	3010	3050	4050	4140	4130	4110	852	875	962	1800	2560
MIN	799	836	905	1220	.00	3920	761	842	747	751	744	950
AC-FT	106300	119500	114000	196500	141600	251700	102200	52020	46990	55180	60830	94890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	MEAN	2226	1574	1336	1661	2186	2576	2736	2682	2900	3626	3607	2690
MAX	4216	4163	4162	4182	4584	4563	4400	4540	4591	4740	4703	4591	
(WY)	1990	1990	1989	1989	1976	1976	1976	1976	1973	1989	1989	1988	
MIN	368	.000	.000	.000	.000	.000	.000	99.6	58.3	113	354	976	539
(WY)	1952	1973	1953	1952	1952	1952	1952	1952	1952	1951	1977	1952	1952

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1951 - 1992		
ANNUAL TOTAL	728482.00			676440.00					
ANNUAL MEAN	1996			1848			2506		
HIGHEST ANNUAL MEAN							4144		
LOWEST ANNUAL MEAN							230		
HIGHEST DAILY MEAN	4080			4140			4940		
LOWEST DAILY MEAN	.00			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	740			456			.00		
ANNUAL RUNOFF (AC-FT)	1445000			1342000			1816000		
10 PERCENT EXCEEDS	3950			4090			4420		
50 PERCENT EXCEEDS	1710			1300			2700		
90 PERCENT EXCEEDS	838			786			70		

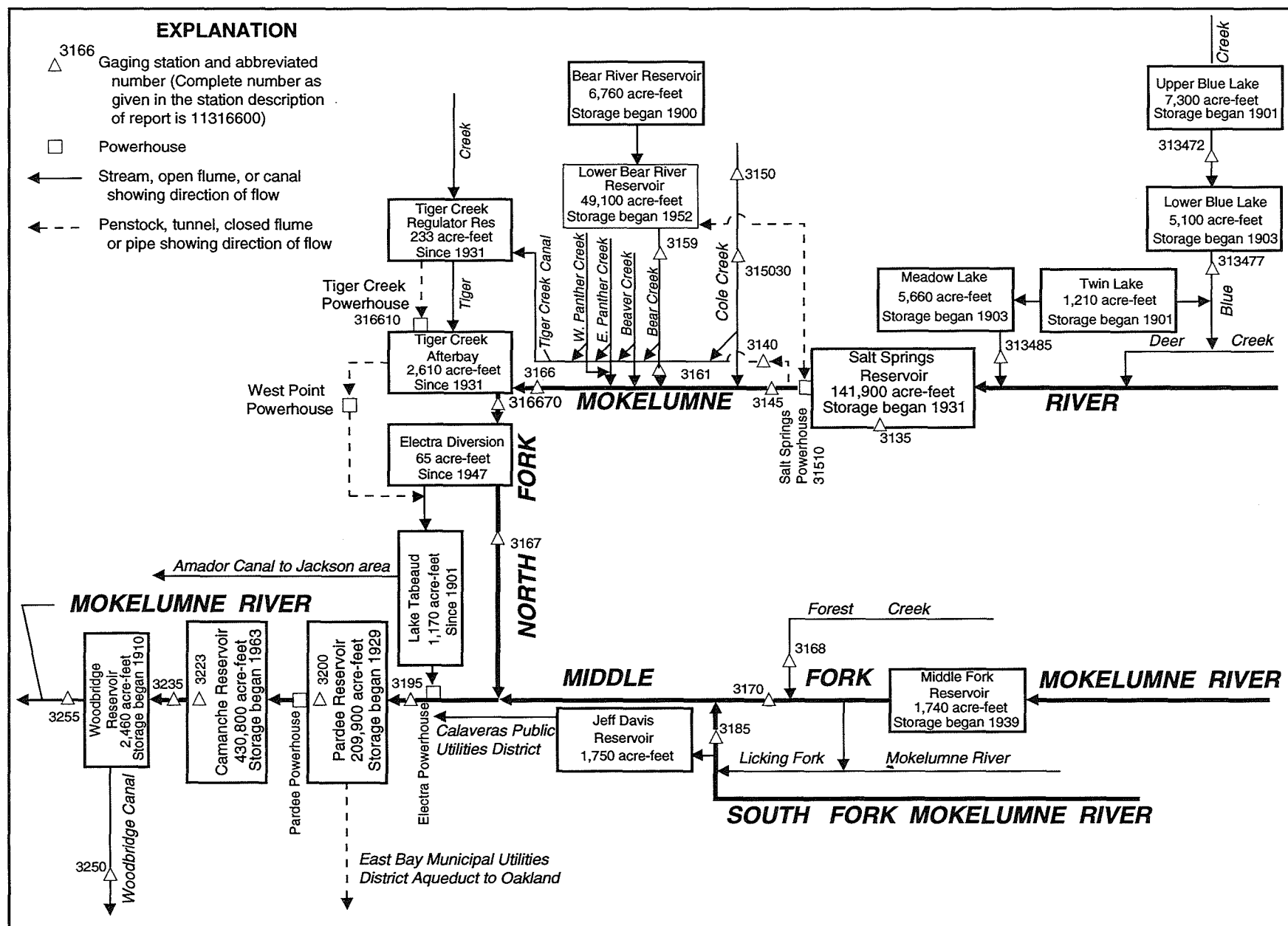


Figure 35. Diversions and storage in Mokelumne River basin.

SAN JOAQUIN RIVER BASIN

11313472 UPPER BLUE LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°37'35", long 119°56'10", in NW 1/4 NW 1/4 sec.19, T.9 N., R.19 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 1,000 ft downstream from Upper Blue Lake dam, and 9.8 mi southwest of Markleeville.

DRAINAGE AREA.--2.64 mi².

PERIOD OF RECORD.--October 1988 to current year. Unpublished records for water years 1981-88 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 8,100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site at different datum.

REMARKS.--No estimated daily discharges. Records not computed for winter months. Low and medium flow regulated by Upper Blue Lake (capacity, 7,300 acre-ft) 1,000 ft upstream. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	9.0	---	---	---	---	---	5.9	6.3	3.2	9.6	9.4
2	9.5	8.3	---	---	---	---	---	6.0	6.3	3.2	9.6	9.1
3	9.3	7.7	---	---	---	---	---	6.1	6.3	3.2	9.6	9.0
4	9.2	7.6	---	---	---	---	---	6.2	6.2	3.2	9.5	8.9
5	9.0	7.7	---	---	---	---	---	6.3	4.5	3.2	9.4	9.0
6	9.0	7.1	---	---	---	---	---	6.6	2.8	3.2	9.3	8.9
7	13	6.7	---	---	---	---	---	6.8	2.8	3.2	9.3	8.8
8	15	6.3	---	---	---	---	---	6.9	2.8	3.2	9.3	8.7
9	15	6.3	---	---	---	---	---	6.9	2.8	3.2	9.2	8.6
10	15	6.2	---	---	---	---	---	6.8	2.8	3.2	9.1	8.5
11	15	5.9	---	---	---	---	---	7.0	2.8	3.4	9.1	8.5
12	15	5.6	---	---	---	---	---	7.0	2.9	3.4	9.4	8.4
13	14	5.3	---	---	---	---	---	7.1	3.1	3.4	9.7	8.3
14	15	5.1	---	---	---	---	---	7.0	2.9	3.4	9.6	8.2
15	15	3.1	---	---	---	---	---	6.9	2.9	3.4	9.6	8.1
16	15	2.9	---	---	---	---	---	6.9	2.9	3.4	9.5	8.8
17	14	3.8	---	---	---	---	---	6.9	2.9	3.2	9.5	9.3
18	14	4.6	---	---	---	---	---	6.8	2.9	3.2	9.5	9.2
19	14	4.3	---	---	---	---	---	6.7	2.9	3.2	9.4	9.1
20	13	4.3	---	---	---	---	---	6.7	2.9	3.2	9.3	9.1
21	14	4.4	---	---	---	---	---	6.6	2.9	3.1	9.2	9.1
22	14	4.1	---	---	---	---	---	6.6	2.8	3.1	9.1	9.0
23	14	3.9	---	---	---	---	---	6.5	2.8	3.1	9.1	8.9
24	13	3.7	---	---	---	---	---	6.5	2.8	6.8	9.0	8.7
25	13	2.5	---	---	---	---	---	6.5	2.8	9.3	8.9	9.5
26	13	1.5	---	---	---	---	---	6.5	3.1	9.3	8.8	10
27	12	1.5	---	---	---	---	---	6.5	3.2	9.3	9.3	9.9
28	12	---	---	---	---	---	5.7	6.5	3.2	9.2	9.6	9.9
29	11	---	---	---	---	---	6.1	6.4	3.3	9.2	9.5	9.6
30	10	---	---	---	---	---	5.9	6.4	3.3	9.5	9.5	9.4
31	9.6	---	---	---	---	---	---	6.4	---	9.7	9.5	---
TOTAL	393.2	---	---	---	---	---	---	204.9	102.9	146.8	290.0	269.9
MEAN	12.7	---	---	---	---	---	---	6.61	3.43	4.74	9.35	9.00
MAX	15	---	---	---	---	---	---	7.1	6.3	9.7	9.7	10
MIN	9.0	---	---	---	---	---	---	5.9	2.8	3.1	8.8	8.1
AC-FT	780	---	---	---	---	---	---	406	204	291	575	535

11313477 LOWER BLUE LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°36'24", long 119°55'31", in SW 1/4 NE 1/4 sec.30, T.9 N., R.19 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 800 ft downstream from Lower Blue Lake dam and 10.0 mi southwest of Markleeville.

DRAINAGE AREA.--4.66 mi².

PERIOD OF RECORD.--October 1987 to current year. Unpublished records for water years 1981-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 7,870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records not computed for winter months. Low and medium flow regulated by Lower Blue Lake (capacity, 5,100 acre-ft) 800 ft upstream. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	4.0	---	---	---	---	19	9.1	9.1	9.0	8.8
2	12	15	---	---	---	---	---	19	9.3	8.8	9.0	8.8
3	11	15	---	---	---	---	---	19	9.3	8.6	9.0	8.8
4	11	27	---	---	---	---	---	14	9.3	8.5	9.0	8.8
5	11	39	---	---	---	---	---	11	9.5	8.6	9.0	8.8
6	11	37	---	---	---	---	---	11	9.7	8.7	9.0	8.8
7	14	36	---	---	---	---	---	11	9.8	8.8	8.9	8.8
8	15	34	---	---	---	---	---	11	9.8	8.6	8.8	8.8
9	16	33	---	---	---	---	---	12	9.8	8.5	8.8	8.8
10	16	31	---	---	---	---	---	11	9.8	9.2	8.8	8.9
11	16	30	---	---	---	---	---	9.9	9.6	9.3	8.8	9.0
12	16	28	---	---	---	---	---	8.8	9.6	9.0	8.8	9.0
13	16	26	---	---	---	---	---	8.8	9.6	9.1	8.8	9.0
14	16	24	---	---	---	---	---	8.8	9.3	9.3	8.8	9.0
15	16	22	---	---	---	---	---	8.8	9.3	9.1	8.8	9.0
16	16	20	---	---	---	---	---	8.8	9.1	9.0	8.8	9.0
17	16	19	---	---	---	---	---	8.8	9.0	9.5	8.8	9.0
18	16	17	---	---	---	---	---	8.8	9.2	9.6	8.8	9.0
19	16	16	---	---	---	---	---	8.8	9.2	9.4	8.8	9.0
20	16	14	---	---	---	---	---	8.8	9.0	9.3	8.8	8.8
21	16	13	---	---	---	---	---	8.7	9.0	9.3	8.8	8.8
22	16	12	---	---	---	---	---	8.5	9.0	9.3	8.9	8.8
23	16	10	---	---	---	---	---	8.5	9.0	9.3	8.9	8.8
24	16	9.2	---	---	---	---	---	8.5	9.0	9.3	8.8	8.8
25	16	6.0	---	---	---	---	---	8.5	9.0	9.3	8.8	8.9
26	16	4.1	---	---	---	---	---	8.5	9.0	9.2	8.8	9.0
27	16	4.0	---	---	---	---	---	8.5	9.0	9.0	8.8	9.0
28	16	3.9	---	---	---	---	18	8.8	9.0	9.0	8.8	9.0
29	16	3.9	---	---	---	---	19	8.8	9.0	9.0	8.8	9.0
30	16	4.0	---	---	---	---	19	8.8	9.3	9.0	8.8	9.0
31	16	---	---	---	---	---	---	8.8	---	9.0	8.8	---
TOTAL	465	568.1	---	---	---	---	---	322.0	278.6	280.7	274.3	267.0
MEAN	15.0	18.9	---	---	---	---	---	10.4	9.29	9.05	8.85	8.90
MAX	16	39	---	---	---	---	---	19	9.8	9.6	9.0	9.0
MIN	11	3.9	---	---	---	---	---	8.5	9.0	8.5	8.8	8.8
AC-FT	922	1130	---	---	---	---	---	639	553	557	544	530

SAN JOAQUIN RIVER BASIN

11313485 MEADOW LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°35'53", long 119°58'40", in SE 1/4 SE 1/4 sec.27, T.9 N., R.18 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 700 ft downstream from Meadow Lake Dam and 12.5 mi southwest of Markleeville.

DRAINAGE AREA.--5.66 mi².

PERIOD OF RECORD.--October 1987 to current year. Unpublished records for water years 1981-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 7,660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records not computed for winter months. Low and medium flow regulated by Meadow Lake, capacity, 5,660 acre-ft. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	35	2.7	---	---	---	---	12	8.7	24	34	7.1
2	29	35	---	---	---	---	---	12	8.7	39	33	6.9
3	29	34	---	---	---	---	---	12	8.7	38	33	7.1
4	28	34	---	---	---	---	---	12	8.9	38	33	7.2
5	28	32	---	---	---	---	---	12	9.0	38	33	7.1
6	28	31	---	---	---	---	---	12	8.9	39	21	7.0
7	29	30	---	---	---	---	---	12	9.3	41	6.9	7.0
8	30	30	---	---	---	---	---	12	9.4	41	6.8	6.9
9	30	29	---	---	---	---	---	12	9.2	40	6.7	6.7
10	30	27	---	---	---	---	---	12	9.1	40	6.6	6.7
11	29	15	---	---	---	---	---	10	9.1	40	6.4	6.7
12	29	6.1	---	---	---	---	---	8.1	9.7	40	6.2	6.8
13	29	2.4	---	---	---	---	---	8.0	10	40	6.4	6.8
14	29	2.5	---	---	---	---	---	8.1	10	40	6.7	7.0
15	28	2.6	---	---	---	---	---	8.3	10	40	6.7	7.4
16	28	2.6	---	---	---	---	---	8.2	10	39	6.6	7.3
17	28	2.5	---	---	---	---	---	8.3	9.5	39	6.7	7.3
18	29	2.5	---	---	---	---	---	8.3	9.4	38	6.9	7.4
19	29	2.2	---	---	---	---	---	8.6	9.3	37	6.7	7.3
20	29	2.1	---	---	---	---	---	8.9	9.0	37	6.7	7.2
21	35	2.2	---	---	---	---	---	8.7	8.8	37	6.8	7.0
22	40	2.2	---	---	---	---	---	8.4	8.8	37	7.2	6.9
23	41	2.2	---	---	---	---	---	8.2	8.7	37	7.2	7.0
24	41	2.2	---	---	---	---	---	8.0	8.8	36	7.0	7.1
25	41	2.2	---	---	---	---	---	8.1	9.0	36	7.0	7.3
26	40	2.2	---	---	---	---	---	8.1	9.0	36	6.8	7.2
27	39	2.3	---	---	---	---	---	8.2	8.8	35	6.8	7.2
28	40	2.6	---	---	---	---	8.4	8.5	8.8	35	6.8	7.0
29	39	2.6	---	---	---	---	11	8.9	9.8	34	6.9	7.0
30	39	2.7	---	---	---	---	12	8.7	10	34	7.1	13
31	37	---	---	---	---	---	---	8.7	---	34	7.2	---
TOTAL	1009	380.9	---	---	---	---	---	297.3	276.4	1159	356.8	217.6
MEAN	32.5	12.7	---	---	---	---	---	9.59	9.21	37.4	11.5	7.25
MAX	41	35	---	---	---	---	---	12	10	41	34	13
MIN	28	2.1	---	---	---	---	---	8.0	8.7	24	6.2	6.7
AC-FT	2000	756	---	---	---	---	---	590	548	2300	708	432

11313500 SALT SPRINGS RESERVOIR NEAR WEST POINT, CA

LOCATION.--Lat 38°29'55", long 120°12'52", in NW 1/4 SE 1/4 sec.33, T.8 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Eldorado National Forest, near center of Salt Springs Dam on North Fork Mokelumne River, 1.8 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.--169 mi².

PERIOD OF RECORD.--March 1931 to current year. Prior to October 1964, records published as usable contents.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Prior to Oct. 1, 1991, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam, completed in 1931; storage began in March 1931.

Capacity, 141,857 acre-ft between elevations 3,667.75 ft, outlet drain, and 3,958.0 ft, top of radial gates.

Storage of 1,860 acre-ft available for release to river only. Water is released through Salt Springs

Powerplant just downstream from dam and discharged into Tiger Creek Powerplant conduit (station 11314000).

Figures given, including extremes, represent total contents. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 142,050 acre-ft, June 3, 1989, elevation, 3,958.2 ft; no contents at times in 1932-33, 1945, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 95,443 acre-ft, May 22, elevation, 3,905.75 ft; minimum, 8,841 acre-ft, Feb. 14, elevation, 3,746.31 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated October 1964)

3,700	1,251	3,720	3,519	3,740	7,324	3,800	28,017
3,705	1,679	3,725	4,324	3,750	9,799	3,850	54,852
3,710	2,199	3,730	5,229	3,760	12,689	3,900	90,786
3,715	2,812	3,735	6,230	3,780	19,632	3,960	143,788

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93398	71724	45505	22288	9942	14833	23952	77226	93842	87098	73093	55700
2	92675	70738	44611	21757	10059	15065	25159	78968	93592	86653	72539	55525
3	91992	69735	43587	21225	10146	15381	26619	80673	93290	85959	72013	55217
4	91161	69047	42629	20626	9877	15649	28205	82170	92775	85076	71991	54895
5	90129	68307	41659	20039	9778	16007	29622	83410	92327	84148	71435	54533
6	88990	67471	40698	19411	9738	16404	30580	84827	91936	83495	70902	54210
7	88242	66614	40193	18883	9680	16683	31528	86520	91888	83056	70373	53921
8	87730	65799	39314	18461	9635	16787	32614	88195	91984	82575	69771	53587
9	87168	65065	38307	18081	9596	16679	33733	89535	91904	82064	69118	53336
10	86653	64251	37384	17712	9561	16637	34957	90446	91984	81544	68521	53097
11	86403	63390	36379	17339	9317	16709	36449	91337	92064	81271	67948	52671
12	86036	62491	35388	16906	9178	16742	37752	92127	91744	81316	67330	51987
13	85029	61816	34382	16458	8922	16776	39414	92989	92303	81180	66718	51231
14	84179	60863	33390	15991	8841	16842	40803	93654	92064	80869	66092	50805
15	83556	59856	32395	15494	8935	16909	42095	94062	92143	80627	65457	50571
16	82895	58861	31401	15014	8976	17114	43051	94514	92223	80263	64852	50312
17	82277	58035	30618	14559	9009	17369	46014	94874	92303	79659	64237	50083
18	81628	57160	30152	14051	9155	17577	48508	95115	91984	78840	63608	49702
19	80854	56250	29646	13536	9446	17784	50343	95286	91824	77920	63137	48967
20	79689	55239	28973	13033	10252	17949	52295	95358	91904	77301	62531	48275
21	78863	54418	28283	12534	10817	18099	54272	95336	91824	76817	61883	47858
22	78330	53737	27601	12018	11850	18269	56035	95443	91585	76366	61242	47484
23	78010	52881	26984	11666	12365	18577	57494	95358	91425	75937	60642	47088
24	e77987	51987	26432	11314	12920	18954	59284	95249	91105	75596	60094	46793
25	e77316	51109	25873	11022	13469	19320	61477	95130	90557	75641	59494	46195
26	e76868	50222	25340	10728	13879	19774	63915	94921	89939	75722	58867	45430
27	e76794	49330	24797	10425	14384	20260	66440	94793	89345	75485	58288	44640
28	e75908	48392	24309	10257	14699	20862	69160	94660	88825	75023	57677	44115
29	e74730	47478	23821	10097	14806	21569	72359	94496	87841	74554	57090	43759
30	73741	46502	23310	9885	---	22292	75163	94299	87503	74061	56353	43509
31	72700	---	22779	9812	---	23003	---	94042	---	73552	55977	---
MAX	93398	71724	45505	22288	14806	23003	75163	95443	93842	87098	73093	55700
MIN	72700	46502	22779	9812	8841	14833	23952	77226	87503	73552	55977	43509
a	3876.22	3836.10	3787.93	3750.05	3766.55	3788.47	3879.59	3904.05	3895.84	3877.39	3851.81	3830.78
b	-21293	-26198	-23723	-12967	+4994	+8197	+52160	+18879	-6539	-13951	-17575	-12468

CAL YR 1991 MAX 138410 MIN 7165 b +11734
WTR YR 1992 MAX 95443 MIN 8841 b -50484

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11314000 TIGER CREEK POWERPLANT CONDUIT BELOW SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'45", long 120°13'11", in SE 1/4 SW 1/4 sec.33, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 1,000 ft downstream from Salt Springs Dam and powerplant and 18 mi northeast of West Point.

