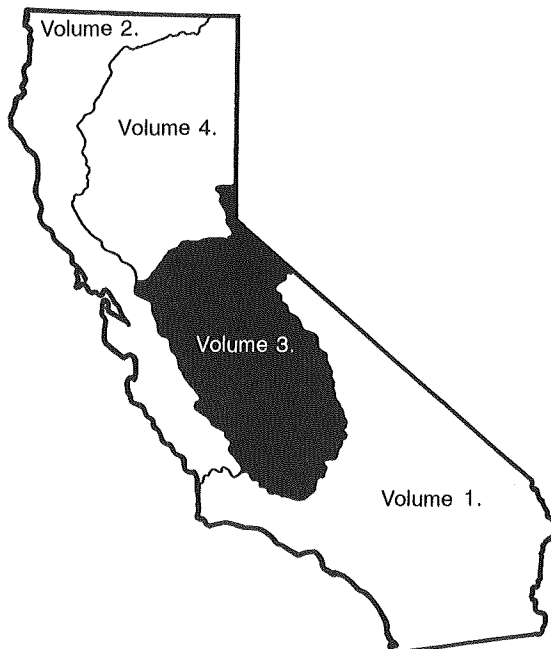


Water Resources Data California Water Year 1996

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-96-3
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1996

1995

OCTOBER							NOVEMBER							DECEMBER						
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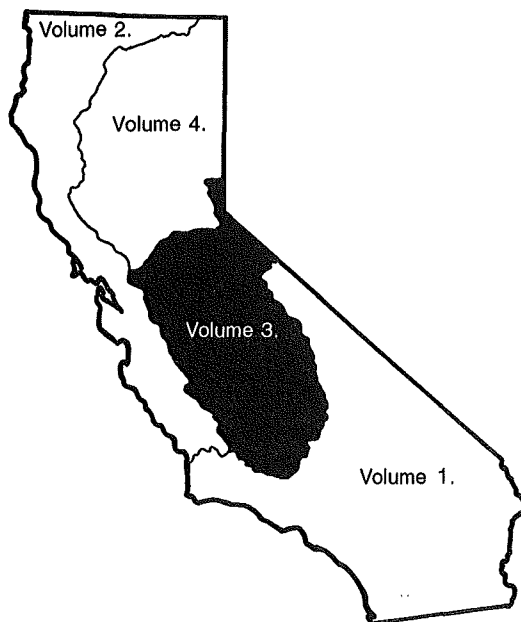
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Water Resources Data California Water Year 1996

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

by G.L. Rockwell, S.W. Anderson, and P.D. Hayes



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-96-3
Prepared in cooperation with the California Department of
Water Resources and with other agencies

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PREFACE

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

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

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

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

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

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

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DISCONTINUED GAGING STATIONS

The following continuous record streamflow stations in California have been discontinued or converted to partial record stations. Daily records were collected and are stored in 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
10336625	Fallen Leaf Lake near Camp Richardson	16.7	1968-92
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	1944-61, 1977-82, 1992-95
10342000	Little Truckee River near Hobart Mills	37.1	1947-72
10343200	Little Truckee River at Highway 89 near Truckee	59.0	1993-94
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
11187000	Kern River at Kernville	1,009	1905-12, 1953-93
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	2,074	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
11205680	Frazier Creek near Strathmore	3.05	1974-94
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
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

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11210930	Foothill Ditch below Terminus Dam	--	1962-90
11210950	Kaweah River below Terminus Dam	561	1962-90
11211300	Dry Creek near Lemoncove	75.6	1960-94
11211500	Kaweah River at McKay Point, near Lemoncove	647	1919-21
11211785	Cottonwood Creek above Collier Creek, near Elderwood	52.3	1985-94
11211790	Cottonwood Creek near Elderwood	60.4	1971-85
11212000	Sand Creek near Orange Cove	31.6	1944-54, 1956, 1967, 1969, 1971-84, 1985-94
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
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	Deer Creek below east Fork, near Shaver Lake	19.0	1924-31
11218000	Dinkey Creek at mouth, near Trimmer	132	1920-37
11218500	Kings River below North Fork, near Trimmer	1,342	1951-93
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
11221700	Mill Creek near Piedra	127	1958-94
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

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11258900	West Fork Chowchilla River near Mariposa	33.6	1958-80
11258920	North Fork Chowchilla River near Nippinnawassee	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, 1976-80
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
11261100	Salt Slough at Highway 165, near Stevinson	--	1986-94
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
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
11270800	Northside Canal at Merced Falls	--	1987-94
11271320	Dry Creek near Snelling	67.6	1966-92
11271500	Merced River near Livingston	1,259	1922-24, 1926-44
11272500	Merced River near Stevinson	1,273	1941-95
11273000	Merced River Slough near Newman	1,276	1942-72
11274554	Spanish Grant Combined Drain near Patterson	--	1993-95
11274560	Turlock Irrigation District Lateral No. 5 near Patterson	--	1992-95
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
11278200	Cherry Creek Canal near Early Intake	--	1956-71, 1987-96
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
11281000	South Fork Tuolumne River near Oakland Recreation Camp	87	1923-96
11281500	Middle Tuolumne River near Mather	52.4	1925-29, 1932-33
11282000	Middle Tuolumne River at Oakland Recreation Camp	73.5	1917-96
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
11283250	Clavey River near Long Barn	48.9	1987-94
11283350	Reed Creek near Long Barn	27.2	1987-94
11283500	Clavey River near Buck Meadows	144	1960-84, 1987-94
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
11292500	Clark Fork Stanislaus River near Dardanelle	67.5	1951-94
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
11293650	North Fork Stanislaus River at Camp Wolfesboro, near Big Meadows	47.4	1994-96
11293700	Hobart Creek at North Fork Stanislaus River Diversion Tunnel Outlet, near New Spicer Meadow Dam	1.13	1989-94
11294300	North Fork Stanislaus River below Ganns Dam Site, near Big Meadow	111	1961-67

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11294400	North Fork Stanislaus River at Sourgrass Campground, near Dorrington	149	1991-96
11295000	Utica Canal near Avery	--	1970, 1976-89
11295400	Stanislaus River near Hathaway Pines	629	1967-94
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
11325500	Mokelumne River at Woodbridge	661	1924-94
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
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
11320000	Pardee Reservoir near Valley Springs	578	1962-93
11322300	Camanche Reservoir near Clements	621	1964-93

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
10336670	Ward Creek near Tahoe Pines	2.03	T,S	1973-76
10336672	Ward Creek Tributary near Tahoe Pines	.91	T,S	1973-76
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, 1978, 1980-85, 1987-88
10337000	Lake Tahoe at Tahoe City	506	WQ	1969, 1978-79
10337500	Truckee River at Tahoe City	507	WQ,T	1978-81, 1993-94
10338000	Truckee River near Truckee	553	WQ,C,T	1951-66, 1977-94
10338700	Donner Creek at Highway 89, near Truckee	29.1	T	1993-94
10339250	Martis Creek at State Highway 267, near Truckee	25.8	WQ,T,S	1975-95
10339380	Martis Creek Lake near Truckee	39.6	WQ,S	1975-95
10339400	Martis Creek near Truckee	--	WQ,S	1975-95
10341950	Little Truckee River below Diversion Dam, near Sierraville	36.1	T	1993-94
10343200	Little Truckee River at Highway 89, near Truckee	59.0	T	1993-94
10343500	Sagehen Creek near Truckee	10.5	WQ,T,S	1968-75, 1981-96
10345700	Bronco Creek at Floriston	15.4	T	1993-94
10345900	Truckee River at Floriston	932	T	1968-71
10346000	Truckee River at Farad	932	WQ,B,S	1951-61, 1964-81
11185350	Kern River near Quaking Aspen Camp	530	T	1966-74
11187000	Kern River at Kernville	1,009	WQ,B,T,S	1962-93
11191000	Kern River below Isabella Dam	2,074	WQ,T	1956-66, 1971-94
11204900	Tule River below Success Dam	393	WQ,T	1962-69, 1971-94
11206500	Middle Fork Kaweah River near Potwisha Camp	102	WQ,C,T	1958-63, 1972, 1980-81
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

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
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
11210950	Kaweah River below Terminus Dam	561	WQ,T	1962-94
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	WQ,B,T,S	1956-93
11221500	Kings River below Pine Flat Dam	1,545	WQ,T	1956-66, 1970-94
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
11204900	Tule River below Success Dam	393	WQ,T	1962-69, 1971-94
11253500	James 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
11259000	Chowchilla River below Buchanan Dam, near Raymond	236	WQ,T	1958-65, 1976-94
11260815	San Joaquin River near Stevinson	7,388	C,T	1989-96
11261100	Salt Slough at Highway 165, near Stevinson	--	WQ,C,T,S	1989-94
11262900	Mud Slough near Gustine	--	WQ,S	1989-94
11264500	Merced River at Happy Isles Bridge, near Yosemite	181	WQ,B,T,S	1966-96
11266500	Merced River at Pohono Bridge, near Yosemite	321	T	1995
11268000	South Fork Merced River near El Portal	241	T	1975-78
11268200	Merced River near Briceburg	691	T	1976-77
11272500	Merced River near Stevinson	1,273	C,T	1989-92
11274000	San Joaquin River near Newman	9,520	WQ,C,T,S	1989, 1992-95
11274538	Orestimba Creek at River Road, near Crows Landing	--	WQ,S	1992-95
11274554	Spanish Grant Combined Drain near Patterson	--	WQ,C,T,S	1993-95
11274560	Turlock Irrigation District Lateral No. 5 near Crows Landing	--	WQ,C,T,S	1992-95
11274570	San Joaquin River at Patterson Bridge, near Patterson	9,760	WQ,C,T,S	1989-95
11283100	Lily Creek near Pinecrest	11.9	T	1965-74
11290000	Tuolumne River at Modesto	1,884	WQ,C,T,S	1989-95
11292700	Middle Fork Stanislaus River at Hells Half Acre Bridge, near Pinecrest	287	T	1966-71, 1973-78
11295400	Stanislaus River near Hathaway Pines	629	T	1970-83
11303000	Stanislaus River at Ripon	1,075	WQ,C,T,S	1989, 1993-94
11303500	San Joaquin River near Vernalis	13,536	B	1974-81
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
11308900	Calaveras River below New Hogan Dam, near Valley Springs	363	WQ,T	1964-66, 1971-94
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	WQ,T	1961-79
11323500	Mokelumne River below Camanche Dam	627	WQ,T,S	1906-07, 1956-76
11325500	Mokelumne River at Woodbridge	661	WQ,B,C, T,S	1951-94
11335000	Cosumnes River at Michigan Bar	536	WQ,T,S	1953-80

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

WATER RESOURCES DATA--CALIFORNIA, WATER YEAR 1996

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

FROM WALKER RIVER TO TRUCKEE RIVER

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

INTRODUCTION

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

This volume of the report includes records on surface water in the State. Specifically, it contains (1) discharge records for 168 streamflow-gaging stations, 1 crest-stage partial-record streamflow station; (2) stage and contents records for 43 lakes and reservoirs; (3) water-quality records for 30 streamflow-gaging stations; and (4) precipitation records for 2 gaging stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of 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-96-3." 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.

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) 278-3100.

COOPERATION

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

Calaveras County Water District, William Becker, General Manager.
 California Department of Water Resources, David N. Kennedy, Director.
 East Bay Municipal Utility District, Jack Jacobs, Director, Water Operations.
 Madera Irrigation District, Robert L. Stanfield, General Manager-Chief Engineer.
 Merced Irrigation District, Ross Rogers, General Manager.
 San Francisco, City and County, Hetch-Hetchy Water and Power, Lawrence T. Klein, General Manager.
 Tulare County Flood Control District, Douglas C. Wilson, Public Works Director.
 Turlock Irrigation District, Wes Monier, Electric Utility Administrator.
 Woodbridge Irrigation District, Anders Christensen, Manager.

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

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

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

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

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

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

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

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

Radiochemical Programs 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.

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1996 water year that began October 1, 1995, and ended September 30, 1996. 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. 1). 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.

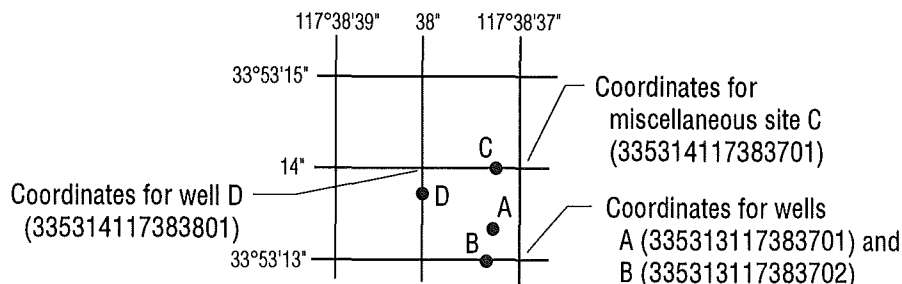


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown, by county, in figures 2 through 21.

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 digital recorders, data collection platforms, or data loggers that sample stage values at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A1 through 19, and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

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

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

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

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following 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 currently in use, the datum of the current gage referred to sea level (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 (IN.) indicates the depth to which the drainage area would be covered if all the runoff for a given period were distributed on it uniformly.

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

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

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape or stored electronically on a data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 through 21.

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 (1996) 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. Methods used in the computation of sediment records are described in the Techniques of Water-Resources Investigations (TWRI's) Book 3, Chapters C1 and C3. These methods are consistent with American Society for Testing and Materials (ASTM) standards and generally follow International Organization for Standards (ISO) standards.

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

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of 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 to analyze sediment samples and to compute sediment records are described in Techniques of Water-Resources Investigations, Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

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 include 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 20192

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. For the membrane filter method, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \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:

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

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

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

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level. This elevation is established by a system of levels from known benchmarks 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 Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 (m²), 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 [$\text{mg C}/(\text{m}^2/\text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3/\text{time})$ for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft 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 85 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 multiple 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
<u>Genus</u>	<u>Hexagenia</u>
<u>Species</u>	<u>Hexagenia limbata</u>

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.)

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

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

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, 1996, is called the "1996 water year."

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. Water temperature--influential factors, field measurement, and data presentation, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. Application of surface geophysics to ground-water investigations, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. Application of seismic-refraction techniques to hydrologic studies, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. Application of borehole geophysics to water-resources investigations, by W.S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. Borehole geophysics applied to ground-water investigations, by W.S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. Application of drilling, coring, and sampling techniques to test holes and wells, by Eugene Shuter and W.E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. General field and office procedures for indirect discharge measurements, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. General procedure for gaging streams, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. Stage measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. Measurement of time of travel in streams by dye tracing, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. Discharge ratings at gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. Measurement of discharge by moving-boat method, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. Fluorometric procedures for dye tracing, Revised by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

- 3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. Determination of stream reaeration coefficients by use of tracers, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. Levels at streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. Simulation of soluble waste transport and buildup in surface waters using tracers, by F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. Stream-gaging cableways, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. Aquifer-test design, observation, and data analysis, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. Introduction to ground-water hydraulics, a programmed text for self-instruction, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. Type curves for selected problems of flow to wells in confined aquifers, by J.E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. Regression modeling of ground-water flow, by R.L. Cooley and R.L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems, by R.L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. The principle of superposition and its application in ground-water hydraulics, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow, by E.J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. Fluvial sediment concepts, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. Field methods for measurement of fluvial sediment, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. Some statistical tools in hydrology, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. Low-flow investigations, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. Storage analyses for water supply, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. Regional analyses of streamflow characteristics, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. Computation of rate and volume of stream depletion by wells, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. Methods for determination of inorganic substances in water and fluvial sediments, by M.J. Fishman and L.C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. Determination of minor elements in water by emission spectroscopy, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. Methods for the determination of organic substances in water and fluvial sediments, by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe, editors: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, by L.J. Britton and P.E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L.C. Friedman and D.E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

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

EXPLANATION

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

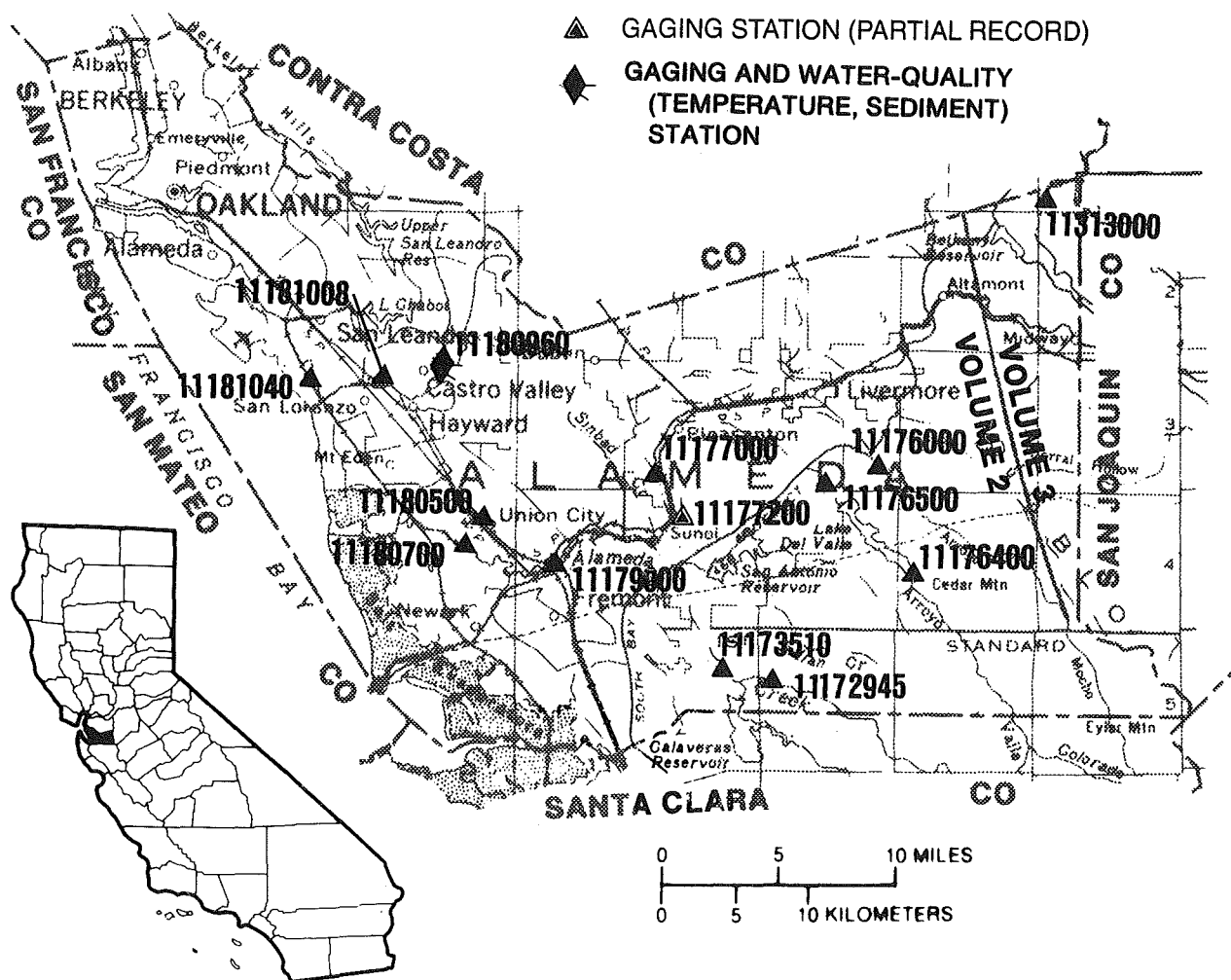
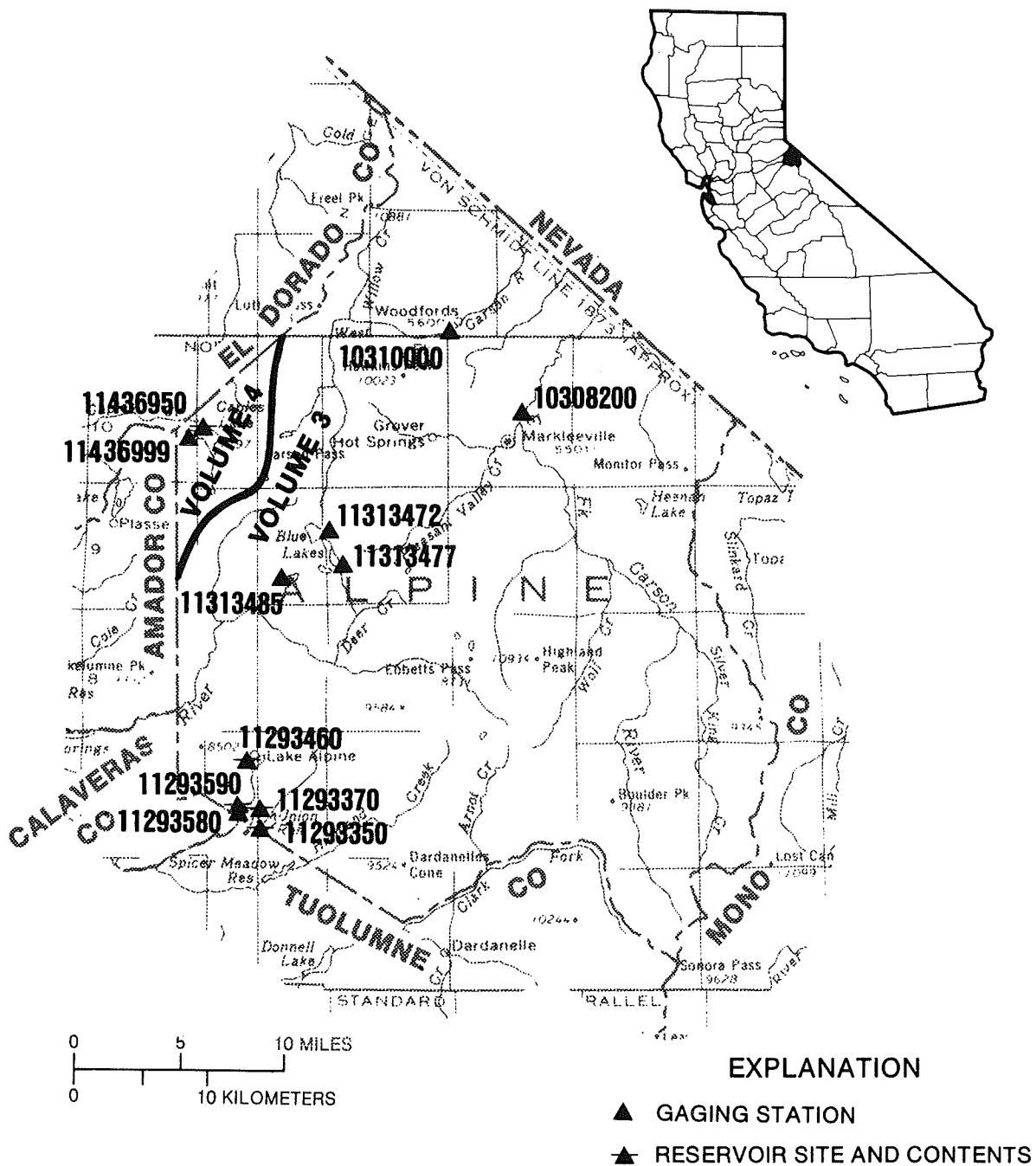


Figure 2. Location of discharge and water-quality stations in Alameda County.
(NOTE: Records for stations 11172945 through 11181040 published in volume 2.)



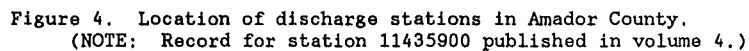


Figure 4. Location of discharge stations in Amador County.
(NOTE: Record for station 11435900 published in volume 4.)

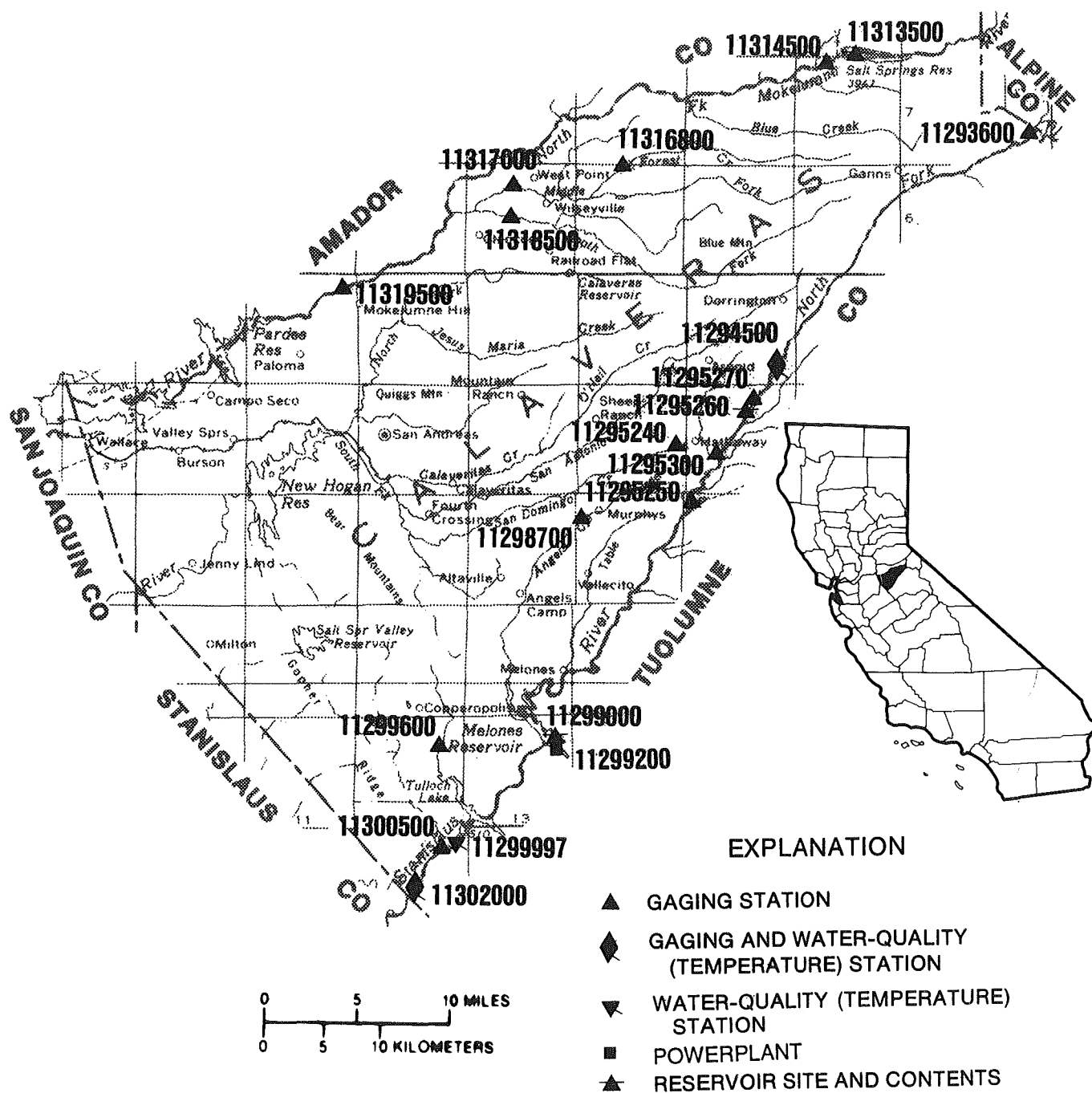
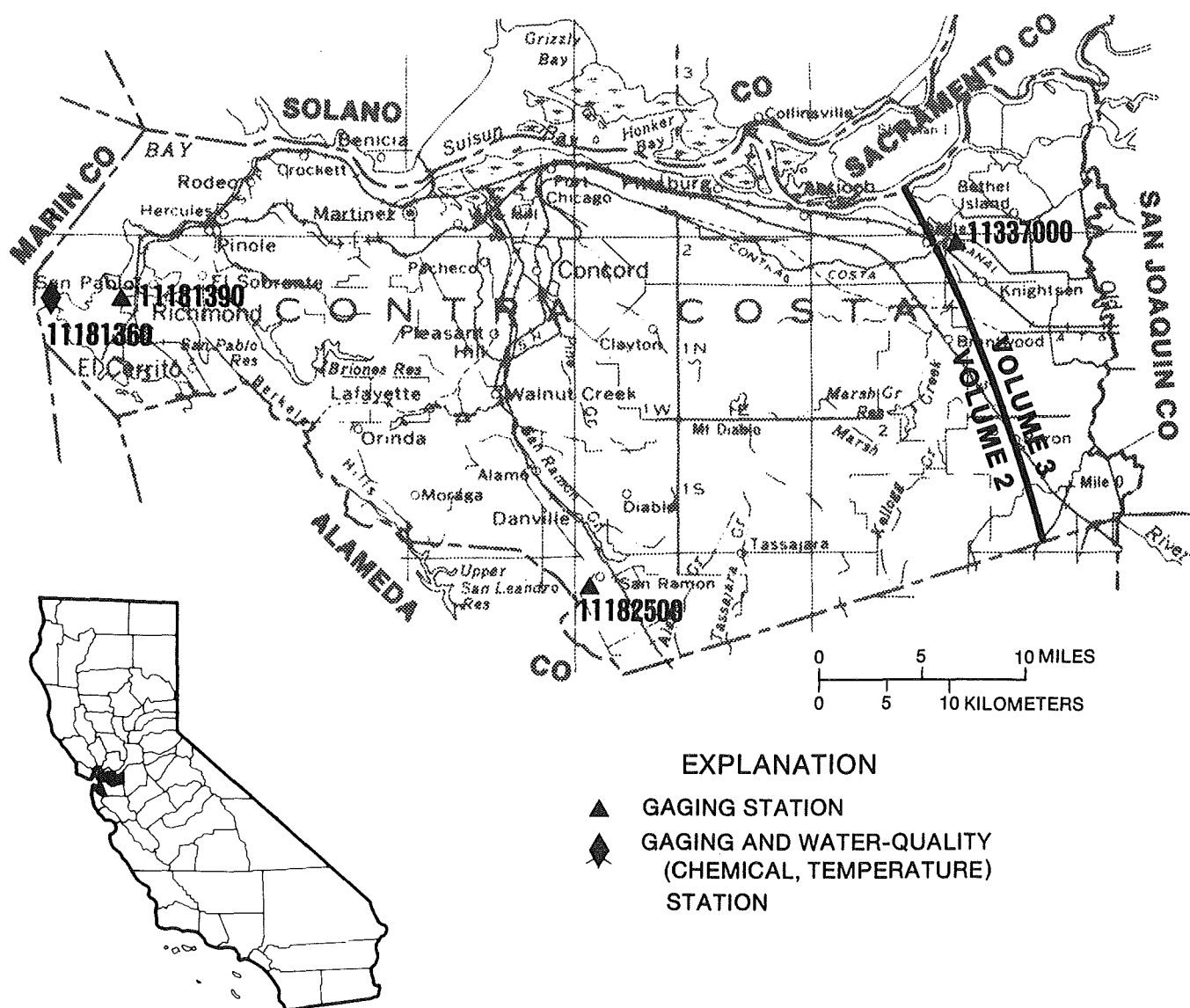


Figure 5. Location of discharge and water-quality stations in Calaveras County.



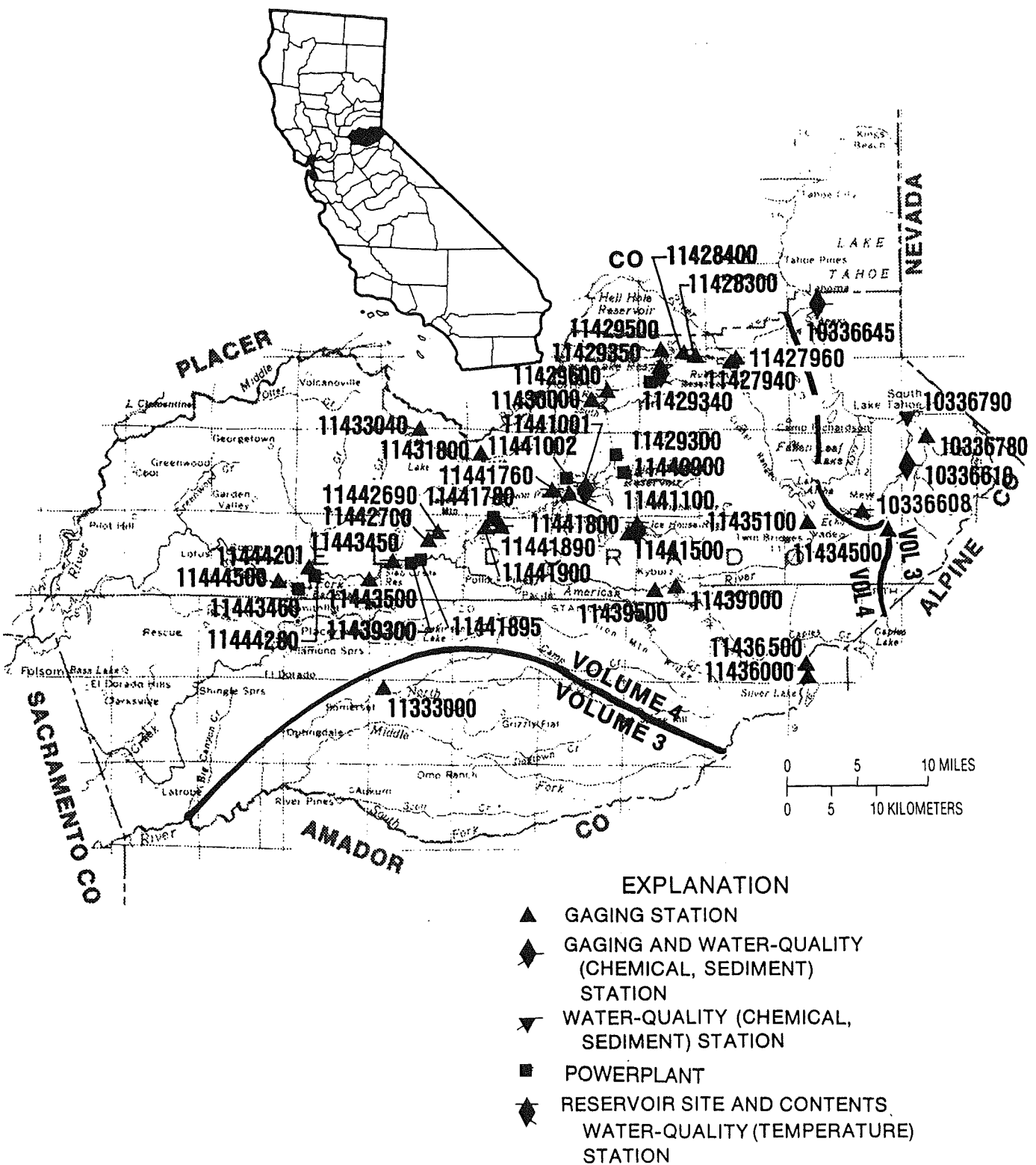


Figure 7. Location of discharge and water-quality stations in El Dorado County.
 (NOTE: Records for stations 11427940 through 11444500 published in volume 4.)

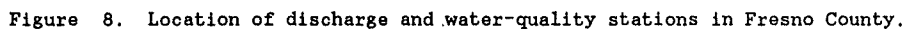


Figure 8. Location of discharge and water-quality stations in Fresno County.

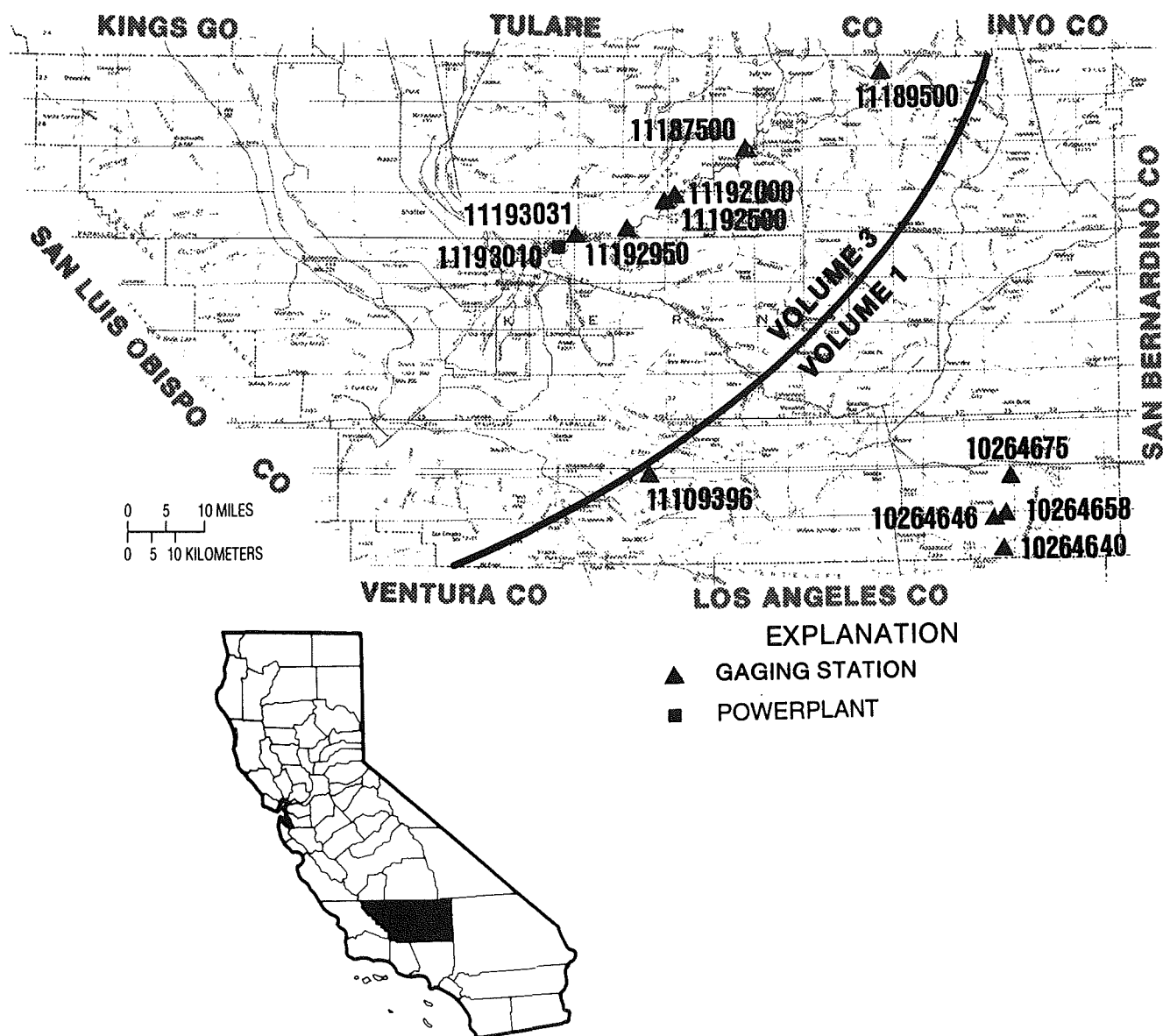
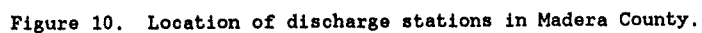


Figure 9. Location of discharge stations in Kern County.



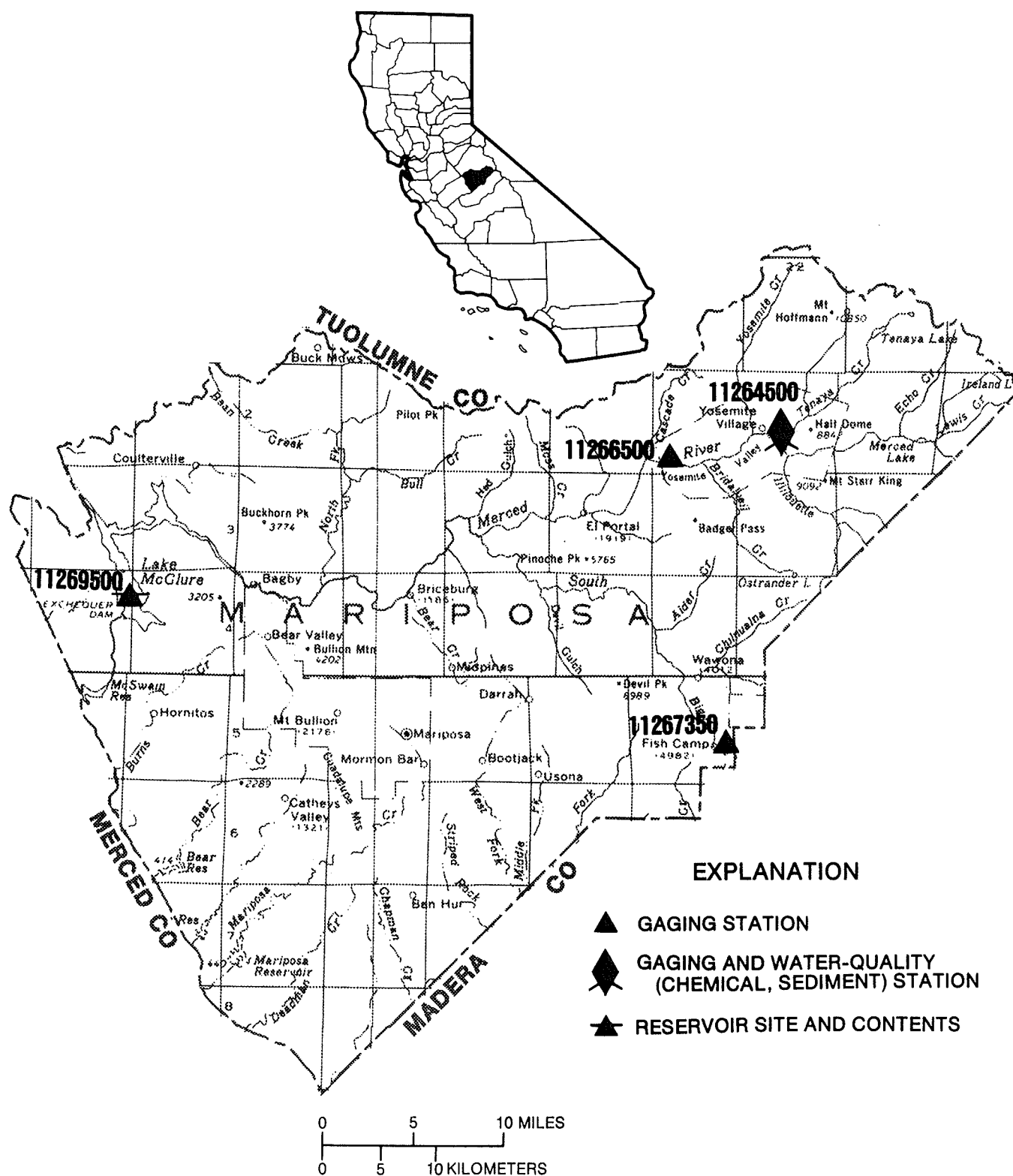


Figure 11. Location of discharge and water-quality stations in Mariposa County.

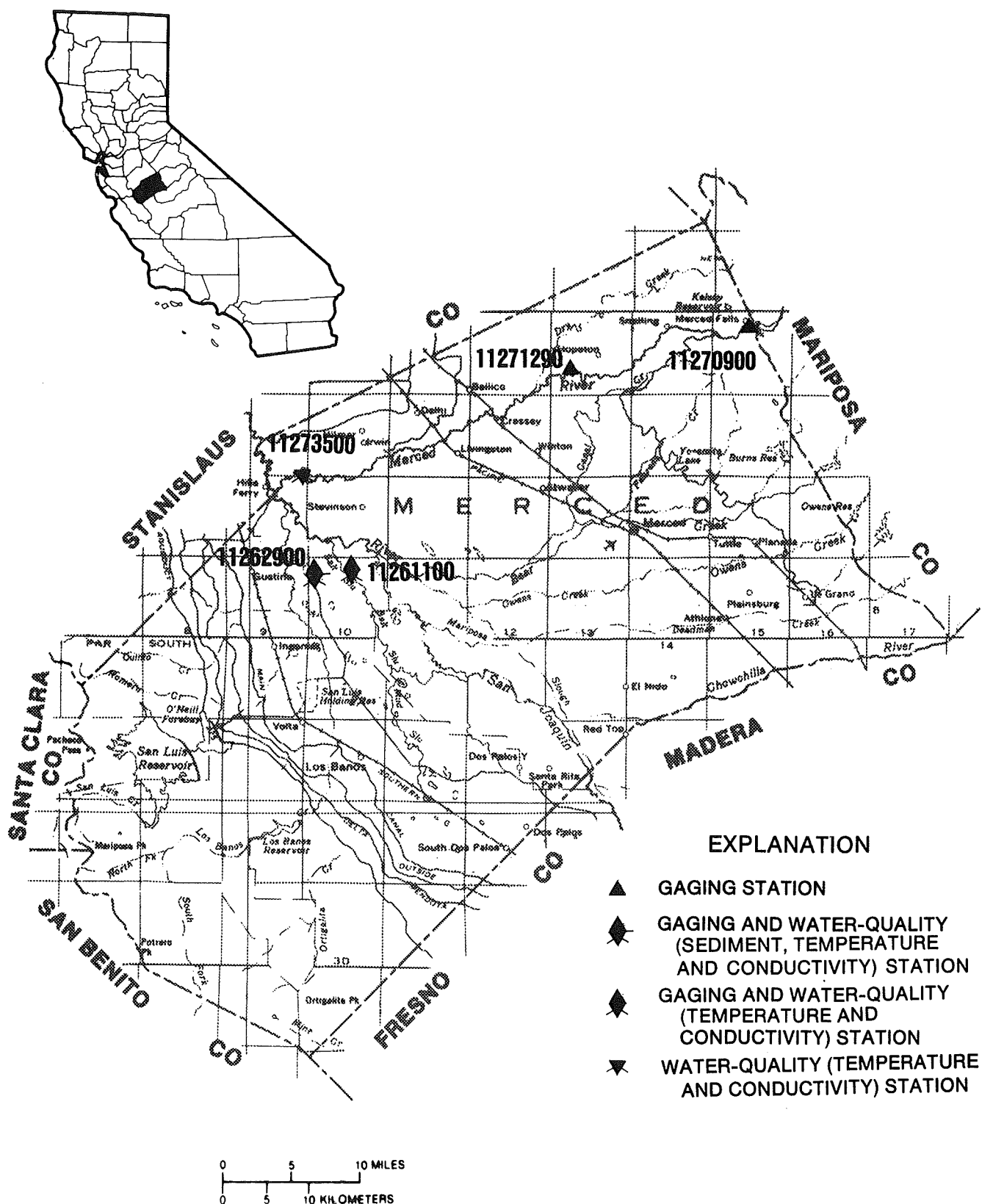


Figure 12. Location of discharge and water-quality stations in Merced County.

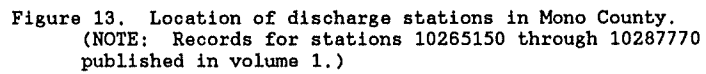


Figure 13. Location of discharge stations in Mono County.
(NOTE: Records for stations 10265150 through 10287770
published in volume 1.)

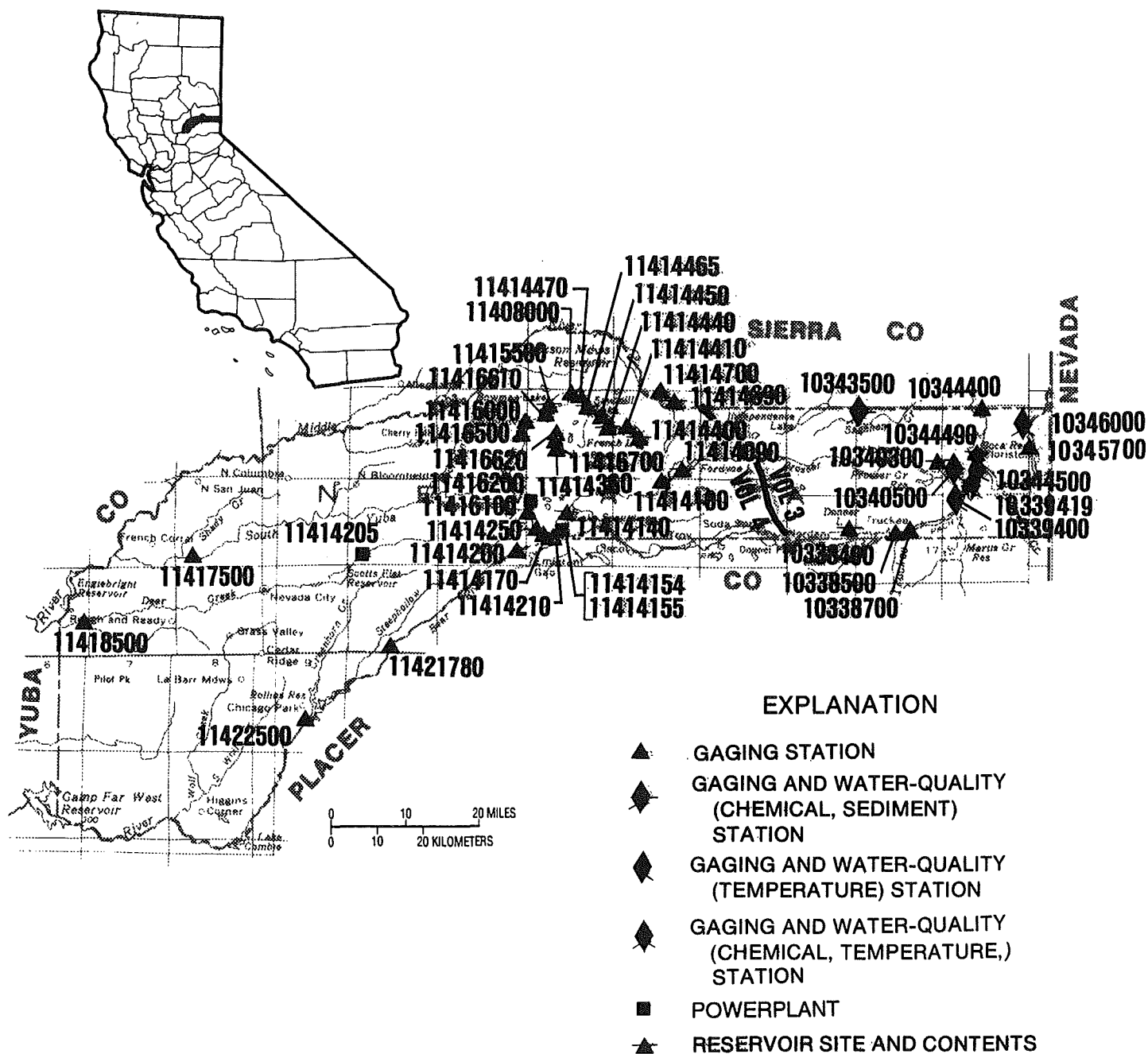


Figure 14. Location of discharge and water-quality stations in Nevada County.
(NOTE: Records for stations 11408000 through 11422500 published in volume 4.)

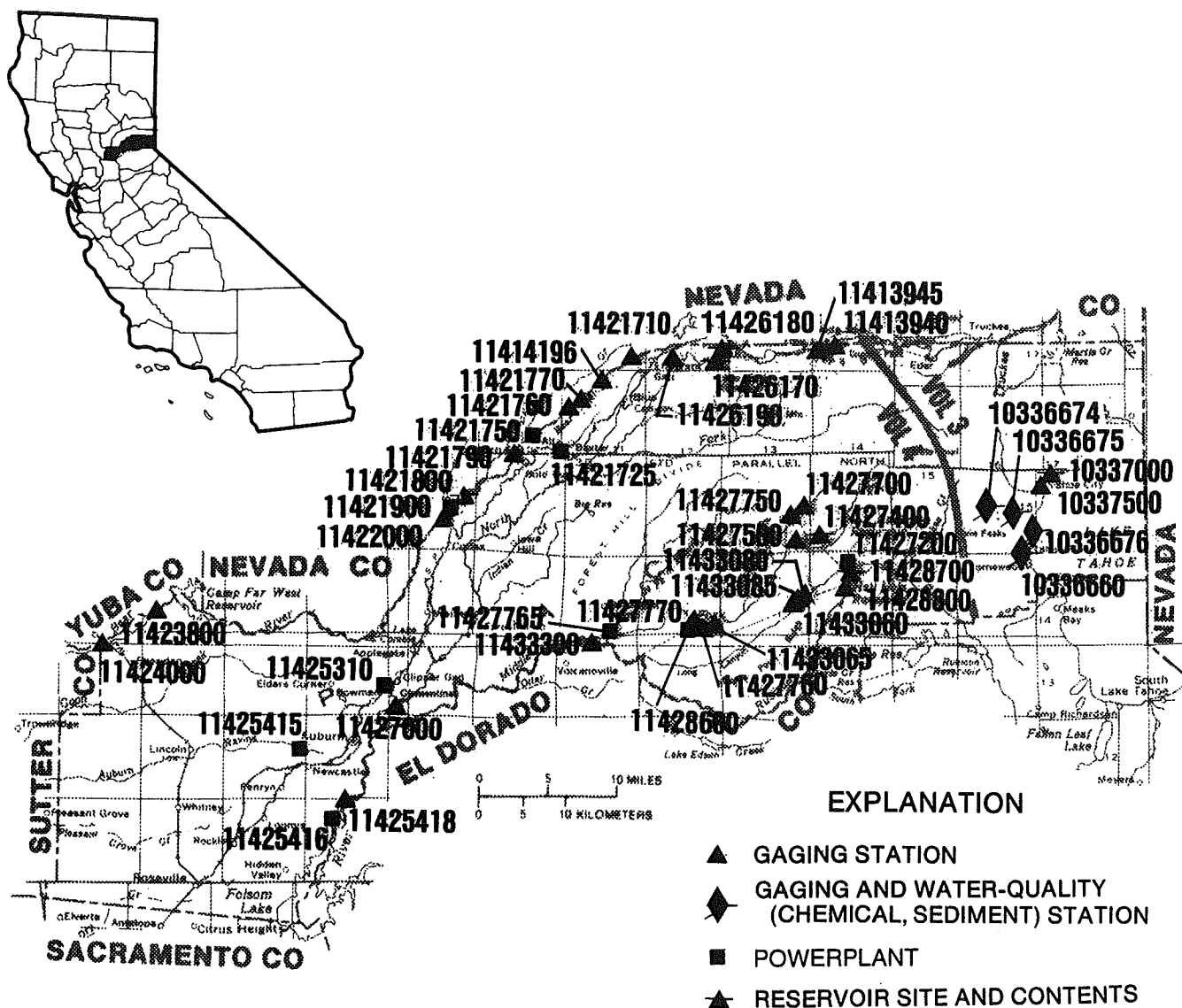


Figure 15. Location of discharge and water-quality stations in Placer County.
 (NOTE: Records for stations 11413940 through 11433300 published in volume 4.)

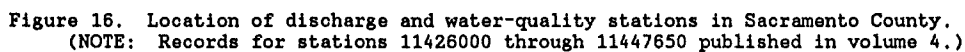


Figure 16. Location of discharge and water-quality stations in Sacramento County.
(NOTE: Records for stations 11426000 through 11447650 published in volume 4.)

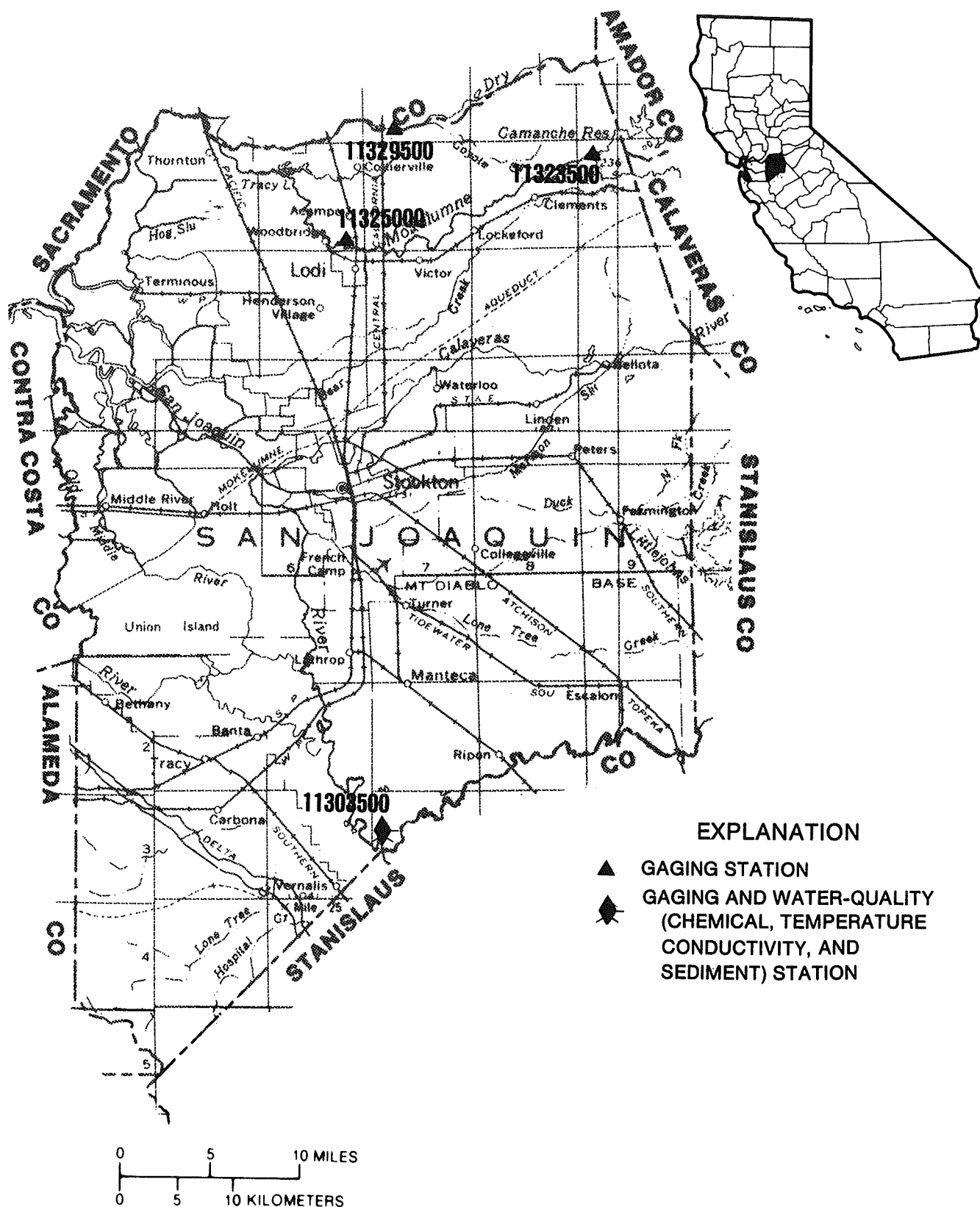


Figure 17. Location of discharge and water-quality stations in San Joaquin County.

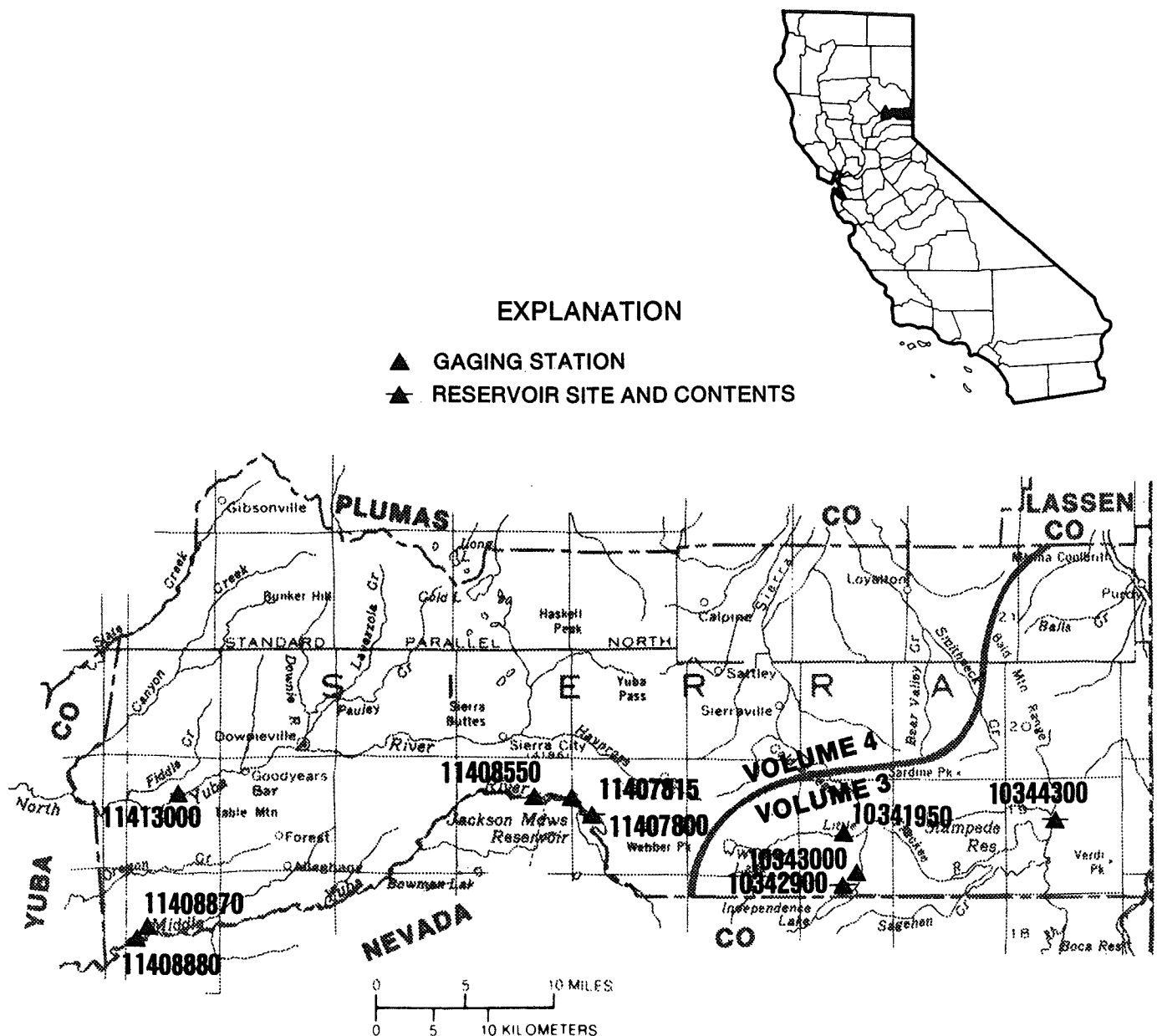


Figure 18. Location of discharge stations in Sierra County.
 (NOTE: Records for stations 11407800 through 11413000 published in volume 4.)

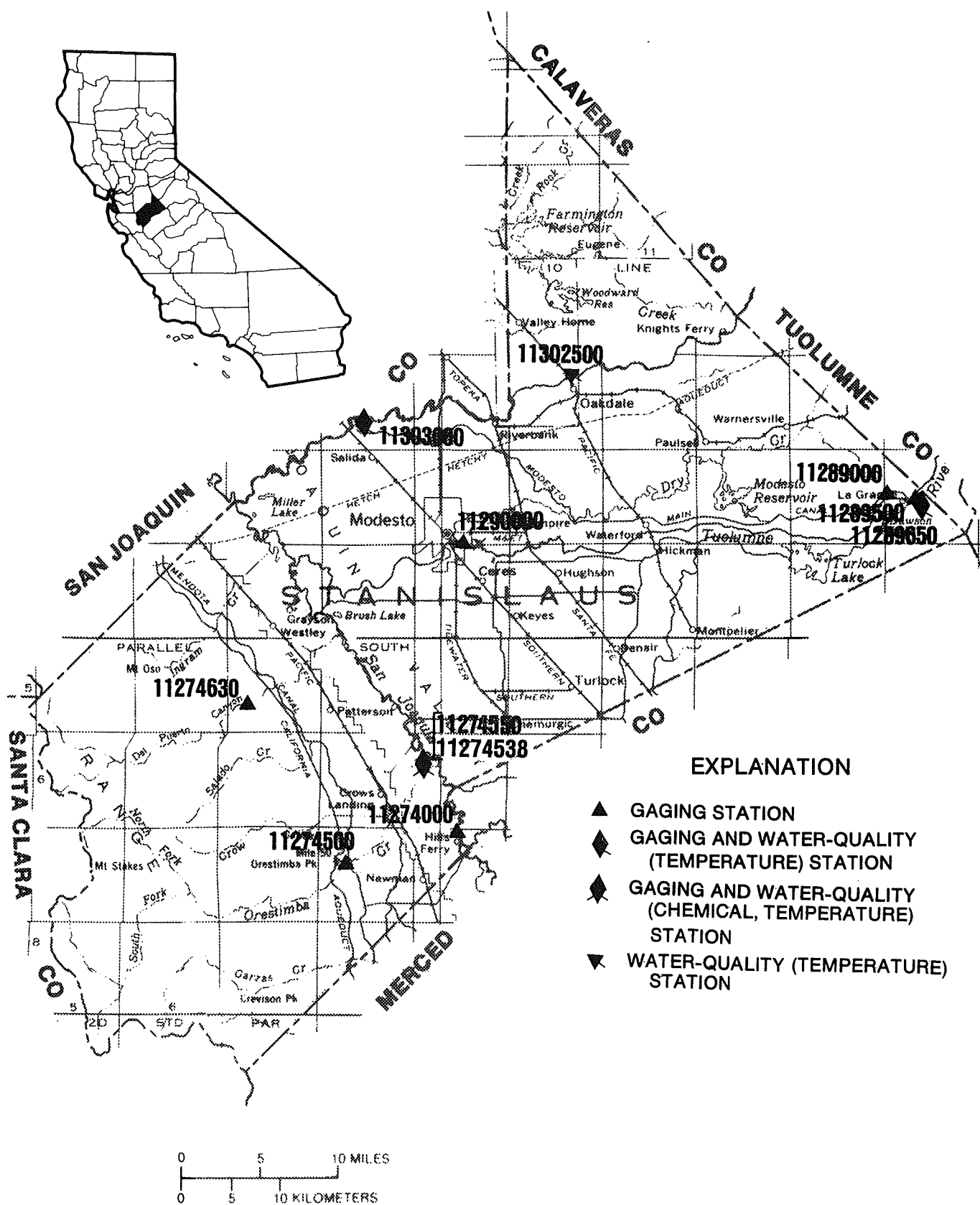


Figure 19. Location of discharge and water-quality stations in Stanislaus County.

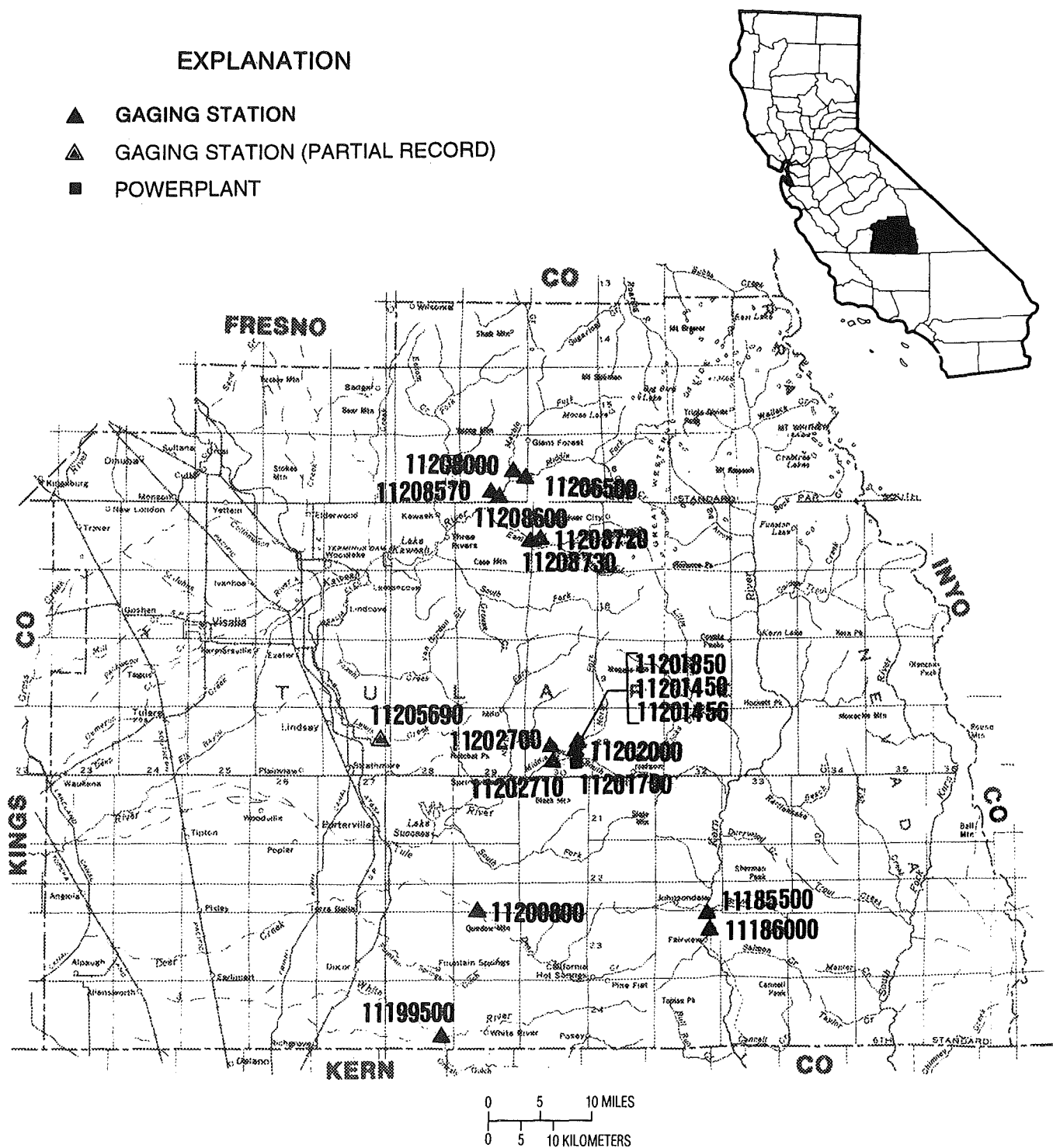


Figure 20. Location of discharge and water-quality stations in Tulare County.

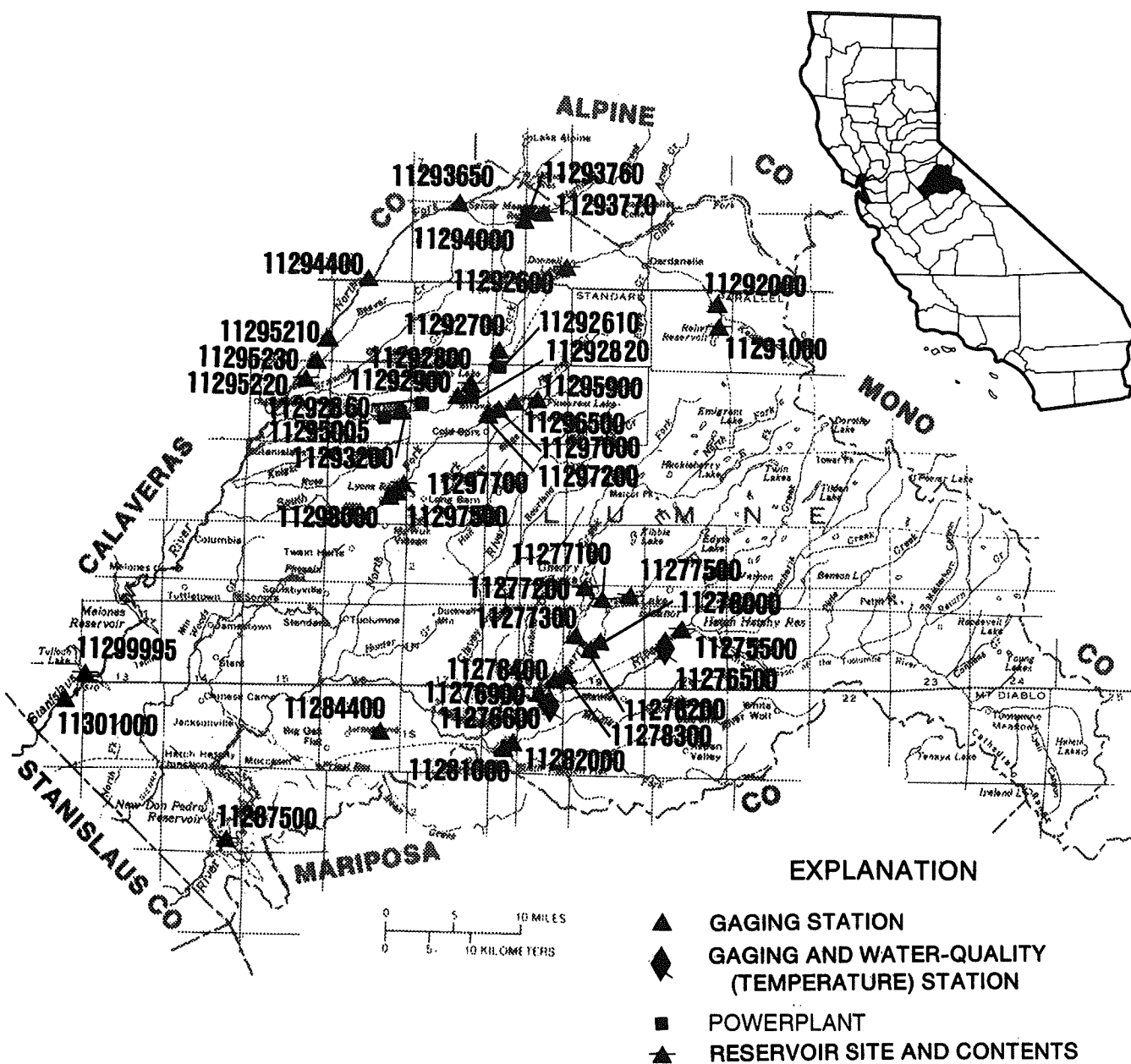


Figure 21. Location of discharge and water-quality stations in Tuolumne County.

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).
ND	Not detected.
&	Biological organism estimated as dominant.
*	Instantaneous streamflow at the time of cross-sectional measurement.
**	Partial sampled width.
1	Laboratory value.
2	Laboratory fixed-end point titration.
A	Samples collected by another agency.
N	Suspended-sediment concentration value determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.

Dissolved Trace-Element Concentrations

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

Change in National Trends Network procedures

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

THE GREAT BASIN

43

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., R24 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 sea level (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet. Figures given herein represent usable contents. Usable contents, 2,070 acre-ft between elevations 7,200 ft, natural rim, and 7,207 ft, spillway crest. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

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, November 1, 1990, elevation, 7,200.11 ft.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,690 acre-ft, July 3, elevation, 7,208.95 ft; minimum observed, 1,930 acre-ft, March 28, elevation, 7,206.55 ft, (affected by high winds).

MONTHEND ELEVATION, IN FEET ABOVE SEA LEVEL, AND TOTAL CONTENTS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)
September 30.	7,207.79	2,320	--
October 31.	7,207.40	2,700	-120
November 30.	7,207.28	2,160	-40
December 31.	7,207.44	2,210	+50
CALENDAR YEAR 1996	--	--	-110
January 31.	7,207.30	2,170	-40
February 29.	7,207.37	2,190	+20
March 31.	7,206.68	1,970	-220
April 30.	7,208.02	2,400	+430
May 31.	7,208.23	2,460	+60
June 30.	7,208.89	2,670	+210
July 31.	7,208.35	2,500	-170
August 31.	7,207.75	2,310	-180
September 30.	7,207.50	2,230	-80
WATER YEAR 1996.	--	--	-90

NOTE.--Monthend elevations are interpolated from readings made during the year.

WALKER LAKE BASIN

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 sea level (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet and by Upper Twin Lake. Figures given herein 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. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

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

EXTREMES FOR CURRENT YEAR--Maximum contents observed, 4,740 acre-ft, May 7, elevation, 7,201.73 ft; minimum observed, 3,820 acre-ft, November 29, elevation 7,199.55 ft.

MONTHEND ELEVATION AND CONTENTS, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)
September 30.	7,200.40	4,180	--
October 31.	7,199.63	3,860	-320
November 30.	7,199.58	3,840	-20
December 31.	7,200.29	4,130	+290
CALENDAR YEAR 1995	--	--	+1,610
January 31.	7,200.56	4,250	+120
February 29.	7,200.68	4,300	+50
March 31.	7,200.83	4,360	+60
April 30.	7,201.58	4,680	+320
May 31.	7,201.63	4,700	+20
June 30.	7,201.53	4,660	-40
July 31.	7,201.08	4,460	-200
August 31.	7,199.32	3,730	-730
September 30.	7,197.22	2,890	-840
WATER YEAR 1996.	--	--	-1,290

NOTE.--Monthend elevations are interpolated from readings made during the year.

WALKER LAKE BASIN

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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 1992 to September 1994 (irrigation season only), October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Upper and Lower Twin Lakes. No flow for many days in some years.

These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known, 660 ft³/s, June 21, 1911, gage height, 5.2 ft, at site 2.5 mi downstream.

REVISIONS.--WSP 1927: Drainage area.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	32	10	26	26	31	34	107	126	139	127	71
2	49	31	9.7	26	25	30	37	116	139	154	123	70
3	48	31	9.5	27	24	29	36	124	166	178	118	69
4	45	31	8.6	26	26	30	35	128	212	201	110	67
5	42	31	8.6	26	34	34	35	129	277	211	105	66
6	43	31	8.4	25	39	31	34	129	307	213	99	65
7	41	30	8.5	25	42	30	34	129	315	207	95	64
8	40	30	8.6	25	43	29	34	131	340	208	91	64
9	38	29	8.9	25	42	29	36	132	359	216	88	63
10	37	28	10	24	41	28	39	132	361	223	86	63
11	38	28	13	23	39	29	41	133	357	226	83	62
12	36	28	30	23	38	32	44	138	341	230	82	62
13	35	28	42	23	36	34	45	151	325	229	85	61
14	35	28	45	22	35	33	46	171	330	221	88	60
15	35	28	45	25	34	32	48	202	330	212	89	58
16	35	28	40	27	34	31	54	298	321	204	89	44
17	35	28	37	29	34	30	57	376	308	194	89	35
18	34	28	35	30	35	29	59	378	292	179	87	33
19	32	28	33	32	41	29	58	332	274	164	83	31
20	32	28	32	30	50	29	55	277	264	152	81	30
21	31	25	30	31	51	29	52	236	257	143	78	30
22	31	20	30	29	53	31	50	201	252	137	76	30
23	31	17	30	28	48	30	48	180	239	135	75	30
24	32	16	30	28	43	31	50	164	225	134	74	30
25	31	16	29	27	41	31	50	148	213	136	74	29
26	32	11	28	26	38	31	56	136	201	136	73	29
27	32	11	27	29	35	31	68	127	186	136	73	29
28	32	11	27	30	34	34	81	123	169	135	73	29
29	32	11	27	29	33	33	91	120	150	135	72	29
30	32	11	27	27	---	32	99	119	138	132	72	29
31	32	---	26	26	---	31	---	121	---	130	71	---
TOTAL	1129	733	753.8	829	1094	953	1506	5388	7774	5450	2709	1432
MEAN	36.4	24.4	24.3	26.7	37.7	30.7	50.2	174	259	176	87.4	47.7
MAX	51	32	45	32	53	34	99	378	361	230	127	71
MIN	31	11	8.4	22	24	28	34	107	126	130	71	29
AC-FT	2240	1450	1500	1640	2170	1890	2990	10690	15420	10810	5370	2840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1996, BY WATER YEAR (WY)

	MEAN	20.9	8.14	5.59	10.2	14.4	15.7	46.4	104	188	162	98.4	51.1
MAX	37.5	25.0	24.3	39.0	63.4	31.7	79.4	187	349	400	199	89.0	
(WY)	1970	1968	1996	1970	1963	1995	1959	1969	1969	1995	1995	1974	
MIN	7.00	.67	.000	.000	.000	.000	22.3	59.1	68.2	62.0	35.1	15.9	
(WY)	1995	1958	1954	1954	1954	1955	1975	1955	1992	1992	1992	1992	

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1954 - 1996

ANNUAL TOTAL	38842.5	29750.8	
ANNUAL MEAN	106	81.3	62.5
HIGHEST ANNUAL MEAN			100
LOWEST ANNUAL MEAN			33.8
HIGHEST DAILY MEAN	587	Jul 10	587
LOWEST DAILY MEAN	2.0	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	4.3	Jan 1	.00
INSTANTANEOUS PEAK FLOW			608
INSTANTANEOUS PEAK STAGE			4.01
ANNUAL RUNOFF (AC-FT)	77040	59010	45310
10 PERCENT EXCEEDS	318	211	158
50 PERCENT EXCEEDS	38	39	30
90 PERCENT EXCEEDS	11	26	.30

WALKER LAKE BASIN

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°14'20", long 119°19'30", in NE 1/4 NE 1/4 sec.04, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank at Buckeye Hot Springs, 0.6 mi downstream from Eagle Creek, and about 5.5 mi southwest of Bridgeport.

DRAINAGE AREA.--44.1 mi².

PERIOD OF RECORD.--November 1910 to September 1914 (fragmentary), October 1953 to September 1979, October 1995 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 6,900 ft above sea level, from topographic map. November 1910 to September 1914, non-recording gage at site 0.5 mi downstream at different datum.

REMARKS.--Records good except May 15 to July 25, which are fair, and estimated daily discharges, which are poor. No regulation or diversion above station. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1911, reached an observed stage of 4.8 ft, discharge not determined, site and datum then in use.

REVISIONS.--WSP 1927: Drainage area.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	31	26	e30	e29	e36	e61	e199	e205	327	97	43
2	48	31	25	e27	e31	e34	e67	e183	e230	307	92	41
3	47	30	25	e27	e30	e34	e63	e178	258	301	84	39
4	46	29	28	e27	e50	e33	e60	e178	257	266	79	38
5	45	29	27	e27	e90	e33	e64	e179	219	235	76	38
6	45	29	26	e26	e57	e34	e72	e182	256	207	75	37
7	44	29	26	e26	e53	34	e81	e204	249	203	72	36
8	43	29	e26	e26	e53	32	e90	226	301	210	71	35
9	42	29	e25	e26	e53	33	e100	228	275	209	70	34
10	41	28	e25	e26	e48	34	e95	233	269	209	68	34
11	40	28	e45	e27	e44	34	e91	254	260	241	68	33
12	38	28	e80	27	e42	33	e89	275	267	251	69	33
13	37	27	e50	27	e39	31	e87	260	323	221	72	35
14	36	27	e40	27	e37	30	e90	280	359	213	69	35
15	36	27	e37	28	e37	30	e99	330	322	215	70	33
16	36	27	e35	33	e39	31	e106	359	331	197	66	33
17	35	26	e33	30	e38	33	e100	272	286	173	62	32
18	35	26	e32	28	e38	39	e92	269	284	160	58	31
19	34	26	e32	29	e50	45	e90	243	280	152	55	31
20	34	26	e31	44	e45	52	e82	229	e275	116	53	30
21	34	26	e30	36	e39	56	e78	219	e275	107	52	29
22	33	25	e30	e34	e38	57	e77	205	274	110	50	29
23	33	25	e30	e33	e38	50	e81	189	e260	117	50	29
24	33	25	e30	e30	e39	46	e104	182	e248	122	50	29
25	33	25	e30	28	e37	44	e125	e162	e230	114	49	28
26	33	27	e30	e30	e37	43	e154	e158	e220	111	48	28
27	32	24	e30	31	e37	e48	e156	e162	209	109	47	28
28	32	27	e30	e30	e36	e51	e150	e158	203	111	45	27
29	31	26	e31	e30	e35	e50	e159	e157	240	108	45	27
30	32	26	e39	e27	---	e53	e177	e160	284	107	44	27
31	31	---	e35	e29	---	e56	---	e180	---	99	43	---
TOTAL	1168	818	1019	906	1239	1249	2940	6693	7949	5628	1949	982
MEAN	37.7	27.3	32.9	29.2	42.7	40.3	98.0	216	265	182	62.9	32.7
MAX	49	31	80	44	90	57	177	359	359	327	97	43
MIN	31	24	25	26	29	30	60	157	203	99	43	27
AC-FT	2320	1620	2020	1800	2460	2480	5830	13280	15770	11160	3870	1950

e Estimated

WALKER LAKE BASIN

47

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.8	21.8	21.9	20.5	21.0	24.2	48.5	135	204	128	51.7	29.2
MAX	41.4	44.4	52.2	37.8	50.5	40.3	98.0	322	432	399	115	65.6
(WY)	1957	1974	1965	1956	1963	1996	1996	1969	1911	1911	1967	1911
MIN	7.43	11.6	10.2	10.2	10.2	11.7	22.3	32.2	43.4	18.8	9.76	7.55
(WY)	1978	1962	1978	1960	1977	1977	1967	1977	1976	1977	1977	1977

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1911 - 1996

ANNUAL TOTAL	32540		
ANNUAL MEAN	88.9	59.2	
HIGHEST ANNUAL MEAN		114	1969
LOWEST ANNUAL MEAN		19.5	1977
HIGHEST DAILY MEAN	359	May 16	860
LOWEST DAILY MEAN	24	Nov 27	4.5
ANNUAL SEVEN-DAY MINIMUM	25	Nov 21	5.5
INSTANTANEOUS PEAK FLOW	500	May 15	947
INSTANTANEOUS PEAK STAGE	3.86	May 15	4.41
ANNUAL RUNOFF (AC-FT)	64540		42880
10 PERCENT EXCEEDS	242		166
50 PERCENT EXCEEDS	44		28
90 PERCENT EXCEEDS	27		13

WALKER LAKE BASIN

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 sea level (project datum).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began December 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 herein represent total contents. Water is used for irrigation by Walker River Irrigation District. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,880 acre-ft, June 16, 1974, elevation 6,460.78 ft; no contents at times in water years 1929, 1930, 1960, 1977, 1988, and 1989.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 43,130 acre-ft, July 9, elevation, 6,460.22 ft; minimum 20,340 acre-feet, September 30, elevation, 6,450.85 ft.

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

6,425	334	6,440	6,240	6,455	29,160
6,430	1,130	6,445	11,380	6,460	42,460
6,435	2,920	6,450	18,780	6,461	45,490

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32130	33070	37540	37180	37200	37820	41230	36180	30610	42280	40420	27870
2	31930	33220	37650	37200	37200	37980	41120	36070	30580	42340	40040	27500
3	31720	33400	37760	37260	37200	38150	40970	35960	30750	42520	39630	27110
4	31520	33530	37840	37320	37590	38570	40850	35750	31040	42520	39230	26790
5	31570	33680	37980	37340	38620	38650	40910	35590	31550	42580	38840	26400
6	31600	33880	38120	37370	38980	38870	40970	35460	32230	42640	38290	26000
7	31620	34010	38210	37370	38870	39100	41030	35300	33170	42730	37820	25650
8	31670	34190	38290	37450	38730	39370	41060	35090	34300	42730	37370	25320
9	31700	34270	38340	37400	38480	39630	41090	34880	35460	42980	36950	24990
10	31700	34480	38620	37480	38230	39980	41150	34640	36570	42700	36570	24640
11	31750	34720	38870	37480	37900	40300	41030	34510	37680	42700	36230	24330
12	31750	34800	39980	37540	37680	40530	40910	34430	38590	42730	35890	24020
13	31800	35010	39860	37590	37570	40450	40710	34430	39400	42670	35650	23700
14	31870	35170	39460	37650	37510	40300	40470	34610	39890	42730	35280	23430
15	31930	35330	38930	37730	37540	40150	40500	34750	40240	42820	34900	23160
16	31980	35490	38460	38120	37730	40040	40240	35170	40770	42730	34610	22870
17	32000	35670	37900	38340	37840	40010	40210	35780	41180	42490	34270	22560
18	31980	35810	37450	38680	38040	40040	39770	36120	41380	42400	33860	22420
19	32030	35990	37120	38840	38760	40040	39430	36120	41440	42400	33370	22230
20	32050	36120	36840	39230	39040	40120	39040	35940	41530	42310	32890	22090
21	31800	36280	36650	39210	38820	40300	38620	35780	41760	42200	32480	22010
22	31850	36420	36550	39320	38400	40420	38210	35170	42020	42110	32100	21870
23	31850	36550	36570	39320	38210	40560	37960	34590	42080	41990	31670	21720
24	31930	36710	36570	39430	37840	40710	37340	34030	41930	41910	31300	21520
25	32000	36820	36630	39290	37540	40800	37120	33470	42080	41760	30820	21290
26	32100	36980	36630	38790	37340	41030	36840	32840	42520	41580	30340	21070
27	32260	37070	36650	38480	37400	41230	36710	32260	42670	41380	29830	20860
28	32430	37200	36630	38010	37480	41350	36570	31720	42490	41320	29350	20680
29	32590	37320	36680	37620	37590	41410	36390	31350	42310	41200	28950	20530
30	32740	37510	36930	37480	---	41350	36310	31090	42280	40970	28610	20360
31	32920	---	37090	37320	---	41230	---	30820	---	40740	28260	---
MAX	32920	37510	39980	39430	39040	41410	41230	36180	42670	42980	40420	27870
MIN	31520	33070	36550	37180	37200	37820	36310	30820	30580	40740	28260	20360
a	6456.53	6458.12	6458.30	6457.83	6459.94	6454.61	6458.27	6458.20	6459.58	6455.69	6459.41	6450.86
b	+540	-420	+270	+4920	+11460	+12480	+4590	+230	+3640	+5490	-1540	-7900

CAL YR 1995 MAX 42550 MIN 6720 b +26100
WTR YR 1996 MAX 42980 MIN 20360 b +33760

a Elevation, in feet above sea level, at end of month.

b Change in contents, in acre-feet.

WALKER LAKE BASIN

49

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 sea level, from topographic map. Prior to October 1, 1921, nonrecording gage at site 0.5 mi upstream at different datum. October 1, 1921, to February 21, 1924, water-stage recorder at site 1 mi downstream at different datum. February 22, 1924, to September 30, 1931, water-stage recorder, and October 1, 1931, to May 25, 1939, nonrecording gage at present site at datum 2.34 ft lower. May 26, 1939, to November 27, 1988, water-stage recorder at datum 2.00 ft higher.

REMARKS.--Records good. Diversions for irrigation of meadow pasturelands near Bridgeport. Flow regulated by Bridgeport Reservoir (station 10292500). These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	22	35	108	200	65	257	338	411	305	325	269
2	240	22	35	108	167	65	289	356	354	266	325	268
3	239	22	35	108	137	65	263	356	323	299	324	260
4	209	22	35	108	153	65	192	355	324	402	324	247
5	120	22	35	108	219	65	125	356	324	403	323	247
6	111	22	35	108	271	65	136	356	324	385	327	246
7	110	22	35	108	326	65	150	355	264	385	318	235
8	109	22	35	108	347	65	150	366	229	421	284	220
9	109	24	35	108	347	90	150	382	230	449	277	224
10	109	23	35	109	347	134	159	382	231	523	276	219
11	109	23	35	109	346	160	184	382	232	494	276	213
12	97	23	168	109	310	216	212	382	252	501	297	218
13	74	23	398	96	254	260	250	394	302	507	328	212
14	74	23	399	82	202	287	274	423	437	462	328	199
15	74	23	397	82	144	303	274	468	489	461	311	193
16	88	23	397	64	101	324	273	682	429	461	286	188
17	108	23	396	54	101	331	273	612	429	412	295	181
18	108	23	353	54	101	331	295	568	460	338	308	165
19	108	23	300	54	155	331	327	626	492	273	322	143
20	108	23	259	54	255	316	328	625	450	273	331	121
21	128	22	220	54	357	240	327	624	391	273	303	120
22	144	21	175	65	387	191	327	648	392	260	285	115
23	111	21	124	85	348	155	327	686	443	241	292	126
24	74	21	108	107	327	124	326	658	458	258	312	165
25	74	21	108	187	326	124	326	618	394	293	323	172
26	53	21	108	348	253	102	326	616	339	305	322	154
27	35	30	108	379	140	89	326	614	381	305	318	140
28	25	26	108	379	101	118	326	574	436	305	315	140
29	25	29	108	325	73	167	326	472	395	305	299	140
30	23	34	108	222	---	218	326	413	339	313	269	135
31	22	---	108	222	---	236	---	412	---	326	269	---
TOTAL	3258	699	4835	4212	6795	5367	7824	15099	10954	11204	9492	5675
MEAN	105	23.3	156	136	234	173	261	487	365	361	306	189
MAX	240	34	399	379	387	331	328	686	492	523	331	269
MIN	22	21	35	54	73	65	125	338	229	241	269	115
AC-FT	6460	1390	9590	8350	13480	10650	15520	29950	21730	22220	18830	11260

WALKER LAKE BASIN

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.1	28.2	36.2	36.4	46.4	85.4	174	254	308	300	239	153
MAX	301	325	398	260	234	417	721	880	1001	797	638	406
(WY)	1984	1983	1984	1942	1996	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1922 - 1996
ANNUAL TOTAL	94951	85414	
ANNUAL MEAN	260	233	144
HIGHEST ANNUAL MEAN			443
LOWEST ANNUAL MEAN			37.5
HIGHEST DAILY MEAN	1160	Jul 9	1360
LOWEST DAILY MEAN	21	Nov 22	.20
ANNUAL SEVEN-DAY MINIMUM	21	Nov 20	.20
INSTANTANEOUS PEAK FLOW		767	1390
INSTANTANEOUS PEAK STAGE		5.37	5.37
ANNUAL RUNOFF (AC-FT)	188300	169400	104100
10 PERCENT EXCEEDS	610	412	342
50 PERCENT EXCEEDS	209	240	92
90 PERCENT EXCEEDS	24	35	6.8

WALKER LAKE BASIN

51

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°21'30", long 119°26'30", in NW 1/4 NW 1/4 sec.22, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on right bank, 0.8 mi North of Sonora Junction, 1.5 mi upstream from mouth, and 14 mi north of Bridgeport.

DRAINAGE AREA.--63.1 mi².

PERIOD OF RECORD.--April to August 1910, October 1944 to September 1986, October 1995 to September 1996. Prior to October 1958, published as East Fork Walker River near Bridgeport.

REVISED RECORDS.--WDR 82-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,790 ft above sea level, from topographic map. April to August 1910, nonrecording gage at site 1 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Small diversions above station. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	28	22	26	23	31	55	181	162	173	62	28
2	37	27	21	26	27	31	63	175	204	194	59	28
3	37	27	21	25	24	31	54	156	264	204	54	27
4	37	26	28	24	46	28	52	150	314	183	53	26
5	37	26	25	23	93	22	56	153	330	161	51	26
6	36	26	23	23	62	41	62	159	351	156	50	26
7	37	26	23	23	45	33	73	164	409	161	49	25
8	39	26	22	22	47	31	88	168	437	170	48	24
9	38	26	21	21	47	37	96	162	407	172	47	24
10	36	25	21	20	41	42	90	168	369	165	46	24
11	35	25	30	21	38	41	85	191	344	213	46	23
12	35	25	101	21	37	36	80	236	329	200	47	22
13	35	25	42	20	35	34	73	265	371	178	49	22
14	34	25	37	20	34	33	78	276	370	163	48	23
15	34	24	34	20	33	33	87	326	330	152	46	22
16	33	24	33	33	37	36	97	730	312	133	44	22
17	33	24	e33	26	36	41	80	412	284	116	40	21
18	33	24	e33	24	33	48	82	461	268	103	36	21
19	33	23	33	25	46	51	68	281	266	97	36	21
20	32	23	e33	33	41	57	62	236	265	93	36	21
21	32	23	e33	24	32	64	59	216	248	91	35	21
22	31	22	e34	e25	31	64	60	195	221	90	35	21
23	31	23	e40	e26	e33	54	68	176	217	90	34	21
24	31	23	e35	26	34	46	89	164	210	92	35	21
25	30	23	e31	27	34	43	111	142	198	86	36	21
26	30	24	e29	e28	33	43	134	135	170	79	34	21
27	29	22	e26	29	39	47	145	140	144	78	32	21
28	29	24	24	e31	42	48	138	129	133	83	32	21
29	29	23	24	e35	33	45	145	131	133	77	30	21
30	28	23	36	39	---	47	165	136	151	75	29	21
31	28	---	31	26	---	51	---	142	---	68	29	---
TOTAL	1037	735	979	792	1136	1289	2595	6756	8211	4096	1308	686
MEAN	33.5	24.5	31.6	25.5	39.2	41.6	86.5	218	274	132	42.2	22.9
MAX	39	28	101	39	93	64	165	730	437	213	62	28
MIN	28	22	21	20	23	22	52	129	133	68	29	21
AC-FT	2060	1460	1940	1570	2250	2560	5150	13400	16290	8120	2590	1360

e Estimated.

WALKER LAKE BASIN

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.3	21.7	22.1	21.1	22.4	26.3	50.7	124	176	103	39.5	23.2
MAX	47.7	65.3	98.4	43.1	58.9	85.7	97.0	323	388	297	137	55.5
(WY)	1983	1951	1951	1956	1986	1986	1986	1969	1983	1967	1983	1983
MIN	6.79	9.84	9.10	9.26	11.0	10.8	20.9	16.5	36.6	9.48	5.41	4.95
(WY)	1978	1949	1949	1949	1977	1977	1976	1977	1976	1977	1977	1977

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1945 - 1996

ANNUAL TOTAL	29620		
ANNUAL MEAN	80.9	54.3	
HIGHEST ANNUAL MEAN		113	1983
LOWEST ANNUAL MEAN		13.9	1977
HIGHEST DAILY MEAN	730	May 16	1996
LOWEST DAILY MEAN	20	Jan 10	
ANNUAL SEVEN-DAY MINIMUM	20	Jan 9	
INSTANTANEOUS PEAK FLOW	1200	May 16	
INSTANTANEOUS PEAK STAGE	3.01	May 16	
ANNUAL RUNOFF (AC-FT)	58750	39330	
10 PERCENT EXCEEDS	199	145	
50 PERCENT EXCEEDS	37	25	
90 PERCENT EXCEEDS	23	13	

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.--181 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 sea level. Prior to October 1, 1939, at site, 125 ft downstream at datum 1.00 ft higher. October 1, 1939, to September 30, 1969, at present site and datum. October 1, 1969, to July 10, 1987, at site 100 ft downstream at same datum.

REMARKS.--Records fair 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, capacity, 1,200 acre-ft, 7 mi upstream. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	71	56	80	81	121	236	1100	1010	815	265	99
2	106	71	53	77	82	111	251	1140	1230	889	248	97
3	103	70	48	76	78	120	231	1050	1540	970	218	95
4	101	67	73	73	125	123	221	930	1670	837	203	91
5	99	68	72	71	338	91	226	898	1650	727	192	91
6	96	66	64	71	300	128	246	937	1740	667	189	89
7	94	66	62	69	231	146	287	946	1940	710	181	87
8	95	66	58	72	207	137	365	985	1870	758	189	86
9	92	65	56	71	197	144	446	905	1710	757	190	85
10	91	64	54	71	181	153	443	956	1550	721	188	84
11	89	64	76	69	169	156	414	1090	1430	733	175	82
12	88	63	261	69	163	148	397	1340	1350	803	168	79
13	88	63	127	69	157	143	361	1510	1520	709	173	79
14	86	62	117	68	153	136	367	1530	1540	741	171	81
15	85	61	105	70	151	135	428	1870	1320	659	169	78
16	84	60	99	95	165	142	479	3450	1270	586	161	78
17	82	59	83	79	179	156	406	1710	1200	483	154	75
18	81	59	89	79	163	184	377	1790	1120	420	144	73
19	80	59	81	73	198	212	329	1220	1130	389	137	71
20	80	57	79	e72	183	254	297	1010	1140	364	131	69
21	78	57	68	e70	176	293	277	945	1120	356	126	67
22	77	55	79	e70	166	310	277	900	949	359	123	63
23	77	57	77	e70	164	273	312	827	933	379	121	61
24	77	57	69	71	161	238	437	717	949	401	123	59
25	76	56	67	67	152	223	610	627	806	363	122	57
26	75	59	67	e70	139	209	779	624	670	334	118	55
27	73	49	71	71	139	211	883	772	536	324	113	54
28	71	59	70	73	124	216	848	682	501	336	107	53
29	71	57	71	86	130	198	831	715	560	323	104	53
30	73	57	94	89	---	204	1010	820	692	303	102	51
31	72	---	93	85	---	210	---	859	---	281	102	---
TOTAL	2650	1844	2539	2296	4852	5525	13071	34855	36646	17497	4907	2242
MEAN	85.5	61.5	81.9	74.1	167	178	436	1124	1222	564	158	74.7
MAX	110	71	261	95	338	310	1010	3450	1940	970	265	99
MIN	71	49	48	67	78	91	221	624	501	281	102	51
AC-FT	5260	3660	5040	4550	9620	10960	25930	69130	72690	34710	9730	4450

e Estimated

WALKER LAKE BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.4	68.6	72.1	67.1	75.1	106	295	758	940	489	152	74.0
MAX	219	539	448	204	246	369	600	1655	2066	1864	663	246
(WY)	1983	1951	1951	1956	1963	1986	1938	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1938 - 1996			
ANNUAL TOTAL	195359				128924							
ANNUAL MEAN	535				352				260			
HIGHEST ANNUAL MEAN									537			
LOWEST ANNUAL MEAN									65.3			
HIGHEST DAILY MEAN	3260				3450				3800			
LOWEST DAILY MEAN	40				48				9.7			
ANNUAL SEVEN-DAY MINIMUM	49				54				10			
INSTANTANEOUS PEAK FLOW					4610				6220			
INSTANTANEOUS PEAK STAGE					6.55				8.10			
ANNUAL RUNOFF (AC-FT)	387500				255700				188400			
10 PERCENT EXCEEDS	1650				974				800			
50 PERCENT EXCEEDS	190				142				88			
90 PERCENT EXCEEDS	64				64				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 Toiyabe 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 sea level, from topographic map. Prior to July 31, 1908, nonrecording gage at site 0.5 mi upstream at different datum. March 1, 1909, to August 31, 1910, nonrecording gage, and June 18, 1915, to August 15, 1919, water-stage recorder near present site at different datums. August 16, 1919, to March 31, 1938, water-stage recorder at site 1,000 ft upstream at different datum. May 26, 1957, to September 10, 1963, water-stage recorder at site 10 ft downstream at datum 0.38 ft lower. September 10, 1963, to October 28, 1994, water-stage recorder at site 20 ft upstream at datum 2.5 ft higher.

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, capacity, 1,200 acre-ft, 17 mi upstream. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	73	62	94	98	144	267	1180	980	891	266	112
2	113	68	56	90	91	140	285	1210	1210	998	253	109
3	109	68	e60	91	88	147	269	1120	1490	1090	222	103
4	106	65	80	88	124	161	249	996	1670	965	203	99
5	105	74	105	84	347	110	254	977	1640	852	190	98
6	102	70	89	85	338	145	279	1030	1690	773	186	97
7	98	75	85	82	271	162	333	1040	1850	822	179	93
8	99	76	76	84	240	161	429	1080	1920	875	184	91
9	96	71	74	84	237	172	527	1000	1790	879	188	91
10	93	69	69	e85	214	183	528	1060	1650	844	186	91
11	91	72	90	e90	201	187	495	1190	1540	841	183	89
12	90	73	302	97	195	184	478	1450	1470	938	189	84
13	91	71	163	96	192	179	433	1650	1620	828	198	89
14	90	70	144	92	188	170	434	1690	1620	880	197	94
15	88	71	133	96	185	166	501	1940	1420	773	194	90
16	87	69	124	121	194	173	569	3210	1370	683	187	93
17	87	69	106	110	211	182	488	1700	1300	552	179	92
18	85	70	109	113	197	210	450	1730	1210	468	165	90
19	85	64	105	91	237	243	394	1180	1210	427	157	88
20	84	61	95	106	233	285	355	978	1210	391	148	83
21	81	60	75	107	208	319	324	920	1190	381	142	81
22	78	52	69	74	189	338	313	886	1030	383	136	78
23	80	58	84	80	195	298	341	826	1020	400	133	76
24	81	61	79	88	183	254	466	726	1030	434	136	74
25	79	65	67	78	179	240	668	637	895	391	141	75
26	81	62	81	92	175	219	862	621	742	350	136	75
27	e78	e65	69	93	165	228	1010	798	588	337	132	75
28	e76	67	72	83	163	242	962	707	525	351	127	73
29	e76	71	74	94	153	207	920	742	588	336	122	70
30	e77	68	102	103	---	220	1090	841	746	311	119	70
31	75	---	111	103	---	226	---	859	---	284	116	---
TOTAL	2777	2028	3010	2874	5691	6295	14973	35974	38214	19728	5294	2623
MEAN	89.6	67.6	97.1	92.7	196	203	499	1160	1274	636	171	87.4
MAX	116	76	302	121	347	338	1090	3210	1920	1090	266	112
MIN	75	52	56	74	88	110	249	621	525	284	116	70
AC-FT	5510	4020	5970	5700	11290	12490	29700	71350	75800	39130	10500	5200

e Estimated

WALKER LAKE BASIN

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.5	70.9	67.2	68.0	81.2	123	301	775	982	525	167	83.8
MAX	299	214	270	189	280	403	636	1756	2055	2492	721	269
(WY)	1905	1974	1965	1980	1963	1986	1910	1969	1983	1907	1995	1907
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1903 - 1996			
ANNUAL TOTAL	201897				139481				276			
ANNUAL MEAN	553				381				669			
HIGHEST ANNUAL MEAN									74.5			
LOWEST ANNUAL MEAN									4170			
HIGHEST DAILY MEAN	3350				3210				14			
LOWEST DAILY MEAN	46				52				14			
ANNUAL SEVEN-DAY MINIMUM	58				60				14			
INSTANTANEOUS PEAK FLOW					4040				6500			
INSTANTANEOUS PEAK STAGE					7.82				.00			
ANNUAL RUNOFF (AC-FT)	400500				276700				199800			
10 PERCENT EXCEEDS	1640				1050				836			
50 PERCENT EXCEEDS	201				171				97			
90 PERCENT EXCEEDS	71				73				37			

WALKER LAKE BASIN

57

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. Datum of gage is above sea level. Prior to October 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). Usable 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 herein 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. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,680 acre-ft, July 3, 1980, July 10, 1995, elevation 5,000.92 ft, present datum; no usable contents at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum contents 59,900 acre-ft, July 10, elevation, 5,005.20 ft; minimum contents, 23,000 acre-ft, September 30, elevation 4,986.54 ft.

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

4,968	490	4,980	19,760	4,995	47,540
4,970	3,580	4,985	28,310	5,000	58,570
4,975	11,520	4,990	37,360	5,001	60,870

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39230	31780	36030	42920	49530	54910	57520	50740	39830	58980	53350	34010
2	38860	31800	36120	43120	49740	54710	57520	50520	40460	59210	52910	33380
3	38470	31900	36290	43310	49960	54710	57520	50310	41630	59210	52250	32800
4	38090	32070	36400	43500	50630	54710	57750	49660	43190	59210	51590	32210
5	37730	32230	36580	43640	51280	54930	57980	49230	44680	58980	50940	31760
6	37400	32370	36730	43850	51940	55180	57980	48770	46180	58980	50280	31330
7	37070	32530	36880	44010	52600	55180	58180	48170	47860	58980	49640	30910
8	36770	32680	37010	44200	52820	55180	58410	47510	49640	59210	48770	30480
9	36500	32820	37170	44360	53290	55400	58640	46810	51150	59670	48030	30020
10	36200	32980	37300	44530	53510	55420	58640	46140	52470	59900	47220	29580
11	35900	33130	37490	44700	53730	55650	58640	45640	53570	59900	46440	29060
12	35610	33270	38470	44820	53950	55870	58410	45530	54460	59670	45760	28480
13	35410	33430	39000	45010	53950	55870	58160	45720	55360	59440	44950	27910
14	35190	33600	39370	45130	54170	55900	57700	46010	56030	59210	44160	27380
15	34980	33740	39570	45300	54200	55900	57250	46410	56480	58980	43410	26900
16	34730	33890	39810	45700	54200	55900	57020	48560	57160	58980	42690	26450
17	34450	34030	40030	45930	54200	55900	56800	49200	57610	58750	41980	26090
18	34160	34180	40270	46350	54200	55900	56350	49420	58300	58520	41310	25790
19	33910	34320	40460	46560	54640	55920	56650	48770	58750	58520	40670	25600
20	33670	34470	40690	46730	54860	55920	54980	47830	58980	58070	40110	25450
21	33400	34620	40830	47010	55110	56140	54310	46770	58980	57840	39650	25310
22	33110	34750	40990	47200	55110	56140	53420	45620	58750	57610	39130	25140
23	32870	34890	41210	47370	54890	56390	52760	44450	58750	57390	38660	24950
24	32660	35040	41370	47450	54890	56390	52290	43210	58980	56930	38210	24680
25	32460	35150	41530	47860	54660	56620	51850	42180	59210	56710	37750	24380
26	32320	35320	41700	47980	54690	56620	51630	41130	59440	56480	37340	24090
27	32210	35470	41860	48690	54690	56870	51630	40450	59440	56030	36880	23800
28	32080	35600	42080	48690	54910	57090	51420	39830	59210	55580	36390	23510
29	31980	35750	42220	48900	54910	57090	50980	39490	59210	55130	35780	23240
30	31850	35900	42470	49100	---	57320	50960	39430	58980	54690	35190	23000
31	31740	---	42710	49310	---	57320	---	39510	---	54020	34600	---
MAX	39230	35900	42710	49310	55110	57320	58640	50740	59440	59900	53350	34010
MIN	31740	31780	36030	42920	49530	54710	50960	39430	39830	54020	34600	23000
a	4991.57	4993.85	4997.31	5000.45	5003.00	5004.07	5001.21	4995.72	5004.80	5002.60	4993.15	4986.54
b	-7870	+4160	+6810	+6600	+5600	-2410	-6360	-11450	+19470	-4960	-19420	-11600

CAL YR 1995 MAX 60680 MIN 8820 b +33970
WTR YR 1996 MAX 59900 MIN 23000 b -16610

a Elevation, in feet above sea level, 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 northeast of Markleeville.

DRAINAGE AREA.--276 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft above sea level, from topographic map. Prior to October 1, 1967, at present site at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	96	83	155	149	277	565	1710	1450	705	179	111
2	151	93	82	142	149	286	593	1770	1670	733	170	106
3	148	93	76	139	147	324	529	1650	1920	747	162	103
4	143	90	103	133	730	417	510	1480	2030	706	159	101
5	126	95	119	128	1810	321	529	1440	1980	648	154	94
6	120	91	98	126	918	310	592	1540	2030	602	154	101
7	116	91	94	123	637	340	695	1550	2170	623	151	102
8	114	91	87	126	581	356	867	1600	2110	604	141	110
9	113	90	86	124	549	420	1010	1510	1900	569	136	108
10	106	89	82	121	500	450	960	1570	1730	545	134	102
11	102	88	130	115	453	474	871	1750	1570	526	133	100
12	101	88	848	118	455	423	831	2080	1510	504	135	97
13	103	87	274	118	423	379	751	2330	1590	463	157	99
14	105	87	200	114	410	357	776	2410	1510	496	156	107
15	102	86	171	123	398	376	899	2960	1370	449	134	104
16	101	85	152	239	448	411	1030	6310	1300	408	125	108
17	100	84	129	187	505	458	834	3330	1220	365	121	104
18	99	83	139	170	468	547	781	4080	1120	337	117	103
19	99	84	124	145	796	635	671	2320	1070	317	115	98
20	98	82	118	140	742	719	618	1870	1040	296	110	84
21	95	83	110	151	521	747	575	1740	987	280	111	83
22	90	79	113	130	437	714	558	1630	898	270	108	82
23	97	82	124	151	408	606	616	1500	868	266	116	81
24	98	82	97	148	387	532	869	1330	862	281	120	81
25	96	81	88	142	370	495	1160	1210	884	268	122	79
26	98	93	e93	161	340	470	1370	1230	832	234	118	80
27	97	75	e100	162	320	482	1510	1350	739	221	114	79
28	96	85	112	143	299	562	1380	1240	660	232	112	78
29	95	85	116	154	285	471	1290	1300	638	219	119	78
30	96	86	176	147	---	466	1560	1330	665	203	119	77
31	95	---	196	148	---	478	---	1330	---	188	118	---
TOTAL	3354	2604	4520	4423	14635	14303	25800	60450	40323	13305	4120	2840
MEAN	108	86.8	146	143	505	461	860	1950	1344	429	133	94.7
MAX	154	96	848	239	1810	747	1560	6310	2170	747	179	111
MIN	90	75	76	114	147	277	510	1210	638	188	108	77
AC-FT	6650	5170	8970	8770	29030	28370	51170	119900	79980	26390	8170	5630

e Estimated

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.4	112	135	164	210	284	543	1126	995	399	146	89.7
MAX	346	476	718	545	917	983	1121	2447	2996	1721	477	239
(WY)	1983	1984	1965	1980	1986	1986	1982	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1960 - 1996			
ANNUAL TOTAL	269998				190677							
ANNUAL MEAN	740				521				358			
HIGHEST ANNUAL MEAN									809			
LOWEST ANNUAL MEAN									83.7			
HIGHEST DAILY MEAN	3820				Jun 2				7360			
LOWEST DAILY MEAN	69				Jan 2				12			
ANNUAL SEVEN-DAY MINIMUM	82				Nov 27				12			
INSTANTANEOUS PEAK FLOW					8180				May 16			
INSTANTANEOUS PEAK STAGE					7.91				May 16			
ANNUAL RUNOFF (AC-FT)	535500				378200				259100			
10 PERCENT EXCEEDS	2220				1500				947			
50 PERCENT EXCEEDS	270				192				144			
90 PERCENT EXCEEDS	91				88				49			

CARSON RIVER BASIN

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION (REVISED).--Lat 38°46'11", long 119°49'58", 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 sea level. Prior to October 1, 1938, nonrecording gage at about the same site at different datum. October 1, 1938, to November 11, 1958, water-stage recorder at same site at datum 1.02 ft lower. November 13, 1958, to January 30, 1963, water-stage recorder at site 150 ft downstream at datum 3.06 ft lower.

REMARKS.--Records fair. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	29	29	76	44	88	165	609	327	146	58	37
2	40	29	29	63	44	89	165	619	361	165	56	30
3	39	31	28	58	43	93	154	568	408	168	53	29
4	38	30	46	53	70	82	155	506	418	161	50	28
5	38	30	42	50	273	49	173	496	398	142	40	29
6	38	30	34	49	289	89	208	512	395	111	38	29
7	37	30	33	48	217	97	257	511	408	110	38	29
8	36	30	32	48	181	99	316	524	393	113	37	29
9	35	30	30	47	161	106	359	501	349	109	36	28
10	34	30	29	46	151	111	339	501	305	107	36	28
11	33	29	38	44	140	111	312	533	281	106	36	30
12	33	29	195	44	136	102	305	596	268	114	37	35
13	37	29	86	44	133	97	283	634	273	105	54	37
14	33	29	63	42	130	94	305	666	258	102	56	39
15	33	29	46	49	126	91	361	790	238	97	51	38
16	32	29	53	59	146	101	367	1820	224	90	49	33
17	32	29	50	61	170	112	288	843	213	81	47	31
18	31	38	48	55	161	134	254	929	199	75	43	31
19	32	42	48	37	150	162	225	543	190	71	35	31
20	31	40	47	52	134	183	205	444	185	67	34	30
21	31	32	42	48	105	203	191	432	182	64	33	29
22	31	29	40	56	117	203	199	431	176	61	33	29
23	31	29	41	56	129	169	268	388	181	62	32	29
24	30	28	43	42	106	146	420	355	190	59	33	32
25	30	28	42	32	109	135	495	316	192	57	34	34
26	31	33	37	44	101	129	546	315	190	55	33	34
27	30	30	37	45	104	137	569	348	174	53	32	32
28	29	30	37	39	100	138	500	321	151	55	31	30
29	29	29	39	42	91	133	486	320	143	54	40	29
30	29	29	79	45	---	131	571	324	141	51	42	29
31	29	---	112	45	---	140	---	320	---	49	40	---
TOTAL	1034	919	1555	1519	3861	3754	9441	17015	7811	2860	1267	938
MEAN	33.4	30.6	50.2	49.0	133	121	315	549	260	92.3	40.9	31.3
MAX	42	42	195	76	289	203	571	1820	418	168	58	39
MIN	29	28	28	32	43	49	154	315	141	49	31	28
AC-FT	2050	1820	3080	3010	7660	7450	18730	33750	15490	5670	2510	1860

CARSON RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.4	40.5	47.8	46.3	57.7	76.6	206	378	259	108	49.3	31.1
MAX	79.1	321	347	140	258	283	502	924	996	525	223	120
(WY)	1983	1951	1951	1970	1963	1986	1907	1906	1983	1907	1907	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1901 - 1996
ANNUAL TOTAL	82668	51974	
ANNUAL MEAN	226	142	111
HIGHEST ANNUAL MEAN			290
LOWEST ANNUAL MEAN			26.1
HIGHEST DAILY MEAN	1100	Jun 1	1820
LOWEST DAILY MEAN	21	Jan 5	28
ANNUAL SEVEN-DAY MINIMUM	23	Jan 2	29
INSTANTANEOUS PEAK FLOW			3040
INSTANTANEOUS PEAK STAGE			5.46
ANNUAL RUNOFF (AC-FT)	164000	103100	80210
10 PERCENT EXCEEDS	696	373	295
50 PERCENT EXCEEDS	73	56	46
90 PERCENT EXCEEDS	30	30	17

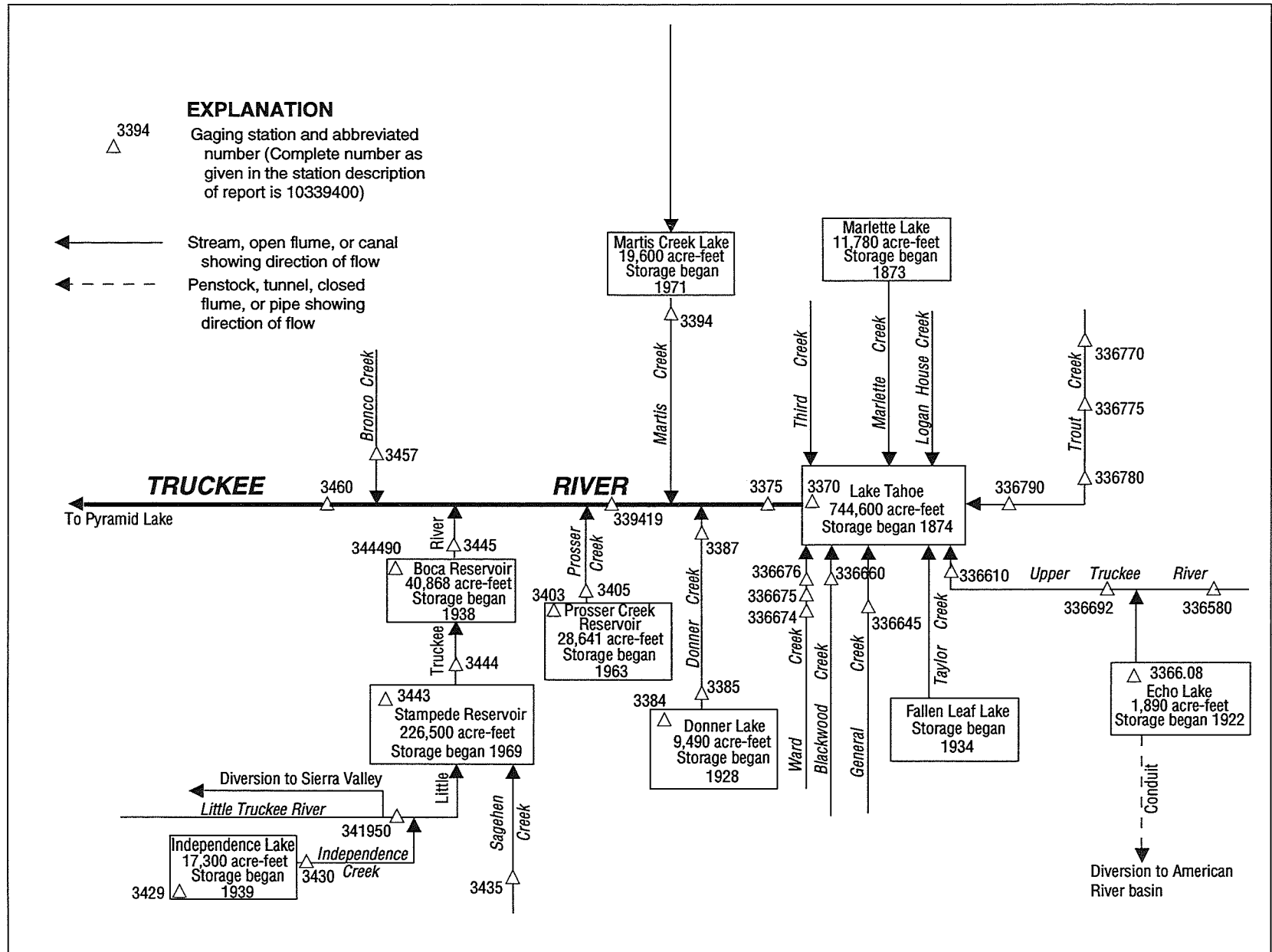


Figure 22. Diversions and storage in Truckee River basin.

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA

LOCATION.--Lat 38°47'47", long 120°01'05", in NW 1/4 SW 1/4 sec.17, T.11 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 0.25 mi upstream from bridge, 0.5 mi upstream of confluence of Big Meadow and Grass Lake Creeks, 0.5 mi west of State Highway 89, and 4.0 mi south of Meyers.

DRAINAGE AREA.--14.1 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 6,490 ft above sea level, from topographic map. Prior to October 1, 1991, at site 1,200 ft downstream at datum 2.54 higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.2	5.2	48	10	14	30	166	186	81	13	3.7
2	5.7	5.2	5.8	35	9.9	14	31	174	230	81	11	3.6
3	5.4	5.2	7.2	30	9.2	15	29	159	257	81	10	3.5
4	5.2	5.1	39	27	68	15	28	139	255	75	10	3.5
5	5.0	5.2	17	21	195	e14	30	139	245	69	9.8	3.5
6	5.0	4.7	9.1	18	76	e14	35	146	260	69	8.9	3.5
7	5.0	4.6	7.9	18	49	13	49	164	268	71	8.0	3.5
8	5.2	4.7	6.6	18	42	13	64	175	246	71	7.7	3.4
9	4.6	4.7	6.6	16	39	18	74	173	214	69	8.1	3.2
10	4.7	4.7	6.1	15	36	19	66	189	191	67	7.7	3.2
11	4.7	4.6	19	13	35	18	57	225	173	67	7.6	3.0
12	4.9	4.6	99	12	35	16	53	263	177	70	8.6	3.0
13	5.0	4.5	37	12	35	14	47	282	176	56	9.3	3.4
14	5.0	4.2	24	12	35	13	52	313	156	50	8.8	4.0
15	5.4	4.3	22	14	34	12	69	495	143	47	7.8	4.2
16	4.6	4.2	e20	e18	40	13	75	658	133	42	7.1	4.3
17	4.6	4.0	e19	e17	47	17	55	306	123	38	6.3	3.9
18	4.6	3.9	17	e16	42	28	47	314	115	33	5.5	3.8
19	4.6	3.9	e17	e15	41	35	41	192	111	31	5.3	3.6
20	4.8	3.6	e16	e14	37	40	38	170	111	28	5.3	3.5
21	5.0	3.6	e15	e14	33	43	36	183	102	27	5.2	3.2
22	5.0	3.5	e14	e11	36	42	36	192	94	26	5.0	3.3
23	5.2	3.6	14	e10	32	35	49	170	92	24	4.9	3.1
24	5.3	3.6	14	e11	29	31	80	152	89	22	5.2	3.0
25	5.2	4.1	e9.0	e12	24	28	97	143	88	21	4.9	3.1
26	5.1	6.2	10	e14	21	26	118	164	91	18	4.9	3.2
27	4.9	4.4	9.0	e13	18	28	119	176	79	17	4.6	3.1
28	4.6	5.0	8.7	e13	16	28	103	162	69	17	4.4	3.1
29	4.6	4.9	12	e12	14	27	108	169	71	16	3.8	3.1
30	4.7	5.1	73	12	---	22	146	169	77	14	3.7	3.1
31	4.8	---	81	11	---	23	---	159	---	13	3.5	---
TOTAL	154.2	135.1	660.2	522	1138.1	688	1862	6681	4622	1411	215.9	102.6
MEAN	4.97	4.50	21.3	16.8	39.2	22.2	62.1	216	154	45.5	6.96	3.42
MAX	5.8	6.2	99	48	195	43	146	658	268	81	13	4.3
MIN	4.6	3.5	5.2	10	9.2	12	28	139	69	13	3.5	3.0
AC-FT	306	268	1310	1040	2260	1360	3690	13250	9170	2800	428	204

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.13	4.46	6.55	7.24	12.6	19.4	45.5	127	117	50.5	10.4	3.31
MAX	4.97	7.15	21.3	16.8	39.2	41.3	62.1	216	329	220	45.9	9.33
(WY)	1996	1992	1996	1996	1996	1995	1996	1996	1995	1995	1995	1995
MIN	2.12	2.13	1.69	1.57	3.06	6.64	15.1	51.2	12.1	3.40	1.64	1.30
(WY)	1993	1991	1991	1991	1991	1991	1991	1992	1992	1994	1994	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1990 - 1996

ANNUAL TOTAL	26946.1		18192.1		35.8	
ANNUAL MEAN	73.8		49.7		72.3	
HIGHEST ANNUAL MEAN					14.1	
LOWEST ANNUAL MEAN					1995	
HIGHEST DAILY MEAN	438	Jun 25	658	May 16	658	May 16 1996
LOWEST DAILY MEAN	3.5	Nov 22	3.0	Sep 11	.76	Sep 1 1990
ANNUAL SEVEN-DAY MINIMUM	3.7	Nov 18	3.1	Sep 23	.97	Aug 29 1990
INSTANTANEOUS PEAK FLOW			945	May 16	945	May 16 1996
INSTANTANEOUS PEAK STAGE			10.51	May 16	10.51	May 16 1996
ANNUAL RUNOFF (AC-FT)	53450		36080		25900	
10 PERCENT EXCEEDS	271		164		98	
50 PERCENT EXCEEDS	22		17		6.4	
90 PERCENT EXCEEDS	4.9		3.9		1.8	

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990 to current year.

REMARKS.--In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data were reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (00301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
11...	1130	4.7	39	--	14.0	6.5	--	--	--	--
12...	1420	4.7	41	7.9	14.5	7.5	600	9.6	102	0.016
NOV										
21...	1405	4.6	47	--	11.5	4.5	--	--	--	0.003
22...	1030	3.3	46	--	8.0	4.5	--	--	--	--
DEC										
14...	1410	14	29	--	1.0	1.0	--	--	--	0.010
JAN										
10...	1200	14	32	--	1.0	1.5	--	--	--	--
12...	1340	14	30	--	9.5	1.5	--	--	--	0.007
16...	1550	48	30	--	3.0	1.0	--	--	--	0.010
FEB										
06...	1420	70	20	--	7.0	1.0	--	--	--	0.008
MAR										
08...	1245	15	31	7.5	5.0	2.0	603	10.8	99	0.012
20...	1340	30	25	--	11.0	3.0	--	--	--	0.008
APR										
05...	1115	29	28	--	12.0	2.5	--	--	--	0.008
17...	1515	58	23	7.2	2.5	2.0	592	10.7	100	0.005
25...	1430	87	22	--	15.0	5.0	--	--	--	0.003
MAY										
02...	1300	145	20	--	15.0	4.0	--	--	--	0.007
06...	1900	159	20	--	8.5	3.5	--	--	--	0.006
11...	1605	237	20	--	20.0	5.5	--	--	--	0.004
14...	1250	289	18	7.2	14.5	5.0	596	10.0	100	0.002
15...	1115	520	14	--	15.0	4.0	--	--	--	0.006
16...	1900	520	14	--	6.5	3.0	--	--	--	0.002
21...	1515	185	20	--	7.5	5.5	--	--	--	0.003
30...	1520	160	22	--	16.0	7.0	--	--	--	0.004
JUN										
03...	1845	340	17	--	18.0	7.0	--	--	--	0.003
06...	1140	200	20	7.5	25.0	7.5	603	9.8	104	0.002
06...	1745	300	17	--	27.0	10.0	--	--	--	0.004
12...	1505	160	22	--	20.5	10.0	--	--	--	0.003
18...	1440	105	23	--	19.0	9.5	--	--	--	0.003
26...	1355	82	23	--	8.5	6.5	--	--	--	0.019
JUL										
03...	1440	73	23	--	23.0	12.0	--	--	--	0.003
19...	1520	30	31	7.6	22.5	12.0	604	8.6	102	0.006
31...	1200	13	37	--	24.0	13.0	--	--	--	--
AUG										
16...	1305	12	41	--	26.0	13.0	--	--	--	0.015
SEP										
06...	1410	3.7	49	7.8	23.0	10.0	599	9.5	107	0.021
23...	0930	3.1	51	--	10.0	6.0	--	--	--	--

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

PYRAMID AND WINNEMUCCA LAKES BASIN

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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 current year. 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 sea level, 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 flashboards. 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 Truckee 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, 1,968 acre-ft, June 10, 1994, gage height, 6.24 ft; minimum, 0 acre-ft, Nov. 18-20, 1993, many days in 1995, gage height, 0.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,916 acre-ft, July 4, gage height, 6.08 ft; minimum, 0 acre-ft, many days, gage height, 0.0 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
1	310	5	1,570
2	625	6	1,890
3	940	6.7	2,118

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	759	0	0	170	120	87	114	301	1508	1838	1867	1751
2	673	0	0	170	117	81	108	328	1687	1874	1841	1739
3	590	0	0	170	120	105	102	322	1822	1906	1844	1724
4	542	0	36	158	253	148	96	298	1825	1916	1848	1667
5	464	0	54	127	440	120	96	277	1815	1903	1841	1606
6	392	0	69	127	412	84	96	286	1848	1900	1835	1560
7	319	0	72	114	325	69	108	289	1877	1900	1828	1515
8	256	0	72	114	265	57	148	292	1864	1896	1825	1478
9	195	0	51	102	244	45	185	301	1828	1893	1828	1439
10	134	0	51	102	216	90	199	307	1815	1887	1828	1389
11	87	0	161	96	192	127	192	325	1828	1890	1828	1353
12	66	0	e408	90	188	134	185	372	1883	1890	1835	1316
13	57	0	e359	84	185	105	173	464	1900	1893	1848	1288
14	45	0	e310	93	170	102	161	530	1887	1896	1838	1258
15	39	0	259	108	144	96	173	873	1864	1890	1838	1221
16	33	0	216	202	151	87	226	1169	1854	1890	1835	1184
17	33	0	176	182	179	84	209	1093	1857	1883	1822	1148
18	24	0	161	213	188	84	199	1032	1861	1864	1822	1115
19	18	0	134	209	209	102	173	928	1867	1864	1812	1079
20	6	0	114	182	213	114	144	883	1870	1861	1809	1042
21	6	0	102	195	235	123	120	952	1854	1857	1805	1006
22	9	0	96	170	199	158	108	982	1841	1851	1805	979
23	9	0	90	185	141	151	114	988	1841	1848	1796	943
24	6	0	84	265	158	127	155	943	1835	1848	1796	916
25	3	0	75	241	137	114	199	946	1828	1851	1799	895
26	3	0	69	216	114	102	238	916	1828	1857	1802	869
27	3	0	81	241	105	108	262	949	1818	1861	1792	862
28	3	0	69	195	96	123	268	1000	1805	1864	1776	848
29	3	0	90	179	90	111	262	1148	1802	1864	1776	830
30	6	0	111	167	---	99	271	1279	1809	1870	1773	794
31	0	---	158	141	---	90	---	1386	---	1870	1766	---
MAX	759	0	408	265	440	158	271	1386	1900	1916	1867	1751
MIN	0	0	0	84	90	45	96	277	1508	1838	1766	794
a	0	0	.51	.46	.30	.30	.87	4.41	5.75	5.94	5.62	2.54
b	-859	0	+158	-17	-51	0	+181	+1115	+423	+61	-104	-972
CAL YR 1995	MAX 1900	MIN 0	b +77									
WTR YR 1996	MAX 1916	MIN 0	b -65									

e Estimated.

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

b Change in contents, in acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA

LOCATION.--Lat 38°50'55", long 120°01'34", in NE 1/4 NE 1/4 sec.31, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 500 ft downstream of U.S. Highway 50 bridge, 1 mi southwest of Meyers, and 7.5 mi upstream of Lake Tahoe.

DRAINAGE AREA.--34.3 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 6,310 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	11	e10	e133	41	64	106	e250	e362	e136	25	10
2	52	11	e11	e100	38	63	110	e300	e385	e136	24	10
3	46	11	e12	e76	36	67	97	e310	e450	e137	22	9.9
4	35	10	e20	54	119	77	94	e290	e550	e129	22	9.5
5	45	10	e65	48	469	76	96	e300	547	e120	21	9.5
6	38	10	e25	44	275	73	109	e340	545	e119	21	9.5
7	43	10	e12	42	190	64	134	386	570	e115	20	9.4
8	37	10	e11	41	150	62	152	415	551	e113	19	9.3
9	37	10	e11	39	129	67	e190	397	490	e108	18	9.0
10	35	10	e10	39	116	72	e160	422	428	e107	18	9.2
11	25	10	e20	36	107	83	e143	486	359	e106	18	8.8
12	19	10	e70	35	103	84	e130	559	340	e108	19	8.5
13	17	10	e180	34	102	77	e120	581	362	e103	22	9.0
14	15	9.8	e80	33	105	70	e110	642	341	e93	22	10
15	14	9.8	e50	37	106	67	e120	851	309	e85	20	10
16	13	9.7	e35	89	118	68	e150	1490	287	e80	18	11
17	13	9.7	e30	83	140	73	e179	803	254	e77	17	10
18	12	9.6	e26	69	133	86	e138	801	239	e71	16	9.7
19	12	9.5	e24	71	161	102	e117	501	e221	e66	15	9.4
20	12	9.3	e21	59	150	118	e100	380	e203	e60	15	9.2
21	11	e9.0	e19	59	126	129	e90	363	e191	e55	14	8.9
22	11	e8.8	e18	53	124	130	e85	415	e180	e50	14	8.7
23	11	e8.1	e18	51	110	118	e81	394	e178	e46	14	8.5
24	11	e8.0	e18	62	94	104	e110	378	e171	42	14	8.3
25	11	e7.9	e16	87	86	95	e138	e340	e160	38	14	8.3
26	11	e10	e14	76	79	89	e162	e320	e150	35	13	8.2
27	11	e11	e13	73	75	92	e225	e380	e147	32	12	8.1
28	11	e9.0	e13	71	70	106	e230	e320	e146	30	12	8.0
29	11	e10	e18	56	66	93	e207	e365	e129	31	12	8.0
30	11	e11	e30	49	---	89	e222	e375	e134	30	11	7.9
31	11	---	e126	44	---	89	---	e355	---	27	11	---
TOTAL	702	293.2	1026	1843	3618	2647	4105	14509	9379	2485	533	273.8
MEAN	22.6	9.77	33.1	59.5	125	85.4	137	468	313	80.2	17.2	9.13
MAX	61	11	180	133	469	130	230	1490	570	137	25	11
MIN	11	7.9	10	33	36	62	81	250	129	27	11	7.9
AC-FT	1390	582	2040	3660	7180	5250	8140	28780	18600	4930	1060	543

e Estimated.

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.67	9.13	13.1	23.0	39.7	66.4	111	290	235	98.5	19.9	11.3
MAX	22.6	14.9	33.1	59.5	125	132	139	569	709	452	78.6	37.5
(WY)	1996	1995	1996	1996	1996	1995	1993	1993	1995	1995	1995	1995
MIN	3.39	3.33	3.15	4.37	6.69	28.2	47.2	85.0	20.4	4.81	2.28	2.50
(WY)	1995	1991	1991	1991	1991	1994	1991	1992	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1990 - 1996			
ANNUAL TOTAL	62629.2				41414.0							
ANNUAL MEAN	172				113				81.0			
HIGHEST ANNUAL MEAN									169			
LOWEST ANNUAL MEAN									26.1			
HIGHEST DAILY MEAN	1040				1490				1490			
LOWEST DAILY MEAN	7.9				7.9				1.2			
ANNUAL SEVEN-DAY MINIMUM	8.7				8.1				1.8			
INSTANTANEOUS PEAK FLOW					2320				2320			
INSTANTANEOUS PEAK STAGE					6.61				6.61			
ANNUAL RUNOFF (AC-FT)	124200				82140				58680			
10 PERCENT EXCEEDS	579				340				204			
50 PERCENT EXCEEDS	57				62				18			
90 PERCENT EXCEEDS	11				9.9				3.6			

PYRAMID AND WINNEMUCCA LAKES BASIN

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990 to current year.

REMARKS.--In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
11...	0900	27	41	--	12.0	9.0	--	--	--	--
12...	1230	20	52	7.6	12.5	9.5	605	9.1	101	0.014
NOV										
21...	1255	9.9	87	--	10.5	6.0	--	--	--	0.016
DEC										
14...	1320	104	33	--	1.5	3.0	--	--	--	0.014
JAN										
10...	0900	39	58	--	1.0	2.0	--	--	--	--
12...	1220	42	50	--	8.0	2.0	--	--	--	0.009
16...	1510	134	53	--	2.5	2.0	--	--	--	0.012
FEB										
06...	1330	268	33	--	8.5	2.0	--	--	--	0.013
12...	0925	99	99	--	4.0	1.5	--	--	--	--
MAR										
08...	1150	69	66	7.3	6.5	3.0	606	10.6	99	0.019
20...	1225	107	54	--	13.5	4.0	--	--	--	0.013
27...	0900	90	65	--	3.0	3.0	--	--	--	--
APR										
05...	0955	100	63	--	8.0	2.5	--	--	--	0.016
17...	1315	198	47	7.1	3.5	3.5	596	10.3	99	0.013
25...	1355	228	42	--	17.0	5.0	--	--	--	0.003
MAY										
02...	1420	448	29	--	13.0	6.0	--	--	--	0.009
06...	1810	333	31	--	13.5	6.0	--	--	--	0.007
11...	1435	387	27	--	22.0	6.5	--	--	--	0.008
14...	1100	547	23	7.2	14.0	4.0	600	10.2	99	0.004
15...	1345	701	20	--	11.0	5.5	--	--	--	0.002
16...	1730	1000	17	--	7.0	4.5	--	--	--	0.006
21...	1420	242	28	--	7.5	7.0	--	--	--	0.006
30...	1430	174	32	--	17.0	8.0	--	--	--	0.005
JUN										
03...	1730	406	25	--	25.5	11.0	--	--	--	0.006
06...	1410	360	25	7.5	26.0	10.5	603	9.0	102	0.006
12...	1345	205	28	--	22.5	11.5	--	--	--	0.006
18...	1325	215	29	--	19.5	11.0	--	--	--	0.007
26...	1240	180	30	--	7.0	8.0	--	--	--	0.007
JUL										
03...	1310	118	34	--	24.0	13.0	--	--	--	0.008
19...	1400	45	47	7.6	23.0	14.0	606	8.3	101	0.007
31...	0915	29	43	--	19.0	13.0	--	--	--	--
AUG										
16...	1230	19	71	--	24.0	15.0	--	--	--	0.010
SEP										
06...	1300	9.7	87	7.8	22.5	12.5	603	9.4	111	0.002
23...	1030	8.5	91	--	14.5	9.5	--	--	--	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

LOCATION.--Lat 38°55'21", long 119°59'26", in NW 1/4 SE 1/4 sec.4, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 200 ft downstream from 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. Datum of gage is 6,229.04 ft above sea level. Prior to Apr. 26, 1984, at datum 2.00 ft higher. Prior to Oct. 19, 1993, at site 200 ft upstream at same datum.

REMARKS.--Records fair including estimated periods. 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 (station 10336608), 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, 0.70 ft³/s, Aug. 22 to Sept. 5, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1315	562	5.02	Apr. 16	1500	497	4.74
Jan. 16	1815	351	4.06	May 16	1345	1780	7.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e41	9.2	11	106	e71	88	190	454	334	143	29	12
2	e40	e12	12	82	e70	86	206	490	382	132	27	12
3	39	e12	11	72	e70	94	170	477	455	129	26	12
4	34	10	33	64	e200	e94	158	423	539	130	26	11
5	34	10	44	58	e600	e94	160	398	541	122	25	10
6	e34	9.7	28	53	e400	e94	175	419	512	113	25	11
7	33	9.7	28	51	303	e95	203	410	547	112	24	12
8	e32	9.8	26	50	242	95	246	461	553	109	23	11
9	29	10	24	48	210	99	285	434	498	102	23	10
10	e28	9.8	21	48	183	107	272	452	433	97	22	10
11	23	10	47	45	165	126	246	487	372	89	22	10
12	17	9.6	410	43	157	121	234	571	337	92	24	10
13	14	9.6	223	42	154	107	208	631	370	100	28	10
14	13	9.6	138	40	151	97	208	677	356	90	28	13
15	12	9.6	101	48	149	97	248	822	319	82	25	14
16	11	9.4	84	168	e148	105	419	1430	294	74	24	15
17	10	9.7	76	144	e145	116	297	1060	265	66	22	14
18	9.9	9.6	60	94	e142	136	289	1000	239	60	21	13
19	9.7	9.5	56	e93	e140	159	216	657	232	56	20	13
20	9.3	9.1	56	e91	e137	186	195	472	226	53	19	12
21	8.6	9.1	67	e90	e134	200	173	426	221	51	18	11
22	7.7	9.3	66	e88	e131	199	163	492	198	49	18	11
23	8.2	9.3	54	e87	e128	171	182	450	186	48	17	9.9
24	8.0	9.8	53	e85	e126	145	260	398	188	45	17	9.9
25	8.6	10	48	e83	e123	132	313	352	197	37	18	9.4
26	9.0	16	44	e81	e120	125	350	345	208	36	17	10
27	8.7	12	41	e79	e110	141	395	389	192	35	16	10
28	8.8	11	40	e77	e100	205	365	352	155	35	16	11
29	8.6	11	37	e76	e90	150	329	307	143	35	16	9.9
30	8.4	11	94	e74	---	143	402	312	143	32	14	9.7
31	9.5	---	153	e73	---	148	---	306	---	31	13	---
TOTAL	567.0	306.4	2186	2333	4899	3955	7557	16354	9635	2385	663	336.8
MEAN	18.3	10.2	70.5	75.3	169	128	252	528	321	76.9	21.4	11.2
MAX	41	16	410	168	600	205	419	1430	553	143	29	15
MIN	7.7	9.1	11	40	70	86	158	306	143	31	13	9.4
AC-FT	1120	608	4340	4630	9720	7840	14990	32440	19110	4730	1320	668

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.8	41.3	49.6	51.6	70.9	107	164	302	253	89.5	21.5	13.3
MAX	72.1	225	218	165	307	305	300	567	795	448	102	55.3
(WY)	1983	1984	1982	1974	1986	1986	1982	1982	1983	1995	1983	1983
MIN	2.60	7.36	8.07	8.00	10.5	21.2	64.0	55.3	23.5	4.65	1.15	1.39
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1994	1994	1988

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1972 - 1996			
ANNUAL TOTAL	74570.4				51177.2							
ANNUAL MEAN	204				140				101			
HIGHEST ANNUAL MEAN									203			
LOWEST ANNUAL MEAN									29.2			
HIGHEST DAILY MEAN	1180				May 1				2010			
LOWEST DAILY MEAN	7.7				Oct 22				.70			
ANNUAL SEVEN-DAY MINIMUM	8.4				Oct 21				.70			
INSTANTANEOUS PEAK FLOW					1780				May 16			
INSTANTANEOUS PEAK STAGE					7.97				May 16			
ANNUAL RUNOFF (AC-FT)	147900				101500				72930			
10 PERCENT EXCEEDS	621				398				276			
50 PERCENT EXCEEDS	84				80				38			
90 PERCENT EXCEEDS	10				9.9				7.1			

PYRAMID AND WINNEMUCCA LAKES BASIN

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.

