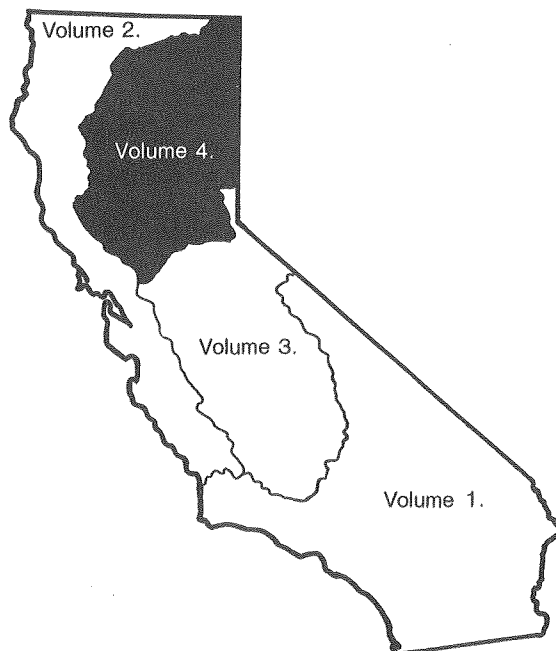


Water Resources Data California Water Year 1996

Volume 4. Northern Central Valley Basins and The
Great Basin from Honey Lake Basin to
Oregon State Line



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-96-4
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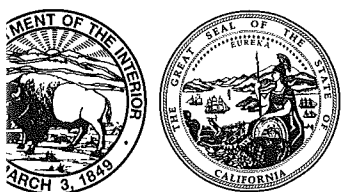
CALENDAR FOR WATER YEAR 1996

1995

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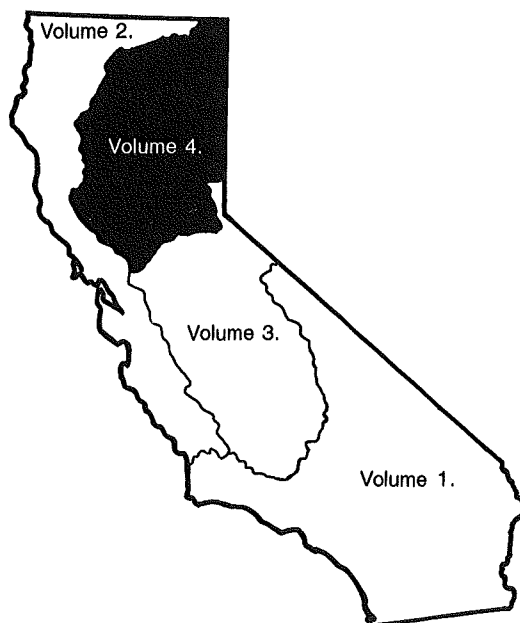
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Water Resources Data California Water Year 1996

Volume 4. Northern Central Valley Basins and The
Great Basin from Honey Lake Basin to
Oregon State Line

by S.W. Anderson, G.L. Rockwell, M.F. Friebel, and M.D. Webster



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-96-4
Prepared in cooperation with the California Department of
Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

For information on the water program in California write to:

District Chief, Water Resources Division

U.S. Geological Survey

Placer Hall, Suite 2012

6000 J Street

Sacramento, California 95819-6129

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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WATER RESOURCES DIVISION

James R. Mullen, Chief, Operations
James C. Bowers, Assistant Chief, Operations

Allan J. Asquith, Hydrologic Technician
William L. Boults, Hydrologic Technician
William R. Brazelton, Hydrologic Technician
David M. Carlson, Hydrologic Technician
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Karl Davidek, Hydrologic Technician
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Kim L. Hanson, Computer Specialist
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Scott N. Hamlin, Hydrologist
Richard A. Hunrichs, Surface Water Hydrologist
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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;
(l), elevation, gage heights, or contents; (g), gage height; (c), chemical; (b), biological;
(p), precipitation; (t), water temperature; and (s), sediment]

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

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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
10354000	Long Valley Creek near Scotts	125	1917, 1919, 1989-94
10354700	Mill Creek at Milford	2.26	1963-69
10355000	Baxter Creek near Janesville	19.6	1913-16, 1918-19
10355500	Schloss Creek at Janesville	1.05	1915, 1918-19
10356500	Susan River at Susanville	184	1900-05, 1913, 1917-21, 1951-94
10357000	Gold Run Creek near Susanville	15.1	1915-16
10358470	Willow Creek Tributary near Susanville	3.08	1966-71
10358500	Willow Creek near Susanville	90.4	1951-94
10359100	Shaffer Creek near Litchfield	5.63	1970-73
10359250	Pine Creek near Westwood	24.8	1951-61
10359300	Pine Creek near Susanville	226	1961-66, 1968, 1970-82
10359350	Eagle Lake Tributary near Susanville	.91	1963-65
10360230	Eagle Creek at Eagleville	6.36	1962-64, 1966-68, 1970
10360900	Bidwell Creek below Mill Creek, near Fort Bidwell	25.6	1961-82
10361000	Bidwell Creek at Fort Bidwell	--	1912, 1918-19
11341400	Sacramento River near Mount Shasta	135	1960-87
11341500	Sacramento River at Castella	256	1911-17, 1920-23
11342500	Sacramento River at Antler	460	1911, 1920-41
11343000	Parker Creek near Alturas	80.9	1931
11343500	North Fork Pit River near Alturas	203	1930-32, 1958-67
11344000	North Fork Pit River at Alturas	212	1929-31, 1972-85
11344500	South Fork Pit River at Jess Valley	100	1929-31
11346000	Crooks Canyon Creek near Likely	33.8	1929-31
11346500	Fitzhugh Creek near Alturas	36.7	1930-31
11347500	Pine Creek near Alturas	23.5	1919-31
11348000	Pit River at Alturas	857	1929-31
11348200	Pit River near Alturas	1,080	1966-71
11349000	Pit River near Lookout	1,585	1929-31, 1958-71, 1978-80
11349500	Ash Creek at Ash Valley	136	1929-31
11350500	Ash Creek at Adin	258	1904-06, 1929-33, 1958-70, 1972-82
11351000	Willow Creek near Adin	--	1930-31
11351500	Widow Valley Creek near Lookout	27.7	1930-31
11352000	Pit River near Bieber	2,475	1904-08, 1922-26, 1929-31, 1952-70, 1972-75
11352500	Horse Creek at Little Valley, near Pittville	237	1929-31, 1960-67
11352900	Beaver Creek near Hat Creek	23.2	1970-73
11353500	Bear Creek near Dana	84	1921-26
11353600	Dry Creek near Dana	6.46	1967-70
11353700	Fall River near Dana	123	1959-67
11354500	Fall River at Fall River Mills	--	1912-13, 1922
11355000	Pit River at Fall River Mills	3,651	1921-51, 1981
11355500	Hat Creek near Hat Creek	162	1926-29, 1930-94
11356500	Hat Creek at Hawkins Ranch, near Hat Creek	190	1912-13
11357000	Hat Creek at Wilcox Ranch, near Cassel	193	1922
11358000	Lost Creek near Bald Mountain	7.51	1930
11358500	Rising River near Cassel	22.2	1912-13, 1921-22
11359500	Hat Creek at Carbon	364	1922
11360000	Burney Creek above Burney	60.1	1922
11360500	Burney Creek at Park Avenue, near Burney	94.6	1912-13, 1921-22, 1958-64, 1966-75, 1977-80
11363500	Kosk Creek near Henderson	54.8	1911-13, 1915-16
11364000	Pit River above Hatchet Creek	4,819	1926-37
11365500	Squaw Creek above Shasta Lake	64	1945-66
11366000	Squaw Creek at Ydalpom	99.5	1912-13
11366500	Pit River near Ydalpom	5,030	1911-43
11367000	Mud Creek near McCloud	--	1927-32
11367200	McCloud River below Big Springs, near McCloud	322	1956-59
11367300	Angel Creek near McCloud	17.1	1955-59
11367700	McCloud River above Panther Creek, near McCloud	401	1955-59
11368500	McCloud River near Gregory	633	1903-08
11369000	McCloud River at Baird	673	1911-43
11369500	Sacramento River at Kennett	6,355	1926-42
11371000	Clear Creek at French Gulch	115	1950-93

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11371500	Clear Creek near Shasta	172	1912-13
11372050	Churn Creek near Redding	9.35	1961-66
11372060	Churn Creek below Newton Creek, near Redding	11.9	1966-72
11372200	South Cow Creek near Millville	77.3	1957-72
11372700	Clover Creek near Oak Run	19	1957-59
11373200	Oak Run Creek near Oak Run	11.0	1957-66
11373300	Little Cow Creek near Ingot	60.8	1958-65
11374060	Shingle Creek near Shingletown	3.25	1964-67
11374100	Bear Creek near Millville	75.7	1960-67
11374400	Middle Fork Cottonwood Creek near Ono	244	1957-75
11375500	North Fork Cottonwood Creek at Ono	58.8	1908-13
11375700	North Fork Cottonwood Creek near Igo	88.7	1957-80
11375810	Cottonwood Creek near Olinda	395	1971-86
11375815	Cottonwood Creek above South Fork, near Cottonwood	478	1982-85
11375820	South Fork Cottonwood Creek near Cottonwood	217	1963-78
11375870	South Fork Cottonwood Creek near Olinda	371	1977-86
11375900	South Fork Cottonwood Creek at Evergreen Road, near Cottonwood	397	1982-85
11376038	Manzanita Creek at park boundary, near Manzanita Lake	11.6	1979-81
11376450	Coleman Canal above Coleman Forebay, near Cottonwood	--	1979-85
11376490	Battle Creek above Coleman Powerhouse, near Cottonwood	355	1979
11376500	Battle Creek near Cottonwood	356	1941-61
11377200	Sacramento River at Bend Bridge	8,900	1968-70
11377500	Paynes Creek near Red Bluff	92.8	1950-66
11378500	Sacramento River at Red Bluff	9,077	1957-66
11378800	Red Bank Creek near Red Bluff	89.6	1960-82
11378860	Red Bank Creek at Rawson Road Bridge, near Red Bluff	109	1965-67
11379000	Antelope Creek near Red Bluff	123	1941-82
11380000	Elder Creek near Henleyville	130	1931-41
11380500	Elder Creek at Gerber	136	1941-69, 1977-79
11381000	Mill Creek near Mineral	21.2	1929-32
11381595	Mill Creek at Sherwood Bridge, near Los Molinos	13.3	1977-78
11381990	Thomes Creek tributary at Paskenta	.65	1968-70
11382090	Thomes Creek at Rawson Road Bridge, near Richfield	28.4	1978-80
11382500	Deer Creek at Deer Creek Meadows	50.5	1929-32
11382550	Deer Creek below Slate Creek, near Deer Creek Meadows	69.4	1961-70
11383000	Deer Creek at Polk Springs	134	1929-31
11383600	Deer Creek at Red Bridge, near Vina	210	1977
11383730	Sacramento River at Vina Bridge, near Corning	--	1945-78, 1980
11383800	Sacramento River near Hamilton City	10,833	1945-80
11384000	Big Chico Creek near Chico	72.4	1931-86
11384340	Mud Creek at Cohasset Road, near Chico	21.9	1968-69
11384350	Mud Creek near Chico	48.9	1966-74
11384500	Stony Creek near Stonyford	102	1914-15, 1919-34
11384600	Little Stony Creek above East Park Reservoir, near Lodoga	45.6	1967-82
11385000	Little Stony Creek near Lodoga	98.2	1909-34
11385500	Stony Creek above Stony Gorge Reservoir	281	1934-41
11386500	Grindstone Creek near Elk Creek	157	1936-37, 1940, 1966-72
11387000	Stony Creek near Fruto	597	1901-12, 1961-78
11387200	Stony Creek above Black Butte Lake, near Orland	623	1909, 1981-83
11387500	Stony Creek near Orland	635	1920-34
11387800	North Fork Stony Creek near Newville	63.4	1963-73
11387990	South Diverson Canal near Orland	--	1955-90
11388000	Stony Creek below Black Butte Dam, near Orland	738	1955-90
11388500	Stony Creek near Hamilton City	773	1941-73
11389700	Butte Creek at Butte Meadows	44.4	1960-74
11389950	Little Butte Creek at Magalia	11.4	1969-85
11390200	Gold Run Creek Tributary near Nelson	1.31	1961
11390210	Cherokee Canal near Nelson	--	1970-74
11390655	South Fork Willow Creek near Fruto	38.9	1963-78
11390660	Walker Creek at Artois	60.4	1965-81
11390672	Stone Corral Creek near Sites	38.2	1958-64, 1966-85
11390890	Colusa Basin Drain at Road 99E, near Knights Landing	--	1996
11391000	Sacramento River at Knights Landing	14,535	1941-80
11391100	Sacramento Slough near Knights Landing	--	1996
11391400	Little Last Chance Creek below Frenchman Dam, near Chilcoot	81.1	1959-80
11391460	Berry Creek near Sattley	7.54	1973-81
11391500	Big Grizzly Creek at Grizzly Valley Dam, near Portola	44	1926-32, 1951-53, 1955-67, 1969-80
11392100	Middle Fork Feather River near Portola	586	1969-76, 1978-80
11392500	Middle Fork Feather River near Clio	686	1926-79
11393000	Middle Fork Feather River at Sloat	775	1911-27
11393500	Middle Fork Feather River below Sloat	819	1941-62
11394000	Middle Fork Feather River near Nelson Point	883	1924-32

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11394500	Middle Fork Feather River near Merrimac	1,062	1952-86
11394620	Fall River near Feather Falls	9.89	1963-79
11394800	South Fork Feather River above Little Grass Valley Reservoir	8.09	1961-79
11395300	Lost Creek above Sly Creek Reservoir, near Strawberry Valley	14.1	1961-70
11396300	South Fork Feather River near Forbestown	105	1958-61
11396350	South Fork Feather River at Ponderosa Dam	108	1962-87, 1990
11396400	Sucker Run near Forbestown	18.7	1965-87
11396500	Palmero Canal at Enterprise	--	1912-65
11397000	South Fork Feather River at Enterprise	132	1912-66
11397500	Feather River at Bidwell Bar	1,341	1912-64
11400000	Butt Creek above Almanor-Butt Creek Tunnel, near Prattville	69.0	1937-64
11401000	Butt Creek at Butt Valley	81.3	1905-21
11401100	Butt Creek near Caribou	85.5	1970, 1976-81
11401125	Indian Creek near Boulder Creek Guard Station, near Taylorsville	68.6	1966-80
11401150	Red Clover Creek near Genesee	122	1956-65
11401180	Little Grizzly Creek near Genesee	29.6	1964-79
11401200	Indian Creek near Taylorsville	526	1958-73, 1975-76, 1979-80
11401300	Lights Creek near Taylorsville	57.6	1958-62
11401500	Indian Creek near Crescent Mills	739	1906-09, 1911-18, 1930-93
11401900	Spanish Creek near Quincy	69.1	1959-63
11401940	Mill Creek near Quincy	6.72	1966-71
11402500	Spanish Creek at Keddle	194	1912-33
11403000	East Branch of North Fork Feather River near Rich Bar	1,025	1951-61, 1968-82
11403510	Bucks Creek Tunnel inlet near Storrie	--	1970, 1976
11404000	Grizzly Creek near Storrie	5.20	1930-44
11404100	Bucks Creek Tunnel Outlet near Storrie	--	1986-94
11405000	North Fork Feather River at Big Bend	1,965	1905-11
11405300	West Branch Feather River near Paradise	--	1958-86
11405500	Spring Valley Diversion near Yankee Hill	--	1926-52
11406000	Concow Creek near Yankee Hill	15.1	1928-30, 1932-52
11406500	West Branch Feather River near Yankee Hill	146	1931-63
11407300	North Honout Creek near Bangor	47.1	1961-81
11407500	South Honout Creek near Bangor	30.6	1951-86
11407700	Feather River at Yuba City	3,974	1965-84
11407810	Middle Yuba River at Jackson Meadows Dam, near Sierra City	37.6	1988-94
11407900	Middle Yuba River below Jackson Meadows Dam, near Sierra City	38.3	1965-87
11408500	Middle Yuba River at Milton	39.8	1926-34, 1935-64,
11408700	Middle Yuba River near Alleghany	96.6	1958-66
11408850	Middle Yuba River near Camptonville	136	1967-89
11409000	Middle Yuba River above Oregon Creek, near North San Juan	162	1941-69
11409500	Oregon Creek near North San Juan	34.4	1912-69
11410000	Middle Yuba River below Oregon Creek, near North San Juan	198	1912-41
11410400	Haypress Creek near Sierra City	18.2	1961-66
11410500	North Yuba River near Sierra City	94.7	1924-44
11411000	Downie River at Downieville	72.7	1911-26
11411500	North Yuba River at Goodyears Bar	221	1911-31
11412000	Rock Creek at Goodyears Bar	8.98	1911-33
11412500	Goodyears Creek at Goodyears Bar	12.9	1911-33
11413100	North Yuba River above Slate Creek, near Strawberry Valley	351	1968-87
11413500	North Yuba River below Bullards Bar Dam	487	1941-66
11413600	Sweetland Creek near North San Juan	2.68	1969-73
11413900	Upper Castle Creek at Soda Springs	3.96	1958-63
11413950	South Yuba River Tributary near Soda Springs	.92	1972-73
11414000	South Yuba River near Cisco	51.8	1942-94
11414190	Drum Canal above Drum Forebay, near Blue Canyon	--	1964-91
11414500	Canyon Creek above Jackson Creek	16.6	1926-30
11415000	Jackson Creek at Mouth	5.45	1926-30
11417000	South Yuba River near Washington	198	1942-53, 1957-72
11417100	Poorman Creek near Washington	23.1	1961-71
11419000	Yuba River at Smartville	1,200	1904-41
11420000	Dry Creek near Brownsville	20.4	1949-60
11420500	Dry Creek at Virginia Ranch	71.3	1949-61
11420700	Dry Creek near Browns Valley	87.1	1964-80
11421500	Yuba River at Marysville	1,344	1944-57
11421700	Feather River below Shanghai Bend, near Olivehurst	5,334	1970-80
11421720	Boardman Canal near Emigrant Gap	--	1965-86
11421730	Bear River below Boardman Diversion Dam, near Emigrant Gap	4.01	1979-85
11423000	Bear River near Auburn	140	1941-67
11423500	Bear River at Van Trent	265	1905-27
11424500	Dry Creek near Wheatland	99.9	1947-62
11424600	Wellman Creek near Smartville	.59	1968-73
11425000	Feather River at Nicolaus	5,921	1942, 1944-83, 1985

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11426110	Onion Creek Tributary No. 3 near Soda Springs	.65	1959-64, 1966-67
11426120	Onion Creek Tributary No. 5A near Soda Springs	.39	1959-64, 1966
11426130	Onion Creek Tributary No. 2 near Soda Springs	.48	1958-64, 1966-67
11426140	Onion Creek Tributary No. 1 near Soda Springs	.19	1958-64, 1966-67
11426150	Onion Creek near Soda Springs	3.58	1960-79
11426160	Onion Creek Tributary No. 7 near Soda Springs	.80	1959-64
11426200	North Fork Forbes Creek near Dutch Flat	1.68	1956-85
11426400	North Shirttail Creek near Dutch Flat	9.10	1957-85
11426500	North Fork American River near Colfax	308	1912-41
11428000	Rubicon River at Rubicon Springs, near Meeks Bay	31.4	1910-13, 1957-86
11429000	South Fork Rubicon River at sawmill, near Quintette	16.1	1910-14
11429800	Robbs Peak Tunnel near Riverton	--	1963-67
11430500	South Fork Rubicon River at Mouth, near Georgetown	56.9	1956-62
11431000	Rubicon River near Georgetown	195	1910-14, 1944-65
11431500	Georgetown Divide Ditch above Pilot Creek, near Georgetown	--	1951-62
11432000	Georgetown Divide Ditch near Georgetown	--	1947-60
11432500	Pilot Creek near Georgetown	15.1	1946-60
11433100	Long Canyon Creek near French Meadows	18.0	1960-92
11433200	Rubicon River near Foresthill	315	1959-84
11433260	North Fork of Middle Fork American River near Foresthill	88.9	1965-85
11433400	Canyon Creek near Georgetown	12.7	1966-79
11433420	Maine Bar Canyon Creek near Greenwood	.75	1973-86
11433500	Middle Fork American River near Auburn	614	1912-86
11433800	North Fork American River below Auburn Damsite, near Auburn	973	1972-86
11434000	North Fork American River at Rattlesnake Bridge	996	1931-37, 1939-55
11435000	Pyramid Creek near Phillips	3.73	1961-64, 1966-70
11435500	South Fork American River at Kyburz	73.2	1924
11437000	Caples Lake Outlet near Kirkwood	13.5	1922-92
11438000	Silver Fork of South Fork American River near Kyburz	107	1925-44
11439950	Alder Creek Pipeline Diversion near Whitehall	--	1976-82
11440000	Alder Creek near Whitehall	22.1	1923-81
11440500	Plum Creek near Riverton	7.32	1923-39
11440850	Picket Pen Creek near Kyburz	.49	1964-68
11441000	Silver Creek at Union Valley	83.0	1925-60
11442000	Silver Creek near Placerville	177	1922-61
11442500	South Fork American River below Silver Creek, near Pollock Pines	449	1923, 1970-93
11443000	American River Flume near Camino	--	1923-57
11445000	South Fork American River at Coloma	631	1930-41
11445500	South Fork American River near Lotus	673	1951-95
11446000	Weber Creek near Salmon Falls	97.6	1943-59
11447000	American River at Sacramento	1,936	1944-59
11447030	Strong Ranch Slough at Sacramento	5.02	1972-75
11447300	Dry Creek Tributary near Roseville	.39	1964-67
11447360	Arcade Creek near Del Paso Heights	31.4	1963-78
11447500	Sacramento River at Sacramento	23,502	1904-05, 1921 1949-79, 1986-96
11448500	Adobe Creek near Kelseyville	6.36	1955-78
11448900	Highland Creek above Highland Creek Dam	11.9	1963-78
11449000	Highland Creek near Kelseyville	12.6	1955-62
11449010	Highland Creek below Highland Creek Dam, near Kelseyville	14.2	1966-77
11449100	Scotts Creek near Lakeport	55.2	1961-80
11449350	Burns Valley Creek near Clearlake Highlands	4.37	1963-69
11449450	Copsey Creek near Lower Lake	13.2	1961-68
11449460	Seigler Creek at Lower Lake	12.5	1966-73
11450500	Cache Creek at Lower Lake	488	1901-15
11451500	North Fork Cache Creek near Lower Lake	197	1931-81
11451700	Bear Creek Tributary near Wilbur Springs	4.49	1962-63
11451720	Bear Creek near Rumsey	100	1959-80
11451760	Cache Creek above Rumsey	955	1961-62, 1965-73, 1976-82, 1984-86
11451950	Cache Creek near Brooks	1,041	1983-86
11452000	Cache Creek near Capay	1,044	1943-77
11453170	Dry Creek above Appletree Creek, near Middletown	.83	1978
11453200	Dry Creek near Middletown	8.35	1960-72, 1979-80
11453500	Putah Creek near Guenoc	113	1905-06, 1931-76
11453550	Hunting Creek near Knoxville	37.8	1969-76
11453570	Adams Creek near Knoxville	7.42	1970-76
11453580	Nevada Creek near Knoxville	7.06	1969-76
11453600	Pope Creek near Pope Valley	78.3	1961-80
11453700	Capell Creek Tributary near Wooden Valley	.87	1962-65
11454100	Pleasants Creek near Winters	15.9	1960-68
11454500	Putah Creek at Winters	635	1906-31
11455000	Putah Creek near Davis	638	1949-63

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
11362650	Pit no. 5 Powerplant Forebay near Big Bend	--	1986-89
11387895	Black Butte Lake near Orland	738	1964-80
11403300	Three Lakes Reservoir near Bucks Lake	1.0	1984-87
11423700	New Camp Far West Reservoir near Wheatland	283	1967-76, 1977-83
11425300	Halsey Forebay near Auburn	--	1980-86
11425320	Lake Arthur near Auburn	.86	1982-83
11425330	Halsey Afterbay near Auburn	--	1980-85

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
10356500	Susan River at Susanville	184	WQ,B,S	1952-93
11341400	Sacramento River near Mt. Shasta	135	T	1966-71, 1973-87
11342000	Sacramento River at Delta	425	WQ,T	1951-81
11345500	South Fork Pit River near Likely	247	WQ,T,S	1951-79
11348500	Pit River near Canby	1,431	WQ,T,S	1951-79
11365000	Pit River near Montgomery Creek	4,952	WQ,T	1951, 1953-81
11368000	McCloud River above Shasta Lake	604	T	1957-59
11370000	Shasta Lake near Redding	6,421	WQ	1978-80
11370500	Sacramento River at Keswick	6,648	B,WQ,C, T,S	1951-94
11371000	Clear Creek at French Gulch	115	S	1966-67
11372000	Clear Creek near Igo	228	WQ,T	1958-79
11372200	South Cow Creek near Millville	77.3	T	1966-71
11374000	Cow Creek near Millville	425	WQ,T,S	1959-71, 1973-76, 1978-79
11374400	Middle Fork Cottonwood Creek near Ono	244	T,S	1965, 1968-73 1977-79
11375700	North Fork Cottonwood Creek near Igo	88.7	T	1977-79
11375810	Cottonwood Creek near Olinda	395	T,S	1973-80
11375820	South Fork Cottonwood Creek near Cottonwood	217	T	1977-79
11375870	South Fork Cottonwood Creek near Olinda	371	T,S	1978, 1977-80
11376000	Cottonwood Creek near Cottonwood	927	WQ,T,S	1957-67, 1977-85
11376038	Manzanita Creek at park boundary, near Manzanita Lake	11.6	C,T	1980-81
11376550	Battle Creek below Colman Fish Hatchery, near Cottonwood	357	WQ,T,S	1962-79
11377100	Sacramento River above Bend Bridge, near Red Bluff	8,900	WQ,C,T,S	1955-83
11377200	Sacramento River at Bend Bridge	--	T,S	1959-63, 1967, 1969-70
11378000	Sacramento River near Red Bluff	9,020	T,S	1961-68
11378500	Sacramento River at Red Bluff	9,077	T,S	1958-66
11379500	Elder Creek near Paskenta	92.4	WQ,T,S	1959-70
11380500	Elder Creek at Gerber	136	T,S	1972-79
11381595	Mill Creek at Sherwood Bridge, near Los Molinos	133	T,S	1977-79
11382000	Thomes Creek at Paskenta	203	WQ,T,S	1959-83
11382090	Thomes Creek at Rawson Road Bridge, near Richfield	284	T,S	1978-80
11383600	Deer Creek at Red Bridge, near Vina	210	T,S	1977
11383800	Sacramento River near Hamilton City	10,833	T,S	1977
11384600	Little Stony Creek above East Park Reservoir, near Lodoga	45.6	T	1967-79
11387000	Stony Creek near Fruto	597	T	1971-78
11387200	Stony Creek above Black Butte Lake, near Orland	623	T,S	1981-83
11387900	Masterson Hollow Creek near Newville	.96	T	1982
11388000	Stony Creek below Black Butte Dam, near Orland	738	WQ,S,T	1958-94
11389000	Sacramento River at Butte City	12,080	WQ,T,S	1955-67, 1969-81
11389470	Colusa Weir Spill, Butte basin, near Colusa	--	T,S	1975
11389500	Sacramento River at Colusa	12,090	WQ,T,S	1959-66, 1973-80
11390000	Butte Creek near Chico	147	WQ,T	1953-79
11390210	Cherokee Canal near Nelson	--	T,S	1970-74
11390425	Sutter Bypass at Long Bridge, near Meridian	--	T,S	1979
11390480	Tisdale Weir near Grimes	--	S	1978-80

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11390600	Sacramento River at Boyers Bend, near Dunnig	--	T	1960-63
11391000	Sacramento River at Knights Landing	14,535	T,S	1959-60, 1978-80
11391050	Sutter Bypass near Nicolaus	--	T,S	1980-81
11391500	Big Grizzly Creek at Grizzly Valley Dam, near Portola	44	T	1963-67
11392500	Middle Fork Feather River near Clio	686	T	1964-82
11394500	Middle Fork Feather River near Merrimac	1,062	T	1963-82
11396350	South Fork Feather River at Ponderosa Dam	108	T	1963-67
11401180	Little Grizzly Creek near Genesee	29.6	T	1964-79
11401500	Indian Creek near Crescent Mills	739	WQ,T,S	1951-79
11404500	North Fork Feather River at Pulga	1,953	WQ,T	1963-83
11405300	West Branch Feather River near Paradise	--	T	1963-80
11406870	Thermolito Afterbay at river outlet	--	T	1968
11406920	Thermolito Afterbay Release to Feather River near Oroville	--	T	1969-92
11407000	Feather River at Oroville	3,624	C,S,T	1906-07, 1951-92
11407150	Feather River near Gridley	3,676	WQ,T,S	1965-93
11407700	Feather River at Yuba City	3,974	T	1964-76
11409000	Middle Yuba River above Oregon Creek, near San Juan	162	T	1965-69
11409400	Oregon Creek below Log Cabin Dam, near Camptonville	29.1	T	1972-79
11409500	Oregon Creek near San Juan	34.4	T	1965-69
11410000	Middle Yuba River below Oregon Creek, near North San Juan	198	T	1974-77
11413100	North Yuba River above Slate Creek, near Strawberry Valley	351	T	1968-69, 1974-77
11413520	North Yuba River below New Bullards Bar Dam, near North San Juan	490	T	1971-74
11413700	Yuba River below Colgate Powerhouse, near French Corral	729	T	1975-78
11417500	South Yuba River at Jones Bar, near Grass Valley	308	T,S	1965-79
11418000	Yuba River below Englebright Dam, near Smartville	1,108	T	1973-78
11418500	Deer Creek near Smartville	84.6	T,S	1974-79
11420800	Yuba River at Daquerra Point Dam, near Browns Valley	1,330	T	1975-77
11421000	Yuba River near Marysville	1,339	WQ	1951-52, 1973-80
11421500	Yuba River at Marysville	1,344	WQ,T	1964, 1966, 1969-70, 1973-76
11425000	Feather River at Nicolaus	5,921	T,S	1960-68, 1973-84
11425100	Feather River near Nicolaus	--	T	1969-72, 1974
11425500	Sacramento River at Verona	21,251	WQ,S	1952, 1969-70, 1980
11427000	North Fork American River at North Fork Dam	342	T,WQ,S	1959-83
11433300	Middle Fork American River, near Foresthill	524	WQ,B	1979
11433400	Canyon Creek near Georgetown	12.7	T	1966-71, 1973-79
11433800	North Fork American River below Auburn dam site, near Auburn	973	T	1983-86
11439500	South Fork American River near Kyburz	193	WQ,T,B,S	1966-79, 1980
11445500	South Fork American River near Lotus	673	B,S,WQ,T	1957-68, 1970-94
11446500	American River at Fair Oaks	1,888	WQ,T	1960-65
11447030	Strong Ranch Slough at Sacramento	5.02	C	1973-75
11447500	Sacramento River at Sacramento	23,502	S	1957-79
11447650	Sacramento River at Freeport	--	B,C	1974-81, 1985-94
11447810	Sacramento River at Greens Landing	--	C	1974-81
11449010	Highland Creek below Highland Creek Dam, near Kelseyville	14.2	T,S	1967-77
11451760	Cache Creek above Rumsey	955	T,S	1960-70, 1976, 1984-86
11451950	Cache Creek near Brooks	1,041	T,S	1984-86
11452500	Cache Creek at Yolo	1,139	T,S	1959-65, 1966-67, 1986
11453000	Yolo Bypass near Woodland	--	S	1957-61, 1980
11453170	Dry Creek above Appletree Creek, near Middletown	.83	C,T	1978
11453500	Putah Creek near Guenoc	113	T,S	1960-73
11453550	Hunting Creek near Knoxville	37.8	T,S	1973-74
11454000	Putah Creek near Winters	574	WQ,T	1951-81

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

WATER RESOURCES DATA--CALIFORNIA, WATER YEAR 1996
VOLUME 4--NORTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN
FROM HONEY LAKE BASIN TO OREGON STATE LINE

By S.W. Anderson, G.L. Rockwell, M.F. Friebe, and M.D. Webster

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 180 streamflow-gaging stations; (2) stage and content records for 45 lakes and reservoirs; (3) gage-height records for 5 stations; (4) precipitation records for 3 stations; (5) water-quality records for 15 streamflow-gaging stations; and (6) 1 partial-record station.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of principal cities of the United States 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-96-4." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or on microfiche by the National Technical Information Service, 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:

California Department of Water Resources, David N. Kennedy, Director.
 Georgetown Divide Public Utility District, Marie E. Davis, General Manager.
 Sacramento County Department of Public Works, Craig Crouch, Principal Civil Engineer.
 Sacramento Municipal Utility District, Rodd Lindberg, District Hydrographer.
 Sacramento Regional County Sanitation District, Douglas Fraleigh, District Engineer.
 Yolo County Flood Control and Water Conservation District, James F. Eagan, General Manager.
 Yuba County Water Agency, Donn Wilson, Engineer-Administrator.