PERIOD OF RECORD.--June 1931 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Auxiliary nonrecording gages in stilling wells upstream and downstream from control.

REMARKS.--No estimated daily discharges. Conduit conveys water of North Fork Mokelumne River from tailrace of Salt Springs Powerplant to forebay of Tiger Creek Powerplant. Since December 1952, flow includes Bear River and Cole Creek diversion to Salt Springs No. 2 Powerplant (station 11313510). See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 577 ft³/s, June 22, 1945; no flow at times in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	544	538	505	302	148	445	303	80	302	528	504	349
2	543	543	503	444	149	306	301	46	300	529	505	162
3	543	541	509	531	147	244	182	46	299	527	502	357
4	534	540	510	529	210	244	96	147	297	527	107	279
5	522	548	510	535	245	244	96	302	299	514	508	188
6	518	538	507	535	244	246	155	305	309	512	520	189
7	509	531	306	449	245	245	192	303	159	512	527	190
8	509	533	441	246	246	371	191	302	4.8	515	529	284
9	518	535	510	252	246	483	193	304	12	525	529	351
10	520	535	515	248	246	454	112	305	5.3	524	528	349
11	191	531	517	246	305	418	49	303	.00	521	527	344
12	248	530	519	246	394	458	48	301	.00	530	527	349
13	526	527	518	280	424	395	173	299	.00	528	529	352
14	537	524	525	298	320	295	247	300	95	530	530	350
15	543	524	524	300	245	295	244	301	126	528	531	347
16	541	519	522	301	246	326	245	301	39	530	524	348
17	543	519	521	299	246	355	149	301	31	528	518	348
18	543	515	526	296	183	355	49	301	303	522	516	348
19	526	516	525	292	142	355	48	302	317	519	337	347
20	513	521	434	301	145	251	72	302	329	508	510	347
21	512	520	384	306	146	135	99	302	345	498	505	369
22	519	520	381	302	146	134	102	302	275	490	501	369
23	261	521	435	222	145	200	120	302	142	492	501	402
24	212	516	526	220	48	245	122	302	527	375	500	312
25	523	516	526	191	74	278	122	302	542	30	499	399
26	343	518	444	190	270	267	123	301	524	.00	497	404
27	409	516	302	191	255	212	123	299	526	281	497	400
28	518	513	303	334	374	110	121	300	525	488	401	403
29	534	504	303	353	448	102	119	301	525	495	297	406
30	537	513	303	351	---	180	120	301	526	465	295	405
31	537	---	303	247	---	303	---	301	---	499	323	---
TOTAL	14876	15765	14157	9837	6682	8951	4316	8464	7684.10	14570.00	14624	10047
MEAN	480	525	457	317	230	289	144	273	256	470	472	335
MAX	544	548	526	535	448	483	303	305	542	530	531	406
MIN	191	504	302	190	48	102	48	46	.00	.00	107	162
AC-FT	29510	31270	28080	19510	13250	17750	8560	16790	15240	28900	29010	19930
a	6570	432	2520	3620	6730	7850	2900	117	5040	9330	11370	7000

a Inflow, in acre-feet, through Salt Springs No. 2 Powerplant, provided by Pacific Gas & Electric Co.

11314000 TIGER CREEK POWERPLANT CONDUIT BELOW SALT SPRINGS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1952, BY WATER YEAR (WY)

MEAN	421	324	260	210	116	118	77.4	72.8	222	408	437	437
MAX	518	470	445	373	339	360	309	404	459	517	514	502
(WY)	1949	1944	1939	1951	1951	1951	1944	1940	1940	1940	1945	1944
MIN	167	118	95.9	10.3	.000	.000	.000	.000	3.03	273	267	283
(WY)	1932	1932	1932	1946	1932	1952	1952	1938	1942	1939	1932	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1952

ANNUAL MEAN	260	
HIGHEST ANNUAL MEAN	353	1951
LOWEST ANNUAL MEAN	154	1932
HIGHEST DAILY MEAN	577	Jun 22 1945
LOWEST DAILY MEAN	.00	Dec 24 1931
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 24 1931
ANNUAL RUNOFF (AC-FT)	188700	
10 PERCENT EXCEEDS	508	
50 PERCENT EXCEEDS	286	
90 PERCENT EXCEEDS	.10	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992, BY WATER YEAR (WY)

MEAN	471	456	440	385	331	329	319	282	471	495	495	489
MAX	552	550	551	545	550	546	542	544	562	559	551	555
(WY)	1965	1963	1981	1984	1965	1980	1970	1986	1986	1980	1984	1964
MIN	4.29	12.2	124	25.1	56.9	25.4	36.9	118	254	257	273	268
(WY)	1978	1978	1977	1991	1977	1957	1959	1963	1976	1976	1976	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1954 - 1992

ANNUAL TOTAL		129973.10	
ANNUAL MEAN		355	414
HIGHEST ANNUAL MEAN			517
LOWEST ANNUAL MEAN			191
HIGHEST DAILY MEAN		548	Nov 5
LOWEST DAILY MEAN		.00	Jun 11
ANNUAL SEVEN-DAY MINIMUM		17	Jun 8
ANNUAL RUNOFF (AC-FT)		257800	299800
ANNUAL INFLOW (AC-FT) a	63500	66640	
10 PERCENT EXCEEDS		529	550
50 PERCENT EXCEEDS		347	502
90 PERCENT EXCEEDS		123	102

a Inflow, in acre-feet, through Salt Springs No. 2 Powerplant, provided by Pacific Gas & Electric Co.

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'37", long 120°13'12", in NE 1/4 NW 1/4 sec.4, T.7 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Stanislaus National Forest, on left bank 0.5 mi downstream from Salt Springs Dam, 1.3 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.--170 mi².

PERIOD OF RECORD.--September 1926 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "above Moore Creek" 1926-30.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 12, 1928, at site 100 ft upstream and Sept. 12, 1928, to Sept. 23, 1940, at present site at datum 2.0 ft higher.

REMARKS.--No estimated daily discharges. Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 0.5 mi upstream. Water is imported from Bear River and Cole Creek to Salt Springs No. 2 Powerplant (station 11313510) upstream from station since December 1952. Then most of the water bypasses station through Tiger Creek Powerplant Conduit (station 11314000). See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s, Nov. 21, 1950, gage height, 17.20 ft, from rating curve extended above 3,900 ft³/s on basis of computations of flow over dam and discharge through powerplant; minimum daily, 0.3 ft³/s, Mar. 31, Apr. 1, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft³/s, Oct. 24, gage height, 2.10 ft; minimum daily, 22 ft³/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	35	24	23	25	24	23	25	26	26	26	27
2	40	25	24	24	24	26	23	25	26	26	26	36
3	39	24	24	25	23	24	23	26	25	25	26	28
4	40	23	24	25	24	24	24	27	26	25	28	26
5	40	23	24	24	24	25	24	25	26	25	26	27
6	40	23	24	23	24	23	24	25	26	26	26	27
7	40	25	28	29	24	22	23	26	26	26	26	27
8	39	25	27	34	24	23	24	26	27	26	26	27
9	39	25	25	24	24	23	23	26	27	26	26	26
10	39	25	24	24	24	23	23	27	26	26	26	26
11	40	24	24	23	24	22	23	27	27	26	26	26
12	43	24	24	23	24	23	23	27	27	26	26	26
13	41	24	24	23	24	23	25	26	27	26	26	26
14	40	24	24	24	23	24	23	26	28	26	26	26
15	40	24	24	26	24	24	24	26	27	25	26	26
16	40	24	24	26	24	24	24	26	27	25	26	26
17	40	24	24	25	24	22	24	26	28	26	26	26
18	40	24	25	24	26	22	24	26	26	25	26	26
19	40	24	24	24	24	22	23	26	26	25	27	26
20	40	24	26	24	24	23	25	26	26	25	26	26
21	40	23	23	24	24	23	26	26	26	26	26	27
22	40	23	23	24	24	22	25	26	29	27	26	27
23	46	24	24	24	24	23	26	26	29	26	26	25
24	54	24	24	24	24	24	24	25	28	27	26	27
25	41	24	23	23	24	24	25	25	27	27	26	26
26	39	24	25	23	24	24	26	26	26	27	28	26
27	40	24	23	23	23	32	26	26	26	27	28	26
28	40	24	23	26	23	24	25	26	26	26	26	26
29	40	24	24	25	24	23	24	26	27	26	26	26
30	39	24	24	24	---	23	25	26	26	27	26	26
31	39	---	23	33	---	23	---	26	---	26	27	---
TOTAL	1258	731	750	770	695	731	724	804	800	804	814	799
MEAN	40.6	24.4	24.2	24.8	24.0	23.6	24.1	25.9	26.7	25.9	26.3	26.6
MAX	54	35	28	34	26	32	26	27	29	27	28	36
MIN	39	23	23	23	23	22	23	25	25	25	26	25
AC-FT	2500	1450	1490	1530	1380	1450	1440	1590	1590	1590	1610	1580

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.8	54.6	84.0	76.1	104	121	241	732	882	153	55.9	42.7
MAX	284	802	1390	537	710	969	1502	2473	3267	1830	406	330
(WY)	1966	1951	1951	1956	1942	1928	1938	1982	1983	1983	1983	1965
MIN	1.33	1.11	.73	.94	.91	1.87	1.55	3.11	3.77	3.02	2.89	2.80
(WY)	1941	1941	1944	1944	1944	1944	1944	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1927 - 1992	
ANNUAL TOTAL	15035		9680			
ANNUAL MEAN	41.2		26.4		215	
ANNUAL MEAN, ADJUSTED ^a					468	
HIGHEST ANNUAL MEAN					710	
LOWEST ANNUAL MEAN					4.27	
HIGHEST DAILY MEAN	664	Jun 9	54	Oct 24	8860	Dec 8 1950
LOWEST DAILY MEAN	20	Mar 8	22	Mar 7	.30	Mar 17 1931
ANNUAL SEVEN-DAY MINIMUM	21	Mar 20	22	Mar 17	.39	Mar 19 1931
INSTANTANEOUS PEAK FLOW			76	Oct 24	16000	Nov 21 1950
INSTANTANEOUS PEAK STAGE			2.10	Oct 24	17.20	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	29820		19200		155800	
10 PERCENT EXCEEDS	40		30		582	
50 PERCENT EXCEEDS	25		26		16,	
90 PERCENT EXCEEDS	22		23		4.1	

^a Combined flow of North Fork Mokelumne River and Tiger Creek Powerplant Conduit minus Bear River and Cole Creek diversion.

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA

LOCATION.--Lat 38°31'09", long 120°12'42", in SW 1/4 NE 1/4 sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 200 ft downstream from bridge, 0.3 mi upstream from diversion dam, 1.4 mi north of Salt Springs Dam, 3.2 mi upstream from mouth, and 6.5 mi southwest of Mokelumne Peak.

DRAINAGE AREA.--21.0 mi².

PERIOD OF RECORD.--July 1927 to November 1942, October 1943 to current year. Prior to October 1958, published as Cold Creek near Mokelumne Peak. October 1958 to September 1960, published as "near Mokelumne Peak."

REVISED RECORDS.--WSP 1515: 1928, 1930-31, 1938(M), 1944, 1947. WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control since Oct. 30, 1974. Elevation of gage is 5,920 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 30, 1974, at site 0.4 mi upstream at different datum.

REMARKS.--Occasional pumping upstream from station for domestic use in summer-home tract began in September 1961. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft³/s, Dec. 23, 1964, gage height, 10.21 ft, site and datum then in use, from rating curve extended above 900 ft³/s on basis of slope-area measurement at gage height 9.69 ft, site and datum then in use; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 465 ft³/s, Apr. 17, gage height, 3.15 ft; minimum daily, 0.06 ft³/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	7.2	e9.0	9.8	11	64	142	123	11	12	.85	2.9
2	.13	11	e8.0	11	e10	52	158	108	9.3	5.8	.76	1.7
3	.13	14	7.9	11	e9.0	51	181	112	7.7	4.6	.67	.97
4	.14	15	e8.0	9.8	e9.0	51	183	114	6.4	4.1	.59	.64
5	.14	15	e8.0	8.8	8.6	49	150	113	5.5	3.3	.53	.44
6	.14	22	e8.2	11	8.7	48	117	121	4.8	2.6	.51	.38
7	.15	22	8.5	10	e11	47	123	140	5.8	2.2	.48	.30
8	.18	21	e9.0	12	17	42	139	141	6.3	1.8	.45	.26
9	.17	30	e10	11	19	41	136	110	4.8	1.6	.43	.23
10	.14	22	e11	14	16	46	131	83	4.0	1.4	.39	.21
11	.11	12	11	15	14	57	135	76	3.6	4.9	.38	.20
12	.11	8.3	e10	13	14	68	119	67	3.4	98	.38	.18
13	.12	7.4	e9.0	12	14	75	170	59	3.2	57	.35	.16
14	.13	6.8	e9.0	13	13	80	159	54	3.1	41	.29	.12
15	.13	5.6	e9.0	13	9.3	64	143	45	3.4	44	.26	.10
16	.13	4.1	e9.0	13	13	52	116	40	6.7	29	.26	.11
17	.13	4.6	7.3	13	14	46	350	38	7.4	28	.24	.11
18	.14	5.5	7.6	12	14	46	202	35	5.7	15	.22	.10
19	.15	10	e9.0	10	13	46	151	30	4.0	9.3	.20	.13
20	.06	19	e9.0	11	73	43	177	27	3.4	6.9	.18	.12
21	.08	47	9.0	10	119	42	175	25	3.3	5.4	.18	.10
22	.10	45	8.9	11	202	42	134	21	3.3	4.4	.18	.09
23	.12	26	8.4	10	114	42	109	19	3.2	3.6	.18	.09
24	.13	25	8.3	9.4	82	44	131	17	3.0	3.1	.18	.11
25	.17	26	8.1	10	89	48	166	17	2.9	2.7	.17	.11
26	68	25	8.0	11	98	78	174	16	2.2	2.7	.16	.11
27	16	29	7.7	11	101	82	173	15	1.1	2.3	.16	.10
28	7.8	e19	7.8	11	98	98	192	21	.99	2.1	.14	.10
29	6.5	e11	8.2	11	80	108	208	16	1.0	1.8	.14	.10
30	6.4	e9.0	8.8	12	---	106	162	12	26	1.3	.16	.10
31	4.1	---	10	12	---	96	---	11	---	1.0	2.5	---
TOTAL	112.06	524.5	270.7	351.8	1293.6	1854	4806	1826	156.49	447.0	12.57	10.37
MEAN	3.61	17.5	8.73	11.3	44.6	59.8	160	58.9	5.22	14.4	.41	.35
MAX	68	47	11	15	202	108	350	141	26	98	2.5	2.9
MIN	.06	4.1	7.3	8.8	8.6	41	109	11	.99	1.0	.14	.09
AC-FT	222	1040	537	698	2570	3680	9530	3620	310	887	25	21

e Estimated.

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.58	22.9	38.3	34.3	40.9	61.6	142	251	145	18.2	1.31	.98
MAX	88.3	368	361	239	228	212	242	509	564	263	25.2	15.6
(WY)	1983	1951	1965	1980	1982	1986	1936	1969	1983	1983	1983	1983
MIN	.045	.10	.14	.30	.30	1.87	38.9	50.1	5.22	.38	.013	.000
(WY)	1967	1960	1960	1933	1933	1933	1975	1934	1992	1976	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	13857.82		11665.09		63.5	
ANNUAL MEAN	38.0		31.9		131	
HIGHEST ANNUAL MEAN					16.6	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	405	Mar 4	350	Apr 17	3760	Dec 23 1964
LOWEST DAILY MEAN	.06	Oct 20	.06	Oct 20	.00	Aug 1 1931
ANNUAL SEVEN-DAY MINIMUM	.11	Sep 14	.10	Sep 21	.00	Aug 1 1931
INSTANTANEOUS PEAK FLOW			465	Apr 17	6140	Dec 23 1964
INSTANTANEOUS PEAK STAGE			3.15	Apr 17	10.21	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	27490		23140		45990	
10 PERCENT EXCEEDS	125		114		197	
50 PERCENT EXCEEDS	8.0		9.8		15	
90 PERCENT EXCEEDS	.15		.14		.16	

11315030 COLE CREEK BELOW DIVISION DAM, NEAR SALT SPRINGS DAM, CA

LOCATION.--Lat 38°30'54", long 120°12'53", in NW 1/4 SE 1/4 sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 200 ft downstream from diversion dam, 1.1 mi north of Salt Springs Dam, and 6.7 mi southwest of Mokelumne Peak.

DRAINAGE AREA.--21.8 mi².