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

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. In May 1994, station was incorporated into the National Water-Quality Assessment Program (NAWQA) to monitor water-quality conditions in the Pyramid and Winnemucca Lake Basin. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE PER (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
12...	1040	21	51	7.7	12.0	8.5	605	9.0	97	0.014
NOV										
21...	1125	9.4	93	--	11.5	6.0	--	--	--	0.018
DEC										
11...	1410	35	60	--	4.5	3.5	--	--	--	0.036
12...	1320	562	35	--	3.0	3.0	--	--	--	0.020
14...	1200	135	34	--	3.0	3.0	--	--	--	0.024
JAN										
12...	1100	43	57	--	5.5	1.5	--	--	--	0.018
16...	1325	174	58	--	4.0	2.0	--	--	--	0.023
17...	1410	123	53	--	1.5	2.0	--	--	--	0.019
FEB										
04...	1445	226	61	--	4.5	0.5	--	--	--	0.031
05...	1500	506	36	--	7.0	0.5	--	--	--	0.019
09...	1400	204	50	--	9.0	3.0	--	--	--	0.021
MAR										
08...	1015	93	74	7.3	2.0	1.0	609	10.6	93	0.032
20...	1040	173	63	--	11.0	3.0	--	--	--	0.023
APR										
05...	1300	149	66	--	11.5	6.0	--	--	--	0.023
12...	1735	226	49	7.5	4.0	7.0	601	9.6	100	0.009
16...	1550	492	47	--	4.0	3.5	--	--	--	0.014
17...	1110	286	49	--	3.5	2.5	--	--	--	0.018
25...	1215	297	43	--	12.0	6.0	--	--	--	0.010
MAY										
02...	0830	517	29	--	9.0	3.0	--	--	--	0.008
06...	1100	423	30	--	15.0	4.0	--	--	--	0.009
06...	1925	385	31	--	10.0	6.5	--	--	--	0.008
11...	1240	472	28	--	17.0	6.5	--	--	--	0.008
14...	0830	716	23	7.6	13.0	5.5	603	9.7	97	0.003
15...	0920	795	22	--	14.0	6.0	--	--	--	0.007
15...	1520	906	23	--	15.0	8.5	--	--	--	0.005
16...	1445	1750	22	--	10.0	7.0	--	--	--	0.007
17...	1900	923	22	--	6.5	5.0	--	--	--	0.009
18...	1430	1100	24	--	8.0	7.0	--	--	--	0.007
21...	1140	412	31	7.5	9.5	5.0	--	--	--	0.008
30...	1315	294	33	--	15.0	7.0	--	--	--	0.008
JUN										
03...	1625	391	29	--	26.0	12.0	--	--	--	0.007
06...	0930	522	24	7.4	17.0	8.0	608	9.8	104	0.006
06...	2100	491	25	--	16.5	12.5	--	--	--	0.004
12...	1210	331	27	--	17.0	11.0	--	--	--	0.006
18...	1150	239	30	--	17.5	10.5	--	--	--	0.007
26...	1105	201	33	--	9.0	8.0	--	--	--	0.007
JUL										
03...	1110	130	35	--	23.5	13.5	--	--	--	0.008
19...	1320	57	51	7.8	20.0	16.0	609	8.4	107	0.002
AUG										
16...	1030	24	77	--	23.0	17.0	--	--	--	0.003
SEP										
06...	1115	11	96	7.8	14.0	12.0	605	9.4	110	0.008

PYRAMID AND WINNEMUCCA LAKES BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT									
12...	0.001	0.07	0.015	0.009	0.004	215	12	0.68	--
NOV									
21...	0.002	0.12	0.015	0.009	0.009	289	1	0.02	--
DEC									
11...	0.027	0.15	0.044	0.025	0.017	470	14	1.3	--
12...	0.013	0.70	0.222	0.031	0.021	1770	124	188	--
14...	0.003	0.18	0.022	0.009	0.002	445	15	5.5	--
JAN									
12...	<0.001	0.10	0.013	--	0.005	276	2	0.23	--
16...	<0.001	0.73	0.221	--	0.009	3270	137	64	--
17...	0.006	0.24	0.029	--	0.004	543	20	6.6	--
FEB									
04...	0.008	0.18	0.048	--	0.004	912	34	21	--
05...	0.006	0.17	0.113	--	0.009	1530	458	626	--
09...	0.002	0.17	0.028	--	0.007	647	17	9.4	--
MAR									
08...	0.015	0.08	0.024	--	0.006	637	25	6.3	--
20...	0.005	0.13	0.032	--	0.004	514	28	13	--
APR									
05...	<0.001	0.06	0.017	--	0.006	353	7	2.8	--
12...	0.001	0.15	0.023	--	0.004	265	8	4.9	--
16...	0.005	0.16	0.055	--	0.010	2500	77	102	--
17...	0.002	0.18	0.027	--	0.005	676	34	26	--
25...	0.001	0.15	0.034	--	0.005	444	22	18	--
MAY									
02...	0.003	0.10	0.048	--	0.005	1890	44	61	--
06...	--	--	0.023	--	0.003	--	47	54	--
06...	0.003	0.14	0.034	--	0.004	463	18	19	--
11...	0.001	0.34	0.025	--	0.005	621	14	18	--
14...	0.004	0.18	0.056	--	0.003	1380	46	89	--
15...	0.004	0.16	0.041	--	0.005	445	61	131	--
15...	0.005	0.30	0.060	--	0.011	911	56	137	--
16...	0.008	0.36	0.133	--	0.014	2100	118	558	34
17...	0.001	0.23	0.060	--	0.005	901	55	137	--
18...	0.002	0.15	0.043	--	0.008	463	21	62	--
21...	0.002	0.20	0.036	--	0.004	507	19	21	--
30...	0.001	0.12	0.027	--	0.005	295	14	11	--
JUN									
03...	0.004	0.25	0.030	--	0.004	250	19	20	--
06...	0.002	0.16	0.021	--	0.004	251	28	39	--
06...	0.002	0.20	0.024	--	0.005	323	33	44	--
12...	0.002	0.18	0.026	--	0.005	459	15	13	--
18...	<0.001	0.10	0.026	--	0.005	526	10	6.5	--
26...	0.002	0.13	0.029	--	0.005	317	6	3.3	--
JUL									
03...	0.001	0.11	0.028	--	0.006	318	12	4.2	--
19...	<0.001	0.07	0.038	--	0.006	228	7	1.1	--
AUG									
16...	<0.001	0.05	0.019	--	0.004	53	11	0.71	--
SEP									
06...	<0.001	0.13	0.028	--	0.003	352	6	0.18	--

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level.

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, 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, 0.29 ft³/s, July 28, Aug. 15, 1994.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1630	164	2.40	May 16	0615	563	4.44
Feb. 5	1300	396	3.61				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.3	1.4	22	e9.0	13	24	115	80	9.2	e1.9	1.3
2	1.2	1.3	1.8	15	e9.0	13	31	110	91	8.5	e1.9	1.3
3	1.2	1.3	1.7	12	7.9	15	25	95	89	7.7	1.9	1.3
4	1.2	1.3	3.1	11	18	e16	24	76	82	7.2	2.0	1.3
5	1.2	1.3	2.3	10	259	e15	25	77	73	6.7	1.9	1.4
6	1.3	1.3	1.9	9.5	139	e15	29	81	71	6.4	1.9	1.4
7	1.3	1.3	2.0	8.8	61	e15	38	88	66	6.1	1.8	1.5
8	1.3	1.3	1.8	8.6	42	14	52	85	55	5.6	1.8	1.5
9	1.3	1.3	1.8	8.4	35	15	62	80	45	5.0	1.7	1.5
10	1.3	1.3	1.7	8.4	32	15	60	86	39	4.6	1.7	1.5
11	1.3	1.3	3.9	7.9	29	16	53	103	34	4.4	1.7	1.5
12	1.3	1.3	100	7.5	27	17	46	129	31	4.7	1.8	1.5
13	1.3	1.3	37	7.3	27	16	38	142	30	5.0	1.9	1.7
14	1.3	1.3	17	7.1	26	13	40	136	24	4.5	1.9	1.8
15	1.3	1.3	12	7.7	25	13	52	248	20	3.5	1.7	1.9
16	1.3	1.3	11	21	29	14	82	348	18	3.3	1.6	2.3
17	1.3	1.3	e9.5	28	42	16	52	188	16	3.3	1.6	2.1
18	1.3	1.3	8.2	17	e38	20	41	261	15	3.0	1.6	2.0
19	1.3	1.3	7.6	13	e35	24	34	99	13	2.8	1.6	2.0
20	1.3	1.3	e6.5	12	e30	29	30	84	12	2.9	1.6	1.8
21	1.3	1.4	e6.2	e12	e28	33	27	93	11	2.7	1.6	1.7
22	1.3	1.3	e5.8	e12	e25	35	28	109	11	2.3	1.6	1.7
23	1.3	1.1	e5.7	e12	e21	30	35	87	9.9	2.2	1.6	1.7
24	1.3	1.1	e5.5	e11	e19	25	65	73	9.3	1.9	1.6	1.7
25	1.3	1.6	e5.2	e11	e17	22	76	76	12	e1.9	1.5	1.7
26	1.3	3.2	e5.2	e11	e16	19	94	86	17	e1.9	1.4	1.7
27	1.3	1.8	5.2	e10	e16	19	99	88	17	e1.9	1.4	1.5
28	1.3	1.6	5.2	e10	e16	25	78	77	14	e1.9	1.3	1.5
29	1.3	1.5	5.5	e10	14	21	71	80	11	e1.9	1.3	1.4
30	1.3	1.4	19	e9.0	---	19	98	74	9.9	e1.9	1.3	1.4
31	1.3	---	40	e9.0	---	19	---	72	---	e1.9	1.3	---
TOTAL	39.8	42.0	340.7	359.2	1091.9	591	1509	3546	1026.1	126.8	51.4	48.6
MEAN	1.28	1.40	11.0	11.6	37.7	19.1	50.3	114	34.2	4.09	1.66	1.62
MAX	1.3	3.2	100	28	259	35	99	348	91	9.2	2.0	2.3
MIN	1.2	1.1	1.4	7.1	7.9	13	24	72	9.3	1.9	1.3	1.3
AC-FT	79	83	676	712	2170	1170	2990	7030	2040	252	102	96

e Estimated.

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.26	7.74	8.83	6.83	13.6	18.6	38.2	61.8	34.1	7.04	1.31	1.28
MAX	15.5	45.4	58.7	19.4	64.2	60.1	70.4	114	158	49.6	4.72	4.36
(WY)	1983	1982	1982	1984	1986	1986	1989	1993	1983	1983	1983	1983
MIN	.73	.84	.89	.90	.99	5.86	15.9	7.18	2.23	.49	.35	.39
(WY)	1993	1993	1991	1991	1991	1994	1991	1992	1992	1994	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1980 - 1996			
ANNUAL TOTAL	11479.1				8772.5							
ANNUAL MEAN	31.4				24.0				16.8			
HIGHEST ANNUAL MEAN									34.7			
LOWEST ANNUAL MEAN									4.96			
HIGHEST DAILY MEAN	269				348				588			
LOWEST DAILY MEAN	1.1				1.1				.29			
ANNUAL SEVEN-DAY MINIMUM	1.2				1.2				.31			
INSTANTANEOUS PEAK FLOW					563				765			
INSTANTANEOUS PEAK STAGE					4.44				5.43			
ANNUAL RUNOFF (AC-FT)	22770				17400				12170			
10 PERCENT EXCEEDS	103				77				49			
50 PERCENT EXCEEDS	10				8.5				3.0			
90 PERCENT EXCEEDS	1.3				1.3				.76			

PYRAMID AND WINNEMUCCA LAKES BASIN

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983.

WATER TEMPERATURE: October 1980 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1992.

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT							
19...	1440	1.3	60	7.0	0.004	0.002	0.09
NOV							
22...	1410	1.3	63	4.5	0.004	0.003	0.08
DEC							
04...	1220	3.4	65	5.0	0.006	0.002	0.10
11...	2315	6.9	56	4.0	0.011	0.003	0.23
12...	1020	125	19	3.0	0.011	0.003	0.36
12...	1620	162	19	2.0	0.009	0.003	0.27
12...	2255	66	19	1.0	0.009	0.002	0.34
13...	1305	33	23	1.0	0.011	0.002	0.28
JAN							
08...	1430	8.4	31	2.5	0.004	0.002	0.11
16...	1720	33	25	1.5	0.006	<0.001	0.24
17...	1300	27	23	0.5	0.004	<0.001	0.16
FEB							
04...	1520	21	30	0.0	0.012	0.002	0.09
04...	2250	41	27	0.0	0.010	0.001	0.18
05...	1105	379	16	0.0	0.007	0.002	0.13
05...	1910	300	16	0.0	0.005	0.001	0.12
06...	1505	117	16	0.0	0.004	0.001	0.12
MAR							
01...	1640	13	28	1.5	0.006	0.003	0.08
29...	1620	20	26	3.0	0.005	0.001	0.04
APR							
15...	1710	55	20	4.5	0.012	0.002	0.07
26...	2240	122	17	2.0	0.004	0.002	0.26
MAY							
08...	1550	72	15	6.5	0.003	0.002	0.24
13...	2020	199	11	5.0	0.003	0.001	0.21
14...	1550	107	12	5.0	0.002	0.001	0.11
15...	1410	224	11	3.5	0.003	0.001	0.12
15...	2020	229	11	3.5	0.003	0.001	0.23
16...	0640	559	12	2.0	0.004	0.003	0.46
16...	1515	294	11	3.5	0.003	0.001	0.25
17...	1040	186	12	3.0	0.004	0.002	0.18
18...	0040	286	12	3.0	0.004	0.002	0.45
18...	1705	256	13	4.0	0.003	0.002	0.13
20...	1655	76	16	7.0	0.003	0.002	0.05
JUN							
02...	1255	72	14	7.5	0.003	0.002	0.41
07...	2130	68	13	11.5	0.003	0.003	0.18
14...	1635	23	20	13.5	0.003	0.004	0.12
JUL							
02...	1600	8.0	35	15.0	0.005	0.005	0.16
AUG							
07...	1600	1.8	60	15.0	0.004	<0.001	0.15
SEP							
14...	1845	1.8	66	10.0	0.004	0.002	0.12

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT						
19...	0.026	0.026	0.016	98	10	0.03
NOV						
22...	0.024	0.022	0.016	91	2	0.01
DEC						
04...	0.028	0.021	0.019	143	4	0.04
11...	0.075	0.034	0.023	813	23	0.43
12...	0.046	0.017	0.010	474	27	9.1
12...	0.041	0.015	0.007	442	68	30
12...	0.026	0.012	0.005	175	14	2.5
13...	0.022	0.012	0.005	109	6	0.53
JAN						
08...	0.009	--	0.004	42	2	0.05
16...	0.021	--	0.005	260	12	1.1
17...	0.008	--	0.003	71	1	0.07
FEB						
04...	0.017	--	0.005	142	4	0.23
04...	0.019	--	0.005	216	7	0.77
05...	0.068	--	0.007	2410	143	146
05...	0.036	--	0.006	1130	52	42
06...	0.028	--	0.004	142	25	7.9
MAR						
01...	0.009	--	0.002	39	2	0.07
29...	0.016	--	0.002	32	8	0.43
APR						
15...	0.008	--	0.002	71	<1	<0.15
26...	0.026	--	0.001	254	12	4.0
MAY						
08...	0.014	--	0.002	52	2	0.39
13...	0.024	--	0.003	284	14	7.5
14...	0.012	--	0.002	81	5	1.4
15...	0.023	--	0.003	293	17	10
15...	0.022	--	0.003	318	14	8.7
16...	0.275	--	0.011	7650	404	610
16...	0.051	--	0.004	1280	58	46
17...	0.022	--	0.003	280	16	8.0
18...	0.043	--	0.004	774	38	29
18...	0.024	--	0.003	381	28	19
20...	0.015	--	0.003	116	5	1.0
JUN						
02...	0.011	--	0.002	49	3	0.58
07...	0.017	--	0.002	88	6	1.1
14...	0.011	--	0.004	54	4	0.25
JUL						
02...	0.018	--	0.009	59	11	0.24
AUG						
07...	0.032	--	0.016	101	2	0.01
SEP						
14...	0.029	--	0.016	94	2	0.01

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level. 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0715	493	3.48	May 16	0500	963	4.74
Feb. 5	0300	653	3.89				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.4	3.4	32	e19	33	54	182	141	48	5.5	1.8
2	3.1	3.9	3.4	27	18	33	59	192	161	47	5.0	1.8
3	3.1	4.2	3.5	25	18	34	53	177	170	46	4.9	1.8
4	3.0	4.1	11	23	156	e30	51	156	171	43	5.1	1.8
5	3.0	4.0	8.8	22	471	e30	53	150	169	38	4.9	1.9
6	3.0	4.0	7.1	20	163	e29	60	150	172	36	4.6	2.1
7	3.0	4.0	6.2	20	108	30	72	151	173	34	4.5	2.0
8	2.8	3.9	5.8	20	89	29	90	150	162	33	4.3	1.9
9	2.7	3.9	5.2	19	75	29	107	145	148	30	4.1	1.9
10	2.6	3.8	4.9	19	67	30	102	150	134	28	4.0	1.8
11	2.8	3.7	23	18	61	34	90	166	121	25	3.8	1.8
12	2.9	4.1	262	17	59	34	83	199	121	25	3.8	1.8
13	2.9	4.0	57	17	58	31	73	230	118	23	4.1	2.0
14	2.8	3.9	31	17	57	29	77	243	106	21	3.9	2.2
15	2.8	3.9	25	17	56	29	91	411	98	19	3.4	2.5
16	2.7	3.8	21	34	69	31	111	607	94	17	3.2	2.4
17	2.6	3.7	18	38	95	33	89	461	88	15	3.0	2.2
18	2.5	3.6	17	30	94	40	74	443	81	14	3.0	2.2
19	2.5	3.5	15	e29	95	49	63	204	78	13	2.9	2.2
20	2.5	3.3	14	27	88	60	59	165	75	12	2.6	2.2
21	2.5	3.3	14	26	75	65	54	167	70	11	2.7	2.0
22	2.4	3.3	13	e25	65	68	54	184	63	9.8	2.5	2.0
23	2.6	3.3	13	e25	53	55	65	156	60	9.2	2.3	2.1
24	2.7	3.3	14	e25	51	48	96	136	60	8.4	2.5	2.1
25	2.7	3.7	e13	e24	45	45	112	135	59	7.7	2.5	2.1
26	2.7	4.3	e12	e24	42	42	135	141	60	7.3	2.3	2.0
27	2.6	3.6	12	e24	39	43	150	144	54	7.0	2.3	1.9
28	2.6	3.6	11	e23	37	51	134	136	46	7.0	2.1	1.9
29	2.5	3.5	12	e23	34	44	128	138	46	6.7	2.0	2.0
30	2.6	3.4	37	e22	---	43	157	132	47	6.2	1.9	2.1
31	3.0	---	52	e21	---	43	---	130	---	5.9	1.9	---
TOTAL	85.4	112.0	745.3	733	2357	1224	2596	6331	3146	653.2	105.6	60.5
MEAN	2.75	3.73	24.0	23.6	81.3	39.5	86.5	204	105	21.1	3.41	2.02
MAX	3.2	4.3	262	38	471	68	157	607	173	48	5.5	2.5
MIN	2.4	3.3	3.4	17	18	29	51	130	46	5.9	1.9	1.8
AC-FT	169	222	1480	1450	4680	2430	5150	12560	6240	1300	209	120

e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.12	13.1	19.8	21.9	22.2	30.4	60.2	129	100	28.8	5.84	2.91
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	1.51	1.21
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	1987	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	24524.6				18149.0							
ANNUAL MEAN	67.2				49.6				36.6			
HIGHEST ANNUAL MEAN									73.4			
LOWEST ANNUAL MEAN									8.71			
HIGHEST DAILY MEAN	522				May 1				1370			
LOWEST DAILY MEAN	2.4				Oct 22				.50			
ANNUAL SEVEN-DAY MINIMUM	2.5				Oct 17				.54			
INSTANTANEOUS PEAK FLOW									2100			
INSTANTANEOUS PEAK STAGE									9.90			
ANNUAL RUNOFF (AC-FT)	48640				36000				26540			
10 PERCENT EXCEEDS	215				146				106			
50 PERCENT EXCEEDS	27				23				10			
90 PERCENT EXCEEDS	3.3				2.4				2.1			

PYRAMID AND WINNEMUCCA LAKES BASIN

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.

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

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT							
19...	1355	2.5	68	8.5	0.004	0.002	0.02
NOV							
22...	1455	3.3	74	5.0	0.004	0.002	0.07
DEC							
04...	0940	7.0	75	5.0	0.005	0.001	0.08
04...	1030	21	71	5.0	0.006	<0.001	0.34
04...	1120	15	69	6.0	0.009	0.001	0.36
04...	1715	17	60	7.0	0.010	0.002	0.22
05...	1205	8.3	63	6.5	0.021	0.001	0.07
11...	2215	59	42	3.5	0.050	0.002	0.29
12...	0925	375	27	3.0	0.044	0.004	0.70
12...	1525	307	29	0.5	0.041	0.003	0.38
12...	2155	113	37	1.0	0.057	0.004	0.44
13...	1205	52	42	1.5	0.074	0.003	0.18
JAN							
08...	1345	20	50	4.0	0.007	0.002	0.07
16...	1630	52	42	1.5	0.003	<0.001	0.43
17...	1210	35	45	1.5	0.005	<0.001	0.10
FEB							
04...	1410	107	40	0.0	0.019	0.003	0.21
04...	2140	429	30	0.0	0.029	0.004	0.31
05...	1000	603	31	0.0	0.028	0.003	0.17
05...	1800	337	34	0.0	0.030	0.002	0.15
06...	1410	148	40	2.5	0.027	0.002	0.19
MAR							
01...	1520	33	55	5.0	0.012	0.004	0.12
29...	1520	44	51	6.5	0.009	0.003	0.03
APR							
15...	1620	88	48	7.0	0.004	0.004	0.06
26...	2145	166	39	3.0	0.021	0.003	0.25
MAY							
08...	1500	133	40	8.0	0.014	0.003	0.46
13...	1930	281	31	5.0	0.015	0.002	0.42
14...	1450	224	33	5.5	0.014	0.002	0.12
15...	1300	432	30	4.5	0.018	0.003	0.13
15...	1935	438	28	3.5	0.016	0.003	0.33
16...	0535	936	24	2.0	0.012	0.006	0.72
16...	1355	549	28	4.0	0.012	0.003	0.37
17...	0940	445	29	3.0	0.019	0.007	0.40
17...	2345	704	27	3.0	0.016	0.006	0.30
18...	1610	326	32	4.0	0.016	0.003	0.48
20...	1605	175	38	8.0	0.016	0.003	0.17
JUN							
02...	1205	136	35	8.0	0.009	0.003	0.32
07...	2040	193	26	7.0	0.007	0.002	0.21
14...	1545	98	33	12.0	0.004	0.007	0.15
JUL							
02...	1505	44	38	15.0	0.004	0.003	0.15
AUG							
07...	1435	4.4	65	19.0	0.004	<0.001	0.15
SEP							
14...	1740	2.3	77	13.5	0.003	0.001	0.17

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT						
19...	0.017	0.017	0.008	126	2	0.01
NOV						
22...	0.017	0.013	0.008	141	<1	<0.01
DEC						
04...	0.020	0.012	0.010	238	2	0.04
04...	0.211	0.013	0.011	4190	76	4.3
04...	0.122	0.012	0.011	2880	65	2.6
04...	0.035	0.010	0.010	511	12	0.55
05...	0.018	0.011	0.010	197	4	0.09
11...	0.222	0.012	0.007	2440	118	19
12...	0.271	0.014	0.011	2570	257	260
12...	0.189	0.016	0.010	1470	221	183
12...	0.065	0.014	0.007	714	50	15
13...	0.024	0.015	0.006	238	13	1.8
JAN						
08...	0.010	--	0.005	103	4	0.22
16...	0.062	--	0.005	879	41	5.8
17...	0.011	--	0.004	124	6	0.57
FEB						
04...	0.064	--	0.002	1420	72	21
04...	0.387	--	0.005	6480	366	424
05...	0.536	--	0.003	9370	704	1150
05...	0.250	--	0.005	3880	319	290
06...	0.060	--	0.005	248	80	32
MAR						
01...	0.013	--	0.005	150	3	0.27
29...	0.018	--	0.004	135	4	0.48
APR						
15...	0.014	--	0.004	503	6	1.4
26...	0.071	--	0.003	1030	86	39
MAY						
08...	0.022	--	0.003	159	7	2.5
13...	0.119	--	0.005	1750	214	162
14...	0.033	--	0.004	401	28	17
15...	0.116	--	0.005	2580	231	269
15...	0.264	--	0.007	4990	482	570
16...	0.994	--	0.009	14800	1080	2730
16...	0.325	--	0.007	5800	434	643
17...	0.220	--	0.006	3000	269	323
17...	0.351	--	0.007	6190	480	912
18...	0.187	--	0.006	3710	282	248
20...	0.062	--	0.005	940	76	36
JUN						
02...	0.023	--	0.002	202	16	5.9
07...	0.046	--	0.004	764	54	28
14...	0.014	--	0.004	159	6	1.6
JUL						
02...	0.016	--	0.007	128	8	0.95
AUG						
07...	0.027	--	0.010	158	6	0.07
SEP						
14...	0.022	--	0.008	164	4	0.02

PYRAMID AND WINNEMUCCA LAKES BASIN

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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above sea level, from topographic map.

REMARKS.--Records fair including estimated daily discharges. No storage or diversion upstream from station. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 434 ft³/s, May 16, 1996, gage height, 7.03 ft; maximum gage height, 7.45 ft, Jan. 10, 1995, backwater from ice; no flow for some days in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0200	234	6.26	May 16	0315	434	7.03
Feb. 5	0145	264	6.39				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.41	.70	18	6.0	13	16	74	68	21	1.8	.58
2	.69	.41	.83	15	5.7	13	17	78	82	22	1.7	.59
3	.65	.40	.87	13	5.6	13	15	70	88	21	1.6	.56
4	.62	.40	6.8	11	108	e13	14	61	88	20	1.5	.56
5	.61	.39	2.2	10	184	e12	15	61	86	17	1.4	.60
6	.55	.39	1.3	9.6	61	e12	18	64	89	16	1.4	.62
7	.52	.41	1.6	9.4	39	12	23	66	90	16	1.3	.60
8	.49	.41	1.1	9.1	32	11	31	62	85	15	1.2	.59
9	.46	.40	.92	8.7	28	11	38	64	75	14	1.1	.56
10	.43	.40	.84	8.3	25	11	34	69	64	13	1.1	.49
11	.39	.40	17	7.7	24	12	30	82	57	12	1.1	.44
12	.39	.38	118	7.5	23	12	27	101	59	11	1.1	.44
13	.39	.38	23	7.1	23	11	24	124	57	10	1.1	.62
14	.38	.37	13	6.7	22	10	27	144	50	9.3	1.1	.58
15	.36	.37	14	7.0	21	10	33	248	46	8.3	1.0	.79
16	.36	.38	9.7	18	31	11	37	272	42	7.3	.95	.64
17	.37	.38	10	17	38	12	29	220	38	6.3	.91	.59
18	.38	.37	6.7	13	32	14	25	190	35	5.6	.87	.57
19	.38	.38	e6.5	12	31	18	21	89	33	5.0	.86	.55
20	.37	.37	e6.0	11	28	21	20	71	32	4.4	.82	.53
21	.37	.36	e5.5	e10	31	22	17	76	29	3.9	.82	.52
22	.39	.36	e5.0	9.8	28	22	17	84	27	3.5	.78	.53
23	.42	.36	4.6	e9.5	19	17	22	64	26	3.2	.76	.54
24	.41	.36	e4.4	e9.2	23	15	32	53	26	3.0	.75	.53
25	.40	.79	e4.2	e8.9	17	14	40	54	28	2.8	.73	.53
26	.40	.96	4.1	e8.6	16	13	50	61	27	2.6	.71	.53
27	.41	.59	4.0	e8.3	15	13	54	62	22	2.4	.68	.51
28	.41	.56	3.8	e8.0	14	14	47	60	20	2.4	.68	.48
29	.40	.82	5.9	7.5	13	13	49	62	20	2.2	.65	.50
30	.40	.52	30	6.6	---	12	63	57	20	2.0	.62	.52
31	.40	---	36	6.4	---	12	---	57	---	1.9	.60	---
TOTAL	13.95	13.48	348.56	311.9	943.3	419	885	2900	1509	284.1	31.69	16.69
MEAN	.45	.45	11.2	10.1	32.5	13.5	29.5	93.5	50.3	9.16	1.02	.56
MAX	.75	.96	118	18	184	22	63	272	90	22	1.8	.79
MIN	.36	.36	.70	6.4	5.6	10	14	53	20	1.9	.60	.44
AC-FT	28	27	691	619	1870	831	1760	5750	2990	564	63	33

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.51	.69	2.96	4.94	9.50	13.6	25.6	60.1	50.3	25.4	4.24	.67
MAX	1.21	1.04	11.2	10.1	32.5	26.9	29.5	93.5	106	88.7	16.0	1.94
(WY)	1994	1992	1996	1996	1996	1995	1996	1996	1995	1995	1995	1995
MIN	.11	.45	.69	.82	.95	5.85	22.0	20.5	3.67	.81	.025	.008
(WY)	1993	1996	1995	1992	1994	1994	1994	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1992 - 1996
ANNUAL TOTAL	10912.61	7676.67	
ANNUAL MEAN	29.9	21.0	16.6
HIGHEST ANNUAL MEAN			29.0
LOWEST ANNUAL MEAN			5.56
HIGHEST DAILY MEAN	190 May 1	272 May 16	272 May 16
LOWEST DAILY MEAN	.36 Oct 15	.36 Oct 15	.00 Aug 21
ANNUAL SEVEN-DAY MINIMUM	.37 Nov 18	.37 Nov 18	.00 Sep 9
INSTANTANEOUS PEAK FLOW		434 May 16	434 May 16
INSTANTANEOUS PEAK STAGE		7.03 May 16	7.45 Jan 10
ANNUAL RUNOFF (AC-FT)	21650	15230	12000
10 PERCENT EXCEEDS	99	62	54
50 PERCENT EXCEEDS	10	9.5	2.5
90 PERCENT EXCEEDS	.40	.40	.13

PYRAMID AND WINNEMUCCA LAKES BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1993 to current year.

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT							
19...	1050	0.41	41	10.5	0.002	0.003	0.04
NOV							
22...	1110	0.32	44	2.0	0.003	0.003	0.09
DEC							
04...	1420	12	38	4.0	0.107	0.003	1.4
11...	1500	11	34	--	0.040	0.003	0.31
JAN							
08...	1015	9.1	37	2.5	0.007	0.003	0.07
FEB							
05...	1350	172	29	0.0	0.016	0.001	0.11
MAR							
01...	1040	13	40	2.0	0.007	0.005	0.16
29...	1115	13	36	2.5	0.006	0.004	0.00
APR							
26...	1800	65	29	2.0	0.016	0.004	0.12
MAY							
13...	1620	169	25	3.0	0.015	0.005	0.10
14...	1220	139	29	3.0	0.014	0.001	0.11
15...	1615	237	24	2.5	0.018	0.002	0.20
16...	0930	288	24	--	0.012	0.002	0.18
17...	1230	184	26	2.0	0.016	0.005	0.12
18...	1320	156	27	3.0	0.014	0.002	0.08
20...	1240	66	31	4.5	0.012	0.002	0.03
JUN							
01...	0950	48	27	4.5	0.007	0.004	0.11
07...	1740	111	24	5.5	0.010	0.004	0.12
14...	1215	44	29	8.0	0.004	0.003	0.09
JUL							
02...	1110	20	32	8.5	0.003	0.003	0.05
AUG							
07...	1020	1.5	41	10.0	0.004	0.004	0.04
SEP							
14...	1500	0.54	45	14.0	0.004	0.002	0.02

PYRAMID AND WINNEMUCCA LAKES BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT						
19...	0.013	0.013	0.006	10	<1	<0.01
NOV						
22...	0.012	0.009	0.006	18	<1	<0.01
DEC						
04...	0.855	0.016	0.016	5620	606	20
11...	0.180	0.017	0.010	1080	176	5.2
JAN						
08...	0.010	--	0.003	19	2	0.05
FEB						
05...	0.079	--	0.007	1880	212	98
MAR						
01...	0.009	--	0.003	47	4	0.14
29...	0.014	--	0.003	93	<1	<0.04
APR						
26...	0.041	--	0.003	603	51	9.0
MAY						
13...	0.094	--	0.005	1440	151	69
14...	0.029	--	0.005	319	35	13
15...	0.099	--	0.006	1080	124	79
16...	0.133	--	0.008	1720	180	140
17...	0.029	--	0.006	298	40	20
18...	0.033	--	0.006	350	38	16
20...	0.018	--	0.005	90	10	1.8
JUN						
01...	0.014	--	0.006	76	4	0.52
07...	0.039	--	0.005	328	25	7.5
14...	0.012	--	0.005	41	6	0.71
JUL						
02...	0.013	--	0.007	20	3	0.16
AUG						
07...	0.017	--	0.006	48	2	0.01
SEP						
14...	0.017	--	0.005	12	<1	<0.01

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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,450 ft above sea level, 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.--Maximum discharge, 866 ft³/s, May 16, 1996, gage height, 6.48 ft; maximum gage height, 8.23 ft, Jan. 10, 1995, backwater from ice; minimum daily, 0.30 ft³/s, Sept. 22, 1994.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0715	236	5.49	May 16	0300	866	6.48
Feb. 4	Unknown	Unknown	a5.93				

(a) Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.8	2.5	19	15	21	35	138	107	30	3.8	1.6
2	2.2	1.8	3.0	18	15	21	37	147	127	29	3.6	1.6
3	2.1	1.8	2.4	18	15	e21	34	135	138	29	3.5	1.5
4	2.1	1.8	12	16	e150	e21	33	115	152	27	3.4	1.5
5	2.1	1.8	6.3	15	e200	e21	35	112	139	25	3.3	1.6
6	2.1	1.8	4.4	15	e100	e21	40	116	142	23	3.2	1.5
7	2.1	1.8	4.9	15	71	21	48	119	139	23	3.0	1.5
8	2.1	1.8	3.6	14	59	20	60	110	129	22	2.8	1.4
9	2.1	1.8	3.0	14	52	20	74	113	114	21	2.6	1.5
10	2.0	1.8	2.9	14	48	21	70	121	100	19	2.4	1.5
11	1.9	1.8	18	13	45	22	60	139	87	17	2.4	1.5
12	2.0	1.7	148	12	43	21	55	165	89	18	2.7	1.5
13	2.0	1.7	31	12	42	19	50	190	85	16	2.7	1.7
14	2.0	1.7	21	12	41	19	54	201	74	15	2.5	1.7
15	1.9	1.7	19	12	40	19	66	371	66	13	2.4	2.1
16	1.8	1.7	18	28	52	21	76	542	62	12	2.3	1.7
17	1.8	1.7	18	30	63	23	57	403	57	11	2.2	1.7
18	1.8	1.7	14	23	57	27	46	356	53	9.7	2.1	1.6
19	1.8	1.7	e14	e19	58	32	40	184	51	8.8	2.1	1.7
20	1.7	1.7	e13	e19	49	36	37	142	50	8.0	2.1	1.5
21	1.7	1.7	e13	e19	42	39	35	158	46	7.5	2.1	1.5
22	1.7	1.6	e12	e18	38	40	36	164	41	6.9	2.0	1.5
23	1.8	1.7	e12	e18	34	33	45	124	37	6.4	2.0	1.6
24	1.8	1.7	e11	e18	31	30	67	103	36	6.0	1.9	1.5
25	1.8	2.4	e11	e18	28	28	81	102	38	5.6	1.9	1.5
26	1.9	4.0	e10	e17	27	26	100	108	38	5.3	1.9	1.5
27	1.8	2.1	9.7	e17	24	27	107	111	33	5.0	1.8	1.4
28	1.8	2.2	10	e17	23	30	90	104	29	4.9	1.8	1.4
29	1.8	2.0	13	e16	22	28	94	105	29	4.6	1.7	1.4
30	1.8	2.0	34	e16	---	25	121	99	29	4.3	1.7	1.4
31	1.7	---	e40	e16	---	25	---	96	---	4.0	1.6	---
TOTAL	59.5	56.5	534.7	528	1484	778	1783	5193	2317	437.0	75.5	46.6
MEAN	1.92	1.88	17.2	17.0	51.2	25.1	59.4	168	77.2	14.1	2.44	1.55
MAX	2.3	4.0	148	30	200	40	121	542	152	30	3.8	2.1
MIN	1.7	1.6	2.4	12	15	19	33	96	29	4.0	1.6	1.4
AC-FT	118	112	1060	1050	2940	1540	3540	10300	4600	867	150	92

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.56	1.95	5.18	9.15	16.3	25.0	43.8	99.6	76.4	30.9	5.71	1.47
MAX	2.52	2.64	17.2	18.3	51.2	52.1	59.4	168	182	107	20.1	3.36
(WY)	1994	1992	1996	1995	1996	1995	1996	1996	1995	1995	1995	1995
MIN	.73	1.62	1.47	2.26	2.19	9.10	26.2	22.7	4.60	1.41	.44	.36
(WY)	1995	1994	1995	1992	1994	1994	1994	1992	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1992 - 1996			
ANNUAL TOTAL	17853.4				13292.8							
ANNUAL MEAN	48.9				36.3				26.4			
HIGHEST ANNUAL MEAN									47.5			
LOWEST ANNUAL MEAN									7.69			
HIGHEST DAILY MEAN	276				May 1				542			
LOWEST DAILY MEAN	1.6				Jan 1				.30			
ANNUAL SEVEN-DAY MINIMUM	1.7				Nov 16				.31			
INSTANTANEOUS PEAK FLOW									866			
INSTANTANEOUS PEAK STAGE									6.48			
ANNUAL RUNOFF (AC-FT)	35410				26370				19160			
10 PERCENT EXCEEDS	156				109				85			
50 PERCENT EXCEEDS	19				17				4.3			
90 PERCENT EXCEEDS	1.8				1.7				.75			

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1993 to current year.

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT							
19...	1150	1.9	67	14.5	0.005	0.003	0.05
NOV							
22...	1230	1.7	69	4.0	0.005	0.003	0.02
DEC							
04...	1550	16	51	5.0	0.087	0.001	0.64
11...	1640	24	47	2.0	0.035	0.002	0.38
12...	1325	214	30	1.0	0.022	0.003	0.90
JAN							
08...	1140	14	46	3.0	0.005	0.002	0.06
FEB							
04...	1730	395	32	0.0	0.027	0.002	0.15
05...	1540	258	35	0.0	0.016	<0.001	0.14
MAR							
01...	1300	21	50	3.0	0.006	0.004	0.12
29...	1250	27	45	4.5	0.002	0.003	0.02
APR							
26...	1910	141	37	2.5	0.009	0.003	0.14
MAY							
13...	1740	243	31	5.0	0.010	0.002	0.12
14...	1330	197	37	5.0	0.010	0.001	0.14
15...	1745	441	28	3.5	0.011	0.002	0.20
16...	1130	427	27	3.0	0.008	0.002	0.62
17...	1330	356	29	3.0	0.013	0.004	0.05
18...	1440	272	31	4.0	0.009	0.001	0.13
20...	1400	138	36	7.5	0.008	0.002	0.05
JUN							
01...	1120	84	34	7.0	0.005	0.002	0.14
07...	1850	159	28	7.0	0.006	0.003	0.15
14...	1405	69	33	11.0	0.003	0.003	0.13
JUL							
02...	1240	28	37	12.0	0.003	0.003	0.07
AUG							
07...	1150	3.0	64	15.0	0.007	0.008	0.07
SEP							
14...	1315	1.7	79	12.5	0.004	0.003	0.05

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO., REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT						
19...	0.024	0.023	0.013	117	1	0.01
NOV						
22...	0.021	0.018	0.012	118	2	0.01
DEC						
04...	0.184	0.014	0.015	1450	90	3.9
11...	0.122	0.019	0.014	1470	70	4.5
12...	0.163	0.019	0.014	1750	208	120
JAN						
08...	0.010	--	0.005	60	2	0.08
FEB						
04...	0.120	--	0.009	1890	176	188
05...	0.106	--	0.009	1850	154	107
MAR						
01...	0.012	--	0.005	57	2	0.11
29...	0.020	--	0.004	59	2	0.15
APR						
26...	0.055	--	0.004	747	63	24
MAY						
13...	0.099	--	0.007	1680	154	101
14...	0.032	--	0.006	316	28	15
15...	0.230	--	0.009	3020	305	363
16...	0.197	--	0.010	2970	274	316
17...	0.057	--	0.007	726	66	63
18...	0.055	--	0.007	781	64	47
20...	0.025	--	0.007	146	20	7.5
JUN						
01...	0.016	--	0.004	43	1	0.23
07...	0.034	--	0.006	204	16	6.9
14...	0.015	--	0.006	61	4	0.75
JUL						
02...	0.017	--	0.008	36	2	0.15
AUG						
07...	0.029	--	0.014	35	1	0.01
SEP						
14...	0.029	--	0.017	58	<1	<0.01

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 sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, 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; maximum gage height, 8.57 ft, Jan. 14, 1995, backwater from ice; no flow for many days during 1977-78, 1981, 1988, 1994.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0230	280	6.03	May 16	0515	1020	7.47
Feb. 4	Unknown	Unknown	a6.89				

(a) Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.3	2.0	27	e15	21	34	125	106	28	3.0	.93
2	1.9	1.3	3.1	23	e15	22	38	134	126	28	2.7	.93
3	1.8	1.3	2.1	21	e15	23	35	127	137	28	2.5	.92
4	1.7	1.3	13	19	e170	22	33	116	139	26	2.4	.93
5	1.8	1.3	6.5	17	207	e20	34	113	136	24	2.2	.99
6	1.8	1.3	4.3	17	113	e21	39	116	140	23	2.1	1.1
7	1.7	1.3	4.7	17	74	23	52	118	140	22	2.1	1.1
8	1.7	1.3	3.4	16	63	20	71	112	129	22	2.0	1.1
9	1.6	1.3	2.8	16	56	21	75	110	112	20	1.7	1.1
10	1.6	1.3	2.5	15	50	21	69	116	96	19	1.6	1.0
11	1.4	1.2	19	15	45	22	62	130	85	17	1.5	.98
12	1.5	1.2	164	15	44	21	57	152	86	17	2.0	.97
13	1.5	1.2	36	14	42	20	48	174	82	16	2.4	1.2
14	1.5	1.2	23	15	41	19	54	188	73	14	2.0	1.6
15	1.5	1.2	18	14	40	19	69	378	66	13	1.7	2.0
16	1.4	1.2	19	36	56	21	80	672	61	11	1.5	2.0
17	1.4	1.1	e17	36	70	23	61	533	55	9.9	1.5	1.6
18	1.4	1.1	16	23	64	27	46	445	50	9.0	1.4	1.5
19	1.4	1.0	14	19	67	32	41	199	48	8.1	1.3	1.5
20	1.4	1.0	e14	e19	57	38	37	156	46	7.5	1.2	1.4
21	1.3	1.0	e14	e19	43	41	33	159	42	6.8	1.3	1.4
22	1.3	1.0	e14	e18	41	41	33	168	38	6.1	1.2	1.3
23	1.4	1.0	e13	e18	e38	34	43	129	37	5.5	1.1	1.2
24	1.5	1.0	e13	e18	34	31	69	104	36	5.1	1.2	1.2
25	1.4	1.8	e13	e18	34	29	80	101	36	4.6	1.2	1.1
26	1.4	4.9	e13	e17	e30	28	95	107	37	4.4	1.2	1.1
27	1.4	2.7	e12	e17	e27	27	103	108	32	4.1	1.1	1.1
28	1.3	2.0	12	e17	24	31	89	102	29	4.1	1.0	1.1
29	1.3	1.6	11	e16	23	31	86	105	28	3.8	1.0	1.1
30	1.3	1.6	e42	e16	---	27	110	97	28	3.3	1.0	1.1
31	1.2	---	48	e16	---	26	---	95	---	3.1	.96	---
TOTAL	46.8	43.0	589.4	584	1598	802	1776	5489	2256	413.4	51.06	36.55
MEAN	1.51	1.43	19.0	18.8	55.1	25.9	59.2	177	75.2	13.3	1.65	1.22
MAX	2.0	4.9	164	36	207	41	110	672	140	28	3.0	2.0
MIN	1.2	1.0	2.0	14	15	19	33	95	28	3.1	.96	.92
AC-FT	93	85	1170	1160	3170	1590	3520	10890	4470	820	101	72

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.37	11.5	12.0	13.5	15.9	21.3	41.2	90.1	73.4	23.0	4.08	1.80
MAX	22.4	73.9	92.5	74.0	77.7	80.3	89.2	177	265	123	26.9	7.93
(WY)	1983	1982	1982	1980	1982	1986	1989	1996	1983	1983	1983	1983
MIN	.15	1.06	.80	1.10	1.24	2.52	8.06	18.7	4.59	1.10	.003	.005
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	1994	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1973 - 1996			
ANNUAL TOTAL	18187.5				13685.21							
ANNUAL MEAN	49.8				37.4				25.9			
HIGHEST ANNUAL MEAN									59.0			
LOWEST ANNUAL MEAN									5.29			
HIGHEST DAILY MEAN	294				672				784			
LOWEST DAILY MEAN	1.0				.92				.00			
ANNUAL SEVEN-DAY MINIMUM	1.0				.95				.00			
INSTANTANEOUS PEAK FLOW					1020				1800			
INSTANTANEOUS PEAK STAGE					7.47				8.57			
ANNUAL RUNOFF (AC-FT)	36070				27140				18780			
10 PERCENT EXCEEDS	150				109				74			
50 PERCENT EXCEEDS	20				17				6.6			
90 PERCENT EXCEEDS	1.4				1.2				.82			

PYRAMID AND WINNEMUCCA LAKES BASIN

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.

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

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT							
19...	1235	1.5	69	12.5	0.002	0.003	0.09
NOV							
22...	1540	4.6	73	3.0	0.003	0.002	0.01
DEC							
04...	0835	9.0	58	3.0	0.047	0.004	0.31
04...	1630	11	54	5.0	0.072	0.001	0.15
05...	1105	273	61	4.0	0.049	0.001	0.11
11...	1750	38	49	2.0	0.028	0.002	0.34
12...	0825	203	29	2.0	0.036	0.004	0.82
12...	1430	162	31	1.0	0.023	0.003	0.63
12...	2050	114	38	0.0	0.029	0.002	0.36
13...	1405	86	43	1.5	0.034	0.002	0.19
JAN							
08...	1220	16	48	2.5	0.003	0.002	0.06
16...	1525	61	38	1.5	0.003	<0.001	0.24
17...	1115	47	43	0.0	0.002	<0.001	0.11
FEB							
04...	1250	100	37	0.0	0.019	0.003	0.23
04...	1910	141	34	0.0	0.028	0.001	0.16
05...	0855	252	34	0.0	0.019	<0.001	0.15
05...	1645	185	36	0.0	0.016	0.001	0.17
06...	1245	103	41	1.0	0.013	0.001	0.28
MAR							
01...	1350	21	51	3.0	0.005	0.004	0.24
29...	1350	28	48	5.0	0.003	0.001	0.16
APR							
15...	1520	64	46	7.0	0.016	0.006	0.10
26...	2015	119	39	2.5	0.009	0.003	0.20
MAY							
08...	1410	100	40	7.5	0.005	0.004	0.29
13...	1840	135	32	5.0	0.009	0.002	0.27
14...	1415	185	33	5.0	0.008	0.001	0.11
15...	1225	283	31	5.0	0.012	0.003	0.15
15...	1845	503	27	3.5	0.011	0.002	0.49
16...	0435	950	25	--	0.010	0.005	0.84
16...	1220	709	29	4.0	0.008	0.002	0.33
17...	0855	558	30	3.0	0.012	0.005	0.22
17...	1410	493	31	3.0	0.012	0.004	0.26
17...	2250	650	28	3.0	0.011	0.004	0.10
18...	1530	341	33	4.0	0.008	0.002	0.12
20...	1510	151	38	8.0	0.008	0.002	0.24
JUN							
01...	1205	87	35	8.0	0.004	0.002	0.15
07...	1950	160	29	7.0	0.005	0.003	0.15
14...	1500	72	34	12.0	0.003	0.004	0.10
JUL							
02...	1325	28	40	13.5	0.004	0.002	0.11
AUG							
07...	1245	2.4	67	16.5	0.003	0.001	0.09
SEP							
14...	1635	1.4	81	12.0	0.003	0.001	0.04

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT						
19...	0.019	0.023	0.011	39	3	0.01
NOV						
22...	0.019	0.016	0.012	39	2	0.02
DEC						
04...	0.467	0.017	0.017	3580	182	4.4
04...	0.159	0.016	0.016	1280	70	2.1
05...	0.025	0.013	0.012	151	7	5.2
11...	0.167	0.018	0.015	1530	86	8.8
12...	0.356	0.021	0.017	2510	258	141
12...	0.202	0.021	0.016	1890	236	103
12...	0.082	0.018	0.011	629	62	19
13...	0.025	0.015	0.009	136	10	2.3
JAN						
08...	0.011	--	0.006	52	2	0.09
16...	0.065	--	0.007	708	47	7.7
17...	0.012	--	0.005	99	6	0.76
FEB						
04...	0.026	--	0.007	322	16	4.3
04...	0.109	--	0.009	2110	146	56
05...	0.153	--	0.010	3140	245	167
05...	0.166	--	0.008	2250	162	81
06...	0.054	--	0.007	133	52	14
MAR						
01...	0.013	--	0.005	63	5	0.28
29...	0.017	--	0.004	54	5	0.38
APR						
15...	0.012	--	0.004	108	2	0.35
26...	0.050	--	0.004	636	52	17
MAY						
08...	0.023	--	0.003	95	7	1.9
13...	0.163	--	0.007	2250	210	77
14...	0.038	--	0.006	546	39	19
15...	0.092	--	0.007	1210	138	105
15...	0.412	--	0.010	5980	592	804
16...	1.79	--	0.015	30200	3000	3650
16...	0.270	--	0.011	4460	374	716
17...	0.140	--	0.009	2540	234	353
17...	0.093	--	0.009	1620	154	205
17...	0.317	--	0.010	5950	640	1120
18...	0.072	--	0.008	923	104	96
20...	0.027	--	0.007	204	14	5.7
JUN						
01...	0.020	--	0.004	72	2	0.47
07...	0.034	--	0.005	227	24	10
14...	0.017	--	0.007	58	5	0.97
JUL						
02...	0.018	--	0.007	40	4	0.30
AUG						
07...	0.028	--	0.012	32	2	0.01
SEP						
14...	0.021	--	0.011	40	<1	<0.01

PYRAMID AND WINNEMUCCA LAKES BASIN

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA

LOCATION.--Lat 38°51'48", long 119°57'26", in NE 1/4 NW 1/4 sec.26, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on right bank, 50 ft downstream from U.S. Forest Service Road 12N01, about 2.2 mi upstream from confluence of Saxon Creek, and 2.6 mi northeast of Meyers.

DRAINAGE AREA.--7.40 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,850 ft above sea level, from topographic map.

REMARKS.--Records poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	7.7	7.1	11	7.1	7.8	9.9	32	51	22	12	8.4
2	8.3	7.6	7.0	11	7.5	7.9	9.6	34	57	22	12	8.4
3	8.2	7.6	6.7	10	7.3	7.9	9.6	34	63	20	12	8.3
4	8.2	7.6	11	10	24	7.7	9.1	33	66	20	12	8.2
5	8.3	7.6	7.8	9.7	30	e7.5	9.5	37	69	20	12	8.5
6	8.1	7.5	7.0	9.9	16	e7.5	10	32	71	18	11	8.4
7	7.9	7.6	6.9	9.7	13	7.5	12	31	71	18	11	7.9
8	7.9	7.6	6.7	9.8	12	7.8	13	33	68	17	11	7.8
9	7.9	7.5	6.6	9.8	e11	8.2	14	36	64	16	11	7.8
10	7.4	7.5	6.5	9.9	11	8.1	14	40	59	16	10	7.8
11	7.2	7.5	12	9.8	e10	7.9	13	47	61	15	10	7.7
12	7.6	7.5	35	9.5	e9.5	7.8	13	52	56	18	12	7.6
13	7.4	7.5	23	9.4	e8.5	7.7	15	53	57	17	13	7.8
14	7.5	7.4	18	8.3	e8.0	7.6	17	57	55	16	12	7.8
15	7.6	7.4	15	9.5	e7.5	7.8	15	72	53	15	10	8.1
16	8.0	7.3	14	16	7.0	8.2	14	88	51	15	9.8	7.8
17	8.0	7.3	e12	11	7.0	8.6	14	65	48	14	9.5	7.8
18	8.0	7.2	10	6.0	6.7	9.3	14	64	45	14	9.4	7.7
19	7.9	7.2	e9.0	e7.0	6.6	9.9	13	53	44	13	9.3	7.3
20	7.8	7.2	e9.0	e7.0	6.4	11	11	50	41	13	9.1	7.2
21	7.7	7.1	e8.0	e7.0	e6.5	11	11	50	42	12	9.1	7.1
22	7.7	7.0	e9.0	e7.0	e7.0	11	11	51	37	12	9.0	6.8
23	7.8	7.0	9.4	e7.0	e7.0	10	12	46	35	13	9.0	7.0
24	7.8	7.0	9.1	11	e8.0	10	14	44	34	13	9.2	7.0
25	7.8	7.1	9.1	e10	8.3	10	17	43	36	12	9.1	6.7
26	7.8	7.6	8.9	e9.5	8.2	10	21	43	34	11	9.0	6.3
27	7.7	6.9	8.8	8.8	8.0	10	22	45	27	12	9.0	5.7
28	7.7	7.0	9.2	8.3	8.0	9.8	23	44	25	12	8.9	5.8
29	7.7	7.0	9.2	7.5	7.9	9.3	25	46	23	11	8.7	5.6
30	7.7	7.0	11	7.8	---	9.3	28	47	22	11	8.6	5.6
31	7.7	---	12	7.4	---	9.6	---	48	---	11	8.5	---
TOTAL	242.7	220.0	334.0	285.6	285.0	273.7	433.7	1450	1465	469	316.2	221.9
MEAN	7.83	7.33	10.8	9.21	9.83	8.83	14.5	46.8	48.8	15.1	10.2	7.40
MAX	8.4	7.7	35	16	30	11	28	88	71	22	13	8.5
MIN	7.2	6.9	6.5	6.0	6.4	7.5	9.1	31	22	11	8.5	5.6
AC-FT	481	436	662	566	565	543	860	2880	2910	930	627	440

e Estimated.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.43	4.64	4.70	4.77	4.70	6.10	9.47	23.3	29.2	15.7	7.35	5.04
MAX	7.83	7.33	10.8	9.21	9.83	9.63	14.5	46.8	84.9	62.1	20.0	9.55
(WY)	1996	1996	1996	1996	1996	1993	1996	1996	1995	1995	1995	1995
MIN	2.91	2.93	2.63	2.59	2.65	3.25	5.18	8.81	4.10	3.60	3.36	3.32
(WY)	1993	1993	1993	1991	1991	1991	1991	1992	1992	1992	1994	1990

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1990 - 1996

ANNUAL TOTAL	7653.5	5996.8	
ANNUAL MEAN	21.0	16.4	10.5
HIGHEST ANNUAL MEAN			19.8 1995
LOWEST ANNUAL MEAN			4.48 1992
HIGHEST DAILY MEAN	130 Jun 28	88 May 16	130 Jun 28 1995
LOWEST DAILY MEAN	4.0 Jan 23	5.6 Sep 29	1.9 Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	4.1 Jan 22	6.1 Sep 24	2.4 Dec 17 1990
INSTANTANEOUS PEAK FLOW		115 May 16	166 Jun 27 1995
INSTANTANEOUS PEAK STAGE		5.81 May 16	6.19 Jun 27 1995
ANNUAL RUNOFF (AC-FT)	15180	11890	7600
10 PERCENT EXCEEDS	68	44	21
50 PERCENT EXCEEDS	8.7	9.5	4.9
90 PERCENT EXCEEDS	4.8	7.0	2.9

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA

LOCATION.--Lat 38°54'13", long 119°58'04", in SE 1/4 NE 1/4 sec.10, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 200 ft upstream of Pioneer Trail Road, 0.6 mi upstream of confluence of Cold Creek, and 2.8 mi south of South Lake Tahoe.

DRAINAGE AREA.--23.7 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,270 ft above sea level, from topographic map. Prior to May 1, 1992, at datum 0.12 ft higher.

REMARKS.--Records poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	13	12	14	26	23	39	85	100	48	20	14
2	17	13	12	13	23	23	40	92	113	46	19	14
3	17	13	11	13	22	23	37	91	126	44	19	14
4	17	13	18	13	44	25	37	88	138	41	19	14
5	17	13	15	13	83	27	38	87	148	39	19	13
6	17	13	13	12	45	26	41	86	147	37	18	13
7	17	13	12	12	31	25	47	82	147	41	18	13
8	17	13	12	12	29	24	53	83	149	38	18	13
9	15	13	11	13	28	25	57	81	142	37	18	13
10	14	13	11	13	27	26	54	84	136	35	18	12
11	14	13	19	12	27	26	50	94	129	34	18	12
12	14	13	54	12	27	25	49	103	127	36	21	12
13	14	13	26	12	27	24	47	111	122	37	24	13
14	14	13	20	13	26	23	49	118	117	34	23	13
15	13	13	17	15	26	23	56	133	109	32	19	14
16	13	13	16	34	28	25	85	211	101	31	18	14
17	13	13	17	26	30	26	63	148	92	30	18	13
18	13	13	17	17	31	29	62	167	88	30	17	12
19	13	13	14	e17	40	32	54	135	85	30	17	12
20	13	12	13	e17	42	35	50	125	81	29	17	12
21	13	12	14	e17	29	38	48	124	78	28	16	11
22	13	12	16	e17	e28	38	47	117	74	27	16	11
23	14	12	15	17	e28	35	54	104	71	27	15	11
24	14	12	14	17	e27	32	64	100	69	26	15	11
25	14	12	14	22	27	31	66	93	76	25	16	11
26	14	14	15	e21	26	31	70	94	78	24	15	10
27	13	12	15	e21	26	32	72	98	66	23	14	10
28	13	12	15	e22	25	37	68	93	58	25	14	10
29	13	12	15	e21	24	33	70	95	54	24	14	10
30	13	12	17	e22	---	32	79	97	51	22	14	10
31	13	---	16	28	---	34	---	94	---	21	14	---
TOTAL	446	381	507	528	902	888	1646	3313	3072	1001	541	365
MEAN	14.4	12.7	16.4	17.0	31.1	28.6	54.9	107	102	32.3	17.5	12.2
MAX	17	14	54	34	83	38	85	211	149	48	24	14
MIN	13	12	11	12	22	23	37	81	51	21	14	10
AC-FT	885	756	1010	1050	1790	1760	3260	6570	6090	1990	1070	724

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.55	7.79	8.21	9.47	11.8	19.3	29.0	54.0	57.8	34.1	12.4	8.39
MAX	14.4	12.7	16.4	17.0	31.1	39.1	54.9	107	158	142	35.8	19.0
(WY)	1996	1996	1996	1996	1996	1995	1996	1996	1995	1995	1995	1995
MIN	4.49	5.03	4.05	4.70	5.49	7.85	12.2	14.2	7.66	5.84	4.48	4.08
(WY)	1991	1991	1991	1991	1993	1992	1991	1992	1992	1992	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1990 - 1996	
ANNUAL TOTAL	17842.7		13590			
ANNUAL MEAN	48.9		37.1		22.8	
HIGHEST ANNUAL MEAN					46.9	
LOWEST ANNUAL MEAN					7.71	
HIGHEST DAILY MEAN	264	Jun 30	211	May 16	264	Jun 30 1995
LOWEST DAILY MEAN	9.7	Jan 5	10	Sep 26	2.0	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	11	Feb 7	10	Sep 24	2.8	Dec 21 1990
INSTANTANEOUS PEAK FLOW			274	May 16	337	Jun 30 1995
INSTANTANEOUS PEAK STAGE			4.39	May 16	4.69	Jun 30 1995
ANNUAL RUNOFF (AC-FT)	35390		26960		16520	
10 PERCENT EXCEEDS	132		93		56	
50 PERCENT EXCEEDS	22		23		9.8	
90 PERCENT EXCEEDS	12		12		4.5	

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level.

REMARKS.--Records good 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1245	126	7.83	Apr. 16	1445	129	7.77
Feb. 5	0630	103	7.40	May 16	1030	303	9.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	23	21	22	22	e40	58	124	132	83	e41	e26
2	31	23	21	21	21	40	61	130	143	82	e40	e26
3	31	23	20	22	21	40	57	129	158	80	e40	e25
4	30	23	31	22	45	43	55	123	172	78	e39	e25
5	29	24	26	21	93	41	57	123	182	76	e39	e25
6	29	23	23	21	61	46	61	126	192	73	e38	e24
7	29	23	21	20	50	46	69	124	205	71	e38	e24
8	28	23	21	20	47	44	79	127	210	70	e37	e24
9	27	23	21	19	47	43	86	126	207	69	e36	e24
10	27	23	20	19	45	44	82	131	200	69	e36	e24
11	27	23	34	19	43	45	75	139	190	70	e36	e24
12	27	23	97	19	42	45	73	154	182	75	e37	e23
13	27	23	47	19	40	43	68	166	178	80	e38	e23
14	27	23	34	19	40	41	71	174	169	75	e35	e23
15	26	23	28	20	38	41	80	193	160	72	e33	e23
16	26	22	e25	45	40	42	116	267	152	69	e32	e23
17	26	22	e24	40	44	43	91	214	144	e69	e32	e23
18	26	21	e23	31	44	46	90	225	137	e67	e32	e22
19	25	20	e22	27	56	51	76	180	132	e65	e31	e22
20	24	20	e21	e27	56	56	71	161	128	e63	e31	e22
21	24	20	e20	26	41	59	67	153	123	e61	e31	e22
22	24	20	e19	e27	41	57	66	147	118	e59	e30	e22
23	24	20	e18	27	e40	51	74	139	113	e57	e30	e22
24	24	20	e17	e27	e39	49	92	135	111	e55	e30	e22
25	24	20	e16	e26	e38	48	96	127	120	e53	e29	e21
26	24	25	e14	e26	e38	47	103	126	121	e51	e29	e21
27	25	21	14	e25	e38	50	110	132	110	e49	e28	e21
28	25	21	14	e24	e38	56	105	126	98	e47	e28	e21
29	24	22	15	e23	e39	50	103	127	90	e45	e27	e21
30	24	21	21	23	---	50	115	126	86	e43	e27	e21
31	24	---	25	22	---	52	---	127	---	e41	e26	---
TOTAL	819	661	773	749	1247	1449	2407	4601	4463	2017	1036	689
MEAN	26.4	22.0	24.9	24.2	43.0	46.7	80.2	148	149	65.1	33.4	23.0
MAX	31	25	97	45	93	59	116	267	210	83	41	26
MIN	24	20	14	19	21	40	55	123	86	41	26	21
AC-FT	1620	1310	1530	1490	2470	2870	4770	9130	8850	4000	2050	1370

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	19.3	20.5	22.4	24.5	29.3	43.0	77.3	91.6	48.6	23.7	17.0
MAX	37.6	61.1	64.0	60.3	68.7	85.0	81.9	184	286	188	88.7	49.6
(WY)	1983	1984	1984	1970	1986	1986	1982	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	25100				20911							
ANNUAL MEAN	68.8				57.1				36.2			
HIGHEST ANNUAL MEAN									85.3			
LOWEST ANNUAL MEAN									10.2			
HIGHEST DAILY MEAN	280				267				352			
LOWEST DAILY MEAN	11				14				2.5			
ANNUAL SEVEN-DAY MINIMUM	11				15				3.0			
INSTANTANEOUS PEAK FLOW					303				535			
INSTANTANEOUS PEAK STAGE					9.70				11.14			
ANNUAL RUNOFF (AC-FT)	49790				41480				26220			
10 PERCENT EXCEEDS	182				129				82			
50 PERCENT EXCEEDS	40				38				22			
90 PERCENT EXCEEDS	16				21				8.6			

PYRAMID AND WINNEMUCCA LAKES BASIN

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA

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.

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

REMARKS.--In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River basin.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
12...	0900	27	44	7.7	10.5	5.5	605	9.8	98	0.002
NOV										
21...	1010	19	49	--	11.0	4.0	--	--	--	0.007
DEC										
11...	1310	34	49	--	4.0	3.0	--	--	--	0.023
12...	1200	127	40	--	4.0	3.0	--	--	--	0.019
14...	1130	34	47	--	3.0	2.0	--	--	--	0.017
JAN										
12...	0950	19	48	--	3.0	1.0	--	--	--	0.016
16...	1230	49	46	--	3.5	2.0	--	--	--	0.019
17...	1300	38	48	--	2.0	2.0	--	--	--	0.018
FEB										
04...	1350	49	49	--	4.5	0.5	--	--	--	0.027
05...	1400	99	41	--	6.0	0.5	--	--	--	0.018
09...	1240	49	51	--	7.5	3.0	--	--	--	0.009
MAR										
08...	0935	46	54	7.4	4.0	1.0	609	11.0	97	0.016
20...	0930	56	52	--	6.0	2.0	--	--	--	0.015
APR										
04...	0955	53	51	--	6.0	2.5	--	--	--	0.015
12...	1610	73	45	7.5	4.0	6.0	602	9.7	99	0.006
16...	1515	132	43	--	4.5	4.0	--	--	--	0.011
17...	0945	91	43	--	2.5	1.5	--	--	--	0.007
25...	1205	91	42	--	12.0	5.0	--	--	--	0.004
MAY										
02...	0720	135	34	--	10.0	3.5	--	--	--	0.008
06...	1815	123	35	--	13.0	7.0	--	--	--	0.008
11...	1115	135	33	--	15.0	6.0	--	--	--	0.008
14...	0720	178	29	7.8	11.0	5.5	--	--	--	0.008
16...	1320	305	28	--	8.5	8.0	--	--	--	0.011
18...	1340	232	28	--	7.0	7.0	--	--	--	0.004
21...	1100	154	30	7.6	9.0	5.0	--	--	--	0.007
30...	1130	128	32	--	12.5	5.5	--	--	--	0.005
JUN										
03...	1635	137	30	--	26.0	11.5	--	--	--	0.004
06...	0810	196	26	7.5	17.0	7.0	608	9.3	96	0.004
12...	1040	188	25	--	17.5	8.0	--	--	--	0.004
18...	1040	143	28	--	17.0	7.5	--	--	--	0.004
26...	1000	120	30	--	9.0	5.5	--	--	--	0.005
JUL										
02...	1040	87	33	--	20.5	10.0	--	--	--	0.005
19...	1235	66	35	7.3	18.0	10.0	--	--	--	0.007
AUG										
16...	0950	34	44	--	19.0	12.0	--	--	--	0.010
SEP										
06...	1030	25	46	7.6	13.0	7.0	605	9.7	101	0.003

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (006068)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, BIO. REACT- IVE TOTAL (UG/L AS FE) (46568)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT									
12...	<0.001	0.15	0.030	0.017	0.010	386	6	0.44	--
NOV									
21...	<0.001	0.08	0.020	0.010	0.010	254	6	0.31	--
DEC									
11...	0.008	0.21	0.060	0.027	0.019	845	27	2.5	--
12...	0.014	1.2	0.232	0.038	0.030	2930	112	38	--
14...	0.004	0.31	0.034	0.018	0.004	693	15	1.4	--
JAN									
12...	<0.001	0.09	0.020	--	0.009	359	6	0.31	--
16...	<0.001	0.53	0.154	--	0.015	5850	93	12	--
17...	<0.001	0.34	0.048	--	0.010	996	24	2.5	--
FEB									
04...	0.008	0.18	0.137	--	0.010	2150	86	11	--
05...	0.006	0.13	0.111	--	0.010	1880	86	23	--
09...	0.002	0.11	0.035	--	0.010	805	10	1.3	--
MAR									
08...	0.007	0.19	0.025	--	0.007	461	19	2.4	--
20...	0.003	0.19	0.045	--	0.007	937	20	3.0	--
APR									
04...	<0.001	0.24	0.026	--	0.007	672	16	2.3	--
12...	<0.001	0.31	0.037	--	0.008	858	15	3.0	--
16...	0.005	0.25	0.071	--	0.011	2000	63	22	--
17...	0.002	0.36	0.056	--	0.008	1960	29	7.1	--
25...	0.001	0.09	0.054	--	0.009	787	20	4.9	--
MAY									
02...	0.001	0.07	0.061	--	0.009	870	27	9.8	--
06...	0.002	0.29	0.049	--	0.008	907	24	8.0	--
11...	0.001	0.49	0.038	--	0.008	970	24	8.7	--
14...	0.002	0.22	0.056	--	0.009	779	27	13	--
16...	0.010	0.26	0.081	--	0.017	1280	25	21	60
18...	0.001	0.16	0.037	--	0.009	448	16	10	--
21...	0.001	0.29	0.046	--	0.008	684	25	10	--
30...	0.001	0.20	0.026	--	0.007	258	13	4.5	--
JUN									
03...	0.002	0.30	0.043	--	0.009	630	16	5.9	--
06...	0.002	0.35	0.025	--	0.008	334	13	6.9	--
12...	0.002	0.10	0.027	--	0.008	518	23	12	--
18...	<0.001	0.10	0.034	--	0.008	548	21	8.1	--
26...	0.001	0.23	0.037	--	0.008	675	20	6.5	--
JUL									
02...	0.002	0.17	0.038	--	0.009	657	14	3.3	--
19...	0.001	0.25	0.062	--	0.009	689	13	2.3	--
AUG									
16...	<0.001	0.12	0.030	--	0.009	397	10	0.92	--
SEP									
06...	<0.001	0.26	0.030	--	0.012	137	6	0.41	--

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level. Prior to Oct. 1, 1957, nonrecording gages at several sites near outlet of lake at same datum except for water years 1907 and 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, 6,220.26 ft, Nov. 30, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,229.09 ft, June 25; minimum, 6,225.63 ft, Dec. 10.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.37	5.93	5.68	6.05	6.68	7.58	8.00	8.29	8.87	9.03	8.85	8.39
2	6.33	5.93	5.68	6.03	6.67	7.58	8.00	8.28	8.88	9.03	8.80	8.39
3	6.31	5.89	5.68	6.03	6.69	7.65	8.00	8.28	8.88	9.02	8.80	8.36
4	6.31	5.89	5.67	6.05	6.89	7.76	8.00	8.32	8.91	8.99	8.75	8.34
5	6.29	5.86	5.67	6.03	6.94	7.79	8.03	8.33	8.94	9.02	8.73	8.26
6	6.23	5.86	5.65	6.04	6.98	7.79	8.03	8.32	8.94	9.03	8.73	8.28
7	6.21	5.82	5.68	6.03	6.99	7.78	8.03	8.32	8.95	9.02	8.71	8.23
8	6.21	5.82	5.66	6.03	6.99	7.81	8.02	8.30	8.96	9.02	8.71	8.24
9	6.20	5.82	5.65	6.02	7.02	7.83	8.03	8.31	8.97	9.03	8.71	8.21
10	6.21	5.79	5.63	6.02	7.03	7.85	8.05	8.32	8.99	9.03	8.68	8.19
11	6.20	5.79	5.80	6.04	7.04	7.87	8.05	8.36	9.01	9.04	8.67	8.18
12	6.18	5.79	6.02	6.04	7.04	7.92	8.04	8.36	9.01	9.04	8.66	8.16
13	6.15	5.80	6.05	6.05	7.05	7.90	8.06	8.42	9.04	9.01	8.69	8.13
14	6.13	5.80	6.05	6.04	7.06	7.93	8.06	8.44	9.04	9.03	8.65	8.07
15	6.13	5.78	6.11	6.05	7.07	7.89	8.07	8.55	9.04	8.99	8.68	8.08
16	6.09	5.78	6.12	6.17	7.09	7.90	8.17	8.71	9.03	9.00	8.66	8.06
17	6.11	5.77	6.08	6.18	7.12	7.90	8.22	8.80	9.04	8.95	8.63	8.06
18	6.11	5.77	6.06	6.28	7.17	7.90	8.22	8.83	9.04	8.97	8.62	8.00
19	6.11	5.76	6.09	6.29	7.31	7.91	8.21	8.86	9.04	8.93	8.60	8.01
20	6.10	5.76	6.06	6.31	7.37	7.91	8.23	8.85	9.06	8.95	8.57	7.99
21	6.05	5.75	6.05	6.37	7.48	7.93	8.23	8.83	9.05	8.94	8.58	7.98
22	6.02	5.74	6.07	6.37	7.48	7.96	8.23	8.84	9.04	8.95	8.56	7.97
23	6.03	5.73	6.05	6.43	7.51	7.95	8.24	8.83	9.03	8.93	8.56	7.94
24	5.98	5.72	6.04	6.60	7.55	7.93	8.24	8.83	9.03	8.93	8.54	7.93
25	5.98	5.71	6.03	6.57	7.59	7.95	8.24	8.82	9.09	8.91	8.52	7.92
26	5.99	5.73	6.04	6.57	7.58	7.91	8.26	8.80	9.08	8.91	8.50	7.91
27	5.99	5.71	6.04	6.70	7.59	7.95	8.27	8.83	9.08	8.88	8.47	7.90
28	5.98	5.70	6.04	6.70	7.58	7.96	8.27	8.81	9.06	8.89	8.49	7.90
29	5.98	5.70	6.04	6.68	7.58	7.98	8.27	8.85	9.05	8.87	8.45	7.89
30	5.96	5.70	6.05	6.69	---	7.98	8.28	8.84	9.04	8.86	8.44	7.86
31	5.94	---	6.04	6.68	---	7.95	---	8.87	---	8.86	8.42	---
MEAN	6.13	5.79	5.92	6.26	7.18	7.87	8.13	8.59	9.01	8.97	8.63	8.09
MAX	6.37	5.93	6.12	6.70	7.59	7.98	8.28	8.87	9.09	9.04	8.85	8.39
MIN	5.94	5.70	5.63	6.02	6.67	7.58	8.00	8.28	8.87	8.86	8.42	7.86
a	357,500	328,300	369,700	447,800	557,800	603,200	643,700	716,300	737,200	715,100	661,000	592,100
b	-52,400	-29,200	+41,400	+78,100	+110,000	+45,400	+40,500	+72,600	+20,900	-22,100	-54,100	-68,900

CAL YR 1995 MEAN 4.96 MAX 6.99 MIN 1.26 b +369,700

WTR YR 1996 MEAN 7.55 MAX 9.09 MIN 5.63 b +182,100

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.

PYRAMID AND WINNEMUCCA LAKES BASIN

105

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."
WATER TEMPERATURE: June 1993 to September 1994.

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

GAGE.--Water-stage recorder. Datum of gage is 6,216.59 ft above sea level. 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 fair including estimated daily discharges. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	46	97	42	47	56	569	1030	698	781	249	253
2	46	46	131	42	53	57	542	1030	698	576	249	253
3	48	46	215	42	55	58	501	1030	669	350	248	254
4	47	46	243	44	56	51	501	1030	566	390	249	254
5	48	46	223	48	40	44	502	1030	586	393	250	254
6	49	46	198	48	52	44	504	1020	588	271	250	253
7	49	48	197	48	51	44	506	1020	607	199	250	254
8	49	49	196	48	52	44	514	1020	827	198	251	254
9	49	49	195	48	53	43	462	1020	841	112	252	253
10	50	48	194	48	54	43	391	879	622	186	251	255
11	50	48	173	48	56	44	386	549	466	210	252	256
12	49	49	103	48	56	44	407	536	468	198	254	255
13	49	49	46	48	55	79	411	560	470	214	252	256
14	49	50	45	48	56	280	414	617	471	220	247	258
15	49	50	44	49	56	473	416	623	471	221	248	e258
16	49	50	44	53	58	545	426	1150	471	219	248	257
17	49	50	44	50	61	550	424	1610	470	221	248	e257
18	49	50	44	50	60	584	605	1610	470	223	249	e256
19	49	50	45	49	64	575	763	1880	296	218	250	255
20	49	51	45	49	62	554	766	2100	192	221	250	254
21	49	51	45	49	59	555	767	2210	191	223	251	e256
22	48	50	46	49	59	559	767	2160	191	221	251	256
23	47	48	44	49	58	560	768	1700	191	216	250	e257
24	48	48	44	e49	57	560	809	1640	117	217	251	e257
25	48	63	44	e49	57	561	1000	1630	206	219	253	256
26	48	108	44	49	57	560	1030	1630	828	250	254	257
27	49	105	44	e49	57	561	1040	1480	1020	247	253	e257
28	49	103	45	e49	57	567	1040	1220	1370	248	252	256
29	49	101	e44	48	57	565	1040	1060	1360	249	253	e256
30	50	99	e44	47	---	565	1030	888	993	249	254	179
31	49	---	44	48	---	566	---	698	---	249	254	---
TOTAL	1515	1743	3010	1485	1615	10391	19301	37660	17414	8209	7773	7586
MEAN	48.9	58.1	97.1	47.9	55.7	335	643	1215	580	265	251	253
MAX	55	108	243	53	64	584	1040	2210	1370	781	254	258
MIN	46	46	44	42	40	43	386	536	117	112	247	179
AC-FT	3010	3460	5970	2950	3200	20610	38280	74700	34540	16280	15420	15050

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10337500 TRUCKEE RIVER AT TAHOE CITY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	181	197	220	216	265	241	170	159	220	273	313	266
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1909 - 1996

ANNUAL TOTAL	17477.00	117702	
ANNUAL MEAN	47.9	322	224
HIGHEST ANNUAL MEAN			1150
LOWEST ANNUAL MEAN			
HIGHEST DAILY MEAN	243	Dec 4	2620
LOWEST DAILY MEAN	.00	Jan 1	.15
ANNUAL SEVEN-DAY MINIMUM	.20	Jan 21	.00
INSTANTANEOUS PEAK FLOW			2630
INSTANTANEOUS PEAK STAGE			9.32
ANNUAL RUNOFF (AC-FT)	34670	233500	162400
10 PERCENT EXCEEDS	78	832	468
50 PERCENT EXCEEDS	49	220	133
90 PERCENT EXCEEDS	.26	46	.00

PYRAMID AND WINNEMUCCA LAKES BASIN

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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 sea level (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, 9,740 acre-ft, June 29, 1993, elevation, 5,936.08 ft; minimum, 2,510 acre-ft, Jan. 24, 28-31, 1991, elevation, 5,927.23 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,700 acre-ft, May 17, elevation, 5,936.03 ft; minimum, 2,970 acre-ft, Dec. 3 and 9, elevation, 5,927.82 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5570	4170	2980	3590	3650	4420	4460	6050	8990	9370	8970	8260
2	5570	4090	2970	3520	3610	4340	4490	6110	9140	9390	8930	8250
3	5540	4020	2970	3490	3580	4310	4510	6110	9290	9390	8880	8150
4	5540	3940	3000	3460	4340	4390	4510	6070	9400	9380	8850	8140
5	5540	3850	3000	3440	5100	4390	4510	6060	9380	9390	8820	8140
6	5510	3750	2990	3430	5180	4320	4520	6110	9330	9390	8790	8120
7	5490	3650	2990	3410	5130	4220	4580	6150	9270	9390	8770	8110
8	5490	3560	2980	3380	5090	4180	4700	6200	9200	9370	8740	8080
9	5480	3510	2970	3370	5030	4140	4860	6290	9130	9370	8730	8040
10	5470	3440	3030	3350	4950	4140	4950	6390	9180	9350	8670	7900
11	5430	3390	3280	3320	4890	4180	4920	6530	9210	9330	8670	7690
12	5400	3340	4340	3320	4830	4160	5010	6730	9270	9350	8670	7550
13	5290	3300	4360	3290	4770	4110	5000	6980	9320	9340	8640	7420
14	5170	3250	4220	3280	4710	4080	5010	7270	9360	9330	8620	7240
15	5080	3200	4200	3320	4670	4060	5080	8060	9390	9310	8600	7120
16	4980	3180	4090	3550	4720	4060	5350	9310	9400	9300	8580	7000
17	4890	3150	4000	3610	4920	4060	5400	9700	9400	9250	8600	6850
18	4830	3130	3910	3680	5030	4100	5400	9650	9420	9240	8580	6710
19	4800	3110	3820	3680	5270	4170	5320	9040	9430	9230	8540	6560
20	4770	3090	3770	3670	5340	4260	5260	8780	9450	9220	8530	6460
21	4750	3050	3730	3730	5340	4340	5210	8880	9460	9190	8510	6330
22	4740	3030	3660	3680	5240	4420	5140	8910	9460	9150	8470	6220
23	4730	3010	3590	3680	5130	4420	5120	8750	9460	9150	8470	6100
24	4720	2980	3520	3810	5070	4390	5250	8530	9470	9120	8440	5980
25	4720	3030	3590	3800	4950	4340	5370	8410	9510	9100	8430	5870
26	4720	3030	3460	3720	4830	4330	5550	8280	9540	9090	8380	5770
27	4670	3010	3430	3870	4730	4340	5670	8360	9560	9060	8370	5650
28	4560	3010	3380	3820	4620	4420	5750	8420	9570	9070	8320	5540
29	4460	3030	3380	3760	4520	4400	5800	8540	9510	9040	8310	5450
30	4360	2980	3480	3740	---	4360	5930	8690	9420	9040	8310	5330
31	4270	---	3550	3700	---	4320	---	8830	---	8990	8290	---
MAX	5570	4170	4360	3870	5340	4420	5930	9700	9570	9390	8970	8260
MIN	4270	2980	2970	3280	3580	4060	4460	6050	8990	8990	8290	5330
a	5929.49	5927.84	5928.58	5928.76	5929.80	5929.55	5931.55	5935.03	5935.72	5935.22	5934.39	5930.81
b	-1310	-1290	+570	+150	+820	-200	+1610	+2900	+590	-430	-700	-2960

CAL YR 1995 MAX 9620 MIN 2930 b +560
WTR YR 1996 MAX 9700 MIN 2970 b -250

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 sea level. 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.--Records good except estimated discharges, which are fair. 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, maximum gage height, 5.77 ft, May 18, 1996; no flow at times in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	44	7.7	34	39	89	79	144	16	32	6.3	4.3
2	.48	42	7.6	34	37	83	84	176	16	2.7	6.2	4.3
3	.35	40	7.3	33	34	81	84	177	15	1.8	5.9	4.0
4	.25	38	8.0	32	51	82	84	177	49	1.4	5.9	4.0
5	2.4	44	8.4	31	129	82	84	147	98	3.7	5.9	4.1
6	4.3	52	8.3	29	153	79	85	123	98	6.1	5.9	4.2
7	3.8	45	8.4	27	149	76	87	123	98	6.0	5.8	4.3
8	3.5	40	8.0	26	143	72	89	103	99	5.9	5.7	4.0
9	3.2	36	7.7	26	137	70	95	86	71	5.9	5.7	28
10	3.1	32	7.4	25	132	70	98	86	23	6.1	4.8	65
11	2.8	29	10	24	127	70	101	86	18	5.9	4.7	78
12	23	26	58	24	122	70	101	88	14	6.1	4.7	77
13	55	23	87	22	118	69	101	91	14	6.3	4.7	76
14	54	21	83	22	114	67	101	75	13	6.3	4.7	74
15	52	19	77	22	111	65	101	59	12	6.3	4.7	70
16	50	17	71	29	112	64	107	e274	12	6.3	4.8	67
17	49	16	65	36	120	64	109	e540	12	6.3	5.3	65
18	29	14	59	38	126	66	111	e540	12	6.3	5.5	63
19	14	14	53	41	137	68	110	533	11	6.3	5.1	62
20	7.8	13	48	40	147	73	109	302	9.7	6.3	4.7	61
21	4.3	12	44	42	146	78	106	143	9.4	6.3	4.7	59
22	3.7	11	40	42	141	83	102	173	8.9	6.3	4.7	58
23	3.2	10	37	41	133	84	101	196	8.0	6.3	4.7	56
24	2.8	9.3	34	45	126	83	99	193	7.5	6.3	4.7	55
25	2.6	9.1	32	50	121	81	104	190	7.3	6.3	4.7	54
26	2.5	9.6	30	46	114	78	108	162	7.4	6.3	4.7	53
27	27	9.0	28	49	108	77	112	80	7.1	6.3	4.7	52
28	54	8.6	26	49	102	79	114	62	6.8	6.3	4.7	51
29	52	8.4	24	45	96	79	115	30	35	6.3	4.7	50
30	50	7.9	26	43	---	78	116	17	53	6.3	4.6	49
31	47	---	33	41	---	77	---	17	---	6.3	4.3	---
TOTAL	607.82	699.9	1043.8	1088	3325	2337	2997	5193	861.1	203.3	158.2	1356.2
MEAN	19.6	23.3	33.7	35.1	115	75.4	99.9	168	28.7	6.56	5.10	45.2
MAX	55	52	87	50	153	89	116	540	99	32	6.3	78
MIN	.25	7.9	7.3	22	34	64	79	17	6.8	1.4	4.3	4.0
AC-FT	1210	1390	2070	2160	6600	4640	5940	10300	1710	403	314	2690

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.4	27.7	30.4	29.9	32.2	36.2	51.5	86.7	46.1	12.5	8.16	24.6
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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1929 - 1996	
ANNUAL TOTAL	26953.43		19870.32			
ANNUAL MEAN	73.8		54.3		35.5	
HIGHEST ANNUAL MEAN					83.3	
LOWEST ANNUAL MEAN					7.71	
HIGHEST DAILY MEAN	321	May 2	540	May 17	700	Nov 21 1950
LOWEST DAILY MEAN	.25	Oct 4	.25	Oct 4	.00	Jan 1 1929
ANNUAL SEVEN-DAY MINIMUM	.82	Sep 28	1.8	Oct 1	.00	Jan 1 1929
INSTANTANEOUS PEAK FLOW			544	May 18	707	Feb 19 1986
INSTANTANEOUS PEAK STAGE			5.77	May 18	5.77	May 18 1996
ANNUAL RUNOFF (AC-FT)	53460		39410		25720	
10 PERCENT EXCEEDS	173		117		98	
50 PERCENT EXCEEDS	55		39		12	
90 PERCENT EXCEEDS	3.5		4.7		.00	

PYRAMID AND WINNEMUCCA LAKES BASIN

10338700 DONNER CREEK AT HIGHWAY 89, NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'16", long 120°12'25", in NE 1/4 SW 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on right bank 50 ft upstream from State Highway 89 bridge, 0.5 mi upstream from mouth, and 1.4 mi southwest of Truckee.

DRAINAGE AREA.--29.1 mi².

PERIOD OF RECORD.--March 1993 to current year.

WATER TEMPERATURE: August 1993 to September 1994.

GAGE.--Water-stage recorder. Elevation of gage is 5,870 ft above sea level, from topographic map.

REMARKS.--Records fair including estimated periods. About half the drainage area is regulated at dam at outlet of Donner Lake (station 10338400) 2.0 mi upstream. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s, May 17, 1996, gage height, 8.74 ft; minimum daily, 2.3 ft³/s, Aug. 21, 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	42	10	62	55	117	141	324	174	70	10	8.2
2	4.0	40	11	54	53	114	149	369	199	39	9.9	7.4
3	3.8	38	10	52	51	114	142	346	199	36	9.4	7.0
4	3.6	37	22	49	169	117	139	318	221	32	9.2	6.8
5	5.7	41	19	46	456	111	141	278	263	32	9.0	6.7
6	7.4	48	16	44	295	108	149	250	268	33	8.8	6.6
7	6.7	42	16	42	243	104	162	248	265	33	8.5	6.9
8	6.3	39	14	42	222	e101	181	220	251	32	8.4	6.2
9	6.0	35	12	42	204	e98	201	195	210	30	8.3	28
10	5.8	32	12	40	191	e97	199	203	147	29	8.3	62
11	5.5	29	30	39	181	e98	190	225	128	28	8.3	73
12	21	27	370	38	174	e98	183	264	127	28	8.9	72
13	53	25	138	37	169	e97	173	301	120	29	9.8	70
14	52	24	105	35	165	e95	178	309	100	27	9.1	69
15	50	22	91	38	164	e93	194	481	91	25	8.8	67
16	48	21	82	72	187	e93	243	969	84	23	8.9	64
17	47	19	74	74	243	e93	205	1060	80	22	8.8	59
18	32	18	67	67	269	e103	192	970	76	21	8.8	57
19	17	17	61	66	297	e116	176	779	73	20	8.6	56
20	11	16	56	63	288	e132	167	513	70	19	8.5	56
21	7.0	15	52	63	308	e140	159	342	65	18	8.5	55
22	6.2	13	49	62	286	149	155	367	61	18	8.6	53
23	5.9	12	46	60	266	139	164	354	58	17	8.5	52
24	5.3	11	43	62	168	132	191	338	55	16	8.7	51
25	5.1	12	40	67	139	126	213	335	51	15	8.6	51
26	5.0	13	38	65	165	121	240	316	49	14	8.4	50
27	24	11	36	68	143	121	251	237	45	13	8.2	49
28	50	11	35	67	131	136	234	210	41	13	8.4	48
29	49	10	35	62	123	125	236	185	68	13	8.4	48
30	47	9.8	64	59	---	122	269	163	89	12	8.3	48
31	44	---	90	57	---	121	---	159	---	11	8.3	---
TOTAL	638.6	729.8	1744	1694	5805	3531	5617	11628	3728	768	271.2	1293.8
MEAN	20.6	24.3	56.3	54.6	200	114	187	375	124	24.8	8.75	43.1
MAX	53	48	370	74	456	149	269	1060	268	70	10	73
MIN	3.6	9.8	10	35	51	93	139	159	41	11	8.2	6.2
AC-FT	1270	1450	3460	3360	11510	7000	11140	23060	7390	1520	538	2570

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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10338700 DONNER CREEK AT HIGHWAY 89, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.6	15.7	27.5	55.3	101	132	156	298	189	73.1	15.3	47.5
MAX	43.3	24.3	56.3	102	200	251	220	379	398	180	38.1	60.2
(WY)	1994	1996	1996	1995	1996	1995	1993	1995	1995	1995	1995	1993
MIN	15.8	8.35	10.4	9.27	11.6	30.9	39.8	64.8	19.8	24.8	3.24	40.9
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1996	1994	1994

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1993 - 1996

ANNUAL TOTAL	53630.9	37448.4	
ANNUAL MEAN	147	102	90.2
HIGHEST ANNUAL MEAN			142 1995
LOWEST ANNUAL MEAN			25.9 1994
HIGHEST DAILY MEAN	896 May 1	1060 May 17	1060 May 17 1996
LOWEST DAILY MEAN	3.6 Oct 4	3.6 Oct 4	2.3 Aug 21 1994
ANNUAL SEVEN-DAY MINIMUM	4.4 Sep 29	5.1 Oct 1	2.5 Aug 19 1994
INSTANTANEOUS PEAK FLOW		1290 May 17	1290 May 17 1996
INSTANTANEOUS PEAK STAGE		8.74 May 17	8.74 May 17 1996
ANNUAL RUNOFF (AC-FT)	106400	74280	65320
10 PERCENT EXCEEDS	379	249	278
50 PERCENT EXCEEDS	86	55	49
90 PERCENT EXCEEDS	12	8.5	7.7

10339400 MARTIS CREEK NEAR TRUCKEE, CA

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to November 1990, June 1993 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 5,730 ft above sea level, from topographic map. Prior to July 10, 1972, at site 1.0 mi downstream at different datum.

REMARKS.--Records good. Flow is completely regulated by Martis Creek Lake since Oct. 7, 1971. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s, Feb. 1, 1963, gage height, 6.16 ft, site and datum then in use; minimum, 1.1 ft³/s, July 19, 20, 1961. Maximum discharge since construction of Martis Creek Lake Dam in 1971, 663 ft³/s, Feb. 28, 1986, gage height, 5.66 ft; maximum gage height, 6.01 ft, Apr. 2, 1974; minimum daily, 0.20 ft³/s, Nov. 9-14, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	9.3	16	17	e38	112	96	39	14	9.6	8.5
2	12	11	9.3	14	17	37	133	98	36	13	9.1	8.2
3	11	10	9.3	14	17	40	107	96	34	13	8.9	8.0
4	11	10	9.7	14	37	66	100	88	32	12	9.0	8.0
5	11	10	10	14	68	44	100	81	31	12	8.9	7.9
6	11	10	9.8	13	70	47	103	79	29	12	8.8	8.4
7	11	10	9.6	13	125	52	110	76	28	12	8.9	8.4
8	10	10	9.4	12	193	48	121	74	26	12	8.7	8.5
9	11	10	9.3	12	104	50	134	69	25	12	8.7	8.5
10	10	10	9.2	12	69	55	130	65	23	12	8.6	8.4
11	10	10	13	12	62	71	115	62	22	12	8.7	8.4
12	9.7	10	58	11	58	69	104	64	22	12	8.9	8.3
13	10	10	68	11	55	59	93	66	21	13	9.5	8.3
14	10	10	58	11	52	55	89	68	19	13	11	9.2
15	10	9.8	24	12	50	61	92	80	18	14	9.6	9.4
16	9.9	9.6	16	32	65	69	165	216	17	13	9.1	10
17	10	9.6	13	39	96	77	140	218	16	13	9.1	9.9
18	9.8	9.3	12	26	102	88	129	238	16	12	9.0	9.4
19	10	9.3	12	26	192	101	101	147	16	12	9.1	9.2
20	10	9.3	11	22	204	112	93	110	15	12	9.1	9.0
21	9.7	9.3	10	17	122	116	82	95	15	13	9.3	8.9
22	9.6	9.3	10	17	94	116	74	87	15	6.8	9.5	8.7
23	9.6	9.3	10	17	89	98	73	76	15	2.8	9.1	8.7
24	10	9.3	10	16	e83	83	83	70	15	18	8.7	8.8
25	10	9.5	10	16	e72	76	90	63	18	18	8.9	8.9
26	10	11	10	16	e64	70	94	58	20	12	8.8	8.8
27	10	10	29	21	e56	75	99	56	20	11	8.7	8.6
28	10	9.7	10	19	e50	114	95	53	18	11	8.8	8.6
29	10	9.5	11	18	e44	84	89	47	16	12	8.8	8.7
30	10	9.3	12	17	---	81	93	43	15	11	8.5	8.7
31	10	---	17	17	---	82	---	42	---	10	8.4	---
TOTAL	318.3	295.1	518.9	527	2327	2234	3143	2781	652	375.6	279.8	261.3
MEAN	10.3	9.84	16.7	17.0	80.2	72.1	105	89.7	21.7	12.1	9.03	8.71
MAX	12	11	68	39	204	116	165	238	39	18	11	10
MIN	9.6	9.3	9.2	11	17	37	73	42	15	2.8	8.4	7.9
AC-FT	631	585	1030	1050	4620	4430	6230	5520	1290	745	555	518

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.05	12.0	18.5	30.6	28.0	36.5	60.2	59.5	22.6	6.40	4.90	5.51
MAX	16.4	18.0	86.5	116	83.4	78.8	148	202	96.6	18.0	10.8	10.1
(WY)	1983	1971	1965	1970	1963	1967	1969	1967	1967	1967	1967	1967
MIN	3.73	4.81	5.38	4.28	9.60	11.1	15.4	9.80	3.21	1.79	1.81	2.37
(WY)	1962	1962	1962	1962	1964	1961	1961	1961	1960	1961	1964	1960

SUMMARY STATISTICS

WATER YEARS 1959 - 1971

ANNUAL MEAN	24.4	
HIGHEST ANNUAL MEAN	47.2	1969
LOWEST ANNUAL MEAN	6.89	1961
HIGHEST DAILY MEAN	903	Jan 31 1963
LOWEST DAILY MEAN	1.3	Jul 30 1961
ANNUAL SEVEN-DAY MINIMUM	1.4	Jul 29 1961
INSTANTANEOUS PEAK FLOW	1880	Feb 1 1963
INSTANTANEOUS PEAK STAGE	6.16	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	17650	
10 PERCENT EXCEEDS	57	
50 PERCENT EXCEEDS	11	
90 PERCENT EXCEEDS	2.7	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.87	17.3	20.8	23.3	35.7	45.9	49.9	56.4	36.1	14.5	10.3	9.05
MAX	20.8	80.0	95.5	77.7	149	181	139	219	169	75.0	76.0	40.2
(WY)	1983	1984	1982	1980	1986	1986	1982	1983	1983	1986	1995	1995
MIN	3.09	1.57	1.25	6.42	8.10	8.35	8.52	7.40	3.96	2.67	2.01	2.40
(WY)	1972	1978	1978	1978	1994	1974	1980	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1972 - 1996

ANNUAL TOTAL	18794.1	13713.0	
ANNUAL MEAN	51.5	37.5	27.4
HIGHEST ANNUAL MEAN			74.5
LOWEST ANNUAL MEAN			6.90
HIGHEST DAILY MEAN	397	May 24	238
LOWEST DAILY MEAN	3.9	Jan 18	2.8
ANNUAL SEVEN-DAY MINIMUM	4.1	Jan 16	8.2
INSTANTANEOUS PEAK FLOW			259
INSTANTANEOUS PEAK STAGE			4.03
ANNUAL RUNOFF (AC-FT)	37280	27200	19820
10 PERCENT EXCEEDS	194	97	66
50 PERCENT EXCEEDS	19	13	11
90 PERCENT EXCEEDS	8.7	8.9	4.3

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1975-95.

WATER TEMPERATURE: Water years 1975 to current year.

SEDIMENT DATA: Water years 1975-95.

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). Unpublished chemical-quality, water-temperature, and sediment data prior to October 1974, available at the U.S. Geological Survey office in Carson City, NV. Interruption in record due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 25.5°C, July 11, 12, 1993; minimum recorded, 0.0°C, Feb. 16, 17, 1982, Jan. 11-13, 16, 1995.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 21.5°C, July 24; minimum recorded, 0.5°C, several days in February.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	12.0	10.0	8.5	7.0	6.0	4.5	3.5	3.0	2.0	1.5	1.0
2	13.0	11.5	9.5	8.0	7.0	6.0	5.0	4.0	3.0	2.0	2.0	1.0
3	13.5	11.5	9.0	7.5	6.5	5.5	5.5	4.0	3.0	2.0	2.0	1.5
4	13.0	11.5	8.5	7.5	6.5	6.0	5.0	4.0	2.5	1.5	1.5	1.5
5	12.5	11.0	8.5	7.0	6.5	6.0	5.5	4.5	1.5	.5	2.0	1.0
6	13.0	11.0	8.5	7.0	7.0	5.5	5.5	4.5	1.0	.5	1.5	1.0
7	12.5	11.0	9.0	7.0	7.0	6.0	5.5	4.0	1.0	.5	1.5	1.0
8	12.5	10.5	9.0	7.5	6.5	6.0	5.5	4.5	1.0	1.0	1.5	1.0
9	12.5	10.5	8.5	7.5	7.0	5.5	5.5	4.5	1.5	1.0	2.0	1.0
10	13.0	10.5	8.5	7.0	6.5	5.5	5.0	4.0	2.0	1.5	2.5	1.5
11	12.5	11.0	9.0	7.0	6.0	5.5	5.0	4.0	2.5	2.0	2.5	2.0
12	12.5	10.5	8.5	7.0	5.5	5.0	5.5	4.0	2.5	2.0	2.5	2.0
13	12.0	10.5	9.0	7.0	5.0	4.5	5.5	4.5	3.0	2.5	2.5	2.0
14	12.0	10.0	8.5	7.0	5.0	4.0	5.5	4.5	3.5	2.5	3.0	2.0
15	12.5	10.0	8.5	7.0	4.0	3.0	5.0	4.5	3.5	3.0	3.0	2.5
16	12.5	10.5	9.0	7.5	4.0	3.0	4.5	4.0	3.5	3.0	3.5	2.5
17	12.5	10.5	9.0	7.5	4.0	3.0	4.5	4.0	4.0	3.5	4.0	3.0
18	12.5	10.0	9.5	7.5	4.0	3.5	4.0	3.0	4.0	3.5	4.5	3.5
19	11.5	10.0	8.5	7.5	4.5	3.5	3.0	2.5	3.5	2.0	5.0	4.0
20	12.0	10.0	8.5	7.0	4.5	3.5	3.0	2.0	2.0	1.0	6.5	4.5
21	12.0	10.0	8.0	7.0	5.0	3.5	3.0	1.5	1.5	1.0	7.5	5.5
22	11.0	9.5	8.0	6.5	4.5	3.5	3.0	2.0	1.0	.5	6.0	5.5
23	11.0	9.5	8.0	6.5	5.0	4.0	3.0	2.0	1.0	.5	5.5	5.0
24	10.5	9.0	7.5	6.5	5.0	3.5	3.0	1.5	1.0	1.0	5.5	4.5
25	10.5	8.5	8.0	6.0	5.0	3.5	3.0	2.0	1.0	.5	5.0	4.5
26	10.5	8.5	7.0	6.0	4.5	3.5	3.0	2.0	1.0	.5	5.5	4.5
27	10.5	8.5	7.0	5.5	4.5	3.5	2.5	1.5	1.0	.5	6.5	5.0
28	10.5	9.0	7.5	6.0	4.5	3.5	3.0	2.0	1.0	.5	5.5	5.0
29	10.5	9.0	7.0	5.5	4.5	4.0	2.5	2.0	1.5	.5	5.5	4.5
30	10.5	9.0	6.5	5.5	4.5	4.0	2.5	2.0	---	---	7.0	5.0
31	10.5	9.0	---	---	4.0	3.5	2.5	2.0	---	---	7.5	6.0
MONTH	13.5	8.5	10.0	5.5	7.0	3.0	5.5	1.5	4.0	.5	7.5	1.0

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	12.0	9.5	15.0	13.0	17.5	14.5	20.5	---	19.0	16.0
2	6.5	6.0	13.0	11.0	16.0	13.5	18.0	14.5	20.0	17.5	19.0	16.0
3	7.0	5.5	12.5	10.5	17.0	14.5	18.0	15.5	19.5	17.0	18.5	15.5
4	7.0	6.0	11.5	10.0	17.0	14.5	19.0	16.0	19.5	17.0	18.0	15.5
5	9.5	7.0	11.0	10.0	17.5	15.0	18.5	16.0	19.5	17.0	17.5	14.5
6	9.5	7.5	11.5	9.5	18.0	16.0	19.0	16.0	19.0	16.5	17.0	14.0
7	10.5	8.5	12.0	10.0	18.5	16.0	20.0	17.0	19.0	15.5	17.0	14.0
8	10.5	8.5	12.0	10.5	18.5	16.0	20.0	17.5	19.5	16.5	17.0	14.0
9	10.0	8.5	12.5	10.5	18.5	16.0	20.5	17.5	19.5	16.5	17.0	14.5
10	9.0	8.0	13.0	11.0	18.0	16.5	20.0	17.5	20.0	16.5	17.5	14.5
11	9.0	8.0	14.0	11.5	18.0	16.0	20.5	18.0	20.0	17.0	17.5	14.5
12	9.0	7.5	15.0	12.0	18.5	16.0	21.0	18.0	19.5	17.5	17.5	14.5
13	7.5	6.5	15.0	12.5	18.5	16.5	20.5	18.5	20.0	17.0	15.5	14.5
14	9.5	7.0	14.0	12.5	18.0	16.5	20.5	18.0	20.0	17.5	16.5	14.0
15	9.0	8.0	12.5	12.0	18.5	16.0	21.0	18.5	20.0	17.5	15.0	14.0
16	8.5	7.5	12.0	10.0	18.5	16.0	20.5	18.0	20.0	17.5	15.5	13.0
17	7.5	6.5	10.0	9.5	18.5	16.0	20.5	18.0	20.0	17.0	15.0	12.5
18	7.0	6.0	9.5	8.0	18.5	16.0	20.0	17.5	19.5	17.0	14.5	12.5
19	7.0	6.0	9.0	8.0	18.0	16.0	19.5	17.0	19.5	16.5	15.0	12.5
20	6.0	5.5	11.5	9.0	18.0	16.0	20.0	16.5	19.0	16.0	15.5	12.5
21	6.5	5.5	11.0	10.0	18.0	16.0	20.0	17.0	19.0	16.0	15.5	12.5
22	8.0	6.0	10.5	9.5	18.0	16.0	20.5	12.5	19.0	16.0	15.5	13.0
23	8.5	7.0	10.0	9.0	18.0	16.0	18.0	11.0	19.0	16.0	15.5	13.0
24	8.5	7.5	10.0	9.0	17.0	15.0	21.5	11.5	19.0	16.5	15.5	13.0
25	9.5	7.5	10.5	9.5	16.5	15.0	20.5	18.5	19.5	16.5	15.0	13.0
26	10.5	8.5	13.0	10.5	15.5	14.0	20.0	18.0	19.0	16.5	15.0	12.5
27	10.5	8.5	12.0	11.0	15.0	13.5	20.0	18.0	19.0	16.0	15.0	12.5
28	11.5	9.5	13.0	11.0	16.5	13.0	20.0	18.0	19.0	16.0	15.0	12.5
29	10.5	9.0	13.5	11.5	17.5	13.0	20.0	18.0	19.0	16.0	15.0	12.5
30	11.0	9.0	13.5	11.5	17.0	14.0	20.5	18.0	19.5	16.0	15.0	13.0
31	---	---	13.5	12.0	---	---	20.5	18.0	19.0	16.0	---	---
MONTH	11.5	5.5	15.0	8.0	18.5	13.0	21.5	11.0	20.5	---	19.0	12.5

10339419 TRUCKEE RIVER ABOVE PROSSER CREEK, NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'07", long 120°06'50", in SE 1/4 NW 1/4 sec.32, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank 0.2 mi upstream from Prosser Creek, and 4.5 mi northeast of Truckee.

DRAINAGE AREA.--644 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,560 ft above sea level, from topographic map

REMARKS.--Records good. Flow regulated by Lake Tahoe, Donner Lake, and Martis Creek Reservoir (station numbers 10337000, 10338400, and 10339380). See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,620 ft³/s, May 18, 1996, gage height, 10.07 ft; minimum daily, 11 ft³/s, July 28, Aug. 11, 15, 19, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	132	166	262	229	425	1100	2200	1390	977	299	273
2	97	131	170	227	225	421	1140	2320	1420	843	296	272
3	94	127	248	214	229	434	1030	2220	1330	483	295	270
4	91	124	310	206	627	487	1010	2120	1260	519	296	269
5	92	126	324	199	1480	421	1020	2040	1350	512	295	270
6	98	139	279	194	899	435	1050	2000	1330	455	294	271
7	96	132	280	189	781	418	1110	2000	1330	345	292	271
8	96	129	274	188	799	413	1230	1950	1450	342	290	270
9	96	125	272	186	673	425	1320	1870	1380	303	289	285
10	94	120	269	185	616	444	1160	1860	1110	251	289	324
11	91	115	332	179	590	492	1100	1410	835	356	295	342
12	97	111	1500	176	576	477	1070	1500	833	318	310	341
13	143	108	536	173	575	446	1010	1580	828	350	329	342
14	142	105	385	171	569	547	1020	1720	780	334	324	341
15	141	103	314	182	557	735	1060	2060	746	326	306	342
16	137	103	277	315	642	858	1370	3840	726	317	301	340
17	134	102	248	363	798	895	1170	4450	704	310	300	333
18	125	101	235	291	807	964	1190	4910	680	304	298	330
19	102	100	220	280	1010	1020	1350	3930	593	299	297	327
20	98	99	204	258	1010	1060	1320	3330	430	295	316	326
21	90	99	197	257	790	1100	1250	3070	412	293	314	322
22	89	98	190	267	696	1110	1230	3200	390	285	307	320
23	89	97	184	256	637	1030	1270	2640	384	279	306	319
24	88	96	174	241	586	979	1470	2490	356	289	292	318
25	88	97	173	224	548	961	1790	2850	298	290	294	316
26	88	161	167	255	513	936	2020	2960	747	301	282	315
27	97	166	159	244	481	944	2080	2430	1220	307	276	314
28	138	164	158	234	460	1070	1990	1930	1510	308	276	311
29	137	163	156	238	440	983	1940	1630	1610	308	275	310
30	135	164	237	237	---	972	2070	1650	1380	304	274	306
31	132	---	359	234	---	973	---	1360	---	301	273	---
TOTAL	3349	3637	8997	7125	18843	22875	39940	75520	28812	11504	9180	9290
MEAN	108	121	290	230	650	738	1331	2436	960	371	296	310
MAX	143	166	1500	363	1480	1110	2080	4910	1610	977	329	342
MIN	88	96	156	171	225	413	1010	1360	298	251	273	269
AC-FT	6640	7210	17850	14130	37380	45370	79220	149800	57150	22820	18210	18430

10339419 TRUCKEE RIVER ABOVE PROSSER CREEK, NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.8	72.1	133	181	324	509	697	1317	726	333	179	180
MAX	108	121	290	259	650	738	1331	2436	1144	587	296	310
(WY)	1996	1996	1996	1995	1996	1996	1996	1996	1995	1995	1996	1996
MIN	34.3	46.6	50.7	52.5	55.9	137	180	224	72.6	41.2	12.1	54.1
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1994 - 1996			
ANNUAL TOTAL	173735				239072							
ANNUAL MEAN	476				653							
HIGHEST ANNUAL MEAN									394			
LOWEST ANNUAL MEAN									653			
HIGHEST DAILY MEAN	2480				4910				85.0			
LOWEST DAILY MEAN	44				88				11			
ANNUAL SEVEN-DAY MINIMUM	51				90				12			
INSTANTANEOUS PEAK FLOW					6620				6620			
INSTANTANEOUS PEAK STAGE					10.07				10.07			
ANNUAL RUNOFF (AC-FT)	344600				474200				285600			
10 PERCENT EXCEEDS	1090				1500				1060			
50 PERCENT EXCEEDS	284				318				185			
90 PERCENT EXCEEDS	102				118				42			

10339419 TRUCKEE RIVER ABOVE PROSSER CREEK, NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: October 1994 to current year.

WATER TEMPERATURE: March 1993 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1994 to current year.

WATER TEMPERATURE: March 1993 to current year.

INSTRUMENTATION.--Water-temperature recorder since March 1993. Specific conductance recorder since October 1994.

REMARKS.--Water temperature and specific conductance are affected by regulation from Lake Tahoe and Donner Lake.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 333 micromhos, Nov. 1, 1994; minimum recorded, 43 micromhos, May 16, 1996.

WATER TEMPERATURE: Maximum recorded, 25.0°C, July 13, 15, 20, 1994; minimum recorded, 0.0°C, many days most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 193 micromhos, Oct. 12; minimum recorded 43 micromhos, May 16.

WATER TEMPERATURE: Maximum recorded, 24.0°C, July 24; minimum recorded, 0.0°C, several days during January - March.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	152	142	132	130	129	124	107	94	135	125	123	114
2	160	145	133	131	127	123	112	107	140	128	129	116
3	165	153	133	131	125	110	115	112	145	132	149	119
4	171	154	134	131	110	100	118	114	137	64	146	116
5	167	154	134	129	111	102	120	117	86	62	130	113
6	164	149	130	127	121	108	121	119	97	80	124	112
7	163	150	131	129	122	115	127	120	100	90	121	113
8	161	150	133	130	120	115	129	121	104	95	125	116
9	164	150	135	131	120	111	131	124	111	95	129	117
10	167	151	136	133	119	113	131	125	106	95	129	118
11	185	151	138	135	116	93	131	127	98	95	127	114
12	193	153	139	136	93	49	132	125	98	96	122	113
13	167	126	139	137	102	70	133	129	98	96	120	115
14	166	126	142	138	105	97	136	131	99	96	120	104
15	163	128	141	138	120	103	137	125	102	96	115	101
16	159	128	142	139	114	105	132	91	102	91	116	99
17	154	129	142	140	121	111	119	96	96	80	110	98
18	154	128	144	140	122	114	123	110	96	81	114	98
19	164	142	144	141	136	116	128	113	104	85	108	97
20	150	142	145	141	139	128	128	116	89	80	105	94
21	153	149	145	142	139	121	128	117	93	88	103	91
22	153	150	146	143	139	125	130	119	95	91	106	92
23	154	151	147	144	132	123	137	120	104	93	103	95
24	156	152	147	145	140	124	129	117	102	97	105	95
25	154	151	147	144	134	124	134	115	114	100	106	97
26	155	153	145	123	137	125	131	122	116	105	110	97
27	155	138	125	123	129	127	130	115	122	107	107	94
28	138	127	125	123	147	129	135	121	121	111	98	91
29	130	128	127	123	146	132	134	119	119	111	95	94
30	131	128	130	124	144	95	133	121	---	---	95	94
31	132	129	---	---	98	77	137	124	---	---	95	94
MONTH	193	126	147	123	147	49	137	91	145	62	149	91

PYRAMID AND WINNEMUCCA LAKES BASIN

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10339419 TRUCKEE RIVER ABOVE PROSSER CREEK, NEAR TRUCKEE, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	96	87	80	74	81	72	107	92	116	113	121	116
2	92	87	79	73	79	69	115	91	116	113	120	116
3	91	90	80	74	78	68	113	91	116	113	121	117
4	92	90	81	77	74	66	114	91	116	113	121	118
5	91	89	81	78	76	66	115	90	117	113	122	116
6	90	87	81	78	75	66	122	99	117	114	120	115
7	89	85	81	77	75	65	120	100	119	114	120	116
8	94	83	81	77	79	66	106	98	119	115	120	116
9	89	81	82	78	80	72	112	97	119	115	119	116
10	90	80	82	77	82	73	112	98	119	116	116	113
11	93	88	80	70	87	72	106	99	119	114	114	112
12	93	85	77	66	83	71	106	96	115	113	113	112
13	95	91	78	65	83	70	104	87	115	112	113	111
14	94	87	74	66	86	72	106	103	116	112	113	111
15	93	87	70	54	86	76	108	105	118	114	113	110
16	91	81	64	43	85	77	110	106	117	115	113	108
17	93	87	65	58	85	77	111	107	117	114	113	111
18	97	88	72	56	86	79	112	108	118	114	113	111
19	97	91	77	71	97	80	112	108	117	114	114	111
20	98	91	80	77	98	83	114	111	118	115	114	111
21	98	91	81	78	106	79	115	112	119	114	114	111
22	100	90	81	78	103	87	115	113	119	115	114	112
23	98	87	81	78	106	87	115	113	119	115	115	111
24	95	81	83	80	106	86	119	113	119	116	114	111
25	85	80	84	80	106	88	118	115	120	116	114	112
26	82	77	82	79	102	82	119	112	120	116	114	111
27	81	77	83	79	107	91	116	112	120	116	114	111
28	82	79	85	79	108	89	115	113	120	116	153	111
29	83	79	82	77	106	93	115	112	120	116	113	110
30	81	76	82	77	108	91	116	113	121	117	113	111
31	---	---	82	76	---	---	116	114	121	117	---	---
MONTH	100	76	85	43	108	65	122	87	121	112	153	108

10339419 TRUCKEE RIVER ABOVE PROSSER CREEK, NEAR TRUCKEE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	8.5	10.5	7.0	8.5	6.5	3.5	1.5	5.5	2.0	5.5	1.5
2	15.5	8.5	9.5	6.5	8.5	6.5	4.5	1.5	4.5	.5	6.0	2.0
3	15.5	9.0	9.0	5.0	7.0	4.5	5.5	2.0	4.5	1.0	5.5	2.5
4	13.5	8.0	8.0	3.5	8.5	7.0	4.5	2.0	4.5	1.0	4.0	.0
5	12.5	6.5	8.5	5.0	9.0	8.0	5.5	3.0	2.5	1.0	2.5	.0
6	12.5	7.0	9.0	5.0	9.0	7.0	5.5	3.0	4.0	2.0	4.0	.0
7	14.5	8.5	10.0	5.5	9.0	7.0	5.0	2.0	4.5	2.0	5.5	2.0
8	13.5	8.0	10.0	6.0	7.5	6.0	5.0	2.0	4.5	2.0	6.5	2.0
9	13.5	7.0	9.5	7.5	8.0	5.5	5.5	2.5	5.0	2.0	7.0	3.0
10	14.5	8.0	9.0	5.5	7.0	5.0	6.0	3.5	5.5	3.5	6.5	3.0
11	13.5	8.5	9.5	5.0	7.0	6.5	5.0	2.0	5.5	3.0	5.0	3.0
12	13.5	8.0	10.0	6.0	6.5	3.0	5.0	1.5	6.0	2.5	4.0	2.5
13	13.0	7.5	10.0	6.0	4.0	2.5	5.0	2.0	6.0	2.5	5.0	2.5
14	13.5	7.5	9.5	6.0	4.5	3.5	4.5	1.5	6.0	2.5	7.5	2.5
15	14.0	8.5	9.5	5.5	3.5	1.5	4.5	3.5	6.0	2.5	7.5	3.0
16	14.0	8.5	10.5	7.0	4.0	2.0	4.0	2.5	6.5	4.5	8.0	4.0
17	14.0	8.5	9.5	6.0	3.0	.5	3.5	1.5	5.5	3.5	8.5	4.0
18	14.5	9.0	9.5	6.0	4.5	2.0	2.5	1.0	5.5	3.5	9.0	4.5
19	13.5	8.0	8.5	5.0	3.5	1.5	2.5	.5	3.5	2.0	9.0	4.5
20	13.0	8.0	8.0	4.5	3.5	1.0	2.5	.5	3.0	1.0	9.0	4.5
21	13.0	8.0	8.5	5.5	3.5	.0	.5	.0	2.0	.5	9.0	5.0
22	10.0	5.5	6.5	3.5	2.5	.5	1.5	.0	2.5	.5	6.5	3.5
23	10.0	5.0	7.5	3.5	3.5	1.0	1.0	.0	4.0	.0	6.5	3.0
24	9.5	4.5	7.5	4.0	2.0	.0	1.0	.0	2.5	.5	7.0	3.0
25	9.5	4.0	8.0	3.0	1.5	.0	1.5	.0	2.5	.5	6.0	3.5
26	12.0	6.0	7.0	5.0	2.5	.0	2.0	.0	2.5	.0	8.0	3.0
27	11.5	7.5	5.5	2.5	4.0	1.0	1.5	.0	3.0	.5	7.0	4.5
28	12.0	8.5	7.0	4.0	3.5	1.5	2.5	.0	5.5	1.0	6.0	3.5
29	12.0	8.5	7.5	4.5	4.5	3.5	4.0	.0	5.0	1.0	7.5	2.5
30	11.5	8.0	7.5	4.5	5.5	4.5	3.5	1.5	---	---	8.5	4.0
31	11.0	8.5	---	---	5.0	3.5	4.0	2.0	---	---	9.0	4.5
MONTH	15.5	4.0	10.5	2.5	9.0	.0	6.0	.0	6.5	.0	9.0	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	4.5	12.0	6.5	14.0	7.5	19.5	14.0	21.5	16.5	20.0	14.0
2	8.0	4.0	11.0	6.5	14.5	8.5	19.5	13.5	21.0	15.5	20.0	14.0
3	8.5	4.5	10.0	6.0	14.5	8.0	19.5	14.0	20.5	14.5	19.5	14.0
4	9.0	4.5	10.0	5.0	14.5	8.0	18.5	13.0	20.5	14.0	18.5	14.5
5	10.0	4.5	10.0	5.5	15.0	8.5	19.0	12.0	21.0	14.5	17.0	11.5
6	10.0	5.0	10.5	5.5	15.5	9.0	20.0	13.0	20.0	15.0	17.5	12.0
7	10.5	5.5	11.0	6.0	16.0	9.5	21.5	15.0	21.5	14.5	18.5	12.5
8	10.5	5.5	10.0	6.0	16.0	9.5	21.0	15.5	22.0	15.5	19.0	13.0
9	10.0	6.0	11.0	5.5	15.5	9.5	21.5	16.0	22.5	16.0	19.0	13.5
10	9.0	5.0	11.5	6.0	15.0	9.0	22.0	14.5	21.5	16.5	19.0	14.5
11	9.0	4.5	13.0	6.5	15.0	8.5	22.5	16.5	21.5	17.5	19.5	14.5
12	8.0	4.5	13.0	6.5	16.5	10.0	21.0	17.5	20.5	17.5	18.5	14.5
13	9.0	4.0	12.0	7.0	16.5	9.5	21.0	16.5	20.0	16.5	16.0	14.0
14	10.0	5.0	9.0	7.5	16.5	9.5	21.5	17.0	22.5	17.0	17.5	13.0
15	9.0	6.0	7.5	6.0	17.0	10.0	22.0	17.0	22.5	16.5	17.0	14.0
16	7.0	5.0	7.0	4.5	17.0	10.5	21.0	15.5	21.5	16.5	16.5	12.5
17	7.5	4.0	6.5	6.0	16.5	10.5	20.0	14.5	21.0	15.5	16.0	11.5
18	8.0	3.5	7.5	5.5	15.5	8.5	20.0	14.5	20.0	14.5	16.0	11.5
19	7.0	4.0	9.5	6.0	16.5	10.0	19.0	12.5	20.0	15.0	16.5	11.5
20	7.0	3.5	11.0	7.5	17.0	11.0	21.5	14.0	20.0	14.0	17.5	12.0
21	9.0	4.0	10.5	8.0	16.0	10.5	22.0	15.5	20.5	14.0	18.0	13.0
22	9.0	5.5	9.0	7.0	16.5	9.5	23.0	16.5	21.5	15.0	17.5	13.0
23	10.5	6.0	8.5	6.0	16.5	10.5	22.5	17.0	21.0	15.5	17.0	12.5
24	8.5	6.0	10.5	6.5	15.0	11.0	24.0	17.0	21.5	16.5	17.0	12.0
25	10.0	5.0	11.0	7.5	11.5	9.5	23.0	16.5	21.5	16.5	16.5	12.5
26	10.5	5.5	12.0	8.0	12.5	9.5	22.5	16.5	21.0	16.5	16.5	12.5
27	10.0	5.5	9.5	8.0	14.0	11.0	22.5	17.0	20.0	14.5	16.5	11.5
28	10.0	6.0	11.0	7.0	16.0	11.5	21.0	18.0	20.5	14.0	17.0	12.0
29	11.5	6.0	12.0	7.0	18.0	13.0	22.0	16.5	21.5	15.5	17.5	12.0
30	11.5	6.5	12.5	7.0	19.5	14.0	22.5	17.0	21.0	15.5	17.5	13.5
31	---	---	13.0	7.0	---	---	23.0	17.0	20.5	15.0	---	---
MONTH	11.5	3.5	13.0	4.5	19.5	7.5	24.0	12.0	22.5	14.0	20.0	11.5

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 sea level (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, 33,719 acre-ft, May 19, 1996, elevation, 5,746.11 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, 33,719 acre-ft, May 19, elevation, 5,746.11 ft; minimum observed, 9,500 acre-ft, Mar. 26, elevation, 5,702.71 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15740	9960	9908	10192	9676	9598	9532	19789	29827	28157	25766	21788
2	15501	9964	9936	10234	9686	9602	9686	20402	29827	28345	25725	21606
3	15263	9970	9960	10240	9686	9615	9733	20998	29895	28520	25671	21368
4	15047	9977	9991	10234	9686	9686	9737	21493	29970	28680	25617	21105
5	14842	9984	10085	10216	10573	9733	9737	21934	29804	28826	25583	20846
6	14630	9984	10160	10164	11578	9733	9761	22350	29610	28956	25460	20589
7	14426	9991	10206	10108	11375	9787	9834	22908	29431	28709	25347	20331
8	14219	9998	10195	10054	10852	9814	9994	23489	29461	28382	25241	20083
9	14009	10004	10164	10002	10261	9845	10240	24016	29468	28057	25134	19835
10	13797	10012	10123	9942	10081	9888	10530	24564	29431	27728	25021	19592
11	13589	10012	10095	9915	10060	9953	10739	25108	29260	27528	24908	19333
12	13381	10018	10566	9901	10026	10054	10870	25739	29016	27513	24814	19150
13	13187	10026	11263	9888	9984	9981	11233	26444	28797	27542	24702	18946
14	12967	10032	10819	9875	9942	9875	11586	27253	28564	27714	24604	18742
15	12760	10040	10555	9862	9891	9875	11970	28085	28287	27749	24486	18548
16	12554	10043	10324	9882	9851	9942	12640	29993	27978	27756	24355	18402
17	12353	10046	10054	10095	10026	10036	13429	31855	27771	27742	24224	18217
18	12143	10054	9774	10088	10431	10171	14018	33434	27628	27699	24094	18026
19	11943	---	9747	10043	10793	10184	14521	33719	27471	27656	23965	17825
20	11736	10068	9713	9964	11222	10226	14954	33043	27485	27606	23810	17624
21	---	10068	9703	9882	10921	10108	15362	32429	27499	27556	23657	17437
22	---	10074	9689	9787	10410	10036	15721	32365	27499	27499	23510	17240
23	11121	10074	9747	9747	9824	9908	16091	32285	27485	27443	23344	17045
24	10921	10081	9794	9754	9784	9665	16558	32108	27471	27358	23174	16846
25	10717	10088	9835	9754	9727	9565	17209	31572	27457	27260	23034	16648
26	---	10123	9878	9727	9605	9500	17867	30609	27429	27162	22889	16458
27	10318	10150	9929	9747	9582	9552	18277	30401	27528	26824	22703	16259
28	10235	10095	9984	9754	9602	9787	18575	30212	27685	26479	22524	16057
29	10144	10032	9970	9730	9588	9787	18803	29970	27835	26133	22338	15867
30	10068	9970	9956	9716	---	9686	19239	29865	28000	25923	22153	15672
31	9984	---	10071	9699	---	9585	---	29850	---	25800	21983	---
MAX	---	---	11263	10240	11578	10226	19239	33719	29970	28956	25766	21788
MIN	---	---	9689	9699	9582	9500	9532	19789	27429	25800	21983	15672
a	5704.15	5704.11	5704.40	5703.31	5702.98	5702.97	5724.90	5741.21	5738.69	5735.54	5729.61	5718.03
b	-6000	-14	+101	-372	-111	-3	+9654	+10611	-1850	-2200	-3817	-6311

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

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.

WATER-DISCHARGE RECORDS

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 sea level (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.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	e11	21	41	e42	e88	240	94	246	14	35	88
2	131	11	11	44	e41	87	238	94	247	14	35	106
3	e120	10	11	51	e41	88	237	94	252	14	34	121
4	e115	10	11	51	e41	89	236	94	332	14	34	120
5	e115	10	11	60	e117	88	236	94	377	14	50	120
6	e115	10	11	64	e344	89	237	e54	374	136	60	120
7	e115	10	24	64	e500	89	238	17	294	224	60	119
8	e115	10	38	64	e500	89	239	17	246	223	60	119
9	e115	10	38	64	e388	90	240	17	246	223	60	118
10	e115	10	38	57	e200	91	242	17	276	191	60	118
11	e115	10	39	41	e200	92	242	17	303	68	61	93
12	e115	10	238	41	e200	129	153	17	304	53	63	97
13	e115	10	354	41	e200	148	92	16	303	54	67	97
14	e115	10	263	41	e200	126	93	59	303	53	66	96
15	e115	10	179	41	e200	94	60	99	303	53	67	96
16	e115	10	178	44	e171	95	23	170	268	53	66	97
17	e115	10	177	69	e160	96	20	374	220	53	67	96
18	e115	11	99	98	e160	155	21	671	204	53	66	96
19	e115	11	50	97	e160	200	20	838	158	54	74	96
20	e115	11	43	97	e351	279	20	776	121	54	80	96
21	e115	11	39	97	e500	315	20	514	121	55	80	95
22	e115	10	23	78	e500	315	19	409	121	55	79	95
23	e115	11	10	54	e306	312	18	392	119	64	79	95
24	e115	11	10	55	e200	274	17	444	118	71	79	94
25	e115	11	10	55	e200	189	17	775	118	70	78	94
26	e115	11	10	55	e173	164	108	586	79	140	85	94
27	e81.0	30	10	56	e115	138	191	342	16	185	90	94
28	e60.0	43	31	54	e115	187	191	394	15	184	90	94
29	e60.0	43	41	54	e97	236	139	335	15	153	89	94
30	e60.0	43	41	54	---	236	94	267	15	79	89	93
31	e41.0	---	41	54	---	236	---	246	---	45	88	---
TOTAL	3330.0	429	2100	1836	6422	4904	3941	8333	6114	2716	2091	3051
MEAN	107	14.3	67.7	59.2	221	158	131	269	204	87.6	67.5	102
MAX	132	43	354	98	500	315	242	838	377	224	90	121
MIN	41	10	10	41	41	87	17	16	15	14	34	88
AC-FT	6610	851	4170	3640	12740	9730	7820	16530	12130	5390	4150	6050

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	94.8	40.8	56.6	66.9	76.5	114	126	211	111	53.5	42.9	110
MAX	282	214	361	321	397	371	372	545	494	167	151	477
(WY)	1983	1982	1965	1970	1986	1986	1969	1983	1983	1985	1995	1983
MIN	5.41	6.84	5.32	7.96	17.5	27.1	21.7	17.2	8.39	6.33	2.55	1.96
(WY)	1989	1989	1989	1989	1991	1977	1977	1985	1966	1966	1994	1992

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	59291.0	45267.0	
ANNUAL MEAN	162	124	92.1
HIGHEST ANNUAL MEAN			214
LOWEST ANNUAL MEAN			24.4
HIGHEST DAILY MEAN	1290	May 2	1790
LOWEST DAILY MEAN	10	Nov 3	.02
ANNUAL SEVEN-DAY MINIMUM	10	Nov 3	.30
INSTANTANEOUS PEAK FLOW			1790
INSTANTANEOUS PEAK STAGE			6.66
ANNUAL RUNOFF (AC-FT)	117600	89790	66730
10 PERCENT EXCEEDS	383	275	223
50 PERCENT EXCEEDS	117	93	44
90 PERCENT EXCEEDS	15	13	9.0

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURE: June 1993 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1993 to current year.

INSTRUMENTATION.--Water-temperature recorder since June 1993.

REMARKS.--Water temperature is affected by regulation from Prosser Creek Dam. Interruption in record due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 27.0°C, Aug. 13-15, 1994; minimum recorded, 0.5°C, Nov. 25, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 18.5°C, June 29 to July 5; minimum recorded, 1.5°C, several days.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	15.0	---	---	10.0	6.5	5.5	3.0	---	---	---	---
2	16.5	15.0	13.5	7.5	10.0	5.5	5.5	3.5	---	---	3.5	2.0
3	---	---	13.5	7.0	8.5	5.5	5.5	3.5	---	---	3.5	2.0
4	---	---	13.5	6.0	9.5	6.5	4.5	3.0	---	---	2.5	1.5
5	---	---	13.0	7.0	9.5	6.0	4.5	3.5	---	---	3.0	1.5
6	---	---	13.5	7.0	10.0	5.5	4.5	3.0	---	---	3.5	1.5
7	---	---	14.0	7.0	9.0	6.0	5.0	3.5	---	---	3.5	2.0
8	---	---	13.0	7.0	8.0	6.0	4.5	3.5	---	---	3.5	2.0
9	---	---	11.5	8.0	8.5	6.0	4.5	3.5	---	---	3.5	2.0
10	---	---	13.0	7.0	8.0	6.0	5.0	3.5	---	---	3.5	2.0
11	---	---	13.0	6.5	7.0	6.5	5.5	3.0	---	---	3.0	2.0
12	---	---	13.5	7.0	7.0	6.5	5.5	3.0	---	---	2.5	2.0
13	---	---	13.5	7.0	6.5	5.5	5.5	3.5	---	---	2.5	2.0
14	---	---	13.0	7.0	5.5	5.0	5.5	3.0	---	---	3.5	2.0
15	---	---	12.5	6.5	5.5	5.0	4.5	3.5	---	---	4.0	2.0
16	---	---	13.0	7.0	5.5	4.5	4.5	3.5	---	---	4.0	2.0
17	---	---	13.0	7.0	5.0	4.5	5.0	3.0	---	---	4.0	2.0
18	---	---	11.5	7.0	5.5	4.0	3.5	3.0	---	---	3.5	2.0
19	---	---	12.5	6.5	5.5	4.0	4.0	3.0	---	---	3.5	2.5
20	---	---	12.5	6.5	5.5	3.5	3.5	2.0	---	---	3.5	2.5
21	---	---	11.0	6.0	5.5	3.5	3.0	2.0	---	---	3.5	2.5
22	---	---	11.0	5.5	5.0	1.5	4.0	2.5	---	---	3.5	2.5
23	---	---	11.5	5.5	6.5	2.0	3.5	2.5	---	---	3.5	2.5
24	---	---	10.5	5.5	6.0	1.5	4.0	1.5	---	---	3.5	2.5
25	---	---	10.5	5.0	6.5	1.5	4.5	2.5	---	---	3.5	2.5
26	---	---	10.5	5.5	6.5	2.0	3.5	2.5	---	---	4.5	3.0
27	---	---	9.0	5.0	7.0	2.5	3.5	2.0	---	---	4.5	3.0
28	---	---	8.5	6.5	5.0	2.0	4.5	2.5	---	---	4.0	3.0
29	---	---	9.0	7.0	4.5	4.0	4.5	2.5	---	---	4.0	3.0
30	---	---	9.0	6.5	5.5	4.0	4.0	3.0	---	---	4.0	3.0
31	---	---	---	---	5.5	3.5	4.0	3.0	---	---	4.0	3.0
MONTH	---	---	---	---	10.0	1.5	5.5	1.5	---	---	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.5	3.5	8.5	6.0	8.5	7.5	18.5	8.5	15.0	10.0	14.0	12.0
2	4.5	3.5	8.5	6.0	9.0	7.5	18.5	8.0	15.0	10.0	14.0	12.0
3	5.0	3.5	8.0	6.0	9.0	7.5	18.5	8.5	15.0	10.0	14.0	12.5
4	5.0	4.0	8.5	6.0	8.5	8.0	18.5	8.0	15.0	10.5	14.0	12.5
5	5.0	4.0	8.5	6.0	8.5	8.0	18.5	7.5	14.0	10.5	14.0	12.5
6	5.5	4.5	---	6.0	8.5	8.0	12.5	8.0	14.0	10.5	14.5	12.5
7	5.5	4.0	15.5	5.0	8.5	8.0	11.0	9.5	14.0	11.0	14.5	12.5
8	5.5	4.5	14.5	5.0	9.0	8.0	11.0	9.5	14.0	10.5	15.0	13.0
9	5.5	4.5	15.0	4.5	9.0	8.0	11.0	10.0	14.0	11.0	15.0	13.0
10	6.5	4.5	15.0	5.0	9.0	8.0	11.5	10.0	14.0	11.0	15.0	13.5
11	6.5	4.5	16.0	5.5	9.0	8.0	13.5	10.0	14.0	11.0	---	13.5
12	7.0	5.0	16.0	5.5	9.0	8.0	13.0	10.0	13.5	11.5	15.5	13.5
13	7.5	5.0	15.5	6.0	9.0	8.5	13.5	10.0	13.5	11.0	14.5	14.0
14	7.5	5.0	9.0	7.0	9.5	8.0	13.0	10.0	14.0	11.5	16.0	14.0
15	11.0	5.0	7.5	7.0	9.5	8.5	13.0	10.0	14.0	11.0	16.0	14.5
16	10.5	4.0	12.0	6.5	9.5	8.5	13.5	9.5	13.5	11.5	16.5	15.0
17	11.0	3.5	12.5	11.5	10.0	8.5	13.0	10.0	13.5	11.0	17.0	15.0
18	12.0	3.5	12.0	11.0	10.0	8.5	13.5	10.0	14.0	11.0	17.0	15.5
19	10.5	4.0	11.0	10.5	10.5	8.5	13.5	9.5	13.5	11.5	17.0	15.5
20	10.0	3.5	12.0	10.0	10.5	8.5	13.5	10.0	14.0	11.5	17.0	15.5
21	12.5	3.5	11.5	10.0	11.0	8.5	13.5	10.0	14.0	11.5	17.0	15.5
22	11.0	4.0	12.5	10.5	11.0	9.0	14.0	10.0	13.5	11.5	17.0	15.5
23	16.0	4.5	11.5	10.0	11.0	9.0	13.0	10.0	14.0	11.5	17.0	15.5
24	9.5	5.5	10.5	7.5	10.5	9.0	13.0	10.5	14.0	12.0	17.0	15.5
25	15.0	5.0	8.5	8.0	10.0	9.0	13.0	10.0	14.0	12.0	16.5	15.0
26	10.0	4.5	9.5	7.5	10.5	8.5	12.0	10.5	14.0	11.5	16.5	15.0
27	7.5	5.5	8.5	8.0	15.5	8.0	12.0	10.5	13.5	12.0	17.0	15.0
28	7.0	6.0	8.5	7.5	18.0	8.0	12.0	11.0	14.0	12.0	17.0	15.0
29	8.0	6.0	8.5	7.5	18.5	8.5	12.5	11.0	14.0	12.0	17.0	15.0
30	8.0	6.0	8.5	7.5	18.5	8.5	13.5	10.5	14.0	12.0	16.5	15.0
31	---	---	8.5	7.5	---	---	15.0	10.5	14.0	12.0	---	---
MONTH	16.0	3.5	---	4.5	18.5	7.5	18.5	7.5	15.0	10.0	---	12.0

10341950 LITTLE TRUCKEE RIVER BELOW DIVERSION DAM, NEAR SIERRAVILLE, CA

LOCATION.--Lat 39°29'29", long 120°17'39", in SE 1/4 SE 1/4 sec.15, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, on left bank 50 ft upstream from Independence Lake Road Bridge, 0.7 mi downstream from diversion dam, and 7.8 mi southeast of Sierraville.

DRAINAGE AREA.--36.1 mi².

PERIOD OF RECORD.--June 1993 to current year.

WATER TEMPERATURE: October 1993 to September 1994.

GAGE.--Water-stage recorder. Elevation of gage is 6,380 ft above sea level, from topographic map.

REMARKS.--Records fair including estimated daily discharge. Some water diverted to Sierra Valley about 0.7 mi upstream for irrigation in the summer months. See schematic diagram of Truckee River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s, May 16, 1996, gage height, 9.78 ft from floodmarks; minimum daily, 1.5 ft³/s, Aug. 17-19, 29, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	6.0	8.5	57	33	81	128	445	322	35	3.1	3.3
2	7.9	6.1	13	48	33	79	127	494	357	28	3.5	3.3
3	7.7	6.0	9.0	44	32	81	111	464	392	26	3.8	3.3
4	7.4	5.9	15	39	139	83	109	409	408	22	3.7	3.2
5	7.3	6.1	16	35	593	67	116	388	405	15	4.9	3.3
6	7.1	6.1	15	33	514	78	136	400	384	10	3.8	3.5
7	6.8	6.0	12	31	356	72	167	400	367	9.0	3.6	3.5
8	6.7	6.1	9.7	30	269	71	214	389	352	12	2.4	3.5
9	6.6	6.1	8.7	31	226	72	262	355	313	13	2.5	3.4
10	6.4	6.1	8.3	32	197	78	276	367	276	7.0	3.3	3.4
11	6.2	6.1	39	29	179	86	251	406	231	5.6	3.2	3.3
12	6.2	6.0	440	28	168	86	229	505	239	11	4.4	3.5
13	6.4	5.9	186	27	162	76	203	603	232	12	4.3	4.5
14	6.3	5.9	89	26	153	72	210	781	194	6.9	4.2	5.1
15	6.2	5.9	61	30	146	73	253	1230	175	4.9	3.6	6.0
16	6.0	5.9	55	73	176	77	298	e1700	153	3.9	3.7	12
17	6.0	5.8	47	83	252	82	243	e1300	121	3.8	2.7	8.8
18	6.1	5.9	40	67	271	94	209	e1150	98	3.2	2.5	7.0
19	6.0	5.9	35	58	233	111	172	e760	106	2.8	2.9	6.3
20	6.1	5.8	e34	51	190	134	151	e570	99	2.5	4.3	5.8
21	6.0	5.8	e33	45	153	154	139	e440	78	2.3	4.7	5.4
22	5.9	5.7	e32	47	127	166	142	e490	68	2.3	4.6	5.2
23	6.1	5.7	e31	45	120	141	177	e400	62	2.6	4.4	5.1
24	6.1	5.7	e30	34	114	120	258	343	54	2.9	4.3	4.9
25	6.1	7.1	e29	e38	102	109	300	335	42	2.8	4.4	4.8
26	6.3	15	e28	e36	98	101	333	350	45	2.8	4.1	4.7
27	6.3	8.0	28	e34	93	104	355	371	44	2.6	3.9	4.5
28	6.2	7.4	28	e33	90	120	329	348	34	2.8	3.9	4.4
29	6.2	7.0	28	e33	87	100	325	341	31	2.8	3.7	4.4
30	6.0	6.8	50	e33	---	95	392	340	39	2.4	3.6	4.3
31	6.1	---	73	e33	---	97	---	330	---	2.9	3.4	---
TOTAL	200.9	193.8	1531.2	1263	5306	2960	6615	17204	5721	262.8	115.4	143.7
MEAN	6.48	6.46	49.4	40.7	183	95.5	220	555	191	8.48	3.72	4.79
MAX	8.2	15	440	83	593	166	392	1700	408	35	4.9	12
MIN	5.9	5.7	8.3	26	32	67	109	330	31	2.3	2.4	3.2
AC-FT	398	384	3040	2510	10520	5870	13120	34120	11350	521	229	285

e Estimated.

10341950 LITTLE TRUCKEE RIVER BELOW DIVERSION DAM, NEAR SIERRAVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.50	5.63	20.8	27.6	82.9	101	161	399	343	106	11.5	4.37
MAX	7.50	6.46	49.4	40.7	183	179	220	555	821	345	31.9	6.48
(WY)	1994	1996	1996	1996	1996	1995	1996	1996	1995	1995	1995	1993
MIN	2.52	4.58	5.50	8.14	8.94	26.9	90.1	100	16.5	4.63	2.22	2.04
(WY)	1995	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1993 - 1996			
ANNUAL TOTAL	68419.8				41516.8							
ANNUAL MEAN	187				113							
HIGHEST ANNUAL MEAN									107			
LOWEST ANNUAL MEAN									183			
HIGHEST DAILY MEAN	1290				1700				23.5			
LOWEST DAILY MEAN	2.8				2.3				1700			
ANNUAL SEVEN-DAY MINIMUM	3.2				2.6				1.5			
INSTANTANEOUS PEAK FLOW					1880				1.6			
INSTANTANEOUS PEAK STAGE					9.78				1880			
ANNUAL RUNOFF (AC-FT)	135700				82350				77310			
10 PERCENT EXCEEDS	620				353				302			
50 PERCENT EXCEEDS	55				33				10			
90 PERCENT EXCEEDS	5.5				3.6				3.0			

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level (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, 17,700 acre-ft, Aug. 4, 1995, elevation, 6,949.51 ft; minimum, 4,750 acre-ft, Nov. 10, 11, 1988, elevation, 6,929.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,500 acre-ft, Jul. 13, elevation, 6,949.34 ft; minimum, 12,300 acre-ft, Apr. 7, elevation, 6,941.69 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16600	15600	14900	15200	15300	16100	12600	12700	16200	17400	17000	16000
2	16600	15600	14800	15200	15300	15900	12500	12800	16400	17500	17000	15900
3	16500	15500	14800	15200	15300	15700	12500	12900	16500	17500	17000	15900
4	16500	15500	14800	15200	15600	15600	12400	13000	16700	17500	16900	15800
5	16500	15500	14800	15100	15900	15500	12400	13000	16800	17500	16900	15800
6	16400	15400	14800	15100	15900	15300	12400	13100	17000	17500	16900	15700
7	16400	15400	14800	15100	16000	15100	12300	13100	17100	17500	16900	15700
8	16400	15400	14800	15100	16000	15000	12400	13200	17200	17500	16900	15600
9	16300	15400	14700	15100	16000	14800	12400	13300	17300	17500	16800	15600
10	16300	15300	14700	15000	16000	14600	12400	13300	17400	17500	16800	15600
11	16300	15300	14900	15000	16000	14500	12400	13400	17400	17500	16800	15500
12	16200	15300	15500	15000	16000	14400	12400	13500	17400	17500	16800	15400
13	16200	15300	15500	15000	16100	14200	12400	13700	17400	17500	16800	15400
14	16200	15300	15500	14900	16100	14000	12400	14000	17300	17500	16800	15300
15	16100	15200	15500	14900	16100	13800	12400	14500	17300	17400	16700	15300
16	16100	15200	15500	15000	16200	13600	12500	15200	17300	17400	16700	15300
17	16100	15200	15500	15000	16200	13500	12500	15900	17300	17300	16700	15300
18	16000	15100	15500	15100	16400	13300	12500	16200	17400	17300	16600	15300
19	16000	15100	15500	15100	16500	13200	12500	16300	17300	17300	16600	15200
20	16000	15100	15400	15100	16600	13000	12400	16500	17300	17300	16600	15200
21	15900	15000	15400	15100	16700	12900	12400	16600	17300	17300	16500	15100
22	15900	15000	15400	15100	16700	12900	12400	16600	17300	17300	16500	15100
23	15900	15000	15400	15100	16700	12800	12400	16400	17400	17300	16500	15000
24	15800	15000	15300	15300	16700	12800	12400	16300	17400	17200	16400	15000
25	15800	15000	15300	15300	16700	12700	12400	16200	17400	17200	16400	15000
26	15800	15000	15300	15300	16600	12700	12400	16200	17400	17200	16300	14900
27	15800	15000	15300	15400	16600	12700	12500	16100	17400	17100	16200	14900
28	15700	15000	15200	15400	16500	12700	12500	16000	17400	17100	16200	14900
29	15700	14900	15200	15300	16300	12600	12500	16000	17400	17100	16200	14800
30	15700	14900	15200	15300	---	12600	12600	16000	17400	17100	16100	14800
31	15600	---	15200	15300	---	12500	---	16100	---	17100	16000	---
MAX	16600	15600	15500	15400	16700	16100	12600	16600	17400	17500	17000	16000
MIN	15600	14900	14700	14900	15300	12500	12300	12700	16200	17100	16000	14800
a	6946.62	6945.51	6946.02	6946.17	6947.52	6941.94	6942.12	6947.27	6949.20	6948.66	6947.21	6945.37
b	-1000	-700	+300	+100	+1000	-3800	+100	+3500	+1300	-300	-1100	-1200

CAL YR 1995 MAX 17700 MIN 10300 b +4800
WTR YR 1996 MAX 17500 MIN 12300 b -1800

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 sea level, 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.--Records good. 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; maximum gage height, 8.16 ft, Apr. 16, 1993, backwater from snow and ice; no flow Sept. 28 to Nov. 10, 1905, June 1, 1906.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	16	24	21	21	131	45	48	37	29	12	23
2	18	16	21	21	21	124	45	49	38	26	12	23
3	18	16	21	21	21	122	45	48	39	24	12	23
4	18	16	21	21	22	124	45	48	40	24	12	23
5	17	16	21	21	26	125	44	48	40	23	11	23
6	16	15	21	21	25	123	44	48	41	22	11	23
7	16	15	21	21	24	120	45	48	44	21	10	23
8	16	15	21	21	24	120	45	48	50	20	10	23
9	16	15	21	21	23	118	46	48	56	18	10	23
10	16	15	21	21	23	117	46	48	60	15	10	23
11	16	15	21	21	23	118	46	48	74	13	9.9	22
12	16	15	26	21	23	118	45	48	88	13	10	22
13	16	15	22	21	23	117	45	48	86	27	9.9	23
14	16	15	22	21	23	115	45	49	78	37	15	23
15	16	15	21	21	23	113	46	52	59	37	16	23
16	16	15	21	22	24	112	46	64	52	37	16	23
17	16	15	21	21	25	110	45	61	51	30	15	23
18	16	15	21	21	25	109	45	60	51	17	16	23
19	16	15	21	21	25	108	45	55	51	16	15	23
20	16	15	21	21	25	107	44	54	50	16	15	23
21	16	15	21	21	25	106	44	75	50	16	15	23
22	16	15	21	21	25	71	44	112	38	15	19	23
23	16	15	21	21	32	45	45	148	31	15	24	23
24	16	15	21	21	40	45	46	141	31	15	24	22
25	16	15	21	21	40	45	46	137	31	15	23	21
26	16	15	21	21	40	45	47	136	31	15	24	21
27	16	15	21	21	40	44	47	135	30	15	24	21
28	16	15	21	21	81	45	47	134	30	15	24	20
29	16	15	21	21	135	45	47	91	29	14	24	20
30	16	21	21	21	---	45	48	51	29	13	24	20
31	16	---	21	21	---	44	---	44	---	12	24	---
TOTAL	505	461	661	652	927	2931	1363	2224	1415	625	496.8	672
MEAN	16.3	15.4	21.3	21.0	32.0	94.5	45.4	71.7	47.2	20.2	16.0	22.4
MAX	18	21	26	22	135	131	48	148	88	37	24	23
MIN	16	15	21	21	21	44	44	44	29	12	9.9	20
AC-FT	1000	914	1310	1290	1840	5810	2700	4410	2810	1240	985	1330

PYRAMID AND WINNEMUCCA LAKES BASIN

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.5	22.2	11.5	8.22	11.0	15.2	19.3	42.0	56.0	27.3	20.7	21.5
MAX	45.8	97.6	58.2	25.1	58.0	94.5	72.9	112	188	89.2	114	133
(WY)	1976	1984	1982	1982	1986	1996	1986	1982	1983	1983	1988	1973
MIN	.47	1.36	.70	1.04	1.07	1.45	1.50	1.51	2.09	1.78	2.05	.58
(WY)	1980	1989	1993	1993	1974	1977	1977	1977	1977	1977	1976	1979

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1968 - 1996			
ANNUAL TOTAL	12866.5				12932.8							
ANNUAL MEAN	35.3				35.3				22.5			
HIGHEST ANNUAL MEAN									46.7			
LOWEST ANNUAL MEAN									7.63			
HIGHEST DAILY MEAN	162				148				269			
LOWEST DAILY MEAN	1.4				9.9				.02			
ANNUAL SEVEN-DAY MINIMUM	1.6				10				.02			
INSTANTANEOUS PEAK FLOW					155				291			
INSTANTANEOUS PEAK STAGE					4.50				8.16			
ANNUAL RUNOFF (AC-FT)	25520				25650				16310			
10 PERCENT EXCEEDS	86				72				62			
50 PERCENT EXCEEDS	16				23				10			
90 PERCENT EXCEEDS	2.2				15				1.9			

PYRAMID AND WINNEMUCCA LAKES BASIN

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10343500 SAGEHEN CREEK NEAR TRUCKEE, CA
(Hydrologic Benchmark 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 sea level, 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1000	122	3.24	Apr. 16	1430	68	2.87
Feb. 5	0430	74	2.92	May 16	0500	435	4.18

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.1	4.2	5.4	4.4	9.7	25	69	40	10	3.7	2.5
2	2.8	3.1	4.6	4.9	4.3	9.7	25	72	39	9.4	3.7	2.5
3	2.8	3.2	3.8	5.0	4.3	10	22	69	38	8.9	3.8	2.5
4	2.8	3.2	5.3	4.7	31	10	22	64	38	8.6	3.8	2.5
5	2.9	3.2	4.4	4.5	61	9.3	25	62	38	8.2	3.7	2.5
6	2.8	3.2	3.9	4.4	33	e9.0	29	61	37	7.8	3.6	2.6
7	2.8	3.2	3.7	4.3	23	8.7	34	60	36	7.5	3.5	2.6
8	2.8	3.2	3.6	4.2	20	9.0	38	57	35	7.3	3.4	2.6
9	2.9	3.2	3.5	4.3	18	9.5	46	55	33	7.0	3.3	2.5
10	2.9	3.2	3.5	4.3	17	9.9	43	54	30	6.7	3.3	2.5
11	2.9	3.2	11	4.0	16	10	42	57	28	6.6	3.3	2.5
12	2.9	3.2	71	3.9	15	9.7	39	61	27	6.7	4.0	2.5
13	3.0	3.3	14	3.9	14	9.1	36	66	26	9.0	3.7	3.0
14	3.0	3.3	8.5	3.8	14	9.0	39	75	24	7.7	3.6	3.0
15	2.9	3.3	6.9	4.9	14	9.6	45	106	22	6.8	3.4	3.5
16	3.0	3.3	6.1	13	19	10	60	263	21	6.3	3.2	5.7
17	3.0	3.1	5.3	9.5	28	11	43	245	19	6.0	3.1	3.7
18	3.0	3.1	5.0	6.9	23	13	37	241	18	5.7	3.1	3.3
19	3.0	3.2	4.7	6.3	23	15	33	152	17	5.6	3.1	3.1
20	3.0	3.2	4.4	5.9	20	17	30	120	16	5.4	3.0	3.0
21	2.9	3.1	4.2	e5.8	16	19	28	106	15	5.1	3.0	2.9
22	3.0	3.1	4.3	5.3	14	19	28	91	14	4.9	3.0	2.8
23	3.0	3.1	4.1	5.3	e14	16	35	76	13	4.6	2.8	2.8
24	3.0	3.1	4.1	4.6	13	15	50	67	13	4.6	2.8	2.8
25	3.1	4.1	3.9	5.3	12	14	54	61	14	4.4	2.8	2.8
26	3.1	5.3	3.8	5.0	e12	14	58	57	15	4.4	2.7	2.8
27	3.1	3.6	3.8	4.6	11	16	59	55	14	4.2	2.7	2.8
28	3.1	3.6	3.8	4.7	11	18	55	50	13	4.6	2.7	2.8
29	3.0	3.5	3.9	4.5	10	16	57	47	12	4.4	2.6	2.8
30	3.1	3.5	6.3	4.5	---	16	64	44	11	4.1	2.6	2.7
31	3.1	---	7.2	4.5	---	17	---	42	---	3.9	2.5	---
TOTAL	91.5	100.0	226.8	162.2	515.0	388.2	1201	2705	716	196.4	99.5	86.6
MEAN	2.95	3.33	7.32	5.23	17.8	12.5	40.0	87.3	23.9	6.34	3.21	2.89
MAX	3.1	5.3	71	13	61	19	64	263	40	10	4.0	5.7
MIN	2.8	3.1	3.5	3.8	4.3	8.7	22	42	11	3.9	2.5	2.5
AC-FT	181	198	450	322	1020	770	2380	5370	1420	390	197	172

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.45	5.07	7.11	7.07	8.33	10.6	24.1	43.7	25.3	7.28	3.11	2.69
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	1.46	1.83	2.03	1.81	2.54	2.74	6.13	3.45	1.82	1.36	1.20	1.11
(WY)	1995	1993	1977	1962	1994	1962	1975	1988	1992	1994	1994	1960

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1954 - 1996

ANNUAL TOTAL	8639.5	6488.2	
ANNUAL MEAN	23.7	17.7	12.3
HIGHEST ANNUAL MEAN			30.0
LOWEST ANNUAL MEAN			2.65
HIGHEST DAILY MEAN	175	May 1	398
LOWEST DAILY MEAN	2.1	Jan 1	1.0
ANNUAL SEVEN-DAY MINIMUM	2.4	Jan 1	1.1
INSTANTANEOUS PEAK FLOW			765
INSTANTANEOUS PEAK STAGE			4.64
ANNUAL RUNOFF (AC-FT)	17140	12870	8930
10 PERCENT EXCEEDS	73	51	32
50 PERCENT EXCEEDS	6.7	5.4	4.4
90 PERCENT EXCEEDS	2.8	2.8	1.9

PYRAMID AND WINNEMUCCA LAKES BASIN

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10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--December 1990 to September 1996 (discontinued).