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

The following organizations aided in collecting records: California Department of Water Resources; Energy Growth Partnership I; Five Bears Hydro, Inc.; Highland Hydro Construction; Independent Hydro; Lassen Station Hydroelectric L.P.; Malacha Power Project, Inc.; Nelson Creek Power Co.; Pacific Gas and Electric Co.; Sacramento Municipal Utility District; Nevada and Oroville-Wyandotte Irrigation Districts; Sithe Energies, Inc.; South Sutter Water District; STS Hydropower; Synergics, Inc.; and Placer and Yuba County Water Agencies.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide. The data 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 coordinations 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 11396310, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "396310." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 1).

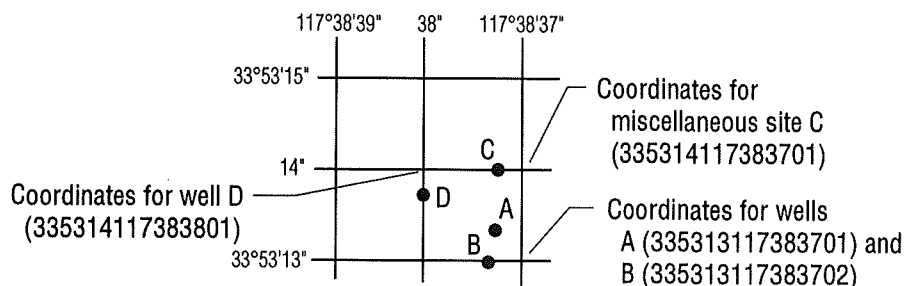


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations for which data are given in this report are shown, by county, in figures 2 through 22.

Data Collection and Computation

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

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

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

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

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

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

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

Data Presentation

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

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

Station manuscript

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

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

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

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, 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 in a data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 through 22.

Arrangement of Records

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

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; 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 time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

Cross-Sectional Data

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

ACCESS TO WATSTORE DATA

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

- * Station Header File - Contains descriptive information on 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/m³) and periphyton and benthic organisms in grams per square meter (g/m²).

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

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

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

Bottom material: See Bed material.

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

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

From cell volume, total algal biomass expressed as biovolume ($\pi\text{m}^3/\text{mL}$) 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 bench marks or by approximation from topographic maps.

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

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

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

Hydrologic Bench-Mark Network is a network of 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 SO_2 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 SO_2 and NO_x scheduled to begin in 2000.

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

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

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

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

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

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

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

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

Parameter code is a five-digit number used in the U.S. Geological Survey 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 having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 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.

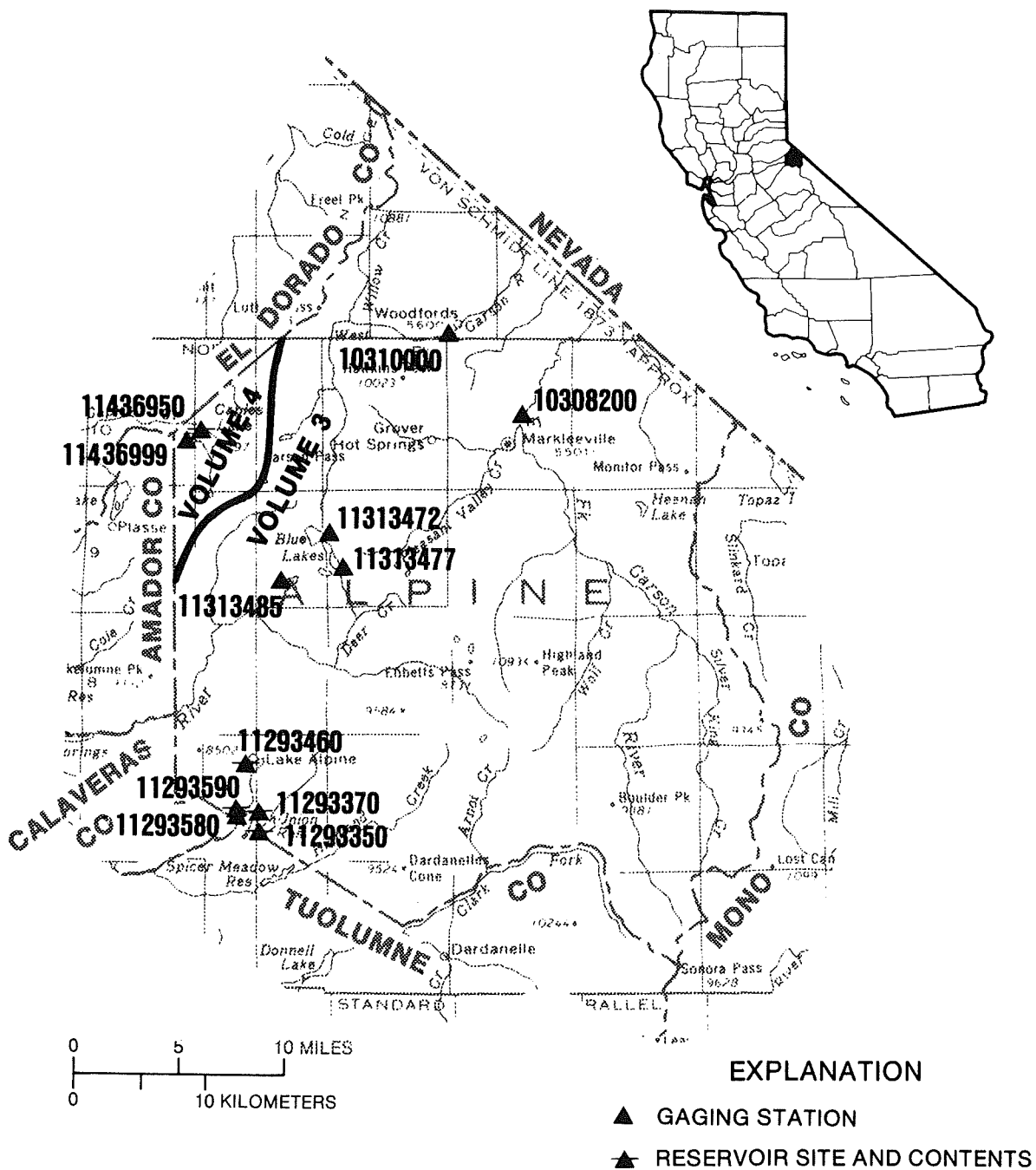


Figure 2. Location of discharge stations in Alpine County.
 (NOTE: Records for stations 10308200 through 10310000 and
 11293350 through 11313485 published in volume 3.)

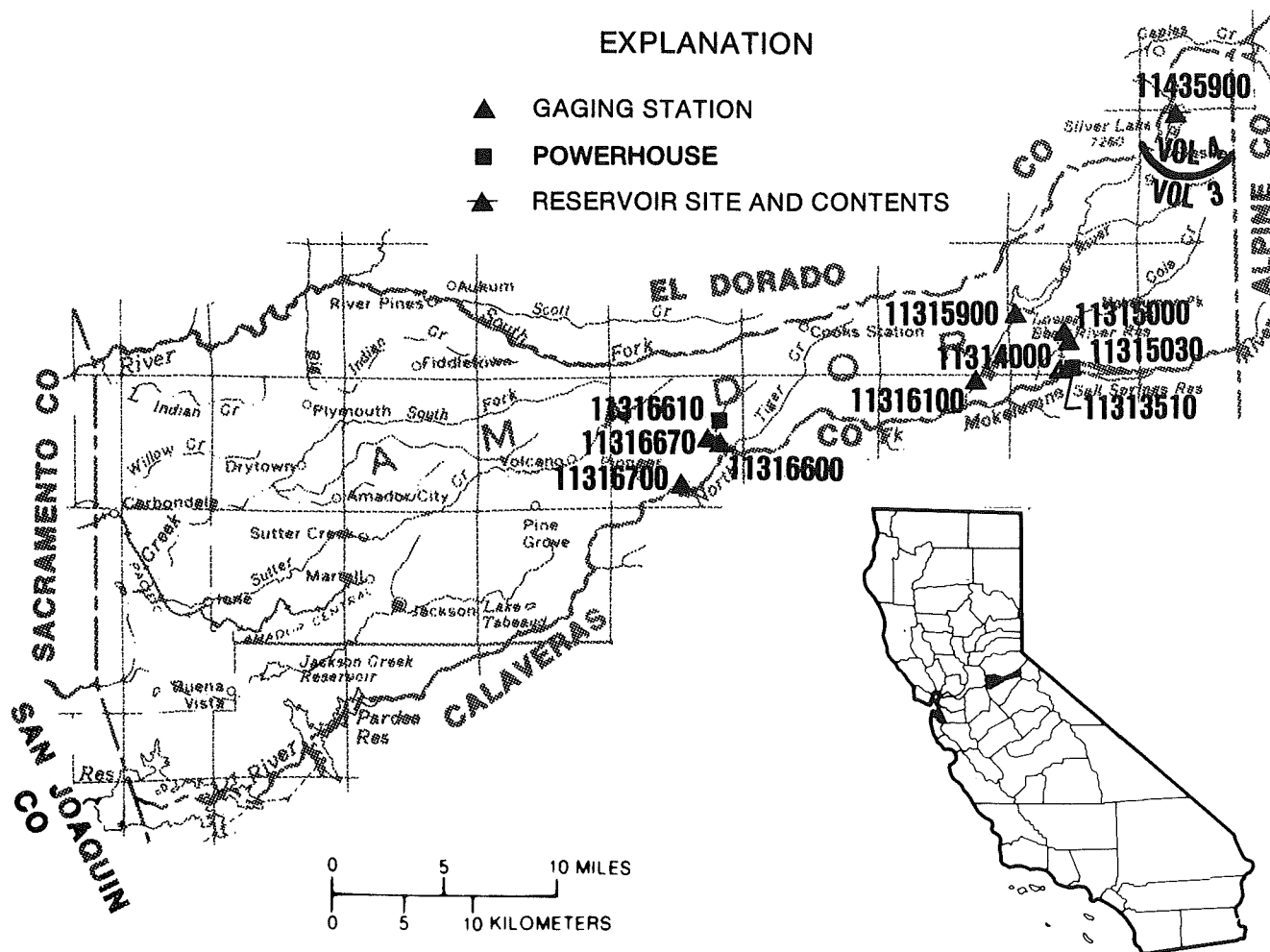


Figure 3. Location of discharge stations in Amador County.
 (NOTE: Records for stations 11313510 through 11316700
 published in volume 3.)

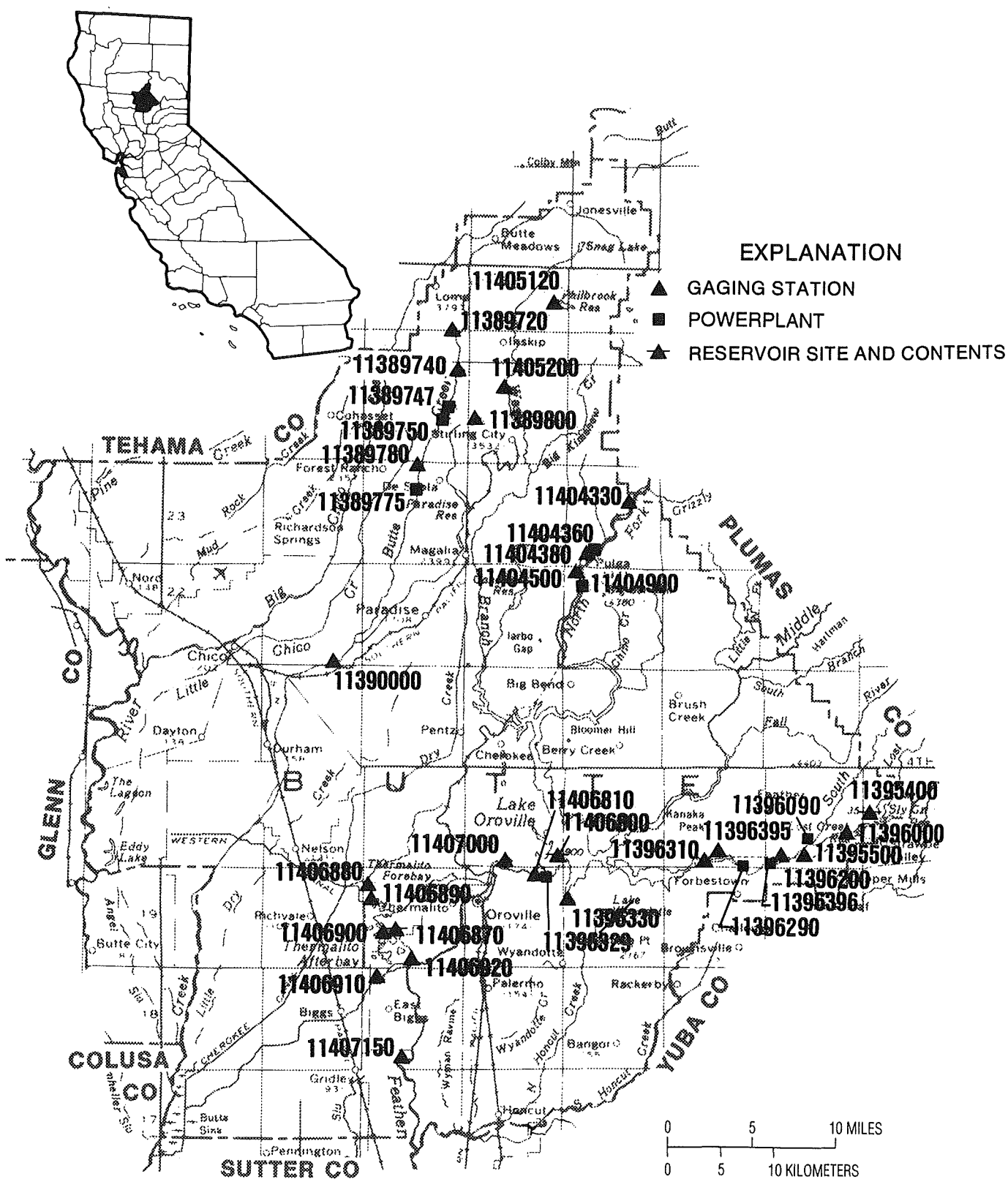


Figure 4. Location of discharge stations in Butte County.

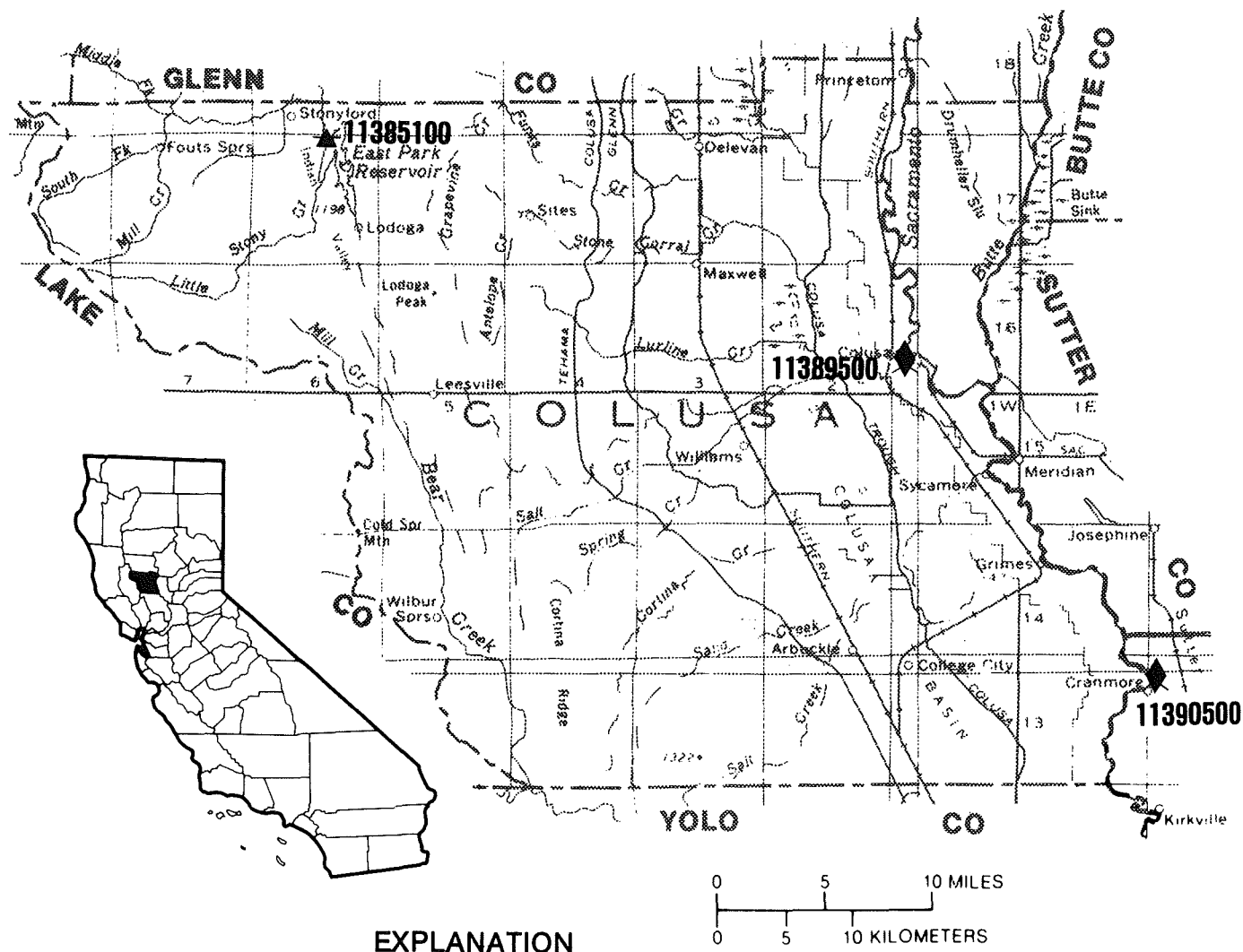


Figure 5. Location of discharge and water-quality stations in Colusa County.

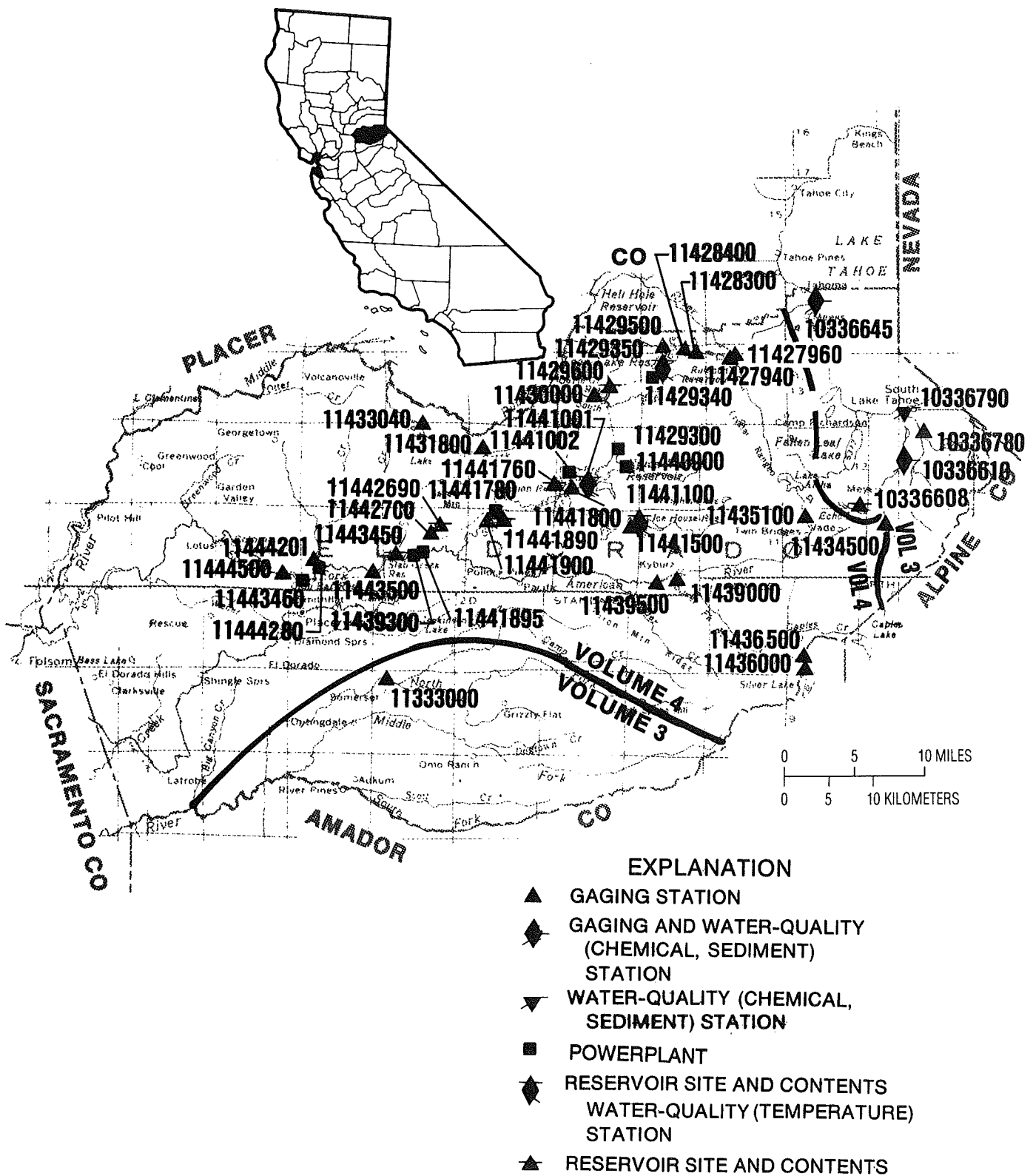


Figure 6. Location of discharge and water-quality stations in El Dorado County.
(NOTE: Record for station 11333000 published in volume 3.)

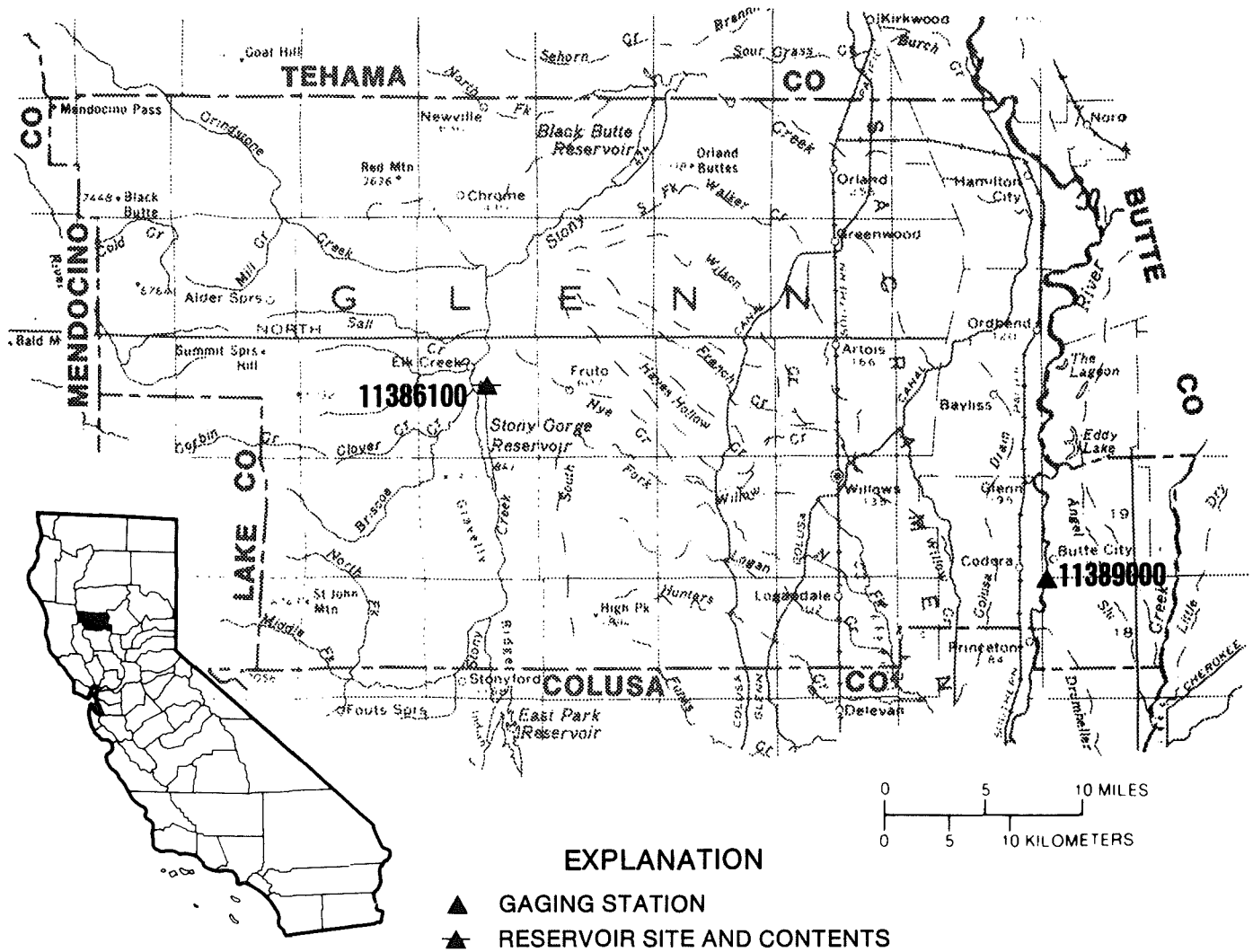
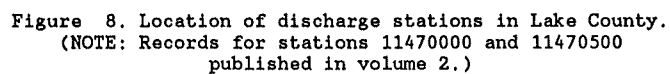


Figure 7. Location of discharge stations in Glenn County.