PERIOD OF RECORD.--December 1987 to current year (low-flow records only). Unpublished records for water years 1981-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and broad-crested weir. Elevation of gage is 5,830 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. No records computed above 3.9 ft³/s. Flow regulated by Cole Creek diversion dam. Water is diverted for power since December 1952 to a tunnel from Lower Bear River Reservoir to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	3.4	3.5	3.6	3.6	3.8	---	3.7	3.6	3.6	1.3	3.2
2	.16	3.4	3.5	3.6	3.6	3.7	---	3.7	3.5	3.5	1.1	2.3
3	.16	3.4	3.5	3.6	3.6	3.7	---	3.7	3.6	3.5	.98	1.1
4	.13	3.4	3.5	3.6	3.6	3.7	---	3.7	3.5	3.4	.89	.80
5	.10	3.4	3.5	3.6	3.6	3.7	---	3.7	3.5	3.4	.82	.62
6	.10	3.4	3.5	3.6	3.6	3.7	---	3.7	3.5	3.4	.75	.52
7	.10	3.4	3.5	3.6	3.6	3.7	---	3.8	3.5	2.8	.72	.42
8	.10	3.5	3.5	3.7	3.7	3.7	---	---	3.5	2.2	.69	.35
9	.10	3.5	3.5	3.6	3.6	3.7	---	3.9	3.5	1.9	.67	.32
10	.10	3.6	3.5	3.6	3.6	3.7	---	3.9	3.6	1.6	.64	.30
11	.10	3.6	3.5	3.6	3.6	3.7	---	3.8	3.5	2.5	.61	.30
12	.10	3.6	3.5	3.7	3.6	3.7	---	3.7	3.5	3.7	.57	.25
13	.10	3.6	3.5	3.7	3.6	3.7	---	3.7	3.5	3.7	.51	.25
14	.10	3.7	3.5	3.6	3.6	3.8	---	3.7	3.5	3.7	.48	.22
15	.10	3.7	3.5	3.6	3.9	3.7	---	3.7	3.6	3.7	.45	.17
16	.10	3.7	3.5	3.6	3.6	3.7	---	3.6	3.6	3.7	.43	.17
17	.10	3.7	3.5	3.6	3.6	3.7	---	3.6	3.5	3.7	.43	.17
18	.10	3.7	3.5	3.6	3.6	3.7	---	3.6	3.5	3.7	.39	.17
19	.10	3.7	3.7	3.6	3.6	3.7	---	3.6	3.5	3.7	.31	.18
20	.10	3.7	3.6	3.6	3.7	3.7	---	3.6	3.5	3.7	.30	.18
21	.10	3.7	3.6	3.6	3.7	3.7	---	3.6	3.5	3.7	.27	.17
22	.10	3.7	3.5	3.6	---	3.7	---	3.6	3.3	3.7	.25	.14
23	.10	3.7	3.5	3.6	3.8	3.7	---	3.6	2.4	3.7	.25	.14
24	.13	3.6	3.6	3.6	3.7	3.7	---	3.6	2.4	3.7	.25	.13
25	.21	3.6	3.6	3.6	3.7	3.8	3.7	3.6	2.4	3.7	.25	.14
26	3.2	3.6	3.5	3.6	3.8	3.9	3.7	3.6	2.2	3.4	.25	.14
27	3.5	3.6	3.5	3.6	3.8	3.9	3.7	3.6	2.0	2.5	.25	.14
28	3.5	3.6	3.5	3.6	3.8	3.9	3.8	3.6	1.9	2.2	.22	.14
29	3.4	3.6	3.6	3.6	3.8	3.9	3.8	3.6	2.2	1.9	.22	.12
30	3.4	3.6	3.6	3.6	---	---	3.7	3.6	3.5	1.7	.24	.12
31	3.4	---	3.6	3.6	---	---	---	3.6	---	1.4	1.4	---
TOTAL	23.25	107.4	109.4	111.9	---	---	---	---	96.3	96.7	16.89	13.37
MEAN	.75	3.58	3.53	3.61	---	---	---	---	3.21	3.12	.54	.45
MAX	3.5	3.7	3.7	3.7	---	---	---	---	3.6	3.7	1.4	3.2
MIN	.10	3.4	3.5	3.6	---	---	---	---	1.9	1.4	.22	.12
AC-FT	46	213	217	222	---	---	---	---	191	192	34	27

11315900 BEAR RIVER BELOW LOWER BEAR RIVER DAM, CA

LOCATION.--Lat 38°32'11", long 120°15'24", in NW 1/4 NW 1/4 sec.19, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 250 ft. downstream from outlet valve on Lower Bear River Reservoir, 0.2 mi below Lower Bear River Reservoir Dam, 1.4 mi upstream from Rattlesnake Creek, and 3.5 mi northwest of Salt Springs Dam.

DRAINAGE AREA.--37.4 mi².

PERIOD OF RECORD.--December 1987 to current year (low-flow periods only). Unpublished records for water years 1981-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--No records computed above 5.9 ft³/s. Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft, and since December 1952 by Lower Bear River Reservoir 0.2 mi upstream, capacity, 49,100 acre-ft. Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.8	3.7	2.9	2.7	2.7	3.0	2.8	2.5	2.8	3.4	3.0	4.7
2	4.8	2.9	2.9	2.7	2.7	3.0	2.8	2.7	2.8	3.4	3.0	---
3	4.7	2.9	2.9	2.7	2.6	3.1	2.8	2.7	2.8	3.4	4.7	4.4
4	4.6	2.9	2.9	2.7	2.7	3.0	2.8	2.6	2.8	3.2	---	3.3
5	4.6	2.9	2.9	2.8	2.6	3.1	2.8	2.4	2.8	3.0	4.5	3.3
6	4.6	2.9	2.9	2.8	2.6	3.1	2.8	2.4	---	2.9	3.3	3.3
7	4.6	2.9	3.0	2.7	2.8	3.1	2.8	2.6	---	2.8	3.2	3.3
8	4.6	2.9	2.9	2.7	2.8	3.1	2.9	2.7	---	2.8	3.3	3.3
9	4.6	2.9	2.9	2.7	2.7	3.2	2.9	2.7	---	2.8	4.9	3.3
10	---	2.9	2.9	2.7	2.7	3.2	2.9	2.7	5.0	2.8	4.1	2.9
11	---	2.9	2.9	2.6	2.7	3.1	2.9	e2.7	5.0	3.0	2.9	2.9
12	---	2.9	2.9	2.6	3.0	3.1	3.0	e2.7	5.0	3.1	3.1	2.9
13	4.9	2.9	e2.8	2.6	2.8	3.0	3.0	e2.7	5.0	3.1	3.1	2.9
14	4.8	2.9	e2.8	2.6	2.7	3.1	3.0	e2.7	5.2	2.9	3.1	2.9
15	4.8	2.9	e2.8	2.6	2.6	3.1	3.1	e2.7	5.3	2.8	3.1	2.9
16	4.8	2.9	e2.8	2.6	2.6	3.2	2.6	e2.7	5.3	2.7	3.1	2.9
17	4.8	3.4	e2.8	2.6	2.5	3.2	2.6	e2.7	5.6	2.7	3.1	2.9
18	4.8	3.2	3.1	2.7	2.5	3.0	2.5	e2.7	3.9	2.6	4.1	2.9
19	4.7	3.1	2.8	2.7	2.7	2.9	2.5	e2.7	2.7	2.6	4.0	2.9
20	4.7	3.4	2.7	2.7	4.6	2.9	2.5	2.7	2.7	2.6	2.5	2.9
21	4.7	3.3	2.7	2.7	3.8	3.0	2.5	2.7	2.7	2.6	2.9	2.8
22	4.7	3.1	2.7	2.7	3.8	3.0	2.5	2.7	4.3	2.6	3.2	2.8
23	4.7	2.9	2.7	2.7	3.2	2.9	2.5	2.7	5.5	2.6	3.2	4.3
24	4.8	2.9	2.7	2.7	3.1	2.8	2.5	2.7	---	4.3	3.2	5.4
25	4.9	2.9	2.7	2.7	3.3	3.0	2.6	2.7	4.6	5.4	3.2	4.3
26	---	2.9	2.7	2.7	3.2	2.9	2.6	2.7	3.6	5.5	3.2	3.2
27	5.1	3.1	2.7	2.7	3.2	2.8	2.7	2.7	3.4	3.9	3.1	3.2
28	4.9	2.9	2.7	2.8	3.2	2.8	2.5	2.8	3.1	2.7	3.1	3.2
29	4.9	2.9	2.7	2.7	3.1	2.8	2.4	2.8	3.4	2.7	3.1	3.2
30	4.7	2.8	2.7	2.7	---	3.0	2.4	2.8	3.6	3.0	3.1	3.2
31	4.7	---	2.7	2.7	---	2.9	---	2.8	---	2.9	3.1	---
TOTAL	---	90.0	87.2	83.3	85.5	93.4	81.2	83.1	---	96.8	---	---
MEAN	---	3.00	2.81	2.69	2.95	3.01	2.71	2.68	---	3.12	---	---
MAX	---	3.7	3.1	2.8	4.6	3.2	3.1	2.8	---	5.5	---	---
MIN	---	2.8	2.7	2.6	2.5	2.8	2.4	2.4	---	2.6	---	---
AC-FT	---	179	173	165	170	185	161	165	---	192	---	---

e Estimated.

11316100 BEAR RIVER BELOW BEAR RIVER DIVERSION DAM, CA

LOCATION.--Lat 38°29'33", long 120°17'21", in NE 1/4 NW 1/4 sec.2, T.7 N., R.15 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 200 ft downstream from diversion dam on Bear River and highway bridge, 1.4 mi upstream from mouth, and 3.5 mi northwest of Salt Springs Dam.

DRAINAGE AREA.--47.8 mi².

PERIOD OF RECORD.--December 1987 to current year (low-flow records only). Unpublished records for water years 1983-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 3,710 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 8, 1987, nonrecording gage at same site and datum.

REMARKS.--No records computed above 10 ft³/s. Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft, and since December 1952 by Lower Bear River Reservoir 4 mi upstream, capacity, 49,100 acre-ft. Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted at diversion dam 200 ft upstream to Tiger Creek Powerplant Conduit for use at Tiger Creek Powerplant (station 11316610). See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.1	5.0	5.1	5.9	5.4	5.6	6.0	5.5	5.4	5.5	e7.0
2	5.4	5.1	5.0	5.1	5.1	5.6	5.5	6.2	5.5	5.4	5.5	e9.9
3	5.4	5.1	5.1	5.0	5.1	5.5	6.1	6.2	5.5	5.4	7.3	e8.4
4	5.4	5.1	5.1	5.2	5.2	5.5	5.8	6.0	5.5	5.4	5.0	6.1
5	5.4	5.1	5.1	5.4	5.1	5.5	5.7	5.5	5.5	5.4	7.8	6.4
6	5.4	5.1	5.1	5.2	5.2	5.5	5.7	5.5	5.5	5.4	5.6	6.4
7	5.2	5.1	e8.0	6.3	5.1	5.5	5.6	5.5	e6.0	5.4	5.6	5.8
8	5.0	5.0	e8.0	6.0	5.1	6.0	5.6	5.5	e5.0	5.4	5.6	5.5
9	5.0	5.0	4.8	5.1	5.1	6.0	5.6	5.5	---	5.5	5.6	5.4
10	5.0	5.0	5.0	5.1	5.2	7.4	6.5	5.5	e7.2	5.5	5.6	5.4
11	---	5.0	5.1	5.0	5.2	7.5	6.6	5.5	e7.2	5.5	5.6	5.4
12	---	5.0	5.1	5.0	5.1	5.3	6.7	5.4	e7.0	5.5	5.6	5.3
13	6.6	5.0	5.1	5.2	5.1	5.6	6.2	5.4	e7.0	5.5	5.6	5.4
14	5.2	5.0	5.1	5.1	5.5	5.3	5.6	5.4	e7.2	5.5	5.6	5.4
15	5.1	5.0	5.1	5.0	5.4	5.3	5.5	5.4	e8.4	5.5	5.6	5.4
16	5.1	5.0	5.2	5.0	5.3	5.4	5.6	5.4	e7.4	5.5	5.6	5.4
17	5.1	5.0	5.1	5.0	5.3	5.5	6.2	5.4	e7.0	5.5	5.6	5.4
18	5.1	5.0	5.0	5.0	5.6	5.5	6.7	5.5	e6.5	5.5	5.6	5.4
19	5.1	5.1	5.0	5.0	5.5	5.4	6.5	5.5	5.5	5.5	8.9	5.4
20	5.0	5.1	5.4	e5.5	5.4	6.3	6.2	5.5	5.5	5.5	6.7	5.4
21	5.1	5.1	5.1	e5.5	5.3	7.1	5.6	5.4	5.5	5.5	5.5	5.5
22	5.1	5.0	5.1	5.0	5.4	6.1	5.6	5.4	e7.0	5.5	5.5	6.3
23	5.1	5.1	5.2	6.4	5.1	5.5	5.7	5.5	e7.0	5.5	5.5	5.8
24	4.9	5.1	8.6	6.7	---	5.3	5.6	5.5	5.4	e8.0	5.4	4.7
25	5.2	5.1	7.3	5.4	---	5.5	5.6	5.5	5.4	e9.7	5.4	5.7
26	7.0	5.0	6.5	5.2	5.7	5.7	5.6	5.5	5.4	e7.5	5.4	5.4
27	6.4	5.1	7.5	5.0	5.6	8.2	5.6	5.5	5.4	e9.6	5.4	5.4
28	5.2	5.0	5.0	5.3	5.6	5.8	5.6	5.5	5.4	e7.3	6.0	5.4
29	5.1	5.0	5.1	5.1	5.5	5.6	5.6	5.5	5.4	8.9	5.6	5.4
30	5.1	5.0	5.1	5.2	---	5.9	5.6	5.5	5.4	---	5.5	5.4
31	5.1	---	5.1	7.0	---	6.1	---	5.5	---	7.6	5.5	---
TOTAL	---	151.4	173.0	166.1	---	181.8	175.6	172.1	---	---	180.2	175.2
MEAN	---	5.05	5.58	5.36	---	5.86	5.85	5.55	---	---	5.81	5.84
MAX	---	5.1	8.6	7.0	---	8.2	6.7	6.2	---	---	8.9	9.9
MIN	---	5.0	4.8	5.0	---	5.3	5.5	5.4	---	---	5.0	4.7
AC-FT	---	300	343	329	---	361	348	341	---	---	357	348

e Estimated.

11316600 NORTH FORK MOKELUMNE RIVER ABOVE TIGER CREEK, NEAR WEST POINT, CA

LOCATION.--Lat 38°26'48", long 120°29'21", in SW 1/4 NE 1/4 sec.24, T.7 N., R.13 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 0.4 mi upstream from Tiger Creek and Tiger Creek powerplant, 3.9 mi northeast of West Point, 18.3 mi downstream from Salt Springs Dam, and at mile 106.4.

DRAINAGE AREA.--333 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1970-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,337.50 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.--Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 18.3 mi upstream. Some water is diverted through Tiger Creek Powerplant Conduit (station 11314000). Additional water is diverted out of the Bear River and several smaller tributaries into Tiger Creek Powerplant Conduit. All the water enters the North Fork Mokelumne River at Tiger Creek Powerplant (station 11316610) 0.4 mi downstream. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft³/s, Feb. 19, 1986, gage height, 8.98 ft, from rating curve extended above 7,700 ft³/s; minimum daily, 30 ft³/s, Aug. 6, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 336 ft³/s, Oct. 26, gage height, 3.36 ft; minimum daily, 35 ft³/s, Aug. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	57	e47	55	59	92	115	103	52	53	38	e39
2	52	52	e49	54	52	88	119	97	51	48	37	e45
3	52	47	49	56	51	88	123	92	50	47	37	47
4	52	46	49	57	51	86	131	94	50	47	41	39
5	51	45	50	69	52	98	127	90	49	47	41	37
6	51	44	51	64	52	157	120	88	49	47	e38	37
7	50	45	57	66	54	126	116	86	56	47	e37	e37
8	52	45	57	70	57	108	116	85	53	46	e37	e37
9	51	45	54	60	57	103	116	81	61	45	e37	e37
10	51	44	52	56	64	99	114	77	62	45	e37	e37
11	62	42	51	54	77	99	114	75	52	46	e37	e37
12	64	40	50	52	105	98	117	72	50	61	e37	e37
13	58	39	51	52	111	98	132	70	50	64	e37	e37
14	55	39	50	52	88	103	130	68	51	55	e37	e37
15	52	e39	50	52	113	109	125	67	54	53	e37	e37
16	52	e38	49	51	104	115	120	66	56	50	e38	e37
17	52	e53	50	51	95	107	129	64	52	50	e38	e37
18	53	63	65	51	90	100	168	62	50	49	e38	e37
19	53	e43	74	50	93	96	126	61	48	48	e38	e37
20	51	e43	58	49	187	93	124	61	49	46	38	e37
21	50	e42	56	50	152	94	125	60	48	43	35	e37
22	51	e40	53	49	158	94	121	58	47	41	36	e37
23	53	e40	52	50	137	94	113	56	50	41	37	e37
24	62	e40	53	52	135	90	107	56	48	42	36	e37
25	65	e39	55	51	143	97	106	55	56	46	36	e37
26	212	e39	52	49	142	118	108	54	47	44	37	e37
27	108	e45	55	48	113	111	109	55	45	41	37	e37
28	68	e44	59	49	104	107	109	55	44	41	37	e37
29	63	e44	71	51	96	104	110	54	49	38	37	e37
30	61	e44	64	49	---	115	109	54	67	40	36	e37
31	58	---	58	48	---	123	---	53	---	41	36	---
TOTAL	1917	1326	1691	1667	2792	3210	3599	2169	1546	1452	1155	1132
MEAN	61.8	44.2	54.5	53.8	96.3	104	120	70.0	51.5	46.8	37.3	37.7
MAX	212	63	74	70	187	157	168	103	67	64	41	47
MIN	50	38	47	48	51	86	106	53	44	38	35	37
AC-FT	3800	2630	3350	3310	5540	6370	7140	4300	3070	2880	2290	2250
a	29640	31790	28380	19300	14540	21680	10790	17280	15550	28900	29340	19240

e Estimated.

a Diversion, in acre-feet, to Tiger Creek Powerplant, provided by Pacific Gas & Electric Co.

11316600 NORTH FORK MOKELUMNE RIVER ABOVE TIGER CREEK, NEAR WEST POINT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	57.6	55.8	61.4	80.7	303	373	393	544	388	65.0	48.0	49.5
MAX	76.8	74.3	97.0	188	1702	1855	1602	2283	1570	145	59.7	65.1
(WY)	1990	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986
MIN	39.4	44.2	47.0	49.8	51.4	76.8	87.3	70.0	49.8	37.0	36.2	37.3
(WY)	1989	1992	1991	1991	1991	1988	1988	1992	1987	1987	1987	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992	
ANNUAL TOTAL	33703		23656			
ANNUAL MEAN	92.3		64.6			
HIGHEST ANNUAL MEAN					201	1986
LOWEST ANNUAL MEAN					59.9	1988
HIGHEST DAILY MEAN	746	Jun 8	212	Oct 26	8170	Feb 19 1986
LOWEST DAILY MEAN	38	Nov 16	35	Aug 21	30	Aug 6 1987
ANNUAL SEVEN-DAY MINIMUM	40	Nov 10	36	Aug 21	32	Aug 4 1987
INSTANTANEOUS PEAK FLOW			336	Oct 26	12900	Feb 19 1986
INSTANTANEOUS PEAK STAGE			3.36	Oct 26	8.98	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	66850		46920		145400	
ANNUAL TOTAL, DIVERSION a	237400		266400			
10 PERCENT EXCEEDS	147		113		289	
50 PERCENT EXCEEDS	57		52		61	
90 PERCENT EXCEEDS	46		37		40	

a Diversion, in acre-feet, to Tiger Creek Powerplant, provided by Pacific Gas & Electric Co.

11316670 NORTH FORK MOKELUMNE RIVER BELOW TIGER CREEK RESERVOIR, NEAR WEST POINT, CA

LOCATION.--Lat 38°26'25", long 120°30'14", in SE 1/4 SE 1/4 sec.23, T.7 N., R.13 E., Amador County, Hydrologic Unit 18040012, on right bank 500 ft downstream from Tiger Creek Reservoir Dam and 3.1 mi northeast of West Point.

DRAINAGE AREA.--357 mi².

PERIOD OF RECORD.--October 1985 to current year (low-flow records only). Unpublished records for water years 1982-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No records computed above 50 ft³/s. Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 20 mi upstream. Most of the water is diverted at Tiger Creek Reservoir to West Point Powerplant. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	12	12	12	11	13	13	12	13	13	14
2	23	13	12	12	12	11	13	13	12	12	13	14
3	23	13	12	12	12	11	13	13	12	12	13	14
4	23	13	12	12	12	11	13	13	12	13	13	14
5	22	12	12	12	12	11	13	13	12	12	14	14
6	22	12	12	12	12	11	14	13	12	12	14	14
7	21	13	12	12	12	11	14	12	12	12	13	14
8	21	12	12	12	12	11	13	12	22	13	14	14
9	22	12	12	12	12	12	13	12	27	12	14	14
10	21	12	12	12	12	12	13	12	23	12	13	14
11	22	12	12	12	12	11	13	12	19	13	e14	14
12	22	12	12	12	12	12	13	12	15	13	e14	14
13	22	12	12	12	11	11	13	12	13	13	e14	14
14	22	12	12	12	11	11	13	12	13	13	e13	14
15	21	12	12	12	12	11	13	12	13	12	e13	13
16	21	12	12	12	11	12	13	12	13	12	e14	13
17	21	12	12	12	11	13	13	12	13	13	e14	13
18	21	12	12	12	11	13	13	12	13	13	e14	14
19	21	12	12	12	11	13	13	12	13	13	14	14
20	21	12	12	12	11	13	13	12	13	13	14	14
21	21	12	12	12	11	13	13	12	13	13	14	14
22	21	12	12	12	11	13	13	12	13	13	13	14
23	21	12	12	12	11	13	13	12	12	12	13	13
24	21	12	12	12	11	13	13	12	13	13	13	14
25	22	12	12	12	12	13	13	12	13	13	13	14
26	23	12	12	12	12	13	13	12	13	13	14	14
27	20	12	12	12	12	13	13	13	13	13	14	14
28	21	12	12	12	12	13	13	13	13	13	14	14
29	22	12	12	12	12	13	13	13	13	13	14	14
30	22	12	12	12	---	13	13	13	13	13	14	14
31	22	---	12	12	---	13	---	12	---	13	14	---
TOTAL	671	368	372	372	337	375	392	382	423	393	422	416
MEAN	21.6	12.3	12.0	12.0	11.6	12.1	13.1	12.3	14.1	12.7	13.6	13.9
MAX	23	16	12	12	12	13	14	13	27	13	14	14
MIN	20	12	12	12	11	11	13	12	12	12	13	13
AC-FT	1330	730	738	738	668	744	778	758	839	780	837	825

WTR YR 1992 TOTAL 4923 MEAN 13.5 MAX 27 MIN 11 AC-FT 9760

e Estimated.