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

REMARKS.--Feb. 24-26, 1996, precipitation data provided by Sagehen Creek Research Station.

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

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily precipitation, 2.95 in., Feb. 4; no precipitation for many days.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.10	.03	.04	.07	.64	.00	.00	.00	.00	.00
2	.00	.00	.18	.00	.03	.00	.03	.00	.00	.00	.03	.04
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.03	.03	.07	.00	2.95	1.07	.03	.00	.00	.00	.03	.00
5	.03	.00	.04	.00	.26	.78	.04	.00	.00	.00	.00	.04
6	.00	.00	.03	.00	.03	.08	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.03	.03	.03	.34	.00	.00	.00	.00	.00	.00
12	.00	.00	1.30	.00	.00	.20	.00	.00	.00	.00	.00	.00
13	.00	.00	2.58	.00	.00	.00	.03	.00	.00	.00	.00	.00
14	.00	.00	.29	.00	.00	.07	.00	.03	.00	.00	.00	.00
15	.00	.00	.07	.26	.00	.03	.00	.90	.00	.00	.00	.16
16	.00	.00	.38	1.12	.11	.00	.88	1.66	.00	.07	.00	.20
17	.00	.00	.04	.13	.57	.00	.40	1.21	.00	.00	.07	.04
18	.00	.00	.07	.78	.58	.00	.17	.35	.00	.00	.00	.00
19	.00	.00	.00	.23	1.57	.00	.20	.03	.00	.10	.00	.00
20	.00	.00	.00	.36	.62	.03	.07	.00	.00	.00	.03	.00
21	.00	.00	.00	.56	1.28	.00	.00	.00	.00	.00	.03	.00
22	.00	.00	.00	.20	.11	.29	.00	.07	.00	.00	.00	.00
23	.00	.00	.03	.05	.11	.07	.00	.05	.00	.04	.00	.00
24	.04	.00	.06	1.58	1.10	.04	.07	.00	.00	.03	.07	.00
25	.00	.25	.04	.17	.27	.00	.07	.00	.00	.04	.08	.00
26	.00	.14	.00	.07	.07	.03	.00	.00	.00	.00	.00	.00
27	.00	.03	.00	.26	.11	.27	.03	.00	.00	.00	.10	.00
28	.00	.00	.00	.85	.00	.43	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.56	.00	.04	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.15	---	.00	.00	.03	.00	.00	.00	.33
31	.00	---	.00	.14	---	.00	---	.00	---	.04	.00	---
TOTAL	0.10	0.45	5.34	7.53	9.84	3.84	2.66	4.36	0.00	0.32	0.44	0.81

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-75, 1981 to September 1996 (discontinued).

CHEMICAL DATA: Water years 1968-72, October 1985 to September 1996 (discontinued).

WATER TEMPERATURE: Water years 1970-74.

SEDIMENT DATA: Water years 1968-75, 1981 to September 1996 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1969 to September 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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 (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 KF AGAR (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)
NOV 1995 07...	1155	3.2	118	7.8	4.0	0.70	610	10.6	101	<1	<1	47
AUG 1996 06...	1105	4.0	113	8.2	9.0	0.40	608	9.2	100	33	27	47
DATE	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 1995 07...	0	12	4.2	5.4	19	0.3	2.1	73	0	60	<0.10	0.40
AUG 1996 06...	0	12	4.0	4.6	17	0.3	1.7	69	0	56	<0.10	0.10
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)	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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (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 1995 07...	<0.10	29	93	<0.001	0.006	<0.002	<0.20	0.011	0.010	0.007	20	22
AUG 1996 06...	<0.10	28	90	0.001	0.011	<0.002	<0.20	0.012	0.010	0.006	13	22
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)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
NOV 1995 07...	<3.0	54	<4	3.0	<10	<1.0	<1	<1.0	140	<6	--	--
AUG 1996 06...	<3.0	67	<4	4.0	<10	<1.0	<1	<1.0	140	<6	0.03	0.26

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1995 TO SEPTEMBER 1996

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)
NOV 1995					
07...	1155	3.2	4.0	2	0.02
AUG 1996					
06...	1105	4.0	9.0	4	0.04

PYRAMID AND WINNEMUCCA LAKES BASIN

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 sea level (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, 239,817 acre-ft, May 27, elevation, 5,952.50 ft; minimum observed, 200,495 acre-ft, Sept. 29, elevation, 5,940.89 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	47,090	5,900	94,535	5,930	167,355	5,960	267,386

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	201428	200881	203787	203884	204533	204046	216191	238323	224160	204500	202234
2	202589	201363	---	203884	203689	204533	204500	217030	238181	223852	203981	202169
3	202653	201267	---	203981	204187	204630	204403	217805	238146	223578	203722	202105
4	202557	---	200913	204111	204685	204858	204143	218480	238146	223202	203592	202072
5	202395	---	201009	204111	205183	204890	203916	219020	238217	222792	203527	201879
6	202460	201202	---	---	206684	204500	203754	219494	238252	222451	203398	201847
7	---	---	201106	---	207502	204565	203754	220070	238217	222110	203333	201814
8	---	201170	201074	203754	207305	204565	203851	220545	238110	221803	203268	201782
9	202427	201170	---	203754	206847	204663	204078	220918	237933	220884	203236	201750
10	202234	201106	---	203689	---	204793	204403	221258	237685	219426	203203	201718
11	202266	---	201202	203624	---	204955	204793	221667	237366	218041	203171	201685
12	202169	---	202137	203624	204890	204988	205509	222246	237083	216627	203139	201685
13	202040	200977	203495	---	---	204890	206063	222963	236799	215286	203106	201428
14	---	200977	203426	203624	204890	204695	206520	223852	236481	213982	203074	201106
15	---	201009	203495	---	204858	204598	207109	225121	236128	212684	203041	200688
16	201976	201009	---	203754	204890	204663	208092	228433	235705	211887	202977	200849
17	201943	200945	---	204421	---	204695	209111	232752	235211	211389	202944	200784
18	---	---	203203	204273	---	204923	209770	236481	234683	210761	202847	200752
19	---	---	---	204500	206334	204955	210298	238465	234226	210133	202783	200720
20	201847	200849	203106	---	206815	205086	210728	239105	233418	209704	202686	200720
21	---	200881	---	---	206455	205151	211025	239283	232122	209276	202589	200720
22	---	200752	203203	204111	205607	205118	211224	239461	230831	208848	202557	200720
23	201621	---	---	203948	204565	204923	211456	239567	229613	208421	202524	200688
24	---	200784	---	204013	---	204403	211887	239496	228364	208092	202557	200656
25	201556	---	---	204208	---	203884	212617	239639	226912	207633	202557	200624
26	---	---	203300	203981	---	203657	213449	239710	225671	207207	202557	200624
27	201556	200881	203365	---	204598	203786	214082	239817	225224	206782	202460	200559
28	---	200945	203430	204370	204500	204208	214550	239496	224949	206324	202363	200527
29	---	200849	203462	204208	204468	203916	214984	239140	224640	205868	202330	200495
30	201492	200881	---	204078	---	203916	215520	238643	224400	205444	202330	200527
31	201460	---	203689	204013	---	203884	---	238501	---	204955	202298	---
MAX	---	---	---	---	---	205151	---	239817	---	224160	204500	202234
MIN	---	---	---	---	---	203657	---	216191	---	204955	202298	200495
a	5941.19	5941.01	5941.88	5941.98	5942.12	5941.94	5945.47	5952.13	5948.09	5942.27	5941.45	5940.90
b		-579	+2808	+324	+455	-584	+11636	+22981	-14101	-19445	-2657	-1771

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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 sea level (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 fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	33	33	e44	e140	273	407	391	556	226	223	31
2	33	33	33	e44	105	285	516	391	548	210	172	31
3	33	33	33	44	78	288	597	390	544	212	69	31
4	33	33	33	e77	102	380	597	388	543	211	38	31
5	33	33	33	e111	147	445	597	387	526	212	37	31
6	32	34	33	e130	284	348	597	387	545	211	37	31
7	32	34	33	e130	542	262	598	387	543	211	35	31
8	32	34	33	e96	676	264	599	387	538	346	33	31
9	32	34	33	75	661	264	601	387	532	620	32	31
10	32	34	33	74	676	269	542	385	521	701	32	31
11	32	34	35	73	676	347	388	386	508	705	32	30
12	32	34	e197	74	485	403	302	386	495	710	32	e76
13	32	34	e318	74	344	398	298	387	487	701	33	e174
14	32	34	e146	74	344	360	295	387	474	701	33	e242
15	32	34	e150	74	343	332	295	389	459	507	32	e140
16	32	34	e150	76	374	337	310	451	444	323	32	e44
17	32	35	e150	e117	402	338	303	536	427	286	32	34
18	33	34	e117	e140	402	443	303	655	409	285	32	33
19	33	34	e100	e184	415	524	296	722	494	249	31	32
20	33	37	e58	e210	605	583	294	749	717	224	31	32
21	33	33	32	e194	795	683	295	754	774	224	31	32
22	33	33	31	e166	797	723	295	761	741	223	31	31
23	33	34	31	e140	517	711	268	774	713	227	32	31
24	33	33	31	e140	290	707	251	679	755	226	32	31
25	33	33	30	e140	288	551	251	613	788	225	32	31
26	33	34	30	e140	285	382	331	615	495	225	32	31
27	33	33	32	e112	285	339	393	710	231	225	31	31
28	33	33	e44	e140	271	468	392	806	228	226	31	31
29	33	33	e44	e140	258	461	391	795	226	226	31	31
30	33	33	e44	e140	---	398	391	664	226	225	31	31
31	34	---	e44	e140	---	399	---	564	---	224	31	---
TOTAL	1012	1011	2144	3513	11587	12965	11993	16663	15487	10327	1373	1458
MEAN	32.6	33.7	69.2	113	400	418	400	538	516	333	44.3	48.6
MAX	34	37	318	210	797	723	601	806	788	710	223	242
MIN	32	33	30	44	78	262	251	385	226	210	31	30
AC-FT	2010	2010	4250	6970	22980	25720	23790	33050	30720	20480	2720	2890

e Estimated.

PYRAMID AND WINNEMUCCA LAKES BASIN

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 1969 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.0	43.0	69.6	76.4	76.1	133	300	553	343	169	116	55.8
MAX	503	132	711	349	400	418	923	1371	1733	1301	573	359
(WY)	1974	1975	1984	1984	1996	1996	1986	1969	1983	1983	1975	1971
MIN	.56	.75	2.85	16.7	10.6	13.8	25.6	30.6	28.1	24.1	1.65	.47
(WY)	1970	1970	1970	1980	1970	1970	1970	1988	1988	1981	1969	1969

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1969 - 1996

ANNUAL TOTAL	61453	89533	
ANNUAL MEAN	168	245	
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			427
HIGHEST DAILY MEAN	825	Jul 29	53.4
LOWEST DAILY MEAN	27	Jan 1	2460
ANNUAL SEVEN-DAY MINIMUM	27	Jan 1	.30
INSTANTANEOUS PEAK FLOW			.31
INSTANTANEOUS PEAK STAGE			13300
ANNUAL RUNOFF (AC-FT)	121900	177600	9.00
10 PERCENT EXCEEDS	544	602	122000
50 PERCENT EXCEEDS	45	189	472
90 PERCENT EXCEEDS	32	32	44
			27

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 most days. Datum of gage is sea level (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 observed, 39,897 acre-ft, June 11, 12, elevation, 5,604.00 ft; minimum, 17,775 acre-ft, Nov. 26, elevation, 5,576.65 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28968	20800	18073	22371	28305	32632	32501	37286	38842	38747	37640	27895
2	28594	20590	18098	22444	28553	32632	32632	37567	38794	39300	37660	27528
3	28305	20382	18163	22553	28760	32675	32588	37801	38747	39224	37426	27164
4	28017	20140	18228	22663	29009	32763	32588	37895	38937	38604	37193	26803
5	27772	19968	18294	22847	29428	32807	32544	37989	39080	37895	36867	26444
6	27488	19763	18359	23068	29935	32807	32501	38131	---	37197	36497	26048
7	27205	19559	18392	23290	30746	32894	32501	38225	39608	36082	36220	25694
8	26963	19390	18491	23551	32109	32938	32457	38320	---	34943	35944	25343
9	26723	19255	18556	---	32414	32938	32457	38414	---	34403	35670	24995
10	26444	19188	18589	23889	32457	32894	32414	38414	39849	34358	35351	24649
11	26206	19088	18655	23889	32544	32938	32894	38462	39897	34358	35034	24382
12	25930	19021	18854	23852	32632	32938	33379	38462	39897	34898	34717	24116
13	25694	18921	19559	23664	32894	32894	33511	38462	39656	35260	34448	23965
14	25499	18854	20002	23513	32982	32763	33644	38509	39416	35624	34179	24045
15	25305	18755	20278	23328	32982	32894	33778	38509	39205	36036	33867	24182
16	25150	18655	20625	23179	33026	32851	33956	38747	38947	36036	33556	24078
17	24956	18524	20905	23290	33158	32807	34224	38794	38652	35944	33202	23814
18	24802	18425	21222	23551	33202	32807	34403	39080	38320	35899	32851	23551
19	24572	---	21364	23965	33379	32851	34582	38937	37989	35944	32501	23253
20	24344	18261	21506	24344	33556	32938	34717	38890	37426	35944	32153	22994
21	24040	18196	21578	24764	33070	32851	34853	38842	37333	35990	31807	22700
22	23776	18098	21649	25188	32414	32763	34943	38794	37146	36128	31481	22444
23	23514	18001	21721	25499	32414	32588	35034	38794	37006	36266	31134	22153
24	23216	17936	21792	25812	32457	32414	35260	38842	36774	36543	30789	21828
25	22920	17839	21864	26206	32501	32153	35533	38842	36774	36821	30403	21471
26	---	17775	21936	26484	32544	32283	35761	38747	36960	37053	30062	21116
27	22334	17839	22008	26923	32588	32326	36128	38699	37379	37333	29723	20800
28	21972	17904	22044	27164	32719	32501	36497	38842	---	37613	29386	20451
29	21685	17965	22117	27447	32719	32501	36821	38842	---	37707	29009	20106
30	21364	17965	22189	27732	---	32501	37053	38842	38272	37660	28635	19831
31	21046	---	22298	28058	---	32501	---	38842	---	37613	28264	---
MAX	---	---	22298	---	33556	32938	37053	39080	---	39300	37660	27895
MIN	---	---	18073	---	28305	32153	32414	37286	---	34358	28264	19831
a	5581.50	5576.95	5583.25	5590.70	5596.20	5595.95	5601.00	5602.80	5602.30	5601.60	5590.95	5579.70
b	-8256	-3081	+4333	+5760	+4661	-218	+4552	+1789	-570	-659	-9349	-8433

CAL YR 1995 b +13186

WTR YR 1996 b -9471

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN

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.

WATER-DISCHARGE RECORDS

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 sea level, 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 flow less than 5 ft³/s, which is 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	136	.08	.22	.29	306	518	300	586	102	213	210
2	187	136	.08	.22	.30	306	648	300	586	181	205	209
3	179	136	.08	.22	.30	306	728	334	523	482	204	209
4	167	135	.09	.22	.78	417	727	355	486	564	211	208
5	160	135	.08	.22	.74	497	727	355	434	572	202	207
6	160	128	.08	.22	.65	386	725	355	401	696	179	206
7	160	123	.10	.22	.69	295	725	355	463	769	171	206
8	160	94	.12	.22	355	319	724	355	498	742	171	207
9	159	73	.12	.22	648	333	724	380	498	723	179	205
10	158	73	.12	25	687	333	499	394	498	723	183	173
11	158	73	.18	99	687	448	238	393	498	571	183	154
12	158	73	.45	139	476	517	241	393	582	494	183	163
13	127	73	.22	164	345	517	296	393	588	534	182	168
14	117	73	.17	164	373	425	295	393	587	503	182	168
15	117	73	.18	164	391	430	295	394	586	426	196	169
16	116	73	.17	124	434	466	296	472	585	363	204	169
17	116	73	.16	41	494	467	296	506	584	346	203	168
18	124	73	.16	.14	495	572	297	682	583	280	203	168
19	154	73	.15	.13	550	641	297	795	663	252	202	167
20	160	73	.14	.10	903	755	297	794	918	219	202	167
21	170	73	.14	.12	1210	896	297	794	827	185	201	166
22	170	73	.15	.10	1010	935	298	775	840	155	200	166
23	170	73	.16	.10	715	935	206	762	828	124	203	187
24	176	73	.16	.12	306	935	153	700	811	96	206	198
25	181	73	.16	.13	306	678	154	661	757	96	205	197
26	181	37	.16	.10	306	465	199	661	328	96	205	197
27	202	.08	.17	.19	306	424	251	702	.52	97	210	196
28	189	.08	.18	.22	306	582	251	797	.55	150	213	195
29	188	.08	.18	.24	306	573	280	799	.60	219	212	195
30	188	.08	.21	.26	---	518	299	680	18	249	211	194
31	173	---	.20	.28	---	518	---	586	---	235	211	---
TOTAL	5025	2301.32	4.80	924.21	11612.75	16195	11981	16615	15557.67	11244	6135	5592
MEAN	162	76.7	.15	29.8	400	522	399	536	519	363	198	186
MAX	202	136	.45	164	1210	935	728	799	918	769	213	210
MIN	116	.08	.08	.10	.29	295	153	300	.52	96	171	154
AC-FT	9970	4560	9.5	1830	23030	32120	23760	32960	30860	22300	12170	11090

PYRAMID AND WINNEMUCCA LAKES BASIN

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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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	107	72.4	91.9	80.3	79.9	126	264	479	317	206	158	110
MAX	441	327	568	410	400	522	975	1148	1788	1131	585	418
(WY)	1972	1984	1984	1984	1996	1996	1986	1985	1983	1983	1975	1971
MIN	.000	.020	.11	.001	1.60	.13	.39	.31	2.63	.75	13.6	.55
(WY)	1995	1991	1978	1995	1995	1995	1988	1988	1977	1981	1984	1970

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1970 - 1996

ANNUAL TOTAL	65538.02	103187.75	
ANNUAL MEAN	180	282	175
HIGHEST ANNUAL MEAN			470
LOWEST ANNUAL MEAN			55.6
HIGHEST DAILY MEAN	847	Jun 17	2240
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			2520
INSTANTANEOUS PEAK STAGE			6.11
ANNUAL RUNOFF (AC-FT)	130000	204700	126600
10 PERCENT EXCEEDS	530	690	453
50 PERCENT EXCEEDS	123	202	77
90 PERCENT EXCEEDS	.00	.18	.50

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURE: April 1993 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1993 to current year.

INSTRUMENTATION.--Water-temperature recorder since April 1993.

REMARKS.--Water temperature is affected by regulation from Boca Dam. There was extremely low flow on the days when the maximum and minimum temperature occurred.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 19.5°C, July 20, 24, 1994; minimum recorded, 2.0°C, Nov. 26, 1994, Mar. 22, 23, 1995, Jan. 28, 29, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 19.0°C, June 30; minimum recorded, 2.0°C, Jan. 28, 29.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	13.5	11.5	11.5	7.0	5.5	4.5	4.0	3.5	2.5	3.0	3.0
2	14.0	13.5	11.5	11.0	7.0	6.0	5.0	4.0	3.5	2.5	3.5	3.0
3	14.5	13.5	11.0	10.5	6.5	5.5	5.0	4.0	3.5	3.0	3.5	3.5
4	14.5	13.5	11.0	10.0	7.0	5.5	5.0	4.0	3.5	2.5	3.5	3.5
5	14.5	14.0	10.5	10.0	7.0	6.0	5.0	4.0	4.0	3.0	3.5	3.0
6	14.0	14.0	10.5	10.0	7.5	6.5	5.5	4.0	4.0	3.5	3.5	3.0
7	14.5	14.0	10.0	10.0	8.0	6.5	5.0	4.0	4.0	3.0	3.5	3.0
8	14.5	14.0	10.0	9.5	7.0	6.0	5.0	4.0	4.0	3.0	3.5	3.0
9	14.5	14.0	10.0	9.5	6.5	5.5	5.0	4.0	3.0	3.0	3.5	3.5
10	14.5	14.0	10.0	9.5	6.0	5.0	5.5	4.0	3.0	3.0	3.5	3.5
11	14.0	14.0	10.0	9.5	5.5	5.5	4.0	4.0	3.5	3.0	4.0	3.5
12	14.0	14.0	9.5	9.5	6.0	5.5	4.0	4.0	3.5	3.0	4.0	3.5
13	14.0	13.5	9.5	9.0	6.0	4.5	4.0	4.0	3.5	3.5	3.5	3.5
14	13.5	13.0	9.5	9.5	6.0	4.0	4.0	4.0	3.5	3.5	4.0	3.5
15	13.5	13.0	9.5	9.5	4.5	3.5	4.0	4.0	3.5	3.5	4.0	4.0
16	13.5	13.0	9.5	9.0	4.0	4.0	4.0	4.0	4.0	3.5	5.0	4.0
17	13.5	13.0	9.5	9.0	4.5	4.0	5.0	4.0	4.0	4.0	4.5	4.5
18	13.5	13.0	9.5	9.0	4.5	4.0	4.5	3.0	4.5	4.0	4.5	4.5
19	13.0	13.0	9.5	9.0	4.5	4.0	4.0	2.5	4.5	4.0	4.5	4.5
20	13.0	13.0	9.5	9.0	4.5	4.0	4.0	3.0	4.0	4.0	4.5	4.5
21	13.0	13.0	9.5	9.0	4.5	4.0	3.5	3.5	4.0	4.0	4.5	4.5
22	13.0	12.5	9.0	8.5	4.5	3.5	3.5	3.0	4.0	3.5	4.5	4.5
23	12.5	12.0	9.0	8.5	4.5	3.5	3.0	3.0	3.5	3.5	5.5	4.5
24	12.0	12.0	8.5	8.0	4.5	3.5	3.5	3.0	3.5	3.5	5.5	5.0
25	12.0	11.5	8.5	8.0	4.5	3.5	3.5	3.0	3.5	3.0	5.5	5.0
26	12.0	11.5	9.0	7.5	4.5	3.5	3.0	3.0	3.5	3.0	5.5	5.0
27	12.0	11.5	7.5	6.5	4.5	3.5	3.0	2.5	3.5	3.0	5.5	5.0
28	12.0	11.5	7.0	6.0	4.0	3.5	2.5	2.0	3.5	3.0	5.5	5.0
29	12.0	11.5	7.5	5.5	4.0	3.5	2.5	2.0	3.5	3.0	5.5	5.5
30	11.5	11.5	6.5	5.5	4.0	3.5	2.5	2.5	---	---	5.5	5.5
31	11.5	11.5	---	---	4.5	3.5	3.0	2.5	---	---	5.5	5.5
MONTH	14.5	11.5	11.5	5.5	8.0	3.5	5.5	2.0	4.5	2.5	5.5	3.0

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.5	8.0	7.5	10.5	10.5	12.5	11.5	13.0	12.5	14.0	13.0
2	6.0	5.5	8.5	7.5	10.5	10.5	12.5	11.5	13.0	12.5	14.0	13.5
3	6.0	6.0	9.0	7.5	11.0	10.5	12.5	11.5	13.0	12.5	14.0	13.5
4	6.5	6.0	9.0	8.0	11.0	10.5	12.5	12.0	13.0	12.5	14.5	13.5
5	6.0	6.0	9.0	8.0	11.0	10.5	12.5	12.0	13.0	12.5	14.0	13.5
6	6.0	6.0	8.5	8.0	11.0	10.5	12.5	12.0	13.0	12.5	14.0	13.5
7	6.0	5.5	8.5	8.0	11.0	10.5	12.5	12.0	13.0	12.5	14.5	13.5
8	6.0	5.5	8.5	8.0	11.5	10.5	13.0	12.0	13.0	12.5	14.5	14.0
9	7.0	5.5	8.5	8.0	11.5	10.5	13.0	12.5	13.0	12.5	15.0	14.0
10	7.0	6.0	8.5	8.0	11.5	10.5	13.0	12.5	13.0	12.5	15.0	14.0
11	7.0	6.0	8.5	8.5	11.5	11.0	13.0	12.5	13.0	12.5	15.5	14.5
12	7.0	6.0	8.5	8.5	11.5	11.0	13.0	12.5	13.0	12.5	16.0	14.0
13	6.5	6.0	9.5	8.5	11.5	11.0	13.0	12.5	13.0	12.5	15.5	14.5
14	6.5	6.5	9.0	8.5	12.0	11.0	13.0	12.5	13.0	12.5	15.5	15.0
15	7.0	6.0	9.0	8.5	12.0	11.0	13.0	12.0	13.5	12.5	15.0	14.5
16	8.0	6.5	10.0	8.5	12.5	11.5	13.0	12.0	13.5	12.5	15.0	14.5
17	7.5	7.0	10.0	8.5	12.5	11.5	13.0	12.0	13.5	12.5	15.0	14.5
18	8.0	7.0	9.5	9.0	12.5	12.0	13.0	12.0	13.5	12.5	15.0	14.5
19	7.5	7.0	9.5	9.0	13.0	12.0	13.0	12.0	13.5	12.5	15.0	15.0
20	8.0	7.0	9.5	9.0	13.0	12.0	13.0	12.0	13.5	12.5	15.0	15.0
21	7.5	7.0	10.0	9.5	13.0	12.5	13.0	12.0	13.5	12.5	15.5	15.0
22	7.5	7.0	10.0	9.5	13.0	12.5	13.0	12.5	13.5	12.5	15.5	15.0
23	7.5	7.0	10.0	9.5	13.0	12.5	13.5	12.0	13.5	13.0	15.5	15.0
24	8.0	7.0	10.0	10.0	13.0	12.5	13.5	12.5	13.5	13.0	15.5	15.0
25	8.0	7.5	10.0	9.5	13.0	12.5	13.0	12.5	13.5	13.0	15.5	15.0
26	8.0	7.5	10.5	10.0	12.5	12.0	13.0	12.5	13.5	13.0	15.5	15.0
27	7.5	7.5	10.5	10.0	15.0	11.5	13.0	12.5	13.5	13.0	15.5	15.0
28	8.0	7.0	10.5	10.0	17.5	12.5	13.0	12.5	14.0	13.0	15.5	15.0
29	8.0	7.5	11.0	10.0	18.0	14.5	13.5	12.5	13.5	13.0	15.0	15.0
30	8.0	7.5	10.5	10.0	19.0	11.5	13.0	12.5	14.0	13.0	15.0	15.0
31	---	---	10.5	10.5	---	---	13.0	12.5	14.0	13.0	---	---
MONTH	8.0	5.5	11.0	7.5	19.0	10.5	13.5	11.5	14.0	12.5	16.0	13.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10345700 BRONCO CREEK AT FLORISTON, CA

LOCATION.--Lat 39°23'02", long 120°01'11", in SE 1/4 NW 1/4 sec.31, T.18 N., R.18 E., Nevada County, Hydrologic Unit 16050102, on right bank 80 ft upstream from railroad bridge, 200 ft upstream from mouth, and 0.7 mi north of Floriston.

DRAINAGE AREA.--15.4 mi².

PERIOD OF RECORD.--April 1993 to current year.

WATER TEMPERATURE: April 1993 to September 1994.

GAGE.--Water-stage recorder. Elevation of gage is 5,350 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 222 ft³/s, July 5, 1995, gage height, 4.28 ft; minimum daily, 2.8 ft³/s, several days in 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 16	Unknown	146	a4.09				

(a) From crest stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.6	7.9	9.0	6.9	8.2	12	e48	44	21	10	6.9
2	12	7.7	7.4	8.9	6.8	8.4	12	e52	44	21	10	6.6
3	12	8.1	6.9	8.7	6.8	9.6	12	e51	53	21	9.6	6.5
4	11	8.4	7.9	8.2	16	9.7	11	e50	57	20	9.6	6.6
5	11	8.9	7.6	8.1	16	9.3	12	e49	52	19	9.4	6.8
6	11	8.8	7.1	7.9	12	e9.3	14	e48	61	18	9.3	6.8
7	10	8.8	7.1	7.6	12	9.3	17	e48	59	18	9.0	6.7
8	9.8	8.8	7.0	7.6	11	9.5	23	e48	58	18	8.6	6.7
9	9.5	8.4	6.9	7.4	11	10	27	45	55	17	8.8	6.6
10	8.9	8.4	6.7	7.2	11	11	27	48	51	16	8.7	6.6
11	9.0	8.3	8.4	7.2	11	11	24	50	48	17	8.8	6.5
12	9.7	8.1	23	7.2	11	11	22	47	48	17	8.9	6.5
13	9.4	8.3	13	7.3	11	10	21	48	45	18	9.6	7.4
14	9.1	8.6	12	7.4	11	9.9	21	78	42	17	9.4	7.1
15	8.6	8.5	13	7.7	11	11	23	81	41	16	8.6	7.5
16	9.0	8.5	12	9.0	11	11	25	e140	40	15	8.4	9.0
17	8.7	8.5	e12	7.8	12	12	22	98	37	14	8.2	8.1
18	9.3	8.3	11	8.1	12	14	21	e85	35	14	8.2	7.4
19	9.3	7.9	e11	8.2	13	15	e19	e75	33	14	8.1	7.2
20	9.6	7.6	e11	8.1	12	17	e17	65	30	13	7.9	6.9
21	9.7	7.6	e10	8.2	11	18	e15	56	28	13	7.9	7.0
22	9.5	7.7	e10	e8.0	11	18	e15	45	27	13	8.1	6.9
23	10	7.8	10	e7.8	e10	16	e22	48	28	12	7.8	6.9
24	9.8	7.7	e10	7.5	e9.5	14	e30	43	26	14	7.7	6.7
25	9.7	8.1	e9.0	7.2	e9.5	13	e32	42	28	13	7.8	6.5
26	9.5	8.3	8.4	e7.8	e9.5	13	e34	45	27	12	7.7	6.5
27	9.6	7.4	8.5	7.8	e9.0	13	e34	43	25	12	7.4	6.5
28	9.6	8.9	8.5	7.4	8.7	12	e32	43	23	12	7.3	6.4
29	9.2	8.3	8.0	7.1	8.4	11	e35	41	22	11	7.0	6.4
30	9.4	7.9	9.5	7.0	---	11	e41	42	22	11	7.0	6.5
31	9.1	---	10	6.9	---	11	---	44	---	11	7.0	---
TOTAL	305.0	247.2	300.8	241.3	311.1	366.2	672	1746	1189	478	261.8	206.7
MEAN	9.84	8.24	9.70	7.78	10.7	11.8	22.4	56.3	39.6	15.4	8.45	6.89
MAX	13	8.9	23	9.0	16	18	41	140	61	21	10	9.0
MIN	8.6	7.4	6.7	6.9	6.8	8.2	11	41	22	11	7.0	6.4
AC-FT	605	490	597	479	617	726	1330	3460	2360	948	519	410

e Estimated.

10345700 BRONCO CREEK AT FLORISTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.14	6.52	6.67	5.87	7.43	9.31	14.8	34.3	36.7	29.3	11.1	7.68
MAX	9.84	8.24	9.70	7.78	10.7	11.8	22.4	56.3	62.2	73.7	23.0	13.6
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1995	1995	1995	1995
MIN	4.08	5.34	4.66	4.81	5.31	5.87	8.63	11.7	6.81	4.05	3.25	3.13
(WY)	1995	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1993 - 1996			
ANNUAL TOTAL	8208.5				6325.1							
ANNUAL MEAN	22.5				17.3				14.9			
HIGHEST ANNUAL MEAN									21.3			
LOWEST ANNUAL MEAN									6.06			
HIGHEST DAILY MEAN	152				140				152			
LOWEST DAILY MEAN	4.1				6.4				2.8			
ANNUAL SEVEN-DAY MINIMUM	4.3				6.5				2.9			
INSTANTANEOUS PEAK FLOW					146				222			
INSTANTANEOUS PEAK STAGE					4.09				4.28			
ANNUAL RUNOFF (AC-FT)	16280				12550				10790			
10 PERCENT EXCEEDS	55				44				41			
50 PERCENT EXCEEDS	12				10				8.4			
90 PERCENT EXCEEDS	5.7				7.1				4.3			

PYRAMID AND WINNEMUCCA LAKES BASIN

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.

WATER-DISCHARGE RECORDS

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.

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 sea level (U.S. Bureau of Reclamation benchmark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	479	313	225	324	277	788	1960	2650	2300	1220	558	569
2	458	310	208	289	271	781	2170	2780	2370	1180	544	581
3	436	306	263	291	278	798	2130	2770	2390	1120	541	602
4	419	304	333	284	638	976	2090	2680	2300	1240	548	601
5	410	303	376	280	1850	999	2090	2600	2350	1250	553	601
6	415	312	325	282	1390	898	2150	2510	2320	1420	547	601
7	415	301	326	275	1340	788	2220	2450	2340	1490	535	599
8	408	278	337	271	1670	803	2350	2420	2440	1460	534	599
9	404	252	334	270	1750	839	2480	2360	2450	1400	536	613
10	402	247	330	274	1500	859	2130	2400	2230	1290	541	625
11	399	240	373	335	1470	1020	1770	2000	1960	1160	541	600
12	397	235	1810	360	1270	1130	1610	2100	2020	953	546	603
13	418	231	962	391	1090	1110	1520	2230	2040	1060	559	618
14	402	227	674	382	1110	1090	1520	2480	1970	1000	551	617
15	397	220	496	390	1110	1270	1560	2910	1920	912	548	620
16	392	219	450	453	1210	1480	1810	4880	1860	806	554	627
17	388	216	416	518	1460	1540	1660	5610	1780	772	551	606
18	379	215	362	401	1520	1780	1630	6260	1720	683	550	600
19	385	213	281	390	1830	2040	1800	5490	1650	644	553	590
20	385	213	262	360	2340	2270	1750	5200	1710	601	557	579
21	386	212	243	354	2560	2470	1680	4640	1570	562	556	576
22	387	215	232	335	2210	2530	1650	4710	1540	528	556	575
23	383	215	206	292	1710	2460	1600	4080	1530	502	557	591
24	391	216	190	302	1070	2380	1710	3820	1480	484	562	609
25	397	217	187	279	1020	2020	2050	4040	1350	485	559	605
26	397	242	186	302	958	1690	2350	3910	1290	529	561	602
27	402	214	182	324	875	1610	2600	3480	1420	620	574	602
28	406	235	191	298	849	1930	2530	3340	1520	667	578	601
29	400	234	208	299	818	1900	2460	3000	1680	723	576	601
30	397	235	261	292	---	1820	2540	2730	1550	662	573	597
31	381	---	407	290	---	1830	---	2270	---	601	570	---
TOTAL	12515	7390	11636	10187	37444	45899	59570	104800	57050	28024	17169	18010
MEAN	404	246	375	329	1291	1481	1986	3381	1902	904	554	600
MAX	479	313	1810	518	2560	2530	2600	6260	2450	1490	578	627
MIN	379	212	182	270	271	781	1520	2000	1290	484	534	569
AC-FT	24820	14660	23080	20210	74270	91040	118200	207900	113200	55590	34050	35720

PYRAMID AND WINNEMUCCA LAKES BASIN

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10346000 TRUCKEE RIVER AT FARAD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	381	421	520	543	628	777	1269	1725	1257	651	508	461
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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1909 - 1996
ANNUAL TOTAL	340334	409694	
ANNUAL MEAN	932	1119	754
HIGHEST ANNUAL MEAN			2443
LOWEST ANNUAL MEAN			184
HIGHEST DAILY MEAN	3880	May 1	13400
LOWEST DAILY MEAN	83	Jan 4	37
ANNUAL SEVEN-DAY MINIMUM	93	Jan 1	40
INSTANTANEOUS PEAK FLOW			17500
INSTANTANEOUS PEAK STAGE		8.93	14.50
ANNUAL RUNOFF (AC-FT)	675100	812600	546500
10 PERCENT EXCEEDS	2070	2410	1670
50 PERCENT EXCEEDS	604	604	504
90 PERCENT EXCEEDS	238	268	193

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

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, July 1993 to current year.

WATER TEMPERATURE: Water years 1964-81, July 1993 to current year.

SUSPENDED SEDIMENT: Water years 1974, 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1964 to September 1980, July 1993 to current year.

WATER TEMPERATURE: January 1964 to September 1981, July 1993 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1993.

REMARKS.--Water temperature and specific conductance are affected by upstream reservoirs and several powerplants.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 377 micromhos, Dec. 27, 1979; minimum daily recorded, 39 micromhos, Dec. 23, 1964.

WATER TEMPERATURE: Maximum recorded, 23.0°C, Aug. 5, 1994; minimum recorded, -0.5°C, Nov. 25, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 136 microsiemens, Dec. 25; minimum recorded, 49 microsiemens, May 16.

WATER TEMPERATURE: Maximum recorded, 20.5°C, July 25; minimum recorded, 0.0°C, several days.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	91	89	103	94	126	117	106	90	128	122	92	90
2	91	89	103	102	128	126	111	106	129	127	93	91
3	93	90	103	102	128	116	111	109	130	128	100	92
4	94	92	104	102	116	113	113	110	133	83	108	90
5	95	93	104	102	113	107	113	109	83	71	93	87
6	95	94	105	102	116	111	111	110	87	80	96	87
7	95	94	104	103	116	111	112	110	88	83	96	94
8	96	94	112	103	112	111	116	110	88	77	98	93
9	97	94	113	111	112	111	112	111	80	76	97	93
10	97	95	114	112	112	111	113	111	81	79	96	93
11	97	95	116	112	112	107	112	102	81	79	99	89
12	96	95	117	114	107	56	104	95	87	79	93	87
13	101	90	115	113	82	64	96	95	87	85	91	86
14	91	90	117	114	93	81	96	95	86	83	94	86
15	91	90	116	114	94	91	98	95	84	83	94	89
16	92	90	116	115	93	92	105	95	84	81	90	89
17	92	91	117	115	95	92	105	91	82	77	90	89
18	95	91	117	115	112	94	116	102	80	76	89	83
19	92	87	116	115	114	112	110	105	88	78	84	82
20	90	89	117	115	118	114	109	107	84	72	82	79
21	89	87	117	115	121	118	108	104	76	70	79	77
22	89	88	117	115	128	119	115	83	75	71	80	77
23	89	88	117	115	130	127	117	101	92	73	80	77
24	90	88	117	116	134	99	116	110	92	87	80	78
25	89	88	117	115	136	106	121	110	92	87	84	79
26	89	88	127	115	135	120	119	99	91	87	88	83
27	90	86	133	120	135	130	121	110	91	89	89	86
28	100	90	120	118	134	123	127	79	92	90	90	82
29	93	92	122	118	128	122	121	119	91	90	84	81
30	93	92	120	117	125	110	120	118	---	---	84	83
31	94	92	---	---	110	85	123	119	---	---	84	83
MONTH	101	86	133	94	136	56	127	79	133	70	108	77

PYRAMID AND WINNEMUCCA LAKES BASIN

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	85	82	81	77	71	68	92	87	93	90	88	87
2	83	80	80	75	70	65	90	81	93	91	88	86
3	80	79	79	76	69	63	81	75	92	91	86	85
4	80	79	80	77	66	63	78	74	93	91	86	85
5	80	79	81	78	67	62	77	75	93	90	86	85
6	80	79	81	77	69	63	77	67	92	90	86	85
7	79	78	82	79	68	63	68	67	92	91	86	85
8	79	76	82	78	70	62	68	67	93	91	87	85
9	77	75	82	80	71	66	68	66	92	91	89	85
10	80	74	82	78	70	67	70	65	92	90	90	87
11	83	79	80	75	69	65	78	70	92	91	97	88
12	84	81	76	71	69	66	77	70	92	91	94	89
13	85	83	74	69	70	64	77	71	92	90	90	89
14	85	84	70	67	69	65	77	75	92	90	90	89
15	85	82	69	61	70	66	80	76	92	90	90	88
16	86	81	65	49	70	66	82	79	90	89	91	88
17	86	81	67	61	72	68	82	79	91	89	91	90
18	89	84	68	59	72	68	85	82	91	89	91	90
19	88	86	71	68	73	68	86	83	91	88	91	90
20	91	87	72	69	69	66	89	85	89	88	92	90
21	90	89	74	69	69	67	91	88	89	88	92	91
22	90	89	74	72	69	67	93	90	90	88	105	91
23	93	89	74	70	69	67	94	92	90	89	105	91
24	91	85	74	69	69	66	96	93	90	88	101	93
25	87	83	70	69	70	66	96	95	90	88	101	90
26	85	80	73	69	84	68	95	85	90	88	101	92
27	82	78	72	70	91	84	88	84	89	87	102	92
28	82	79	72	69	91	87	86	81	88	87	103	91
29	83	81	70	68	93	90	83	81	88	87	103	91
30	82	79	73	68	94	89	88	83	88	87	103	91
31	---	---	74	68	---	---	91	87	88	87	---	---
MONTH	93	74	82	49	94	62	96	65	93	87	105	85

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	15.0	11.0	11.0	8.5	8.0	6.0	3.5	2.0	5.0	2.5	5.0	2.0
2	15.5	11.0	9.5	7.5	8.0	5.5	3.5	2.0	4.0	2.0	5.5	2.5
3	15.5	11.0	8.5	6.0	6.0	4.5	4.0	2.5	4.0	2.5	5.0	3.0
4	14.0	10.5	8.5	5.0	8.5	6.0	4.0	2.5	4.5	1.5	4.5	1.5
5	13.5	9.5	9.0	6.0	8.5	8.0	5.0	3.0	3.0	1.5	3.5	1.5
6	13.5	10.0	9.0	6.0	8.5	7.0	5.0	3.0	4.0	2.5	4.0	1.0
7	14.5	11.0	9.5	6.5	8.5	7.0	4.5	2.0	4.5	2.5	5.0	2.5
8	14.0	10.0	9.5	7.0	7.0	5.5	4.5	2.0	4.5	2.5	5.5	2.5
9	14.0	10.0	9.0	8.0	7.0	5.5	5.0	2.5	4.5	2.5	5.5	3.5
10	14.5	10.0	9.0	6.0	6.5	5.0	5.0	4.0	5.0	3.5	5.5	3.5
11	14.0	11.0	9.0	5.5	7.0	6.5	4.5	2.5	5.0	3.0	5.0	3.5
12	13.5	10.5	9.5	6.5	7.0	4.0	4.5	2.0	5.0	3.0	4.0	3.5
13	12.5	10.0	9.5	6.5	5.0	3.5	4.5	2.5	5.0	3.0	4.5	3.0
14	13.0	9.0	9.5	6.0	5.0	4.0	4.5	2.0	5.0	3.0	6.5	3.0
15	13.5	10.0	9.0	6.0	4.0	3.0	4.5	4.0	5.5	3.0	6.5	3.0
16	13.5	10.0	10.0	8.0	4.0	3.0	4.5	4.0	6.0	4.5	7.0	4.0
17	13.5	9.5	9.0	6.0	3.0	1.5	4.0	2.0	5.5	4.0	7.5	4.0
18	13.5	10.0	9.5	7.0	4.0	2.5	2.5	2.0	5.5	3.5	7.0	4.5
19	13.0	10.0	8.5	5.5	3.5	1.5	2.5	1.5	4.5	3.0	7.5	4.5
20	13.0	9.5	8.0	5.5	2.5	1.0	2.5	1.0	4.0	2.5	7.0	4.5
21	13.0	10.0	8.0	6.0	2.0	.5	1.5	.0	3.5	2.5	7.0	4.5
22	11.0	8.5	7.0	4.5	1.5	1.0	2.0	.0	4.0	2.5	6.0	4.0
23	11.0	8.0	7.0	4.5	2.0	1.0	1.0	.0	4.5	2.0	5.5	3.5
24	11.0	7.5	7.5	5.0	1.0	.0	2.0	.0	3.5	2.0	6.5	4.0
25	11.0	7.5	7.5	4.0	.5	.0	2.0	.0	3.0	1.5	6.0	4.0
26	12.0	8.5	7.5	4.5	1.0	.0	1.5	.0	3.0	1.0	6.5	3.5
27	12.0	9.0	5.0	3.0	3.0	.5	2.0	.0	3.0	1.5	7.5	4.5
28	11.5	9.5	6.5	4.0	3.0	2.0	2.0	.0	4.5	1.5	6.0	4.5
29	12.0	9.0	7.0	4.5	4.5	3.0	3.0	.5	4.5	2.0	6.5	3.5
30	11.5	9.0	7.5	4.5	6.0	4.5	3.5	2.0	---	---	7.5	4.5
31	11.5	9.5	---	---	6.0	3.5	3.5	3.0	---	---	7.5	4.5
MONTH	15.5	7.5	11.0	3.0	8.5	.0	5.0	.0	6.0	1.0	7.5	1.0
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	7.0	5.0	11.0	7.0	12.5	9.0	18.5	14.0	19.0	14.5	17.5	13.0
2	7.5	4.5	10.0	7.0	13.0	9.0	18.0	14.0	18.5	13.5	17.5	13.0
3	7.5	5.0	10.0	6.5	13.0	9.0	17.0	13.5	18.0	13.5	17.5	13.0
4	8.0	5.0	9.5	5.5	13.0	9.0	16.5	13.0	18.5	13.5	17.0	13.5
5	8.0	5.0	10.0	6.5	13.0	9.0	16.5	12.0	18.5	13.5	16.0	11.5
6	8.5	5.5	10.0	6.0	13.5	9.5	16.0	13.0	17.5	13.5	16.5	12.0
7	9.0	5.5	10.5	7.0	13.5	10.0	16.5	13.0	18.5	13.5	17.0	12.5
8	9.0	6.0	9.5	6.0	13.5	10.0	16.5	13.0	19.0	13.5	17.5	12.5
9	8.5	6.0	10.5	6.0	13.5	10.0	17.0	13.5	19.5	14.5	17.5	13.5
10	8.0	5.5	11.0	6.5	13.0	9.5	16.5	12.5	19.0	14.5	18.0	13.5
11	8.0	5.0	11.5	7.0	13.5	9.5	18.5	14.0	19.0	15.5	17.5	13.5
12	7.5	5.0	11.5	7.5	13.5	10.5	17.0	14.5	18.5	15.5	17.5	13.5
13	8.5	4.5	11.5	7.5	14.0	10.5	17.5	14.5	17.5	15.0	15.5	13.5
14	9.0	5.5	10.5	8.0	14.0	10.0	17.5	14.5	19.0	15.5	16.5	13.0
15	9.0	6.5	8.5	7.0	14.0	10.5	18.5	14.5	19.5	15.0	15.0	13.5
16	8.0	6.0	8.0	5.5	14.5	10.5	18.0	13.5	19.0	14.5	15.5	12.5
17	8.0	4.5	7.5	7.0	14.5	11.0	17.5	13.5	18.5	14.0	15.5	12.0
18	7.5	4.5	8.5	6.5	14.0	10.5	17.5	13.0	17.5	13.5	15.5	12.0
19	7.0	5.0	10.0	7.0	14.5	11.0	17.5	12.0	17.5	13.5	16.0	12.5
20	7.0	4.5	11.0	8.0	15.0	11.5	18.5	13.0	17.5	13.0	16.5	12.5
21	8.5	5.0	10.5	8.5	14.5	11.5	19.5	13.5	17.5	13.0	17.0	13.5
22	8.5	6.0	10.0	8.0	15.0	11.0	20.0	14.5	18.0	13.5	17.0	13.5
23	10.0	6.5	9.5	7.0	15.0	11.5	19.5	15.5	18.5	14.0	16.5	13.0
24	9.5	7.0	10.5	7.5	13.5	11.5	19.5	15.5	18.0	15.0	16.5	13.0
25	10.0	5.5	11.0	8.0	12.0	11.0	20.5	15.0	19.0	15.0	16.0	13.0
26	10.0	6.0	11.5	8.5	12.0	10.5	19.5	15.0	18.5	14.5	16.0	13.0
27	9.5	6.0	10.5	8.5	13.5	10.5	19.5	15.0	17.5	13.5	16.0	12.5
28	9.5	5.5	11.0	8.0	16.0	11.5	17.5	16.0	18.0	13.0	16.5	12.5
29	11.0	6.0	11.5	8.5	17.5	13.0	18.5	14.0	18.5	14.0	16.5	13.0
30	11.0	7.0	11.5	8.0	18.5	14.0	19.0	14.5	18.5	14.0	17.0	14.0
31	---	---	11.5	8.5	---	---	20.0	14.5	18.0	13.5	---	---
MONTH	11.0	4.5	11.5	5.5	18.5	9.0	20.5	12.0	19.5	13.0	18.0	11.5

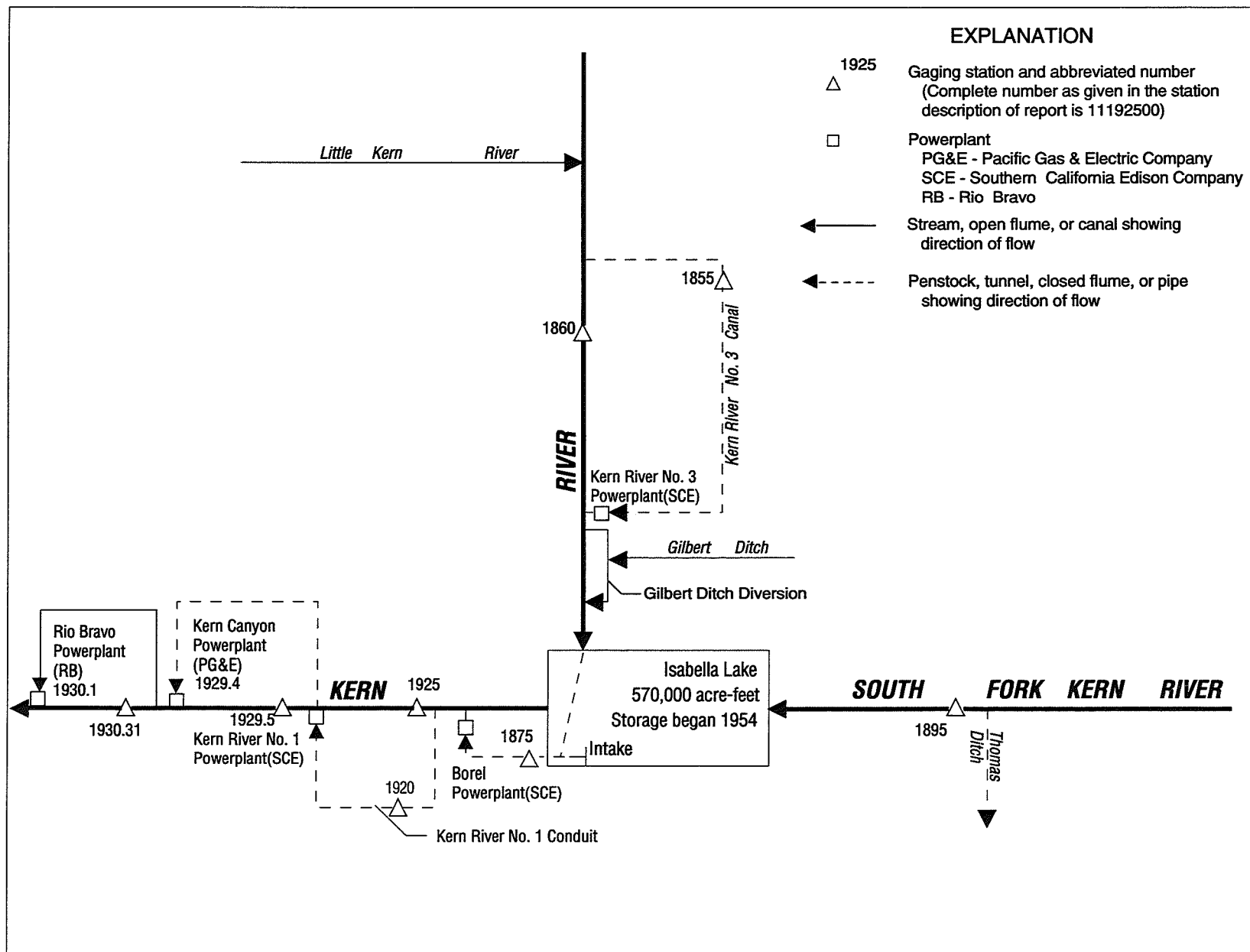


Figure 23. Diversions and storage in Kern River basin.

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 sea level, 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.--Since 1921, Kern River No. 3 Canal (station 11185500) 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 station 11186001.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	47	50	44	44	90	603	2720	1860	643	101	81
2	99	49	50	44	45	73	923	2850	2150	729	99	79
3	251	49	51	44	45	80	694	2790	2480	816	96	79
4	54	49	50	44	68	177	637	2580	2730	847	97	79
5	54	47	49	44	743	645	629	2530	3050	767	97	80
6	54	48	49	44	413	344	654	2510	3130	773	99	77
7	55	48	47	44	208	289	727	2550	3080	751	98	77
8	56	47	46	44	128	272	848	2570	3100	703	96	77
9	56	46	46	44	117	331	1040	2550	2920	672	96	77
10	57	45	46	44	80	326	949	2480	2800	620	96	77
11	60	48	45	44	56	362	914	2740	2320	578	96	80
12	59	48	81	44	51	413	914	2860	2050	587	96	78
13	57	47	190	44	48	390	839	3180	2000	629	99	76
14	57	47	47	44	44	317	829	3440	2000	655	101	78
15	56	45	47	47	44	279	894	3470	1910	537	98	78
16	56	44	46	133	46	301	1070	3920	1770	439	97	75
17	56	45	46	249	49	355	1240	3190	1580	340	99	74
18	56	45	46	53	44	492	1220	2970	1420	254	100	74
19	56	47	46	82	483	642	971	2600	1360	192	103	74
20	56	49	46	48	2660	733	861	2340	1330	148	105	73
21	56	46	46	48	1070	772	780	2230	1260	125	106	71
22	56	45	46	48	754	831	745	2060	1090	113	104	74
23	57	46	44	47	488	770	795	1930	1140	109	102	73
24	56	46	45	46	439	642	964	1750	1030	116	104	74
25	55	46	48	44	339	588	1260	1560	953	137	104	75
26	56	46	46	41	215	533	1660	1390	787	118	105	73
27	56	47	46	42	151	521	2060	1490	656	101	105	73
28	55	50	42	41	169	618	2180	1500	512	109	103	73
29	58	50	42	41	116	549	2310	1530	464	99	102	73
30	57	50	42	49	---	491	2510	1600	532	97	101	74
31	56	---	43	47	---	489	---	1620	---	101	102	---
TOTAL	1982	1412	1614	1722	9157	13715	32720	75500	53464	12905	3107	2276
MEAN	63.9	47.1	52.1	55.5	316	442	1091	2435	1782	416	100	75.9
MAX	251	50	190	249	2660	831	2510	3920	3130	847	106	81
MIN	54	44	42	41	44	73	603	1390	464	97	96	71
AC-FT	3930	2800	3200	3420	18160	27200	64900	149800	106000	25600	6160	4510

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.6	47.1	126	123	148	263	596	1485	1639	741	216	106
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	347249				209574							
ANNUAL MEAN	951				573				463			
HIGHEST ANNUAL MEAN									1727			
LOWEST ANNUAL MEAN									3.65			
HIGHEST DAILY MEAN	4510				Jun 13				33600			
LOWEST DAILY MEAN	42				Dec 28				.20			
ANNUAL SEVEN-DAY MINIMUM	44				Dec 25				.26			
INSTANTANEOUS PEAK FLOW					4830				Feb 20			
INSTANTANEOUS PEAK STAGE					9.98				Feb 20			
ANNUAL RUNOFF (AC-FT)	688800				415700				335400			
10 PERCENT EXCEEDS	3010				2060				1490			
50 PERCENT EXCEEDS	138				100				78			
90 PERCENT EXCEEDS	45				45				27			

PACIFIC SLOPE BASINS IN CALIFORNIA

BUENA VISTA LAKE BASIN

11186001 KERN RIVER NEAR KERNVILLE, CA--Continued

KERN RIVER AND KERN RIVER NO. 3 CANAL NEAR KERNVILLE
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	282	249	316	481	671	1180	3310	2430	1210	585	298
2	358	288	246	305	422	647	1500	3440	2720	1300	573	296
3	340	286	244	302	399	661	1280	3380	3050	1380	552	292
4	337	285	246	302	456	759	1220	3170	3300	1420	525	288
5	332	284	252	297	1330	1230	1220	3120	3620	1340	491	289
6	330	284	247	294	996	923	1240	3100	3700	1340	470	282
7	329	283	246	293	791	871	1310	3140	3650	1320	458	273
8	326	280	247	294	712	856	1430	3150	3670	1270	444	267
9	322	277	243	293	701	914	1540	3130	3490	1240	431	262
10	319	275	239	290	661	908	1530	3060	3370	1180	422	258
11	317	274	242	283	636	945	1490	3320	2890	1140	416	253
12	315	271	538	284	633	1000	1490	3440	2620	1150	408	249
13	311	271	744	286	619	974	1420	3760	2570	1200	409	251
14	306	269	415	286	599	895	1410	4020	2570	1220	432	261
15	302	267	355	284	593	860	1480	4050	2480	1100	422	263
16	304	265	336	482	599	884	1660	4500	2340	1010	400	256
17	303	264	307	777	636	939	1830	3770	2150	910	387	252
18	299	261	318	426	604	1070	1800	3530	1990	823	385	248
19	296	263	313	616	1050	1220	1560	3180	1920	762	380	243
20	294	258	296	395	3140	1320	1450	2920	1900	719	367	238
21	294	258	283	318	1650	1360	1370	2810	1830	696	356	232
22	294	258	279	336	1330	1410	1330	2640	1660	685	343	230
23	292	259	307	342	1070	1350	1380	2510	1710	681	335	228
24	293	258	282	366	1020	1220	1540	2330	1600	688	342	225
25	293	257	287	405	923	1170	1840	2140	1520	710	350	223
26	292	256	285	378	795	1110	2240	1960	1350	691	363	223
27	290	256	284	393	731	1100	2650	2070	1220	668	344	222
28	287	256	281	425	707	1200	2770	2070	1080	664	330	220
29	288	258	283	398	693	1130	2890	2100	1030	650	317	218
30	287	254	293	377	---	1070	3100	2170	1100	664	305	216
31	287	---	319	420	---	1070	---	2190	---	632	298	---
TOTAL	9596	8057	9506	11263	24977	31737	50150	93480	70530	30463	12650	7556
MEAN	310	269	307	363	861	1024	1672	3015	2351	983	408	252
MAX	359	288	744	777	3140	1410	3100	4500	3700	1420	595	298
MIN	287	254	239	283	399	647	1180	1960	1030	632	298	216
AC-FT	19030	15980	18860	22340	49540	62950	99470	185400	139900	60420	25090	14990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	245	260	355	407	506	694	1121	2052	2187	1158	513	310
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1961 - 1996

ANNUAL TOTAL	509398	359965	
ANNUAL MEAN	1396	984	818
HIGHEST ANNUAL MEAN			2264
LOWEST ANNUAL MEAN			228
HIGHEST DAILY MEAN	5090	4500	33600
LOWEST DAILY MEAN	148	216	76
ANNUAL SEVEN-DAY MINIMUM	183	221	84
ANNUAL RUNOFF (AC-FT)	1010000	714000	592600
10 PERCENT EXCEEDS	3590	2640	2080
50 PERCENT EXCEEDS	722	562	382
90 PERCENT EXCEEDS	270	258	156

BUENA VISTA LAKE BASIN

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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 and concrete-lined channel with Ogee weir. Elevation of gage is 2,540 ft above sea level, from topographic map. Prior to Apr. 29, 1952, at site 4 mi upstream at different datum.

REMARKS.--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. See schematic diagram of Kern River basin.

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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	531	464	408	413	568	587	577	550	525	541	543
2	525	534	297	408	413	581	585	579	552	528	543	545
3	524	534	363	408	414	583	584	578	555	528	542	543
4	524	537	500	409	415	583	581	576	557	533	541	541
5	523	536	482	409	409	582	584	578	554	534	543	544
6	524	536	446	409	407	584	586	583	555	536	545	541
7	523	534	424	409	408	586	583	582	558	539	543	543
8	522	534	393	409	409	580	583	565	558	544	542	541
9	532	535	344	409	411	578	582	548	557	542	543	543
10	526	535	347	409	407	581	580	546	554	541	542	542
11	524	535	331	409	406	583	578	550	554	540	541	539
12	522	534	305	409	410	584	578	518	554	543	541	543
13	522	533	372	409	405	576	579	548	553	544	543	543
14	524	532	413	409	407	578	581	552	556	541	543	544
15	519	535	413	409	408	580	582	553	558	540	544	544
16	521	535	413	409	410	581	585	552	559	542	543	549
17	522	536	412	412	410	583	582	553	557	542	542	554
18	522	536	411	413	411	584	583	552	552	541	542	554
19	524	537	411	413	408	577	585	553	555	539	543	554
20	523	538	410	412	408	580	581	552	559	542	543	550
21	522	535	408	409	407	582	580	551	554	541	541	551
22	523	533	409	409	409	580	580	552	556	541	544	552
23	524	537	409	410	411	580	578	553	555	541	544	554
24	525	539	409	409	409	580	576	551	550	543	544	554
25	524	536	408	410	407	577	578	554	546	541	545	555
26	525	536	408	411	409	579	582	557	531	540	544	555
27	525	537	409	411	410	581	585	557	539	542	545	553
28	523	534	409	412	411	583	585	554	519	542	544	552
29	527	533	408	413	473	580	577	553	520	542	540	552
30	524	530	408	413	---	579	579	550	526	540	544	553
31	524	---	408	413	---	585	---	553	---	543	544	---
TOTAL	16238	16047	12444	12711	11935	17998	17449	17280	16503	16720	16829	16431
MEAN	524	535	401	410	412	581	582	557	550	539	543	548
MAX	532	539	500	413	473	586	587	583	559	544	545	555
MIN	519	530	297	408	405	568	576	518	519	525	540	539
AC-FT	32210	31830	24680	25210	23670	35700	34610	34270	32730	33160	33380	32590

BUENA VISTA LAKE BASIN

11187500 BOREL CANAL BELOW ISABELLA DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	242	239	266	305	384	461	506	518	535	483	390	293
MAX	588	584	576	584	590	611	605	607	614	605	607	586
(WY)	1979	1984	1951	1984	1984	1985	1984	1989	1989	1985	1952	1993
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1910 - 1996			
ANNUAL TOTAL	179329				188585							
ANNUAL MEAN	491				515							
HIGHEST ANNUAL MEAN									384			
LOWEST ANNUAL MEAN									585			
HIGHEST DAILY MEAN	575				587				106			
LOWEST DAILY MEAN	220				297				634			
ANNUAL SEVEN-DAY MINIMUM	222				358				.00			
ANNUAL RUNOFF (AC-FT)	355700				374100				.00			
10 PERCENT EXCEEDS	569				581				278400			
50 PERCENT EXCEEDS	535				541				587			
90 PERCENT EXCEEDS	265				409				433			
									127			

BUENA VISTA LAKE BASIN

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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 June 1994, July 1995 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 sea level, 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.--Records good. Lowell and Thomas Ditches divert upstream from station for irrigation downstream of station, combined capacity, 7 ft³/s. See schematic diagram of Kern River basin.

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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 17	0215	217	4.86	Mar. 23	1045	385	5.54
Feb. 20	0315	1,970	7.55	Apr. 27	1515	1,130	6.78

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	37	30	48	73	123	347	984	236	57	33	19
2	28	36	29	46	64	116	421	967	223	53	29	18
3	24	34	29	47	61	122	406	932	214	50	27	18
4	24	33	28	47	61	133	392	872	207	48	26	18
5	24	33	29	49	111	202	383	816	198	55	26	18
6	25	33	32	48	136	155	396	775	187	58	27	19
7	25	33	32	49	110	145	438	735	187	55	27	13
8	25	34	32	49	101	151	499	693	185	52	26	9.9
9	25	36	35	50	104	166	593	663	182	50	25	9.9
10	26	39	37	51	103	174	608	622	186	48	25	9.9
11	28	39	35	49	101	187	608	590	175	51	24	9.8
12	29	38	53	47	100	200	628	577	157	53	25	9.8
13	27	38	105	49	105	205	588	581	147	53	26	10
14	25	39	71	49	110	189	551	575	138	53	21	11
15	25	36	54	49	113	182	563	567	131	49	15	11
16	26	29	51	77	114	187	601	580	125	50	13	12
17	25	29	43	142	116	200	661	610	116	47	12	12
18	25	29	38	67	117	227	674	542	109	44	12	12
19	25	29	43	92	224	257	539	498	103	42	11	12
20	25	28	45	68	1340	290	475	454	99	41	11	12
21	25	29	39	58	496	319	438	420	87	39	11	12
22	26	28	36	55	322	344	427	397	80	37	11	12
23	26	28	44	45	219	369	463	377	80	31	15	12
24	27	30	40	53	195	357	566	362	80	20	22	11
25	30	32	35	63	181	336	786	372	77	17	22	14
26	36	32	39	56	148	320	937	362	78	16	22	15
27	36	32	41	50	129	319	1010	336	81	16	24	15
28	36	31	44	60	122	343	1040	312	77	18	23	17
29	36	30	48	53	127	322	1010	288	67	19	21	21
30	36	30	45	51	---	312	973	270	61	26	20	22
31	36	---	50	57	---	313	---	252	---	36	19	---
TOTAL	868	984	1312	1774	5303	7265	18021	17381	4073	1284	651	415.3
MEAN	28.0	32.8	42.3	57.2	183	234	601	561	136	41.4	21.0	13.8
MAX	36	39	105	142	1340	369	1040	984	236	58	33	22
MIN	24	28	28	45	61	116	347	252	61	16	11	9.8
AC-FT	1720	1950	2600	3520	10520	14410	35740	34480	8080	2550	1290	824

BUENA VISTA LAKE BASIN

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.2	35.8	57.6	61.0	93.9	158	351	434	170	48.5	23.9	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 1996 WATER YEAR

WATER YEARS 1912 - 1996

ANNUAL TOTAL	59331.3		
ANNUAL MEAN	162	124	
HIGHEST ANNUAL MEAN		605	1969
LOWEST ANNUAL MEAN		11.5	1961
HIGHEST DAILY MEAN	1340	Feb 20	14000
LOWEST DAILY MEAN	9.8	Sep 11	.00
ANNUAL SEVEN-DAY MINIMUM	10	Sep 8	.00
INSTANTANEOUS PEAK FLOW	1970	Feb 20	28700
INSTANTANEOUS PEAK STAGE	7.55	Feb 20	18.90
ANNUAL RUNOFF (AC-FT)	117700		89740
10 PERCENT EXCEEDS	540		287
50 PERCENT EXCEEDS	.50		41
90 PERCENT EXCEEDS	18		7.1

BUENA VISTA LAKE BASIN

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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 sea level.

REMARKS.--Kern River No. 1 Conduit (station 11192000) 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 downstream from station. Flow regulated by Isabella Lake 22 mi upstream beginning in 1954. Many diversions upstream from station for irrigation. See schematic diagram of Kern River basin. For records of combined discharge of river and conduit, see station 11192501.

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.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	944	742	233	43	82	339	449	1160	2000	1940	1750	816
2	984	709	56	43	68	361	496	1330	2040	1950	1650	829
3	997	445	36	42	66	361	545	1350	2290	2130	1600	916
4	830	400	146	39	67	364	362	1260	2250	2210	1550	946
5	853	420	156	45	111	454	404	1290	2330	2260	1520	999
6	896	520	123	45	127	400	440	1390	2470	2290	1690	986
7	832	515	70	45	90	369	465	1460	2590	2240	1840	901
8	803	543	69	43	76	350	524	1490	2560	2300	1710	838
9	793	595	36	44	67	342	625	1500	2490	2340	1660	877
10	741	609	36	46	62	346	722	1550	2540	2260	1700	853
11	709	613	36	51	50	351	662	1480	2570	2300	1760	845
12	703	643	35	48	56	353	661	1450	2620	2250	1710	875
13	655	672	37	49	50	415	641	1630	2670	1990	1650	825
14	613	677	58	48	50	368	596	1890	2590	1990	1810	751
15	598	691	43	48	51	353	587	1970	2290	2100	1840	732
16	654	713	39	85	53	347	551	2460	2110	2000	1720	829
17	621	727	37	181	53	349	548	2620	2250	2050	1580	805
18	599	674	62	84	55	359	514	2630	2400	2100	1430	720
19	683	643	58	114	71	447	555	2650	2040	2100	1520	736
20	795	641	37	84	959	449	574	2790	2110	1890	1510	788
21	850	654	44	70	755	464	546	2790	2040	1830	1460	710
22	912	631	45	79	e589	457	596	2770	2110	1960	1340	633
23	975	627	62	65	e419	351	647	2770	2110	2040	1210	684
24	984	612	54	60	e269	366	696	2770	2170	2120	1170	740
25	973	626	49	111	e220	372	712	2470	2160	2190	1180	778
26	886	581	47	102	e199	e444	753	2360	2150	2080	1200	760
27	880	642	42	79	165	e500	755	2320	2100	1880	1160	687
28	793	599	41	133	166	e480	770	2350	2020	1690	1140	645
29	772	418	41	88	178	398	838	2100	1840	1690	1140	609
30	845	410	43	71	---	380	867	2030	1850	1680	1070	599
31	843	---	44	73	---	378	---	2100	---	1690	951	---
TOTAL	25016	17992	1915	2158	5224	12067	18101	62180	67760	63540	46221	23712
MEAN	807	600	61.8	69.6	180	389	603	2006	2259	2050	1491	790
MAX	997	742	233	181	959	500	867	2790	2670	2340	1840	999
MIN	598	400	35	39	50	339	362	1160	1840	1680	951	599
AC-FT	49620	35690	3800	4280	10360	23930	35900	123300	134400	126000	91680	47030

e Estimated.

BUENA VISTA LAKE BASIN

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	318	221	127	171	247	490	771	1005	1513	1486	1058	461
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1961 - 1996

ANNUAL TOTAL	458339		345886									
ANNUAL MEAN	1256		945							658		
HIGHEST ANNUAL MEAN										2837		1983
LOWEST ANNUAL MEAN										23.7		1961
HIGHEST DAILY MEAN	3540					2790		May 20		6640		Jun 7 1969
LOWEST DAILY MEAN	21			Feb 15		35		Dec 12		.00		May 26 1977
ANNUAL SEVEN-DAY MINIMUM	21			Feb 15		40		Dec 9		.01		May 16 1977
INSTANTANEOUS PEAK FLOW						2840		May 23		10100		Dec 6 1966
INSTANTANEOUS PEAK STAGE						12.21		May 23		18.55		Dec 6 1966
ANNUAL RUNOFF (AC-FT)	909100					686100				476500		
10 PERCENT EXCEEDS	2900					2220				1910		
50 PERCENT EXCEEDS	964					706				233		
90 PERCENT EXCEEDS	23					51				1.9		

11192501 KERN RIVER NEAR DEMOCRAT SPRINGS, CA--Continued

KERN RIVER AND KERN RIVER NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS,
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1130	619	414	452	709	817	1560	2400	2340	2140	1190
2	1380	1090	374	414	438	732	864	1730	2440	2350	2040	1200
3	1390	828	330	413	436	733	776	1750	2690	2530	1990	1290
4	1230	781	518	410	438	736	763	1660	2650	2610	1940	1320
5	1250	802	534	416	482	826	805	1690	2730	2660	1910	1370
6	1290	902	497	416	498	772	840	1790	2870	2690	2080	1360
7	1230	897	448	415	461	741	866	1860	2990	2640	2230	1280
8	1200	924	448	413	447	723	925	1890	2960	2700	2100	1210
9	1190	979	376	414	438	715	1020	1900	2890	2740	2040	1250
10	1140	994	371	416	433	719	1120	1950	2940	2660	2080	1230
11	1100	995	369	421	421	724	1060	1880	2970	2700	2140	1230
12	1090	1020	347	418	427	727	1060	1850	3020	2650	2090	1260
13	1050	1060	361	418	421	789	1040	2030	3070	2390	2030	1210
14	1000	1060	434	417	421	742	997	2290	2990	2390	2190	1140
15	989	1070	418	417	422	727	988	2370	2690	2500	2220	1120
16	1040	1090	416	454	424	721	952	2860	2510	2400	2100	1220
17	1010	1100	412	550	424	723	949	3020	2650	2450	1960	1190
18	987	1050	425	452	425	733	915	3030	2800	2500	1810	1100
19	1070	1020	412	483	441	821	956	3050	2440	2490	1900	1120
20	1180	1020	409	453	1330	823	975	3190	2510	2270	1890	1170
21	1240	1030	412	440	1120	838	947	3190	2440	2210	1840	1090
22	1300	1010	413	449	959	830	997	3170	2510	2330	1720	1010
23	1360	1010	430	435	789	723	1050	3170	2510	2410	1590	1060
24	1370	991	421	430	639	737	1100	3170	2570	2510	1550	1120
25	1360	1000	415	481	590	743	1110	2870	2560	2580	1560	1160
26	1270	958	415	472	569	814	1150	2760	2550	2450	1580	1140
27	1260	1020	413	449	535	870	1160	2720	2500	2250	1540	1070
28	1180	977	413	503	536	849	1170	2750	2420	2060	1520	1030
29	1150	800	413	458	548	767	1240	2500	2240	2070	1510	997
30	1230	800	415	441	---	749	1270	2430	2250	2070	1440	986
31	1230	---	415	443	---	746	---	2500	---	2080	1330	---
TOTAL	37106	29408	13093	13625	15964	23602	29882	74580	79760	75680	58060	35123
MEAN	1197	980	422	440	550	761	996	2406	2659	2441	1873	1171
MAX	1390	1130	619	550	1330	870	1270	3190	3070	2740	2230	1370
MIN	987	781	330	410	421	709	763	1560	2240	2060	1330	986
AC-FT	73600	58330	25970	27030	31660	46810	59270	147900	158200	150100	115200	69670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	552	448	382	457	572	811	1082	1344	1875	1800	1359	715
MAX	1835	1689	1432	2338	1785	3644	5685	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1955 - 1996			
ANNUAL TOTAL	592685				485883							
ANNUAL MEAN	1624				1328				952			
HIGHEST ANNUAL MEAN									3173			
LOWEST ANNUAL MEAN									246			
HIGHEST DAILY MEAN	3920				3190				7030			
LOWEST DAILY MEAN	228				330				10			
ANNUAL SEVEN-DAY MINIMUM	254				382				12			
ANNUAL RUNOFF (AC-FT)	1176000				963700				689600			
10 PERCENT EXCEEDS	3290				2620				2130			
50 PERCENT EXCEEDS	1340				1090				592			
90 PERCENT EXCEEDS	343				421				198			

BUENA VISTA LAKE BASIN

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 right bank 100 ft downstream of diversion dam, 16.4 mi northeast of Bakersfield.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1987 to June 1995, October 1995 to September 1996 (low-flow records only). Prior to October 1, 1993, at site 100 ft upstream and did not include leakage through diversion dam radial gates. Bypass flow would enter the main channel immediately downstream from the gage.

GAGE.--Water-stage recorder. Elevation of gage is 975 ft above sea level, from topographic map.

REMARKS.--No records were computed above 35 ft³/s. Flow regulated at diversion dam 100 ft upstream from gage. See schematic diagram of Kern 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e35	28	28	30	31	---	---	32	32	32	33	31
2	e35	27	32	30	31	---	---	32	32	32	31	32
3	e35	28	33	30	31	---	---	32	33	33	31	32
4	e35	28	33	30	31	---	30	31	34	32	31	32
5	e35	28	31	30	30	---	30	32	34	33	31	32
6	e35	29	31	30	31	---	30	32	34	34	33	32
7	e35	28	31	30	31	---	29	32	33	31	32	31
8	e35	28	30	30	31	---	27	32	33	34	31	31
9	e35	28	30	30	31	---	28	33	33	---	31	32
10	e35	28	30	30	31	---	27	33	34	32	---	32
11	29	28	30	30	31	---	27	33	33	35	32	34
12	30	29	30	29	31	---	25	32	34	34	32	32
13	31	29	30	28	31	---	28	32	34	30	32	32
14	29	28	29	28	31	---	28	33	33	31	32	31
15	27	29	27	28	31	---	28	32	32	32	32	32
16	28	28	27	29	31	---	28	32	31	31	32	32
17	28	29	27	30	31	---	28	33	34	32	31	32
18	27	29	28	30	---	---	28	34	34	32	31	31
19	28	29	29	30	---	---	28	34	33	32	32	32
20	28	29	29	30	---	---	28	33	32	31	31	32
21	28	29	29	30	---	---	28	33	31	32	31	32
22	28	29	29	30	---	---	28	32	32	33	31	32
23	28	29	29	30	---	---	28	32	32	32	31	32
24	28	29	29	31	---	---	29	31	32	32	31	32
25	28	29	29	30	---	---	29	33	31	32	32	32
26	27	29	29	31	---	---	28	32	31	31	31	32
27	27	29	30	31	---	---	29	32	31	31	32	32
28	27	27	30	30	---	---	29	32	31	31	31	32
29	27	27	30	31	---	---	29	32	32	32	32	32
30	28	29	30	31	---	---	29	32	32	31	31	32
31	28	---	30	31	---	---	---	32	---	32	31	---
TOTAL	939	853	919	928	---	---	---	1002	977	---	---	957
MEAN	30.3	28.4	29.6	29.9	---	---	---	32.3	32.6	---	---	31.9
MAX	35	29	33	31	---	---	---	34	34	---	---	34
MIN	27	27	27	28	---	---	---	31	31	---	---	31
AC-FT	1860	1690	1820	1840	---	---	---	1990	1940	---	---	1900

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 sea level.

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, 3,930 ft³/s, Aug. 17, 1995; minimum daily, 47 ft³/s, June 14-17, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	62	62	65	60	59	58	100	591	1440	1290	315
2	64	62	69	65	60	58	59	134	594	1470	1120	267
3	63	61	357	65	60	58	59	150	802	1640	1030	365
4	61	62	200	65	60	57	58	89	765	1720	979	414
5	61	62	62	65	60	57	58	87	1270	1770	929	460
6	61	63	62	65	60	56	59	152	2170	1810	1080	456
7	61	62	62	65	60	56	60	203	1970	1750	1270	379
8	62	62	63	65	60	56	62	218	1950	1810	1150	312
9	62	62	63	62	60	56	60	220	1850	1910	1130	339
10	61	63	62	60	60	56	59	267	1930	2610	1180	321
11	62	63	63	60	60	56	58	217	1950	2540	1200	480
12	61	63	63	60	60	56	58	179	2000	2030	1190	967
13	60	64	62	60	60	56	58	289	2060	1590	1100	339
14	60	64	62	60	60	56	58	536	2050	1580	1270	263
15	61	68	62	60	60	57	58	529	1730	1700	1310	228
16	63	64	62	60	60	57	58	893	1530	1570	1210	323
17	63	64	62	60	60	57	59	1130	1650	1590	1070	321
18	63	64	62	60	60	58	60	1170	1830	1640	895	196
19	68	64	62	60	59	58	61	1150	1510	1650	972	180
20	64	64	62	60	108	58	60	1250	1580	1470	980	249
21	64	65	63	72	55	58	59	1250	1490	1390	943	182
22	63	63	63	87	46	58	60	1220	1570	1510	811	131
23	63	63	64	72	51	57	60	1230	1580	1600	684	173
24	62	63	64	60	51	57	60	1290	1690	1680	610	238
25	62	63	64	59	54	58	60	976	1690	1600	612	271
26	62	63	64	59	56	58	61	844	1650	1340	646	261
27	62	63	64	60	56	58	61	792	1580	1340	610	199
28	61	63	65	60	56	65	61	802	1510	1220	543	162
29	61	62	65	60	58	151	60	655	1350	1250	524	132
30	62	63	64	60	---	57	61	586	1340	1240	460	139
31	62	---	64	60	---	58	---	645	---	1220	389	---
TOTAL	1928	1894	2388	1951	1730	1873	1783	19253	47232	50680	29187	9062
MEAN	62.2	63.1	77.0	62.9	59.7	60.4	59.4	621	1574	1635	942	302
MAX	68	68	357	87	108	151	62	1290	2170	2610	1310	967
MIN	60	61	62	59	46	56	58	87	591	1220	389	131
AC-FT	3820	3760	4740	3870	3430	3720	3540	38190	93680	100500	57890	17970
a	66420	50810	21860	23710	29580	42200	52820	101500	58250	49450	53400	50200

a Diversion, in acre-feet, through Rio Bravo Powerplant, provided by Rio Bravo Hydro Project.

BUENA VISTA LAKE BASIN

11193031 KERN RIVER AT RIO BRAVO POWERPLANT, NEAR BAKERSFIELD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	139	167	180	188	174	250	338	401	632	539	592	215
MAX	258	261	248	348	462	1004	2014	1555	1890	1764	2665	405
(WY)	1990	1990	1994	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	60.5	63.1	77.0	62.9	59.2	59.8	49.5	51.5	51.6	52.1	63.1	61.0
(WY)	1994	1996	1996	1996	1994	1994	1991	1991	1991	1991	1994	1993

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1990 - 1996	
ANNUAL TOTAL	375835		168961			
ANNUAL MEAN	1030		462		331	
HIGHEST ANNUAL MEAN					1056	
LOWEST ANNUAL MEAN					106	
HIGHEST DAILY MEAN	3870		2610		3870	
LOWEST DAILY MEAN	60		46		46	
ANNUAL SEVEN-DAY MINIMUM	61		53		47	
INSTANTANEOUS PEAK FLOW			2850		3930	
ANNUAL RUNOFF (AC-FT)	745500		335100		240100	
TOTAL DIVERSION (AC-FT) a	450300		600200			
10 PERCENT EXCEEDS	2330		1580		957	
50 PERCENT EXCEEDS	759		64		114	
90 PERCENT EXCEEDS	62		58		55	

a Diversion, in acre-feet, through Rio Bravo Powerplant, provided by Rio Bravo Hydro Project.

TULARE LAKE BASIN

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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 sea level, 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 17	0345	53	1.52	Mar. 5	0645	98	1.76
Jan. 25	1630	47	1.47	Mar. 13	0700	65	1.55
Feb. 5	1830	59	1.57	Mar. 28	1830	47	1.41
Feb. 20	0500	340	3.03	Apr. 2	0430	49	1.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.1	2.6	12	30	20	10	4.8	.45	.00	.00
2	.00	.00	1.0	2.7	9.4	28	38	9.6	4.1	.22	.00	.00
3	.00	.00	1.1	3.1	7.6	27	29	9.2	3.3	.05	.00	.00
4	.00	.00	1.1	3.2	7.0	30	25	8.9	2.8	.00	.00	.00
5	.00	.00	1.1	3.2	27	71	23	8.4	2.4	.00	.00	.00
6	.00	.00	1.2	3.2	28	58	21	8.0	2.2	.00	.00	.00
7	.00	.00	1.2	3.2	18	45	21	8.0	2.0	.00	.00	.00
8	.00	.00	1.2	3.4	14	39	19	8.0	1.8	.00	.00	.00
9	.00	.00	1.2	3.2	12	35	18	7.9	1.7	.00	.00	.00
10	.00	.00	1.3	3.2	10	32	19	7.7	1.7	.00	.00	.00
11	.00	.00	1.3	3.2	8.7	30	18	7.3	1.6	.00	.00	.00
12	.00	.00	1.7	3.2	8.0	34	17	6.8	1.6	.00	.00	.00
13	.00	.00	5.0	3.2	7.8	54	17	6.4	1.5	.00	.00	.00
14	.00	.00	10	3.2	7.6	38	16	6.3	1.4	.00	.00	.00
15	.00	.00	4.5	3.2	7.3	34	15	6.3	1.4	.00	.00	.00
16	.00	.00	2.7	5.0	7.0	32	15	7.5	1.3	.00	.00	.00
17	.00	.00	2.4	28	7.0	30	19	8.6	1.2	.00	.00	.00
18	.00	.00	2.0	10	7.0	28	19	7.1	1.3	.00	.00	.00
19	.00	.24	2.0	17	8.7	27	17	7.1	1.3	.00	.00	.00
20	.00	.56	1.9	13	185	26	16	7.3	1.2	.00	.00	.00
21	.00	.62	1.8	8.2	117	24	15	6.6	1.1	.00	.00	.00
22	.00	.59	1.8	12	100	23	14	6.7	1.1	.00	.00	.00
23	.00	.67	2.2	8.8	59	23	14	7.2	1.1	.00	.00	.00
24	.00	.77	2.0	6.2	45	21	14	6.6	1.1	.00	.00	.00
25	.00	.85	1.8	20	39	20	13	6.3	1.3	.00	.00	.00
26	.00	.85	1.7	24	39	20	13	6.2	1.7	.00	.00	.00
27	.00	.85	1.6	12	37	19	12	5.9	1.5	.00	.00	.00
28	.00	.91	1.8	24	36	29	12	6.1	1.5	.00	.00	.00
29	.00	1.0	1.9	16	34	29	11	5.6	1.1	.00	.00	.00
30	.00	1.1	2.0	11	---	22	10	5.3	.75	.00	.00	.00
31	.00	---	2.3	9.1	---	20	---	5.1	---	.00	.00	---
TOTAL	0.00	9.01	65.9	271.3	905.1	978	530	224.0	52.85	0.72	0.00	0.00
MEAN	.000	.30	2.13	8.75	31.2	31.5	17.7	7.23	1.76	.023	.000	.000
MAX	.00	1.1	10	28	185	71	38	10	4.8	.45	.00	.00
MIN	.00	.00	1.0	2.6	7.0	19	10	5.1	.75	.00	.00	.00
AC-FT	.00	18	131	538	1800	1940	1050	444	105	1.4	.00	.00

TULARE LAKE BASIN

11199500 WHITE RIVER NEAR DUCOR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.41	2.19	5.40	11.7	17.2	33.8	20.9	11.3	4.14	.86	.24	.20
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1943 - 1996

ANNUAL TOTAL	5391.23		3036.88									
ANNUAL MEAN	14.8		8.30							9.12		
HIGHEST ANNUAL MEAN										44.5		1943
LOWEST ANNUAL MEAN										.58		1977
HIGHEST DAILY MEAN	298	Mar 11				185	Feb 20			1320	Mar 9	1943
LOWEST DAILY MEAN	.00	Aug 14				.00	Oct 1			.00	Oct 1	1942
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 14				.00	Oct 1			.00	Oct 1	1942
INSTANTANEOUS PEAK FLOW						340	Feb 20			2300	Mar 9	1943
INSTANTANEOUS PEAK STAGE						3.03	Feb 20					
ANNUAL RUNOFF (AC-FT)	10690					6020				6610		
10 PERCENT EXCEEDS	38					26				20		
50 PERCENT EXCEEDS	5.7					1.6				1.9		
90 PERCENT EXCEEDS	.00					.00				.00		

TULARE LAKE BASIN

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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 sea level, from topographic map.

REMARKS.--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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	2245	350	5.01	Mar. 5	1015	326	4.90
Feb. 20	0400	2,260	8.53				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	5.6	7.2	13	47	81	75	45	23	10	3.8	1.1
2	4.9	7.0	7.3	13	36	79	136	43	21	9.2	3.5	.85
3	4.9	7.7	5.8	12	31	78	91	43	22	8.7	3.8	.74
4	4.7	7.0	6.4	12	30	87	82	41	20	8.3	2.7	1.5
5	5.1	7.2	7.7	12	116	257	74	39	19	8.3	2.3	1.2
6	4.7	6.3	7.9	11	75	171	70	40	18	7.4	3.9	1.7
7	3.9	6.7	8.3	12	54	137	67	38	17	5.9	4.2	1.9
8	2.2	6.5	8.5	11	45	118	64	38	15	7.4	3.4	1.1
9	3.8	6.2	8.6	11	40	111	62	37	13	7.6	2.8	1.0
10	4.7	6.7	8.1	10	36	101	63	36	15	7.2	2.5	.95
11	4.2	7.3	7.7	11	32	94	62	34	15	7.4	1.4	1.9
12	4.3	7.0	12	11	30	108	60	31	15	8.0	1.0	1.8
13	5.1	5.5	32	10	28	132	59	32	15	6.8	2.1	2.3
14	3.5	6.4	33	11	26	108	57	31	16	4.3	1.8	2.7
15	3.3	5.8	18	11	26	98	55	31	15	5.6	1.7	3.2
16	4.1	5.8	16	44	25	92	60	38	12	5.5	1.7	3.3
17	5.2	6.2	14	119	24	88	72	38	14	5.6	1.9	3.7
18	5.7	6.0	13	33	23	84	73	31	13	6.0	.96	3.7
19	5.2	5.3	12	89	41	80	63	32	13	6.2	.83	3.2
20	4.9	4.2	12	43	1080	77	59	34	12	6.0	1.3	3.3
21	4.1	6.0	12	35	417	74	58	30	12	4.7	1.9	3.0
22	3.0	6.5	11	33	286	72	55	31	12	5.3	1.8	2.0
23	5.0	7.1	12	28	160	70	53	32	10	5.3	1.8	1.9
24	5.5	7.1	12	23	128	67	51	30	12	4.8	1.9	3.0
25	5.5	6.9	11	88	110	65	51	28	12	4.4	.98	2.7
26	5.4	6.8	11	55	101	62	50	26	14	4.3	.99	2.1
27	5.4	7.6	11	47	89	60	49	28	15	4.4	.97	2.3
28	4.9	7.8	11	98	87	81	48	28	14	3.4	2.3	2.1
29	3.5	7.6	11	50	84	93	46	25	12	3.7	2.3	1.1
30	4.2	7.4	11	37	---	76	45	24	10	4.4	2.2	1.6
31	5.2	---	13	35	---	69	---	25	---	4.0	1.9	---
TOTAL	140.4	197.2	371.5	1028	3307	2970	1910	1039	446	190.1	66.63	62.94
MEAN	4.53	6.57	12.0	33.2	114	95.8	63.7	33.5	14.9	6.13	2.15	2.10
MAX	5.7	7.8	33	119	1080	257	136	45	23	10	4.2	3.7
MIN	2.2	4.2	5.8	10	23	60	45	24	10	3.4	.83	.74
AC-FT	278	391	737	2040	6560	5890	3790	2060	885	377	132	125

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.78	12.2	20.2	44.2	65.8	81.5	63.8	40.2	20.8	8.37	3.70	3.22
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1968 - 1996

ANNUAL TOTAL	16333.4	11728.77	
ANNUAL MEAN	44.7	32.0	30.6
HIGHEST ANNUAL MEAN			143 1983
LOWEST ANNUAL MEAN			4.29 1977
HIGHEST DAILY MEAN	605 Mar 11	1080 Feb 20	1610 Feb 25 1969
LOWEST DAILY MEAN	2.2 Oct 8	.74 Sep 3	.00 Jun 24 1972
ANNUAL SEVEN-DAY MINIMUM	3.5 Sep 19	1.3 Aug 31	.00 Jun 30 1972
INSTANTANEOUS PEAK FLOW		2260 Feb 20	3340 Feb 24 1969
INSTANTANEOUS PEAK STAGE		8.53 Feb 20	9.85 Feb 24 1969
ANNUAL RUNOFF (AC-FT)	32400	23260	22180
10 PERCENT EXCEEDS	112	80	69
50 PERCENT EXCEEDS	28	12	11
90 PERCENT EXCEEDS	4.9	2.2	.73

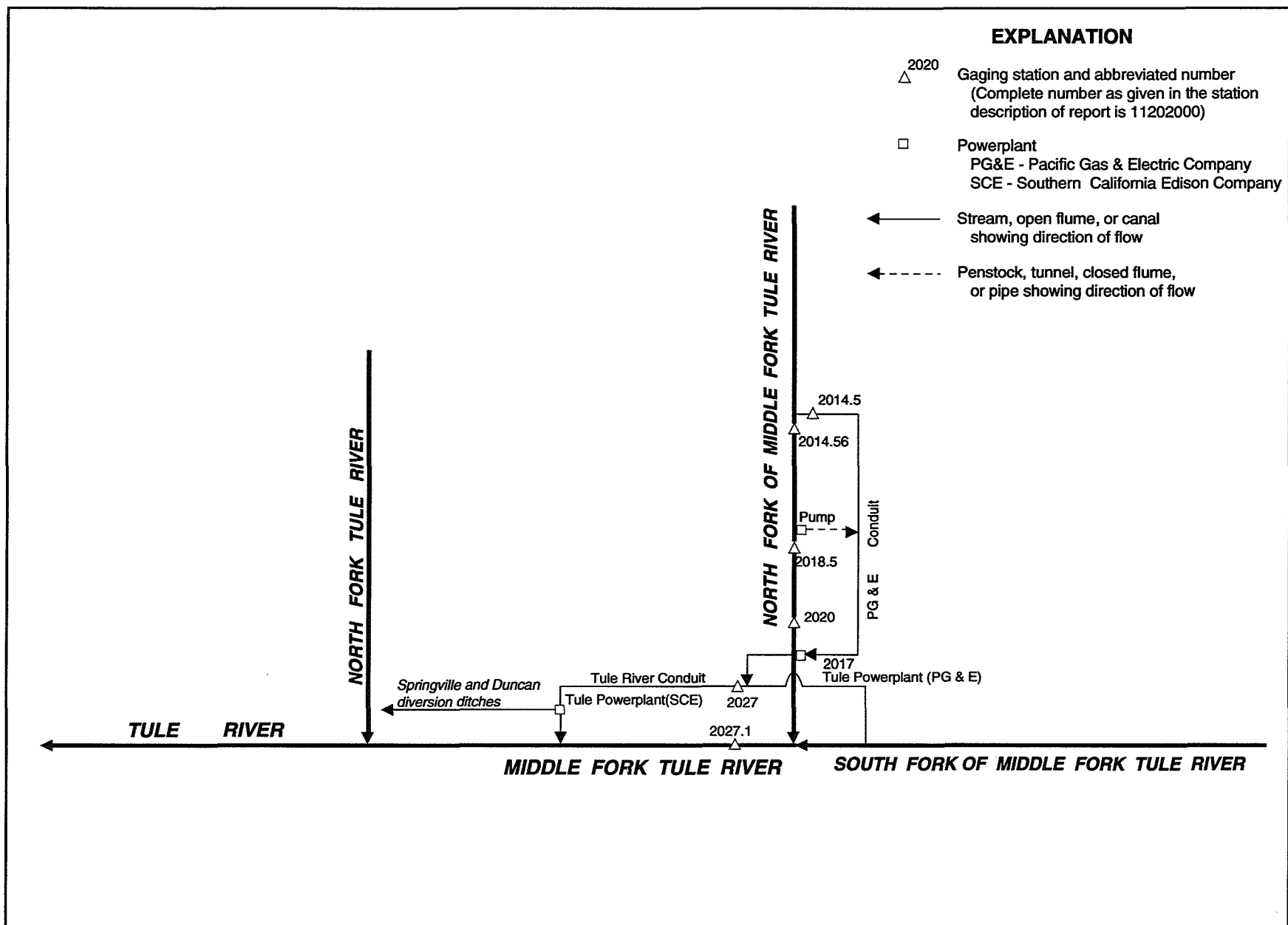


Figure 24. Diversions and storage in Tule River basin.

TULARE LAKE BASIN

11201450 PACIFIC GAS & ELECTRIC CO. TULE RIVER CONDUIT BELOW DIVERSION DAM, NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°11'32", long 118°39'24", in SW 1/4 SE 1/4 sec. 7, T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on left bank 75 ft downstream from diversion dam and 11 mi east of Springville.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,040 ft above sea level, from topographic map.

REMARKS.--Water is returned to river 3.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule 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, 63 ft³/s, many days in 1995, minimum daily, 0.17 ft³/s, Aug. 8, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	7.6	6.1	12	30	50	59	62	60	29	16	9.7
2	4.5	7.7	6.1	11	27	48	61	62	60	29	16	9.6
3	.29	7.3	6.0	11	24	49	60	62	60	28	16	9.5
4	.26	7.2	6.0	11	32	55	60	62	60	27	16	9.7
5	.19	7.2	6.1	10	39	59	60	62	60	26	6.2	9.9
6	.19	7.3	6.2	10	58	57	60	61	60	25	.31	9.9
7	.19	7.2	6.4	9.9	58	57	61	61	60	24	.21	9.7
8	.19	7.0	6.4	9.9	59	58	61	61	60	24	.17	9.5
9	.21	7.0	6.1	9.9	58	60	61	61	59	23	.71	9.4
10	.24	7.2	5.9	9.8	57	60	61	61	59	23	.56	9.2
11	3.4	7.0	7.8	9.4	56	60	61	61	59	23	.52	8.4
12	8.4	6.9	33	9.3	55	60	61	62	59	23	.51	8.0
13	8.1	6.8	37	9.3	53	59	61	62	58	24	.51	8.9
14	7.7	6.8	21	9.3	53	58	61	62	56	22	.49	10
15	7.6	6.7	16	9.2	52	58	61	62	54	21	.58	10
16	7.6	6.6	14	3.3	52	59	61	62	49	21	.74	10
17	7.2	6.5	12	21	51	60	62	61	46	21	.78	9.9
18	7.1	6.4	11	30	48	60	62	61	44	21	.78	9.3
19	7.3	6.4	10	43	56	60	61	61	42	20	.78	8.8
20	7.1	6.2	9.6	27	48	60	61	61	40	20	.79	8.6
21	7.2	6.3	9.1	25	59	60	61	61	39	19	.77	8.8
22	7.5	6.3	9.2	22	61	61	61	61	37	19	.76	8.9
23	7.4	6.2	10	20	60	60	61	61	36	18	.74	9.0
24	7.4	6.1	9.1	19	59	59	61	61	35	18	.74	8.9
25	7.4	6.1	9.0	25	58	59	62	61	34	18	.73	8.7
26	7.4	6.3	9.0	22	56	58	62	60	35	17	.73	8.4
27	7.2	6.6	9.0	25	56	58	62	61	34	17	.68	8.2
28	7.1	6.6	8.8	32	55	59	62	61	33	17	.61	8.0
29	7.2	6.5	8.9	25	55	58	62	61	32	17	3.4	7.9
30	7.1	6.4	11	22	---	58	62	60	30	16	9.0	6.6
31	7.2	---	13	30	---	58	---	60	---	16	9.2	---
TOTAL	169.86	202.4	338.8	542.3	1485	1795	1832	1898	1450	666	106.00	271.4
MEAN	5.48	6.75	10.9	17.5	51.2	57.9	61.1	61.2	48.3	21.5	3.42	9.05
MAX	12	7.7	37	43	61	61	62	62	60	29	16	10
MIN	.19	6.1	5.9	3.3	24	48	59	60	30	16	.17	6.6
AC-FT	337	401	672	1080	2950	3560	3630	3760	2880	1320	210	538

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1996, BY WATER YEAR (WY)

MEAN	4.41	5.40	8.69	22.2	46.1	57.8	60.7	61.8	55.6	40.4	16.3	12.8
MAX	5.48	6.75	10.9	26.9	51.2	57.9	61.1	62.4	62.8	59.3	29.2	16.5
(WY)	1996	1996	1996	1995	1996	1996	1996	1995	1995	1995	1995	1995
MIN	3.35	4.05	6.46	17.5	40.9	57.6	60.3	61.2	48.3	21.5	3.42	9.05
(WY)	1995	1995	1995	1996	1995	1995	1995	1996	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1995 - 1996
ANNUAL TOTAL	13342.36	10756.76	
ANNUAL MEAN	36.6	29.4	32.6
HIGHEST ANNUAL MEAN			35.8
LOWEST ANNUAL MEAN			29.4
HIGHEST DAILY MEAN	63 Apr 5	62 Apr 17	63 Apr 5 1995
LOWEST DAILY MEAN	.19 Oct 5	.17 Aug 8	.17 Aug 8 1996
ANNUAL SEVEN-DAY MINIMUM	.21 Oct 4	.21 Oct 4	.21 Oct 4 1995
ANNUAL RUNOFF (AC-FT)	26460	21340	23600
10 PERCENT EXCEEDS	63	61	62
50 PERCENT EXCEEDS	38	21	28
90 PERCENT EXCEEDS	6.6	6.0	3.4

TULARE LAKE BASIN

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11201456 NORTH FORK OF MIDDLE FORK TULE RIVER BELOW DIVERSION DAM, NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°11'33", long 118°39'25", in SW 1/4 SE 1/4 sec. 7, T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on left bank 375 ft downstream from diversion dam, 0.3 mi upstream from Hossack Creek, and 11 mi east of Springville.

DRAINAGE AREA.--30.9 mi².

PERIOD OF RECORD.--October 1994 to current year (low flow records only).

GAGE.--Water-stage recorder and sharp-crested V-notch weir in concrete control. Elevation of gage is 4,000 ft above sea level, from topographic map.

REMARKS.--No records computed above 80 ft³/s. Most of the flow is diverted at the diversion dam to Pacific Gas and Electric Co. Tule River conduit (station 11201450). Water is returned to river 3.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.1	5.2	5.9	6.2	5.0	56	---	39	5.2	3.7	4.3
2	11	5.1	5.3	5.8	6.0	4.9	59	---	42	5.2	3.7	4.2
3	15	5.1	5.3	5.8	5.7	4.9	45	---	45	5.1	3.7	4.1
4	15	5.1	5.3	5.7	---	26	41	---	46	5.0	3.6	4.1
5	15	5.2	5.4	5.6	---	60	43	---	48	5.0	12	4.1
6	14	5.2	5.3	5.6	64	35	50	---	46	4.9	17	4.0
7	14	5.2	5.2	5.6	36	28	58	---	43	4.9	17	4.0
8	14	5.1	5.2	5.6	30	27	67	---	38	4.8	16	3.9
9	14	5.2	5.2	5.5	26	33	70	---	35	4.8	15	4.0
10	14	5.2	5.2	5.4	18	33	64	---	30	4.8	15	4.0
11	11	5.1	5.3	5.4	15	34	57	---	24	4.8	15	4.4
12	6.4	5.1	27	5.4	12	37	52	---	18	4.8	16	4.7
13	6.1	5.1	10	5.4	8.8	32	47	---	14	4.8	16	4.8
14	5.8	5.1	5.3	5.4	8.5	27	47	---	11	4.7	15	4.9
15	5.5	5.1	5.1	5.4	7.0	24	52	---	8.2	4.6	14	4.8
16	5.6	5.1	5.0	---	6.8	23	79	---	7.2	4.6	14	4.8
17	5.8	5.2	4.9	49	6.4	29	79	---	6.9	4.4	14	4.7
18	5.4	5.2	5.1	7.9	5.6	41	---	---	6.7	4.0	13	4.7
19	5.0	5.2	5.2	11	---	54	63	---	6.6	4.0	13	4.8
20	5.1	5.2	5.2	6.9	---	61	54	---	6.4	3.9	13	4.7
21	5.2	5.2	5.3	6.1	---	64	48	77	6.3	3.9	13	4.5
22	5.2	5.2	5.5	5.7	---	63	46	68	6.2	3.9	13	4.3
23	5.2	5.2	5.6	5.5	60	52	51	60	6.1	3.9	13	4.2
24	5.1	5.2	5.5	5.3	44	43	61	52	6.0	3.8	13	4.1
25	5.1	5.2	5.5	5.6	34	37	---	45	5.9	3.8	12	4.2
26	5.1	5.2	5.5	5.4	25	33	---	42	6.0	3.8	12	4.5
27	5.0	5.1	5.5	6.0	16	32	---	41	5.9	3.8	12	4.6
28	5.0	5.1	5.5	6.6	9.9	37	---	40	5.7	3.8	12	4.5
29	5.0	5.1	5.5	5.9	6.3	30	---	40	5.4	3.7	9.8	4.5
30	5.0	5.1	5.7	5.7	---	28	---	37	5.3	3.7	4.8	5.4
31	5.1	---	6.0	6.3	---	30	---	37	---	3.7	4.7	---
TOTAL	249.0	154.5	191.8	---	---	1067.8	---	---	579.8	136.1	369.0	132.8
MEAN	8.03	5.15	6.19	---	---	34.4	---	---	19.3	4.39	11.9	4.43
MAX	15	5.2	27	---	---	64	---	---	48	5.2	17	5.4
MIN	5.0	5.1	4.9	---	---	4.9	---	---	5.3	3.7	3.6	3.9
AC-FT	494	306	380	---	---	2120	---	---	1150	270	732	263

11201850 NORTH FORK OF MIDDLE FORK TULE RIVER BELOW DOYLE SPRINGS DIVERSION, NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°11'19", long 118°40'01", unsurveyed, in T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on right bank 600 ft downstream from diversion, 0.2 mi upstream from Meadow Creek, and 10 mi east of Springville.

DRAINAGE AREA.--34.1 mi².

PERIOD OF RECORD.--October 1994 to current year (low-flow records only).

GAGE.--Water-stage recorder and broad-crested weir in concrete control. Elevation of gage is 3,740 ft above sea level, from topographic map.

REMARKS.--No records computed above 5 ft³/s. Pacific Gas and Electric Co. pumps up to 5 ft³/s from river at Doyle Springs diversion to Tule River conduit (station 11201450); water is returned to river 2.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule 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.

NOTE.--All daily discharges greater than 5 ft³/s this year.

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 near Springville (station 11201700).

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 sea level, from topographic map.

REMARKS.--Pacific Gas and Electric Co. conduit diverts 2.5 mi upstream from station; water is returned to river 1.1 mi downstream after passing through Tule River Powerplant. See schematic diagram of Tule River basin. For records of combined discharge of river and powerplant, see station 11202001.

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, 6.4 ft³/s, Sept. 5-8, 1993.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	6.8	6.4	7.4	12	14	67	193	42	8.4	5.3	5.7
2	12	6.8	6.4	7.4	11	13	93	199	46	8.1	5.2	5.6
3	20	7.0	6.7	7.0	10	13	64	191	50	8.1	5.2	5.5
4	20	7.3	6.6	7.0	68	34	56	169	52	8.4	5.2	5.4
5	20	8.4	6.4	7.0	319	127	57	153	55	8.2	13	5.5
6	20	9.0	6.4	7.0	100	65	65	145	53	7.7	22	5.3
7	19	7.1	6.4	7.0	50	47	75	142	48	7.6	22	4.9
8	19	6.9	6.4	7.0	37	40	87	135	47	7.8	21	4.9
9	19	7.6	6.4	6.7	33	46	94	129	41	7.7	20	4.9
10	19	8.3	6.4	6.4	23	46	88	125	34	7.5	20	4.8
11	17	6.7	6.6	6.4	19	49	77	129	26	7.5	20	5.0
12	12	6.7	26	6.4	17	59	71	135	20	7.6	20	5.7
13	10	6.7	30	6.4	12	52	63	143	17	7.6	21	5.8
14	8.2	6.7	9.3	6.4	12	43	61	149	14	7.3	20	6.3
15	9.0	6.7	7.6	6.4	11	35	67	140	12	7.3	19	6.4
16	9.0	6.8	7.5	99	9.8	31	100	204	11	7.2	19	6.2
17	7.4	6.7	7.3	93	10	35	112	164	10	6.9	19	6.0
18	7.0	6.8	7.0	17	9.1	52	118	151	9.7	6.0	18	5.8
19	6.9	7.1	7.0	32	139	71	89	132	9.6	5.9	18	5.8
20	7.0	7.1	7.0	14	531	82	76	113	9.5	5.7	19	5.7
21	7.3	6.8	6.8	13	241	86	66	97	9.6	5.7	18	5.5
22	8.9	7.4	6.9	11	164	87	61	85	9.4	5.6	18	5.6
23	8.0	6.7	7.3	9.3	96	73	66	76	9.4	5.6	18	6.1
24	6.9	6.7	7.0	8.7	69	59	79	64	9.4	5.5	18	5.8
25	6.8	7.0	7.0	18	52	50	102	53	9.7	5.4	17	6.5
26	6.8	7.1	7.0	12	37	44	140	46	9.4	5.4	17	6.4
27	6.7	6.7	7.1	17	27	42	164	47	9.4	5.5	17	6.0
28	6.7	6.6	7.0	23	20	52	168	45	9.3	5.5	17	6.1
29	7.3	6.4	7.0	13	16	41	172	45	8.8	5.3	16	7.3
30	6.7	6.4	7.0	11	---	37	181	42	8.5	5.3	8.2	6.1
31	6.7	---	7.2	12	---	39	---	40	---	5.3	6.1	---
TOTAL	348.1	211.0	257.1	504.9	2154.9	1564	2779	3681	699.7	208.6	502.2	172.6
MEAN	11.2	7.03	8.29	16.3	74.3	50.5	92.6	119	23.3	6.73	16.2	5.75
MAX	20	9.0	30	99	531	127	181	204	55	8.4	22	7.3
MIN	6.7	6.4	6.4	6.4	9.1	13	56	40	8.5	5.3	5.2	4.8
AC-FT	690	419	510	1000	4270	3100	5510	7300	1390	414	996	342

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.01	12.0	26.3	24.2	26.9	34.3	50.6	83.0	46.4	10.5	4.32	3.36
MAX	19.1	362	786	266	182	337	229	381	316	121	16.2	22.7
(WY)	1953	1951	1967	1980	1986	1943	1969	1969	1983	1983	1996	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	20717.5		13083.1			
ANNUAL MEAN	56.8		35.7		26.8	
HIGHEST ANNUAL MEAN					129	
LOWEST ANNUAL MEAN					1.25	
HIGHEST DAILY MEAN	523	Apr 30	531	Feb 20	13300	Dec 6 1966
LOWEST DAILY MEAN	5.0	Sep 14	4.8	Sep 10	.06	Nov 2 1979
ANNUAL SEVEN-DAY MINIMUM	5.0	Sep 14	5.0	Sep 5	.20	Aug 24 1964
INSTANTANEOUS PEAK FLOW			1070	Feb 20	16900	Dec 6 1966
INSTANTANEOUS PEAK STAGE			6.14	Feb 20	13.83	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	41090		25950		19400	
10 PERCENT EXCEEDS	187		99		76	
50 PERCENT EXCEEDS	10		11		4.8	
90 PERCENT EXCEEDS	5.7		6.0		.80	

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NORTH FORK OF MIDDLE FORK TULE RIVER AND PACIFIC GAS & ELECTRIC CO. TULE RIVER POWERPLANT NEAR SPRINGVILLE
COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

ANNUAL TOTAL	35713		25655					
ANNUAL MEAN	97.8		70.1			57.8		
HIGHEST ANNUAL MEAN						157		1983
LOWEST ANNUAL MEAN						15.1		1977
HIGHEST DAILY MEAN	540	Apr 30	599	Feb 20	13300		Dec 6	1966
LOWEST DAILY MEAN	11	Dec 26	11	Dec 26	5.0		Oct 1	1987
ANNUAL SEVEN-DAY MINIMUM	17	Dec 5	17	Sep 10	5.2		Oct 1	1987
INSTANTANEOUS PEAK FLOW					16900		Dec 6	1966
ANNUAL RUNOFF (AC-FT)	70840		50890		41880			
10 PERCENT EXCEEDS	254		164		133			
50 PERCENT EXCEEDS	55		32		28			
90 PERCENT EXCEEDS	18		17		13			

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA

LOCATION.--Lat 36°09'41", long 118°42'31", unsurveyed, T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, Sequoia National Forest, on right bank 700 ft downstream from confluence of North Fork Middle Fork Tule River and South Fork Middle Fork Tule River, and 6.5 mi northeast of Springville.

DRAINAGE AREA.--85.3 mi².

PERIOD OF RECORD.--October 1988 to September 1990, October 1991 to current year.

REVISED RECORD.--WDR CA-95-3: 1993(M).

GAGE.--Water-stage recorder and V-notch sharp-crested weir in concrete control on river; water-stage recorder and metal flume for conduit diversion. Elevation of gage is 2,370 ft above sea level, from topographic map.

REMARKS.--Southern California Edison Co.'s Tule River Conduit (station 11202700) diverts from the right bank of Middle Fork Tule River 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. 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 station 11202711.

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.--River only; maximum discharge, 2,900 ft³/s, Feb. 20, 1996, gage height, 6.05 ft; minimum daily, 4.9 ft³/s, Nov. 2, 1994.
Combined flow, maximum daily discharge, 1,240 ft³/s, Feb. 20, 1996; minimum daily, 6.5 ft³/s, Dec. 12, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	30	5.4	9.3	67	101	190	340	127	34	11	10
2	5.3	32	5.4	7.4	51	98	249	355	125	31	11	11
3	5.3	31	5.6	6.5	42	97	183	344	130	28	11	11
4	5.3	30	5.9	6.2	139	151	165	305	130	26	11	11
5	5.3	28	6.3	5.9	550	349	163	278	133	27	10	11
6	5.5	30	6.0	5.7	224	203	171	266	128	24	11	11
7	5.6	30	5.8	5.5	153	168	182	262	124	22	11	10
8	5.5	28	5.5	5.9	131	153	194	252	118	21	11	10
9	5.5	27	5.5	5.0	122	157	201	242	114	21	11	10
10	5.5	30	5.5	5.4	107	153	193	235	105	20	11	10
11	5.3	30	6.2	5.7	98	154	178	238	98	20	11	10
12	5.3	28	87	5.1	94	174	172	246	94	21	11	10
13	7.5	15	131	5.1	84	163	162	261	89	21	11	10
14	9.1	5.3	39	5.2	84	144	159	272	84	18	11	10
15	8.4	5.3	19	5.2	84	133	166	264	78	17	11	10
16	22	5.6	15	144	80	128	221	377	73	16	11	10
17	27	5.9	11	149	80	133	256	303	72	16	11	10
18	25	5.9	8.8	51	75	151	264	276	67	15	11	9.9
19	24	5.9	7.1	120	404	171	212	254	60	15	11	10
20	24	5.7	6.2	48	1220	182	190	226	57	13	11	10
21	24	5.6	5.7	42	585	184	174	206	55	17	11	10
22	25	5.6	5.8	31	413	186	165	190	53	21	11	10
23	26	5.9	7.3	22	257	170	170	175	50	11	11	10
24	25	5.8	6.3	20	205	152	186	162	47	11	11	10
25	26	6.0	6.7	65	177	143	213	151	45	11	10	11
26	28	6.1	5.9	43	150	136	263	142	46	11	10	11
27	29	6.4	5.4	61	130	133	299	140	48	11	11	11
28	28	5.9	5.4	94	117	161	303	137	46	11	11	11
29	28	5.7	5.4	51	108	142	309	132	40	11	11	11
30	27	5.6	6.2	36	---	132	321	129	37	11	9.7	11
31	28	---	10	59	---	133	---	126	---	11	10	---
TOTAL	509.0	467.2	457.3	1125.1	6031	4835	6274	7286	2473	563	335.7	310.9
MEAN	16.4	15.6	14.8	36.3	208	156	209	235	82.4	18.2	10.8	10.4
MAX	29	32	131	149	1220	349	321	377	133	34	11	11
MIN	5.3	5.3	5.4	5.0	42	97	159	126	37	11	9.7	9.9
AC-FT	1010	927	907	2230	11960	9590	12440	14450	4910	1120	666	617

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.3	10.3	8.41	31.2	55.7	95.5	106	137	89.2	35.1	14.2	13.0
MAX	30.2	15.6	14.8	78.4	208	239	209	343	365	151	25.2	15.5
(WY)	1993	1996	1996	1993	1996	1995	1996	1995	1995	1995	1995	1994
MIN	6.78	6.04	5.75	6.41	8.21	15.5	32.9	22.6	12.1	11.2	10.8	10.4
(WY)	1989	1995	1995	1994	1990	1992	1990	1992	1992	1994	1996	1996

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1989 - 1996			
ANNUAL TOTAL	45582.8				30667.2							
ANNUAL MEAN	125				83.8				51.0			
HIGHEST ANNUAL MEAN									124			
LOWEST ANNUAL MEAN									15.6			
HIGHEST DAILY MEAN	1080				1220				1220			
LOWEST DAILY MEAN	5.3				5.0				4.9			
ANNUAL SEVEN-DAY MINIMUM	5.4				5.2				5.2			
INSTANTANEOUS PEAK FLOW					2900				2900			
INSTANTANEOUS PEAK STAGE					6.05				6.05			
ANNUAL RUNOFF (AC-FT)	90410				60830				36970			
10 PERCENT EXCEEDS	341				222				148			
50 PERCENT EXCEEDS	56				28				14			
90 PERCENT EXCEEDS	5.9				5.7				6.4			

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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	34	31	43	104	136	225	377	162	70	41	29
2	37	36	31	41	88	133	284	392	160	67	40	30
3	38	35	32	40	78	132	218	381	165	64	40	29
4	38	34	31	40	174	186	200	342	165	62	40	29
5	38	32	31	40	582	384	198	315	168	63	36	30
6	37	34	32	39	259	240	206	303	163	60	40	31
7	38	34	32	38	189	204	215	299	159	58	40	29
8	37	32	32	38	167	188	229	289	153	58	38	29
9	37	31	31	38	158	193	238	279	149	58	36	29
10	37	34	30	37	143	189	230	272	140	57	36	28
11	36	34	32	37	134	189	215	275	133	57	36	28
12	36	32	120	36	130	210	209	283	129	58	36	28
13	37	33	163	36	120	199	198	298	124	57	39	30
14	35	33	74	35	120	180	195	308	119	54	36	33
15	35	33	54	35	120	169	202	301	113	53	35	34
16	35	33	49	176	116	164	258	414	108	52	34	34
17	32	33	45	187	115	169	293	340	106	51	33	33
18	30	32	43	89	110	187	301	313	99	50	33	32
19	29	32	41	158	437	207	249	291	95	50	33	31
20	29	32	39	86	1240	218	227	263	92	48	32	30
21	29	32	39	81	616	220	210	243	90	48	32	30
22	30	32	38	69	446	222	201	227	88	40	32	29
23	31	32	41	60	291	206	207	212	85	45	31	29
24	30	32	38	57	239	188	223	199	83	44	32	28
25	31	31	37	102	212	178	251	188	82	44	31	30
26	32	32	37	81	185	171	301	178	83	43	31	29
27	33	33	37	99	165	168	337	176	85	44	32	29
28	32	33	37	130	152	196	341	173	82	44	32	28
29	32	33	37	87	144	177	342	168	76	42	33	28
30	31	32	39	72	---	167	355	164	73	42	31	27
31	32	---	44	95	---	168	---	161	---	42	29	---
TOTAL	1054	985	1397	2202	7034	5938	7358	8425	3529	1625	1080	893
MEAN	34.0	32.8	45.1	71.0	243	192	245	272	118	52.4	34.8	29.8
MAX	40	36	163	187	1240	384	355	414	168	70	41	34
MIN	29	31	30	35	78	132	195	161	73	40	29	27
AC-FT	2090	1950	2770	4370	13950	11780	14590	16710	7000	3220	2140	1770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

MEAN	24.9	27.0	30.5	60.0	88.6	131	143	173	119	55.5	28.6	23.1
MAX	34.0	32.8	45.1	112	243	276	245	381	403	189	62.6	41.9
(WY)	1996	1996	1996	1993	1996	1995	1996	1995	1995	1995	1995	1995
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 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1989 - 1996		
ANNUAL TOTAL	57655			41520					
ANNUAL MEAN	158			113			75.2		
HIGHEST ANNUAL MEAN							155		
LOWEST ANNUAL MEAN							34.0		
HIGHEST DAILY MEAN	1100			1240			1240		
LOWEST DAILY MEAN	29			27			6.5		
ANNUAL SEVEN-DAY MINIMUM	30			28			13		
ANNUAL RUNOFF (AC-FT)	114400			82350			54460		
10 PERCENT EXCEEDS	379			258			186		
50 PERCENT EXCEEDS	93			55			37		
90 PERCENT EXCEEDS	32			31			18		

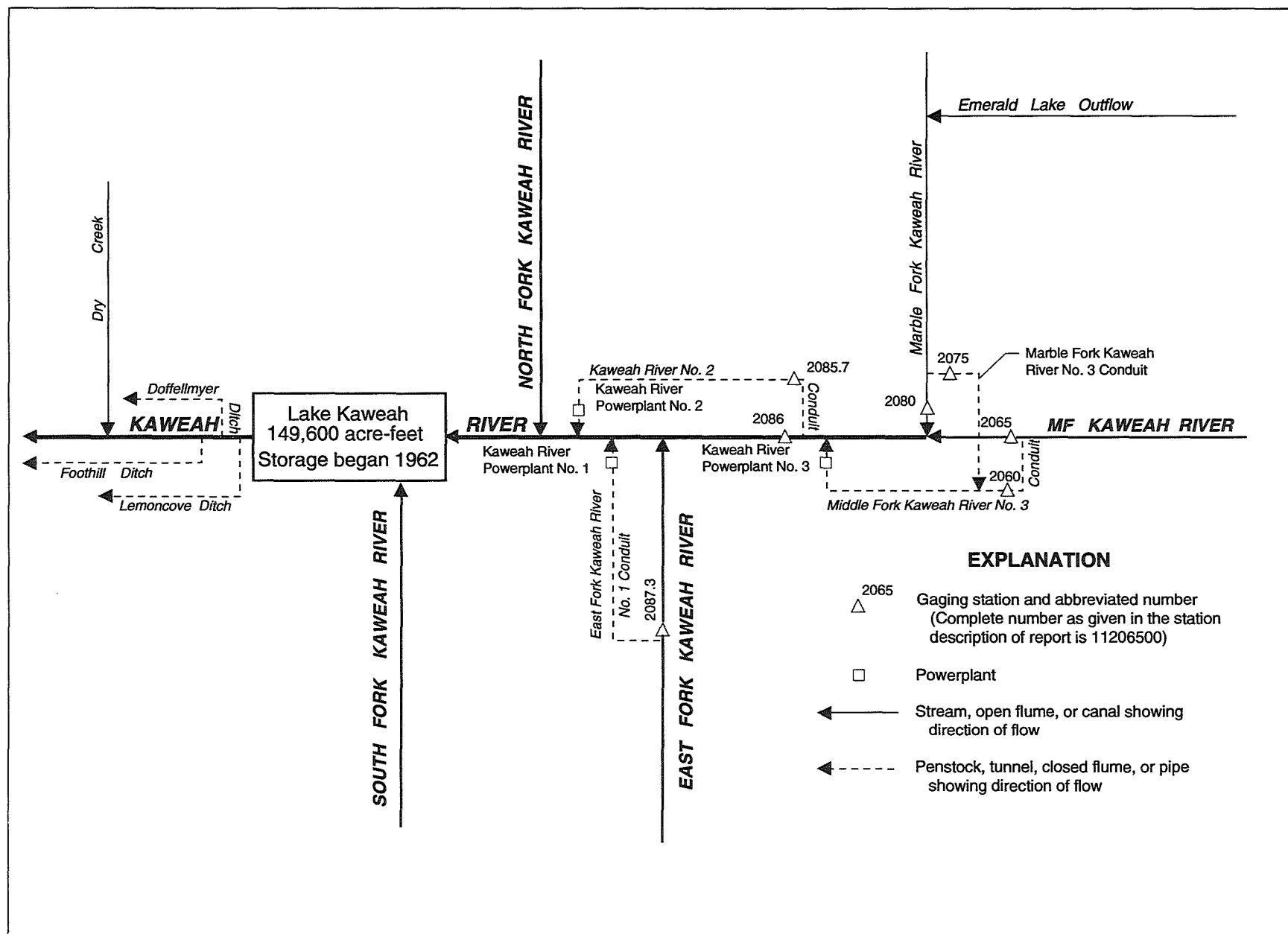


Figure 25. Diversions and storage in Kaweah River basin.

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.

CHEMICAL ANALYSES: June to September 1980.

SPECIFIC CONDUCTANCE: October 1979 to September 1981.

WATER TEMPERATURE: October 1979 to September 1981.

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 sea level, from topographic map. Prior to October 1955, at datum 0.70 ft higher.

REMARKS.--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. 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 station 11206501.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	11	17	57	128	292	815	529	184	42	16
2	12	11	11	16	47	125	285	814	616	203	e40	16
3	12	11	11	17	41	129	228	755	709	210	e35	16
4	12	11	11	16	393	249	214	683	764	190	e30	13
5	12	11	11	16	1180	282	219	659	810	177	e25	11
6	12	11	11	16	439	207	237	665	815	177	e23	11
7	12	11	11	16	283	192	275	674	788	174	e21	11
8	12	11	11	16	229	188	328	661	737	164	e21	11
9	12	11	11	16	202	207	360	634	729	157	e21	11
10	12	11	11	16	172	198	344	649	635	144	e21	11
11	16	11	11	16	154	194	304	721	537	174	e21	11
12	11	11	339	16	142	240	283	783	498	173	49	11
13	11	11	157	16	130	212	248	850	493	140	23	11
14	11	11	61	16	128	184	263	816	488	138	16	11
15	11	11	36	16	124	173	304	802	455	123	16	11
16	11	11	21	169	134	177	402	1370	424	110	16	11
17	11	11	13	139	128	202	398	799	382	91	16	11
18	11	11	11	58	111	245	389	708	352	79	16	11
19	11	11	10	129	580	279	289	627	343	69	16	11
20	11	11	10	60	886	293	256	578	329	62	16	11
21	11	11	10	58	469	302	235	541	298	60	16	11
22	11	11	10	43	370	297	231	446	257	57	16	11
23	11	11	11	37	302	250	270	419	264	55	16	11
24	11	11	10	34	249	216	348	351	259	57	16	11
25	11	11	10	61	212	201	465	305	221	57	16	11
26	11	11	10	42	179	189	630	296	176	56	16	11
27	11	11	11	55	158	191	698	345	145	50	16	11
28	11	11	13	91	147	218	707	374	124	50	16	11
29	11	11	16	48	136	185	734	405	138	45	16	11
30	11	11	17	41	---	181	785	396	165	43	16	11
31	11	---	19	66	---	194	---	444	---	42	16	---
TOTAL	356	330	916	1373	7782	6528	11021	19385	13480	3511	660	347
MEAN	11.5	11.0	29.5	44.3	268	211	367	625	449	113	21.3	11.6
MAX	16	11	339	169	1180	302	785	1370	815	210	49	16
MIN	11	11	10	16	41	125	214	296	124	42	16	11
AC-FT	706	655	1820	2720	15440	12950	21860	38450	26740	6960	1310	688

e Estimated.

TULARE LAKE BASIN

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11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.7	25.0	55.6	81.1	102	136	235	432	396	173	48.3	22.9
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1961 - 1996

ANNUAL TOTAL	95237	65689	
ANNUAL MEAN	261	179	144
HIGHEST ANNUAL MEAN			417
LOWEST ANNUAL MEAN			25.2
HIGHEST DAILY MEAN	1330	Apr 30	1370
LOWEST DAILY MEAN	10	Dec 19	10
ANNUAL SEVEN-DAY MINIMUM	10	Dec 19	10
INSTANTANEOUS PEAK FLOW			2460
INSTANTANEOUS PEAK STAGE			9.11
ANNUAL RUNOFF (AC-FT)	188900	130300	104100
10 PERCENT EXCEEDS	779	579	424
50 PERCENT EXCEEDS	113	57	32
90 PERCENT EXCEEDS	11	11	10

TULARE LAKE BASIN

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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	25	21	66	116	184	349	868	579	236	103	32
2	41	26	20	63	106	181	342	866	666	256	e101	31
3	39	25	20	66	100	185	284	807	760	263	e96	30
4	38	24	20	63	450	306	270	735	815	243	e91	29
5	37	24	21	60	1210	340	275	711	861	230	e85	30
6	36	24	21	59	483	265	293	717	866	230	e81	29
7	35	24	21	61	331	250	331	726	839	227	e75	28
8	34	23	21	61	285	246	384	713	788	216	e70	27
9	33	23	21	59	258	265	415	686	780	209	e67	27
10	32	23	20	55	228	256	396	701	686	195	e66	26
11	31	23	21	52	209	253	357	774	587	225	e63	25
12	30	22	387	54	197	299	338	836	548	224	96	25
13	30	22	208	55	185	271	303	900	543	191	79	25
14	28	22	120	53	183	243	316	853	538	189	65	30
15	28	22	94	53	179	232	355	822	505	173	62	29
16	28	22	77	216	190	236	453	1420	474	160	59	28
17	28	22	66	198	184	260	449	849	431	141	56	29
18	27	22	61	117	167	304	440	758	401	129	52	27
19	27	22	54	189	638	338	340	677	392	118	49	26
20	26	21	50	119	919	352	306	628	380	111	46	25
21	26	21	45	117	523	361	285	591	351	109	44	24
22	26	21	45	101	428	356	281	496	310	106	41	24
23	26	21	59	95	359	308	321	469	317	105	40	24
24	26	21	48	92	307	274	399	401	312	110	39	23
25	26	21	48	121	270	259	517	355	274	112	39	23
26	25	21	47	101	236	247	682	346	228	112	39	23
27	25	22	47	114	215	249	750	395	196	107	38	23
28	24	22	45	151	204	276	760	424	175	108	37	23
29	24	21	46	107	192	242	787	454	189	103	34	23
30	24	21	62	100	---	238	838	444	217	102	33	23
31	24	---	70	125	---	251	---	493	---	102	32	---
TOTAL	927	673	1906	2943	9350	8327	12616	20915	15008	5142	1878	791
MEAN	29.9	22.4	61.5	94.9	322	269	421	675	500	166	60.6	26.4
MAX	43	26	387	216	1210	361	838	1420	866	263	103	32
MIN	24	21	20	52	100	181	270	346	175	102	32	23
AC-FT	1840	1330	3780	5840	18550	16520	25020	41480	29770	10200	3730	1570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1996, BY WATER YEAR (WY)

	MEAN	32.7	48.5	96.2	114	142	180	283	480	443	205	71.5	39.7
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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1955 - 1996	
ANNUAL TOTAL	111427		80476			
ANNUAL MEAN	305		220		178	
HIGHEST ANNUAL MEAN					468	
LOWEST ANNUAL MEAN					53.5	
HIGHEST DAILY MEAN	1390		1420		10500	
LOWEST DAILY MEAN	20		20		7.0	
ANNUAL SEVEN-DAY MINIMUM	21		21		7.1	
INSTANTANEOUS PEAK FLOW					46800	
ANNUAL RUNOFF (AC-FT)	221000		159600		128900	
10 PERCENT EXCEEDS	836		631		475	
50 PERCENT EXCEEDS	169		111		85	
90 PERCENT EXCEEDS	24		23		17	

e Estimated.

11208600 KAWEAH RIVER BELOW NO. 2 CONDUIT, NEAR HAMMOND, CA

LOCATION.--Lat 36°29'04", long 118°50'06", in NW 1/4 NW 1/4 sec. 37, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, on right bank 0.4 mi upstream of confluence with East Fork Kaweah River, 1.9 mi northeast of Hammond, and 5.2 miles northeast of Three Rivers.

DRAINAGE AREA.--342 mi².

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder on river, acoustic-flow meter on minimum release discharge pipe; water-stage recorder for conduit diversion. Elevation of gage is 1,360 ft above sea level, from topographic map.

REMARKS.--River discharge is the combined flow of river gage and flow through pipe intake to Kaweah Powerplant No. 2. Kaweah River No. 2 conduit (station 11208570) diverts up to 130 ft³/s from right bank of river near diversion dam. Water is returned to Kaweah River 3.8 miles downstream of diversion and 1.9 miles upstream of confluence with North Fork Kaweah River. For records of combined discharges of river and conduit, see station 11208601. See schematic diagram of Kaweah River basin.

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

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 3,780 ft³/s, Feb. 19, 1996; minimum daily, 5.5 ft³/s, for several days in December 1994.

Combined flow, maximum daily discharge, 2,550 ft³/s, May 16, 1996; minimum daily 14 ft³/s, several days in September 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	11	72	92	207	497	1310	880	296	29	15
2	12	11	11	79	72	200	560	1290	995	327	27	12
3	12	11	11	60	62	212	424	1210	1120	342	23	12
4	12	12	11	23	438	331	386	1120	1200	301	21	11
5	12	12	11	22	1910	453	395	1100	1270	273	21	11
6	12	12	11	21	738	319	429	1120	1250	272	21	11
7	12	12	11	22	474	291	492	1130	1210	265	21	11
8	12	12	12	22	386	282	571	1100	1150	249	21	12
9	12	12	12	21	343	316	622	1040	1140	237	21	12
10	12	12	12	21	295	307	580	1080	997	216	21	12
11	12	11	11	21	264	305	526	1190	853	267	21	12
12	12	11	467	21	248	371	514	1270	780	299	21	12
13	11	11	338	21	219	337	458	1370	774	210	35	12
14	12	11	128	21	221	288	474	1290	765	243	52	12
15	12	11	62	21	219	268	535	1260	707	182	48	12
16	12	11	32	195	231	276	664	2500	655	160	29	12
17	12	12	19	272	232	317	677	1450	592	126	21	12
18	12	12	14	108	200	397	712	1210	548	111	21	12
19	12	11	11	205	e857	465	522	1090	540	92	21	12
20	12	11	12	103	e1520	495	457	1000	513	81	21	12
21	12	11	11	103	e785	512	415	931	471	74	21	12
22	12	12	12	78	e617	519	406	767	400	68	21	12
23	12	11	13	63	e498	430	472	724	416	62	21	12
24	12	12	11	58	e425	361	606	614	411	64	21	12
25	12	12	11	90	e359	337	784	530	353	64	21	12
26	12	12	11	66	e300	322	1030	506	262	62	21	12
27	12	11	11	78	e266	330	1140	598	230	51	21	12
28	11	11	11	142	e244	380	1160	654	198	54	21	12
29	11	11	12	76	e221	321	1200	705	218	43	21	12
30	11	11	15	61	---	313	1290	674	274	38	21	12
31	11	---	27	94	---	336	---	745	---	31	21	---
TOTAL	367	343	1352	2260	12736	10598	18998	32578	21172	5160	747	359
MEAN	11.8	11.4	43.6	72.9	439	342	633	1051	706	166	24.1	12.0
MAX	12	12	467	272	1910	519	1290	2500	1270	342	52	15
MIN	11	11	11	21	62	200	386	506	198	31	21	11
AC-FT	728	680	2680	4480	25260	21020	37680	64620	41990	10230	1480	712

e Estimated.

TULARE LAKE BASIN

11208600 KAWEAH RIVER BELOW NO. 2 CONDUIT, NEAR HAMMOND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.3	9.12	19.7	78.1	211	324	463	819	819	436	95.8	15.4
MAX	27.0	11.4	43.6	141	439	521	633	1051	1500	1131	252	26.3
(WY)	1994	1996	1996	1995	1996	1995	1996	1996	1995	1995	1995	1995
MIN	11.8	5.70	5.93	20.1	32.1	108	249	451	250	11.7	11.2	8.05
(WY)	1996	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1994 - 1996

ANNUAL TOTAL	160440	106670		
ANNUAL MEAN	440	291		
HIGHEST ANNUAL MEAN			276	
LOWEST ANNUAL MEAN			436	1995
HIGHEST DAILY MEAN	2100	Apr 30	99.2	1994
LOWEST DAILY MEAN	10	Jan 1	2500	May 16 1996
ANNUAL SEVEN-DAY MINIMUM	11	Oct 28	5.5	Dec 21 1994
INSTANTANEOUS PEAK FLOW			5.6	Dec 17 1994
ANNUAL RUNOFF (AC-FT)	318200	211600	3780	Feb 19 1996
10 PERCENT EXCEEDS	1310	950	3780	
50 PERCENT EXCEEDS	187	78	199600	
90 PERCENT EXCEEDS	11	11	876	
			62	
			7.3	

11208601 KAWEAH RIVER BELOW NO. 2 CONDUIT, NEAR HAMMOND, CA--Continued

KAWEAH RIVER BELOW NO. 2 CONDUIT AND KAWEAH RIVER NO. 2 CONDUIT, NEAR HAMMOND
COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	35	28	78	169	285	575	1380	958	375	105	35
2	53	36	27	79	149	277	638	1350	1070	406	102	36
3	51	35	27	73	138	290	500	1290	1190	421	97	35
4	50	34	27	94	516	409	462	1200	1280	379	93	33
5	48	34	28	91	1950	527	471	1180	1340	350	88	34
6	47	33	28	86	807	396	507	1200	1330	350	83	33
7	46	33	28	90	550	370	571	1210	1290	342	80	32
8	45	33	30	91	465	361	650	1180	1220	326	74	32
9	44	32	29	86	423	395	700	1120	1210	314	71	32
10	43	33	27	82	375	386	659	1160	1070	291	63	28
11	41	32	27	78	343	384	604	1270	910	348	68	28
12	30	31	515	80	327	450	592	1350	859	380	67	28
13	40	31	389	83	298	414	535	1440	854	289	86	27
14	39	30	181	81	300	365	551	1360	846	322	52	27
15	38	30	139	80	298	345	613	1340	787	261	48	26
16	29	30	109	263	310	354	743	2550	734	238	49	29
17	39	30	94	344	311	394	754	1470	670	204	53	31
18	38	30	78	179	278	474	790	1280	626	187	54	30
19	37	29	78	281	e937	543	599	1160	618	171	54	30
20	36	29	73	177	e1590	573	533	1070	591	159	51	30
21	36	29	66	176	e852	590	491	1010	549	151	50	28
22	36	29	67	148	e689	597	482	842	478	145	48	27
23	36	29	83	133	e574	507	549	800	494	139	46	27
24	36	29	70	129	e501	438	683	689	490	140	43	26
25	36	29	70	166	e435	414	860	606	431	139	43	25
26	36	29	69	142	e376	399	1110	582	339	137	43	25
27	35	30	70	155	e332	407	1210	674	306	125	30	24
28	34	30	66	221	e321	458	1230	729	275	128	27	24
29	33	29	68	153	e299	398	1270	781	297	116	40	24
30	33	28	85	138	---	390	1360	741	353	112	37	23
31	33	---	99	171	---	413	---	823	---	107	36	---
TOTAL	1234	931	2775	4228	14913	13003	21292	34837	23465	7552	1881	869
MEAN	39.8	31.0	89.5	136	514	419	710	1124	782	244	60.7	29.0
MAX	56	36	515	344	1950	597	1360	2550	1340	421	105	36
MIN	29	28	27	73	138	277	462	582	275	107	27	23
AC-FT	2450	1850	5500	8390	29580	25790	42230	69100	46540	14980	3730	1720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

MEAN	42.3	37.7	66.8	133	282	403	543	898	896	506	139	47.6
MAX	55.8	51.4	89.5	217	514	600	710	1124	1583	1220	334	94.2
(WY)	1995	1995	1996	1995	1996	1995	1996	1996	1995	1995	1995	1995
MIN	31.2	30.7	46.6	44.6	86.4	188	330	532	324	55.5	20.8	19.7
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1994 - 1996

ANNUAL TOTAL	185256	126980	
ANNUAL MEAN	508	347	333
HIGHEST ANNUAL MEAN			508
LOWEST ANNUAL MEAN			142
HIGHEST DAILY MEAN	2170	Apr 30	2550
LOWEST DAILY MEAN	27	Dec 2	23
ANNUAL SEVEN-DAY MINIMUM	28	Nov 30	24
ANNUAL RUNOFF (AC-FT)	367500		251900
10 PERCENT EXCEEDS	1400		1030
50 PERCENT EXCEEDS	268		152
90 PERCENT EXCEEDS	33		29

e Estimated.

TULARE LAKE BASIN

11208730 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA

LOCATION.--Lat 36°27'06", long 118°47'18", in NW 1/4 sec. 14, T.17 S., R.29 E. (corrected), Tulare County, Hydrologic Unit 18030007, 1.9 miles downstream of Grunigen Creek confluence, and 8.2 miles east of Three Rivers.

DRAINAGE AREA.--85.8 mi².

PERIOD OF RECORD.--May 1952 to September 1955, October 1957 to September 1977, October 1993 to current year. Prior to October 1962, combined, only.

CHEMICAL ANALYSES: July 1968 to September 1971.

WATER TEMPERATURE: August 1968 to September 1976.

SEDIMENT DATA: August 1968 to September 1971.

GAGE.--Water-stage recorder and acoustic-flow meter on river; water-stage recorder and Parshall flume for conduit diversion. Elevation of gage is 2,500 ft above sea level, from topographic map.

REMARKS.--East Fork Kaweah River No. 1 Conduit (station 11208720) diverts up to 30 ft³/s from left bank of river near diversion dam. Water is returned to Middle Fork Kaweah River, 1.9 mi downstream from mouth of East Fork. See schematic diagram of Kaweah River Basin. For records of combined discharges of river and conduit, see station 11208731.

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, 13,000 ft³/s, Dec. 6, 1966, gage height, 21 ft, from floodmarks, from rating curve extended above 850 ft³/s, on basis of critical-depth measurement of peak flow over diversion dam; minimum daily, no flow, Jan. 22, Oct. 18-20, 1962.