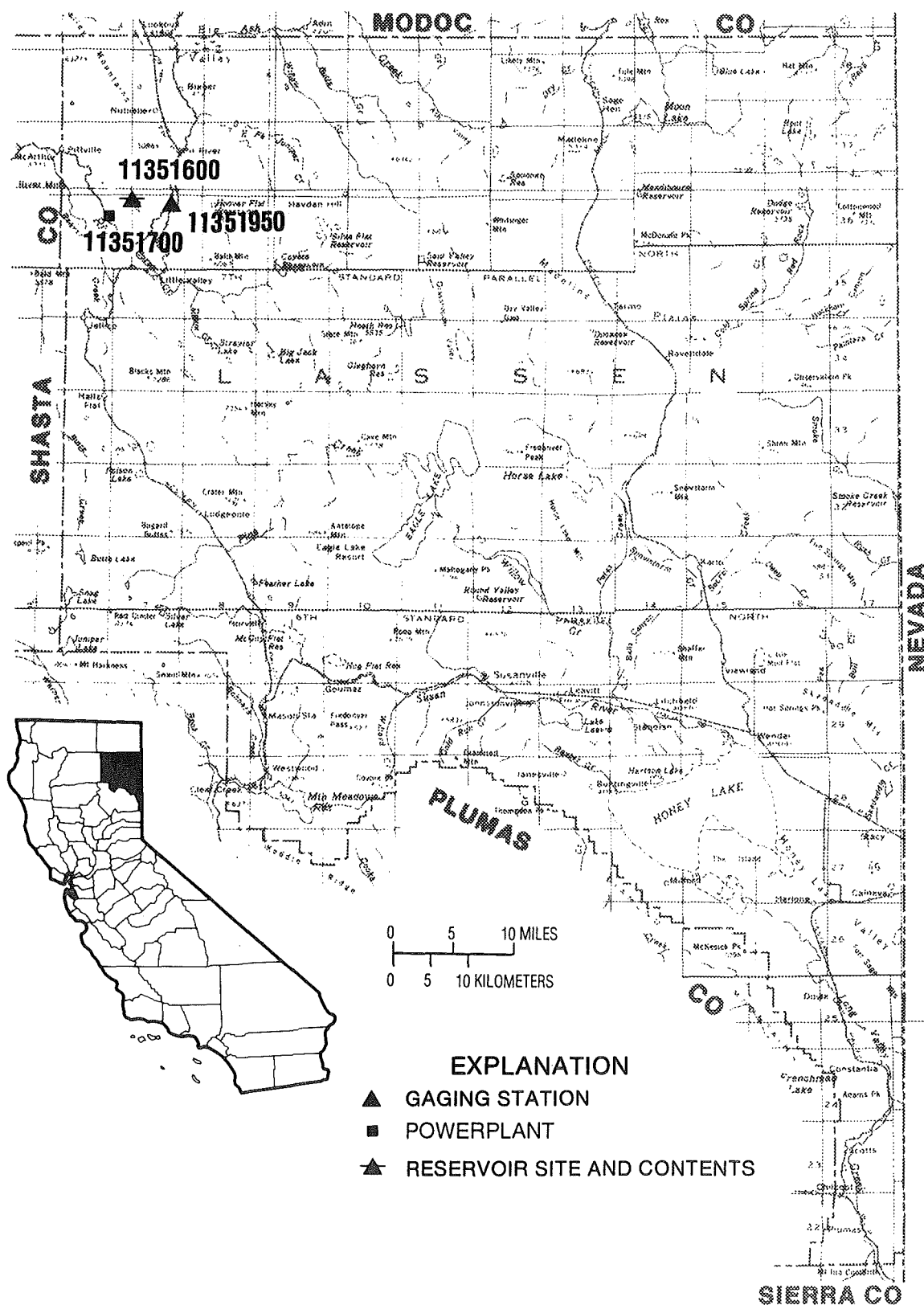
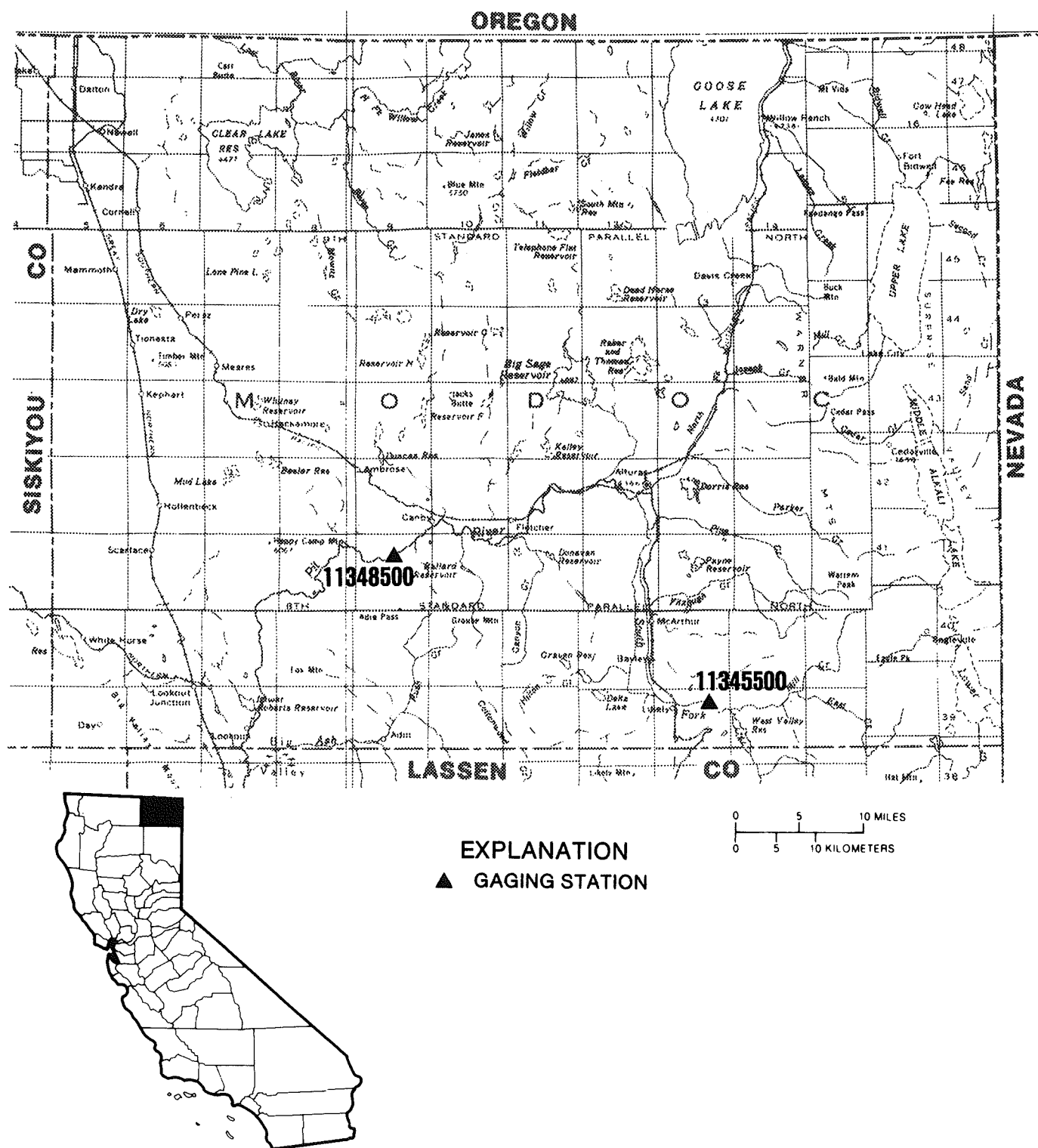


Figure 9. Location of discharge stations in Lassen County.



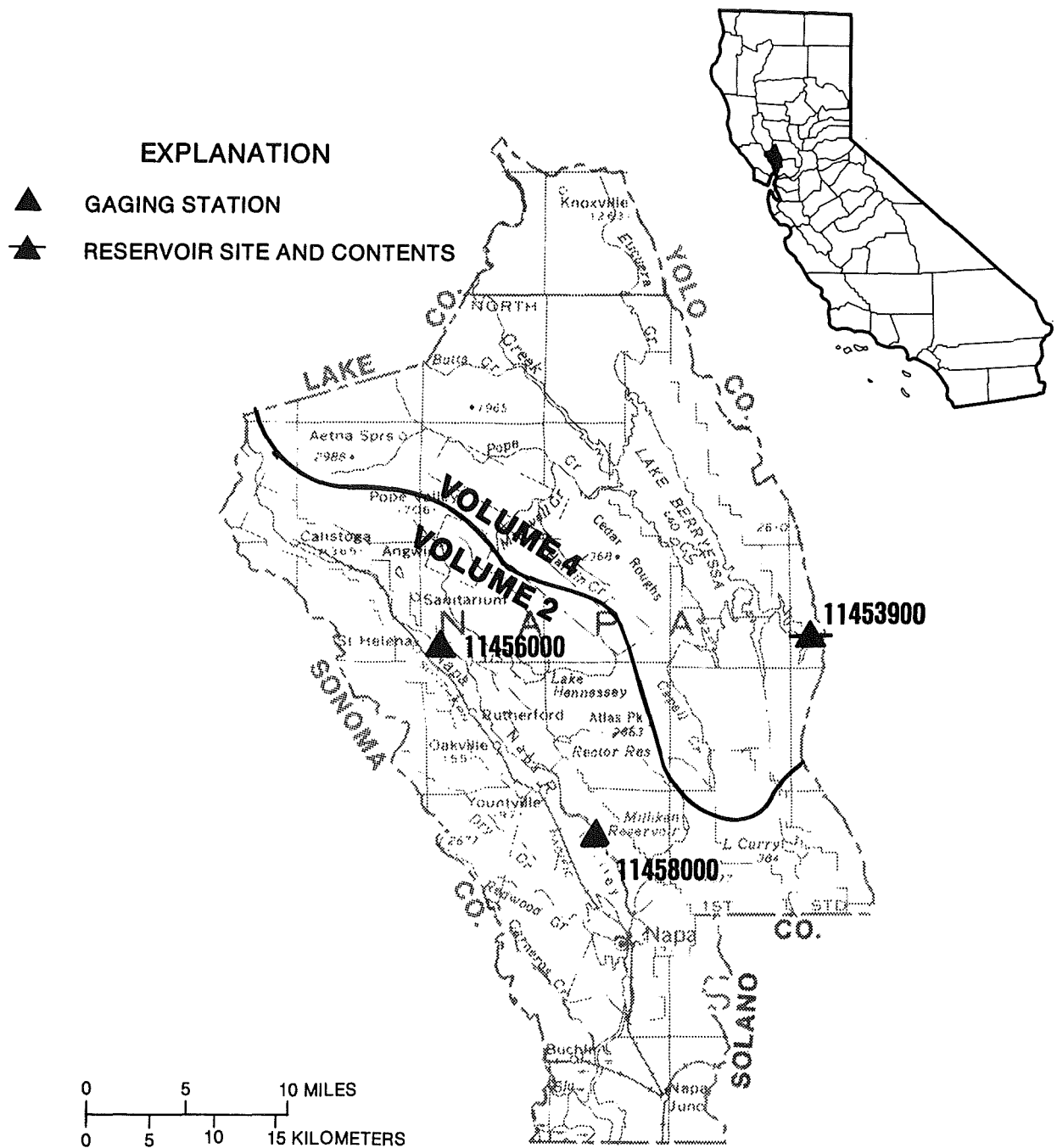


Figure 11. Location of discharge stations in Napa County.
 (NOTE: Records for stations 11456000 and 11458000 published in volume 2.)

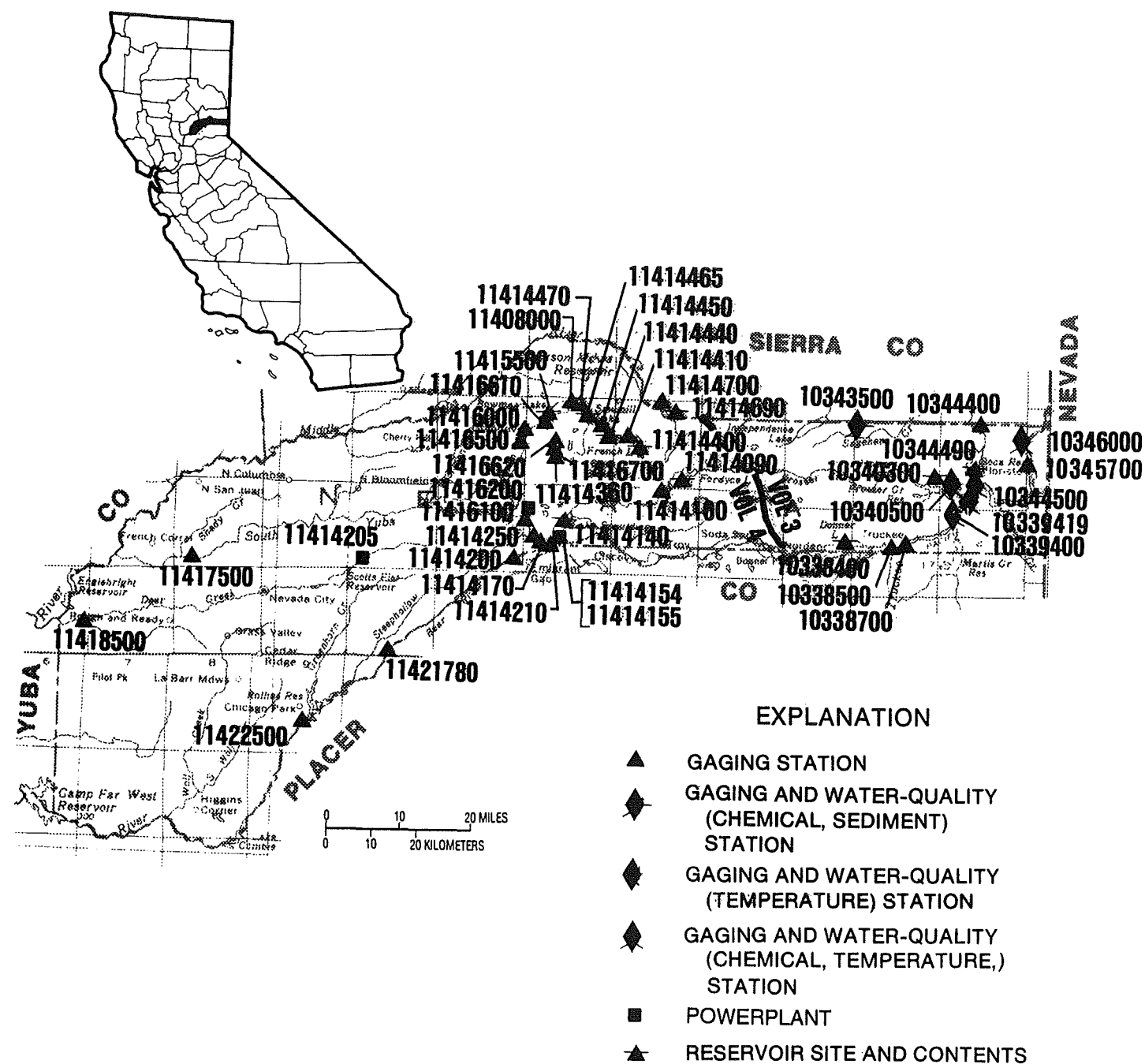


Figure 12. Location of discharge and water-quality stations in Nevada County.
 (NOTE: Records for stations 10338400 through 10346000 published in volume 3.)

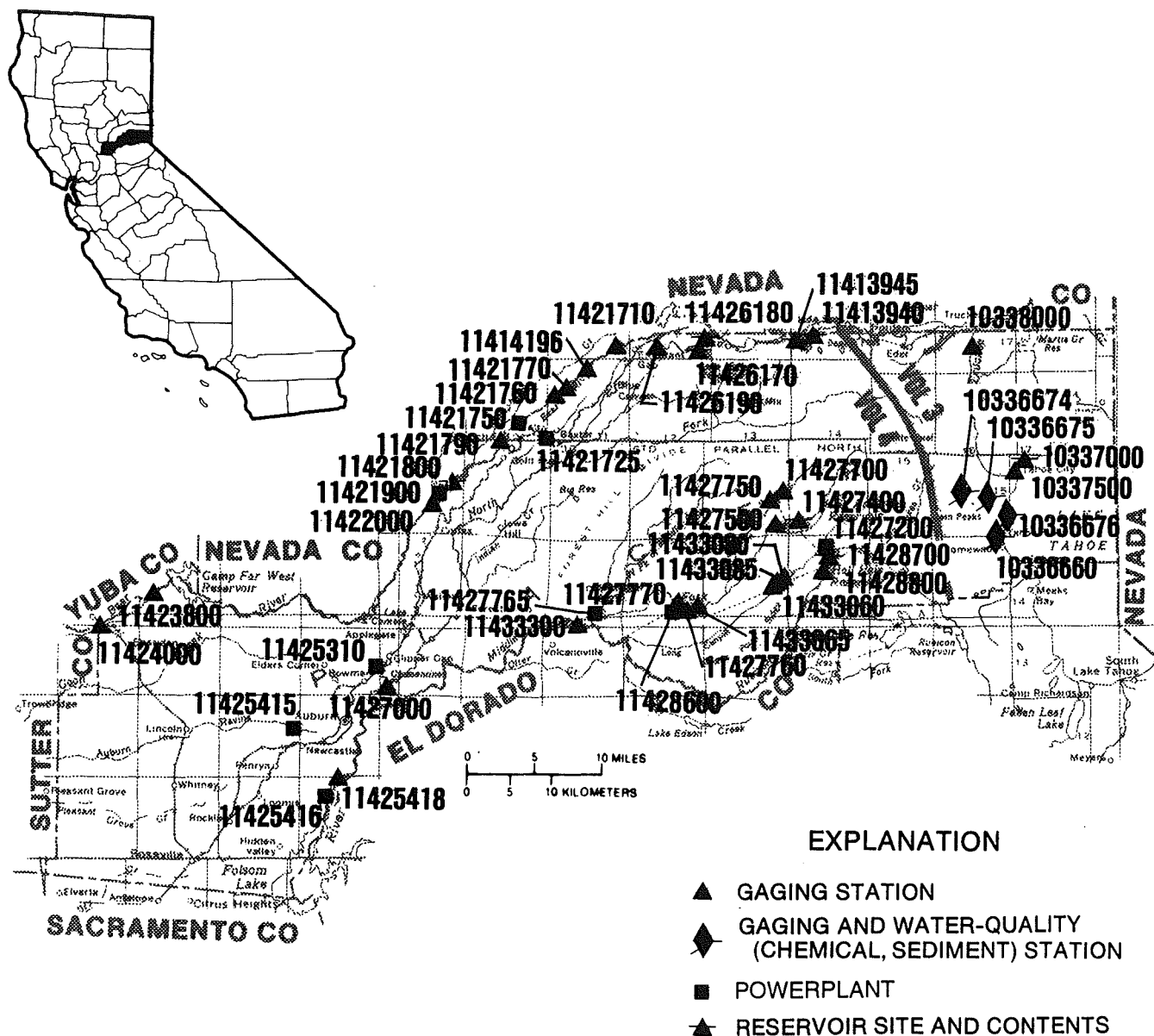


Figure 13. Location of discharge and water-quality stations in Placer County.
 (NOTE: Records for stations 10336660 through 10338000 published in volume 3.)

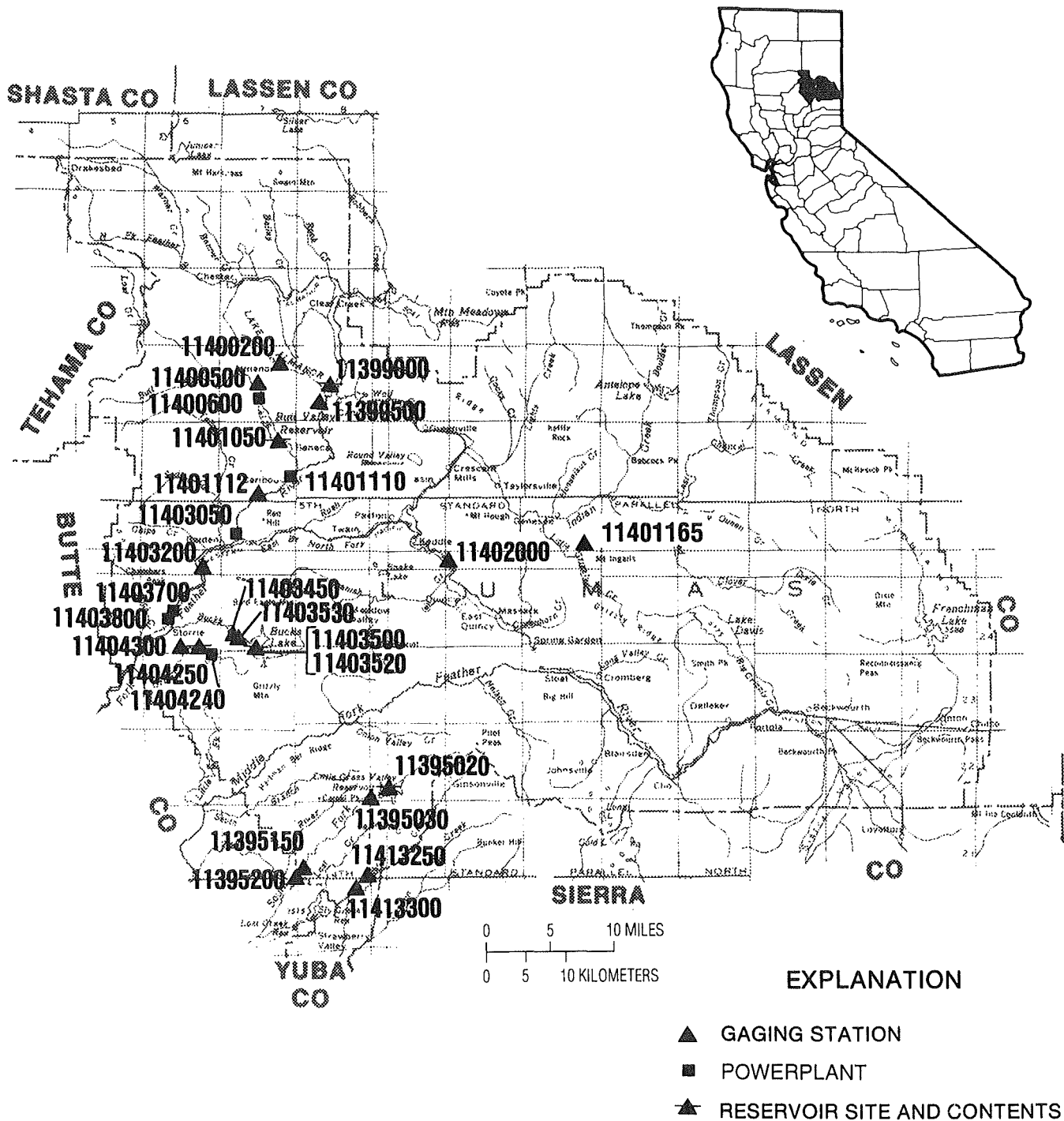


Figure 14. Location of discharge stations in Plumas County.

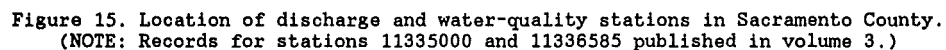
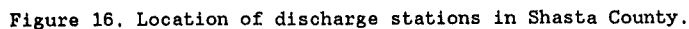


Figure 15. Location of discharge and water-quality stations in Sacramento County.
(NOTE: Records for stations 11335000 and 11336585 published in volume 3.)



EXPLANATION

- ▲ GAGING STATION
- ▲ RESERVOIR SITE AND CONTENTS

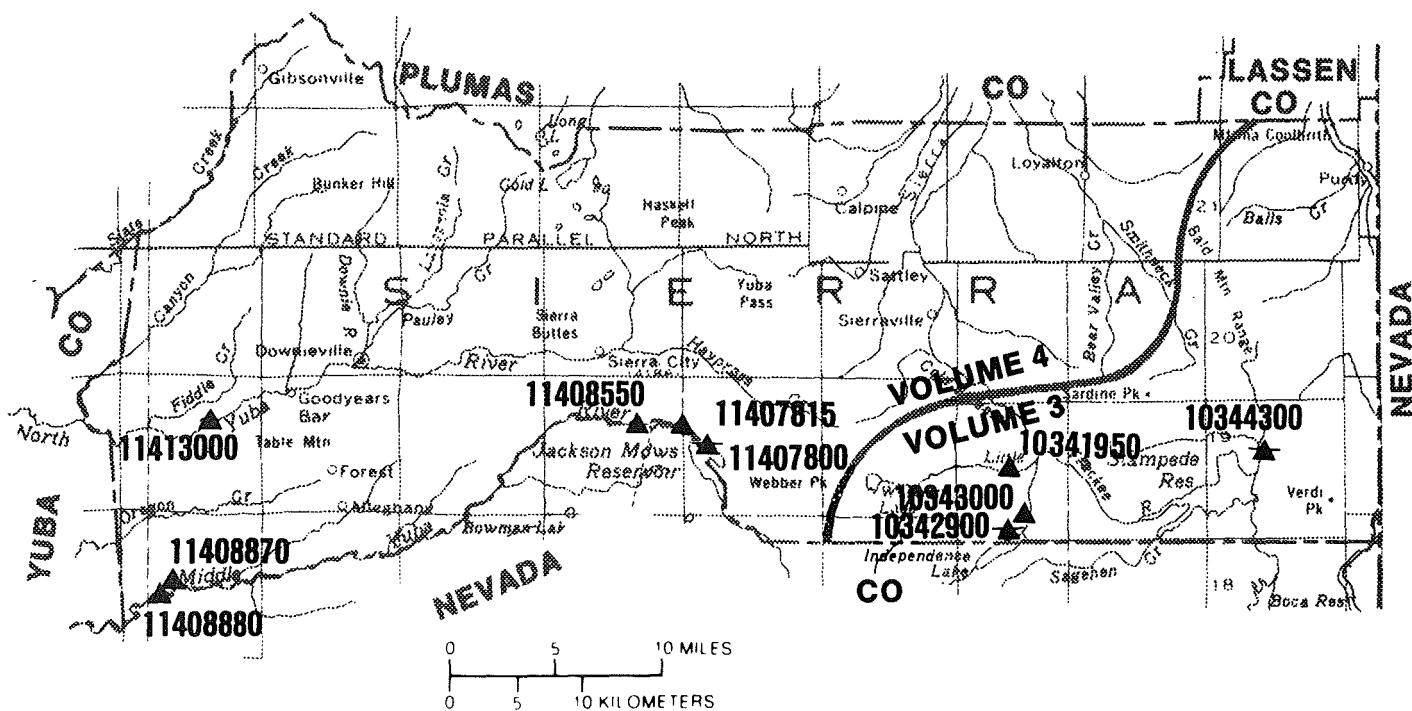
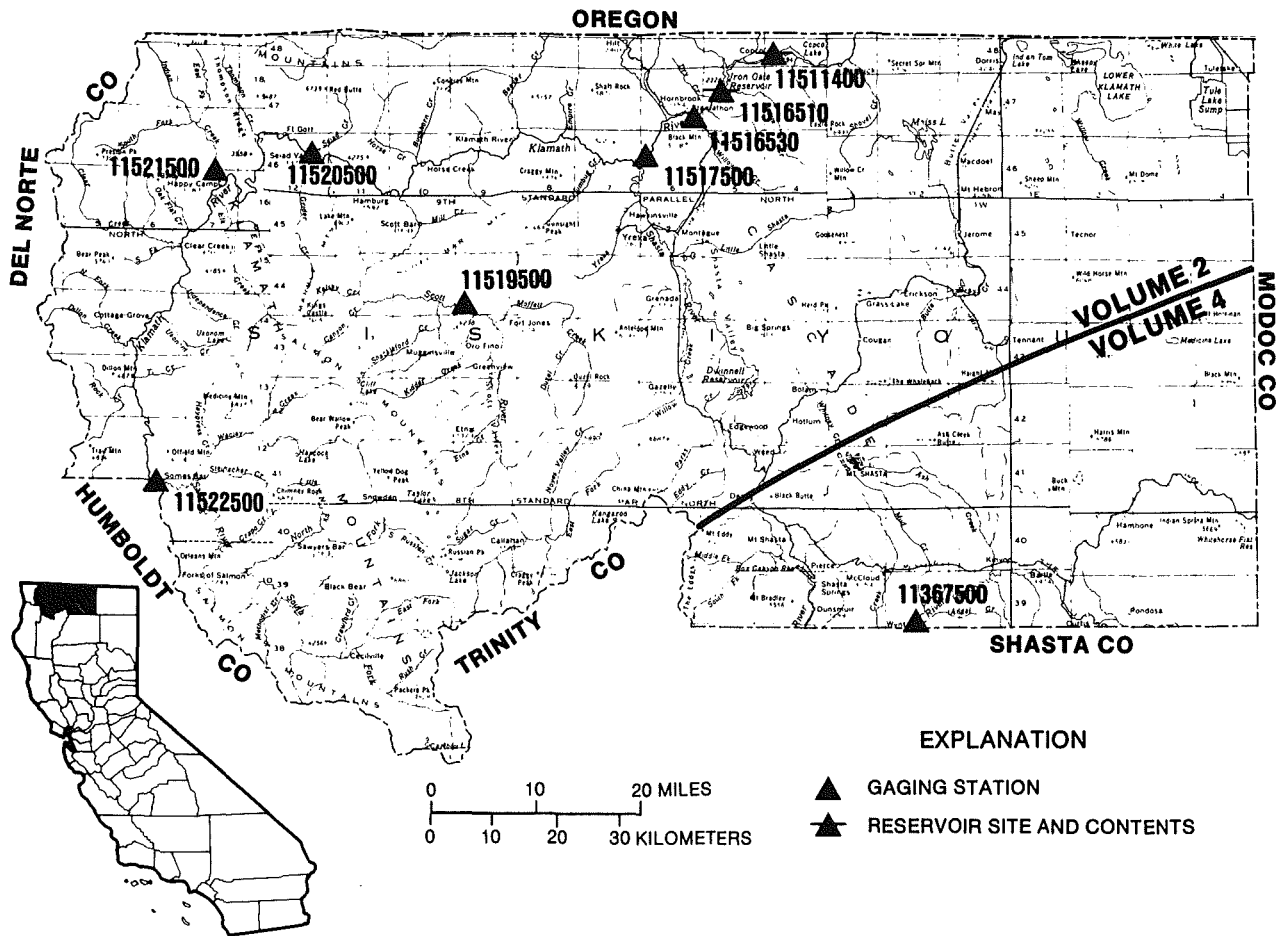


Figure 17. Location of discharge stations in Sierra County.
 (NOTE: Records for stations 10341950 through 10344300 published in volume 3.)