11316700 NORTH FORK MOKELUMNE RIVER BELOW ELECTRA DIVERSION DAM, NEAR WEST POINT, CA

LOCATION.--Lat 38°25'15", long 120°32'56", in SW 1/4 NE 1/4 sec.33, T.7 N., R.13 E., Amador County, Hydrologic Unit 18040012, on right bank 300 ft downstream from Electra diversion dam and 2.0 mi northwest of West Point.

DRAINAGE AREA.--365 mi².

PERIOD OF RECORD.--October 1985 to current year (low-flow records only). Unpublished records for water years 1982-84 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and sharp-crested weir since March 1987. Elevation of gage is 1,980 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No records computed above 30 ft³/s. Flow regulated since 1931 by numerous reservoirs and diversions upstream. Most of the water is diverted at Electra diversion dam to Electra powerplant. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	12	12	12	12	13	13	12	13	12	13
2	18	13	12	12	12	12	13	13	12	13	12	13
3	18	13	12	12	12	13	13	13	12	13	12	13
4	18	13	12	12	12	13	13	13	12	13	12	13
5	18	13	12	12	12	13	13	13	12	13	13	13
6	18	13	12	12	12	13	13	13	12	13	14	13
7	18	13	12	12	12	13	13	13	12	13	13	13
8	17	13	12	12	12	13	13	12	13	13	13	13
9	17	13	13	12	12	13	13	12	14	13	13	13
10	17	13	13	12	13	13	13	12	14	13	13	13
11	17	13	13	12	13	13	13	12	13	13	13	13
12	17	13	13	12	13	13	13	12	13	13	13	13
13	17	13	13	12	13	13	13	12	13	13	13	13
14	17	13	13	12	13	13	13	12	13	13	13	13
15	17	13	13	12	12	13	13	12	13	13	13	12
16	17	13	13	12	12	13	13	12	13	12	13	12
17	17	13	12	12	13	13	13	12	12	12	13	12
18	17	14	13	12	12	13	13	12	13	12	13	12
19	17	13	13	12	12	13	13	12	13	12	13	12
20	18	13	13	12	13	13	13	12	13	12	13	12
21	18	13	12	12	12	13	13	12	13	12	13	13
22	18	13	12	12	12	13	13	12	13	12	13	13
23	18	13	12	12	12	13	13	12	13	12	13	12
24	18	13	12	12	12	13	13	12	13	12	13	13
25	18	13	12	12	12	13	13	12	13	12	13	13
26	18	13	12	12	12	13	13	12	13	12	13	13
27	17	13	12	12	12	13	13	12	13	12	13	13
28	17	13	12	12	12	13	13	12	13	12	13	13
29	17	13	12	12	12	13	13	12	13	12	13	12
30	18	12	12	12	---	13	13	12	13	12	13	12
31	18	---	12	12	---	13	---	12	---	12	13	---
TOTAL	542	394	383	372	355	401	390	379	384	387	400	381
MEAN	17.5	13.1	12.4	12.0	12.2	12.9	13.0	12.2	12.8	12.5	12.9	12.7
MAX	18	17	13	12	13	13	13	13	14	13	14	13
MIN	17	12	12	12	12	12	13	12	12	12	12	12
AC-FT	1080	781	760	738	704	795	774	752	762	768	793	756

WTR YR 1992 TOTAL 4768 MEAN 13.0 MAX 18 MIN 12 AC-FT 9460

11316800 FOREST CREEK NEAR WILSEYVILLE, CA

LOCATION.--Lat 38°24'12", long 120°26'45", in SW 1/4 NW 1/4 sec.4, T.6 N., R.14 E., Calaveras County, Hydrologic Unit 18040012, on left bank 1.0 mi downstream from Lion Creek, 1.8 mi upstream from mouth, and 4 mi northeast of Wilseyville.

DRAINAGE AREA.--20.8 mi².

PERIOD OF RECORD.--July 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation. Minor diversions upstream from station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft³/s, Feb. 19, 1986, gage height, 8.12 ft, from rating curve extended above 500 ft³/s on basis of slope-area measurement at gage height 7.41 ft; minimum daily, 0.11 ft³/s, Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 20	1015	*58	*3.96				
Minimum daily, 0.30 ft ³ /s, Aug. 28.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	1.6	2.4	3.1	2.7	15	27	7.6	2.5	2.9	.83	.63
2	.79	1.5	2.5	2.9	2.7	14	26	7.3	2.4	2.3	.83	.79
3	.58	1.5	2.3	3.0	2.4	14	25	7.0	2.3	2.0	.83	.65
4	.46	1.4	2.3	2.8	2.5	15	24	6.8	2.2	2.0	.75	.52
5	.62	1.4	2.2	4.2	2.4	23	23	6.7	2.2	1.8	.70	.47
6	.78	1.4	2.3	4.9	2.5	44	22	6.4	2.2	1.8	.66	.44
7	.43	1.3	3.2	5.8	2.9	34	20	6.1	2.7	1.5	.50	.40
8	.48	1.3	2.9	4.5	3.7	29	19	5.7	2.8	1.4	.61	.42
9	.71	1.6	2.4	4.1	3.7	25	18	5.3	2.5	1.4	.75	.42
10	.55	1.6	2.3	3.9	5.0	22	17	4.9	1.9	1.3	.80	.47
11	.61	1.6	2.3	3.4	7.8	21	16	4.6	2.0	1.5	.77	.50
12	.70	1.6	2.1	2.9	23	20	17	4.5	2.1	3.6	.53	.47
13	.56	1.6	2.1	3.1	22	19	18	4.4	2.2	2.9	.58	.47
14	.54	1.7	2.2	2.9	17	22	17	4.4	2.2	2.2	.53	.51
15	.54	1.7	2.1	2.8	25	23	16	4.2	2.4	2.0	.57	.53
16	.46	1.7	2.0	2.8	20	31	15	4.1	2.8	1.8	.73	.47
17	.51	4.2	2.2	2.8	18	29	15	3.9	2.3	1.7	.71	.64
18	.60	8.8	5.6	2.9	16	25	15	3.8	1.8	1.5	.67	.69
19	.54	4.0	5.4	2.7	18	22	14	3.8	1.5	1.3	.63	.68
20	.52	3.3	3.3	2.6	48	20	13	4.1	2.3	1.3	.61	.64
21	.60	3.2	3.1	2.6	34	20	12	3.9	2.4	1.1	.59	.57
22	.74	2.9	2.9	2.3	35	20	12	3.7	1.8	1.2	.57	.49
23	.96	2.7	2.7	2.4	27	21	11	3.5	1.7	1.0	.58	.48
24	1.3	2.6	2.5	2.5	20	19	11	3.5	2.2	.95	.64	.45
25	1.5	2.4	2.5	2.6	17	24	10	3.3	2.0	1.2	.63	.47
26	24	2.3	2.4	2.4	16	31	9.2	2.8	2.0	1.3	.53	.45
27	7.3	3.0	2.3	2.3	16	27	8.8	2.9	2.0	1.2	.32	.36
28	2.8	3.0	3.5	2.6	15	26	8.5	2.7	1.9	1.0	.30	.31
29	2.2	2.6	5.7	2.6	15	25	7.9	2.6	3.0	1.2	.42	.32
30	1.9	2.2	5.0	2.5	---	29	7.9	2.6	5.5	.89	.49	.34
31	1.7	---	3.7	2.5	---	29	---	2.5	---	.90	.56	---
TOTAL	56.74	71.7	90.4	95.4	440.3	738	475.3	139.6	69.8	50.14	19.22	15.05
MEAN	1.83	2.39	2.92	3.08	15.2	23.8	15.8	4.50	2.33	1.62	.62	.50
MAX	24	8.8	5.7	5.8	48	44	27	7.6	5.5	3.6	.83	.79
MIN	.43	1.3	2.0	2.3	2.4	14	7.9	2.5	1.5	.89	.30	.31
AC-FT	113	142	179	189	873	1460	943	277	138	99	38	30

SAN JOAQUIN RIVER BASIN

11316800 FOREST CREEK NEAR WILSEYVILLE, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.25	9.75	20.8	34.4	43.7	47.9	48.1	32.9	12.6	5.81	3.65	3.18
MAX	11.9	59.5	138	144	243	209	174	128	47.4	17.1	10.5	8.36
(WY)	1983	1984	1965	1970	1986	1983	1982	1967	1967	1983	1983	1983
MIN	.63	2.39	2.17	2.40	2.35	4.58	2.96	3.92	1.58	.46	.33	.50
(WY)	1978	1992	1977	1991	1991	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1961 - 1992

ANNUAL TOTAL	2434.02	2261.65	
ANNUAL MEAN	6.67	6.18	22.1
HIGHEST ANNUAL MEAN			67.9
LOWEST ANNUAL MEAN			2.39
HIGHEST DAILY MEAN	68	Mar 4	1250
LOWEST DAILY MEAN	.40	Sep 30	.11
ANNUAL SEVEN-DAY MINIMUM	.53	Oct 14	.15
INSTANTANEOUS PEAK FLOW			2020
INSTANTANEOUS PEAK STAGE			8.12
ANNUAL RUNOFF (AC-FT)	4830	4490	16040
10 PERCENT EXCEEDS	21	20	56
50 PERCENT EXCEEDS	2.4	2.5	7.6
90 PERCENT EXCEEDS	.76	.54	2.1

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA

LOCATION.--Lat 38°23'23", long 120°31'32", in SE 1/4 NE 1/4 sec.10, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 200 ft downstream from highway bridge, 0.6 mi south of West Point, and 4.5 mi upstream from South Fork Mokelumne River.

DRAINAGE AREA.--68.4 mi².

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for October 1911, published in WSP 1315-A.

REVISED RECORDS.--WSP 1515: 1919-20, 1927-28(M), 1936(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 6, 1926, nonrecording gage at site 1,200 ft upstream at different datum. Oct. 6, 1926, to Aug. 18, 1928, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records fair. Flow slightly regulated by Schaads Reservoir, capacity, 1,740 acre-ft, 6 mi upstream from station, since January 1940. Maximum output of Schaads Powerplant is 35 ft³/s and is operational only when reservoir level is within 4 ft of spill gates. Several small diversions upstream from station. At times water is diverted 4 mi upstream from station to Licking Fork Mokelumne River via Middle Fork ditch, capacity, 10 ft³/s; because of leakage, only 5 ft³/s may reach Licking Fork Mokelumne River. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft³/s, Feb. 19, 1986, gage height, 9.19 ft, from rating curve extended above 3,100 ft³/s; no flow for many days in 1931 and Sept. 9, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	0145	*138	*2.66				

Minimum daily, 1.0 ft³/s, Aug. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.4	5.1	6.0	3.8	63	69	35	9.4	8.6	4.4	1.2
2	2.7	2.4	5.6	5.4	4.1	49	67	12	8.8	7.2	4.0	1.2
3	2.7	2.2	5.7	5.2	3.7	54	65	12	9.0	6.4	3.6	1.2
4	3.0	2.0	5.7	4.4	3.7	55	64	18	10	6.7	3.9	1.2
5	3.1	2.0	5.5	9.4	3.5	70	63	60	9.0	6.2	4.1	1.1
6	3.5	2.1	5.7	8.5	3.7	113	61	37	8.6	5.9	3.7	1.1
7	3.5	2.0	8.9	10	4.0	93	59	24	9.6	5.8	3.6	1.1
8	3.2	2.0	8.4	8.1	4.9	83	58	22	10	5.7	3.9	1.1
9	3.3	2.1	7.2	6.2	4.9	74	57	21	9.5	8.6	4.4	1.1
10	3.1	2.5	6.7	5.7	7.8	70	32	20	8.5	8.6	4.5	1.1
11	3.4	2.6	6.5	5.1	17	68	37	19	8.8	6.0	4.3	1.4
12	3.4	2.6	6.3	4.4	42	66	56	20	10	8.1	4.7	1.7
13	3.5	3.0	6.0	4.2	36	63	57	57	12	9.2	5.0	1.9
14	3.5	2.7	5.7	4.2	22	55	55	25	13	6.4	5.6	2.2
15	3.5	3.5	5.9	4.0	88	61	43	19	12	5.4	4.9	2.4
16	3.4	3.7	5.5	3.9	65	82	22	17	13	5.1	4.4	2.2
17	3.3	8.8	5.5	3.9	57	81	53	16	12	5.4	3.1	2.4
18	3.6	16	9.5	4.0	48	74	53	16	11	5.1	2.9	2.6
19	4.2	7.4	12	3.7	47	71	53	16	9.6	4.9	2.7	2.6
20	3.8	5.1	7.6	3.5	94	58	34	16	11	4.9	3.4	2.7
21	3.4	4.8	6.6	3.6	95	47	21	16	15	5.2	2.5	2.5
22	3.5	5.0	6.3	3.4	94	65	49	16	11	5.5	2.6	2.5
23	4.1	4.7	5.7	2.8	80	68	49	16	10	5.3	2.4	2.5
24	4.2	4.5	5.4	3.1	70	65	23	12	12	5.0	2.3	2.9
25	4.7	4.5	4.8	3.5	58	59	16	9.3	12	4.1	2.4	3.2
26	31	4.5	5.0	3.4	57	51	43	8.6	10	3.9	2.5	3.0
27	16	5.5	5.0	3.2	53	48	44	8.6	10	3.9	2.4	3.0
28	4.0	6.2	7.2	3.5	46	70	14	9.2	10	3.6	2.2	2.3
29	3.3	5.4	12	3.8	55	68	12	10	11	3.1	1.9	2.4
30	3.0	5.2	10	3.7	---	70	39	11	16	3.5	1.0	2.6
31	2.7	---	7.4	3.6	---	72	---	9.5	---	4.2	1.2	---
TOTAL	146.4	127.4	210.4	147.4	1168.1	2086	1368	608.2	321.8	177.5	104.5	60.4
MEAN	4.72	4.25	6.79	4.75	40.3	67.3	45.6	19.6	10.7	5.73	3.37	2.01
MAX	31	16	12	10	95	113	69	60	16	9.2	5.6	3.2
MIN	2.7	2.0	4.8	2.8	3.5	47	12	8.6	8.5	3.1	1.0	1.1
AC-FT	290	253	417	292	2320	4140	2710	1210	638	352	207	120

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.1	22.8	49.9	84.0	120	134	147	106	41.8	15.9	8.83	7.40
MAX	37.5	223	389	622	768	653	561	372	181	68.1	40.8	31.1
(WY)	1983	1951	1956	1914	1986	1983	1982	1983	1983	1983	1969	1969
MIN	.86	2.64	3.33	4.75	5.70	9.06	6.47	4.17	.95	.22	.071	.15
(WY)	1932	1930	1977	1977	1991	1977	1977	1931	1924	1924	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1912 - 1992	
ANNUAL TOTAL	6611.5		6526.1			
ANNUAL MEAN	18.1		17.8		62.1	
HIGHEST ANNUAL MEAN					218	
LOWEST ANNUAL MEAN					5.25	
HIGHEST DAILY MEAN	76	Mar 4	113	Mar 6	3610	Feb 19 1986
LOWEST DAILY MEAN	1.8	Aug 27	1.0	Aug 30	.00	Aug 23 1931
ANNUAL SEVEN-DAY MINIMUM	2.1	Nov 3	1.1	Sep 4	.00	Aug 23 1931
INSTANTANEOUS PEAK FLOW			138	Feb 15	4920	Feb 19 1986
INSTANTANEOUS PEAK STAGE			2.66	Feb 15	9.19	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	13110		12940		44970	
10 PERCENT EXCEEDS	57		59		161	
50 PERCENT EXCEEDS	5.7		5.8		20	
90 PERCENT EXCEEDS	3.1		2.5		3.8	

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA

LOCATION.--Lat 38°22'06", long 120°32'40", in SE 1/4 SE 1/4 sec.16, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 500 ft upstream from highway bridge, 2.4 mi southwest of West Point, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--75.1 mi².

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1315-A: 1934(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,950 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1933 to Sept. 19, 1957, at site 1,100 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good except those less than 1.0 ft³/s, which are poor. The middle fork ditch can divert 10 ft³/s from the Middle Fork Mokelumne River which, due to leakage, delivers about 5 ft³/s to the Licking Fork Mokelumne River. There are two pumps with a combined capacity of 8.9 ft³/s that can pump water to Jeff Davis Reservoir upstream from the station. There are other small diversions upstream from the station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s, Feb. 19, 1986, gage height, 12.48 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; no flow Aug. 6, 7, Aug. 12 to Sept. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	0100	*480	*4.78				

Minimum daily, 0.28 ft³/s, Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	1.2	5.7	11	7.9	54	74	20	4.9	9.7	4.2	.86
2	.59	.89	5.9	9.3	8.5	51	70	19	3.8	7.4	3.8	.38
3	.54	.71	5.8	8.1	6.7	51	68	18	3.5	6.4	2.7	.48
4	.53	.57	5.7	7.6	3.9	51	65	17	3.4	5.9	1.4	.60
5	.53	.63	5.6	24	3.7	72	62	16	3.3	5.5	1.3	.62
6	.52	.39	5.4	22	3.7	210	58	14	3.3	5.2	1.3	.67
7	.50	.28	8.4	22	4.3	137	54	14	2.7	5.0	1.5	.68
8	.48	.55	8.2	18	6.1	102	51	14	3.0	4.7	.86	.65
9	.52	3.5	7.1	12	7.0	84	48	14	2.8	4.4	.86	.66
10	.62	3.8	6.3	9.1	15	73	46	12	2.3	4.0	1.1	.95
11	.82	4.0	5.8	7.7	47	70	43	12	1.7	4.1	.95	.59
12	.64	3.9	5.7	6.6	120	68	44	11	1.9	10	.85	.47
13	.64	4.1	5.5	6.0	121	66	47	11	2.1	12	1.1	.54
14	.62	4.1	5.4	5.4	75	69	44	11	2.5	4.4	.72	.81
15	.61	4.0	5.3	4.9	264	74	41	11	2.8	3.0	.67	.55
16	.64	4.1	4.5	4.7	150	94	38	10	3.6	2.3	.56	.47
17	.63	7.6	1.2	4.9	97	90	39	9.9	3.5	2.6	.67	.57
18	.58	16	5.2	4.7	69	79	38	9.5	4.0	5.9	.51	.50
19	.54	7.3	15	4.7	60	72	35	9.4	6.8	4.7	.45	.45
20	.62	4.2	7.3	4.5	133	67	33	10	6.7	4.5	.40	.44
21	.53	3.3	4.6	4.2	118	65	30	10	7.5	4.2	.56	.45
22	.59	3.3	3.8	4.0	101	69	30	9.0	6.7	3.8	.37	.50
23	.86	2.7	3.2	3.6	88	75	28	7.5	6.0	4.4	.38	.71
24	1.2	2.3	2.8	3.6	71	65	27	7.0	6.0	4.2	.62	.56
25	2.1	1.9	2.5	3.6	61	62	26	6.7	5.6	4.0	.32	.41
26	52	1.7	2.4	3.5	60	76	24	6.5	5.3	4.3	.37	.49
27	32	2.2	3.6	3.4	58	77	23	6.3	5.2	4.3	.41	.47
28	10	3.2	11	3.7	57	70	21	6.1	5.4	4.0	.59	.47
29	3.4	4.3	36	4.3	55	67	21	6.1	6.5	4.8	.31	.48
30	2.2	6.0	28	4.3	---	74	20	5.7	12	4.1	.36	.64
31	1.6	---	15	5.6	---	83	---	5.4	---	3.9	.45	---
TOTAL	118.28	102.72	237.9	241.0	1871.8	2417	1248	339.1	134.8	157.7	30.64	17.12
MEAN	3.82	3.42	7.67	7.77	64.5	78.0	41.6	10.9	4.49	5.09	.99	.57
MAX	52	16	36	24	264	210	74	20	12	12	4.2	.95
MIN	.48	.28	1.2	3.4	3.7	51	20	5.4	1.7	2.3	.31	.38
AC-FT	235	204	472	478	3710	4790	2480	673	267	313	61	34

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.0	32.3	74.3	120	168	180	182	118	45.4	21.3	12.4	10.3
MAX	41.6	270	465	661	959	825	704	424	163	62.9	36.1	31.6
(WY)	1983	1951	1956	1969	1986	1983	1982	1983	1983	1983	1952	1983
MIN	1.65	3.21	2.83	1.85	2.53	11.3	7.48	10.9	4.49	1.00	.039	.13
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1934	1934	1934

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1934 - 1992	
ANNUAL TOTAL	6729.91		6916.06			
ANNUAL MEAN	18.4		18.9		81.0	
HIGHEST ANNUAL MEAN					264	
LOWEST ANNUAL MEAN					6.14	
HIGHEST DAILY MEAN	230	Mar 25	264	Feb 15	5780	Feb 17 1986
LOWEST DAILY MEAN	.14	Jul 27	.28	Nov 7	.00	Aug 6 1934
ANNUAL SEVEN-DAY MINIMUM	.52	Oct 3	.40	Aug 25	.00	Aug 12 1934
INSTANTANEOUS PEAK FLOW			480	Feb 15	7300	Feb 19 1986
INSTANTANEOUS PEAK STAGE			4.78	Feb 15	12.48	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	13350		13720		58680	
10 PERCENT EXCEEDS	62		67		206	
50 PERCENT EXCEEDS	3.8		4.9		27	
90 PERCENT EXCEEDS	.64		.54		6.0	

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA

LOCATION.--Lat 38°18'46", long 120°43'09", in SW 1/4 SW 1/4 sec.1, T.5 N., R.11 E., Calaveras County, Hydrologic Unit 18040012, on downstream side of bridge 1.2 mi northwest of Mokelumne Hill and 8 mi downstream from confluence of north and south Forks of Mokelumne River.