Combined flow, maximum discharge, 13,000 ft³/s, Dec. 6, 1966; minimum daily, 3.5 ft³/s, Sept. 28, 29, 1960.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	6.7	6.3	11	45	101	219	614	431	160	24	6.2
2	16	6.8	6.3	9.6	32	95	253	635	460	158	22	6.2
3	14	6.6	6.3	9.9	28	97	190	579	496	141	21	6.2
4	13	6.6	6.3	9.5	201	188	176	549	515	121	20	6.2
5	12	6.5	6.3	8.8	561	227	179	537	539	113	19	6.3
6	11	6.6	6.7	8.5	274	162	193	540	525	107	18	6.3
7	10	6.7	6.9	8.7	192	144	213	543	493	102	16	6.3
8	10	6.6	6.9	9.0	158	135	247	538	464	95	14	6.2
9	10	6.6	6.5	9.0	143	151	273	532	461	89	13	6.1
10	9.5	6.7	6.3	8.3	123	152	264	540	420	84	13	6.0
11	8.8	6.6	7.1	7.4	111	150	246	568	382	88	12	6.0
12	8.9	6.6	217	7.2	103	186	242	645	361	77	13	6.7
13	7.7	6.6	108	7.6	95	174	229	714	357	72	21	7.7
14	6.9	6.5	36	7.4	93	164	237	713	346	67	18	8.0
15	6.9	6.4	24	7.1	92	142	259	657	292	63	14	7.9
16	7.4	6.3	17	92	95	142	326	1040	272	63	11	7.7
17	7.4	6.3	12	126	95	156	319	575	269	60	9.7	7.7
18	6.9	6.3	12	45	87	183	307	570	274	54	7.7	7.7
19	13	6.3	10	100	374	206	254	539	264	49	7.0	7.7
20	7.5	6.3	9.0	42	618	216	228	509	255	44	6.6	7.8
21	6.3	6.4	7.4	40	378	221	218	473	246	40	6.3	7.9
22	6.6	6.4	9.1	33	303	223	214	421	229	37	6.3	8.1
23	6.6	6.3	13	30	225	201	237	413	223	38	6.3	7.8
24	6.8	6.4	11	27	190	183	280	396	219	34	6.3	7.7
25	6.9	6.6	11	45	164	171	351	377	203	33	6.6	7.7
26	6.9	6.6	11	31	143	164	432	370	196	32	7.1	7.7
27	6.9	6.6	7.9	50	127	164	480	387	192	32	7.3	7.6
28	6.9	6.5	6.4	69	113	184	500	389	180	33	7.2	8.1
29	6.4	6.4	6.9	33	106	161	527	397	172	31	7.1	8.0
30	6.4	6.3	12	29	---	157	559	400	164	31	7.3	7.9
31	6.5	---	14	61	---	164	---	398	---	28	6.8	---
TOTAL	277.1	195.1	626.6	982.0	5269	5164	8652	16558	9900	2176	374.6	215.4
MEAN	8.94	6.50	20.2	31.7	182	167	288	534	330	70.2	12.1	7.18
MAX	17	6.8	217	126	618	227	559	1040	539	160	24	8.1
MIN	6.3	6.3	6.3	7.1	28	95	176	370	164	28	6.3	6.0
AC-FT	550	387	1240	1950	10450	10240	17160	32840	19640	4320	743	427

TULARE LAKE BASIN

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11208730 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.89	6.49	36.6	44.5	50.7	70.4	148	352	352	122	25.6	9.55
MAX	22.4	26.3	594	359	219	251	350	944	966	661	148	73.9
(WY)	1970	1966	1967	1969	1969	1995	1969	1969	1969	1995	1967	1978
MIN	.32	.48	.23	.55	.37	2.28	45.2	54.8	21.3	.85	.34	.23
(WY)	1959	1963	1959	1961	1961	1977	1977	1977	1976	1959	1955	1953

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1952 - 1996			
ANNUAL TOTAL	85572.3				50389.8							
ANNUAL MEAN	234				138				101			
HIGHEST ANNUAL MEAN									300			
LOWEST ANNUAL MEAN									15.9			
HIGHEST DAILY MEAN	1340				1040				8000			
LOWEST DAILY MEAN	5.7				6.0				.00			
ANNUAL SEVEN-DAY MINIMUM	6.3				6.2				.10			
INSTANTANEOUS PEAK FLOW					1700				13000			
INSTANTANEOUS PEAK STAGE					7.53				21.00			
ANNUAL RUNOFF (AC-FT)	169700				99950				73010			
10 PERCENT EXCEEDS	659				431				310			
50 PERCENT EXCEEDS	77				37				19			
90 PERCENT EXCEEDS	6.6				6.4				.60			

TULARE LAKE BASIN

11208731 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA--Continued

EAST FORK KAWEAH RIVER AND EAST FORK KAWEAH RIVER NO. 1 CONDUIT NEAR THREE RIVERS, CA
COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	25	19	34	68	124	242	638	448	161	45	20
2	39	26	19	33	55	118	276	658	477	166	44	19
3	37	25	19	33	51	120	213	602	514	157	43	19
4	36	24	20	32	219	212	199	572	533	142	41	19
5	35	23	20	32	567	251	202	560	558	134	40	19
6	34	24	20	31	292	185	216	563	544	128	39	19
7	32	24	20	32	214	167	236	566	516	123	37	19
8	31	23	21	32	181	158	270	561	487	116	35	18
9	30	23	19	32	166	174	296	555	484	110	34	18
10	29	24	18	30	146	175	287	563	443	105	34	18
11	29	23	21	29	134	173	269	591	405	108	33	17
12	29	23	227	29	126	209	265	669	384	98	33	18
13	29	23	123	30	118	197	252	738	380	93	41	19
14	27	21	58	29	116	187	260	737	367	88	38	25
15	26	21	46	29	115	165	282	680	292	84	34	22
16	26	20	38	114	118	165	350	1060	272	84	31	21
17	26	20	33	142	118	179	343	598	269	80	30	22
18	25	20	33	67	110	206	331	593	274	74	29	21
19	25	20	31	122	395	229	278	562	264	69	27	20
20	24	20	30	64	629	239	252	531	255	64	27	24
21	24	20	27	62	398	244	242	496	246	60	25	25
22	25	20	30	55	324	246	238	441	229	57	24	25
23	25	20	35	52	246	224	261	428	223	56	23	25
24	25	19	30	50	213	206	304	410	219	54	22	24
25	25	20	30	68	186	194	375	391	203	53	23	24
26	25	21	29	54	166	187	456	384	196	52	23	23
27	25	21	28	73	146	187	504	401	192	52	22	23
28	24	20	28	92	136	207	523	403	180	53	22	22
29	23	20	29	56	129	184	549	411	172	51	21	22
30	23	19	35	52	---	180	582	415	164	51	20	21
31	23	---	37	84	---	187	---	414	---	48	20	---
TOTAL	876	652	1173	1674	5882	5879	9353	17191	10190	2771	960	631
MEAN	28.3	21.7	37.8	54.0	203	190	312	555	340	89.4	31.0	21.0
MAX	40	26	227	142	629	251	582	1060	558	166	45	25
MIN	23	19	18	29	51	118	199	384	164	48	20	17
AC-FT	1740	1290	2330	3320	11670	11660	18550	34100	20210	5500	1900	1250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.9	24.0	54.4	62.5	73.1	92.8	172	377	377	146	46.3	27.5
MAX	42.2	45.2	597	372	223	270	368	966	988	682	174	99.5
(WY)	1970	1966	1967	1969	1969	1995	1969	1969	1969	1995	1967	1978
MIN	10.2	9.37	10.2	14.5	17.8	22.9	68.1	79.5	47.4	18.4	10.8	10.2
(WY)	1960	1960	1960	1961	1961	1977	1977	1977	1976	1977	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1952 - 1996			
ANNUAL TOTAL	93166				57232							
ANNUAL MEAN	255				156				121			
HIGHEST ANNUAL MEAN									317			
LOWEST ANNUAL MEAN									34.0			
HIGHEST DAILY MEAN	1360				1060				8000			
LOWEST DAILY MEAN	18				17				3.5			
ANNUAL SEVEN-DAY MINIMUM	19				18				6.3			
ANNUAL RUNOFF (AC-FT)	184800				113500				88020			
10 PERCENT EXCEEDS	683				450				332			
50 PERCENT EXCEEDS	100				57				43			
90 PERCENT EXCEEDS	23				20				15			

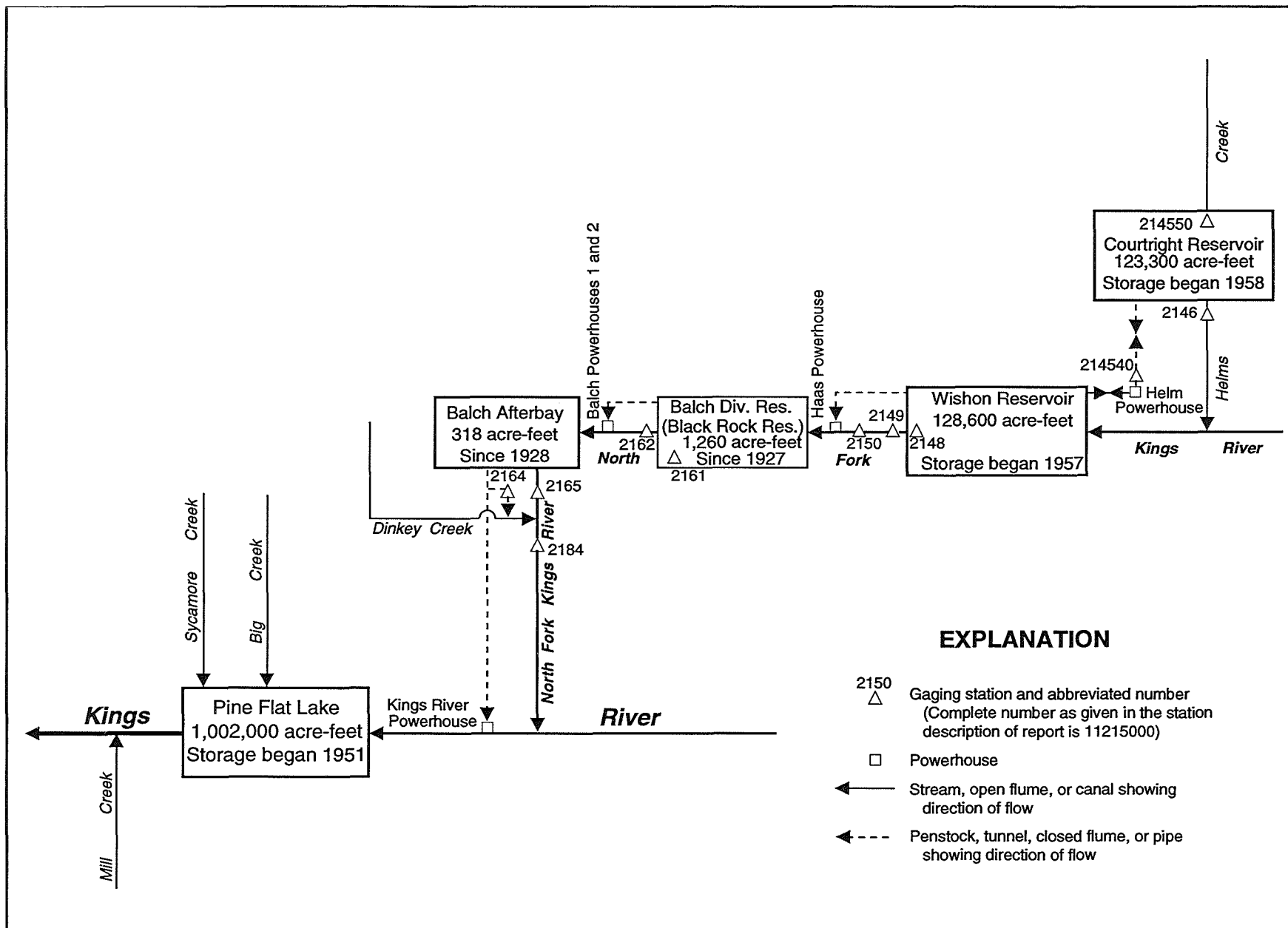


Figure 26. Diversions and storage in Kings River basin.

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 sea level (levels by Pacific Gas & Electric Co.)

REMARKS.--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, 4,730 ft³/s, May 18, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	787	328	78	-810	669	218	325	430	-1160	265	69	-956
2	1800	269	-468	-655	-132	-870	-27	108	-1260	868	-215	-1280
3	1440	.00	-520	-138	-158	588	-246	-896	797	524	-473	-670
4	629	.00	112	-162	-777	228	-86	-1570	428	-444	-937	.00
5	360	.00	1120	-241	-774	1060	-213	-2190	325	-.50	-854	-70
6	.00	.00	52	.00	-896	-49	140	.00	1740	824	-906	402
7	110	43	765	79	464	-589	60	203	-939	-1130	-801	801
8	-83	.00	-774	581	1850	-1140	156	463	-210	384	279	1710
9	2150	-209	-179	426	350	-1850	243	96	280	665	38	2610
10	2760	.00	604	136	-1050	-720	323	-861	-191	57	1170	658
11	-319	.00	-324	271	-2280	-169	-86	962	1070	391	253	173
12	138	-692	-659	1450	-527	167	.00	2050	-113	-151	2480	478
13	831	-381	1120	540	859	-268	257	2890	-87	140	3030	18
14	560	-160	.00	-19	2970	1730	274	-538	341	-1050	2270	.00
15	-151	.00	188	1040	3260	1140	1660	-1580	.00	304	1320	.00
16	211	.00	-263	573	-44	235	-350	-1410	70	.00	1790	202
17	695	.00	-323	-300	-1700	136	-964	-2880	62	-143	121	279
18	1380	.00	-141	902	-414	987	-77	-4730	.00	167	-1230	168
19	1060	.00	-159	-641	-1160	247	-696	-1410	61	1150	-687	36
20	-101	.00	-911	-584	-461	396	-1050	764	152	2600	-195	2420
21	-377	.00	-204	-787	-80	746	-958	1330	490	-58	297	511
22	-1360	.00	-260	447	2060	-1490	1220	1270	122	1160	650	-1210
23	-119	.00	-663	2040	-273	-1320	1490	2150	78	174	1700	227
24	185	.00	-45	377	-1550	-577	1440	3260	-668	-199	-107	.00
25	-53	.00	-405	-172	-872	-543	1680	102	-21	1640	-1010	-498
26	96	168	-840	61	651	791	1500	-340	194	-889	-395	22
27	-64	71	-394	-1540	844	-93	277	-162	620	-184	-63	147
28	1230	24	-226	-941	225	376	-176	581	-657	940	89	.00
29	1090	-258	-230	-151	-27	-256	789	-1130	-318	-160	1360	1320
30	513	315	-1150	1520	---	-1310	2080	-905	-180	1270	1140	1160
31	84	---	-1190	1080	---	-536	---	-1300	---	1150	373	---
TOTAL	15482.00	-482.00	-6289.00	4382.00	1027	-2735	8985.00	-5243.00	1026.00	10264.50	10556	8658.00
MEAN	499	-16.1	-203	141	35.4	-88.2	299	-169	34.2	331	341	289
MAX	2760	328	1120	2040	3260	1730	2080	3260	1740	2600	3030	2610
MIN	-1360	-692	-1190	-1540	-2280	-1850	-1050	-4730	-1260	-1130	-1230	-1280
AC-FT	30710	-956	-12470	8690	2040	-5420	17820	-10400	2040	20360	20940	17170

11214540 HELMS POWERPLANT NEAR WISHON RESERVOIR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	-71.4	36.1	41.9	133	48.6	62.5	-311	-7.70	264	288	343
MAX	499	247	220	245	433	371	370	194	242	627	418	894
(WY)	1996	1994	1989	1995	1989	1995	1995	1995	1992	1989	1994	1991
MIN	-110	-734	-203	-278	3.43	-315	-310	-722	-194	17.7	177	51.6
(WY)	1993	1992	1996	1989	1990	1989	1989	1992	1991	1995	1990	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1989 - 1996			
ANNUAL TOTAL	68364.00				45631.50							
ANNUAL MEAN	187				125				83.0			
HIGHEST ANNUAL MEAN									177			
LOWEST ANNUAL MEAN									32.0			
HIGHEST DAILY MEAN	3070				3260				4250			
LOWEST DAILY MEAN	-2750				-4730				-4730			
ANNUAL SEVEN-DAY MINIMUM	-909				-1680				-1910			
ANNUAL RUNOFF (AC-FT)	135600				90510				60120			
10 PERCENT EXCEEDS	1420				1320				1150			
50 PERCENT EXCEEDS	43				.00				.00			
90 PERCENT EXCEEDS	-795				-940				-905			

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 sea level (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. Records, including extremes, represent total 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, 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, 121,921 acre-ft, June 10, elevation, 8,183.16 ft; minimum, 53,587 acre-ft, Dec. 15, elevation, 8,128.52 ft.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86987	57411	58165	69757	59359	61567	72493	68882	117964	120822	100421	80350
2	83432	56855	59064	71027	59636	63219	72560	70021	121226	119172	100806	82762
3	80653	56845	60082	71305	60003	62256	73171	73023	120485	118107	101677	84057
4	79397	56826	59854	71618	61860	62900	73443	77257	120405	118949	103451	83994
5	78667	56798	57671	72088	63528	61073	73967	82750	120421	118981	105028	84082
6	78619	56769	57478	72088	65456	61223	73864	83944	117663	117347	106770	83258
7	78393	56769	56058	71920	64753	62440	73967	84647	120051	119507	108323	81641
8	78536	56655	57584	70783	61223	64732	73978	84886	121016	118774	107723	78274
9	74344	57046	57932	69955	60611	68501	73864	85798	120967	117458	107619	73171
10	68980	57027	56731	69691	62675	70021	73590	88707	121921	117316	105101	71852
11	69603	57008	57633	69154	67315	70550	74104	88265	120051	116560	104559	71472
12	69319	58342	59182	66333	68469	70375	74448	85748	120517	116905	99755	70429
13	67723	59074	57209	65277	66897	70971	74264	81592	120887	116623	93847	70462
14	66567	59379	53917	65319	61153	67670	74093	83857	120405	118678	89400	70436
15	65793	59359	53587	63301	54748	65413	71305	88903	120517	118043	86820	70372
16	66450	59339	54083	62369	54970	64994	72673	96127	120485	117996	83146	69933
17	65078	59319	54729	62993	58359	64805	74919	103002	120469	118218	82874	69340
18	62358	59300	55008	61375	59359	62931	75473	113860	120517	117837	85253	68980
19	60311	59270	55278	62655	61962	62563	77081	117189	120469	115525	86525	68860
20	60501	59250	57104	63796	62787	61952	79349	117142	120180	110407	86845	64128
21	61173	59221	57517	65435	63610	61597	81360	115447	119347	110483	86218	63065
22	63869	59201	58029	64586	59636	64784	79229	113751	119124	108203	84886	65456
23	64107	59182	59379	60631	60231	67251	76577	110225	118949	107828	81556	64952
24	63734	59162	59458	59953	63147	68871	74150	104325	120340	108188	81727	64920
25	63807	59136	60182	60341	64994	70010	71517	104602	120437	104896	83669	65848
26	63590	58720	61860	60251	63765	68534	69450	105970	120164	106651	84383	65761
27	63734	58554	62675	63321	62206	68828	69900	107022	118981	106978	84446	65424
28	61365	58476	63106	65245	61809	68296	71372	106414	120308	105072	84221	65392
29	59399	58975	63590	65572	61962	68882	71060	109347	120935	105395	81531	62777
30	58242	58340	65793	62655	---	71573	68317	111796	121322	102886	79289	60461
31	58058	---	68177	60661	---	72786	---	114979	---	100592	78524	---
MAX	86987	59379	68177	72088	68469	72786	81360	117189	121921	120822	108323	84082
MIN	58058	56655	53587	59953	54748	61073	68317	68882	117663	100592	78524	60461
a	8133.27	8133.56	8143.13	8135.91	8137.20	8147.30	8143.26	8178.79	8182.79	8169.15	8152.25	8135.71
b	-30480	+282	+9837	-7516	+1301	+10824	-4469	+46662	+6343	-20730	-22068	-18063

CAL YR 1995 b +3905
WTR YR 1996 b -28077

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

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 February 12, 1986. May 8, 1986 to current year.

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 sea level, from photogrammetry survey.

REMARKS.--Flow regulated since October 1958 by Courtright Reservoir (station 11214550) 500 ft upstream. Water bypasses this gage through Helms Powerplant (station 11214540). 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.0	6.5	6.9	6.3	6.5	7.6	7.7	17	23	19	15
2	10	6.9	6.5	7.0	6.3	6.6	7.5	7.6	18	23	19	15
3	9.1	6.9	6.6	7.1	6.3	6.6	7.5	7.6	18	22	19	15
4	8.7	6.8	6.6	7.1	6.9	6.6	7.5	7.8	e19	22	19	16
5	8.4	6.8	6.6	7.1	7.5	6.6	7.6	8.1	e19	22	19	16
6	8.4	6.7	6.4	7.1	6.9	6.5	7.7	8.1	e20	22	19	15
7	8.3	6.7	6.4	7.0	6.9	6.6	7.8	8.1	e20	22	20	15
8	8.2	6.7	6.4	7.0	6.7	6.6	8.0	e8.2	e20	22	20	15
9	8.2	6.7	6.4	7.0	6.6	6.8	e7.8	8.2	e20	22	20	15
10	8.0	6.7	6.4	6.9	6.6	7.0	7.6	8.4	e21	22	20	14
11	7.9	6.7	6.4	6.8	6.8	7.1	7.7	e8.2	e21	22	20	14
12	7.9	6.7	6.9	6.8	6.9	7.2	e7.6	8.2	e21	21	19	14
13	7.8	6.7	6.6	6.7	7.0	7.1	7.6	e8.2	e21	21	19	14
14	7.7	6.7	6.3	6.6	6.8	7.1	e7.6	8.2	e21	21	18	14
15	7.7	6.7	6.2	6.6	6.5	6.8	7.6	11	e22	22	17	13
16	7.7	6.7	6.1	6.5	6.3	6.7	7.5	9.6	e22	22	17	13
17	7.7	6.7	6.1	6.5	6.3	6.9	7.6	e10	e22	22	16	13
18	7.6	6.7	6.1	6.5	6.5	6.9	7.7	11	e22	21	16	13
19	7.4	6.7	6.1	6.4	6.5	6.8	e7.7	11	e22	21	16	13
20	7.3	6.7	6.2	6.4	6.6	6.9	7.8	17	e23	21	16	13
21	7.3	6.7	6.2	6.6	6.7	6.8	8.0	e18	e23	20	16	12
22	7.4	6.7	6.2	6.6	6.5	6.8	e8.0	17	e23	20	16	13
23	7.5	6.7	6.3	6.4	6.4	6.9	e8.0	16	e23	20	16	13
24	7.5	6.6	6.4	6.3	6.5	7.0	8.0	15	e23	20	16	13
25	7.5	6.5	6.4	6.3	6.6	7.2	8.0	15	e24	19	16	13
26	7.6	6.5	6.5	6.3	6.6	7.2	e7.8	15	e24	19	16	12
27	7.6	6.5	6.5	6.4	6.6	7.2	e7.8	15	e24	19	16	12
28	7.6	6.5	6.6	6.5	6.5	7.2	7.8	15	23	19	16	12
29	7.4	6.4	6.7	6.6	6.5	7.1	7.8	15	23	19	16	12
30	7.3	6.5	6.8	6.6	---	7.2	7.7	15	23	19	15	12
31	7.2	---	6.8	6.4	---	7.5	---	16	---	19	15	---
TOTAL	245.9	200.5	199.2	207.0	192.1	214.0	231.9	354.2	642	649	542	409
MEAN	7.93	6.68	6.43	6.68	6.62	6.90	7.73	11.4	21.4	20.9	17.5	13.6
MAX	10	7.0	6.9	7.1	7.5	7.5	8.0	18	24	23	20	16
MIN	7.2	6.4	6.1	6.3	6.3	6.5	7.5	7.6	17	19	15	12
AC-FT	488	398	395	411	381	424	460	703	1270	1290	1080	811

e Estimated.

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
LOWEST ANNUAL MEAN	2.29
HIGHEST DAILY MEAN	986
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	1340
INSTANTANEOUS PEAK STAGE	7.70
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.8	6.01	4.78	4.92	5.20	5.30	5.90	8.40	13.2	13.7	11.1	8.31
MAX	58.3	8.88	6.43	7.46	10.9	7.65	8.27	11.7	21.4	21.6	18.0	13.6
(WY)	1985	1992	1993	1989	1995	1989	1989	1989	1996	1991	1991	1996
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1985 - 1996

ANNUAL TOTAL	3564.1	4086.8	
ANNUAL MEAN	9.76	11.2	8.24
HIGHEST ANNUAL MEAN			11.2
LOWEST ANNUAL MEAN			5.65
HIGHEST DAILY MEAN	24	Jul 15	679
LOWEST DAILY MEAN	2.7	Apr 8	2.4
ANNUAL SEVEN-DAY MINIMUM	3.0	Apr 4	2.5
INSTANTANEOUS PEAK FLOW			24
INSTANTANEOUS PEAK STAGE			4.13
ANNUAL RUNOFF (AC-FT)	7070	8110	5970
10 PERCENT EXCEEDS	16	21	15
50 PERCENT EXCEEDS	8.0	7.7	6.4
90 PERCENT EXCEEDS	5.1	6.5	3.9

TULARE LAKE BASIN

195

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 sea level (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 (station 11216050). 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, 126,996 acre-ft, June 6, elevation, 6,548.39 ft; minimum, 39,113 acre-ft, April 21, elevation, 6,439.39 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89359	82600	66362	50061	58597	67519	43549	78131	117531	117491	117736	106674
2	91404	82567	65404	48282	58295	66016	43330	81938	116440	118686	115887	103244
3	92586	82189	64316	47591	57988	67225	42384	82844	120026	119158	113817	100784
4	92113	81670	64528	47099	57441	67024	41476	82223	122414	118029	111491	99952
5	91072	81093	66762	46241	57399	69123	40522	79280	123561	118117	108756	98753
6	89420	80518	66901	46197	56151	68756	40327	80885	126996	119927	106238	98654
7	87960	80518	68343	46291	56969	67690	40404	82945	124563	117706	103904	99528
8	86167	78932	66739	47036	60705	64862	41028	85570	123691	117657	103610	102576
9	88754	77777	66346	47768	61822	60317	41878	87332	123581	118284	102741	107177
10	92586	76692	67512	47793	60192	58210	42638	87401	122156	117706	104345	107764
11	90540	75703	67040	48003	55825	57342	42535	91780	123511	117824	103748	107335
12	89264	73353	66539	50751	55061	56534	42499	98618	123072	116712	107540	107568
13	89152	71672	68951	51880	56898	55020	42777	107335	123162	116576	112490	106823
14	88641	70364	72422	51913	63048	57272	43372	109141	124342	114354	115906	106321
15	86595	69538	72878	53797	70010	58439	46942	109498	124734	114392	117228	105784
16	85238	68522	71942	55136	69853	58052	47042	116246	125186	113530	119907	105525
17	84881	67605	70720	54508	66855	57526	45694	112385	125348	112585	119227	105322
18	85971	67589	70010	56443	66185	58928	45818	104786	125025	112156	115568	105063
19	86509	67581	69053	55109	64824	59188	44068	103950	124875	113874	113052	104492
20	84720	67001	66631	54060	64467	59900	41518	106117	124965	118500	111719	108615
21	83653	66423	65480	52630	64581	60178	39113	109555	125257	117736	111425	109009
22	80626	66047	64414	53265	69053	56779	41070	112623	124865	118971	111767	106377
23	79769	65980	62785	57067	68842	53695	43970	117111	124463	118588	113961	106100
24	79653	65694	62523	57796	66277	51353	47364	123611	122355	117189	113071	105525
25	78783	65610	61792	57399	64771	49576	52065	123681	121977	119641	110290	103858
26	78684	65939	59776	57491	65955	50367	56835	122922	121838	116819	108681	103289
27	77982	66085	58396	54583	67589	49389	59616	122903	122275	115732	107465	103152
28	80351	66124	57314	52716	67659	49622	61866	124292	120223	116819	106683	102640
29	82357	65595	56499	52297	67194	48257	66308	122245	118785	115539	108391	104198
30	82836	66216	54284	55116	---	44811	73780	120698	117677	117082	109639	105812
31	82735	---	51920	57370	---	43056	---	118696	---	118490	109564	---
MAX	92586	82600	72878	57796	70010	69123	73780	124292	126996	119927	119907	109009
MIN	77982	65595	51920	46197	55061	43056	39113	78131	116440	112156	102741	98654
a	6500.43	6479.96	6460.03	6468.02	6481.23	6446.00	6489.57	6540.10	6539.06	6539.89	6530.59	6526.57
b	-6676	-16519	-14296	+5450	+9824	-24138	+30724	+44916	-1019	+813	-8926	-3752

CAL YR 1995 b +13786
WTR YR 1996 b +16401

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

TULARE LAKE BASIN

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, low flow records only).

GAGE.--Water-stage recorder and 90° V-notch steel weir and concrete control. Elevation of gage is 6,300 ft above sea level, from topographic map.

REMARKS.--No records computed above 25 ft³/s. Flow regulated by Wishon Reservoir (station 11214800) and Courtwright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas Powerplant (station 11216050). 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

[illegible]

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA

LOCATION.--Lat 36°59'38", long 118°58'49", in NE 1/4 NW 1/4 sec.12, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank at Cliff Camp Bridge, 1 mi northwest of Cliff Camp, 1.2 mi downstream from Wishon Dam, and 2 mi downstream from Woodchuck Creek.

DRAINAGE AREA.--181 mi².

PERIOD OF RECORD.--August 1921 to current year (since October 1990, high-flow records only). Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1715: 1951, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,143.95 ft above sea level (levels by San Joaquin Light and Power Corp.). Prior to Nov. 24, 1922, at site 1 mi upstream at different datum.

REMARKS.--No records computed below 25 ft³/s. Flow regulated since Dec. 5, 1957, by Wishon Reservoir (station 11214800) 1.2 mi upstream, and since Oct. 17, 1958, by Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas Powerplant (station 11216050) since Dec. 10, 1958. See schematic diagram of Kings River basin. Monthly chemical, trace-element, biological, and sediment data are available in files of the U.S. Geological Survey and in U.S. Geological Survey Open-File Report 88-479. Also available in the same report are daily maximum, minimum, and mean specific-conductance and water-temperature values.

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 Reservoir).--Maximum discharge, 14,000 ft³/s, Dec. 11, 1937, gage height, 18.0 ft, from floodmarks, from rating curve extended above 4,200 ft³/s on basis of velocity-area studies.

From 1957 to 1990.--Maximum discharge, 5,110 ft³/s, Sept. 5, 1978, gage height, 11.96 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	28	75	34	34	27	27	27
2	---	---	---	---	---	30	55	34	33	27	27	27
3	---	---	---	---	---	32	41	33	33	26	27	27
4	---	---	---	---	81	36	38	32	332	26	27	27
5	---	---	---	---	93	36	37	31	809	26	27	26
6	---	---	---	---	45	34	37	31	1060	26	26	26
7	---	---	---	---	38	35	38	30	1120	26	26	26
8	---	---	---	---	39	37	38	30	1020	26	26	27
9	---	---	---	---	40	39	37	30	968	26	26	27
10	---	---	---	---	37	41	33	30	875	26	26	28
11	---	---	---	---	35	39	31	30	643	26	26	28
12	---	---	50	---	34	37	30	31	305	26	26	27
13	---	---	30	---	33	33	28	32	29	27	26	28
14	---	---	25	---	33	33	28	33	28	27	27	28
15	---	---	---	---	33	36	29	45	28	27	28	27
16	---	---	---	34	38	40	62	163	28	27	28	28
17	---	---	---	32	34	47	73	53	28	26	28	27
18	---	---	---	---	32	53	74	45	28	26	28	27
19	---	---	---	---	199	56	41	40	27	26	28	27
20	---	---	---	---	83	54	35	38	27	26	27	27
21	---	---	---	---	44	52	31	37	27	27	27	28
22	---	---	---	---	38	47	31	36	28	27	27	28
23	---	---	---	---	37	39	32	37	28	27	27	27
24	---	---	---	---	36	34	33	36	28	27	27	27
25	---	---	---	---	33	33	34	36	28	27	28	27
26	---	---	---	---	31	32	35	37	29	27	28	27
27	---	---	---	---	30	33	35	36	29	27	28	27
28	---	---	---	---	30	42	35	36	28	27	27	27
29	---	---	---	---	29	34	34	35	27	27	27	27
30	---	---	---	---	---	33	34	35	27	27	27	27
31	---	---	---	---	---	33	---	34	---	27	28	---
TOTAL	---	---	---	---	---	1188	1194	1220	7734	823	838	814
MEAN	---	---	---	---	---	38.3	39.8	39.4	258	26.5	27.0	27.1
MAX	---	---	---	---	---	56	75	163	1120	27	28	28
MIN	---	---	---	---	---	28	28	30	27	26	26	26
AC-FT	---	---	---	---	---	2360	2370	2420	15340	1630	1660	1610
a	38,668	15,935	7,281	6,591	4,705	33,039	33,898	52,688	48,947	29,495	31,976	20,642

a Diversion, in acre-feet, to Haas Powerplant, provided by Pacific Gas and Electric Co.

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
LOWEST ANNUAL MEAN	80.2
HIGHEST DAILY MEAN	7460
LOWEST DAILY MEAN	1.3
ANNUAL SEVEN-DAY MINIMUM	1.4
INSTANTANEOUS PEAK FLOW	14000
INSTANTANEOUS PEAK STATE	18.00
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)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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
LOWEST ANNUAL MEAN	10.0
HIGHEST DAILY MEAN	3040
LOWEST DAILY MEAN	3.9
ANNUAL SEVEN-DAY MINIMUM	4.2
INSTANTANEOUS PEAK FLOW	5110
INSTANTANEOUS PEAK STATE	11.96
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 sea level (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, 1,314 acre-ft, Feb. 19, 1996, elevation, 4,099.52 ft; minimum, 359 acre-ft, Nov. 3, 1986, elevation 4,064.51 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,314 acre-ft, Feb. 19, elevation, 4,099.52 ft; minimum, 589 acre-ft, Nov. 26, elevation, 4,077.45 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1138	697	948	900	871	1035	1073	1282	1148	948	773
2	915	1035	751	1108	973	891	1161	1063	1282	939	1178	850
3	991	939	799	1066	1038	868	1039	1185	1282	816	1125	957
4	1060	960	819	954	1289	882	1082	1092	1293	1135	787	807
5	1131	1063	871	1019	1236	841	1044	1283	1279	1073	912	816
6	1155	1102	912	1016	1028	924	1141	1283	1286	1019	942	827
7	1155	1102	942	1060	1016	877	1102	1283	1282	1038	804	1145
8	1079	1145	1041	1095	1000	906	1060	1283	1279	1057	804	1175
9	1138	936	1035	1003	1006	1006	1092	1283	1279	988	933	1009
10	1175	1073	1095	976	1006	954	1161	1286	1272	882	927	885
11	976	1099	1151	1003	748	824	1141	1286	1279	900	793	997
12	801	1082	850	1041	891	1028	1135	1293	1279	985	1000	951
13	879	1066	960	1003	912	945	1155	1293	1275	1079	909	982
14	894	1092	1066	1076	963	991	1092	1293	1195	988	865	874
15	915	1016	942	997	833	1095	1099	1307	1155	821	906	865
16	982	1073	897	921	1054	976	1108	1293	1000	1050	819	921
17	1019	1086	1028	909	660	997	1108	1289	897	1052	1047	989
18	1070	1057	853	868	634	1102	1092	1289	1019	1095	921	927
19	979	933	954	1041	1314	1066	1155	1286	1031	1131	844	985
20	915	1003	988	1086	1092	930	1115	1286	900	1054	933	1006
21	1041	1035	973	976	1073	957	1095	1282	1019	966	945	1038
22	1022	939	1003	850	1188	936	1082	1282	1025	951	939	591
23	1138	1000	1013	951	1118	1057	1138	1282	979	951	1076	875
24	865	988	1070	957	1115	1089	1172	1279	994	942	930	729
25	1102	707	988	1073	1076	1125	1038	1279	874	994	891	652
26	933	589	900	1044	868	1060	1092	1286	988	1000	804	683
27	982	594	865	891	796	1073	1158	1282	960	1000	960	707
28	1016	631	1022	906	888	997	1158	1282	954	1006	976	715
29	1076	660	994	963	960	985	1122	1282	997	997	927	1128
30	1223	662	1003	821	---	1000	1115	1282	1028	827	877	1031
31	874	---	871	795	---	918	---	1282	---	924	810	---
MAX	1223	1145	1151	1108	1314	1125	1172	1307	1293	1148	1178	1175
MIN	801	589	697	795	634	824	1035	1063	874	816	787	591
a	4085.95	4078.34	4085.85	4083.21	4088.82	4087.43	4093.73	4098.62	4091.03	4087.63	4083.74	4091.13
b	-132	-212	+209	-76	+165	-42	+197	+167	-254	-104	-114	+221

CAL YR 1995 b -160

WTR YR 1996 b +25

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 and sharp-crested rectangular weir. Elevation of gage is 2,890 ft above sea level, from topographic map.

REMARKS.--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 (station 11216300) 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. 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, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.9	8.7	8.7	15	17	24	12	400	11	8.0	7.4
2	5.8	6.4	8.9	9.0	13	17	25	12	412	11	8.6	7.3
3	5.8	6.2	9.1	8.6	12	17	19	11	466	10	8.8	7.8
4	6.0	6.0	9.4	6.6	65	39	18	11	600	10	8.3	8.2
5	6.2	6.0	9.3	6.4	264	76	17	306	1150	11	7.4	7.8
6	6.3	6.3	9.0	6.5	21	33	16	453	1390	11	7.9	7.7
7	6.3	6.2	9.3	6.5	16	26	16	450	1530	11	7.5	7.8
8	6.2	6.3	9.4	6.6	15	24	15	446	1380	10	10	9.1
9	6.2	6.2	9.4	6.6	14	23	15	442	1300	10	12	9.0
10	6.3	6.2	9.4	6.4	13	22	15	449	1190	10	12	8.2
11	6.1	6.1	11	6.3	13	24	15	475	967	9.8	12	7.7
12	5.6	6.2	21	6.3	12	33	15	589	556	10	11	8.3
13	5.6	6.2	15	6.4	12	29	15	729	281	10	8.8	8.4
14	5.7	6.3	13	6.4	11	24	14	723	130	10	9.2	8.1
15	5.7	6.3	10	6.4	11	22	14	827	14	9.7	8.8	8.2
16	5.9	6.2	9.5	15	11	21	21	2490	13	9.3	9.3	7.8
17	6.0	6.1	9.3	16	11	21	22	881	13	9.7	9.3	8.0
18	6.2	6.4	9.1	11	10	21	31	696	13	9.8	9.5	8.2
19	6.1	6.4	8.8	17	415	20	20	578	12	10	8.8	8.1
20	5.9	6.0	9.2	11	275	20	18	523	11	10	9.2	8.3
21	5.9	6.2	9.0	11	43	19	17	502	11	9.7	9.3	8.6
22	6.2	6.2	9.1	9.9	73	19	16	513	11	8.7	9.0	8.4
23	6.3	6.2	11	8.9	24	18	16	443	11	8.7	9.2	6.5
24	6.3	6.3	9.8	9.3	22	17	15	410	11	8.3	9.4	7.3
25	6.0	6.1	9.8	19	21	17	13	391	11	8.3	8.7	6.9
26	6.3	5.6	9.2	12	19	17	13	462	11	8.2	8.0	6.8
27	6.0	6.3	8.6	16	17	16	13	456	11	8.3	7.9	7.0
28	6.0	8.2	8.7	20	17	19	12	406	11	8.7	8.3	6.9
29	6.1	8.5	9.6	12	17	17	12	392	11	8.3	8.0	7.0
30	6.1	8.6	9.7	11	---	16	12	389	11	7.9	7.8	8.9
31	6.3	---	9.4	19	---	16	---	389	---	8.0	7.8	---
TOTAL	187.4	192.1	311.7	321.8	1482	720	504	15856	11938	296.4	279.8	235.7
MEAN	6.05	6.40	10.1	10.4	51.1	23.2	16.8	511	398	9.56	9.03	7.86
MAX	6.3	8.6	21	20	415	76	31	2490	1530	11	12	9.1
MIN	5.6	5.6	8.6	6.3	10	16	12	11	11	7.9	7.4	6.5
AC-FT	372	381	618	638	2940	1430	1000	31450	23680	588	555	468
a	38241	16880	9838	10795	17645	43056	50308	50105	48399	30329	31492	21425

a Diversion, in acre-feet, to Balch Powerplant, provided by Pacific Gas and Electric Co.

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.71	7.76	6.23	8.73	25.6	58.9	90.8	208	273	103	6.14	5.82
MAX	7.54	26.4	18.8	26.1	193	441	541	1004	1654	1066	9.03	8.02
(WY)	1984	1984	1984	1993	1986	1986	1986	1995	1995	1995	1996	1993
MIN	3.48	3.54	3.18	3.16	4.69	4.61	3.59	3.25	2.84	3.10	3.14	3.06
(WY)	1988	1991	1987	1987	1985	1994	1987	1987	1987	1987	1987	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1984 - 1996			
ANNUAL TOTAL	128759.3				32324.9							
ANNUAL MEAN	353				88.3				66.7			
HIGHEST ANNUAL MEAN									353			
LOWEST ANNUAL MEAN									3.97			
HIGHEST DAILY MEAN	2650				2490				2650			
LOWEST DAILY MEAN	5.6				5.6				.89			
ANNUAL SEVEN-DAY MINIMUM	5.8				5.8				2.5			
INSTANTANEOUS PEAK FLOW					4380				5360			
INSTANTANEOUS PEAK STAGE					8.56				8.84			
ANNUAL RUNOFF (AC-FT)	255400				64120				48310			
TOTAL DIVERSION (AC-FT) a	459500				368500							
10 PERCENT EXCEEDS	1460				391				25			
50 PERCENT EXCEEDS	14				10				6.0			
90 PERCENT EXCEEDS	6.0				6.2				3.5			

a Diversion, in acre-feet, to Balch Powerplant, provided by Pacific Gas and Electric Co.

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.--Ultra sonic flowmeter. Elevation of gage is 1,320 ft above sea level, from topographic map. Prior to August 1995, pressure-differential flowmeter at same site and datum.

REMARKS.--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, 16 ft³/s, many days in August 1994; no flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.3	6.7
2	.01	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.7	6.7
3	.01	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.7	6.7
4	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.6	6.7
5	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.6	6.7
6	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.6	6.7
7	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.6	6.7
8	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.6	6.7
9	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	2.1	6.6	6.7
10	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.3	6.6	6.7
11	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.8	6.6	7.0
12	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.8	6.6	7.9
13	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.8	6.6	7.9
14	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.8	6.6	7.9
15	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.9	6.6	7.9
16	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.9	6.6	7.9
17	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	5.9	6.6	7.9
18	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	7.9
19	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	7.9
20	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	8.0
21	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	8.0
22	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.1	6.6	8.0
23	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.2	6.6	7.9
24	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	7.9
25	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	7.9
26	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.0	6.6	7.8
27	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.1	6.6	7.9
28	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.1	6.6	8.0
29	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	6.1	6.6	7.8
30	e.00	e.00	e.00	e.00	---	e.00	e.00	e.00	e.00	6.1	6.6	6.9
31	e.00	---	e.00	e.00	---	e.00	---	e.00	---	6.1	6.6	---
TOTAL	4.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	133.10	204.5	223.3
MEAN	.15	.000	.000	.000	.000	.000	.000	.000	.000	4.29	6.60	7.44
MAX	4.7	.00	.00	.00	.00	.00	.00	.00	.00	6.2	6.7	8.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.3	6.7
AC-FT	9.4	.00	.00	.00	.00	.00	.00	.00	.00	264	406	443

e Estimated.

11216400 DINKEY CREEK SIPHON FISH RELEASE AT BALCH CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.20	1.15	.53	.18	.14	.000	.000	.000	2.43	5.84	8.47	9.22
MAX	14.4	7.09	3.20	1.71	1.41	.000	.000	.000	5.63	11.0	14.4	15.0
(WY)	1981	1991	1981	1990	1981	1987	1987	1987	1992	1990	1994	1992
MIN	.15	.000	.000	.000	.000	.000	.000	.000	.000	.000	2.30	5.33
(WY)	1996	1987	1987	1987	1987	1987	1987	1987	1991	1993	1995	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1987 - 1996	
ANNUAL TOTAL	245.84		565.62			
ANNUAL MEAN	.67		1.55		2.78	
HIGHEST ANNUAL MEAN					4.76	
LOWEST ANNUAL MEAN					.73	
HIGHEST DAILY MEAN	11	Aug 26	8.0	Sep 20	16	Aug 5 1994
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 4	.00	Oct 3 1986
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 4	.00	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	488		1120		2010	
10 PERCENT EXCEEDS	5.5		6.6		10	
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.

WATER TEMPERATURE: Water years 1968-79.

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 sea level, 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.

From 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	19	18	16	25	14	14	295	27	18	19
2	17	17	19	18	15	25	16	14	307	26	18	19
3	17	18	19	18	14	25	14	14	316	23	18	19
4	17	17	18	18	16	26	13	14	458	21	18	19
5	17	18	19	17	60	37	14	119	972	20	18	19
6	17	18	19	18	19	29	15	347	1270	19	18	19
7	17	18	19	18	17	28	14	348	1450	18	18	19
8	17	18	19	19	17	27	14	340	1240	18	18	19
9	17	18	18	19	16	24	14	337	1140	18	18	19
10	17	18	19	18	15	18	14	338	1030	18	18	19
11	17	17	19	17	15	18	15	369	835	18	18	20
12	17	17	427	16	15	19	14	390	453	18	18	20
13	17	17	195	13	14	19	14	429	199	18	18	18
14	17	18	28	13	14	19	13	428	100	18	18	18
15	17	19	19	13	14	19	13	503	38	18	19	18
16	17	18	19	15	13	18	15	2600	38	18	19	18
17	17	18	19	14	14	18	15	781	36	18	19	18
18	17	18	19	12	12	17	18	614	38	18	19	18
19	17	19	19	17	17	15	16	493	42	18	19	18
20	17	19	20	15	553	14	16	443	40	18	19	18
21	17	19	20	16	124	15	16	409	41	18	19	18
22	16	19	19	15	321	14	14	354	43	18	19	18
23	17	19	20	14	269	13	14	348	43	17	19	18
24	17	19	20	14	132	13	14	309	40	18	19	18
25	18	18	20	17	26	13	14	285	39	18	19	19
26	18	19	20	16	25	13	14	271	34	18	19	20
27	18	18	20	16	25	13	14	313	30	18	20	20
28	18	18	20	17	25	13	15	289	27	18	19	20
29	17	18	18	15	25	13	206	286	28	18	19	20
30	17	18	18	14	---	12	16	281	28	18	19	20
31	18	---	17	15	---	12	---	283	---	18	19	---
TOTAL	531	543	1184	495	1858	584	628	12363	10650	585	576	565
MEAN	17.1	18.1	38.2	16.0	64.1	18.8	20.9	399	355	18.9	18.6	18.8
MAX	18	19	427	19	553	37	206	2600	1450	27	20	20
MIN	16	17	17	12	12	12	13	14	27	17	18	18
AC-FT	1050	1080	2350	982	3690	1160	1250	24520	21120	1160	1140	1120

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.7	20.4	26.8	43.6	45.6	41.7	70.6	234	325	172	48.5	29.1
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1960 - 1996

ANNUAL TOTAL	110887	30562	
ANNUAL MEAN	304	83.5	86.5
HIGHEST ANNUAL MEAN			406
LOWEST ANNUAL MEAN			8.47
HIGHEST DAILY MEAN	2460	Jul 8	2600 May 16
LOWEST DAILY MEAN	12	Jan 1	12 Jan 18
ANNUAL SEVEN-DAY MINIMUM	13	Feb 24	13 Mar 25
INSTANTANEOUS PEAK FLOW			5050 May 16
INSTANTANEOUS PEAK STAGE			6.25 May 16
ANNUAL RUNOFF (AC-FT)	219900	60620	62630
10 PERCENT EXCEEDS	1170	287	196
50 PERCENT EXCEEDS	19	18	15
90 PERCENT EXCEEDS	16	14	8.3

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 sea level, 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 (station 11218700), beginning Mar. 1, 1962. Some water diverted from Balch Afterbay returns upstream from station at a release to Dinkey 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	38	39	104	179	292	732	1600	889	146	56	40
2	44	38	39	93	140	295	889	1550	925	137	55	40
3	42	39	38	93	126	326	602	1350	966	126	54	40
4	41	38	38	89	385	443	538	1220	1090	116	52	40
5	40	38	38	82	2080	660	575	1310	1680	111	53	40
6	40	38	39	80	813	436	665	1560	1890	103	52	40
7	40	38	39	81	501	418	767	1520	2000	96	52	40
8	40	38	39	84	418	398	863	1470	1830	91	50	39
9	39	38	39	84	395	421	916	1430	1710	87	49	39
10	39	38	39	80	367	410	836	1470	1540	78	47	39
11	39	38	39	73	343	429	744	1610	1270	77	47	40
12	39	38	937	74	340	447	712	1680	746	76	46	42
13	39	38	541	74	329	413	625	1720	478	75	46	39
14	39	38	167	73	342	373	666	1630	379	73	46	42
15	39	39	118	70	342	361	772	1970	305	72	47	44
16	39	39	97	132	353	388	1010	6690	286	71	46	42
17	39	38	86	310	374	447	967	2490	266	71	45	41
18	39	38	82	160	315	549	1090	2110	252	70	44	41
19	38	38	76	177	1590	610	717	1730	239	70	44	41
20	38	39	72	125	1910	641	613	1470	228	69	45	40
21	38	38	66	131	955	663	554	1330	217	69	44	40
22	38	38	65	107	880	655	574	1160	212	68	44	39
23	38	39	76	98	722	514	695	1090	205	72	44	39
24	38	39	67	98	533	441	851	933	193	72	43	39
25	38	38	67	138	393	435	1050	882	190	70	43	39
26	38	39	65	117	349	421	1310	841	226	69	43	39
27	38	39	66	124	331	437	1400	924	221	68	43	39
28	38	39	68	171	314	494	1450	853	186	67	42	39
29	38	39	65	121	302	425	1680	865	167	66	41	39
30	38	39	93	107	---	427	1540	847	155	63	41	39
31	38	---	122	168	---	452	---	832	---	60	41	---
TOTAL	1218	1151	3422	3518	16421	14121	26403	48137	20941	2559	1445	1200
MEAN	39.3	38.4	110	113	566	456	880	1553	698	82.5	46.6	40.0
MAX	47	39	937	310	2080	663	1680	6690	2000	146	56	44
MIN	38	38	38	70	126	292	538	832	155	60	41	39
AC-FT	2420	2280	6790	6980	32570	28010	52370	95480	41540	5080	2870	2380

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.5	86.3	136	214	279	362	620	1052	867	305	60.6	49.6
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	321535				140536							
ANNUAL MEAN	881				384							
HIGHEST ANNUAL MEAN									340			
LOWEST ANNUAL MEAN									1045			
HIGHEST DAILY MEAN	5090				6690				49.2			
LOWEST DAILY MEAN	38				38				14900			
ANNUAL SEVEN-DAY MINIMUM	38				38				6.4			
INSTANTANEOUS PEAK FLOW					11000				9.6			
INSTANTANEOUS PEAK STAGE					12.99				27400			
ANNUAL RUNOFF (AC-FT)	637800				278800				19.20			
10 PERCENT EXCEEDS	2880				1180				861			
50 PERCENT EXCEEDS	308				93				94			
90 PERCENT EXCEEDS	39				39				29			

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 sea level. 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.--Records fair. Minor diversion for irrigation and stock ponds.

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).--Maximum discharge, 5,700 ft³/s, Mar. 10, 1995, gage height, 12.77 ft, present datum, in gage well, 13.41 ft from floodmarks, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement at gage height 12.77 ft; maximum gage height, 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 31	1715	127	4.65	Mar. 5	0030	240	4.98
Feb. 4	2245	406	5.56	Mar. 12	0915	87	4.38
Feb. 19	2215	352	5.22				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.58	.84	1.2	42	50	8.8	2.3	.99	1.3	.07	.00
2	.36	.59	.87	1.2	11	18	11	2.0	.82	1.2	.10	.00
3	.36	.59	.87	1.2	8.5	8.9	7.3	1.9	.63	1.0	.10	.00
4	.36	.58	.87	1.1	87	35	7.6	2.2	.49	1.0	.09	.00
5	.43	.55	.87	1.0	94	79	6.2	2.3	.38	.97	.08	.00
6	.43	.55	.88	1.0	17	23	5.6	2.2	.33	.90	.08	.00
7	.45	.55	.87	.99	6.3	22	5.0	2.1	.27	.88	.08	.00
8	.48	.49	.83	.97	3.7	18	4.3	2.3	.22	.80	.08	.00
9	.49	.53	.78	.98	2.9	13	4.6	2.4	.18	.78	.06	.00
10	.49	.53	1.1	.98	2.2	8.2	6.0	2.1	.17	.70	.05	.00
11	.47	.55	1.2	.93	1.9	6.1	5.2	1.9	.17	.71	.05	.00
12	.50	.53	1.7	.94	1.9	45	4.7	1.9	.18	.64	.07	.00
13	.53	.52	3.2	.95	1.9	45	4.7	1.4	.16	.60	.07	.00
14	.50	.58	1.6	.98	2.3	17	4.2	1.4	.14	.58	.04	.00
15	.47	.53	1.4	.96	3.6	12	3.5	1.6	.13	.52	.03	.00
16	.52	.56	1.2	1.4	6.4	12	5.6	14	.09	.53	.04	.00
17	.43	.55	1.2	1.8	3.6	11	5.7	9.1	.07	.46	.02	.00
18	.32	.55	1.3	1.6	3.4	12	6.3	5.0	.07	.43	.02	.00
19	.26	.57	1.8	1.5	52	10	5.3	3.8	.05	.35	.02	.00
20	.60	.56	1.3	1.5	99	9.7	5.0	3.2	.04	.33	.03	.00
21	.56	.57	1.3	3.1	96	9.3	4.8	2.8	.03	.30	.04	.00
22	.54	.59	1.3	2.9	67	9.2	4.1	2.7	.04	.26	.04	.00
23	.36	.59	2.3	2.1	26	9.5	3.8	2.5	.03	.25	.03	.00
24	.30	.61	2.2	1.6	14	8.8	3.4	2.1	.02	.19	.02	.00
25	.27	.59	1.7	1.8	13	7.0	3.3	1.7	.06	.20	.02	.00
26	.18	.64	1.6	1.8	14	6.2	2.9	1.4	.39	.16	.02	.00
27	.05	.73	1.4	1.8	16	5.9	2.8	1.4	1.7	.15	.03	.00
28	.08	.78	1.4	1.8	14	7.1	2.9	1.5	2.5	.12	.03	.00
29	.34	.82	1.4	1.6	51	6.0	2.6	1.2	1.9	.10	.01	.01
30	.40	.82	1.3	1.5	---	4.9	2.4	1.3	1.6	.10	.01	.01
31	.52	---	1.2	55	---	3.9	---	1.1	---	.10	.01	---
TOTAL	12.42	17.78	41.78	98.18	761.6	532.7	149.6	84.8	13.85	16.61	1.44	0.02
MEAN	.40	.59	1.35	3.17	26.3	17.2	4.99	2.74	.46	.54	.046	.001
MAX	.60	.82	3.2	55	99	79	11	14	2.5	1.3	.10	.01
MIN	.05	.49	.78	.93	1.9	3.9	2.4	1.1	.02	.10	.01	.00
AC-FT	25	35	83	195	1510	1060	297	168	27	33	2.9	.04

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.26	.93	3.64	12.5	22.6	21.1	8.99	2.61	.93	.24	.078	.25
MAX	7.15	18.2	36.3	139	287	236	160	40.0	16.4	5.71	2.92	8.33
(WY)	1946	1966	1967	1969	1978	1995	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1945 - 1996	
ANNUAL TOTAL	10694.96		1730.78			
ANNUAL MEAN	29.3		4.73		6.10	
HIGHEST ANNUAL MEAN					48.5	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	2940	Mar 10	99	Feb 20	2940	Mar 10 1995
LOWEST DAILY MEAN	.00	Jan 1	.00	Sep 1	.00	Jul 5 1945
ANNUAL SEVEN-DAY MINIMUM	.19	Aug 1	.00	Sep 1	.00	Jul 5 1945
INSTANTANEOUS PEAK FLOW			406	Feb 4	5700	Mar 10 1995
INSTANTANEOUS PEAK STAGE			5.56	Feb 4	13.95	Jan 16 1978
ANNUAL RUNOFF (AC-FT)	21210		3430		4420	
10 PERCENT EXCEEDS	38		9.6		6.0	
50 PERCENT EXCEEDS	2.0		.93		.00	
90 PERCENT EXCEEDS	.32		.02		.00	

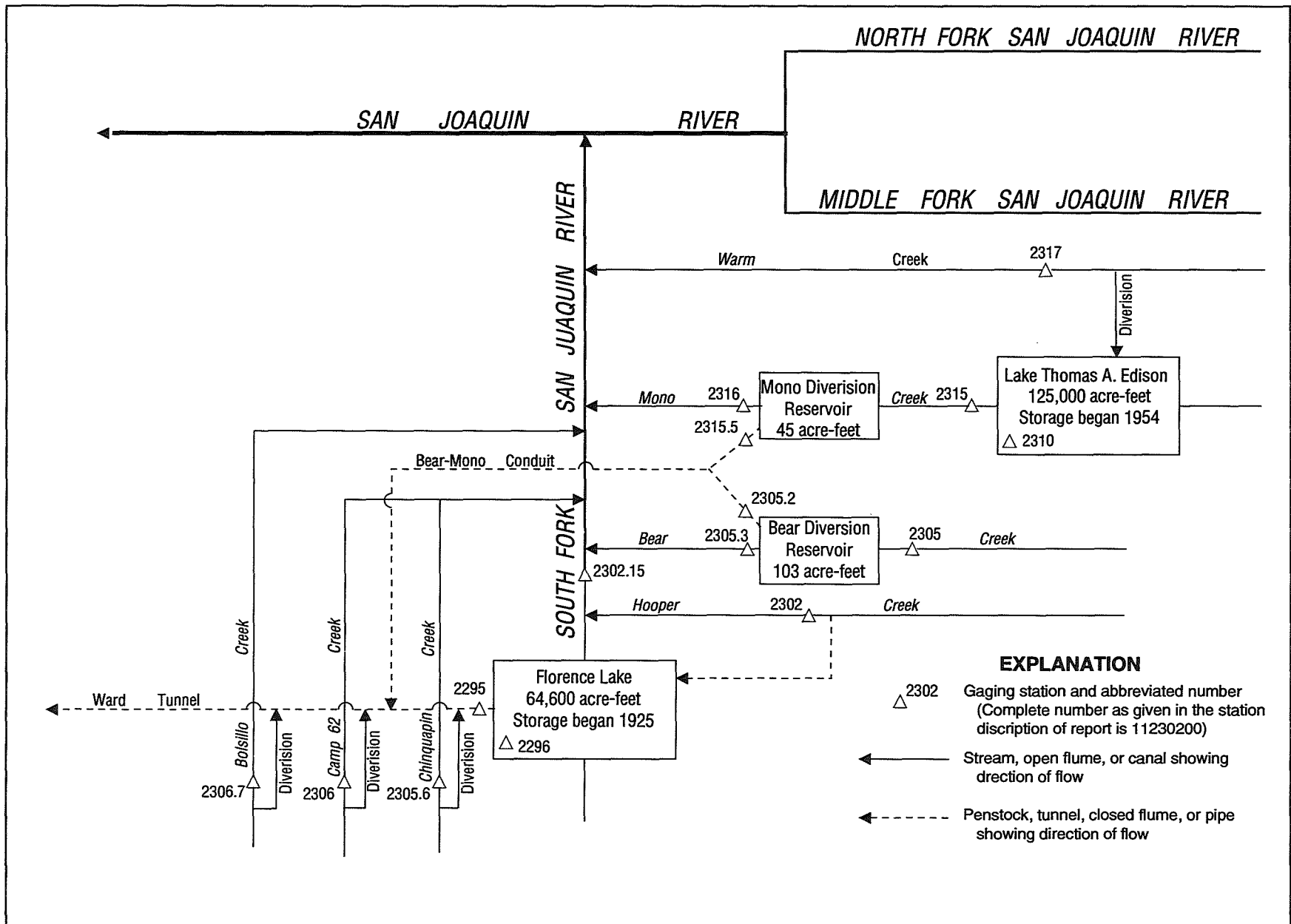


Figure 27. Diversions and storage in upper San Joaquin River basin.

SAN JOAQUIN RIVER BASIN

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11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA

LOCATION.--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 sea level (levels by Southern California Edison Co.).

REMARKS.--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 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, 1,990 ft³/s, Apr. 30, 1926; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	96	1.3	55	1.7	107	150	884	705	88	573	823
2	399	349	1.3	53	1.7	107	177	910	413	371	596	812
3	397	753	1.3	54	1.7	106	193	931	107	809	613	887
4	397	661	1.3	52	1.6	109	192	943	3.9	965	617	922
5	562	508	1.3	47	1.7	109	190	953	238	968	616	954
6	683	156	1.3	45	1.8	109	189	965	689	1110	705	1050
7	681	56	1.3	44	1.8	137	191	980	912	841	701	1020
8	677	35	1.3	44	71	153	255	993	930	573	702	1120
9	672	28	1.3	42	125	155	361	1010	954	573	786	1070
10	517	26	1.3	40	126	158	406	1020	1070	571	682	1010
11	446	9.3	1.3	37	128	160	392	1040	1170	672	424	1010
12	786	1.2	1.3	37	157	160	380	1080	1190	746	464	1110
13	867	1.2	1.4	39	197	160	352	659	1220	769	868	893
14	857	1.2	1.4	39	196	178	311	2.7	1190	799	1020	413
15	846	1.2	1.5	38	195	200	328	2.9	1130	798	1020	109
16	834	1.2	1.6	50	193	189	352	3.0	1010	746	1010	68
17	819	1.2	1.6	67	192	184	361	303	896	524	1000	54
18	805	1.2	1.6	71	191	196	297	512	897	476	998	45
19	789	1.2	322	75	189	207	260	523	801	573	992	39
20	774	1.2	560	68	189	215	259	400	779	647	1080	34
21	759	1.3	113	76	190	222	254	3.7	762	644	1130	30
22	746	1.2	57	66	190	228	234	3.8	514	590	1120	28
23	730	1.2	57	36	324	230	222	304	741	560	1110	26
24	570	1.2	52	1.3	470	226	239	602	865	562	1090	24
25	517	1.2	47	1.3	449	220	446	604	978	562	1080	21
26	663	1.3	44	1.3	668	213	713	604	1020	563	970	20
27	644	1.4	42	1.3	503	206	745	604	289	566	695	18
28	623	1.3	41	1.4	154	178	777	678	115	565	1040	17
29	599	1.2	39	1.4	107	155	810	894	45	564	1000	16
30	371	1.2	48	1.6	---	149	850	824	4.9	526	838	16
31	209	---	58	1.6	---	146	---	702	---	466	831	---
TOTAL	19639	2700.6	1504.7	1186.2	5216.0	5272	10886	19938.1	21638.8	19787	26371	13659
MEAN	634	90.0	48.5	38.3	180	170	363	643	721	638	851	455
MAX	867	753	560	76	668	230	850	1080	1220	1110	1130	1120
MIN	209	1.2	1.3	1.3	1.6	106	150	2.7	3.9	88	424	16
AC-FT	38950	5360	2980	2350	10350	10460	21590	39550	42920	39250	52310	27090

SAN JOAQUIN RIVER BASIN

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	240	133	110	78.9	77.8	111	271	459	550	534	421	344
MAX	634	745	1064	546	240	297	573	949	1161	1199	856	778
(WY)	1996	1938	1946	1939	1986	1986	1962	1974	1974	1967	1995	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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1925 - 1996

ANNUAL TOTAL	163423.4	147798.4	
ANNUAL MEAN	448	404	279
HIGHEST ANNUAL MEAN			460
LOWEST ANNUAL MEAN			98.1
HIGHEST DAILY MEAN	1710	Aug 2	1220
LOWEST DAILY MEAN	1.2	Nov 12	1.2
ANNUAL SEVEN-DAY MINIMUM	1.2	Nov 12	1.2
ANNUAL RUNOFF (AC-FT)	324200	293200	202400
10 PERCENT EXCEEDS	1050	979	663
50 PERCENT EXCEEDS	324	259	164
90 PERCENT EXCEEDS	1.6	1.4	12

11229600 FLORENCE LAKE NEAR BIG CREEK, CA

LOCATION.--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.

PERIOD OF RECORD.--November 1925 to current year. Prior to October 1931, published in WSP 721. Maximum and minimum daily contents (water years 1926-39) summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.--WDR CA-78-3: 1977.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by multiple-arch concrete dam; storage began in April 1925. Usable capacity, 64,406 acre-ft between elevations 7,220.94 ft, throat of Venturi tube in Ward Tunnel intake (station 11229500), and 7,327.50 ft, top of spillway drum gates. Additional storage of 168 acre-ft is not available for diversion. Water is diverted through Ward Tunnel to Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) and used for further power development in Big Creek powerplants. 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, 65,990 acre-ft, July 3, 1932, elevation, 7,329.14 ft; minimum occurred during period of no record, Oct. 2-4, 1926, or Nov. 30 to Dec. 2, 1927.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 64,985 acre-ft, July 5, elevation, 7,328.10 ft; minimum, 1,074 acre-ft, Sept. 29, 30, elevation, unknown.

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
7,222	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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42271	5963	1285	e1156	2699	1276	1468	6057	42880	64763	63935	24824
2	41616	5304	1300	e1153	2879	1271	1645	6670	45301	64589	63638	23401
3	40965	3709	1310	e1154	3061	1284	1723	7081	48985	64724	63216	23218
4	40325	2372	1352	e1153	3575	1339	1711	7349	53360	64946	62681	20161
5	39672	1316	1380	e1144	4591	1377	1662	7611	57535	64985	62090	18410
6	38684	1230	1402	e1142	5115	1391	1621	7629	60233	64830	61388	16427
7	37471	e1158	1440	e1141	5475	1436	1652	8013	60867	64753	60545	14519
8	36264	e1127	1460	e1141	5618	1432	1829	8410	61093	64695	59668	12401
9	35060	e1112	1477	e1137	5685	1462	2061	8818	61293	64618	58627	10407
10	33852	e1105	1492	e1134	5729	1542	2127	9167	61502	64532	57712	8391
11	32909	1117	1596	e1129	5749	1590	1983	9735	61663	64888	57312	6484
12	32104	1142	1900	e1129	5701	1615	1817	10796	62033	64589	56868	4213
13	30654	1168	2077	e1132	5566	1607	1656	12172	62729	64407	55768	1970
14	29036	1187	2271	e1132	5431	1588	1447	14710	63676	64435	54281	1696
15	27427	1198	2488	e1130	5300	1509	1389	18802	63868	64541	52816	1428
16	25843	1212	2663	e1149	5192	1377	1466	23064	63992	64628	51333	e1173
17	24269	1225	2830	e1173	5069	1305	1607	28984	63762	64782	49830	e1154
18	22729	1233	2998	e1178	4904	1353	1592	31267	63810	64772	48284	e1142
19	21200	1241	2416	e1183	4919	1499	1656	33156	64118	64532	46697	e1132
20	19710	1242	1241	e1173	4863	1658	1674	34396	64089	64243	44901	e1125
21	18240	1248	e1230	e1185	4852	1791	1619	35672	63906	63954	42963	e1119
22	16799	1250	e1159	e1171	4837	1927	1552	37711	64012	63753	41039	e1112
23	15364	1259	e1159	e1129	4558	2016	1588	39542	63800	63676	39136	e1105
24	13958	1262	e1153	1393	3932	1953	1808	40668	63848	63638	37256	e1098
25	12808	1264	e1144	1559	3295	1832	2313	40783	63686	63618	35413	e1090
26	11781	1271	e1141	1163	2082	1698	2713	40808	63197	63580	33759	e1086
27	10573	1262	e1137	1878	1163	1567	3046	40965	63810	63503	32755	e1079
28	9388	1262	e1136	2039	1267	1471	3535	41368	64599	63800	30926	e1078
29	8240	1259	e1132	2203	1276	1451	4067	41500	64907	63983	29140	e1074
30	7144	1267	e1146	2360	---	1421	4692	41228	64792	64021	27691	e1074
31	6438	---	e1159	2530	---	1421	---	41204	---	64108	26248	---
MAX	42271	5963	2998	2530	5749	2016	4692	41500	64907	64985	63935	24824
MIN	6438	1105	1132	1129	1163	1271	1389	6057	42880	63503	26248	1074
a	7249.50	7232.31		7238.34	7232.36	7233.16	7245.07	7301.65	7327.90	7327.19	7282.31	
b	-35858	-5171	-108	+1371	-1254	+145	+3271	+36512	+23588	-684	-37860	-25174

CAL YR 1995 b +18
WTR YR 1996 b -41222

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11230200 HOOPER CREEK BELOW DIVERSION DAM, NEAR FLORENCE LAKE, CA

LOCATION.--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. Prior to October 1991, published as Hooper Creek at diversion dam near Florence Lake.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,440 ft above sea level, 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, 112 ft³/s, July 17, 1995; minimum daily, 1.2 ft³/s, Apr. 25, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	4.4	3.0	3.4	3.1	3.5	2.0	3.6	4.6	4.5	3.9	3.3
2	2.9	4.4	3.0	3.4	6.4	3.7	2.7	3.8	4.6	4.5	3.7	3.2
3	4.1	4.0	3.2	3.4	3.0	3.8	3.2	4.0	4.6	4.5	3.7	3.0
4	5.9	3.7	3.5	3.3	5.6	3.6	3.2	4.0	4.3	4.4	3.6	3.1
5	6.2	3.8	3.2	3.2	7.7	3.8	3.1	3.9	4.5	4.4	3.6	3.0
6	5.9	3.8	3.1	3.3	5.1	4.1	3.1	3.9	4.5	4.3	3.6	3.0
7	5.8	3.8	3.2	3.3	4.6	3.6	3.1	3.4	4.4	4.4	3.7	2.9
8	5.7	3.7	3.0	3.3	4.4	4.1	3.0	4.1	4.5	4.3	3.7	2.8
9	5.5	3.8	2.8	3.2	4.4	4.3	3.0	4.0	4.4	4.3	3.7	2.8
10	5.2	3.8	2.9	3.1	4.2	4.4	3.0	4.0	4.6	4.2	3.7	2.7
11	4.6	3.8	4.5	3.1	4.1	4.4	3.1	3.8	5.0	4.3	3.7	2.7
12	4.6	3.8	8.4	3.0	4.0	4.3	3.2	3.8	5.0	4.4	3.7	2.7
13	4.6	3.7	4.8	3.0	4.0	4.3	3.2	3.4	5.0	4.3	3.6	3.0
14	4.6	3.8	4.5	2.9	4.0	4.1	3.1	2.9	4.9	4.4	3.6	3.1
15	4.8	3.6	4.3	3.0	3.9	4.1	3.1	3.1	4.9	4.3	3.6	3.0
16	4.7	3.6	3.8	3.7	4.2	4.6	3.2	3.1	4.9	4.3	3.6	2.9
17	4.7	3.5	3.5	3.4	4.1	5.6	3.1	2.9	4.9	4.3	3.6	2.8
18	4.7	3.5	3.5	3.2	3.9	6.4	3.2	3.0	4.9	4.3	3.6	2.8
19	4.6	3.4	3.3	3.3	4.3	7.1	3.2	3.0	4.8	4.2	3.6	2.7
20	4.7	3.4	3.1	3.6	4.8	7.5	3.2	3.0	4.8	4.2	3.6	2.6
21	4.6	3.3	3.2	3.1	4.5	7.9	3.2	3.0	4.8	4.1	3.6	2.5
22	4.7	3.3	3.3	5.6	4.4	7.7	3.1	3.7	4.8	4.2	3.5	2.5
23	4.8	3.2	3.2	3.4	4.3	7.0	2.9	4.6	4.8	4.1	3.5	2.5
24	4.6	3.2	3.1	3.2	4.0	6.8	2.6	4.5	4.8	4.1	3.5	2.4
25	4.6	3.2	3.1	3.2	3.7	6.3	2.9	4.5	4.7	4.1	3.5	2.4
26	4.6	3.3	3.1	3.0	3.7	6.5	3.1	4.7	4.7	4.2	3.5	2.4
27	4.5	3.2	3.1	3.0	3.6	4.7	3.1	4.7	4.7	4.2	3.5	2.4
28	4.5	3.2	3.1	5.4	3.4	2.5	3.1	4.7	4.7	4.2	3.5	2.4
29	4.6	3.1	3.2	3.2	3.9	3.0	3.4	4.7	4.6	4.2	3.4	2.3
30	4.7	3.0	3.9	3.0	---	2.6	3.7	4.7	4.6	4.2	3.3	2.3
31	4.3	---	3.6	3.0	---	2.4	---	4.7	---	4.1	3.3	---
TOTAL	147.3	107.3	110.5	104.2	125.3	148.7	92.1	119.2	141.3	132.5	111.2	82.2
MEAN	4.75	3.58	3.56	3.36	4.32	4.80	3.07	3.85	4.71	4.27	3.59	2.74
MAX	6.2	4.4	8.4	5.6	7.7	7.9	3.7	4.7	5.0	4.5	3.9	3.3
MIN	2.9	3.0	2.8	2.9	3.0	2.4	2.0	2.9	4.3	4.1	3.3	2.3
AC-FT	292	213	219	207	249	295	183	236	280	263	221	163

11230200 HOOPER CREEK BELOW DIVERSION DAM, NEAR FLORENCE LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.64	2.42	2.27	2.19	2.42	3.36	5.35	5.10	11.3	13.0	4.77	2.61
MAX	4.75	3.58	3.56	3.36	4.32	6.02	9.50	21.8	43.2	68.3	18.8	3.82
(WY)	1996	1996	1996	1996	1996	1995	1989	1995	1995	1995	1995	1993
MIN	1.68	1.82	1.59	1.55	1.55	2.10	3.07	2.50	2.46	2.66	2.32	1.91
(WY)	1991	1991	1989	1991	1991	1990	1996	1991	1989	1989	1989	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1987 - 1996
ANNUAL TOTAL	5784.2	1421.8	
ANNUAL MEAN	15.8	3.88	4.79
HIGHEST ANNUAL MEAN			15.6
LOWEST ANNUAL MEAN			2.42
HIGHEST DAILY MEAN	112	Jul 17	112
LOWEST DAILY MEAN	2.3	Jan 2	1.2
ANNUAL SEVEN-DAY MINIMUM	2.5	Jan 1	1.3
ANNUAL RUNOFF (AC-FT)	11470	2820	3470
10 PERCENT EXCEEDS	52	4.8	5.2
50 PERCENT EXCEEDS	5.2	3.7	2.7
90 PERCENT EXCEEDS	2.9	3.0	1.8

SAN JOAQUIN RIVER BASIN

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--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 sea level (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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	18	7.7	28	33	34	64	340	292	262	142	39
2	35	18	7.1	25	31	34	58	330	392	307	126	38
3	33	17	5.9	24	27	36	55	291	493	350	111	37
4	32	17	11	22	36	33	50	270	576	338	96	35
5	31	17	10	20	82	32	52	274	617	311	87	33
6	30	17	9.3	19	57	39	67	289	643	319	85	31
7	30	17	11	21	48	36	93	300	656	322	81	29
8	29	16	9.9	22	44	41	120	300	643	312	78	28
9	28	16	10	21	44	52	127	279	658	305	75	27
10	27	15	10	19	43	48	107	321	605	287	74	27
11	27	15	12	19	41	48	94	394	526	292	70	26
12	26	14	31	21	41	43	93	450	486	353	74	25
13	25	14	20	22	40	42	76	486	485	310	96	24
14	24	13	42	21	42	40	89	510	450	241	86	27
15	24	12	41	19	43	39	107	512	448	232	81	26
16	24	11	34	20	42	43	107	628	433	224	84	23
17	24	10	34	25	44	57	90	316	385	184	77	22
18	23	10	35	29	36	77	82	306	374	161	68	21
19	23	9.5	32	29	35	86	72	233	374	147	61	20
20	23	9.4	28	e32	37	84	63	220	351	143	56	19
21	23	10	26	29	42	88	60	215	355	144	52	18
22	21	9.0	26	e29	41	82	72	193	307	146	48	18
23	20	9.7	28	e31	54	59	96	173	312	153	47	18
24	20	9.5	29	32	59	51	137	154	321	161	49	18
25	20	8.9	24	32	36	48	187	137	279	182	49	17
26	19	8.5	24	34	36	46	236	150	202	167	50	17
27	19	6.6	25	27	37	51	260	182	160	142	46	17
28	19	9.5	25	32	37	53	265	168	134	179	43	16
29	19	7.5	25	36	36	46	288	176	147	164	41	16
30	19	8.1	29	31	---	48	323	170	198	157	40	16
31	19	---	27	29	---	56	---	208	---	143	39	---
TOTAL	773	373.2	688.9	800	1224	1572	3590	8975	12302	7138	2212	728
MEAN	24.9	12.4	22.2	25.8	42.2	50.7	120	290	410	230	71.4	24.3
MAX	37	18	42	36	82	88	323	628	658	353	142	39
MIN	19	6.6	5.9	19	27	32	50	137	134	142	39	16
AC-FT	1530	740	1370	1590	2430	3120	7120	17800	24400	14160	4390	1440

e Estimated.

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.0	15.3	19.6	21.5	23.6	32.7	86.6	252	347	202	66.0	28.2
MAX	62.2	56.1	71.2	82.5	61.0	79.8	172	586	740	747	349	260
(WY)	1983	1951	1956	1980	1986	1986	1926	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1922 - 1996			
ANNUAL TOTAL	65507.1				40376.1							
ANNUAL MEAN	179				110				92.6			
HIGHEST ANNUAL MEAN									201			
LOWEST ANNUAL MEAN									29.2			
HIGHEST DAILY MEAN	1420				658				2610			
LOWEST DAILY MEAN	5.9				5.9				1.2			
ANNUAL SEVEN-DAY MINIMUM	7.5				7.5				1.2			
INSTANTANEOUS PEAK FLOW					876				3660			
INSTANTANEOUS PEAK STAGE					5.81				8.35			
ANNUAL RUNOFF (AC-FT)	129900				80090				67110			
10 PERCENT EXCEEDS	580				317				291			
50 PERCENT EXCEEDS	58				42				30			
90 PERCENT EXCEEDS	17				16				7.0			

11230520 BEAR CREEK CONDUIT NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--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 sea level (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, 465 ft³/s, June 4, 1996; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	16	.00	e24	e30	29	62	222	288	254	139	.00
2	32	16	.00	e21	e28	30	56	223	375	226	123	.00
3	30	15	.00	e20	e24	33	53	221	429	94	108	.00
4	29	15	.00	21	e33	32	48	219	465	.00	93	.00
5	28	15	.00	19	e79	32	50	220	193	.00	84	.00
6	27	15	.00	19	56	36	65	221	.00	122	82	.00
7	27	15	.00	21	49	36	91	221	.00	219	78	.00
8	26	14	.00	21	44	40	118	250	.00	222	75	.00
9	25	14	.00	20	43	52	125	272	.00	220	72	11
10	24	13	.00	18	42	48	105	286	.00	218	71	24
11	25	13	.00	17	41	47	92	287	.00	221	67	23
12	24	.14	.00	20	41	42	91	298	.00	223	71	22
13	23	.00	.00	21	40	42	74	313	110	221	93	21
14	22	.00	.00	20	42	39	87	233	320	212	83	24
15	22	.00	.00	18	43	38	105	.00	.00	215	78	23
16	9.5	.00	.00	20	42	42	105	.00	.00	221	81	20
17	.00	.00	.00	23	44	56	88	148	.00	181	74	19
18	.00	.00	.00	27	36	80	80	303	.00	158	65	18
19	12	.00	.00	27	35	90	70	230	.00	144	58	17
20	21	.00	e64	30	37	88	61	217	.00	140	53	16
21	21	.00	e22	26	41	91	58	139	.00	141	49	15
22	19	.00	e22	27	43	87	70	.00	.00	143	45	15
23	18	.00	e23	29	54	61	94	96	.00	150	44	15
24	17	.00	e25	e29	58	51	135	151	.00	158	46	15
25	18	.00	e19	e29	40	48	184	134	.00	179	46	14
26	17	.00	e19	e32	36	46	218	147	.00	164	47	14
27	17	.00	e20	e23	33	50	213	179	88	139	43	14
28	17	.00	e21	e29	34	53	216	165	131	176	40	13
29	17	.00	e20	e33	29	45	221	173	144	161	.00	13
30	17	.00	e25	e28	---	48	230	167	195	154	.00	13
31	17	---	e23	e25	---	56	---	205	---	140	.00	---
TOTAL	635.50	161.14	303.00	737	1197	1568	3265	5940.00	2738.00	5216.00	2008.00	379.00
MEAN	20.5	5.37	9.77	23.8	41.3	50.6	109	192	91.3	168	64.8	12.6
MAX	34	16	64	33	79	91	230	313	465	254	139	24
MIN	.00	.00	.00	17	24	29	48	.00	.00	.00	.00	.00
AC-FT	1260	320	601	1460	2370	3110	6480	11780	5430	10350	3980	752

e Estimated.

11230520 BEAR CREEK CONDUIT NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.6	11.6	9.91	15.0	18.4	34.6	94.4	178	164	66.8	42.6	18.9
MAX	45.3	26.5	22.1	37.9	41.3	52.4	138	226	326	168	181	84.1
(WY)	1995	1995	1995	1995	1996	1995	1989	1992	1991	1996	1995	1995
MIN	3.23	3.68	3.23	3.46	4.12	17.4	43.2	59.2	.000	.000	10.6	4.53
(WY)	1989	1991	1991	1991	1991	1987	1991	1995	1995	1995	1989	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1987 - 1996
ANNUAL TOTAL	17098.64	24147.64	
ANNUAL MEAN	46.8	66.0	55.4
HIGHEST ANNUAL MEAN			66.0 1996
LOWEST ANNUAL MEAN			49.2 1990
HIGHEST DAILY MEAN	247 Aug 5	465 Jun 4	465 Jun 4 1996
LOWEST DAILY MEAN	.00 Apr 7	.00 Oct 17	.00 Oct 18 1988
ANNUAL SEVEN-DAY MINIMUM	.00 May 18	.00 Nov 13	.00 May 18 1995
ANNUAL RUNOFF (AC-FT)	33920	47900	40150
10 PERCENT EXCEEDS	136	215	177
50 PERCENT EXCEEDS	30	32	21
90 PERCENT EXCEEDS	.00	.00	3.4

11230530 BEAR CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--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. Prior to October 1991, published as "at Diversion Dam."

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 7,338.30 ft above sea level (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 discharge, 1,730 ft³/s, July 9, 1995, gage height, 14.75 ft; minimum daily, 0.94 ft³/s, Oct. 15, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	2.2	7.7	e2.5	e2.3	2.5	2.2	118	3.4	8.3	3.2	37
2	3.4	2.2	7.1	e2.5	e2.3	2.6	2.3	107	17	81	3.2	36
3	3.4	2.3	5.9	e2.5	e2.3	2.6	2.5	70	64	256	3.2	34
4	3.4	2.3	11	e2.5	e2.3	2.7	2.5	51	111	327	3.2	33
5	3.4	2.3	10	e2.5	e2.3	2.7	2.5	54	424	297	3.3	30
6	3.4	2.3	9.3	e2.5	e2.3	2.6	2.4	68	593	197	3.3	28
7	3.4	2.3	11	e2.5	2.3	2.3	2.4	79	614	103	3.4	26
8	3.4	2.3	9.9	e2.5	2.2	2.3	2.4	50	603	90	3.3	25
9	3.4	2.2	10	e2.4	2.2	2.3	2.4	6.8	621	85	3.2	16
10	3.0	2.2	10	e2.2	2.2	2.3	2.4	35	567	69	3.3	3.2
11	2.5	2.2	12	e2.2	2.2	2.3	2.4	107	496	71	3.4	3.3
12	2.5	2.3	28	e2.3	2.2	2.3	2.5	152	466	130	3.3	3.3
13	2.5	2.4	19	e2.3	2.2	2.3	2.3	173	375	89	3.1	3.3
14	2.5	6.1	30	e2.3	2.2	2.3	2.3	277	130	29	3.1	3.3
15	2.5	12	32	e2.3	2.3	2.2	2.3	491	438	17	3.1	3.3
16	26	11	29	e2.3	2.3	2.2	2.2	590	423	3.2	3.1	3.3
17	18	10	29	e2.3	2.3	2.2	2.2	168	377	3.2	3.1	3.3
18	5.0	10	32	e2.3	2.3	2.2	2.4	3.4	365	3.2	3.1	3.2
19	4.5	9.5	36	e2.3	2.3	2.3	2.5	3.4	366	3.2	3.1	3.2
20	2.3	9.4	22	e2.3	2.3	2.4	2.5	3.4	340	3.3	3.1	3.2
21	2.2	10	e2.5	e2.3	2.3	2.3	2.5	76	346	3.1	3.1	3.2
22	2.1	9.0	e2.5	e2.3	2.3	2.3	2.5	177	292	3.1	3.1	3.2
23	2.3	9.7	e2.5	e2.3	2.5	2.2	2.5	77	298	3.1	3.1	3.2
24	2.6	9.5	e2.5	e2.3	2.7	2.2	2.4	3.4	308	3.1	3.1	3.2
25	2.2	8.9	e2.5	e2.3	2.8	2.2	2.6	3.4	265	3.2	3.1	3.2
26	2.3	8.5	e2.5	e2.3	2.7	2.2	18	3.3	188	3.2	3.1	3.2
27	2.4	6.6	e2.5	e2.3	2.5	2.2	47	3.3	72	3.2	3.1	3.2
28	2.3	9.5	e2.5	e2.3	2.4	2.2	49	3.3	3.2	3.2	3.2	3.2
29	2.3	7.5	e2.5	e2.3	2.4	2.2	67	3.3	3.1	3.2	31	3.2
30	2.3	8.1	e2.5	e2.3	---	2.2	93	3.3	3.1	3.2	36	3.2
31	2.3	---	e2.5	e2.3	---	2.2	---	3.3	---	3.1	37	---
TOTAL	127.3	184.8	388.4	72.8	67.9	72.0	334.1	2963.6	9171.8	1900.1	193.0	332.9
MEAN	4.11	6.16	12.5	2.35	2.34	2.32	11.1	95.6	306	61.3	6.23	11.1
MAX	26	12	36	2.5	2.8	2.7	93	590	621	327	37	37
MIN	2.1	2.2	2.5	2.2	2.2	2.2	2.2	3.3	3.1	3.1	3.1	3.2
AC-FT	252	367	770	144	135	143	663	5880	18190	3770	383	660

e Estimated.

11230530 BEAR CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.10	2.13	2.81	1.87	1.87	1.92	4.42	26.5	101	91.9	14.8	4.05
MAX	4.11	6.16	12.5	2.59	2.60	2.54	16.6	121	555	747	109	11.1
(WY)	1996	1996	1996	1994	1994	1994	1995	1995	1995	1995	1995	1996
MIN	1.33	1.38	1.41	1.48	1.35	1.48	1.42	2.57	2.43	2.25	2.25	2.44
(WY)	1988	1990	1993	1995	1995	1988	1990	1991	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1987 - 1996			
ANNUAL TOTAL	48386.8				15808.7							
ANNUAL MEAN	133				43.2				21.4			
HIGHEST ANNUAL MEAN									131			
LOWEST ANNUAL MEAN									1.98			
HIGHEST DAILY MEAN	1420				621				1420			
LOWEST DAILY MEAN	1.1				2.1				.94			
ANNUAL SEVEN-DAY MINIMUM	1.2				2.2				1.0			
INSTANTANEOUS PEAK FLOW					788				1730			
INSTANTANEOUS PEAK STAGE					13.63				14.75			
ANNUAL RUNOFF (AC-FT)	95980				31360				15480			
10 PERCENT EXCEEDS	580				108				3.5			
50 PERCENT EXCEEDS	3.4				3.2				2.3			
90 PERCENT EXCEEDS	1.4				2.3				1.5			

SAN JOAQUIN RIVER BASIN

11230560 CHINQUAPIN CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.--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. Prior to October 1991 published as "at Diversion Dam."

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,260 ft above sea level, 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 Mar. 26 to Apr. 18, Apr. 24 to May 15, June 27 to July 18 and July 28-30. 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.76	14	---	1.2	---	---
2	---	---	---	---	---	---	.76	9.0	---	1.2	---	---
3	---	---	---	---	---	---	.76	1.4	---	1.2	---	---
4	---	---	---	---	---	---	.73	1.4	---	1.2	---	---
5	---	---	---	---	---	---	.73	1.7	---	1.2	---	---
6	---	---	---	---	---	---	.74	2.6	---	1.2	---	---
7	---	---	---	---	---	---	.76	2.3	---	1.2	---	---
8	---	---	---	---	---	---	.78	1.3	---	1.2	---	---
9	---	---	---	---	---	---	.79	1.3	---	1.2	---	---
10	---	---	---	---	---	---	.79	1.4	---	1.2	---	---
11	---	---	---	---	---	---	.79	2.4	---	1.2	---	---
12	---	---	---	---	---	---	.79	7.9	---	1.3	---	---
13	---	---	---	---	---	---	.77	12	---	1.3	---	---
14	---	---	---	---	---	---	.77	14	---	1.2	---	---
15	---	---	---	---	---	---	.79	17	---	1.2	---	---
16	---	---	---	---	---	---	.79	---	---	e1.2	---	---
17	---	---	---	---	---	---	.79	---	---	e1.2	---	---
18	---	---	---	---	---	---	.77	---	---	e1.1	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	.80	---	---	---	---	---
25	---	---	---	---	---	---	1.0	---	---	---	---	---
26	---	---	---	---	---	.55	5.0	---	---	---	---	---
27	---	---	---	---	---	.77	11	---	2.7	---	---	---
28	---	---	---	---	---	.76	13	---	1.2	e.95	---	---
29	---	---	---	---	---	.76	9.7	---	1.2	e.82	---	---
30	---	---	---	---	---	.76	11	---	1.2	e1.2	---	---
31	---	---	---	---	---	.76	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

11230600 CAMP 62 CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.--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. Prior to October 1991 published as "at Diversion Dam."

GAGE.--Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,320 ft above sea level, 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 Oct. 1-15, Mar. 26 to Apr. 1, Apr. 11 to May 16 and June 27 to Aug. 4. Flow over the spillway bypasses this station. Discharge represents the combined flow of spill and or release from diversion dam. 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	---	---	---	---	---	.49	e9.7	---	.50	.44	---
2	.42	---	---	---	---	---	---	e7.0	---	.49	.44	---
3	.42	---	---	---	---	---	---	e1.0	---	.49	.44	---
4	.42	---	---	---	---	---	---	e2.0	---	.49	.44	---
5	.42	---	---	---	---	---	---	e3.3	---	.49	---	---
6	.42	---	---	---	---	---	---	e4.5	---	.49	---	---
7	.42	---	---	---	---	---	---	e3.5	---	.49	---	---
8	.42	---	---	---	---	---	---	.56	---	.48	---	---
9	.42	---	---	---	---	---	---	.56	---	.46	---	---
10	.42	---	---	---	---	---	---	e1.1	---	.44	---	---
11	.42	---	---	---	---	---	.50	e5.1	---	.45	---	---
12	.42	---	---	---	---	---	.49	e14	---	.46	---	---
13	.42	---	---	---	---	---	.49	e17	---	.45	---	---
14	.42	---	---	---	---	---	.49	e14	---	.44	---	---
15	.42	---	---	---	---	---	.49	e18	---	.44	---	---
16	---	---	---	---	---	---	.49	e27	---	.44	---	---
17	---	---	---	---	---	---	.49	---	---	.44	---	---
18	---	---	---	---	---	---	.49	---	---	.42	---	---
19	---	---	---	---	---	---	.49	---	---	.42	---	---
20	---	---	---	---	---	---	.49	---	---	.42	---	---
21	---	---	---	---	---	---	.49	---	---	.42	---	---
22	---	---	---	---	---	---	.49	---	---	.42	---	---
23	---	---	---	---	---	---	.49	---	---	.42	---	---
24	---	---	---	---	---	---	.49	---	---	.42	---	---
25	---	---	---	---	---	---	e.66	---	---	.42	---	---
26	---	---	---	---	---	.97	e3.3	---	---	.42	---	---
27	---	---	---	---	---	.46	e6.8	---	e3.4	.42	---	---
28	---	---	---	---	---	.46	e8.1	---	.47	.43	---	---
29	---	---	---	---	---	.48	e6.6	---	.49	.45	---	---
30	---	---	---	---	---	.49	e6.4	---	.49	.44	---	---
31	---	---	---	---	---	.49	---	---	---	.44	---	---
TOTAL	---	---	---	---	---	---	---	---	---	13.90	---	---
MEAN	---	---	---	---	---	---	---	---	---	.45	---	---
MAX	---	---	---	---	---	---	---	---	---	.50	---	---
MIN	---	---	---	---	---	---	---	---	---	.42	---	---
AC-FT	---	---	---	---	---	---	---	---	---	.28	---	---

e Estimated.

11230670 BOLSILLO CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.--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 sea level, from topographic map.

REMARKS.--Records of fishery release normally computed only during periods of diversion to Ward Tunnel. Diversion during the current water year occurred Mar. 21 to Aug. 6. 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.58	1.1	1.3	.51	.51	---
2	---	---	---	---	---	---	.56	1.0	2.2	.51	.49	---
3	---	---	---	---	---	---	.56	.59	3.2	.51	.48	---
4	---	---	---	---	---	---	.56	.60	4.3	.51	.47	---
5	---	---	---	---	---	---	.56	.61	4.0	.51	.47	---
6	---	---	---	---	---	---	.56	.61	4.5	.51	.45	---
7	---	---	---	---	---	---	.56	.61	5.3	.51	---	---
8	---	---	---	---	---	---	.56	.61	5.2	.51	---	---
9	---	---	---	---	---	---	.56	.61	3.3	.51	---	---
10	---	---	---	---	---	---	.56	.67	2.9	.51	---	---
11	---	---	---	---	---	---	.56	1.1	2.7	.51	---	---
12	---	---	---	---	---	---	.57	2.2	3.3	.51	---	---
13	---	---	---	---	---	---	.56	2.7	3.6	.51	---	---
14	---	---	---	---	---	---	.57	3.0	2.2	.51	---	---
15	---	---	---	---	---	---	.58	4.2	1.7	.49	---	---
16	---	---	---	---	---	---	.58	12	1.2	.51	---	---
17	---	---	---	---	---	---	.58	9.9	.86	.51	---	---
18	---	---	---	---	---	---	.57	9.9	.74	.51	---	---
19	---	---	---	---	---	---	.57	9.6	.68	.51	---	---
20	---	---	---	---	---	---	.59	9.3	.63	.51	---	---
21	---	---	---	---	---	.32	.58	9.3	.56	.51	---	---
22	---	---	---	---	---	.59	.59	9.2	.56	.51	---	---
23	---	---	---	---	---	.59	.59	8.9	.56	.51	---	---
24	---	---	---	---	---	.59	.59	8.5	.56	.51	---	---
25	---	---	---	---	---	.59	.59	8.4	.56	.51	---	---
26	---	---	---	---	---	.59	.59	8.6	.56	.51	---	---
27	---	---	---	---	---	.59	.59	9.2	.55	.51	---	---
28	---	---	---	---	---	.59	.59	4.7	.52	.51	---	---
29	---	---	---	---	---	.59	.60	.52	.52	.51	---	---
30	---	---	---	---	---	.59	.77	.53	.52	.51	---	---
31	---	---	---	---	---	.59	---	.77	---	.51	---	---
TOTAL	---	---	---	---	---	---	17.43	139.53	59.28	15.79	---	---
MEAN	---	---	---	---	---	---	.58	4.50	1.98	.51	---	---
MAX	---	---	---	---	---	---	.77	12	5.3	.51	---	---
MIN	---	---	---	---	---	---	.56	.52	.52	.49	---	---
AC-FT	---	---	---	---	---	---	35	277	118	31	---	---

11231000 LAKE THOMAS A. EDISON NEAR BIG CREEK, CA

LOCATION.--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 sea level (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, 125,239 acre-ft, July 1, elevation, 7,642.61 ft; minimum, 64,164 acre-ft, Apr. 26, elevation, 7,607.12 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112329	110235	107898	108562	111859	95821	74710	66281	95856	125239	124646	124516
2	111406	110199	107862	108544	111895	95071	74240	66929	97412	124979	124516	124553
3	110829	110163	107862	109730	111967	94341	73608	67631	99222	124720	124313	124572
4	110307	110145	107934	109730	111859	93576	72947	67975	101128	124905	124128	124591
5	110073	110109	107951	109514	111859	92242	72255	68085	103540	124942	123961	124591
6	110091	109965	107969	109550	111931	91464	71582	68335	104982	124868	123961	124591
7	110109	109766	108005	109568	111352	91464	70976	68948	105054	124831	123924	124609
8	110145	109173	108005	109874	110595	90739	70466	69579	110451	124739	123887	124628
9	110181	108257	108023	110073	109820	90032	70116	70227	112637	124591	123869	124646
10	110217	107754	108023	110091	108975	89310	69863	71056	114433	124387	123869	124665
11	110217	107754	108347	110127	108167	88606	69595	71982	115925	124424	123869	124665
12	110235	107772	108670	110181	107611	87972	69311	72963	117330	124683	123998	124628
13	110271	107808	108796	110199	106841	87288	68963	74305	119013	124702	124072	124609
14	110289	107808	108867	110235	106071	86537	68600	75247	120810	124387	124128	124146
15	110289	107826	108041	110307	105411	85771	68288	79195	122485	124646	124165	123315
16	110289	107844	108975	110307	104679	84989	67960	81213	124054	124924	124183	122448
17	110289	107844	109029	110541	103931	84228	67897	83619	124794	124887	124165	121601
18	110289	107862	109047	110685	103256	83517	67600	85125	124831	124776	124109	120755
19	110289	107862	109083	110775	103024	82893	67131	86622	124868	124794	124054	120021
20	110289	107862	109119	110829	102332	82304	66605	87853	124813	124831	124017	119196
21	110289	107862	109119	110920	101694	81715	66049	89018	124776	124887	124165	118317
22	110235	107844	109173	110938	100880	81163	65477	90083	124609	124850	124091	117458
23	110199	107898	109245	110974	100068	80594	64928	91015	124442	124850	124146	116581
24	110181	107898	109263	111100	99416	79992	64485	91861	124368	124850	124183	115706
25	110181	107916	109298	111244	98711	79378	64241	92000	124442	124794	124220	114850
26	110199	107916	109334	111298	97921	78764	64164	92069	124479	124813	124220	114033
27	110217	107916	109370	111443	97219	78118	64424	92121	124591	124850	124220	113179
28	110217	107898	109406	111515	96537	77476	64806	92259	124591	124850	124257	112329
29	110235	107898	109514	111587	96537	76850	65187	92588	124702	124887	124331	111515
30	110217	107898	109604	111678	---	76145	65693	93437	124702	124665	124405	110721
31	110181	---	109676	111786	---	75410	---	93889	---	124609	124479	---
MAX	112329	110235	109676	111786	111967	95821	74710	93889	124868	125239	124646	124665
MIN	110073	107754	107862	108544	96537	75410	64164	66281	95856	124387	123869	110721
a	7634.37	7633.10	7634.09	7635.26	7626.29	7614.24	7608.12	7625.17	7642.32	7642.27	7642.20	7634.67
b	-2745	-2283	+1778	+2110	-15249	-21127	-9717	+28196	+30813	-93	-130	-13758

CAL YR 1995 b +78256

WTR YR 1996 b -2205

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA

LOCATION.--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 above sea level, from topographic map.

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	476	27	16	16	17	494	480	305	50	313	192	25
2	476	27	16	16	17	490	476	289	50	707	229	25
3	345	27	16	16	17	485	476	297	36	720	238	25
4	311	27	16	16	276	485	481	297	21	454	238	25
5	139	27	16	16	247	489	485	297	20	519	220	25
6	29	109	16	16	31	487	485	297	20	567	135	24
7	29	115	16	16	438	484	463	297	45	559	135	24
8	29	290	16	16	494	480	417	231	71	559	136	24
9	29	427	16	16	494	476	373	199	72	559	118	24
10	29	388	16	16	511	474	372	199	177	559	105	24
11	29	23	16	16	497	470	372	199	231	477	105	24
12	29	16	17	16	496	485	388	200	231	383	106	24
13	29	16	16	16	482	497	392	202	99	500	107	30
14	29	16	16	16	476	488	392	93	27	540	107	280
15	29	16	16	16	480	489	392	30	27	236	107	465
16	29	16	16	16	478	489	393	33	27	183	107	476
17	29	16	16	17	476	488	413	31	394	336	107	476
18	29	16	16	17	476	443	455	31	696	333	107	476
19	29	16	16	17	481	448	467	30	709	225	106	473
20	29	16	16	17	489	452	476	30	728	241	83	470
21	29	16	16	17	494	430	476	30	707	211	57	470
22	28	16	16	17	498	433	483	30	705	257	57	470
23	28	16	16	17	496	433	459	30	701	250	57	470
24	28	16	16	17	454	433	387	325	636	266	57	470
25	28	16	16	17	492	440	358	360	474	266	57	470
26	27	16	16	17	501	462	290	382	381	211	57	470
27	27	16	16	17	472	476	303	378	297	189	57	467
28	27	16	16	17	467	479	294	286	293	256	43	465
29	27	16	16	17	487	485	284	27	293	259	25	465
30	27	16	16	17	---	489	297	86	293	316	25	465
31	27	---	16	17	---	489	---	87	---	207	25	---
TOTAL	2485	1791	497	511	11734	14642	12279	5608	8511	11658	3305	8121
MEAN	80.2	59.7	16.0	16.5	405	472	409	181	284	376	107	271
MAX	476	427	17	17	511	497	485	382	728	720	238	476
MIN	27	16	16	16	17	430	284	27	20	183	25	24
AC-FT	4930	3550	986	1010	23270	29040	24360	11120	16880	23120	6560	16110

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	91.3	156	200	215	218	182	127	68.3	75.7	207	219	171
MAX	265	423	437	467	472	479	647	515	577	684	414	450
(WY)	1994	1994	1968	1984	1973	1973	1983	1983	1969	1995	1983	1994
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1956 - 1996

ANNUAL TOTAL	77629	81142	
ANNUAL MEAN	213	222	161
HIGHEST ANNUAL MEAN			366
LOWEST ANNUAL MEAN			53.2
HIGHEST DAILY MEAN	1300	Jul 11	2080
LOWEST DAILY MEAN	16	Nov 12	4.1
ANNUAL SEVEN-DAY MINIMUM	16	Nov 12	4.2
INSTANTANEOUS PEAK FLOW			2160
INSTANTANEOUS PEAK STAGE			8.87
ANNUAL RUNOFF (AC-FT)	154000	160900	116400
10 PERCENT EXCEEDS	498	488	424
50 PERCENT EXCEEDS	104	135	92
90 PERCENT EXCEEDS	16	16	14

11231550 MONO CREEK CONDUIT NEAR MONO HOT SPRINGS, CA

LOCATION.--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 sea level (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, 499 ft³/s, Apr. 7, 1995; minimum daily, -18 ft³/s, June 11, 1993 (reverse flow from Bear Creek Conduit).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	459	17	.00	7.6	2.0	486	472	291	35	299	178	11
2	459	18	.00	7.6	2.0	482	468	275	35	318	215	11
3	328	19	.00	7.6	2.0	477	468	283	21	399	224	11
4	295	19	.00	7.6	261	477	473	284	7.0	440	224	11
5	126	19	.00	7.6	232	481	477	284	7.0	465	206	11
6	18	53	.00	7.6	19	479	475	283	7.0	375	122	10
7	18	107	.00	7.6	430	476	438	283	32	309	122	10
8	18	282	.00	7.9	486	472	400	218	57	315	122	10
9	18	419	.00	8.2	486	468	365	186	58	316	104	10
10	19	380	.00	8.0	498	466	364	186	164	315	91	10
11	19	15	.00	8.0	489	462	364	186	218	327	91	10
12	19	7.6	.00	8.1	488	477	380	187	218	269	92	10
13	19	7.6	.00	8.1	474	489	384	189	86	260	93	17
14	19	1.0	.00	8.1	468	480	384	80	13	488	93	266
15	19	.00	.00	8.1	472	481	384	17	13	223	93	451
16	18	.00	.00	8.1	470	481	385	20	13	158	93	462
17	16	.00	.00	9.1	468	479	405	18	141	322	93	462
18	17	.00	.00	9.1	468	435	447	18	202	320	93	462
19	18	.00	.00	9.1	473	440	459	17	204	211	92	459
20	19	.00	.00	9.1	481	444	468	17	203	227	70	456
21	19	.00	8.0	9.1	486	422	468	17	206	197	44	456
22	18	.00	8.0	9.1	490	425	475	17	204	243	44	456
23	18	.00	7.8	6.0	486	425	447	17	202	236	44	456
24	18	.00	7.6	2.0	446	425	377	311	197	253	44	456
25	18	.00	7.6	2.0	484	432	349	346	318	252	44	456
26	17	.00	7.5	2.0	493	454	282	368	368	198	44	456
27	17	.00	7.6	2.0	464	468	295	316	284	175	44	453
28	17	.00	7.6	2.0	459	471	286	273	279	242	29	451
29	17	.00	7.6	2.0	479	477	273	15	279	245	11	451
30	17	.00	7.6	2.0	---	481	283	72	279	303	11	452
31	17	---	7.6	2.0	---	481	---	72	---	193	12	---
TOTAL	2134	1364.20	84.50	202.4	11456.0	14393	11995	5146	4350.0	8893	2882	7703
MEAN	68.8	45.5	2.73	6.53	395	464	400	166	145	287	93.0	257
MAX	459	419	8.0	9.1	498	489	477	368	368	488	224	462
MIN	16	.00	.00	2.0	2.0	422	273	15	7.0	158	11	10
AC-FT	4230	2710	168	401	22720	28550	23790	10210	8630	17640	5720	15280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	MEAN	75.8	112	104	65.5	97.0	141	136	69.1	64.8	162	232	179
MAX	254	412	421	213	395	464	400	207	155	417	383	440	
(WY)	1994	1994	1987	1987	1996	1996	1996	1995	1989	1989	1989	1994	
MIN	13.8	12.6	1.39	4.08	3.72	8.00	14.8	6.07	6.91	.000	93.0	11.8	
(WY)	1990	1989	1991	1991	1991	1990	1992	1989	1995	1995	1996	1989	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	47986.10	70603.10	
ANNUAL MEAN	131	193	
HIGHEST ANNUAL MEAN			120
LOWEST ANNUAL MEAN			204
HIGHEST DAILY MEAN	499	498	50.5
LOWEST DAILY MEAN	.00	.00	1990
ANNUAL SEVEN-DAY MINIMUM	.00	.00	499
ANNUAL RUNOFF (AC-FT)	95180	140000	499
10 PERCENT EXCEEDS	386	472	Apr 7 1995
50 PERCENT EXCEEDS	19	122	-18
90 PERCENT EXCEEDS	.00	.70	Jun 11 1993
			.00
			Dec 5 1990
			6.7

11231600 MONO CREEK BELOW DIVERSION DAM, NEAR MONO HOT SPRINGS, CA

LOCATION.--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. Prior to October 1991, published as "at Diversion Dam."

GAGE.--Acoustic-velocity meter on low-flow discharge, and water-stage recorder on diversion reservoir. Elevation of gage is 7,340 ft above sea level, 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. Discharge, including extremes, represents the combined flow at Mono Creek and spill at diversion dam.

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, 1,300 ft³/s, July 11, 12, 1995; minimum daily, 4.1 ft³/s, Dec. 12-16, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	10	34	8.4	e15	8.0	8.5	14	15	14	14	14
2	17	9.2	33	8.4	e15	8.1	8.0	14	15	389	14	14
3	17	8.2	32	8.4	e15	8.1	8.0	14	15	321	14	14
4	16	8.2	41	8.4	e15	8.1	8.0	13	14	14	14	14
5	13	8.2	42	8.4	e15	8.0	8.0	13	13	54	14	14
6	11	56	40	8.4	12	8.0	10	14	13	192	13	14
7	11	8.1	43	8.4	7.8	8.0	25	14	13	250	13	14
8	11	8.2	41	8.1	8.0	8.0	17	13	14	244	14	14
9	11	8.3	39	7.8	7.8	8.0	8.1	13	14	243	14	14
10	10	8.1	39	8.0	13	8.0	8.2	13	13	244	14	14
11	10	8.1	45	8.0	7.9	8.0	8.1	13	13	150	14	14
12	10	8.4	40	7.9	8.5	8.0	8.2	13	13	114	14	14
13	10	8.4	29	7.9	7.9	8.2	8.2	13	13	240	14	13
14	10	15	38	7.9	7.9	8.1	8.2	13	14	52	14	14
15	10	29	39	7.9	7.9	8.1	8.3	13	14	13	14	14
16	11	31	38	7.9	7.9	8.0	8.2	13	14	25	14	14
17	13	31	39	7.9	7.9	8.7	8.1	13	253	14	14	14
18	12	31	37	7.9	7.9	8.5	8.0	13	494	13	14	14
19	11	32	36	7.9	7.9	8.0	8.0	13	505	14	14	14
20	10	31	21	e7.9	7.9	7.9	8.0	13	525	14	13	14
21	10	31	8.0	e7.9	7.9	7.9	7.9	13	501	14	13	14
22	10	32	8.0	e7.9	7.8	8.0	8.0	13	501	14	13	14
23	10	34	8.2	e11	10	7.9	12	13	499	14	13	14
24	10	35	8.4	e15	8.0	7.9	9.7	14	439	13	13	14
25	9.8	35	8.4	e15	8.0	7.9	8.8	14	156	14	13	14
26	9.6	36	8.5	e15	8.1	8.0	8.1	14	13	13	13	14
27	9.6	32	8.4	e15	8.0	8.0	7.9	62	13	14	13	14
28	9.6	35	8.4	e15	8.0	8.0	8.0	13	14	14	14	14
29	9.9	33	8.4	e15	8.0	8.0	11	12	14	14	14	14
30	10	34	8.4	e15	---	7.9	14	14	14	13	14	13
31	9.9	---	8.4	e15	---	7.9	---	15	---	14	13	---
TOTAL	349.4	694.4	837.5	308.6	277.0	249.2	285.5	462	4161	2765	423	418
MEAN	11.3	23.1	27.0	9.95	9.55	8.04	9.52	14.9	139	89.2	13.6	13.9
MAX	17	56	45	15	15	8.7	25	62	525	389	14	14
MIN	9.6	8.1	8.0	7.8	7.8	7.9	7.9	12	13	13	13	13
AC-FT	693	1380	1660	612	549	494	566	916	8250	5480	839	829

e Estimated.

11231600 MONO CREEK BELOW DIVERSION DAM, NEAR MONO HOT SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.60	8.68	8.81	6.91	7.04	6.83	8.31	11.9	25.3	95.6	24.4	11.9
MAX	11.4	23.1	27.0	9.95	9.55	9.20	18.5	18.6	139	684	141	16.4
(WY)	1994	1996	1996	1996	1996	1987	1995	1995	1996	1995	1995	1995
MIN	6.72	5.62	5.69	5.66	5.69	5.84	5.88	9.45	9.98	9.91	9.85	9.67
(WY)	1995	1992	1993	1993	1993	1990	1992	1994	1990	1991	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1987 - 1996			
ANNUAL TOTAL	30310.0				11230.6							
ANNUAL MEAN	83.0				30.7				18.8			
HIGHEST ANNUAL MEAN									79.4			
LOWEST ANNUAL MEAN									7.83			
HIGHEST DAILY MEAN	1300				525				1300			
LOWEST DAILY MEAN	5.5				7.8				4.1			
ANNUAL SEVEN-DAY MINIMUM	5.6				7.9				4.2			
ANNUAL RUNOFF (AC-FT)	60120				22280				13650			
10 PERCENT EXCEEDS	66				37				14			
50 PERCENT EXCEEDS	15				13				9.4			
90 PERCENT EXCEEDS	6.4				8.0				5.8			

11231700 WARM CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--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.

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 above sea level, from topographic map.

REMARKS.--Records normally computed only in summer months or during periods of diversion to Lake Thomas A. Edison. Diversion occurred Oct. 1-31, and Apr. 8 to Aug. 26. 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
2	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
3	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
4	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
5	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
6	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
7	.27	---	---	---	---	---	---	.56	.40	.40	.40	---
8	.27	---	---	---	---	---	1.9	.49	.40	.40	.40	---
9	.27	---	---	---	---	---	1.9	.42	.40	.40	.40	---
10	.27	---	---	---	---	---	1.9	.42	.40	.40	.40	---
11	.27	---	---	---	---	---	1.9	.42	.40	.40	.40	---
12	.27	---	---	---	---	---	2.0	.42	.40	.40	.40	---
13	.27	---	---	---	---	---	1.9	.42	.40	.40	.40	---
14	.27	---	---	---	---	---	2.0	.42	.40	.40	.39	---
15	.27	---	---	---	---	---	2.0	.42	.40	.40	.38	---
16	.27	---	---	---	---	---	2.0	.40	.40	.40	.37	---
17	.27	---	---	---	---	---	2.0	.40	.38	.37	.37	---
18	.27	---	---	---	---	---	2.0	.42	.38	.38	.36	---
19	.27	---	---	---	---	---	2.0	.42	.38	.38	.35	---
20	.27	---	---	---	---	---	2.0	.42	.38	.38	.35	---
21	.27	---	---	---	---	---	2.0	.42	.40	.40	.34	---
22	.27	---	---	---	---	---	1.2	.41	.40	.40	.33	---
23	.27	---	---	---	---	---	.42	.40	.40	.40	.24	---
24	.27	---	---	---	---	---	.44	.40	.40	.40	.32	---
25	.27	---	---	---	---	---	.44	.40	.40	.40	.32	---
26	.27	---	---	---	---	---	.46	.40	.40	.40	.35	---
27	.27	---	---	---	---	---	.49	.40	.40	.42	---	---
28	.27	---	---	---	---	---	.51	.40	.40	.42	---	---
29	.27	---	---	---	---	---	.51	.40	.40	.42	---	---
30	.27	---	---	---	---	---	.49	.40	.40	.42	---	---
31	.27	---	---	---	---	---	---	.40	---	.42	---	---
TOTAL	8.37	---	---	---	---	---	---	13.84	11.92	12.41	---	---
MEAN	.27	---	---	---	---	---	---	.45	.40	.40	---	---
MAX	.27	---	---	---	---	---	---	.56	.40	.42	---	---
MIN	.27	---	---	---	---	---	---	.40	.38	.37	---	---
AC-FT	17	---	---	---	---	---	---	27	24	25	---	---

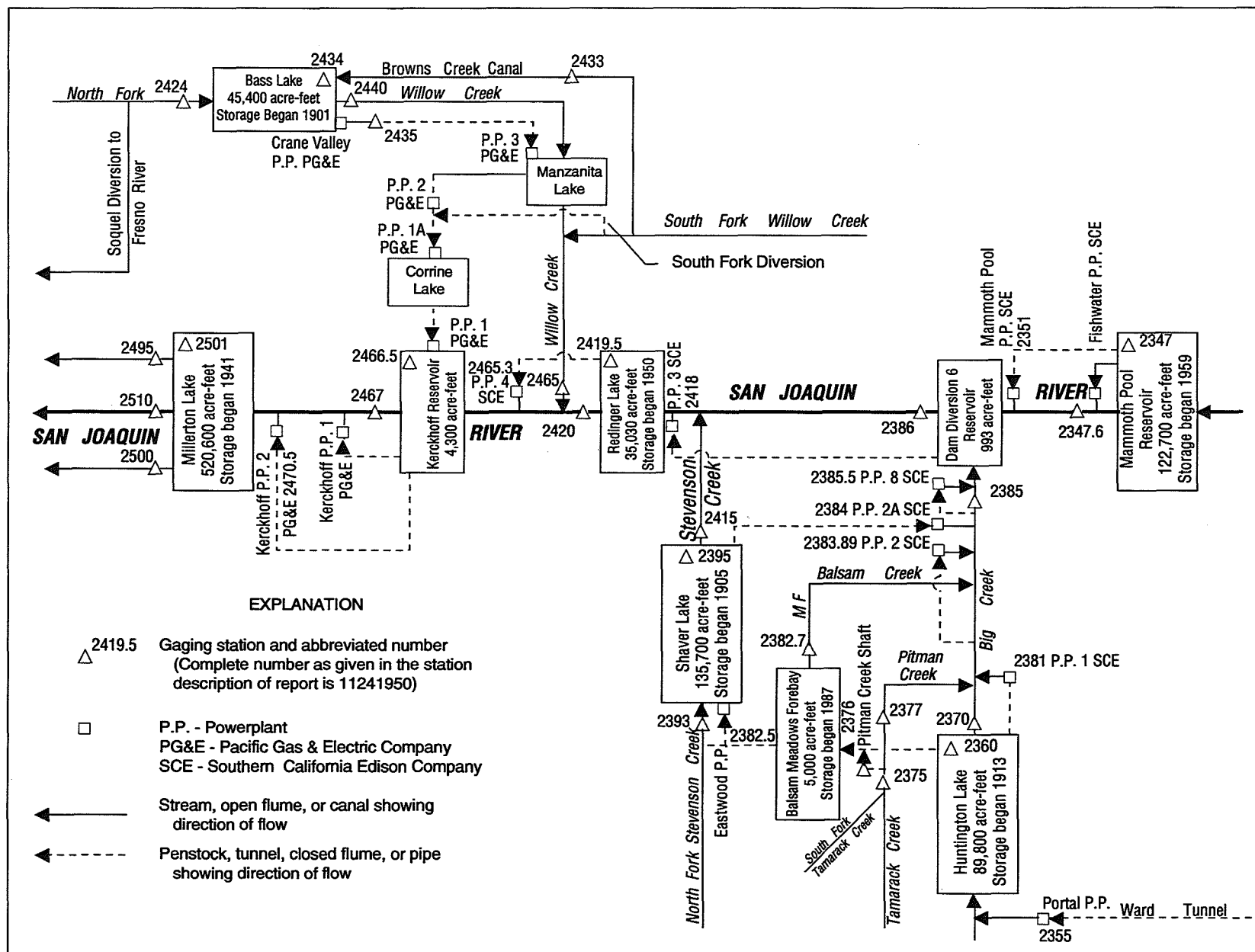


Figure 28. Diversions and storage in lower San Joaquin River basin.

11234700 MAMMOTH POOL RESERVOIR NEAR BIG CREEK, CA

LOCATION.--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 sea level (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 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. 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, 124,695 acre-ft, May 16, elevation, 3,334.26 ft; minimum, 20,247 acre-ft, Sept. 30, elevation, 3,197.24 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90219	66686	43697	36163	45923	76380	37760	86831	121448	117962	98598	55413
2	89216	65318	42870	36037	47196	72706	38017	93902	121837	119995	97737	53956
3	88421	64758	42059	36413	48486	69826	37415	99576	122171	120903	96795	52674
4	87822	64439	41250	36793	52210	69645	36338	104152	122160	120494	95830	50993
5	87023	63530	40450	36163	62906	69120	35327	108955	122194	120250	95011	49371
6	86237	62743	39530	35790	67561	69448	34936	113549	122529	120195	93959	48057
7	85446	61864	38876	35418	70214	64918	35475	118297	123133	120150	92646	46699
8	84666	60918	38101	34930	71926	62705	36882	121437	122887	120471	91256	45422
9	84077	60138	37071	34689	73280	61214	38840	121592	122674	120471	90107	44061
10	83103	59488	36309	34203	74381	59745	40218	121848	122328	120372	88780	42523
11	82322	57661	36060	33846	75301	58766	41009	122384	121949	120228	87372	40947
12	81356	57023	39664	33484	75848	57958	41797	122663	121793	120516	85773	39257
13	80397	56388	41114	33361	76594	56676	41816	122596	121793	120494	84367	37534
14	79641	55616	41785	33245	77333	54951	42147	122350	121303	119929	83301	36315
15	78880	55283	42059	33123	77892	53098	43257	124019	121559	119066	82206	35270
16	77944	54664	42190	34203	79020	51432	45988	124695	121503	117649	80627	34013
17	77384	53735	42059	35418	81883	50079	48372	122440	121570	115846	79081	32681
18	76646	52971	41785	36037	83626	49632	50349	122708	121570	113845	77961	31310
19	75720	52365	41386	36663	88947	50044	50501	122026	121492	111772	76345	29768
20	74977	51453	40984	37047	96269	50355	49955	121681	121537	109523	74661	28140
21	74423	50556	40450	37302	99398	50632	48978	121459	121481	107939	73018	27680
22	73694	49811	39913	37302	99398	50847	48097	121437	121247	106582	71234	27268
23	72958	49073	39664	37302	97303	50058	47924	121236	121225	105994	69226	26368
24	72235	48198	39136	37564	95239	48674	49025	121737	121069	105267	67293	24606
25	71509	47334	38749	38077	93400	47170	52013	121581	120615	104644	65422	22686
26	70968	46771	37969	38334	90760	45441	56765	121080	119962	103520	64638	21995
27	70255	45923	37326	38858	87363	43882	62449	121181	119143	102969	62922	21465
28	69366	45085	36816	40169	83824	42914	67895	120981	117756	102320	62210	21018
29	68653	44640	36309	41362	80920	41294	73204	120947	116410	101394	60501	20647
30	67074	44575	36187	42172	---	39664	79755	120936	116815	100522	58668	20247
31	66370	---	36524	43812	---	38179	---	121136	---	99398	56883	---
MAX	90219	66686	43697	43812	99398	76380	79755	124695	123133	120903	98598	55413
MIN	66370	44575	36060	33123	45923	38179	34936	86831	116410	99398	56883	20247
a	3273.01	3242.80	3229.70	3241.61	3290.25	3232.49	3288.93	3331.08	3330.90	3310.12	3260.68	3197.24
b	-25298	-21795	-8051	+7288	+37108	-42741	+41576	+41381	-4321	-17417	-42515	-36636

CAL YR 1995 b -6873
WTR YR 1996 b -71421

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

SAN JOAQUIN RIVER BASIN

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA

LOCATION.--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 sea level (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 of 60 ft³/s or less.

REMARKS.--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 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, 24,700 ft³/s, May 16, 1996, gage height, 20.44 ft; minimum daily, 0.3 ft³/s, Oct. 14, Dec. 5, 1959.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e27	e35	12	12	11	379	26	53	1550	28	28	27
2	e27	16	12	12	11	376	11	53	2310	28	28	27
3	e27	11	12	12	11	374	10	53	3060	795	28	27
4	e27	11	11	12	11	185	10	54	3490	683	27	26
5	e27	11	11	12	12	51	10	54	3500	246	27	27
6	e27	11	11	12	12	51	10	54	3920	139	27	27
7	e27	11	11	12	12	50	11	54	4980	107	27	27
8	e27	11	11	12	12	50	11	743	5620	290	30	27
9	e27	11	11	12	12	50	11	1920	5040	378	e35	27
10	e27	11	11	11	12	49	11	2390	4580	335	e35	27
11	e27	11	11	11	12	49	28	3210	3460	206	e35	27
12	e27	11	11	11	12	49	51	4060	2780	195	e35	27
13	e27	11	11	11	12	50	51	4440	2670	515	e35	26
14	e27	11	11	11	12	50	51	4310	2230	160	e35	26
15	e27	11	12	11	12	50	51	4670	2190	28	e35	26
16	e27	11	12	11	12	50	42	18100	2200	27	e35	26
17	e27	11	12	11	12	49	20	6610	2120	28	e35	26
18	e27	11	12	11	12	49	20	5360	2360	28	e35	26
19	e27	11	12	11	29	49	20	4350	2050	28	e35	27
20	e27	11	12	11	66	49	33	2850	2220	28	e35	28
21	e27	11	12	11	62	49	49	2510	2190	28	e35	28
22	e27	11	12	11	219	49	49	1810	1690	28	e33	28
23	e27	11	12	11	396	49	49	1670	1510	28	28	28
24	e30	11	12	11	394	49	49	1300	1530	28	27	28
25	e34	11	12	11	393	48	50	2180	815	28	27	28
26	e35	11	12	11	390	48	50	1830	204	28	27	27
27	e35	11	12	11	387	50	50	1870	38	28	27	27
28	e35	11	12	11	384	50	51	1220	28	28	27	27
29	e35	11	12	11	383	50	52	1000	28	28	27	27
30	e35	11	12	11	---	50	53	930	28	28	27	27
31	e35	---	12	11	---	50	---	1040	---	28	27	---
TOTAL	895	359	361	350	3315	2651	990	80748	70391	4580	954	809
MEAN	28.9	12.0	11.6	11.3	114	85.5	33.0	2605	2346	148	30.8	27.0
MAX	35	35	12	12	396	379	53	18100	5620	795	35	28
MIN	27	11	11	11	11	48	10	53	28	27	27	26
AC-FT	1780	712	716	694	6580	5260	1960	160200	139600	9080	1890	1600
a	38100	34950	34940	27040	70100	157200	149900	136200	130500	113200	67770	48890

e Estimated.

a Diversion, in acre-feet, to Mammoth Pool Powerplant, provided by Southern California Edison Co.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.3	12.9	15.1	28.4	64.6	105	218	1420	2099	889	75.1	22.3
MAX	61.9	20.1	66.3	422	754	1111	2489	9681	12400	7169	1184	45.3
(WY)	1960	1974	1967	1967	1980	1995	1995	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1960 - 1996			
ANNUAL TOTAL	717160				166403							
ANNUAL MEAN	1965				455				415			
HIGHEST ANNUAL MEAN									2022			
LOWEST ANNUAL MEAN									13.2			
HIGHEST DAILY MEAN	13500				18100				18100			
LOWEST DAILY MEAN	11				10				.30			
ANNUAL SEVEN-DAY MINIMUM	11				10				.57			
INSTANTANEOUS PEAK FLOW					24700				24700			
INSTANTANEOUS PEAK STAGE					20.44				20.44			
ANNUAL RUNOFF (AC-FT)	1422000				330100				300700			
TOTAL DIVERSION (AC-FT) a	916100				1009000							
10 PERCENT EXCEEDS	6920				1820				391			
50 PERCENT EXCEEDS	242				28				15			
90 PERCENT EXCEEDS	11				11				12			

a Diversion, in acre-feet, to Mammoth Pool Powerplant, provided by Southern California Edison Co.

11235500 PORTAL POWERPLANT AT HUNTINGTON LAKE, CA

LOCATION.--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. October 1960 to September 1991, published as Ward Tunnel Outlet at Huntington Lake.

GAGE.--Acoustic-velocity meter in tunnel 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 sea level (levels by Southern California Edison Co.). May 24, 1956, to Sept. 30, 1968, no recorder, see REMARKS below.

REMARKS.--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 11230520 and 11231550), and at times from several other small tributaries to South Fork San Joaquin River. See schematic diagram 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, 2,080 ft³/s, June 21, 1935; no flow at times many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	928	166	.00	94	.00	640	731	1540	1130	676	953	877
2	923	416	.00	94	.00	585	736	1610	1020	938	978	877
3	786	857	.00	125	.00	630	741	1620	711	1380	1000	877
4	751	711	.00	94	323	630	741	1620	565	1460	968	988
5	761	565	.00	98	368	741	746	1620	490	1090	973	1010
6	761	235	.00	96	65	615	781	1620	812	1700	918	1150
7	756	188	.00	35	471	671	761	1650	993	1450	958	1070
8	746	411	.00	82	665	681	756	1660	1080	1150	938	1160
9	746	501	.00	103	716	681	923	1660	1110	1160	998	1160
10	575	488	.00	79	711	741	983	1660	1300	1160	918	1090
11	524	192	.00	99	686	686	973	1710	1470	1260	529	1070
12	857	.00	.00	104	650	711	923	1750	1480	1380	620	1140
13	958	.00	.00	.00	736	681	897	1420	1490	1360	1070	1220
14	938	.00	.00	113	736	731	842	465	1660	1390	1280	781
15	923	.00	.00	120	736	731	867	146	1110	1350	1270	565
16	907	.00	.00	.00	736	736	998	385	1110	1230	1230	605
17	832	.00	.00	170	736	736	902	595	1040	1010	1210	539
18	847	.00	.00	85	736	872	907	998	1160	1070	1210	524
19	867	.00	.00	166	731	766	842	897	1040	923	1160	534
20	887	.00	415	142	726	812	857	792	1090	1110	1250	555
21	822	.00	164	100	731	766	842	224	973	998	1190	519
22	832	.00	80	116	731	872	837	24	812	1020	1250	524
23	776	.00	131	116	832	802	832	514	928	998	1250	486
24	655	.00	37	.00	1030	781	832	1070	1120	998	1240	534
25	590	.00	100	80	1050	721	1040	1190	1300	1090	1220	454
26	741	.00	29	.00	1150	731	1350	1180	1540	988	1100	504
27	726	.00	94	71	1140	736	1380	1230	696	948	716	524
28	686	.00	94	.00	665	786	1410	1250	696	978	1150	463
29	726	.00	49	70	610	716	1460	1220	534	1070	1080	469
30	425	.00	93	.00	---	736	1540	1250	555	1040	867	504
31	203	---	92	64	---	731	---	1060	---	776	892	---
TOTAL	23455	4730.00	1378.00	2516.00	18467.00	22455	28430	35630	31015	35151	32386	22773
MEAN	757	158	44.5	81.2	637	724	948	1149	1034	1134	1045	759
MAX	958	857	415	170	1150	872	1540	1750	1660	1700	1280	1220
MIN	203	.00	.00	.00	.00	585	731	24	490	676	529	454
AC-FT	46520	9380	2730	4990	36630	44540	56390	70670	61520	69720	64240	45170

11235500 PORTAL POWERPLANT AT HUNTINGTON LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	328	263	270	254	261	288	521	847	907	828	646	490
MAX	757	908	1102	793	806	815	953	1459	1665	1321	1386	1104
(WY)	1996	1983	1946	1985	1985	1985	1936	1946	1974	1956	1995	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1928 - 1996
ANNUAL TOTAL	252115.00	258386.00	
ANNUAL MEAN	691	706	493
HIGHEST ANNUAL MEAN			742
LOWEST ANNUAL MEAN			196
HIGHEST DAILY MEAN	1780	Aug 2	2080
LOWEST DAILY MEAN	.00	Nov 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 12	.00
ANNUAL RUNOFF (AC-FT)	500100	512500	357300
10 PERCENT EXCEEDS	1400	1250	1080
50 PERCENT EXCEEDS	656	741	461
90 PERCENT EXCEEDS	.00	.00	62

11236000 HUNTINGTON LAKE NEAR BIG CREEK, CA

LOCATION.--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 sea level (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, 89,009 acre-ft, July 31, elevation, 6,949.89 ft; minimum, 3,303 acre-ft, Feb. 6, elevation, 6,844.90 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87750	81766	55774	33583	5218	38506	44396	46788	86204	88351	88723	88580
2	87979	81766	54752	32968	4815	39540	44628	48962	86785	88422	88365	88523
3	87993	81959	53806	32243	3540	40669	44892	51374	86970	88265	88322	88508
4	87951	81105	52879	31334	3902	41924	45092	53634	86785	88322	88265	88523
5	88365	81628	51947	30319	4042	43249	44965	56078	86360	88322	88279	88365
6	88408	79914	51014	29407	3303	44249	44955	58524	86317	88308	88265	88279
7	88294	78893	50078	28544	3562	44660	45134	60847	86345	88537	88279	88122
8	88208	78323	49105	27177	5180	45261	45197	63073	86402	88680	88222	88265
9	88094	77890	48229	25413	6711	45451	45398	65344	86374	88537	88465	88322
10	87708	77446	47413	24042	8130	45345	45611	67713	86516	88422	88408	88437
11	87225	76452	46734	22985	9454	45483	45643	70390	86814	88165	88322	88494
12	87126	75092	46432	22185	10717	45878	45601	73322	87055	88008	88380	88637
13	87239	73795	45878	21376	11737	45750	45462	76492	87268	88065	88437	88923
14	87324	72443	45050	20710	13129	45569	45271	78378	88294	88094	88465	88279
15	87552	71114	44156	19506	14526	45675	45271	80351	88766	88136	88422	87254
16	87765	69707	43322	19558	16000	45398	45792	83972	88565	88108	88337	88656
17	87793	68337	42539	17032	17578	45166	45430	84294	88494	88694	88265	88275
18	87850	66991	41731	18305	19060	45029	44565	85669	88594	88823	88237	85838
19	87779	65695	40960	17621	20867	44723	43416	86473	88494	88952	88365	85937
20	87779	64509	41711	16913	22458	44649	42364	86345	88308	88708	88451	85979
21	87665	63554	41131	16012	23968	44533	41385	84685	88480	88823	88465	85923
22	87608	62617	40407	15446	25382	44544	40488	82388	88508	88952	88508	85937
23	87466	61760	39739	14573	26927	44544	39679	80843	88136	88866	88523	85965
24	86998	61077	39016	13504	28928	44365	39026	80788	88079	88923	88623	85852
25	86473	60386	38310	12543	30975	44323	38947	81229	87879	88866	88851	85430
26	86162	59530	37573	11338	33104	44291	39689	81766	88565	88994	88279	84923
27	85852	58762	36881	11271	35179	44323	40669	82415	88594	88937	88565	84420
28	85458	58000	36147	9698	36327	44533	41802	83012	88537	88851	88780	83805
29	85120	57525	35365	8119	37389	44533	43219	83861	88408	88794	88737	83192
30	84280	56688	34779	6898	---	44776	44892	84769	88351	88923	88708	82707
31	83095	---	34160	5906	---	44502	---	85331	---	89009	88680	---
MAX	88408	81959	55774	33583	37389	45878	45792	86473	88766	89009	88851	88923
MIN	83095	56688	34160	5906	3303	38506	38947	46788	86204	88008	88222	82707
a	6945.70	6925.12	6903.69	6855.20	6907.12	6914.18	6914.55	6947.30	6949.43	6949.89	6949.66	6945.42
b	-4391	-26407	-22528	-28254	+31483	+7113	+390	+40439	+3020	+658	-329	-5973

CAL YR 1995 b -14167

WTR YR 1996 b -4779

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

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA

LOCATION.--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.

WATER TEMPERATURE: Water years 1961-70.

REVISED RECORDS.--WSP 1315-A: 1943(M). WSP 1635: 1925-29. WSP 1930: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,630 ft above sea level, 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.--Flow regulated by Huntington Lake (station 11236000). Diversions 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, many days in 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	4.5	3.8	3.2	.96	2.5	3.7	4.8	3.1	2.5	2.3	2.2
2	4.5	4.5	3.8	3.2	.77	2.5	3.9	4.7	3.0	2.4	2.3	2.2
3	4.5	4.5	3.8	3.2	.76	2.4	3.7	4.5	3.0	2.4	2.2	2.2
4	4.5	4.4	3.8	3.1	2.3	2.4	3.7	4.4	3.0	2.4	2.2	2.1
5	4.6	4.3	3.7	3.1	4.1	2.3	3.9	4.3	2.9	2.4	2.2	2.1
6	4.6	4.4	3.7	3.0	2.1	2.3	4.1	4.3	2.9	2.4	2.2	2.1
7	4.6	4.4	3.7	3.0	1.6	2.4	4.3	4.2	2.9	2.4	2.2	2.2
8	4.6	4.3	3.6	2.9	1.5	2.4	4.5	4.1	2.8	2.4	2.2	2.2
9	4.6	4.3	3.6	2.8	1.5	2.4	4.5	4.1	2.8	2.3	2.2	2.2
10	4.6	4.3	3.6	2.8	1.5	2.5	4.4	3.9	2.8	2.3	2.2	2.2
11	4.6	4.3	4.1	2.7	1.5	2.5	4.2	3.8	2.8	2.3	2.2	2.2
12	4.6	4.2	5.9	2.6	1.5	2.5	4.2	3.8	2.8	2.4	2.2	2.2
13	4.6	4.2	4.2	2.5	1.5	2.4	4.1	3.7	2.8	2.3	2.1	3.0
14	4.6	4.1	3.9	2.4	1.6	2.4	4.1	3.7	2.8	2.3	2.1	2.7
15	4.6	4.1	3.8	2.4	1.6	2.4	4.2	4.1	2.8	2.3	2.2	2.3
16	4.6	4.0	3.7	3.3	1.9	2.6	5.8	7.8	2.7	2.2	2.2	2.2
17	4.6	4.0	3.6	3.0	2.0	2.8	5.7	5.1	2.7	2.3	2.2	2.2
18	4.6	4.0	3.5	2.6	1.9	3.0	6.5	4.7	2.7	3.2	2.2	2.1
19	4.5	3.9	3.5	2.5	5.4	3.2	5.1	4.5	2.6	2.8	2.1	2.1
20	4.5	3.9	3.5	2.4	5.2	3.4	4.7	4.2	2.6	2.4	2.1	2.1
21	4.5	3.8	3.5	2.3	3.2	3.5	4.5	4.0	2.6	3.1	2.1	2.7
22	4.5	3.8	3.4	2.3	2.8	3.5	4.4	3.8	2.6	3.7	2.1	2.6
23	4.5	3.8	3.4	2.3	2.6	3.2	4.5	3.6	2.5	2.5	2.1	2.6
24	4.5	3.8	3.4	2.1	2.6	3.1	4.6	3.5	2.5	2.4	2.1	2.6
25	4.6	3.8	3.4	1.9	2.6	3.1	4.7	3.3	2.6	3.2	2.1	2.5
26	4.6	3.9	3.3	1.8	2.6	3.0	4.9	3.3	2.7	3.1	2.2	2.5
27	4.6	3.8	3.3	1.7	2.6	3.1	5.0	3.3	2.7	2.7	4.9	2.4
28	4.6	3.8	3.3	1.6	2.6	3.2	4.9	3.2	2.6	2.4	2.2	2.4
29	4.6	3.8	3.3	1.5	2.6	3.1	4.8	3.1	2.5	2.4	2.1	2.3
30	4.6	3.8	3.4	1.3	---	3.2	4.8	3.1	2.5	3.0	2.2	2.3
31	4.6	---	3.3	1.2	---	3.3	---	3.1	---	2.7	2.2	---
TOTAL	141.7	122.7	113.8	76.7	65.39	86.6	136.4	126.0	82.3	79.6	70.1	69.7
MEAN	4.57	4.09	3.67	2.47	2.25	2.79	4.55	4.06	2.74	2.57	2.26	2.32
MAX	4.6	4.5	5.9	3.3	5.4	3.5	6.5	7.8	3.1	3.7	4.9	3.0
MIN	4.5	3.8	3.3	1.2	.76	2.3	3.7	3.1	2.5	2.2	2.1	2.1
AC-FT	281	243	226	152	130	172	271	250	163	158	139	138
a	21290	15060	18160	30470	11640	26680	36950	41640	27420	35520	37430	28540

a Diversion, in acre-ft, to Big Creek Powerplant No. 1, provided by Southern California Edison Co.

SAN JOAQUIN RIVER BASIN

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.41	1.42	1.44	1.22	1.28	1.66	2.68	9.24	9.28	10.4	1.94	1.46
MAX	4.79	4.55	4.70	4.25	3.52	5.90	7.09	297	242	293	8.34	4.86
(WY)	1994	1994	1956	1995	1995	1995	1995	1926	1926	1925	1969	1993
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1925 - 1996			
ANNUAL TOTAL	2232.4				1170.99							
ANNUAL MEAN	6.12				3.20				3.20			
HIGHEST ANNUAL MEAN									45.9			
LOWEST ANNUAL MEAN									.35			
HIGHEST DAILY MEAN	19				7.8				1160			
LOWEST DAILY MEAN	3.3				.76				.10			
ANNUAL SEVEN-DAY MINIMUM	3.3				1.2				.10			
INSTANTANEOUS PEAK FLOW					27				2040			
INSTANTANEOUS PEAK STAGE					3.00				11.30			
ANNUAL RUNOFF (AC-FT)	4430				2320				2320			
TOTAL RUNOFF (AC-FT) a	348900				330800							
10 PERCENT EXCEEDS	12				4.6				4.0			
50 PERCENT EXCEEDS	4.7				3.0				1.3			
90 PERCENT EXCEEDS	3.6				2.1				.40			

a Diversion, in acre-ft, to Big Creek Powerplant No. 1, provided by Southern California Edison Co.

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 sea level, from topographic map.

REMARKS.--Flow is diverted from Huntington Lake (station 11236000) and Pitman Creek (station 11237600) to Balsam Meadows Forebay, then 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, 1,910 ft³/s, May 24, 1993; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	406	490	655	529	0	0	776	1417	1129	842	812	771
2	442	494	181	570	0	0	822	1492	1170	842	832	771
3	441	600	580	509	0	0	913	1119	913	1079	630	771
4	483	451	640	534	0	0	756	1205	1094	1346	665	786
5	468	477	550	615	0	0	731	1356	1018	1270	771	842
6	359	519	560	681	0	0	807	1381	1210	1250	650	792
7	645	575	575	590	0	129	691	1235	1270	1301	771	726
8	832	340	534	761	0	751	1039	1069	1170	1079	766	741
9	746	771	259	721	0	640	1079	1160	1255	1028	585	842
10	872	716	385	580	0	827	686	1109	1270	1013	0	792
11	706	420	493	570	0	441	1124	1094	1235	1064	0	716
12	514	741	560	423	0	467	1074	1170	1190	1094	32	443
13	323	635	565	0	0	454	1114	295	1351	1074	857	625
14	726	731	575	0	0	635	988	0	1245	1054	907	983
15	605	731	465	0	0	660	983	0	973	1155	892	630
16	464	630	650	0	0	771	1149	130	1281	660	948	756
17	600	751	544	0	0	756	1094	1190	1306	807	867	721
18	524	676	514	0	0	590	1094	1407	1281	812	847	524
19	625	417	433	0	0	490	1311	1512	887	923	837	560
20	681	681	416	0	0	897	1104	1477	1089	882	797	503
21	524	534	372	0	0	812	1230	1613	665	741	832	605
22	726	575	400	0	0	882	1109	1467	1265	862	867	590
23	600	489	430	0	0	882	1265	1462	1301	741	892	529
24	691	600	544	0	0	721	1311	1467	1326	721	812	487
25	480	605	534	0	0	761	1356	1260	1452	797	681	381
26	600	590	605	0	0	867	1195	1255	1255	731	427	751
27	600	544	417	0	0	711	1497	1165	807	797	1255	681
28	660	476	615	0	0	519	1215	1240	923	716	792	478
29	797	394	590	0	0	539	1563	1129	776	857	832	1109
30	857	488	610	0	---	701	1371	1124	756	812	786	1144
31	610	---	620	0	---	877	---	1089	---	467	771	---
TOTAL	18607	17141	15871	7083	0	16780	32447	35089	33863	28817	22413	21050
MEAN	600	571	512	228	.000	541	1082	1132	1129	930	723	702
MAX	872	771	655	761	0	897	1563	1613	1452	1346	1255	1144
MIN	323	340	181	0	0	0	686	0	665	467	0	381
AC-FT	36910	34000	31480	14050	.00	33280	64360	69600	67170	57160	44460	41750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

	MEAN	264	202	224	254	223	229	492	746	840	666	496	405
MAX	600	571	512	400	406	541	1080	1604	1501	1343	809	702	
(WY)	1996	1996	1996	1989	1988	1996	1996	1993	1993	1995	1995	1996	
MIN	.000	.000	21.4	6.19	.000	19.5	29.3	159	270	156	181	81.7	
(WY)	1988	1988	1991	1990	1996	1991	1991	1991	1990	1992	1992	1992	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1988 - 1996		
ANNUAL TOTAL	256122			249161					
ANNUAL MEAN	702			681			421		
HIGHEST ANNUAL MEAN							681		
LOWEST ANNUAL MEAN							141		
HIGHEST DAILY MEAN	1900			1613			1910		
LOWEST DAILY MEAN	0			0			0		
ANNUAL SEVEN-DAY MINIMUM	.00			.00			.00		
ANNUAL RUNOFF (AC-FT)	508000			494200			304900		
10 PERCENT EXCEEDS	1410			1250			996		
50 PERCENT EXCEEDS	597			691			343		
90 PERCENT EXCEEDS	193			.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 sea level, 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 (station 11238250). 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, unknown, Apr. 15, 1989, as there was no record of flow over spillway; minimum daily, 0.31 ft³/s, Feb. 4, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.61	.59	.58	.55	.52	.59	.53	1.3	1.3	1.3	1.4
2	1.1	.61	.56	.59	.54	.54	.60	.53	1.2	1.3	1.3	1.4
3	.64	.60	.57	.59	.55	.53	.58	.53	1.3	1.4	1.3	1.4
4	.64	.61	.58	.59	.60	.51	.58	.52	1.3	1.2	1.3	1.3
5	.7	.61	.58	.60	.64	.51	.59	e.52	1.2	1.2	1.2	1.3
6	.81	.61	.59	.58	.58	.50	.62	e.52	1.2	1.2	1.2	1.3
7	.81	.61	.58	.57	.57	.51	.63	.52	1.2	1.2	1.2	1.3
8	.77	.61	.58	.59	.59	.55	.63	.54	1.2	1.2	1.2	1.3
9	.75	.60	.57	.57	.59	.55	.62	.57	1.2	1.3	1.2	1.3
10	.75	.60	.59	.57	.59	.55	.56	.57	1.1	1.3	1.2	1.3
11	.75	.63	.60	.58	.59	.55	.55	.57	1.1	1.3	1.3	1.3
12	.73	.61	.64	.56	.58	.54	.55	.57	1.1	1.2	1.2	1.3
13	.73	.61	.60	.54	.57	.53	.54	.58	1.1	1.2	1.2	1.3
14	.73	.59	.59	.54	.57	.54	.54	.59	1.1	1.3	1.2	1.3
15	.73	.59	.58	.54	.57	.56	.54	.61	1.1	1.3	1.3	1.3
16	.71	.59	.59	.56	.57	.59	.61	.71	1.2	1.3	1.3	1.3
17	.71	.59	.58	.56	.57	.61	.57	.63	1.2	1.3	1.2	1.3
18	.71	.59	.59	.54	.57	.60	.57	.60	1.2	1.2	1.2	1.2
19	.71	.58	.58	.54	.75	.58	.53	.60	1.1	1.2	1.2	1.2
20	.63	.59	.58	.54	.64	.60	.52	.58	1.1	1.2	1.2	1.2
21	.61	.61	.57	.55	.58	.61	.53	.59	1.2	1.2	1.2	1.2
22	.61	.62	.59	.54	.55	.61	.54	.57	1.1	1.2	1.2	1.2
23	.59	.61	.58	.54	.54	.61	.56	.57	1.1	1.2	1.2	1.2
24	.59	.62	.57	.55	.54	.60	.56	.57	1.1	1.2	1.2	1.2
25	.59	.62	.57	.56	.54	.59	.55	.58	1.1	1.2	1.2	1.2
26	.69	.61	.57	.55	.54	.59	.56	.58	1.1	1.2	1.2	1.2
27	.67	.61	.55	.56	.54	.58	.54	.58	1.1	1.2	1.2	1.2
28	.73	.60	.57	.55	.53	.58	.53	.59	1.2	1.2	1.2	1.2
29	.73	.59	.58	.55	.51	.60	.54	.58	1.2	1.2	1.2	1.2
30	.67	.59	.59	.56	---	.57	.54	.81	1.2	1.2	1.3	1.2
31	.63	---	.58	.55	---	.59	---	1.3	---	1.2	1.3	---
TOTAL	22.62	18.12	18.04	17.39	16.65	17.50	16.97	18.71	34.9	38.3	38.1	38.0
MEAN	.73	.60	.58	.56	.57	.56	.57	.60	1.16	1.24	1.23	1.27
MAX	1.4	.63	.64	.60	.75	.61	.63	1.3	1.3	1.4	1.3	1.4
MIN	.59	.58	.55	.54	.51	.50	.52	.52	1.1	1.2	1.2	1.2
AC-FT	45	36	36	34	33	35	34	37	69	76	76	75

e Estimated.