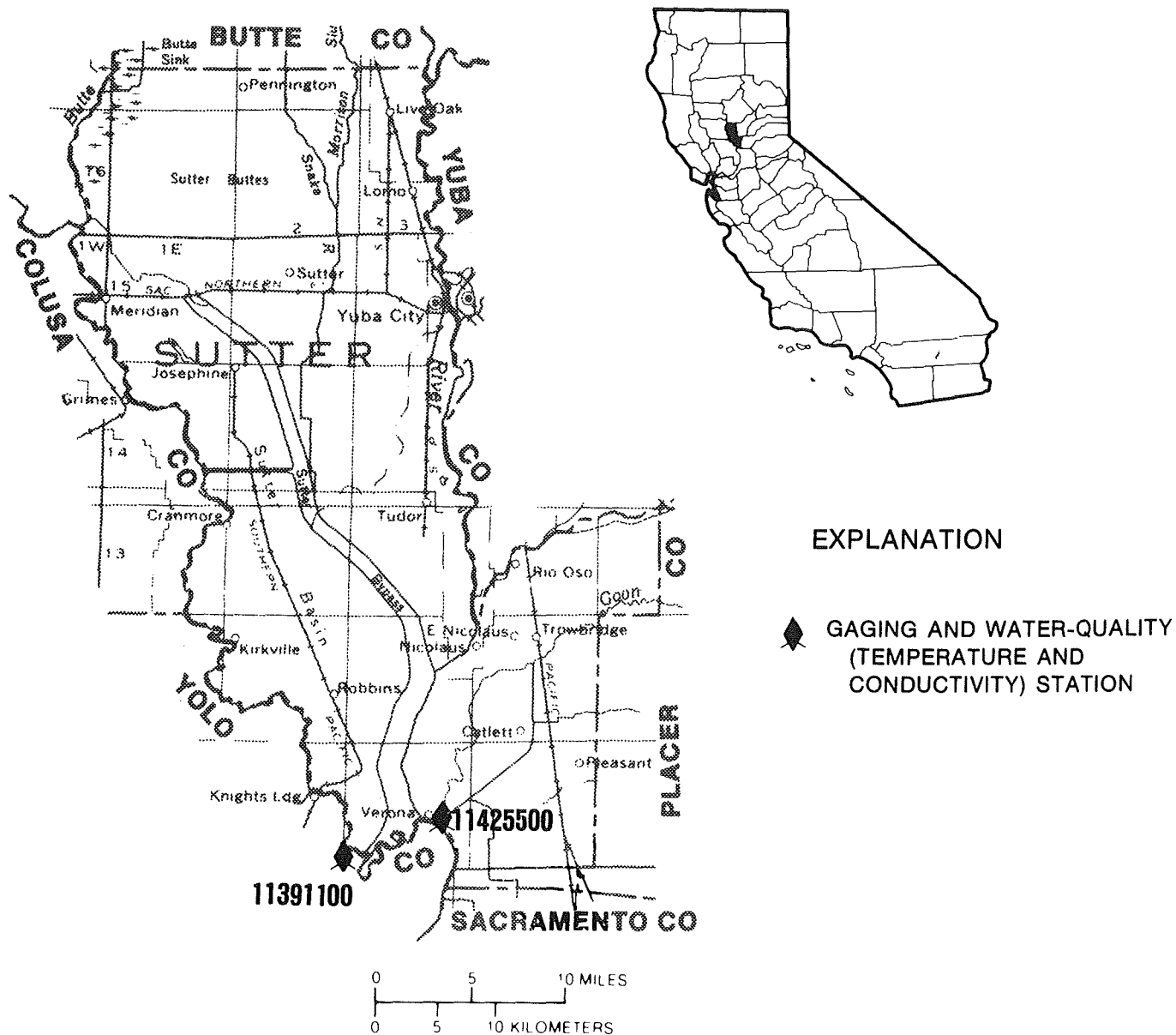


Figure 19. Location of discharge station in Sutter County.

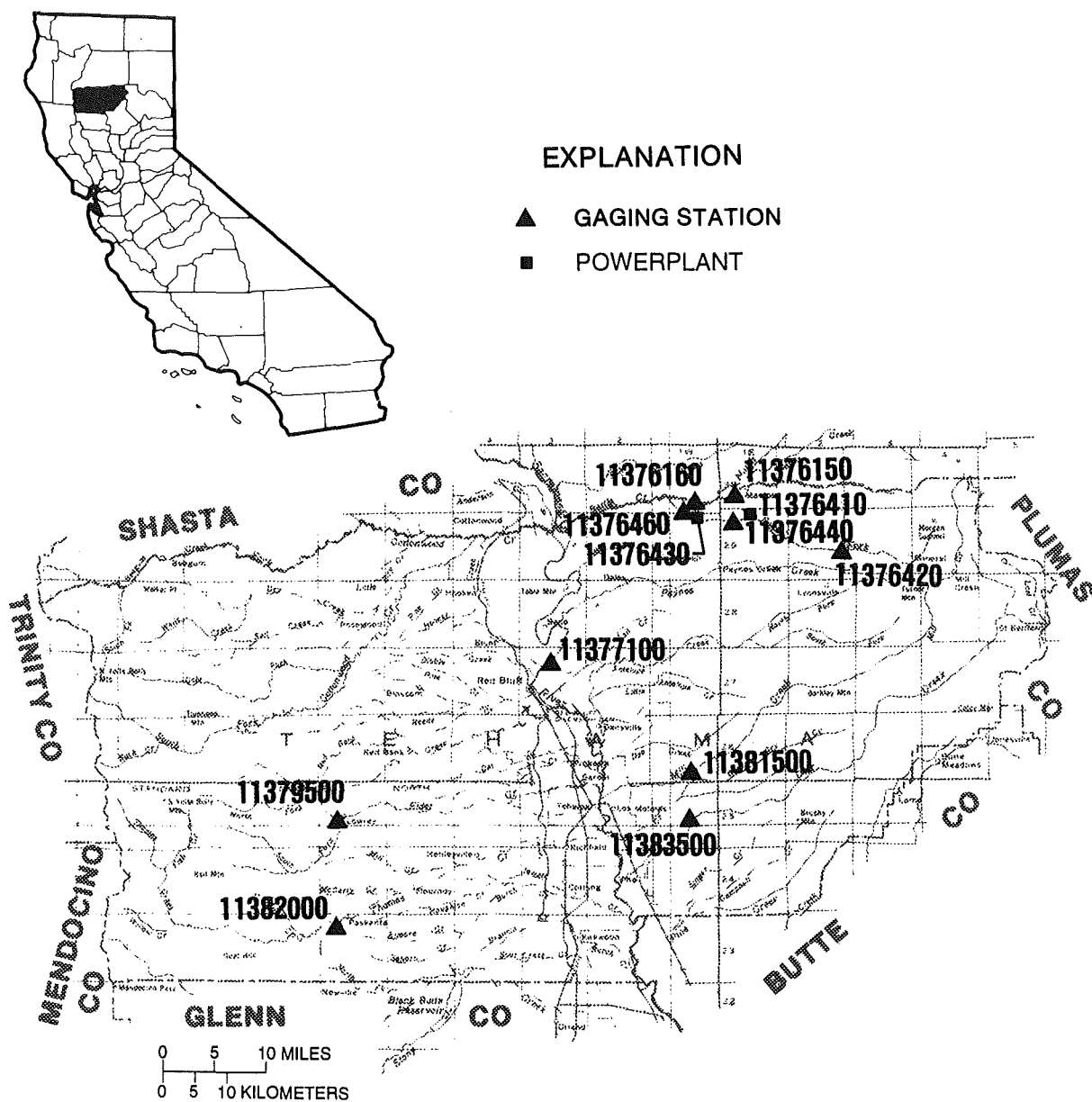
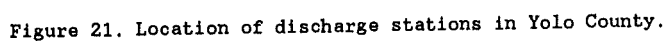


Figure 20. Location of discharge stations in Tehama County.



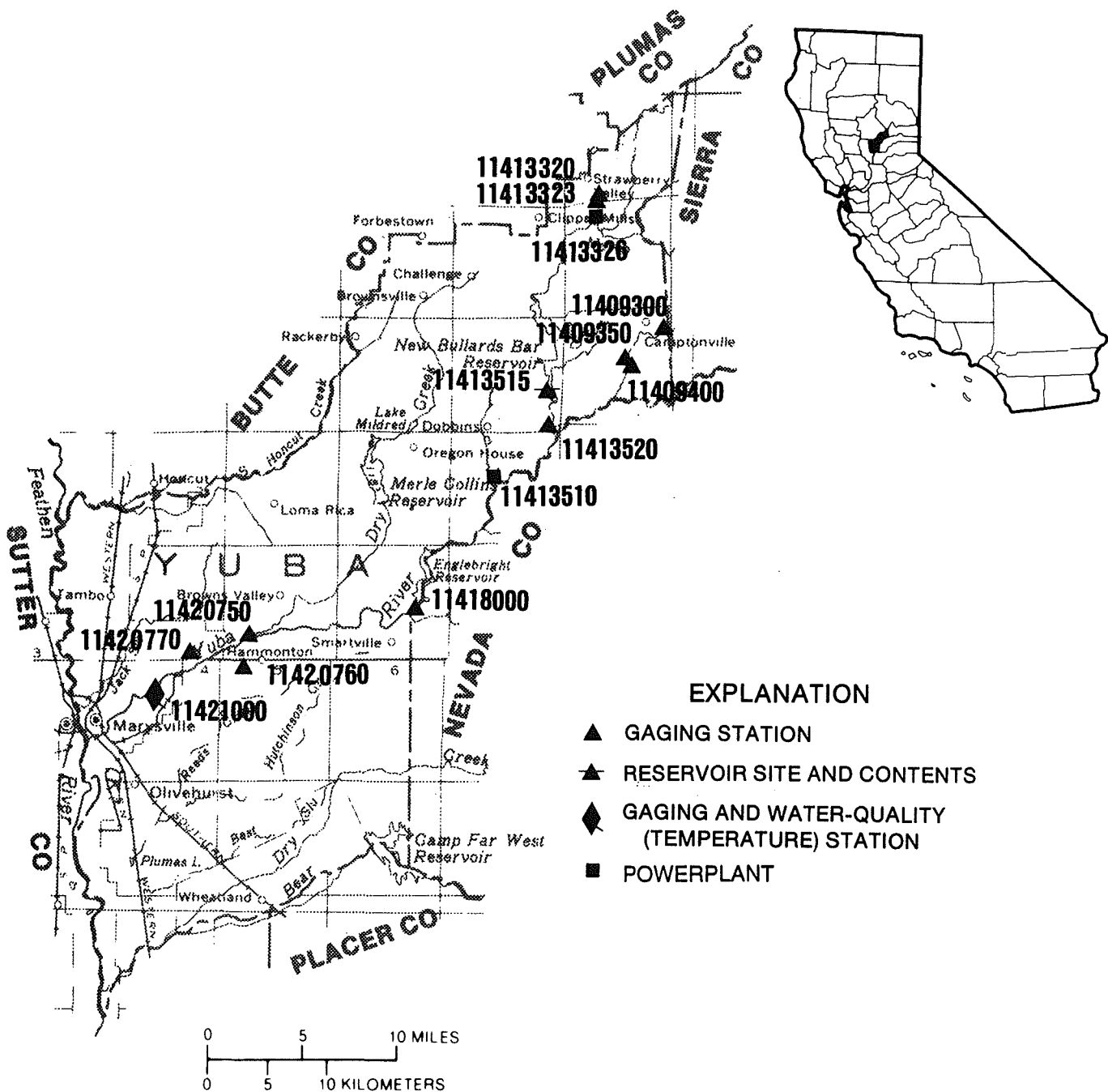


Figure 22. Location of discharge and water-quality stations in Yuba County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
e	Estimated value.
>	Actual value is 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 NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

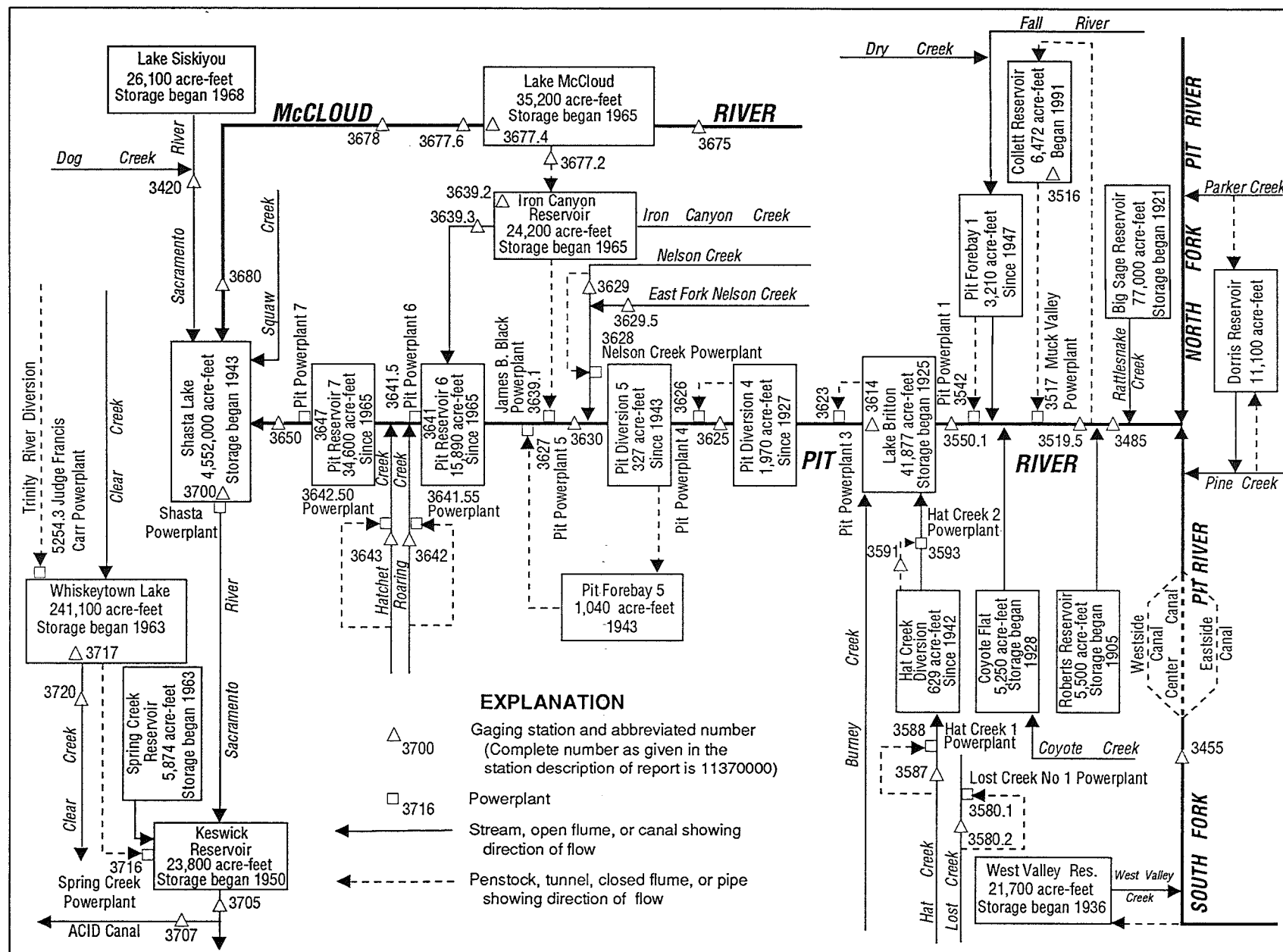


Figure 23. Diversions and storage in Pit and McCloud River basins.

SACRAMENTO RIVER BASIN

11342000 SACRAMENTO RIVER AT DELTA, CA

LOCATION.--Lat 40°56'23", long 122°24'58", in SW 1/4 NW 1/4 sec.35, T.36 N., R.5 W, Shasta County, Hydrologic Unit 18020005, U.S. Bureau of Reclamation property, on left bank 0.2 mi downstream from Dog Creek, 0.6 mi southeast of Delta, 2.8 mi south of Lamoine, and 29 mi downstream from Lake Siskiyou.

DRAINAGE AREA.--425 mi².

PERIOD OF RECORD.--October 1944 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1951-81.

WATER TEMPERATURE: Water years 1951, 1954-57, 1963-79.

REVISED RECORDS.--WSP 1395: 1951(M). WDR-CA-94-4: 1993(P).

GAGE.--Water-stage recorder. Datum of gage is 1,075.00 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Records excellent. Some regulation by Lake Siskiyou, capacity, 26,100 acre-ft, since December 1968. Some minor diversions for irrigation upstream from station. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s, Jan. 16, 1974, gage height, 27.20 ft in gage well, 28.7 ft from floodmarks, from rating curve extended above 19,000 ft³/s on basis of slope-area measurements at gage height 19.50 ft, and of peak flow; minimum daily, 117 ft³/s, Aug. 5, 6, 12-15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0900	10,700	10.91	Feb. 21	0215	12,000	11.31
Feb. 5	0245	9,380	10.50	May 17	1830	11,900	11.28
Feb. 17	0515	10,300	10.80				

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	265	260	334	659	1110	2460	1980	1780	1030	460	301	250
2	263	259	296	637	1060	2410	1890	1750	991	445	296	249
3	260	256	290	660	1070	2520	1640	1620	960	434	295	248
4	257	255	378	633	5040	5300	1500	1500	932	423	294	240
5	259	257	363	608	7660	5950	1440	1350	880	411	293	229
6	260	257	349	582	5580	3890	1460	1250	857	403	291	250
7	260	259	299	558	4600	3070	1550	1240	822	391	288	248
8	260	259	271	541	4060	2810	1660	1190	798	387	285	247
9	260	262	265	715	3680	3080	1750	1140	752	383	281	245
10	260	261	344	823	3250	3280	1640	1120	719	375	277	243
11	261	271	1340	683	2900	4630	1470	1100	705	369	272	242
12	265	260	6570	644	2560	4070	1330	1180	679	362	273	245
13	261	259	3350	724	2350	3240	1230	1230	657	358	272	258
14	258	259	2070	575	2160	2850	1180	1410	632	354	275	272
15	257	254	4650	708	1980	2630	1240	1800	620	372	271	345
16	257	258	1990	2230	2500	2480	2410	1560	605	368	268	283
17	259	260	1450	2240	7940	2360	1910	5480	588	357	266	266
18	257	270	1220	1510	6620	2340	1660	5210	563	353	259	261
19	254	262	1020	1250	7710	2350	1560	3040	557	345	262	259
20	254	259	732	1390	7460	2310	1480	2290	553	338	267	257
21	254	262	623	1580	9100	2100	1420	2300	587	331	266	256
22	254	266	578	1210	5360	2040	1360	2210	512	327	262	252
23	257	262	544	1060	3800	1870	1440	1860	507	323	259	253
24	257	259	512	1110	3040	1730	2900	1650	524	325	257	253
25	258	260	494	1060	2550	1520	2640	1500	561	318	256	251
26	259	272	477	967	2250	1450	2340	1400	524	313	256	248
27	258	260	468	1040	2060	1450	2120	1580	580	310	257	247
28	256	258	467	936	2100	1400	1850	1380	525	313	259	246
29	255	256	550	890	2650	1270	1710	1250	497	321	250	246
30	254	258	668	929	---	1220	1700	1170	478	313	252	246
31	257	---	738	1010	---	1180	---	1100	---	305	250	---
TOTAL	8006	7810	33700	30162	114200	81260	51460	55640	20195	11187	8410	7635
MEAN	258	260	1087	973	3938	2621	1715	1795	673	361	271	254
MAX	265	272	6570	2240	9100	5950	2900	5480	1030	460	301	345
MIN	254	254	265	541	1060	1180	1180	1100	478	305	250	229
AC-FT	15880	15490	66840	59830	226500	161200	102100	110400	40060	22190	16680	15140

SACRAMENTO RIVER BASIN

47

11342000 SACRAMENTO RIVER AT DELTA, 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	360	782	1283	1778	2228	2236	1999	1669	778	330	231	231
MAX	1837	6075	4310	7162	9557	7957	4264	4216	3090	1142	462	514
(WY)	1951	1974	1956	1995	1958	1983	1963	1983	1983	1983	1983	1957
MIN	150	187	197	214	226	243	264	410	229	145	122	154
(WY)	1945	1992	1977	1991	1977	1977	1977	1977	1977	1977	1977	1991

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1945 - 1996			
ANNUAL TOTAL	809731				429665							
ANNUAL MEAN	2218				1174				1153			
HIGHEST ANNUAL MEAN									2715			
LOWEST ANNUAL MEAN									228			
HIGHEST DAILY MEAN	32800				Jan 9				9100			
LOWEST DAILY MEAN	237				Jan 2				Feb 21			
ANNUAL SEVEN-DAY MINIMUM	255				Oct 18				229			
INSTANTANEOUS PEAK FLOW									Sep 5			
INSTANTANEOUS PEAK STAGE									Sep 4			
ANNUAL RUNOFF (AC-FT)	1606000				11.31				Feb 21			
10 PERCENT EXCEEDS	4970				2630				69800			
50 PERCENT EXCEEDS	925				569				27.20			
90 PERCENT EXCEEDS	259				256				835400			

SACRAMENTO RIVER BASIN

11345500 SOUTH FORK PIT RIVER NEAR LIKELY, CA

LOCATION.--Lat 41°13'51", long 120°26'10", in NE 1/4 SE 1/4 sec.11, T.39 N., R.13 E., Modoc County, Hydrologic Unit 18020002, on left bank 250 ft downstream from highway bridge, 1.4 mi downstream from West Valley Creek, and 3.5 mi east of Likely.

DRAINAGE AREA.--247 mi².

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1951-79.

WATER TEMPERATURE: Water years 1965-79.

SEDIMENT DATA: Water years 1957-61, 1967-70.

REVISED RECORDS.--WSP 1931: Drainage area. WDR CA-88-4: 1983(M).

GAGE.--Water-stage recorder. Datum of gage is 4,507.74 ft above sea level. Prior to Oct. 1, 1931, at site 1,000 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges for the ice-affected periods, Dec. 22-27, Jan. 22-26 and Feb. 25-28, which are poor. Considerable regulation by West Valley Reservoir on West Valley Creek beginning in May 1937, usable capacity, 21,700 acre-ft. Diversions for irrigation of about 3,800 acres upstream from station. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s, June 2, 1971, gage height, 6.05 ft; minimum, 0.2 ft³/s, Feb. 3, 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	32	35	20	107	39	61	321	315	335	103	196	147
2	32	26	21	78	39	75	375	343	316	102	183	146
3	32	14	17	69	38	93	327	369	303	121	176	146
4	34	15	18	61	90	103	291	368	298	126	176	117
5	35	16	23	53	187	85	266	358	297	126	174	110
6	38	15	24	50	186	74	252	353	295	125	172	109
7	38	15	24	47	177	75	252	346	287	123	183	108
8	37	15	21	44	154	70	261	334	277	123	189	108
9	37	16	21	45	124	69	269	328	269	137	189	108
10	36	17	22	55	108	64	271	328	257	150	184	107
11	36	17	20	52	93	63	275	332	242	156	167	128
12	40	17	70	46	83	63	269	347	223	175	161	142
13	39	17	72	41	77	58	260	367	212	186	164	142
14	37	16	44	37	72	55	256	402	201	189	169	144
15	36	19	44	55	69	54	256	460	189	193	147	146
16	36	17	39	91	68	55	265	510	179	186	135	124
17	36	16	38	77	71	54	266	566	168	157	128	106
18	35	17	34	55	77	58	275	577	161	148	122	103
19	35	18	27	47	98	61	266	584	170	152	118	101
20	35	17	25	45	105	69	258	563	170	169	118	100
21	35	16	22	42	91	77	251	511	177	174	117	80
22	35	16	e22	e42	84	84	246	544	174	179	122	63
23	36	16	e23	e41	78	82	247	541	170	197	149	52
24	36	15	e22	e41	69	75	259	490	176	203	165	42
25	36	17	e22	e41	e60	73	270	e459	177	203	173	45
26	37	23	e23	e41	e55	66	283	415	174	182	174	47
27	37	17	e23	40	e50	70	294	446	184	172	174	48
28	37	20	25	41	e52	85	298	481	159	168	172	45
29	36	19	30	40	54	124	292	446	132	167	161	45
30	36	17	157	39	---	217	300	410	114	186	147	45
31	35	---	179	40	---	292	---	370	---	197	147	---
TOTAL	1112	531	1172	1603	2548	2604	8271	13263	6486	4975	4952	2954
MEAN	35.9	17.7	37.8	51.7	87.9	84.0	276	428	216	160	160	98.5
MAX	40	35	179	107	187	292	375	584	335	203	196	147
MIN	32	14	17	37	38	54	246	315	114	102	117	42
AC-FT	2210	1050	2320	3180	5050	5170	16410	26310	12860	9870	9820	5860

e Estimated.