DRAINAGE AREA.--544 mi².

PERIOD OF RECORD.--January to June 1901, May 1903 to December 1904, October 1927 to current year. Yearly estimate only for water year 1928 (incomplete), published in WSP 1315-A. Published as "at Electra" 1901, 1903-4.

CHEMICAL DATA: Water year 1980. Water years 1971-79 in files of California Department of Water Resources.

WATER TEMPERATURE: Water years 1961-79 (daily record).

REVISED RECORDS.--WSP 1445: 1903-4, 1928(M), 1936(M), 1938(M), 1940(M), 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.88 ft above National Geodetic Vertical Datum of 1929 (levels by California Division of Highways). Jan. 1 to June 30, 1901, and May 11, 1903, to Dec. 31, 1904, nonrecording gage at site 3 mi upstream at different datum. Nov. 10, 1927, to Aug. 26, 1952, water-stage recorder at site 40 ft upstream at datum 5.00 ft higher. Aug. 27, 1952, to Oct. 14, 1977, at present site at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Salt Springs Reservoir (station 11313500) beginning in 1931, several smaller reservoirs, and four powerplants. Diversion upstream from station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,700 ft³/s, Dec. 3, 1950, gage height, 23.5 ft, present datum; minimum observed, 5 ft³/s, Aug. 13-15, 17, 18, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft³/s, Feb. 15, 20, gage height, 9.27 ft; minimum daily, 23 ft³/s, June 11-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	572	545	526	320	283	775	690	257	292	447	456	325
2	551	557	555	400	176	661	609	220	350	556	500	208
3	614	609	551	555	249	490	484	95	299	509	463	359
4	511	568	551	618	173	478	464	231	304	516	322	355
5	588	549	519	649	313	514	431	425	332	510	316	141
6	517	577	535	572	270	935	441	376	248	548	559	123
7	539	543	394	602	281	803	490	398	340	495	559	207
8	508	577	483	367	324	639	532	367	212	631	470	349
9	535	514	528	404	318	807	407	387	27	479	539	273
10	471	581	531	286	321	819	386	367	25	558	498	339
11	376	593	531	294	492	831	305	424	23	541	450	359
12	227	543	563	289	654	724	323	293	23	531	649	316
13	385	540	537	305	899	807	405	423	23	598	562	260
14	515	529	560	381	596	625	589	363	24	586	435	346
15	624	580	504	321	1030	617	593	302	87	522	530	414
16	573	538	592	251	673	777	324	431	199	574	492	315
17	559	624	551	394	592	675	414	321	39	491	578	287
18	514	578	560	364	421	729	425	303	279	583	477	300
19	595	548	586	327	412	720	302	291	329	507	334	371
20	482	578	584	308	718	613	270	392	325	561	457	321
21	630	578	402	333	779	416	311	348	416	517	555	371
22	533	573	411	340	701	460	337	363	330	467	520	343
23	448	553	371	295	531	429	281	266	172	541	481	426
24	57	472	634	278	512	574	348	332	447	355	523	252
25	613	611	525	219	338	566	221	339	609	172	409	471
26	796	547	538	220	481	621	332	334	576	67	547	316
27	707	517	345	266	576	552	246	317	480	214	554	330
28	612	579	372	351	563	408	422	313	602	366	478	438
29	501	548	409	320	770	480	240	269	632	552	186	434
30	524	553	343	402	---	452	256	353	688	515	347	328
31	656	---	397	327	---	694	---	366	---	448	259	---
TOTAL	16333	16802	15488	11358	14446	19691	11878	10266	8732	14957	14505	9677
MEAN	527	560	500	366	498	635	396	331	291	482	468	323
MAX	796	624	634	649	1030	935	690	431	688	631	649	471
MIN	57	472	343	219	173	408	221	95	23	67	186	123
AC-FT	32400	33330	30720	22530	28650	39060	23560	20360	17320	29670	28770	19190

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	505	589	770	853	1000	1112	1350	1851	1734	697	538	516
MAX	898	3275	4375	2903	4788	3950	4114	5092	6243	3384	1117	949
(WY)	1984	1951	1951	1956	1986	1983	1982	1952	1983	1983	1983	1983
MIN	8.97	25.3	70.1	65.5	100	115	221	273	262	106	77.5	67.7
(WY)	1978	1930	1931	1991	1977	1977	1977	1987	1977	1928	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	160552		164133			
ANNUAL MEAN	440		448		958	
HIGHEST ANNUAL MEAN					2511	
LOWEST ANNUAL MEAN					208	
HIGHEST DAILY MEAN	1250		1030		22700	
LOWEST DAILY MEAN	16		23		6.6	
ANNUAL SEVEN-DAY MINIMUM	35		33		7.0	
INSTANTANEOUS PEAK FLOW			1260		33700	
INSTANTANEOUS PEAK STAGE			9.27		23.50	
ANNUAL RUNOFF (AC-FT)	318500		325600		694300	
10 PERCENT EXCEEDS	622		624		2080	
50 PERCENT EXCEEDS	501		463		609	
90 PERCENT EXCEEDS	98		257		236	

11320000 PARDEE RESERVOIR NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°15'25", long 120°50'59", in NW 1/4 SW 1/4 sec.26, T.5 N., R.10 E., Amador County, Hydrologic Unit 18040012, at Pardee Dam on the Mokelumne River, 4.5 mi north of Valley Springs.

DRAINAGE AREA.--578 mi².

PERIOD OF RECORD.--October 1961 to current year. March 1929 to September 1930 (lake elevation only), October 1930 to September 1933, published in reports of U.S. Geological Survey. October 1933 to September 1961, in files of East Bay Municipal Utility District.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by a curved concrete gravity dam, completed in 1929. Storage began Mar. 9, 1929. Usable capacity, 194,100 acre-ft between elevations 393.50 ft, diversion tunnel invert, and 567.65 ft, spillway crest. Dead storage, 15,800 acre-ft. Water is released from reservoir for municipal use in the area on the east side of San Francisco Bay. Small intermittent diversions are made to Jackson Valley Irrigation District. Prior to Oct. 1, 1985, records, including extremes, represent contents at 2400 hours. Records from Oct. 1, 1985 through July 24, 1989, including extremes, represent total contents at 0800 hours. Records from July 25, 1989, including extremes, represent contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records provided by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 219,300 acre-ft, Dec. 23, 1955, Feb. 19, 1986, elevation, 571.72 ft; minimum, 47,000 acre-ft, Mar. 25, 1977, elevation, 454.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 202,400 acre-ft, Mar. 6, elevation, 564.28 ft; minimum, 157,500 acre-ft, Sept. 30, elevation, 541.99 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey provided by East Bay Municipal Utility District in 1930)

450	43,400	480	69,200	510	105,700	540	153,800	570	215,300
460	50,900	490	80,100	520	120,400	550	172,700	580	239,100
470	59,500	500	92,930	530	136,500	560	193,200		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172000	173900	192100	188600	192700	200500	195200	196400	198200	177300	168100	163300
2	172100	174300	192200	189000	192800	201200	195400	196200	198000	176800	168300	162800
3	172300	174700	191300	189700	192900	201600	195400	195800	197200	176500	167700	162700
4	172200	175100	190400	190400	192800	201900	195400	195700	196500	176600	166900	162600
5	172700	175500	189400	191700	193100	202200	195200	195900	196100	176800	166100	162000
6	173000	175900	189000	192500	193400	202400	195100	196100	195700	176300	165700	161400
7	173300	176300	188700	193200	193700	202300	195000	196300	195500	175800	165500	161000
8	173500	176700	188600	192800	194000	201800	195200	196400	194800	175200	165600	160800
9	173800	177000	188700	192500	194400	201400	195400	196600	193400	174000	165900	160500
10	173900	177400	188900	191900	194900	200400	195500	196700	192100	173500	165500	160300
11	173900	177900	189000	191400	195800	199400	195500	197000	190700	173800	164900	160100
12	173600	178300	189200	190800	197000	198200	195600	197000	189300	174100	164700	160000
13	173600	178900	189200	190300	198500	197300	195800	197300	188400	173500	164300	159600
14	173600	179500	189100	189900	199500	196800	196300	197400	187600	172500	164100	159600
15	174100	180300	189000	189500	200900	196300	196800	197400	186500	172000	164500	159500
16	174400	181000	189000	189000	200600	196400	196800	197700	185300	172200	164800	159300
17	174600	181900	188900	188900	199900	196300	197000	197700	183800	172300	165300	159000
18	174800	182600	189000	189100	199000	196300	197200	197700	182700	172700	165500	158700
19	175100	183400	189000	189400	198200	196300	197200	197700	181800	172900	165300	158700
20	175300	184200	189100	189700	198700	196100	197100	197900	181500	172600	165300	158500
21	175100	185000	188900	189800	199200	195500	197000	197900	181500	172000	165300	158300
22	174600	185700	188800	190100	199500	195100	197000	198000	180900	171400	165300	158200
23	174100	186400	188600	190300	199400	194600	196900	197900	179600	171300	165400	158200
24	172800	187000	189000	190500	199400	194700	196900	197900	178900	171200	165300	157900
25	172800	187800	189100	190400	199000	194600	196700	197900	178500	170800	165000	158000
26	173300	188600	189100	190500	198900	194600	196700	198000	178100	170100	165000	157800
27	173400	189400	188700	190600	199000	194600	196500	198000	178000	169300	165100	157600
28	173300	190200	188400	191200	199100	194300	196700	198000	178300	169100	165000	157600
29	173000	190700	188300	191600	199500	194300	196600	198000	178100	168700	164300	157600
30	173000	191500	188200	192000	---	194300	196400	198100	178000	168300	164000	157500
31	173500	---	188400	192400	---	194700	---	198200	---	168000	163500	---
MAX	175300	191500	192200	193200	200900	202400	197200	198200	198200	177300	168300	163300
MIN	172000	173900	188200	188600	192700	194300	195000	195700	178000	168000	163500	157500
a	550.42	559.20	557.74	559.65	562.95	560.73	561.53	562.35	552.65	547.56	545.23	541.99
b	+1800	+18000	-3100	+4000	+7100	-4800	+1700	+1800	-20200	-10000	-4500	-6000
c	880	330	174	120	416	444	798	1406	1287	1372	1457	995
d	15862	11809	11803	11065	8236	10295	18942	19151	17375	17755	16852	15473
CAL YR 1991	b	+31300										
WTR YR 1992	b	-14200										

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by East Bay Municipal Utility District; not reviewed by U.S. Geological Survey.

d Diversion, in acre-feet, from Pardee Reservoir to East Bay Municipal Utility District and to Jackson Valley Irrigation District provided by East Bay Municipal Utility District; not reviewed by U.S. Geological Survey.

11322300 CAMANCHE RESERVOIR NEAR CLEMENTS, CA

LOCATION.--Lat 38°13'31", long 121°01'17", in NE 1/4 SE 1/4 sec.6, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, at Camanche Dam on the Mokelumne River, 4.3 mi northeast of Clements.

DRAINAGE AREA.--621 mi².

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

REVISED RECORDS.--WDR CA-85-3: 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 18, 1963. Usable capacity, 430,300 acre-ft between elevations 104.00 ft, invert of emergency valve release, and 235.50 ft, spillway crest. Dead storage, 534 acre-ft. Camanche Reservoir provides holdover storage to meet downstream water requirements and flood control on the Mokelumne River. Prior to July 1, 1984, records, including extremes, represent total contents at 2400 hours. Records from July 1, 1984, through July 24, 1989, including extremes, represent total contents at 0800 hours. Records from July 25, 1989, including extremes, represent total contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records provided by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 439,100 acre-ft, Feb. 22, 1986, elevation, 236.57 ft; minimum since reservoir first filled, 8,530 acre-ft, Oct. 5, 1988, elevation, 124.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 148,000 acre-ft, Mar. 27-29, elevation, 188.10 ft; minimum, 106,600 acre-ft, Dec. 1, elevation, 177.41 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey provided by East Bay Municipal Utility District in 1964)

120	4,970	170	82,600
130	13,800	190	156,200
140	25,000	220	320,900
150	38,900	235.5	430,900
160	57,100	240	465,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113700	120700	106600	118600	115800	126100	147200	134500	115600	116100	115200	112400
2	113800	120800	106800	118200	115500	125700	146900	133900	115300	116400	114700	112600
3	114000	120100	108100	117900	115200	125700	146700	133200	115400	116300	115000	112600
4	114100	119300	109800	117700	115000	125700	146500	132600	115500	115700	115600	112600
5	114100	118400	110800	118100	114700	126200	146200	132200	115400	115100	116000	112600
6	114100	117900	111800	117500	114300	127700	146000	131700	115100	115500	116300	112600
7	114300	117400	112200	117600	113900	128800	145800	131000	114700	116000	116300	112600
8	114300	116500	112400	117800	113500	129900	145400	130200	114500	116600	115900	112600
9	114300	115500	112500	118400	113100	130800	144700	129500	115100	117500	115500	112600
10	114500	115000	112600	118800	113000	133000	144100	128800	115100	117800	115500	112700
11	114400	114800	112900	119400	113400	135000	143500	128300	115000	117400	115700	112700
12	114500	114700	113000	119900	113800	136900	143300	127700	115200	116900	116100	112700
13	114500	114200	113300	120200	114200	138600	142600	127000	114600	117500	116500	112700
14	114500	113900	113700	120800	114300	139700	141900	126400	114000	118400	116500	112700
15	114500	113600	114100	120900	115900	140700	141200	125800	114100	118700	115900	112700
16	114600	113000	114400	121600	117200	141900	140800	125200	114500	118200	115400	112700
17	114700	112300	114900	121400	118900	142700	140500	124600	114900	117700	114900	112700
18	114700	112400	115300	121200	120000	143200	140200	124000	115200	117200	114600	112800
19	114700	111700	115600	120900	121100	143700	139800	123500	115500	116800	114300	112800
20	114800	111500	115800	120700	122000	144400	139500	122800	115200	117000	114100	112900
21	115400	111200	116100	120200	122400	145100	139100	122300	114700	117300	114000	112900
22	115900	110700	116500	119600	122800	146100	138800	121700	114700	117500	113800	112900
23	116500	110200	116900	119200	123200	146900	138400	121100	115100	117500	113700	113000
24	117100	109600	116900	118700	123700	147200	138000	120500	115400	117000	113600	113000
25	118100	109400	117100	118000	124000	147600	137600	119900	115700	116500	113300	113000
26	119200	109100	117400	117800	124400	147700	137200	119300	116000	116000	113000	113100
27	119700	108600	118000	117300	124900	148000	136700	118700	115500	115800	112600	113100
28	120200	108000	118700	117100	125300	148000	136300	118100	115100	115300	112900	113200
29	120700	107600	119200	117000	125700	148000	135700	117400	115400	115500	112700	113200
30	121000	107100	119400	116500	---	147800	135100	116800	115700	115500	112600	113200
31	121100	---	118900	116000	---	147500	---	116200	---	115600	112400	---
MAX	121100	120800	119400	121600	125700	148000	147200	134500	116000	118700	116500	113200
MIN	113700	107100	106600	116000	113000	125700	135100	116200	114000	115100	112400	112400
a	181.40	177.56	180.81	180.03	182.59	187.97	184.98	180.07	179.95	179.93	179.04	179.27
b	+7400	-14000	+11800	-2900	+9700	+21800	-12400	-18900	-500	-100	-3200	+800
c	1760	850	410	270	520	680	1630	2940	2600	3020	2880	2220

CAL YR 1991 b -31100

WTR YR 1992 b -500

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by East Bay Municipal Utility District; not reviewed by U.S. Geological Survey.

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA

LOCATION.--Lat 38°13'14", long 121°02'19", in NW 1/4 NW 1/4 sec.7, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, on left bank 0.7 mi downstream from Murphy Creek, 1.0 mi downstream from Camanche Dam, and 3.4 mi northeast of Clements.

DRAINAGE AREA.--627 mi².

PERIOD OF RECORD.--October 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A and 1735. Prior to October 1961, published as "near Clements".

CHEMICAL DATA: Water years 1906-7, 1965-66. Published as "at Clements" in 1906-07.

WATER TEMPERATURE: Water years 1962-68, 1970-76.

SEDIMENT DATA: Water years 1956-70. Prior to 1962 water year, published as "near Clements".

REVISED RECORDS.--WSP 751: Drainage area. WSP 881: 1905-09 (yearly summaries only). WSP 1445: 1911, 1917(M), 1925(M).