11238270 MIDDLE FORK BALSAM CREEK BELOW BALSAM MEADOWS FOREBAY, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.81	.76	.82	.79	.80	1.00	1.16	.88	1.31	1.34	1.36	1.35
MAX	.93	1.15	1.44	1.10	1.10	2.20	2.75	1.28	1.45	1.38	1.48	1.50
(WY)	1992	1992	1992	1993	1993	1992	1992	1995	1995	1990	1992	1992
MIN	.72	.60	.58	.56	.57	.56	.57	.60	1.16	1.24	1.23	1.22
(WY)	1994	1996	1996	1996	1996	1996	1996	1996	1994	1996	1996	1991

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1989 - 1996			
ANNUAL TOTAL	382.84				295.30							
ANNUAL MEAN	1.05				.81				1.04			
HIGHEST ANNUAL MEAN									1.38			
LOWEST ANNUAL MEAN									.81			
HIGHEST DAILY MEAN	1.7 Sep 3				1.4 Oct 1				3.4 Apr 2 1992			
LOWEST DAILY MEAN	.55 Dec 27				.50 Mar 6				.31 Feb 4 1989			
ANNUAL SEVEN-DAY MINIMUM	.57 Dec 23				.52 Feb 29				.52 Feb 29 1996			
INSTANTANEOUS PEAK FLOW					1.7 Jul 3							
INSTANTANEOUS PEAK STAGE					.87 Jul 3							
ANNUAL RUNOFF (AC-FT)	759				586				750			
10 PERCENT EXCEEDS	1.5				1.3				1.4			
50 PERCENT EXCEEDS	1.2				.61				.89			
90 PERCENT EXCEEDS	.59				.54				.64			

SAN JOAQUIN RIVER BASIN

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 above sea level, from topographic map.

REMARKS.--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, 3,380 ft³/s, May 16, 1996, gage height, 7.64 ft, from rating curve extended above 900 ft³/s; no flow several days in 1925 and 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.3	2.2	2.6	3.9	3.0	3.8	46	25	15	3.0	3.6
2	3.8	3.2	2.4	2.6	3.0	2.9	3.7	63	26	17	3.6	5.7
3	4.0	3.3	2.4	2.6	2.7	2.8	3.8	53	26	17	3.6	5.4
4	3.9	3.2	2.3	2.6	9.3	4.1	3.1	49	25	16	3.7	4.0
5	3.9	3.1	2.3	2.5	10	16	3.0	17	25	16	3.7	4.6
6	3.9	3.1	2.3	2.5	4.6	6.6	3.1	5.7	24	16	3.4	3.8
7	3.9	3.3	2.3	2.5	3.5	4.8	3.1	6.8	24	16	4.2	3.7
8	3.9	3.9	2.9	2.3	3.1	4.2	3.1	53	24	16	4.5	3.6
9	3.9	3.9	2.9	2.4	2.8	3.8	3.1	8.4	23	16	4.5	3.6
10	3.8	4.0	2.9	2.3	2.6	3.5	3.1	11	23	16	4.3	3.6
11	3.8	4.0	3.1	2.3	2.4	650	3.1	18	23	10	4.8	3.6
12	3.8	3.9	4.0	2.3	2.4	904	3.2	25	23	56	4.5	3.6
13	3.7	3.9	3.0	2.3	2.3	898	3.2	15	23	5.1	4.4	3.6
14	3.6	3.8	2.5	2.3	2.2	756	4.2	5.7	23	5.0	4.3	3.6
15	3.6	3.8	2.2	2.3	2.2	437	4.2	130	24	4.9	4.2	3.6
16	3.6	3.6	2.1	3.7	2.2	6.8	5.4	1030	23	4.5	4.4	3.6
17	3.6	3.5	2.1	3.2	27	6.3	5.3	76	17	4.2	4.3	3.6
18	9.1	3.5	2.3	3.0	2.3	13	146	221	14	4.2	4.4	3.6
19	3.6	3.4	2.6	5.3	8.0	27	75	125	16	4.2	3.7	3.6
20	3.5	3.0	2.6	3.0	13	38	69	97	16	4.2	4.2	3.6
21	3.4	2.1	2.5	3.1	11	18	28	88	16	4.2	3.8	3.6
22	3.4	2.4	2.5	2.9	8.4	4.5	15	36	15	4.2	4.7	3.6
23	3.4	2.4	2.7	2.4	5.3	4.0	7.7	34	15	4.2	6.5	3.6
24	3.4	2.4	2.6	2.2	4.5	3.6	27	33	15	4.2	6.1	3.7
25	3.5	2.4	2.6	4.6	4.1	3.6	49	32	15	4.2	6.0	3.7
26	3.4	2.3	2.5	2.8	3.7	3.6	55	147	16	4.2	5.3	3.6
27	3.4	2.3	2.5	3.6	3.4	3.3	57	268	15	4.2	5.8	3.6
28	3.4	2.3	2.5	4.3	3.2	3.9	56	24	15	4.2	6.2	3.6
29	3.4	2.3	2.6	2.9	3.0	3.4	56	23	15	4.2	4.2	3.6
30	3.3	2.3	2.6	2.6	---	3.4	54	24	15	4.2	3.6	3.5
31	3.3	---	2.6	5.8	---	3.2	---	24	---	3.8	3.6	---
TOTAL	118.1	93.9	79.6	91.8	156.1	3842.3	756.2	2788.6	599	309.1	137.5	113.7
MEAN	3.81	3.13	2.57	2.96	5.38	124	25.2	90.0	20.0	9.97	4.44	3.79
MAX	9.1	4.0	4.0	5.8	27	904	146	1030	26	56	6.5	5.7
MIN	3.3	2.1	2.1	2.2	2.2	2.8	3.0	5.7	14	3.8	3.0	3.5
AC-FT	234	186	158	182	310	7620	1500	5530	1190	613	273	226
a	58920	33720	35080	55000	43910	64010	77830	70130	55530	63640	65550	56560

a Diversion, in acre-feet, to Big Creek Powerplant No. 8, provided by Southern California Edison Co.

11238500 BIG CREEK NEAR MOUTH, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.58	3.53	2.43	7.08	3.54	57.2	13.0	46.1	34.8	19.6	3.86	3.69
MAX	5.66	8.47	5.42	39.0	9.08	377	58.3	327	267	110	6.22	6.34
(WY)	1994	1995	1994	1993	1993	1995	1995	1995	1995	1995	1994	1994
MIN	2.44	1.97	1.28	1.61	1.69	2.03	2.35	2.23	2.23	2.20	2.27	2.33
(WY)	1988	1988	1995	1989	1988	1992	1989	1987	1987	1987	1988	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1987 - 1996	
ANNUAL TOTAL	36023.4		9085.9			
ANNUAL MEAN	98.7		24.8		16.7	
HIGHEST ANNUAL MEAN					99.2	1995
LOWEST ANNUAL MEAN					2.34	1988
HIGHEST DAILY MEAN	1430	Mar 12	1030	May 16	1430	Mar 12 1995
LOWEST DAILY MEAN	1.2	Jan 1	2.1	Nov 21	1.0	Dec 8 1994
ANNUAL SEVEN-DAY MINIMUM	2.0	Feb 20	2.3	Nov 25	1.1	Dec 4 1994
INSTANTANEOUS PEAK FLOW			3380	May 16	3380	May 16 1996
INSTANTANEOUS PEAK STAGE			7.64	May 16	7.64	May 16 1996
ANNUAL RUNOFF (AC-FT)	71450		18020		12070	
TOTAL DIVERSION (AC-FT) a	774000		679900		455100	
10 PERCENT EXCEEDS	336		27		7.4	
50 PERCENT EXCEEDS	4.4		3.9		2.9	
90 PERCENT EXCEEDS	2.4		2.4		1.7	

a Diversion, in acre-feet, to Big Creek Powerplant No. 8, provided by Southern California Edison Co.

11238600 SAN JOAQUIN RIVER ABOVE STEVENSON CREEK, NEAR BIG CREEK, CA

LOCATION (REVISED).--Lat 37°12'28", long 119°19'44", unsurveyed, T.8 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in intake structure near left bank, 300 ft upstream from Dam 6, 3.5 mi upstream from Stevenson Creek, 4.4 mi west of town of Big Creek, and at mile 313.6.

DRAINAGE AREA.--1,197 mi².

PERIOD OF RECORD.--Water years 1987, 1993-94, October 1995 to September 1996. Records for water years 1951 to 1972 in files of Southern California Edison Co. Records for water years 1974 to 1986 in files of the U.S. Geological Survey.

GAGE.--Acoustic-velocity meter since Oct. 1, 1992. Water-stage recorders at various sites downstream prior to 1992. Elevation of gage is 2,200 ft above sea level, from topographic map.

REMARKS.--Record consists of computed flow over spillway at Dam 6 and flow through fish-water release valve. At times the sluice valve leaks and this flow bypasses the station. Flow regulated by Mammoth Pool Reservoir and Huntington Lake (stations 11234700 and 11236000) and diversions for power development in Big Creek powerplants. Most of the water is diverted past this station to Big Creek Powerplant No. 3 (station 11241800). 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, 30,500 ft³/s, May 16, 1996; minimum daily, 3.0 ft³/s, Dec. 4, 5, 1993, Feb. 8, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.3	e3.3	e3.3	e3.3	e3.2	e1850	e653	e714	e1280	e599	e3.3	e3.3
2	e3.3	e3.3	e3.3	e3.3	e3.2	e1870	e578	e713	e1940	e1020	e3.3	e3.3
3	e3.3	e3.3	e3.3	e3.3	e3.2	e1790	e279	e695	e2760	e1080	e3.3	e3.3
4	e3.3	e3.3	e3.3	e3.3	e145	e1760	e420	e661	e4160	e628	e3.3	e3.3
5	e3.3	e3.3	e3.3	e3.3	e689	e1900	e612	e178	e4060	e283	e3.3	e3.3
6	e3.3	e3.3	e3.3	e3.3	e11	e1750	e576	e140	e4110	e125	e3.3	e3.3
7	e3.3	e3.3	e3.3	e3.3	e3.3	e1360	e569	e236	e4910	e86	e3.3	e3.3
8	e3.3	e3.3	e3.3	e3.3	e3.0	e1560	e582	e938	e6000	e268	e22	e3.3
9	e3.3	e3.3	e3.3	e3.3	e3.2	e648	e590	e2270	e5800	e479	e3.3	e3.3
10	e3.3	e3.3	e3.3	e3.3	e3.2	e540	e620	e2620	e5360	e474	e162	e3.3
11	e3.3	e3.3	e3.3	e3.3	e3.2	e1010	e617	e3350	e4040	e423	e3.3	e3.3
12	e3.3	e3.3	e3.2	e3.3	e3.2	e1370	e590	e4200	e3300	e328	e3.3	e3.3
13	e3.3	e3.3	e3.2	e3.3	e3.2	e1320	e541	e4570	e3090	e699	e3.3	e3.3
14	e3.3	e3.3	e3.2	e3.3	e3.2	e1060	e500	e4470	e2590	e355	e3.3	e3.3
15	e3.3	e3.3	e3.3	e3.3	e3.2	e310	e462	e4580	e2200	e39	e3.3	e3.3
16	e3.3	e3.3	e3.3	e3.3	e3.2	e625	e628	e20500	e2390	e3.3	e3.3	e3.3
17	e3.3	e3.3	e3.3	e3.2	e3.0	e641	e622	e7010	e2300	e3.3	e3.3	e3.3
18	e3.3	e3.3	e3.2	e3.2	e114	e681	e1000	e6310	e2660	e3.3	e3.3	e3.3
19	e3.3	e3.3	e3.2	e3.2	e3240	e796	e754	e4300	e2410	e3.3	e3.3	e3.3
20	e3.3	e3.3	e3.2	e3.2	e3510	e900	e703	e2750	e2490	e3.3	e3.3	e3.3
21	e3.3	e3.3	e3.2	e3.2	e2580	e722	e674	e1960	e2480	e3.3	e3.3	e3.3
22	e3.3	e3.3	e3.3	e3.2	e2930	e654	e640	e1380	e1900	e3.3	e3.3	e3.3
23	e3.3	e3.3	e3.3	e3.2	e4040	e604	e637	e1930	e1820	e3.3	e3.3	e3.3
24	e3.3	e3.3	e3.3	e3.2	e3650	e660	e645	e940	e1900	e3.3	e3.3	e3.3
25	e3.3	e3.3	e3.3	e3.2	e1560	e547	e676	e900	e1030	e3.3	e3.3	e3.2
26	e3.3	e3.3	e3.3	e3.2	e1820	e526	e689	e1800	e477	e3.3	e3.3	e3.3
27	e3.3	e3.3	e3.3	e4.6	e1820	e453	e706	e2170	e422	e3.3	e3.3	e3.3
28	e3.3	e3.3	e3.3	e3.3	e1810	e472	e698	e1700	e203	e3.3	e3.3	e3.3
29	e3.3	e3.3	e3.3	e3.3	e1810	e453	e687	e1070	e262	e3.3	e3.3	e3.3
30	e3.3	e3.3	e3.3	e3.2	---	e280	e687	e1040	e263	e3.3	e3.3	e3.3
31	e3.3	---	e3.3	e3.2	---	e453	---	e1020	---	e3.3	e3.3	---
TOTAL	102.3	99.0	101.6	102.4	29773.5	29565	18635	87115	78607	6938.8	279.7	98.9
MEAN	3.30	3.30	3.28	3.30	1027	954	621	2810	2620	224	9.02	3.30
MAX	3.3	3.3	3.3	4.6	4040	1900	1000	20500	6000	1080	162	3.3
MIN	3.3	3.3	3.2	3.2	3.0	280	279	140	203	3.3	3.3	3.2
AC-FT	203	196	202	203	59060	58640	36960	172800	155900	13760	555	196
a	100200	68630	71620	85060	74340	177600	199800	194400	160000	175400	135100	107000

e Estimated.

a Diversion, in acre-feet, to Big Creek Powerplant No. 3, provided by Southern California Edison Co.

11238600 SAN JOAQUIN RIVER ABOVE STEVENSON CREEK, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.43	3.46	3.49	3.57	266	289	303	1636	1669	417	4.94	3.51
MAX	3.90	3.95	4.06	4.32	1027	954	621	3726	4048	1437	9.02	4.04
(WY)	1987	1987	1987	1987	1996	1996	1996	1993	1993	1993	1996	1987
MIN	3.14	3.20	3.25	3.26	3.30	3.20	3.25	3.39	3.60	3.40	3.35	3.29
(WY)	1993	1993	1993	1993	1993	1994	1994	1994	1994	1994	1993	1993

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	251418.2		
ANNUAL MEAN	687		
HIGHEST ANNUAL MEAN			383
LOWEST ANNUAL MEAN			838
HIGHEST DAILY MEAN	20500	May 16	3.38
LOWEST DAILY MEAN	3.0	Feb 8	20500
ANNUAL SEVEN-DAY MINIMUM	3.2	Feb 8	3.0
INSTANTANEOUS PEAK FLOW	30500	May 16	3.1
ANNUAL RUNOFF (AC-FT)	498700		May 16 1996
TOTAL DIVERSION (AC-FT) a	1549000		277700
10 PERCENT EXCEEDS	2220		868
50 PERCENT EXCEEDS	3.3		3.4
90 PERCENT EXCEEDS	3.3		3.2

a Diversion, in acre-feet, to Big Creek Powerplant No. 3, provided by Southern California Edison Co.

SAN JOAQUIN RIVER BASIN

11239300 NORTH FORK STEVENSON CREEK AT PERIMETER ROAD, NEAR BIG CREEK, CA

LOCATION.--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 above sea level, 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, 3,220 ft³/s, May 16, 1996, gage height, 9.58 ft; minimum daily, 1.6 ft³/s, Feb. 14, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	4.7	4.2	5.0	11	38	25	32	11	5.2	4.9	5.0
2	6.7	4.7	4.2	4.9	11	38	28	31	11	5.2	4.9	5.1
3	6.7	4.7	4.2	4.5	10	41	24	29	9.9	5.4	4.8	4.8
4	6.8	4.7	4.3	4.0	20	45	23	27	9.3	6.1	4.8	4.8
5	6.1	4.7	4.3	3.7	107	43	23	26	8.8	6.0	4.8	4.9
6	5.3	4.7	4.3	3.8	95	45	25	25	8.5	5.9	4.7	4.8
7	5.3	4.7	4.3	3.8	79	41	26	24	8.0	5.6	5.4	4.7
8	5.3	4.7	4.3	4.0	63	12	26	22	7.4	5.4	5.7	4.6
9	5.4	4.7	4.3	4.2	55	13	24	23	7.0	5.4	5.3	4.7
10	5.4	4.7	4.3	3.9	51	14	24	22	6.6	5.3	12	4.5
11	5.4	4.7	5.9	3.7	47	15	22	21	6.4	5.4	78	4.4
12	5.4	4.7	12	3.6	46	14	21	20	6.1	5.5	79	4.7
13	5.4	4.7	5.1	6.6	45	13	19	19	6.2	5.2	36	e4.9
14	5.4	4.7	6.0	7.7	47	13	19	58	7.0	5.1	6.0	e4.9
15	5.5	4.7	5.7	7.4	48	13	21	104	7.1	5.0	6.0	e5.1
16	5.5	4.7	5.3	12	51	14	32	1750	6.7	5.2	5.7	e4.9
17	4.8	4.7	5.1	13	57	16	34	862	6.8	5.2	5.8	e4.9
18	4.9	4.6	5.0	12	50	18	37	31	7.0	5.2	5.8	e4.9
19	4.9	4.6	4.9	11	85	21	28	29	6.9	5.1	5.7	4.9
20	4.9	4.6	4.9	13	90	22	25	26	6.8	5.0	5.6	4.9
21	4.8	4.5	5.1	11	72	22	23	23	6.5	4.8	5.6	4.9
22	4.8	4.5	4.8	13	55	23	22	21	6.5	4.8	5.5	4.7
23	4.8	4.4	4.9	17	53	20	24	20	6.8	4.7	5.3	4.7
24	4.8	4.3	4.9	9.8	52	18	26	17	6.5	4.7	5.5	4.6
25	4.8	4.3	4.8	9.9	48	17	27	16	6.9	4.7	5.3	4.7
26	4.8	4.3	4.7	10	43	17	30	15	7.8	5.0	5.3	4.7
27	4.8	4.3	4.7	9.7	42	17	31	14	7.0	4.9	5.4	4.6
28	4.8	4.3	4.7	10	43	19	31	14	6.3	4.9	5.2	4.6
29	4.8	4.2	5.1	9.7	39	17	32	13	6.0	4.9	5.2	4.5
30	4.7	4.2	5.5	9.3	---	17	33	12	5.6	4.7	5.1	4.5
31	4.7	---	5.3	11	---	17	---	12	---	5.0	4.8	---
TOTAL	164.5	137.0	157.1	252.2	1515	693	785	3358	220.4	160.5	349.1	142.9
MEAN	5.31	4.57	5.07	8.14	52.2	22.4	26.2	108	7.35	5.18	11.3	4.76
MAX	6.8	4.7	12	17	107	45	37	1750	11	6.1	79	5.1
MIN	4.7	4.2	4.2	3.6	10	12	19	12	5.6	4.7	4.7	4.4
AC-FT	326	272	312	500	3010	1370	1560	6660	437	318	692	283

e Estimated.

11239300 NORTH FORK STEVENSON CREEK AT PERIMETER ROAD, NEAR BIG CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.68	5.49	6.65	6.80	12.6	17.5	28.1	33.7	30.4	9.35	5.95	5.09
MAX	6.39	9.75	14.1	11.4	52.2	40.7	53.9	108	178	36.2	11.3	7.15
(WY)	1994	1992	1992	1995	1996	1995	1992	1996	1995	1995	1996	1995
MIN	3.65	3.80	4.29	4.59	3.89	7.15	8.99	5.80	4.66	4.00	4.08	4.14
(WY)	1991	1993	1993	1992	1991	1991	1994	1990	1989	1989	1989	1991

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1989 - 1996	
ANNUAL TOTAL	12664.3		7934.7		14.9	
ANNUAL MEAN	34.7		21.7		34.7	
HIGHEST ANNUAL MEAN					1995	
LOWEST ANNUAL MEAN					1990	
HIGHEST DAILY MEAN	1300	Jun 27	1750	May 16	1750	May 16 1996
LOWEST DAILY MEAN	4.2	Nov 29	3.6	Jan 12	1.6	Feb 14 1991
ANNUAL SEVEN-DAY MINIMUM	4.2	Nov 27	3.9	Jan 6	2.0	Feb 14 1991
INSTANTANEOUS PEAK FLOW			3220	May 16	3220	May 16 1996
INSTANTANEOUS PEAK STAGE			9.58	May 16	9.58	May 16 1996
ANNUAL RUNOFF (AC-FT)	25120		15740		10780	
10 PERCENT EXCEEDS	64		38		26	
50 PERCENT EXCEEDS	11		6.0		5.8	
90 PERCENT EXCEEDS	4.7		4.6		4.1	

11239500 SHAVER LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°08'41", long 119°18'06", in SW 1/4 SE 1/4 sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, near center of dam on Stevenson Creek, 5.2 mi southwest of town of Big Creek.

DRAINAGE AREA.--29.1 mi².

PERIOD OF RECORD.--November 1909 to current year. Prior to January 1927, monthly contents only, published in WSP 1315-A; January 1927 to September 1931, published in WSP 721. Maximum and minimum daily contents (water years 1928-39) summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.--WSP 1565: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.). Prior to Jan. 11, 1927, gage on rockfill dam a short distance upstream at different datum.

REMARKS.--Storage began prior to 1905. Original lake formed by rockfill dam, usable capacity, 5,500 acre-ft. Water diverted by Fresno Flume and Lumber Co.'s Flumes Nos. 1 and 2 beginning prior to 1907 and discontinued July 7, 1920. Present lake formed by concrete-arch dam; dam completed Nov. 18, 1927. Usable capacity of present lake, 135,568 acre-ft between elevations 5,225 ft, trash-rack foundation, and 5,370.13 ft, crest of spillway. Additional storage of 92 acre-ft is not available for release. Water is received from Pitman Creek (since Feb. 22, 1928) and Huntington Lake (since Apr. 21, 1928) via Huntington-Shaver Conduit and Eastwood Powerplant (station 11238250). Water is released for power development in Big Creek powerplants. 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, 135,897 acre-ft, July 5, 1946, Aug. 4, 1978; maximum elevation, 5,370.28 ft, Aug. 4, 1978; minimum contents, 652 acre-ft, Mar. 7, 1942, elevation, 5,249.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 135,305 acre-ft, July 27, elevation, 5,370.01 ft; minimum, 83,496 acre-ft, Mar. 30, elevation, 5,343.94 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Oct. 1, 1967)

5,245	379	5,270	4,748	5,320	46,797
5,250	700	5,280	9,189	5,330	60,942
5,255	1,254	5,290	15,598	5,340	76,741
5,260	2,070	5,300	24,004	5,350	94,568
5,265	3,206	5,310	34,455	5,371	137,476

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127836	121372	124513	122624	108669	93775	83778	108328	130952	133413	135087	134283
2	127241	121664	124177	122373	108990	92643	84503	110073	131168	133630	135153	134109
3	126858	121893	124156	122060	108009	91581	84539	111081	131168	133500	135044	134130
4	126054	122143	124135	121997	107412	90560	84999	111928	130952	133500	134892	134239
5	125716	122414	124051	121852	107432	89972	84892	112880	130909	133652	134739	134304
6	125167	120663	123925	121935	108248	89218	84857	114465	131060	134370	134478	134370
7	125146	123191	123988	121643	108569	88253	84822	115466	130952	135153	134326	134196
8	124956	123254	123988	122060	108609	87472	84786	115609	130738	135131	134174	134196
9	124534	123673	123946	122227	107870	87490	85140	116222	130546	135131	134000	134217
10	124450	123988	123401	122164	107174	87127	85657	116633	130759	134892	132806	134174
11	124135	124219	124303	121852	106179	87145	85890	117148	131189	134609	132073	134087
12	123883	124576	125210	121289	105133	86607	86518	117642	131383	134587	131340	134043
13	123275	124829	123296	120601	104108	86195	86966	116407	132202	134522	131814	133761
14	123401	125062	123485	119978	103502	85657	87563	115303	132526	134457	132095	134174
15	123485	125336	123506	119315	102544	85282	88035	115017	133108	134913	132289	134174
16	123464	125611	125653	118963	101572	85105	88525	117457	133565	134609	132634	134109
17	123380	126097	125632	118342	100719	85034	89677	119750	134043	134739	132720	134109
18	123317	126519	125548	117704	100797	84875	91059	121184	134370	134718	133000	133891
19	123086	126816	125442	117045	100583	84609	92438	122561	134326	134870	133043	133456
20	122687	126901	125400	116407	101417	84574	93662	123988	134239	134979	132979	132936
21	122477	126794	125188	115916	101340	84450	94720	125505	133000	134848	133043	132332
22	122310	126582	124998	115344	101165	84468	95578	126604	133086	134979	133282	131750
23	121997	126582	124745	114629	100351	84609	96607	127644	132914	135196	133456	131254
24	121726	126180	124513	114281	99446	84432	97507	128792	132741	134892	133630	130588
25	121372	125949	124282	113367	98560	84379	98541	128963	133761	134979	133326	130032
26	120955	125653	123946	112596	97909	84256	99638	129262	134783	134957	133000	130118
27	120872	125590	123799	112150	96913	84132	100564	129305	134892	135305	134457	130118
28	120580	125336	123547	111605	96397	84026	102368	129754	134652	135022	134435	130139
29	120371	124998	122729	110899	94816	84043	103620	130161	134022	134370	134544	130161
30	120705	124261	123233	110133	---	83496	105074	130546	133543	133826	134478	130054
31	121080	---	122960	109832	---	83584	---	130802	---	133434	134370	---
MAX	127836	126901	125653	122624	108990	93775	105074	130802	134892	135305	135153	134370
MIN	120371	120663	122729	109832	94816	83496	83778	108328	130546	133413	131340	130032
a	5363.33	5364.85	5364.23	5357.83	5350.13	5343.99	5355.44	5367.93	5369.20	5369.15	5369.58	5367.58
b	-7266	+3181	-1301	-13128	-15016	-11232	+21490	+25728	+2741	-109	+936	-4316

CAL YR 1995 b +24457

WTR YR 1996 b +1708

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

SAN JOAQUIN RIVER BASIN

251

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, 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 August 1919, October 1919 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 sea level, 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; maximum gage height, 7.64 ft, Apr. 26, 1993; no flow at times in 1924, 1925, 1927.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.3	2.3	2.4	2.5	2.4	3.6	4.8	e350	e200	3.1	3.2
2	3.5	4.2	2.3	2.4	2.3	2.4	3.5	5.2	e350	e200	3.1	3.1
3	7.4	4.3	2.3	2.3	2.2	2.4	3.2	5.2	e350	e291	3.1	3.1
4	4.1	4.3	2.3	2.1	3.3	3.5	3.2	5.3	e350	e374	3.1	3.1
5	4.3	4.3	2.3	2.1	3.5	3.3	3.1	5.5	e350	e471	3.1	3.2
6	4.3	4.3	2.3	2.1	2.5	2.8	3.1	8.1	e413	e139	3.1	3.2
7	4.3	3.9	2.3	2.0	2.4	2.6	3.0	e185	e600	e154	3.1	3.2
8	4.3	3.6	2.3	2.0	2.3	2.6	3.0	e300	e600	e300	3.1	3.1
9	4.3	3.6	8.5	2.0	2.3	2.6	3.0	e313	e600	e300	3.0	3.1
10	4.3	3.6	10	2.0	2.2	2.5	3.0	e350	e423	e356	3.0	3.1
11	4.3	3.6	5.9	2.1	2.2	2.9	3.0	e350	e350	e500	3.0	3.1
12	4.3	3.6	3.3	2.1	2.2	3.3	3.0	e350	e350	e300	3.0	3.1
13	4.3	3.6	2.7	2.1	2.1	2.8	3.0	e350	e350	e300	3.0	3.1
14	4.3	3.6	2.5	2.1	2.1	2.6	3.0	e350	e350	e300	3.1	3.1
15	4.3	3.6	2.3	2.1	2.1	2.5	3.4	e350	e350	e145	3.1	3.1
16	4.3	3.6	2.3	2.4	2.1	2.4	4.3	e350	e350	3.1	3.1	3.1
17	4.3	3.6	2.2	2.3	2.1	2.4	4.2	e472	e350	3.0	3.1	3.1
18	4.3	3.6	2.2	2.3	2.1	2.3	4.5	e650	e350	3.1	3.0	3.1
19	4.3	3.6	2.2	2.5	4.1	2.3	4.1	e650	e491	3.1	3.1	3.1
20	4.3	2.9	2.2	2.4	4.0	2.3	4.0	e650	e600	3.0	3.3	3.1
21	4.3	2.3	2.2	2.3	3.7	2.2	4.0	e650	e600	3.1	3.3	3.1
22	4.3	2.3	2.2	2.2	2.8	2.2	3.9	e650	e600	3.1	3.4	3.0
23	4.3	2.3	2.2	2.1	2.6	2.2	3.9	e650	e600	3.1	3.4	3.1
24	4.3	2.3	2.2	2.1	2.5	2.2	4.1	e650	e600	3.1	3.4	3.1
25	4.3	2.3	2.2	2.2	2.5	2.1	4.4	e650	e454	3.1	3.4	3.1
26	4.3	2.3	2.1	2.1	2.4	2.1	4.4	e650	e350	3.1	3.4	3.3
27	4.3	2.3	2.2	2.3	2.3	2.1	4.5	e650	e249	3.1	3.3	3.4
28	4.3	2.3	2.3	2.3	2.3	2.5	4.5	e524	e350	3.1	3.2	3.4
29	4.3	2.3	2.4	2.2	2.3	2.2	4.5	e350	e283	3.1	3.2	3.4
30	4.3	2.3	2.4	2.2	---	2.7	4.5	e350	e200	3.1	3.2	3.4
31	4.3	---	2.4	2.8	---	3.1	---	e350	---	3.1	3.2	---
TOTAL	134.6	98.7	89.5	68.6	74.0	78.5	110.9	11828.1	12563	4379.4	98.0	94.7
MEAN	4.34	3.29	2.89	2.21	2.55	2.53	3.70	382	419	141	3.16	3.16
MAX	7.4	4.3	10	2.8	4.1	3.5	4.5	650	600	500	3.4	3.4
MIN	3.5	2.3	2.1	2.0	2.1	2.1	3.0	4.8	200	3.0	3.0	3.0
AC-FT	267	196	178	136	147	156	220	23460	24920	8690	194	188
a	37640	18350	16150	23670	27670	38710	37960	20810	25310	27690	28080	27470

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 1917 - 1928, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.54	8.14	7.53	5.13	12.9	38.7	66.8	59.8	20.3	5.73	4.76	3.51
MAX	9.76	45.5	33.5	15.1	40.7	147	245	203	61.3	16.5	12.7	10.9
(WY)	1917	1927	1927	1920	1927	1917	1917	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 1917 - 1928

ANNUAL TOTAL	
ANNUAL MEAN	19.6
HIGHEST ANNUAL MEAN	61.9 1917
LOWEST ANNUAL MEAN	.76 1928
HIGHEST DAILY MEAN	854 Nov 27 1928
LOWEST DAILY MEAN	.00 Jun 11 1924
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 20 1924
ANNUAL RUNOFF (AC-FT)	14170
10 PERCENT EXCEEDS	46
50 PERCENT EXCEEDS	4.5
90 PERCENT EXCEEDS	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.64	3.26	2.74	2.76	2.77	15.8	31.3	82.5	126	85.1	13.0	3.45
MAX	4.34	3.84	3.73	3.63	3.34	131	255	382	556	495	98.4	3.93
(WY)	1996	1988	1994	1995	1991	1995	1995	1996	1995	1995	1995	1993
MIN	3.31	2.92	2.22	2.21	2.39	2.53	3.43	3.45	3.23	3.19	3.16	3.16
(WY)	1993	1993	1990	1996	1990	1996	1989	1992	1994	1994	1996	1996

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	56882.3	29618.0	
ANNUAL MEAN	156	80.9	31.1
HIGHEST ANNUAL MEAN			156 1995
LOWEST ANNUAL MEAN			3.06 1990
HIGHEST DAILY MEAN	688 Jun 25	650 May 18	688 Jun 25 1995
LOWEST DAILY MEAN	2.1 Dec 26	2.0 Jan 7	1.2 Dec 1 1991
ANNUAL SEVEN-DAY MINIMUM	2.2 Dec 20	2.0 Jan 4	1.9 Nov 26 1991
INSTANTANEOUS PEAK FLOW			816 Jun 13 1995
INSTANTANEOUS PEAK STAGE			7.64 Apr 26 1993
ANNUAL RUNOFF (AC-FT)	112800	58750	22520
TOTAL DIVERSION (AC-FT) a	402800	329500	219700
10 PERCENT EXCEEDS	520	350	4.9
50 PERCENT EXCEEDS	4.5	3.1	3.4
90 PERCENT EXCEEDS	2.6	2.2	2.5

a Diversion, in acre-feet, to Big Creek Powerplant No. 2A, provided by Southern California Edison Co.

SAN JOAQUIN RIVER BASIN

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11241950 REDINGER LAKE NEAR AUBERRY, CA

LOCATION.--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 sea level (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. 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, 25,930 acre-ft, Feb. 19, elevation, 1,402.59 ft; minimum, 8,016 acre-ft, Oct. 14, elevation, 1,354.36 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25282	20594	24528	24448	24573	25141	24632	25360	24915	23976	23018	24676
2	25287	21443	24721	24300	24766	25227	25383	24956	24434	24911	23456	24304
3	25319	22022	24793	24229	24421	25164	25155	24587	24430	25511	24457	24127
4	24421	22473	24775	21337	23768	25301	24780	24251	25015	23254	24636	24367
5	22581	22827	24861	19190	25069	25360	24573	24425	24251	23676	24870	24408
6	20702	23228	24974	21834	24717	25141	24825	24007	24816	23407	24816	24502
7	19113	23909	25046	24282	24488	25164	24997	23958	24452	24171	24816	24609
8	17531	24564	24748	23246	24282	25006	25114	24256	24699	25543	24533	24300
9	15580	24816	25001	24269	24528	25141	25250	25387	24408	25814	24533	24038
10	14055	24924	25051	23522	24511	25520	25397	24699	24708	25680	24672	24069
11	11919	24802	24537	24114	24390	24775	24730	25078	24605	25209	24992	24127
12	10645	24947	24524	24082	24269	24974	24291	24109	25342	24753	25101	24029
13	8804	25078	24605	23219	24376	25155	24105	24452	25534	25465	25337	23909
14	8016	25073	24726	23285	24708	24793	24609	25378	24739	25146	24888	23005
15	8830	25082	25383	24893	24757	24078	25092	24363	25033	24511	24884	22236
16	9387	24861	25301	24893	24511	24929	25451	24884	24924	24484	25150	21214
17	9844	24933	24811	23027	23671	25657	25607	23896	24667	24403	25433	20402
18	10188	24685	24627	23031	22910	25429	24997	24287	24712	24403	25191	19596
19	11008	24744	24726	23464	25930	25296	25186	24056	24820	24591	25323	18683
20	11716	24960	24748	23803	23385	25223	24623	23909	25200	24569	25237	17330
21	12472	25205	25146	23385	24122	24938	24645	24771	25024	23852	24879	16059
22	13044	25666	25291	24345	23219	24528	24771	24304	24158	24363	24649	14801
23	13787	25001	24780	24528	24372	24600	24807	23812	24318	24461	24542	12648
24	14859	25105	24974	24300	25365	24748	24825	24484	24956	25269	24694	12248
25	15910	25369	25042	25064	25666	24663	24856	23385	24762	24843	24448	11949
26	17094	25168	25042	25186	25731	24466	24965	24546	23759	25132	24313	11413
27	18037	25096	25269	24843	25087	24614	25114	24681	22741	24753	25168	11258
28	18667	25214	25378	24843	25064	24938	25255	24843	24078	24408	25269	10607
29	19263	25119	25055	24158	25082	25365	25218	24025	25410	24047	25010	10099
30	20126	25214	24870	24238	---	24555	25259	24282	24726	24502	25101	9880
31	20303	---	24681	24870	---	24640	---	24600	---	23892	25069	---
MAX	25319	25666	25383	25186	25930	25657	25607	25387	25534	25814	25433	24676
MIN	8016	20594	24524	19190	22910	24078	24105	23385	22741	23254	23018	9880
a	1389.70	1401.03	1399.85	1400.27	1400.74	1399.76	1401.13	1399.67	1399.95	1398.08	1400.71	1360.76
b	-4874	+4911	-533	+189	+212	-442	+619	-659	+126	-834	+1177	-15189

CAL YR 1995 b -207

WTR YR 1996 b -15297

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

SAN JOAQUIN RIVER BASIN

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 sea level (levels by Southern California Edison Co.).

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	22	23	14	322	38	651	1440	42	19	23
2	20	26	22	23	13	320	454	715	2410	42	24	23
3	20	27	22	23	13	321	180	686	3030	382	23	23
4	20	22	20	23	14	317	174	376	3070	1940	23	23
5	20	22	22	23	14	917	175	241	3640	229	24	41
6	19	22	22	25	14	579	174	33	3280	41	24	46
7	19	22	22	25	13	300	174	29	5040	41	24	24
8	19	22	22	23	13	271	166	310	5430	43	23	24
9	18	22	22	23	13	255	170	2460	5420	250	23	24
10	18	22	22	23	13	253	639	2250	4380	442	23	24
11	24	22	22	23	13	830	538	3580	3280	751	23	24
12	24	22	22	23	13	671	361	3760	2130	367	23	24
13	24	22	22	23	13	585	21	3870	2170	100	23	24
14	23	22	22	23	13	708	9.5	4830	2280	284	23	24
15	23	22	22	23	13	568	34	e4400	1240	149	23	23
16	24	22	22	23	13	27	335	e20800	1660	48	23	23
17	24	22	22	23	13	23	865	7140	1640	48	23	23
18	24	22	22	23	13	564	859	4990	1690	48	23	23
19	24	22	22	23	319	633	852	3870	1550	48	23	22
20	24	22	22	23	1990	627	506	2190	1630	48	23	22
21	24	22	22	23	22	640	428	2490	1900	48	23	22
22	24	22	22	23	22	645	428	2350	1700	48	21	22
23	25	22	22	23	22	321	428	1690	1130	48	23	22
24	25	22	22	23	22	316	425	1550	1010	47	23	22
25	25	22	22	23	85	312	425	553	561	44	23	22
26	30	22	22	23	434	308	419	2010	216	46	23	22
27	34	22	22	22	700	153	433	1520	41	46	23	22
28	35	22	22	21	347	134	531	1800	42	46	23	22
29	35	22	22	16	326	11	476	1020	42	41	23	22
30	26	22	23	13	---	437	449	956	42	32	23	21
31	24	---	23	14	---	176	---	1120	---	32	23	---
TOTAL	738	671	682	688	4527	12544	11166.5	84240	63094	5821	711	726
MEAN	23.8	22.4	22.0	22.2	156	405	372	2717	2103	188	22.9	24.2
MAX	35	27	23	25	1990	917	865	20800	5430	1940	24	46
MIN	18	22	20	13	13	11	9.5	29	41	32	19	21
AC-FT	1460	1330	1350	1360	8980	24880	22150	167100	125100	11550	1410	1440
a	104400	64720	75910	88710	135500	223200	216000	222600	211400	184700	134700	122800

e Estimated.

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.1	20.2	111	80.5	115	156	422	1675	2195	854	75.2	21.2
MAX	25.9	76.2	3501	679	1255	1456	2739	10410	12700	7739	1343	33.9
(WY)	1990	1983	1956	1980	1986	1983	1951	1969	1983	1995	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1951 - 1996	
ANNUAL TOTAL	756993.1		185608.5			
ANNUAL MEAN	2074		507		473	
HIGHEST ANNUAL MEAN					2409	1983
LOWEST ANNUAL MEAN					11.4	1966
HIGHEST DAILY MEAN	14800	Apr 30	20800	May 16	47700	Dec 23 1955
LOWEST DAILY MEAN	4.4	Mar 4	9.5	Apr 14	.00	Sep 25 1951
ANNUAL SEVEN-DAY MINIMUM	4.9	Mar 2	13	Feb 7	.38	Oct 17 1982
INSTANTANEOUS PEAK FLOW			33600	May 16	73200	Dec 23 1955
INSTANTANEOUS PEAK STAGE			35.50	May 16	54.20	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	1501000		368200		342700	
TOTAL DIVERSION (AC-FT) a	1853000		1785000			
10 PERCENT EXCEEDS	7280		1650		1130	
50 PERCENT EXCEEDS	35		24		20	
90 PERCENT EXCEEDS	19		21		4.9	

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 Sequel 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). WDR CA-93-3: 1992.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,200 ft above sea level, from topographic map.

REMARKS.--Records good. No storage upstream from station. Madera Irrigation District has water rights to divert up to 50 ft³/s from North Fork Willow Creek through Sequel 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0215	279	4.34	Feb. 19	2115	492	4.72
Jan. 16	1900	149	3.98	May 16	0530	686	4.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	5.8	4.9	12	30	43	88	135	72	22	8.9	3.5
2	7.7	6.1	4.9	11	22	45	96	132	73	21	8.6	3.5
3	7.3	5.9	4.9	11	20	48	82	124	72	20	8.5	3.5
4	7.1	5.8	6.2	10	88	76	74	115	69	19	8.6	3.4
5	7.0	5.6	6.2	10	182	67	73	111	65	18	8.5	3.5
6	6.9	5.4	5.6	10	82	59	75	111	62	18	8.4	3.6
7	6.7	5.4	5.6	10	59	57	80	110	58	17	7.8	3.4
8	6.5	5.3	5.5	9.9	52	55	84	108	53	16	7.5	3.2
9	6.4	5.3	5.3	9.9	49	58	87	106	49	16	7.2	3.2
10	6.1	5.3	5.1	9.7	46	59	84	109	45	15	7.1	3.1
11	4.8	5.3	20	9.5	44	75	78	117	42	15	6.9	3.0
12	2.2	5.2	112	9.4	44	75	76	123	40	15	6.9	3.0
13	2.1	5.1	32	9.3	43	66	72	122	38	14	6.6	3.4
14	1.9	5.0	20	9.2	42	59	72	113	36	14	6.4	4.0
15	1.8	5.1	16	9.4	42	57	77	150	34	14	6.3	4.0
16	1.7	5.0	13	57	47	60	108	368	32	13	5.8	4.0
17	1.8	4.8	12	45	44	67	105	172	31	13	5.1	4.2
18	1.7	4.8	11	24	41	76	127	167	30	15	4.9	4.0
19	e1.8	4.8	10	22	237	83	91	133	29	14	5.0	3.8
20	e1.9	4.6	10	18	179	85	82	117	27	12	5.0	3.7
21	2.0	4.6	9.6	17	110	85	76	109	26	12	5.0	3.6
22	2.0	4.6	9.5	16	85	83	73	101	25	11	4.8	3.3
23	2.1	4.6	9.6	16	74	73	77	93	25	11	4.5	3.2
24	2.1	4.5	9.3	15	66	66	81	85	24	11	4.4	3.1
25	3.1	4.5	9.1	15	58	63	88	82	29	9.6	4.3	3.1
26	5.6	5.4	9.0	14	53	61	103	82	32	7.5	4.4	3.2
27	5.5	5.2	9.1	16	53	60	111	81	29	7.3	4.3	3.3
28	5.4	5.1	9.3	17	52	87	114	78	26	8.9	4.1	3.1
29	5.4	5.0	11	16	44	69	123	77	25	9.8	3.9	3.1
30	5.3	5.0	16	15	---	64	129	75	24	9.5	3.7	3.0
31	5.4	---	14	31	---	63	---	72	---	9.2	3.6	---
TOTAL	135.3	154.1	425.7	504.3	1988	2044	2686	3678	1222	427.8	187.0	103.0
MEAN	4.36	5.14	13.7	16.3	68.6	65.9	89.5	119	40.7	13.8	6.03	3.43
MAX	8.0	6.1	112	57	237	87	129	368	73	22	8.9	4.2
MIN	1.7	4.5	4.9	9.2	20	43	72	72	24	7.3	3.6	3.0
AC-FT	268	306	844	1000	3940	4050	5330	7300	2420	849	371	204

e Estimated.

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.62	8.92	13.5	24.6	28.6	40.9	50.5	77.2	51.5	16.6	5.73	4.36
MAX	17.8	43.0	69.2	147	178	151	176	228	219	109	26.9	14.3
(WY)	1983	1984	1984	1980	1986	1986	1982	1995	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1965 - 1996			
ANNUAL TOTAL	28076.4				13555.2							
ANNUAL MEAN	76.9				37.0				27.2			
HIGHEST ANNUAL MEAN									82.7			
LOWEST ANNUAL MEAN									1.57			
HIGHEST DAILY MEAN	528				Mar 10				1360			
LOWEST DAILY MEAN	1.7				Oct 16				.27			
ANNUAL SEVEN-DAY MINIMUM	1.8				Oct 14				.29			
INSTANTANEOUS PEAK FLOW					686				May 16			
INSTANTANEOUS PEAK STAGE					4.97				May 16			
ANNUAL RUNOFF (AC-FT)	55690				26890				19730			
10 PERCENT EXCEEDS	219				94				77			
50 PERCENT EXCEEDS	32				15				7.8			
90 PERCENT EXCEEDS	5.2				3.6				1.8			

SAN JOAQUIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--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 (station 11243400) 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	.00	.00	15	47	74	73	73	55	19	7.1	1.6
2	2.9	.00	.00	12	37	76	71	73	50	18	6.9	1.6
3	2.6	.00	.00	12	32	77	73	72	46	16	6.8	1.5
4	2.4	.00	.00	11	53	70	73	72	44	15	7.0	1.5
5	2.4	.00	.00	10	57	63	74	72	42	14	7.0	1.5
6	2.4	.00	.00	8.6	72	77	75	73	40	14	6.9	1.5
7	2.2	.00	.00	8.4	76	77	76	73	39	13	6.8	1.5
8	2.2	.00	.00	8.3	74	77	76	74	37	13	6.4	1.4
9	2.2	.00	.00	8.2	75	79	76	74	36	12	6.1	1.4
10	2.1	.00	.00	7.9	76	77	73	74	34	12	5.7	1.3
11	2.1	.00	.28	7.4	76	75	73	73	31	12	5.3	1.3
12	1.9	.00	30	7.1	76	72	74	73	29	12	4.7	1.3
13	1.9	.00	50	7.0	76	73	74	72	27	10	4.5	1.5
14	1.9	.00	33	6.8	76	73	74	73	26	9.6	4.1	1.8
15	1.8	.00	22	6.7	75	73	74	74	25	9.2	3.2	2.4
16	1.8	.00	16	34	76	74	76	64	25	11	3.1	2.2
17	2.1	.00	13	71	75	76	73	66	24	13	3.0	2.2
18	1.9	.00	9.5	46	65	75	77	74	24	13	3.2	1.9
19	1.3	.00	8.0	43	69	72	74	73	23	13	3.6	1.7
20	1.2	.00	7.0	33	71	74	74	73	22	12	3.7	1.6
21	1.2	.00	6.1	29	69	75	73	72	22	12	3.7	1.5
22	.96	.00	5.9	23	72	77	71	73	21	11	3.7	1.3
23	.16	.00	6.3	21	79	75	73	73	21	10	3.2	1.3
24	.06	.00	5.8	22	73	73	74	80	20	9.9	2.8	1.3
25	.00	.00	5.5	25	67	71	74	71	22	9.4	2.5	1.3
26	.00	.00	5.3	22	71	71	75	73	26	9.1	2.1	1.3
27	.00	.00	5.4	27	70	72	75	75	26	8.8	2.2	1.3
28	.00	.00	5.6	32	71	60	73	69	23	8.8	2.1	1.3
29	.00	.00	6.8	23	73	59	72	62	21	8.0	1.9	.90
30	.00	.00	19	21	---	72	73	59	20	7.8	1.8	.18
31	.00	---	18	49	---	73	---	58	---	7.6	1.6	---
TOTAL	44.58	0.00	278.48	657.4	1979	2262	2216	2210	901	363.2	132.7	44.38
MEAN	1.44	.000	8.98	21.2	68.2	73.0	73.9	71.3	30.0	11.7	4.28	1.48
MAX	2.9	.00	50	71	79	79	77	80	55	19	7.1	2.4
MIN	.00	.00	.00	6.7	32	59	71	58	20	7.6	1.6	.18
AC-FT	88	.00	552	1300	3930	4490	4400	4380	1790	720	263	88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	MEAN	2.19	3.59	6.20	18.4	32.2	49.7	56.1	41.4	22.3	8.01	2.41	1.13
MAX	6.53	6.18	11.2	53.5	71.0	73.0	77.2	76.3	76.4	37.4	12.1	4.50	
(WY)	1990	1995	1995	1993	1995	1996	1993	1993	1995	1995	1995	1995	1995
MIN	.000	.000	1.07	3.01	2.87	25.3	29.1	14.1	3.80	.032	.000	.000	
(WY)	1989	1986	1991	1991	1991	1991	1994	1987	1987	1987	1987	1987	1987

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	13986.32	11088.74		
ANNUAL MEAN	38.3	30.3	20.2	
HIGHEST ANNUAL MEAN			39.0	1995
LOWEST ANNUAL MEAN			10.3	1994
HIGHEST DAILY MEAN	83	Apr 29	80	May 24
LOWEST DAILY MEAN	.00	Oct 25	.00	Oct 25
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 25	.00	Oct 25
ANNUAL RUNOFF (AC-FT)	27740	21990	14640	
10 PERCENT EXCEEDS	78	74	71	
50 PERCENT EXCEEDS	32	13	7.1	
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 sea level (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. 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, 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, 44,982 acre-ft, May 17, elevation, 3,376.02 ft; minimum, 22,034 acre-ft, Nov. 27, elevation, 3,353.04 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37488	28893	22075	22879	27907	33805	34237	40496	44151	42570	36264	35039
2	37215	28614	22099	22938	28121	33805	34558	40790	44198	42387	36264	35018
3	36944	28344	22108	22997	28288	33805	34818	40943	44198	42205	36264	34997
4	36674	28056	22124	23064	29051	34217	35007	41226	44222	42004	36275	34976
5	36404	27786	22149	23115	30341	34402	35154	41390	44234	41784	36286	34965
6	36134	27508	22165	23173	30938	34237	35323	41586	44234	41597	36286	34955
7	35866	27232	22181	23224	31346	34124	35493	41773	44222	41379	36307	34923
8	35599	26959	22198	23257	31640	34031	35684	41938	44198	41183	36318	34923
9	35334	26671	22214	23316	31797	33990	35877	42104	44151	40965	36329	34923
10	35070	26383	22239	23358	31895	33959	36005	42285	44079	40736	36340	34902
11	34755	26095	22445	23409	31993	34021	36124	42479	43984	40518	36340	34881
12	34485	25818	23459	23451	32053	34237	36264	42707	43960	40333	36188	34871
13	34217	25525	23901	23484	32092	34176	36340	42913	43949	40115	35898	34860
14	33918	25330	23926	23535	32112	34083	36437	43099	43937	39918	35599	34839
15	33622	25215	23748	23570	32152	34021	36545	43475	44008	39690	35313	34839
16	33336	25056	23535	24080	32191	33980	36998	44880	44127	39472	35196	34829
17	33061	24744	23299	24493	32241	33970	37324	44982	44258	39254	35186	34829
18	32780	24467	23064	24726	32221	33990	37967	44558	44390	39079	35175	34818
19	32490	24183	22821	25013	32703	34011	38196	44306	44498	38905	35154	34818
20	32211	23875	22561	25162	34474	34021	38360	44234	44462	38698	35134	34808
21	31924	23586	22313	25338	34755	34021	38501	44222	44270	38512	35134	34797
22	31640	23299	22206	25480	34495	34042	38610	44175	44091	38305	35144	34797
23	31366	23005	22280	25614	34298	33990	38741	44210	43913	38109	35135	34787
24	31064	22703	22329	25792	34176	33970	38883	44198	43735	37935	35123	34776
25	30782	22395	22371	26149	34083	33959	39046	44187	43546	37738	35123	34756
26	30533	22132	22420	26293	33980	33908	39232	44198	43404	37564	35102	34755
27	30245	22034	22462	26581	33918	33877	39472	44198	43251	37270	35091	34755
28	29987	22050	22503	26842	33846	33990	39722	44198	43110	37042	35081	34745
29	29702	22058	22578	26950	33826	33939	39951	44175	42936	36826	35070	34745
30	29427	22067	22686	27069	---	33918	40245	44163	42775	36599	35070	34734
31	29164	---	22787	27591	---	33887	---	44139	---	36361	35060	---
MAX	37488	28893	23926	27591	34755	34402	40245	44982	44498	42570	36340	35039
MIN	29164	22034	22075	22879	27907	33805	34237	40496	42775	36361	35060	34734
a	3361.12	3353.08	3353.95	3359.43	3365.88	3365.93	3371.86	3375.31	3374.15	3368.29	3367.07	3366.76
b	-8574	-7097	+720	+4804	+6235	+61	+6358	+3894	-1364	-6414	-1301	-326

CAL YR 1995 b -833
WTR YR 1996 b -3004

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

SAN JOAQUIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--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 (station 11244100), and is stored temporarily at Manzanita Lake on North Fork Willow Creek; flow then diverts to Powerplants No. 2 and No. 1A (stations 11246570 and 11246590), before it enters San Joaquin River at Kerckhoff Reservoir through San Joaquin Powerplant No. 1 (station 11246610). 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	149	1.4	.07	.24	154	128	125	129	155	46	2.0
2	.71	149	1.2	.09	.24	153	115	125	129	155	1.6	2.1
3	73	151	.94	.09	.24	153	115	125	129	155	1.6	1.0
4	140	154	.94	.11	.61	153	130	125	129	156	.47	.35
5	140	148	.69	.12	.92	153	140	125	129	156	.02	.14
6	140	148	.60	.12	.90	153	140	126	129	157	.00	.00
7	140	149	.59	.09	.89	153	140	127	129	157	.00	.00
8	140	154	.51	.76	45	153	140	127	130	158	.00	.00
9	141	154	.51	.94	104	153	136	127	130	158	.00	.00
10	147	153	.51	.94	115	153	128	127	130	158	.00	.00
11	151	153	.53	.46	126	153	126	127	130	158	.00	.00
12	151	153	.64	.30	135	139	126	127	89	156	92	.00
13	150	153	.62	.30	142	143	126	127	78	156	152	.00
14	150	127	.53	.30	144	150	125	127	78	154	153	.00
15	150	67	139	.30	144	151	31	127	20	151	153	.00
16	150	54	141	.30	144	150	73	128	.54	151	50	.00
17	150	154	141	.30	144	149	129	127	.60	151	.00	.00
18	150	154	141	.30	144	149	124	128	.23	151	.00	.00
19	91	154	141	.30	144	150	125	130	.00	152	.00	.00
20	72	154	140	.30	145	149	125	64	101	152	.00	.00
21	150	154	140	.11	150	150	125	126	160	152	.00	.00
22	150	154	140	.69	153	150	124	126	158	150	1.2	.00
23	150	155	23	.87	153	150	124	126	157	149	2.2	.00
24	150	156	.44	.87	153	150	124	127	157	148	2.2	.05
25	150	156	.36	.87	153	147	124	127	158	147	1.5	.08
26	150	157	.36	.46	153	144	124	127	156	146	.30	.05
27	150	125	.15	.03	153	144	125	127	156	146	.30	.18
28	150	1.4	.13	.67	153	144	125	128	153	145	.30	.26
29	149	1.4	.12	.56	153	144	125	128	152	143	.62	.30
30	149	1.4	2.1	21	---	144	125	128	153	142	1.6	.30
31	149	---	.25	.25	---	144	---	129	---	141	2.1	---
TOTAL	4074.43	3893.2	1160.12	32.87	3054.04	4625	3667	3870	3350.37	4706	662.01	6.81
MEAN	131	130	37.4	1.06	105	149	122	125	112	152	21.4	.23
MAX	151	157	141	21	153	154	140	130	160	158	153	2.1
MIN	.71	1.4	.12	.03	.24	139	31	64	.00	141	.00	.00
AC-FT	8080	7720	2300	65	6060	9170	7270	7680	6650	9330	1310	14
a	7730	7070	2230	44	5820	8710	6740	7030	5950	7720	1180	0
b	8930	7430	2340	58	6070	9230	8210	9020	6670	8420	1270	0
c	10470	8270	2630	58	7950	10590	10280	10460	8190	10530	1490	0
d	9380	7950	3480	1870	8620	12150	11580	10720	7460	8930	1720	323

a Discharge, in acre-ft, to San Joaquin Powerplant No. 3, provided by Pacific Gas & Electric Co.

b Discharge, in acre-ft, to San Joaquin Powerplant No. 2, provided by Pacific Gas & Electric Co.

c Discharge, in acre-ft, to San Joaquin Powerplant No. 1A, provided by Pacific Gas & Electric Co.

d Discharge, in acre-ft, to San Joaquin Powerplant No. 1, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

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11243500 PACIFIC GAS & ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.8	42.1	56.1	61.1	70.1	74.9	64.3	60.5	60.4	83.5	103	86.3
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	.23
(WY)	1988	1968	1954	1954	1977	1947	1947	1977	1942	1977	1977	1996

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1941 - 1996			
ANNUAL TOTAL	39304.77				33101.85							
ANNUAL MEAN	108				90.4							
HIGHEST ANNUAL MEAN									68.9			
LOWEST ANNUAL MEAN									128			
HIGHEST DAILY MEAN	157				160				14.4			
LOWEST DAILY MEAN	.00				.00				167			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	77960				65660				49920			
TOTAL DIVERSION (AC-FT) a	76660				60220							
TOTAL DIVERSION (AC-FT) b	85430				67630							
TOTAL DIVERSION (AC-FT) c	101000				80920							
TOTAL DIVERSION (AC-FT) d	105600				84180							
10 PERCENT EXCEEDS	149				153				151			
50 PERCENT EXCEEDS	130				127				64			
90 PERCENT EXCEEDS	.48				.09				.03			

a Discharge, in acre-ft, to San Joaquin Powerplant No. 3, provided by Pacific Gas & Electric Co.

b Discharge, in acre-ft, to San Joaquin Powerplant No. 2, provided by Pacific Gas & Electric Co.

c Discharge, in acre-ft, to San Joaquin Powerplant No. 1A, provided by Pacific Gas & Electric Co.

d Discharge, in acre-ft, to San Joaquin Powerplant No. 1, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

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 sea level, 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, 2,300 ft³/s, Mar. 11, 1995; minimum daily, 0.01 ft³/s, Dec. 4, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	3.9	3.9	3.4	4.0	30	32	28	22	4.9	4.4	5.0
2	147	3.9	3.9	3.4	3.9	25	5.5	28	8.0	4.9	4.5	5.0
3	73	3.9	3.9	3.4	3.9	25	4.5	29	5.9	4.8	4.5	4.7
4	4.2	3.9	3.9	3.4	5.0	67	4.0	29	4.5	4.7	4.5	5.0
5	4.2	3.9	3.9	3.4	6.2	226	3.9	29	4.5	4.6	4.4	5.4
6	4.1	3.9	3.9	3.4	4.3	193	3.9	28	4.5	4.5	4.2	5.5
7	3.9	3.9	3.9	3.4	3.9	141	3.9	26	4.5	4.5	4.2	5.3
8	3.9	3.9	3.9	3.4	3.7	104	3.9	27	4.6	4.5	4.2	5.0
9	3.9	3.9	3.9	3.4	3.7	86	13	29	4.7	4.5	4.2	5.0
10	3.7	3.9	3.7	3.4	3.7	74	24	29	5.0	4.5	4.2	5.4
11	3.7	3.9	3.7	3.4	3.4	78	26	29	5.0	4.5	4.4	5.5
12	3.7	3.9	5.5	3.4	3.4	138	26	29	5.0	4.5	4.3	5.3
13	3.7	3.9	4.0	3.4	3.4	162	26	29	5.0	4.5	3.3	5.0
14	3.7	3.9	3.8	3.4	3.4	133	28	29	5.0	4.4	4.2	5.0
15	3.7	4.0	3.4	3.4	3.4	104	122	18	5.0	4.4	4.2	5.0
16	3.7	4.2	3.4	3.9	3.4	86	81	7.6	5.0	4.3	4.4	5.2
17	3.7	4.0	3.3	3.8	3.4	79	24	226	5.4	4.3	4.5	5.5
18	3.7	3.9	3.2	3.7	3.2	79	26	423	5.5	4.5	4.5	5.5
19	3.7	3.9	3.2	3.7	9.5	83	26	283	5.5	4.5	4.5	5.4
20	3.9	3.9	3.2	3.7	201	90	26	229	5.7	4.5	4.5	5.5
21	3.9	3.9	3.2	3.7	331	94	26	128	5.5	4.5	4.5	5.5
22	3.9	3.9	3.3	3.5	350	96	26	126	5.4	4.5	4.3	5.5
23	3.9	3.9	3.4	3.4	225	88	26	85	5.3	4.5	4.2	5.5
24	3.9	3.9	3.4	3.5	163	79	26	61	5.2	4.4	4.2	5.5
25	3.9	3.9	3.4	4.9	128	72	27	58	5.0	4.4	4.4	5.5
26	3.9	3.8	3.4	3.8	93	65	28	55	5.0	4.4	4.5	5.5
27	3.9	3.8	3.4	4.0	67	59	28	54	5.0	4.4	4.7	5.5
28	3.9	3.9	3.4	4.3	51	77	28	53	5.0	4.3	5.0	5.5
29	3.9	3.9	3.4	3.5	39	77	28	52	5.0	4.2	4.5	5.5
30	3.9	3.9	3.4	3.5	---	70	28	44	5.0	4.2	4.5	5.5
31	3.9	---	3.4	4.2	---	64	---	38	---	4.2	4.7	---
TOTAL	475.0	117.3	112.6	112.1	1726.8	2844	780.6	2338.6	171.7	138.8	135.6	159.2
MEAN	15.3	3.91	3.63	3.62	59.5	91.7	26.0	75.4	5.72	4.48	4.37	5.31
MAX	147	4.2	5.5	4.9	350	226	122	423	22	4.9	5.0	5.5
MIN	3.7	3.8	3.2	3.4	3.2	25	3.9	7.6	4.5	4.2	3.3	4.7
AC-FT	942	233	223	222	3430	5640	1550	4640	341	275	269	316

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.05	4.05	6.75	16.5	27.7	36.8	21.3	31.8	21.3	4.56	4.07	4.19
MAX	77.8	54.6	106	194	380	387	272	317	217	73.6	66.4	103
(WY)	1949	1958	1947	1956	1986	1995	1982	1995	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1941 - 1996			
ANNUAL TOTAL	33994.8				9112.3				15.1			
ANNUAL MEAN	93.1				24.9				92.4			
HIGHEST ANNUAL MEAN									.26			
LOWEST ANNUAL MEAN									2300			
HIGHEST DAILY MEAN	2300				423				2300			
LOWEST DAILY MEAN	3.1				3.2				.01			
ANNUAL SEVEN-DAY MINIMUM	3.3				3.3				.11			
ANNUAL RUNOFF (AC-FT)	67430				18070				10940			
10 PERCENT EXCEEDS	294				78				21			
50 PERCENT EXCEEDS	5.8				4.5				.77			
90 PERCENT EXCEEDS	3.8				3.4				.30			

SAN JOAQUIN RIVER BASIN

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.

WATER TEMPERATURE: Water years 1961-72.

GAGE.--Water-stage recorder. Concrete control since Oct. 22, 1964. Datum of gage is 1,174.69 ft above sea level (levels by Southern California Edison Co.).

REMARKS.--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, 4,350 ft³/s, Feb. 19, gage height, 14.87 ft; maximum gage height, 15.20 ft, May 16 (backwater from San Joaquin River); minimum daily, 0.36 ft³/s, Sept. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.9	2.2	7.1	164	113	183	110	50	9.3	3.7	.56
2	2.0	2.2	2.1	6.3	99	107	253	109	30	8.7	3.7	.56
3	1.7	2.4	2.5	6.1	41	106	154	94	29	8.6	3.9	.56
4	1.4	2.4	2.6	6.1	182	220	116	77	24	12	3.9	.56
5	1.7	2.8	2.6	7.1	1140	782	120	64	20	8.4	4.1	.50
6	2.0	3.0	2.8	5.4	355	460	132	54	18	7.7	4.1	.49
7	1.7	2.5	2.7	5.1	113	330	135	48	18	7.2	4.2	.54
8	1.6	2.3	2.6	5.0	69	256	138	41	17	6.8	3.2	.56
9	1.8	2.2	2.5	4.9	61	232	139	36	15	6.5	2.7	.54
10	1.9	2.6	2.5	5.0	55	211	132	34	15	6.2	2.5	.49
11	1.9	2.7	2.8	4.9	51	235	123	32	15	6.2	2.1	.42
12	1.8	2.4	178	4.8	49	398	113	30	24	7.0	1.8	.36
13	1.8	2.2	93	4.6	49	402	100	28	16	6.5	1.6	.38
14	2.1	2.2	31	4.5	48	317	92	27	14	5.8	1.4	.48
15	2.2	2.1	16	4.4	48	255	100	30	13	5.5	1.2	.68
16	2.5	2.1	9.9	30	48	230	228	e694	13	5.9	1.1	.93
17	2.4	2.1	7.8	153	49	238	265	327	13	5.3	1.1	1.0
18	2.3	4.2	6.5	26	45	277	382	569	12	5.1	.99	1.1
19	2.0	3.6	5.9	49	1000	305	210	450	12	5.0	.92	1.1
20	2.0	2.6	5.6	26	1890	309	158	262	12	5.2	.90	.97
21	1.9	2.2	5.2	20	1060	303	132	178	11	5.5	1.0	.88
22	1.8	2.1	6.4	18	917	294	118	171	12	5.1	1.1	.81
23	1.8	2.3	9.4	15	533	249	114	148	11	4.9	.97	.73
24	1.8	2.2	8.8	15	407	204	116	97	10	4.9	.87	.65
25	1.9	2.1	8.2	88	343	181	117	88	11	5.0	.77	1.4
26	2.0	2.1	7.9	39	275	161	129	84	14	4.9	.72	5.2
27	2.0	2.1	7.7	33	193	150	139	78	15	4.3	.76	5.5
28	2.0	2.3	6.8	144	157	248	127	76	13	4.3	.81	5.5
29	2.0	2.3	7.3	53	130	248	120	69	12	4.1	.78	5.4
30	1.9	2.3	9.1	64	---	181	111	68	10	3.7	.71	5.3
31	1.9	---	8.6	172	---	167	---	55	---	3.6	.62	---
TOTAL	60.1	72.5	467.0	1026.3	9571	8169	4496	4228	499	189.2	58.22	44.15
MEAN	1.94	2.42	15.1	33.1	330	264	150	136	16.6	6.10	1.88	1.47
MAX	2.5	4.2	178	172	1890	782	382	694	50	12	4.2	5.5
MIN	1.4	1.9	2.1	4.4	41	106	92	27	10	3.6	.62	.36
AC-FT	119	144	926	2040	18980	16200	8920	8390	990	375	115	88

e Estimated.

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.46	14.0	54.2	106	129	151	145	154	54.3	9.00	2.36	2.68
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1952 - 1996			
ANNUAL TOTAL	80060.4				28880.47							
ANNUAL MEAN	219				78.9				66.8			
HIGHEST ANNUAL MEAN									344			
LOWEST ANNUAL MEAN									1.71			
HIGHEST DAILY MEAN	4970				1890				7500			
LOWEST DAILY MEAN	1.4				.36				.00			
ANNUAL SEVEN-DAY MINIMUM	1.7				.46				.00			
INSTANTANEOUS PEAK FLOW					4350				15700			
INSTANTANEOUS PEAK STAGE					15.20				28.50			
ANNUAL RUNOFF (AC-FT)	158800				57280				48390			
10 PERCENT EXCEEDS	566				233				162			
50 PERCENT EXCEEDS	39				7.8				8.1			
90 PERCENT EXCEEDS	2.1				1.1				.30			

SAN JOAQUIN RIVER BASIN

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 sea level (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, 4,236 acre-ft, Mar. 9, 1995, elevation, 985.60 ft; minimum, 2,104 acre-ft, Nov. 14-17, 1988, elevation, 970.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,172 acre-ft, June 3, 7, elevation, 985.20 ft; minimum, 3,330 acre-ft, Oct. 14, July 13, elevation, 979.60 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3968	3590	3922	3984	3650	3605	3532	3590	3517	3517	4015	4015
2	3937	3576	3922	3968	4077	3664	3561	3650	3992	3476	3922	3992
3	3984	3644	3906	3590	4062	3605	3488	3473	4172	3605	3815	3922
4	3992	3459	3800	4062	3891	3517	3561	3387	4170	3502	4030	3968
5	3830	3502	4015	4058	3830	3546	3620	3532	4170	3430	3784	3694
6	3937	3815	3980	3735	3984	3561	3517	3502	4168	3502	3784	4015
7	3845	3815	3992	3765	3984	3644	3650	3650	4172	3650	3709	3532
8	4030	3845	3953	3906	3984	3546	3664	3532	4156	3502	3891	3992
9	4046	3830	3830	3860	3754	3576	3600	3640	4015	3473	3739	3937
10	4030	3830	3937	3992	3906	3532	3590	3648	4015	3664	3709	3650
11	4015	3679	3800	4030	3922	3576	3387	3740	3953	3561	3832	3709
12	3769	3724	3754	3891	3679	3430	3459	3740	3650	3459	3620	4015
13	3984	3860	3517	3937	3459	3644	3459	3754	3815	3330	3740	4060
14	3330	3876	4015	3876	3620	3444	3517	3754	3532	4030	3890	3694
15	3870	3845	3968	3605	3680	3502	3401	3754	3576	3754	3906	3920
16	4062	3739	3953	3695	3830	3459	3459	3430	3620	3590	3459	3709
17	4140	3784	3724	4015	3724	3488	3644	3430	3502	3490	3754	3784
18	4125	3992	3990	3984	3664	3709	3459	3754	3502	3694	3906	3800
19	3968	3968	3984	3891	3922	3709	3459	3754	3444	3679	3590	3992
20	3984	3876	3720	3664	3416	3444	3416	3766	3600	3754	3906	3953
21	3830	3937	3860	3488	3546	3517	3473	3760	3546	3754	3953	3860
22	3891	3984	3937	3815	3679	3430	3600	3400	3387	3517	3891	3968
23	3769	3940	3830	3937	3605	3561	3664	3694	3444	3830	3860	3990
24	3920	3875	3906	3724	3590	3532	3500	3532	3561	3694	3922	3992
25	3700	3990	4046	3546	3561	3488	3387	3502	3416	3664	3937	3968
26	3860	4060	4093	4015	3488	3650	3532	3561	3416	3984	3906	3984
27	3644	3906	3891	3830	3820	3430	3605	3444	3876	3664	3922	3906
28	3937	3953	3953	4062	3473	3576	3754	3430	4030	3860	3876	3891
29	3769	3984	3953	3980	3620	3500	3605	3444	3739	3860	3830	3937
30	3709	3968	3937	4046	---	3532	3605	3416	3576	4062	3984	3679
31	3576	---	3694	3645	---	3532	---	3644	---	4030	3937	---
MAX	4140	4060	4093	4062	4077	3709	3754	3766	4172	4062	4030	4060
MIN	3330	3459	3517	3488	3416	3430	3387	3387	3387	3330	3459	3532
a	981.30	983.90	982.10	981.70	981.60	981.00	981.50	981.70	981.30	984.30	983.70	982.00
b	-408	+392	-274	-49	-25	-88	+73	+39	-68	+454	-93	-258

CAL YR 1995 b -136

WTR YR 1996 b -305

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 sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Flow regulated by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. Diversions to Kerckhoff Powerplant and Kerckhoff Powerplant No. 2 (stations 11246950 and 11247050) bypass this station. 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, 33,700 ft³/s, Mar. 11, 1995, gage height, 24.34 ft; minimum daily, 16 ft³/s, May 9-18, 1987, Sept. 29, 30, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	38	41	41	42	32	32	32	29	31	35	31
2	33	38	40	41	42	32	32	32	29	31	35	31
3	33	38	40	41	42	32	32	32	330	31	36	31
4	33	38	40	40	42	32	32	32	737	30	37	31
5	33	38	40	41	40	33	32	32	1090	31	37	31
6	34	39	41	41	40	32	32	32	907	31	36	31
7	34	39	40	41	40	32	32	32	2380	31	36	31
8	33	39	41	41	40	32	32	32	2820	31	37	31
9	34	39	40	41	40	32	32	32	2950	31	37	31
10	34	39	41	41	40	32	32	32	1890	31	37	31
11	34	39	42	41	40	32	32	1000	864	32	36	31
12	34	39	42	41	40	33	32	1100	30	32	37	31
13	34	40	40	41	40	189	32	1140	30	128	37	32
14	34	40	40	41	41	32	32	2090	30	33	37	32
15	33	40	40	41	40	32	32	1290	30	34	37	31
16	33	40	40	79	40	32	32	16000	31	33	37	32
17	33	40	40	41	40	32	32	5790	31	33	36	31
18	33	39	39	41	40	32	32	2890	30	33	37	31
19	34	40	39	40	41	32	32	1610	94	34	37	32
20	34	40	40	39	3060	32	32	372	30	34	36	32
21	34	41	40	39	45	32	32	436	31	34	36	32
22	34	41	40	39	67	32	32	185	30	33	37	32
23	34	40	40	40	33	32	32	34	30	34	37	32
24	37	40	40	40	32	32	32	28	31	34	36	33
25	38	40	40	41	32	32	32	28	31	34	37	33
26	38	41	40	40	32	32	32	28	31	34	36	32
27	38	41	40	41	32	32	32	28	31	34	35	32
28	38	41	40	40	32	32	32	28	31	34	35	32
29	38	41	40	41	32	32	32	28	31	35	34	32
30	38	41	40	41	---	32	32	28	31	35	32	32
31	38	---	41	42	---	32	---	28	---	35	31	---
TOTAL	1075	1189	1247	1298	4167	1151	960	34481	14670	1111	1116	947
MEAN	34.7	39.6	40.2	41.9	144	37.1	32.0	1112	489	35.8	36.0	31.6
MAX	38	41	42	79	3060	189	32	16000	2950	128	37	33
MIN	33	38	39	39	32	32	32	28	29	30	31	31
AC-FT	2130	2360	2470	2570	8270	2280	1900	68390	29100	2200	2210	1880
a	42650	13210	0	0	8410	25500	8340	59810	68100	10190	4900	0
b	65010	52980	70670	86170	147900	236800	227700	250400	226500	181500	122500	113800

a Discharge, in acre-ft, to Kerckhoff Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-ft, to Kerckhoff Powerplant No. 2, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.9	28.9	30.1	87.1	38.7	117	79.0	572	784	573	37.1	30.9
MAX	36.3	39.6	43.1	603	144	881	534	2683	5452	5217	89.3	45.6
(WY)	1995	1996	1991	1993	1996	1995	1995	1995	1995	1995	1995	1993
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1987 - 1996

ANNUAL TOTAL	461582	63412	
ANNUAL MEAN	1265	173	201
HIGHEST ANNUAL MEAN			1263
LOWEST ANNUAL MEAN			18.2
HIGHEST DAILY MEAN	13700	Apr 30	16000
LOWEST DAILY MEAN	29	Jan 1	28
ANNUAL SEVEN-DAY MINIMUM	30	Jan 1	28
INSTANTANEOUS PEAK FLOW			30500
INSTANTANEOUS PEAK STAGE			23.33
ANNUAL RUNOFF (AC-FT)	915500	125800	145900
TOTAL RUNOFF (AC-FT) a	432700	241100	
TOTAL RUNOFF (AC-FT) b	2146000	1782000	
10 PERCENT EXCEEDS	5090	41	40
50 PERCENT EXCEEDS	36	34	30
90 PERCENT EXCEEDS	33	31	18

a Discharge, in acre-ft, to Kerckhoff Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-ft, to Kerckhoff Powerplant No. 2, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

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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.--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, 3, 1973, and, May 21, 1983; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474	200	.00	.00	.00	700	690	1070	887	839	870	584
2	460	200	.00	.00	.00	700	664	1170	914	879	870	591
3	486	200	.00	.00	.00	700	625	1200	792	871	857	600
4	532	200	.00	.00	.00	700	610	1180	1150	841	798	632
5	566	200	.00	.00	73	700	571	1170	1200	811	718	650
6	575	184	.00	.00	.00	700	537	1170	1210	800	664	624
7	575	175	.00	.00	.00	700	530	1170	1220	813	682	594
8	575	175	.00	.00	.00	700	552	1120	1220	839	700	508
9	562	170	.00	.00	.00	700	602	1050	1220	818	700	446
10	568	170	.00	.00	.00	700	652	1000	1210	881	700	435
11	575	170	.00	.00	.00	700	702	990	1170	925	700	500
12	556	170	.00	.00	.00	700	720	958	1130	941	700	535
13	550	170	.00	.00	.00	700	720	924	1110	950	738	512
14	524	170	.00	.00	.00	700	720	941	1110	931	814	461
15	510	170	.00	.00	.00	700	720	987	1090	920	803	421
16	494	170	.00	.00	.00	700	701	960	1010	901	785	410
17	485	50	.00	.00	.00	700	690	1130	1040	890	785	442
18	485	.00	.00	.00	.00	700	677	1200	1080	805	717	460
19	469	.00	.00	.00	.00	700	670	1200	1090	969	680	460
20	460	.00	.00	.00	.00	700	638	1060	1090	961	680	460
21	434	.00	.00	.00	.00	700	601	944	1080	950	680	389
22	407	.00	.00	.00	.00	450	590	846	980	918	654	331
23	387	.00	.00	.00	.00	300	616	800	891	900	608	320
24	280	.00	.00	.00	.00	300	695	735	922	900	577	320
25	306	.00	.00	.00	133	384	808	726	934	900	557	320
26	350	.00	.00	.00	200	545	850	766	925	900	563	307
27	334	.00	.00	.00	200	630	863	799	899	900	602	300
28	242	.00	.00	.00	200	669	889	810	804	900	633	300
29	200	.00	.00	.00	533	690	919	842	760	900	640	268
30	200	.00	.00	.00	---	690	969	860	786	900	640	250
31	200	---	.00	.00	---	690	---	860	---	881	614	---
TOTAL	13821	2944.00	0.00	0.00	1339.00	20048	20791	30638	30924	27534	21729	13430
MEAN	446	98.1	.000	.000	46.2	647	693	988	1031	888	701	448
MAX	575	200	.00	.00	533	700	969	1200	1220	969	870	650
MIN	200	.00	.00	.00	.00	300	530	726	760	800	557	250
AC-FT	27410	5840	.00	.00	2660	39770	41240	60770	61340	54610	43100	26640

SAN JOAQUIN RIVER BASIN

11249500 MADERA CANAL AT FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	109	15.2	1.06	19.6	107	305	344	492	789	977	732	342
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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1949 - 1996
ANNUAL TOTAL	212933.00	183198.00	
ANNUAL MEAN	583	501	
HIGHEST ANNUAL MEAN			354
LOWEST ANNUAL MEAN			736
HIGHEST DAILY MEAN	1230 Jul 7	1220 Jun 7	43.8
LOWEST DAILY MEAN	.00 Jan 1	.00 Nov 18	1330 Jul 2 1973
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Nov 18	.00 Oct 3 1948
ANNUAL RUNOFF (AC-FT)	422400	363400	.00 Oct 3 1948
10 PERCENT EXCEEDS	1130	969	256800
50 PERCENT EXCEEDS	562	575	1070
90 PERCENT EXCEEDS	.00	.00	101
			.00

SAN JOAQUIN RIVER BASIN

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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.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	1520	569	606	670	1080	2890	4240	4400	4410	4030	1640
2	2190	1460	500	661	705	1100	2900	4180	4400	4900	3700	1760
3	2230	1260	500	644	730	1130	2850	3960	4420	5090	3340	1870
4	2200	1150	617	508	765	1050	2880	3930	4550	5150	3480	1960
5	2250	1210	700	378	792	850	2900	4130	4750	4810	3580	1910
6	2070	1270	675	379	797	850	2760	4250	4860	4510	3530	1700
7	1890	1350	600	430	830	908	2810	4250	4850	4630	3250	1440
8	2000	1320	683	452	871	950	3330	4270	4860	4980	3310	1540
9	2240	1300	625	408	900	979	3600	4300	4870	4980	3170	1680
10	2330	1210	500	410	871	1000	3630	4150	4860	4840	2930	1830
11	2000	1150	558	389	869	1000	3900	3620	4850	4720	3080	1850
12	1710	1170	638	360	900	1060	3880	3630	4850	4560	3360	1780
13	1460	1240	670	326	1020	1030	3850	3840	4850	4230	3640	1630
14	1320	1380	553	302	1100	1000	3780	3790	4560	4320	3690	1390
15	1470	1370	412	303	1120	1060	3780	3470	4190	4450	3620	1370
16	1640	1280	389	331	1150	1160	3600	3080	4150	4410	3290	1550
17	1700	1170	403	352	1150	1260	3400	2920	4120	4350	3010	1570
18	1700	1160	491	352	1150	1410	3280	2630	4330	4130	3100	1600
19	1700	1200	580	350	1120	1610	3210	2770	4720	3800	3200	1510
20	1670	1270	573	403	875	1930	3030	2960	4870	3560	3050	1370
21	1620	1280	553	430	700	2070	3140	2940	4510	3730	2830	1200
22	1720	1060	555	401	794	2260	3310	2990	4120	3900	2790	1150
23	1800	923	526	450	1370	2510	3520	3060	4270	4090	2560	1300
24	1800	879	502	471	1530	2550	3760	2940	4520	4150	2400	1400
25	1860	929	504	479	1520	2560	3810	2850	4600	4080	2520	1470
26	2000	1010	505	500	1570	2640	4060	2850	4600	3790	2660	1510
27	1820	1110	531	500	1650	2890	3910	3050	4540	3600	2580	1410
28	1590	1090	579	500	1640	2910	3940	3490	4340	3760	2270	1200
29	1660	988	601	500	1400	2630	4140	4060	3950	3930	2080	1240
30	1670	850	603	493	---	2500	4230	4310	4030	3950	1850	1410
31	1550	---	605	608	---	2720	---	4380	---	4060	1610	---
TOTAL	56860	35559	17300	13676	30559	50657	104080	111290	135790	133870	93510	46240
MEAN	1834	1185	558	441	1054	1634	3469	3590	4526	4318	3016	1541
MAX	2330	1520	700	661	1650	2910	4230	4380	4870	5150	4030	1960
MIN	1320	850	389	302	670	850	2760	2630	3950	3560	1610	1150
AC-FT	112800	70530	34310	27130	60610	100500	206400	220700	269300	265500	185500	91720

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	831	323	73.9	202	1282	1253	1398	1661	2649	2913	2576	1509
MAX	3084	1364	629	1348	4505	3551	4475	4238	4529	4905	4339	4033
(WY)	1979	1979	1970	1966	1965	1965	1962	1993	1993	1993	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1949 - 1996
ANNUAL TOTAL	824642.00	829391	
ANNUAL MEAN	2259	2266	1400
HIGHEST ANNUAL MEAN			2356
LOWEST ANNUAL MEAN			270
HIGHEST DAILY MEAN	4600	5150	5330
LOWEST DAILY MEAN	.00	302	.00
ANNUAL SEVEN-DAY MINIMUM	.00	331	.00
ANNUAL RUNOFF (AC-FT)	1636000	1645000	1015000
10 PERCENT EXCEEDS	4410	4360	3550
50 PERCENT EXCEEDS	1960	1810	975
90 PERCENT EXCEEDS	447	507	.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 sea level (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. See schematic diagram of lower San Joaquin River basin.

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, 513,900 acre-ft, June 14, elevation, 576.64 ft; minimum, 237,200 acre-ft, Sept. 30, elevation, 507.12 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	317300	278400	266200	304700	368200	452000	506600	449800	483900	485300	351900	248800
2	315600	277500	267100	305800	369200	448500	508300	445300	484000	479100	346700	248300
3	313100	276400	268200	308900	370200	446700	509300	441400	484900	474200	341300	247100
4	311700	276000	269300	309500	372100	447500	508900	436800	485300	473000	336100	245400
5	311000	275100	269700	313100	379700	452800	508000	431400	486900	469600	331300	244400
6	310500	273800	270500	312600	385100	456200	506900	426900	488500	465900	326500	243100
7	310500	272500	271100	311600	389200	459000	505700	423000	493400	460700	322600	243200
8	309700	271200	272200	313900	391700	462100	503300	420100	499600	454600	318800	242700
9	309000	270300	273000	315700	393900	465000	500400	421600	506100	450100	314600	242400
10	307600	269600	273700	317200	396600	467800	498200	423400	510100	446300	311400	241700
11	307400	269200	275600	318700	399600	471500	496200	428200	513000	443900	307400	240700
12	308000	268600	278500	320700	402200	475700	494500	434200	513300	441300	303800	239600
13	308700	267600	280700	323000	404300	477700	492400	439800	513000	438600	299100	239100
14	309800	266600	281800	325000	406100	479500	490100	447200	513900	435300	294500	239900
15	307400	265600	282800	327100	408200	480500	487800	453400	513100	432600	290000	240000
16	305100	264900	284400	328400	410600	480500	487100	483500	513200	428600	286500	240100
17	303300	264700	286600	333700	411300	480700	487500	486300	513500	424200	282700	239900
18	301700	264400	287800	335800	411000	481800	488800	485300	513400	420200	278900	239600
19	300000	264500	289100	338400	414700	483000	488300	482300	512300	416600	275700	239300
20	298300	264100	290600	340500	432500	484100	487300	478900	510900	413900	272200	239900
21	296800	263600	291700	343400	440700	485300	485900	478400	511200	410600	269700	240100
22	294800	263600	292900	344100	450000	488200	483900	478500	512200	405600	267600	240100
23	293000	264300	294600	345800	456400	491100	481600	477900	511600	399600	266000	241200
24	290800	264800	295600	348200	461300	493700	478700	480400	510200	393400	264300	241600
25	288700	264900	296500	351400	464400	496100	475500	481200	507800	387900	262600	241800
26	285900	265300	297900	353600	466600	498000	471700	483500	504900	382600	259200	240800
27	284000	265500	299100	356700	464900	499100	467300	486500	501000	378400	255400	239500
28	282600	265400	300100	359600	460500	500200	463300	489000	495600	373600	252300	239000
29	281500	265200	301700	362000	455900	501600	459300	488600	491600	368600	250900	238100
30	280400	265200	302800	363500	---	504100	454400	486700	489000	362700	249800	237200
31	279400	---	304200	366500	---	505400	---	484800	---	357700	249300	---
MAX	317300	278400	304200	366500	466600	505400	509300	489000	513900	485300	351900	248800
MIN	279400	263600	266200	304700	368200	446700	454400	420100	483900	357700	249300	237200
a	519.01	515.81	527.10	543.42	564.42	574.89	564.09	570.56	571.46	541.20	510.94	507.12
b	-39800	-14200	+39000	+62300	+89400	+49500	-51000	+30400	+4200	-131300	-108400	-12100

CAL YR 1995 b +87400

WTR YR 1996 b -82000

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

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, to Sept. 30, 1938, water-stage recorder at site 2.5 mi upstream at different datum.

REVISED RECORDS.--WSP 843: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 294.00 ft above sea level (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.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	148	113	63	52	4560	218	1540	674	198	257	192
2	164	147	113	63	39	4280	236	1530	673	208	257	193
3	164	147	110	60	50	3440	501	1530	807	226	258	193
4	164	149	111	76	92	2510	1050	1530	1020	226	260	192
5	165	149	111	108	174	2100	1260	1550	1020	226	258	192
6	166	147	111	109	89	2080	1550	936	645	225	256	193
7	166	142	111	109	73	1600	1560	233	263	222	248	192
8	166	135	111	96	65	1350	1550	198	262	220	238	192
9	166	134	111	64	60	1350	1540	198	257	221	215	193
10	165	135	111	64	58	1350	1540	198	259	221	214	192
11	165	136	99	65	55	1350	1100	199	263	222	212	192
12	163	136	75	67	53	2040	679	208	262	223	210	192
13	163	136	75	67	49	2660	679	216	260	223	209	193
14	166	136	75	66	48	2630	679	214	260	223	209	192
15	167	136	75	66	47	2630	679	482	260	226	209	192
16	169	136	74	69	44	2630	683	3970	259	221	209	185
17	158	137	72	69	46	2310	684	7060	255	215	212	177
18	149	137	68	66	46	2050	893	6440	240	215	212	176
19	150	136	58	64	59	2050	1560	5910	226	217	213	177
20	150	136	58	64	135	1870	1550	4270	222	218	214	177
21	150	136	58	67	119	1540	1550	2890	215	219	216	179
22	150	129	57	66	134	745	1550	2880	213	231	213	177
23	150	113	67	82	216	219	1550	2090	212	263	197	176
24	148	112	74	104	651	217	1550	911	211	265	203	179
25	146	111	74	76	916	216	1540	529	208	266	214	175
26	145	111	71	70	1830	213	1540	390	207	266	215	172
27	145	111	61	62	3700	212	1540	261	204	261	210	172
28	145	111	58	64	5160	220	1540	261	197	255	203	171
29	145	111	62	63	4770	222	1540	408	194	254	193	171
30	146	111	64	62	---	216	1540	674	193	255	190	171
31	147	---	63	69	---	214	---	679	---	257	189	---
TOTAL	4867	3951	2551	2260	18830	51074	35631	50385	10441	7188	6813	5520
MEAN	157	132	82.3	72.9	649	1648	1188	1625	348	232	220	184
MAX	169	149	113	109	5160	4560	1560	7060	1020	266	260	193
MIN	145	111	57	60	39	212	218	198	193	198	189	171
AC-FT	9650	7840	5060	4480	37350	101300	70670	99940	20710	14260	13510	10950

SAN JOAQUIN RIVER BASIN

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11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1940, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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 TOTAL	
ANNUAL MEAN	2343
HIGHEST ANNUAL MEAN	4961
LOWEST ANNUAL MEAN	698
HIGHEST DAILY MEAN	38800
LOWEST DAILY MEAN	54
ANNUAL SEVEN-DAY MINIMUM	105
INSTANTANEOUS PEAK FLOW	77200
INSTANTANEOUS PEAK STAGE	23.80
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	364	268	399	633	982	1233	1778	1953	1693	1026	609	477
MAX	1663	1623	3798	5376	7100	7705	7701	9107	9438	5322	2807	2392
(WY)	1946	1983	1983	1956	1969	1969	1983	1941	1941	1995	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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1941 - 1996

ANNUAL TOTAL	840402	199511	
ANNUAL MEAN	2302	545	950
HIGHEST ANNUAL MEAN			4385
LOWEST ANNUAL MEAN			66.9
HIGHEST DAILY MEAN	9400	Jul 11	7060
LOWEST DAILY MEAN	33	Jan 8	39
ANNUAL SEVEN-DAY MINIMUM	60	Jan 16	48
INSTANTANEOUS PEAK FLOW			7100
INSTANTANEOUS PEAK STAGE			9.51
ANNUAL RUNOFF (AC-FT)	1667000	395700	688200
10 PERCENT EXCEEDS	7870	1550	2870
50 PERCENT EXCEEDS	250	198	147
90 PERCENT EXCEEDS	74	66	51

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 and crest-stage gage. Elevation of gage is 680 ft above sea level, from topographic map. Prior to October 1966, crest-stage gage at datum 2.00 ft lower.

REMARKS.--Records fair. 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, 7.38 ft, from floodmarks, Mar. 10, 1995; no flow for several months in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 31	2245	87	1.75	Mar. 5	0130	69	1.69
Feb. 5	0030	102	1.86	Mar. 12	2100	74	1.71
Feb. 20	0100	92	1.79				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.16	.36	.65	19	14	5.3	1.2	.66	.17	.00	.00
2	.08	.17	.36	.68	7.4	9.6	7.1	1.2	.62	.14	.00	.00
3	.08	.17	.36	.68	5.9	7.8	4.1	1.2	.55	.14	.00	.00
4	.04	.14	.36	.65	23	7.8	3.0	1.2	.46	.13	.00	.00
5	.03	.12	.36	.65	45	25	2.6	1.3	.40	.12	.00	.00
6	.03	.12	.36	.65	8.1	7.7	2.3	1.3	.41	.11	.00	.00
7	.07	.12	.36	.69	4.8	6.1	2.2	1.3	.39	.09	.00	.00
8	.08	.12	.36	.72	3.7	5.4	2.0	1.2	.34	.09	.00	.00
9	.09	.12	.36	.72	3.1	4.8	1.9	1.2	.33	.08	.00	.00
10	.08	.12	.41	.65	2.6	4.3	2.0	1.2	.34	.05	.00	.00
11	.08	.12	.41	.65	2.1	4.2	2.0	1.1	.38	.06	.00	.00
12	.06	.14	.47	.69	1.9	22	2.0	1.1	.41	.07	.00	.00
13	.03	.17	1.9	.72	1.7	22	2.0	.91	.40	.04	.00	.00
14	.03	.14	.98	.72	1.7	12	1.9	.89	.40	.03	.00	.00
15	.03	.12	.80	.72	1.7	9.5	1.8	1.0	.35	.02	.00	.00
16	.06	.12	.77	.72	2.5	8.6	1.9	3.3	.31	.03	.00	.00
17	.09	.12	.72	.74	2.0	8.0	2.8	3.2	.31	.05	.00	.00
18	.08	.12	.74	.79	1.9	7.6	2.9	2.1	.30	.05	.00	.00
19	.08	.15	.75	.72	4.4	7.2	2.6	1.6	.30	.06	.00	.00
20	.05	.17	.74	.70	29	6.7	2.2	1.4	.28	.05	.00	.00
21	.06	.17	.72	.79	28	6.4	2.1	1.2	.27	.04	.00	.00
22	.06	.18	.72	1.5	15	6.4	1.9	1.2	.28	.02	.00	.00
23	.07	.18	.92	1.1	9.1	6.4	1.8	1.0	.28	.03	.00	.00
24	.08	.23	1.0	.94	7.0	6.4	1.6	.98	.25	.02	.00	.00
25	.10	.26	.79	.78	5.9	6.1	1.5	.93	.28	.02	.00	.00
26	.11	.26	.72	.78	5.0	6.0	1.5	.84	.47	.02	.00	.00
27	.12	.26	.72	.80	4.8	5.6	1.4	.80	.62	.02	.00	.00
28	.12	.28	.72	.94	4.6	5.5	1.4	.81	.50	.04	.00	.00
29	.08	.31	.72	1.0	6.8	5.2	1.4	.74	.31	.01	.00	.00
30	.08	.33	.72	.97	---	5.1	1.3	.72	.24	.01	.00	.00
31	.10	---	.71	33	---	4.9	---	.70	---	.00	.00	---
TOTAL	2.27	5.19	20.39	56.51	257.7	264.3	70.5	38.82	11.44	1.81	0.00	0.00
MEAN	.073	.17	.66	1.82	8.89	8.53	2.35	1.25	.38	.058	.000	.000
MAX	.12	.33	1.9	33	45	25	7.1	3.3	.66	.17	.00	.00
MIN	.03	.12	.36	.65	1.7	4.2	1.3	.70	.24	.00	.00	.00
AC-FT	4.5	10	40	112	511	524	140	77	23	3.6	.00	.00

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.087	.35	1.32	6.88	9.71	13.9	4.94	2.44	1.03	.37	.095	.14
MAX	1.40	2.82	11.2	44.0	53.9	101	23.2	17.4	7.64	3.83	1.83	1.41
(WY)	1984	1973	1984	1969	1969	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1967 - 1996			
ANNUAL TOTAL	5419.14				728.93							
ANNUAL MEAN	14.8				1.99							
HIGHEST ANNUAL MEAN									3.41			
LOWEST ANNUAL MEAN									18.9			
HIGHEST DAILY MEAN	1070				45				.003			
LOWEST DAILY MEAN	.00				.00				1070			
ANNUAL SEVEN-DAY MINIMUM	.05				.00				.00			
INSTANTANEOUS PEAK FLOW					102				3420			
INSTANTANEOUS PEAK STAGE					1.86				7.38			
ANNUAL RUNOFF (AC-FT)	10750				1450				2470			
10 PERCENT EXCEEDS	30				5.9				6.1			
50 PERCENT EXCEEDS	1.9				.40				.06			
90 PERCENT EXCEEDS	.12				.00				.00			

SAN JOAQUIN RIVER BASIN

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 sea level, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
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	233	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	350	.00	.00	.00	.00
12	.00	.00	137	.00	.00	.00	.00	497	.00	.00	.00	.00
13	.00	.00	510	.00	.00	.00	.00	441	.00	.00	.00	.00
14	.00	.00	370	.00	.00	.00	.00	441	.00	.00	.00	.00
15	.00	.00	248	.00	.00	140	.00	441	.00	.00	.00	.00
16	.00	.00	136	.00	.00	137	.00	664	.00	.00	.00	.00
17	.00	.00	120	.00	.00	307	.00	980	.00	.00	.00	.00
18	.00	.00	104	.00	.00	344	.00	1570	.00	.00	.00	.00
19	.00	.00	82	.00	.00	332	.00	2550	.00	.00	.00	.00
20	.00	.00	64	.00	.00	357	.00	3440	.00	.00	.00	.00
21	.00	.00	51	.00	.00	350	.00	3780	.00	.00	.00	.00
22	.00	.00	39	.00	.00	290	.00	3440	.00	.00	.00	.00
23	.00	.00	28	.00	.00	182	.00	3300	.00	.00	.00	.00
24	.00	.00	22	.00	.00	233	.00	3230	.00	.00	.00	.00
25	.00	.00	45	.00	.00	218	.00	2920	.00	.00	.00	.00
26	.00	.00	70	.00	.00	106	.00	1750	.00	.00	.00	.00
27	.00	.00	99	.00	.00	93	.00	1290	.00	.00	.00	.00
28	.00	.00	103	.00	.00	146	.00	1070	.00	.00	.00	.00
29	.00	.00	107	.00	.00	111	.00	785	.00	.00	.00	.00
30	.00	.00	111	.00	---	.00	.00	652	.00	.00	.00	.00
31	.00	---	115	.00	---	.00	---	397	---	.00	.00	---
TOTAL	0.00	0.00	2561.00	0.00	0.00	3346.00	0.00	33988.00	234.00	0.00	0.00	0.00
MEAN	.000	.000	82.6	.000	.000	108	.000	1096	7.80	.000	.000	.000
MAX	.00	.00	510	.00	.00	357	.00	3780	233	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	5080	.00	.00	6640	.00	67420	464	.00	.00	.00

SAN JOAQUIN RIVER BASIN

279

11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.8	162	246	302	246	567	715	861	494	202	41.2	30.0
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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1948 - 1996 a
ANNUAL TOTAL	298200.00	40129.00	
ANNUAL MEAN	817	110	328
HIGHEST ANNUAL MEAN			3189
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	3990 May 25	3780 May 21	5360 Mar 3
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1
ANNUAL RUNOFF (AC-FT)	591500	79600	237500
10 PERCENT EXCEEDS	3270	138	842
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

a Does not include water years 1955 to 1972, (see Period of Record)

SAN JOAQUIN RIVER BASIN

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.--Water years 1986-94. October 1995 to September 1996.

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

REMARKS.--Records good except for estimated discharges which are fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e224	e207	225	191	406	541	e434	156	179	330	281	348
2	e249	e222	221	176	482	544	e448	139	188	358	290	351
3	e225	e217	224	150	457	515	468	125	191	316	295	323
4	e170	e220	207	151	457	576	380	129	184	284	301	273
5	e177	e221	204	135	513	619	314	133	189	290	353	266
6	e143	e217	209	138	599	666	308	161	176	304	338	250
7	e130	e211	209	143	e633	692	278	148	190	310	348	238
8	e134	e197	175	137	e599	649	251	168	202	330	354	238
9	e139	e169	200	136	e552	576	265	179	250	348	366	287
10	e133	e165	201	132	e520	510	264	208	283	311	369	295
11	e125	e173	200	128	e501	464	253	222	276	284	348	236
12	e132	e187	221	132	e487	438	248	237	278	287	404	201
13	e121	e191	257	147	e484	e450	282	242	302	284	397	209
14	e121	e193	282	169	472	e470	331	246	275	276	376	233
15	e151	e198	296	171	443	e484	366	260	281	272	300	241
16	e172	e190	303	175	437	e513	e379	273	286	261	278	206
17	e203	e190	290	186	449	e538	345	282	306	252	277	223
18	e251	e183	290	195	e441	e526	316	275	362	263	280	198
19	e271	e174	288	207	438	e504	302	227	349	259	310	195
20	e266	e181	284	205	488	e501	304	209	314	263	330	191
21	e254	181	280	202	524	e499	306	252	332	279	329	172
22	e245	180	267	222	e554	e501	307	335	333	277	348	166
23	e239	184	274	238	e528	e498	300	401	332	268	382	186
24	e248	185	258	251	519	e495	194	414	317	259	364	190
25	e273	178	241	245	500	e464	165	414	309	269	356	180
26	e288	179	237	226	490	e455	167	361	291	267	391	139
27	e284	200	208	227	493	e446	210	277	257	261	394	131
28	e259	209	179	241	511	e427	196	244	267	288	315	127
29	e237	220	193	251	539	e439	155	181	276	339	298	108
30	e229	224	217	251	---	e437	150	155	293	374	315	112
31	e202	---	202	276	---	e427	---	164	---	332	334	---
TOTAL	6295	5846	7342	5834	14516	15864	8686	7217	8068	9095	10421	6513
MEAN	203	195	237	188	501	512	290	233	269	293	336	217
MAX	288	224	303	276	633	692	468	414	362	374	404	351
MIN	121	165	175	128	406	427	150	125	176	252	277	108
AC-FT	12490	11600	14560	11570	28790	31470	17230	14310	16000	18040	20670	12920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1996, BY WATER YEAR (WY)

MEAN	165	174	139	139	252	348	270	223	227	247	266	183
MAX	255	273	237	188	501	512	419	355	339	376	411	289
(WY)	1990	1990	1996	1996	1996	1996	1986	1987	1987	1986	1986	1986
MIN	41.3	65.2	63.4	60.6	83.4	231	165	75.2	72.0	61.7	57.1	39.4
(WY)	1993	1993	1991	1991	1991	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1986 - 1996

ANNUAL TOTAL	105697	
ANNUAL MEAN	289	219
HIGHEST ANNUAL MEAN		289
LOWEST ANNUAL MEAN		96.6
HIGHEST DAILY MEAN	692	810
LOWEST DAILY MEAN	108	24
ANNUAL SEVEN-DAY MINIMUM	129	31
INSTANTANEOUS PEAK FLOW	701	unknown
INSTANTANEOUS PEAK STAGE	69.28	unknown
ANNUAL RUNOFF (AC-FT)	209600	158800
10 PERCENT EXCEEDS	487	372
50 PERCENT EXCEEDS	266	208
90 PERCENT EXCEEDS	163	75

e Estimated.

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989-94. October 1995 to September 1996. 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 U.S. Geological Survey Open File Report 91-74.

CHEMICAL DATA: Water years 1993-94.

SPECIFIC CONDUCTANCE: Water years 1989-94. October 1995 to September 1996.

WATER TEMPERATURE: Water years 1989-94. October 1995 to September 1996.

SEDIMENT DATA: Water years 1993-94.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Water years 1989-94. October 1995 to September 1996.

WATER TEMPERATURE: Water years 1989-94. October 1995 to September 1996.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,330 microsiemens, Jan. 16, 1991; minimum recorded, 911 microsiemens, June 1, 1993.

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, 3,170 microsiemens, May 5; minimum recorded, 889 microsiemens, Sept. 15.

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 2, 30, 31, Aug. 13, 14; minimum recorded, 8.5°C, Dec. 24-27, Feb. 28.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1250	1210	1570	1540	1820	1810	2450	2420	2260	1960	2070	2030
2	1230	1150	1600	1540	1840	1810	2470	2450	1970	1880	2230	2060
3	1210	1050	1600	1570	1860	1830	2480	2470	2120	1910	2280	2150
4	1060	965	1580	1550	1880	1840	2510	2480	2180	2110	2310	2260
5	1060	1030	1560	1520	1940	1880	2570	2510	2110	2020	2270	2170
6	1040	1000	1520	1420	1920	1880	2620	2570	2060	2020	2210	2130
7	1070	1000	1470	1410	1970	1890	2670	2620	2140	2040	2200	2180
8	1070	1050	1410	1380	1940	1910	2720	2670	2350	2140	2260	2200
9	1050	1020	1420	1280	1920	1760	2790	2720	2430	2350	2300	2220
10	1020	1010	1410	1300	1940	1870	2830	2790	2510	2430	2330	2300
11	1040	1010	1540	1410	1940	1930	2860	2820	2600	2370	2350	2280
12	1090	1040	1580	1490	1960	1940	2870	2840	2630	2590	2350	2260
13	1120	1070	1530	1490	1940	1880	2920	2860	2650	2550	2380	2280
14	1190	1110	1640	1530	1880	1870	2930	2880	2600	2530	2350	2280
15	1270	1190	1690	1640	1880	1870	2880	2740	2610	2520	2330	2250
16	1270	1230	1780	1630	1900	1870	2740	2680	2540	2400	2300	2230
17	1270	1230	1830	1780	1900	1880	2680	2660	2540	2330	2310	2150
18	1300	1270	1880	1830	1930	1900	2700	2670	2330	2280	2300	2140
19	1430	1280	1900	1860	1960	1930	2740	2650	2290	2150	2290	2160
20	1400	1350	1960	1890	1990	1960	2720	2650	2150	2090	2190	2110
21	1360	1340	1900	1860	2010	1980	2730	2650	2170	2070	2190	2090
22	1380	1340	1920	1890	2040	1990	2740	2460	2170	2070	2200	2060
23	1410	1370	1920	1860	2070	2040	2480	2360	2170	2150	2240	2090
24	1380	1370	1890	1850	2120	2070	2480	2360	2170	2080	2090	2050
25	1370	1350	1850	1820	2200	2120	2490	2340	2110	2080	2230	2060
26	1350	1330	1840	1830	2280	2200	2610	2460	2110	2080	2280	2190
27	1340	1310	1830	1780	2340	2280	2700	2600	2080	1950	2190	2040
28	1420	1340	1810	1780	2410	2340	2670	2400	2040	1990	2090	2040
29	1470	1420	1800	1780	2430	2400	2400	2280	2030	1940	2040	1940
30	1510	1470	1810	1800	2430	2400	2340	2260	---	---	2280	2000
31	1540	1510	---	---	2420	2400	2340	2260	---	---	2340	2110
MONTH	1540	965	1960	1280	2430	1760	2930	2260	2650	1880	2380	1940

SAN JOAQUIN RIVER BASIN

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2150	2030	2960	2610	2320	2080	3000	2800	2030	1940	1620	1410
2	2060	1830	3000	2660	2220	2090	2870	2590	2110	1950	1440	1370
3	2040	1790	3110	2850	2360	2090	3090	2790	2210	2030	1520	1390
4	2030	1760	3150	3070	2480	2250	3070	2940	2180	2040	1690	1510
5	2180	1760	3170	2960	2360	2230	3060	1900	2120	2020	1960	1620
6	2180	2060	3030	2290	2560	2360	1940	1880	2120	2030	1980	1670
7	2120	1900	2410	1680	2580	2380	1970	1900	2090	1990	2040	1800
8	2320	1990	2570	1640	2620	2390	1970	1910	2230	2040	2010	1750
9	2080	1990	2220	2080	2530	2070	2080	1900	2230	2090	1830	1440
10	2160	2000	2110	1940	2270	2090	2240	2020	2270	2060	1600	1480
11	2170	2000	2020	1930	2400	2100	2240	2070	2400	2090	1730	1590
12	2170	2050	2090	1860	2530	2400	2110	1930	2160	2060	1770	1600
13	2050	1900	2100	1900	2450	2150	2190	2080	2080	1410	1600	1060
14	2040	1700	2120	1940	2610	1670	2220	2070	1600	1480	1060	956
15	1910	1640	2170	2090	2470	1680	2350	2070	1740	1600	1290	889
16	1780	1640	2240	1990	2480	2370	2380	1950	1800	1710	1500	1160
17	1860	1690	2010	1460	2470	2330	2250	2030	1780	1650	1710	1450
18	2080	1850	1730	1320	2380	2230	2160	1820	1770	1650	1550	1380
19	2050	1910	1720	1640	2440	2290	2060	1880	1650	1460	1500	1280
20	2210	1960	1730	1700	2470	1970	2090	1940	1590	1440	1470	1290
21	2080	1960	1800	1700	2510	1970	2070	1900	1640	1520	1580	1300
22	2190	1980	1910	1760	2510	2310	2090	1920	1640	1480	1630	1380
23	2250	2110	1960	1670	2690	2300	2160	1970	1580	1420	1450	1230
24	2420	2130	1980	1660	2690	2400	2230	1990	1590	1120	1760	1220
25	2800	2390	1880	1630	2550	2390	2260	1910	1590	1440	1760	1100
26	2810	2590	1720	1640	2510	2360	2140	1850	1480	1310	1230	1130
27	2790	2390	1780	1690	2840	2490	2050	1810	1520	1290	1180	1060
28	2720	2390	1930	1740	3010	2770	1870	1610	1720	1520	1080	999
29	2920	2690	2150	1930	3080	2810	1720	1570	1740	1650	1220	1020
30	2910	2600	2390	2150	3030	2760	1810	1610	1760	1670	1230	1060
31	---	---	2460	2060	---	---	2040	1790	1680	1590	---	---
MONTH	2920	1640	3170	1320	3080	1670	3090	1570	2400	1120	2040	889

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

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

SAN JOAQUIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Records fair except for period of estimated discharge which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 710 ft³/s, Mar. 16, 1995; gage height, 10.96; minimum daily, 0.01 ft³/s, Sept. 24, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	e48	95	75	292	359	98	33	45	17	8.9	8.4
2	8.8	e49	95	67	300	307	79	15	44	16	7.9	12
3	7.7	e49	98	69	293	224	78	9.5	35	11	7.0	16
4	7.9	e53	104	69	304	192	88	9.2	24	8.2	4.3	14
5	8.6	e57	106	70	356	203	92	8.8	22	6.2	9.9	11
6	8.0	e56	109	74	404	292	82	8.9	12	5.4	11	8.9
7	7.9	e58	102	69	428	350	68	13	22	4.4	4.1	4.3
8	8.6	e60	101	64	451	348	59	19	24	4.9	2.8	2.3
9	9.4	e61	103	59	472	328	47	29	22	6.4	8.3	5.4
10	e11	e64	93	57	421	307	52	26	29	12	8.5	2.6
11	e13	e65	107	59	305	294	54	20	52	6.7	9.8	1.4
12	e14	e66	128	61	258	297	58	16	37	2.7	18	2.1
13	e14	e69	151	70	194	254	66	18	29	8.7	11	4.2
14	e15	e74	167	76	150	168	65	29	30	23	2.8	4.1
15	e17	e75	161	75	146	135	63	23	24	28	2.1	3.9
16	e19	e76	172	79	143	136	54	26	15	28	2.6	23
17	e20	e80	165	88	165	160	33	27	13	17	7.0	30
18	e23	e84	155	96	161	156	14	21	13	7.5	9.6	30
19	e24	e85	150	108	197	140	12	21	15	4.9	8.5	9.4
20	e26	e86	148	106	226	134	13	20	16	3.2	10	4.0
21	e28	e88	140	121	291	112	17	23	17	2.6	11	3.6
22	e29	91	134	130	352	104	27	32	13	3.1	4.7	6.8
23	e31	89	130	135	405	109	24	127	21	4.2	2.4	15
24	e33	89	133	147	435	117	20	214	21	4.8	1.7	30
25	e34	88	125	142	450	127	18	187	19	7.7	1.5	35
26	e36	86	115	123	439	117	23	130	14	4.2	1.6	37
27	e37	82	107	107	420	112	20	75	14	7.0	3.5	50
28	e40	77	98	104	393	119	19	45	15	14	3.4	45
29	e42	80	95	132	368	126	24	40	15	19	2.2	45
30	e45	84	92	169	---	128	28	44	17	12	8.0	46
31	e49	---	90	251	---	117	---	50	---	10	12	---
TOTAL	674.9	2169	3769	3052	9219	6072	1395	1359.4	689	309.8	206.1	510.4
MEAN	21.8	72.3	122	98.5	318	196	46.5	43.9	23.0	9.99	6.65	17.0
MAX	49	91	172	251	472	359	98	214	52	28	18	50
MIN	7.7	48	90	57	143	104	12	8.8	12	2.6	1.5	1.4
AC-FT	1340	4300	7480	6050	18290	12040	2770	2700	1370	614	409	1010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1996, BY WATER YEAR (WY)

	MEAN	27.6	41.1	57.1	93.2	118	133	66.7	30.1	32.9	30.1	27.4	11.9
MAX	61.0	92.0	122	259	318	359	229	109	130	92.7	100	21.6	
(WY)	1994	1994	1996	1995	1996	1995	1986	1986	1986	1986	1987	1991	
MIN	3.35	7.53	5.86	6.17	6.96	28.0	19.2	1.76	3.79	7.42	3.36	2.67	
(WY)	1993	1991	1991	1991	1991	1990	1992	1992	1994	1994	1994	1990	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1986 - 1996

ANNUAL TOTAL	37289.0	29425.6	
ANNUAL MEAN	102	80.4	55.5
HIGHEST ANNUAL MEAN			120
LOWEST ANNUAL MEAN			17.6
HIGHEST DAILY MEAN	681	Mar 16	681
LOWEST DAILY MEAN	1.5	Sep 15	.01
ANNUAL SEVEN-DAY MINIMUM	6.1	Sep 11	.12
INSTANTANEOUS PEAK FLOW			710
INSTANTANEOUS PEAK STAGE			10.96
ANNUAL RUNOFF (AC-FT)	73960	58370	40210
10 PERCENT EXCEEDS	280	199	129
50 PERCENT EXCEEDS	54	44	29
90 PERCENT EXCEEDS	12	6.0	4.1

e Estimated.

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 U.S. Geological Survey Open-File Report 91-74.

CHEMICAL DATA: Water years 1983-94.

SPECIFIC CONDUCTANCE: Water year 1989 to current year.

WATER TEMPERATURE: Water year 1989 to current year.

SEDIMENT DATA: Water years 1988-94.

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, July 2, 25, Aug. 13, 1996; minimum recorded, 2.5°C, Dec. 24, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 7,920 microsiemens, Sept. 14; minimum recorded, 590 microsiemens, Sept. 16.

WATER TEMPERATURE: Maximum recorded, 34.5°C, July 2, 25, Aug. 13; minimum recorded, 7.5°C, Dec. 25, 26.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1110	900	---	---	1330	1230	1970	1710	1270	1060	1410	1360
2	960	890	---	---	1330	1280	1880	1850	1190	1170	1620	1410
3	1120	920	---	---	1300	1270	1930	1880	1180	1140	1800	1620
4	1140	960	---	---	1280	1260	1930	1900	1220	1160	1860	1800
5	1070	930	---	---	1270	1250	1910	1880	1230	1040	1920	1860
6	1170	1070	---	---	1270	1250	1890	1810	1240	1040	1920	1490
7	1220	1100	---	---	1370	1260	1910	1830	1120	1060	1520	1440
8	1180	1130	---	---	1360	1190	1980	1910	1060	1030	1440	1420
9	1200	1140	---	---	1380	1190	2020	1960	1040	1000	1440	1420
10	---	---	---	---	1430	1370	2020	1950	1380	1020	1440	1420
11	---	---	---	---	1410	1360	1990	1950	1630	1380	1470	1430
12	---	---	---	---	1360	1290	1980	1880	1680	1560	1570	1470
13	---	---	---	---	1310	1220	1900	1780	1820	1660	1850	1570
14	---	---	---	---	1220	1190	1840	1760	1880	1800	1970	1850
15	---	---	---	---	1250	1200	1910	1830	1910	1570	2010	1960
16	---	---	---	---	1250	1220	1930	1870	1830	1610	2000	1910
17	---	---	---	---	1280	1250	1870	1800	1870	1690	1980	1830
18	---	---	---	---	1320	1280	1810	1700	1900	1790	1940	1840
19	---	---	---	---	1330	1290	1710	1630	1870	1390	2040	1850
20	---	---	---	---	1310	1270	1760	1710	1580	1370	2090	1920
21	---	---	---	---	1330	1310	1740	1610	1380	1310	2210	2090
22	---	---	1230	1170	1370	1320	1640	1570	1320	1080	2220	2140
23	---	---	1300	1230	1380	1330	1620	1550	1120	1030	2190	2050
24	---	---	1260	1240	1390	1330	1600	1530	1070	1050	2190	2060
25	---	---	1270	1240	1460	1390	1710	1580	1080	1050	2100	2060
26	---	---	1330	1270	1520	1450	1870	1710	1150	1070	2220	2100
27	---	---	1370	1310	1570	1510	1930	1870	1210	1150	2280	2150
28	---	---	1390	1360	1630	1530	1950	1910	1330	1210	2370	2250
29	---	---	1400	1330	1650	1530	1960	1390	1370	1320	2400	2310
30	---	---	1340	1320	1660	1640	1670	1150	---	---	2440	2340
31	---	---	---	---	1720	1650	1220	1150	---	---	2510	2440
MONTH	---	---	---	---	1720	1190	2020	1150	1910	1000	2510	1360

11262900 MUD SLOUGH NEAR GUSTINE, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2490	2340	1730	1240	1370	1260	2470	2350	1720	1420	1120	1070
2	2380	1020	3590	1730	1300	1190	2450	2340	1740	1550	1080	860
3	2290	2210	4340	3570	1580	1240	2760	2350	1940	1590	960	810
4	2730	2260	4510	4140	1800	1480	4000	2760	2460	1940	980	840
5	3190	2560	4510	4130	2670	1740	4570	3910	2210	1220	1170	910
6	3440	3160	4700	4240	3710	2660	4670	4180	1480	1150	1500	940
7	3340	3220	4710	1790	3460	1820	4920	4280	2790	1460	1990	1500
8	3310	1730	2880	1800	2030	1750	5490	2900	3130	2780	2420	1980
9	3450	1700	2360	1670	2240	1880	3880	1820	3080	1880	2270	1250
10	3640	1700	1680	1420	2110	1210	2000	1620	1910	1710	2560	1290
11	3530	1630	1790	1540	1340	1160	2950	2000	1740	1320	2800	2530
12	3640	1950	2220	1790	1520	1330	5560	2890	1320	910	2810	2460
13	3190	2870	2180	1480	1660	1520	6360	1160	1660	910	3830	2810
14	3320	2640	1720	1240	1670	1520	1290	1160	2540	1660	7920	3230
15	3170	2970	2010	1620	2250	1510	1420	1080	2720	2430	3770	1340
16	3560	3010	2640	1600	2340	2100	1290	1140	2980	2060	1340	590
17	---	---	3470	1560	2880	2200	2140	1290	2140	1090	920	700
18	---	---	3440	2330	3210	2340	2670	2070	1430	1070	980	630
19	4160	4030	2340	2130	3050	2420	3290	2670	1640	1160	1720	980
20	4110	3700	2960	1760	3390	1420	4360	3290	1440	1130	2010	1670
21	4060	1810	2810	1630	2760	1390	4730	4000	1410	1080	2100	1940
22	2180	1820	2740	1710	3230	1870	4810	3900	2340	1410	2050	1420
23	2210	2130	1900	1320	1870	1710	4120	3330	2630	2050	6490	1350
24	2990	2160	1460	1220	2870	1760	3520	3010	2740	2350	6110	3660
25	2850	2080	1650	1180	2930	2270	3080	1670	2840	2620	6040	5060
26	2130	1940	2530	1650	3410	2690	3280	1810	2790	2570	5730	4940
27	2510	1990	2250	1310	3660	2590	3220	1220	2590	1540	5340	3120
28	2420	2000	1720	1060	3080	2210	1320	1140	1850	1550	3360	2900
29	2020	1600	1440	1060	3710	3050	1140	940	2100	1840	2920	2820
30	1800	1510	1430	1260	5130	2280	1320	1020	2170	860	3000	2850
31	---	---	1400	1200	---	---	1470	1290	1120	820	---	---
MONTH	---	---	4710	1060	5130	1160	6360	940	3130	820	7920	590

11262900 MUD SLOUGH NEAR GUSTINE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	13.5	11.0	13.0	11.0	13.5	11.5	14.0	10.5
2	---	---	---	---	14.0	12.5	13.5	11.0	14.0	12.5	16.5	12.0
3	---	---	---	---	13.0	11.5	13.0	11.0	14.0	13.0	17.0	14.0
4	---	---	---	---	15.0	12.5	13.0	11.0	14.5	13.5	16.0	14.0
5	---	---	---	---	15.0	13.5	13.5	12.0	16.5	14.0	15.5	13.0
6	---	---	---	---	16.0	13.5	13.5	11.5	16.0	14.5	15.5	12.0
7	---	---	---	---	16.5	14.5	12.0	11.0	15.5	14.0	17.0	13.5
8	---	---	---	---	14.5	14.0	12.0	11.0	14.5	13.5	17.5	14.0
9	---	---	---	---	14.5	13.5	11.5	11.0	14.5	13.5	18.0	15.0
10	---	---	---	---	13.5	13.0	13.0	10.5	16.0	13.5	18.5	15.0
11	---	---	---	---	13.0	12.5	11.5	11.0	16.5	14.0	18.0	15.5
12	---	---	---	---	13.0	12.0	11.0	10.5	16.5	14.5	16.0	14.5
13	---	---	---	---	13.0	12.0	10.5	10.5	18.5	14.5	16.5	13.0
14	---	---	---	---	13.0	11.5	10.5	9.5	19.0	15.0	19.5	14.0
15	---	---	---	---	12.0	11.0	10.5	9.5	16.5	15.5	21.0	15.5
16	---	---	---	---	11.0	9.5	11.0	9.5	18.5	14.5	20.5	15.5
17	---	---	---	---	11.0	9.0	12.0	9.5	19.5	16.5	22.0	16.0
18	---	---	---	---	10.0	9.5	10.5	10.0	19.0	15.5	23.0	17.0
19	---	---	---	---	11.5	9.5	12.5	10.0	17.5	15.5	23.0	18.5
20	---	---	---	---	11.0	9.5	12.5	10.0	15.5	13.5	23.0	19.0
21	---	---	---	---	10.0	9.0	13.0	11.0	13.5	12.0	23.5	18.5
22	---	---	16.5	14.0	9.5	8.5	12.0	10.0	13.5	11.0	20.0	16.5
23	---	---	16.0	13.5	10.0	9.0	10.0	9.0	14.0	11.0	17.5	14.0
24	---	---	15.5	13.5	9.5	8.0	10.0	9.0	13.0	11.5	18.0	13.0
25	---	---	16.0	13.5	10.0	7.5	12.0	10.0	12.5	10.5	17.5	14.0
26	---	---	15.5	12.5	10.0	7.5	11.0	9.0	12.5	10.0	18.0	12.0
27	---	---	12.5	10.5	11.0	8.0	11.5	9.5	11.5	9.5	19.5	14.5
28	---	---	12.5	10.0	11.0	9.5	12.5	9.5	11.5	8.5	19.0	16.0
29	---	---	13.5	10.5	10.5	9.5	12.0	10.0	11.5	9.5	18.5	13.5
30	---	---	13.5	10.5	12.0	10.0	12.0	10.5	---	---	20.0	14.5
31	---	---	---	---	13.5	11.5	12.0	11.0	---	---	21.5	16.0
MONTH	---	---	---	---	16.5	7.5	13.5	9.0	19.5	8.5	23.5	10.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	17.0	---	---	---	---	34.0	22.5	33.0	23.5	30.5	20.0
2	20.5	15.0	---	---	---	---	34.5	23.5	31.5	21.0	30.5	19.5
3	20.5	16.5	---	---	---	---	32.5	22.0	31.5	20.5	29.5	20.0
4	21.0	16.5	---	---	---	---	31.5	20.5	32.5	19.5	28.5	19.5
5	22.0	17.0	---	---	---	---	31.0	19.0	31.0	21.0	26.0	17.5
6	23.5	18.5	---	---	33.0	22.0	33.5	20.0	31.0	19.5	28.0	17.5
7	26.5	20.0	---	---	33.5	24.0	34.0	22.0	31.0	19.5	28.0	17.5
8	25.0	20.0	---	---	32.5	23.0	33.0	21.5	31.5	19.5	28.5	17.5
9	23.0	19.0	---	---	30.5	22.5	34.0	22.0	33.5	21.0	28.0	18.0
10	23.0	17.5	---	---	30.5	21.5	33.5	23.0	32.5	22.5	29.5	19.0
11	23.0	17.0	---	---	28.5	23.0	33.5	22.0	33.0	23.0	28.0	18.5
12	21.0	17.5	---	---	30.5	23.5	33.5	23.0	34.0	25.0	28.0	17.0
13	21.0	16.0	---	---	30.0	23.0	33.0	22.0	34.5	25.0	23.0	19.5
14	23.0	17.0	---	---	30.0	22.0	32.5	25.5	33.5	24.5	26.5	16.5
15	22.5	18.5	---	---	31.0	22.0	30.0	24.5	33.5	22.0	26.5	18.0
16	21.0	18.5	---	---	30.0	20.0	29.0	22.0	33.5	21.0	22.5	18.5
17	---	---	---	---	29.0	19.0	31.5	21.0	30.5	21.0	22.0	18.0
18	---	---	---	---	27.5	19.0	31.0	21.0	30.0	21.0	22.0	17.5
19	---	---	---	---	28.0	19.0	29.0	18.5	30.5	21.0	26.0	17.0
20	---	---	---	---	30.0	19.0	31.5	19.0	29.5	19.0	27.0	17.0
21	---	---	---	---	29.5	19.5	33.5	20.5	30.0	19.5	28.0	17.5
22	---	---	---	---	30.0	18.0	31.0	22.0	31.0	20.0	27.0	18.5
23	---	---	---	---	29.5	21.0	31.5	22.0	32.5	21.0	26.5	18.0
24	---	---	---	---	29.0	21.0	33.0	21.5	32.5	21.0	24.0	19.5
25	---	---	---	---	30.0	19.5	34.5	22.0	30.5	20.0	24.0	20.5
26	---	---	---	---	23.0	18.5	31.5	23.0	30.5	19.0	24.5	20.5
27	---	---	---	---	27.5	17.0	31.0	22.5	29.0	19.0	24.5	20.0
28	---	---	---	---	29.5	17.5	33.5	24.0	30.5	19.0	24.5	20.5
29	---	---	---	---	31.0	18.5	34.0	24.5	31.0	20.0	25.0	21.0
30	---	---	---	---	32.5	18.5	34.0	26.0	30.0	20.5	24.5	21.5
31	---	---	---	---	---	---	33.5	25.5	31.5	21.5	---	---
MONTH	---	---	---	---	---	---	34.5	18.5	34.5	19.0	30.5	16.5

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA
(Hydrologic Benchmark 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 sea level. Prior to Nov. 2, 1916, nonrecording gage at datum 0.55 ft lower.

REMARKS.--Records good. 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 16	0615	5,900	8.84	June 4	0315	2,440	6.56

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	21	17	124	105	214	444	2010	1420	644	261	59
2	51	22	16	117	105	220	460	2010	1730	729	234	60
3	47	23	15	115	105	245	417	1780	2010	788	206	59
4	45	20	19	106	285	280	388	1590	2130	749	178	52
5	43	19	22	98	1050	264	397	1540	2040	644	157	48
6	42	19	23	94	655	250	473	1590	2070	586	149	44
7	41	19	26	94	455	248	611	1580	2090	631	143	40
8	39	19	27	96	399	261	778	1610	2160	635	136	37
9	37	19	25	94	377	327	864	1380	1990	618	135	34
10	35	19	23	89	360	340	788	1530	1710	607	132	32
11	33	18	46	84	335	351	713	1850	1550	579	130	31
12	32	18	353	88	328	329	697	2090	1420	836	129	30
13	31	18	183	93	322	300	595	2210	1500	812	125	30
14	30	17	144	91	325	283	635	2180	1440	606	132	37
15	30	17	137	91	330	284	783	2540	1340	667	134	35
16	30	15	118	162	368	314	874	4380	1240	504	133	33
17	30	14	106	174	373	375	709	1880	1120	399	125	30
18	30	14	103	145	325	469	604	1670	1050	334	116	27
19	29	14	91	141	468	546	500	1300	1050	303	103	24
20	28	15	80	127	444	571	455	1180	1040	287	92	22
21	28	14	68	125	372	592	419	1200	993	285	85	21
22	29	13	70	112	340	580	426	1080	796	284	78	18
23	28	13	69	112	329	472	520	1020	749	285	75	17
24	27	13	64	112	318	411	755	835	788	301	78	17
25	27	13	61	112	293	381	1080	804	675	309	77	17
26	26	18	60	111	260	356	1450	956	663	298	75	17
27	25	18	61	113	254	368	1620	1150	511	274	70	17
28	25	17	61	107	243	398	1610	1010	425	293	66	17
29	23	16	67	105	223	354	1740	1070	415	299	60	17
30	23	16	118	104	---	357	1950	1090	505	361	58	17
31	21	---	144	106	---	375	---	1150	---	318	58	---
TOTAL	1019	511	2417	3442	10146	11115	23755	49265	38620	15265	3730	939
MEAN	32.9	17.0	78.0	111	350	359	792	1589	1287	492	120	31.3
MAX	54	23	353	174	1050	592	1950	4380	2160	836	261	60
MIN	21	13	15	84	105	214	388	804	415	274	58	17
AC-FT	2020	1010	4790	6830	20120	22050	47120	97720	76600	30280	7400	1860

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.3	61.3	84.1	79.5	107	187	538	1254	1223	471	113	43.3
MAX	267	818	736	366	401	575	1007	2675	3317	2393	775	360
(WY)	1919	1951	1965	1980	1986	1986	1926	1969	1983	1995	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1916 - 1996
ANNUAL TOTAL	268379	160224	
ANNUAL MEAN	735	438	350
HIGHEST ANNUAL MEAN			802
LOWEST ANNUAL MEAN			84.9
HIGHEST DAILY MEAN	4780	Jul 9	7480
LOWEST DAILY MEAN	13	Nov 22	1.5
ANNUAL SEVEN-DAY MINIMUM	14	Nov 19	1.9
INSTANTANEOUS PEAK FLOW		5900	9860
INSTANTANEOUS PEAK STAGE		8.84	12.73
ANNUAL RUNOFF (AC-FT)	532300	317800	253800
10 PERCENT EXCEEDS	2300	1390	1120
50 PERCENT EXCEEDS	275	194	98
90 PERCENT EXCEEDS	23	19	11

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to September 1996 (discontinued).

CHEMICAL DATA: Water years 1968 to September 1996 (discontinued).

BIOLOGICAL DATA: Water years 1973-81.

WATER TEMPERATURE: Water years 1966-77, 1979-93.

SEDIMENT DATA: Water years 1970-71, 1973 to September 1996 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1965 to September 1977, October 1978 to September 1993.

REMARKS.--Water-quality samples were obtained 1.0 mi downstream of the gage at or below Clarks Bridge.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, IN 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, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 21...	1120	13	36	6.9	6.0	0.10	661	10.6	98	K1	K4	9
JAN 19...	0930	139	24	6.8	1.5	0.10	658	12.0	99	K4	K9	6
DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 21...	3.2	0.33	2.8	38	0.4	0.50	12	10	0.50	4.1	<0.10	10
JAN 19...	2.2	0.23	2.0	39	0.3	0.30	7	6	0.20	2.9	0.10	7.7
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS DIS-SOLVED (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 21...	29	27	0.04	<0.010	<0.050	<0.015	<0.20	0.010	<0.010	<0.010	20	3.0
JAN 19...	20	19	0.03	<0.010	0.050	<0.015	<0.20	<0.010	<0.010	<0.010	30	3.0
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)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
NOV 21...	<3.0	35	6	<1.0	<10	<1.0	<1	<1.0	53	<6	--	--
JAN 19...	<3.0	39	8	1.0	<10	<1.0	<1	<1.0	39	<6	0.04	0.84

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
21...*	1111	0.60	5.50	34	7.0	6.0	661	10.6	98	1	58
21...*	1116	1.00	10.0	37	7.0	6.0	661	10.6	98	<1	84
21...*	1121	0.70	17.5	37	7.0	6.0	661	10.6	98	<1	75
21...*	1126	0.90	24.5	34	6.9	6.0	661	10.6	98	<1	84
21...*	1131	1.00	34.0	34	6.8	6.0	661	10.7	99	<1	84

* Instantaneous discharge at time of cross-sectional measurement: Nov. 21, 13 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
21...	1120	13	6.0	<1	0.04	77
JAN						
19...	0930	139	1.5	2	0.75	88

SAN JOAQUIN RIVER BASIN

375438119152901 TIOGA PASS PRECIPITATION GAGE NEAR LEE VINING, CA

PRECIPITATION RECORDS

LOCATION.--Lat 37°54'38", long 119°15'29", in NW 1/4 NE 1/4 sec.31, T.1 N, R.25 E, Tuolumne County, Hydrologic Unit 18040009, 200 ft west of Tioga Pass entrance station, 50 ft south of Yosemite Park boundary, and 12 mi west of Lee Vining.

PERIOD OF RECORD.--October 1994 to September 1996 (discontinued).

INSTRUMENTATION.--Recording-weighing gage since Oct. 6, 1994.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded daily precipitation, 4.82 in, Mar. 23, 1995; no precipitation for many days.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily precipitation, 2.48 in, Dec. 11; no precipitation for many days.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.03	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.03	.63	.00	.00	.00	.00	.00
3	.00	.00	.28	.00	.00	.00	.03	.08	.00	.00	.00	.00
4	.00	.00	.49	.00	1.51	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.07	.00	.71	1.20	.03	.00	.00	.00	.00	.04
6	.00	.00	.00	.00	.09	.45	.00	.00	.00	.00	.00	.00
7	.00	.00	.17	.00	.00	.24	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.03	.04	.00	.00	.00	.03	.00	.00	.00	.00
11	.00	.00	2.48	.00	.00	.00	.00	.00	.00	.39	.00	.00
12	.00	.00	2.07	.00	.03	.30	.04	.00	.00	.38	.99	.00
13	.00	.00	.69	.00	.00	.61	.00	.00	.28	.10	.06	.13
14	.00	.00	.09	.00	.00	.10	.00	.00	.03	.87	.04	.06
15	.00	.00	.10	.03	.10	.00	.04	.00	.00	.09	.00	.08
16	.00	.00	.04	1.09	.06	.00	.03	.40	.00	.00	.00	.00
17	.00	.00	.03	.23	.07	.00	.71	.71	.00	.00	.06	.00
18	.00	.00	.00	.72	.17	.00	.21	.26	.00	.00	.00	.00
19	.00	.00	.00	.37	1.13	.00	.30	.20	.00	.00	.00	.00
20	.00	.00	.03	.04	.38	.00	.04	.00	.00	.00	.00	.00
21	.00	.00	.00	.33	.56	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.11	.07	.21	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.07	.00	.06	.04	.00	.08	.00	.00	.00	.00
24	.00	.00	.00	.16	.10	.07	.06	.06	.00	.00	.00	.00
25	.00	.03	.03	.46	.16	.00	.03	.00	.04	.00	.00	.00
26	.00	.07	.00	.03	.00	.04	.00	.00	.17	.00	.03	.00
27	.00	.00	.00	.20	.07	.00	.00	.03	.00	.00	.00	.00
28	.00	.00	.00	.00	.16	.00	.00	.00	.00	.07	.00	.00
29	.00	.00	.47	.06	.00	.26	.00	.00	.04	.17	.00	.00
30	.00	.00	.46	.15	---	.00	.00	.00	.00	.07	.00	.00
31	.00	---	.10	.14	---	.00	---	.00	---	.10	.00	---
TOTAL	0.00	0.10	7.84	4.12	5.64	3.37	2.15	1.85	0.56	2.24	1.18	0.31

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.

CHEMICAL DATA: Water years 1971-72, 1981-82, 1994, and 1995.

WATER TEMPERATURE: Water year 1995.

SEDIMENT DATA: Water year 1995.

GAGE.--Water-stage recorder. Datum of gage is 3,861.66 ft above sea level. 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 2	0130	4,380	8.33	June 4	0530	3,670	7.67
May 16	1030	12,500	13.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	41	31	245	e220	452	1010	3870	2310	872	321	78
2	82	41	31	228	e220	471	1070	3900	2780	956	293	78
3	78	41	30	227	e400	538	967	3520	3160	1010	263	77
4	74	41	36	e210	e1000	e540	889	3130	3310	972	232	73
5	72	40	41	e195	e2100	e510	916	2990	3150	854	207	69
6	70	39	42	e190	e1300	e500	1110	3050	3110	779	193	65
7	69	38	44	e195	e1000	e500	1410	3030	3130	806	188	61
8	65	38	47	e200	e900	e600	1720	3040	3150	808	179	57
9	64	37	42	e190	849	e640	1920	2620	2880	784	176	54
10	61	37	40	e180	783	e650	1780	2850	2490	769	172	51
11	58	37	71	e170	719	e650	1620	3350	2220	735	168	49
12	57	37	944	e180	703	e630	1590	3790	2030	1010	166	48
13	55	36	426	e180	692	e600	1390	4070	2080	1100	162	48
14	54	35	285	e175	705	e580	1450	3970	2010	866	167	52
15	52	34	254	e250	718	e590	1730	4680	1850	879	167	52
16	51	34	205	e350	847	e700	1950	9760	1720	676	167	50
17	51	34	179	e300	889	e800	1650	4390	1580	550	158	47
18	50	32	173	e290	737	e950	1430	3730	1460	460	149	45
19	49	32	149	e280	1040	e1200	1180	2880	1440	409	138	43
20	49	32	128	e250	1140	e1200	1070	2480	1410	380	124	41
21	49	31	111	e245	905	1300	974	2430	1360	367	114	39
22	49	31	119	e230	742	1300	985	2170	1150	361	105	37
23	49	30	129	e230	687	1050	1190	2060	1070	354	99	35
24	48	30	118	e230	656	898	1630	1740	1100	368	100	34
25	48	29	109	e225	577	831	2160	1660	1000	374	101	34
26	47	31	104	e230	523	775	2840	1830	1050	365	98	33
27	46	33	103	e230	488	812	3230	2100	850	342	95	33
28	45	32	104	e210	471	892	3200	1910	692	350	91	33
29	43	32	108	e215	463	771	3400	1950	641	360	86	32
30	42	31	208	e220	---	804	3720	1970	729	403	80	32
31	41	---	304	e220	---	835	---	1990	---	388	79	---
TOTAL	1756	1046	4715	6970	22474	23569	51181	96910	56912	19707	4838	1480
MEAN	56.6	34.9	152	225	775	760	1706	3126	1897	636	156	49.3
MAX	88	41	944	350	2100	1300	3720	9760	3310	1100	321	78
MIN	41	29	30	170	220	452	889	1660	641	342	79	32
AC-FT	3480	2070	9350	13820	44580	46750	101500	192200	112900	39090	9600	2940

e Estimated.

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.4	121	184	177	244	412	1096	2317	1913	636	149	64.7
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1917 - 1996			
ANNUAL TOTAL	480861				291558							
ANNUAL MEAN	1317				797				616			
HIGHEST ANNUAL MEAN									1466			
LOWEST ANNUAL MEAN									127			
HIGHEST DAILY MEAN	6480				9760				18000			
LOWEST DAILY MEAN	29				29				5.4			
ANNUAL SEVEN-DAY MINIMUM	31				31				5.6			
INSTANTANEOUS PEAK FLOW					12500				23400			
INSTANTANEOUS PEAK STAGE					13.86				21.52			
ANNUAL RUNOFF (AC-FT)	953800				578300				446000			
10 PERCENT EXCEEDS	4170				2250				1880			
50 PERCENT EXCEEDS	545				331				180			
90 PERCENT EXCEEDS	41				38				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 sea level, from topographic map.

REMARKS.--Records fair except those 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.1	3.6	e.50	2.0	.11	.36	37	41	14	.48	.37
2	3.1	2.0	3.8	e.40	1.6	.10	.32	37	40	13	.48	.37
3	3.0	1.9	3.7	e.30	1.3	.10	.32	37	39	12	.48	.37
4	2.8	1.9	4.2	e.30	5.8	.64	.32	36	37	12	.48	.38
5	2.7	1.9	4.2	e.30	1.8	.35	15	36	35	12	.46	.33
6	2.7	1.8	4.0	e.30	.12	.31	30	36	34	11	.44	.28
7	2.7	1.9	4.2	e.30	e.08	.20	31	36	32	11	.41	.28
8	2.7	1.9	3.9	e.30	.07	.27	33	36	30	11	.39	.28
9	2.7	1.9	3.9	e.30	.07	.17	34	36	29	10	.39	.28
10	2.6	2.0	3.8	e.30	.08	.24	34	35	27	9.7	.39	.28
11	2.5	1.9	6.1	e.30	.08	.30	33	36	26	4.2	.39	.28
12	2.6	2.0	3.3	.32	.06	1.5	33	37	25	.64	.39	.28
13	2.6	2.0	1.0	.32	.06	.48	33	37	24	.63	.39	.28
14	2.4	1.9	1.2	.32	.06	.26	33	37	23	.61	.39	.28
15	2.3	1.9	.73	.32	.06	.26	33	38	21	.57	.39	.28
16	2.4	1.9	1.0	.49	.06	.26	35	46	21	.55	.39	.28
17	2.4	1.9	.79	.34	.05	.29	35	41	20	.55	.39	.28
18	2.2	1.9	.82	.49	.06	.32	36	41	19	.57	.39	.28
19	2.0	1.9	.80	1.4	1.0	.32	34	41	18	.55	.39	.28
20	2.0	2.0	.81	.96	.31	.29	34	38	18	.55	.39	.28
21	2.1	2.0	.68	.75	.46	.28	33	38	17	.55	.38	.28
22	2.1	2.1	e.66	.64	1.4	.30	33	37	17	.55	.39	.28
23	2.1	2.1	e.64	.89	.71	.26	34	36	16	.55	.39	.28
24	2.1	2.3	e.64	1.5	.39	.26	34	35	16	.55	.39	.26
25	2.1	2.8	.74	.83	.30	.26	34	38	19	.55	.39	.25
26	2.0	2.9	.67	1.4	.16	.26	35	43	22	.55	.39	.25
27	2.0	3.1	.72	1.7	.10	.30	36	43	20	.53	.39	.25
28	2.0	3.3	.62	1.7	.11	.34	36	42	18	.54	.38	.25
29	2.1	3.5	.84	1.4	.10	.32	37	42	16	.50	.38	.25
30	2.0	3.6	e.70	1.4	---	.32	37	41	15	.48	.38	.25
31	2.0	---	e.60	2.7	---	.31	---	41	---	.48	.38	---
TOTAL	74.3	66.3	63.36	23.47	18.45	9.98	866.32	1190	735	130.95	12.54	8.62
MEAN	2.40	2.21	2.04	.76	.64	.32	28.9	38.4	24.5	4.22	.40	.29
MAX	3.3	3.6	6.1	2.7	5.8	1.5	37	46	41	14	.48	.38
MIN	2.0	1.8	.60	.30	.05	.10	.32	35	15	.48	.38	.25
AC-FT	147	132	126	47	37	20	1720	2360	1460	260	25	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.68	3.36	4.82	7.62	8.75	16.0	21.9	26.5	15.6	3.39	1.14	.94
MAX	7.61	7.65	13.1	35.8	32.7	37.3	43.3	56.2	46.1	11.2	3.14	3.46
(WY)	1970	1970	1970	1970	1970	1972	1993	1975	1975	1993	1973	1995
MIN	.026	1.10	.75	.76	.64	.32	3.21	2.65	.025	.52	.025	.000
(WY)	1989	1991	1991	1996	1996	1996	1995	1995	1995	1995	1988	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1970 - 1996
ANNUAL TOTAL	1357.69	3199.29	
ANNUAL MEAN	3.72	8.74	9.93
HIGHEST ANNUAL MEAN			19.3
LOWEST ANNUAL MEAN			3.67
HIGHEST DAILY MEAN	25 Jan 7	46 May 16	66 Jun 1 1975
LOWEST DAILY MEAN	.00 Jun 2	.05 Feb 17	.00 Jul 1 1973
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 2	.06 Feb 12	.00 Aug 1 1987
ANNUAL RUNOFF (AC-FT)	2690	6350	7190
10 PERCENT EXCEEDS	9.0	36	32
50 PERCENT EXCEEDS	3.0	1.4	3.5
90 PERCENT EXCEEDS	.05	.26	.28

e Estimated.

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 sea level (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.

COOPERATION.--Records were provided by Pacific Gas and Electric Company 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, 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, 986,400 acre-ft, June 16, 17, elevation, 861.55 ft; minimum, 628,900 acre-ft, Dec. 11, elevation, 800.53 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	808500	662800	637300	632800	683400	726100	702600	795500	944000	968200	884000	776800
2	800500	661600	636600	633300	685300	723000	705000	802500	946900	966500	880300	774000
3	792500	661000	635900	633700	686800	719900	706500	808100	951100	965000	876500	770900
4	784800	660300	634300	634100	694600	720700	708700	812500	955500	962900	872700	767800
5	777000	659700	633700	634300	718900	730100	711200	816500	959500	961100	869200	764700
6	769500	658500	633100	634600	e724400	732900	714300	820500	964000	959100	865500	761800
7	761700	657700	632400	634900	e729600	733100	718500	824100	968200	956900	861300	758900
8	753900	657500	631100	635100	734200	732000	722700	827900	973100	954500	858000	755800
9	746100	655800	630500	635300	732900	730500	727500	830500	976800	952400	854400	753200
10	738400	655400	629400	635600	730700	728900	732000	833400	980300	950000	851500	750500
11	730800	654200	628900	635800	728100	727400	736200	837900	982300	947900	847700	748000
12	723200	653700	632400	635900	725200	727700	739900	843700	983100	945800	843900	744900
13	715200	652700	635400	636100	722800	727300	742800	850900	984900	943400	840300	741900
14	707600	652300	636400	636300	720200	726000	746400	857400	985300	941500	836300	739400
15	702300	651000	637100	636800	717600	724000	749700	864900	986200	939100	833400	737100
16	698200	650400	637300	639100	714300	722100	753000	893900	986400	936700	829900	734400
17	695600	649400	637000	642300	712100	720200	755900	904600	986400	933700	826300	731600
18	693000	648500	637200	643800	709400	718900	757900	911000	985700	930700	822800	729500
19	691200	647900	636900	646600	713000	718200	759000	915900	985200	927800	819000	727500
20	688400	646900	636500	648100	726200	717700	759200	919100	984700	924600	815800	724700
21	686100	646200	635900	649800	733400	717100	759100	921700	983300	921300	812500	722400
22	683500	644900	635700	651100	739300	716700	758500	923300	982400	917600	809000	720200
23	680900	644200	635100	651900	740500	715400	758600	924900	981000	914600	806100	717800
24	679000	643200	634800	653200	740500	713500	759600	925900	979600	910800	802700	716100
25	676100	642500	634100	660900	739300	711300	761700	926800	978300	907800	799200	713800
26	673600	641300	633600	663200	737500	708800	765900	927800	977300	904600	795600	711300
27	671300	640900	633100	667100	735000	706300	771500	931100	975400	901200	792600	708600
28	669400	640000	632700	673100	732200	705700	776700	934200	973700	897900	789500	706700
29	666800	639200	e632900	675800	729300	704500	782000	937700	971700	894100	786200	704700
30	664600	638200	632000	677400	---	703600	788400	940900	969900	890600	782800	702100
31	e664500	---	632300	680400	---	702600	---	942100	---	887200	779900	---
MAX	808500	662800	637300	680400	740500	733100	788400	942100	986400	968200	884000	776800
MIN	664500	638200	628900	632800	683400	702600	702600	795500	944000	887200	779900	702100
a	807.48	802.43	801.23	810.77	819.93	814.99	830.39	855.02	859.15	846.61	828.93	814.90
b	-151600	-26300	-5900	+48100	+48900	-26700	+85800	+153700	+27800	-82700	-107300	-77800

CAL YR 1995 b +350800
WTR YR 1996 b -114000

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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.