SACRAMENTO RIVER BASIN

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11345500 SOUTH FORK PIT RIVER NEAR LIKELY, 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	31.2	28.1	28.6	30.3	35.5	49.0	109	231	174	89.1	114	56.4
MAX	63.2	57.8	107	93.0	101	219	385	570	610	238	236	159
(WY)	1963	1985	1965	1965	1965	1972	1952	1984	1971	1995	1995	1975
MIN	15.7	5.17	3.28	5.99	4.07	4.63	16.9	25.7	12.1	7.70	9.97	10.5
(WY)	1932	1980	1980	1941	1978	1977	1991	1931	1931	1931	1934	1931

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1929 - 1996

ANNUAL TOTAL	57272.1	50471	
ANNUAL MEAN	157	138	81.6
HIGHEST ANNUAL MEAN			183
LOWEST ANNUAL MEAN			27.3
HIGHEST DAILY MEAN	762	May 6	1220
LOWEST DAILY MEAN	9.0	Feb 19	.80
ANNUAL SEVEN-DAY MINIMUM	10	Feb 17	1.1
INSTANTANEOUS PEAK FLOW			1620
INSTANTANEOUS PEAK STAGE			6.05
ANNUAL RUNOFF (AC-FT)	113600	100100	59140
10 PERCENT EXCEEDS	467	307	187
50 PERCENT EXCEEDS	69	103	42
90 PERCENT EXCEEDS	16	22	12

SACRAMENTO RIVER BASIN

11348500 PIT RIVER NEAR CANBY, CA

LOCATION.--Lat 41°24'22", long 120°55'36", in NW 1/4 SW 1/4 sec.10, T.41 N., R.9 E., Modoc County, Hydrologic Unit 18020002, on right bank at lower end of Warm Spring Valley, 3.9 mi southwest of Canby.

DRAINAGE AREA.--1,431 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--January 1904 to December 1905, May 1929 to current year (1929-31 incomplete).

CHEMICAL DATA: Water years 1951-79.

WATER TEMPERATURE: Water years 1965-79.

SEDIMENT DATA: Water years 1957-61, 1967-70.

REVISED RECORDS.--WSP 1445: 1904, 1935(M), 1936, 1937(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,266.0 ft above sea level. January 1904 to December 1905, nonrecording gage and May 6, 1929, to Sept. 30, 1931, water-stage recorder, at site 100 ft upstream at different datum.

REMARKS.--Records good. Low flow regulated by many small reservoirs, total capacity about 144,000 acre-ft. Diversions for irrigation of about 39,000 acres upstream from station. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,000 ft³/s, Mar. 8, 1904, gage height, 15.0 ft, site and datum then in use; minimum daily, 0.1 ft³/s, several days in April 1934 and August 1935.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 1	0440	1,360	5.48	Mar. 5	2300	2,070	6.52
Jan. 17	2230	1,020	4.88	Apr. 5	0300	1,340	5.46
Feb. 8	0445	3,750	8.50	May 21	1030	1,490	5.68
Feb. 21	1530	3,920	8.67				

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	194	93	101	1260	337	896	835	597	679	236	82	73
2	179	92	100	682	333	929	960	599	683	170	85	83
3	108	100	99	432	322	1010	1150	616	590	153	82	54
4	77	78	88	357	483	1360	1290	638	477	126	72	51
5	69	89	89	284	1410	1870	1320	643	374	108	65	51
6	62	80	108	238	2860	1980	1190	563	388	87	56	50
7	64	71	99	208	3620	1800	1020	618	279	59	56	54
8	78	68	97	189	3690	1650	915	577	318	40	69	48
9	65	64	95	198	3270	1540	863	507	287	27	62	58
10	60	65	98	272	2590	1480	826	446	226	59	53	59
11	87	73	104	357	2010	1390	805	355	187	94	50	45
12	64	78	338	290	1470	1330	803	381	225	83	49	37
13	70	65	348	235	946	1160	766	414	209	73	43	37
14	99	73	420	203	723	930	674	393	188	59	51	48
15	80	71	541	202	650	765	597	465	175	40	84	123
16	66	70	543	403	596	661	632	626	150	38	91	186
17	66	66	448	837	571	617	665	842	134	49	89	255
18	69	69	315	858	724	578	695	1060	64	182	64	276
19	73	77	313	495	1680	562	713	1230	87	65	66	191
20	86	113	231	357	2710	558	731	1250	114	55	77	161
21	81	73	199	357	3800	557	723	1350	114	79	82	119
22	71	68	181	330	3350	529	698	1380	104	78	95	86
23	77	52	134	282	2680	518	684	1310	82	69	114	66
24	81	47	117	242	2170	559	643	1220	91	70	98	61
25	70	52	126	229	1710	542	647	1140	107	68	73	67
26	68	57	117	251	1330	469	667	1010	124	73	55	63
27	77	64	123	266	1060	410	686	905	160	108	69	63
28	71	70	116	309	928	512	667	854	272	130	85	54
29	73	85	130	376	882	649	663	888	382	118	86	57
30	82	85	391	378	---	691	635	820	294	87	77	58
31	81	---	1060	347	---	748	---	616	---	78	75	---
TOTAL	2548	2208	7269	11724	48905	29250	24163	24313	7564	2761	2255	2634
MEAN	82.2	73.6	234	378	1686	944	805	784	252	89.1	72.7	87.8
MAX	194	113	1060	1260	3800	1980	1320	1380	683	236	114	276
MIN	60	47	88	189	322	410	597	355	64	27	43	37
AC-FT	5050	4380	14420	23250	97000	58020	47930	48220	15000	5480	4470	5220

SACRAMENTO RIVER BASIN

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11348500 PIT RIVER NEAR CANBY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.4	103	190	295	429	554	474	456	266	66.1	43.1	63.1
MAX	1068	418	1225	1684	2249	1749	2774	2176	1746	312	125	150
(WY)	1963	1982	1938	1970	1986	1972	1952	1995	1971	1971	1983	1984
MIN	.26	12.7	31.0	14.7	19.2	5.83	1.29	2.32	3.53	4.62	.22	.28
(WY)	1935	1935	1937	1937	1937	1934	1934	1992	1992	1931	1934	1934

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1904 - 1996			
ANNUAL TOTAL	209781				165594							
ANNUAL MEAN	575				452				249			
HIGHEST ANNUAL MEAN									676			
LOWEST ANNUAL MEAN									22.4			
HIGHEST DAILY MEAN	5300				May 2				8580			
LOWEST DAILY MEAN	13				Aug 14				.10			
ANNUAL SEVEN-DAY MINIMUM	20				Aug 17				.13			
INSTANTANEOUS PEAK FLOW					3920				13000			
INSTANTANEOUS PEAK STAGE					8.67				15.00			
ANNUAL RUNOFF (AC-FT)	416100				328500				180700			
10 PERCENT EXCEEDS	1380				1150				643			
50 PERCENT EXCEEDS	273				190				93			
90 PERCENT EXCEEDS	55				60				16			

SACRAMENTO RIVER BASIN

11351600 COLLETT RESERVOIR NEAR LITTLE VALLEY, CA

LOCATION.--Lat 40°58'00", long 121°13'00", unsurveyed, Lassen County, Hydrologic Unit 18020003, on right bank, 1.9 mi east of Muck Valley powerplant, 5.5 mi northwest of Little Valley, and 9.1 mi southwest of Nubieber.

PERIOD OF RECORD.--October 1991 to September 1992. October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Lake is formed by earth and rockfill dam. Storage began December 31, 1990. Water is diverted from the Pit River through a tunnel to the reservoir. Operating pool from elevation 4,030 ft, capacity 155 acre-ft, to 4,065 ft, capacity 7,693 acre-ft. Crest of spillway is at elevation 4,065 ft. Reservoir is used for power generation. Figures given represent total contents. Data not published below the minimum operating level at elevation 4,030 ft, capacity 155 acre-ft. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were provided by Malacha Hydro Limited Partnership, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Malacha Hydro Limited Partnership, dated November 1991)

4,030	155
4,032	395
4,035	931
4,040	1,899
4,050	4,052
4,065	7,693

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	432	273	e237	3063	3956	3783	3494	5825	6710	4629	1119	e194
2	e481	273	e237	3781	3942	3771	3484	5877	6583	4614	1142	e194
3	493	273	e237	4202	3925	3762	3474	5910	6462	4851	1148	e194
4	771	273	e237	4205	3953	3762	3461	5940	6336	5234	1148	e194
5	1038	273	e209	4195	3958	3762	3449	5974	6205	5145	953	e194
6	1058	273	e191	4194	3955	3751	3595	6004	6514	5224	839	e219
7	1058	273	e169	4194	3944	3738	3734	6032	7050	5272	688	e227
8	1058	273	e169	3847	3944	3725	3869	6056	7445	5060	565	e227
9	857	273	e169	3469	3930	3715	4006	6101	7526	4817	469	e227
10	664	273	e169	3212	3917	3742	4140	6140	7415	4570	469	e227
11	515	273	e169	2972	3903	3738	4284	6737	7396	4325	469	e227
12	515	273	e457	2791	3888	3727	4406	7211	7342	4077	426	e227
13	e467	273	1736	2531	3875	3712	4497	7203	7260	4071	366	e227
14	e467	273	2930	2046	3862	3700	4587	7274	7024	4066	e310	e227
15	e467	237	3226	1678	3847	3684	4675	7367	7009	3823	e310	e227
16	e487	237	3198	1743	3836	3671	4766	7322	6991	3568	e270	e220
17	e416	237	3167	2303	3827	3657	4861	7186	6689	3322	e270	e198
18	e376	237	3059	3001	3820	3644	4942	7193	6387	3074	e270	e187
19	e376	237	3028	3743	3836	3631	5030	7232	6091	2829	e240	e189
20	e377	237	3028	4066	3827	3618	5109	7272	6189	2822	e222	e191
21	e377	237	3028	4060	3847	3604	5187	7325	6102	2819	e212	e191
22	380	237	3028	4060	3845	3594	5258	7374	6094	2583	e206	e193
23	380	237	3028	4034	3850	3582	5330	7415	6082	2331	e200	e249
24	446	237	3028	4030	3850	3566	5405	7452	5818	2082	e200	e415
25	440	237	2995	4021	3837	3554	5470	7487	5531	1828	e200	822
26	e400	237	2980	4013	3823	3540	5535	7405	5285	1579	e194	848
27	374	237	2969	4013	3811	3535	5595	7313	5038	1579	e194	e696
28	374	237	2969	4005	3799	3533	5653	7201	4792	1579	e194	762
29	374	237	2969	3991	3788	3518	5710	7084	4785	1579	e194	773
30	e342	237	e2969	3980	---	3508	5771	6964	4806	1579	e194	e627
31	e273	---	2931	3966	---	3494	---	6832	---	1332	e194	---
MAX	1058	273	3226	4205	3958	3783	5771	7487	7526	5272	1148	848
MIN	273	237	169	1678	3788	3494	3449	5825	4785	1332	194	187
a	2200	2760	13240	31350	35250	37400	31630	29340	12410	4880	1390	928

e Estimated.

a Discharge, in acre-feet, for Muck Valley Powerplant (station 11351700), provided by Malacha Hydro Limited Partnership.

11351950 PIT RIVER BELOW DIVERSION TO MUCK VALLEY POWERPLANT, NEAR BIEBER, CA

LOCATION.--Lat 41°00'55", long 121°09'13", in NE 1/4 SW 1/4 sec.27, T.37 N., R.7 E., Lassen County, Hydrologic Unit 18020003, on right bank 1.7 mi upstream from North Gulch, 2.2 mi upstream from Spring Gulch, and 7.4 mi south of Bieber.

DRAINAGE AREA.--2,475 mi², excluding Goose Lake Basin.

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

GAGE.--Acoustic velocity meter measures minimum bypass flow and water-stage recorder and Ogee weir for spillway. Elevation of gage is 4,120 ft above sea level, from topographic map.

REMARKS.--Flow at this station has two components which are combined for publication: low flow release (station 11351946) and flow over Ogee weir (station 11351948). Water is diverted upstream of weir through a tunnel to Collett Reservoir (station 11351600), for power generation. During powerplant operation, the minimum release is 50 ft³/s. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were provided by Malacha Hydro Limited Partnership, 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, 10,400 ft³/s, May 3, 1995; no flow many days during 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	53	54	53	720	309	1810	1030	542	618	52	31	4.0
2	53	54	53	1030	309	1820	1190	472	506	52	40	5.0
3	43	54	53	829	309	1920	1370	414	446	52	39	6.0
4	47	53	53	344	609	2140	1470	368	367	52	12	13
5	53	53	53	54	2060	2820	1500	398	263	53	2.0	25
6	52	53	53	53	4010	3430	1490	383	e88	53	2.0	41
7	39	53	53	53	5030	3390	1400	331	e103	53	3.0	47
8	36	53	53	53	5480	3200	1210	331	54	53	4.0	24
9	45	54	53	53	5430	2960	1040	309	53	49	3.0	19
10	40	54	53	54	4790	2900	946	203	53	29	2.0	13
11	38	53	53	54	4010	2920	887	54	53	25	2.0	11
12	34	54	52	55	3240	2880	887	53	53	20	2.0	9.0
13	44	53	296	54	2490	2780	887	53	53	16	2.0	10
14	44	53	289	53	1760	2470	829	53	53	11	2.0	9.0
15	38	53	352	54	1180	2070	731	54	48	9.0	2.0	9.0
16	49	53	709	237	911	1720	628	54	38	6.0	1.0	8.0
17	47	54	488	887	786	1410	720	257	37	3.0	1.0	8.0
18	45	54	323	1110	877	1230	852	462	25	5.0	.00	7.0
19	43	54	54	1200	1890	1090	910	752	6.0	12	3.0	31
20	31	53	53	853	3850	1010	946	1120	51	14	7.0	48
21	34	53	53	455	6220	946	970	1340	53	8.0	8.0	29
22	42	53	53	431	6810	853	958	1360	33	8.0	11	33
23	36	53	53	303	6570	807	876	1390	.00	9.0	2.0	53
24	42	54	53	212	5410	742	796	1310	12	10	.00	53
25	52	53	53	229	4500	753	752	1190	29	9.0	.00	53
26	41	54	53	e53	3600	720	678	1060	11	7.0	4.0	53
27	44	54	53	54	2840	638	678	1210	3.0	8.0	19	53
28	41	54	53	e70	2300	721	658	1150	27	8.0	6.0	53
29	39	54	53	222	1990	853	619	958	33	20	3.0	49
30	47	55	53	269	---	1030	580	863	26	e16	2.0	39
31	49	---	181	309	---	1010	---	795	---	e30	3.0	---
TOTAL	1341	1606	3910	10407	89570	55043	28488	19289	3195.00	752.0	218.00	815.0
MEAN	43.3	53.5	126	336	3089	1776	950	622	106	24.3	7.03	27.2
MAX	53	55	709	1200	6810	3430	1500	1390	618	53	40	53
MIN	31	53	52	53	309	638	580	53	.00	3.0	.00	4.0
AC-FT	2660	3190	7760	20640	177700	109200	56510	38260	6340	1490	432	1620

e Estimated.

SACRAMENTO RIVER BASIN

11351950 PIT RIVER BELOW DIVERSION TO MUCK VALLEY POWERPLANT, NEAR BIEBER, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.4	51.9	90.0	991	2021	2546	1313	2151	283	35.2	5.13	26.9
MAX	43.3	53.5	126	1647	3089	3316	1677	3679	459	46.1	7.03	27.2
(WY)	1996	1996	1996	1995	1996	1995	1995	1995	1995	1995	1996	1996
MIN	21.5	50.3	54.0	336	916	1776	950	622	106	24.3	3.23	26.7
(WY)	1995	1995	1995	1996	1995	1996	1996	1996	1996	1996	1995	1995

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1995 - 1996

ANNUAL TOTAL	366827.00	214634.00	
ANNUAL MEAN	1005	586	791
HIGHEST ANNUAL MEAN			997
LOWEST ANNUAL MEAN			586
HIGHEST DAILY MEAN	10400	May 3	10400
LOWEST DAILY MEAN	.00	Jul 27	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 3	.00
ANNUAL RUNOFF (AC-FT)	727600	425700	573300
10 PERCENT EXCEEDS	3340	1730	2490
50 PERCENT EXCEEDS	54	53	54
90 PERCENT EXCEEDS	8.2	8.0	6.0

11354200 PIT NO. 1 POWERPLANT NEAR FALL RIVER MILLS, CA

LOCATION.--Lat 40°59'28", long 121°29'49", in SE 1/4 NE 1/4 sec.10, T.37 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on right bank of Pit River 2.3 mi downstream from Pit River Falls and 3.2 mi southwest of Fall River Mills.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1973-86 available in files of the U.S. Geological Survey. Fragmentary record for water years 1922-72 available in files of the Pacific Gas & Electric Co.

GAGE.--Discharge computed from powerplant output.

REMARKS.--Water is diverted from Fall River at Pit No. 1 Forebay at NW 1/4 SW 1/4 sec.25, T.37 N., R.4 E., through a tunnel to powerplant and then into Pit River. See schematic diagram of Pit and McCloud River basins.

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, 2,490 ft³/s, Mar. 13, 1995; no flow, Aug. 21, 1992, Feb. 9-13, 1994, Dec. 13, 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	1130	1110	1140	1160	885	1700	1640	1430	1450	1140	1180	1170
2	1020	1100	1150	1160	1090	1700	1730	1240	1420	1160	1180	1080
3	1090	1170	1170	1140	1120	1660	1720	1430	1450	1140	1180	1050
4	1030	1150	1080	1210	1320	1630	1640	1390	1280	1090	1190	1170
5	1020	1060	1110	1180	1620	1900	1560	1280	1330	1190	1200	1160
6	1010	1080	1130	1140	1590	1930	1490	1310	1250	1130	1190	1180
7	1160	1110	1070	1160	1760	1770	1400	1310	1290	1110	1180	1190
8	1150	1130	1230	1160	1740	1680	1470	1320	1230	1130	1190	1180
9	984	1160	1120	1260	1590	1650	1490	1220	1210	1110	1180	1180
10	1130	1150	1100	1050	1510	1640	1590	1240	1260	1130	1130	1170
11	1160	1080	1160	1300	1520	1660	1500	1260	1200	1120	1170	1170
12	1200	1140	122	1170	1460	1840	1520	1200	1230	1140	1090	1170
13	1200	1150	.00	1180	1480	1840	1550	1190	1160	1090	1120	1140
14	1070	1080	82	1150	1250	1660	1760	1280	1250	1080	1140	1170
15	1100	1190	1410	1200	1210	1640	1780	1570	1190	1050	1150	1170
16	1150	1140	1370	1290	1370	1640	1690	1660	1070	1110	1210	1170
17	1120	1140	1270	1380	1380	1600	1680	1440	1170	1100	1140	1170
18	1180	1090	1150	1360	1960	1600	1600	1840	1170	1140	1100	1180
19	1160	1110	1130	1230	2120	1620	1560	2100	1160	1170	1150	1180
20	1070	1160	1350	1370	1800	1540	1550	2120	1160	1100	1210	1170
21	1080	1180	1160	1430	2040	1550	1550	1920	1190	1050	1150	1180
22	1100	1110	1160	1230	2130	1540	1520	1780	1190	1150	1150	1180
23	896	1110	1150	1240	2090	1640	1420	1710	1120	1090	1150	1170
24	1060	1100	1160	1260	2110	1640	1390	1630	1210	1120	1150	1160
25	1060	1080	1100	1520	2080	1660	1640	1530	1150	1120	878	1170
26	1080	1180	1140	1320	1930	1490	1650	1450	1190	1120	1180	1190
27	1090	1160	1220	1310	1860	1490	1500	1680	1200	1110	1190	1140
28	1280	1070	1160	1280	1710	1640	1480	1530	1210	1130	1190	1180
29	1130	1130	1170	1260	1700	1530	1440	1490	1230	1130	1190	1170
30	1120	1160	1200	1250	---	1520	1430	1490	1110	1180	1190	1160
31	1130	---	1210	1300	---	1400	---	1470	---	1180	1170	---
TOTAL	34160	33780	33174.00	38650	47425	51000	46940	46510	36730	34810	35868	34920
MEAN	1102	1126	1070	1247	1635	1645	1565	1500	1224	1123	1157	1164
MAX	1280	1190	1410	1520	2130	1930	1780	2120	1450	1190	1210	1190
MIN	896	1060	.00	1050	885	1400	1390	1190	1070	1050	878	1050
AC-FT	67760	67000	65800	76660	94070	101200	93110	92250	72850	69050	71140	69260

SACRAMENTO RIVER BASIN

11354200 PIT NO. 1 POWERPLANT NEAR FALL RIVER MILLS, 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	1093	1108	1099	1142	1164	1407	1368	1268	1115	1031	1009	1044
MAX	1318	1283	1274	1293	1635	1971	1927	1846	1362	1200	1157	1177
(WY)	1987	1987	1987	1995	1996	1995	1995	1995	1995	1995	1996	1987
MIN	941	971	986	996	749	1053	1013	947	914	844	835	900
(WY)	1995	1995	1995	1992	1994	1992	1994	1992	1994	1992	1992	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1987 - 1996		
ANNUAL TOTAL	499440.00			473967.00					
ANNUAL MEAN	1368			1295			1154		
HIGHEST ANNUAL MEAN							1335		
LOWEST ANNUAL MEAN							955		
HIGHEST DAILY MEAN	2490			Mar 13			2130		
LOWEST DAILY MEAN	.00			Dec 13			Feb 22		
ANNUAL SEVEN-DAY MINIMUM	688			Dec 8			.00		
ANNUAL RUNOFF (AC-FT)	990600			940100			835900		
10 PERCENT EXCEEDS	2040			1660			1430		
50 PERCENT EXCEEDS	1200			1190			1120		
90 PERCENT EXCEEDS	1070			1090			927		

11355010 PIT RIVER BELOW PIT NO. 1 POWERPLANT, NEAR FALL RIVER MILLS, CA

LOCATION.--Lat 40°59'00", long 121°30'39", in NE 1/4 NW 1/4 sec.15, T.36 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on left bank 0.9 mi downstream from Pit No. 1 Powerplant and 4 mi southwest of Fall River Mills.

DRAINAGE AREA.--3,761 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,798.21 ft above sea level (levels by Pacific Gas and Electric Co.).

REMARKS.--Records good. Low flow regulated by many small reservoirs (total usable reservoir capacity, 210,000 acre-ft) and Pit No. 1 Powerplant. Many diversions upstream from station for irrigation. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s, Feb. 20, 1986, gage height, 17.03 ft; minimum daily, 535 ft³/s, Sept. 11, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1974 reached a stage of 14.8 ft, from floodmarks on right bank, discharge 22,600 ft³/s.

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)
Feb. 8	1915	8,220	10.53	May 27	1415	4,260	8.33
Feb. 22	0445	11,300	11.82				

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	1330	1420	1620	e2180	2160	4310	3390	2580	2750	1360	1350	1270
2	1610	1840	1360	e2590	2300	4260	3700	2350	2550	1430	1420	1170
3	1300	1540	1430	e2520	2260	4290	3800	2450	2560	1460	1420	1110
4	1210	1950	1920	e2400	2990	4470	3820	2390	2330	1420	1340	1250
5	1190	1840	1970	e2100	4650	5450	3770	2280	2260	1410	1340	1250
6	1290	1350	1900	e1900	5990	6060	3630	2300	1970	1440	1360	1280
7	1850	1760	1540	e1800	7470	5980	3540	2290	1690	1340	1330	1270
8	1500	1410	1460	e1910	7890	5700	3380	2270	1570	1360	1350	1270
9	1690	1900	1360	e1970	7870	5400	3200	2190	1650	1420	1340	1290
10	1680	1490	1350	e1950	7290	5220	3170	2150	1750	1440	1270	1280
11	1450	1560	1450	e2140	6570	5260	3020	1850	1600	1420	1300	1270
12	1420	1780	1600	e2100	5690	5560	3010	1530	1540	1410	1190	1270
13	1360	1640	1890	e2090	4940	5420	3050	1520	1490	1390	1200	1270
14	1270	1960	1790	e2070	4010	4970	3190	1670	1600	1290	1250	1280
15	1360	1940	2480	e2100	3370	4530	3130	1960	1500	1250	1250	1280
16	1440	1970	2830	e2400	3160	4140	2910	2390	1340	1340	1320	1280
17	1300	1860	2580	e2700	3000	3820	2920	2340	1390	1370	1230	1280
18	1450	1860	2210	e2900	3470	3580	3030	2790	1480	1410	1180	1280
19	1800	1770	2050	e2880	4810	3450	3070	3240	1480	1430	1250	1290
20	1300	1330	2060	e2810	7210	3260	3140	3570	1460	1380	1250	1290
21	1280	1460	1750	e2750	9700	3200	3150	3690	1500	1270	1250	1290
22	1310	1870	1570	e2500	10800	3140	3080	3650	1470	1320	1240	1290
23	1110	1490	e1520	e2320	10200	3200	2930	3560	1330	1350	1230	1300
24	1230	1870	e1500	e2350	9180	3150	2800	3440	1380	1390	1240	1320
25	1240	1930	e1450	e2390	7980	3130	2940	3240	1420	1400	887	1370
26	1300	1930	e1440	e2250	6730	2970	2900	3110	1500	1380	1290	1400
27	1300	1680	e1510	e2090	5770	2880	2760	3880	1490	1370	1300	1420
28	1530	1920	e1500	e2100	4950	3080	2730	3420	1490	1320	1290	1410
29	1340	1880	e1550	e2150	4510	3160	2670	3110	1460	1280	1290	1320
30	1770	1910	e1600	e2300	---	3250	2590	2970	1370	1310	1290	1310
31	1580	---	e1900	2460	---	3180	---	2890	---	1310	1270	---
TOTAL	43790	52110	54140	71170	166920	129470	94420	83070	50370	42470	39517	38660
MEAN	1413	1737	1746	2296	5756	4176	3147	2680	1679	1370	1275	1289
MAX	1850	1970	2830	2900	10800	6060	3820	3880	2750	1460	1420	1420
MIN	1110	1330	1350	1800	2160	2880	2590	1520	1330	1250	887	1110
AC-FT	86860	103400	107400	141200	331100	256800	187300	164800	99910	84240	78380	76680

e Estimated.

SACRAMENTO RIVER BASIN

11355010 PIT RIVER BELOW PIT NO. 1 POWERPLANT, NEAR FALL RIVER MILLS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1370	1595	1759	2101	2777	3238	2528	2210	1569	1287	1250	1288
MAX	1722	3181	3834	5351	8539	6539	5614	6883	2789	1666	1563	1623
(WY)	1976	1982	1984	1980	1986	1993	1982	1995	1983	1983	1983	1983
MIN	939	1133	1214	1222	1268	1294	1173	1050	1012	954	828	784
(WY)	1995	1993	1993	1991	1994	1992	1992	1992	1992	1994	1994	1994
SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR					FOR 1996 WATER YEAR				WATER YEARS 1975 - 1996		
ANNUAL TOTAL	1101780					866107						
ANNUAL MEAN	3019					2366				1908		
HIGHEST ANNUAL MEAN										2895		
LOWEST ANNUAL MEAN										1149		
HIGHEST DAILY MEAN	15900					May 3				28800		
LOWEST DAILY MEAN	1110					Oct 23				535		
ANNUAL SEVEN-DAY MINIMUM	1250					Oct 20				663		
INSTANTANEOUS PEAK FLOW						11300				30000		
INSTANTANEOUS PEAK STAGE						11.82				17.03		
ANNUAL RUNOFF (AC-FT)	2185000					1718000				1382000		
10 PERCENT EXCEEDS	6270					4050				3130		
50 PERCENT EXCEEDS	1970					1800				1460		
90 PERCENT EXCEEDS	1290					1280				1150		

11358020 LOST CREEK BELOW DIVERSION TO LOST CREEK POWERPLANT NO. 1, NEAR OLD STATION, CA

LOCATION.--Lat 40°45'35", long 121°24'46", in NW 1/4 SW 1/4 sec.34, T.34 N., R.5 E., Shasta County, Hydrologic Unit 18020003, on right bank 0.4 mi downstream from Lost Creek Diversion Dam, 2.5 mi downstream from Porcupine Reservoir, 6.0 mi north of Old Station, and 13.2 mi southeast of Cassel.

DRAINAGE AREA.--7.53 mi².

PERIOD OF RECORD.--October 1989 to current year (operated as low-flow station only).

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 3,900 ft above sea level, from topographic map.