GAGE.--Water-stage recorder. Datum of gage is 82.71 ft above National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1961.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Camanche Reservoir (station 11322300) 1 mi upstream beginning December 1963, Salt Springs Reservoir (station 11313500) beginning March 1931, Pardee Reservoir (station 11320000) beginning March 1929, and several small reservoirs. East Bay Municipal Utility District aqueducts, maximum capacity 511 ft³/s with Pardee Reservoir full, are the largest of several diversions upstream from the station. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft³/s, Nov. 21, 1950, gage height, 24.40 ft, site and datum then in use; no flow on several days in 1924. Maximum discharge since construction of Camanche Dam in 1963, 6,060 ft³/s, Feb. 19, 1986, gage height, 11.21 ft; minimum daily, 23 ft³/s, Oct. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 530 ft³/s, Feb. 15, gage height, 4.46 ft; minimum daily, 85 ft³/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	315	189	148	174	179	307	271	258	268	289	156
2	93	495	189	147	174	168	340	271	268	278	289	119
3	88	493	189	147	176	182	312	271	277	281	278	119
4	86	492	189	147	177	189	288	267	287	281	272	119
5	86	493	187	149	177	198	289	268	283	281	272	120
6	86	492	186	147	174	209	290	266	270	274	272	127
7	86	495	187	147	177	192	289	266	271	269	272	134
8	85	499	186	147	173	189	291	267	271	270	272	132
9	86	499	186	145	174	188	291	254	271	280	272	131
10	86	497	190	144	176	187	290	269	276	287	272	131
11	87	355	192	144	190	184	290	281	289	288	269	130
12	89	185	192	144	196	179	293	287	299	286	261	131
13	89	179	192	142	186	178	282	288	310	288	255	131
14	89	175	192	141	203	178	270	284	305	289	247	132
15	89	180	191	137	302	179	277	268	292	289	247	132
16	89	178	167	156	208	186	174	267	285	289	247	128
17	89	179	154	176	201	185	164	267	289	290	254	120
18	89	178	154	175	193	184	153	265	299	295	256	113
19	89	181	154	163	197	184	152	257	297	300	256	110
20	89	181	154	171	213	183	153	247	286	305	268	110
21	89	180	154	175	196	183	161	248	288	323	272	110
22	89	181	154	171	193	183	175	246	289	328	272	110
23	89	181	153	171	192	182	173	260	289	326	272	113
24	90	181	151	172	189	182	174	275	290	326	267	118
25	89	181	151	169	191	179	174	275	284	325	267	119
26	99	181	151	178	193	181	181	270	300	325	262	119
27	93	181	151	175	188	185	209	262	307	331	258	119
28	89	181	151	171	182	184	225	253	308	334	257	120
29	89	183	151	172	180	214	239	255	294	328	256	124
30	89	188	151	175	---	287	263	254	277	316	257	122
31	91	---	151	177	---	288	---	252	---	309	228	---
TOTAL	2776	8559	5289	4923	5545	5949	7169	8231	8609	9259	8188	3699
MEAN	89.5	285	171	159	191	192	239	266	287	299	264	123
MAX	110	499	192	178	302	288	340	288	310	334	289	156
MIN	85	175	151	137	173	168	152	246	258	268	228	110
AC-FT	5510	16980	10490	9760	11000	11800	14220	16330	17080	18370	16240	7340

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	450	543	710	745	883	913	1193	1608	1458	557	478	467
MAX	670	3188	4568	3529	2473	3155	3451	4217	3164	1194	691	678
(WY)	1939	1951	1951	1956	1938	1938	1938	1952	1952	1952	1962	1958
MIN	58.0	63.1	95.6	112	77.6	132	136	179	241	296	267	108
(WY)	1932	1932	1960	1962	1948	1931	1961	1961	1931	1961	1961	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1963

ANNUAL MEAN	832
HIGHEST ANNUAL MEAN	1669
LOWEST ANNUAL MEAN	221
HIGHEST DAILY MEAN	26900
LOWEST DAILY MEAN	35
ANNUAL SEVEN-DAY MINIMUM	49
INSTANTANEOUS PEAK FLOW	28800
INSTANTANEOUS PEAK STAGE	24.40
ANNUAL RUNOFF (AC-FT)	603000
10 PERCENT EXCEEDS	1890
50 PERCENT EXCEEDS	551
90 PERCENT EXCEEDS	213

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	616	530	503	806	835	935	909	1009	920	725	620	568
MAX	2061	2157	2938	2680	2814	5117	3726	3889	3197	2788	1412	1377
(WY)	1966	1984	1984	1980	1983	1986	1983	1982	1983	1983	1983	1983
MIN	33.3	83.6	78.7	83.6	60.8	77.9	125	170	254	249	235	123
(WY)	1978	1989	1967	1967	1967	1989	1991	1988	1977	1991	1991	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1965 - 1992

ANNUAL TOTAL	64731	78196	
ANNUAL MEAN	177	214	748
ANNUAL MEAN a	161	240	787
HIGHEST ANNUAL MEAN			2400
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	499	Nov 8	499
LOWEST DAILY MEAN	85	Oct 8	85
ANNUAL SEVEN-DAY MINIMUM	86	Oct 4	86
INSTANTANEOUS PEAK FLOW			530
INSTANTANEOUS PEAK STAGE			4.46
ANNUAL RUNOFF (AC-FT)	128400	155100	541600
ANNUAL RUNOFF (AC-FT) a	116600	174400	570200
10 PERCENT EXCEEDS	287	296	1790
50 PERCENT EXCEEDS	154	189	454
90 PERCENT EXCEEDS	89	113	104

a Adjusted for change in contents and evaporation from Camanche Reservoir.

11325000 WOODBRIDGE CANAL AT WOODBRIDGE, CA

LOCATION.--Lat 38°09'07", long 121°18'00", in NE 1/4 SE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County,

Hydrologic Unit 18040005, on right bank at Woodbridge, at point of diversion from Woodbridge Reservoir.

PERIOD OF RECORD.--April 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.18 ft above National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). Prior to Mar. 15, 1931, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.--Records good. Discharge computed from records of gate openings and effective head as shown by differential recorder. Canal diverts from Woodbridge Reservoir on Mokelumne River for irrigation south and west of Woodbridge. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 482 ft³/s, July 8, 1953; no flow at times in each year. Lowest daily mean, -64 ft³/s, May 4, 1938 (the water level in Woodbridge Reservoir was drawn down and water from the canal drained back into the reservoir. In order that the figures may represent the net diverted flow, the reverse flow was indicated by negative figures).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	149	129	150	157	120
2	.00	.00	.00	.00	.00	.00	.00	155	132	149	146	41
3	.00	.00	.00	.00	.00	.00	.00	157	135	143	130	.00
4	.00	.00	.00	.00	.00	.00	.00	157	136	139	129	.00
5	.00	.00	.00	.00	.00	.00	.00	154	135	141	132	.00
6	.00	.00	.00	.00	.00	.00	e44	156	140	143	132	.00
7	.00	.00	.00	.00	.00	.00	47	160	139	148	132	.00
8	.00	.00	.00	.00	.00	.00	49	161	134	150	132	.00
9	.00	.00	.00	.00	.00	.00	49	160	135	149	127	.00
10	.00	.00	.00	.00	.00	.00	54	153	147	145	127	.00
11	.00	.00	.00	.00	.00	.00	62	146	e156	141	125	.00
12	.00	.00	.00	.00	.00	.00	67	151	e163	142	125	.00
13	.00	.00	.00	.00	.00	.00	67	155	160	145	127	.00
14	.00	.00	.00	.00	.00	.00	66	158	166	142	124	.00
15	.00	.00	.00	.00	.00	.00	57	158	172	146	124	.00
16	.00	.00	.00	.00	.00	.00	49	158	179	150	121	.00
17	.00	.00	.00	.00	.00	.00	49	157	176	151	116	.00
18	.00	.00	.00	.00	.00	.00	50	152	176	155	119	.00
19	.00	.00	.00	.00	.00	.00	48	147	168	159	122	.00
20	.00	.00	.00	.00	.00	.00	44	138	158	158	121	.00
21	.00	.00	.00	.00	.00	.00	50	136	154	163	121	.00
22	.00	.00	.00	.00	.00	.00	54	135	149	170	125	.00
23	.00	.00	.00	.00	.00	.00	62	132	152	173	128	.00
24	.00	.00	.00	.00	.00	.00	69	130	150	175	128	.00
25	.00	.00	.00	.00	.00	.00	67	130	150	170	128	.00
26	.00	.00	.00	.00	.00	.00	68	129	148	166	132	.00
27	.00	.00	.00	.00	.00	.00	86	130	148	168	132	.00
28	.00	.00	.00	.00	.00	.00	118	125	150	168	132	.00
29	.00	.00	.00	.00	.00	.00	128	128	150	166	131	.00
30	.00	.00	.00	.00	---	.00	135	133	149	167	131	.00
31	.00	---	.00	.00	---	.00	---	128	---	160	127	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	1639.00	4518	4536	4792	3983	161.00
MEAN	.000	.000	.000	.000	.000	.000	54.6	146	151	155	128	5.37
MAX	.00	.00	.00	.00	.00	.00	135	161	179	175	157	120
MIN	.00	.00	.00	.00	.00	.00	.00	125	129	139	116	.00
AC-FT	.00	.00	.00	.00	.00	.00	3250	8960	9000	9500	7900	319

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1992, BY WATER YEAR (WY)

	109	26.5	5.07	.26	.21	23.3	117	215	266	276	258	184
MEAN	109	26.5	5.07	.26	.21	23.3	117	215	266	276	258	184
MAX	218	137	83.5	5.95	5.55	158	295	376	401	412	378	294
(WY)	1955	1959	1959	1931	1931	1953	1953	1950	1950	1953	1953	1948
MIN	.000	-.14	.000	.000	.000	.000	.000	76.5	95.9	63.0	66.8	5.37
(WY)	1978	1939	1927	1927	1927	1927	1927	1977	1926	1926	1926	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1926 - 1992	
ANNUAL TOTAL	19331.00		19629.00			
ANNUAL MEAN	53.0		53.6		125	
HIGHEST ANNUAL MEAN					206	
LOWEST ANNUAL MEAN					49.2	
HIGHEST DAILY MEAN	234	Jun 28	179	Jun 16	482	Jul 8 1953
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	-64	May 4 1938
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	-6.3	Oct 31 1938
ANNUAL RUNOFF (AC-FT)	38340		38930		90410	
10 PERCENT EXCEEDS	147		155		316	
50 PERCENT EXCEEDS	.00		.00		101	
90 PERCENT EXCEEDS	.00		.00		.00	

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°09'31", long 121°18'09", in NW 1/4 NE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, 0.4 mi downstream from county highway bridge, and 0.5 mi downstream from dam and canal intake of Woodbridge Irrigation District.

DRAINAGE AREA.--661 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year (low-flow records only 1924-25).

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.9 ft above National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). See WSP 2130 for history of changes prior to July 26, 1968.

REMARKS.--No estimated daily discharges. Records good. Concerning regulation and diversions see REMARKS for Mokelumne River below Camanche Dam (station 11323500). Between Woodbridge and Camanche Dam there are many additional diversions for irrigation, including Woodbridge Canal (station 11325000). See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s, Nov. 22, 1950, gage height, 29.58 ft, from rating curve extended above 6,200 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.23 ft³/s, Nov. 15, 1977. Maximum discharge since construction of Camanche Dam in 1963, 5,340 ft³/s, Mar. 8, 1986, gage height, 23.19 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 808 ft³/s, Oct. 31, gage height, 10.65 ft; minimum daily, 24 ft³/s, Oct. 23, 24 and Apr. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	300	135	106	140	135	129	29	34	44	38	32
2	40	279	137	106	137	129	133	28	32	39	37	31
3	39	379	137	106	134	126	135	29	32	39	44	32
4	36	395	137	107	136	135	136	32	31	40	45	33
5	36	398	136	143	138	169	145	38	32	40	38	32
6	34	401	137	117	144	183	142	37	34	48	34	32
7	32	400	162	115	147	164	145	35	35	45	33	32
8	32	399	140	107	140	148	143	33	35	39	32	32
9	33	403	138	105	133	141	143	32	35	34	32	33
10	33	408	138	105	148	139	146	31	35	28	32	33
11	32	407	141	104	190	138	141	30	35	28	33	33
12	30	279	142	101	192	137	158	32	36	27	33	33
13	28	178	144	103	171	134	156	36	36	33	33	33
14	27	154	143	105	178	138	140	32	41	34	33	33
15	27	144	142	105	280	140	137	34	49	31	33	33
16	28	144	142	103	237	139	112	34	41	31	32	34
17	28	147	121	122	177	140	71	33	38	31	31	34
18	28	146	110	139	160	137	58	33	37	31	31	35
19	26	141	107	137	155	137	52	34	37	31	31	35
20	25	143	106	127	169	136	41	35	38	29	30	35
21	26	142	106	135	163	136	24	35	37	28	30	35
22	25	138	107	142	148	137	29	34	37	28	30	34
23	24	138	105	139	143	136	35	33	38	32	31	33
24	24	136	105	138	139	134	33	32	39	37	31	33
25	28	137	105	139	136	134	29	32	39	40	30	33
26	101	137	105	137	139	132	29	33	38	40	30	33
27	56	135	107	139	139	133	27	35	38	37	30	32
28	40	134	122	153	135	134	28	35	39	36	30	32
29	36	134	119	138	134	133	26	35	51	37	30	32
30	34	133	109	137	---	136	25	35	54	38	30	32
31	284	---	107	136	---	128	---	34	---	37	31	---
TOTAL	1316	7009	3892	3796	4582	4318	2748	1030	1133	1092	1018	989
MEAN	42.5	234	126	122	158	139	91.6	33.2	37.8	35.2	32.8	33.0
MAX	284	408	162	153	280	183	158	38	54	48	45	35
MIN	24	133	105	101	133	126	24	28	31	27	30	31
AC-FT	2610	13900	7720	7530	9090	8560	5450	2040	2250	2170	2020	1960

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	277	469	655	713	870	848	989	1282	1121	200	133	198
MAX	571	2529	4283	3435	2341	3032	3278	3990	2958	728	309	400
(WY)	1939	1951	1951	1956	1938	1938	1938	1952	1952	1952	1931	1958
MIN	3.76	13.6	29.4	56.6	45.0	34.5	7.02	11.3	11.3	17.1	17.2	10.0
(WY)	1932	1932	1960	1962	1948	1961	1931	1931	1931	1955	1955	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1963

ANNUAL MEAN	644
HIGHEST ANNUAL MEAN	1507
LOWEST ANNUAL MEAN	62.2
HIGHEST DAILY MEAN	19600
LOWEST DAILY MEAN	2.4
ANNUAL SEVEN-DAY MINIMUM	2.4
INSTANTANEOUS PEAK FLOW	27000
INSTANTANEOUS PEAK STAGE	29.58
ANNUAL RUNOFF (AC-FT)	466700
10 PERCENT EXCEEDS	1680
50 PERCENT EXCEEDS	346
90 PERCENT EXCEEDS	28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	468	480	437	739	762	812	706	674	526	315	238	311
MAX	1716	1979	2825	2448	2698	4711	3641	3522	2736	2372	982	1067
(WY)	1966	1984	1984	1980	1970	1986	1983	1982	1983	1983	1983	1983
MIN	2.12	23.3	38.5	33.1	20.2	9.34	9.02	8.66	8.34	9.24	6.58	5.13
(WY)	1978	1978	1990	1977	1977	1989	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1965 - 1992

ANNUAL TOTAL	21477	32923	
ANNUAL MEAN	58.8	90.0	538
HIGHEST ANNUAL MEAN			2170
LOWEST ANNUAL MEAN			21.8
HIGHEST DAILY MEAN	408	Nov 10	408
LOWEST DAILY MEAN	17	Mar 21	24
ANNUAL SEVEN-DAY MINIMUM	20	Aug 2	25
INSTANTANEOUS PEAK FLOW			808
INSTANTANEOUS PEAK STAGE			10.65
ANNUAL RUNOFF (AC-FT)	42600	65300	389600
10 PERCENT EXCEEDS	137	147	1570
50 PERCENT EXCEEDS	33	42	170
90 PERCENT EXCEEDS	24	30	23

11325500 MOKELUMNE RIVER AT WOODBRIDGE, 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 1952-58, 1975-77.

WATER TEMPERATURE: Water years 1951-58, 1961-1986.

SEDIMENT DATA: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL DATA: March 1951 to September 1958.

SPECIFIC CONDUCTANCE: March 1951 to September 1958, October 1974 to September 1977.

WATER TEMPERATURE: March 1951 to September 1958, November 1960 to September 1986.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (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, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC 17...	0945	121	60	7.5	7.5	3.5	761	10.7	89	--	61
MAR 17...	1045	141	49	7.5	11.5	4.9	761	10.0	92	130	190
JUN 17...	0900	38	49	7.4	18.0	5.1	760	7.8	83	83	400
JUL 20...	1055	30	52	6.8	22.5	--	760	9.2	107	--	--
SEP 17...	1110	34	56	7.0	22.0	4.0	762	8.2	94	11	160

DATE	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)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)
DEC 17...	21	1	5.4	1.7	3.4	25	0.3	1.1	24	20
MAR 17...	17	1	4.5	1.5	3.1	27	0.3	0.90	20	17
JUN 17...	18	2	4.8	1.5	3.0	25	0.3	0.90	20	16
SEP 17...	16	0	3.9	1.4	3.1	29	0.3	1.0	20	16

DATE	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, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
DEC 17...	3.6	3.6	<0.10	9.3	--	41	0.08	0.010	<0.010	0.300
MAR 17...	3.0	3.4	0.20	5.9	31	33	0.04	<0.010	<0.010	0.099
JUN 17...	2.9	4.2	<0.10	8.0	31	36	0.04	<0.010	<0.010	0.160
SEP 17...	2.4	3.7	<0.10	6.8	44	32	0.06	<0.010	<0.010	<0.050

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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 ORTHODIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHODIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
DEC 17...	0.300	0.020	0.010	0.20	0.020	<0.010	0.020	0.020	20	24
MAR 17...	0.097	0.020	0.020	<0.20	<0.010	<0.010	<0.010	<0.010	30	21
JUN 17...	0.160	0.030	0.020	<0.20	0.020	<0.010	0.020	<0.010	50	23
SEP 17...	<0.050	0.020	0.020	0.20	0.010	0.020	<0.010	<0.010	10	17

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)
DEC 17...	<3	26	<4	7	<10	<1	<1	<1.0	59	<6
MAR 17...	<3	54	<4	5	<10	<1	<1	<1.0	49	<6
JUN 17...	<3	130	<4	10	<10	<1	<1	<1.0	52	<6
SEP 17...	<3	41	<4	5	<10	<1	<1	<1.0	48	<6

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 WATER WHOLE FIELD (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- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
17...*	1030	2.80	40.0	55	7.5	11.5	761	10.1	93	12	83
17...*	1032	2.50	33.5	53	7.5	11.5	761	10.0	92	12	94
17...*	1034	3.40	29.5	54	7.6	11.5	761	10.0	92	12	96
17...*	1035	2.90	18.5	53	7.6	11.5	761	10.1	93	10	96
17...*	1036	1.55	10.0	50	7.5	11.5	761	10.0	92	10	94
SEP											
17...*	1045	1.40	5.10	56	6.9	22.0	762	8.2	94	5	--
17...*	1046	1.70	11.6	56	6.9	22.0	762	8.2	94	7	--
17...*	1048	1.30	17.4	56	7.0	22.0	762	8.1	93	--	--
17...*	1049	1.70	22.9	56	7.0	22.0	762	8.2	94	7	--
17...*	1050	1.40	29.0	56	7.0	22.0	762	8.2	94	7	--

* Instantaneous streamflow at the time of cross-sectional measurements: Mar. 17, 141 ft³/s; Sept. 17, 34 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 17...	0945	121	7.5	11	3.6	77
MAR 17...	1045	141	11.5	11	4.2	93
JUN 17...	0900	38	18.0	5	0.51	99
SEP 17...	1110	34	22.0	7	0.64	--

11333000 CAMP CREEK NEAR SOMERSET, CA

LOCATION.--Lat 38°39'26", long 120°39'46", in SW 1/4 SW 1/4 sec.4, T.9 N., R.12 E., El Dorado County, Hydrologic Unit 18040013, on right bank 0.2 mi upstream from mouth, 1.3 mi northeast of Somerset, and 5.6 mi south of Camino.

DRAINAGE AREA.--62.6 mi².