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 sea level. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.--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.

COOPERATION.--Records were provided by Pacific Gas and Electric Company, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-96).--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4080	549	554	351	269	3120	2350	2630	2300	1960	2060	1660
2	4090	550	554	331	262	3130	2360	2750	2300	1960	2060	1610
3	4100	545	554	294	262	3120	2060	2800	2300	1960	2060	1570
4	4040	550	559	292	396	3200	1270	2770	2300	2000	2070	1550
5	3970	545	556	288	369	3150	958	2720	2310	2030	2060	1560
6	3990	545	558	281	370	3130	960	2720	2100	2040	2060	1530
7	4030	556	555	281	1330	3130	960	2730	1950	2030	2020	1490
8	4060	549	553	281	2730	3130	998	2770	1950	2030	2000	1450
9	4070	545	555	279	3090	3120	1070	2840	1960	2040	1960	1370
10	4080	556	554	278	3090	3110	1090	2830	1980	2060	1950	1310
11	4050	547	555	279	3100	3120	1090	2830	1980	2090	1940	1390
12	4010	553	561	281	3100	3120	1080	2810	2030	2110	1960	1390
13	4020	549	561	281	3090	3120	1080	2820	2070	2100	1930	1360
14	4030	549	554	281	3060	3120	1080	2820	2080	2080	1890	1360
15	3110	549	560	296	3050	3120	1390	2800	2080	2080	1890	1360
16	1880	549	553	323	3070	3120	1880	2860	2070	2040	1910	1330
17	1390	549	552	290	3080	3120	2150	2850	2070	2010	1890	1290
18	1310	549	555	276	3080	3120	2170	2850	2070	2090	1870	1260
19	1300	550	552	262	3190	3110	2160	2840	2030	2110	1800	1230
20	1300	549	554	270	3120	2980	2120	2840	2020	2080	1750	1240
21	1310	555	554	275	3120	3120	2120	2860	2040	2070	1760	1210
22	1320	551	554	265	3080	3130	2130	2830	2060	2070	1770	1190
23	1320	554	554	262	3080	3130	2180	2630	2030	2070	1770	1190
24	1330	550	554	262	3080	3130	2250	2450	2000	2080	1770	1170
25	1330	552	554	313	3090	3110	2330	2290	2000	2070	1750	1160
26	1330	553	554	265	3120	3120	2420	2260	1970	2100	1720	1160
27	1340	555	554	304	3130	3120	2470	1900	1940	2110	1690	1160
28	1330	554	554	284	3130	2870	2520	1630	1950	2110	1680	1150
29	1330	554	559	262	3120	2540	2540	1690	1950	2080	1640	1150
30	1090	554	551	262	---	2330	2580	1930	1960	2050	1620	1110
31	685	---	447	325	---	2350	---	2260	---	2060	1640	---
TOTAL	80625	16515	17098	8874	71058	94340	53816	80610	61850	63770	57940	39960
MEAN	2601	550	552	286	2450	3043	1794	2600	2062	2057	1869	1332
MAX	4100	556	561	351	3190	3200	2580	2860	2310	2110	2070	1660
MIN	685	545	447	262	262	2330	958	1630	1940	1660	1620	1110
AC-FT	159900	32760	33910	17600	140900	187100	106700	159900	122700	126500	114900	79260

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	1907
LOWEST ANNUAL MEAN	348	1924
HIGHEST DAILY MEAN	37200	Jan 30 1911
LOWEST DAILY MEAN	1.0	Nov 21 1901
ANNUAL SEVEN-DAY MINIMUM	20	Sep 4 1924
INSTANTANEOUS PEAK FLOW	47700	Jan 31 1911
INSTANTANEOUS PEAK STAGE	23.30	Jan 31 1911
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	1938
LOWEST ANNUAL MEAN	360	1931
HIGHEST DAILY MEAN	24000	Dec 4 1950
LOWEST DAILY MEAN	4.5	Feb 11 1960
ANNUAL SEVEN-DAY MINIMUM	8.7	Jan 12 1940
INSTANTANEOUS PEAK FLOW	46200	Dec 4 1950
INSTANTANEOUS PEAK STAGE	22.60	Dec 4 1950
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	862	398	528	592	845	1282	1806	2267	2318	2096	1735	1377
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	891067	646456	
ANNUAL MEAN	2441	1766	1344
HIGHEST ANNUAL MEAN			3779
LOWEST ANNUAL MEAN			363
HIGHEST DAILY MEAN	7550	Jul 11	7860
LOWEST DAILY MEAN	205	Jan 28	46
ANNUAL SEVEN-DAY MINIMUM	208	Jan 28	74
INSTANTANEOUS PEAK FLOW			4190
INSTANTANEOUS PEAK STAGE			9.19
ANNUAL RUNOFF (AC-FT)	1767000	1282000	973900
10 PERCENT EXCEEDS	5060	3120	2800
50 PERCENT EXCEEDS	2250	1940	1150
90 PERCENT EXCEEDS	234	388	181

SAN JOAQUIN RIVER BASIN

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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 records only).

GAGE.--Water-stage recorder. Datum of gage is 116.79 ft above sea level.

REMARKS.--No records computed above 200 ft³/s. 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.

COOPERATION.--Records were provided by Pacific Gas and 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 1965 TO SEPTEMBER 1966
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	145	83	84
2	---	---	---	---	---	---	---	---	---	140	90	98
3	---	---	---	---	---	---	---	---	---	115	99	88
4	---	---	---	---	---	---	---	---	---	103	104	96
5	---	---	---	---	---	---	---	---	---	124	108	86
6	---	---	---	---	---	---	---	---	---	115	85	87
7	---	---	---	---	---	---	---	---	---	118	81	80
8	---	---	---	---	---	---	---	---	176	107	76	115
9	---	---	---	---	---	---	---	---	189	91	76	144
10	---	---	---	---	---	---	---	---	177	76	85	121
11	---	---	---	---	---	---	---	---	166	68	89	101
12	---	---	---	---	---	---	197	---	152	83	85	120
13	---	---	---	---	---	---	170	---	153	101	74	118
14	---	---	---	---	---	---	179	---	153	145	66	114
15	---	---	---	---	---	---	---	---	165	150	61	115
16	---	---	---	---	---	---	---	---	171	124	60	116
17	---	---	---	---	---	---	---	---	159	110	60	109
18	---	---	---	---	---	---	---	---	152	107	73	106
19	---	---	---	---	---	---	---	---	152	111	91	110
20	---	---	---	---	---	---	---	---	141	102	79	107
21	---	---	---	---	---	---	---	---	159	108	85	102
22	---	---	---	---	---	---	---	---	156	108	79	133
23	---	---	---	---	---	---	---	---	169	88	82	133
24	---	---	---	---	---	---	---	---	169	100	79	113
25	---	---	---	---	---	---	---	---	161	104	95	120
26	---	---	---	---	---	---	---	---	183	91	100	116
27	---	---	---	---	---	---	---	---	180	99	65	116
28	---	---	---	---	---	---	---	---	149	110	72	131
29	---	---	---	---	---	---	---	---	140	110	82	129
30	---	---	---	---	---	---	---	---	146	89	82	132
31	---	---	---	---	---	---	---	---	---	79	95	---
TOTAL	---	---	---	---	---	---	---	---	---	3321	2541	3340
MEAN	---	---	---	---	---	---	---	---	---	107	82.0	111
MAX	---	---	---	---	---	---	---	---	---	150	108	144
MIN	---	---	---	---	---	---	---	---	---	68	60	80
AC-FT	---	---	---	---	---	---	---	---	---	6590	5040	6620

SAN JOAQUIN RIVER BASIN

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA

LOCATION.--Lat 37°21'04", long 120°57'39", in NE 1/4 SE 1/4 sec. 4, T.7 S., R.9 E, Merced County, Hydrologic Unit 1804002, on upstream side of River Road Bridge, near right bank just downstream of Hatfield State Park and 1.1 river miles upstream of confluence with the San Joaquin River.

DRAINAGE AREA.--1,276 mi².

PERIOD OF RECORD.--April 1992 to current year. Published as Merced River near Stevinson (11272500) water years 1989-94.

SPECIFIC CONDUCTANCE: April 1992 to current year.

WATER TEMPERATURE: April 1992 to current year.

CHEMICAL DATA: Water year 1994.

SEDIMENT DATA: Water year 1994.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1992 to current year.

WATER TEMPERATURE: April 1992 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1992.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Specific-conductance and water-temperature values are affected by irrigation return flow.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 910 microsiemens, Aug. 7, 1992; minimum recorded, 22 microsiemens, June 23, 1995.

WATER TEMPERATURE: Maximum recorded, 32.5°C, July 14, 15, 1992, Aug. 12, 1992; minimum recorded, 6.0°C, January 4, 5, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 404 microsiemens, July 14, 15; minimum recorded, 27 microsiemens, Oct. 16.

WATER TEMPERATURE: Maximum recorded, 31.0°C, Aug. 13, 14; minimum recorded, 9.0°C, Dec. 25, 27, Jan. 23, 26, 27.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	97	77	103	97	118	107	159	99	59	57
2	---	---	114	87	107	91	178	115	127	118	59	57
3	---	---	120	114	126	107	184	177	170	121	59	57
4	36	31	119	104	126	119	203	180	190	170	57	55
5	37	30	120	114	129	112	210	203	189	114	65	55
6	34	30	121	116	119	111	210	198	118	90	70	57
7	35	32	125	110	122	114	214	204	116	95	57	55
8	34	31	126	120	120	93	212	194	115	91	64	53
9	34	30	129	122	122	111	211	196	91	65	59	54
10	33	29	130	123	123	119	205	183	67	58	55	53
11	31	28	129	124	128	118	201	170	60	55	55	53
12	32	28	129	121	120	108	200	168	56	54	54	52
13	31	29	122	115	131	101	202	180	55	51	55	53
14	30	28	125	111	121	97	204	177	51	49	57	55
15	32	28	125	106	104	100	207	178	51	48	58	56
16	33	27	118	104	106	95	201	186	63	49	58	55
17	41	33	119	105	107	98	188	110	52	47	57	55
18	60	40	122	104	108	105	131	77	50	49	58	56
19	65	59	119	114	108	103	181	131	50	49	58	56
20	97	65	125	116	107	104	194	117	67	48	57	55
21	81	74	121	109	109	105	185	114	71	56	62	57
22	92	72	122	105	109	103	203	104	69	55	57	54
23	83	67	122	113	107	102	168	102	63	58	55	54
24	91	75	119	106	109	104	188	168	58	56	55	54
25	95	77	112	94	109	104	188	174	57	55	55	54
26	95	87	115	95	107	102	174	71	58	56	57	54
27	97	86	120	92	108	104	102	84	57	55	57	54
28	87	76	106	95	110	105	120	78	57	54	65	55
29	93	76	103	91	110	101	98	79	58	55	58	55
30	100	91	105	94	114	100	141	97	---	---	62	55
31	98	95	---	---	108	95	160	141	---	---	63	61
MONTH	---	---	130	77	131	91	214	71	190	47	70	52

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	64	59	72	64	206	84	276	228	346	290	---	---
2	62	59	73	66	94	84	279	226	368	339	---	---
3	64	61	75	62	88	75	336	276	380	368	---	---
4	68	61	67	59	106	85	316	290	375	314	---	---
5	84	68	68	58	99	86	342	301	314	238	---	---
6	106	84	74	60	113	93	329	300	272	236	---	---
7	133	95	64	56	138	109	315	291	268	247	---	---
8	108	98	67	56	214	138	291	240	263	240	---	---
9	116	103	70	61	255	212	255	220	308	250	---	---
10	126	115	67	61	231	205	266	214	353	280	---	---
11	135	125	71	58	267	227	308	264	301	272	---	---
12	155	135	67	59	272	248	375	307	283	250	---	---
13	172	137	69	58	290	253	389	350	271	242	---	---
14	203	172	65	58	278	245	404	330	318	266	---	---
15	179	152	67	60	269	220	404	222	340	295	---	---
16	191	152	69	54	261	211	222	212	344	314	---	---
17	152	77	63	55	219	169	271	218	315	306	---	---
18	83	65	64	56	246	178	286	240	311	294	---	---
19	68	64	62	59	246	208	302	286	294	281	---	---
20	73	66	62	55	287	211	296	272	281	247	---	---
21	77	63	58	55	330	242	298	279	270	261	251	200
22	69	60	56	52	288	232	301	260	267	260	252	224
23	66	58	59	53	281	216	326	301	277	264	239	199
24	67	58	65	58	274	206	348	312	268	259	205	169
25	69	64	65	54	254	210	327	303	282	263	262	168
26	81	67	80	59	272	251	305	279	284	255	281	253
27	75	63	83	74	257	159	311	286	259	255	293	220
28	75	59	113	74	202	156	287	240	279	252	223	171
29	67	59	185	113	231	202	240	217	312	278	219	193
30	70	62	199	182	271	231	305	227	317	297	236	195
31	---	---	233	189	---	---	303	280	297	239	---	---
MONTH	203	58	233	52	330	75	404	212	380	236	---	---

SAN JOAQUIN RIVER BASIN

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	17.0	16.0	13.0	11.5	12.5	11.5	12.0	11.5	11.5	10.5
2	---	---	16.5	15.5	13.5	12.5	13.0	11.5	12.5	11.5	12.0	10.5
3	---	---	16.5	15.0	12.5	11.5	13.0	12.0	13.5	12.5	12.0	11.0
4	16.5	15.5	16.5	14.5	14.5	12.5	13.0	12.0	14.0	13.5	12.0	11.5
5	16.0	15.0	15.5	14.5	14.0	13.5	13.5	12.0	14.5	14.0	12.0	11.5
6	16.0	14.5	15.5	14.0	14.5	13.5	13.0	12.0	15.5	14.5	12.0	11.0
7	16.0	15.0	16.0	14.0	15.0	14.0	12.0	11.5	15.0	14.5	12.0	11.0
8	16.0	14.5	16.0	14.5	14.0	13.5	12.0	11.5	15.0	14.5	12.5	11.5
9	16.0	15.0	16.5	14.5	14.0	13.5	12.0	11.5	14.5	13.5	12.5	11.5
10	16.0	15.0	16.0	14.5	13.5	13.0	12.5	11.0	13.5	13.0	13.0	11.5
11	16.0	15.0	16.0	14.5	13.0	13.0	11.5	11.5	13.5	12.5	13.0	12.0
12	16.0	15.0	16.0	14.5	13.5	13.0	11.5	11.0	13.0	12.5	12.5	12.0
13	15.5	14.5	16.5	14.5	13.5	12.5	11.0	11.0	13.0	12.0	12.5	11.5
14	15.5	14.5	16.0	14.5	13.0	12.5	11.0	10.5	13.5	12.5	12.5	11.0
15	16.0	15.0	16.0	14.5	12.5	12.0	11.0	10.5	13.0	12.5	13.0	11.5
16	16.0	15.0	16.5	14.5	12.0	11.0	11.0	10.5	13.0	12.0	13.5	12.0
17	16.5	15.5	16.5	15.0	11.5	10.5	11.5	10.0	13.5	12.5	13.5	12.0
18	17.0	15.5	16.5	15.0	11.5	10.5	10.5	10.0	13.0	12.5	14.0	12.5
19	17.5	16.5	16.5	15.0	11.5	10.5	12.0	10.0	13.0	12.5	14.0	12.5
20	18.0	16.5	16.0	14.5	11.0	10.0	11.5	10.0	12.5	12.0	14.5	13.0
21	18.5	17.0	15.5	14.5	10.5	10.0	12.0	10.5	12.5	11.5	14.5	13.0
22	17.0	15.5	15.5	14.0	10.5	10.0	12.0	10.0	12.0	11.0	14.0	13.0
23	17.0	15.5	15.0	14.0	10.5	10.0	10.0	9.0	11.5	10.5	13.0	12.0
24	17.0	15.5	14.5	13.5	10.5	9.5	11.0	9.5	11.5	11.0	13.0	11.5
25	16.5	15.0	14.5	13.5	10.5	9.0	12.0	10.0	11.5	10.5	13.0	11.5
26	16.5	15.0	14.5	13.0	10.5	9.5	10.5	9.0	11.5	10.5	13.5	12.0
27	17.0	15.5	13.0	12.0	10.5	9.0	10.5	9.0	11.0	10.0	13.5	12.0
28	17.0	15.5	13.5	12.0	11.0	10.0	11.0	9.5	10.0	9.5	14.0	13.0
29	17.0	16.0	13.5	12.0	10.5	10.0	10.0	9.5	11.0	10.0	14.0	12.5
30	17.0	16.0	13.0	11.5	11.5	10.5	11.0	10.0	---	---	13.5	12.0
31	17.0	16.0	---	---	13.0	11.5	11.5	10.5	---	---	14.5	13.0
MONTH	---	---	17.0	11.5	15.0	9.0	13.5	9.0	15.5	9.5	14.5	10.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	14.0	19.5	17.5	23.0	20.0	29.0	24.0	30.0	23.5	---	---
2	15.0	13.5	19.5	18.0	23.5	21.5	30.0	24.5	28.5	23.0	---	---
3	15.0	13.5	19.0	17.5	24.0	21.5	29.5	24.0	28.0	22.0	---	---
4	15.0	13.5	18.0	17.0	24.5	22.0	29.0	23.5	28.5	22.0	---	---
5	16.0	14.5	18.0	16.5	25.0	22.5	28.0	22.0	28.5	23.5	---	---
6	18.0	15.0	18.0	16.0	25.0	22.5	29.5	23.5	27.5	22.0	---	---
7	19.0	16.0	18.0	16.5	25.5	23.0	29.5	24.0	27.5	22.0	---	---
8	20.0	17.5	17.0	16.0	26.0	22.0	29.0	24.5	28.0	22.5	---	---
9	19.5	17.5	17.5	15.5	26.0	22.0	29.5	24.5	30.0	23.5	---	---
10	19.5	17.0	18.0	15.5	25.5	21.5	29.0	24.0	30.0	24.0	---	---
11	19.5	16.5	18.5	16.5	25.5	21.0	29.0	23.5	30.0	24.5	---	---
12	19.0	17.0	19.5	17.0	27.0	22.0	29.5	23.5	30.0	25.5	---	---
13	19.0	15.5	19.5	18.0	26.5	22.0	29.5	23.0	31.0	26.0	---	---
14	19.5	16.0	20.0	18.5	26.0	21.5	29.5	24.0	31.0	26.0	---	---
15	19.0	17.5	19.0	18.0	26.5	22.0	29.0	23.0	30.0	24.5	---	---
16	19.5	17.5	18.0	17.5	26.5	22.0	28.5	23.0	29.5	24.0	---	---
17	18.0	17.0	17.5	16.5	25.5	22.0	28.5	23.0	28.0	23.5	---	---
18	17.5	15.5	17.0	16.0	25.0	21.5	27.5	23.0	27.0	22.5	---	---
19	15.5	14.5	17.5	15.5	25.0	21.5	26.5	21.5	27.0	22.0	---	---
20	15.0	14.0	17.5	16.0	26.0	21.5	28.0	21.5	26.0	21.5	---	---
21	15.5	13.5	17.0	16.0	26.0	21.0	29.0	23.5	27.0	21.5	23.5	20.0
22	16.0	14.0	17.0	16.0	26.0	21.0	28.5	24.5	27.0	22.0	23.5	20.5
23	17.0	15.5	17.0	15.5	27.0	22.0	29.0	23.5	27.0	22.5	23.5	20.0
24	18.0	16.0	17.0	15.5	25.0	22.0	29.5	23.5	27.5	23.5	23.0	20.5
25	18.0	16.5	18.0	16.0	25.5	20.5	29.5	23.5	27.0	22.5	23.5	19.5
26	18.5	17.0	19.5	17.5	23.5	20.5	29.0	24.5	26.5	21.5	23.5	19.5
27	18.0	16.5	19.5	18.0	23.5	19.0	28.5	25.0	25.5	21.0	24.5	19.0
28	17.5	16.0	20.0	18.0	25.0	20.0	29.0	24.0	26.5	21.0	24.5	19.5
29	18.0	16.5	21.0	17.5	26.5	21.0	30.0	25.0	27.0	22.0	24.5	20.0
30	19.0	17.0	21.5	18.0	27.5	22.0	30.5	25.5	27.0	23.0	23.5	21.0
31	---	---	22.5	18.5	---	---	30.5	25.5	27.0	22.5	---	---
MONTH	20.0	13.5	22.5	15.5	27.5	19.0	30.5	21.5	31.0	21.0	---	---

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.

PERIOD OF RECORD.--April 1912 to current year. Water years 1938 to 1943 include flows through Merced River Slough.

CHEMICAL DATA: Water year 1993.

SPECIFIC CONDUCTANCE: Water years 1989, 1992-95.

TEMPERATURE: Water years 1989, 1992-95.

SEDIMENT DATA: Water year 1993.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. 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.--Records good except for estimated daily discharges which are fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2400	1230	835	983	1960	4940	2900	1620	1720	933	674	750
2	2930	1220	844	897	2400	5240	2880	1620	1660	906	582	793
3	3100	1190	858	815	2450	5550	2900	1660	1580	832	540	816
4	3110	1160	873	752	2270	6050	2820	1680	1510	750	549	810
5	3100	1090	871	702	2510	6820	2380	1660	1420	707	594	738
6	3070	1070	883	679	3530	7760	1930	1690	1370	687	647	693
7	3060	1040	896	670	3710	8300	1710	1750	1280	674	698	691
8	3070	1030	888	662	3930	8460	1580	1710	1150	665	726	681
9	3120	1000	870	659	e4220	8090	1450	1770	1060	658	731	677
10	3150	964	892	667	e4350	7470	1360	1840	1070	648	680	725
11	3150	936	900	672	e4300	6850	1260	1910	1020	629	694	753
12	3170	940	942	655	e4250	6410	1170	1920	988	578	736	693
13	3180	932	1030	655	e4200	6090	1090	1910	969	542	803	606
14	3160	918	1110	674	4120	5850	1060	1900	957	531	808	585
15	3180	911	1130	697	4020	5820	1090	1890	950	535	755	589
16	3110	910	1140	716	3970	6010	1110	2010	969	544	660	615
17	2350	899	1150	779	3920	6390	1330	2360	1040	554	629	633
18	1730	887	1130	984	3910	6580	1610	2620	977	567	614	654
19	1560	883	1110	980	3930	6520	1780	2720	1000	582	642	671
20	1460	880	1080	996	e4160	6400	1840	2830	926	584	715	661
21	1370	882	1060	1070	e4980	6190	1870	3670	837	586	779	618
22	1340	873	1020	1090	e5720	5880	1880	4600	840	566	803	591
23	1330	871	1010	1150	e6050	5470	1860	5370	839	556	806	573
24	1260	862	1020	1110	5960	4930	1800	5920	876	551	813	594
25	1270	856	1010	1070	5760	4550	1750	6010	848	551	812	597
26	1320	848	1010	e1440	5540	4130	1670	5650	860	560	802	569
27	1340	845	987	e1580	5370	3880	1640	5090	905	563	822	525
28	1350	840	962	e1530	5200	3840	1650	4350	932	570	827	511
29	1330	851	926	1790	5060	3670	1660	3100	931	605	801	520
30	1280	843	965	1740	---	3350	1610	2140	937	661	751	535
31	1260	---	1010	1730	---	3020	---	1770	---	708	730	---
TOTAL	70610	28661	30412	30594	121750	180510	52640	86740	32421	19583	22223	19467
MEAN	2278	955	981	987	4198	5823	1755	2798	1081	632	717	649
MAX	3180	1230	1150	1790	6050	8460	2900	6010	1720	933	827	816
MIN	1260	840	835	655	1960	3020	1060	1620	837	531	540	511
AC-FT	140100	56850	60320	60680	241500	358000	104400	172000	64310	38840	44080	38610

e Estimated.

SAN JOAQUIN RIVER BASIN

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	1916
LOWEST ANNUAL MEAN	196	1931
HIGHEST DAILY MEAN	20700	Jan 27 1914
LOWEST DAILY MEAN	15	Aug 9 1924
ANNUAL SEVEN-DAY MINIMUM	17	Aug 4 1924
INSTANTANEOUS PEAK FLOW	20700	Jan 27 1914
INSTANTANEOUS PEAK STAGE	65.30	Jan 27 1914
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	1938
LOWEST ANNUAL MEAN	904	1939
HIGHEST DAILY MEAN	33000	Mar 7 1938
LOWEST DAILY MEAN	170	Nov 9 1939
ANNUAL SEVEN-DAY MINIMUM	171	Nov 8 1939
INSTANTANEOUS PEAK FLOW	33000	Mar 7 1938
INSTANTANEOUS PEAK STAGE	65.81	Mar 7 1938
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	685	652	1174	2011	2743	3018	2872	2776	2122	927	505	616
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1944 - 1996

ANNUAL TOTAL	1745020	695611	
ANNUAL MEAN	4781	1901	1669
HIGHEST ANNUAL MEAN			11620
LOWEST ANNUAL MEAN			200
HIGHEST DAILY MEAN	20900	Mar 16	8460
LOWEST DAILY MEAN	537	Jan 1	511
ANNUAL SEVEN-DAY MINIMUM	708	Jan 1	550
INSTANTANEOUS PEAK FLOW			8520
INSTANTANEOUS PEAK STAGE			60.57
INSTANTANEOUS LOW FLOW			65.78
ANNUAL RUNOFF (AC-FT)	3461000	1380000	1209000
10 PERCENT EXCEEDS	13300	4950	3850
50 PERCENT EXCEEDS	1940	1070	577
90 PERCENT EXCEEDS	883	617	213

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, WDR CA-95-3: 1986 (M).

GAGE.--Water-stage recorder. Datum of gage is 216.01 ft above sea level. 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 discharges below 10 ft³/s which are fair. No storage or diversion upstream from station except for minor stock ponds.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s, Mar. 10, 1995, gage height, 9.51, from rating curve extended above 4,000 ft³/s on basis of critical depth measurement; no flow for all or parts of each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 27	1730	555	4.49	Mar. 5	0230	760	4.80
Jan. 31	1215	1,540	5.54	Mar. 12	2200	606	4.64
Feb. 4	2215	2,400	6.03	Apr. 2	0315	106	3.86
Feb. 19	2045	3,130	6.32				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	322	89	44	9.0	.89	.00	.00	.00
2	.00	.00	.00	.00	162	84	72	6.8	.79	.00	.00	.00
3	.00	.00	.00	.00	113	126	38	6.6	.66	.00	.00	.00
4	.00	.00	.00	.00	624	100	31	6.4	.55	.00	.00	.00
5	.00	.00	.00	.00	697	390	26	6.3	.43	.00	.00	.00
6	.00	.00	.00	.00	300	167	28	6.2	.33	.00	.00	.00
7	.00	.00	.00	.00	202	117	28	6.1	.29	.00	.00	.00
8	.00	.00	.00	.00	147	84	28	6.0	.27	.00	.00	.00
9	.00	.00	.00	.00	105	57	28	5.8	.27	.00	.00	.00
10	.00	.00	.00	.00	74	37	28	5.6	.26	.00	.00	.00
11	.00	.00	.00	.00	49	27	25	5.2	.26	.00	.00	.00
12	.00	.00	.00	.00	32	183	21	5.0	.24	.00	.00	.00
13	.00	.00	.00	.00	28	326	16	4.5	.23	.00	.00	.00
14	.00	.00	.00	.00	27	167	19	4.0	.19	.00	.00	.00
15	.00	.00	.00	.00	30	114	27	3.8	.14	.00	.00	.00
16	.00	.00	.00	.00	42	92	23	21	.10	.00	.00	.00
17	.00	.00	.00	.00	36	72	21	23	.06	.00	.00	.00
18	.00	.00	.00	.00	24	53	20	15	.03	.00	.00	.00
19	.00	.00	.00	.00	793	44	20	10	.01	.00	.00	.00
20	.00	.00	.00	.00	1190	36	19	8.1	.00	.00	.00	.00
21	.00	.00	.00	.00	1150	32	19	5.6	.00	.00	.00	.00
22	.00	.00	.00	1.2	542	28	18	3.8	.00	.00	.00	.00
23	.00	.00	.00	1.8	258	25	18	2.9	.00	.00	.00	.00
24	.00	.00	.00	.99	182	24	18	2.2	.00	.00	.00	.00
25	.00	.00	.00	114	141	21	17	1.7	.00	.00	.00	.00
26	.00	.00	.00	47	104	21	16	1.4	.00	.00	.00	.00
27	.00	.00	.00	133	86	22	15	1.2	.00	.00	.00	.00
28	.00	.00	.00	136	87	23	14	1.2	.00	.00	.00	.00
29	.00	.00	.00	55	95	22	12	1.2	.00	.00	.00	.00
30	.00	.00	.00	36	---	22	10	1.1	.00	.00	.00	.00
31	.00	---	.00	603	---	26	---	.97	---	.00	.00	---
TOTAL	0.00	0.00	0.00	1127.99	7642	2631	719	187.67	6.00	0.00	0.00	0.00
MEAN	.000	.000	.000	36.4	264	84.9	24.0	6.05	.20	.000	.000	.000
MAX	.00	.00	.00	603	1190	390	72	23	.89	.00	.00	.00
MIN	.00	.00	.00	.00	24	21	10	.97	.00	.00	.00	.00
AC-FT	.00	.00	.00	2240	15160	5220	1430	372	12	.00	.00	.00

SAN JOAQUIN RIVER BASIN

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.98	10.7	41.0	77.8	49.8	22.5	3.21	.62	.11	.001	.000
MAX	.000	31.0	181	264	482	345	362	46.9	15.1	5.32	.045	.000
(WY)	1933	1951	1956	1983	1980	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1932 - 1996			
ANNUAL TOTAL	16442.41				12313.66				16.9			
ANNUAL MEAN	45.0				33.6				89.4			
HIGHEST ANNUAL MEAN									.000			
LOWEST ANNUAL MEAN									1983			
HIGHEST DAILY MEAN	4260				1190				4260			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					3130				12000			
INSTANTANEOUS PEAK STAGE					6.32				9.51			
ANNUAL RUNOFF (AC-FT)	32610				24420				12270			
10 PERCENT EXCEEDS	76				84				18			
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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 65 ft above sea level, from topographic map.

REMARKS.--Records good except for period of estimated daily discharge and discharges below 1.0 ft³/s which are fair. Flows during summer and fall consist mainly of return water from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,650 ft³/s, Mar. 10, 1995, gage height 18.40 ft, from rating curve extended above 2,470 ft³/s; no flow for many days during winter months.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	24	21	.09	383	104	54	8.6	38	22	23	13
2	7.9	33	21	e.00	123	86	73	18	26	14	16	6.7
3	3.8	51	16	e.04	65	81	63	14	24	19	14	6.1
4	4.5	41	21	.14	133	91	27	14	17	24	28	7.6
5	4.4	34	31	.05	938	353	22	17	16	41	47	8.1
6	36	53	22	.05	292	347	55	18	30	26	19	14
7	21	55	23	.20	136	377	63	13	42	23	23	6.6
8	20	28	32	.15	81	406	47	12	14	24	20	2.5
9	56	21	31	.19	51	378	18	13	22	26	22	5.8
10	62	43	25	5.2	29	311	37	5.9	49	22	28	5.2
11	29	61	36	1.9	15	233	21	5.9	80	18	12	5.4
12	14	61	40	.46	7.0	196	20	7.1	58	18	22	4.0
13	4.4	55	32	.21	3.2	385	59	6.0	29	24	14	11
14	27	28	21	.02	.85	203	56	5.8	11	26	17	24
15	54	17	9.7	.13	2.2	137	75	8.1	10	24	17	36
16	19	17	5.3	1.2	2.5	154	72	101	24	29	16	18
17	23	16	3.0	.85	3.1	182	27	57	20	32	19	4.8
18	16	12	2.4	.06	1.1	194	11	35	33	20	11	3.9
19	7.6	11	2.6	.06	115	196	4.7	108	15	18	12	14
20	4.2	22	1.2	.00	1100	200	5.6	132	15	23	5.3	22
21	9.0	13	.81	.05	981	165	8.5	110	22	29	11	23
22	5.5	4.3	1.3	.00	672	130	50	134	8.2	24	14	41
23	11	2.6	.63	.00	303	122	39	108	11	20	18	19
24	23	14	.13	.00	193	103	21	154	9.2	19	18	3.4
25	21	23	.00	.00	140	99	11	199	11	27	15	9.3
26	5.4	16	.00	36	102	89	10	162	19	24	9.2	2.2
27	24	23	.00	13	87	26	6.7	112	16	19	7.1	9.9
28	39	33	.00	164	86	22	7.7	82	15	36	7.3	23
29	35	33	.17	45	77	85	49	29	17	61	9.0	18
30	34	36	1.1	18	---	91	14	59	17	48	11	42
31	47	---	.34	417	---	60	---	75	---	45	23	---
TOTAL	670.4	880.9	400.68	704.05	6121.95	5606	1027.2	1823.4	718.4	825	527.9	409.5
MEAN	21.6	29.4	12.9	22.7	211	181	34.2	58.8	23.9	26.6	17.0	13.6
MAX	62	61	40	417	1100	406	75	199	80	61	47	42
MIN	2.7	2.6	.00	.00	.85	22	4.7	5.8	8.2	14	5.3	2.2
AC-FT	1330	1750	795	1400	12140	11120	2040	3620	1420	1640	1050	812

e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.9	16.8	12.4	87.4	116	150	30.9	30.7	18.5	24.6	23.9	13.9
MAX	21.6	29.4	27.7	175	223	318	44.0	58.8	30.5	36.4	46.1	21.1
(WY)	1996	1996	1994	1993	1993	1995	1995	1996	1995	1995	1993	1993
MIN	2.19	3.82	1.01	11.4	6.15	12.5	12.2	11.7	7.38	14.1	11.2	4.04
(WY)	1995	1995	1995	1994	1995	1994	1994	1994	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1992 - 1996			
ANNUAL TOTAL	22557.99				19715.38							
ANNUAL MEAN	61.8				53.9				45.8			
HIGHEST ANNUAL MEAN									57.0			
LOWEST ANNUAL MEAN									15.7			
HIGHEST DAILY MEAN	2130				1100				2130			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.02				.00			
INSTANTANEOUS PEAK FLOW					1540				2650			
INSTANTANEOUS PEAK STAGE					14.57				18.40			
ANNUAL RUNOFF (AC-FT)	44740				39110				33210			
10 PERCENT EXCEEDS	79				125				72			
50 PERCENT EXCEEDS	25				21				15			
90 PERCENT EXCEEDS	1.3				1.3				1.0			

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1992 to current year.

CHEMICAL DATA: Water years 1992-95.

SPECIFIC CONDUCTANCE: April 1992 to current year.

WATER TEMPERATURE: April 1992 to current year.

SEDIMENT DATA: Water years 1992-95.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1992 to current year.

WATER TEMPERATURE: April 1992 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1992.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments and days where no flow occurred. 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 PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,890 microsiemens, Sept. 13, 1992; minimum recorded, 103 microsiemens, Jan. 7, 1993.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 29, 1996; minimum recorded, 4.0°C, Dec. 28, 1992.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,280 microsiemens, Feb. 17; minimum recorded, 171 microsiemens, May 26.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 29; minimum recorded, 7.5°C, Dec. 21-23.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	405	372	435	354	617	530	---	---	463	300	689	632
2	382	374	412	352	553	532	---	---	340	315	666	633
3	438	376	398	363	581	544	---	---	360	340	636	624
4	478	423	406	377	682	578	578	562	517	317	624	612
5	501	440	432	361	695	573	---	---	517	353	613	502
6	524	382	447	392	596	564	---	---	516	424	513	505
7	405	358	483	429	590	525	---	---	562	493	518	512
8	427	375	464	424	602	537	608	585	649	562	536	518
9	410	356	506	424	607	560	649	608	733	649	544	533
10	359	321	521	482	608	547	685	614	701	659	544	539
11	342	303	495	443	664	543	614	591	707	701	554	544
12	394	327	489	396	635	530	592	576	705	690	550	530
13	369	352	513	391	665	488	577	564	712	699	531	459
14	403	325	523	422	626	477	---	---	712	702	459	450
15	334	271	482	416	752	626	---	---	745	694	462	453
16	310	239	569	457	752	694	550	335	1080	730	473	460
17	323	245	529	457	722	628	645	493	1280	984	503	473
18	374	312	586	508	628	442	---	---	1110	1000	505	495
19	374	332	578	468	628	526	---	---	1090	350	497	487
20	598	345	591	413	618	573	---	---	470	269	493	483
21	617	453	454	410	666	575	---	---	485	292	485	475
22	582	453	477	444	689	620	---	---	372	312	497	484
23	732	559	533	459	620	581	---	---	424	372	497	489
24	571	428	823	527	587	575	---	---	470	424	490	479
25	460	362	633	477	---	---	---	---	511	470	479	464
26	430	354	539	474	---	---	---	---	543	511	464	451
27	563	334	573	503	---	---	633	465	588	543	467	454
28	431	359	630	513	---	---	745	465	632	588	485	467
29	374	342	629	547	---	---	587	521	632	622	500	485
30	430	361	625	544	552	472	877	587	---	---	493	469
31	459	367	---	---	560	534	877	408	---	---	477	470
MONTH	732	239	823	352	---	---	---	---	1280	269	689	450

SAN JOAQUIN RIVER BASIN

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	497	477	390	319	267	214	666	637	642	546	728	628
2	534	497	418	390	313	267	678	653	729	639	767	679
3	561	534	424	400	339	311	681	671	764	667	770	650
4	589	560	425	398	370	339	677	669	699	673	805	652
5	594	580	431	353	400	370	689	676	703	496	839	785
6	600	577	379	336	449	400	689	644	597	534	880	825
7	652	600	441	379	482	449	674	649	611	593	825	798
8	649	637	480	441	499	481	717	672	630	611	844	813
9	653	639	493	429	500	492	729	712	661	630	917	843
10	650	636	429	387	515	498	734	720	674	660	906	866
11	651	610	416	390	533	515	734	662	663	605	939	886
12	610	574	446	396	533	447	730	607	618	605	1050	937
13	590	526	450	424	455	448	645	529	647	602	1040	659
14	529	462	439	419	468	454	663	590	689	647	673	547
15	462	420	423	414	482	468	694	618	705	665	576	557
16	420	400	422	398	491	481	699	538	709	678	594	576
17	409	402	398	352	503	490	620	505	730	709	604	594
18	411	404	352	339	507	498	703	620	714	611	631	603
19	429	411	348	338	514	503	757	613	656	623	680	630
20	471	429	345	335	523	513	653	533	669	654	686	668
21	492	471	349	337	564	523	617	533	674	656	668	634
22	491	439	347	309	578	564	643	542	702	674	634	603
23	440	417	311	248	590	578	741	640	740	702	606	586
24	431	421	248	207	592	581	744	625	757	734	590	583
25	438	430	215	191	595	585	733	609	766	751	607	586
26	476	437	197	171	632	594	662	634	773	762	664	607
27	483	471	181	172	633	622	667	654	782	767	696	664
28	478	456	204	181	629	621	677	562	785	775	740	696
29	462	302	228	204	629	619	562	516	803	768	741	730
30	319	300	252	216	642	622	605	524	896	768	731	713
31	---	---	223	188	---	---	605	529	775	619	---	---
MONTH	653	300	493	171	642	214	757	505	896	496	1050	547

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

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

SAN JOAQUIN RIVER BASIN

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA

LOCATION.--Lat 37°25'42", long 121°00'12", in NE 1/4 NE 1/4 sec.7, T.6 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 50 ft downstream from bridge on Crows Landing Road, and 4.2 miles northeast of Crows Landing.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to September 1996.

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

REMARKS.--Records good except for estimated daily discharges which are fair. 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, 8,870 ft³/s, Mar. 8, 1996, elevation, unknown; minimum daily, 617 ft³/s, Sept. 27, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2550	e1290	e855	e990	2300	e5040	3200	1720	1710	1100	736	815
2	e3020	e1280	e862	e905	2350	e5320	3190	1700	1680	1070	634	929
3	e3140	e1260	e875	e824	2400	e5620	3210	1690	1620	985	627	933
4	e3160	e1240	e892	e760	2300	e6130	3130	1740	1520	917	679	922
5	e3150	e1180	e890	e709	3250	e7130	2790	1710	1420	884	826	854
6	e3120	e1150	e902	e686	3570	e8060	2320	1740	1400	869	804	842
7	e3100	e1110	e905	e675	3660	e8620	2020	1760	1330	856	893	828
8	e3120	e1070	e902	e670	3840	e8810	1830	1700	1220	860	882	813
9	e3180	e1040	e887	e665	4200	e8410	1640	1760	1150	810	851	828
10	e3200	e990	e915	e675	4640	e7730	1570	1800	1150	807	780	870
11	e3200	e975	e923	e679	4720	e7040	1500	1860	1130	760	811	922
12	e3230	e985	e965	e662	4510	e6570	1410	1920	1070	723	848	848
13	e3150	e977	e1040	e665	4270	e6410	1350	1910	1030	679	900	762
14	e3230	e970	e1120	e680	4100	e6010	1300	1840	987	679	862	777
15	e3250	e960	e1150	e705	3970	e5930	1350	1820	1010	723	815	802
16	e3200	e945	e1160	e720	3910	e6130	1370	2100	1070	768	725	838
17	e2440	e930	e1160	e780	3860	e6540	1500	2330	1110	815	680	814
18	e1810	e925	e1140	e985	3840	e6740	1740	2610	1030	819	635	845
19	e1550	e915	e1130	e940	3890	e6690	1990	2810	1040	787	715	858
20	e1490	e900	e1100	929	4890	e6570	2080	2910	992	755	781	878
21	e1410	e905	e1070	1020	5390	e6340	2100	3500	905	776	822	805
22	e1400	e890	e1020	1010	5890	e6000	2170	4350	841	721	855	770
23	e1390	e880	e1020	1090	5990	e5580	2130	4960	863	665	866	721
24	e1310	e872	e1030	1060	5880	e5030	2010	5310	871	660	921	694
25	e1340	e875	e1020	1020	5750	e4650	1920	5440	827	647	922	677
26	e1400	e865	e1020	1220	5560	4500	1870	5680	906	689	907	641
27	e1420	e870	e997	1360	5380	4160	1770	5340	949	700	940	617
28	e1430	e870	e970	1500	5240	4090	1760	4740	1010	756	932	641
29	e1410	e885	e935	1640	5110	4020	1780	3650	1060	888	881	665
30	e1350	e868	e975	1620	---	3760	1730	2460	1060	817	817	695
31	e1340	---	e1020	1920	---	3420	---	1940	---	816	833	---
TOTAL	72490	29872	30850	29764	124660	187050	59730	86800	33961	24801	25180	23904
MEAN	2338	996	995	960	4299	6034	1991	2800	1132	800	812	797
MAX	3250	1290	1160	1920	5990	8810	3210	5680	1710	1100	940	933
MIN	1310	865	855	662	2300	3420	1300	1690	827	647	627	617
AC-FT	143800	59250	61190	59040	247300	371000	118500	172200	67360	49190	49940	47410

e Estimated.

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2338	996	995	960	4299	6034	1991	2800	1132	800	812	797
MAX	2338	996	995	960	4299	6034	1991	2800	1132	800	812	797
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996
MIN	2338	996	995	960	4299	6034	1991	2800	1132	800	812	797
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1996 WATER YEAR

ANNUAL TOTAL	729062	
ANNUAL MEAN	1992	
HIGHEST DAILY MEAN	8810	Mar 8
LOWEST DAILY MEAN	617	Sep 27
ANNUAL SEVEN-DAY MINIMUM	661	Sep 24
INSTANTANEOUS PEAK FLOW	e8870	Mar 8
INSTANTANEOUS PEAK STAGE	unknown	Mar 8
ANNUAL RUNOFF (AC-FT)	1446000	
10 PERCENT EXCEEDS	5030	
50 PERCENT EXCEEDS	1100	
90 PERCENT EXCEEDS	724	

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1996 to September 1996.

SPECIFIC CONDUCTANCE: January 1996 to September 1996.

WATER TEMPERATURE: January 1996 to September 1996.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1996 to September 1996.

WATER TEMPERATURE: January 1996 to September 1996.

INSTRUMENTATION.--Water-quality monitor since January 1996.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Specific conductance and water temperature values are affected by irrigation return flow.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,660 microsiemens, Jan. 15; minimum recorded, 141 microsiemens, May 23.

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 30, 31, Aug. 13, 14; minimum recorded, 9.0°C, Jan. 23, 24.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	794	742	803	743	863	800	1240	1180	1270	1210	1060	999
2	787	730	783	733	887	800	1280	1210	1360	1270	1000	845
3	731	691	736	661	913	872	1360	1270	1350	1280	902	859
4	694	659	704	656	960	900	1450	1350	1350	1190	876	808
5	786	634	697	672	1050	960	1480	1400	1200	1120	915	853
6	1010	734	710	658	1070	1000	1540	1430	1200	1120	964	915
7	1160	1010	703	643	1160	1010	1460	1340	1150	1080	965	903
8	1190	1050	673	631	1400	1120	1430	1350	1130	1050	975	940
9	1270	1120	703	553	1400	1290	1440	1380	1120	1050	957	906
10	1270	1230	698	639	1370	1250	1530	1350	1200	1120	910	840
11	1350	1200	664	593	1370	1240	1500	1390	1200	1070	844	782
12	1410	1300	615	588	1410	1310	1580	1430	1140	1080	935	818
13	1510	1360	605	573	1470	1380	1580	1460	1080	983	958	872
14	1550	1430	621	595	1530	1360	1550	1430	1010	978	930	823
15	1490	1340	642	581	1450	1370	1590	1410	1130	991	825	709
16	1370	1240	618	562	1420	1160	1480	1340	1200	1130	774	664
17	1240	1010	584	485	1330	1240	1390	1310	1240	1140	807	711
18	1010	766	503	425	1340	1240	1370	1250	1260	1180	825	705
19	766	702	459	365	1320	1210	1360	1260	1230	1100	815	694
20	732	685	427	362	1330	1230	1350	1280	1140	968	742	676
21	744	698	362	147	1410	1330	1360	1250	1000	950	790	718
22	718	676	337	185	1430	1300	1410	1260	992	949	808	742
23	718	664	195	141	1440	1320	1450	1360	1000	938	867	808
24	746	701	170	142	1380	1270	1420	1350	977	913	864	787
25	740	711	252	170	1370	1320	1420	1350	961	815	1020	798
26	804	739	307	252	1330	1270	1460	1360	979	927	1220	1020
27	835	797	353	307	1330	1200	1430	1330	938	901	1100	1020
28	820	732	405	353	1230	1150	1390	1250	1000	888	1100	969
29	776	703	697	405	1230	1130	1280	1100	1030	998	969	828
30	793	711	727	559	1270	1190	1210	1100	1060	1010	862	778
31	---	---	816	675	---	---	1210	1140	1060	966	---	---
MONTH	1550	634	816	141	1530	800	1590	1100	1360	815	1220	664

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	12.5	11.0	---	---
2	---	---	---	---	---	---	---	---	12.5	12.0	---	---
3	---	---	---	---	---	---	---	---	13.5	12.5	---	---
4	---	---	---	---	---	---	---	---	14.0	13.5	---	---
5	---	---	---	---	---	---	---	---	15.0	14.0	---	---
6	---	---	---	---	---	---	---	---	15.5	14.5	---	---
7	---	---	---	---	---	---	---	---	15.5	15.0	---	---
8	---	---	---	---	---	---	---	---	15.5	15.0	---	---
9	---	---	---	---	---	---	---	---	15.0	13.0	---	---
10	---	---	---	---	---	---	---	---	14.5	14.0	---	---
11	---	---	---	---	---	---	---	---	14.0	13.5	---	---
12	---	---	---	---	---	---	---	---	14.0	13.5	---	---
13	---	---	---	---	---	---	---	---	14.0	13.5	---	---
14	---	---	---	---	---	---	---	---	14.5	13.5	---	---
15	---	---	---	---	---	---	10.5	10.5	14.0	13.5	---	---
16	---	---	---	---	---	---	11.0	10.5	14.5	13.5	---	---
17	---	---	---	---	---	---	11.0	10.0	---	---	---	---
18	---	---	---	---	---	---	10.5	10.0	14.5	14.0	---	---
19	---	---	---	---	---	---	11.0	10.0	14.0	14.0	---	---
20	---	---	---	---	---	---	11.5	10.0	14.0	13.0	---	---
21	---	---	---	---	---	---	11.5	10.5	13.5	13.0	---	---
22	---	---	---	---	---	---	11.5	10.5	13.0	12.0	---	---
23	---	---	---	---	---	---	10.5	9.0	12.0	11.5	---	---
24	---	---	---	---	---	---	10.0	9.0	12.0	11.5	---	---
25	---	---	---	---	---	---	11.0	10.0	12.0	11.5	---	---
26	---	---	---	---	---	---	10.5	9.5	11.5	11.0	14.5	13.5
27	---	---	---	---	---	---	10.0	9.5	11.5	10.5	15.0	14.0
28	---	---	---	---	---	---	10.5	9.5	10.5	10.0	15.5	14.5
29	---	---	---	---	---	---	10.0	9.5	11.0	10.0	15.5	14.5
30	---	---	---	---	---	---	10.5	10.0	---	---	15.5	14.5
31	---	---	---	---	---	---	11.0	10.5	---	---	16.5	15.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.5	16.0	21.0	18.5	23.5	21.0	28.5	25.0	29.5	26.5	26.5	24.0
2	16.5	15.0	21.0	19.0	25.0	22.0	29.5	26.5	28.0	25.5	26.0	23.5
3	16.5	15.0	20.5	19.0	25.5	23.5	29.0	26.5	27.5	24.5	25.5	23.0
4	16.5	15.5	20.0	17.5	26.5	24.0	28.0	25.5	27.5	24.0	25.0	23.0
5	17.5	16.0	19.5	17.5	26.5	24.0	27.0	24.5	27.5	24.5	23.5	21.5
6	19.0	17.0	19.5	17.0	27.0	24.5	28.0	24.5	27.0	24.0	23.5	20.5
7	20.5	18.0	19.5	17.5	27.5	25.0	29.0	25.5	26.5	23.5	24.0	21.0
8	21.0	19.5	18.5	17.5	27.0	24.5	28.5	25.5	27.0	24.0	24.5	22.0
9	20.5	19.5	19.0	16.5	26.5	24.5	29.0	25.5	28.5	25.0	25.0	22.0
10	20.0	18.5	19.5	17.0	26.0	23.5	29.0	26.0	29.0	26.0	25.5	22.5
11	19.5	18.0	20.5	18.0	26.0	23.5	29.0	25.5	29.5	26.5	25.0	23.0
12	19.0	18.0	21.5	18.5	27.0	24.0	29.0	25.5	30.0	27.0	24.0	21.5
13	19.0	17.0	22.0	20.0	26.5	24.5	29.0	25.5	30.5	27.5	23.0	21.5
14	19.5	17.5	21.5	20.0	26.5	23.5	29.5	26.0	30.5	27.5	23.0	20.0
15	20.0	18.5	21.5	20.0	26.5	24.0	28.5	25.5	29.0	26.5	23.0	21.0
16	19.0	18.0	20.0	18.5	26.5	24.0	27.5	24.5	28.5	25.5	21.5	19.5
17	18.5	17.5	18.5	18.0	25.5	23.5	27.5	25.0	28.0	25.5	21.0	19.0
18	18.0	16.5	19.0	17.5	25.0	23.0	26.5	24.5	27.0	24.5	21.0	19.0
19	17.0	16.0	19.0	17.0	25.0	22.5	26.0	23.5	26.5	23.5	22.0	19.5
20	16.0	15.5	19.5	17.5	25.5	23.0	26.5	23.0	25.5	23.0	23.0	20.0
21	16.5	14.0	19.0	17.5	25.5	23.0	28.0	24.5	25.5	23.0	23.5	21.0
22	17.5	15.5	18.0	17.5	25.5	23.0	28.0	25.5	26.0	23.5	23.5	21.5
23	19.0	16.5	18.0	17.0	26.0	23.0	28.5	25.5	27.0	24.0	23.5	19.0
24	19.5	17.5	17.5	16.5	24.5	23.0	28.5	25.5	27.0	24.5	23.0	21.0
25	19.5	18.0	19.0	17.5	25.0	22.0	29.5	26.0	26.5	24.0	23.0	20.5
26	20.0	18.0	20.5	19.0	24.5	22.0	29.0	26.5	25.5	23.5	23.0	20.5
27	19.0	17.5	20.5	19.5	23.5	20.5	28.5	26.5	25.0	22.5	23.0	20.5
28	18.0	15.5	21.0	20.0	24.0	21.0	29.0	26.0	25.5	22.5	23.5	21.0
29	19.5	17.0	21.5	20.0	25.5	22.0	29.5	26.5	26.0	23.5	23.5	21.0
30	20.5	18.0	21.5	20.0	27.0	23.5	30.5	27.5	27.0	24.0	23.0	21.5
31	---	---	22.0	20.0	---	---	30.5	27.5	27.0	24.5	---	---
MONTH	21.0	14.0	22.0	16.5	27.5	20.5	30.5	23.0	30.5	22.5	26.5	19.0

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 sea level, from topographic map. Prior to June 1965, crest-stage gage at site 1.0 mi downstream at different datum.

REMARKS.--Records good except those below 0.1 ft³/s, which are poor. Some stock ponds and small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s, Mar. 10, 1995, gage height, 11.62, from rating curve extended above 690 ft³/s on basis of computation of peak flow through culvert; no flow for several months in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1930	68	2.41	Feb. 19	2000	623	4.96
Jan. 27	1530	248	3.57	Mar. 4	2245	176	3.17
Jan. 31	1215	512	4.60	Mar. 12	1830	506	4.58
Feb. 4	2145	347	4.01				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.48	1.0	3.0	114	52	24	7.6	3.9	1.1	.20	.06
2	.02	.53	1.1	2.9	49	47	26	7.0	3.5	.94	.29	.08
3	.01	.58	1.1	2.8	32	48	20	6.5	3.2	.71	.28	.10
4	.02	.56	1.1	2.8	120	63	18	6.5	2.8	.55	.24	.10
5	.01	.66	1.1	2.6	168	102	16	6.4	2.6	.44	.23	.12
6	.02	.78	1.2	2.6	67	72	16	6.4	2.4	.44	.21	.10
7	.02	.81	1.3	2.6	42	56	17	6.2	2.2	.38	.18	.10
8	.03	.83	1.3	2.6	31	47	16	6.1	2.1	.32	.18	.10
9	.03	.94	1.3	2.6	25	41	16	6.1	1.7	.40	.22	.09
10	.04	.92	1.3	2.5	21	37	17	5.8	1.5	.32	.22	.06
11	.04	.79	2.4	2.5	18	33	16	5.4	1.4	.29	.19	.06
12	.06	.78	25	2.6	15	160	15	5.1	1.4	.36	.16	.06
13	.05	.84	20	2.6	14	145	15	4.9	1.6	.32	.16	.08
14	.03	.87	7.0	2.4	13	73	15	4.5	1.6	.25	.14	.11
15	.05	.90	5.8	2.4	13	55	14	5.9	1.5	.22	.11	.09
16	.06	.97	5.4	5.7	18	47	16	23	1.6	.22	.16	.07
17	.08	1.0	4.3	23	14	40	15	12	1.5	.22	.17	.08
18	.10	1.1	6.2	8.2	12	35	16	8.1	1.6	.19	.16	.05
19	.13	1.1	11	8.2	173	35	15	6.9	1.4	.20	.10	.04
20	.15	1.1	6.0	8.1	328	37	15	6.0	1.4	.18	.06	.02
21	.17	1.1	4.6	11	301	33	14	5.5	1.2	.17	.06	.01
22	.19	1.1	4.3	12	168	30	14	5.8	1.2	.14	.06	.02
23	.21	1.1	5.8	9.0	95	29	13	5.5	1.2	.16	.06	.01
24	.18	1.1	4.8	7.4	74	27	13	5.0	1.1	.21	.06	.01
25	.22	1.1	4.2	36	61	25	12	4.6	1.3	.16	.06	.02
26	.27	1.1	3.6	22	51	23	10	4.3	1.8	.23	.06	.03
27	.28	1.0	3.4	70	54	22	9.6	4.5	2.2	.27	.06	.02
28	.26	1.0	3.3	54	56	23	8.8	4.8	2.1	.29	.06	.03
29	.31	.99	3.2	26	57	21	8.3	4.4	1.9	.27	.06	.02
30	.35	.98	3.7	17	---	21	8.2	4.4	1.5	.24	.07	.02
31	.38	---	3.5	224	---	20	---	4.2	---	.22	.06	---
TOTAL	3.79	27.11	149.3	581.1	2204	1499	448.9	199.4	56.4	10.41	4.33	1.76
MEAN	.12	.90	4.82	18.7	76.0	48.4	15.0	6.43	1.88	.34	.14	.059
MAX	.38	1.1	25	224	328	160	26	23	3.9	1.1	.29	.12
MIN	.01	.48	1.0	2.4	12	20	8.2	4.2	1.1	.14	.06	.01
AC-FT	7.5	54	296	1150	4370	2970	890	396	112	21	8.6	3.5

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.097	.96	3.08	16.7	27.2	26.1	9.30	3.87	1.82	.29	.074	.18
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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1965 - 1996
ANNUAL TOTAL	8175.14	5185.50	
ANNUAL MEAN	22.4	14.2	7.37
HIGHEST ANNUAL MEAN			47.7
LOWEST ANNUAL MEAN			.030
HIGHEST DAILY MEAN	1230 Mar 10	328 Feb 20	1230 Mar 10 1995
LOWEST DAILY MEAN	.00 Jan 1	.01 Oct 3	.00 Jul 1 1965
ANNUAL SEVEN-DAY MINIMUM	.01 Aug 31	.02 Oct 1	.00 Jul 1 1965
INSTANTANEOUS PEAK FLOW		623 Feb 19	3400 Mar 10 1995
INSTANTANEOUS PEAK STAGE		4.96 Feb 19	11.62 Mar 10 1995
ANNUAL RUNOFF (AC-FT)	16220	10290	5340
10 PERCENT EXCEEDS	46	37	13
50 PERCENT EXCEEDS	3.1	2.0	.08
90 PERCENT EXCEEDS	.03	.06	.00

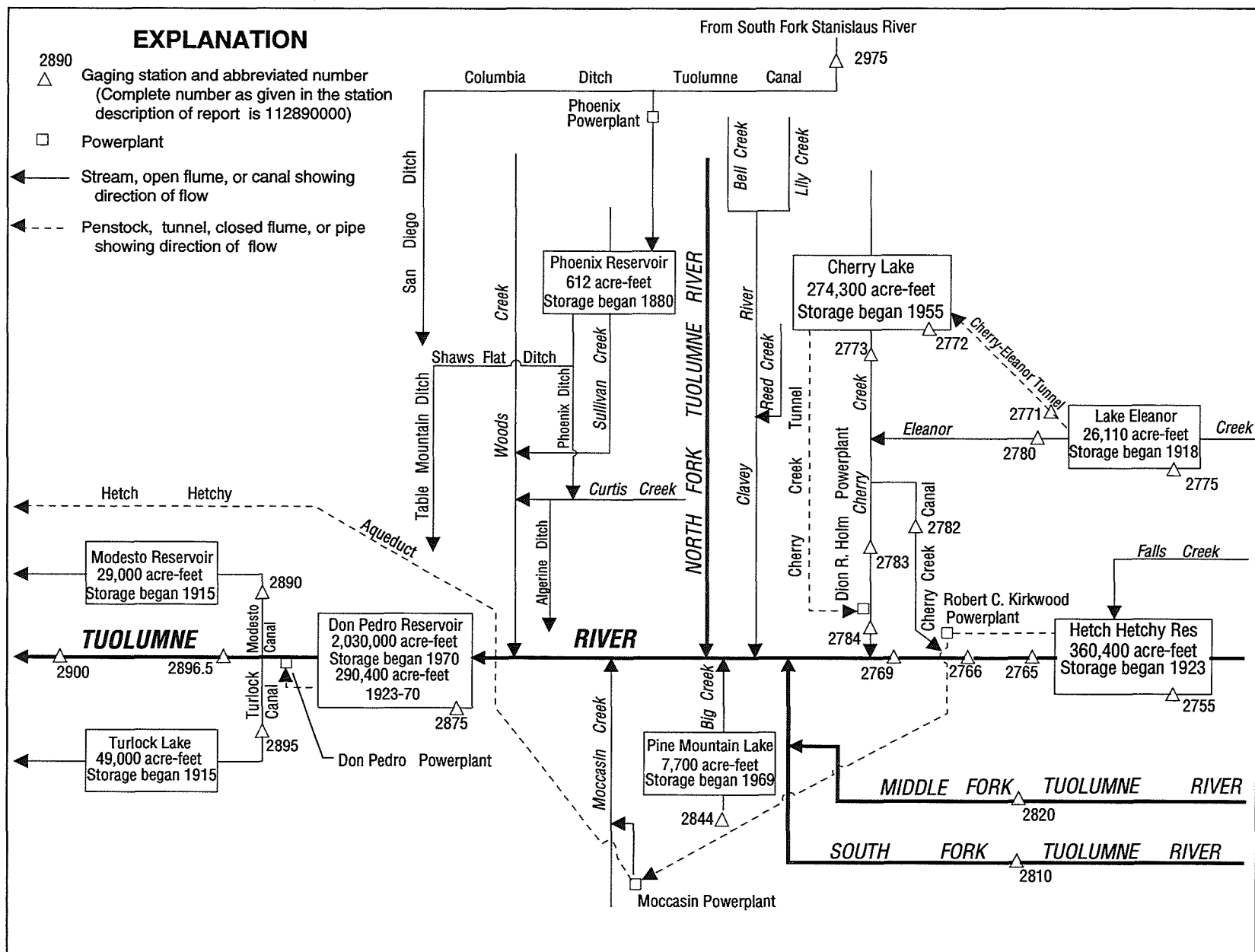


Figure 29. Diversions and storage in Tuolumne River basin.

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.--Water-stage recorder installed March 1995. Datum of gage is 1.84 ft above sea level. 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 2400 hours.

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 FOR CURRENT YEAR.--Maximum contents, 363,700 acre-ft, June 19, 20, gage height, 3,807.7 ft; minimum, 238,300 acre-ft, Apr. 6, gage height, 3,739.67 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340000	315700	297700	e292400	281000	269500	242400	281700	316500	360500	355300	338600
2	339300	314800	297100	e292200	278800	267700	242100	289000	322300	361700	355000	337700
3	338500	314100	296500	291900	276600	266200	241200	295200	329200	e362500	354700	336600
4	337800	313500	296000	291600	278700	265700	240100	300000	334500	e362500	354200	336000
5	337100	313200	295400	291200	285700	264700	239000	304900	337800	e361700	353700	334900
6	336400	312600	294700	291100	287600	263300	238300	309800	341500	e361500	353100	334000
7	335700	312000	294200	290900	287800	261800	238400	313400	346300	361400	352700	333200
8	335000	311400	293700	290800	287500	260500	239400	314000	350500	361400	352100	332500
9	334100	310700	293100	290800	287100	259500	240900	312200	352800	361400	351700	331400
10	333400	310200	292500	290600	286400	259200	242000	311600	353500	361200	351300	330400
11	332500	309600	292700	290400	285500	258000	242700	313000	353800	361200	350800	329300
12	331700	309000	e296400	290100	284400	258000	243200	316700	355700	e361900	350300	328300
13	331100	308500	e296400	290000	283300	256100	243100	321600	360100	e362100	349900	327600
14	330200	307900	e296600	289800	283100	254800	243300	325600	362200	e361900	349500	326700
15	329400	307300	e296300	289800	282700	253400	244200	333300	e363100	361200	349000	325900
16	328700	306700	e295500	291100	282800	252200	246400	347000	e362900	360400	348700	324900
17	327900	306100	e295000	e291800	282100	251400	247500	338700	e362900	359200	348400	324200
18	327200	305600	e294200	292600	281000	251100	248100	329600	e363500	358100	348100	323400
19	326400	304900	e294200	293100	283600	251200	e247900	324000	e363700	357600	347600	322500
20	325500	304400	e294200	293200	283900	251600	e247400	320500	e363700	357000	346900	321600
21	324700	303800	e294900	293600	283400	251900	e245900	317100	e363100	356700	346300	320800
22	324100	303100	e293700	293500	282400	252200	e245200	313200	e362700	356100	345800	319800
23	323100	302600	e293300	293200	281100	251700	e245200	310800	e362500	356200	345000	318800
24	322200	302000	292500	292900	279800	250700	e246800	308500	362300	356300	344400	317800
25	321200	301300	292100	292700	278600	249500	e249900	306300	362100	356400	343700	316900
26	320300	300800	291800	291700	276900	248300	e256100	305000	361500	356400	343000	316100
27	319500	300200	291500	290200	275200	247000	e260600	305200	360300	356300	342500	315300
28	318800	299600	291600	289000	273300	246400	e264800	305700	359200	356200	341700	314500
29	318300	299000	291600	287000	271400	245100	267800	307400	358700	356100	340900	313900
30	317400	298400	291900	285000	---	243900	274400	309700	359200	356000	340100	312800
31	316600	---	292400	283000	---	242700	---	312600	---	355700	339300	---
MAX	340000	315700	297700	293600	287800	269500	274400	347000	363700	362500	355300	338600
MIN	316600	298400	291500	283000	271400	242700	238300	281700	316500	355700	339300	312800
a	3783.29	3773.58	3770.28	3765.16	3758.72	3742.22	3760.41	3781.18	3805.41	3803.64	3795.21	3781.29
b	-24600	-18200	-6000	-9400	-11600	-28700	+31700	+38200	+46600	-3500	-16400	-26500

CAL YR 1995 b +95600
WTR YR 1996 b -28400

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 sea level, 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.--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, 13,600 ft³/s, July 9, 1995, gage height, 14.37 ft; no flow at times in 1968-70.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	62	54	51	119	125	151	171	1270	186	127	119
2	61	62	48	45	147	124	152	177	1600	401	127	117
3	50	62	48	39	148	128	150	183	1890	859	127	116
4	52	62	48	38	164	138	149	186	2960	963	127	116
5	50	62	48	38	184	142	149	190	3530	783	125	116
6	47	62	48	e38	167	128	149	325	3570	566	124	120
7	45	62	50	e38	157	122	149	1010	3650	489	124	130
8	45	62	50	e38	155	123	149	2470	3720	488	123	128
9	56	62	50	e38	155	128	149	2980	3760	474	121	128
10	51	62	50	e38	153	125	149	2960	3780	444	127	129
11	55	62	51	38	150	123	149	2960	3500	371	129	129
12	60	62	57	38	148	124	149	3000	2380	574	129	129
13	60	62	53	38	147	116	149	3070	1680	685	129	129
14	60	61	53	38	145	138	149	3310	2260	771	128	129
15	60	60	e53	38	145	138	149	3570	2960	628	128	98
16	60	60	e52	46	145	138	151	6950	2870	324	128	76
17	60	57	e52	45	144	138	152	9640	2380	199	128	86
18	60	56	e52	44	142	136	154	9380	1860	195	128	87
19	60	60	e52	55	169	136	153	5680	1920	170	127	83
20	60	60	e52	44	163	136	153	3550	2000	134	125	83
21	60	60	e52	44	159	136	152	3490	1990	132	125	83
22	60	61	e52	43	155	136	152	3430	1600	129	124	83
23	60	62	e52	43	150	135	152	2650	1330	124	122	83
24	60	62	52	48	148	135	152	1990	1300	124	120	82
25	60	62	51	58	144	134	152	1800	1040	123	118	80
26	60	61	51	45	140	132	152	1780	836	123	118	80
27	61	61	51	103	136	132	153	1780	606	123	118	80
28	61	61	52	129	132	133	155	1200	375	123	120	81
29	61	61	52	125	129	141	159	844	233	123	121	83
30	60	61	52	122	---	149	165	856	197	122	121	83
31	61	---	52	120	---	149	---	870	---	123	121	---
TOTAL	1788	1832	1590	1705	4340	4118	4548	82452	63047	11073	3860	3066
MEAN	57.7	61.1	51.3	55.0	150	133	152	2660	2102	357	125	102
MAX	72	62	57	129	184	149	165	9640	3780	963	129	130
MIN	45	56	48	38	119	116	149	171	197	122	118	76
AC-FT	3550	3630	3150	3380	8610	8170	9020	163500	125100	21960	7660	6080

e Estimated.

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.1	63.0	62.4	62.4	69.5	74.0	237	1087	1755	869	168	73.8
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	360575	183419	
ANNUAL MEAN	988	501	382
HIGHEST ANNUAL MEAN			1433
LOWEST ANNUAL MEAN			49.5
HIGHEST DAILY MEAN	11400	Jul 10	11400
LOWEST DAILY MEAN	36	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	49	Dec 2	.00
INSTANTANEOUS PEAK FLOW			9920
INSTANTANEOUS PEAK STAGE			13.09
ANNUAL RUNOFF (AC-FT)	715200	363800	276400
10 PERCENT EXCEEDS	3280	1780	993
50 PERCENT EXCEEDS	139	127	61
90 PERCENT EXCEEDS	53	50	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. Interruptions in record were due to malfunction of the recording instrument. Water temperature can be affected by releases from O'Shaughnessy Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 19.5°C, July 12, 1996; minimum recorded, 4.0°C, Mar. 25, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 19.5°C, July 12; minimum recorded, 7.0°C, minimum recorded Mar. 23, 25, 29.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

SAN JOAQUIN RIVER BASIN

11276500 TUOLUMNE RIVER NEAR HETCH-HETCHY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

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 sea level, 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, 13,400 ft³/s, July 9, 1995, gage height, 22.23 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	62	60	57	190	204	234	195	1140	196	134	125
2	73	64	50	56	194	207	305	198	1610	300	133	123
3	57	64	47	49	199	221	241	203	1870	756	133	122
4	52	63	48	46	360	404	227	206	2870	958	133	122
5	57	64	47	46	643	550	213	209	3640	807	132	122
6	52	64	47	45	370	330	206	251	3680	599	131	122
7	50	63	49	45	272	274	200	794	3750	493	130	134
8	47	62	50	45	245	250	195	2400	3830	482	129	135
9	51	62	50	45	229	251	192	3240	3870	475	128	135
10	58	62	50	45	217	238	191	3220	3900	453	130	135
11	50	62	60	44	207	255	189	3210	3680	385	137	134
12	59	62	141	44	199	348	187	3260	2690	488	136	135
13	60	62	96	44	193	271	186	3340	1700	662	136	135
14	60	62	78	44	189	263	183	3530	2190	744	135	135
15	60	59	65	44	186	243	182	3850	3040	674	134	128
16	60	59	64	77	185	231	196	6670	3020	399	133	85
17	61	59	59	133	183	222	230	10100	2560	225	133	84
18	61	54	58	70	179	215	248	9880	1960	205	133	88
19	60	58	57	155	424	208	221	6660	1960	199	133	87
20	60	59	57	107	520	202	208	3700	2070	145	132	86
21	60	59	56	90	380	197	200	3640	2080	141	131	86
22	60	59	55	88	377	193	194	3570	1690	139	130	86
23	60	59	55	75	306	191	190	2920	1360	132	129	86
24	59	59	54	84	295	186	187	2150	1290	132	126	85
25	59	59	53	232	269	183	186	1870	1080	131	125	83
26	59	60	53	133	246	179	184	1840	866	131	124	82
27	59	59	53	188	229	176	184	1830	635	131	123	82
28	59	59	53	325	217	229	184	1390	452	131	127	82
29	60	59	57	207	209	213	186	836	269	130	129	86
30	60	60	66	185	---	212	191	842	223	129	128	86
31	59	---	60	194	---	204	---	852	---	129	127	---
TOTAL	1816	1818	1848	3042	7912	7550	6120	86856	64975	11101	4054	3216
MEAN	58.6	60.6	59.6	98.1	273	244	204	2802	2166	358	131	107
MAX	74	64	141	325	643	550	305	10100	3900	958	137	135
MIN	47	54	47	44	179	176	182	195	223	129	123	82
AC-FT	3600	3610	3670	6030	15690	14980	12140	172300	128900	22020	8040	6380

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.3	75.8	90.0	111	135	155	289	1086	1741	895	182	82.0
MAX	142	552	708	376	341	814	1564	3339	6142	5424	1319	132
(WY)	1987	1987	1983	1974	1974	1983	1983	1982	1983	1995	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1971 - 1996	
ANNUAL TOTAL	401680		200308			
ANNUAL MEAN	1100		547		408	
HIGHEST ANNUAL MEAN					1584	
LOWEST ANNUAL MEAN					53.5	
HIGHEST DAILY MEAN	11900	Jul 10	10100	May 17	11900	Jul 10 1995
LOWEST DAILY MEAN	47	Oct 8	44	Jan 11	25	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	48	Dec 2	44	Jan 9	27	Oct 11 1988
INSTANTANEOUS PEAK FLOW			10600	May 17	13400	Jul 9 1995
INSTANTANEOUS PEAK STAGE			21.50	May 17	22.23	Jul 9 1995
ANNUAL RUNOFF (AC-FT)	796700		397300		295800	
10 PERCENT EXCEEDS	3480		1850		986	
50 PERCENT EXCEEDS	230		136		81	
90 PERCENT EXCEEDS	59		56		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 600 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, 23.0°C, July 30, 31; minimum recorded, 4.5°C, Dec. 21, 22, 25-27, Feb. 28.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	13.5	13.5	12.5	8.5	7.5	8.0	7.0	9.0	8.0	8.5	6.0
2	16.0	13.5	13.0	12.0	8.5	8.0	7.5	7.0	8.5	7.5	9.0	6.5
3	16.5	13.5	12.5	11.5	8.5	7.5	7.5	6.5	9.0	8.0	9.0	7.5
4	16.0	13.5	12.0	10.5	10.0	8.5	7.0	6.5	9.0	8.5	8.5	7.5
5	16.0	13.0	11.5	10.0	10.0	9.0	7.0	6.5	9.0	8.5	7.5	6.0
6	15.5	13.0	11.0	10.0	9.5	8.5	7.0	6.0	9.0	8.5	7.5	5.5
7	15.5	13.0	11.0	9.5	9.5	9.0	6.5	6.0	9.5	8.0	8.5	6.5
8	15.5	13.0	11.0	9.5	9.5	8.5	7.0	6.0	9.5	8.5	9.5	7.5
9	15.0	12.5	11.5	10.0	9.0	8.0	7.5	6.5	9.5	8.5	10.0	8.5
10	15.5	13.0	11.0	10.0	8.5	7.5	7.5	6.5	10.0	9.0	10.0	8.5
11	15.0	12.5	11.0	9.5	9.0	8.5	6.5	6.0	10.0	9.0	9.5	8.5
12	15.0	12.5	11.0	10.0	9.0	9.0	6.5	5.5	10.0	8.5	8.5	7.5
13	15.0	12.5	11.0	10.0	9.5	8.5	6.5	6.0	10.0	8.5	9.0	7.5
14	15.0	12.5	11.0	9.5	8.5	7.5	6.5	5.5	10.0	8.5	10.0	7.5
15	15.0	13.0	11.0	9.5	7.5	7.0	7.0	6.0	10.0	8.5	10.5	8.0
16	15.0	13.0	10.5	9.5	7.0	6.5	7.5	7.0	10.5	9.5	11.0	8.5
17	14.5	12.5	10.5	9.5	6.5	5.5	8.0	7.5	10.5	9.5	11.5	9.0
18	14.5	12.5	10.5	9.5	7.0	5.5	8.0	7.5	10.0	9.0	12.0	9.5
19	14.5	12.5	10.5	9.5	6.0	5.5	8.0	7.5	9.5	9.0	12.5	10.0
20	15.0	12.5	10.5	9.0	5.5	5.0	7.5	6.5	9.0	8.0	12.5	10.0
21	14.5	12.5	10.5	9.5	5.0	4.5	7.0	5.5	8.0	7.0	12.5	10.0
22	13.5	12.0	10.0	9.0	5.5	4.5	6.0	5.0	7.0	5.5	10.5	9.5
23	13.0	12.0	9.5	8.5	6.5	5.5	5.5	5.0	7.0	5.5	10.5	8.5
24	12.5	10.5	10.0	8.5	6.0	5.0	6.0	5.0	7.0	6.0	10.5	8.0
25	12.0	10.0	9.5	9.0	5.0	4.5	6.5	5.5	6.5	5.5	10.5	8.0
26	12.0	10.0	10.0	9.0	5.0	4.5	6.5	5.5	6.0	5.0	10.5	7.5
27	12.0	10.0	9.0	8.5	5.5	4.5	6.5	6.5	5.5	5.0	11.0	8.0
28	12.5	11.0	9.0	8.0	6.0	5.0	6.5	6.0	6.5	4.5	10.5	8.5
29	13.0	11.0	9.0	8.0	7.0	6.0	7.0	6.0	7.0	5.5	10.0	8.0
30	13.0	11.5	8.5	7.5	8.5	7.0	8.0	7.0	---	---	10.5	7.5
31	13.0	11.5	---	---	8.5	8.0	8.5	8.0	---	---	11.5	8.5
MONTH	16.5	10.0	13.5	7.5	10.0	4.5	8.5	5.0	10.5	4.5	12.5	5.5

SAN JOAQUIN RIVER BASIN

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	9.0	16.0	12.5	12.0	10.0	19.0	15.0	22.5	19.5	18.5	15.5
2	10.0	8.0	15.5	12.5	12.0	10.0	19.0	16.0	22.0	18.5	18.5	15.5
3	11.0	8.5	15.0	12.0	12.0	10.0	18.0	16.0	21.0	18.0	18.5	15.5
4	11.5	9.0	14.5	11.5	11.5	10.0	18.0	16.5	20.5	17.0	18.0	15.5
5	12.5	9.0	14.0	11.0	11.5	9.5	18.0	16.5	20.5	17.0	17.5	15.0
6	13.5	10.0	14.0	11.0	11.5	10.0	18.5	17.0	20.5	17.0	17.0	14.5
7	14.0	10.5	12.0	10.0	11.5	10.0	19.5	17.5	21.0	17.5	17.0	14.5
8	14.0	11.0	10.0	8.5	11.5	10.0	19.5	18.0	21.5	18.0	17.0	14.5
9	13.5	11.0	10.5	8.5	11.5	10.0	20.0	18.0	21.5	18.0	17.5	14.5
10	13.5	10.5	10.5	8.5	11.5	10.0	20.0	18.5	22.0	18.5	17.5	14.5
11	13.0	10.0	10.5	9.0	11.5	10.0	20.5	18.5	22.0	19.0	17.5	15.0
12	12.5	10.5	11.0	9.0	12.5	10.0	20.0	18.0	22.0	19.0	17.0	14.5
13	12.5	9.5	11.0	9.0	12.5	10.5	21.0	19.5	21.5	19.0	15.5	14.0
14	13.0	9.5	10.0	9.0	13.5	10.5	21.5	19.5	22.0	19.0	15.5	13.0
15	12.0	10.0	10.0	9.5	14.0	12.0	21.0	19.5	21.5	18.5	15.0	13.0
16	11.0	10.0	9.5	9.5	14.0	12.0	21.0	19.0	21.5	18.5	16.0	13.5
17	10.0	9.5	9.5	9.5	14.0	12.0	21.0	18.0	20.5	17.5	16.5	13.5
18	11.0	8.5	9.5	9.0	15.0	12.0	20.0	17.5	19.5	17.0	16.5	13.5
19	10.5	8.5	10.5	9.0	15.5	13.5	19.5	16.5	19.0	16.0	16.5	13.5
20	10.0	8.5	10.5	9.0	15.5	14.0	20.5	16.5	18.0	15.5	17.0	14.0
21	12.0	8.5	10.0	9.0	15.5	13.5	21.0	17.0	17.5	15.5	17.0	14.5
22	12.5	9.0	10.5	9.0	15.5	13.0	21.0	17.5	17.0	15.0	17.5	14.5
23	14.0	10.5	10.0	9.0	16.0	13.5	21.5	18.0	18.0	15.5	17.5	15.0
24	14.5	11.0	11.0	9.0	15.0	13.5	22.0	18.5	19.0	16.0	17.5	15.0
25	15.0	11.5	11.0	9.5	13.5	13.0	22.5	19.0	19.5	16.5	17.0	14.5
26	16.0	12.0	11.5	9.5	13.0	12.5	22.0	19.0	19.5	16.5	17.0	14.5
27	16.0	12.5	11.0	9.5	13.0	12.0	21.0	19.0	19.0	16.5	17.0	14.5
28	15.5	12.0	11.5	9.5	14.0	12.0	22.0	18.5	18.0	16.0	17.0	14.5
29	15.5	12.0	11.5	10.0	16.5	13.0	22.5	19.0	17.5	15.5	17.0	15.0
30	16.0	12.0	11.5	10.0	17.5	14.0	23.0	19.0	17.5	15.5	17.0	15.0
31	---	---	12.0	10.0	---	---	23.0	19.5	18.0	15.5	---	---
MONTH	16.0	8.0	16.0	8.5	17.5	9.5	23.0	15.0	22.5	15.0	18.5	13.0

SAN JOAQUIN RIVER BASIN

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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 sea level, 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, 13,800 ft³/s, July 9, 1995, gage height, 11.33 ft; minimum daily, 12 ft³/s, Nov. 28-30, 1976.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	58	57	52	1050	1000	978	936	1910	1080	131	117
2	72	60	53	51	1060	1010	1050	959	2260	1200	129	115
3	53	60	45	44	1060	1020	986	980	2640	1690	128	113
4	45	60	44	40	1220	1200	975	1020	3500	1910	128	112
5	49	60	44	39	1520	1350	974	924	4220	1760	128	111
6	50	60	44	39	1200	1100	949	1040	4270	1540	127	111
7	46	60	44	38	1100	1020	935	1560	4330	1420	126	123
8	44	60	47	38	967	987	935	3010	4390	1410	125	125
9	42	60	47	38	940	1010	927	3710	4460	1400	123	124
10	51	60	47	37	938	914	928	3690	4510	1370	124	123
11	50	60	51	37	927	1040	906	3670	4280	1300	131	123
12	50	60	133	37	1030	1120	904	3640	3370	1400	131	123
13	55	60	104	36	1000	1050	886	3800	2500	1580	131	124
14	56	60	75	36	558	1030	892	4020	2880	1620	127	124
15	57	59	60	36	558	996	908	4360	3580	1580	103	119
16	57	58	59	61	680	983	923	6880	3560	1290	125	78
17	57	57	54	148	1020	966	922	10200	3190	1090	126	75
18	57	55	53	69	1020	944	974	9860	2680	866	126	82
19	57	54	50	170	1260	925	946	6720	2660	491	126	80
20	56	56	50	114	1370	912	929	4230	2720	348	124	80
21	56	57	49	90	1210	910	918	4160	2740	167	122	79
22	56	57	49	88	1200	904	919	4130	2450	307	120	79
23	57	57	49	73	1140	899	912	3440	2150	128	119	81
24	57	57	48	83	1110	899	910	2650	2100	127	118	81
25	57	57	48	264	911	905	906	2680	1910	122	117	76
26	57	58	47	565	1030	906	908	2660	1710	125	116	75
27	57	58	47	917	1010	906	908	2660	1480	126	115	75
28	57	57	47	812	1020	957	910	2260	1310	126	119	75
29	56	57	51	992	1010	941	915	1730	1120	125	121	79
30	57	57	63	997	---	947	909	1730	1100	123	119	79
31	57	---	55	1050	---	944	---	1740	---	162	119	---
TOTAL	1699	1749	1714	7091	30119	30695	27942	105049	85980	27983	3824	2961
MEAN	54.8	58.3	55.3	229	1039	990	931	3389	2866	903	123	98.7
MAX	72	60	133	1050	1520	1350	1050	10200	4510	1910	131	125
MIN	42	54	44	36	558	899	886	924	1100	122	103	75
AC-FT	3370	3470	3400	14060	59740	60880	55420	208400	170500	55500	7580	5870

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	85.2	109	134	191	254	324	452	1290	1957	1004	247	124
MAX	247	313	876	735	1039	990	1694	3727	6260	5530	1726	370
(WY)	1984	1984	1983	1995	1996	1996	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1968 - 1996			
ANNUAL TOTAL	511318				326806							
ANNUAL MEAN	1401				893				514			
HIGHEST ANNUAL MEAN									1778			
LOWEST ANNUAL MEAN									49.2			
HIGHEST DAILY MEAN	11600				10200				11600			
LOWEST DAILY MEAN	42				36				12			
ANNUAL SEVEN-DAY MINIMUM	45				37				13			
INSTANTANEOUS PEAK FLOW					10600				13800			
INSTANTANEOUS PEAK STAGE					10.33				11.33			
ANNUAL RUNOFF (AC-FT)	1014000				648200				372700			
10 PERCENT EXCEEDS	3970				2650				1310			
50 PERCENT EXCEEDS	859				140				132			
90 PERCENT EXCEEDS	55				50				43			

11277100 LAKE ELEANOR DIVERSION TUNNEL TO CHERRY LAKE, NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'47", long 119°52'51", in SW 1/4 SW 1/4 sec.34, T.2 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on west side of Lake Eleanor 0.5 mi northwest of Eleanor Dam and 6.0 mi northwest of Hetch Hetchy.

PERIOD OF RECORD.--July 1996 to August 1996.

GAGE.--Ultrasonic-velocity meter system. Elevation of gage is 4,670 ft above sea level, from topographic map.

REMARKS.--Records fair. Instrumentation damaged by forest fire on Aug. 26. Flow is gravity flow or regulated by pump station at Cherry Lake (11277200). Diversion from Lake Eleanor (station 11277500) to Cherry Lake began in March 1960. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 284 ft³/s, Aug. 3, 1996; minimum daily 232 ft³/s, Aug. 4, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	274	---
2	---	---	---	---	---	---	---	---	---	---	263	---
3	---	---	---	---	---	---	---	---	---	---	284	---
4	---	---	---	---	---	---	---	---	---	---	232	---
5	---	---	---	---	---	---	---	---	---	---	269	---
6	---	---	---	---	---	---	---	---	---	---	271	---
7	---	---	---	---	---	---	---	---	---	---	262	---
8	---	---	---	---	---	---	---	---	---	---	278	---
9	---	---	---	---	---	---	---	---	---	---	268	---
10	---	---	---	---	---	---	---	---	---	---	267	---
11	---	---	---	---	---	---	---	---	---	---	266	---
12	---	---	---	---	---	---	---	---	---	---	245	---
13	---	---	---	---	---	---	---	---	---	---	268	---
14	---	---	---	---	---	---	---	---	---	---	266	---
15	---	---	---	---	---	---	---	---	---	---	262	---
16	---	---	---	---	---	---	---	---	---	---	251	---
17	---	---	---	---	---	---	---	---	---	---	249	---
18	---	---	---	---	---	---	---	---	---	---	256	---
19	---	---	---	---	---	---	---	---	---	---	254	---
20	---	---	---	---	---	---	---	---	---	---	243	---
21	---	---	---	---	---	---	---	---	---	---	253	---
22	---	---	---	---	---	---	---	---	---	---	252	---
23	---	---	---	---	---	---	---	---	---	---	254	---
24	---	---	---	---	---	---	---	---	---	---	251	---
25	---	---	---	---	---	---	---	---	---	---	253	---
26	---	---	---	---	---	---	---	---	---	---	e250	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e250	---	---
31	---	---	---	---	---	---	---	---	---	251	---	---

e Estimated.

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 sea level. 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, 273,000 acre-ft, June 14, gage height, 4,702.29 ft; minimum, 213,700 acre-ft, Sept. 30, gage height, 4,667.73 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258000	243200	242600	246900	237900	244600	233000	228300	262200	270800	260500	241300
2	256700	243300	242600	246600	236500	243800	232200	230000	263500	270300	259700	240700
3	255300	243500	242600	247100	235800	243100	231100	231100	265000	269900	259000	240100
4	253700	243300	242800	247100	240000	243300	229900	231700	266900	270100	258700	239200
5	252100	243300	242800	246800	246900	242600	228800	232400	268200	269400	258000	238300
6	250900	243200	242900	246900	249000	241900	228100	233100	269600	269300	257300	237300
7	250400	243200	242900	247100	249400	241200	228000	234000	271300	269200	256600	236400
8	250000	243200	243000	246800	249300	240700	228000	234900	272600	268400	255800	235600
9	248900	243100	242900	246700	249100	240300	228200	235200	272900	267700	255100	234800
10	247600	243100	243000	246300	248700	239900	228100	236200	272500	267000	254400	233900
11	246100	243000	244300	246200	248300	239800	227700	237700	272000	266400	253700	233000
12	244600	243000	250700	245900	248000	239600	227100	239900	272000	266600	253000	232200
13	243300	243000	251400	246000	247700	239100	226300	242200	272600	267400	252000	231500
14	242200	242900	251700	246100	247400	238400	226300	244100	273000	268500	251200	230800
15	242400	242900	251900	246200	246900	237900	226100	251000	272900	268600	250700	230300
16	242600	243000	251700	247700	247600	237300	226700	264100	272700	268800	249900	229400
17	243100	242900	251600	248100	247700	237400	226600	263600	272700	268900	249300	228500
18	243400	242800	251400	248100	247700	237300	225900	266400	272700	268700	249900	227400
19	243700	242800	251200	248000	250600	237700	224800	265300	272600	268300	249200	226500
20	243500	242800	250300	247500	251200	238000	223600	263500	272500	267700	248500	225400
21	243700	242800	249600	247100	251200	238300	222100	261800	272400	267400	248100	224400
22	244100	242800	248800	246300	250700	238300	220900	260800	272000	266700	247500	223500
23	243900	242700	248400	245600	250200	238100	220100	260800	271500	266100	246700	222400
24	243700	242700	248200	245100	249900	237500	220100	260000	271100	265400	246100	220800
25	243500	242700	248200	244500	249100	237300	220600	259500	271000	264700	246500	219300
26	243300	242700	247400	243300	248300	236900	221700	259300	271600	264000	245500	218000
27	243100	242700	247000	243000	247500	236300	223000	259800	271500	263500	244600	216500
28	243300	242700	246000	242200	246500	236300	223900	259900	271100	263000	243800	215300
29	243600	242600	245300	241500	245600	235300	224800	260300	271200	262400	243100	214300
30	243300	242600	246300	240600	---	234300	226500	260600	271200	261800	242300	213700
31	243000	---	247100	239400	---	233200	---	261200	---	261200	241800	---
MAX	258000	243500	251900	248100	251200	244600	233000	266400	273000	270800	260500	241300
MIN	242200	242600	242600	239400	235800	233200	220100	228300	262200	261200	241800	213700
a	-15800	-400	+4500	-7700	+6200	-12400	-6700	+34700	+10000	-10000	-19400	-28100
b	4685.19	4684.99	4687.60	4683.10	4686.71	4679.49	4675.49	4695.64	4701.33	4695.64	4684.51	4667.73

CAL YR 1995 b +77700

WTR YR 1996 b -45100

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 sea level (levels by city and county of San Francisco).

REMARKS.--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, 5,120 ft³/s, from rating curve extended above 4,000 ft³/s, May 16, 1996, gage height, 11.15 ft; minimum daily, 0.77 ft³/s, Dec. 1-4, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	4.8	5.2	5.5	6.4	9.7	8.1	7.3	6.2	13	14	15
2	11	4.8	5.2	5.5	6.1	9.4	7.7	6.9	6.1	15	14	15
3	8.9	4.8	5.2	5.8	6.2	9.6	6.8	6.8	6.0	15	14	15
4	8.9	4.8	5.2	5.7	29	23	6.6	6.6	6.0	15	14	15
5	6.1	4.8	5.2	5.7	32	27	6.5	6.8	5.9	15	14	15
6	4.3	4.8	5.2	5.2	18	17	6.4	6.5	5.6	15	14	15
7	4.2	4.8	5.2	5.2	15	14	6.2	6.5	5.6	15	14	15
8	4.2	5.0	5.2	5.2	13	13	6.2	6.5	103	15	14	15
9	4.2	5.2	5.2	5.2	12	12	6.2	6.3	398	15	13	15
10	4.2	5.2	5.2	5.2	11	12	6.2	6.2	476	15	13	15
11	4.2	5.2	6.2	5.2	11	15	6.1	6.1	361	15	13	15
12	4.3	5.2	11	5.2	10	18	5.8	5.9	95	15	13	16
13	4.5	5.2	5.6	5.0	9.9	14	5.9	5.6	6.9	15	13	15
14	4.5	5.2	5.4	4.8	9.4	12	6.2	5.6	6.8	15	13	15
15	4.5	5.2	5.2	4.8	8.9	11	5.6	5.9	6.7	14	13	13
16	4.5	5.2	5.2	12	8.9	10	5.8	2030	6.7	15	13	13
17	4.5	5.2	4.9	7.0	8.1	9.6	8.3	2680	6.4	15	13	15
18	4.5	5.2	4.8	6.0	7.6	8.8	10	912	6.3	15	13	15
19	4.6	5.2	5.1	7.1	40	8.3	7.8	911	6.2	15	13	16
20	4.8	5.2	5.2	5.9	30	7.8	7.4	907	6.2	15	13	18
21	4.8	5.2	5.2	5.6	24	7.4	7.1	906	6.2	15	14	17
22	4.8	5.2	5.3	4.9	18	7.2	6.8	440	6.8	15	15	17
23	4.8	5.2	5.5	4.6	15	6.8	6.8	7.9	7.3	15	15	17
24	4.8	5.2	5.3	4.5	14	6.4	6.9	7.2	7.2	15	15	17
25	4.8	5.2	5.2	4.8	13	6.2	6.9	6.9	9.5	15	15	17
26	5.0	5.2	5.2	4.6	11	5.9	6.9	6.7	10	15	15	17
27	4.9	5.2	5.2	8.0	11	5.8	6.9	6.5	8.4	14	15	17
28	4.8	5.2	5.2	7.3	10	8.1	7.3	6.5	8.7	14	15	17
29	4.8	5.2	5.5	5.6	9.8	6.3	7.3	6.4	10	14	15	17
30	4.8	5.2	5.9	5.5	---	6.2	7.3	6.4	9.9	14	15	17
31	4.8	---	5.5	6.8	---	6.2	---	6.3	---	14	15	---
TOTAL	168.0	153.0	169.6	179.4	418.3	333.7	206.0	8942.3	1610.6	457	432	471
MEAN	5.42	5.10	5.47	5.79	14.4	10.8	6.87	288	53.7	14.7	13.9	15.7
MAX	14	5.2	11	12	40	27	10	2680	476	15	15	18
MIN	4.2	4.8	4.8	4.5	6.1	5.8	5.6	5.6	5.6	13	13	13
AC-FT	333	303	336	356	830	662	409	17740	3190	906	857	934

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.4	12.8	11.7	11.9	11.8	15.9	14.4	42.2	139	105	29.3	22.5
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	50459.0				13540.9							
ANNUAL MEAN	138				37.0							
HIGHEST ANNUAL MEAN									35.6			
LOWEST ANNUAL MEAN									195			
HIGHEST DAILY MEAN	2830				2680				7.08			
LOWEST DAILY MEAN	4.2				4.2				2830			
ANNUAL SEVEN-DAY MINIMUM	4.2				4.2				.77			
INSTANTANEOUS PEAK FLOW					5120				.79			
INSTANTANEOUS PEAK STAGE					11.15				5120			
ANNUAL RUNOFF (AC-FT)	100100				26860				11.15			
10 PERCENT EXCEEDS	458				15				25790			
50 PERCENT EXCEEDS	8.4				7.1				17			
90 PERCENT EXCEEDS	4.9				4.8				7.2			
									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 sea level. 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, 27,500 acre-ft, May 16, gage height, 4,661.36 ft; minimum, 0 acre ft, gage height, 4,605.00 ft, many days in November and several days in September.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10700	e1670	38	7190	18000	21300	25400	25600	25200	26000	22500	8580
2	e10300	e1480	39	7430	18300	21100	25400	25600	25300	26300	22000	8210
3	e9980	e1290	38	7770	18600	21100	25300	25500	25400	26500	21500	7840
4	e9500	0	39	8030	21500	21800	25200	25300	25400	26600	21100	7460
5	e9260	0	39	8260	26800	22400	25200	25200	25500	26700	20600	7070
6	e8950	0	39	8460	25800	22400	25400	25200	25700	26800	20100	6670
7	e8500	0	40	8670	25000	22400	25600	25200	26000	26800	19700	6270
8	e8160	0	40	8870	24400	22300	25800	25100	26400	26900	19200	5850
9	e7810	0	40	9080	24000	22400	25500	25000	26700	26900	18700	5420
10	e7400	0	41	9260	23600	22600	25200	25000	26800	26900	18300	5020
11	e7260	0	72	9430	23300	23000	25000	25200	26800	27000	17800	4640
12	e6780	0	5490	9590	23200	23300	24800	25400	26800	27000	17300	4250
13	e6440	0	7000	9760	23200	23300	24500	25500	26900	27000	16900	3860
14	e6020	0	7550	9910	23200	23300	24300	25500	26900	27000	16400	3460
15	e5820	0	7770	10100	23100	23200	24300	26800	26800	27000	15900	3050
16	e5610	0	7830	11300	23500	23300	25000	27500	26700	26900	15500	2630
17	e5100	0	7820	12200	23900	23500	25200	26300	26300	26800	15000	2250
18	e4820	0	7750	12800	24100	24000	25000	26400	26100	26700	14600	1950
19	e3970	0	7660	13300	26300	24500	24600	25700	26100	26500	14100	1730
20	e4140	0	7520	13700	25700	25100	24100	25300	26100	26300	13600	1560
21	e3690	0	7350	14100	25400	25300	23500	25100	26000	26200	13200	1420
22	e3410	0	7190	14400	24900	25200	22900	25200	26000	26000	12700	1300
23	e3130	36	7010	14700	24400	24800	22700	25300	25800	25800	12300	1200
24	e2840	36	6810	15200	24000	24400	22900	25100	25700	25600	11900	0
25	e2620	0	6590	15500	23400	24000	23300	25000	25600	25400	11400	0
26	e1920	0	6380	15800	23000	23900	24100	25000	25600	25200	11100	0
27	e3010	0	6180	16300	22600	23700	24800	25100	25600	24700	10800	0
28	e2840	36	5990	16600	22100	23900	25200	25100	25500	24300	10300	0
29	e2560	37	5960	16900	21700	24100	25400	25100	25400	23800	9890	0
30	e2300	38	6520	17200	---	24400	25500	25100	25700	23400	9440	0
31	e1960	---	6980	17600	---	24700	---	25100	---	23000	8990	---
MAX	10700	1670	7830	17600	26800	25300	25800	27500	26900	27000	22500	8580
MIN	1920	0	38	7190	18000	21100	22700	25000	25200	23000	8990	0
a	4629.0	4620.6	4637.5	4650.7	4655.2	4658.5	4659.3	4658.9	4659.5	4656.6	4640.4	4608.2
b	-8940	-1922	+6942	+10620	+4100	+3000	+800	-400	+600	-2700	-14010	-8990

CAL YR 1995 b +6980

WTR YR 1996 b -10900

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 sea level, from topographic map. November 1909 to November 1915, nonrecording gage and water-stage recorder at site 1 mi upstream at different datum.

REMARKS.--Records good. Flow regulated by Lake Eleanor (station 11277500) 0.5 mi upstream beginning in 1918. Since March 1960, water is diverted at Lake Eleanor via Lake Eleanor diversion tunnel (station 11277100) to Cherry Lake (station 11277200). 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	5.2	8.4	6.8	124	231	992	434	24	20	20
2	9.0	10	5.2	8.5	6.6	42	468	1010	466	24	20	20
3	5.9	107	5.6	8.5	6.5	10	458	937	522	24	20	20
4	9.7	139	5.6	8.3	22	16	402	810	576	24	20	20
5	12	91	5.6	6.7	584	14	383	728	543	24	20	20
6	12	68	5.6	5.9	1540	11	417	705	434	24	20	20
7	12	52	5.6	6.0	835	11	522	706	366	25	20	21
8	12	40	5.6	5.9	564	11	670	707	368	26	20	20
9	12	33	5.6	5.7	430	11	904	661	368	26	21	20
10	12	27	5.6	5.6	368	12	819	643	366	26	21	20
11	11	23	6.9	5.7	355	13	690	659	366	27	21	21
12	11	20	14	5.6	244	16	633	749	366	28	21	21
13	11	18	9.2	5.6	179	15	609	881	366	30	21	21
14	11	15	8.6	5.6	177	15	600	898	366	30	21	21
15	11	14	8.4	5.7	177	14	596	1250	365	29	20	20
16	11	14	8.1	12	179	14	605	5200	363	27	20	17
17	11	9.2	7.9	6.8	190	14	676	2470	363	25	20	13
18	10	6.5	7.6	7.1	200	21	690	2040	181	24	20	11
19	11	7.1	7.6	8.5	455	43	621	1370	25	24	20	11
20	11	7.4	7.6	6.4	1050	71	598	830	24	23	20	11
21	10	7.6	7.4	6.3	663	241	576	669	24	23	21	11
22	10	7.7	7.3	6.1	425	383	562	521	24	23	21	11
23	10	8.1	7.6	6.2	350	326	558	474	24	23	21	11
24	10	8.1	7.6	6.6	332	286	557	459	24	23	20	122
25	10	8.1	7.6	7.3	313	198	559	414	24	23	20	97
26	11	7.5	7.6	6.8	228	145	571	400	24	23	20	72
27	11	6.7	7.6	9.9	177	139	602	405	24	23	20	55
28	11	6.3	7.5	7.3	177	143	667	413	24	22	20	43
29	11	5.7	7.5	6.0	177	145	802	415	23	22	20	34
30	11	5.2	8.3	6.2	---	157	899	425	23	21	20	27
31	11	---	8.1	8.3	---	169	---	426	---	21	20	---
TOTAL	333.6	782.2	225.2	215.5	10410.9	2830	17945	29267	7466	761	629	851
MEAN	10.8	26.1	7.26	6.95	359	91.3	598	944	249	24.5	20.3	28.4
MAX	12	139	14	12	1540	383	904	5200	576	30	21	122
MIN	5.9	5.2	5.2	5.6	6.5	10	231	400	23	21	20	11
AC-FT	662	1550	447	427	20650	5610	35590	58050	14810	1510	1250	1690

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.5	40.0	31.8	39.0	53.9	20.8	80.6	272	328	113	26.3	26.9
MAX	333	565	314	459	586	198	916	1029	1605	677	176	137
(WY)	1983	1984	1984	1970	1986	1986	1982	1995	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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1961 - 1996

ANNUAL TOTAL	94807.5	71716.4	
ANNUAL MEAN	260	196	87.5
HIGHEST ANNUAL MEAN			320
LOWEST ANNUAL MEAN			4.73
HIGHEST DAILY MEAN	3510	May 1	5610
LOWEST DAILY MEAN	5.2	Nov 30	.10
ANNUAL SEVEN-DAY MINIMUM	5.4	Nov 30	.10
INSTANTANEOUS PEAK FLOW			6960
INSTANTANEOUS PEAK STAGE			10.05
ANNUAL RUNOFF (AC-FT)	188100	142200	63360
10 PERCENT EXCEEDS	911	613	254
50 PERCENT EXCEEDS	22	21	7.5
90 PERCENT EXCEEDS	6.3	6.8	4.6

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 September 1996 (discontinued).

GAGE.--Water-stage recorder and concrete canal. Elevation of gage is 2,700 ft above sea level, from topographic map.

REMARKS.--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. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 194 ft³/s, July 30, 1959; no flow at times in 1964, 1969, 1971, 1988-96.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
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	.01	.02	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.05	.02	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.29	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.09	.00	.00	.00	.01	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.11	.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	.04	.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	.04	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.36	0.23	0.21	0.04	0.00	0.01	0.00	0.00	0.00	0.00
MEAN	.000	.000	.012	.007	.007	.001	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.29	.09	.11	.02	.00	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.7	.5	.4	.08	.00	.02	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.3	32.3	27.9	27.5	32.4	33.2	40.2	46.6	48.9	53.2	42.9	39.3
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1956 - 1996

ANNUAL TOTAL	1.21	0.85	
ANNUAL MEAN	.003	.002	35.6
HIGHEST ANNUAL MEAN			179
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	.29 Dec 12	.29 Dec 12	194 Jul 30 1959
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jun 19 1964
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 16	.00 Oct 1	.00 May 25 1971
ANNUAL RUNOFF (AC-FT)	2.4	1.7	25820
10 PERCENT EXCEEDS	.00	.00	176
50 PERCENT EXCEEDS	.00	.00	6.6
90 PERCENT EXCEEDS	.00	.00	.00

SAN JOAQUIN RIVER BASIN

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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 sea level (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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	16	12	19	80	237	311	987	440	38	33	33
2	26	16	12	18	73	157	569	1010	466	42	33	33
3	18	59	12	18	67	117	552	949	517	42	33	33
4	16	171	14	18	236	249	484	840	573	42	33	33
5	21	109	14	18	959	365	450	762	548	41	33	33
6	18	80	13	16	1910	213	472	735	452	41	33	33
7	17	62	13	15	1050	185	564	735	377	41	33	34
8	17	49	13	15	705	174	715	743	424	42	32	34
9	17	41	13	15	557	176	925	707	720	42	32	34
10	17	35	13	15	474	170	879	687	803	42	33	34
11	17	30	20	14	453	218	751	700	723	43	33	33
12	16	27	76	14	367	277	687	786	495	43	33	35
13	16	25	44	14	282	226	658	911	374	44	33	36
14	16	22	30	14	272	180	646	935	374	45	33	35
15	16	21	24	14	265	162	639	1180	373	45	33	35
16	16	19	22	64	270	152	660	8080	372	42	33	31
17	16	19	19	82	275	143	756	5420	371	41	33	29
18	15	14	18	45	280	138	790	2770	262	40	33	25
19	15	13	18	85	778	150	698	2250	39	39	33	25
20	15	13	17	55	1550	165	661	1740	39	38	32	27
21	15	13	17	48	928	299	632	1560	38	38	33	27
22	15	14	17	39	618	453	612	1060	37	37	35	27
23	15	14	17	35	490	413	604	489	37	37	34	27
24	15	14	17	41	468	364	601	482	37	37	34	97
25	15	14	16	65	432	296	600	435	39	36	34	141
26	15	15	16	48	355	225	610	418	46	36	34	100
27	16	14	16	68	286	217	638	421	44	36	34	80
28	16	13	17	109	279	271	697	429	40	36	34	66
29	16	13	18	68	274	254	799	429	39	35	34	56
30	16	12	26	58	---	246	897	436	38	35	33	48
31	16	---	21	75	---	249	---	438	---	34	33	---
TOTAL	522	977	615	1222	15033	7141	19557	39524	9137	1230	1029	1314
MEAN	16.8	32.6	19.8	39.4	518	230	652	1275	305	39.7	33.2	43.8
MAX	27	171	76	109	1910	453	925	8080	803	45	35	141
MIN	15	12	12	14	67	117	311	418	37	34	32	25
AC-FT	1040	1940	1220	2420	29820	14160	38790	78400	18120	2440	2040	2610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	MEAN	24.4	54.2	57.9	92.1	128	109	153	337	468	209	41.6	39.0
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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1961 - 1996	
ANNUAL TOTAL	172503		97301			
ANNUAL MEAN	473		266		142	
HIGHEST ANNUAL MEAN					634	
LOWEST ANNUAL MEAN					8.08	
HIGHEST DAILY MEAN	4200	May 1	8080	May 16	9350	Apr 11 1982
LOWEST DAILY MEAN	12	Nov 30	12	Nov 30	.30	Apr 5 1964
ANNUAL SEVEN-DAY MINIMUM	13	Nov 27	13	Nov 27	1.4	Oct 6 1970
INSTANTANEOUS PEAK FLOW			13400	May 16	16500	Feb 1 1963
INSTANTANEOUS PEAK STAGE			13.67	May 16	14.50	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	342200		193000		103200	
10 PERCENT EXCEEDS	1470		709		356	
50 PERCENT EXCEEDS	115		41		31	
90 PERCENT EXCEEDS	16		15		9.7	

SAN JOAQUIN RIVER BASIN

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 sea level (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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	566	26	14	552	e1020	1250	1190	2080	e1300	782	622	469
2	866	26	14	533	e931	1160	1650	2100	e1420	834	671	494
3	881	50	14	33	e616	1110	1630	2040	e1460	846	645	552
4	925	171	16	179	e524	1240	1560	1910	e1520	513	473	624
5	945	112	16	313	e1400	1390	1520	1820	e1500	796	617	658
6	822	88	15	158	e2910	1200	1540	1790	1550	520	628	703
7	450	72	15	25	e2050	1180	1500	1790	1450	521	633	590
8	410	60	15	329	e1690	1170	1790	1790	1510	838	647	612
9	665	51	15	281	e1530	1170	2020	1750	1710	794	640	661
10	871	45	15	321	e1440	1170	1960	1730	1930	783	648	653
11	921	41	27	193	e1420	1180	1820	1740	1850	729	572	654
12	955	38	377	281	e1320	1290	1750	1820	1590	369	674	596
13	849	31	477	97	e1250	1230	1720	1960	1440	129	802	606
14	743	25	475	94	1280	1170	1440	1980	1440	131	647	525
15	64	24	467	117	1270	1160	1700	2230	1450	365	638	474
16	30	22	465	200	1260	1150	1730	9140	1440	250	600	613
17	27	22	462	327	1270	976	1820	6610	1440	274	557	666
18	27	17	465	323	1270	1130	1860	3720	1320	342	50	655
19	28	15	408	518	1830	1150	1770	3260	1050	472	604	635
20	289	16	693	507	2610	1160	1730	2890	1060	506	596	606
21	28	16	676	506	2030	1320	1700	2730	1060	423	513	576
22	28	16	689	583	1690	1510	1680	2220	1060	500	554	530
23	268	16	435	575	1560	1470	1680	e1440	1060	526	608	626
24	247	16	374	588	1330	1400	1670	e1430	1040	544	607	822
25	255	16	310	638	1490	1060	1670	e1380	1040	578	46	894
26	260	17	621	742	1390	1000	1680	e1370	879	605	652	761
27	235	16	501	637	1280	1220	1700	e1370	880	601	670	770
28	27	16	732	695	1270	1290	1760	e1380	858	558	542	707
29	27	15	736	609	1270	1260	1870	e1380	532	624	637	552
30	240	14	419	676	---	1120	1980	e1390	528	626	652	357
31	257	---	413	963	---	1260	---	e1380	---	622	478	---
TOTAL	13206	1110	10371	12593	42201	37546	51090	71620	38367	17001	17923	18641
MEAN	426	37.0	335	406	1455	1211	1703	2310	1279	548	578	621
MAX	955	171	736	963	2910	1510	2020	9140	1930	846	802	894
MIN	27	14	14	25	524	976	1190	1370	528	129	46	357
AC-FT	26190	2200	20570	24980	83710	74470	101300	142100	76100	33720	35550	36970

e Estimated.

SAN JOAQUIN RIVER BASIN

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11278400 CHERRY CREEK BELOW DION R. HOLM POWERPLANT, NEAR MATHER, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	421	454	463	591	632	677	785	1034	1148	754	523	473
MAX	962	1445	1394	1335	1528	1303	2199	2310	3728	2643	1161	753
(WY)	1983	1984	1984	1970	1986	1983	1982	1996	1983	1983	1983	1968
MIN	12.7	14.9	5.56	4.22	3.84	3.71	2.63	2.67	4.08	11.3	25.8	20.4
(WY)	1994	1994	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1963 - 1996			
ANNUAL TOTAL	417877				331669							
ANNUAL MEAN	1145				906				662			
HIGHEST ANNUAL MEAN									1437			
LOWEST ANNUAL MEAN									47.9			
HIGHEST DAILY MEAN	5520				May 1				9790			
LOWEST DAILY MEAN	14				Nov 30				1.6			
ANNUAL SEVEN-DAY MINIMUM	15				Nov 27				2.1			
INSTANTANEOUS PEAK FLOW					14400				May 16			
INSTANTANEOUS PEAK STAGE					14.89				May 16			
ANNUAL RUNOFF (AC-FT)	828900				657900				479800			
10 PERCENT EXCEEDS	2480				1750				1190			
50 PERCENT EXCEEDS	1010				670				615			
90 PERCENT EXCEEDS	28				28				77			

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 September 1996 (discontinued).

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 sea level, 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.--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 daily, 0.4 ft³/s, Aug. 22, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 4	2245	1,450	7.23	Mar. 4	2100	1,370	7.10
Feb. 20	0045	2,070	8.00	May 16	0745	2,800	8.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	18	18	55	156	171	320	358	160	55	32	13
2	21	18	18	47	115	175	414	350	160	53	30	15
3	21	18	18	44	98	191	314	316	156	53	29	15
4	20	18	18	42	474	607	269	286	148	52	29	14
5	20	18	18	40	952	714	252	272	137	50	29	12
6	20	19	18	38	476	392	263	271	127	48	28	13
7	20	19	19	38	297	323	283	266	123	46	27	14
8	20	18	19	38	233	285	299	261	113	44	27	14
9	20	18	19	37	207	276	310	228	105	43	23	14
10	20	18	19	37	188	266	287	242	97	44	21	14
11	19	18	35	35	173	307	268	266	92	41	20	14
12	18	18	346	35	163	436	262	284	88	39	19	14
13	19	18	163	35	157	363	239	286	87	39	19	14
14	19	18	89	35	152	290	236	269	85	39	12	15
15	19	18	62	35	150	263	254	335	82	38	12	15
16	19	18	49	109	168	257	341	1540	76	37	16	16
17	19	18	43	135	179	260	342	467	71	36	18	16
18	19	18	40	89	157	279	369	425	68	32	18	16
19	19	18	37	147	826	293	284	334	67	24	18	16
20	19	18	35	90	954	298	253	278	64	26	18	15
21	19	18	33	79	553	289	232	259	48	31	e18	15
22	18	18	33	64	419	283	221	235	57	32	e18	16
23	18	17	34	57	317	251	224	222	59	31	e18	16
24	18	17	32	72	290	227	251	204	57	30	e18	16
25	18	17	31	177	252	214	272	189	62	31	e17	16
26	18	18	30	99	223	203	319	186	82	33	e17	16
27	18	18	30	191	201	199	339	189	81	34	e17	16
28	18	18	31	252	188	262	330	177	70	33	e17	15
29	18	18	34	117	178	222	341	171	63	31	17	15
30	18	18	67	91	---	209	354	167	58	31	17	15
31	18	---	66	146	---	199	---	159	---	33	16	---
TOTAL	592	539	1504	2506	8896	9004	8742	9492	2743	1189	635	445
MEAN	19.1	18.0	48.5	80.8	307	290	291	306	91.4	38.4	20.5	14.8
MAX	22	19	346	252	954	714	414	1540	160	55	32	16
MIN	18	17	18	35	98	171	221	159	48	24	12	12
AC-FT	1170	1070	2980	4970	17650	17860	17340	18830	5440	2360	1260	883

e Estimated.

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.6	31.1	62.7	90.5	134	165	225	254	129	34.0	13.1	9.80
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1923 - 1996

ANNUAL TOTAL	88204	46287	
ANNUAL MEAN	242	126	96.1
HIGHEST ANNUAL MEAN			330
LOWEST ANNUAL MEAN			9.25
HIGHEST DAILY MEAN	3560	Mar 10	1540
LOWEST DAILY MEAN	17	Nov 23	12
ANNUAL SEVEN-DAY MINIMUM	18	Nov 19	14
INSTANTANEOUS PEAK FLOW			2800
INSTANTANEOUS PEAK STAGE			8.66
ANNUAL RUNOFF (AC-FT)	175000	91810	69630
10 PERCENT EXCEEDS	538	301	260
50 PERCENT EXCEEDS	126	45	31
90 PERCENT EXCEEDS	18	17	6.0

SAN JOAQUIN RIVER BASIN

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 September 1996 (discontinued). 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 sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges 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 some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1615	387	4.08	Mar. 4	2130	617	4.95
Feb. 5	0715	488	4.48	May 16	1030	2,330	8.62
Feb. 19	2345	689	5.19				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	4.6	5.4	29	56	93	193	434	243	42	8.5	3.3
2	6.1	4.7	5.4	24	45	96	240	446	255	38	7.8	e3.1
3	5.7	4.9	5.5	22	40	107	195	414	253	35	7.5	e3.1
4	5.6	4.9	6.1	20	156	306	166	371	238	33	7.1	e3.0
5	5.5	4.9	6.6	19	382	351	159	350	217	31	7.1	e3.0
6	5.4	4.9	7.2	18	255	187	174	355	200	29	6.8	3.1
7	5.4	4.9	7.2	17	171	161	200	355	189	28	6.8	3.0
8	5.4	5.0	7.1	17	142	142	227	352	169	26	6.5	2.9
9	5.4	5.0	6.9	17	117	137	249	296	149	25	6.2	2.9
10	5.4	5.0	6.5	16	104	133	240	330	133	24	5.9	2.9
11	5.3	5.1	9.9	16	97	149	222	371	117	23	5.6	3.1
12	5.3	5.1	162	16	91	206	215	417	108	23	5.3	3.0
13	5.3	5.1	82	16	89	165	199	440	105	23	5.9	3.3
14	5.3	4.9	43	16	88	138	196	426	96	35	5.6	3.5
15	5.2	4.7	30	16	87	127	218	512	85	28	5.4	3.8
16	5.3	4.7	24	48	93	126	283	1540	79	22	5.1	4.0
17	5.0	4.7	19	80	108	129	296	654	74	20	4.8	3.8
18	4.9	4.7	19	50	100	146	269	584	68	19	4.5	3.7
19	4.7	4.7	17	70	355	160	213	487	64	18	4.6	3.6
20	4.6	4.6	15	41	381	172	194	411	60	16	4.8	3.6
21	4.6	4.7	13	41	271	177	179	393	56	15	4.8	3.5
22	4.6	4.7	15	31	189	182	171	356	55	15	4.7	3.4
23	4.6	4.7	15	27	154	158	180	331	50	14	4.6	3.3
24	4.7	4.7	14	59	146	139	215	286	48	13	4.3	3.2
25	4.9	4.8	13	116	127	132	252	268	51	13	4.1	2.7
26	4.8	5.0	13	48	112	126	313	279	86	12	4.0	2.6
27	4.7	5.4	14	124	101	125	360	291	79	12	3.9	2.6
28	4.7	5.6	13	113	99	161	359	268	64	12	3.8	2.6
29	4.6	5.6	15	52	96	139	373	253	54	12	3.8	2.6
30	4.6	5.5	30	41	---	140	410	246	48	11	3.7	2.5
31	4.6	---	34	53	---	136	---	236	---	9.4	3.6	---
TOTAL	158.5	147.8	673.8	1273	4252	4846	7160	12752	3493	676.4	167.1	94.7
MEAN	5.11	4.93	21.7	41.1	147	156	239	411	116	21.8	5.39	3.16
MAX	6.3	5.6	162	124	382	351	410	1540	255	42	8.5	4.0
MIN	4.6	4.6	5.4	16	40	93	159	236	48	9.4	3.6	2.5
AC-FT	314	293	1340	2520	8430	9610	14200	25290	6930	1340	331	188

e Estimated.

11282000 MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.21	15.2	32.1	42.9	65.8	86.6	155	293	186	36.5	6.69	3.30
MAX	36.9	181	318	248	345	353	476	747	875	361	60.7	23.5
(WY)	1983	1951	1951	1956	1986	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1917 - 1996			
ANNUAL TOTAL	75668.5				35694.3							
ANNUAL MEAN	207				97.5				77.3			
HIGHEST ANNUAL MEAN									246			
LOWEST ANNUAL MEAN									6.49			
HIGHEST DAILY MEAN	1670				1540				4000			
LOWEST DAILY MEAN	4.6				2.5				.00			
ANNUAL SEVEN-DAY MINIMUM	4.6				2.7				.00			
INSTANTANEOUS PEAK FLOW					2330				4920			
INSTANTANEOUS PEAK STAGE					8.62				11.75			
ANNUAL RUNOFF (AC-FT)	150100				70800				56040			
10 PERCENT EXCEEDS	609				284				235			
50 PERCENT EXCEEDS	64				26				18			
90 PERCENT EXCEEDS	5.0				4.1				1.7			

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 sea level (levels by Boise-Cascade Corp.).

REMARKS.--Records good except flows below 1 ft³/s, which are fair and flows below 0.10 ft³/s, which are poor. No storage or diversion 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 Jan. 6, 1965, 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0245	570	4.74	Mar. 4	2015	729	5.05
Feb. 4	2145	442	4.46	Mar. 12	1400	177	3.65
Feb. 19	1945	472	4.53				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.14	1.8	30	18	26	4.5	2.2	.74	.01	.00
2	.00	.00	.14	1.5	18	16	31	4.3	2.1	.68	.01	.00
3	.00	.00	.15	1.3	12	15	16	4.2	1.8	.62	.00	.00
4	.00	.00	.21	1.2	118	223	13	4.0	1.6	.57	.00	.00
5	.00	.00	.26	1.1	215	353	11	3.7	1.6	.52	.00	.00
6	.00	.00	.25	1.0	63	110	10	3.7	1.5	.49	.00	.00
7	.00	.00	.24	.96	31	58	9.4	3.5	1.4	.44	.00	.00
8	.00	.00	.22	.95	20	38	8.7	3.5	1.3	.38	.00	.00
9	.00	.00	.20	.90	15	29	8.6	3.5	1.1	e.31	.00	.00
10	.00	.00	.19	.90	11	23	8.7	3.4	1.1	e.25	.00	.00
11	.00	.00	1.5	.86	9.2	28	8.2	3.2	1.0	e.20	.00	.00
12	.00	.00	32	.83	7.9	100	7.9	2.9	1.0	e.18	.00	.00
13	.00	.00	11	.79	6.9	65	7.7	2.8	.97	.21	.00	.00
14	.00	.00	6.8	.79	6.2	38	7.3	2.7	.91	.19	.00	.00
15	.00	.00	6.5	.88	5.8	29	7.1	3.6	.86	.16	.00	.00
16	.00	.00	7.3	33	6.5	24	9.9	19	.82	.13	.00	.00
17	.00	.00	2.5	30	5.7	21	10	8.5	.79	.12	.00	.00
18	.00	.00	1.7	15	5.3	18	20	6.0	.78	.10	.00	.00
19	.00	.00	1.4	61	194	16	11	4.8	.77	.10	.00	.00
20	.00	.00	1.1	16	194	14	9.1	4.0	.74	.09	.00	.00
21	.00	.00	1.0	20	225	13	8.3	3.8	.71	.07	.00	.00
22	.00	.00	.97	16	148	12	7.2	3.9	.70	.06	.00	.00
23	.00	.00	1.0	8.4	72	12	6.9	3.8	.69	.05	.00	.00
24	.00	.00	.96	32	50	11	e6.6	3.9	.69	.04	.00	.00
25	.00	.00	.89	250	40	10	e6.3	3.3	.82	.03	.00	.00
26	.00	.06	.82	39	31	9.4	6.1	2.8	1.5	.03	.00	.00
27	.00	.14	.79	111	25	9.1	5.6	2.5	1.6	.03	.00	.00
28	.00	.14	.81	135	22	19	5.2	2.8	1.2	.02	.00	.00
29	.00	.14	1.2	34	21	12	4.9	2.6	1.0	.02	.00	.00
30	.00	.14	5.0	19	---	10	4.7	2.5	.84	.02	.00	.00
31	.00	---	2.8	41	---	9.1	---	2.4	---	.01	.00	---
TOTAL	0.00	0.62	90.04	876.16	1608.5	1362.6	302.4	130.1	34.09	6.86	0.02	0.00
MEAN	.000	.021	2.90	28.3	55.5	44.0	10.1	4.20	1.14	.22	.001	.000
MAX	.00	.14	32	250	225	353	31	19	2.2	.74	.01	.00
MIN	.00	.00	.14	.79	5.3	9.1	4.7	2.4	.69	.01	.00	.00
AC-FT	.00	1.2	179	1740	3190	2700	600	258	68	14	.04	.00

e Estimated.

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.089	3.52	7.99	23.2	30.2	26.1	10.6	3.71	.99	.23	.036	.018
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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1969 - 1996
ANNUAL TOTAL	6590.56	4411.39	
ANNUAL MEAN	18.1	12.1	8.78
HIGHEST ANNUAL MEAN			38.2 1983
LOWEST ANNUAL MEAN			.011 1977
HIGHEST DAILY MEAN	741 Mar 10	353 Mar 5	1340 Feb 17 1986
LOWEST DAILY MEAN	.00 Aug 25	.00 Oct 1	.00 Aug 27 1969
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 25	.00 Oct 1	.00 Aug 27 1969
INSTANTANEOUS PEAK FLOW		729 Mar 4	2620 Feb 17 1986
INSTANTANEOUS PEAK STAGE		5.05 Mar 4	7.03 Feb 17 1986
ANNUAL RUNOFF (AC-FT)	13070	8750	6360
10 PERCENT EXCEEDS	33	27	14
50 PERCENT EXCEEDS	2.1	.88	.30
90 PERCENT EXCEEDS	.00	.00	.00

SAN JOAQUIN RIVER BASIN

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 sea level (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, 2,026,000 acre-ft, July 30, 1995, elevation, 829.71 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, 1,963,000 acre-ft, June 28, elevation, 824.75 ft; minimum, 1,604,000 acre-ft, Dec. 10, 11, elevation 794.07.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1766000	1623000	1607000	1634000	1693000	1732000	1701000	1726000	1849000	1958000	1872000	1748000
2	1762000	1621000	1607000	1635000	1693000	1729000	1702000	1727000	1851000	1957000	1869000	1746000
3	1756000	1620000	1606000	1635000	1692000	1726000	1701000	1727000	1853000	1958000	1864000	1743000
4	1752000	1619000	1606000	1634000	1699000	1732000	1702000	1726000	1858000	1958000	1859000	1741000
5	1747000	1618000	1606000	1634000	1716000	1744000	1703000	1724000	1865000	1959000	1855000	1739000
6	1742000	1617000	1606000	1634000	1723000	1747000	1704000	1723000	1870000	1958000	1851000	1737000
7	1735000	1617000	1606000	1634000	1724000	1747000	1705000	1722000	1876000	1956000	1847000	1735000
8	1729000	1617000	1605000	1634000	1724000	1746000	1707000	1723000	1881000	1955000	1843000	1732000
9	1723000	1617000	1605000	1634000	1723000	1744000	1708000	1727000	1887000	1955000	1838000	1729000
10	1717000	1616000	1604000	1635000	1721000	1742000	1710000	1731000	1896000	1954000	1831000	1725000
11	1712000	1616000	1604000	1634000	1718000	1741000	1710000	1735000	1905000	1952000	1821000	1722000
12	1707000	1616000	1609000	1634000	1715000	1743000	1710000	1738000	1910000	1950000	1814000	1720000
13	1701000	1615000	1613000	1634000	1712000	1744000	1710000	1743000	1915000	1947000	1811000	1718000
14	1696000	1615000	1615000	1634000	1709000	1743000	1708000	1748000	1920000	1944000	1809000	1716000
15	1690000	1615000	1618000	1633000	1705000	1742000	1708000	1755000	1925000	1942000	1807000	1715000
16	1683000	1614000	1619000	1636000	1701000	1739000	1710000	1790000	1931000	1941000	1803000	1713000
17	1676000	1614000	1620000	1640000	1699000	1737000	1712000	1811000	1936000	1937000	1800000	1711000
18	1670000	1614000	1622000	1643000	1696000	1736000	1713000	1833000	1940000	1935000	1797000	1710000
19	1663000	1613000	1622000	1648000	1705000	1734000	1715000	1844000	1943000	1931000	1791000	1708000
20	1656000	1613000	1623000	1650000	1718000	1732000	1716000	1847000	1948000	1928000	1788000	1706000
21	1651000	1612000	1624000	1653000	1732000	1731000	1716000	1850000	1951000	1924000	1784000	1703000
22	1647000	1612000	1625000	1654000	1740000	1729000	1716000	1851000	1953000	1918000	1779000	1700000
23	1642000	1611000	1626000	1656000	1742000	1727000	1715000	1850000	1954000	1914000	1775000	1699000
24	1639000	1611000	1626000	1660000	1743000	1724000	1716000	1848000	1957000	1910000	1771000	1697000
25	1635000	1611000	1626000	1671000	1742000	1721000	1717000	1848000	1959000	1905000	1767000	1697000
26	1632000	1609000	1627000	1673000	1741000	1718000	1718000	1849000	1960000	1900000	1764000	1697000
27	1628000	1608000	1628000	1677000	1740000	1714000	1720000	1850000	1962000	1895000	1761000	1695000
28	1627000	1608000	1629000	1683000	1737000	1712000	1721000	1850000	1963000	1890000	1759000	1693000
29	1625000	1608000	1630000	1685000	1735000	1710000	1723000	1850000	1962000	1885000	1756000	1692000
30	1624000	1607000	1632000	1687000	---	1707000	1724000	1849000	1960000	1879000	1752000	1690000
31	1624000	---	1633000	1691000	---	1703000	---	1849000	---	1875000	1749000	---
MAX	1766000	1623000	1633000	1691000	1743000	1747000	1724000	1851000	1963000	1959000	1872000	1748000
MIN	1624000	1607000	1604000	1633000	1692000	1703000	1701000	1722000	1849000	1875000	1749000	1690000
a	795.89	794.37	796.75	801.93	805.80	803.03	804.91	815.51	824.53	817.67	807.09	801.87
b	-148000	-17000	+26000	+58000	+44000	-32000	+21000	+125000	+111000	-85000	-126000	-59000
CAL YR 1995	b	+221000										
WTR YR 1996	b	-82000										

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 sea level (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.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	561	491	3.2	115	139	91	197	662	330	946	465	655
2	563	344	3.1	282	158	91	398	744	391	674	908	572
3	418	343	3.0	203	121	91	439	929	826	392	984	452
4	430	551	10	289	132	91	300	972	972	713	1060	566
5	422	471	28	184	39	91	320	974	1140	938	845	562
6	669	30	2.8	130	87	91	400	979	1600	1150	693	854
7	846	.28	2.8	236	86	91	479	1040	1380	1010	776	1130
8	842	.00	23	104	26	91	572	973	1400	821	923	1140
9	619	.00	24	.00	27	91	655	882	1250	1050	1310	1240
10	499	.00	98	24	28	91	673	804	1180	751	1480	1310
11	495	.00	18	22	28	91	782	816	963	878	1060	886
12	470	.00	8.4	15	29	91	663	796	1080	885	1160	865
13	472	.00	7.7	.00	29	91	756	708	638	1220	1110	715
14	428	.00	8.5	.00	30	92	710	824	873	1110	1040	570
15	383	.00	8.2	.31	30	92	722	815	895	994	976	471
16	730	.00	7.9	.00	30	92	692	805	534	973	953	386
17	960	.00	7.9	.00	30	92	555	786	796	1210	614	602
18	644	.00	37	.00	30	92	472	655	644	1100	740	448
19	449	.00	16	.00	30	92	513	652	812	1100	731	748
20	468	.00	4.9	.00	29	92	424	651	646	989	666	839
21	370	.00	4.9	.00	28	128	445	652	640	1200	893	968
22	195	27	40	.00	93	259	517	652	982	1500	1060	1130
23	364	11	130	.00	94	331	663	542	1200	786	730	855
24	715	36	118	91	94	553	480	472	920	1100	692	509
25	633	78	102	2.0	93	362	467	305	751	1330	647	423
26	652	249	68	.00	92	109	612	202	781	1160	539	461
27	511	15	144	148	92	110	568	202	615	1050	790	502
28	76	39	179	131	92	110	556	203	794	1200	570	724
29	217	46	154	88	92	110	700	259	872	1480	1020	525
30	36	22	114	116	---	109	687	171	879	1690	971	462
31	307	---	154	38	---	109	---	209	---	869	653	---
TOTAL	15444	2753.28	1530.3	2218.31	1908	4117	16417	20336	26784	32269	27059	21570
MEAN	498	91.8	49.4	71.6	65.8	133	547	656	893	1041	873	719
MAX	960	551	179	289	158	553	782	1040	1600	1690	1480	1310
MIN	36	.00	2.8	.00	26	91	197	171	330	392	465	386
AC-FT	30630	5460	3040	4400	3780	8170	32560	40340	53130	64010	53670	42780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	237	105	77.6	51.5	86.9	298	661	830	896	787	633	429
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1909 - 1996

ANNUAL TOTAL	153802.23	172405.89	
ANNUAL MEAN	421	471	427
HIGHEST ANNUAL MEAN			570
LOWEST ANNUAL MEAN			198
HIGHEST DAILY MEAN	1590	1690	1820
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	305100	342000	309400
10 PERCENT EXCEEDS	998	1040	1010
50 PERCENT EXCEEDS	417	456	377
90 PERCENT EXCEEDS	.30	6.9	.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 sea level (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 most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	7.0	.00	59	381	394	1480	1270	2100	2450	1620	658
2	715	5.4	.00	65	208	387	1400	2030	1820	1510	1130	736
3	998	5.9	.00	59	291	402	1500	1940	1730	1720	1800	1300
4	1070	6.2	.00	46	108	416	1360	1550	1820	2010	1840	742
5	935	.26	.00	84	106	488	1140	1540	1780	1940	1810	701
6	1020	.78	.00	48	46	492	1090	1950	2230	2010	1790	842
7	655	.10	.00	47	45	429	1010	1720	2080	2090	1790	723
8	899	.15	.00	110	42	455	972	1880	1740	2000	1950	660
9	1160	.09	.00	192	263	452	1090	1290	1430	1740	1800	1120
10	1490	.03	.00	191	47	458	1330	1480	977	2140	2380	1180
11	1530	.19	35	284	54	455	1480	1730	1050	1900	2280	859
12	1360	.00	317	346	270	597	1550	1950	1650	2240	1980	839
13	1330	.00	145	317	287	878	1510	1380	1020	2220	1490	701
14	1490	.00	127	409	324	878	1350	637	1260	2060	1530	627
15	1130	.00	43	439	518	836	1570	574	1470	1900	1510	623
16	1160	.00	57	460	522	843	1070	606	1520	1550	1700	701
17	839	.00	49	456	408	869	1430	485	1730	1880	1320	842
18	1210	.00	113	425	462	866	1470	418	1520	1620	1320	728
19	1450	.00	53	251	531	888	1250	417	1730	1790	1990	845
20	1450	.00	91	355	803	842	1310	642	1550	1730	1470	869
21	1040	.00	84	275	1540	954	1210	747	1840	2000	1700	948
22	690	.00	145	477	1120	1640	1750	1110	1960	2120	1770	640
23	671	.00	39	392	177	1650	2090	1630	1740	1940	1910	704
24	481	.00	61	324	133	1650	1450	1400	1070	1710	1700	515
25	338	.00	46	708	132	972	718	781	1910	1920	1400	575
26	339	.00	71	1230	136	226	1040	826	1610	1980	1200	356
27	957	.81	61	1180	141	230	1120	979	1740	1960	1220	723
28	587	.94	105	1200	135	231	953	1370	1550	2190	1170	1120
29	4.0	.00	121	1270	129	671	909	1170	1970	2090	1190	538
30	2.5	.00	47	302	---	1360	984	2230	1910	1610	1470	686
31	6.9	---	46	644	---	1360	---	2130	---	1890	1190	---
TOTAL	27385.4	27.65	1856.00	12645	9359	23269	38586	39862	49507	59910	50420	23101
MEAN	883	.92	59.9	408	323	751	1286	1286	1650	1933	1626	770
MAX	1530	7.0	317	1270	1540	1650	2090	2230	2230	2450	2380	1300
MIN	2.5	.00	.00	46	42	226	718	417	977	1510	1130	356
AC-FT	54320	55	3680	25080	18560	46150	76540	79070	98200	118800	100000	45820

11289500 TURLOCK CANAL NEAR LA GRANGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	290	150	134	73.1	122	460	1021	1248	1341	1264	1055	684
MAX	883	1008	1210	467	855	1350	1874	1829	1883	2098	1891	1604
(WY)	1996	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1899 - 1996
ANNUAL TOTAL	297798.35	335928.05	
ANNUAL MEAN	816	918	659
HIGHEST ANNUAL MEAN			1082
LOWEST ANNUAL MEAN			54.3
HIGHEST DAILY MEAN	2940	Jun 29	3400
LOWEST DAILY MEAN	.00	Nov 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 12	.00
ANNUAL RUNOFF (AC-FT)	590700	666300	477100
10 PERCENT EXCEEDS	1880	1910	1660
50 PERCENT EXCEEDS	689	867	444
90 PERCENT EXCEEDS	1.6	2.0	.00

SAN JOAQUIN RIVER BASIN

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 sea level (levels by Turlock Irrigation District).

REMARKS.--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 287 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 station 11289651.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2320	311	276	294	2400	4020	4060	2590	1730	184	275	279
2	2140	309	263	293	3000	5130	3980	2120	2110	397	271	279
3	2070	310	267	291	3240	5110	3680	2410	1640	154	288	281
4	1860	309	260	292	3350	5110	2630	2930	1130	157	281	281
5	1920	308	284	293	3210	5070	2600	2900	878	153	276	279
6	1980	316	291	292	4690	5080	2650	2340	515	156	276	281
7	2020	309	292	285	5490	5130	2650	2500	512	165	275	279
8	1920	316	295	294	5580	5110	2680	2460	1070	167	276	282
9	1770	305	292	295	5170	5100	2750	2960	1100	207	280	279
10	1620	315	286	285	5510	5100	2690	3000	856	158	279	284
11	1630	314	289	287	5550	5110	2650	2920	531	158	274	284
12	1670	322	288	285	5170	4970	2660	2720	539	160	277	285
13	1680	312	296	286	5040	4690	2630	3110	536	162	274	285
14	1620	308	286	286	4960	4690	2630	3860	577	162	276	285
15	1600	303	283	285	4820	4660	2620	3910	568	162	275	285
16	1620	324	277	288	4740	4700	2580	3890	562	159	279	296
17	1650	317	286	279	5080	4730	2590	5070	531	160	274	290
18	1570	312	289	281	5080	4750	2600	6790	426	160	277	296
19	1560	315	285	281	5050	4720	2650	6640	292	160	285	299
20	1500	314	287	279	4760	4740	2600	6480	189	160	285	296
21	1370	311	288	279	3960	4610	2560	6350	186	160	284	292
22	1230	327	288	281	3990	3730	2420	5990	188	159	285	290
23	1150	310	288	464	5310	3730	1970	5570	181	158	284	288
24	1050	299	291	643	5410	3510	2130	4850	179	159	284	290
25	947	297	292	646	5360	4340	2560	4110	180	159	277	292
26	824	313	292	644	e5350	5420	2580	3910	192	159	281	292
27	723	305	293	647	e5360	5420	2610	3880	193	159	278	290
28	669	301	294	645	e5370	5410	2620	3570	185	159	279	290
29	635	303	294	885	5300	4950	2570	3310	181	159	276	290
30	544	303	293	1030	---	4230	2700	2330	184	157	277	290
31	400	---	294	1610	---	4230	---	2010	---	158	277	---
TOTAL	45262	9318	8879	13525	137300	148200	81300	117480	18141	5247	8635	8609
MEAN	1460	311	286	436	4734	4781	2710	3790	605	169	279	287
MAX	2320	327	296	1610	5580	5420	4060	6790	2110	397	288	299
MIN	400	297	260	279	2400	3510	1970	2010	179	153	271	279
AC-FT	89780	18480	17610	26830	272300	294000	161300	233000	35980	10410	17130	17080

e Estimated.

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	735	383	840	1266	1558	1677	1514	1436	657	389	206	516
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1971 - 1996			
ANNUAL TOTAL	1150639				601896							
ANNUAL MEAN	3152				1645				929			
HIGHEST ANNUAL MEAN									4786			
LOWEST ANNUAL MEAN									84.3			
HIGHEST DAILY MEAN	8710				May 23				10400			
LOWEST DAILY MEAN	174				Jan 1				.00			
ANNUAL SEVEN-DAY MINIMUM	176				Jan 4				.00			
INSTANTANEOUS PEAK FLOW									10400			
INSTANTANEOUS PEAK STAGE									15.09			
ANNUAL RUNOFF (AC-FT)	2282000				1194000				672700			
10 PERCENT EXCEEDS	7880				5040				3010			
50 PERCENT EXCEEDS	1920				319				213			
90 PERCENT EXCEEDS	290				187				12			

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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3260	809	279	468	2920	5400	5740	4520	4160	3580	2350	1590
2	3420	658	266	640	3370	5610	5780	4890	4320	2580	2310	1590
3	3490	659	270	553	3650	5600	5620	5280	4200	2260	3070	2030
4	3360	866	270	627	3590	5620	4290	5450	3920	2880	3180	1590
5	3280	779	312	561	3350	5650	4060	5410	3800	3030	2930	1540
6	3670	347	294	470	4820	5660	4140	5270	4340	3320	2760	1980
7	3520	309	295	568	5620	5650	4140	5260	3970	3260	2840	2130
8	3660	316	318	508	5650	5660	4220	5310	4210	2990	3150	2080
9	3550	305	316	487	5460	5640	4490	5130	3780	3000	3390	2640
10	3610	315	384	500	5580	5650	4690	5280	3020	3050	4140	2770
11	3650	314	342	593	5630	5660	4910	5470	2540	2940	3610	2020
12	3500	322	613	646	5470	5660	4870	5470	3270	3280	3420	1980
13	3480	312	449	603	5360	5660	4900	5200	2200	3600	2870	1700
14	3540	308	421	695	5310	5660	4690	5320	2710	3330	2850	1480
15	3110	303	334	724	5370	5590	4910	5300	2930	3050	2760	1370
16	3510	324	342	748	5290	5630	4340	5300	2610	2680	2930	1390
17	3450	317	343	735	5520	5690	4570	6340	3060	3250	2200	1730
18	3420	312	439	706	5570	5710	4540	7860	2590	2880	2340	1480
19	3460	315	354	532	5610	5700	4410	7710	2830	3050	3000	1890
20	3420	314	383	634	5590	5670	4330	7770	2390	2880	2420	2010
21	2780	311	377	554	5530	5690	4210	7750	2670	3360	2870	2210
22	2110	354	473	758	5200	5630	4690	7750	3130	3780	3110	2060
23	2180	321	457	856	5580	5710	4720	7740	3120	2890	2920	1850
24	2250	335	470	1060	5640	5710	4060	6720	2170	2970	2670	1310
25	1920	375	440	1360	5580	5670	3740	5200	2840	3410	2330	1290
26	1810	562	431	1870	5580	5750	4230	4940	2580	3300	2020	1110
27	2190	321	498	1980	5590	5760	4300	5060	2540	3170	2290	1510
28	1330	341	578	1970	5600	5750	4130	5140	2520	3550	2020	2130
29	856	349	569	2240	5520	5730	4180	4740	3020	3730	2490	1350
30	582	325	454	1450	---	5700	4370	4730	2970	3460	2720	1440
31	714	---	494	2290	---	5700	---	4350	---	2920	2120	---
TOTAL	88082	12098	12265	28386	148550	175570	136270	177660	94410	97430	86080	53250
MEAN	2841	403	396	916	5122	5664	4542	5731	3147	3143	2777	1775
MAX	3670	866	613	2290	5650	5760	5780	7860	4340	3780	4140	2770
MIN	582	303	266	468	2920	5400	3740	4350	2170	2260	2020	1110
AC-FT	174700	24000	24330	56300	294600	348200	270300	352400	187300	193300	170700	105600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1353	869	1268	1432	1739	2460	3162	3290	2886	2976	2476	1788
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 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1971 - 1996

ANNUAL TOTAL	1602027	1110051	
ANNUAL MEAN	4389	3033	2153
HIGHEST ANNUAL MEAN			6186
LOWEST ANNUAL MEAN			442
HIGHEST DAILY MEAN	11600	7860	13800
LOWEST DAILY MEAN	197	266	.45
ANNUAL SEVEN-DAY MINIMUM	279	284	.61
ANNUAL RUNOFF (AC-FT)	3178000	2202000	1560000
10 PERCENT EXCEEDS	9430	5630	4530
50 PERCENT EXCEEDS	3620	3000	1810
90 PERCENT EXCEEDS	339	354	231

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, 14.5°C, several days in July, Aug. 1; minimum recorded, 10.0°C, Nov. 27, 28, several days in February, many days in March, Apr. 1, 2, 4, 13.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.0	12.0	11.5	11.0	10.5	11.5	11.0	11.0	11.0	10.5	10.0
2	12.5	12.0	12.0	11.5	11.0	10.5	11.5	11.0	11.0	10.5	10.5	10.0
3	12.5	12.0	12.0	11.0	11.0	10.5	11.5	11.0	11.0	10.5	10.5	10.0
4	12.5	12.0	12.0	11.0	11.0	10.5	11.0	11.0	11.0	11.0	10.0	10.0
5	12.5	12.0	11.5	11.0	11.0	10.5	11.5	11.0	11.0	10.5	10.0	10.0
6	12.5	12.0	12.0	11.0	11.0	10.5	11.5	11.0	11.0	10.5	10.5	10.0
7	12.5	12.0	12.0	11.5	11.0	10.5	11.5	11.0	11.0	10.5	10.5	10.0
8	12.5	12.0	12.0	11.5	11.0	10.5	11.0	11.0	11.0	10.5	10.5	10.0
9	12.5	12.0	12.0	11.0	11.0	10.5	11.5	11.0	11.0	10.5	10.5	10.0
10	12.5	12.0	12.0	11.0	11.0	10.5	11.0	11.0	11.0	10.5	10.5	10.0
11	12.5	12.0	12.0	11.0	11.0	10.5	11.5	11.0	10.5	10.5	10.0	10.0
12	12.5	12.0	11.5	11.0	11.0	11.0	11.0	11.0	10.5	10.5	10.0	10.0
13	12.5	12.0	11.5	11.0	11.0	11.0	11.0	11.0	10.5	10.5	10.0	10.0
14	12.5	12.0	11.5	11.0	11.0	10.5	11.0	11.0	10.5	10.5	10.5	10.0
15	13.0	12.0	11.5	11.0	11.0	10.5	11.0	11.0	10.5	10.5	10.5	10.0
16	12.5	12.0	11.5	11.0	11.0	10.5	11.0	11.0	10.5	10.5	10.5	10.0
17	12.5	12.0	11.5	11.0	11.0	10.5	11.5	11.0	10.5	10.5	10.5	10.0
18	12.5	12.0	11.5	10.5	11.0	10.5	11.0	11.0	10.5	10.5	10.5	10.0
19	12.5	12.0	11.5	11.0	11.0	10.5	11.5	11.0	10.5	10.5	10.5	10.0
20	12.5	12.0	11.5	10.5	11.0	10.5	11.5	11.0	10.5	10.5	10.5	10.0
21	12.5	12.0	11.0	10.5	11.0	10.5	11.5	11.0	10.5	10.0	10.5	10.0
22	12.0	11.5	11.0	10.5	11.0	10.5	11.0	11.0	10.5	10.0	10.5	10.0
23	12.5	11.5	11.0	10.5	11.0	11.0	11.0	10.5	10.5	10.0	10.5	10.0
24	12.0	11.5	11.0	10.5	11.0	10.5	11.0	11.0	10.5	10.0	10.5	10.0
25	12.0	11.5	11.0	10.5	11.0	10.5	11.0	11.0	10.5	10.0	10.5	10.0
26	12.0	11.5	11.0	10.5	11.0	10.5	11.0	11.0	10.5	10.0	10.5	10.0
27	12.5	11.5	11.0	10.0	11.0	10.5	11.5	11.0	10.0	10.0	10.5	10.0
28	12.5	11.5	11.0	10.0	11.0	11.0	11.5	11.0	10.5	10.0	10.5	10.0
29	12.0	11.5	11.0	10.5	11.0	11.0	11.0	11.0	10.5	10.0	10.5	10.0
30	12.0	11.5	11.0	10.5	11.5	11.0	11.0	11.0	---	---	10.5	10.0
31	12.0	11.5	---	---	11.5	11.0	11.0	11.0	---	---	10.5	10.0
MONTH	13.0	11.5	12.0	10.0	11.5	10.5	11.5	10.5	11.0	10.0	10.5	10.0

SAN JOAQUIN RIVER BASIN

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	10.0	11.5	11.0	12.5	11.5	14.0	12.0	14.5	12.0	13.0	11.5
2	10.5	10.0	11.5	11.0	12.0	11.5	13.5	11.5	14.0	12.0	13.0	11.5
3	11.0	10.5	11.5	11.0	12.5	11.5	14.0	11.5	13.5	12.0	13.0	11.5
4	11.0	10.0	11.5	11.0	12.5	11.5	14.0	11.5	13.5	12.0	13.0	11.5
5	11.0	10.5	11.5	11.0	13.0	11.5	14.0	11.5	13.5	12.0	13.0	11.5
6	11.0	10.5	11.5	11.0	13.0	11.5	14.0	11.5	13.5	12.0	13.0	11.5
7	11.0	10.5	11.5	11.0	13.0	11.5	14.0	11.5	13.5	12.0	13.0	11.5
8	11.0	10.5	11.5	11.0	12.5	11.5	14.0	12.0	14.0	12.0	13.0	11.5
9	11.0	10.5	11.5	11.0	12.5	11.5	14.5	12.0	13.5	12.0	13.0	11.5
10	11.0	10.5	11.5	11.0	12.5	11.5	14.0	12.0	13.5	12.0	13.0	11.5
11	11.0	10.5	11.5	11.0	13.0	11.5	14.0	12.0	14.0	12.0	13.0	11.5
12	11.0	10.5	12.0	11.0	12.5	11.5	14.0	12.0	13.5	12.0	13.0	11.5
13	11.0	10.0	11.5	11.0	13.0	11.5	14.0	12.0	13.5	12.0	12.5	11.5
14	11.0	10.5	11.5	11.0	12.5	11.5	14.0	12.0	13.5	12.0	13.0	11.5
15	11.0	10.5	11.5	11.0	12.5	11.5	14.0	12.0	13.5	12.0	13.0	11.5
16	11.0	10.5	11.5	11.0	12.5	11.5	14.5	12.0	13.5	12.0	12.5	11.5
17	11.0	10.5	11.0	11.0	12.5	11.5	14.0	12.0	13.5	12.0	13.0	11.5
18	11.0	10.5	11.5	11.0	13.0	11.5	14.0	12.0	13.5	12.0	13.0	11.5
19	11.0	10.5	11.5	11.0	13.0	11.5	14.0	12.0	13.5	12.0	13.0	11.5
20	11.0	10.5	11.5	11.0	13.5	11.5	14.0	12.0	13.5	11.5	13.0	11.5
21	11.0	10.5	11.5	11.0	13.5	11.5	14.5	12.0	13.5	12.0	13.0	12.0
22	11.5	10.5	11.5	11.5	13.5	11.5	14.5	12.0	13.0	11.5	13.0	12.0
23	11.5	10.5	11.5	11.5	14.0	11.5	14.5	12.0	13.5	12.0	13.0	12.0
24	11.5	10.5	12.0	11.0	13.0	11.5	14.5	12.0	13.5	12.0	13.0	12.0
25	11.5	10.5	12.0	11.0	13.0	11.5	14.5	12.0	13.5	12.0	13.0	12.0
26	11.5	11.0	12.0	11.0	12.0	11.5	14.5	12.5	13.5	11.5	13.0	12.0
27	11.5	10.5	12.0	11.0	13.5	11.5	14.5	12.5	13.5	12.0	13.0	12.0
28	11.5	10.5	12.0	11.5	14.0	11.5	14.5	12.5	13.0	11.5	13.5	12.0
29	11.5	11.0	12.0	11.0	14.0	11.5	14.5	12.5	13.0	11.5	13.5	12.0
30	11.5	11.0	12.0	11.0	14.0	12.0	14.5	12.5	13.0	11.5	13.0	12.0
31	---	---	12.0	11.0	---	---	14.5	12.5	13.5	11.5	---	---
MONTH	11.5	10.0	12.0	11.0	14.0	11.5	14.5	11.5	14.5	11.5	13.5	11.5

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.