REMARKS.--During times of powerplant operation, the minimum release requirement is 15 ft³/s; flow is computed to 80 ft³/s. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were collected by Snow Mountain Hydro, 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	15	15	16	15	15	16	18	16	16	16	16	16
2	15	15	15	15	15	16	18	16	19	16	16	16
3	15	15	15	15	16	16	16	16	19	16	16	16
4	15	15	16	15	18	16	16	16	16	16	16	16
5	15	15	15	15	30	16	16	16	16	16	16	16
6	15	15	15	15	16	16	16	16	16	16	16	16
7	15	15	15	15	15	15	16	16	16	16	16	16
8	15	15	16	15	16	16	16	16	16	16	16	16
9	15	15	15	18	15	15	16	16	16	16	16	16
10	15	15	15	15	15	16	15	16	16	16	20	16
11	16	15	16	15	15	22	16	16	16	20	16	16
12	23	15	38	15	15	41	16	16	16	20	22	16
13	16	18	49	15	16	16	16	16	16	16	16	16
14	15	15	50	15	16	15	16	16	16	20	16	16
15	15	15	e50	15	19	15	21	16	16	16	16	16
16	15	15	e50	15	16	16	18	16	16	16	16	16
17	15	15	e50	15	16	16	22	16	16	16	16	16
18	15	15	23	23	16	15	19	16	16	16	16	16
19	15	15	15	16	16	15	16	17	16	19	16	16
20	15	15	15	16	16	15	15	16	16	17	16	16
21	15	15	15	15	46	15	16	16	20	16	16	16
22	15	16	15	24	61	15	16	15	16	16	16	16
23	15	15	15	15	16	15	15	15	16	16	16	16
24	15	15	16	15	16	15	16	15	16	16	16	16
25	15	15	15	15	16	15	16	16	16	16	16	16
26	15	16	15	15	16	15	16	21	16	16	18	16
27	15	15	15	15	15	18	16	45	16	16	16	16
28	15	16	15	15	15	16	16	19	16	16	16	16
29	15	15	15	15	16	15	16	20	16	20	16	16
30	15	16	15	21	---	15	16	16	16	16	16	16
31	15	---	16	15	---	16	---	16	---	16	16	---
TOTAL	475	457	676	493	549	514	497	535	490	516	508	480
MEAN	15.3	15.2	21.8	15.9	18.9	16.6	16.6	17.3	16.3	16.6	16.4	16.0
MAX	23	18	50	24	61	41	22	45	20	20	22	16
MIN	15	15	15	15	15	15	15	15	16	16	16	16
AC-FT	942	906	1340	978	1090	1020	986	1060	972	1020	1010	952
a	2600	2570	2180	2760	3140	3670	3040	3190	2740	2860	2960	2900

WTR YR 1996 TOTAL 6190 MEAN 16.9 MAX 61 MIN 15 AC-FT 12280

e Estimated.

a Discharge, in acre-feet, for Lost Creek No. 1 Powerplant (station 11358010), provided by Snow Mountain Hydro.

SACRAMENTO RIVER BASIN

11358700 HAT CREEK BELOW HAT NO. 1 DIVERSION DAM, NEAR BURNEY, CA

LOCATION.--Lat 40°55'08", long 121°33'02", in NW 1/4 SW 1/4 sec.5, T.36 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on right bank at Hat No. 1 diversion dam on Hat Creek, 6.5 mi northeast of Burney.

DRAINAGE AREA.--347 mi².

PERIOD OF RECORD.--Oct. 1 to Dec. 8, 1987 (fragmentary), Dec. 9, 1987, to current year (operated as a low-flow station only). Unpublished fragmentary records for water years 1980-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Cipolletti weir. Elevation of gage is 3,180 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 2.0 ft³/s at all times. Flow is computed to 6.0 ft³/s. See schematic diagram of Pit and McCloud River basins.

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	2.9	3.0	2.7	2.7	2.8	2.7	2.7	2.9	2.5	2.9	2.6	3.0
2	2.9	2.9	2.7	2.7	2.8	2.7	2.8	2.9	2.3	2.7	2.7	3.1
3	2.8	2.7	2.7	2.7	2.8	2.7	2.8	2.8	2.6	2.7	2.6	3.0
4	2.8	2.7	2.7	2.8	2.8	2.9	2.8	2.8	2.8	2.6	2.6	2.9
5	2.9	2.7	2.7	2.7	4.2	2.8	2.8	2.8	2.8	2.7	2.6	2.9
6	2.8	2.7	2.8	2.7	4.8	2.8	2.8	2.8	2.7	2.7	2.5	2.9
7	3.0	3.9	2.8	2.7	4.7	2.8	2.7	2.7	2.6	2.7	2.8	2.9
8	2.9	3.0	2.8	2.4	4.7	2.8	2.7	2.7	2.5	2.8	3.0	2.9
9	2.8	3.0	2.8	2.8	4.6	2.8	2.7	2.7	2.5	2.9	2.8	2.9
10	2.8	3.0	2.8	2.8	4.6	2.8	2.6	2.7	2.5	3.0	2.8	2.9
11	2.7	3.0	2.8	2.9	4.6	2.8	2.7	2.7	2.7	3.0	2.8	2.9
12	2.6	2.9	---	2.9	4.6	2.8	2.8	2.7	2.9	3.1	2.8	3.0
13	2.6	2.9	5.5	2.9	4.5	2.8	2.8	2.8	2.8	3.1	2.9	3.0
14	2.6	---	5.3	2.8	4.5	2.6	2.8	2.7	2.8	3.0	2.8	3.0
15	2.6	2.9	2.8	2.9	4.5	2.6	2.7	2.6	2.7	3.0	2.8	3.0
16	2.6	2.9	2.7	2.9	4.5	2.6	2.8	2.7	2.8	3.0	2.9	2.9
17	2.5	2.9	2.6	2.9	4.6	2.6	2.8	2.8	3.0	3.0	3.0	2.8
18	2.5	2.9	2.6	2.9	4.8	2.6	2.8	2.8	3.3	3.0	3.0	2.9
19	2.6	2.9	2.6	2.9	5.2	2.6	2.8	2.8	3.2	3.0	3.0	2.7
20	2.6	2.9	2.6	2.9	5.3	2.6	2.8	2.8	3.2	3.0	3.0	2.7
21	2.6	2.9	2.7	2.9	5.9	2.7	2.8	2.8	3.2	3.0	2.9	2.8
22	2.6	2.7	2.8	2.9	5.7	2.8	2.8	2.8	3.3	2.9	3.0	2.7
23	2.6	2.8	2.8	2.9	5.3	2.8	2.9	2.8	3.3	2.9	2.9	2.7
24	2.6	2.8	2.8	---	5.4	2.8	2.9	2.8	2.9	2.9	2.9	2.6
25	2.6	2.8	2.7	2.8	5.1	2.8	2.8	2.7	2.8	2.8	2.9	2.6
26	2.6	2.8	2.7	2.8	4.9	2.8	2.8	2.7	2.7	2.7	2.9	2.7
27	2.7	2.8	2.7	2.8	4.9	2.8	2.8	2.7	2.7	2.7	2.9	2.8
28	2.9	2.7	2.7	2.8	4.1	2.8	2.8	2.7	2.8	2.7	3.0	2.8
29	2.9	2.7	2.8	2.8	2.7	2.8	2.8	2.7	2.7	2.7	3.0	2.8
30	2.9	2.7	2.7	2.8	---	2.7	2.9	2.6	2.9	2.6	3.0	2.8
31	2.9	---	2.7	2.8	---	2.7	---	2.6	---	2.6	3.0	---
TOTAL	84.4	---	---	---	129.9	84.9	83.5	85.1	84.5	88.4	88.4	85.6
MEAN	2.72	---	---	---	4.48	2.74	2.78	2.75	2.82	2.85	2.85	2.85
MAX	3.0	---	---	---	5.9	2.9	2.9	2.9	3.3	3.1	3.0	3.1
MIN	2.5	---	---	---	2.7	2.6	2.6	2.6	2.3	2.6	2.5	2.6
AC-FT	167	---	---	---	258	168	166	169	168	175	175	170

SACRAMENTO RIVER BASIN

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11358800 HAT CREEK NO. 1 POWERPLANT NEAR BURNEY, CA

LOCATION.--Lat 40°55'45", long 121°32'37", in SW 1/4 SW 1/4 sec.32, T.36 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on right bank of Hat Creek at the upper end of Baum Lake, 7.4 mi northeast of Burney.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1981-86 available in files of the U.S. Geological Survey. Fragmentary records for water years 1921-80 in files of the Pacific Gas & Electric Co.

GAGE.--Discharge computed from powerplant output.

REMARKS.--Water is diverted from left bank of Hat Creek at NW 1/4 SW 1/4 sec.5, T.36 N., R.8 W., through a canal to powerplant and then into Hat Creek. See schematic diagram of Pit and McCloud River basins.

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, 453 ft³/s, Oct. 20, 1986; no flow several 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	291	310	347	347	347	387	347	325	325	291	257	268
2	295	325	347	347	347	387	347	325	325	291	257	268
3	280	336	347	336	347	387	364	325	302	291	257	257
4	235	336	325	333	347	306	387	325	302	291	257	257
5	257	336	327	325	101	336	387	325	313	291	257	257
6	257	336	336	325	.00	398	392	302	325	291	268	257
7	257	230	336	325	.00	364	387	291	325	291	280	257
8	257	313	336	336	.00	364	364	291	325	280	280	257
9	274	336	336	336	.00	364	364	257	325	280	268	257
10	318	336	336	336	.00	364	364	268	325	280	268	257
11	318	336	336	336	.00	364	364	268	325	291	268	257
12	302	336	139	347	.00	364	364	268	313	291	268	257
13	302	336	.00	347	.00	364	364	257	313	291	268	280
14	302	268	.00	347	.00	375	364	268	313	291	268	280
15	302	291	420	347	.00	375	347	268	313	280	257	280
16	302	325	398	347	.00	387	364	268	313	291	268	280
17	299	325	398	347	.00	387	364	336	302	291	268	280
18	294	325	391	336	.00	364	364	336	302	291	268	280
19	302	325	364	336	.00	347	364	336	313	291	268	280
20	302	316	336	336	.00	313	364	347	302	291	268	257
21	302	302	347	336	.00	347	364	347	291	291	265	257
22	302	302	347	364	.00	364	347	347	291	280	257	257
23	302	302	336	347	.00	364	342	347	291	280	268	268
24	302	302	336	313	.00	364	347	375	291	268	268	268
25	305	307	336	336	.00	364	347	364	291	268	268	280
26	313	313	339	336	.00	364	347	364	291	280	268	268
27	313	321	347	336	.00	347	347	364	302	280	268	268
28	336	349	347	336	162	387	347	336	291	280	268	268
29	336	364	347	347	364	364	336	313	291	268	280	268
30	336	332	347	347	---	364	302	313	291	257	268	280
31	326	---	347	347	---	364	---	325	---	268	268	---
TOTAL	9219	9571	9931.00	10517	2015.00	11290	10752	9781	9222	8796	8264	8005
MEAN	297	319	320	339	69.5	364	358	316	307	284	267	267
MAX	336	364	420	364	364	398	392	375	325	291	280	280
MIN	235	230	.00	313	.00	306	302	257	291	257	257	257
AC-FT	18290	18980	19700	20860	4000	22390	21330	19400	18290	17450	16390	15880
a	26000	25990	25860	27980	27610	30270	28660	27080	25450	24120	22770	22350

a Discharge, in acre-feet, for Hat Creek No. 2 Powerplant (station 11359300), provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11358800 HAT CREEK NO. 1 POWERPLANT NEAR BURNEY, 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	280	282	314	318	288	320	293	262	268	260	244	249
MAX	432	423	410	406	403	379	358	355	365	366	301	307
(WY)	1987	1987	1987	1987	1987	1989	1996	1995	1995	1995	1987	1987
MIN	187	72.5	248	266	69.5	258	203	150	200	195	170	192
(WY)	1993	1990	1995	1993	1996	1992	1992	1991	1994	1994	1992	1994

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1987 - 1996

ANNUAL TOTAL	117142.00			107363.00								
ANNUAL MEAN	321			293								
HIGHEST ANNUAL MEAN							281					
LOWEST ANNUAL MEAN							362			1987		
HIGHEST DAILY MEAN	443			Mar 28			420			Dec 15		
LOWEST DAILY MEAN	.00			Jan 10			.00			Dec 13		
ANNUAL SEVEN-DAY MINIMUM	180			Mar 18			.00			Feb 6		
ANNUAL RUNOFF (AC-FT)	232400						213000			203900		
TOTAL DISCHARGE (AC-FT) a	327700						314100					
10 PERCENT EXCEEDS	387						364			373		
50 PERCENT EXCEEDS	325						313			280		
90 PERCENT EXCEEDS	280						257			198		

a Discharge, in acre-feet, for Hat Creek No. 2 Powerplant (station 11359300), provided by Pacific Gas & Electric Co.

11359100 HAT NO. 2 POWER CANAL DIVERSION TO HAT CREEK NEAR BURNEY, CA

LOCATION.--Lat 40°57'01", long 121°32'39", in SE 1/4 NW 1/4 sec.29, T.36 N., R.4 E., Shasta County, Hydrologic Unit 18020003, on right bank of Hat No. 2 Power Canal 75 ft downstream from Hat No. 2 Diversion Dam on Hat Creek, 7.9 mi northeast of Burney.

PERIOD OF RECORD.--Oct. 1 to Dec. 9, 1987 (fragmentary), Dec. 10, 1987, to current year (operated as a low-flow station only). Unpublished fragmentary records for water years 1979-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 2,980 ft sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 8.0 ft³/s at all times. See schematic diagram of Pit and McCloud River basins.

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	11	10	10	10	10	9.7	9.3	9.5	9.5	9.4	9.3	10
2	11	9.8	10	10	10	9.7	9.4	9.2	9.4	9.6	9.3	10
3	11	9.9	10	10	10	9.7	9.4	9.1	9.4	9.6	9.4	9.9
4	11	9.8	10	10	10	9.7	9.4	9.1	9.3	9.4	9.4	9.8
5	11	9.9	10	10	10	9.9	9.4	9.0	9.5	9.4	9.5	9.8
6	11	9.9	10	10	10	9.7	9.3	8.9	9.4	9.3	9.5	9.8
7	11	9.8	9.9	10	10	9.7	9.3	9.1	9.3	9.4	9.4	9.8
8	11	9.9	9.8	10	10	9.7	9.4	9.3	9.3	9.3	9.6	9.8
9	11	9.9	9.8	10	10	9.7	9.4	9.1	9.4	9.5	9.4	9.9
10	11	10	9.9	10	10	9.7	9.4	9.1	9.2	9.5	9.4	9.8
11	11	9.9	10	10	10	9.7	9.4	9.1	9.1	9.2	9.4	9.9
12	10	9.8	11	10	10	9.9	9.4	9.1	9.2	8.4	9.4	10
13	10	9.8	11	9.9	10	9.8	9.4	9.1	9.3	8.4	9.2	10
14	10	9.7	11	9.9	10	9.7	9.3	9.3	9.3	8.4	9.1	10
15	10	9.9	11	10	10	9.7	9.4	9.3	9.3	8.6	9.0	10
16	10	9.8	10	10	10	9.6	9.4	9.5	9.5	9.2	8.9	9.9
17	10	9.8	10	10	10	9.6	9.5	9.7	9.4	9.6	8.9	9.7
18	10	9.8	10	10	10	9.5	9.4	9.5	9.5	9.2	8.9	9.5
19	9.7	9.8	10	10	11	9.6	9.4	9.5	9.4	9.0	8.9	9.4
20	9.7	9.8	10	10	11	9.8	9.4	9.3	9.3	8.9	9.3	9.5
21	9.8	9.9	10	11	11	10	9.4	9.4	9.4	9.0	9.6	9.5
22	9.9	9.8	10	10	11	10	9.4	9.5	9.3	8.9	9.6	9.4
23	9.9	9.9	10	10	11	10	9.3	9.4	9.4	9.2	9.7	9.4
24	9.9	9.9	10	10	11	11	9.4	9.2	9.5	9.3	9.9	9.5
25	10	10	10	10	11	9.8	9.4	9.0	9.5	9.2	9.9	9.5
26	10	10	10	10	10	9.2	9.3	9.1	9.5	9.2	10	9.5
27	10	10	10	10	10	9.2	9.1	9.8	9.4	9.3	10	9.6
28	10	10	10	10	10	9.1	9.1	9.5	9.4	9.3	10	9.6
29	9.9	9.9	10	10	10	9.2	9.2	9.6	9.5	9.2	10	9.9
30	9.9	9.9	10	10	---	9.1	9.4	9.7	9.7	9.4	10	9.7
31	10	---	10	10	---	9.1	---	9.4	---	9.3	10	---
TOTAL	319.7	296.3	313.4	310.8	297	299.8	280.7	288.4	281.6	284.6	293.9	292.1
MEAN	10.3	9.88	10.1	10.0	10.2	9.67	9.36	9.30	9.39	9.18	9.48	9.74
MAX	11	10	11	11	11	11	9.5	9.8	9.7	9.6	10	10
MIN	9.7	9.7	9.8	9.9	10	9.1	9.1	8.9	9.1	8.4	8.9	9.4
AC-FT	634	588	622	616	589	595	557	572	559	565	583	579

WTR YR 1996 TOTAL 3558.3 MEAN 9.72 MAX 11 MIN 8.4 AC-FT 7060

RESERVOIRS IN PIT AND McCLOUD RIVER BASINS, CA

11361400 LAKE BRITTON NEAR BURNEY.--Lat 41°01'20", long 121°40'32", in SW 1/4 SW 1/4 sec.19, T.37 N., R.3 E., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, at control house on right bank 200 ft upstream from dam on Pit River, 1.1 mi downstream from Clark Creek, 1.3 mi northwest of Burney Falls, and 9 mi north of Burney. DRAINAGE AREA, 4,607 mi², excluding Goose Lake Basin. PERIOD OF RECORD, October 1965 to current year (monthend contents only). Fragmentary records for water years 1925-65 in files of the Pacific Gas & Electric Co. GAGE, remote telemark read once daily. Datum of gage is 19.53 ft above sea level (levels by Pacific Gas & Electric Co.). Monthend contents based on capacity table dated Dec. 1, 1976, provided by Pacific Gas & Electric Co.

REMARKS.--Reservoir is formed by gravity-type concrete dam. Storage began July 15, 1925. Usable capacity, 41,877 acre-ft between elevations 2,665.0 ft, invert of sluice gate, and 2,758.0 ft, top of flash boards. Dead storage, 30 acre-ft. Normal operating pool is from elevation 2,744.0 ft, capacity, 26,183 acre-ft, to 2,757.0 ft, capacity, 40,626 acre-ft. Figures given represent total contents. Lake is used for power generation and recreation. See schematic diagram of Pit and McCloud River basins. Records prior to water year 1977 reported usable contents only.

COOPERATION.--Record of contents 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 (AT 2400) FOR PERIOD OF RECORD.--Maximum total contents, 47,922 acre-ft, Feb. 20, 1986, elevation, 2,762.50 ft; minimum total contents, 26,755 acre-ft, Oct. 9, 1976, elevation, 2,744.60 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 40,626 acre-ft, Dec. 15, elevation, 2,757.00 ft; minimum, 29,088 acre-ft, Dec. 11, elevation, 2,746.95 ft.

11363920 IRON CANYON RESERVOIR NEAR BIG BEND.--Lat 41°02'41", long 121°58'52", in SW 1/4 SE 1/4 sec.21, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, in control house on left bank 500 ft upstream from Iron Canyon Dam on Iron Canyon Creek, 3.7 mi northwest of Big Bend. DRAINAGE AREA, 11.1 mi². PERIOD OF RECORD, December 1965 to current year (monthend contents only). GAGE, water-stage recorder. Datum of gage is sea level (levels by Pacific Gas & Electric Co.). Monthend contents based on capacity table dated May 17, 1965, provided by Pacific Gas & Electric Co.

REMARKS.--Reservoir is formed by a rockfill dam completed in 1965. Usable capacity is 24,197 acre-ft between elevations 2,525.00 ft, invert of sluice pipe, and 2,665.00 ft, crest of spillway. Dead storage, 44 acre-ft. Normal operating pool is from elevation 2,565.0 ft, capacity, 990 acre-ft, to 2,664.0 ft, capacity, 23,738 acre-ft. Water is diverted from Lake McCloud (station 11367740) through a tunnel to Iron Canyon Reservoir and then into the Pit River via James B. Black Powerplant (station 11363910). Figures given represent total contents. Water is used for power generation and recreation. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Record of contents 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 (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 23,539 acre-ft, May 16, 22, 1977, elevation, 2,663.60 ft; normal minimum since reservoir first filled, 2,860 acre-ft, May 23, 24, 29, June 2, 7, 9, 14, 23, 24, 1966, elevation, 2,590.00 ft. Contents reduced to 195 acre-ft, elevation, 2,540.00 ft, Feb. 10, 1971, when reservoir was drained for inspection.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 22,081 acre-ft, July 27, 28, elevation, 2,660.60 ft; minimum, 3,209 acre-ft, Mar. 12, elevation, 2,593.10 ft.

11367740 LAKE McCLOUD NEAR McCLOUD.--Lat 41°08'06", long 122°04'26", in SE 1/4 SW 1/4 sec.22, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on McCloud Dam near spillway on McCloud River, 200 ft downstream from Panther Creek, and 8.8 mi southeast of McCloud. DRAINAGE AREA, 403 mi². PERIOD OF RECORD, October 1965 to current year (monthend contents only). GAGE, water-stage recorder. Datum of gage is sea level (levels by Pacific Gas & Electric Co.). Monthend contents based on capacity table dated June 29, 1965, provided by Pacific Gas & Electric Co.

REMARKS.--Reservoir is formed by a rockfill dam completed in 1965. Usable capacity, 35,231 acre-ft between elevations 2,471.30 ft, invert of sluice pipe, and 2,680.00 ft, maximum operational water surface. Dead storage, 3 acre-ft. Normal operating pool is from elevation 2,635.00 ft, capacity, 16,425 acre-ft, to 2,680.00 ft, capacity, 35,234 acre-ft. Water is diverted from Lake McCloud (station 11367740) through a diversion tunnel to Iron Canyon Reservoir (station 11363920) and then into the Pit River via James B. Black Powerplant (station 11363910). Figures given represent total contents. Water is used for power generation and recreation. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Record of contents 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 (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 35,967 acre-ft, Jan. 15, 1974, elevation, 2,681.40 ft; minimum since reservoir first filled, 13,017 acre-ft, Oct. 14-22, 1981, elevation, 2,632.50 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 34,871 acre-ft, May 20, 23, 27, elevation, 2,679.30 ft; minimum, 16,425 acre-ft, Jan. 30, elevation, 2,635.00 ft.

RESERVOIRS IN PIT AND McCLOUD RIVER BASINS, CA--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

	11361400 LAKE BRITTON			11363920 IRON CANYON RESERVOIR			11367740 LAKE McCLOUD		
Date	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents (acre- feet)
Sept. 30.....	2,754.80	37,891	--	2,644.40	15,260	--	2,668.40	23,535	--
Oct. 31.....	2,754.70	37,769	-122	2,621.20	8,239	-7,021	2,646.10	20,255	-9,280
Nov. 30.....	2,755.05	38,196	+427	2,619.70	7,872	-367	2,636.50	16,913	-3,342
Dec. 31.....	2,749.70	31,998	-6,198	2,617.20	7,287	-585	2,637.60	17,276	+363
CAL YR 1995..	--	--	-164	--	--	-5,657	--	--	-3,537
Jan. 31.....	2,755.00	38,134	+6,136	2,620.70	8,115	+828	2,635.90	16,716	-560
Feb. 28.....	2,755.40	38,625	+491	2,596.60	3,647	-4,468	2,677.30	33,848	+17,132
Mar. 31.....	2,756.50	39,994	+1,369	2,597.20	3,726	+79	2,665.00	27,984	-5,864
Apr. 30.....	2,756.10	39,493	-501	2,612.50	6,275	+2,549	2,667.60	29,166	+1,182
May 31.....	2,756.10	39,493	0	2,618.50	7,587	+1,312	2,677.80	34,102	+4,936
June 30.....	2,755.35	38,564	-929	2,647.30	16,352	+8,765	2,668.50	29,582	-4,520
July 31.....	2,753.30	36,092	-2,472	2,655.80	19,875	+3,523	2,678.90	34,665	+5,083
Aug. 31.....	2,752.40	35,038	-1,054	2,637.90	13,010	-6,865	2,668.00	29,350	-5,315
Sept. 30.....	2,755.20	38,379	+3,341	2,637.10	12,750	-260	2,656.40	24,276	-5,074
WTR YR 1996..	--	--	+488	--	--	-2,510	--	--	-5,259

SACRAMENTO RIVER BASIN

11362500 PIT RIVER BELOW PIT NO. 4 DAM, CA

LOCATION.--Lat 40°58'25", long 121°46'42", unsurveyed, T.36 N., R.2 E., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, on right bank 0.6 mi downstream from Ruling Creek, 1.3 mi downstream from Pit No. 4 Dam, and 2.7 mi downstream from Pit No. 3 Powerplant.

DRAINAGE AREA.--4,648 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--May 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Pecks Bridge" April to October 1922, and as "at Lindsay Flat" November 1922 to June 1927.

REVISED RECORDS.--WSP 843: 1935(M). WSP 1315-A: 1928(M). WDR CA-75-4: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,358 ft above sea level, from river-profile map. Prior to November 1922, water-stage recorder at site at Pecks Bridge 7.4 mi upstream at different datum. November 1922 to June 20, 1927, at site at Lindsay Flat 1.8 mi upstream at different datum. June 20, 1927, to Sept. 5, 1990, at site 200 ft downstream at datum 0.15 ft lower.

REMARKS.--Low flow completely regulated by small reservoirs and powerplants, total usable reservoir capacity, 253,000 acre-ft. Many diversions upstream from station; diversion to Pit No. 4 Powerplant began June 9, 1955. See schematic diagram of Pit and McCloud River basins.

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, 33,700 ft³/s, Feb. 20, 1986, gage height, 18.70 ft; minimum daily, prior to diversion to Pit No. 4 Powerplant in 1955, 234 ft³/s, Sept. 13, 1953. Minimum daily, since diversion to Pit No. 4 Powerplant, 22 ft³/s, Dec. 2-4, 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	162	157	163	157	159	2060	912	180	249	161	160	165
2	158	159	158	157	160	1970	1290	175	163	162	161	163
3	160	158	157	158	160	1940	1470	171	162	163	162	162
4	170	158	157	158	165	2130	1410	171	161	163	162	162
5	195	167	159	160	1450	3490	1200	171	162	160	163	163
6	160	160	158	160	4480	3780	1110	171	162	159	164	163
7	158	160	159	161	6260	3700	1020	171	162	162	161	164
8	158	161	176	163	6330	3400	654	172	163	162	161	165
9	157	163	169	167	5730	3070	719	173	164	162	160	166
10	162	164	164	182	5650	2840	589	175	163	162	162	165
11	160	163	161	173	4910	2870	395	176	161	161	164	166
12	171	160	160	162	3680	3230	172	176	159	165	163	162
13	183	158	160	161	2870	3310	276	175	162	167	165	165
14	157	160	171	160	2050	2840	488	175	162	165	162	166
15	160	160	188	165	790	2140	748	173	162	163	166	161
16	162	162	1220	164	160	1770	291	172	162	164	164	163
17	162	162	409	166	404	1410	175	173	162	163	164	167
18	162	162	159	161	2450	1150	228	177	163	164	165	164
19	162	162	160	159	4070	902	747	173	163	161	165	181
20	162	162	160	160	7530	485	625	737	163	163	165	165
21	164	165	158	163	9260	193	351	1510	162	163	164	164
22	167	164	157	163	10400	724	440	1520	162	163	165	161
23	164	163	159	166	9410	1160	412	1230	161	162	167	166
24	164	162	160	163	8110	455	312	1050	160	162	167	193
25	164	164	160	164	5980	415	380	689	162	161	162	176
26	163	162	156	161	5030	526	407	328	160	160	161	181
27	162	172	156	165	3520	422	320	1400	160	161	162	179
28	162	174	157	161	2920	198	183	1080	162	160	160	195
29	161	167	160	160	2310	202	173	222	162	160	160	160
30	158	196	158	159	---	564	175	347	162	162	163	160
31	157	---	157	157	---	645	---	284	---	161	164	---
TOTAL	5067	4907	6306	5036	116398	53991	17672	13697	4943	5027	5054	5033
MEAN	163	164	203	162	4014	1742	589	442	165	162	163	168
MAX	195	196	1220	182	10400	3780	1470	1520	249	167	167	195
MIN	157	157	156	157	159	193	172	171	159	159	160	160
AC-FT	10050	9730	12510	9990	230900	107100	35050	27170	9800	9970	10020	9980
a	101500	100700	132000	160300	166200	177100	170200	165200	118000	102200	95000	94730
b	119400	119300	158800	192200	215700	239500	231400	214900	146800	127300	116900	113500

a Discharge, in acre-feet, for Pit No. 3 Powerplant (station 11362300), provided by Pacific Gas & Electric Co.
b Diversion, in acre-feet, to Pit No. 4 Powerplant (station 11362600), provided by Pacific Gas & Electric Co.

11362500 PIT RIVER BELOW PIT NO. 4 DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1945	2102	2458	2700	3338	3799	3766	2877	2307	1925	1833	1865
MAX	2385	2544	5968	5523	6872	8510	11400	5507	4096	2652	2146	2318
(WY)	1954	1954	1938	1953	1942	1938	1952	1938	1953	1952	1954	1953
MIN	1571	1666	1745	1698	1742	1895	1730	1635	1612	1569	1509	1541
(WY)	1935	1934	1935	1937	1933	1934	1934	1934	1934	1934	1934	1934

SUMMARY STATISTICS

WATER YEARS 1927 - 1954

ANNUAL MEAN	2572
HIGHEST ANNUAL MEAN	4066
LOWEST ANNUAL MEAN	1703
HIGHEST DAILY MEAN	26200
LOWEST DAILY MEAN	234
ANNUAL SEVEN-DAY MINIMUM	1450
INSTANTANEOUS PEAK FLOW	a30200
INSTANTANEOUS PEAK STAGE	17.90
ANNUAL RUNOFF (AC-FT)	1863000
10 PERCENT EXCEEDS	3810
50 PERCENT EXCEEDS	2170
90 PERCENT EXCEEDS	1630

a From rating curve extended above 12,000 ft³/s on basis of velocity-area studies.