PERIOD OF RECORD.--February to May 1924 (published as "near Pleasant Valley"), October 1954 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Feb. 1 to May 31, 1924, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. Water is released from Jenkinson Lake through Camino conduit for irrigation and domestic supply in North Fork Cosumnes and South Fork American River basins. Seepage from North Fork Extension Ditch siphon could constitute a major part or all the flow at low stages. Some water is released from Jenkinson Lake for irrigation downstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,680 ft³/s, Feb. 16, 1982, gage height, 14.50 ft, from rating curve extended above 5,000 ft³/s; no flow Aug. 7-18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79 ft³/s, Oct. 26, gage height, 2.98 ft; minimum daily, 0.90 ft³/s, Aug. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	5.3	3.3	3.9	3.5	5.6	9.4	5.6	5.5	10	1.8	1.3
2	1.7	5.0	3.3	3.6	3.7	6.3	9.6	5.6	5.3	7.4	1.7	1.3
3	1.7	4.8	3.3	3.4	3.5	7.4	8.9	5.3	5.2	6.1	1.6	1.2
4	1.7	4.6	3.1	3.4	3.3	6.7	8.3	5.1	5.2	5.7	1.5	1.3
5	1.7	4.6	3.1	9.5	3.3	9.9	7.6	5.1	5.0	5.1	1.5	1.3
6	1.7	4.6	3.1	8.9	3.3	28	7.0	5.1	4.8	4.8	1.5	1.3
7	1.7	4.6	6.6	10	3.5	17	6.6	5.1	4.7	4.4	1.5	1.3
8	1.7	4.6	6.1	9.0	3.8	12	6.3	5.1	4.7	4.2	1.4	1.3
9	1.7	4.6	4.0	5.7	3.8	10	6.0	4.9	4.6	3.9	1.3	1.3
10	1.7	4.6	3.5	4.7	4.6	8.1	6.0	4.6	4.4	3.7	1.3	1.3
11	1.7	4.6	3.4	4.3	11	8.5	5.6	4.4	4.3	3.6	1.2	1.3
12	1.6	4.6	3.3	4.1	13	9.4	6.0	4.4	4.3	3.9	1.2	1.2
13	1.6	4.6	3.2	3.9	18	8.7	7.9	4.4	4.4	4.2	1.1	1.2
14	1.6	4.2	3.1	3.9	12	9.0	5.8	4.4	4.5	5.3	1.1	1.2
15	1.6	4.3	3.1	3.8	30	10	5.4	4.4	5.1	4.7	1.1	1.2
16	1.6	4.2	3.1	3.8	29	29	5.2	4.0	5.6	4.2	1.1	1.2
17	1.6	5.3	3.1	3.8	29	21	6.0	3.7	5.9	4.0	1.0	1.1
18	1.7	9.9	4.2	3.8	21	16	5.5	3.6	5.3	3.7	.98	1.1
19	1.7	5.0	6.9	3.8	22	13	5.0	3.5	4.9	3.6	.96	1.1
20	1.7	4.1	4.4	3.6	47	11	4.7	3.8	4.5	3.4	.94	1.1
21	1.5	4.0	3.8	3.4	29	11	4.4	3.7	4.1	3.0	.91	1.1
22	1.5	3.7	3.5	3.3	27	11	4.2	3.6	4.0	2.9	.92	1.1
23	1.6	3.4	3.4	3.2	19	12	4.0	3.6	3.9	2.7	.90	1.1
24	1.7	3.6	3.3	3.1	14	9.4	4.1	3.4	3.8	2.5	1.0	1.1
25	1.9	3.5	3.3	3.2	11	9.2	4.0	3.3	3.8	2.5	1.1	1.1
26	34	3.4	3.3	3.4	8.9	21	4.0	3.3	6.6	2.4	1.1	1.1
27	35	4.2	3.2	3.4	7.5	15	3.8	5.1	5.1	2.3	1.2	1.1
28	13	4.8	3.6	3.7	6.5	12	4.0	6.6	4.8	2.2	1.2	1.0
29	8.1	3.6	4.8	3.8	5.9	9.8	5.6	6.4	5.3	2.1	1.2	1.0
30	6.4	3.3	5.6	3.5	---	9.3	5.6	6.1	11	1.9	1.2	1.1
31	5.7	---	4.3	3.4	---	10	---	5.8	---	1.9	1.3	---
TOTAL	143.8	135.6	119.3	138.3	397.1	376.3	176.5	143.0	150.6	122.3	37.81	35.4
MEAN	4.64	4.52	3.85	4.46	13.7	12.1	5.88	4.61	5.02	3.95	1.22	1.18
MAX	35	9.9	6.9	10	47	29	9.6	6.6	11	10	1.8	1.3
MIN	1.5	3.3	3.1	3.1	3.3	5.6	3.8	3.3	3.8	1.9	.90	1.0
AC-FT	285	269	237	274	788	746	350	284	299	243	75	70
a	-2418	-566	-326	-211	+3061	+4670	+2876	-954	-2456	-2627	-2896	-2742
b	2424	619	615	615	445	369	464	1534	1994	2242	2423	2483
c	140	30	22	16	24	48	132	236	226	247	323	210

a Change in contents, in acre-feet, in Jenkinson Lake.

b Diversion, in acre-feet, from Jenkinson Lake provided by U.S. Bureau of Reclamation.

c Evaporation, in acre-feet, from Jenkinson Lake provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

11333000 CAMP CREEK NEAR SOMERSET, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.26	8.88	45.6	77.3	106	114	139	100	22.5	10.9	6.94	5.20
MAX	32.9	71.3	469	456	820	745	621	452	156	34.7	23.7	17.2
(WY)	1983	1984	1984	1970	1986	1983	1982	1967	1967	1967	1972	1982
MIN	.71	1.62	2.01	2.82	2.43	2.84	1.59	2.42	.57	.51	.12	.67
(WY)	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992	
ANNUAL TOTAL	2227.3		1976.01			
ANNUAL MEAN	6.10		5.40		53.3	
ANNUAL MEAN d	30.4		23.7		81.0	
HIGHEST ANNUAL MEAN					215	
LOWEST ANNUAL MEAN					1.89	
HIGHEST DAILY MEAN	55	Mar 25	47	Feb 20	5640	Feb 19 1986
LOWEST DAILY MEAN	1.5	Oct 21	.90	Aug 23	.00	Aug 7 1977
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 22	.94	Aug 17	.00	Aug 7 1977
INSTANTANEOUS PEAK FLOW			79	Oct 26	8680	Feb 16 1982
INSTANTANEOUS PEAK STAGE			2.98	Oct 26	14.50	Feb 16 1982
ANNUAL RUNOFF (AC-FT)	4420		3920		38600	
ANNUAL RUNOFF (AC-FT) d	22000		17210		58680	
10 PERCENT EXCEEDS	11		10		150	
50 PERCENT EXCEEDS	4.2		4.0		7.5	
90 PERCENT EXCEEDS	1.7		1.2		2.8	

d Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

SAN JOAQUIN RIVER BASIN

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA

LOCATION.--Lat 38°30'01", long 121°02'39", in NW 1/4 SE 1/4 sec.36, T.8 N., R.8 E., Sacramento County, Hydrologic Unit 18040013, on downstream side of midstream pier of county bridge at Michigan Bar, 5.5 mi southwest of Latrobe, and 12 mi downstream from confluence of north and middle Forks of Cosumnes River.

DRAINAGE AREA.--536 mi².

PERIOD OF RECORD.--October 1907 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1953-80.

WATER TEMPERATURE: Water years 1963-79.

SEDIMENT DATA: Water years 1958-74.

REVISED RECORDS.--WSP 331: 1911-12. WSP 1315-A: 1908-9, 1911(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 168.09 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods with flows below 5 ft³/s, which are poor. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. See REMARKS for Camp Creek near Somerset (station 11333000) for diversion out of basin. Numerous small diversions upstream from station for irrigation and domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,100 ft³/s, Feb. 17, 1986, gage height, 14.76 ft, from rating curve extended above 34,000 ft³/s on basis of area-velocity study of peak flow; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1907 reached a stage of 16.3 ft, discharge unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	0545	*5,340	*7.08				

No flow for many days in August and September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	28	30	56	46	388	450	166	29	26	2.1	.00
2	1.4	25	27	46	48	366	429	157	27	43	1.7	.00
3	1.0	23	25	41	48	341	405	145	26	35	2.0	.00
4	1.6	22	26	40	47	337	394	133	23	27	1.8	.00
5	1.6	21	25	95	43	557	380	126	22	21	1.3	.00
6	1.0	20	24	151	42	2030	353	118	20	19	.49	.00
7	1.0	20	32	135	42	1420	325	108	19	17	.85	.00
8	1.8	20	47	134	45	790	305	109	21	15	.31	.00
9	1.7	20	52	106	51	592	290	105	18	13	.29	.00
10	1.4	19	41	80	89	491	276	98	16	12	.75	.00
11	1.9	19	33	69	400	441	262	89	17	10	.62	.00
12	1.9	19	30	61	673	419	290	82	17	9.2	.40	.00
13	1.8	19	28	55	594	399	360	76	15	9.3	e .08	.00
14	1.8	19	27	49	650	398	324	73	14	8.9	.00	.00
15	1.9	17	26	50	3010	462	290	70	16	8.1	.00	.00
16	1.8	17	25	49	1470	764	266	67	16	13	.00	.00
17	1.3	20	25	47	1290	1080	255	63	18	13	.00	.00
18	2.0	24	26	46	731	692	291	57	22	11	.00	.00
19	2.0	51	31	45	602	557	271	54	23	9.3	.00	.00
20	1.9	50	67	45	2410	488	248	51	20	9.6	.00	.00
21	1.6	36	54	44	1320	442	240	49	17	9.1	.00	.00
22	1.7	31	41	43	1130	446	236	48	15	8.0	.00	.00
23	2.4	30	38	42	881	492	214	45	14	6.0	.00	.00
24	2.4	31	36	40	663	430	200	40	14	5.9	.00	.00
25	2.6	30	34	40	531	388	193	40	12	5.0	.00	.00
26	13	28	32	43	464	545	188	36	12	4.3	.00	.00
27	203	28	31	42	429	565	184	34	10	4.3	.00	.00
28	121	28	38	43	411	498	179	31	12	3.9	.00	.00
29	61	31	48	45	395	459	174	31	17	3.4	.00	.00
30	41	32	66	47	---	437	174	33	19	2.5	.00	.00
31	32	---	75	47	---	483	---	30	---	2.8	.00	---
TOTAL	513.9	778	1140	1876	18555	18197	8446	2364	541	384.6	12.69	0.00
MEAN	16.6	25.9	36.8	60.5	640	587	282	76.3	18.0	12.4	.41	.000
MAX	203	51	75	151	3010	2030	450	166	29	43	2.1	.00
MIN	1.0	17	24	40	42	337	174	30	10	2.5	.00	.00
AC-FT	1020	1540	2260	3720	36800	36090	16750	4690	1070	763	25	.00

e Estimated.

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.5	146	432	861	1147	1155	1062	670	244	56.9	19.1	13.7
MAX	335	2493	3380	4181	6610	5255	3992	2218	1067	346	114	82.0
(WY)	1963	1951	1965	1911	1986	1983	1982	1983	1983	1983	1983	1983
MIN	.000	7.90	18.3	21.4	35.9	43.5	33.7	48.5	4.42	.096	.000	.000
(WY)	1978	1930	1977	1991	1991	1977	1977	1977	1924	1977	1908	1924

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1908 - 1992	
ANNUAL TOTAL	55271.47		52808.19			
ANNUAL MEAN	151		144		483	
HIGHEST ANNUAL MEAN					1687	
LOWEST ANNUAL MEAN					21.8	
HIGHEST DAILY MEAN	3540	Mar 25	3010	Feb 15	34400	Feb 17 1986
LOWEST DAILY MEAN	.68	Sep 30	.00	Aug 14	.00	Jul 25 1908
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 27	.00	Aug 14	.00	Jul 25 1908
INSTANTANEOUS PEAK FLOW			5340	Feb 15	45100	Feb 17 1986
INSTANTANEOUS PEAK STAGE			7.08	Feb 15	14.76	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	109600		104700		349700	
10 PERCENT EXCEEDS	416		441		1250	
50 PERCENT EXCEEDS	28		30		99	
90 PERCENT EXCEEDS	1.9		.00		6.5	

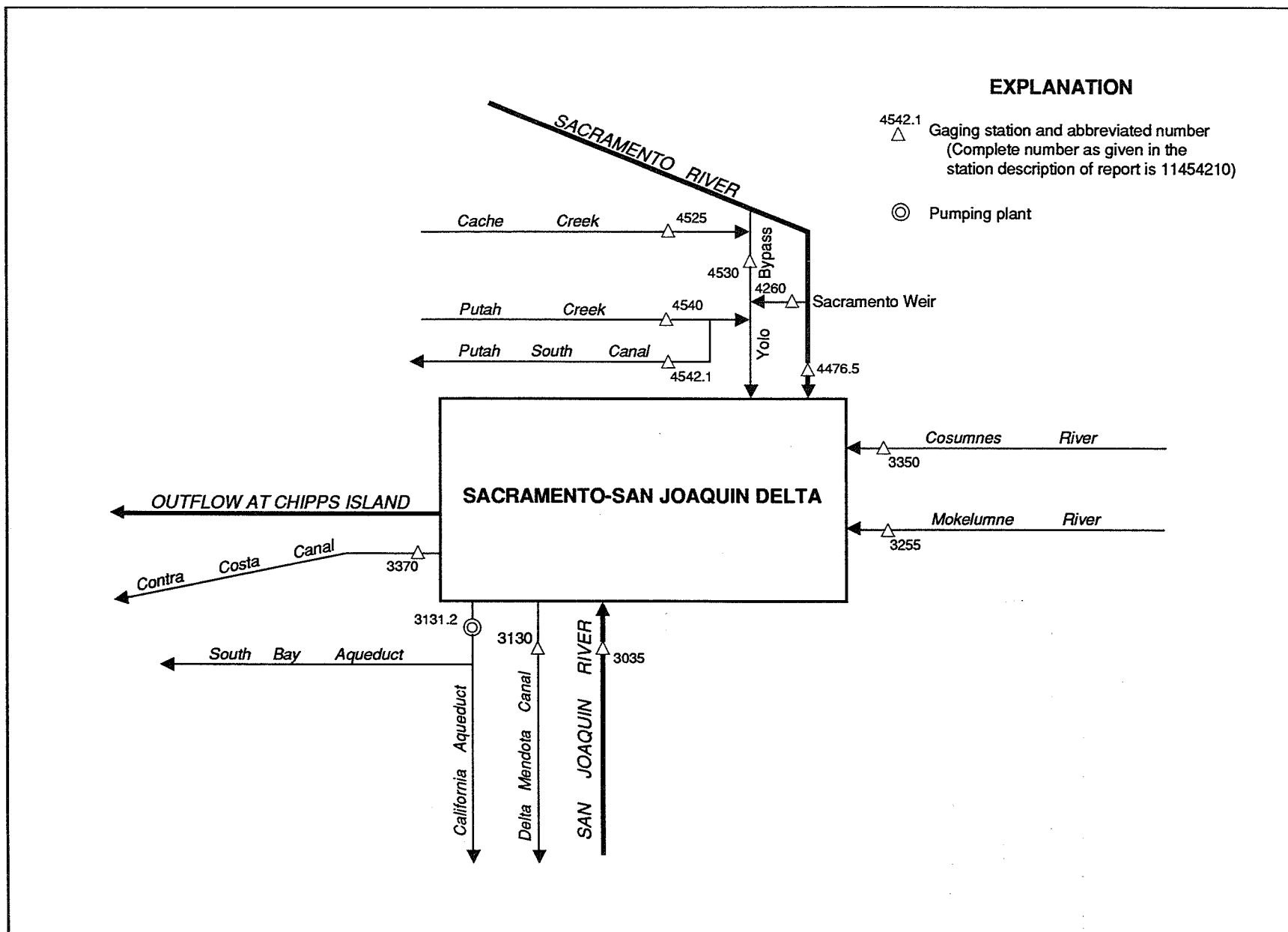


Figure 36. Principal inflows and diversions, Sacramento-San Joaquin Delta.

SACRAMENTO-SAN JOAQUIN DELTA, INFLOWS AND DIVERSIONS

LOCATION.--See schematic diagram of inflows and diversions, Sacramento-San Joaquin Delta.

PERIOD OF RECORD.--October 1971 to current year. Data for periods prior to October 1971 can be obtained from published records for stations tabulated below.

REMARKS.--Minor inflow streams and diversions are not included. Total for water year may not equal the sum of the individual months because of rounding.

COOPERATION.--Records for Delta-Mendota, Contra Costa, and Putah South Canals provided by U.S. Bureau of Reclamation; Records for California Aqueduct and Sacramento Weir spill provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.

SUMMARY OF PRINCIPAL INFLOWS AND DIVERSIONS IN THE
SACRAMENTO-SAN JOAQUIN DELTA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Inflows, in thousands of acre-feet												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Month Apr.	May	June	July	Aug.	Sept.	Water year
11303500 SAN JOAQUIN RIVER NEAR VERNALIS												
48.48	64.50	55.02	58.98	120.3	90.37	84.40	54.82	28.60	27.47	29.69	37.76	700.4
11325500 MOKELUMNE RIVER AT WOODBRIDGE												
2.61	13.90	7.72	7.53	9.09	8.56	5.45	2.04	2.25	2.17	2.02	1.96	65.30
11335000 COSUMNES RIVER AT MICHIGAN BAR												
1.02	1.54	2.26	3.72	36.80	36.09	16.75	4.69	1.07	.76	.02	.00	104.7
11426000 SACRAMENTO WEIR SPILL												
0	0	0	0	0	0	0	0	0	0	0	0	0
11447650 SACRAMENTO RIVER AT FREEPORT												
577.9	414.1	569.3	642.0	1499	1250	562.2	394.4	506.4	510.9	536.0	584.0	8046
11453000 YOLO BYPASS NEAR WOODLAND ¹												
0	0	0	0	571.2	11.52	0	0	0	0	0	0	582.7
11454000 PUTAH CREEK NEAR WINTERS												
12.83	4.73	4.18	3.71	2.49	2.64	12.30	34.15	32.65	35.12	33.11	20.75	198.7
TOTAL												
642.8	498.8	638.5	715.9	2239	1399	681.1	490.1	571.0	576.4	600.8	644.5	9698
Diversion, in thousands of acre-feet												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Month Apr.	May	June	July	Aug.	Sept.	Water year
11313000 DELTA-MENDOTA CANAL												
106.3	119.5	114.1	196.5	141.7	251.7	102.2	52.02	46.99	55.18	60.82	94.87	1342
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)												
208.3	63.97	78.59	185.3	202.9	386.0	70.76	43.02	56.14	23.11	91.12	164.8	1574
11337000 CONTRA COSTA CANAL												
9.33	6.54	6.92	6.38	5.26	4.56	8.56	11.40	11.35	11.84	12.25	10.15	104.5
11454210 PUTAH SOUTH CANAL												
9.98	2.53	2.12	1.75	1.65	1.57	10.90	31.55	27.68	29.37	27.38	17.63	164.1
TOTAL												
333.9	192.5	201.7	389.9	351.5	643.8	192.4	138.0	142.2	119.5	191.6	287.4	3184

¹Flow not computed below 1,000 ft³/s.

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-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1992

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (feet)	Discharge (ft ³ /s)
Tulare Lake basin							
11205680	Frazier Creek near Strathmore, CA	Lat 36°08'33", long 118°57'17", in NE 1/4 SE 1/4 sec.32, T.20 S., R.28 E., Tulare County, Hydrologic Unit 18030012, at culvert on county road J28, 5.9 mi east of Strathmore.	3.05	1974-92	2-15-92	5.30	2.9
11205690	Lewis Creek near Lindsay, CA	Lat 36°11'11", long 118°59'46", in NW 1/4 NE 1/4 sec.13, T.20 S., R.27 E., Tulare County, Hydrologic Unit 18030012, at culvert on Road 258, 0.2 mi downstream from unnamed tributary, and 7.0 mi southeast of Lindsay.	21.5	1969a, 1974-92	2-15-92	23.04	e280
11212000	Sand Creek near Orange Cove, CA	Lat 36°37'36", long 119°14'48", in SW 1/4 NW 1/4 sec.15, T.15 S., R.25 E., Tulare County, Hydrologic Unit 18030012, on right bank 3.8 mi east of Orange Cove.	31.6	1944-54, 1956d, 1967d, 1969d, 1971-84d, 1985-92	2-15-92	2.71	54

a Published as a miscellaneous measurement.

e Estimated.

d Computed as continuous record.