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. Water-quality data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Water-quality data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

CHEMICAL DATA: Water years 1993-95.

SPECIFIC CONDUCTANCE: Water years 1989-95.

WATER TEMPERATURE: Water years 1989-95.

SEDIMENT: Water years 1993-95.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is sea level (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 period of estimated daily discharges which is fair. 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 1896, 1941-96).--Maximum discharge observed, 57,000 ft³/s, Dec. 9, 1950, elevation, 69.19 ft; minimum daily, 56 ft³/s, Aug. 6, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3110	596	388	462	3290	5730	4460	2920	2260	375	313	498
2	3160	533	393	449	3660	5480	4420	2680	1850	351	392	523
3	2670	490	387	434	4000	5570	4280	2230	2190	425	423	490
4	2420	470	368	419	4200	5590	3840	2610	1640	388	441	499
5	2190	456	377	404	5480	5650	3000	3200	1130	355	451	545
6	2220	451	387	403	5120	5940	2890	3040	871	367	405	483
7	2230	458	387	400	5530	5740	2940	2460	675	373	425	484
8	2270	449	395	391	6050	5640	2950	2680	700	357	431	482
9	2290	452	391	392	6040	5590	2930	2720	1060	326	445	493
10	2060	438	399	395	5900	5560	3000	3250	1130	346	425	475
11	1860	453	433	389	6050	5540	2890	3220	853	325	427	482
12	1750	447	439	391	6010	5620	2830	3120	652	332	419	505
13	1810	431	467	387	5770	5800	2870	2930	635	326	417	524
14	1870	428	447	382	5680	5410	2840	3480	630	335	422	557
15	1860	427	441	380	5550	5240	2840	4060	657	367	419	541
16	1840	420	421	438	5480	e5220	2810	4570	657	327	420	551
17	1810	429	406	600	5500	e5240	2770	4780	636	312	427	543
18	1810	425	412	611	5730	e5180	2930	5830	615	308	497	519
19	1760	425	401	508	5810	e5170	2900	6750	551	307	493	499
20	1740	428	396	884	6020	e5360	3000	6790	481	328	459	514
21	1750	422	391	555	5940	e5400	3010	6680	429	367	456	538
22	1540	419	400	643	5950	e5150	3050	6550	396	355	504	553
23	1300	427	397	486	5280	e4620	2620	6260	401	331	504	579
24	1140	413	401	498	5800	e4510	2080	5970	390	350	476	561
25	1020	399	412	988	6000	e4290	2340	5230	379	316	480	528
26	995	393	425	2180	6020	e4990	2740	4600	390	315	476	510
27	954	399	422	909	5900	5590	2810	4290	438	317	469	527
28	1110	400	431	1760	5870	5520	2860	4150	421	346	469	548
29	1030	392	458	1270	5870	5470	2860	3910	371	345	466	528
30	1130	389	498	968	---	4930	2810	3500	372	335	476	477
31	900	---	489	1510	---	4440	---	2560	---	318	465	---
TOTAL	55599	13159	12859	20886	159500	165180	90570	127020	23860	10625	13792	15556
MEAN	1794	439	415	674	5500	5328	3019	4097	795	343	445	519
MAX	3160	596	498	2180	6050	5940	4460	6790	2260	425	504	579
MIN	900	389	368	380	3290	4290	2080	2230	371	307	313	475
AC-FT	110300	26100	25510	41430	316400	327600	179600	251900	47330	21070	27360	30860

e Estimated.

SAN JOAQUIN RIVER BASIN

11290000 TUOLUMNE RIVER AT MODESTO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	879	1032	1545	1743	1945	1982	1884	1941	1600	620	352	551
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 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1940 - 1996		
ANNUAL TOTAL	1265818			708606					
ANNUAL MEAN	3468			1936			1328		
HIGHEST ANNUAL MEAN							5518		
LOWEST ANNUAL MEAN							185		
HIGHEST DAILY MEAN	8880	Mar 12		6790	May 20		43800	Dec 9	1950
LOWEST DAILY MEAN	247	Jan 1		307	Jul 19		56	Aug 6	1977
ANNUAL SEVEN-DAY MINIMUM	308	Jan 1		326	Jul 13		62	Aug 2	1977
INSTANTANEOUS PEAK FLOW				6890			57000		
INSTANTANEOUS PEAK STAGE				51.61			69.19		
ANNUAL RUNOFF (AC-FT)	2511000			1406000			962400		
10 PERCENT EXCEEDS	8130			5560			3510		
50 PERCENT EXCEEDS	2270			570			606		
90 PERCENT EXCEEDS	417			381			178		

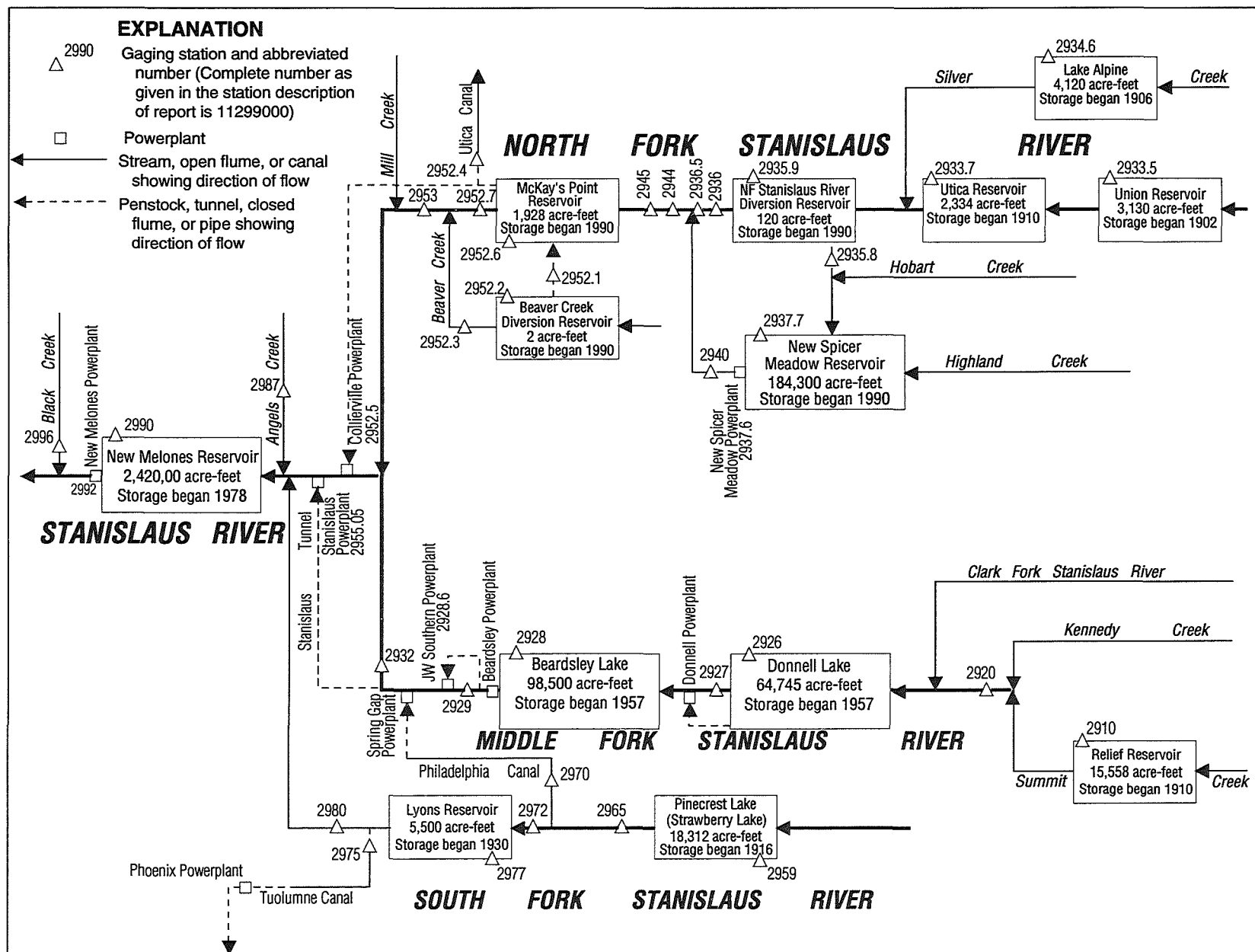


Figure 30. Diversions and storage in Stanislaus River basin.

SAN JOAQUIN 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, 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 above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--No record for the winter months. 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. Flashboards are added in the summer months, increasing gage height to 138 ft and usable capacity to 15,550 acre-ft. 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, 15,650 acre-ft, June 7, 1996, gage height, 138.43 ft; minimum observed, 33 acre-ft, Jan. 12, 1987, gage height, 6.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,650 acre-ft, June 7, gage height, 138.43 ft; minimum observed, 828 acre-ft, Jan. 22, gage height, 39.81 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	120	11895
40	842	80	5105	140	16012

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7863	969	896	912	887	---	---	---	15400	15620	15174	11069
2	7610	955	896	894	874	---	---	12729	15463	15639	15113	10881
3	7360	943	896	902	898	---	---	13089	15576	15611	15047	10682
4	7113	928	896	888	897	---	---	13366	15583	15571	14970	10471
5	6865	913	896	883	909	---	---	13618	15576	15531	14891	10242
6	6619	900	896	873	908	---	---	13890	15618	15569	14820	10003
7	6357	899	896	896	924	---	---	14209	15650	15576	14748	9805
8	6093	899	896	888	---	---	---	14497	15587	15573	14666	9623
9	5820	899	896	886	---	---	---	14750	15535	15580	14587	9435
10	5476	899	897	871	---	---	---	15057	15486	15550	14499	9249
11	5148	899	897	871	---	---	---	15360	15461	15555	14423	9039
12	4807	899	908	877	---	---	---	15448	15520	15546	14345	8781
13	4483	899	910	871	---	---	---	15461	15548	15533	14282	8540
14	4165	899	902	890	---	---	---	15440	15473	15522	14172	8286
15	3859	899	881	879	---	---	---	15792	15440	15512	14015	8026
16	3564	899	888	898	---	---	---	15419	15435	15480	13857	7813
17	3278	899	894	867	---	---	---	15102	15410	15437	13701	7593
18	3001	899	874	887	---	---	---	14913	15461	15410	13536	7384
19	2738	899	864	843	---	---	---	14384	15516	15389	13370	7168
20	2457	898	853	886	---	---	---	14239	15541	15376	13189	6956
21	2178	897	855	845	---	---	---	14479	15484	15366	13004	6752
22	1917	897	882	828	---	---	---	14676	15471	15364	12821	6538
23	1654	897	857	879	---	---	---	14846	15478	15366	12640	6319
24	1406	897	855	899	---	---	---	14937	15418	15370	12453	6101
25	1164	897	854	848	---	---	---	15025	15446	15360	12264	5881
26	1045	896	858	892	---	---	---	15232	15391	15337	12057	5659
27	1034	896	875	893	---	---	---	15280	15372	15316	11863	5455
28	1021	896	873	877	---	---	---	15280	15414	15309	11724	5252
29	1007	896	887	900	---	---	---	15330	15486	15286	11569	5047
30	995	896	897	916	---	---	---	15335	15583	15257	11407	4834
31	982	---	897	908	---	---	---	15364	---	15218	11240	---
MAX	7863	969	910	916	---	---	---	---	15650	15639	15174	11069
MIN	982	896	853	828	---	---	---	---	15372	15218	11240	4834
a	42.19	40.87	40.88	41.06				137.02	138.14	136.26	116.06	78.11
b	-7091	-86	+1	+11					+219	-365	-3978	-6406

WTR YR 1996 b -3239

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

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 sea level.

REMARKS.--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, 3,310 ft³/s, May 16, 1996, gage height, 8.37 ft; minimum daily, 7.1 ft³/s, Jan. 14, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	34	24	37	26	32	60	611	e420	347	141	130
2	175	33	23	35	25	32	60	481	e520	402	137	129
3	174	33	23	34	25	32	59	291	e660	433	131	128
4	172	33	23	33	51	33	57	269	e650	379	126	127
5	170	32	24	32	128	32	56	260	e600	322	122	125
6	169	32	23	31	99	33	59	264	e590	294	122	125
7	167	32	23	30	72	34	72	267	e610	335	120	123
8	164	32	23	29	58	33	94	268	e600	351	119	122
9	185	32	22	29	54	37	113	257	e550	355	119	122
10	206	32	22	28	51	39	116	264	e500	352	119	121
11	203	31	30	27	50	39	113	339	e470	332	118	129
12	199	31	100	27	49	39	109	580	e480	344	118	147
13	196	31	49	26	49	38	103	673	e550	316	119	148
14	193	31	39	26	49	35	99	697	e480	294	131	147
15	190	31	35	26	49	35	98	1020	e470	289	153	145
16	188	30	33	30	49	35	103	2350	e460	268	151	144
17	185	30	31	32	52	39	105	994	e450	223	149	142
18	182	30	29	30	52	49	101	881	e400	190	146	141
19	178	30	28	28	53	58	89	745	398	171	143	139
20	175	28	28	29	55	64	78	473	434	160	139	138
21	172	25	29	28	51	70	70	257	433	157	138	137
22	168	25	30	29	45	72	66	275	365	160	137	136
23	164	24	28	31	43	71	67	e380	347	163	136	136
24	161	24	26	33	40	67	87	e290	358	172	136	135
25	157	24	26	28	38	65	121	e280	307	171	137	134
26	106	25	25	29	37	64	157	e310	286	161	137	133
27	35	25	25	28	36	62	183	e390	212	156	136	132
28	34	24	24	26	34	62	182	e380	159	155	134	131
29	34	24	25	27	33	61	209	e380	178	154	132	130
30	34	24	35	26	---	60	537	e380	253	150	131	129
31	34	---	40	26	---	60	---	e400	---	145	131	---
TOTAL	4748	872	945	910	1453	1482	3423	15706	13190	7901	4108	4005
MEAN	153	29.1	30.5	29.4	50.1	47.8	114	507	440	255	133	133
MAX	206	34	100	37	128	72	537	2350	660	433	153	148
MIN	34	24	22	26	25	32	56	257	159	145	118	121
AC-FT	9420	1730	1870	1800	2880	2940	6790	31150	26160	15670	8150	7940

e Estimated.

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.8	47.2	39.6	29.8	29.6	43.0	92.4	312	438	241	121	127
MAX	226	372	266	85.0	89.0	155	247	626	949	767	328	272
(WY)	1983	1951	1951	1951	1982	1980	1943	1969	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1939 - 1996			
ANNUAL TOTAL	85298				58743							
ANNUAL MEAN	234				160				134			
HIGHEST ANNUAL MEAN									256			
LOWEST ANNUAL MEAN									36.4			
HIGHEST DAILY MEAN	1450				2350				2350			
LOWEST DAILY MEAN	18				22				7.1			
ANNUAL SEVEN-DAY MINIMUM	21				23				7.5			
INSTANTANEOUS PEAK FLOW					3310				3310			
INSTANTANEOUS PEAK STAGE					8.37				8.37			
ANNUAL RUNOFF (AC-FT)	169200				116500				96830			
10 PERCENT EXCEEDS	615				392				358			
50 PERCENT EXCEEDS	121				118				59			
90 PERCENT EXCEEDS	24				27				15			

SAN JOAQUIN RIVER BASIN

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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 sea level (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, 64,200 acre-ft, June 6, 20, July 6, 7, 12, maximum gage height, 4,915.81 ft, June 6; minimum, 7,320 acre-ft, Apr. 5, gage height, 4,746.32 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61000	42700	39400	31400	21500	19600	8070	33700	63600	64000	57300	43300
2	61000	42500	39500	31000	20600	18800	7920	37200	63800	63900	56700	42800
3	61000	42300	39500	30700	20400	18100	7800	40500	63800	63900	56000	42200
4	61000	42100	39700	30400	21100	17600	7510	42900	63700	64000	55600	41600
5	61000	42000	39900	30200	24100	16900	7320	45100	63700	64000	55100	41000
6	61000	41800	40000	30300	24800	16100	7360	47500	64200	64200	54700	40400
7	60900	41600	40200	30300	24900	15500	7810	49900	63900	64200	54200	40000
8	60700	41500	39800	30000	24900	14700	8650	52100	63500	64100	53800	39700
9	60400	41300	39700	29700	24800	14200	9630	54100	63000	64000	53200	39100
10	60100	41100	39500	29300	24500	13600	10500	56300	63000	64000	52700	38500
11	59800	41000	39100	29000	24300	13200	11100	59200	63200	64000	52200	37800
12	59600	40900	39600	28700	24000	12600	11600	62600	63500	64200	51700	37200
13	59300	40700	38800	28700	23800	12000	12000	63200	63700	64100	51300	36500
14	58700	40600	37800	28700	23500	11300	12400	63200	63500	64100	50800	36000
15	58200	40400	36800	28400	23200	10600	13200	64000	63200	64100	50600	35800
16	57600	40200	36600	28500	23100	10000	15600	62400	63300	63900	50100	35200
17	57000	40000	36200	28500	23200	9560	16300	61700	63400	63600	49900	34600
18	56400	40100	35800	28200	23200	9400	16700	62400	63600	63200	49600	34000
19	55800	40200	35200	27900	24100	9540	16900	62600	63900	62700	49100	33300
20	55100	40000	34800	27800	24600	9810	16900	62500	64200	62100	48700	32600
21	54200	39500	34100	27700	24500	10300	16700	62400	63700	61500	48300	32500
22	53300	39200	33500	27200	24700	10600	16800	62500	63500	61000	47800	32800
23	52400	39300	33400	26800	24200	10600	16900	62600	63800	60400	47300	32700
24	51400	39100	33300	26400	23700	10300	17600	62600	63900	60500	46900	32600
25	50500	39000	33100	25900	23100	10000	18900	62500	63800	60300	46700	32400
26	49500	39000	32500	25200	22600	9740	20500	62600	63700	60000	46200	32200
27	48300	39000	31800	25000	21900	9390	22600	63100	63500	59800	45600	32000
28	47200	39100	31200	24600	21200	9260	24600	63500	63400	59400	45000	32300
29	45900	39200	30700	23900	20400	8900	26800	63500	63400	58700	44500	32600
30	44700	39300	31000	23100	---	8520	30000	63300	63600	58100	43900	32400
31	43500	---	31300	22300	---	8190	---	63400	---	57800	43600	---
MAX	61000	42700	40200	31400	24900	19600	30000	64000	64200	64200	57300	43300
MIN	43500	39000	30700	22300	20400	8190	7320	33700	63000	57800	43600	32000
a	4863.27	4851.68	4828.56	4800.58	4794.45	4749.87	4824.83	4913.87	4914.31	4900.18	4863.49	4832.04
b	-17400	-4200	-8000	-9000	-1900	-12210	+21810	+33400	+200	-5800	-14200	-11200

CAL YR 1995 b +23550

WTR YR 1996 b -28500

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.

WATER TEMPERATURE: Water years 1966-71 and 1973-78.

GAGE.--Water-stage recorder. Datum of gage is 3,418.31 ft above sea level (river-profile survey). Prior to Aug. 9, 1961, at site 1,600 ft upstream at different datum.

REMARKS.--Records good. Flow regulated by Relief Reservoir (station 11291000), Donnell Lake (station 11292600) since April 1957, and diversion around station through Donnell Powerplant (station 11292610). See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s, May 16, 1996, gage height, 14.92 ft, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	38	37	80	104	244	418	468	1170	115	40	40
2	42	38	37	71	102	252	454	446	1490	352	40	40
3	42	37	37	71	100	270	391	398	1940	430	39	40
4	42	37	41	68	303	402	358	351	2110	325	39	39
5	42	37	39	64	1550	390	364	330	1980	164	39	39
6	42	37	38	62	742	320	409	327	1740	101	39	39
7	42	37	39	61	458	308	470	318	2320	177	38	39
8	42	37	38	62	398	303	510	303	2310	196	37	39
9	41	37	38	62	372	324	516	279	2070	226	37	39
10	41	37	38	61	351	333	473	280	1560	193	37	38
11	41	37	48	59	336	419	430	308	1270	121	37	38
12	41	37	229	58	342	426	400	520	1130	76	40	37
13	41	37	135	58	352	356	360	2110	1220	103	40	38
14	40	38	82	57	342	321	365	2510	1480	163	40	38
15	41	38	67	57	332	323	390	3050	1250	61	39	38
16	41	37	59	121	436	341	616	9290	981	46	39	38
17	41	37	54	254	486	379	520	4470	757	45	39	37
18	41	37	51	141	452	440	474	4470	656	47	38	37
19	40	37	49	146	1390	500	380	2740	521	46	38	36
20	40	37	47	118	921	511	340	2080	565	45	38	36
21	40	37	46	109	628	519	309	1610	853	43	38	36
22	40	37	46	99	478	489	292	1330	672	42	38	36
23	40	37	45	92	415	400	298	1140	412	41	37	36
24	40	37	44	95	381	351	345	977	307	40	38	36
25	39	37	43	95	337	329	383	888	422	38	37	36
26	39	38	43	96	305	308	440	799	365	37	37	36
27	39	38	43	93	281	306	453	806	250	37	37	36
28	39	37	44	111	263	445	420	813	151	43	41	35
29	38	37	46	99	250	363	420	987	73	42	41	36
30	38	37	97	94	---	346	459	1140	70	42	40	36
31	38	---	97	98	---	337	---	1050	---	41	40	---
TOTAL	1255	1116	1797	2812	13207	11355	12457	46588	32095	3478	1197	1124
MEAN	40.5	37.2	58.0	90.7	455	366	415	1503	1070	112	38.6	37.5
MAX	42	38	229	254	1550	519	616	9290	2320	430	41	40
MIN	38	37	37	57	100	244	292	279	70	37	37	35
AC-FT	2490	2210	3560	5580	26200	22520	24710	92410	63660	6900	2370	2230
a	28930	7140	15690	18000	36390	44430	41740	41400	40800	37910	26520	20650

a Diversion, in acre-feet, through Donnell Powerplant (station 11292610), provided by Oakdale and South San Joaquin Irrigation District.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.5	45.9	81.5	122	159	208	290	848	974	273	46.7	34.5
MAX	184	305	814	630	986	738	808	3144	4512	2016	320	72.8
(WY)	1983	1984	1965	1980	1986	1986	1986	1969	1983	1995	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 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1958 - 1996		
ANNUAL TOTAL	276216			128481					
ANNUAL MEAN	757			351			260		
HIGHEST ANNUAL MEAN							868		
LOWEST ANNUAL MEAN							18.4		
HIGHEST DAILY MEAN	4840	Jun 2		9290	May 16		9290	May 16	1996
LOWEST DAILY MEAN	34	Aug 31		35	Sep 28		3.3	Nov 9	1957
ANNUAL SEVEN-DAY MINIMUM	35	Aug 27		36	Sep 22		3.7	Nov 7	1957
INSTANTANEOUS PEAK FLOW				12800	May 16		12800	May 16	1996
INSTANTANEOUS PEAK STAGE				14.92	May 16		14.92	May 16	1996
ANNUAL RUNOFF (AC-FT)	547900			254800			188300		
ANNUAL RUNOFF (AC-FT) ^a	324000			359600					
10 PERCENT EXCEEDS	2740			825			605		
50 PERCENT EXCEEDS	233			81			47		
90 PERCENT EXCEEDS	38			37			20		

^a Diversion, in acre-feet, through Donnell Powerplant (station 11292610), provided by Oakdale and South San Joaquin Irrigation District.

SAN JOAQUIN RIVER BASIN

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 sea level (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, then diverted 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, 97,800 acre-ft, July 21, gage height, 3,396.94 ft; minimum, 48,400 acre-ft, Jan. 15, gage height, 3,319.27 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	78,200
3,190	1,370	3,260	19,500	3,398	98,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81100	74600	61200	53200	50400	78300	79200	96400	97100	97300	97100	92700
2	80300	74100	60400	53100	50800	78300	80300	96400	97200	97400	97100	92600
3	79500	73500	59500	52900	50600	78300	81100	96200	97200	97500	97100	92500
4	78700	73100	58700	52700	52000	78600	82000	96000	97200	97500	96900	92400
5	78000	72500	57900	52300	56000	78500	82900	95700	97000	97400	96700	92400
6	77200	72000	57100	51700	58000	78400	84000	95600	97000	97300	96600	92300
7	76600	71500	56300	51100	59200	78400	85100	95700	97100	97600	96600	92000
8	76100	71000	55900	50800	60000	78400	86400	95700	97000	97600	96400	91700
9	75600	70500	54700	50700	60800	78400	87700	95700	96900	97600	96300	91600
10	75200	69900	54700	50500	61900	78400	88900	95800	96700	97600	96300	91500
11	74800	69400	54600	50100	62600	78500	89900	95900	96800	97600	96200	91600
12	74300	69000	55800	49900	63400	78500	90900	96200	97000	97600	96100	91700
13	73900	69000	56600	49300	64400	78400	91900	97400	97200	97500	95900	91900
14	73700	69100	57200	48600	65300	78400	92900	97300	97300	97500	95800	91800
15	73600	69200	57700	48400	66300	78400	93800	97300	97200	97400	95400	91500
16	73500	69200	57300	48500	67400	78400	94500	96500	97100	97400	95400	91600
17	73300	69300	57100	48700	68700	78500	95400	95300	97100	97500	95100	91700
18	73200	69100	56900	48900	69900	78500	96000	95700	97200	97500	94800	92100
19	73100	68800	56900	49000	72900	78600	96200	95600	97300	97600	94700	92900
20	73000	68700	56500	48700	75500	78600	96300	96100	97300	97700	94600	93100
21	73200	68400	56500	48500	77200	78600	96100	96300	97400	97800	94500	92600
22	73300	68000	56500	48500	78100	78500	96000	96400	97500	97700	94400	91700
23	73400	67100	56000	48600	78400	78500	95900	96500	97500	97600	94300	91300
24	73600	66700	55400	48700	78500	78400	96000	96500	97300	97200	94000	90800
25	73700	65900	54900	48700	78500	78400	96300	96500	97400	97100	93700	90400
26	73900	65300	54800	49000	78300	78300	96400	96400	97400	97100	93600	90000
27	74000	64500	54800	49000	78300	78400	96500	96600	97300	97000	93600	89600
28	74200	63700	54700	49000	78300	78500	96400	96700	97300	97100	93500	88700
29	74400	62800	54600	49300	78300	78500	96400	96700	97300	97300	93500	87800
30	74500	62000	54100	49600	---	78400	96400	97000	97200	97500	93400	87400
31	74700	---	53700	50000	---	78400	---	97100	---	97200	93100	---
MAX	81100	74600	61200	53200	78500	78600	96500	97400	97500	97800	97100	93100
MIN	73000	62000	53700	48400	50400	78300	79200	95300	96700	97000	93100	87400
a	3363.15	3342.89	3328.69	3322.21	3368.70	3368.87	3395.05	3396.06	3396.20	3396.21	3390.42	3382.21
b	-7200	-12700	-8300	-3700	+28300	+100	+18000	+700	+100	0	-4100	-5700

CAL YR 1995 b +33000

WTR YR 1996 b +5500

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 sea level (river-profile survey).

REMARKS.--Records good. Diversion from Beardsley Afterbay Dam, 0.5 mi upstream, to J.W. Southern Powerplant (station 11292860) 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 station 11292901.

COOPERATION.--Records of diversion to J.W. Southern Powerplant provided by Oakdale-South San Joaquin Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 15,000 ft³/s, from rating curve extended above 5,400 ft³/s, May 16, 1996, gage height, 14.64 ft; minimum daily, 3.0 ft³/s, Oct. 10, 11, 1958.
Combined flow, maximum daily discharge, 11,100 ft³/s, May 16, 1996; minimum daily 25 ft³/s, Oct. 25, 1986.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	149	150	148	150	449	363	616	1260	220	151	149
2	147	148	150	149	149	454	199	615	1530	397	151	149
3	148	147	147	149	149	472	191	588	1940	508	150	149
4	150	148	145	148	172	621	179	613	2110	445	149	149
5	148	148	145	148	163	768	151	607	2020	317	149	149
6	150	148	145	148	140	618	147	500	1740	232	150	149
7	150	147	149	148	141	543	148	437	2140	148	149	149
8	150	147	149	148	140	552	151	435	2140	270	149	149
9	149	146	148	148	143	574	149	380	1970	354	149	149
10	151	146	148	147	141	591	146	344	1640	302	150	149
11	150	147	149	148	140	656	146	344	1230	224	149	150
12	151	147	150	148	140	762	147	473	1050	182	149	149
13	151	146	148	148	147	682	148	1530	1190	256	149	150
14	151	147	149	149	150	605	147	2670	1450	253	147	149
15	148	146	149	148	148	589	147	3110	1330	175	150	149
16	148	148	149	151	149	602	163	10600	1060	161	149	149
17	150	147	149	148	150	629	325	5250	841	149	149	149
18	151	146	148	150	149	690	434	4400	662	152	149	149
19	149	149	149	151	153	752	468	2830	576	151	149	149
20	150	147	150	150	151	793	543	1860	643	151	150	149
21	152	150	151	149	147	729	582	1570	881	148	149	149
22	150	150	151	149	155	772	579	1360	645	154	150	149
23	149	148	150	149	455	704	531	1210	469	158	149	149
24	151	147	150	150	634	627	495	1190	474	150	149	149
25	152	148	151	152	560	590	485	1000	540	152	150	149
26	149	147	150	148	523	516	559	937	503	152	151	149
27	147	146	150	151	489	525	612	876	417	151	150	149
28	149	146	150	151	478	674	633	864	267	151	149	150
29	146	146	150	148	461	650	620	1070	201	151	149	149
30	146	149	149	149	---	607	617	1070	198	151	149	151
31	148	---	149	149	---	586	---	1100	---	151	149	---
TOTAL	4629	4421	4617	4617	6867	19382	10205	50449	33117	6716	4631	4475
MEAN	149	147	149	149	237	625	340	1627	1104	217	149	149
MAX	152	150	151	152	634	793	633	10600	2140	508	151	151
MIN	146	146	145	147	140	449	146	344	188	148	147	149
AC-FT	9180	8770	9160	9160	13620	38440	20240	100100	65690	13320	9190	8880
a	39460	21150	28940	28920	33430	40610	37560	36880	36180	36490	33580	28010

a Diversion, in acre-feet, through Beardsley Powerplant, provided by Oakdale-South San Joaquin Irrigation District.

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
LOWEST ANNUAL MEAN	111
HIGHEST DAILY MEAN	8630
LOWEST DAILY MEAN	3.0
ANNUAL SEVEN-DAY MINIMUM	5.0
INSTANTANEOUS PEAK FLOW	9080
INSTANTANEOUS PEAK STAGE	12.30
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	99.2	103	102	101	132	193	220	612	689	317	116	102
MAX	149	158	154	154	237	625	607	1973	3266	1960	269	149
(WY)	1996	1994	1990	1990	1996	1996	1995	1995	1995	1995	1995	1996
MIN	54.8	54.4	53.9	53.1	55.1	58.7	135	59.1	57.6	57.3	55.8	56.8
(WY)	1991	1991	1995	1995	1991	1991	1991	1994	1994	1994	1988	1990

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	276791	154126	
ANNUAL MEAN	758	421	233
HIGHEST ANNUAL MEAN			735
LOWEST ANNUAL MEAN			76.6
HIGHEST DAILY MEAN	5130	Jun 2	10600
LOWEST DAILY MEAN	38	Jan 22	140
ANNUAL SEVEN-DAY MINIMUM	44	Jan 19	141
INSTANTANEOUS PEAK FLOW			15000
INSTANTANEOUS PEAK STAGE			14.64
ANNUAL RUNOFF (AC-FT)	549000	305700	168400
10 PERCENT EXCEEDS	2650	848	231
50 PERCENT EXCEEDS	150	150	140
90 PERCENT EXCEEDS	138	147	57

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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683	560	474	489	492	1050	948	1220	1860	809	630	551
2	684	489	476	490	490	1060	810	1220	2130	1010	631	517
3	682	461	477	490	490	1070	802	949	2540	1120	629	553
4	678	409	475	490	429	1230	779	1210	2710	1060	628	555
5	675	462	476	495	362	1380	756	1210	2630	927	592	555
6	676	461	475	478	433	1230	754	1100	2350	838	559	556
7	666	461	480	493	673	1150	757	1040	2750	750	556	556
8	671	458	495	493	662	1160	758	1010	2750	883	556	559
9	675	458	494	493	655	1180	754	981	2590	966	556	559
10	627	459	495	492	640	1200	744	946	2260	915	555	524
11	649	461	489	496	656	1270	748	947	1840	837	558	518
12	668	370	464	496	670	1380	749	1080	1660	794	559	513
13	668	146	489	480	670	1300	750	2130	1800	869	601	512
14	661	147	492	499	672	1220	749	3270	2070	867	604	511
15	654	146	493	495	675	1200	749	3710	1950	789	556	514
16	662	148	494	495	679	1210	524	11100	1680	752	553	513
17	655	148	494	494	666	1240	899	5850	1460	701	555	513
18	632	146	493	496	684	1300	1030	5010	1280	687	555	274
19	653	149	494	495	729	1360	1070	3440	1190	683	553	149
20	654	267	494	492	750	1390	1150	2470	1260	671	553	478
21	645	475	495	492	746	1340	1190	2170	1500	704	552	515
22	654	477	498	493	693	1380	1190	1960	1260	748	555	149
23	664	475	494	494	1060	1310	1140	1810	1090	771	554	512
24	657	414	494	495	1240	1240	1100	1680	1090	670	555	514
25	659	475	495	497	1160	1200	1090	1600	1160	542	553	517
26	567	471	492	496	1120	1130	1160	1540	1120	530	553	517
27	657	473	487	493	1090	1130	1220	1480	1030	528	551	517
28	542	475	489	479	1080	1280	1240	1470	861	529	551	519
29	686	473	489	492	1060	1260	1230	1680	773	586	551	517
30	645	472	482	495	---	1220	1220	1670	767	627	554	521
31	658	---	487	494	---	1200	---	1700	---	627	552	---
TOTAL	20307	11486	15115	15261	21426	38270	28060	68653	51411	23790	17620	14778
MEAN	655	383	488	492	739	1235	935	2215	1714	767	568	493
MAX	686	560	498	499	1240	1390	1240	11100	2750	1120	631	559
MIN	542	146	464	478	362	1050	524	946	767	528	551	149
AC-FT	40280	22780	29980	30270	42500	75910	55660	136200	102000	47190	34950	29310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1996, BY WATER YEAR (WY)

MEAN	321	235	351	257	341	498	580	1030	1221	778	556	453
MAX	655	538	500	499	939	1560	1448	2554	3838	2504	805	635
(WY)	1996	1987	1986	1994	1986	1986	1986	1995	1995	1995	1995	1995
MIN	57.6	58.1	55.8	55.3	55.1	58.7	146	72.7	208	444	471	124
(WY)	1989	1989	1989	1989	1991	1981	1988	1980	1987	1994	1994	1988

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1986 - 1996

ANNUAL TOTAL	446908	326177	
ANNUAL MEAN	1224	891	552
HIGHEST ANNUAL MEAN			1165
LOWEST ANNUAL MEAN			221
HIGHEST DAILY MEAN	5720	Jun 2	11100
LOWEST DAILY MEAN	53	Jan 4	146
ANNUAL SEVEN-DAY MINIMUM	54	Jan 1	147
ANNUAL RUNOFF (AC-FT)	886400		647000
10 PERCENT EXCEEDS	3220		1460
50 PERCENT EXCEEDS	657		657
90 PERCENT EXCEEDS	456		475
			60

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 sea level, from topographic map.

REMARKS.--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 (station 11295505). 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	28	28	35	---	---	---	---	---	---	59
2	---	30	28	28	33	---	---	---	---	---	---	59
3	---	28	28	28	30	---	---	---	---	---	---	59
4	---	28	28	28	---	---	---	---	---	---	---	60
5	---	29	28	28	---	---	---	---	---	---	---	60
6	---	29	29	28	---	---	---	---	---	---	70	61
7	---	29	30	28	---	---	---	---	---	---	68	61
8	---	28	33	28	---	---	---	---	---	---	65	61
9	---	28	30	28	---	---	---	---	---	---	64	60
10	---	28	28	28	---	---	---	---	---	---	65	59
11	---	28	29	29	---	---	---	---	---	---	65	57
12	---	41	31	29	---	---	---	---	---	---	61	57
13	---	---	30	30	---	---	---	---	---	---	---	57
14	---	---	30	30	---	---	---	---	---	---	---	56
15	---	---	30	30	---	---	---	---	---	---	56	57
16	---	---	29	---	---	---	---	---	---	---	57	56
17	---	---	29	51	---	---	---	---	---	---	57	56
18	---	---	29	40	---	---	---	---	---	---	57	---
19	---	28	29	52	---	---	---	---	---	---	57	---
20	---	29	29	37	---	---	---	---	---	---	56	59
21	---	30	29	34	---	---	---	---	---	---	54	56
22	---	30	29	31	---	---	---	---	---	---	54	56
23	---	30	29	31	---	---	---	---	---	---	54	56
24	---	29	29	38	---	---	---	---	---	---	54	56
25	---	29	29	56	---	---	---	---	---	55	55	56
26	---	29	30	41	---	---	---	---	---	56	54	56
27	---	29	30	55	---	---	---	---	---	56	55	57
28	---	29	30	49	---	---	---	---	---	55	57	57
29	---	28	29	40	---	---	---	---	---	---	57	56
30	---	28	28	39	---	---	---	---	---	---	58	57
31	---	---	28	41	---	---	---	---	---	---	58	---
TOTAL	---	---	905	---	---	---	---	---	---	---	---	---
MEAN	---	---	29.2	---	---	---	---	---	---	---	---	---
MAX	---	---	33	---	---	---	---	---	---	---	---	---
MIN	---	---	28	---	---	---	---	---	---	---	---	---
AC-FT	---	---	1800	---	---	---	---	---	---	---	---	---
a	30400	21810	30740	31240	29720	31510	30650	31890	30130	30790	30930	26360
CAL YR 1995	a	342000										
WTR YR 1996	a	356200										

a Diversion, in acre-feet, through Stanislaus Powerplant, provided by Pacific Gas & Electric Co.

371

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		

[illegible]

11293370 UTICA RESERVOIR NEAR BIG MEADOWS. CA

LOCATION.--Lat 38°26'26", long 120°00'08", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Utica Dam on North Fork Stanislaus River, 1.2 mi upstream from Silver Creek. 2.6 mi southeast of Bear Valley, and 6.2 mi west of Big Meadows.

DRAINAGE AREA.--15.2 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 intermittently during summer months. Datum of gage is 6,776.75 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete and rock dam completed in 1910. Usable capacity, 2,334 acre-ft between gage heights 0.7 ft, invert of outlet, and 42.5 ft, crest of spillway. Figures given represent usable contents. Reservoir observed to be spilling on Apr. 5, 19, May 3, 17, June 2, 14, 28, and July 12. 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 1954)

0.7	0	30	356
10	19	35	858
20	65	40	1,763
25	127	43	2,456

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY INSTANTANEOUS VALUES[illegible]

373

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.

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 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.

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

[illegible]

SAN JOAQUIN RIVER BASIN

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 sea level (levels by Calaveras County Water District).

REMARKS.--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, 860 ft³/s, May 16, 1996; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	.12	7.4	1.4	21	141	576	255	22	.04	.00
2	22	18	.10	.52	1.3	24	121	547	314	19	.04	.01
3	22	18	.10	.33	1.2	33	97	461	324	17	.01	.02
4	21	18	.12	.32	27	46	97	370	292	14	.00	.02
5	21	18	.15	.20	330	51	131	372	254	9.9	.00	.00
6	21	18	.13	.15	146	28	228	396	243	6.3	.00	.01
7	21	18	.10	.18	51	25	350	377	256	2.6	.01	.00
8	21	17	.10	.22	36	27	412	386	214	2.2	.00	.01
9	21	17	.11	.22	73	44	414	309	164	2.3	.00	.01
10	21	16	.08	.22	83	56	338	385	125	2.3	.00	.02
11	20	15	.28	.25	72	58	265	455	99	2.4	.00	14
12	20	15	.42	.41	87	53	257	560	84	2.7	.02	20
13	20	15	5.0	.55	107	35	199	560	92	3.8	.04	20
14	20	15	.10	.57	110	29	272	509	77	11	.02	20
15	20	16	.06	.60	104	32	338	690	55	8.0	.02	21
16	20	15	.04	.97	177	48	352	860	46	2.6	.02	20
17	20	15	.06	6.5	235	80	208	639	39	1.4	.02	21
18	20	15	.05	3.4	194	146	148	734	34	1.3	.01	21
19	19	15	.06	1.5	174	198	86	357	30	1.2	.02	21
20	19	15	.05	1.2	131	212	73	283	27	.97	.02	22
21	19	15	.06	1.4	89	219	59	322	24	.59	.00	22
22	19	15	.07	1.1	60	192	72	335	20	.25	.01	21
23	19	15	.05	1.0	35	100	155	319	16	.03	.00	21
24	19	15	.01	1.1	40	61	302	198	14	.01	.00	21
25	19	15	.01	1.3	37	51	383	167	33	.04	.01	22
26	19	15	.01	1.1	32	48	482	216	64	.03	.01	21
27	19	15	.02	1.3	25	60	508	280	75	.03	.00	20
28	19	14	.02	1.1	25	75	412	211	49	.04	.02	21
29	19	14	.04	1.0	23	54	404	212	35	.04	.02	21
30	19	11	15	1.1	---	61	553	250	27	.03	.02	21
31	19	---	24	1.2	---	79	---	214	---	.04	.01	---
TOTAL	620	472	88.10	38.41	2506.9	2246	7857	12550	3381	134.10	0.39	411.10
MEAN	20.0	15.7	2.84	1.24	86.4	72.5	262	405	113	4.33	.013	13.7
MAX	22	19	.42	7.4	330	219	553	860	324	22	.04	.22
MIN	19	11	.01	.15	1.2	21	59	167	14	.01	.00	.00
AC-FT	1230	936	175	76	4970	4450	15580	24890	6710	266	.8	815

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.37	4.62	1.64	6.50	17.5	59.4	181	255	135	38.4	4.77	9.78
MAX	20.0	15.7	4.22	27.5	86.4	145	301	561	554	257	14.3	18.5
(WY)	1996	1996	1990	1990	1996	1995	1989	1993	1995	1995	1993	1990
MIN	.33	.14	.002	.000	.001	7.28	39.3	33.0	.021	.10	.013	.013
(WY)	1990	1991	1994	1994	1994	1991	1991	1992	1992	1990	1996	1989

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1989 - 1996

ANNUAL TOTAL	52967.52	30305.00	
ANNUAL MEAN	145	82.8	60.8
HIGHEST ANNUAL MEAN			144
LOWEST ANNUAL MEAN			22.0
HIGHEST DAILY MEAN	814	860	860
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	105100	60110	44020
10 PERCENT EXCEEDS	518	310	203
50 PERCENT EXCEEDS	22	20	7.1
90 PERCENT EXCEEDS	.06	.02	.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.

REVISED RECORD.--WDR CA-92-3: 1991.

GAGE.--Water-stage recorder. Prior to Sept. 14, 1990, contents estimated on basis of periodic observations of nonrecording gage. Datum of gage is sea level (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, 152 acre-ft, May 15, 1996, elevation, 6,696.6 ft; minimum observed, 5 acre-ft, Feb. 1, 28, Mar. 1, 1990, elevation, 6,676.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 152 acre-ft, May 15, elevation, 6,696.6 ft; minimum, not recorded.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

6,679	11	6,690	65	6,696	140
6,685	32	6,695	120		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	38	12	28	12	34	54	119	79	35	13	19
2	36	38	---	27	12	36	48	108	93	34	13	19
3	36	38	---	25	12	38	47	94	74	32	13	19
4	36	38	---	20	53	40	48	86	65	31	13	20
5	36	38	---	16	61	37	56	97	62	29	13	19
6	36	38	---	16	43	35	68	92	64	28	13	---
7	36	38	---	19	38	35	83	104	62	26	14	---
8	36	38	---	19	39	38	93	76	56	23	14	---
9	36	35	---	15	46	41	89	82	51	20	14	---
10	36	36	---	14	44	41	77	90	48	18	14	26
11	36	36	15	17	44	41	74	114	45	15	15	33
12	36	36	31	18	48	39	63	120	46	20	15	34
13	36	36	24	16	49	36	68	113	45	30	16	34
14	36	37	15	13	49	36	94	100	42	30	16	36
15	36	37	12	12	48	39	74	152	40	28	16	36
16	36	37	---	20	59	43	65	134	39	25	16	37
17	36	37	---	29	62	50	54	137	38	19	16	37
18	36	37	---	26	52	56	47	95	37	14	16	38
19	36	37	---	20	54	59	45	69	36	12	16	39
20	36	37	---	15	46	59	42	65	35	12	16	40
21	37	37	---	13	44	60	43	66	34	12	16	40
22	38	37	---	12	39	51	47	71	33	12	16	43
23	38	37	---	12	38	44	64	58	32	12	16	43
24	38	37	---	---	39	42	79	54	32	12	16	44
25	38	38	---	12	37	40	118	56	44	12	16	44
26	38	37	---	11	36	42	112	64	48	12	16	46
27	38	38	---	---	35	42	98	65	44	12	16	47
28	38	38	---	---	34	42	85	61	40	12	16	47
29	38	38	11	---	34	42	117	68	38	12	16	48
30	38	26	36	---	---	44	115	64	36	12	18	48
31	38	---	32	11	---	48	---	65	---	12	18	---
MAX	38	38	---	---	62	60	118	152	93	35	18	---
MIN	36	26	---	---	12	34	42	54	32	12	13	---
a	6685.9	6683.5	6685.0	6679.0	6685.3	6687.5	6694.6	6690.0	6685.6	6679.7	6681.5	6687.4
b	+2	-8	+6	-21	+23	+14	+67	-50	-29	-24	+6	+30

CAL YR 1995 b +13
WTR YR 1996 b +12

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

SAN JOAQUIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Records good. Low and medium flow regulated by Union and Utica Reservoirs and Lake Alpine (stations 11293350, 11293370, and 11293460). Diversion upstream from station at North Fork Stanislaus River Diversion Reservoir (station 11293590) through North Fork Stanislaus River Diversion Tunnel (station 11293580) and into New Spicer Meadow Reservoir (station 11293770), for hydroelectric power generation. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s, May 16, 1996, gage height 7.92 ft, from rating curve extended above 120 ft³/s on basis of computation of peak flow over diversion dam; minimum daily, 2.3 ft³/s, Oct. 18-20, 22, 23, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	11	21	11	22	27	34	27	21	6.5	7.3
2	17	17	6.0	19	11	23	26	34	28	21	6.4	7.4
3	17	17	4.4	19	11	23	25	33	28	20	6.3	7.3
4	17	17	6.1	18	21	24	25	33	26	20	6.4	7.1
5	17	17	5.0	15	38	24	26	33	26	20	6.5	7.6
6	17	17	3.9	13	28	25	29	33	26	19	6.5	13
7	17	17	4.2	e15	24	23	31	33	26	18	6.5	8.3
8	17	17	4.1	16	24	23	32	33	26	18	6.7	7.4
9	17	17	3.8	15	26	23	32	32	25	16	6.5	6.5
10	17	17	3.5	13	26	24	31	33	24	15	6.5	12
11	17	17	6.3	14	26	24	30	34	24	13	6.6	20
12	17	17	25	15	27	24	30	35	23	14	6.6	18
13	17	17	20	15	27	23	29	38	24	17	6.5	17
14	17	17	16	13	28	22	31	36	23	18	6.6	18
15	17	17	12	12	27	23	38	151	23	18	6.5	18
16	17	17	9.4	13	30	24	32	1840	22	17	6.6	18
17	17	17	8.2	20	30	25	28	106	22	15	6.6	18
18	17	17	7.9	20	28	27	26	384	22	12	6.7	18
19	17	17	7.4	19	28	28	24	25	21	9.4	6.7	18
20	17	17	7.4	16	27	29	24	24	21	8.0	6.5	18
21	17	17	7.2	14	26	29	24	24	21	7.4	6.5	18
22	17	17	6.9	13	25	28	24	25	21	7.1	6.4	18
23	17	17	6.5	12	37	25	27	25	20	6.9	6.2	18
24	17	17	6.3	11	24	24	30	24	20	6.8	6.2	18
25	17	17	6.1	12	25	24	33	23	22	6.6	6.2	18
26	17	17	6.5	12	24	24	33	24	23	6.6	6.2	18
27	17	17	7.2	12	28	24	33	26	23	6.7	6.2	18
28	17	17	7.2	14	23	25	32	25	22	6.7	6.1	18
29	17	17	7.4	11	23	24	32	25	22	6.6	6.1	18
30	17	16	20	10	---	24	37	26	21	6.5	6.6	18
31	17	---	22	10	---	25	---	26	---	6.5	7.2	---
TOTAL	527	509	274.9	452	733	759	881	3277	702	403.8	200.6	444.9
MEAN	17.0	17.0	8.87	14.6	25.3	24.5	29.4	106	23.4	13.0	6.47	14.8
MAX	17	17	25	21	38	29	38	1840	28	21	7.2	20
MIN	17	16	3.5	10	11	22	24	23	20	6.5	6.1	6.5
AC-FT	1050	1010	545	897	1450	1510	1750	6500	1390	801	398	882

e Estimated.

11293600 NORTH FORK STANISLAUS RIVER BELOW DIVERSION DAM, NEAR BIG MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.7	16.7	11.2	13.7	16.3	22.6	34.5	47.3	26.8	16.1	13.9	16.4
MAX	20.2	42.2	14.8	18.0	25.3	42.5	99.6	106	98.7	28.1	22.8	26.5
(WY)	1989	1990	1992	1990	1996	1988	1988	1996	1995	1989	1988	1988
MIN	10.1	7.01	3.19	3.80	4.85	16.2	18.8	18.0	9.68	5.45	5.32	5.48
(WY)	1993	1991	1991	1991	1991	1991	1991	1992	1992	1988	1989	1989

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1988 - 1996		
ANNUAL TOTAL	11890.3			9164.2					
ANNUAL MEAN	32.6			25.0			20.9		
HIGHEST ANNUAL MEAN							32.6		
LOWEST ANNUAL MEAN							13.0		
HIGHEST DAILY MEAN	938			May 1			1840		
LOWEST DAILY MEAN	3.5			Dec 10			2.3		
ANNUAL SEVEN-DAY MINIMUM	4.4			Dec 4			2.3		
INSTANTANEOUS PEAK FLOW				3220			May 16		
INSTANTANEOUS PEAK STAGE				7.92			May 16		
INSTANTANEOUS LOW FLOW				3.5			Dec 10		
ANNUAL RUNOFF (AC-FT)	23580			18180			15170		
10 PERCENT EXCEEDS	39			30			27		
50 PERCENT EXCEEDS	18			18			17		
90 PERCENT EXCEEDS	10			6.5			6.7		

11293650 NORTH FORK STANISLAUS RIVER AT CAMP WOLFEBORO, NEAR BIG MEADOWS, CA

LOCATION.--Lat 38°24'38", long 120°04'38", unsurveyed, T.7 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 1.6 mi downstream from Bloods Creek and 2.1 mi east of Big Meadows.

DRAINAGE AREA.--47.4 mi².

PERIOD OF RECORD.--October 1993 to September 1996 (discontinued).

REVISED RECORDS.--WDR CA-95-3: 1994(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,790 ft above sea level, from topographic map.

REMARKS.--Records good. Low and medium flow regulated by Union and Utica Reservoirs, Lake Alpine, and North Fork Stanislaus Diversion Reservoir (stations 11293350, 11293370, 11293460, and 11293590). See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,580 ft³/s, May 16, 1996, from rating curve extended above 330 ft³/s, gage height, 10.11 ft; minimum daily, 4.0 ft³/s, Dec. 10, 1995.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	14	51	31	66	171	342	116	30	9.7	7.5
2	18	18	8.2	43	30	75	157	324	121	28	9.2	7.5
3	18	18	5.2	42	29	83	135	287	120	27	8.9	7.5
4	18	18	9.4	37	221	80	130	251	111	26	8.9	7.4
5	18	18	6.8	33	656	70	152	249	102	25	8.1	7.4
6	18	18	4.9	30	281	76	203	249	95	24	7.3	11
7	18	18	4.8	33	172	77	254	252	88	23	6.9	11
8	18	18	4.7	35	151	82	285	233	80	22	6.9	7.9
9	18	18	4.4	34	148	97	278	223	71	20	6.8	8.2
10	18	18	4.0	30	141	97	239	237	64	19	8.3	6.4
11	18	18	17	29	141	100	213	272	58	17	7.1	20
12	18	18	158	33	157	91	197	301	53	26	7.3	18
13	18	18	45	32	168	79	178	297	50	38	7.0	19
14	18	18	29	30	168	77	211	262	46	31	7.0	19
15	18	18	23	28	158	87	239	436	42	24	6.9	19
16	18	18	18	56	207	107	294	2580	39	22	6.6	19
17	18	18	16	79	231	142	191	525	36	20	6.6	19
18	18	18	15	55	199	180	158	783	34	17	6.7	19
19	18	18	13	46	252	208	127	260	33	14	6.9	19
20	18	18	13	39	193	212	112	208	32	12	6.7	19
21	18	18	12	35	126	219	104	195	31	10	6.4	19
22	18	18	12	31	107	196	112	191	30	9.9	6.4	19
23	18	18	11	29	103	140	157	166	28	9.3	6.2	19
24	18	18	10	28	93	118	207	142	29	8.2	6.1	19
25	18	18	10	28	85	111	252	139	43	8.4	6.1	19
26	18	18	11	27	78	109	304	142	58	8.0	6.1	19
27	18	18	12	25	72	114	298	140	50	7.9	6.1	19
28	18	18	12	26	68	135	269	130	40	9.0	6.1	20
29	18	18	18	25	67	111	292	126	35	11	5.9	20
30	18	18	80	25	---	113	337	121	32	10	6.1	20
31	18	---	80	28	---	127	---	115	---	10	7.0	---
TOTAL	558	540	681.4	1102	4533	3579	6256	10178	1767	566.7	218.3	464.8
MEAN	18.0	18.0	22.0	35.5	156	115	209	328	58.9	18.3	7.04	15.5
MAX	18	18	158	79	656	219	337	2580	121	38	9.7	20
MIN	18	18	4.0	25	29	66	104	115	28	7.9	5.9	6.4
AC-FT	1110	1070	1350	2190	8990	7100	12410	20190	3500	1120	433	922

11293650 NORTH FORK STANISLAUS RIVER AT CAMP WOLFEBORO, NEAR BIG MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.2	17.2	17.7	41.4	86.9	121	183	268	158	42.6	13.7	15.9
MAX	18.8	18.7	22.3	76.9	156	178	226	390	395	95.4	19.1	16.3
(WY)	1995	1995	1995	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	17.8	14.9	8.95	11.9	16.4	70.7	113	84.5	18.7	14.1	7.04	15.5
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1996	1996

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1994 - 1996			
ANNUAL TOTAL	46867.0				30444.2							
ANNUAL MEAN	128				83.2				81.8			
HIGHEST ANNUAL MEAN									129			
LOWEST ANNUAL MEAN									33.6			
HIGHEST DAILY MEAN	1620				2580				2580			
LOWEST DAILY MEAN	4.0				4.0				4.0			
ANNUAL SEVEN-DAY MINIMUM	5.6				5.6				5.6			
INSTANTANEOUS PEAK FLOW					5580				5580			
INSTANTANEOUS PEAK STAGE					10.11				10.11			
ANNUAL RUNOFF (AC-FT)	92960				60390				59240			
10 PERCENT EXCEEDS	341				220				215			
50 PERCENT EXCEEDS	56				28				22			
90 PERCENT EXCEEDS	16				7.5				9.9			

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 east-southeast of Big Meadows.

DRAINAGE AREA.--45.4 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (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, 188,616 acre-ft, July 8, 1995, elevation, 6,613.8 ft; minimum, 30,198 acre-ft, Mar. 5, 1993, elevation, 6,491.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 184,670 acre-ft, June 8, elevation, 6,611.9 ft; minimum, 91,080 acre-ft, Mar. 30, elevation, 6,557.0 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134757	114780	105124	99804	93623	106100	91218	125915	181631	181412	159414	134359
2	133806	113914	104989	99736	92809	105598	91634	128504	182195	180849	159222	133687
3	132885	113305	104804	99436	92389	105263	91842	130522	182870	180624	158645	132827
4	131892	113016	104575	99271	93223	105514	92049	131962	183545	179837	158357	132059
5	130920	112684	104210	98873	95686	105765	92603	133495	183995	179387	158165	131002
6	129981	112151	103681	98699	96879	104676	93088	135224	184220	179049	157492	130425
7	129132	111571	103202	98736	97461	103421	94123	136857	184220	178486	157300	129753
8	128404	111047	102834	98701	97920	102588	95727	138491	184670	178036	156628	128985
9	127409	110500	102554	98702	98457	101834	97569	139638	184445	177248	156052	128504
10	126470	110100	102318	98549	98980	100914	98904	141464	183770	176461	155192	127741
11	125425	109585	102928	98434	99402	100495	100411	143578	183882	175560	153750	126780
12	124589	108966	104216	98161	100001	99992	101499	146070	183545	174885	152405	126107
13	124164	108647	104338	97966	100597	98904	102253	148664	183432	174328	151253	125627
14	123956	108221	104185	97918	101247	97485	103504	151061	183207	173765	149721	125004
15	123439	107899	104008	97974	101807	96146	104760	154903	183882	173089	148471	124753
16	122942	107739	103841	98229	102770	95141	106602	162742	183882	172414	147319	124334
17	122352	107563	103655	98415	103909	94677	107937	167018	183432	172302	146454	124167
18	121745	107363	103222	99742	104786	94330	108775	171739	183207	172077	146070	123999
19	121023	107214	102619	98778	106089	94677	109194	173765	182757	172077	145302	123664
20	120365	107061	101980	98839	106853	94607	109779	175447	182757	171402	144538	123414
21	119942	106866	101555	99062	107774	94974	110198	176461	182645	170952	144057	123079
22	119542	106719	101161	98936	107858	94890	110449	177473	182307	169938	143001	122744
23	119036	106528	100779	98445	108021	94815	111119	178148	182082	169038	141848	122246
24	118583	106264	100481	97941	108189	94330	112375	178373	181519	168032	140888	121576
25	118326	106213	100195	97326	108524	93708	112790	178598	182082	166906	139735	120822
26	117915	106027	99971	96612	108524	92603	115552	178711	181970	166006	138586	120404
27	117322	105834	99829	96571	108356	91703	117561	178711	182307	164993	137818	119734
28	116900	105703	99636	96575	107272	91772	119315	179499	182645	164205	137530	119232
29	116599	105525	99509	96171	106686	91357	121409	180287	182420	163192	136569	118478
30	116016	105397	99547	95425	---	91080	123497	180737	181970	161622	135801	117808
31	115557	---	99710	94544	---	91149	---	181187	---	159894	134840	---
MAX	134757	114780	105124	99804	108524	106100	123497	181187	184670	181412	159414	134359
MIN	115557	105397	99509	94544	92389	91080	91218	125915	181519	159894	134840	117808
a	6573.6	6566.9	6563.2	6559.8	6567.8	6557.1	6578.8	6610.2	6610.6	6599.8	6585.4	6575.1
b	-19926	-10160	-5687	-5166	+12142	-15537	+32348	+57690	+783	-22076	-25054	-17032

CAL YR 1995 b +30132

WTR YR 1996 b -17675

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 east-southeast of Big Meadows.

DRAINAGE AREA.--45.4 mi².

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930; 1953. WDR 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 sea level, 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.--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 (station 11293760). 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	383	96	59	547	415	278	25	490	398	313	253
2	524	404	96	110	502	300	102	45	533	400	174	251
3	522	337	98	149	300	299	183	127	524	358	152	397
4	451	147	152	203	166	164	147	163	531	302	152	435
5	450	209	232	226	30	132	149	164	585	302	152	382
6	449	326	250	75	30	699	151	164	727	302	152	355
7	434	280	250	75	31	695	83	164	677	302	187	254
8	404	279	203	58	31	601	62	165	547	400	346	243
9	468	283	122	45	31	600	30	165	605	400	362	342
10	483	288	122	51	31	599	30	118	631	419	451	455
11	456	288	90	134	31	498	30	52	495	431	622	396
12	456	287	41	165	31	456	30	50	515	374	742	242
13	314	240	90	104	31	665	31	50	577	344	742	232
14	151	204	158	105	31	798	30	68	372	316	711	253
15	210	165	120	87	31	767	32	90	108	312	710	182
16	354	120	102	51	31	698	27	31	201	278	569	181
17	355	107	156	30	32	615	27	27	399	153	242	170
18	355	99	259	30	31	541	28	26	364	134	217	150
19	354	99	278	26	32	442	28	26	281	135	332	153
20	354	99	299	25	32	407	28	51	278	166	366	231
21	222	99	266	25	31	407	28	216	278	314	319	302
22	167	99	205	97	114	406	63	256	278	406	508	262
23	309	98	177	298	206	406	168	329	278	533	560	270
24	218	98	177	392	30	492	164	420	247	497	560	298
25	218	95	177	392	30	641	127	458	154	501	559	329
26	224	96	132	379	100	854	114	458	107	449	459	324
27	350	96	104	149	394	640	27	458	101	472	302	328
28	218	96	121	120	502	366	27	361	203	342	319	318
29	198	96	181	224	505	478	72	258	301	478	347	319
30	260	96	186	413	---	462	69	280	302	729	437	318
31	303	---	37	530	---	231	---	404	---	800	432	---
TOTAL	10551	5613	4977	4827	3924	15774	2365	5669	11689	11747	12496	8625
MEAN	340	187	161	156	135	509	78.8	183	390	379	403	287
MAX	524	404	299	530	547	854	278	458	727	800	742	455
MIN	151	95	37	25	30	132	27	25	101	134	152	150
AC-FT	20930	11130	9870	9570	7780	31290	4690	11240	23190	23300	24790	17110
a	20930	11130	9870	9570	7780	31290	4690	11240	23190	23300	24790	17110

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.3	43.2	65.3	63.5	79.5	112	226	408	291	115	63.4	52.7
MAX	340	244	399	317	385	509	456	1047	1097	787	403	375
(WY)	1996	1994	1965	1980	1995	1996	1995	1969	1983	1995	1996	1995
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1953 - 1996			
ANNUAL TOTAL	127225				98257							
ANNUAL MEAN	349				268				131			
HIGHEST ANNUAL MEAN									328			
LOWEST ANNUAL MEAN									25.3			
HIGHEST DAILY MEAN	1120				854				5040			
LOWEST DAILY MEAN	17				25				.00			
ANNUAL SEVEN-DAY MINIMUM	23				28				.00			
INSTANTANEOUS PEAK FLOW					915				9860			
INSTANTANEOUS PEAK STAGE									11.88			
ANNUAL RUNOFF (AC-FT)	252400				194900				94640			
ANNUAL RUNOFF (AC-FT) a	251900				194900							
10 PERCENT EXCEEDS	613				530				382			
50 PERCENT EXCEEDS	312				248				46			
90 PERCENT EXCEEDS	35				31				2.7			

a Diversion, in acre-feet, through New Spicer Meadow Powerplant, provided by Calaveras County Water District.

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 September 1996 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,930 ft above sea level, from topographic map.

REMARKS.--Records poor. 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, 14,000 ft³/s, May 16, 1996, from rating curve extended above 8,500 ft³/s, gage height, 18.67 ft; minimum daily, 11 ft³/s, Oct. 24, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	391	109	191	679	730	1060	1170	856	457	447	320
2	532	428	104	185	706	591	794	1110	907	481	221	244
3	575	421	99	255	438	642	763	1070	895	462	178	388
4	484	195	128	264	1460	809	650	991	873	374	177	479
5	483	174	231	335	3170	490	682	958	861	369	177	422
6	483	362	264	195	1250	967	810	969	1030	367	176	384
7	480	307	267	151	763	1130	926	962	993	365	176	332
8	439	306	260	153	652	970	1000	927	790	436	343	240
9	480	304	138	122	585	1010	977	865	790	462	372	329
10	529	310	130	117	547	1020	863	876	870	464	437	478
11	495	311	179	125	529	1070	756	873	698	497	634	477
12	494	308	729	288	560	943	712	964	654	445	772	317
13	430	289	246	176	594	995	610	964	740	434	797	221
14	195	224	239	171	583	1170	657	890	627	392	756	337
15	175	217	212	172	560	1180	781	1390	258	371	754	219
16	367	140	152	436	739	1140	1520	7400	232	358	696	216
17	376	135	143	415	928	1150	1010	2110	507	238	327	213
18	374	115	293	239	854	1220	930	3290	506	172	200	181
19	373	114	303	211	1950	1210	642	1120	384	173	331	182
20	373	114	332	164	1500	1170	556	830	374	169	417	197
21	307	114	320	156	840	1180	493	926	369	314	330	365
22	172	113	255	142	608	1120	501	974	366	405	485	298
23	314	114	208	346	730	923	674	937	362	553	590	301
24	244	114	205	516	481	902	928	932	356	538	590	322
25	239	112	204	486	407	988	960	965	302	540	591	364
26	240	115	190	541	375	1250	1160	958	287	498	554	362
27	336	111	131	341	626	1130	1070	944	251	539	331	366
28	308	111	133	187	788	1090	966	853	249	361	331	356
29	176	111	203	301	775	915	998	670	402	495	375	356
30	281	111	496	434	---	914	1210	659	391	684	423	356
31	299	---	308	691	---	732	---	744	---	935	498	---
TOTAL	11343	6291	7211	8506	24677	30751	25659	39291	17180	13348	13486	9622
MEAN	366	210	233	274	851	992	855	1267	573	431	435	321
MAX	575	428	729	691	3170	1250	1520	7400	1030	935	797	479
MIN	172	111	99	117	375	490	493	659	232	169	176	181
AC-FT	22500	12480	14300	16870	48950	60990	50890	77930	34080	26480	26750	19090

SAN JOAQUIN RIVER BASIN

11294400 NORTH FORK STANISLAUS RIVER AT SOURGRASS CAMPGROUND, NEAR DORRINGTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	245	170	218	321	414	611	707	857	548	407	294	282
MAX	366	267	367	710	851	1222	1358	1660	1454	1031	435	399
(WY)	1996	1994	1994	1995	1996	1995	1995	1995	1995	1995	1996	1995
MIN	131	115	120	118	126	227	359	160	165	172	171	168
(WY)	1993	1993	1992	1992	1991	1994	1994	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1991 - 1996	
ANNUAL TOTAL	298432		207365			
ANNUAL MEAN	818		567		450	
HIGHEST ANNUAL MEAN					798	
LOWEST ANNUAL MEAN					188	
HIGHEST DAILY MEAN	7350		May 1		7400	
LOWEST DAILY MEAN	31		Sep 18		99	
ANNUAL SEVEN-DAY MINIMUM	108		Nov 27		108	
INSTANTANEOUS PEAK FLOW					14000	
INSTANTANEOUS PEAK STAGE					18.67	
ANNUAL RUNOFF (AC-FT)	591900		411300		326200	
10 PERCENT EXCEEDS	1480		1000		993	
50 PERCENT EXCEEDS	625		437		271	
90 PERCENT EXCEEDS	178		172		124	

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, October 1928 to current year. Water-year estimates for 1923-25 and 1929 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 sea level (river-profile survey). Prior to September 1922, nonrecording gage at same site at datum 0.05 ft lower.

REMARKS.--Records fair. Low and medium flows regulated by Union and Utica Reservoirs, Lake Alpine, North Fork Stanislaus River Diversion Reservoir beginning 1990, and New Spicer Meadow Reservoir beginning 1990 (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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	383	120	185	671	832	1070	1140	861	438	473	329
2	497	425	115	168	726	664	920	1110	915	467	237	242
3	569	423	110	228	428	729	856	1070	902	459	187	349
4	475	226	133	230	1300	980	734	1010	884	372	183	458
5	469	181	220	298	2940	734	752	963	857	368	183	411
6	469	339	264	200	1250	1030	863	979	1010	365	182	372
7	468	310	267	136	823	1200	958	966	994	363	182	340
8	426	308	265	141	702	1060	1020	953	799	417	313	234
9	456	304	163	116	621	1100	1010	886	773	450	364	309
10	515	312	138	107	569	1090	918	902	879	446	417	441
11	477	312	189	110	540	1150	821	882	693	487	591	464
12	477	312	771	251	567	1070	782	968	625	438	749	324
13	430	304	277	162	614	1070	654	978	727	426	792	222
14	217	234	227	156	599	1210	692	917	631	397	746	327
15	182	232	212	159	572	1220	833	1220	288	371	740	219
16	339	159	148	382	726	1180	1410	7660	236	358	702	215
17	374	149	136	453	897	1180	1050	1790	468	259	350	212
18	375	127	249	247	880	1240	988	2980	492	188	208	187
19	375	126	271	233	1730	1230	713	1130	388	185	303	182
20	375	125	298	175	1600	1190	599	880	373	180	402	188
21	335	125	295	164	1040	1200	521	942	368	294	330	346
22	186	125	235	140	785	1170	515	997	365	387	445	290
23	295	125	197	284	862	990	672	962	362	521	565	292
24	262	125	191	485	611	959	942	946	361	530	567	309
25	246	124	190	461	502	1020	951	975	311	515	566	349
26	246	127	186	509	452	1230	1120	966	299	482	549	349
27	321	122	123	379	678	1160	1070	959	268	515	331	352
28	332	122	123	226	872	1150	980	882	239	374	321	344
29	185	122	166	291	860	965	976	672	396	460	362	343
30	273	121	450	389	---	975	1160	656	389	633	394	343
31	291	---	304	698	---	828	---	736	---	944	489	---
TOTAL	11217	6529	7033	8163	25417	32806	26550	39077	17153	13089	13223	9342
MEAN	362	218	227	263	876	1058	885	1261	572	422	427	311
MAX	569	425	771	698	2940	1240	1410	7660	1010	944	792	464
MIN	182	121	110	107	428	664	515	656	236	180	182	182
AC-FT	22250	12950	13950	16190	50410	65070	52660	77510	34020	25960	26230	18530

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.3	134	222	241	331	499	977	1478	783	169	78.5	71.9
MAX	482	2103	1957	1691	2105	1785	2026	3299	3651	1231	437	403
(WY)	1983	1951	1965	1980	1986	1986	1982	1969	1983	1983	1995	1995
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1915 - 1996			
ANNUAL TOTAL	309968				209599							
ANNUAL MEAN	849				573				421			
HIGHEST ANNUAL MEAN									1019			
LOWEST ANNUAL MEAN									54.3			
HIGHEST DAILY MEAN	8390				May 1				23400			
LOWEST DAILY MEAN	42				Sep 17				5.5			
ANNUAL SEVEN-DAY MINIMUM	119				Nov 27				7.4			
INSTANTANEOUS PEAK FLOW					13400				May 16			
INSTANTANEOUS PEAK STAGE					11.08				May 16			
ANNUAL RUNOFF (AC-FT)	614800				415700				305300			
10 PERCENT EXCEEDS	1500				1060				1200			
50 PERCENT EXCEEDS	628				438				125			
90 PERCENT EXCEEDS	186				167				35			

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.--Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 23.0°C, July 5, 27-30, 1991; minimum recorded, 0.0°C, Nov. 26, 27, 1994. Jan. 23, 24, 1996.

EXTREMES FOR CURRENT YEAR.--WATER TEMPERATURE: Maximum recorded, 18.5°C, July 20, 21, Aug. 7, 9; minimum recorded, 0.0°C, Jan. 23, 24.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	11.5	10.0	9.5	6.5	5.5	4.5	3.0	4.5	3.5	5.0	3.0
2	13.5	12.0	10.0	8.5	7.0	6.5	4.5	3.5	5.0	4.0	5.0	3.5
3	14.0	12.5	9.0	8.0	6.5	6.0	4.5	3.5	4.5	4.0	5.0	4.0
4	13.5	11.5	8.5	7.5	7.0	6.5	4.5	4.0	4.5	2.5	4.5	3.5
5	13.0	11.5	8.0	6.5	8.5	7.0	5.0	4.0	3.5	2.5	3.5	2.5
6	12.5	11.0	8.0	6.5	8.0	7.0	5.0	4.5	4.0	3.0	4.5	1.5
7	12.5	11.0	---	---	8.0	7.5	5.0	4.0	4.5	3.0	6.0	4.0
8	12.5	11.0	---	---	7.5	6.5	5.0	4.0	4.5	3.5	6.5	4.0
9	12.5	11.0	10.0	8.5	7.0	6.0	5.0	4.0	5.0	4.0	6.0	4.5
10	13.0	11.5	9.0	8.0	6.5	5.5	5.0	4.0	5.5	4.5	6.0	4.5
11	13.0	11.0	9.0	7.5	6.5	6.0	4.5	4.0	5.5	4.5	6.0	4.5
12	12.5	10.5	9.0	8.0	7.0	4.5	5.0	3.5	6.0	4.5	4.5	4.0
13	12.5	11.0	9.5	8.0	4.5	3.0	5.0	4.0	6.0	4.5	5.0	4.0
14	13.0	11.5	9.5	8.0	3.0	2.0	4.5	3.5	5.5	4.5	6.5	4.0
15	13.0	10.5	9.0	8.0	4.0	3.0	5.0	4.5	5.5	4.5	7.0	4.0
16	12.0	10.5	9.0	7.5	3.0	2.5	5.0	4.0	6.5	5.5	7.0	4.0
17	12.0	10.5	8.5	7.0	2.5	2.0	4.0	3.0	5.5	5.0	7.5	4.5
18	11.0	10.0	8.0	7.0	4.5	2.5	3.5	2.0	5.0	4.0	7.5	4.5
19	11.0	10.0	7.5	6.5	4.0	4.0	3.0	1.5	5.0	4.0	7.0	5.0
20	10.5	10.0	7.5	6.5	4.0	3.5	3.0	2.0	4.0	3.5	7.0	4.5
21	10.0	9.5	7.5	6.5	3.5	3.0	2.5	1.0	4.0	2.0	7.0	4.5
22	9.5	8.0	7.0	5.5	4.0	3.5	2.0	1.0	3.0	2.0	6.5	4.5
23	8.5	7.0	7.0	5.5	4.5	3.5	1.0	.0	3.5	1.0	5.5	3.0
24	8.5	7.5	7.5	6.0	4.0	3.0	1.5	.0	3.5	2.0	5.5	3.0
25	8.5	7.0	7.5	6.0	3.5	2.5	3.5	1.0	2.5	1.5	5.5	3.5
26	9.5	7.5	7.5	6.5	3.5	2.5	3.5	3.0	2.5	1.0	6.5	3.5
27	10.5	8.5	6.5	5.5	4.0	3.0	4.0	2.0	2.5	1.0	6.0	4.5
28	10.0	9.5	6.0	5.0	4.0	3.0	3.0	2.0	4.0	2.0	6.0	4.0
29	11.0	9.0	6.5	5.5	4.5	3.5	3.0	2.5	4.5	3.0	6.0	2.5
30	10.5	9.0	6.5	5.5	5.5	4.5	4.5	3.0	---	---	6.5	4.0
31	10.0	9.0	---	---	5.5	4.5	4.5	3.5	---	---	7.0	4.5
MONTH	14.0	7.0	---	---	8.5	2.0	5.0	.0	6.5	1.0	7.5	1.5

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	4.5	9.5	6.0	12.5	10.0	16.0	14.0	15.5	12.5	16.5	14.5
2	6.0	4.0	9.5	6.0	13.5	11.0	16.0	14.0	17.5	13.5	17.0	13.5
3	6.5	5.0	8.5	6.0	13.0	10.5	16.0	14.0	17.0	13.5	16.0	14.0
4	7.5	5.0	8.0	5.5	13.0	10.5	16.5	14.0	17.5	13.5	15.5	14.0
5	8.0	5.5	9.0	6.0	13.0	10.5	16.0	13.5	18.0	14.5	14.5	13.0
6	8.0	5.5	9.0	6.0	14.0	11.0	17.0	14.0	18.0	14.5	15.0	13.0
7	8.0	5.5	9.0	6.5	14.5	11.5	18.0	15.0	18.5	14.5	15.0	13.0
8	8.0	5.0	9.0	6.5	14.5	11.5	17.5	15.5	18.0	15.0	16.0	13.0
9	8.0	5.0	9.0	6.5	14.0	11.0	17.0	15.0	18.5	16.0	16.0	13.5
10	7.0	5.0	9.5	7.0	13.5	10.5	17.0	15.0	18.0	16.0	15.5	14.0
11	7.5	5.0	10.5	8.0	13.5	10.5	17.0	15.0	17.0	15.5	15.5	14.0
12	7.0	6.0	11.0	8.0	14.5	12.0	17.5	15.5	15.5	13.0	15.0	13.5
13	7.0	4.5	11.0	8.0	14.5	11.5	17.5	15.0	15.5	13.0	13.5	12.5
14	8.5	5.5	10.5	8.5	14.0	11.5	18.0	15.5	15.5	13.5	14.0	11.0
15	8.0	6.5	10.0	8.5	16.0	12.0	18.0	15.5	15.5	12.5	14.5	12.5
16	7.5	4.5	8.5	6.5	16.5	12.5	17.0	14.5	15.0	12.5	14.0	11.5
17	5.0	3.5	7.0	6.5	15.0	12.5	18.0	14.0	15.0	13.0	13.5	11.0
18	5.5	4.5	7.0	6.5	14.0	11.5	18.0	14.0	15.5	12.0	14.0	11.0
19	5.5	4.5	8.5	6.5	14.5	12.5	18.0	14.0	14.5	12.0	14.5	11.5
20	5.5	4.0	9.0	7.0	15.0	12.5	18.5	14.5	13.5	12.0	15.0	12.0
21	7.5	4.0	9.0	7.5	15.0	12.5	18.5	15.0	15.5	12.0	15.0	13.0
22	8.5	5.0	10.0	7.5	15.0	11.5	17.5	15.5	16.5	14.0	15.5	13.5
23	9.0	6.5	9.5	7.0	16.0	12.5	17.0	15.5	16.5	14.5	15.0	13.0
24	8.5	6.5	9.0	6.0	13.5	11.5	17.5	14.5	16.5	14.5	15.0	13.0
25	9.5	6.5	10.5	7.5	11.5	10.5	17.0	15.0	16.5	14.5	14.5	12.5
26	9.5	6.0	11.0	8.5	10.5	10.0	17.0	15.0	16.5	14.5	14.5	12.5
27	9.0	6.0	10.5	9.0	12.5	9.5	16.5	15.5	16.0	14.0	15.0	13.0
28	8.5	5.5	10.0	8.0	15.0	10.5	18.0	15.5	16.5	14.0	15.5	14.0
29	9.5	6.0	11.0	9.0	15.5	12.5	17.5	16.0	17.0	14.5	15.0	13.5
30	9.5	6.0	10.5	9.0	16.5	13.5	17.5	15.5	17.0	15.0	15.0	13.5
31	---	---	12.0	9.5	---	---	16.5	12.0	16.5	14.5	---	---
MONTH	9.5	3.5	12.0	5.5	16.5	9.5	18.5	12.0	18.5	12.0	17.0	11.0

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 eastsoutheast of Arnold.

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

GAGE.--Water-stage recorder. Datum of gage is 4,188.0 ft above sea level (levels by Calaveras County Water District).

REMARKS.--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, 232 ft³/s, Apr. 4, 1993; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	21	35	112	153	197	84	13	.00	.00
2	.00	.00	.00	15	29	114	165	186	78	10	.00	.00
3	.00	.00	.00	15	24	117	195	175	73	9.0	.00	.00
4	.00	.00	.00	12	52	152	177	156	74	8.2	.00	.00
5	.00	.00	.00	8.7	34	140	176	145	68	6.5	.00	.00
6	.00	.00	.00	6.1	80	122	186	143	56	6.3	.00	.00
7	.00	.00	.00	7.1	118	152	186	138	47	5.2	.00	.00
8	.00	.00	.00	3.9	153	145	199	132	45	4.5	.00	.00
9	.00	.00	.00	5.5	159	151	200	125	40	3.8	.00	.00
10	.00	.00	.00	1.8	151	152	202	124	34	2.8	.00	.00
11	.00	.00	9.1	3.6	147	172	180	126	29	2.2	.00	.00
12	.00	.00	51	.00	147	177	173	132	25	4.6	.00	.00
13	.00	.00	43	1.7	154	172	157	123	26	2.7	.00	.00
14	.00	.00	24	.00	156	153	159	127	26	1.0	.00	.00
15	.00	.00	11	2.3	154	156	163	140	25	1.1	.00	.00
16	.00	.00	4.8	76	186	162	123	17	23	.00	.00	.00
17	.00	.00	2.1	87	180	176	185	23	20	.00	.00	.00
18	.00	.00	.30	72	138	160	191	.00	18	.00	.00	.00
19	.00	.00	.20	63	70	184	198	91	19	.00	.00	.00
20	.00	.00	.00	33	73	154	178	128	19	.00	.00	.00
21	.00	.00	.00	28	99	200	160	142	16	.00	.00	.00
22	.00	.00	.00	16	123	206	154	162	15	.00	.00	.00
23	.00	.00	.00	11	193	157	155	144	13	.00	.00	1.3
24	.00	.00	.00	23	194	164	164	133	15	.00	.00	.00
25	.00	.00	.00	21	165	156	174	123	21	.00	.00	.00
26	.00	.00	.00	23	147	147	193	114	30	.00	.00	.00
27	.00	.00	.00	38	139	143	197	110	30	.00	.00	.00
28	.00	.00	.00	42	128	178	187	104	21	.00	.00	.00
29	.00	.00	.60	24	120	170	178	98	18	.00	.00	.00
30	.00	.00	67	24	---	159	191	92	13	.00	.00	.00
31	.00	---	43	34	---	155	---	87	---	.00	.00	---
TOTAL	0.00	0.00	256.10	718.70	3548	4858	5299	3737.00	1021	80.90	0.00	1.30
MEAN	.000	.000	8.26	23.2	122	157	177	121	34.0	2.61	.000	.043
MAX	.00	.00	67	87	194	206	202	197	84	13	.00	1.3
MIN	.00	.00	.00	.00	24	112	123	.00	13	.00	.00	.00
AC-FT	.00	.00	508	1430	7040	9640	10510	7410	2030	160	.00	2.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	MEAN	.068	.18	1.82	21.0	50.1	69.5	94.3	72.8	27.3	2.49	.024	.007
MAX		.41	1.08	8.26	52.9	122	157	177	173	80.7	13.2	.17	.043
(WY)	1993	1995	1996	1995	1996	1996	1996	1996	1993	1995	1995	1995	1996
MIN		.000	.000	.000	.000	.000	3.90	32.7	2.52	.000	.000	.000	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1994	1992	1992	1990	1990	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1990 - 1996			
ANNUAL TOTAL	15211.20				19520.00							
ANNUAL MEAN	41.7				53.3				30.0			
HIGHEST ANNUAL MEAN									54.6			
LOWEST ANNUAL MEAN									6.74			
HIGHEST DAILY MEAN	192				206				232			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	30170				38720				21710			
10 PERCENT EXCEEDS	115				166				110			
50 PERCENT EXCEEDS	9.2				6.8				.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 east-southeast of Arnold.

DRAINAGE AREA.--29.3 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Calaveras County Water District).

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in July 1989. Usable capacity, 3.5 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. At times, during some years, reservoir is drained below minimum fishwater release elevation 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, 14 acre-ft, at times in some water years, maximum elevation, 4,194.2 ft, Mar. 10, 1995; minimum, 6.0 acre-ft, at times in water years 1994 and 1995, minimum elevation, 4,180.7 ft, Nov. 24, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14 acre-ft, Feb. 4, 19, May 16, 17; maximum elevation, 4,193.2 ft, Feb. 19; minimum, 10.0 acre-ft, many days during year, elevation, 4,187.2 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

4,180	6	4,186	9	4,192	13
4,182	7	4,188	11	4,193	14
4,184	8	4,190	12		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	10	11	12	12	13	12	12	12	10	10
2	10	10	10	11	11	12	12	12	12	12	10	10
3	10	10	10	12	12	12	12	12	12	12	10	10
4	10	10	10	12	14	13	12	12	12	12	10	10
5	10	10	10	11	13	12	12	12	12	12	10	10
6	10	10	10	11	13	12	12	12	12	12	10	10
7	10	10	10	11	13	12	13	12	12	12	10	10
8	10	10	10	12	13	12	13	12	12	12	10	10
9	10	10	10	11	12	12	12	12	11	12	10	10
10	10	10	10	12	12	12	12	12	11	12	10	10
11	10	10	12	11	12	13	12	12	12	12	10	10
12	10	10	13	12	12	12	12	12	12	12	10	10
13	10	10	12	12	12	12	12	12	11	12	10	10
14	10	10	12	12	12	13	12	12	12	12	10	10
15	10	10	12	12	12	12	13	13	12	12	10	10
16	10	10	12	13	13	12	13	14	11	11	10	10
17	10	10	12	12	13	13	13	14	12	11	10	10
18	10	10	12	12	13	13	12	13	12	11	10	10
19	10	10	10	12	14	13	12	13	12	10	10	10
20	10	10	10	12	13	13	12	13	11	10	10	10
21	10	10	10	12	13	13	12	13	12	10	10	10
22	10	10	10	12	13	13	12	12	11	10	10	10
23	10	10	10	11	12	12	12	12	12	10	10	10
24	10	10	10	11	12	12	12	12	12	10	10	10
25	10	10	10	12	12	12	12	12	11	10	10	10
26	10	10	10	11	12	12	12	12	11	10	10	10
27	10	10	10	12	12	12	12	12	12	10	10	10
28	10	10	10	12	12	12	13	12	12	10	10	10
29	10	10	12	12	12	12	12	12	12	10	10	10
30	10	10	12	12	---	12	12	12	12	10	10	10
31	10	---	11	12	---	12	---	12	---	10	10	---
MAX	10	10	13	13	14	13	13	14	12	12	10	10
MIN	10	10	10	11	11	12	12	12	11	10	10	10
a	4187.2	4187.2	4189.1	4189.4	4190.1	4190.3	4190.4	4190.5	4189.8	4187.5	4187.2	4187.2
b	0	0	+1	+1	0	0	0	0	0	-2	0	0

CAL YR 1995 b +1

WTR YR 1996 b 0

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 east-southeast of Arnold.

DRAINAGE AREA.--29.3 mi².

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

REVISED RECORDS.--WDR CA-92-3: 1991 (M).

GAGE.--Acoustic-velocity meter on low-flow discharge, and water-stage recorder on Beaver Creek Diversion Reservoir (station 11295220). Datum of gage is sea level (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, 2,290 ft³/s, Mar. 10, 1995; minimum daily, 1.2 ft³/s, Dec. 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.8	9.3	21	21	21	83	21	22	21	15	9.7
2	9.0	9.9	9.4	21	21	21	71	25	22	21	15	9.5
3	10	9.9	9.5	21	21	21	21	21	22	21	14	9.5
4	10	9.7	15	21	217	59	23	21	22	21	15	9.5
5	9.9	9.8	13	21	628	61	21	21	22	21	15	9.6
6	9.9	9.7	11	21	200	24	24	21	22	21	14	9.6
7	10	9.7	11	21	82	21	29	21	21	21	14	9.5
8	10	9.6	11	21	36	21	38	21	21	21	14	9.4
9	10	9.6	10	21	21	21	40	21	21	21	13	9.2
10	9.9	9.7	10	21	21	21	21	21	21	21	13	9.0
11	9.8	9.6	24	21	21	27	24	22	21	21	12	9.0
12	9.8	9.5	128	21	21	27	25	21	21	21	12	9.0
13	9.9	9.4	40	21	22	21	21	23	20	21	12	10
14	9.7	9.3	21	21	21	21	21	21	21	21	12	11
15	9.6	9.3	21	21	21	21	24	34	21	21	12	11
16	9.6	9.3	21	51	23	21	170	715	22	21	12	11
17	9.8	9.2	21	43	57	21	81	313	22	21	12	10
18	9.6	9.2	21	21	94	55	81	466	22	21	12	10
19	9.5	9.2	20	21	507	53	21	174	22	20	12	9.7
20	9.4	9.2	18	21	455	87	23	133	21	20	12	9.6
21	9.4	9.0	17	21	272	45	22	47	21	19	12	9.4
22	9.4	9.1	18	21	140	29	21	22	21	18	11	9.2
23	9.5	9.1	18	21	432	44	21	22	22	18	11	9.2
24	9.5	9.0	16	21	22	21	21	21	22	18	11	9.1
25	9.6	9.1	16	21	23	21	23	22	22	17	11	8.0
26	9.7	11	16	21	36	21	21	21	21	17	11	8.0
27	9.6	9.8	16	21	21	21	22	21	22	16	10	8.7
28	9.6	9.5	17	21	26	55	21	21	21	16	10	8.6
29	9.9	9.4	18	21	21	22	22	21	21	16	10	8.6
30	9.4	9.3	21	21	---	23	24	21	21	16	10	8.4
31	9.4	---	21	21	---	21	---	22	---	15	9.8	---
TOTAL	301.4	284.9	638.2	703	3503	968	1080	2397	643	604	378.8	282.0
MEAN	9.72	9.50	20.6	22.7	121	31.2	36.0	77.3	21.4	19.5	12.2	9.40
MAX	11	11	128	51	628	87	170	715	22	21	15	11
MIN	9.0	9.0	9.3	21	21	21	21	21	20	15	9.8	8.0
AC-FT	598	565	1270	1390	6950	1920	2140	4750	1280	1200	751	559

SAN JOAQUIN RIVER BASIN

11295230 BEAVER CREEK BELOW DIVERSION DAM, NEAR ARNOLD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.87	6.76	10.1	32.2	32.5	72.7	53.3	69.1	25.6	11.2	7.09	5.30
MAX	9.72	9.50	20.6	101	121	280	185	291	87.8	19.5	16.3	10.4
(WY)	1996	1996	1996	1995	1996	1995	1995	1995	1995	1996	1995	1995
MIN	3.28	4.48	4.53	5.00	6.32	17.6	17.2	16.3	6.93	4.77	2.61	2.48
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	1994	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1990 - 1996	
ANNUAL TOTAL	32493.1		11783.3			
ANNUAL MEAN	89.0		32.2		30.3	
HIGHEST ANNUAL MEAN					87.8	
LOWEST ANNUAL MEAN					8.86	
HIGHEST DAILY MEAN	1510	Mar 10	715	May 16	1510	Mar 10 1995
LOWEST DAILY MEAN	8.3	Sep 12	8.0	Sep 25	1.2	Dec 22 1994
ANNUAL SEVEN-DAY MINIMUM	9.1	Nov 19	8.5	Sep 24	2.0	Oct 1 1991
INSTANTANEOUS PEAK FLOW			1300	May 16	2290	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	64450		23370		21920	
10 PERCENT EXCEEDS	259		37		23	
50 PERCENT EXCEEDS	19		21		12	
90 PERCENT EXCEEDS	9.6		9.4		3.2	

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 sea level, 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	63	43	72	31	30	10	65	55	67	50	50
2	54	66	70	72	46	30	5.1	65	55	70	50	50
3	54	66	70	74	45	30	5.1	65	58	69	50	50
4	54	66	64	75	25	21	18	65	60	70	50	50
5	54	66	72	75	10	15	48	65	46	70	50	50
6	55	66	74	75	10	15	50	65	60	70	50	50
7	54	66	74	75	18	15	50	65	60	70	50	50
8	55	66	74	75	31	15	13	62	60	58	50	50
9	55	66	74	75	35	15	5.1	60	60	70	50	50
10	54	66	74	75	37	15	22	60	63	70	50	50
11	54	66	63	75	43	24	50	60	65	70	50	50
12	54	66	17	75	51	30	53	60	65	70	50	50
13	54	63	.32	76	55	30	55	60	65	70	50	50
14	54	61	46	76	55	30	55	60	65	70	50	50
15	54	61	70	76	55	30	55	55	65	70	50	50
16	54	68	65	47	55	30	33	17	65	70	50	50
17	54	68	65	32	55	36	20	19	65	70	50	50
18	54	58	68	45	28	40	20	30	65	46	50	50
19	54	58	73	45	10	40	36	30	65	49	50	50
20	56	58	75	45	10	40	45	30	65	49	50	50
21	56	58	75	45	15	40	45	44	65	49	49	50
22	56	58	75	52	20	43	51	55	65	49	50	50
23	56	58	75	60	20	45	55	55	65	49	50	50
24	56	58	75	51	20	45	55	55	65	49	50	50
25	56	58	75	10	20	45	61	55	65	49	50	50
26	56	23	75	33	20	45	65	55	65	49	50	50
27	56	6.8	75	23	20	33	65	55	65	49	50	50
28	56	6.8	75	10	20	24	65	55	65	49	50	50
29	47	9.4	75	10	26	38	65	54	60	49	50	50
30	57	11	74	10	---	40	65	55	65	49	50	50
31	57	---	72	10	---	40	---	55	---	49	50	---
TOTAL	1693	1631.0	2052.32	1649	886	969	1240.3	1651	1872	1857	1549	1500
MEAN	54.6	54.4	66.2	53.2	30.6	31.3	41.3	53.3	62.4	59.9	50.0	50.0
MAX	57	68	75	76	55	45	65	65	65	70	50	50
MIN	47	6.8	.32	10	10	15	5.1	17	46	46	49	50
AC-FT	3360	3240	4070	3270	1760	1920	2460	3270	3710	3680	3070	2980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

MEAN	51.4	51.8	59.3	53.4	53.1	54.0	53.6	66.9	68.7	54.2	42.7	41.3
MAX	74.7	59.3	70.2	77.7	79.0	75.8	81.5	85.2	86.0	81.9	56.0	51.3
(WY)	1990	1992	1994	1990	1991	1990	1990	1992	1992	1993	1995	1993
MIN	40.4	38.1	44.8	24.2	27.4	17.3	22.7	24.6	51.7	36.2	30.4	33.9
(WY)	1993	1991	1993	1995	1990	1995	1995	1995	1995	1990	1990	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1990 - 1996	
ANNUAL TOTAL	16665.32		18549.62			
ANNUAL MEAN	45.7		50.7		54.2	
HIGHEST ANNUAL MEAN					59.8	
LOWEST ANNUAL MEAN					43.7	
HIGHEST DAILY MEAN	79	Feb 16	76	Jan 13	89	Oct 17 1989
LOWEST DAILY MEAN	.32	Dec 13	.32	Dec 13	.00	Feb 4 1990
ANNUAL SEVEN-DAY MINIMUM	4.4	Jan 10	15	Jan 25	.00	Feb 4 1990
ANNUAL RUNOFF (AC-FT)	33060		36790		39280	
10 PERCENT EXCEEDS	75		70		80	
50 PERCENT EXCEEDS	54		54		55	
90 PERCENT EXCEEDS	9.0		20		29	

SAN JOAQUIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--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, 1,430 ft³/s, May 12, 1995, Feb. 6, 1996; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	250	79	146	608	810	1070	1210	749	416	405	74
2	508	261	.00	216	750	632	1180	1230	745	374	204	71
3	538	300	.00	372	417	461	979	1090	749	376	.00	433
4	428	105	187	229	877	1150	879	982	961	296	.00	343
5	437	139	167	200	1420	1140	800	822	868	346	119	450
6	522	322	106	.00	1430	890	852	1000	910	167	123	294
7	202	279	112	17	983	1170	835	987	822	210	171	126
8	154	255	110	156	841	1200	1000	835	740	421	261	29
9	474	230	62	130	755	1020	1110	882	523	482	358	452
10	442	273	.00	91	603	1170	1200	905	651	431	595	530
11	455	167	309	90	584	1210	890	871	768	374	218	241
12	341	116	519	174	762	1210	815	850	574	340	488	303
13	422	369	331	.00	903	1160	560	932	513	164	610	172
14	.00	189	298	.00	803	1200	581	880	544	232	592	86
15	.00	192	218	147	568	1270	1030	970	112	393	709	.00
16	315	127	95	364	861	1160	1010	284	156	293	525	161
17	334	106	100	404	893	1200	1360	984	498	208	271	224
18	352	20	232	447	1020	1250	1130	1270	401	130	.00	156
19	361	.00	177	338	1150	1290	1030	1340	380	213	407	300
20	316	88	186	.00	1400	1300	421	1040	400	111	369	314
21	89	36	158	89	1400	1250	353	1050	387	109	437	96
22	86	34	181	330	868	1210	974	1020	174	356	441	.00
23	324	.00	100	245	702	1070	738	947	110	491	587	227
24	287	.00	110	361	678	980	900	994	346	528	369	361
25	213	.00	104	540	633	1180	991	917	224	422	120	354
26	276	.00	99	520	767	1130	1040	834	319	383	498	306
27	363	79	88	347	821	1250	1170	738	316	199	280	278
28	35	114	108	286	799	1180	995	808	228	364	366	94
29	.00	208	84	460	851	1130	937	777	195	592	535	.00
30	369	149	147	406	---	839	1040	799	239	590	452	358
31	282	---	372	601	---	754	---	670	---	716	213	---
TOTAL	8990.00	4408.00	4839.00	7706.00	25147	33866	27870	28918	14602	10727	10723.00	6833.00
MEAN	290	147	156	249	867	1092	929	933	487	346	346	228
MAX	538	369	519	601	1430	1300	1360	1340	961	716	709	530
MIN	.00	.00	.00	.00	417	461	353	284	110	109	.00	.00
AC-FT	17830	8740	9600	15280	49880	67170	55280	57360	28960	21280	21270	13550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

MEAN	157	97.1	127	236	340	544	647	623	410	289	226	207
MAX	290	198	277	676	867	1101	1239	1339	1331	897	355	324
(WY)	1996	1994	1994	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	49.5	40.2	25.3	32.3	9.79	140	309	50.6	55.5	94.7	104	114
(WY)	1993	1992	1992	1992	1991	1991	1994	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1990 - 1996		
ANNUAL TOTAL	260851.00			184629.00					
ANNUAL MEAN	715			504			347		
HIGHEST ANNUAL MEAN							696		
LOWEST ANNUAL MEAN							115		
HIGHEST DAILY MEAN	1430			1430			1430		
LOWEST DAILY MEAN	.00			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	21			21			.00		
ANNUAL RUNOFF (AC-FT)	517400			366200			251700		
10 PERCENT EXCEEDS	1390			1120			954		
50 PERCENT EXCEEDS	632			385			194		
90 PERCENT EXCEEDS	87			87			.00		

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.

REVISED RECORDS.--WDR CA-92-3: 1992 (M).

GAGE.--Water-stage recorder. Datum of gage is sea level (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, 2,420 acre-ft, May 1, 1995, elevation, 3,375.3 ft; minimum, 313 acre-ft, Jan. 28, 1994, elevation, 3,279.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,370 acre-ft, May 16, elevation, 3,373.7 ft; minimum, 826 acre-ft, Mar. 5, elevation, 3,317.8 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	3,380	2,575
3,320	869				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1908	1440	1126	1715	1387	1158	1701	1528	1459	1719	1449	1657
2	1709	1608	1173	1525	1255	1261	1272	1314	1671	1744	1353	1839
3	1576	1704	1208	1139	1285	1835	1168	1283	1788	1753	1565	1514
4	1520	1778	941	1046	2192	1706	1007	1266	1432	1755	1764	1624
5	1424	1690	858	1159	2289	826	996	1490	1184	1617	1741	1418
6	1161	1561	988	1425	1885	1238	1119	1359	1167	1843	1706	1434
7	1544	1463	1099	1528	1707	1404	1394	1238	1294	1981	1567	1724
8	1937	1411	1216	1366	1622	1201	1628	1402	1265	1815	1500	1956
9	1747	1402	1223	1217	1577	1486	1657	1287	1606	1581	1367	1506
10	1734	1324	1299	1113	1748	1432	1197	1163	1879	1432	836	1163
11	1623	1460	928	1024	1875	1386	1076	1057	1528	1475	1422	1483
12	1754	1686	1394	1056	1657	1256	1031	1179	1484	1506	1728	1392
13	1615	1402	1379	1229	1213	1214	1273	1150	1768	1850	1801	1349
14	1887	1329	1197	1376	990	1314	1573	1094	1788	1992	1897	1695
15	2066	1258	1087	1262	1186	1324	1238	1539	1985	1779	1733	1956
16	1976	1155	1081	1315	1094	1457	2121	2370	2017	1717	1888	1928
17	1919	1070	1037	1534	1337	1530	1613	2322	1819	1653	1897	1773
18	1827	1120	957	1166	1204	1596	1459	2274	1874	1633	2125	1684
19	1708	1202	1033	996	2324	1577	950	1815	1735	1432	1788	1324
20	1683	1119	1158	1305	2093	1402	1481	1500	1539	1414	1701	930
21	2015	1135	1318	1425	1307	1443	1962	1292	1349	1646	1326	1283
22	2054	1154	1302	997	1173	1477	1101	1224	1588	1569	1189	1697
23	1858	1233	1361	1014	1666	1385	1046	1246	1939	1484	954	1688
24	1659	1307	1385	1269	1775	1434	1151	1126	1828	1353	1197	1436
25	1575	1386	1422	1170	1710	1140	1081	1160	1866	1396	1951	1282
26	1369	1536	1454	1193	1189	1400	1317	1385	1726	1445	1901	1223
27	1152	1564	1376	1344	969	1270	1175	1784	1506	1944	1857	1234
28	1583	1522	1265	1302	1157	1314	1173	1855	1386	1806	1624	1582
29	1809	1287	1286	1021	1153	1052	1272	1604	1664	1359	1140	2089
30	1446	1166	1895	1048	---	1394	1617	1287	1830	1266	883	1919
31	1321	---	1742	1269	---	1617	---	1365	---	1471	1299	---
MAX	2070	1780	1890	1710	2320	1830	2120	2370	2020	1990	2120	2090
MIN	1150	1070	858	996	969	826	950	1060	1170	1270	836	930
a	3339.8	3333.4	3354.3	3337.7	3332.9	3350.4	3350.4	3341.4	3357.1	3345.2	3338.9	3359.9
b	-322	-155	+576	-473	-116	+464	0	-252	+465	-359	-172	+620

CAL YR 1995 b +770

WTR YR 1996 b +276

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, at McKay's Point Dam and 4.5 mi northeast of Avery.

DRAINAGE AREA.--166 mi².

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

REVISED RECORDS.--WDR CA-91-3: 1990.

GAGE.--Acoustic-flow meter and water-stage recorder on McKay's Point Reservoir (station 11295260). August 1989 to September 1992 at site 500 ft downstream at different datum. Elevation of gage is 3,280 ft above sea level, from topographic map.

REMARKS.--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 (station 11295240) and Collierville Powerplant (station 11295250). Discharge, including extremes, represents flow through dam's release valve, mini-hydro generator, and flow over spillway. 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, 13,000 ft³/s, May 16, 1996; minimum daily, 3.4 ft³/s, Nov. 25, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	18	18	19	20	20	19	19	18	19	20	21
2	22	19	18	19	20	19	18	18	19	19	19	21
3	20	20	18	19	19	20	19	19	18	19	19	19
4	18	20	18	18	20	19	19	19	18	19	19	19
5	18	20	18	18	1800	18	19	19	18	19	19	18
6	19	20	19	19	141	21	20	19	20	19	19	19
7	20	19	20	18	19	21	20	19	20	20	19	19
8	21	18	20	19	20	19	19	20	20	20	19	20
9	20	18	19	19	20	19	20	20	20	19	19	20
10	18	18	19	18	20	19	18	19	20	18	18	18
11	19	19	18	18	20	19	18	19	19	19	20	19
12	19	19	19	18	20	19	20	20	19	19	20	20
13	19	19	20	19	18	18	20	20	20	20	20	19
14	19	19	20	19	19	19	20	19	20	20	19	20
15	19	18	19	19	20	20	19	20	20	20	19	20
16	19	19	19	19	20	20	20	6530	20	19	19	20
17	19	18	18	20	19	20	20	1100	19	19	18	18
18	19	19	18	19	19	21	20	1880	19	18	19	18
19	19	19	19	18	84	20	19	36	19	18	19	18
20	18	19	19	19	431	20	19	20	19	18	18	18
21	19	19	20	20	20	19	20	19	19	19	18	19
22	19	19	20	19	20	20	19	18	19	19	18	20
23	19	19	20	18	22	19	18	18	20	19	19	20
24	18	19	20	20	21	19	20	18	19	19	20	19
25	18	18	20	20	21	19	20	19	19	19	21	21
26	18	19	19	20	20	20	20	18	19	20	20	21
27	19	19	19	20	20	20	20	19	18	20	20	21
28	19	19	19	21	20	19	20	18	18	21	20	20
29	20	19	19	20	20	18	20	18	19	20	19	21
30	19	18	20	19	---	20	19	19	19	19	18	20
31	18	---	21	19	---	19	---	18	---	19	20	---
TOTAL	592	566	593	590	2953	603	582	10057	574	595	594	586
MEAN	19.1	18.9	19.1	19.0	102	19.5	19.4	324	19.1	19.2	19.2	19.5
MAX	22	20	21	21	1800	21	20	6530	20	21	21	21
MIN	18	18	18	18	18	18	18	18	18	18	18	18
AC-FT	1170	1120	1180	1170	5860	1200	1150	19950	1140	1180	1180	1160

11295270 NORTH FORK STANISLAUS RIVER BELOW MCKAY'S POINT DAM, NEAR AVERY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.5	20.2	19.2	24.9	31.2	54.5	43.7	109	26.4	20.6	20.4	22.8
MAX	27.6	25.9	27.1	70.0	102	253	189	338	63.5	23.1	24.5	27.5
(WY)	1992	1994	1994	1995	1996	1995	1995	1995	1995	1994	1994	1991
MIN	19.1	6.06	5.55	7.93	17.4	15.8	18.9	18.4	19.1	19.0	10.6	18.9
(WY)	1996	1990	1990	1990	1990	1990	1990	1992	1996	1995	1989	1989

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1989 - 1996			
ANNUAL TOTAL	32205				18885							
ANNUAL MEAN	88.2				51.6				34.9			
HIGHEST ANNUAL MEAN									88.8			
LOWEST ANNUAL MEAN									16.9			
HIGHEST DAILY MEAN	6480				6530				6530			
LOWEST DAILY MEAN	18				18				3.4			
ANNUAL SEVEN-DAY MINIMUM	18				18				4.2			
INSTANTANEOUS PEAK FLOW					13000				13000			
ANNUAL RUNOFF (AC-FT)	63880				37460				25300			
10 PERCENT EXCEEDS	26				20				25			
50 PERCENT EXCEEDS	19				19				20			
90 PERCENT EXCEEDS	18				18				18			

SAN JOAQUIN RIVER BASIN

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 sea level, 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 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, 7,950 ft³/s, May 1, 1995; minimum daily, 5.1 ft³/s, December 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	28	28	40	41	41	102	40	40	41	34	31
2	31	29	28	40	40	40	89	43	40	40	34	30
3	30	30	28	40	40	41	40	40	40	40	34	28
4	29	30	33	40	237	78	42	40	39	40	34	28
5	28	30	32	40	2430	80	40	40	40	40	34	28
6	29	29	30	40	341	46	44	41	41	40	34	28
7	30	29	31	40	101	42	49	40	41	41	33	28
8	31	28	31	40	55	40	58	41	41	41	32	29
9	30	28	30	40	40	40	59	41	40	40	32	29
10	28	28	29	39	41	40	40	40	40	40	31	28
11	28	28	42	39	41	46	43	40	40	40	32	28
12	28	29	147	39	41	45	44	41	40	40	32	29
13	29	29	59	40	41	39	41	42	40	41	32	29
14	28	28	41	40	40	40	41	41	41	42	31	31
15	29	28	40	40	41	41	43	54	41	41	31	32
16	29	28	40	70	44	41	190	7240	42	40	30	31
17	29	28	39	63	76	42	101	1410	40	40	30	29
18	28	28	39	40	113	75	101	2350	40	39	30	28
19	28	28	39	39	590	74	40	210	40	38	30	28
20	28	28	37	40	885	106	42	153	40	38	30	28
21	28	28	36	41	293	65	42	66	40	38	30	28
22	29	28	38	40	160	49	41	40	40	38	30	29
23	28	28	38	39	454	63	40	40	41	37	30	29
24	28	28	36	41	43	40	41	40	41	36	30	28
25	28	28	36	41	44	40	42	40	40	36	32	29
26	28	30	35	41	56	41	41	40	40	36	30	29
27	28	29	36	41	41	40	42	40	40	37	31	30
28	28	29	36	41	46	75	41	40	40	38	31	29
29	30	28	37	40	41	41	42	39	40	36	30	29
30	28	27	41	40	---	42	43	40	41	34	28	29
31	28	---	42	40	---	40	---	39	---	35	30	---
TOTAL	893	854	1234	1294	6456	1573	1664	12451	1209	1203	972	869
MEAN	28.8	28.5	39.8	41.7	223	50.7	55.5	402	40.3	38.8	31.4	29.0
MAX	32	30	147	70	2430	106	190	7240	42	42	34	32
MIN	28	27	28	39	40	39	40	39	39	34	28	28
AC-FT	1770	1690	2450	2570	12810	3120	3300	24700	2400	2390	1930	1720

11295300 NORTH FORK STANISLAUS RIVER BELOW BEAVER CREEK, NEAR HATHAWAY PINES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.8	29.3	31.6	60.0	63.7	127	97.1	178	51.9	31.8	28.9	28.6
MAX	33.5	32.1	39.8	171	223	533	374	629	151	38.8	35.4	32.1
(WY)	1992	1992	1996	1995	1996	1995	1995	1995	1995	1996	1995	1995
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1990 - 1996			
ANNUAL TOTAL	64719				30672				68.2			
ANNUAL MEAN	177				83.8				177			
HIGHEST ANNUAL MEAN									1995			
LOWEST ANNUAL MEAN									1992			
HIGHEST DAILY MEAN	7950				May 1				7950			
LOWEST DAILY MEAN	27				Nov 30				5.1			
ANNUAL SEVEN-DAY MINIMUM	28				Nov 14				22			
ANNUAL RUNOFF (AC-FT)	128400				60840				49390			
10 PERCENT EXCEEDS	329				57				44			
50 PERCENT EXCEEDS	38				40				33			
90 PERCENT EXCEEDS	28				28				26			

11295900 PINECREST LAKE AT PINECREST, CA

LOCATION.--Lat 38°11'59", long 119°59'20", 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 sea level (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, 18,531 acre-ft, May 15, 1996, elevation, 5,618.22 ft; minimum observed, 3,157 acre-ft, Mar. 3, 4, 1991, elevation, 5,546.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,531 acre-ft, May 15, elevation, 5,618.22 ft; minimum, 4,760 acre-ft, Feb. 3, elevation, 5,560.16 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14422	11214	7900	6190	4887	10325	13811	18225	18315	18034	17589	16617
2	14314	11091	7682	6190	4826	10362	13921	18173	18480	18120	17552	16597
3	14223	10972	7465	6173	4760	10451	14002	18097	18510	18117	17498	16575
4	14173	10854	7287	6142	5444	10574	14092	18064	18462	18108	17467	16563
5	14137	10735	7094	6097	6654	10634	14211	18067	18438	18097	17428	16549
6	14099	10616	6886	6053	7064	10681	14398	18082	18465	18082	17389	16529
7	14056	10489	6695	6008	7265	10725	14656	18088	18483	18055	17338	16512
8	14017	10370	6489	5970	7417	10782	15015	18019	18410	18040	17311	16495
9	13991	10254	6284	5915	7524	10897	15362	18025	18358	18034	17274	16443
10	13960	10135	6078	5866	7596	10997	15629	18088	18377	18025	17242	16286
11	13934	10018	6161	5802	7656	11116	15998	18223	18380	18016	17196	16098
12	13808	9969	6916	5749	7722	11196	16298	18275	18410	18001	17169	15891
13	13649	9957	6975	5688	7793	11244	16498	18266	18404	17995	17142	15709
14	13487	9938	6954	5615	7849	11287	16613	18205	18374	18085	17093	15577
15	13326	9918	6922	5559	8002	11362	16752	18531	18361	18188	17045	15464
16	13171	9899	6857	5695	8292	11464	17082	18343	18425	18097	16992	15351
17	13024	9887	6794	5714	8569	11632	17274	18001	18450	18052	16944	15219
18	12902	9867	6718	5695	8785	11860	17395	18016	18386	18016	16901	15091
19	12781	9785	6635	5658	9185	12144	17475	17857	18361	17971	16875	14983
20	12656	9665	6548	5609	9394	12415	17496	17905	18349	17923	16831	14873
21	12530	9548	6458	5559	9574	12676	17505	18111	18331	17899	16796	14756
22	12394	9428	6363	5495	9686	12882	17540	18225	18358	17877	16755	14619
23	12272	9308	6275	5444	9797	13014	17675	18064	18349	17846	16725	14516
24	12139	9192	6175	5396	9906	13099	17810	17959	18309	17821	16711	14413
25	12018	9072	6080	5333	9991	13171	17965	17995	18334	17796	16696	14303
26	11890	8947	5983	5272	10071	13233	18105	18091	18324	17782	16704	14170
27	11789	8771	5891	5233	10144	13305	18105	18114	18275	17746	16691	14030
28	11667	8560	5804	5166	10210	13427	18088	18091	18120	17737	16676	13915
29	11552	8342	5769	5087	10279	13479	18158	18094	18061	17695	16662	13795
30	11431	8119	5976	5020	---	13555	18211	18111	18025	17652	16645	13675
31	11322	---	6165	4954	---	13639	---	18161	---	17629	16631	---
MAX	14422	11214	7900	6190	10279	13639	18211	18531	18510	18188	17589	16617
MIN	11322	8119	5769	4954	4760	10325	13811	17857	18025	17629	16631	13675
a	5591.34	5578.01	5568.83	5561.59	5587.14	5600.39	5617.15	5616.98	5616.52	5615.15	5611.17	5600.53
b	-3196	-3203	-1954	-1211	+5325	+3360	+4572	-50	-136	-396	-998	-2956

CAL YR 1995 MAX 18312 MIN 4240 b +958
WTR YR 1996 MAX 18531 MIN 4760 b -843

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 sea level (river-profile survey). October 1911 to January 1917, nonrecording gage at site 1 mi downstream at different datum.

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	58	120	77	71	51	97	682	446	121	21	19
2	64	63	104	74	71	62	96	678	546	116	21	19
3	49	63	104	67	71	65	92	599	656	109	21	19
4	18	63	104	62	107	68	90	524	656	95	21	19
5	18	63	105	61	260	61	94	497	609	82	21	19
6	18	62	103	61	210	64	125	519	604	72	21	19
7	18	62	102	60	157	65	137	527	641	68	21	19
8	18	62	101	61	142	64	160	512	602	63	20	19
9	18	62	100	61	133	69	171	434	511	58	20	27
10	18	62	99	60	126	71	159	494	418	53	20	62
11	18	61	86	59	123	74	148	598	365	48	20	68
12	60	32	109	62	122	72	142	732	361	52	20	68
13	87	11	75	64	123	68	132	767	388	92	20	68
14	85	10	70	64	124	66	144	720	344	142	22	67
15	85	10	69	64	86	69	164	1050	296	78	22	66
16	84	9.9	69	76	73	74	170	2560	228	54	22	66
17	80	9.6	69	82	80	83	143	905	228	43	22	66
18	67	9.6	68	73	74	99	130	964	247	36	21	66
19	63	39	67	70	86	113	120	580	216	33	21	66
20	66	61	67	68	77	123	120	423	196	29	21	66
21	66	61	66	67	63	128	119	356	184	27	20	65
22	65	61	66	66	55	126	122	366	151	26	20	65
23	65	60	65	65	55	106	147	461	144	25	20	65
24	65	60	65	66	52	95	232	333	125	24	20	65
25	65	63	65	65	48	90	346	308	214	24	20	65
26	65	65	64	64	45	87	474	366	301	24	20	64
27	64	84	64	65	43	87	543	436	222	24	22	64
28	64	106	64	64	42	92	524	403	142	23	35	64
29	64	107	65	63	41	87	550	404	115	22	20	64
30	66	106	78	71	---	85	639	400	120	22	20	64
31	56	---	85	72	---	86	---	423	---	22	19	---
TOTAL	1703	1646.1	2538	2054	2760	2550	6330	19021	10276	1707	654	1553
MEAN	54.9	54.9	81.9	66.3	95.2	82.3	211	614	343	55.1	21.1	51.8
MAX	87	107	120	82	260	128	639	2560	656	142	35	68
MIN	18	9.6	64	59	41	51	90	308	115	22	19	19
AC-FT	3380	3270	5030	4070	5470	5060	12560	37730	20380	3390	1300	3080

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.9	53.0	58.3	51.1	53.2	65.9	132	417	378	111	50.7	60.3
MAX	121	344	338	161	229	212	386	874	1066	683	127	98.2
(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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1938 - 1996			
ANNUAL TOTAL	85423.1				52792.1							
ANNUAL MEAN	234				144				124			
HIGHEST ANNUAL MEAN									259			
LOWEST ANNUAL MEAN									26.6			
HIGHEST DAILY MEAN	1200				2560				2560			
LOWEST DAILY MEAN	9.6				9.6				1.3			
ANNUAL SEVEN-DAY MINIMUM	13				13				2.3			
INSTANTANEOUS PEAK FLOW					3510				3900			
INSTANTANEOUS PEAK STAGE					8.82				9.25			
ANNUAL RUNOFF (AC-FT)	169400				104700				90040			
10 PERCENT EXCEEDS	728				423				323			
50 PERCENT EXCEEDS	92				68				61			
90 PERCENT EXCEEDS	61				20				21			

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 sea level, from topographic map.

REMARKS.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	9.0	---	22	19	9.6	---	---	---	---	8.7	7.8
2	7.3	7.6	---	18	19	14	---	---	---	---	8.7	7.5
3	9.1	6.1	---	13	18	17	50	---	---	---	8.8	7.0
4	12	5.1	---	7.2	---	36	45	---	---	---	8.7	7.0
5	8.3	4.9	---	6.2	---	33	49	---	---	37	8.7	7.2
6	8.2	4.8	---	5.4	---	23	---	---	---	27	8.5	7.2
7	7.9	4.9	---	5.2	---	24	---	---	---	24	8.6	7.0
8	7.8	4.8	---	5.3	---	23	---	---	---	17	8.5	7.3
9	7.7	4.8	---	5.4	---	28	---	---	---	11	8.8	7.3
10	8.5	4.7	---	4.9	---	31	---	---	---	8.6	8.7	9.3
11	9.0	4.7	40	4.7	---	38	---	---	---	---	8.7	11
12	19	5.7	---	5.8	---	39	---	---	---	8.5	8.7	9.0
13	30	5.4	35	6.4	---	32	---	---	---	---	8.8	9.4
14	29	4.9	25	6.0	---	27	---	---	---	---	8.8	8.9
15	29	4.9	23	7.8	---	29	---	---	---	---	8.2	8.7
16	32	4.8	21	26	26	33	---	---	---	50	7.5	8.7
17	27	4.9	21	34	30	42	---	---	---	36	7.1	8.4
18	15	4.9	22	23	25	---	---	---	---	20	7.0	8.4
19	8.5	5.0	21	18	---	---	---	---	---	8.5	7.0	8.3
20	8.2	4.6	21	14	---	---	---	---	---	8.5	7.0	8.5
21	8.1	4.7	20	15	39	---	---	---	---	8.4	7.0	7.7
22	8.0	4.5	20	13	24	---	---	---	---	25	7.2	7.4
23	7.8	4.4	20	11	22	---	---	---	---	31	7.6	7.8
24	7.7	4.6	20	12	17	---	---	---	---	31	7.2	8.6
25	7.8	6.2	20	11	13	46	---	---	---	18	7.1	8.6
26	7.9	6.8	15	9.6	9.0	40	---	---	---	8.4	7.0	8.5
27	7.8	26	9.4	11	4.8	41	---	---	---	8.4	7.5	8.5
28	7.7	---	9.4	11	4.4	---	---	---	---	8.5	7.1	8.4
29	7.6	---	9.8	18	4.3	42	---	---	---	8.5	7.7	8.4
30	7.7	---	22	19	---	39	---	---	---	8.7	9.7	8.4
31	11	---	30	19	---	39	---	---	---	8.8	8.0	---
TOTAL	379.6	---	---	387.9	---	---	---	---	---	---	248.6	246.2
MEAN	12.2	---	---	12.5	---	---	---	---	---	---	8.02	8.21
MAX	32	---	---	34	---	---	---	---	---	---	9.7	11
MIN	7.0	---	---	4.7	---	---	---	---	---	---	7.0	7.0
AC-FT	753	---	---	769	---	---	---	---	---	---	493	488
a	2690	2630	3260	3500	3030	3490	3420	3470	3350	1910	718	2560

CAL YR 1995 a 37120

WTR YR 1996 a 34040

a Diversion, in acre-feet, to Philadelphia Canal, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

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 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 sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Reservoir is formed by concrete arch dam completed in 1930; storage began in 1930. Usable capacity, 4,847 acre-ft between gage heights 0.0 ft, invert of outlet, and 86.0 ft, top of spillway gates. Dead storage, 2.5 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, 832 acre-ft, Nov. 27, 1995, gage height, 48.51 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,566 acre-ft, June 25, gage height, 90.35 ft; minimum, 832 acre-ft, Nov. 27, gage height, 48.51 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1996)

20	34.2	40	474	70	2,598
25	94.4	50	908	80	3,913
30	186	60	1,592	90	5,507

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2577	1703	1027	2200	3254	3954	4006	4201	4385	5526	4770	2820
2	2498	1685	1070	2214	3315	3960	3993	4192	4499	5527	4712	2759
3	2424	1667	1114	2224	3366	3978	3987	4166	4945	5526	4653	2696
4	2357	1644	1166	2220	3903	4133	3975	4143	5461	5519	4594	2633
5	2281	1620	1220	2209	4113	4058	3975	4137	5541	5502	4537	2575
6	2206	1591	1269	2196	4059	4036	3979	4146	5521	5477	4482	2515
7	2133	1559	1320	2180	4030	4021	3990	4148	5541	5453	4423	2455
8	2061	1527	1369	2165	4014	4012	3999	4139	5510	5414	4357	2396
9	1988	1490	1420	2150	4006	4011	4008	4114	5451	5367	4293	2335
10	1941	1449	1473	2137	4000	4006	4003	4137	5531	5312	4233	2276
11	1915	1406	1564	2118	3994	4038	3996	4186	5539	5262	4170	2220
12	1892	1366	1851	2102	3991	4044	3993	4224	5538	5213	4105	2160
13	1906	1328	1943	2087	3990	4020	3987	4222	5546	5191	4039	2115
14	1915	1289	1980	2073	3990	4006	3988	4196	5524	5272	3978	2071
15	1924	1247	2006	2062	3964	4002	3997	4482	5551	5337	3910	2025
16	1967	1209	2021	2201	3949	3994	4029	4528	5538	5381	3847	1979
17	2019	1169	2032	2331	3954	3994	4011	4239	5558	5394	3781	1934
18	2045	1128	2043	2429	3951	3999	4005	4276	5565	5399	3716	1890
19	2054	1090	2058	2542	4139	4002	3993	4164	5555	5349	3649	1847
20	2060	1053	2070	2580	4067	4002	3991	4113	5551	5292	3585	1805
21	2048	1018	2076	2610	4058	4002	3988	4096	5548	5239	3521	1763
22	2001	985	2086	2618	4020	4002	3987	4100	5534	5193	3454	1720
23	1939	950	2096	2622	4009	3990	3993	4146	5527	5175	3391	1680
24	1892	917	2102	2655	4000	3978	4035	4081	5531	5157	3330	1639
25	1869	885	2110	2716	3987	3972	4082	4071	5566	5134	3265	1602
26	1842	858	2114	2743	3973	3964	4134	4096	5531	5080	3201	1562
27	1815	832	2104	2872	3963	3961	4154	4122	5470	5029	3137	1526
28	1788	880	2093	2987	3957	3987	4146	4142	5500	4980	3056	1491
29	1759	932	2092	3045	3952	3970	4161	4204	5461	4931	2993	1457
30	1735	980	2131	3096	---	3964	4190	4241	5487	4876	2946	1423
31	1717	---	2174	3184	---	3960	---	4337	---	4823	2883	---
MAX	2577	1703	2174	3184	4139	4133	4190	4528	5566	5527	4770	2820
MIN	1717	832	1027	2062	3254	3954	3975	4071	4385	4823	2883	1423
a	61.41	51.33	66.13	74.75	80.26	80.31	81.83	82.78	89.88	85.85	72.38	57.95
b	-934	-737	+1194	+1010	+768	+8	+230	+147	+1150	-664	-1940	-1460

CAL YR 1995 MAX 6244 MIN 832 b -212
WTR YR 1996 MAX 5566 MIN 832 b -1228

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 sea level (river-profile survey).

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.6	6.8	3.5	3.3	25	55	691	389	27	6.7	7.2
2	5.8	5.6	6.8	3.5	3.3	33	86	709	438	37	6.8	7.2
3	5.8	5.5	6.8	3.5	3.3	40	67	629	405	31	6.9	7.0
4	5.8	5.4	6.8	3.4	3.6	197	55	529	383	24	6.9	6.2
5	5.8	5.2	6.8	3.3	328	342	48	477	561	16	7.0	5.9
6	5.8	5.0	6.8	3.4	316	200	52	496	595	12	7.2	5.9
7	5.6	5.0	6.8	3.2	202	164	69	508	623	11	7.2	5.8
8	5.6	5.0	6.8	3.3	147	137	94	515	621	10	7.2	5.8
9	5.6	5.0	6.2	3.5	117	129	113	402	529	9.8	7.1	5.8
10	5.6	5.1	5.8	3.3	96	126	106	444	339	8.5	7.0	5.8
11	5.6	5.1	5.4	3.3	83	145	90	544	303	7.5	7.0	5.7
12	5.6	5.0	5.7	3.3	73	208	82	716	291	7.0	7.0	4.0
13	5.6	5.0	5.1	3.3	69	174	68	829	320	6.9	7.1	2.6
14	5.6	5.0	4.7	3.3	70	134	66	801	310	7.0	7.2	2.5
15	5.6	5.0	4.7	3.3	59	114	87	911	210	7.9	7.1	2.4
16	6.0	5.0	4.7	3.7	22	103	141	3260	180	8.9	6.9	2.8
17	6.2	5.2	4.3	3.5	18	97	133	1300	126	9.3	7.1	3.1
18	6.1	5.7	4.3	3.5	19	104	126	1110	167	9.3	7.3	3.0
19	6.1	6.6	4.3	3.5	187	112	92	719	152	8.9	7.5	2.7
20	6.1	6.8	4.1	3.4	354	117	82	466	133	8.2	7.5	2.7
21	5.9	6.8	4.1	3.4	260	115	72	347	110	7.6	7.8	2.7
22	5.4	6.8	4.1	3.3	179	113	65	327	80	7.1	8.1	2.7
23	5.4	6.8	3.9	3.3	117	93	70	425	54	6.9	8.1	2.7
24	5.4	6.8	3.9	3.5	108	72	130	346	35	6.9	8.1	2.6
25	5.3	6.7	3.9	3.7	79	60	241	261	90	6.9	8.1	2.6
26	5.3	6.6	3.7	3.4	59	52	392	301	270	6.9	7.4	2.7
27	5.3	6.7	3.8	3.6	42	41	525	401	196	6.7	7.2	2.7
28	5.4	6.7	3.9	3.5	33	63	519	361	73	6.7	7.2	2.7
29	5.6	6.8	3.7	3.3	27	48	523	333	45	6.7	7.2	2.6
30	5.6	6.8	3.7	3.3	---	38	623	339	18	6.8	7.2	2.5
31	5.6	---	3.7	3.3	---	32	---	324	---	6.7	7.2	---
TOTAL	175.9	174.3	156.1	105.6	3077.5	3428	4872	19821	8046	343.1	225.3	120.6
MEAN	5.67	5.81	5.04	3.41	106	111	162	639	268	11.1	7.27	4.02
MAX	6.2	6.8	6.8	3.7	354	342	623	3260	623	37	8.1	7.2
MIN	5.3	5.0	3.7	3.2	3.3	25	48	261	18	6.7	6.7	2.4
AC-FT a	349	346	310	209	6100	6800	9660	39310	15960	681	447	239
	1540	1280	1100	1130	1780	1440	2200	2100	2430	1850	2050	1800

a Diversion, in acre-feet, to Tuolumne Canal, provided by Pacific Gas & Electric Co.

SAN JOAQUIN RIVER BASIN

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.43	11.0	24.1	29.9	38.0	53.1	98.5	355	314	59.0	3.30	2.12
MAX	14.7	324	399	258	306	291	501	875	950	583	37.7	5.45
(WY)	1983	1951	1951	1956	1982	1938	1982	1969	1983	1995	1983	1995
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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1938 - 1996			
ANNUAL TOTAL	78427.1				40545.4							
ANNUAL MEAN	215				111				81.8			
HIGHEST ANNUAL MEAN									234			
LOWEST ANNUAL MEAN									1.50			
HIGHEST DAILY MEAN	1240				3260				3370			
LOWEST DAILY MEAN	2.8				2.4				.00			
ANNUAL SEVEN-DAY MINIMUM	3.1				2.6				.00			
INSTANTANEOUS PEAK FLOW					4410				4900			
INSTANTANEOUS PEAK STAGE					8.93				9.30			
ANNUAL RUNOFF (AC-FT)	155600				80420				59250			
ANNUAL DIVERSION (AC-FT) a	25910				20700							
10 PERCENT EXCEEDS	762				368				285			
50 PERCENT EXCEEDS	46				7.2				2.4			
90 PERCENT EXCEEDS	5.0				3.4				1.4			

a Diversion, in acre-feet, to Tuolumne Canal, provided by Pacific Gas & Electric Co.

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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 downstream from diversion dam and 1.2 mi southwest of Murphys.

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 sea level, 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.

[illegible]

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 sea level (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 New Melones Powerplant (station 11299200) 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, 83,630 acre-ft, Oct. 1, 1992, elevation, 721.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,193,000 acre-ft, several days in June, elevation, 1069.26 ft, June 11; minimum, 1,757,000 acre-ft, Oct. 23-26, elevation, 1029.40, Oct. 24.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1763000	1766000	1785000	1828000	1912000	2034000	2049000	2040000	2164000	2181000	2099000	2029000
2	1764000	1767000	1785000	1829000	1915000	2031000	2050000	2042000	2167000	2177000	2096000	2026000
3	1766000	1769000	1786000	1831000	1918000	2028000	2049000	2042000	2171000	2174000	2092000	2024000
4	1767000	1768000	1788000	1831000	1929000	2031000	2048000	2042000	2174000	2170000	2088000	2023000
5	1768000	1769000	1789000	1833000	1946000	2039000	2047000	2042000	2178000	2166000	2084000	2021000
6	1769000	1770000	1791000	1833000	1954000	2041000	2046000	2042000	2181000	2165000	2081000	2020000
7	1769000	1772000	1791000	1835000	1961000	2042000	2045000	2044000	2186000	2164000	2078000	2018000
8	1769000	1772000	1792000	1837000	1966000	2042000	2043000	2042000	2190000	2160000	2076000	2015000
9	1770000	1774000	1793000	1836000	1971000	2042000	2042000	2041000	2192000	2159000	2074000	2014000
10	1771000	1775000	1794000	1837000	1974000	2043000	2041000	2040000	2193000	2156000	2071000	2012000
11	1772000	1777000	1797000	1838000	1977000	2043000	2039000	2039000	2193000	2152000	2069000	2010000
12	1771000	1778000	1801000	1838000	1979000	2045000	2037000	2038000	2193000	2149000	2067000	2008000
13	1769000	1776000	1804000	1839000	1983000	2047000	2035000	2039000	2193000	2147000	2066000	2006000
14	1766000	1777000	1805000	1841000	1985000	2047000	2033000	2042000	2193000	2147000	2064000	2004000
15	1763000	1777000	1807000	1842000	1987000	2047000	2031000	2048000	2193000	2147000	2062000	2002000
16	1761000	1777000	1809000	1849000	1988000	2047000	2032000	2088000	2192000	2143000	2060000	2001000
17	1760000	1777000	1810000	1852000	1989000	2046000	2034000	2106000	2192000	2140000	2058000	1999000
18	1759000	1777000	1811000	1856000	1992000	2046000	2035000	2122000	2191000	2138000	2055000	1998000
19	1759000	1777000	1812000	1861000	2003000	2046000	2035000	2132000	2190000	2134000	2052000	1997000
20	1759000	1778000	1814000	1863000	2014000	2046000	2035000	2138000	2188000	2130000	2050000	1996000
21	1758000	1779000	1814000	1865000	2029000	2045000	2034000	2142000	2188000	2127000	2047000	1995000
22	1758000	1780000	1814000	1868000	2036000	2044000	2034000	2145000	2187000	2125000	2046000	1993000
23	1757000	1781000	1815000	1870000	2037000	2043000	2034000	2148000	2185000	2123000	2045000	1992000
24	1757000	1779000	1816000	1876000	2038000	2042000	2033000	2151000	2182000	2121000	2043000	1991000
25	1757000	1780000	1818000	1884000	2038000	2043000	2034000	2154000	2184000	2118000	2041000	1989000
26	1757000	1781000	1818000	1888000	2039000	2043000	2034000	2155000	2191000	2115000	2039000	1990000
27	1758000	1782000	1819000	1894000	2039000	2044000	2035000	2156000	2190000	2112000	2037000	1990000
28	1760000	1783000	1821000	1898000	2039000	2046000	2036000	2156000	2188000	2109000	2035000	1990000
29	1761000	1783000	1822000	1901000	2037000	2048000	2037000	2159000	2186000	2109000	2034000	1989000
30	1763000	1784000	1823000	1905000	---	2048000	2038000	2161000	2184000	2103000	2032000	1988000
31	1765000	---	1826000	1909000	---	2049000	---	2162000	---	2102000	2031000	---
MAX	1772000	1784000	1826000	1909000	2039000	2049000	2050000	2162000	2193000	2181000	2099000	2029000
MIN	1757000	1766000	1785000	1828000	1912000	2028000	2031000	2038000	2164000	2102000	2031000	1988000
a	1030.24	1032.08	1036.09	1043.89	1055.58	1056.65	1055.70	1066.57	1068.45	1061.36	1055.03	1051.20
b	+2000	+19000	+42000	+83000	+128000	+12000	-11000	+124000	+22000	-82000	-71000	-43000
c	4180	1877	1115	1418	1678	2755	3943	5618	7485	9856	8428	6557
d	59540	17270	15900	8790	72310	211900	174600	161100	153500	142600	127000	87390

CAL YR 1995 b +1400600

WTR YR 1996 b +225000

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.

d Discharge, in acre-feet, through New Melones Powerplant, provided by U.S. Bureau of Reclamation.

SAN JOAQUIN RIVER BASIN

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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 sea level.

REMARKS.--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 or maximim:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	1415	650	4.36	Feb. 21	0930	1,430	5.07
Jan. 25	0100	1,620	5.25	Mar. 5	0545	290	3.74
Feb. 4	2230	900	4.62	Mar. 12	0945	122	3.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.09	2.1	35	20	14	2.5	.97	.18	.00	.00
2	.00	.00	.09	1.7	23	18	11	2.4	.91	.13	.00	.00
3	.00	.00	.11	1.4	18	17	8.1	2.3	.79	.08	.00	.00
4	.00	.00	.14	1.2	386	53	7.2	2.2	.70	.05	.00	.00
5	.00	.00	.16	1.1	212	139	6.7	2.1	.64	.04	.00	.00
6	.00	.00	.15	1.0	79	62	6.2	2.0	.59	.03	.00	.00
7	.00	.00	.17	.94	44	41	5.6	2.0	.50	.02	.00	.00
8	.00	.00	.16	.96	30	32	5.2	1.8	.43	.01	.00	.00
9	.00	.00	.15	.93	23	26	4.8	1.8	.39	.00	.00	.00
10	.00	.00	.16	.86	18	22	4.8	1.7	.35	.00	.00	.00
11	.00	.00	.81	.83	15	35	4.6	1.6	.34	.00	.00	.00
12	.00	.00	2.7	.83	13	79	4.4	1.4	.34	.00	.00	.00
13	.00	.00	1.8	.83	12	47	4.2	1.3	.31	.00	.00	.00
14	.00	.00	1.4	.83	10	33	4.1	1.3	.29	.00	.00	.00
15	.00	.00	2.0	1.1	9.6	27	4.0	2.1	.28	.00	.00	.00
16	.00	.00	1.6	171	9.3	23	9.9	10	.27	.00	.00	.00
17	.00	.00	.82	41	12	20	6.3	3.1	.26	.00	.00	.00
18	.00	.00	.55	70	12	18	8.7	2.8	.25	.00	.00	.00
19	.00	.00	.48	50	308	16	5.2	2.2	.23	.00	.00	.00
20	.00	.00	.43	14	322	14	5.6	1.9	.23	.00	.00	.00
21	.00	.00	.40	49	442	13	4.8	1.8	.19	.00	.00	.00
22	.00	.00	.38	16	175	12	4.2	1.9	.20	.00	.00	.00
23	.00	.01	.43	10	86	11	3.9	1.7	.18	.00	.00	.00
24	.00	.03	.39	130	71	10	3.5	1.4	.15	.00	.00	.00
25	.00	.04	.37	358	52	9.8	3.3	1.3	.22	.00	.00	.00
26	.00	.10	.37	45	39	9.2	3.1	1.2	.41	.00	.00	.00
27	.00	.07	.36	149	32	8.8	3.0	1.2	.64	.00	.00	.00
28	.00	.07	.47	91	26	12	2.9	1.3	.41	.00	.00	.00
29	.00	.08	2.3	37	24	8.5	2.8	1.2	.31	.00	.00	.00
30	.00	.09	17	24	---	7.8	2.7	1.1	.26	.00	.00	.00
31	.00	---	3.5	55	---	7.4	---	1.1	---	.00	.00	---
TOTAL	0.00	0.49	39.94	1326.61	2537.9	851.5	164.8	63.7	12.04	0.54	0.00	0.00
MEAN	.000	.016	1.29	42.8	87.5	27.5	5.49	2.05	.40	.017	.000	.000
MAX	.00	.10	17	358	442	139	14	10	.97	.18	.00	.00
MIN	.00	.00	.09	.83	9.3	7.4	2.7	1.1	.15	.00	.00	.00
AC-FT	.00	1.0	79	2630	5030	1690	327	126	24	1.1	.00	.00

SAN JOAQUIN RIVER BASIN

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.17	5.33	5.90	22.0	33.5	24.0	3.84	1.85	.30	.032	.000	.008
MAX	1.80	53.1	59.4	109	170	96.6	9.34	13.4	2.06	.35	.000	.11
(WY)	1992	1984	1984	1995	1986	1995	1995	1995	1995	1995	1995	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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1983 - 1996

ANNUAL TOTAL	7463.41	4997.52	
ANNUAL MEAN	20.4	13.7	
HIGHEST ANNUAL MEAN			7.96
LOWEST ANNUAL MEAN			20.4
HIGHEST DAILY MEAN	648	Mar 10	1400
LOWEST DAILY MEAN	.00	Aug 2	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 2	.00
INSTANTANEOUS PEAK FLOW			5200
INSTANTANEOUS PEAK STAGE			9.10
ANNUAL RUNOFF (AC-FT)	14800	9910	5760
10 PERCENT EXCEEDS	39	28	11
50 PERCENT EXCEEDS	.96	.37	.18
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 sea level (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, 66,000 acre-ft, Aug. 12, maximum elevation, 509.24 ft; minimum, 53,900 acre-ft, Dec. 10, elevation, 498.69.