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	237	224	419	903	1044	1186	802	502	220	164	163	159
MAX	2189	2436	3791	7250	7657	5545	3416	4770	1479	490	458	268
(WY)	1955	1955	1965	1970	1986	1995	1982	1995	1955	1955	1992	1973
MIN	96.8	66.4	49.8	50.0	49.0	49.7	88.3	128	128	137	120	79.8
(WY)	1962	1957	1979	1981	1981	1981	1961	1961	1961	1964	1955	1955

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1955 - 1996

ANNUAL TOTAL	517823	243131	
ANNUAL MEAN	1419	664	499
HIGHEST ANNUAL MEAN			1868
LOWEST ANNUAL MEAN			98.4
HIGHEST DAILY MEAN	15200	May 3	10400
LOWEST DAILY MEAN	156	Sep 21	156
ANNUAL SEVEN-DAY MINIMUM	158	Sep 16	157
INSTANTANEOUS PEAK FLOW			13400
INSTANTANEOUS PEAK STAGE			13.04
ANNUAL RUNOFF (AC-FT)	1027000	482300	361900
TOTAL DISCHARGE (AC-FT) a	1637000	1583000	
TOTAL DISCHARGE (AC-FT) b	2110000	1996000	
10 PERCENT EXCEEDS	5150	1820	1140
50 PERCENT EXCEEDS	167	164	155
90 PERCENT EXCEEDS	158	159	59

a Discharge, in acre-feet, for Pit No. 3 Powerplant (station 11362300), provided by Pacific Gas & Electric Co.

b Diversion, in acre-feet, to Pit No. 4 Powerplant (station 11362600), provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11362900 NELSON CREEK BELOW DIVERSION TO NELSON CREEK POWERPLANT, NEAR BIG BEND, CA

LOCATION.--Lat 41°02'32", long 121°52'34", in NE 1/4 NE 1/4 sec.29, T.37 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on right bank 400 ft upstream from Snowslide Creek, 0.3 mi downstream from Bull Creek, and 2.3 mi northeast of Big Bend.

DRAINAGE AREA.--13.2 mi².

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

GAGE.--Water-stage recorder and broad-crested weir; water-stage recorder and sharp-crested weir. Elevation of gages is 2,320 ft above sea level, from topographic map.

REMARKS.--Records good. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11362880) and flow over a sharp-crested weir (station 11362890). Water is diverted upstream of weirs through a tunnel to Nelson Creek Powerplant (station 11362800), returning to Nelson Creek at its confluence with the Pit River. See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 623 ft³/s, Feb. 19, 1996; minimum daily, 7.4 ft³/s, Sept. 8, 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	13	12	16	16	17	62	54	22	28	15	15	14
2	13	12	13	16	17	45	52	19	25	15	15	14
3	13	12	17	16	17	50	44	19	23	15	15	14
4	13	12	18	16	52	115	37	25	20	15	15	15
5	13	12	23	16	e77	e211	34	20	17	15	15	17
6	13	12	14	16	e66	e158	33	19	22	15	15	18
7	13	12	15	16	e56	e148	32	19	16	15	15	18
8	13	12	14	16	e59	e114	31	18	15	15	17	18
9	13	12	14	16	e52	e93	28	18	15	15	17	18
10	12	12	14	16	e48	e83	26	18	15	15	16	19
11	12	12	31	16	e45	e128	e26	18	15	16	16	e14
12	13	12	162	16	e41	e192	e26	18	15	15	16	13
13	13	12	84	16	e39	e181	e27	18	16	15	16	14
14	13	12	61	16	e38	e157	e27	21	16	15	16	14
15	13	12	114	16	e37	e134	e43	18	16	15	16	20
16	13	12	34	51	e58	e116	e38	31	15	15	16	18
17	13	12	20	27	e134	e101	30	79	16	15	16	16
18	13	12	17	25	400	e85	47	209	16	15	16	15
19	13	12	16	16	497	e74	33	166	16	15	16	15
20	13	12	e20	16	562	e67	28	129	16	16	15	15
21	13	11	18	16	470	e64	27	105	16	15	15	15
22	13	12	18	15	361	e44	27	82	16	15	15	15
23	13	12	17	15	299	e36	28	68	16	15	15	15
24	13	12	17	16	207	e43	77	58	16	15	15	15
25	13	16	18	16	174	e41	52	48	16	15	15	15
26	e19	12	19	16	197	37	43	42	16	15	15	15
27	12	12	19	25	130	38	39	40	16	15	15	15
28	12	12	19	17	104	36	29	34	16	15	15	15
29	12	12	17	17	79	33	26	32	15	15	15	15
30	12	13	17	17	---	31	25	28	15	15	14	14
31	12	---	16	17	---	30	---	25	---	15	14	---
TOTAL	402	364	912	562	4333	2747	1069	1466	511	467	477	468
MEAN	13.0	12.1	29.4	18.1	149	88.6	35.6	47.3	17.0	15.1	15.4	15.6
MAX	19	16	162	51	562	211	77	209	28	16	17	20
MIN	12	11	13	15	17	30	25	18	15	15	14	13
AC-FT	797	722	1810	1110	8590	5450	2120	2910	1010	926	946	928
a	0	0	417	941	1780	2930	2930	2550	1670	460	32	0

e Estimated.

a Discharge, in acre-feet, for Nelson Creek Powerplant (station 11362800), provided by Sierra Pacific Industries.

11362900 NELSON CREEK BELOW DIVERSION TO NELSON CREEK POWERPLANT, NEAR BIG BEND, 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	11.7	11.2	19.2	36.4	74.9	84.6	44.8	35.8	17.1	13.6	13.5	12.7
MAX	13.6	12.1	29.4	75.5	149	149	82.0	47.3	19.7	16.2	16.8	15.6
(WY)	1994	1996	1996	1995	1996	1995	1995	1996	1995	1995	1995	1996
MIN	8.44	9.70	11.9	15.5	16.3	15.7	16.7	17.0	14.6	9.63	8.18	8.05
(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 1994 - 1996		
ANNUAL TOTAL	16077			13778					
ANNUAL MEAN	44.0			37.6			31.1		
HIGHEST ANNUAL MEAN							42.0		
LOWEST ANNUAL MEAN							13.6		
HIGHEST DAILY MEAN	355			Mar 14			562		
LOWEST DAILY MEAN	10			Jan 2			7.4		
ANNUAL SEVEN-DAY MINIMUM	12			Nov 15			7.5		
INSTANTANEOUS PEAK FLOW							623		
ANNUAL RUNOFF (AC-FT)	31890			27330			22520		
TOTAL DISCHARGE (AC-FT) a	15660			13710					
10 PERCENT EXCEEDS	112			79			66		
50 PERCENT EXCEEDS	18			16			16		
90 PERCENT EXCEEDS	12			13			9.3		

a Discharge, in acre-feet, for Nelson Creek Powerplant (station 11362800), provided by Sierra Pacific Industries.

11362950 EAST FORK NELSON CREEK BELOW DIVERSION TO NELSON CREEK, NEAR BIG BEND, CA

LOCATION.--Lat 41°02'25", long 121°52'28", in NE 1/4 NE 1/4 sec.29, T.37 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on right bank 700 ft upstream from Nelson Creek, and 2.3 mi northeast of Big Bend.

DRAINAGE AREA.--8.18 mi².

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

GAGE.--Water-stage recorder and broad-crested weir; water-stage recorder and sharp-crested weir. Elevation of gages is 2,360 ft above sea level, from topographic map.

REMARKS.--Records good. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11362940) and flow over a sharp-crested weir (station 11362945). Water is diverted upstream of weirs through a pipe to Nelson Creek (station 11362900). See schematic diagram of Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 267 ft³/s, Mar. 15, 1995; minimum daily, 0.07 ft³/s, Aug. 12 to Sept. 23, 1994 and Oct. 11, 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	4.7	4.4	3.5	4.3	5.7	43	29	17	18	e13	5.2	3.8
2	4.7	4.1	2.7	4.1	5.5	41	28	17	18	e12	5.2	3.8
3	4.6	3.9	2.9	4.0	5.5	40	25	16	17	e12	5.2	3.3
4	4.6	4.1	3.6	3.9	11	56	22	16	17	e12	5.0	2.6
5	4.6	4.3	4.7	3.8	40	54	20	16	17	e12	4.9	2.6
6	4.6	4.0	3.3	3.7	43	48	20	16	17	e11	4.8	2.6
7	4.6	3.6	2.9	3.6	37	45	19	16	18	e11	4.7	2.6
8	4.6	3.6	2.7	3.5	31	44	18	16	18	e11	4.7	2.6
9	4.7	3.3	2.7	4.1	29	44	17	16	18	e11	4.6	2.6
10	4.7	2.6	3.2	4.0	26	45	16	16	18	e10	4.6	2.6
11	4.8	2.6	5.9	3.7	27	56	16	16	17	10	4.6	e2.6
12	4.7	2.6	16	3.6	26	56	16	16	17	10	4.5	e2.9
13	4.5	2.6	7.0	3.5	25	52	15	16	17	10	4.5	e2.9
14	4.4	2.6	6.2	3.4	24	49	17	16	17	8.4	4.5	e2.9
15	4.4	2.6	18	4.2	23	47	17	16	17	6.4	4.4	e2.7
16	4.4	2.6	7.9	7.8	24	45	18	17	16	6.2	4.2	e2.7
17	4.4	2.6	6.6	6.3	43	44	18	22	16	6.2	4.2	e2.7
18	4.4	2.6	6.0	6.0	130	43	17	48	16	6.4	4.3	e2.6
19	4.5	2.6	5.1	6.1	208	43	17	45	16	6.2	4.3	e2.5
20	4.4	2.6	4.5	6.1	207	42	17	33	15	6.1	4.3	e2.4
21	4.4	2.6	4.2	6.1	186	41	17	30	15	6.0	4.3	e2.5
22	4.4	2.6	3.9	5.9	132	35	17	30	14	5.7	4.1	e2.4
23	4.4	2.6	3.8	5.7	103	26	17	25	14	5.7	4.1	e2.4
24	4.4	2.6	3.6	6.1	84	24	20	23	14	5.7	4.0	e2.4
25	4.4	3.0	3.5	6.2	71	23	18	22	14	5.5	4.0	e2.3
26	4.4	2.7	3.4	6.0	62	21	17	21	14	5.4	4.1	e2.2
27	4.4	2.6	3.3	6.2	56	23	17	22	e14	5.4	4.0	e2.2
28	4.4	2.6	3.3	5.6	52	22	17	20	14	5.5	3.8	e2.2
29	4.4	2.6	3.8	5.6	47	20	17	21	13	5.4	3.8	e2.1
30	4.4	2.6	4.6	5.6	---	18	17	19	13	5.3	3.8	e2.1
31	4.4	---	4.8	5.7	---	18	---	18	---	5.2	3.8	---
TOTAL	139.7	90.4	157.6	154.4	1763.7	1208	556	658	479	251.7	136.5	78.8
MEAN	4.51	3.01	5.08	4.98	60.8	39.0	18.5	21.2	16.0	8.12	4.40	2.63
MAX	4.8	4.4	18	7.8	208	56	29	48	18	13	5.2	3.8
MIN	4.4	2.6	2.7	3.4	5.5	18	15	16	13	5.2	3.8	2.1
AC-FT	277	179	313	306	3500	2400	1100	1310	950	499	271	156

e Estimated.

11362950 EAST FORK NELSON CREEK BELOW DIVERSION TO NELSON CREEK, NEAR BIG BEND, 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	2.45	2.11	3.08	6.48	26.4	41.5	29.5	20.9	9.33	6.38	3.69	2.61
MAX	4.51	3.01	5.08	11.5	60.8	79.9	66.3	37.7	16.0	10.4	6.59	5.12
(WY)	1996	1996	1996	1995	1996	1995	1995	1995	1996	1995	1995	1995
MIN	.10	.46	.61	2.99	3.34	5.80	3.64	3.74	2.25	.63	.091	.079
(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 1994 - 1996	
ANNUAL TOTAL	7737.90		5673.8			
ANNUAL MEAN	21.2		15.5		12.8	
HIGHEST ANNUAL MEAN					20.2	
LOWEST ANNUAL MEAN					2.64	
HIGHEST DAILY MEAN	207	Mar 15	208	Feb 19	208	Feb 19 1996
LOWEST DAILY MEAN	.50	Jan 1	2.1	Sep 29	.07	Aug 12 1994
ANNUAL SEVEN-DAY MINIMUM	.76	Jan 1	2.2	Sep 24	.07	Aug 12 1994
INSTANTANEOUS PEAK FLOW			251	Feb 19	267	Mar 15 1995
ANNUAL RUNOFF (AC-FT)	15350		11250		9270	
10 PERCENT EXCEEDS	64		40		38	
50 PERCENT EXCEEDS	8.0		6.0		4.4	
90 PERCENT EXCEEDS	3.3		2.6		.39	

11363000 PIT RIVER AT BIG BEND, CA

LOCATION.--Lat 41°01'10", long 121°54'36", in NW 1/4 SW 1/4 sec.31, T.37 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on left bank at Big Bend, 0.4 mi downstream from Nelson Creek, 1.5 mi upstream from Kosk Creek, and 3.1 mi downstream from Pit No. 5 Dam.

DRAINAGE AREA.--4,711 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Henderson" 1910-23.

REVISED RECORDS.--WSP 1345: 1911, 1914(M), 1916(M), 1917, 1928, 1935-36(M). WDR CA-75-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,674.47 ft above sea level. Prior to Dec. 28, 1912, nonrecording gage; Dec. 28, 1912, to June 21, 1924, water-stage recorder at same site, at datum 7.69 ft higher. June 22, 1924, to Sept. 30, 1988, at site 200 ft downstream at same datum.

REMARKS.--Low flow completely regulated by many reservoirs and powerplants, total usable reservoir capacity, about 253,000 acre-ft. Many diversions upstream from station; diversion to Pit No. 5 Powerplant (station 11362700) began May 1, 1944. See schematic diagram of Pit and McCloud River basins.

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, 49,000 ft³/s, Jan. 25, 1970, gage height, 18.17 ft in gage well, 19.0 ft from floodmarks, site then in use, from rating curve extended above 17,000 ft³/s; maximum gage height, 18.70 ft, Feb. 20, 1986, site then in use; minimum daily, 692 ft³/s, July 9, 1925; since diversion to Pit No. 5 Powerplant, minimum daily, 34 ft³/s, Mar. 29, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 9	0845	24,000	15.66	Feb. 21	1445	21,600	15.22

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	137	145	156	167	193	2550	1260	286	593	192	159	141
2	133	148	146	160	191	2440	1650	283	305	187	161	143
3	137	142	148	161	193	2400	1780	275	294	192	151	144
4	138	136	153	156	376	2820	1730	274	287	187	149	145
5	139	139	179	157	1950	3750	1530	273	284	189	157	144
6	141	138	156	148	5130	4750	1440	258	269	188	154	148
7	142	138	139	151	6920	4630	1340	258	260	180	152	143
8	140	136	150	152	6980	4320	996	257	247	186	152	143
9	140	135	151	164	7130	3910	1060	252	233	185	170	142
10	148	134	160	164	6020	3630	903	251	235	183	154	156
11	149	133	239	152	5260	3800	744	252	238	188	148	150
12	158	134	516	158	3980	4130	454	250	240	182	152	155
13	151	141	268	154	3150	4250	626	241	234	170	154	151
14	144	139	211	151	2220	3720	757	257	236	167	155	151
15	136	142	1790	166	1160	2990	1050	248	238	171	145	156
16	152	143	2420	292	423	2450	808	294	230	173	145	148
17	148	140	1710	256	690	2100	557	421	228	172	142	146
18	148	140	1050	222	3930	1770	582	673	222	176	142	146
19	154	139	725	205	5680	1540	1090	576	218	175	151	147
20	154	144	513	223	9450	1060	1040	1090	214	175	154	147
21	152	148	510	225	11500	444	754	1980	218	168	151	147
22	154	144	177	206	12500	913	791	2070	217	173	153	145
23	154	140	158	197	11300	1770	825	1750	213	175	154	146
24	151	140	161	222	9780	902	782	1480	221	175	145	144
25	152	143	149	215	7290	603	798	1220	217	172	143	141
26	147	144	149	196	6160	835	809	769	213	173	154	144
27	138	142	156	202	4350	817	744	1600	220	154	160	142
28	138	141	150	187	3660	477	496	1720	209	155	159	145
29	140	145	158	184	2920	356	373	609	197	158	158	145
30	143	147	170	189	---	831	295	776	195	160	158	143
31	146	---	171	191	---	964	---	702	---	159	150	---
TOTAL	4504	4220	13089	5773	140486	71922	28064	21645	7425	5440	4732	4388
MEAN	145	141	422	186	4844	2320	935	698	247	175	153	146
MAX	158	148	2420	292	12500	4750	1780	2070	593	192	170	156
MIN	133	133	139	148	191	356	295	241	195	154	142	141
AC-FT	8930	8370	25960	11450	278700	142700	55660	42930	14730	10790	9390	8700

11363000 PIT RIVER AT BIG BEND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1943, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2206	2373	2676	3000	3927	4449	4446	3229	2520	2214	2100	2107
MAX	3021	3186	6792	7675	7989	9953	11410	6216	3763	3218	2987	2975
(WY)	1912	1912	1938	1914	1942	1938	1917	1938	1911	1911	1911	1911
MIN	1607	1740	1764	1750	1746	2051	1860	1734	1672	1584	1526	1565
(WY)	1935	1934	1935	1937	1933	1931	1934	1934	1934	1934	1934	1934

SUMMARY STATISTICS

WATER YEARS 1911 - 1943

ANNUAL MEAN	2931	
HIGHEST ANNUAL MEAN	4597	1938
LOWEST ANNUAL MEAN	1787	1934
HIGHEST DAILY MEAN	30300	Dec 12 1937
LOWEST DAILY MEAN	692	Jul 9 1925
ANNUAL SEVEN-DAY MINIMUM	915	Jul 4 1925
INSTANTANEOUS PEAK FLOW	a34200	Dec 12 1937
INSTANTANEOUS PEAK STAGE	16.26	Dec 12 1937
ANNUAL RUNOFF (AC-FT)	2123000	
10 PERCENT EXCEEDS	4520	
50 PERCENT EXCEEDS	2440	
90 PERCENT EXCEEDS	1750	

a From rating extended above 11,000 ft³/s on basis of velocity-area studies.

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	208	213	483	958	1204	1416	1130	625	241	132	130	124
MAX	2322	2469	3889	8804	9457	6658	8441	5420	1656	175	448	284
(WY)	1944	1944	1965	1970	1986	1995	1952	1995	1971	1996	1992	1986
MIN	58.8	56.0	45.0	51.4	57.1	52.6	49.9	114	78.5	63.5	60.9	60.1
(WY)	1949	1979	1979	1949	1977	1977	1977	1977	1944	1944	1944	1945

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1944 - 1996

ANNUAL TOTAL	605883	311688	
ANNUAL MEAN	1660	852	569
HIGHEST ANNUAL MEAN			1638
LOWEST ANNUAL MEAN			86.5
HIGHEST DAILY MEAN	17500	May 3	36500
LOWEST DAILY MEAN	133	Oct 2	34
ANNUAL SEVEN-DAY MINIMUM	135	Nov 6	40
INSTANTANEOUS PEAK FLOW			49000
INSTANTANEOUS PEAK STAGE			15.66
ANNUAL RUNOFF (AC-FT)	1202000	618200	412100
10 PERCENT EXCEEDS	5870	2410	1510
50 PERCENT EXCEEDS	189	187	137
90 PERCENT EXCEEDS	140	142	73

SACRAMENTO RIVER BASIN

11363910 JAMES B. BLACK POWERPLANT NEAR BIG BEND, CA

LOCATION.--Lat 40°59'12", long 121°58'35", in SW 1/4 SE 1/4 sec.9, T.36 N., R.1 W., Shasta County, Hydrologic Unit 18020003, at powerplant on right bank of Pit River, 5.8 mi downstream from Big Bend.

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Discharge computed from powerplant output.

REMARKS.--Water is diverted from Lake McCloud (station 11367740) at SE 1/4 SW 1/4 sec.22, T.38 N., R.2 W., through McCloud-Iron Canyon Diversion Tunnel (station 11367720) to Iron Canyon Reservoir (station 11363920), then through the penstock for powerplant and into the Pit River. Records are combined flow of diversion from McCloud River at McCloud Dam plus Iron Canyon Creek. See schematic diagram of Pit and McCloud River basins.

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, 2,420 ft³/s, July 15, 1966; no flow several 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	1010	943	741	814	1200	1550	895	1340	1260	301	857	1270
2	956	903	613	1060	803	1560	1180	1000	1170	1320	1180	13
3	672	945	716	619	1140	1470	1150	1100	1280	944	727	930
4	830	834	838	829	312	1480	1150	1270	1150	563	1060	680
5	1480	545	529	632	838	1680	1430	1330	1250	1030	680	1100
6	987	658	554	577	1120	1500	1360	1250	1320	723	815	930
7	892	840	852	816	1690	1610	1240	987	1200	820	1220	1260
8	826	795	837	915	1830	1400	1290	1140	963	841	1160	917
9	1140	955	1040	623	1730	1520	1390	858	740	742	1740	841
10	1110	949	637	814	1360	1400	1150	1070	738	441	1050	700
11	791	472	607	883	1230	1640	1370	1130	1030	.00	482	815
12	928	841	1170	1040	1350	1540	1490	1220	968	720	925	947
13	1020	727	1940	501	1340	1540	1900	1180	944	1140	1020	783
14	826	806	1390	800	1320	1530	1340	786	981	413	997	887
15	877	513	940	882	1400	1310	1430	1450	979	226	882	793
16	879	664	1350	1000	1270	1370	1360	1460	981	647	815	852
17	1270	610	1020	1370	1330	1730	1300	1680	981	1130	1080	964
18	1070	800	1180	1070	1710	1420	1350	1960	981	727	517	705
19	827	706	935	1080	1740	1430	1430	1870	982	581	1100	797
20	818	782	1150	1240	1860	1520	1310	1310	982	737	892	912
21	989	793	1120	851	1870	1360	1170	1350	977	359	890	692
22	1240	726	1060	889	1860	1410	1110	1430	499	1160	941	498
23	1010	690	1070	970	1780	1460	1220	1460	218	520	1150	1260
24	936	828	569	815	1580	1490	1210	1270	648	321	1110	671
25	962	628	793	1330	1500	1410	1170	1470	967	908	912	706
26	1200	436	569	526	1510	1410	827	1440	973	762	1070	860
27	1080	999	.00	547	1670	1580	1130	1260	1000	147	1190	717
28	1260	506	644	1290	1550	1320	1260	1320	1110	668	551	573
29	995	719	1010	794	1570	1360	1290	1420	475	1150	842	678
30	707	708	814	16	---	1420	1320	1060	149	1350	1140	918
31	864	---	880	336	---	1370	---	1250	---	941	1560	---
TOTAL	30452	22321	27568.00	25929	41463	45790	38222	40121	27896	22342.00	30555	24669
MEAN	982	744	889	836	1430	1477	1274	1294	930	721	986	822
MAX	1480	999	1940	1370	1870	1730	1900	1960	1320	1350	1740	1270
MIN	672	436	.00	16	312	1310	827	786	149	.00	482	13
AC-FT	60400	44270	54680	51430	82240	90820	75810	79580	55330	44320	60610	48930
a	131900	131100	163000	218800	232000	252500	243400	231000	165600	145600	130400	124500

a Discharge, in acre-feet, for Pit No. 5 Powerplant (station 11362700), provided by Pacific Gas & Electric Co.

11363910 JAMES B. BLACK POWERPLANT NEAR BIG BEND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	737	737	865	948	1003	1163	1141	1005	878	829	801	776
MAX	1122	1401	1538	1651	1533	1565	1670	1797	1735	1260	1101	1225
(WY)	1976	1974	1974	1970	1970	1995	1966	1967	1967	1966	1983	1983
MIN	505	428	433	500	373	581	421	368	523	533	465	515
(WY)	1993	1992	1992	1992	1978	1991	1990	1977	1987	1994	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1966 - 1996			
ANNUAL TOTAL	413268.00				377328.00							
ANNUAL MEAN	1132				1031				903			
HIGHEST ANNUAL MEAN									1313			
LOWEST ANNUAL MEAN									547			
HIGHEST DAILY MEAN	1950				1960				2420			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	628				512				.00			
ANNUAL RUNOFF (AC-FT)	819700				748400				654000			
TOTAL DISCHARGE (AC-FT) a	2246000				2170000							
10 PERCENT EXCEEDS	1630				1490				1490			
50 PERCENT EXCEEDS	1080				998				869			
90 PERCENT EXCEEDS	630				576				383			

a Discharge, in acre-feet, for Pit No. 5 Powerplant (station 11362700), provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11363930 IRON CANYON CREEK BELOW IRON CANYON DAM, NEAR BIG BEND, CA

LOCATION.--Lat 41°02'22", long 121°59'03", in NW 1/4 NW 1/4 sec.28, T.37 N., R.1 W., Shasta County, Hydrologic Unit 18020003, on left bank 0.2 mi downstream from Iron Canyon Dam and 4.2 mi west of Big Bend.

DRAINAGE AREA.--11.2 mi² (revised).

PERIOD OF RECORD.--August 1966 to current year (beginning October 1994, operated as a low-flow station only).

REVISED RECORDS.--WDR CA-95-4: Drainage area.

GAGE.--Water-stage recorder, 60° sharp-crested V-notch weir, and concrete control with flashboards in 2- x 10-ft opening. Datum of gage is 2,461.52 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Flow is completely regulated by Iron Canyon Reservoir (station 11363920). There is an interbasin diversion from Lake McCloud (station 11367740) to Iron Canyon Reservoir and then through a tunnel to James B. Black Powerplant on the Pit River (station 11363910). This station records fishwater release only. The minimum release requirement is 3.0 ft³/s at all times. Flow is computed to 12.0 ft³/s. See schematic diagram of Pit and McCloud River basins.

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, 650 ft³/s, Feb. 5, 1986, gage height unknown (flashboards removed from weir), from equation for a 4 by 4-ft slide gate. Flow was the result of full travel test of slide gate at Iron Canyon Dam; maximum gage height, 3.24 ft, Feb. 25, 1978 (flashboards in weir), was the result of failure of the James B. Black Penstock; no flow, July 15-18, 1967.

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	3.8	3.7	3.8	3.8	3.8	3.8	3.9	3.8	3.8	3.8	4.1	3.3
2	3.8	3.8	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.1	3.3
3	3.8	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	4.1	3.4
4	3.8	3.7	3.8	3.8	4.6	4.9	3.8	3.8	3.8	3.8	4.1	3.4
5	3.8	3.7	3.8	3.8	---	4.4	3.8	3.8	3.8	3.8	4.0	3.4
6	3.8	3.8	3.8	3.8	6.8	3.9	3.8	3.8	3.8	3.8	4.0	3.4
7	3.7	3.7	3.8	3.8	4.9	3.8	3.8	3.8	3.8	3.8	4.0	3.4
8	3.8	3.8	3.8	3.8	4.0	3.8	3.8	3.8	3.8	3.8	3.9	3.3
9	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.5
10	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.5
11	3.8	3.8	4.0	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.7	3.5
12	3.8	3.8	---	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.7	3.6
13	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.7	3.6
14	3.8	3.8	4.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.5
15	3.8	3.8	4.6	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.7	3.6
16	3.8	3.8	3.8	4.2	3.8	3.8	3.8	4.7	3.8	4.0	3.7	3.5
17	3.8	3.8	3.8	3.8	---	3.8	3.8	---	3.8	4.0	3.7	3.5
18	3.8	3.7	3.8	3.8	---	3.8	3.8	7.4	3.8	4.0	3.6	3.5
19	3.8	3.8	3.8	3.8	9.2	3.8	3.8	4.7	3.8	4.2	3.7	3.5
20	3.8	3.7	3.8	3.9	---	3.8	3.8	3.9	3.8	4.2	3.6	3.4
21	3.8	3.8	3.8	3.7	---	3.8	3.8	3.8	3.8	4.2	3.6	3.4
22	3.8	3.8	3.8	3.8	7.9	3.8	3.8	3.8	3.8	4.2	3.6	3.5
23	3.8	3.8	3.8	3.8	6.1	3.8	3.8	3.8	3.8	4.2	3.6	3.5
24	3.8	3.8	3.8	3.8	4.9	3.8	3.8	3.8	3.8	4.2	3.5	3.4
25	3.7	3.8	3.8	3.8	4.4	3.8	3.8	3.8	3.8	4.2	3.5	3.5
26	---	3.8	3.8	3.8	4.0	3.7	3.8	3.8	3.8	4.2	3.5	3.5
27	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.2	3.5	3.5
28	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.3	3.4	3.5
29	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.3	3.4	3.5
30	3.7	3.8	3.8	3.8	---	3.8	3.8	3.8	3.8	4.2	3.4	3.5
31	3.7	---	3.8	3.8	---	3.8	---	3.8	---	4.1	3.4	---
TOTAL	---	113.1	---	118.2	---	119.6	114.1	---	114.0	124.1	115.0	103.9
MEAN	---	3.77	---	3.81	---	3.86	3.80	---	3.80	4.00	3.71	3.46
MAX	---	3.8	---	4.2	---	4.9	3.9	---	3.8	4.3	4.1	3.6
MIN	---	3.7	---	3.7	---	3.7	3.8	---	3.8	3.8	3.4	3.3
AC-FT	---	224	---	234	---	237	226	---	226	246	228	206

11364200 ROARING CREEK BELOW DIVERSION TO ROARING CREEK POWERPLANT, NEAR MONTGOMERY CREEK, CA

LOCATION.--Lat 40°53'22", long 121°56'59", in NW 1/4 SW 1/4 sec.15, T.35 N., R.1 W., Shasta County, Hydrologic Unit 18020003, on left bank 1,500 ft downstream from Cove Road, 0.5 mi downstream from Little Roaring Creek, and 3.5 miles northwest of Montgomery Creek.