Miscellaneous sites

Discharge measurements in the following table were made at miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at miscellaneous sites during water year 1992

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
Pyramid and Winnemucca Lakes basin						
390954120103700 Truckee River at Rampart, near Tahoe City, CA	Pyramid Lake	Lat 39°09'54", long 120°10'37", in SW 1/4 NE 1/4 sec.11, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 2 mi downstream from Lake Tahoe, and about 2.2 mi west of Tahoe City.	--	1991	10-30-91	.68
391108120113900 Truckee River above Bear Creek, near Alpine Meadows, CA	Pyramid Lake	Lat 39°11'08", long 120°11'39", in SW 1/4 SW 1/4 sec.34, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1.7 mi southeast of Squaw Valley, and about 3.1 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	1.70 .76
391125120114900 Bear Creek at mouth, near Alpine Meadows, CA	Truckee River	Lat 39°11'25", long 120°11'49", in NW 1/4 SW 1/4 sec.34, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1.5 mi southeast of Squaw Valley, and about 3.3 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	1.45 .29
391146120115000 Truckee River at Highway 89 Bridge, near Squaw Valley, CA	Pyramid Lake	Lat 39°11'46", long 120°11'50", in NE 1/4 NE 1/4 sec.33, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1.1 mi southeast of Squaw Valley, and about 3.5 mi northwest of Tahoe City.	--	1991	10-30-91	3.20
391240120115000 Truckee River above Squaw Creek, near Squaw Valley, CA	Pyramid Lake	Lat 39°12'40", long 120°11'50", in NW 1/4 NW 1/4 sec.27, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1 mi northeast of Squaw Valley and about 4.2 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	4.21 .83
10337855 Squaw Creek at Highway 89, near Squaw Valley, CA	Truckee River	Lat 39°12'42", long 120°11'57", in NE 1/4 NE 1/4 sec.28, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1 mi northeast of Squaw Valley and about 4.2 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	2.63 .02
391318120115700 Truckee River above Deer Creek, near Squaw Valley, CA	Pyramid Lake	Lat 39°13'18", long 120°11'57", in SE 1/4 NE 1/4 sec.21, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1.3 mi northeast of Squaw Valley, and about 4.7 mi northwest of Tahoe City.	--	--	10-30-91 9-08-92	7.22 1.62
391319120115500 Deer Creek at mouth, near Squaw Valley, CA	Truckee River	Lat 39°13'19", long 120°11'55", in SE 1/4 NE 1/4 sec.21, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 1.3 mi northeast of Squaw Valley and about 4.7 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	.92 .57
391413120121900 Truckee River above Pole Creek, near Squaw Valley, CA	Pyramid Lake	Lat 39°14'13", long 120°12'19", in SW 1/4 NE 1/4 sec.16, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 2.1 mi northeast of Squaw Valley and about 5.7 mi northwest of Tahoe City.	--	--	9-08-92	2.12
391402120122100 Pole Creek at mouth, near Squaw Valley, CA	Truckee River	Lat 39°14'02", long 120°12'21", in SW 1/4 NE 1/4 sec.16, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 2.1 mi northeast of Squaw Valley, and about 5.7 mi northwest of Tahoe City.	--	1991	10-30-91 9-08-92	.49 (b)

b No flow.

Discharge measurements made at miscellaneous sites during water year 1992--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
Pyramid and Winnemucca Lakes basin--Continued						
391528120122800 Truckee River above Deep Creek, near Truckee, CA	Pyramid Lake	Lat 39°15'28", long 120°12'28", in SE 1/4 SW 1/4 sec.4, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 5 mi southwest of Truckee.	--	--	9-08-92	2.30
391529120123300 Deep Creek at mouth, near Truckee, CA	Truckee River	Lat 39°15'29", long 120°12'33", in SE 1/4 SW 1/4 sec.4, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 400 ft upstream from Truckee River, and about 5 mi southwest of Truckee.	--	1991	10-30-91 9-08-92	.82 .39
391642120122100 Cabin Creek at Highway 89, near Truckee, CA	Truckee River	Lat 39°16'42", long 120°12'21", in NW 1/4 SE 1/4 sec.33, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 200 ft upstream from Truckee River, and about 3.6 mi southwest of Truckee.	--	1991	10-30-91 9-08-92	.14 .09
10338000 Truckee River near Truckee, CA	Pyramid Lake	Lat 39°17'47", long 120°12'16", in SW 1/4 NE 1/4 sec.28, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, about 2.5 mi southwest of Truckee.	--	1946-61a 1977-82a 1991	10-30-91 9-08-92	14.2 4.51
10338010 Truckee River above Donner Creek, near Truckee, CA	Pyramid Lake	Lat 39°18'58", long 120°12'00", in SE 1/4 SE 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, about 0.4 mi upstream from Donner Creek, and about 1.2 mi southwest of Truckee.	--	1991	9-08-92	5.41
10339003 Donner Creek at mouth, near Truckee, CA	Truckee River	Lat 39°18'59", long 120°12'02", in SE 1/4 SE 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, about 50 ft upstream from Truckee River, and about 1.2 mi southwest of Truckee.	--	1991	10-30-91 9-08-92	16.1 9.05
391859120115800 Truckee River below Donner Creek, near Truckee, CA	Truckee River	Lat 39°18'59", long 120°11'58", in SE 1/4 SE 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, 20 ft downstream from Donner Creek, and about 1.2 mi southwest of Truckee.	--	--	10-30-91	32.7
10339010 Truckee River at Highway 267, at Truckee, CA	Pyramid Lake	Lat 39°19'36", long 120°11'00", in NE 1/4 NE 1/4 sec.15, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, at California State Highway 267 bridge at Truckee.	--	1991	10-30-91 9-08-92	34.8 13.9
391950120100200 Truckee River above Trout Creek, near Truckee, CA	Pyramid Lake	Lat 39°19'50", long 120°10'02", in SW 1/4 SE 1/4 sec.11, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, about 0.2 mi upstream from Trout Creek, and about 0.9 mi east of Truckee.	--	1991	10-30-91 9-08-92	33.6 13.1
391956120095200 Trout Creek at mouth, near Truckee, CA	Truckee River	Lat 39°19'56", long 120°09'52", in SE 1/4 SE 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, about 50 ft upstream from Truckee River, and about 1.0 mi northeast of Truckee.	--	1991	9-08-92	(b)
392018120080300 Truckee River at Polaris, near Truckee, CA	Pyramid Lake	Lat 39°20'18", long 120°08'03", in SE 1/4 NW 1/4 sec.7, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, at Polaris, about 0.2 mi south of old U.S. Highway 40, and about 2.7 mi northeast of Truckee.	--	1991	10-30-91 9-08-92	32.4 15.0

a Operated as a continuous-record gaging station.

b No flow.

Discharge measurements made at miscellaneous sites during water year 1992--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
Pyramid and Winnemucca Lakes basin--Continued						
10339400	Truckee River	Lat 39°19'44", long 120°07'00", in	--	1959-91a	10-01-91	3.19
Martis Creek near Truckee, CA		NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, 0.2 mi downstream from Martis Creek Lake Dam, 1.8 mi upstream from mouth, and 3.5 mi east of Truckee.			10-01-91	3.21
					10-08-91	3.40
					11-01-91	4.94
					12-02-91	5.18
					12-31-91	5.72
					2-03-92	5.49
					3-02-92	14.2
					3-31-92	22.3
					5-01-92	6.30
					6-01-92	3.60
					6-16-92	4.26
					7-02-92	3.24
					8-13-92	2.23
					9-01-92	2.93
10339405	Truckee River	Lat 39°20'56", long 120°07'02", in	--	1991	10-30-91	6.32
Martis Creek at mouth, near Truckee, CA		NE 1/4 SW 1/4 sec.5, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 350 ft upstream from Truckee River, and about 3.8 mi northeast of Truckee.			9-08-92	3.14
10339498	Pyramid Lake	Lat 39°21'11", long 120°07'17", in	--	1991	10-30-91	47.4
Truckee River at Old U.S. Highway 40 Bridge, below Truckee, CA		SW 1/4 NW 1/4 sec.5, T.17 N., R.17 E., Nevada Coun[Bty, Hydrologic Unit 16050102, at upstream side of old U.S. Highway 40 bridge, about 3.5 mi northeast of Truckee.			9-08-92	22.2
392213120065800	Truckee River	Lat 39°22'13", long 120°06'58", in	--	1991	9-08-92	1.88
Prosser Creek at mouth, near Truckee, CA		SE 1/4 NW 1/4 sec.32, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 200 ft upstream from Truckee River and about 4.6 mi northeast of Truckee.				
392215120065600	Pyramid Lake	Lat 39°22'15", long 120°06'56", in	--	1991	10-30-91	60.0
Truckee River below Prosser Creek, near Truckee, CA		NE 1/4 NW 1/4 sec.32, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 300 ft downstream from Prosser Creek, and about 4.7 mi northeast of Truckee.			9-08-92	27.4
392304120053400	Pyramid Lake	Lat 39°23'04", long 120°05'34", in	--	1991	10-30-91	55.6
Truckee River below Little Truckee River, near Truckee, CA		SW 1/4 NE 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 200 ft downstream from Little Truckee River, about 0.4 mi south of Boca Reservoir, and about 6.3 mi northeast of Truckee.			9-08-92	61.5
392152120041700	Truckee River	Lat 39°21'52", long 120°04'17", in	--	1991	9-08-92	(b)
Juniper Creek at mouth, near Hirschdale, CA		NW 1/4 SE 1/4 sec.34, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 400 ft upstream from Truckee River, and about 0.4 mi southeast of Hirschdale.				
392156120041400	Pyramid Lake	Lat 39°21'56", long 120°04'14", in	--	1991	10-30-91	66.3
Truckee River below Juniper Creek, near Hirschdale, CA		NE 1/4 SE 1/4 sec.34, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 300 ft downstream from Juniper Creek, and about 0.4 mi southeast of Hirschdale.			9-08-92	69.4
392224120014600	Truckee River	Lat 39°22'24", long 120°01'46", in	--	1991	10-30-91	8.80
Gray Creek at mouth, near Floriston, CA		NE 1/4 NE 1/4 sec.36, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 400 ft upstream from Truckee River, and about 1.6 mi southwest of Floriston.			9-08-92	4.88

a Operated as a continuous-record gaging station.

b No flow.

Discharge measurements made at miscellaneous sites during water year 1992--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
Pyramid and Winnemucca Lakes basin--Continued						
392226120014900 Truckee River below Gray Creek, near Floriston, CA	Pyramid Lake	Lat 39°22'26", long 120°01'49", in NE 1/4 NE 1/4 sec.36, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, about 200 ft downstream from Railroad Bridge, and about 1.5 mi southwest of Floriston.	--	--	9-08-92	73.9
392257120011100 Truckee River above Bronco Creek, near Floriston, CA	Pyramid Lake	Lat 39°22'57", long 120°01'11", in SE 1/4 NW 1/4 sec.31, T.18 N., R.18 E., Nevada County, Hydrologic Unit 16050102, about 400 ft upstream from Bronco Creek, and about 0.9 mi south of Floriston.	--	1991	10-30-91 9-08-92	79.8 76.8
392303120011000 Bronco Creek at mouth, near Floriston, CA	Truckee River	Lat 39°23'03", long 120°01'10", in SE 1/4 NW 1/4 sec.31, T.18 N., R.18 E., Nevada County, Hydrologic Unit 16050102, about 300 ft upstream from Truckee River, and about 0.7 mi south of Floriston.	--	1991	10-30-91 9-08-92	4.00 3.96
10345909 Truckee River at Floriston Dam, near Floriston, CA	Pyramid Lake	Lat 39°23'48", long 120°01'24", in SE 1/4 NW 1/4 sec.30, T.18 N., R.18 E., Nevada County, Hydrologic Unit 16050102, at Floriston Dam, and about 0.2 mi northwest of Floriston.	--	1991	10-30-91 9-08-92	82.1 95.0

Discharge measurements made at miscellaneous sites during water year 1992--Continued

Stream	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements		
				Date	Gage height (feet)	Discharge (ft ³ /s)
Buena Vista Lake basin						
11187500	Lat 35°38'32", long 118°28'09",	--	1910-14a,	10-03-91	5.63	199.
Borel Canal	in SW 1/4 NE 1/4 sec.30, T.26 S.,		1925-90a	10-25-91	--	(b)
below Isabella	R.33 E., Kern County, Hydrologic		1991	12-17-91	5.19	146
Dam, CA	Unit 18030001, on right bank,			12-23-91	5.21	148
	500 ft downstream from Isabella			1-15-92	5.46	175
	Dam and 3 mi upstream from point			3-03-92	6.81	365
	where canal crosses Erskine			4-09-92	7.17	427
	Creek.			5-08-92	7.36	444
				7-02-92	8.28	576
				7-27-92	8.29	590
				8-28-92	4.84	111
11191000	Lat 35°38'21", long 118°29'02",	2,074	1945-90a	10-03-91	3.10	6.37
Kern River	in SW 1/4 NW 1/4 sec.35, T.26 S.,		1991	10-25-91	4.97	137
below Isabella	R.33 E., Kern County, Hydrologic			11-22-91	3.05	2.54
Dam, CA	Unit 18030003, on right bank			12-18-91	3.77	34.1
	200 ft downstream from highway			1-15-92	3.06	3.30
	bridge, 0.6 mi downstream from			3-02-92	4.10	57.8
	Isabella Dam, and 1.6 mi south-			4-07-92	3.17	5.00
	west of town of Lake Isabella.			5-19-92	5.26	173
				6-30-92	4.45	78.4
				7-23-92	5.79	280
				8-26-92	5.11	149
Tulare Lake basin						
11204680	Lat 36°03'34", long 118°55'22",	--	1952-90a	10-02-91	.80	13.7
Pioneer Ditch	in SW 1/4 NW 1/4 sec.35, T.21 S.,		1991	11-13-91	--	(b)
below Success Dam,	R.28 E., Tulare County, Hydrologic			1-03-92	.16	.95
CA	Unit 18030006, on left bank			2-13-92	.10	.73
	0.1 mi downstream from Success			4-01-92	.46	6.24
	Dam and 5.5 mi east of Porterville.			5-20-92	.75	12.2
				7-06-92	.72	11.5
				8-25-92	.84	13.8
11204900	Lat 36°03'23", long 118°55'22",	393	1953-90a	10-02-91	2.67	24.1
Tule River	in NW 1/4 SW 1/4 sec.35, T.21 S.,		1991	11-13-91	1.41	.29
below Success Dam,	R.28 E., Tulare County, Hydrologic			1-03-92	1.30	.36
CA	Unit 18030012, on right bank			2-13-92	1.30	.51
	1,000 ft downstream from Success			4-01-92	3.77	74.5
	Dam and 5 mi east of Porterville.			5-21-92	3.33	53.7
				7-07-92	4.67	177
				8-28-92	2.72	20.2
11210850	Lat 36°24'55", long 119°00'22",	--	1963-90a	10-04-91	1.59	7.80
Lemoncove Ditch	in SW 1/4 SW 1/4 sec.25, T.17 S.,		1991	11-14-91	1.41	4.16
below Terminus Dam,	R.27 E., Tulare County, Hydrologic			12-30-91	1.16	.85
CA	Unit 18030007, on right bank 75 ft			2-12-92	--	(b)
	downstream from outlet tunnel of			4-01-92	1.34	3.38
	Terminus Dam and 2.4 mi northeast			5-21-92	1.62	8.37
	of Lemoncove.			7-07-92	1.60	8.04
				8-31-92	1.62	8.11
11210930	Lat 36°24'48", long 119°00'47",	--	1962-90a	10-04-91	.73	12.0
Foothill Ditch	in NW 1/4 NW 1/4 sec.35, T.17 S.,		1991	11-14-91	.70	10.8
below Terminus Dam,	R.27 E., Tulare County, Hydrologic			12-30-91	.40	4.26
CA	Unit 18030012, on left bank 0.7 mi			2-12-92	--	(b)
	downstream from Terminus Dam and			4-01-92	--	(b)
	2.1 mi northeast of Lemoncove.			5-21-92	.75	11.6
				7-07-92	.93	13.4
				8-31-92	.87	11.1
11210950	Lat 36°24'51", long 119°00'42",	561	1962-90a	10-04-91	.46	10.7
Kaweah River	in SE 1/4 SE 1/4 sec.26, T.17 S.,		1991	11-15-91	.17	2.48
below Terminus Dam,	R.27 E., Tulare County, Hydrologic			12-31-91	1.55	94.8
CA	Unit 18030012, on left bank 0.6 mi			2-12-92	3.39	422
	downstream from Terminus Dam and			4-01-92	.89	42.6
	2.2 mi northeast of Lemoncove.			5-26-92	1.62	95.1
				6-05-92	5.35	1350
				7-08-92	4.26	721
				8-31-92	1.28	65.8

a Operated as a continuous-record gaging station.

b No flow.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1992--Continued

Stream	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements		
				Date	Gage height (feet)	Discharge (ft ³ /s)
Tulare Lake basin--Continued						
11221500	Lat 36°49'50", long 119°20'07",	1,545	1954-90a	10-11-91	1.58	179
Kings River	in SW 1/4 NW 1/4 sec.2, T.13 S.,			11-18-91	0.71	51.9
below Pine Flat Dam,	R.24 E., Fresno County, Hydrologic			1-07-92	1.28	130
CA	Unit 18030012, on right bank			2-27-92	1.06	101
	0.6 mi downstream from Pine Flat			4-09-92	4.37	1,490
	Dam and 2.9 mi northeast of Piedra.			5-28-92	4.76	1,790
				7-20-92	4.83	1,870
				9-02-92	2.30	329
11259000	Lat 37°12'56", long 119°59'25",	236	1922-23a,	7-08-92	5.20	272
Chowchilla River	in SE 1/4 SW 1/4 sec.22. T.8 S.,		1931-72a,			
below Buchanan Dam,	R.18 E., Madera County, Hydrologic		1976-90a			
near Raymond, CA	Unit 18040007, on left bank					
	1,800 ft downstream from Buchanan					
	Dam and 4.6 mi west of Raymond.					
San Joaquin River basin						
11308900	Lat 38°08'53", long 120°49'26", in	363	1961-90a	10-11-91	1.16	48.5
Calaveras River	NW 1/4 NE 1/4 sec.1, T.3 N.,			11-12-91	0.94	29.3
below New Hogan	R.10 E., Calaveras County,			12-11-91	1.07	47.7
Dam near Valley	Hydrologic Unit 18040011, on right			01-14-92	1.06	42.5
Springs, CA	bank at county road bridge, 0.5 mi			02-10-92	0.55	4.59
	upstream from Cosgrove Creek, 0.8 mi			03-11-92	0.54	4.88
	downstream from New Hogan Dam, and			04-14-92	0.47	2.90
	3.0 mi south of Valley Springs.			05-27-92	1.60	191
				07-07-92	1.81	286
				08-18-92	0.79	117.7

a Operated as a continuous-record gaging station.

b No flow.

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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
<i>Length</i>		
inches (in)	2.54×10^1 2.54×10^{-2}	millimeters (mm) meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3 4.047×10^{-1} 4.047×10^{-3}	square meters (m ²) square hectometers (hm ²) square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0 3.785×10^0 3.785×10^{-3}	liters (L) cubic decimeters (dm ³) cubic meters (m ³)
million gallons	3.785×10^3 3.785×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1 2.832×10^{-2}	cubic decimeters (dm ³) cubic meters (m ³)
cfs-days	2.447×10^3 2.447×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3 1.233×10^{-3} 1.233×10^{-6}	cubic meters (m ³) cubic hectometers (hm ³) cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1 2.832×10^1 2.832×10^{-2}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2} 6.309×10^{-2} 6.309×10^{-5}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1 4.381×10^{-2}	cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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