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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61400	55600	55100	55400	55300	55600	57100	60400	65300	64400	65000	64800
2	60900	55000	56600	54900	55000	56300	57600	60000	65000	64500	64100	65100
3	60900	54400	56000	54300	54600	56800	57900	60900	64900	65100	64600	65400
4	60200	56700	55400	55800	56300	55900	58000	60900	64800	65100	65300	65400
5	59600	56100	54800	55300	57100	56300	58000	61000	65100	65100	65900	65000
6	59500	55500	54200	55200	57000	55800	58100	60800	65500	65300	65100	65100
7	59300	54900	55600	54700	56900	56300	58200	60800	64900	64800	65400	65000
8	59200	56400	55100	54100	56600	56800	58600	61400	64200	64700	65500	65100
9	58700	55700	54500	55800	56200	55800	58400	62100	64100	64600	64900	65100
10	58700	55100	53900	56200	56200	55200	58900	62000	64700	64900	65700	64900
11	58500	54500	54500	55700	55900	55700	59500	61800	64500	64600	65600	64900
12	58300	54000	54100	56800	56500	55700	59700	62100	64700	64300	66000	64800
13	59300	56500	54700	56200	55300	55000	59500	63100	64800	64300	64900	64500
14	59300	55900	55800	55700	55300	55000	59700	63200	65000	64300	65700	64500
15	58700	56600	55300	55100	55300	54800	59600	63100	65300	64500	65600	64200
16	58100	56200	54700	55600	55600	54900	59900	63000	64900	64900	65300	64000
17	58100	56200	54100	56000	55900	54700	59000	62900	64300	65100	64500	63900
18	57500	56300	55300	56000	55200	55000	59000	63700	64400	64400	64500	63200
19	57100	56300	54800	55900	55700	54900	59200	62800	64900	65100	64800	62700
20	56800	55700	54200	55400	56800	55100	59200	62300	65600	65600	65000	62200
21	56800	55000	55800	55900	56300	55200	59300	63000	65100	65800	65700	62000
22	56600	54400	56800	55500	54200	55700	59700	63400	64400	65200	65000	61700
23	56800	54200	56200	55000	55100	56800	59600	63600	64600	65100	64500	61700
24	56800	56800	55600	55200	55600	57600	60200	63400	64800	64500	64500	61700
25	56400	56200	55000	56800	55500	57100	60400	63200	64700	64900	64500	62900
26	57400	55700	56100	56600	55300	57000	60600	63900	64600	65000	64500	61900
27	56700	55100	55500	57100	55000	56400	60800	64200	64900	65100	64900	61000
28	56100	54500	54900	57000	54100	56300	60900	64100	64900	64800	64900	60300
29	55700	56400	55700	56500	54500	56400	60900	64200	65000	64800	65200	60000
30	55100	55800	56600	55700	---	56600	60900	64500	64500	65600	65300	60100
31	54400	---	56000	55500	---	56500	---	65400	---	64600	65200	---
MAX	61400	56800	56800	57100	57100	57600	60900	65400	65600	65800	66000	65400
MIN	54400	54000	53900	54100	54100	54700	57100	60000	64100	64300	64100	60000
a	498.18	500.44	500.66	500.17	499.22	501.10	505.00	508.73	508.03	508.07	508.55	504.34
b	-7100	+1400	+200	-500	-1000	+2000	+4400	+4500	-900	+100	+600	-5100

CAL YR 1995 b -100
WTR YR 1996 b -1400

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, 12.0°C, many days in August and September; minimum recorded, 9.0°C, Feb. 28, 29, many days during March and April.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.5	9.0
2	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
3	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
4	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
5	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.5	9.0
6	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
7	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
8	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
9	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
10	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
11	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
12	11.0	11.0	10.5	10.5	10.5	10.0	10.0	10.0	10.0	10.0	9.0	9.0
13	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
14	11.5	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
15	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
16	11.0	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
17	11.0	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
18	11.0	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
19	11.0	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
20	10.5	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
21	10.5	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
22	11.0	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0
23	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	10.0	9.0	9.0
24	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	10.0	9.0	9.0
25	10.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.5	9.0	9.0
26	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	9.5	9.5	9.0	9.0
27	11.0	10.5	10.5	10.5	10.5	10.0	10.0	10.0	9.5	9.5	9.0	9.0
28	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.5	9.0	9.0	9.0
29	11.0	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.0	9.0	9.0
30	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	---	---	9.0	9.0
31	10.5	10.5	---	---	10.0	10.0	10.0	10.0	---	---	9.5	9.0
MONTH	11.5	10.5	10.5	10.5	10.5	10.0	10.0	10.0	10.0	9.0	9.5	9.0

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA-Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	9.0	9.5	9.5	10.5	10.0	10.5	10.5	11.5	11.5	12.0	12.0
2	9.0	9.0	9.5	9.5	10.5	10.0	10.5	10.5	11.5	11.5	12.0	12.0
3	9.0	9.0	9.5	9.5	10.5	10.5	11.0	10.5	11.5	11.5	12.0	11.5
4	9.0	9.0	9.5	9.5	10.5	10.5	11.0	10.5	11.5	11.5	12.0	11.5
5	9.0	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
6	9.0	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
7	9.5	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
8	9.5	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
9	9.5	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
10	9.5	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	11.5
11	9.5	9.0	9.5	9.5	10.5	10.5	11.0	11.0	11.5	11.5	12.0	12.0
12	9.5	9.0	9.5	9.5	10.5	10.5	11.5	11.0	12.0	11.5	12.0	12.0
13	9.5	9.0	9.5	9.5	10.5	10.5	11.5	11.0	12.0	11.5	12.0	11.5
14	9.5	9.0	9.5	9.5	10.5	10.5	11.5	11.0	12.0	11.5	12.0	11.5
15	9.5	9.5	9.5	9.5	10.5	10.5	11.5	11.0	12.0	11.5	12.0	11.5
16	9.5	9.5	10.0	9.5	10.5	10.5	11.5	11.0	12.0	11.5	12.0	11.5
17	9.5	9.0	10.0	10.0	10.5	10.5	11.5	11.5	12.0	11.5	12.0	11.5
18	9.5	9.0	10.0	10.0	10.5	10.5	11.5	11.5	12.0	11.5	12.0	11.5
19	9.5	9.0	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	11.5
20	9.5	9.5	10.0	10.0	11.0	10.5	11.5	11.5	11.5	11.5	12.0	11.5
21	9.5	9.5	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	11.5
22	9.5	9.0	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	11.5
23	9.5	9.0	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	11.5
24	9.5	9.0	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	11.5
25	9.5	9.5	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	12.0
26	9.5	9.5	10.0	10.0	10.5	10.5	11.5	11.5	12.0	11.5	12.0	12.0
27	9.5	9.5	10.0	10.0	11.0	10.5	11.5	11.5	12.0	11.5	12.0	12.0
28	9.5	9.5	10.0	10.0	10.5	10.5	11.5	11.5	12.0	11.5	12.0	11.5
29	9.5	9.5	10.0	10.0	10.5	10.5	11.5	11.5	12.0	12.0	12.0	12.0
30	9.5	9.5	10.5	10.0	10.5	10.5	11.5	11.5	12.0	12.0	12.0	11.5
31	---	---	10.5	10.0	---	---	11.5	11.5	12.0	12.0	---	---
MONTH	9.5	9.0	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.5	12.0	11.5

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.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 334.18 ft above sea level (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 fair except estimated period which is poor. Canal diverts from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin Irrigation Districts.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	4.0	5.4	4.4	.00	.58	708	741	951	965	1160	775
2	238	4.1	4.7	4.2	.00	.58	836	777	950	979	1150	771
3	246	4.0	4.1	4.3	.00	.60	816	792	951	990	1150	767
4	248	4.1	4.4	4.4	.12	.62	817	807	1020	987	1150	766
5	248	4.1	4.4	4.4	.02	.90	829	814	1060	997	1140	824
6	246	4.1	4.4	4.4	.00	.58	828	880	1060	994	1140	867
7	246	4.1	4.4	4.1	.00	.55	844	911	1080	994	1140	870
8	246	4.0	4.4	4.2	.00	.50	881	914	1090	979	1140	870
9	247	3.9	4.4	1.4	.00	.44	895	989	1090	1050	1140	870
10	247	3.9	4.4	.00	.00	.44	880	1030	1110	1080	1080	941
11	e540	3.9	4.4	.00	.00	215	909	1030	1120	1080	745	973
12	e677	3.9	4.6	.00	.00	326	915	1030	1100	1080	1010	977
13	e682	3.9	4.5	.00	.00	331	928	1020	1090	1080	1160	869
14	e683	3.8	4.4	.00	3.2	335	945	1020	1090	1080	1160	818
15	e676	3.7	4.4	.00	1.9	339	943	1020	1110	1090	1160	818
16	e660	3.7	4.4	.14	3.7	339	951	527	1110	1090	1170	809
17	e644	3.7	4.4	.00	3.7	339	948	182	1100	1160	1170	707
18	e637	3.7	4.4	.03	3.7	339	933	182	1080	1190	1170	656
19	e636	3.7	4.4	.00	4.0	339	844	182	1080	1200	1170	656
20	e638	3.7	4.4	.00	4.1	339	816	215	1080	1170	1170	657
21	e639	3.7	2.7	.02	1.8	339	814	216	1080	1150	1170	656
22	e639	3.7	.39	.00	.44	340	821	495	1080	1160	971	660
23	e639	3.7	.19	.00	.44	339	734	702	1080	1160	855	659
24	e638	3.7	.63	.04	.45	339	677	700	1070	1160	845	661
25	e638	3.7	2.4	.13	.44	364	685	747	1070	1160	845	521
26	e205	3.7	.90	.00	.46	377	700	790	1070	1160	844	437
27	e7.0	3.7	.77	.06	.48	388	705	794	1050	1160	844	436
28	5.8	4.5	3.1	.00	.56	423	706	807	984	1170	846	439
29	4.4	5.1	3.8	.00	.58	422	703	828	945	1170	845	435
30	4.0	5.3	3.6	.00	---	421	724	827	956	1170	814	312
31	3.9	---	4.4	.01	---	435	---	902	---	1170	785	---
TOTAL	12339.1	118.8	112.18	36.23	30.09	7433.79	24735	22871	31707	34025	32139	21477
MEAN	398	3.96	3.62	1.17	1.04	240	824	738	1057	1098	1037	716
MAX	683	5.3	5.4	4.4	4.1	435	951	1030	1120	1200	1170	977
MIN	3.9	3.7	.19	.00	.00	.44	677	182	945	965	745	312
AC-FT	24470	236	223	72	60	14740	49060	45360	62890	67490	63750	42600

MEAN	152	45.7	24.8	76.5	127	245	687	900	936	867	749	475
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	41.9	84.0	147	78.2	70.9	5.55
(WY)	1920	1920	1920	1916	1916	1930	1995	1977	1924	1924	1924	1977

ANNUAL TOTAL	164356.60		187024.19			
ANNUAL MEAN	450		511		446	
HIGHEST ANNUAL MEAN					684	1984
LOWEST ANNUAL MEAN					114	1977
HIGHEST DAILY MEAN	1170	Aug 12	1200	Jul 19	1320	Aug 10 1978
LOWEST DAILY MEAN	.00	Apr 8	.00	Jan 10	.00	Oct 30 1914
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 8	.00	Feb 6	.00	Oct 30 1914
ANNUAL RUNOFF (AC-FT)	326000		371000		323100	
10 PERCENT EXCEEDS	1120		1110		1070	
50 PERCENT EXCEEDS	5.8		636		331	
90 PERCENT EXCEEDS	.65		.33		.00	

e Estimated.

11301000 OAKDALE CANAL NEAR KNIGHTS FERRY, CA

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.

PERIOD OF RECORD.--May 1914 to current year. Records for water years 1933-36 incomplete; monthly and yearly estimates published in WSP 1315-A.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above sea level, 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.

REMARKS.--Records good. Canal diverts water from left bank of Stanislaus River at Goodwin Dam 0.3 mi upstream for irrigation in Oakdale Irrigation District.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	e.00	.00	.00	.47	.00	303	387	415	461	482	451
2	336	e.00	.00	.00	.27	.00	286	387	415	454	481	451
3	328	e.00	.00	.00	.11	.00	256	395	415	448	481	451
4	325	e.00	.00	.00	1.3	.00	269	401	415	457	481	451
5	325	e.00	.00	.00	1.3	.64	288	401	431	457	481	452
6	325	e.00	.00	.00	.52	.18	311	401	437	457	480	446
7	325	e.00	.00	.00	.26	.07	323	415	438	458	479	437
8	325	e.00	.00	.00	.19	.01	323	422	449	458	479	437
9	325	e.00	.00	.00	.11	.01	332	423	455	467	478	437
10	326	e.00	.00	.00	.10	.00	337	423	455	472	477	423
11	326	e.00	.00	.00	.06	.00	338	431	455	473	479	406
12	326	e.00	.06	.00	.01	.00	352	444	455	475	480	400
13	324	e.00	.05	.00	.01	.00	374	445	444	476	479	401
14	312	e.00	.00	.00	.01	.00	392	445	431	476	479	401
15	300	e.00	.03	.00	.00	.00	403	445	430	489	481	401
16	300	e.00	.00	.76	.00	.00	402	390	441	497	481	385
17	299	e.00	.00	.22	.00	.00	390	350	448	498	481	378
18	293	e.00	.00	.27	.00	.00	374	326	448	497	482	369
19	280	e.00	.00	.67	.81	.00	337	322	448	495	482	362
20	280	e.00	.00	.21	1.8	.01	335	321	464	496	482	361
21	279	e.00	.00	.66	3.3	.01	335	349	473	492	482	361
22	279	e.00	.00	.23	1.4	.01	337	364	474	491	482	362
23	262	e.00	.00	.10	.66	.01	338	378	474	493	482	356
24	244	e.00	.00	.29	.36	.01	338	404	474	495	482	345
25	239	e.00	.00	1.7	.25	20	338	413	466	495	482	345
26	e8.0	e.00	.00	.29	.11	80	338	413	461	494	472	337
27	e.00	e.00	.00	.90	.07	103	354	414	461	486	463	325
28	e.00	e.00	.00	.96	.00	177	363	414	461	480	463	325
29	e.00	e.00	.11	.37	.00	177	363	414	461	480	463	325
30	e.00	.00	.20	.16	---	225	379	414	461	481	463	325
31	e.00	---	.00	.44	---	286	---	415	---	481	458	---
TOTAL	7627.00	0.00	0.45	8.23	13.48	1068.96	10208	12366	13455	14829	14797	11706
MEAN	246	.000	.015	.27	.46	34.5	340	399	448	478	477	390
MAX	336	.00	.20	1.7	3.3	286	403	445	474	498	482	452
MIN	.00	.00	.00	.00	.00	.00	256	321	415	448	458	325
AC-FT	15130	.00	.9	16	27	2120	20250	24530	26690	29410	29350	23220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1996, BY WATER YEAR (WY)

	MEAN	94.0	5.08	1.06	1.67	2.20	47.4	227	360	373	367	332	248
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	.000	.000	.000	.000	.000	.000	.004	97.5	49.8	25.8	.62	1.20	
(WY)	1995	1915	1916	1916	1915	1918	1983	1915	1924	1924	1977	1977	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1914 - 1996
ANNUAL TOTAL	78655.34	86079.12	
ANNUAL MEAN	215	235	174
HIGHEST ANNUAL MEAN			277
LOWEST ANNUAL MEAN			52.8
HIGHEST DAILY MEAN	498 Aug 6	498 Jul 17	556 Jul 8 1967
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 27	.00 Jun 21 1914
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 31	.00 Oct 27	.00 Oct 16 1914
ANNUAL RUNOFF (AC-FT)	156000	170700	126300
10 PERCENT EXCEEDS	492	479	475
50 PERCENT EXCEEDS	262	325	77
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

SAN JOAQUIN RIVER BASIN

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 sea level.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	273	267	271	268	3800	1690	1540	850	784	685	331
2	212	274	268	273	266	3780	1690	1560	840	669	654	332
3	202	272	269	265	265	3780	1700	1520	833	541	605	340
4	201	270	269	269	284	3750	1700	1520	831	474	611	342
5	205	273	268	273	275	3760	1720	1510	831	481	559	345
6	209	271	267	271	270	3750	1700	1530	827	481	514	337
7	208	270	266	270	269	3770	1700	1520	945	482	455	339
8	208	270	267	270	268	3780	1710	1530	1140	505	418	343
9	207	273	266	273	263	3770	1690	1510	1140	505	380	344
10	207	272	266	276	585	3710	1690	1510	1140	443	372	359
11	205	270	270	280	647	3530	1700	1510	1130	530	364	350
12	204	270	273	269	649	3470	1610	1500	1140	631	389	356
13	895	271	272	270	896	3440	1520	1530	1130	682	373	347
14	1250	273	269	269	1170	3420	1520	1520	1140	674	330	342
15	1240	273	272	269	1460	3470	1520	1510	1040	717	312	346
16	1210	274	269	282	1490	3460	1540	1530	915	663	326	343
17	1040	274	267	271	1500	3460	1530	1520	857	612	320	341
18	684	270	267	275	1490	3470	1520	1490	862	601	316	339
19	369	266	268	275	1850	3460	1510	1540	847	651	321	343
20	266	269	269	270	2420	3450	1520	1520	847	692	325	316
21	269	270	270	275	2460	3460	1530	1520	841	633	324	302
22	270	275	273	270	2620	3290	1530	1290	842	577	336	303
23	270	269	273	269	3020	2930	1520	952	838	526	334	302
24	276	267	270	274	3150	2690	1530	818	856	490	328	303
25	269	270	270	283	3150	2470	1530	803	864	541	329	305
26	289	270	270	270	3240	2180	1530	826	860	596	329	305
27	293	268	270	291	3290	2110	1520	846	856	655	331	302
28	275	266	270	445	3530	2010	1530	838	830	662	333	295
29	275	266	276	446	3760	1810	1540	825	808	638	334	300
30	274	268	277	450	---	1690	1540	824	787	643	340	301
31	273	---	272	384	---	1670	---	840	---	683	334	---
TOTAL	12456	8117	8360	9098	44805	98590	47780	40802	27667	18462	12281	9853
MEAN	402	271	270	293	1545	3180	1593	1316	922	596	396	328
MAX	1250	275	277	450	3760	3800	1720	1560	1140	784	685	359
MIN	201	266	266	265	263	1670	1510	803	787	443	312	295
AC-FT	24710	16100	16580	18050	88870	195600	94770	80930	54880	36620	24360	19540

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
LOWEST ANNUAL MEAN	6.47
HIGHEST DAILY MEAN	29400
LOWEST DAILY MEAN	.14
ANNUAL SEVEN-DAY MINIMUM	.15
INSTANTANEOUS PEAK FLOW	40200
INSTANTANEOUS PEAK STAGE	28.85
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	409	419	648	682	605	1211	782	761	564	508	467	355
MAX	1228	2246	4581	4793	1693	4905	1593	1389	1080	1314	1152	1097
(WY)	1984	1984	1984	1984	1984	1986	1996	1993	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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1984 - 1996

ANNUAL TOTAL	170168	338271	
ANNUAL MEAN	466	924	619
HIGHEST ANNUAL MEAN			1469
LOWEST ANNUAL MEAN			185
HIGHEST DAILY MEAN	2320	Mar 12	3800
LOWEST DAILY MEAN	190	Jul 29	201
ANNUAL SEVEN-DAY MINIMUM	204	Sep 30	205
INSTANTANEOUS PEAK FLOW			3890
INSTANTANEOUS PEAK STAGE			13.12
ANNUAL RUNOFF (AC-FT)	337500	671000	448100
10 PERCENT EXCEEDS	1220	2130	1260
50 PERCENT EXCEEDS	270	477	332
90 PERCENT EXCEEDS	227	269	155

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.--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, 12.5°C, June 25, 26, 29, many days during July, several days during August; minimum recorded, 9.5°C, November 27, 29, several days during December and January.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	11.0	10.5	10.5	10.0	10.0	10.0	9.5	10.0	10.0	10.5	10.0
2	11.0	11.0	10.5	10.5	10.0	9.5	10.0	9.5	10.0	10.0	10.5	10.0
3	11.0	11.0	10.5	10.5	10.0	9.5	10.0	9.5	10.0	10.0	10.5	10.0
4	11.0	11.0	10.5	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.5
5	11.0	11.0	10.5	10.5	10.0	10.0	10.0	9.5	10.0	10.0	10.5	10.5
6	11.0	11.0	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
7	11.0	11.0	10.5	10.0	10.0	10.0	10.0	9.5	10.0	10.0	10.5	10.5
8	11.0	11.0	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
9	11.0	11.0	10.5	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.5
10	11.0	11.0	10.0	10.0	10.0	9.5	10.0	9.5	10.0	10.0	10.5	10.5
11	11.0	10.5	10.5	10.0	10.0	10.0	10.0	9.5	10.0	10.0	10.5	10.5
12	11.0	11.0	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
13	11.0	11.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
14	11.0	10.5	10.0	10.0	10.0	10.0	10.0	9.5	10.0	10.0	10.5	10.5
15	11.0	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
16	11.0	10.5	10.0	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.5
17	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
18	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
19	11.0	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
20	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
21	10.5	10.5	10.0	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.5
22	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5
23	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.0	10.5
24	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.0	10.5	10.5
25	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.0	11.0	10.5
26	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.0	11.0	10.5
27	10.5	10.5	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.0	10.5	10.5
28	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
29	10.5	10.5	10.0	9.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
30	10.5	10.5	10.0	10.0	10.0	10.0	10.0	10.0	---	---	11.0	10.5
31	10.5	10.5	---	---	10.0	9.5	10.0	10.0	---	---	11.0	10.5
MONTH	11.0	10.5	10.5	9.5	10.0	9.5	10.0	9.5	10.5	10.0	11.0	10.0

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	10.5	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.0	11.5	11.5
2	10.5	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
3	10.5	10.5	11.0	10.5	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
4	10.5	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
5	11.0	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
6	10.5	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
7	11.0	10.5	11.0	11.0	12.0	12.0	12.5	12.0	12.5	12.0	11.5	11.5
8	11.0	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.5	12.0	11.5	11.5
9	10.5	10.5	11.0	11.0	12.0	11.5	12.5	12.0	12.0	12.0	11.5	11.5
10	11.0	10.5	11.0	11.0	12.0	12.0	12.5	12.0	12.5	12.0	11.5	11.5
11	11.0	10.5	11.0	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
12	11.0	10.5	11.0	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
13	11.0	11.0	11.0	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
14	11.0	10.5	11.5	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
15	11.0	10.5	11.0	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
16	11.0	11.0	11.5	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
17	11.0	11.0	11.5	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
18	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
19	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
20	11.0	11.0	11.5	11.0	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
21	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
22	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
23	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	12.0	11.5	11.5	11.5
24	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	12.0	12.0	11.5	11.5
25	11.0	11.0	11.5	11.5	12.5	12.0	12.5	12.5	12.0	12.0	12.0	11.5
26	11.0	11.0	11.5	11.5	12.5	12.0	12.5	12.5	12.0	12.0	11.5	11.5
27	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	12.0	11.5	11.5	11.5
28	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	11.5	11.5	12.0	11.5
29	11.0	10.5	11.5	11.5	12.5	12.0	12.5	12.5	11.5	11.5	12.0	12.0
30	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	11.5	11.5	12.0	12.0
31	---	---	11.5	11.5	---	---	12.5	12.5	11.5	11.5	---	---
MONTH	11.0	10.5	11.5	10.5	12.5	11.5	12.5	12.0	12.5	11.5	12.0	11.5

SAN JOAQUIN RIVER BASIN

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 were due to malfunction of the recording instrument. Water temperature can be affected by releases from Goodwin Dam.

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, 18.5°C, Aug. 10, 15; minimum recorded, 8.5°C, Dec. 25, 26, Jan. 23, 26.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

11302500 STANISLAUS RIVER AT OAKDALE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. April to September 1940 in reports of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 0.72 ft above sea level. October 1940 to Nov. 17, 1953, at site 100 ft upstream at same datum.

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	374	315	398	727	3530	1890	1570	1040	921	788	463
2	357	341	314	358	542	3630	1970	1590	1070	867	816	475
3	364	330	314	344	433	3660	1920	1600	1000	777	798	451
4	359	326	319	336	414	3680	1870	1640	958	687	751	435
5	333	324	318	329	740	3690	1820	1570	961	636	740	436
6	316	324	318	327	680	3750	1830	1560	951	628	696	542
7	320	323	314	326	480	3740	1800	1560	946	606	659	539
8	334	323	313	325	419	3720	1790	1560	1070	618	612	553
9	324	323	313	327	391	3730	1770	1610	1250	644	583	522
10	381	322	315	329	383	3740	1770	1610	1300	649	599	477
11	361	321	338	332	519	3720	1770	1600	1280	586	572	472
12	354	318	367	333	607	3830	1800	1570	1260	643	535	474
13	310	317	385	326	627	3910	1720	1580	1250	701	526	485
14	576	316	387	323	775	3900	1620	1620	1300	757	511	475
15	1010	317	367	322	982	3840	1620	1640	1260	781	488	491
16	1140	319	364	348	1250	3850	1610	1930	1160	817	459	489
17	1160	320	352	533	1340	3870	1620	1930	1040	785	506	518
18	1070	318	342	482	1370	3860	1690	1830	1000	759	484	524
19	818	320	335	411	1410	3720	1680	1770	956	734	459	503
20	565	316	329	469	1830	3760	1670	1760	937	779	479	498
21	502	316	331	405	2530	3830	1640	1730	965	811	484	474
22	454	315	335	425	3000	3840	1610	1680	965	763	474	415
23	440	319	335	387	2890	3790	1590	1530	958	699	469	443
24	414	320	332	365	2920	3550	1580	1250	945	661	449	441
25	426	316	330	403	3040	3230	1600	1090	948	650	470	441
26	429	320	310	576	3060	2860	1610	1020	979	697	481	475
27	453	318	330	433	3080	2580	1600	1040	965	731	466	456
28	391	319	330	556	3160	2470	1610	1040	968	808	448	440
29	368	316	331	604	3270	2360	1590	1040	970	791	460	426
30	363	315	405	529	---	2110	1580	994	924	777	469	427
31	364	---	486	540	---	1920	---	996	---	780	464	---
TOTAL	15390	9666	10574	12501	42879	107670	51240	46510	31576	22543	17195	14260
MEAN	496	322	341	403	1479	3473	1708	1500	1053	727	555	475
MAX	1160	374	486	604	3270	3910	1970	1930	1300	921	816	553
MIN	310	315	310	322	383	1920	1580	994	924	586	448	415
AC-FT	30530	19170	20970	24800	85050	213600	101600	92250	62630	44710	34110	28280

SAN JOAQUIN RIVER BASIN

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11303000 STANISLAUS RIVER AT RIPON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	357	464	877	1148	1125	1378	1528	2054	1442	494	344	328
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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	216854		382004			
ANNUAL MEAN	594		1044			
HIGHEST ANNUAL MEAN					961	
LOWEST ANNUAL MEAN					2548	1983
HIGHEST DAILY MEAN	2450	Mar 12	3910	Mar 13	44.9	1977
LOWEST DAILY MEAN	292	Sep 30	310	Oct 13	47000	Dec 24 1955
ANNUAL SEVEN-DAY MINIMUM	316	Dec 3	316	Dec 3	.11	Aug 4 1977
INSTANTANEOUS PEAK FLOW			3930	Mar 13	.13	Aug 2 1977
INSTANTANEOUS PEAK STAGE			51.10	Mar 13	62500	Dec 24 1955
ANNUAL RUNOFF (AC-FT)	430100		757700		63.25	Dec 24 1955
10 PERCENT EXCEEDS	1370		2490		695900	
50 PERCENT EXCEEDS	403		615		2610	
90 PERCENT EXCEEDS	320		323		369	
					136	

11303000 STANISLAUS RIVER AT RIPON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 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 U.S. Geological Survey Open-File Report 91-74.

CHEMICAL DATA: Water year 1994.

SPECIFIC CONDUCTANCE: Water years 1986-89.

WATER TEMPERATURE: Water years 1986-89. October 1994 to current year.

SEDIMENT DATA: Water year 1994.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Water years 1986-89.

WATER TEMPERATURE: Water years 1986-89. October 1994 to current year.

INSTRUMENTATION.--Temperature recorder since October 1994.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 27.5°C, July 21, 1989; minimum recorded, 5.0°C, Feb. 7, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 22.5°C, Aug. 12; minimum recorded, 8.0°C, Dec. 26.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

11303000 STANISLAUS RIVER AT RIPON, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

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 sea level. See WSP 2130 for history of changes prior to Nov. 30, 1967.

REMARKS.--Records good except for periods of estimated record which are fair. 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. See schematic diagram of Sacramento-San Joaquin Delta.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5650	3330	2160	2430	5250	15200	10200	6530	6020	2870	2080	2090
2	6320	3030	2150	2310	6260	15000	10100	6600	5740	2710	2060	2150
3	6650	2910	2110	2140	6420	14900	9900	6380	5500	2590	2080	2160
4	6620	2810	2120	2040	6740	15200	9670	6230	5350	2540	2130	2050
5	6640	2740	2130	1980	7430	15400	8990	6500	4790	2420	2170	2070
6	6520	2660	2120	1940	9170	16100	8300	6700	4390	2280	2120	2100
7	6540	2640	2120	1910	9170	16800	7950	6440	4010	2270	2100	2170
8	6590	2590	2140	1880	9770	17200	7700	6240	3810	2320	2070	2190
9	6650	2550	2130	1880	10300	17400	7420	6350	3910	2220	2060	2220
10	6600	2500	2110	1840	10600	17600	7260	6540	4180	2130	2080	2060
11	6490	2440	2160	1840	11100	17500	7190	6770	4150	2100	2120	2050
12	6450	2380	2260	1820	11400	17300	6970	6830	3860	2060	2060	2140
13	e6420	2370	2340	1800	11400	17200	6870	6830	3610	2020	e1990	2070
14	e6670	2350	2440	1790	11200	16700	6710	6730	3550	2090	e1970	2120
15	e6900	2300	2450	1790	11200	16000	6680	7130	3540	2190	e1960	2250
16	7290	2270	2450	1850	11300	15400	6650	8100	3540	2120	1830	2290
17	7220	2260	2410	1960	11300	15100	6670	8720	3560	2190	1870	2200
18	6650	2260	2410	2390	11500	15200	6820	9120	3380	2150	1930	2210
19	6010	2260	2440	2370	11700	15300	7080	10200	3220	2170	1940	2220
20	5500	2260	2370	2450	12200	15400	7250	11000	3070	e2190	1950	2230
21	5070	2220	2320	2660	13700	15600	7340	11200	2950	e2190	1960	2220
22	4820	2220	2300	2460	14700	15600	7360	11300	2870	e2150	1990	2220
23	4630	2220	2270	2550	15400	15100	7230	11600	2940	e2170	2070	2240
24	4280	2220	2250	2380	15400	14300	6800	11700	2940	2010	2070	2160
25	3940	2200	2240	2440	15800	13400	6560	11700	2850	1890	2100	2180
26	3810	2190	2210	3280	15900	12400	6690	11300	2840	1900	2100	2150
27	3840	2170	2210	3610	15700	12300	6700	10900	2850	2040	2070	2170
28	4030	2170	2190	3400	15400	12100	6680	10400	2930	2030	2030	2140
29	4040	2170	2160	4280	15300	12000	6670	9670	2910	2230	2030	2180
30	3860	2160	2210	3900	---	11700	6600	8390	2900	2140	2030	2210
31	3750	---	2380	3980	---	10800	---	6970	---	2110	2030	---
TOTAL	176450	72850	69760	75350	332710	467200	225010	261070	112160	68490	63050	64910
MEAN	5692	2428	2250	2431	11470	15070	7500	8422	3739	2209	2034	2164
MAX	7290	3330	2450	4280	15900	17600	10200	11700	6020	2870	2170	2290
MIN	3750	2160	2110	1790	5250	10800	6560	6230	2840	1890	1830	2050
AC-FT	350000	144500	138400	149500	659900	926700	446300	517800	222500	135800	125100	128700

e Estimated.

SAN JOAQUIN RIVER BASIN

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11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2225	2307	3558	4896	6623	7338	7130	7734	6601	2535	1360	1718
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 1995 CALENDAR YEAR					FOR 1996 WATER YEAR			WATER YEARS 1924 - 1996			
ANNUAL TOTAL	3374430					1989010						
ANNUAL MEAN	9245					5434			4487			
HIGHEST ANNUAL MEAN									21280			
LOWEST ANNUAL MEAN									575			
HIGHEST DAILY MEAN	25900					Mar 20			70000			
LOWEST DAILY MEAN	1310					Jan 1			30			
ANNUAL SEVEN-DAY MINIMUM	1490					Jan 1			59			
INSTANTANEOUS PEAK FLOW						18000			79000			
INSTANTANEOUS PEAK STAGE						22.82			34.55			
ANNUAL RUNOFF (AC-FT)	6693000					3945000			3251000			
10 PERCENT EXCEEDS	22300					12200			12100			
50 PERCENT EXCEEDS	6290					2930			2040			
90 PERCENT EXCEEDS	2260					2060			649			

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.

TURBIDITY: Water years 1972-84.

PERIOD OF DAILY RECORD.--

CHEMICAL DATA: 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, 889 microsiemens, July 6; minimum recorded, 151 microsiemens, Oct. 4.

WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 13; minimum recorded, 13.0°C, several days during March.

SEDIMENT CONCENTRATION: Maximum daily mean, 317 mg/L, Feb. 6; minimum daily mean, 20 mg/L, Jan. 15.

SEDIMENT LOAD: Maximum daily, 7,860 tons, Feb. 6; minimum daily, 98 tons, Jan. 15.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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						
01...	1430	3260	17.0	47	414	87
DEC						
08...	1505	2150	14.0	44	255	76
JAN						
05...	1435	1980	13.0	48	257	75
FEB						
21...	1610	14000	--	186	7030	57
APR						
29...	1645	6650	17.0	64	1150	73
JUN						
13...	1500	3560	22.5	80	769	88
AUG						
08...	1400	2060	26.0	122	679	93
SEP						
18...	1420	2190	20.5	62	367	86

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
MAR											
01...	1500	1	15100	--	--	6	71	100	--	--	--
01...	1505	1	15100	--	--	4	39	85	98	100	--
01...	1510	1	15200	--	--	5	57	99	100	--	--
01...	1515	1	15200	--	--	5	46	85	96	99	100
01...	1520	1	15200	--	--	18	79	99	100	--	--
SEP											
18...	1500	1	2160	20.5	--	5	52	93	100	--	--
18...	1505	1	2190	20.5	1	9	53	92	99	100	--
18...	1510	1	2230	20.5	--	6	70	98	100	--	--
18...	1515	1	2190	20.5	--	2	39	90	98	100	--
18...	1520	1	2150	20.5	--	16	72	97	100	--	--

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SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	309	261	---	---	---	---	---	---	---	---	---	---
2	309	171	---	---	---	---	---	---	---	---	---	---
3	181	160	---	---	---	---	---	---	---	---	---	---
4	171	151	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	162	156	---	---	---	---	---	---	---	---	---	---
7	169	156	---	---	---	---	---	---	---	---	---	---
8	170	162	---	---	---	---	---	---	---	---	---	---
9	169	159	---	---	---	---	---	---	---	---	---	---
10	169	160	---	---	---	---	---	---	---	---	---	---
11	178	167	---	---	---	---	---	---	---	---	---	---
12	178	168	---	---	---	---	---	---	---	---	230	221
13	173	167	---	---	---	---	---	---	---	---	235	228
14	171	161	---	---	---	---	---	---	---	---	243	233
15	168	161	---	---	---	---	---	---	---	---	248	238
16	167	160	---	---	---	---	---	---	---	---	241	229
17	170	158	---	---	---	---	---	---	---	---	233	217
18	199	170	---	---	---	---	---	---	---	---	217	208
19	242	199	---	---	---	---	---	---	---	---	230	212
20	295	240	---	---	---	---	---	---	---	---	229	223
21	311	295	---	---	---	---	---	---	---	---	228	222
22	340	311	---	---	---	---	---	---	---	---	232	224
23	362	340	---	---	---	---	---	---	---	---	244	232
24	390	362	---	---	---	---	---	---	---	---	265	244
25	422	384	---	---	---	---	---	---	---	---	294	265
26	443	419	---	---	---	---	---	---	---	---	294	274
27	437	412	---	---	---	---	---	---	---	---	278	266
28	415	380	---	---	---	---	---	---	---	---	283	271
29	398	371	---	---	---	---	---	---	---	---	276	258
30	435	398	---	---	---	---	---	---	---	---	289	261
31	446	412	---	---	---	---	---	---	---	---	311	289
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	332	311	291	281	359	335	771	700	684	649	654	610
2	335	326	296	289	392	359	774	741	669	629	626	601
3	335	318	304	289	410	392	790	745	664	620	617	558
4	320	308	299	283	438	402	815	756	655	620	580	549
5	337	314	286	268	473	438	840	783	697	636	586	539
6	354	337	271	266	511	473	889	859	681	604	551	518
7	380	349	292	270	555	511	850	707	695	627	576	536
8	392	374	293	285	559	534	797	663	687	646	593	553
9	390	363	285	273	560	529	790	602	722	638	559	541
10	377	358	282	259	538	511	853	748	638	599	591	550
11	376	352	275	262	544	505	846	772	691	606	595	544
12	352	331	272	266	578	542	861	812	681	634	550	522
13	344	334	275	266	626	578	859	813	674	631	539	513
14	354	335	276	273	615	596	855	764	699	649	525	509
15	359	341	273	257	631	588	802	649	657	620	533	501
16	359	341	258	251	634	607	737	647	636	614	520	463
17	353	343	259	254	649	598	802	671	673	616	494	463
18	343	308	258	221	678	627	811	759	681	645	504	458
19	311	282	221	169	723	672	772	747	677	608	510	467
20	282	261	200	170	758	704	759	704	673	628	526	494
21	269	262	209	195	756	737	729	670	658	618	506	475
22	278	267	205	163	779	747	709	649	633	579	507	479
23	287	271	196	177	780	737	715	694	630	590	524	482
24	298	286	184	169	799	758	774	705	608	584	532	481
25	304	296	187	170	803	769	809	750	623	601	515	499
26	300	283	218	187	782	757	810	764	601	555	522	495
27	290	285	237	216	783	735	781	716	626	556	574	522
28	297	287	256	230	743	720	750	667	636	577	602	574
29	295	285	271	186	725	681	686	619	624	586	602	569
30	294	281	275	186	739	700	708	645	623	597	597	542
31	---	---	345	263	---	---	652	601	668	612	---	---
MONTH	392	261	345	163	803	335	889	601	722	555	654	458

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	17.0	---	---	---	---	---	---	---	---	---	---
2	18.0	17.0	---	---	---	---	---	---	---	---	---	---
3	17.5	16.0	---	---	---	---	---	---	---	---	---	---
4	16.5	15.5	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	16.5	15.5	---	---	---	---	---	---	---	---	---	---
7	16.5	15.5	---	---	---	---	---	---	---	---	---	---
8	16.5	15.5	---	---	---	---	---	---	---	---	---	---
9	16.5	15.5	---	---	---	---	---	---	---	---	---	---
10	16.5	15.5	---	---	---	---	---	---	---	---	---	---
11	17.0	16.0	---	---	---	---	---	---	---	---	---	---
12	16.5	16.0	---	---	---	---	---	---	---	---	14.0	13.0
13	16.0	15.5	---	---	---	---	---	---	---	---	13.5	13.0
14	16.5	15.5	---	---	---	---	---	---	---	---	14.0	13.0
15	16.0	15.5	---	---	---	---	---	---	---	---	14.0	13.0
16	16.5	15.5	---	---	---	---	---	---	---	---	14.5	13.5
17	16.0	15.5	---	---	---	---	---	---	---	---	14.5	13.5
18	16.5	15.5	---	---	---	---	---	---	---	---	15.0	14.0
19	17.0	16.0	---	---	---	---	---	---	---	---	15.5	14.5
20	17.0	16.0	---	---	---	---	---	---	---	---	16.0	14.5
21	17.0	16.5	---	---	---	---	---	---	---	---	16.0	15.0
22	16.5	15.0	---	---	---	---	---	---	---	---	15.5	15.0
23	15.5	14.5	---	---	---	---	---	---	---	---	15.0	13.5
24	15.5	14.5	---	---	---	---	---	---	---	---	14.0	13.5
25	15.5	14.5	---	---	---	---	---	---	---	---	14.0	13.5
26	16.0	14.5	---	---	---	---	---	---	---	---	13.5	13.0
27	16.5	15.0	---	---	---	---	---	---	---	---	14.0	13.0
28	16.5	16.0	---	---	---	---	---	---	---	---	14.0	13.5
29	16.5	16.0	---	---	---	---	---	---	---	---	14.0	13.0
30	17.0	16.0	---	---	---	---	---	---	---	---	14.0	13.0
31	16.5	16.0	---	---	---	---	---	---	---	---	14.5	14.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	14.0	18.5	17.5	20.0	18.5	25.5	23.0	26.5	24.5	25.0	23.0
2	14.5	13.5	18.5	17.5	21.5	19.5	26.0	23.5	25.5	23.0	25.0	23.0
3	15.0	14.0	18.5	17.0	22.5	20.5	26.0	23.5	24.5	22.5	24.5	22.5
4	15.0	14.0	18.0	16.5	22.5	21.0	25.5	23.5	25.0	22.5	24.0	22.0
5	15.5	14.5	17.0	16.5	23.0	21.0	25.5	23.0	25.0	23.0	22.5	21.0
6	16.0	15.5	17.0	16.0	23.5	21.5	26.0	23.5	24.5	22.5	22.5	20.5
7	17.0	16.0	17.0	16.0	24.5	22.5	26.5	24.0	25.0	22.5	23.0	20.5
8	17.5	16.5	16.5	16.0	24.0	22.5	26.5	24.0	25.5	22.5	23.0	21.0
9	16.5	16.0	16.5	15.0	23.5	22.0	26.5	24.5	26.5	23.5	23.5	21.0
10	16.0	15.5	17.0	15.5	22.5	21.5	27.0	24.5	26.5	24.5	24.0	21.5
11	16.0	15.0	17.5	16.5	22.0	20.5	27.0	24.5	27.5	25.0	23.5	22.0
12	16.0	15.0	18.5	17.0	22.5	20.5	26.5	24.5	27.5	25.0	23.0	21.0
13	15.5	14.5	19.0	18.0	22.5	21.0	26.5	24.0	28.5	26.0	22.0	21.0
14	16.0	14.5	19.0	18.0	22.5	20.5	26.5	24.0	28.0	26.0	21.5	20.0
15	16.0	15.0	18.5	17.0	22.5	21.0	25.5	23.5	27.5	25.0	21.5	20.0
16	16.0	15.0	17.0	16.5	22.5	21.0	25.0	23.0	27.0	24.5	20.5	19.0
17	15.0	14.5	17.0	16.0	22.5	21.0	24.5	22.5	26.0	24.5	20.5	18.5
18	15.0	14.0	16.0	15.5	22.5	20.5	24.5	22.0	25.5	23.0	20.5	18.5
19	15.0	14.5	16.0	15.0	22.5	20.5	24.5	22.0	25.0	23.0	21.0	19.0
20	15.0	14.0	16.5	15.0	22.5	20.5	24.5	22.0	24.0	22.0	22.0	19.5
21	15.0	13.5	16.5	15.5	22.5	20.0	25.5	22.5	24.5	22.0	22.5	20.5
22	16.0	14.5	16.0	15.0	23.0	20.5	25.5	23.5	25.0	22.5	22.5	20.5
23	16.5	15.5	16.5	15.0	23.5	21.0	26.0	23.0	25.5	23.5	22.5	20.5
24	17.5	16.0	16.5	15.5	22.0	20.5	26.0	23.5	26.0	23.5	22.0	20.5
25	18.0	16.5	17.5	16.0	22.0	19.5	27.0	24.0	25.0	23.0	21.5	20.0
26	18.0	16.5	18.5	17.5	21.0	20.0	26.5	24.5	24.5	22.5	21.5	19.5
27	17.5	16.5	19.0	18.0	21.5	19.0	26.0	24.5	24.0	22.0	21.5	19.5
28	16.5	15.5	19.0	18.0	22.0	19.5	26.5	23.5	24.5	22.0	22.0	20.0
29	17.0	16.0	18.5	18.0	23.0	20.5	27.0	24.5	25.0	22.5	22.0	20.5
30	18.0	16.5	18.5	18.0	24.5	21.5	27.5	25.0	25.5	23.5	22.0	20.5
31	---	---	19.0	18.0	---	---	27.0	25.0	25.5	23.0	---	---
MONTH	18.0	13.5	19.0	15.0	24.5	18.5	27.5	22.0	28.5	22.0	25.0	18.5

SAN JOAQUIN RIVER BASIN

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11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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	5650	68	1040	3330	51	462	2160	35	202
2	6320	80	1360	3030	48	392	2150	38	223
3	6650	85	1520	2910	49	383	2110	42	240
4	6620	89	1590	2810	51	391	2120	42	237
5	6640	85	1520	2740	52	382	2130	50	286
6	6520	78	1380	2660	49	355	2120	43	245
7	6540	76	1340	2640	46	328	2120	44	254
8	6590	74	1310	2590	45	313	2140	46	266
9	6650	73	1300	2550	41	282	2130	41	234
10	6600	75	1340	2500	40	271	2110	42	237
11	6490	71	1240	2440	36	237	2160	47	277
12	6450	67	1170	2380	37	236	2260	62	380
13	6420	66	1140	2370	37	236	2340	70	440
14	6670	70	1260	2350	35	225	2440	74	486
15	6900	70	1300	2300	36	225	2450	80	528
16	7290	73	1440	2270	38	230	2450	68	449
17	7220	75	1470	2260	37	223	2410	57	373
18	6650	73	1310	2260	37	226	2410	52	339
19	6010	67	1090	2260	40	246	2440	52	346
20	5500	65	970	2260	42	253	2370	51	329
21	5070	78	1070	2220	40	237	2320	50	315
22	4820	74	959	2220	38	230	2300	43	269
23	4630	60	755	2220	40	240	2270	42	256
24	4280	58	672	2220	46	274	2250	39	235
25	3940	53	562	2200	38	225	2240	38	230
26	3810	52	535	2190	39	229	2210	38	225
27	3840	56	577	2170	42	245	2210	37	219
28	4030	64	696	2170	48	280	2190	45	266
29	4040	65	703	2170	44	257	2160	52	304
30	3860	54	562	2160	37	217	2210	50	296
31	3750	55	558	---	---	---	2380	56	358
TOTAL	176450	---	33739	72850	---	8330	69760	---	9344
JANUARY			FEBRUARY			MARCH			
1	2430	63	414	5250	273	3930	15200	74	3020
2	2310	54	338	6260	222	3750	15000	73	2950
3	2140	49	281	6420	168	2910	14900	73	2920
4	2040	47	258	6740	192	3490	15200	76	3120
5	1980	48	254	7430	234	4720	15400	72	2980
6	1940	39	205	9170	317	7860	16100	67	2910
7	1910	37	191	9170	243	6010	16800	69	3130
8	1880	36	181	9770	219	5780	17200	69	3210
9	1880	35	177	10300	190	5270	17400	68	3210
10	1840	41	202	10600	166	4760	17600	67	3210
11	1840	33	163	11100	141	4200	17500	66	3130
12	1820	25	125	11400	142	4380	17300	66	3060
13	1800	22	107	11400	119	3680	17200	65	2990
14	1790	21	101	11200	100	3030	16700	64	2880
15	1790	20	98	11200	105	3200	16000	63	2730
16	1850	29	147	11300	92	2800	15400	64	2670
17	1960	33	175	11300	91	2790	15100	62	2530
18	2390	77	500	11500	99	3070	15200	59	2410
19	2370	85	542	11700	117	3700	15300	55	2260
20	2450	96	639	12200	144	4750	15400	51	2100
21	2660	108	773	13700	157	5820	15600	52	2180
22	2460	103	682	14700	133	5290	15600	57	2420
23	2550	177	1220	15400	102	4250	15100	55	2240
24	2380	102	656	15400	90	3740	14300	65	2490
25	2440	78	514	15800	81	3450	13400	63	2280
26	3280	231	2130	15900	72	3080	12400	67	2250
27	3610	163	1600	15700	76	3230	12300	68	2260
28	3400	175	1610	15400	73	3060	12100	70	2290
29	4280	195	2260	15300	71	2940	12000	68	2200
30	3900	150	1580	---	---	---	11700	65	2050
31	3980	160	1730	---	---	---	10800	68	1970
TOTAL	75350	---	19853	332710	---	118940	467200	---	82050

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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	10200	74	2020	6530	70	1240	6020	118	1920
2	10100	85	2330	6600	90	1610	5740	111	1730
3	9900	86	2310	6380	73	1260	5500	94	1400
4	9670	79	2060	6230	71	1190	5350	89	1290
5	8990	84	2040	6500	69	1210	4790	89	1150
6	8300	79	1770	6700	61	1110	4390	90	1060
7	7950	79	1690	6440	69	1200	4010	91	979
8	7700	80	1670	6240	66	1110	3810	90	929
9	7420	74	1470	6350	65	1120	3910	102	1080
10	7260	71	1380	6540	71	1260	4180	98	1110
11	7190	76	1470	6770	75	1360	4150	85	953
12	6970	66	1240	6830	78	1430	3860	80	833
13	6870	57	1050	6830	69	1270	3610	86	843
14	6710	66	1190	6730	72	1310	3550	93	889
15	6680	65	1160	7130	84	1630	3540	86	819
16	6650	76	1370	8100	144	3180	3540	87	831
17	6670	83	1490	8720	125	2950	3560	93	890
18	6820	71	1310	9120	108	2660	3380	109	996
19	7080	76	1440	10200	127	3500	3220	116	1010
20	7250	74	1450	11000	143	4240	3070	99	816
21	7340	70	1380	11200	126	3800	2950	98	782
22	7360	69	1370	11300	191	5860	2870	118	911
23	7230	69	1340	11600	156	4900	2940	101	804
24	6800	71	1310	11700	128	4030	2940	104	825
25	6560	84	1480	11700	116	3660	2850	116	891
26	6690	73	1320	11300	114	3500	2840	112	862
27	6700	79	1440	10900	109	3230	2850	114	873
28	6680	73	1310	10400	119	3320	2930	105	828
29	6670	65	1160	9670	106	2770	2910	113	891
30	6600	75	1340	8390	103	2330	2900	110	862
31	---	---	---	6970	103	1940	---	---	---
TOTAL	225010	---	45360	261070	---	75180	112160	---	30057
JULY			AUGUST			SEPTEMBER			
1	2870	99	769	2080	117	656	2090	89	500
2	2710	104	764	2060	106	591	2150	94	544
3	2590	103	720	2080	108	606	2160	88	513
4	2540	110	755	2130	111	643	2050	89	493
5	2420	95	622	2170	122	717	2070	94	528
6	2280	106	650	2120	126	718	2100	85	479
7	2270	96	591	2100	125	708	2170	82	481
8	2320	113	710	2070	127	709	2190	80	472
9	2220	116	692	2060	131	729	2220	73	438
10	2130	108	622	2080	123	692	2060	73	405
11	2100	120	681	2120	112	642	2050	78	433
12	2060	131	728	2060	119	660	2140	78	449
13	2020	112	614	e1990	115	618	2070	76	425
14	2090	103	580	e1970	124	660	2120	75	429
15	2190	113	670	e1960	120	635	2250	78	473
16	2120	108	620	1830	115	569	2290	68	419
17	2190	110	652	1870	118	597	2200	63	376
18	2150	119	689	1930	109	565	2210	59	353
19	2170	130	765	1940	108	565	2220	69	414
20	e2190	126	745	1950	111	585	2230	80	481
21	e2190	123	727	1960	107	569	2220	72	435
22	e2150	126	731	1990	102	550	2220	73	439
23	e2170	118	691	2070	121	674	2240	81	492
24	2010	114	622	2070	116	646	2160	70	408
25	1890	115	587	2100	100	564	2180	65	381
26	1900	118	605	2100	95	540	2150	63	368
27	2040	125	689	2070	110	612	2170	62	366
28	2030	122	671	2030	94	514	2140	64	372
29	2230	117	708	2030	90	493	2180	65	384
30	2140	121	697	2030	86	470	2210	67	398
31	2110	124	709	2030	90	493	---	---	---
TOTAL	68490	---	21076	63050	---	18990	64910	---	13148
YEAR	1989010		476067						

e Estimated

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 sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--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. See schematic diagram of Sacramento-San Joaquin Delta.

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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4330	4280	4410	4180	4340	1910	1020	879	4380	4300	4500	4370
2	4350	4280	4360	4180	4330	1910	3210	883	4550	4370	4450	4360
3	4300	4290	4340	4170	4350	1910	4350	916	4390	4470	4440	4380
4	4390	4270	4380	4160	4330	519	4440	905	4420	4440	4460	4380
5	4320	4280	4350	4160	4320	.00	4270	907	4430	4470	4490	4360
6	4320	4270	4340	4180	4350	.00	4350	925	4440	4470	4480	4370
7	4330	3230	4360	4190	4320	.00	4170	890	4480	4510	4470	4340
8	4300	2870	4310	4190	4340	.00	4340	873	4520	4490	4490	4300
9	4330	3550	4320	4260	4340	.00	4330	878	4550	4460	4500	4320
10	4330	4350	4320	4330	4320	.00	4320	885	4550	4460	3970	4370
11	4370	4410	4320	4400	4300	.00	4330	887	4490	4340	4420	4360
12	4360	4430	4230	4360	2380	.00	4330	923	4460	4270	3420	4280
13	4350	4360	4270	4270	3310	.00	4300	700	4310	4430	3900	4280
14	4350	4380	4280	4250	4430	1550	4300	716	4610	4490	4520	4290
15	4310	4370	4260	4240	4430	1720	1880	907	4380	4390	4530	4260
16	4320	4330	4140	4280	4420	1720	1010	908	4380	4510	4520	4240
17	4340	4300	4280	4290	4440	1710	1000	917	4420	4520	4490	4270
18	4340	4330	4250	4260	4370	1710	1000	915	4150	4530	4480	4310
19	4380	4390	4240	4280	4330	508	949	913	4440	4500	4450	4300
20	4350	4350	4250	4240	4280	.00	1000	905	4400	4440	4440	4270
21	4330	4340	4240	4280	4260	235	1000	3320	4360	4500	4470	4290
22	4330	4290	4220	4270	2440	.00	881	4350	4410	4470	4490	4290
23	4290	4330	4210	4380	1850	.00	823	4340	4400	4460	4450	4300
24	4290	4310	4210	4210	1920	569	840	4340	4420	4470	4320	4270
25	4320	4330	4350	4330	1930	892	857	4340	4380	4490	4360	4220
26	4290	4320	4210	4320	1920	943	851	4330	4380	4490	4390	4220
27	4300	4320	4220	4320	1910	1020	873	4330	4410	4450	4410	4210
28	4290	4360	4200	4310	1900	1020	871	4320	4380	4430	4380	4230
29	4520	4370	4200	4330	1920	1020	870	4320	4360	4400	4320	4190
30	4290	4370	4190	4440	---	1020	872	4300	4240	4360	4370	4230
31	4300	---	4190	4340	---	1020	---	4370	---	4500	4360	---
TOTAL	134320	126660	132450	132400	104080	22906.00	71637	64292	132490	137880	135740	128860
MEAN	4333	4222	4273	4271	3589	739	2388	2074	4416	4448	4379	4295
MAX	4520	4430	4410	4440	4440	1910	4440	4370	4610	4530	4530	4380
MIN	4290	2870	4140	4160	1850	.00	823	700	4150	4270	3420	4190
AC-FT	266400	251200	262700	262600	206400	45430	142100	127500	262800	273500	269200	255600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2297	1706	1510	1840	2340	2555	2718	2615	2904	3653	3632	2817
MAX	4333	4239	4273	4271	4584	4563	4400	4540	4591	4740	4703	4591
(WY)	1996	1994	1996	1996	1976	1976	1976	1976	1973	1989	1989	1988
MIN	368	.000	.000	.000	.000	.000	99.6	58.3	113	354	976	539
(WY)	1952	1973	1953	1952	1952	1952	1952	1952	1951	1977	1952	1952

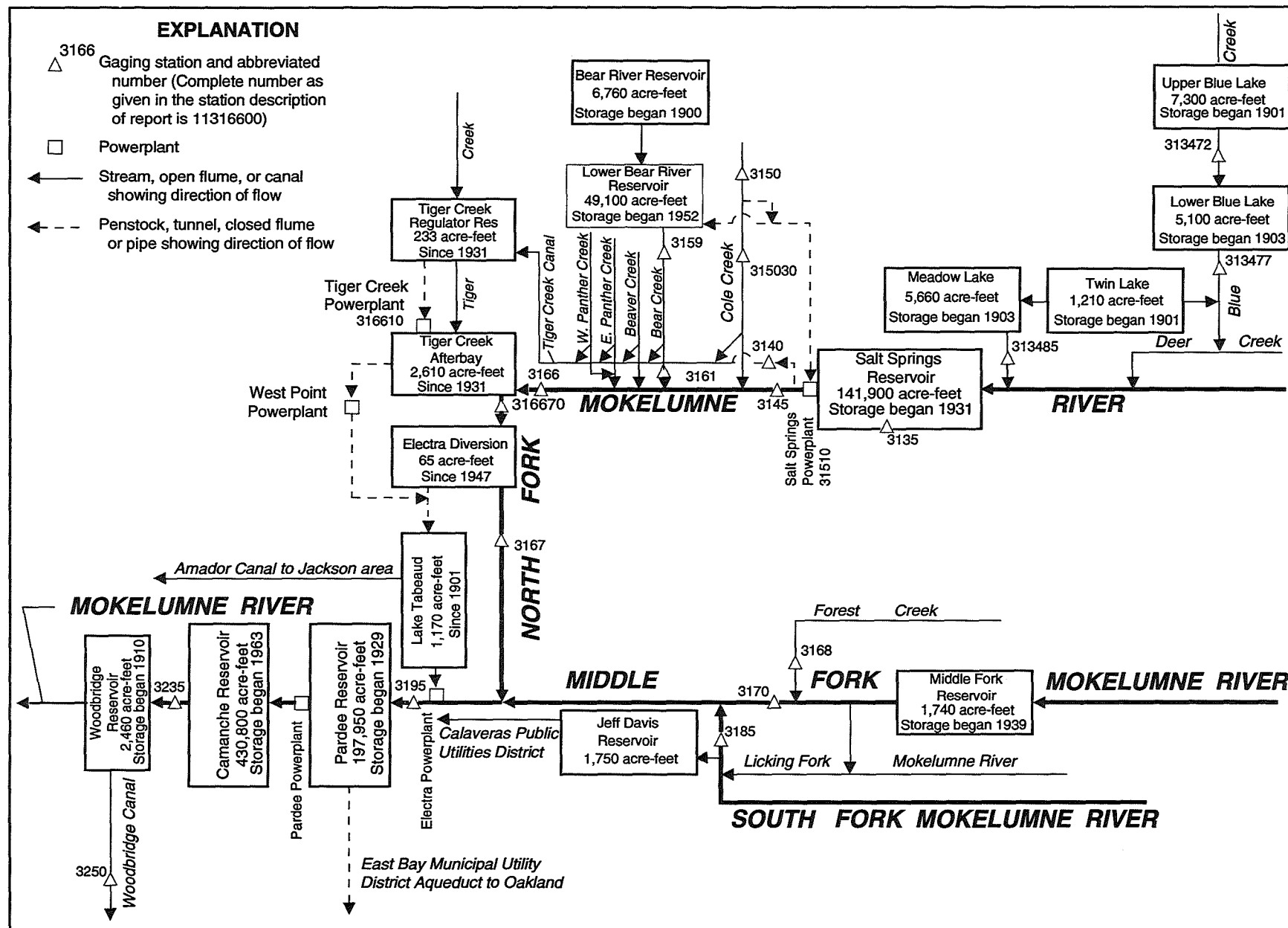
SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1951 - 1996

ANNUAL TOTAL	1430647.00	1323715.00	
ANNUAL MEAN	3920	3617	2570
HIGHEST ANNUAL MEAN			4144
LOWEST ANNUAL MEAN			230
HIGHEST DAILY MEAN	4570	Jul 20	4610
LOWEST DAILY MEAN	.00	Mar 11	.00
ANNUAL SEVEN-DAY MINIMUM	275	Mar 11	.00
ANNUAL RUNOFF (AC-FT)	2838000	2626000	1862000
10 PERCENT EXCEEDS	4470	4470	4420
50 PERCENT EXCEEDS	4270	4320	2820
90 PERCENT EXCEEDS	2840	905	105



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 sea level, from topographic map. Prior to October 1987, nonrecording gage at same site at different datum.

REMARKS.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	50	3.9	---	---	---	---	---	9.1	19	33	30
2	38	50	3.9	---	---	---	---	---	9.6	19	33	30
3	38	49	3.9	---	---	---	---	---	9.8	18	33	30
4	38	48	3.9	---	---	---	---	---	10	17	33	30
5	38	47	3.9	---	---	---	---	---	9.9	17	33	29
6	37	25	3.9	---	---	---	---	---	10	16	33	29
7	37	3.4	3.9	---	---	---	---	---	10	14	33	29
8	37	4.0	3.8	---	---	---	---	---	10	14	33	29
9	37	4.2	3.8	---	---	---	---	---	10	13	33	30
10	43	4.1	3.8	---	---	---	---	6.8	10	13	33	31
11	50	4.1	3.9	---	---	---	---	7.1	10	12	33	31
12	50	4.1	4.5	---	---	---	---	7.5	11	11	33	31
13	50	4.1	4.1	---	---	---	---	7.7	11	10	33	30
14	49	4.1	4.1	---	---	---	---	8.0	10	9.9	33	30
15	49	4.1	4.1	---	---	---	---	9.6	10	9.3	32	30
16	49	4.0	4.1	---	---	---	---	13	10	8.5	32	30
17	48	4.0	4.1	---	---	---	---	9.1	10	7.9	32	29
18	48	4.0	4.1	---	---	---	---	9.5	10	7.0	32	29
19	47	4.0	4.1	---	---	---	---	7.8	9.9	6.6	32	29
20	47	4.0	4.1	---	---	---	---	7.5	9.9	6.6	32	29
21	47	4.0	---	---	---	---	---	7.6	9.9	6.5	31	28
22	46	4.0	---	---	---	---	---	7.9	12	6.5	31	28
23	46	4.0	---	---	---	---	---	7.9	15	6.5	31	28
24	45	4.0	---	---	---	---	---	7.6	29	6.4	31	28
25	45	4.0	---	---	---	---	---	7.6	45	6.3	31	28
26	44	4.0	---	---	---	---	---	7.9	44	6.3	30	27
27	44	3.9	---	---	---	---	---	8.2	29	6.3	30	27
28	47	3.9	---	---	---	---	---	8.2	19	6.3	30	27
29	52	3.9	---	---	---	---	---	8.4	19	6.3	30	27
30	52	3.9	---	---	---	---	---	8.6	19	6.3	30	27
31	51	---	---	---	---	---	---	8.7	---	17	30	---
TOTAL	1388	364.8	---	---	---	---	---	---	441.1	329.5	989	870
MEAN	44.8	12.2	---	---	---	---	---	---	14.7	10.6	31.9	29.0
MAX	52	50	---	---	---	---	---	---	45	19	33	31
MIN	37	3.4	---	---	---	---	---	---	9.1	6.3	30	27
AC-FT	2750	724	---	---	---	---	---	---	875	654	1960	1730

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 sea level, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	72	4.0	---	---	---	---	25	41	18	46	44
2	51	71	3.9	---	---	---	---	24	48	19	46	43
3	51	70	4.0	---	---	---	---	24	53	19	46	43
4	51	69	4.1	---	---	---	---	23	54	19	46	43
5	51	68	4.0	---	---	---	---	23	51	18	46	43
6	51	52	3.9	---	---	---	---	24	51	17	46	43
7	51	38	3.9	---	---	---	---	24	53	17	45	43
8	51	38	3.9	---	---	---	---	24	51	16	45	43
9	50	37	3.9	---	---	---	---	22	46	16	45	48
10	64	37	3.9	---	---	---	---	19	32	16	45	53
11	75	36	4.0	---	---	---	---	19	21	16	45	53
12	74	35	4.2	---	---	---	---	20	18	15	45	52
13	73	35	4.1	---	---	---	---	20	16	15	45	52
14	72	19	4.0	---	---	---	---	20	15	15	45	52
15	72	3.9	4.0	---	---	---	---	21	15	15	45	52
16	71	3.9	4.0	---	---	---	---	23	15	15	45	52
17	70	4.0	4.0	---	---	---	---	28	15	15	45	51
18	69	4.0	4.0	---	---	---	---	54	15	15	45	51
19	69	4.0	4.0	---	---	---	---	54	15	15	45	51
20	68	4.0	4.1	---	---	---	---	43	15	15	45	51
21	68	4.0	---	---	---	---	---	38	15	15	45	51
22	67	4.0	---	---	---	---	---	37	15	15	45	50
23	67	4.0	---	---	---	---	---	37	15	15	45	50
24	66	4.0	---	---	---	---	---	33	15	15	44	50
25	66	4.0	---	---	---	---	---	29	16	15	44	50
26	65	4.1	---	---	---	---	---	29	17	19	44	50
27	65	4.0	---	---	---	---	---	33	17	21	44	49
28	66	4.0	---	---	---	---	---	34	17	21	44	49
29	68	4.0	---	---	---	---	---	36	17	21	44	49
30	68	4.0	---	---	---	---	25	38	17	21	44	49
31	69	---	---	---	---	---	---	38	---	36	44	---
TOTAL	1970	740.9	---	---	---	---	---	916	801	540	1393	1460
MEAN	63.5	24.7	---	---	---	---	---	29.5	26.7	17.4	44.9	48.7
MAX	75	72	---	---	---	---	---	54	54	36	46	53
MIN	50	3.9	---	---	---	---	---	19	15	15	44	43
AC-FT	3910	1470	---	---	---	---	---	1820	1590	1070	2760	2900

SAN JOAQUIN RIVER BASIN

437

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 sea level, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.--Records not computed for winter months or above 40 ft³/s. 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	27	3.7	---	---	---	---	---	---	36	30	26
2	---	27	3.7	---	---	---	---	---	---	37	30	26
3	---	27	3.7	---	---	---	---	---	---	35	31	26
4	---	27	3.7	---	---	---	---	---	---	33	30	26
5	40	26	3.7	---	---	---	---	---	---	29	30	27
6	39	26	3.7	---	---	---	---	---	---	24	30	27
7	38	25	3.7	---	---	---	---	---	---	23	29	26
8	38	24	3.7	---	---	---	---	---	---	22	29	26
9	37	24	3.7	---	---	---	---	---	---	21	28	25
10	36	24	3.7	---	---	---	---	13	---	19	28	25
11	36	23	3.7	---	---	---	---	13	29	18	28	24
12	36	22	3.7	---	---	---	---	14	---	17	28	24
13	35	21	3.7	---	---	---	---	15	19	17	28	25
14	34	20	3.6	---	---	---	---	---	23	16	28	26
15	34	11	3.6	---	---	---	---	---	---	15	28	25
16	33	3.7	3.6	---	---	---	---	---	---	15	28	25
17	32	3.8	3.6	---	---	---	---	---	---	15	28	24
18	32	3.9	3.6	---	---	---	---	---	---	15	28	24
19	32	3.9	3.6	---	---	---	---	---	---	15	28	23
20	31	3.9	3.6	---	---	---	---	---	---	14	28	22
21	31	3.9	---	---	---	---	---	---	---	14	28	22
22	32	3.9	---	---	---	---	---	---	---	14	27	22
23	32	3.9	---	---	---	---	---	---	---	14	27	22
24	32	3.9	---	---	---	---	---	---	---	14	27	22
25	31	3.9	---	---	---	---	---	---	---	14	27	21
26	30	3.9	---	---	---	---	---	---	---	14	27	21
27	29	3.9	---	---	---	---	---	---	---	14	28	21
28	28	3.9	---	---	---	---	---	---	---	14	27	21
29	28	3.8	---	---	---	---	---	---	36	14	26	21
30	28	3.7	---	---	---	---	---	---	35	14	26	20
31	27	---	---	---	---	---	---	---	---	22	26	---
TOTAL	---	411.9	---	---	---	---	---	---	---	598	871	715
MEAN	---	13.7	---	---	---	---	---	---	---	19.3	28.1	23.8
MAX	---	27	---	---	---	---	---	---	---	37	31	27
MIN	---	3.7	---	---	---	---	---	---	---	14	26	20
AC-FT	---	817	---	---	---	---	---	---	---	1190	1730	1420

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 sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Recorder malfunctioned Sept. 3-30. Daily readings were used during this period. 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, 142,091 acre-ft, July 3, 1993, elevation, 3,958.24 ft; no contents at times in 1932-33, 1945, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 141,476 acre-ft, June 20, elevation, 3,957.60 ft; minimum, 39,618 acre-ft, Dec. 29, elevation, 3,823.59 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 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100368	69188	50421	42095	46496	78352	79156	110381	135544	140903	123768	97761
2	99591	68585	49449	42123	44572	78024	79464	113557	136248	140566	123483	96694
3	98614	68152	48468	41984	e45600	77786	79524	116335	137002	140141	122850	e94922
4	97509	67850	47622	41941	e51000	78144	79479	118562	137390	139796	122104	e93934
5	96559	67442	46770	42078	56764	78136	79487	120664	137343	139228	121250	e92603
6	95790	66991	45843	42190	59613	77801	79727	123019	137748	138798	120359	e91345
7	95085	66593	44987	42306	61579	77577	80491	125468	138636	138415	119861	e90707
8	93885	66218	44087	42421	62679	77293	81758	127870	139475	137842	119438	e89678
9	92833	65702	43157	42525	63540	77241	83118	130019	139815	137324	119095	e88258
10	91672	65120	42317	42738	64403	77129	84018	132292	139313	136497	118526	e87864
11	91209	64576	41503	42997	65244	77234	84696	133598	139569	136012	118202	e86067
12	89408	e63926	44345	43235	66099	77234	85393	134146	140787	135149	117593	e85835
13	89258	e63416	44853	43509	66794	76994	85843	134220	141352	134362	116801	e84983
14	88053	62905	44611	43770	67478	76617	86442	134676	141152	133784	115984	e84133
15	87012	62315	44109	44077	68089	76359	87542	137135	e141200	133130	114909	e83133
16	86895	61402	43520	44903	69110	76115	89487	136688	e141300	132942	114066	e82369
17	86832	60996	42873	45332	70552	76122	90446	135206	141362	132989	113277	e80998
18	85711	60321	42355	45557	71703	76403	91209	135112	141305	133055	112273	e80316
19	84680	59679	41957	45746	e73178	76905	91473	134420	141352	132905	111286	e79487
20	82224	59026	41536	45786	e74654	77659	91569	134353	141476	132546	110099	e78062
21	80922	58469	41112	45832	77338	78352	91529	134296	141457	131413	108930	e77316
22	79269	57677	40824	45775	78106	79013	91513	134362	141238	130532	108979	e76351
23	78181	56662	40635	45735	78592	79224	91744	134156	140855	129789	108169	e75390
24	77346	55569	40471	45843	79036	79194	92775	133645	140643	128981	107294	e74363
25	76388	54476	40252	45855	79329	79089	94326	133738	140566	128336	106243	e74290
26	75375	53610	40080	45700	79494	78810	96654	134128	140749	127971	105053	e74216
27	74319	52838	39889	45632	79532	78698	99144	134600	141372	127326	103787	e73777
28	73297	52240	39690	45367	79126	79119	101156	134686	141343	127456	102870	e73304
29	72258	51962	39618	45419	78698	79021	104031	134932	141286	126716	101771	e72831
30	71081	51408	40683	45798	---	78878	107055	135008	140999	125191	100430	e72467
31	70072	---	41787	46280	---	78720	---	135112	---	124602	99064	---
MAX	100368	69188	50421	46280	79532	79224	107055	137135	141476	140903	123768	97761
MIN	70072	51408	39618	41941	44572	76115	79156	110381	135544	124602	99064	72467
a	3872.57	3844.41	3827.64	3835.71	3884.35	3884.38	3919.69	3950.91	3957.10	3939.56	3910.19	3875.90
b	-30342	-18664	-9621	+4493	+32418	+22	+28335	+28057	+5887	-16397	-25538	-26597

CAL YR 1995 MAX 141857 MIN 9966 b +27278

WTR YR 1996 MAX 141476 MIN 39618 b -27947

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 sea level, from topographic map. Auxiliary nonrecording gages in stilling wells upstream and downstream from control.

REMARKS.--Conduit conveys water of North Fork Mokelumne River from tailrace of Salt Springs Powerplant to forebay of Tiger Creek Powerplant (station 11316610). 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	525	113	151	313	498	543	551	546	548	548	551
2	14	530	322	345	516	540	540	552	547	548	546	546
3	503	543	518	504	449	461	538	553	547	548	544	541
4	545	530	529	440	312	400	542	552	543	547	542	538
5	549	535	531	311	161	400	549	551	541	547	534	522
6	549	532	529	311	160	434	551	551	534	547	522	517
7	548	536	523	311	260	527	551	552	531	547	509	507
8	542	549	519	311	523	527	551	553	522	547	486	502
9	548	532	521	244	537	525	553	551	510	548	481	491
10	547	537	522	198	496	459	553	550	503	543	444	488
11	547	540	519	194	428	400	552	550	501	537	456	465
12	543	539	256	193	455	337	547	551	500	533	473	101
13	534	542	128	193	539	234	547	551	499	533	463	490
14	529	537	127	193	551	487	547	551	487	533	450	531
15	521	536	286	194	433	524	504	514	472	530	449	533
16	8.5	484	465	197	411	525	403	242	555	446	449	535
17	27	369	496	197	418	524	403	227	558	133	448	523
18	525	531	502	196	418	524	403	391	558	163	443	519
19	547	531	500	198	417	533	403	470	558	551	443	511
20	547	534	500	198	417	546	404	539	465	551	442	502
21	549	500	499	198	418	548	465	548	461	551	28	504
22	434	525	315	197	341	549	531	548	453	550	106	506
23	132	520	149	195	417	550	551	548	447	550	533	13
24	541	511	149	196	418	545	552	548	442	550	552	.00
25	542	507	149	199	418	542	553	517	435	550	555	.00
26	543	508	270	267	418	543	553	25	438	549	549	.14
27	539	504	373	407	409	543	552	183	308	553	549	.36
28	534	504	373	407	399	543	548	485	524	549	548	.33
29	535	528	269	285	399	543	550	545	546	551	547	.28
30	533	375	148	195	---	544	550	546	549	546	549	.28
31	534	---	150	196	---	545	---	546	---	546	547	---
TOTAL	14090.8	15474	11250	7821	11851	15400	15589	15141	15080	16025	14735	10937.39
MEAN	455	516	363	252	409	497	520	488	503	517	475	365
MAX	549	549	531	504	551	550	553	553	558	553	555	551
MIN	1.3	369	113	151	160	234	403	25	308	133	28	.00
AC-FT	27950	30690	22310	15510	23510	30550	30920	30030	29910	31790	29230	21690
a	11720	9490	4880	6870	11470	13320	12660	13220	12240	7540	9560	2120

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)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	465	444	433	376	336	333	326	281	468	489	493	482
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1954 - 1996

ANNUAL TOTAL	159705.3	163394.19	
ANNUAL MEAN	438	446	412
HIGHEST ANNUAL MEAN			517
LOWEST ANNUAL MEAN			191
HIGHEST DAILY MEAN	557	Aug 12	572
LOWEST DAILY MEAN	1.3	Jun 8	.00
ANNUAL SEVEN-DAY MINIMUM	123	Jun 3	.20
ANNUAL RUNOFF (AC-FT)	316800		298300
ANNUAL INFLOW (AC-FT) a	131500		
10 PERCENT EXCEEDS	548		550
50 PERCENT EXCEEDS	501		501
90 PERCENT EXCEEDS	167		101

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 sea level, 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.--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, 17,000 ft³/s, May 16, 1996, gage height, 17.66 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. 17, 23, 31, and Apr. 1, 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	163	24	26	26	310	301	307	1430	213	31	92
2	53	24	24	27	26	256	321	313	1750	225	31	94
3	164	24	24	26	26	321	255	318	1950	156	30	97
4	221	24	24	26	27	401	252	324	2030	55	30	98
5	293	24	25	26	26	405	248	330	2080	55	31	114
6	291	24	26	26	25	365	245	334	1950	54	31	125
7	290	25	26	26	25	271	245	338	1780	53	31	124
8	121	50	25	26	25	268	247	342	1530	137	34	125
9	230	36	25	26	25	268	250	348	1480	238	35	133
10	295	24	25	26	25	325	253	462	1650	249	35	136
11	293	24	25	26	25	388	257	1400	947	249	35	151
12	297	24	26	26	25	451	258	2220	438	175	138	141
13	303	24	25	26	25	595	260	2570	790	37	263	153
14	314	24	330	26	25	315	261	2420	1020	31	268	112
15	335	24	356	26	393	268	306	3220	891	31	274	112
16	788	24	36	27	130	267	420	11400	648	31	278	109
17	741	28	26	25	107	267	425	5110	584	46	276	36
18	330	29	26	26	110	267	428	4980	585	47	275	66
19	312	29	25	26	117	260	428	2560	485	31	273	113
20	305	29	25	25	127	245	427	1600	432	31	273	131
21	309	31	26	25	129	239	363	1500	436	30	51	131
22	424	24	26	25	103	240	294	1490	443	32	75	132
23	692	24	26	26	129	241	274	1480	450	32	250	301
24	308	24	26	26	129	247	274	1180	457	31	271	305
25	298	24	25	26	130	254	276	870	465	30	270	264
26	297	23	26	26	130	254	279	1470	468	30	241	200
27	296	23	26	26	223	254	287	1550	270	31	228	205
28	294	24	26	25	396	258	296	1220	189	30	269	300
29	310	32	27	26	393	257	297	1180	202	30	268	212
30	321	24	26	26	---	256	301	1310	197	30	214	241
31	319	---	26	26	---	255	---	1330	---	30	93	---
TOTAL	9915	930	1434	803	3102	9269	9028	55476	28027	2480	4902	4553
MEAN	320	31.0	46.3	25.9	107	299	301	1790	934	80.0	158	152
MAX	788	163	356	27	396	595	428	11400	2080	249	278	305
MIN	53	23	24	25	25	239	245	307	189	30	30	36
AC-FT	19670	1840	2840	1590	6150	18390	17910	110000	55590	4920	9720	9030

SAN JOAQUIN RIVER BASIN

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.1	53.0	80.9	73.2	102	124	240	750	915	179	62.9	50.6
MAX	320	802	1390	537	710	969	1502	2473	3267	1887	406	330
(WY)	1996	1951	1951	1956	1942	1928	1938	1982	1983	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1927 - 1996			
ANNUAL TOTAL	240796				129919							
ANNUAL MEAN	660				355				222			
HIGHEST ANNUAL MEAN									710			
LOWEST ANNUAL MEAN									4.27			
HIGHEST DAILY MEAN	4460				Jun 5				11400			
LOWEST DAILY MEAN	20				Jan 20				May 16			
ANNUAL SEVEN-DAY MINIMUM	20				Jan 31				23			
INSTANTANEOUS PEAK FLOW									Nov 26			
INSTANTANEOUS PEAK STAGE									Nov 22			
ANNUAL RUNOFF (AC-FT)	477600				17000				May 16			
10 PERCENT EXCEEDS	2500				17.66				May 16			
50 PERCENT EXCEEDS	282				257700				17.66			
90 PERCENT EXCEEDS	24								161100			
									591			
									19			
									4.3			

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 sea level, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.30	e.10	.17	60	23	43	110	385	222	21	.75	.11
2	e.30	e.10	.18	45	22	49	107	352	273	20	.70	.11
3	e.20	e.10	.23	43	22	61	89	294	264	19	.67	.11
4	e.20	e.10	1.4	34	357	59	86	245	232	16	.66	.11
5	e.20	e.10	.76	28	1210	52	104	255	207	14	.62	.10
6	e.20	e.10	.42	26	423	60	148	254	223	13	.90	.11
7	e.20	e.10	.48	27	184	46	217	269	215	11	1.4	.11
8	e.20	e.10	.38	27	133	50	264	255	176	9.2	.90	.10
9	e.20	e.10	.31	26	109	77	256	238	144	7.8	.41	.10
10	e.20	e.10	.28	23	95	72	202	267	122	7.0	.32	.10
11	e.20	e.10	16	21	94	65	163	350	104	6.3	.30	.10
12	e.20	e.10	340	23	115	58	151	406	106	5.5	.74	.10
13	e.20	e.10	64	24	130	48	128	388	102	4.8	1.4	.13
14	e.20	e.10	31	22	125	44	171	367	83	4.2	1.4	.20
15	e.20	e.10	e21	22	117	52	205	748	70	3.6	.92	.23
16	e.20	e.10	e16	97	165	75	253	1530	61	3.0	.21	.34
17	e.20	e.10	e16	105	205	101	144	414	55	2.7	.19	.22
18	e.20	e.10	e14	55	161	139	111	639	48	2.3	.18	.18
19	e.20	e.10	e12	41	192	167	86	215	43	2.1	.18	.16
20	e.10	e.10	e12	e30	151	169	76	190	40	1.9	.18	.14
21	e.10	e.10	e11	e28	93	168	70	232	36	1.9	.18	.14
22	e.10	e.10	e9.0	e27	83	148	80	253	30	1.8	.17	e.14
23	e.10	e.10	e8.0	e24	90	94	134	193	27	1.7	e.17	e.14
24	e.10	e.10	e9.0	22	62	75	196	134	27	1.5	e.16	e.14
25	e.10	e.20	8.7	20	61	69	248	162	35	1.4	e.16	e.14
26	e.10	e.40	8.7	25	64	62	334	199	77	1.2	e.15	e.14
27	e.10	e.30	10	22	59	72	314	202	65	1.1	e.15	e.14
28	e.10	e.20	10	20	45	95	257	175	40	1.0	e.14	e.14
29	e.10	.18	17	21	42	80	285	184	29	.89	e.14	e.14
30	e.10	.18	190	21	---	73	370	177	24	.84	e.13	e.14
31	e.10	---	141	22	---	79	---	178	---	.79	e.12	---
TOTAL	5.20	3.86	969.01	1031	4632	2502	5359	10150	3180	188.52	14.70	4.26
MEAN	.17	.13	31.3	33.3	160	80.7	179	327	106	6.08	.47	.14
MAX	.30	.40	340	105	1210	169	370	1530	273	21	1.4	.34
MIN	.10	.10	.17	20	22	43	70	134	24	.79	.12	.10
AC-FT	10	7.7	1920	2040	9190	4960	10630	20130	6310	374	29	8.4

e Estimated.

SAN JOAQUIN RIVER BASIN

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.34	21.9	37.1	34.9	42.5	63.8	144	254	149	20.6	1.43	.93
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1928 - 1996

ANNUAL TOTAL	45484.87	28039.55	
ANNUAL MEAN	125	76.6	64.4
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			16.6
HIGHEST DAILY MEAN	1650	May 1	3760
LOWEST DAILY MEAN	.10	Oct 20	.00
ANNUAL SEVEN-DAY MINIMUM	.10	Oct 20	.00
INSTANTANEOUS PEAK FLOW		2250	May 16
INSTANTANEOUS PEAK STAGE		5.23	May 16
ANNUAL RUNOFF (AC-FT)	90220	55620	46670
10 PERCENT EXCEEDS	403	226	200
50 PERCENT EXCEEDS	49	21	15
90 PERCENT EXCEEDS	.14	.10	.16

11315030 COLE CREEK BELOW DIVERSION 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 sea level, from topographic map. Prior to Dec. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.14	.22	3.5	3.4	3.6	---	---	---	e3.3	.84	.23
2	.27	.14	.24	3.4	3.4	3.6	---	---	---	e3.3	.81	.22
3	.24	.14	.27	3.4	3.4	3.7	---	---	---	e3.3	.76	.22
4	.22	.14	1.7	3.4	---	3.8	---	---	---	e3.3	.74	.22
5	.25	.14	1.2	3.4	---	3.7	---	---	---	e3.3	.70	.23
6	.25	.14	.80	3.4	---	3.6	---	---	---	e3.3	.66	.24
7	.25	.14	.67	3.4	---	3.6	---	---	---	e3.3	.62	.24
8	.25	.14	.34	3.4	---	3.7	---	---	---	e3.3	.55	.25
9	.26	.15	.20	3.3	---	3.7	---	---	---	e3.3	.52	.21
10	.26	.14	.29	3.3	---	3.7	---	---	---	e3.3	.52	.18
11	.26	.15	---	3.3	---	3.7	---	---	3.6	e3.2	.52	.17
12	.25	.15	---	3.3	---	3.6	---	---	3.6	e3.2	.52	.16
13	.25	.15	---	3.3	---	3.6	---	---	3.6	e3.2	.51	.17
14	.25	.15	---	3.3	---	3.6	---	---	3.6	e3.2	.49	.24
15	.25	.14	3.6	3.4	---	3.8	---	---	3.6	e3.2	.41	.30
16	.25	.14	3.6	---	---	---	---	---	3.5	3.2	.30	.47
17	.22	.14	3.6	---	---	---	---	---	3.5	3.1	.30	.39
18	.16	.14	3.5	---	---	---	---	---	3.5	2.7	.30	.33
19	.16	.14	3.5	3.5	---	---	---	---	3.5	2.5	.30	.28
20	.14	.14	3.5	3.5	---	---	---	---	3.5	2.2	.29	.27
21	.14	.14	3.5	3.4	---	---	---	---	3.5	1.9	.29	.27
22	.13	.14	3.5	3.5	3.7	---	---	---	3.5	1.8	.30	.25
23	.12	.14	3.5	3.5	3.7	---	---	---	3.5	1.7	.28	.25
24	.12	.14	3.5	3.5	3.7	---	---	---	3.5	1.6	.27	.23
25	.12	.15	3.4	3.6	3.6	---	---	---	3.5	1.5	.25	.22
26	.13	.44	3.4	3.6	3.6	---	---	---	3.5	1.4	.25	.22
27	.14	.32	3.4	3.5	3.6	---	---	---	3.4	1.2	.25	.21
28	.14	.26	3.4	3.5	3.5	---	---	---	e3.4	1.1	.25	.20
29	.14	.25	3.4	3.5	3.5	---	---	---	e3.4	.98	.25	.20
30	.14	.24	---	3.4	---	---	---	---	e3.4	.94	.25	.19
31	.14	---	---	3.4	---	---	---	---	---	.89	.24	---
TOTAL	6.17	5.07	---	---	---	---	---	---	---	77.71	13.54	7.26
MEAN	.20	.17	---	---	---	---	---	---	---	2.51	.44	.24
MAX	.27	.44	---	---	---	---	---	---	---	3.3	.84	.47
MIN	.12	.14	---	---	---	---	---	---	---	.89	.24	.16
AC-FT	12	10	---	---	---	---	---	---	---	154	27	14

e Estimated.

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.

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.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

[illegible]

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 sea level, 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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	5.3	5.9	5.2	---	---	---	---	---	---	---	5.1
2	---	5.3	6.0	5.5	---	---	---	---	---	---	---	5.1
3	---	5.3	6.0	5.2	---	---	---	---	---	---	---	5.1
4	5.3	5.3	6.0	5.1	---	---	---	---	---	---	---	5.1
5	5.1	5.3	6.0	4.6	---	---	---	---	---	---	---	5.1
6	5.1	5.3	6.0	4.8	---	---	---	---	---	---	---	5.1
7	5.0	4.8	6.0	5.1	---	---	---	---	---	---	---	5.0
8	5.0	4.2	6.0	5.1	---	---	---	---	---	---	---	5.0
9	5.0	5.1	6.0	4.8	---	---	---	---	---	---	---	5.0
10	5.0	5.3	6.0	5.3	---	---	---	---	---	---	---	5.0
11	5.0	5.3	6.0	5.6	---	---	---	---	---	---	---	4.9
12	5.0	5.3	6.2	5.6	---	---	---	---	---	---	---	e7.0
13	5.0	5.3	6.3	5.6	---	---	---	---	---	---	---	4.9
14	5.0	5.3	7.1	5.6	---	---	---	---	5.3	---	---	5.1
15	4.9	5.3	6.5	5.6	---	---	---	---	5.2	---	---	5.1
16	4.9	5.1	5.8	---	---	---	---	---	5.1	---	---	5.0
17	4.9	5.2	5.9	---	---	---	---	---	5.1	---	---	5.0
18	e7.0	6.1	5.9	---	---	---	---	---	5.1	---	---	5.1
19	e7.0	6.1	6.0	---	---	---	---	---	5.1	---	---	5.1
20	e7.0	6.0	6.0	---	---	---	---	---	5.1	---	---	5.1
21	e7.0	5.6	6.0	---	---	---	---	---	5.1	---	---	5.1
22	e7.0	6.0	5.2	---	---	---	---	---	5.0	---	---	5.1
23	e7.0	6.0	4.8	---	---	---	---	---	5.0	---	5.1	e8.0
24	e6.5	6.0	5.2	---	---	---	---	---	5.0	---	5.1	e7.5
25	5.5	6.0	5.2	---	---	---	---	---	5.0	---	5.1	e7.5
26	5.4	5.9	5.9	---	---	---	---	---	5.0	---	5.1	e7.5
27	5.4	5.9	6.7	---	---	---	---	---	---	---	5.2	e7.5
28	5.4	6.0	6.7	---	---	---	---	---	---	---	5.2	e7.5
29	5.3	4.3	6.1	---	---	---	---	---	---	---	5.2	e7.5
30	5.3	4.7	5.2	---	---	---	---	---	---	---	5.2	e7.5
31	5.3	---	5.2	---	---	---	---	---	---	---	5.2	---
TOTAL	---	162.6	183.8	---	---	---	---	---	---	---	---	173.6
MEAN	---	5.42	5.93	---	---	---	---	---	---	---	---	5.79
MAX	---	6.1	7.1	---	---	---	---	---	---	---	---	8.0
MIN	---	4.2	4.8	---	---	---	---	---	---	---	---	4.9
AC-FT	---	323	365	---	---	---	---	---	---	---	---	344

e Estimated.

SAN JOAQUIN RIVER BASIN

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 sea level (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. Water is occasionally diverted at the weir for cooling at the Tiger Creek Powerplant. This year water was diverted July 23 to July 30. 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, 30,700 ft³/s, May 16, 1996, gage height, 11.97 ft; minimum daily, 29 ft³/s, Jul. 26, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	278	57	107	170	673	808	1220	1870	318	72	134
2	85	67	57	93	146	585	978	1230	2240	340	84	133
3	126	58	57	89	152	643	801	1190	2500	321	81	138
4	206	57	74	77	706	1030	738	1120	2510	133	75	140
5	279	57	70	73	2410	1230	720	1100	2480	146	73	146
6	292	57	61	71	1270	1010	746	1120	2350	135	72	166
7	291	57	62	70	689	820	821	1100	2210	115	81	165
8	193	61	60	68	566	778	902	1140	1920	146	85	166
9	180	73	59	68	480	774	956	1080	1740	363	83	168
10	295	66	58	67	446	799	892	1150	1840	389	82	176
11	294	56	90	66	419	931	811	1920	1300	389	81	189
12	295	56	657	66	414	1030	784	2860	589	379	50	171
13	305	56	364	66	420	1090	718	3240	888	103	175	218
14	308	56	322	64	408	828	722	3080	1160	95	159	159
15	336	56	586	67	670	731	808	3780	1090	77	147	159
16	707	56	143	282	581	728	1220	19000	860	70	133	160
17	787	56	94	364	561	739	1120	7530	751	83	122	117
18	400	60	85	175	612	802	1100	6900	749	128	136	78
19	322	61	80	269	1040	863	964	3820	672	56	251	137
20	306	60	76	174	1470	881	920	2130	563	53	340	170
21	312	61	72	169	1210	865	835	2080	571	46	205	172
22	358	58	72	143	933	852	738	2450	574	50	114	174
23	736	56	72	131	787	745	722	2270	583	39	240	286
24	332	55	69	185	729	682	809	1790	591	33	329	384
25	308	56	69	336	641	659	868	1430	622	31	329	318
26	307	64	68	186	579	623	999	1920	662	29	326	282
27	300	58	70	300	564	617	1050	2160	510	37	252	211
28	297	57	73	340	768	887	985	1780	299	37	328	333
29	304	62	77	211	742	727	964	1610	337	34	326	314
30	322	57	161	175	---	686	1150	1730	317	47	321	226
31	322	---	131	177	---	663	---	1760	---	64	149	---
TOTAL	10027	1988	4046	4729	20583	24971	26649	86690	35348	4286	5301	5790
MEAN	323	66.3	131	153	710	806	888	2796	1178	138	171	193
MAX	787	278	657	364	2410	1230	1220	19000	2510	389	340	384
MIN	85	55	57	64	146	585	718	1080	299	29	50	78
AC-FT	19890	3940	8030	9380	40830	49530	52860	171900	70110	8500	10510	11480
a	29310	30230	24690	17810	27690	35520	33830	32770	31430	33180	29450	21520

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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	95.8	56.5	69.3	135	321	483	494	985	937	308	103	106
MAX	323	74.3	131	442	1702	1855	1602	2796	4265	2303	340	323
(WY)	1996	1986	1996	1995	1986	1986	1986	1996	1995	1995	1993	1995
MIN	39.4	44.2	46.9	49.8	51.4	76.8	87.3	70.0	49.8	37.0	36.2	34.2
(WY)	1989	1992	1994	1991	1991	1988	1988	1992	1987	1987	1987	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1986 - 1996			
ANNUAL TOTAL	394910				230408							
ANNUAL MEAN	1082				630				341			
HIGHEST ANNUAL MEAN									1052			
LOWEST ANNUAL MEAN									59.9			
HIGHEST DAILY MEAN	6260				Jun 5				19000			
LOWEST DAILY MEAN	55				Nov 24				29			
ANNUAL SEVEN-DAY MINIMUM	56				Nov 11				34			
INSTANTANEOUS PEAK FLOW									30700			
INSTANTANEOUS PEAK STAGE									May 16			
ANNUAL RUNOFF (AC-FT)	783300				457000				11.97			
ANNUAL DIVERSION (AC-FT) a	351700				347400				246700			
10 PERCENT EXCEEDS	3430				1230				934			
50 PERCENT EXCEEDS	410				310				69			
90 PERCENT EXCEEDS	64				59				40			

a Diversion, in acre-feet, to Tiger Creek Powerplant, provided by Pacific Gas & Electric Co.

[illegible]

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 sea level, from topographic map.

REMARKS.--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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	13	17	---	---	---	---	---	21	18	18
2	22	15	13	17	13	---	---	---	---	21	18	18
3	19	13	13	17	12	---	---	---	---	24	18	18
4	19	13	13	17	---	---	---	---	---	19	18	18
5	17	13	13	17	---	---	---	---	---	19	18	18
6	17	13	13	17	---	---	---	---	---	20	18	18
7	---	13	12	17	---	---	---	---	---	19	18	18
8	---	13	12	17	---	---	---	---	---	19	18	18
9	---	12	12	17	---	---	---	---	---	26	19	19
10	---	12	12	15	---	---	---	---	---	29	18	19
11	---	12	12	12	---	---	---	---	---	28	18	19
12	---	12	---	12	---	---	---	---	---	30	18	19
13	---	12	27	12	---	---	---	---	---	22	20	19
14	---	12	18	12	---	---	---	---	---	22	22	20
15	---	12	21	12	---	---	---	---	---	22	22	19
16	---	12	18	13	---	---	---	---	---	21	21	18
17	---	12	17	30	---	---	---	---	---	18	20	18
18	21	12	17	12	---	---	---	---	---	18	20	18
19	19	12	17	12	---	---	---	---	---	18	19	18
20	17	12	17	12	---	---	---	---	---	18	18	18
21	23	12	17	12	---	---	---	---	---	18	18	18
22	20	12	17	12	---	---	---	---	---	18	18	18
23	21	12	17	12	---	---	---	---	---	18	18	---
24	21	12	17	13	---	---	---	---	---	18	22	---
25	19	13	17	---	---	---	---	---	---	18	19	18
26	19	12	17	12	---	---	---	---	---	18	18	24
27	19	13	17	---	---	---	---	---	---	18	18	---
28	18	12	17	---	---	---	---	---	---	18	18	---
29	18	12	17	13	---	---	---	---	---	18	18	29
30	17	12	17	12	---	---	---	---	30	18	18	29
31	20	---	17	12	---	---	---	---	---	18	18	---
TOTAL	---	382	---	---	---	---	---	---	---	632	582	---
MEAN	---	12.7	---	---	---	---	---	---	---	20.4	18.8	---
MAX	---	23	---	---	---	---	---	---	---	30	22	---
MIN	---	12	---	---	---	---	---	---	---	18	18	---
AC-FT	---	758	---	---	---	---	---	---	---	1250	1150	---

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 sea level, from topographic map.

REMARKS.--Records good except for period of estimated daily discharge which is 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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0030	171	4.22	Feb. 19	2115	281	4.64
Jan. 27	1915	125	4.00	Mar. 4	1800	241	4.50
Feb. 5	0730	222	4.43	Apr. 1	1800	127	4.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.7	4.3	11	28	59	81	40	24	13	5.5	3.4
2	4.0	3.6	4.6	9.7	26	58	91	38	24	12	5.4	3.0
3	3.9	3.5	4.6	8.9	23	64	78	37	22	12	5.4	2.9
4	3.7	3.5	7.7	8.4	92	135	71	35	21	11	5.5	2.9
5	3.1	3.5	6.2	7.9	165	154	65	33	21	11	5.5	3.1
6	3.2	3.5	5.0	7.6	100	106	61	32	20	11	5.5	3.1
7	3.9	3.5	5.1	7.2	76	93	59	30	19	11	5.4	3.1
8	3.9	3.5	4.9	7.2	65	85	57	28	18	9.9	4.8	3.1
9	3.7	4.0	4.9	6.8	56	82	56	28	18	9.3	4.8	3.1
10	3.3	4.6	4.7	6.5	49	80	54	26	18	9.3	4.8	2.9
11	3.2	4.5	12	6.3	45	88	52	25	17	9.3	4.6	3.0
12	3.5	4.3	45	6.2	42	104	50	24	17	9.1	4.6	2.5
13	3.6	4.3	26	5.8	46	93	48	24	16	8.4	4.5	3.0
14	3.8	4.3	16	5.5	49	84	44	23	16	8.4	4.3	3.5
15	3.6	4.3	15	6.3	49	78	42	28	16	8.4	4.3	4.1
16	3.7	4.3	12	53	51	76	76	49	15	8.4	4.2	4.8
17	3.8	4.3	9.5	47	56	74	81	50	15	8.2	3.8	4.4
18	3.7	4.3	8.4	32	55	73	96	50	14	7.6	3.9	3.8
19	3.4	4.3	7.6	50	149	71	78	50	14	7.6	4.1	3.7
20	3.3	4.3	7.1	27	e214	71	73	48	14	7.6	4.0	3.3
21	3.3	4.3	6.4	26	e186	70	67	43	14	7.5	4.0	3.3
22	3.2	4.3	6.8	21	e131	68	61	43	13	7.1	3.9	3.3
23	3.3	4.3	6.5	18	e107	67	58	40	13	6.5	3.9	3.3
24	3.3	4.3	6.3	46	100	62	56	37	13	6.5	3.8	3.3
25	3.3	4.3	6.0	86	86	58	53	33	14	6.5	3.8	3.3
26	3.3	6.3	5.8	36	78	54	51	31	17	6.4	3.8	3.2
27	3.2	5.0	5.9	74	70	52	49	31	17	6.2	3.8	3.0
28	3.3	4.8	6.5	67	64	95	47	30	15	6.1	3.9	2.9
29	3.3	4.6	8.8	40	60	72	44	28	14	5.8	4.0	2.9
30	3.4	4.6	21	30	---	63	42	28	13	5.8	3.7	2.9
31	3.5	---	14	30	---	59	---	26	---	5.5	3.4	---
TOTAL	109.0	126.9	304.6	794.3	2318	2448	1841	1068	502	262.4	136.9	98.1
MEAN	3.52	4.23	9.83	25.6	79.9	79.0	61.4	34.5	16.7	8.46	4.42	3.27
MAX	4.3	6.3	45	86	214	154	96	50	24	13	5.5	4.8
MIN	3.1	3.5	4.3	5.5	23	52	42	23	13	5.5	3.4	2.5
AC-FT	216	252	604	1580	4600	4860	3650	2120	996	520	272	195

e Estimated.

11316800 FOREST CREEK NEAR WILSEYVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.02	9.07	19.4	35.2	43.8	52.3	49.8	34.8	13.2	5.99	3.66	3.11
MAX	11.9	59.5	138	144	243	209	174	129	47.4	17.1	10.5	8.36
(WY)	1983	1984	1965	1970	1986	1983	1982	1995	1967	1983	1983	1983
MIN	.63	1.80	2.17	2.40	2.35	4.58	2.96	3.92	1.58	.46	.33	.50
(WY)	1978	1993	1977	1991	1991	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	18980.4				10009.2							
ANNUAL MEAN	52.0				27.3				22.8			
HIGHEST ANNUAL MEAN									67.9			
LOWEST ANNUAL MEAN									2.39			
HIGHEST DAILY MEAN	693				214				1250			
LOWEST DAILY MEAN	3.1				2.5				.11			
ANNUAL SEVEN-DAY MINIMUM	3.3				3.0				.15			
INSTANTANEOUS PEAK FLOW					281				2020			
INSTANTANEOUS PEAK STAGE					4.64				8.12			
ANNUAL RUNOFF (AC-FT)	37650				19850				16480			
10 PERCENT EXCEEDS	131				73				58			
50 PERCENT EXCEEDS	18				10				7.6			
90 PERCENT EXCEEDS	3.7				3.3				2.0			

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 sea level, 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.--Records fair except for period June 19 to September 30 which are poor. 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0130	722	4.48	Feb. 20	0030	986	5.00
Feb. 5	0815	671	4.37	Mar. 4	1900	803	4.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	14	33	104	166	229	121	78	40	16	9.4
2	14	11	14	28	90	165	282	116	74	40	14	7.9
3	14	12	14	26	84	176	231	111	70	41	14	7.4
4	13	12	19	25	258	397	210	110	66	42	17	8.1
5	13	12	20	23	552	564	196	110	64	40	18	8.5
6	12	12	17	23	304	330	189	105	64	39	18	7.1
7	13	12	17	22	221	277	186	100	63	38	18	6.6
8	13	12	16	21	191	244	182	97	62	27	14	6.9
9	13	12	16	21	174	232	179	94	58	24	12	7.3
10	12	11	15	21	163	226	171	89	50	23	11	7.1
11	11	13	27	20	153	238	162	86	48	23	12	8.6
12	12	14	107	20	147	287	156	84	48	21	15	8.6
13	12	14	92	19	146	261	149	82	46	20	16	8.5
14	12	14	56	19	142	228	143	79	46	23	15	10
15	11	13	49	21	138	213	134	93	47	22	12	11
16	11	13	41	127	141	207	230	260	47	22	12	14
17	11	14	31	157	155	202	248	200	45	25	11	12
18	11	13	27	86	164	201	289	211	45	24	12	11
19	11	14	25	145	435	204	230	170	42	24	13	11
20	11	14	24	85	783	202	212	145	38	24	13	11
21	10	14	22	82	664	199	192	134	39	26	12	11
22	10	14	22	66	437	193	180	131	38	23	12	11
23	10	14	22	57	321	185	154	120	42	20	12	11
24	11	14	21	154	285	175	148	113	39	22	12	11
25	10	14	20	342	244	165	143	105	37	21	11	11
26	11	18	19	133	215	161	142	99	43	20	12	11
27	11	16	20	228	195	153	141	96	55	20	11	10
28	11	15	21	233	179	254	135	94	51	19	11	10
29	11	15	24	136	169	201	129	89	44	17	11	10
30	11	14	54	106	---	179	126	86	41	16	10	11
31	11	---	42	102	---	168	---	81	---	16	9.3	---
TOTAL	362	401	928	2581	7254	7053	5498	3611	1530	802	406.3	289.0
MEAN	11.7	13.4	29.9	83.3	250	228	183	116	51.0	25.9	13.1	9.63
MAX	15	18	107	342	783	564	289	260	78	42	18	14
MIN	10	11	14	19	84	153	126	79	37	16	9.3	6.6
AC-FT	718	795	1840	5120	14390	13990	10910	7160	3030	1590	806	573

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	22.3	48.3	85.9	121	139	148	108	42.5	16.0	9.00	7.46
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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1912 - 1996	
ANNUAL TOTAL	53262.4		30715.3			
ANNUAL MEAN	146		83.9		62.9	
HIGHEST ANNUAL MEAN					218	
LOWEST ANNUAL MEAN					5.25	
HIGHEST DAILY MEAN	1980	Mar 11	783	Feb 20	3610	Feb 19 1986
LOWEST DAILY MEAN	3.4	Aug 25	6.6	Sep 7	.00	Aug 23 1931
ANNUAL SEVEN-DAY MINIMUM	8.1	Aug 24	7.4	Sep 4	.00	Aug 23 1931
INSTANTANEOUS PEAK FLOW			986	Feb 20	4920	Feb 19 1986
INSTANTANEOUS PEAK STAGE			5.00	Feb 20	9.19	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	105600		60920		45590	
10 PERCENT EXCEEDS	371		212		164	
50 PERCENT EXCEEDS	49		29		20	
90 PERCENT EXCEEDS	11		11		3.9	

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 sea level, from topographic map. October 1933 to Sept. 19, 1957, at site 1,100 ft downstream at different datum.

REMARKS.--Records good. 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, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0045	858	5.69	Feb. 20	0015	1,460	6.76
Jan. 27	2230	589	5.07	Mar. 05	0315	937	5.85
Feb. 05	0315	907	5.79				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	10	14	35	109	175	273	120	78	40	16	8.6
2	15	11	14	30	92	170	322	114	75	41	15	8.1
3	14	13	14	27	82	179	258	109	72	39	15	8.3
4	14	15	17	25	336	423	227	103	69	38	15	8.1
5	14	15	19	24	758	738	208	98	67	35	15	8.5
6	14	15	16	23	417	467	198	95	64	32	15	8.7
7	14	15	16	22	283	375	192	90	63	30	14	8.7
8	14	15	16	22	230	318	184	86	61	30	14	8.2
9	14	15	15	21	202	293	179	84	59	29	14	8.1
10	14	15	15	21	185	279	172	81	58	28	13	8.2
11	14	14	30	18	172	297	162	78	56	28	16	7.8
12	14	14	143	16	166	371	155	74	55	27	15	7.8
13	15	14	98	16	168	328	145	72	54	26	12	9.2
14	14	14	58	16	162	281	137	70	52	26	13	11
15	14	14	61	17	153	262	133	82	51	25	12	11
16	13	14	44	171	162	249	277	275	49	24	12	11
17	11	13	31	196	180	242	288	174	48	24	11	11
18	11	8.9	26	106	187	243	367	210	46	23	11	9.3
19	10	8.9	24	155	636	243	282	168	45	22	12	8.7
20	9.7	9.0	23	88	1070	238	259	143	44	22	12	8.1
21	9.5	8.9	21	106	1060	230	232	133	43	21	12	8.0
22	9.6	9.3	20	75	720	220	211	131	42	20	11	8.0
23	9.8	9.2	21	64	493	202	195	118	41	17	11	7.4
24	9.9	9.2	20	215	406	185	184	114	41	17	10	7.3
25	10	9.1	19	409	331	175	175	109	44	18	11	7.2
26	10	12	19	134	274	161	166	101	56	18	11	7.2
27	11	11	19	288	234	155	157	97	59	17	11	8.8
28	10	10	21	306	205	283	147	95	47	17	10	11
29	9.9	9.9	24	148	187	210	135	92	43	17	9.9	11
30	10	11	62	106	---	184	125	89	41	16	10	11
31	10	---	43	111	---	172	---	84	---	16	9.3	---
TOTAL	378.4	362.4	983	3011	9660	8348	6145	3489	1623	783	388.2	265.3
MEAN	12.2	12.1	31.7	97.1	333	269	205	113	54.1	25.3	12.5	8.84
MAX	16	15	143	409	1070	738	367	275	78	41	16	11
MIN	9.5	8.9	14	16	82	155	125	70	41	16	9.3	7.2
AC-FT	751	719	1950	5970	19160	16560	12190	6920	3220	1550	770	526

e Estimated.

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.6	30.9	71.2	124	169	189	183	121	46.1	21.3	12.3	10.1
MAX	41.6	270	465	661	959	825	704	461	163	62.9	36.1	31.6
(WY)	1983	1951	1956	1969	1986	1983	1982	1995	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1934 - 1996	
ANNUAL TOTAL	67880.8		35436.3			
ANNUAL MEAN	186		96.8		82.2	
HIGHEST ANNUAL MEAN					264	
LOWEST ANNUAL MEAN					6.14	
HIGHEST DAILY MEAN	2630	Mar 11	1070	Feb 20	5780	Feb 17 1986
LOWEST DAILY MEAN	8.9	Nov 18	7.2	Sep 25	.00	Aug 6 1934
ANNUAL SEVEN-DAY MINIMUM	9.1	Nov 18	7.6	Sep 20	.00	Aug 12 1934
INSTANTANEOUS PEAK FLOW			1460	Feb 20	7300	Feb 19 1986
INSTANTANEOUS PEAK STAGE			6.76	Feb 20	12.48	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	134600		70290		59530	
10 PERCENT EXCEEDS	475		258		211	
50 PERCENT EXCEEDS	61		30		27	
90 PERCENT EXCEEDS	13		9.9		5.8	

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 sea level (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.--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.

COOPERATION.--Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324	876	495	333	684	1590	1990	2240	2750	929	693	665
2	136	744	573	426	923	1610	2510	2230	3110	947	646	645
3	431	499	544	719	922	1690	2090	2240	3420	1020	614	640
4	805	450	622	706	1530	2540	1960	2060	3470	866	652	794
5	803	556	648	334	4740	3940	1840	2080	3400	732	692	642
6	904	580	690	424	2960	2800	1850	2020	3280	806	596	683
7	825	664	540	458	1720	2430	1950	2000	3190	795	620	664
8	785	255	576	455	1620	2270	2000	2030	2750	744	610	677
9	743	545	519	406	1650	2200	2010	1980	2590	841	612	659
10	837	544	609	287	1530	2150	2000	2000	2890	896	557	649
11	868	659	777	314	1320	2150	1820	2750	2190	867	492	597
12	888	580	1240	350	1260	2420	1800	3820	1270	951	691	426
13	882	489	1040	235	1300	2310	1680	4270	1590	814	623	533
14	916	648	493	267	1350	2150	1660	4180	1920	696	793	667
15	884	659	830	358	1320	2050	1790	4470	1880	678	746	668
16	853	416	871	779	1330	1980	2250	18100	1510	460	809	756
17	850	471	663	1400	1350	1930	2390	8520	1360	268	803	620
18	877	694	684	714	1600	2030	2410	7820	1340	242	741	651
19	803	628	503	1010	2340	2140	2080	5140	1310	689	825	723
20	916	598	664	699	4640	2100	2010	3460	1100	635	738	631
21	900	482	657	696	4190	2120	1950	3200	834	724	463	648
22	874	587	509	551	3300	2030	1810	3570	1130	707	252	529
23	878	606	200	459	2420	1950	1820	3360	1180	680	579	363
24	874	509	320	771	2280	1820	1850	2900	1100	682	759	342
25	881	596	224	2170	2040	1770	1850	2280	1150	618	891	495
26	840	527	338	1070	1780	1730	2080	2410	1190	737	940	275
27	868	625	499	1290	1710	1480	2150	2630	1110	664	821	272
28	887	549	480	1780	1590	2190	2030	2700	842	623	844	266
29	890	328	427	1210	1870	2010	1940	2530	940	720	857	361
30	907	274	478	814	---	1810	2100	2700	965	598	851	274
31	899	---	397	606	---	1780	---	2700	---	660	874	---
TOTAL	25028	16638	18110	22091	57269	65170	59670	114390	56761	22289	21684	16845
MEAN	807	555	584	713	1975	2102	1989	3690	1892	719	699	561
MAX	916	876	1240	2170	4740	3940	2510	18100	3470	1020	940	794
MIN	136	255	200	235	684	1480	1660	1980	834	242	252	266
AC-FT	49640	33000	35920	43820	113600	129300	118400	226900	112600	44210	43010	33410

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	509	577	755	862	1013	1158	1370	1902	1784	727	547	522
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 1995 CALENDAR YEAR					FOR 1996 WATER YEAR			WATER YEARS 1928 - 1996			
ANNUAL TOTAL	754037					495945						
ANNUAL MEAN	2066					1355			976			
HIGHEST ANNUAL MEAN									2511			
LOWEST ANNUAL MEAN									208			
HIGHEST DAILY MEAN	11400					Mar 11			18100			
LOWEST DAILY MEAN	136					Oct 2			May 16			
ANNUAL SEVEN-DAY MINIMUM	355					Dec 23			22700			
INSTANTANEOUS PEAK FLOW									6.6			
INSTANTANEOUS PEAK STAGE									7.0			
ANNUAL RUNOFF (AC-FT)	1496000					983700			33700			
10 PERCENT EXCEEDS	4730					2530			23.50			
50 PERCENT EXCEEDS	1240					869			707100			
90 PERCENT EXCEEDS	544					453			2150			
									612			
									236			

SAN JOAQUIN RIVER BASIN

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). WDR CA-94-3: 1993(M).

GAGE.--Water-stage recorder. Datum of gage is 82.71 ft above sea level. See WSP 1930 for history of changes prior to Oct. 1, 1961.

REMARKS.--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.

COOPERATION.--Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	299	281	265	1290	2980	1960	1260	931	1280	1220	783
2	1260	277	280	265	1280	2970	1760	1260	930	1280	1120	784
3	1210	279	281	268	1280	2990	1550	1250	938	1290	1010	784
4	1140	277	284	268	1310	3050	1350	1250	937	1290	912	788
5	1070	276	274	263	1280	3050	1250	1250	936	1280	807	786
6	1030	276	271	263	1450	3010	1260	1250	938	1280	765	783
7	957	276	272	263	1870	3010	1260	1250	939	1270	770	782
8	899	279	269	266	1890	3010	1280	1270	938	1280	773	748
9	842	280	268	263	1840	3010	1280	1270	930	1270	765	683
10	781	280	268	263	1770	3020	1270	1270	1130	1280	785	615
11	719	280	275	262	1770	3020	1270	1270	1300	1280	770	563
12	655	280	281	259	1770	3030	1270	1270	1290	1280	763	513
13	591	280	282	259	1780	3020	1270	1210	1290	1280	755	468
14	531	281	281	259	1780	2990	1270	1110	1290	1280	759	416
15	475	281	280	263	1910	2920	1260	1010	1290	1280	757	371
16	452	281	277	280	2190	2870	1260	936	1290	1280	761	351
17	451	278	276	265	2180	2820	1270	910	1290	1280	757	348
18	446	276	279	264	2180	2750	1260	911	1290	1280	757	353
19	436	277	275	262	2210	2690	1260	910	1290	1280	761	353
20	403	279	268	259	2550	2630	1260	915	1290	1280	759	329
21	396	281	268	264	3030	2580	1270	916	1290	1280	762	313
22	396	281	268	259	3020	2530	1270	923	1290	1280	766	312
23	387	280	268	259	3000	2480	1270	923	1290	1280	766	316
24	370	281	269	272	2990	2430	1260	922	1290	1280	768	316
25	370	281	268	295	2990	2380	1270	921	1270	1270	768	318
26	373	281	270	264	2990	2330	1270	924	1240	1280	769	320
27	375	281	271	305	2990	2280	1270	924	1270	1280	769	315
28	375	274	271	298	2990	2230	1260	917	1280	1280	778	317
29	371	280	275	356	2990	2180	1260	935	1280	1280	782	316
30	370	281	279	622	---	2130	1250	932	1280	1280	790	316
31	347	---	268	958	---	2090	---	931	---	1270	786	---
TOTAL	19798	8393	8497	9431	62570	84480	39520	33200	35238	39660	25030	14760
MEAN	639	280	274	304	2158	2725	1317	1071	1175	1279	807	492
MAX	1320	299	284	958	3030	3050	1960	1270	1300	1290	1220	788
MIN	347	274	268	259	1280	2090	1250	910	930	1270	755	312
AC-FT	39270	16650	16850	18710	124100	167600	78390	65850	69890	78670	49650	29280

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	286	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 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	587	498	472	741	839	998	968	1065	1013	793	650	574
MAX	2061	2157	2938	2680	2814	5117	3726	3889	3847	2788	1412	1447
(WY)	1966	1984	1984	1980	1983	1986	1983	1982	1995	1983	1983	1995
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1965 - 1996

ANNUAL TOTAL	596770	380577	
ANNUAL MEAN	1635	1040	766
HIGHEST ANNUAL MEAN			2400
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	3960	Jun 7	3050
LOWEST DAILY MEAN	239	Jan 18	259
ANNUAL SEVEN-DAY MINIMUM	245	Jan 1	261
INSTANTANEOUS PEAK FLOW			3190
INSTANTANEOUS PEAK STAGE			7.67
ANNUAL RUNOFF (AC-FT)	1184000	754900	554900
10 PERCENT EXCEEDS	3450	2290	1860
50 PERCENT EXCEEDS	1430	923	450
90 PERCENT EXCEEDS	275	271	107

SAN JOAQUIN RIVER BASIN

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 sea level (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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	e51	.00	.00	.00	.00	.00	138	158	210	263	204
2	128	.00	.00	.00	.00	.00	.00	145	154	214	252	203
3	128	.00	.00	.00	.00	.00	.00	145	151	214	246	197
4	134	.00	.00	.00	.00	.00	.00	143	159	214	236	194
5	144	.00	.00	.00	.00	.00	.00	138	155	218	233	194
6	e142	.00	.00	.00	.00	.00	.00	141	154	226	226	192
7	e141	.00	.00	.00	.00	.00	.00	139	160	232	237	190
8	e135	.00	.00	.00	.00	.00	.00	156	164	236	247	188
9	e132	.00	.00	.00	.00	.00	.00	165	165	241	247	183
10	e134	.00	.00	.00	.00	.00	27	166	175	253	240	177
11	e136	.00	.00	.00	.00	.00	46	171	196	261	236	171
12	e133	.00	.00	.00	.00	.00	45	173	208	263	234	170
13	e132	.00	.00	.00	.00	.00	65	177	214	262	233	166
14	e127	.00	.00	.00	.00	.00	66	182	222	256	232	168
15	e127	.00	.00	.00	.00	.00	71	176	228	246	232	165
16	e122	.00	.00	.00	.00	.00	79	156	230	240	236	147
17	e124	.00	.00	.00	.00	.00	94	148	228	234	231	131
18	e127	.00	.00	.00	.00	.00	96	151	227	232	228	134
19	e124	.00	.00	.00	.00	.00	92	151	227	238	226	140
20	e114	.00	.00	.00	.00	.00	90	150	226	241	231	141
21	e101	.00	.00	.00	.00	.00	90	146	227	245	231	137
22	e88	.00	.00	.00	.00	.00	98	144	227	256	206	136
23	e93	.00	.00	.00	.00	.00	102	145	226	260	197	131
24	e120	.00	.00	.00	.00	.00	105	142	220	279	187	133
25	e126	.00	.00	.00	.00	.00	107	138	215	297	185	145
26	e128	.00	.00	.00	.00	.00	109	137	206	297	184	147
27	e126	.00	.00	.00	.00	.00	110	136	209	295	183	139
28	e125	.00	.00	.00	.00	.00	110	140	206	291	191	145
29	e124	.00	.00	.00	.00	.00	119	148	209	273	202	141
30	e122	.00	.00	.00	---	.00	129	155	209	265	209	126
31	e122	---	.00	.00	---	.00	---	153	---	264	208	---
TOTAL	3892	51.00	0.00	0.00	0.00	0.00	1850.00	4695	5955	7753	6929	4835
MEAN	126	1.70	.000	.000	.000	.000	61.7	151	198	250	224	161
MAX	144	51	.00	.00	.00	.00	129	182	230	297	263	204
MIN	88	.00	.00	.00	.00	.00	.00	136	151	210	183	126
AC-FT	7720	101	.00	.00	.00	.00	3670	9310	11810	15380	13740	9590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	107	25.0	4.78	.24	.20	22.6	114	210	262	274	256	182
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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1926 - 1996

ANNUAL TOTAL	36333.00	35960.00	
ANNUAL MEAN	99.5	98.3	123
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			49.2
HIGHEST DAILY MEAN	301	Aug 12	297
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	72070	71330	88970
10 PERCENT EXCEEDS	259	232	313
50 PERCENT EXCEEDS	86	112	99
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

SAN JOAQUIN RIVER BASIN

463

11329500 DRY CREEK NEAR GALT, CA

LOCATION.--Lat 38°14'53", long 121°13'33", in NE 1/4 NE 1/4 sec.32, T.5 N., R.7 E., San Joaquin County, Hydrologic Unit 18040005, on left bank of main channel 35 ft downstream from county road bridge, 2 mi downstream from Coyote Creek, and 4 mi east of Galt.

DRAINAGE AREA.--324 mi².

PERIOD OF RECORD.--Water years 1927-33, 1945-87, October 1995 to September 1996 (low-flow records only). Monthly figures for some periods published in WSP 1315-A.

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

GAGE.--Water-stage recorder. Datum of gage is 42.83 ft above sea level (levels by East Bay Municipal Utility District). Dec. 4, 1926, to Sept. 30, 1933, at site 4 mi downstream at different datum. Oct. 1, 1944, to Sept. 30, 1945, on left bank at datum 13.00 ft. higher. Oct. 1, 1945, to June 14, 1966, on right bank and June 15, 1966, to Dec. 4, 1978, on left bank, both at datum 10.00 ft higher.

REMARKS.--No records computed above 400 ft³/s. Records fair except estimated daily discharges, which are poor. Many small diversions above station for irrigation. Total storage of many small reservoirs, 1,000 acre-ft. See schematic diagram of Sacramento-San Joaquin Delta.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,300 ft³/s, Feb. 17, 1986, gage height, 26.02 ft, from rating curve extended above 16,000 ft³/s; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	.73	.70	52	---	147	151	43	80	22	.48	.65
2	5.1	.20	1.1	34	354	123	---	41	81	16	1.2	.40
3	2.1	.18	1.0	25	252	110	234	37	76	14	.73	.02
4	3.4	.01	2.6	20	---	---	186	35	65	11	.70	.00
5	.96	.00	3.1	16	---	---	162	36	58	13	.71	.00
6	.36	.00	3.7	13	---	---	148	33	49	15	2.3	.00
7	1.1	.29	6.3	12	---	---	140	30	45	16	6.0	.00
8	2.6	2.5	3.5	11	---	---	129	27	42	17	4.7	.00
9	3.5	2.0	1.3	9.7	338	---	108	27	43	13	7.1	.00
10	1.7	1.7	1.9	9.1	262	---	102	29	40	12	6.1	.00
11	.65	.35	3.3	8.4	213	---	86	26	40	9.3	2.5	.00
12	.27	.01	36	7.7	186	---	81	25	32	7.9	2.4	.00
13	.07	.00	108	7.1	170	---	80	24	26	7.0	1.2	1.9
14	.00	.00	89	6.4	156	---	84	23	20	8.4	.62	2.1
15	.00	.00	49	6.2	145	---	98	24	20	8.2	.28	1.1
16	.00	.00	85	---	141	---	107	---	19	6.9	.60	.10
17	.00	.00	56	---	130	---	149	---	22	5.7	4.6	.00
18	.00	.00	30	191	123	375	194	264	25	5.9	3.3	.00
19	.00	.00	20	196	---	331	160	184	25	9.4	1.3	.00
20	.00	.00	14	145	---	289	125	145	21	4.7	.79	.00
21	.00	.00	11	217	---	224	112	123	23	3.5	.45	.00
22	.00	.00	9.0	---	---	212	89	121	26	2.8	.34	.00
23	.00	.00	7.6	---	---	199	88	112	18	3.3	.27	.00
24	.00	.00	6.4	---	---	169	81	100	17	3.8	.15	.00
25	.00	.00	5.4	---	---	---	76	76	24	4.5	.29	.00
26	.00	.00	5.2	---	---	---	74	72	23	8.2	.32	.00
27	.00	.00	4.8	---	304	106	55	73	28	5.2	.88	.00
28	.00	.00	5.3	---	233	128	51	e76	35	5.4	3.0	.00
29	.00	2.6	7.8	---	182	150	49	e69	30	4.0	2.1	.00
30	.97	1.5	96	---	---	135	47	72	27	2.3	1.5	.00
31	2.0	---	105	---	---	129	---	79	---	1.2	.62	---
TOTAL	30.38	12.07	779.00	---	---	---	---	---	1080	266.6	57.53	6.27
MEAN	.98	.40	25.1	---	---	---	---	---	36.0	8.60	1.86	.21
MAX	5.6	2.6	108	---	---	---	---	---	81	22	7.1	2.1
MIN	.00	.00	.70	---	---	---	---	---	17	1.2	.15	.00
AC-FT	60	24	1550	---	---	---	---	---	2140	529	114	12

e Estimated.

SAN JOAQUIN RIVER BASIN

11329500 DRY CREEK NEAR GALT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1987, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.42	48.3	197	344	430	363	216	41.8	6.89	2.04	1.22	1.35
MAX	39.4	829	1416	1646	2866	2257	2038	431	76.9	42.5	26.9	34.9
(WY)	1963	1951	1956	1956	1986	1983	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1927	1928	1930	1931	1977	1977	1931	1931	1928	1927	1927	1927

SUMMARY STATISTICS

WATER YEARS 1927 - 1987

ANNUAL MEAN	136	
HIGHEST ANNUAL MEAN	664	1983
LOWEST ANNUAL MEAN	.000	1977
HIGHEST DAILY MEAN	18900	Feb 17 1986
LOWEST DAILY MEAN	.00	Oct 1 1926
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1926
INSTANTANEOUS PEAK FLOW	30300	Feb 17 1986
INSTANTANEOUS PEAK STAGE	26.02	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	98720	
10 PERCENT EXCEEDS	274	
50 PERCENT EXCEEDS	.33	
90 PERCENT EXCEEDS	.00	

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 sea level, from topographic map. Feb. 1 to May 31, 1924, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	7.1	5.7	7.9	25	163	262	e158	102	14	13	7.7
2	7.3	6.7	7.9	6.6	22	157	376	e151	93	28	13	7.6
3	7.3	5.8	6.4	6.2	20	177	331	143	85	28	13	7.6
4	7.1	5.6	9.1	5.7	43	453	290	133	78	27	13	7.6
5	7.3	5.6	7.9	5.6	222	858	258	124	72	26	13	7.6
6	7.1	5.6	6.5	5.4	53	588	238	116	68	25	13	7.8
7	7.2	5.6	6.4	5.1	35	453	229	108	64	24	12	7.7
8	7.4	5.6	6.4	5.0	28	384	224	104	60	23	12	7.6
9	7.3	5.6	6.2	4.9	23	355	220	98	57	23	12	7.5
10	7.2	5.6	6.2	4.8	21	352	211	94	55	21	11	7.4
11	7.0	5.4	12	4.7	19	390	193	92	48	21	11	7.3
12	6.9	5.3	32	4.6	17	488	177	96	31	20	10	7.1
13	6.9	5.3	17	4.6	15	450	159	98	16	19	10	7.7
14	6.9	5.3	15	4.6	15	387	147	97	16	19	10	9.1
15	6.9	5.3	19	5.1	18	343	144	135	15	19	10	10
16	6.9	5.3	16	39	122	316	259	711	15	18	9.8	12
17	7.1	5.3	10	38	202	298	273	561	14	18	9.5	9.6
18	7.1	5.3	8.6	21	244	294	350	538	14	18	9.2	8.8
19	7.1	5.3	7.9	36	360	293	290	425	14	18	9.1	8.4
20	6.9	5.3	7.4	24	807	291	275	332	14	17	9.1	7.9
21	6.9	5.3	7.3	27	821	279	244	299	14	16	9.1	7.5
22	6.9	5.3	7.2	23	612	268	221	316	14	16	8.8	7.4
23	6.9	5.3	7.3	21	436	249	206	262	13	16	8.6	7.2
24	6.9	5.3	7.0	106	388	218	200	224	13	16	8.3	7.2
25	6.9	5.6	6.9	191	317	194	196	193	13	15	8.1	7.1
26	6.9	7.6	6.7	52	263	172	192	169	17	15	8.1	7.0
27	6.9	5.7	6.8	68	223	164	189	156	17	15	8.1	6.9
28	7.0	5.6	9.5	73	196	290	e182	145	14	14	8.1	6.6
29	7.0	5.5	9.9	43	175	244	e174	133	13	14	8.0	6.4
30	6.9	5.3	20	31	---	216	e166	123	13	14	7.9	6.4
31	6.9	---	11	29	---	197	---	113	---	13	7.8	---
TOTAL	218.3	168.4	313.2	902.8	5742	9981	6876	6447	1072	590	313.6	233.7
MEAN	7.04	5.61	10.1	29.1	198	322	229	208	35.7	19.0	10.1	7.79
MAX	7.4	7.6	32	191	821	858	376	711	102	28	13	12
MIN	6.9	5.3	5.7	4.6	15	157	144	92	13	13	7.8	6.4
AC-FT	433	334	621	1790	11390	19800	13640	12790	2130	1170	622	464
a	-2639	-1636	+389	+5091	+8063	+447	-149	-227	-315	-2027	-2593	-2154
b	2430	1803	956	438	317	395	518	827	1708	2807	3051	2531
c	127	48	39	10	26	64	112	169	224	240	219	167

e Estimated.

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.

SAN JOAQUIN RIVER BASIN

11333000 CAMP CREEK NEAR SOMERSET, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.01	8.55	42.2	74.8	107	134	151	109	24.8	11.5	7.00	5.20
MAX	32.9	71.3	469	456	820	745	621	452	156	37.2	23.7	17.2
(WY)	1983	1984	1984	1970	1986	1983	1982	1967	1967	1995	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 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1955 - 1996			
ANNUAL TOTAL	56962.9				32858.0							
ANNUAL MEAN	156				89.8				56.6			
ANNUAL MEAN ^a	199				119				84.6			
HIGHEST ANNUAL MEAN									215			1983
LOWEST ANNUAL MEAN									1.89			1977
HIGHEST DAILY MEAN	2440				Mar 11				5640			Feb 19 1986
LOWEST DAILY MEAN	5.3				Nov 12				.00			Aug 7 1977
ANNUAL SEVEN-DAY MINIMUM	5.3				Nov 12				.00			Aug 7 1977
INSTANTANEOUS PEAK FLOW									8680			Feb 16 1982
INSTANTANEOUS PEAK STAGE					7.03				14.50			Feb 16 1982
ANNUAL RUNOFF (AC-FT)	113000				65170				41000			
ANNUAL RUNOFF (AC-FT) ^a	143900				86660				61290			
10 PERCENT EXCEEDS	438				290				166			
50 PERCENT EXCEEDS	38				15				7.6			
90 PERCENT EXCEEDS	6.8				5.7				2.8			

^a Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

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 sea level. Prior to July 10, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good. 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. See schematic diagram of Sacramento-San Joaquin Delta.

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 or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0345	10,500	8.52	Mar. 05	0500	10,600	8.56
Feb. 05	1100	6,530	7.56	May 16	1430	8,190	7.98
Feb. 21	1615	8,530	8.06				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	34	36	272	773	1090	1320	807	546	142	50	27
2	33	34	39	213	635	1020	2120	791	509	133	49	26
3	31	35	40	182	562	1000	1530	754	478	138	47	28
4	31	36	43	166	2630	3180	1340	699	452	132	45	25
5	30	35	50	152	5440	7850	1210	643	427	128	46	25
6	29	35	73	141	3020	3460	1120	607	397	121	46	26
7	29	34	58	132	2000	2460	1090	574	375	117	46	25
8	29	33	50	126	1590	1980	1080	555	353	116	46	26
9	29	34	49	120	1340	1740	1070	533	329	106	44	27
10	29	33	46	116	1170	1630	1030	514	314	106	42	26
11	31	32	57	112	1060	1770	966	499	294	103	39	26
12	28	33	299	109	980	2880	904	505	271	100	38	27
13	29	32	711	105	942	2550	844	518	243	95	38	28
14	28	32	390	102	904	1960	793	517	221	92	38	29
15	29	32	290	101	861	1680	770	581	209	92	36	32
16	29	32	406	742	895	1540	949	4020	196	91	35	39
17	28	31	223	1550	1040	1440	1380	2590	189	89	33	48
18	27	31	159	683	1270	1410	1710	2270	180	85	33	45
19	28	31	132	861	2240	1400	1390	1880	172	83	34	39
20	29	31	118	623	5370	1390	1290	1490	166	77	35	36
21	28	31	106	972	6270	1350	1170	1270	160	75	34	33
22	28	31	94	694	4560	1290	1070	1380	155	74	34	32
23	28	31	89	494	2900	1220	994	1190	149	72	34	32
24	28	31	89	1380	2470	1100	953	1050	146	68	32	32
25	28	31	84	5400	2160	1010	938	928	147	66	31	31
26	28	33	81	1330	1830	933	913	846	160	64	31	30
27	30	37	79	1890	1550	874	904	789	228	60	30	30
28	33	42	85	2370	1340	1140	869	749	210	58	30	29
29	32	39	132	1200	1190	1170	826	692	174	58	29	27
30	33	37	382	862	---	1020	813	640	157	54	30	28
31	33	---	383	825	---	949	---	592	---	53	28	---
TOTAL	919	1003	4873	24025	58992	55486	33356	31473	8007	2848	1163	914
MEAN	29.6	33.4	157	775	2034	1790	1112	1015	267	91.9	37.5	30.5
MAX	34	42	711	5400	6270	7850	2120	4020	546	142	50	48
MIN	27	31	36	101	562	874	770	499	146	53	28	25
AC-FT	1820	1990	9670	47650	117000	110100	66160	62430	15880	5650	2310	1810

SAN JOAQUIN RIVER BASIN

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.8	141	420	885	1151	1198	1066	686	249	58.9	19.6	13.9
MAX	335	2493	3380	4181	6610	5255	3992	2362	1067	346	114	82.0
(WY)	1963	1951	1965	1911	1986	1983	1982	1995	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 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1908 - 1996	
ANNUAL TOTAL	432204		223059			
ANNUAL MEAN	1184		609		490	
HIGHEST ANNUAL MEAN					1687	
LOWEST ANNUAL MEAN					21.8	
HIGHEST DAILY MEAN	18100	Mar 11	7850	Mar 5	34400	Feb 17 1986
LOWEST DAILY MEAN	27	Oct 18	25	Sep 4	.00	Jul 25 1908
ANNUAL SEVEN-DAY MINIMUM	28	Oct 17	26	Sep 4	.00	Jul 25 1908
INSTANTANEOUS PEAK FLOW			10600	Mar 5	45100	Feb 17 1986
INSTANTANEOUS PEAK STAGE			8.56	Mar 5	14.76	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	857300		442400		354800	
10 PERCENT EXCEEDS	3000		1540		1280	
50 PERCENT EXCEEDS	406		139		100	
90 PERCENT EXCEEDS	31		29		6.5	

SACRAMENTO RIVER BASIN

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11336585 LAGUNA CREEK NEAR ELK GROVE, CA

LOCATION.--Lat 38°25'24", long 121°21'08", in NE 1/4 NE 1/4, sec. 31, T.7 N, R.6 E in Sacramento County, Hydrologic Unit 18020109, on left bank 50 ft downstream from bridge on Waterman Road at intersection with Bond Road, and 1 mi northeast of Elk Grove.

DRAINAGE AREA.--31.9 mi².

PERIOD OF RECORD.--October 1995 to September 1996.

GAGE.--Water-stage recorder. Datum of gage is 40 ft above sea level, from topographic map.

REMARKS.--Records good except for discharges below 1 ft³/s and estimated daily discharges, which are poor. Low summer flow sustained by residential and agricultural waste water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s, Feb. 5, 1996, gage height, 6.57; no flow for many days this year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 5	0145	1,110	6.57	Feb. 20	0145	929	6.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	4.4	67	4.8	41	.00	.00	.00	.00	.53
2	e.00	e.00	e.00	e4.0	20	3.0	101	.00	.00	.00	.00	4.7
3	e.00	e.00	e.00	e3.6	12	2.4	15	.00	.00	.00	.00	4.8
4	e.00	e.00	e.00	e3.2	435	6.1	6.7	.00	.00	.00	.00	3.0
5	e.00	e.00	e.00	e2.8	702	94	4.1	.00	.00	.00	.00	1.5
6	e.00	e.00	e.00	e2.4	97	26	2.4	.00	.00	.00	.00	.82
7	e.00	e.00	e.00	e2.0	26	12	1.5	.00	.00	.00	.00	.35
8	e.00	e.00	e.00	e1.6	15	8.3	1.3	.00	.00	.00	.00	.26
9	e.00	e.00	e.00	e1.2	10	5.4	.60	.00	.00	.00	.00	.25
10	e.00	e.00	e.00	e.86	8.3	3.9	.31	.00	.00	.00	.00	.22
11	e.00	e.00	e.04	e.47	6.3	4.2	.23	.00	.00	.00	.00	1.2
12	e.00	e.00	e38	.08	4.7	222	.17	.00	.00	.00	.00	1.9
13	e.00	e.00	e41	.08	3.8	209	.11	.00	.00	.00	.00	2.1
14	e.00	e.00	17	.07	3.2	34	.07	.00	.00	.00	.00	2.7
15	e.00	e.00	13	.07	2.5	14	.06	.00	.00	.00	.00	1.8
16	e.00	e.00	11	28	2.6	9.2	.05	9.9	.00	.00	.00	1.1
17	e.00	e.00	5.8	71	2.1	6.0	.06	6.7	.00	.00	.00	.47
18	e.00	e.00	3.1	14	1.8	3.9	1.2	3.5	.00	.00	.00	.19
19	e.00	e.00	1.8	7.5	254	2.5	1.4	1.5	.00	.00	.00	.13
20	e.00	e.00	.98	4.7	726	1.8	.80	.79	.00	.00	.00	.08
21	e.00	e.00	.77	37	367	1.2	.34	.36	.00	.00	.00	.06
22	e.00	e.00	.72	23	194	.97	.16	.26	.00	.00	.00	.04
23	e.00	e.00	.50	8.7	42	.81	.10	.12	.00	.00	.00	.01
24	e.00	e.00	.31	19	20	.70	.09	.08	.00	.00	.00	.00
25	e.00	e.00	.22	315	19	e.58	.08	.07	.00	.00	.00	.00
26	e.00	e.00	.16	49	13	e.45	.07	.03	.00	.00	.00	.11
27	e.00	e.00	.14	102	10	e.32	.05	.02	.00	.00	.04	.09
28	e.00	e.00	.13	180	9.2	.19	.01	.02	.00	.00	.11	.05
29	e.00	e.00	.19	28	7.0	.15	.00	.01	.00	.00	.70	.04
30	e.00	e.00	7.2	14	---	.13	.00	.00	.00	.00	.42	.04
31	e.00	---	6.5	54	---	.11	---	.00	---	.00	.23	---
TOTAL	0.00	0.00	148.56	981.73	3080.5	678.11	178.96	23.36	0.00	0.00	1.50	28.55
MEAN	.000	.000	4.79	31.7	106	21.9	5.97	.75	.000	.000	.048	.95
MAX	.00	.00	41	315	726	222	101	9.9	.00	.00	.70	4.8
MIN	.00	.00	.00	.07	1.8	.11	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	295	1950	6110	1350	355	46	.00	.00	3.0	57

e Estimated.

SACRAMENTO RIVER BASIN

11336585 LAGUNA CREEK NEAR ELK GROVE, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	4.79	31.7	106	21.9	5.97	.75	.000	.000	.048	.95
MAX	.000	.000	4.79	31.7	106	21.9	5.97	.75	.000	.000	.048	.95
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996
MIN	.000	.000	4.79	31.7	106	21.9	5.97	.75	.000	.000	.048	.95
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1996 WATER YEAR

ANNUAL TOTAL	5121.27
ANNUAL MEAN	14.0
HIGHEST DAILY MEAN	726 Feb 20
LOWEST DAILY MEAN	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1
INSTANTANEOUS PEAK FLOW	1110 Feb 5
INSTANTANEOUS PEAK STAGE	6.57 Feb 5
ANNUAL RUNOFF (AC-FT)	10160
10 PERCENT EXCEEDS	14
50 PERCENT EXCEEDS	.02
90 PERCENT EXCEEDS	.00

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LOCATION.--Lat 37°59'44", long 121°42'03", in NW 1/4 NE 1/4 sec.25, T.2 N., R.2 E., Contra Costa County, Hydrologic Unit 18040003, at Pumping Plant No. 1, 0.7 mi east of Oakley, and 2.6 mi northwest of Knightsen.

PERIOD OF RECORD.--February 1950 to September 1987. October 1993 to current year.

GAGE.--Water-stage recorder and acoustic-velocity meter. From Jan. 1, 1953, to Sept. 30, 1993, recording flow meters on pumps. Prior to Jan. 1, 1953, water-stage recorder at site 3.2 mi downstream at datum 121.72 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Water is diverted from Sacramento-San Joaquin Delta by way of Old River, Rock Slough, and a dredged channel. A series of four pumps lift the water 115 ft into the canal. Water is used for municipal, agricultural, and industrial purposes. The canal is a part of the Central Valley Project. See schematic diagram of Sacramento-San Joaquin Delta.

COOPERATION.--Records of daily discharge were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 436 ft³/s, Aug. 19, 1995; no flow, on some days in most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	109	123	99	98	62	97	150	173	207	245	226
2	168	108	126	97	94	58	91	167	174	49	242	220
3	164	99	135	103	87	66	87	158	155	1	241	219
4	165	101	151	114	87	.00	85	171	34	112	239	202
5	168	103	164	119	86	.00	88	173	.00	239	242	190
6	181	103	165	116	23	.00	87	176	111	241	241	191
7	174	105	158	118	31	.00	84	172	187	243	239	186
8	177	103	155	120	82	55	84	173	190	242	235	194
9	165	99	148	114	85	94	107	174	205	242	240	196
10	166	104	126	113	97	91	108	174	212	245	226	197
11	166	109	98	102	103	85	109	170	207	241	245	198
12	175	121	45	102	104	81	103	188	92	242	244	188
13	175	131	102	111	110	82	110	181	218	238	226	196
14	171	154	96	97	117	84	111	175	227	238	231	194
15	169	160	101	92	115	84	115	150	234	241	233	200
16	140	163	98	3	112	78	119	142	233	239	233	188
17	137	156	95	.00	60	85	106	106	235	239	214	185
18	166	152	95	36	101	92	107	84	240	242	236	189
19	174	154	96	111	100	108	109	111	237	239	231	187
20	176	150	99	130	100	109	112	118	242	237	230	188
21	166	129	94	118	79	96	111	141	235	233	231	186
22	161	127	91	117	74	94	105	127	238	223	230	186
23	160	122	84	118	68	91	56	146	228	210	223	183
24	166	120	84	117	76	94	77	158	72	221	224	184
25	163	127	81	116	70	96	103	159	179	215	218	179
26	168	125	85	118	72	90	116	156	214	212	220	186
27	149	123	84	116	69	101	127	147	215	214	219	54
28	133	122	92	113	62	105	126	151	215	203	216	92
29	120	124	95	110	55	103	145	156	217	30	213	204
30	118	123	96	103	---	97	156	160	225	82	218	211
31	114	---	98	79	---	98	---	169	---	242	219	---
TOTAL	4965	3726	3360	3122.00	2417	2379.00	3141	4783	5644.00	6302	7144	5599
MEAN	160	124	108	101	83.3	76.7	105	154	188	203	230	187
MAX	181	163	165	130	117	109	156	188	242	245	245	226
MIN	114	99	45	.00	23	.00	56	84	.00	1.0	213	54
AC-FT	9850	7390	6660	6190	4790	4720	6230	9490	11190	12500	14170	11110

MEAN	114	90.6	74.7	70.0	70.0	73.5	95.7	129	162	175	177	149
MAX	305	218	213	182	167	185	206	238	302	339	398	359
(WY)	1995	1995	1995	1995	1995	1988	1988	1987	1995	1995	1995	1985
MIN	36.5	33.8	21.1	18.0	15.6	17.9	23.6	32.3	46.9	56.6	59.0	59.1
(WY)	1953	1952	1951	1951	1950	1951	1950	1951	1952	1952	1952	1950

ANNUAL TOTAL	81852.00		52582.00			
ANNUAL MEAN	224		144		117	
HIGHEST ANNUAL MEAN					253	1995
LOWEST ANNUAL MEAN					41.0	1952
HIGHEST DAILY MEAN	436	Aug 19	245	Jul 10	436	Aug 19 1995
LOWEST DAILY MEAN	.00	Feb 28	.00	Jan 17	.00	Mar 2 1994
ANNUAL SEVEN-DAY MINIMUM	86	Dec 22	26	Mar 2	6.7	Jan 15 1970
ANNUAL RUNOFF (AC-FT)	162400		104300		84450	
10 PERCENT EXCEEDS	377		233		211	
50 PERCENT EXCEEDS	190		128		101	
90 PERCENT EXCEEDS	109		81		44	

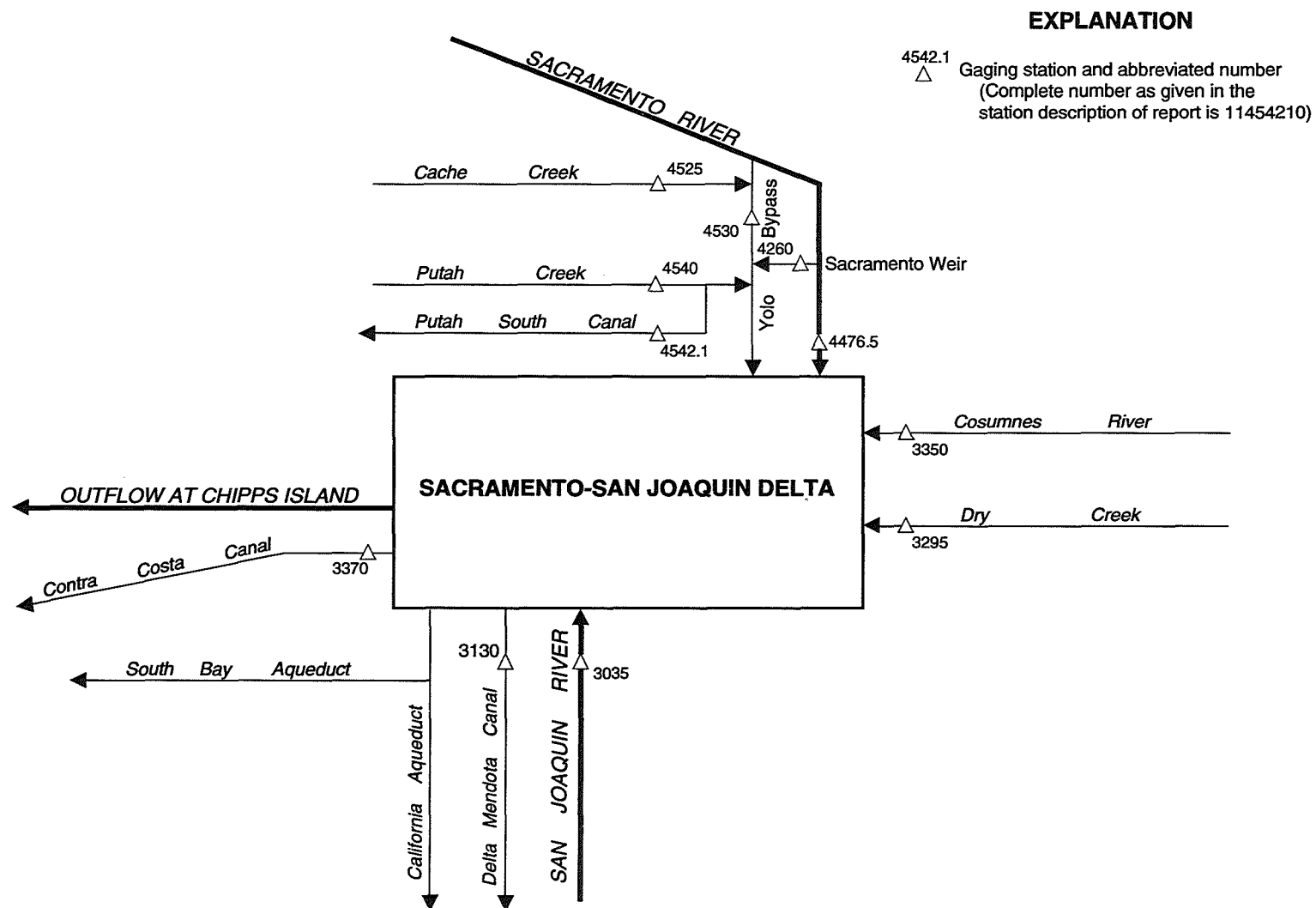


Figure 32. Principal inflows and diversions, Sacramento-San Joaquin Delta.

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 1996

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							
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, 1974-96	02-20-96	23.13	145

a Published as a miscellaneous measurement.

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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