DRAINAGE AREA.--34.8 mi².

PERIOD OF RECORD.--October 1987 to September 1988, October 1989 to September 1990 (operated as low-flow station only), October 1990 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 1,580 ft above sea level, from topographic map. Prior to Oct. 1, 1988, at site 750 ft upstream at different datum.

REMARKS.--During times of powerplant operation the minimum release requirement is 15 ft³/s except March to May when the minimum release requirement is 40 ft³/s. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were collected by Mega Renewables Energy/Independent Hydro Developers, 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 1991-96) Maximum discharge, 1,690 ft³/s, Jan. 13, 1995, gage-height, 4.84 ft, from rating curve extended above 50 ft³/s on basis of theoretical computation of flow over weir; minimum daily, 6.6 ft³/s, many days in August and September 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	20	16	16	134	96	42	23	16	16	16
2	17	16	18	16	16	120	82	42	16	21	16	16
3	17	16	19	16	17	126	64	42	18	23	16	16
4	16	16	22	16	214	245	46	42	16	16	17	17
5	16	16	17	16	476	297	42	42	17	16	24	17
6	16	16	17	16	330	223	42	42	16	16	24	17
7	16	16	18	16	291	198	42	42	16	16	23	17
8	17	17	20	16	253	187	42	42	16	16	23	17
9	16	17	19	16	226	172	42	42	16	16	22	16
10	16	18	21	22	207	162	42	42	16	16	21	16
11	18	18	28	16	191	230	42	42	16	16	21	16
12	18	18	258	16	178	228	42	41	16	16	21	17
13	16	17	154	16	156	195	42	41	16	16	20	19
14	16	17	100	17	134	160	41	42	16	16	19	19
15	16	17	277	16	111	134	42	54	16	16	19	21
16	17	17	141	65	117	123	58	58	16	16	19	19
17	17	17	40	32	178	107	52	103	16	16	19	19
18	17	18	17	18	283	95	42	398	16	16	19	18
19	16	17	17	16	590	85	51	238	16	16	19	18
20	16	17	17	30	650	75	43	154	16	16	19	19
21	16	18	17	35	620	67	43	164	16	16	19	18
22	16	18	17	17	395	64	42	170	16	16	18	18
23	16	18	17	16	305	54	42	118	17	16	18	18
24	16	18	17	79	277	44	64	95	17	16	18	18
25	16	18	17	83	238	42	47	102	16	16	18	18
26	16	18	17	42	211	43	42	76	17	16	18	16
27	16	18	24	47	185	49	42	83	18	16	18	16
28	16	18	16	25	170	55	42	49	16	16	18	16
29	16	17	17	17	160	43	42	54	16	16	18	16
30	16	17	16	19	---	42	42	42	16	16	17	16
31	16	---	16	18	---	44	---	42	---	16	17	---
TOTAL	507	516	1431	806	7195	3843	1443	2586	495	508	594	520
MEAN	16.4	17.2	46.2	26.0	248	124	48.1	83.4	16.5	16.4	19.2	17.3
MAX	18	18	277	83	650	297	96	398	23	23	24	21
MIN	16	16	16	16	16	42	41	41	16	16	16	16
AC-FT	1010	1020	2840	1600	14270	7620	2860	5130	982	1010	1180	1030
a	0	0	1090	3600	5320	5920	5050	4170	3280	992	52	0

a Discharge, in acre-feet, for Roaring Creek Powerplant (station 11364155), provided by Mega Renewables/Independent Hydro Developers.

11364200 ROARING CREEK BELOW DIVERSION TO ROARING CREEK POWERPLANT, NEAR MONTGOMERY CREEK, 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	12.8	14.6	22.9	65.5	93.9	150	85.5	64.5	20.0	14.1	13.3	12.8
MAX	18.5	17.2	46.2	248	248	371	190	142	31.0	16.5	19.2	18.5
(WY)	1994	1996	1996	1995	1996	1995	1995	1995	1993	1995	1996	1995
MIN	8.66	11.6	12.8	14.7	15.1	40.6	40.8	32.0	16.0	11.8	7.27	6.73
(WY)	1992	1992	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	37521	20444		
ANNUAL MEAN	103	55.9	47.3	
HIGHEST ANNUAL MEAN			99.6	1995
LOWEST ANNUAL MEAN			20.1	1992
HIGHEST DAILY MEAN	1060	Mar 14	1220	Mar 17 1993
LOWEST DAILY MEAN	15	Jun 10	6.6	Aug 22 1992
ANNUAL SEVEN-DAY MINIMUM	16	Jul 17	6.6	Sep 9 1992
INSTANTANEOUS PEAK FLOW			1690	Jan 13 1995
INSTANTANEOUS PEAK STAGE			4.84	Jan 13 1995
ANNUAL RUNOFF (AC-FT)	74420	40550	34280	
TOTAL DISCHARGE (AC-FT) a	31640	29470		
10 PERCENT EXCEEDS	290	163	115	
50 PERCENT EXCEEDS	19	18	17	
90 PERCENT EXCEEDS	16	16	8.9	

a Discharge, in acre-feet, for Roaring Creek Powerplant (station 11364155), provided by Mega Renewables/Independent Hydro Developers.

11364300 HATCHET CREEK BELOW DIVERSION TO HATCHET CREEK POWERPLANT, NEAR MONTGOMERY CREEK, CA

LOCATION.--Lat 40°52'39", long 121°51'55", in SW 1/4 NE 1/4 sec.21, T.35 N., R.1 E., Shasta County, Hydrologic Unit 18020003, on left bank 1,100 ft downstream from diversion to powerplant, 1,400 ft downstream from Buffom Creek and 3.8 mi northeast of Montgomery Creek.

DRAINAGE AREA.--29.6 mi².

PERIOD OF RECORD.--October 1987 to September 1988, October 1989 to September 1990 (operated as low-flow station only), October 1990 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 3,460 ft above sea level, from topographic map.

REMARKS.--During times of powerplant operation the minimum flow requirement is 15 ft³/s. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were collected by Mega Renewables/Independent Hydro Developers, 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 1991-96) Maximum discharge, 1,930 ft³/s, Oct. 29, 1992, gage height, 7.06 ft, from outside highwater mark, from rating curve extended above 42 ft³/s on basis of theoretical computation of flow over weir; minimum daily, 3.8 ft³/s, Aug. 18 to Sept. 8, 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	21	19	24	20	20	76	144	45	20	20	22	18
2	21	18	21	27	20	73	136	25	20	20	25	18
3	20	18	22	20	20	105	106	20	20	20	25	18
4	21	18	25	20	159	180	78	20	20	20	24	18
5	20	18	20	20	357	166	56	20	20	20	24	18
6	20	18	20	20	325	131	44	20	20	20	24	18
7	20	18	19	20	266	119	37	20	20	20	24	18
8	20	18	22	20	224	117	30	20	20	20	23	18
9	20	18	23	20	202	115	28	20	20	20	23	18
10	20	18	27	20	185	114	27	20	20	20	23	18
11	21	18	31	20	162	140	21	20	20	20	22	18
12	22	18	380	20	145	148	23	20	20	20	22	18
13	21	18	219	20	131	131	20	28	20	20	22	20
14	21	18	162	20	115	114	20	20	20	20	22	22
15	21	18	319	20	101	105	21	23	20	20	21	28
16	21	18	167	98	102	91	98	23	20	20	21	23
17	21	18	65	111	129	79	98	86	20	20	21	22
18	19	18	29	57	141	69	76	408	20	20	21	21
19	18	18	18	34	310	61	79	232	20	20	21	20
20	19	18	19	27	353	55	69	150	20	20	22	20
21	19	19	20	35	355	48	67	132	20	20	21	20
22	19	19	20	20	232	42	63	160	20	20	21	19
23	20	19	20	20	197	32	63	122	20	20	20	19
24	21	19	20	51	166	25	131	107	20	20	20	19
25	21	20	20	89	145	20	111	84	20	20	20	19
26	18	22	20	38	129	21	90	64	20	20	20	18
27	18	20	20	34	114	33	70	98	20	20	20	18
28	18	20	19	23	104	61	51	51	20	20	20	18
29	18	19	20	20	90	25	40	43	20	20	20	18
30	18	19	20	20	---	20	31	31	20	20	19	18
31	19	---	19	20	---	21	---	26	---	20	18	---
TOTAL	616	557	1850	1004	4999	2537	1928	2158	600	620	671	578
MEAN	19.9	18.6	59.7	32.4	172	81.8	64.3	69.6	20.0	20.0	21.6	19.3
MAX	22	22	380	111	357	180	144	408	20	20	25	28
MIN	18	18	18	20	20	20	20	20	20	20	18	18
AC-FT	1220	1100	3670	1990	9920	5030	3820	4280	1190	1230	1330	1150
a	0	0	2090	4000	4640	5080	4940	4460	2690	787	6.0	0

a Discharge, in acre-feet, for Hatchet Creek Powerplant (station 11364250), provided by Mega Renewables/Independent Hydro Developers.

11364300 HATCHET CREEK BELOW DIVERSION TO HATCHET CREEK POWERPLANT, NEAR MONTGOMERY CREEK, 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	14.8	14.5	24.5	53.9	58.9	109	73.6	41.3	24.6	15.0	15.0	13.6
MAX	30.5	22.1	59.7	204	172	259	175	77.7	53.1	20.0	22.5	22.1
(WY)	1994	1994	1996	1995	1996	1995	1993	1995	1993	1996	1995	1995
MIN	6.27	9.07	9.40	10.3	14.5	18.4	19.2	13.5	8.15	6.06	4.07	4.21
(WY)	1992	1992	1992	1992	1991	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1991 - 1996

ANNUAL TOTAL	29208	18118	
ANNUAL MEAN	80.0	49.5	38.1
HIGHEST ANNUAL MEAN			75.3
LOWEST ANNUAL MEAN			10.6
HIGHEST DAILY MEAN	787	Jan 9	408 May 18
LOWEST DAILY MEAN	16	Jan 3	18 Oct 19
ANNUAL SEVEN-DAY MINIMUM	18	May 28	18 Nov 2
INSTANTANEOUS PEAK FLOW			707 May 18
INSTANTANEOUS PEAK STAGE			3.35 May 18
ANNUAL RUNOFF (AC-FT)	57930	35940	27630
TOTAL DISCHARGE (AC-FT) a	28750	28690	
10 PERCENT EXCEEDS	210	131	100
50 PERCENT EXCEEDS	22	20	19
90 PERCENT EXCEEDS	18	18	7.2

a Discharge, in acre-feet, for Hatchet Creek Powerplant (station 11364250), provided by Mega Renewables/
Independent Hydro Developers.

11365000 PIT RIVER NEAR MONTGOMERY CREEK, CA

LOCATION.--Lat 40°50'38", long 122°00'05", in NE 1/4 SW 1/4 sec.32, T.35 N., R.1 W., Shasta County, Hydrologic Unit 18020003, Shasta National Forest, on left bank 0.7 mi downstream from Pit No. 7 Dam and Powerplant, 1.4 mi upstream from Potem Creek, and 4.1 mi west of town of Montgomery Creek.

DRAINAGE AREA.--4,952 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--October 1944 to current year (monthly discharge only December 1964 to May 1965). Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1951, 1953, 1955-81.

WATER TEMPERATURE: Water years 1951, 1954-57, 1959.

REVISED RECORDS.--WSP 1931: Drainage area. WDR CA-86-4: 1983 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,000.00 ft above sea level (levels by Pacific Gas & Electric Co.). October 1944 to Feb. 17, 1963, at site 0.7 mi upstream at different datum. Feb. 17, 1963, to May 21, 1965, at site 1.5 mi upstream at different datum. May 21, 1965, to June 20, 1981, at site 0.9 mi downstream at datum 1,036.00 ft above sea level.

REMARKS.--Low flow completely regulated by many reservoirs and powerplants, total usable reservoir capacity, 337,000 acre-ft. Many diversions upstream from station for irrigation. Diversion from McCloud River to Iron Canyon Reservoir (station 11363920) began December 1965. See schematic diagram of Pit and McCloud River basins.

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, 73,000 ft³/s, Jan. 24, 1970, gage height, 32.36 ft, site and datum then in use; maximum gage height, 74.65 ft, Feb. 19, 1986; minimum daily, 30 ft³/s, July 12, 27, 1975, result of construction work below Pit No. 7 Powerplant.

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	e2230	3700	e4000	e5010	6490	9770	7130	e6590	e6270	e1480	3990	2020
2	e4290	3250	e3370	e5780	5260	9620	8370	e5040	e5990	e4850	3230	2670
3	e2730	3880	e2940	e4070	6050	9650	8140	e6370	e6010	e3900	2090	3960
4	e2880	2540	e3690	e3650	7490	11800	8370	e6460	e6370	e3660	2720	3580
5	e4280	2130	e3260	e4300	14000	12600	8360	e5550	e4830	e3720	3760	4090
6	e3570	3520	e4430	e3190	14700	12700	8350	e5150	e6830	e3020	4120	3510
7	e2060	3760	e3590	e3680	15800	12300	7140	e5540	e5660	e2530	3560	2610
8	e2230	3450	e3640	e4520	15300	11700	7470	e5910	e3650	3100	4140	2380
9	e4350	2930	e4290	e3880	14000	11000	7790	e4980	e2690	3960	4450	2910
10	2980	3740	e4580	5130	13500	11000	7090	e6210	e3990	3930	3190	3030
11	3830	3330	e4230	4380	12100	11600	6640	e5200	e5830	4200	584	3150
12	4210	2550	e5890	6300	10900	11900	7280	e4960	e5000	2750	3520	2940
13	3700	2690	e5510	5140	10100	11600	7070	e4830	e4260	3390	4040	4070
14	2490	3100	e6510	4200	8970	10900	8310	e3670	e5160	1280	4060	4690
15	2780	3170	e8200	3540	8500	10200	7770	e4680	e6020	2440	3490	1420
16	2800	3030	e8300	5340	8320	9150	6920	e6340	e4070	3390	3240	3190
17	3890	3320	e6470	8200	8110	9360	6720	e10100	e4650	4070	2310	3170
18	3220	2840	e5480	6680	16700	8410	7060	e13800	e3350	4610	2160	3200
19	2870	2560	e2970	4910	20200	8420	7470	e11100	e2750	2450	4960	3470
20	3410	3700	e4810	7260	23200	8390	7530	e8900	e3640	3680	2770	4330
21	3380	3590	e5610	7080	25100	7170	7210	e10300	e5190	2120	3050	2650
22	3150	3820	e3850	5870	21800	7000	e6880	e10300	e3040	2720	3440	2100
23	3810	2250	e4800	5150	19700	8350	e6660	e8680	e3480	4110	4590	3710
24	3000	4000	e4290	6490	17600	8340	e8200	e9180	e2450	4170	2020	3580
25	3510	2710	e3830	8280	14800	7060	e6760	e8450	e4030	2370	2440	3520
26	3630	2420	e3990	6340	13600	6260	e6950	e7510	e4120	4060	3880	3630
27	3190	e3780	e3040	5440	11800	8040	e5890	e7440	e4000	1690	4260	3760
28	4940	e2730	e2970	7040	11000	6980	e7290	e8380	e3550	1970	3300	1620
29	2680	e2620	e4780	6920	10200	6940	e5970	e7990	e3170	3740	3950	1660
30	4260	e3520	e4310	4680	---	7250	e6630	e6700	e1240	3640	3940	2990
31	3100	---	e4000	3580	---	7270	---	e6400	---	3840	2390	---
TOTAL	103450	94630	141630	166030	385290	292730	219420	222710	131290	100840	103644	93610
MEAN	3337	3154	4569	5356	13290	9443	7314	7184	4376	3253	3343	3120
MAX	4940	4000	8300	8280	25100	12700	8370	13800	6830	4850	4960	4690
MIN	2060	2130	2940	3190	5260	6260	5890	3670	1240	1280	584	1420
AC-FT	205200	187700	280900	329300	764200	580600	435200	441700	260400	200000	205600	185700
a	15277	14991	15382	13931	15251	14129	14837	14079	9879	14607	15251	15199
b	205600	191200	255200	302300	409500	449300	407200	387100	248300	186200	206200	186300
c	33538	33538	33677	33492	33862	32350	32215	32940	32758	33215	33723	33677

e Estimated

a Contents, in acre-feet, at end of month for Pit No. 6 Reservoir (station 11364100), provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, for Pit No. 6 Powerplant (station 11364150), provided by Pacific Gas & Electric Co.

c Contents, in acre-feet, at end of month for Pit No. 7 Reservoir (station 11364700), provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11365000 PIT RIVER NEAR MONTGOMERY CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1965, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2643	2828	3821	4320	5592	5331	5711	4297	3127	2376	2231	2284
MAX	5999	3710	9541	11240	12970	8212	13350	7380	5044	3037	2651	2744
(WY)	1963	1951	1956	1956	1958	1956	1952	1952	1953	1958	1958	1959
MIN	2112	2232	2219	2137	2500	3225	3404	2299	2353	1935	1971	1899
(WY)	1950	1950	1950	1949	1948	1964	1947	1947	1950	1949	1947	1949

SUMMARY STATISTICS

WATER YEARS 1945 - 1965

ANNUAL TOTAL	
ANNUAL MEAN	3704
HIGHEST ANNUAL MEAN	5529 1956
LOWEST ANNUAL MEAN	2658 1947
HIGHEST DAILY MEAN	32100 Dec 23 1955
LOWEST DAILY MEAN	150 Jul 19 1965
ANNUAL SEVEN-DAY MINIMUM	1610 Jul 19 1965
INSTANTANEOUS PEAK FLOW	37100 Dec 23 1955
INSTANTANEOUS PEAK STAGE	14.12 Dec 23 1955
ANNUAL RUNOFF (AC-FT)	2684000
10 PERCENT EXCEEDS	6080
50 PERCENT EXCEEDS	3010
90 PERCENT EXCEEDS	1740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3301	3956	4638	6305	6992	8106	6601	5400	3924	3247	3082	3070
MAX	4804	8174	9814	20890	18670	16030	12920	11900	6237	4297	4187	3966
(WY)	1985	1974	1982	1970	1986	1983	1982	1995	1971	1974	1983	1974
MIN	2286	2533	2408	2632	2784	3241	2626	2404	2268	2291	2049	1427
(WY)	1993	1993	1991	1991	1991	1977	1977	1992	1992	1994	1992	1966

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	2541128	2055274	
ANNUAL MEAN	6962	5616	4875
HIGHEST ANNUAL MEAN			7693 1974
LOWEST ANNUAL MEAN			2808 1992
HIGHEST DAILY MEAN	29300 Mar 14	25100 Feb 21	53900 Jan 23 1970
LOWEST DAILY MEAN	774 Jul 9	584 Aug 11	30 Jul 12 1975
ANNUAL SEVEN-DAY MINIMUM	2590 Aug 8	2930 Nov 23	939 Sep 5 1966
INSTANTANEOUS PEAK FLOW		28400 Feb 21	73000 Jan 24 1970
INSTANTANEOUS PEAK STAGE		69.43 Feb 21	74.65 Feb 19 1986
ANNUAL RUNOFF (AC-FT)	5040000	4077000	3532000
TOTAL DISCHARGE (AC-FT) a	3665000	3435000	
10 PERCENT EXCEEDS	14200	10100	8410
50 PERCENT EXCEEDS	4940	4270	3970
90 PERCENT EXCEEDS	2650	2640	2050

a Discharge, in acre-feet, for Pit No. 6 Powerplant (station 11364150), provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

83

11367500 McCloud River NEAR McCloud, CA

LOCATION.--Lat 41°11'18", long 122°03'52", in NW 1/4 NE 1/4 sec.34, T.39 N., R.2 W., Siskiyou County, Hydrologic Unit 18020004, on right bank 0.4 mi downstream from Angel Creek and 6 mi southeast of McCloud.

DRAINAGE AREA.--358 mi².

PERIOD OF RECORD.--April 1931 to current year.

REVISED RECORDS.--WSP 843: 1936(M). WSP 1445: 1940(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,711.2 ft above sea level, from river-profile map.

REMARKS.--Two small diversions upstream from station for irrigation, and one 22-in. pipeline for town of McCloud. See schematic diagram of Pit and McCloud River basins.

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, 11,800 ft³/s, Dec. 21, 1955, gage heights, 9.42 ft, in gage well, 10.7 ft from floodmarks, from rating curve extended above 8,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 524 ft³/s, Nov. 23, 24, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1500	1,550	2.60	May 18	0115	4,120	4.85
Feb. 21	0845	4,070	4.82				

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	813	770	753	771	758	1090	1300	1100	1060	887	844	814
2	791	770	748	764	753	1070	1470	1100	1040	884	841	813
3	790	768	748	764	750	1060	1290	1090	1020	882	841	813
4	789	766	749	764	828	1260	1210	1070	1010	880	840	812
5	789	766	752	764	1160	1380	1170	1050	1000	876	839	810
6	789	765	747	764	1370	1210	1150	1040	989	874	837	809
7	789	764	744	761	1290	1150	1150	1030	980	873	834	808
8	788	763	741	760	1170	1140	1150	1030	971	872	834	808
9	787	763	741	770	1090	1150	1160	1020	962	872	833	808
10	785	760	749	791	1040	1160	1150	1010	955	868	833	807
11	785	759	778	780	1010	1300	1120	1010	950	867	833	807
12	783	759	1210	775	985	1390	1100	1010	942	866	833	807
13	782	759	1150	767	968	1300	1080	1020	938	867	831	809
14	781	759	954	764	953	1230	1060	1050	931	865	832	808
15	779	758	967	771	938	1190	1060	1240	927	864	829	816
16	778	758	911	810	977	1170	1210	1160	925	865	828	808
17	776	758	846	844	1760	1150	1220	2980	918	864	827	806
18	776	758	817	833	2930	1150	1150	3190	914	861	827	802
19	775	757	795	811	3200	1150	1130	2230	913	859	826	801
20	775	754	782	800	2640	1150	1110	1700	911	859	824	801
21	774	753	774	791	3480	1160	1090	1540	907	859	822	801
22	773	753	765	778	2280	1160	1080	1490	904	856	821	798
23	771	752	764	771	1790	1140	1080	1350	901	850	820	798
24	771	749	759	774	1570	1110	1230	1270	901	850	820	796
25	770	750	757	766	1410	1090	1270	1220	908	848	820	795
26	770	749	753	764	1300	1070	1190	1190	901	847	820	795
27	770	747	752	767	1220	1070	1160	1220	901	846	820	795
28	770	747	751	761	1180	1090	1130	1170	900	850	819	795
29	770	747	756	758	1140	1050	1110	1130	895	849	816	795
30	770	747	764	758	---	1030	1100	1100	889	846	814	795
31	770	---	775	757	---	1030	---	1080	---	846	814	---
TOTAL	24179	22728	25052	24073	41940	35850	34880	40890	28263	26752	25672	24130
MEAN	780	758	808	777	1446	1156	1163	1319	942	863	828	804
MAX	813	770	1210	844	3480	1390	1470	3190	1060	887	844	816
MIN	770	747	741	757	750	1030	1060	1010	889	846	814	795
AC-FT	47960	45080	49690	47750	83190	71110	69180	81110	56060	53060	50920	47860

SACRAMENTO RIVER BASIN

11367500 McCLOUD RIVER NEAR McCLOUD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	760	785	850	887	967	1042	1121	1119	944	830	791	769
MAX	1030	1569	1879	2348	2155	2220	1896	2182	1549	1219	1101	1059
(WY)	1984	1974	1956	1970	1958	1983	1974	1938	1938	1983	1983	1983
MIN	536	537	534	539	549	568	674	606	574	561	556	544
(WY)	1933	1933	1933	1933	1933	1935	1994	1992	1992	1934	1992	1932

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1931 - 1996

ANNUAL TOTAL	388904		354409									
ANNUAL MEAN	1065		968							908		
HIGHEST ANNUAL MEAN										1406		1974
LOWEST ANNUAL MEAN										589		1992
HIGHEST DAILY MEAN	5050	Mar 10		3480	Feb 21					10100	Jan 16	1974
LOWEST DAILY MEAN	546	Jan 1		741	Dec 8					524	Nov 23	1932
ANNUAL SEVEN-DAY MINIMUM	551	Jan 1		746	Dec 3					528	Nov 20	1932
INSTANTANEOUS PEAK FLOW				4120	May 18					11800	Dec 21	1955
INSTANTANEOUS PEAK STAGE					4.85	May 18				9.42	Dec 21	1955
ANNUAL RUNOFF (AC-FT)	771400			703000						657500		
10 PERCENT EXCEEDS	1500			1210						1240		
50 PERCENT EXCEEDS	860			846						833		
90 PERCENT EXCEEDS	755			758						603		

11367720 McCLOUD-IRON CANYON DIVERSION TUNNEL NEAR McCLOUD, CA

LOCATION.--Lat 41°08'06", long 122°04'26", in SE 1/4 SW 1/4 sec.22, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on left bank of Lake McCloud, 8.8 mi southeast of McCloud.

PERIOD OF RECORD.--December 1965 to current year.

REVISED RECORDS.--WDR CA-75-4: 1973.

GAGE.--None. Water-stage recorders on Iron Canyon Reservoir and Lake McCloud (stations 11363920 and 11367740) used to compute record.

REMARKS.--Water is diverted from Lake McCloud (station 11367740) via tunnel to Iron Canyon Reservoir (station 11363920) and then via penstock into James B. Black Powerplant (station 11363910) on the Pit River. Diversion began Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins.

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, 1,890 ft³/s, several days during May and June 1967; no flow several days in 1965-68, 1971, 1978.

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	738	739	600	687	665	1390	1200	1150	1160	644	712	844
2	739	725	585	747	703	1390	1200	1130	1140	715	735	752
3	716	715	590	720	744	1380	1180	1120	1130	726	723	749
4	703	698	619	730	647	1370	1170	1120	1120	704	741	723
5	749	656	588	686	699	1380	1190	1120	1120	723	725	746
6	747	630	558	654	809	1380	1200	1120	1110	711	727	743
7	742	645	592	661	932	1380	1200	1080	1090	709	741	774
8	731	635	621	686	1080	1370	1200	1070	1070	716	765	768
9	757	667	715	660	1150	1370	1030	1030	1020	706	818	752
10	768	694	660	674	1170	1370	1200	1020	985	684	815	731
11	744	622	630	684	1160	1390	1200	1020	970	619	781	726
12	747	624	808	750	1180	1410	1220	1020	949	621	783	728
13	753	624	1010	684	1190	1410	1300	1030	929	660	787	719
14	742	652	1060	681	1180	1400	1300	991	916	634	787	723
15	732	609	1020	698	1190	1380	1300	1030	902	600	776	706
16	726	593	1040	761	1190	1360	1300	1070	891	607	770	713
17	762	593	1010	862	1200	1390	1300	1160	882	644	781	721
18	770	597	1020	894	1290	1370	1300	1210	874	647	748	712
19	756	593	983	897	1330	1370	1290	1280	865	642	767	701
20	735	599	971	938	1340	1360	1290	1270	858	651	769	697
21	732	621	963	899	1320	1340	1290	1250	853	621	764	671
22	757	621	939	876	1370	1350	1220	1250	803	660	766	642
23	754	623	912	859	1400	1360	1200	1250	739	649	780	695
24	759	638	829	830	1410	1330	1190	1230	725	625	791	674
25	755	621	803	895	1410	1330	1180	1240	739	645	782	660
26	782	573	747	820	1470	1310	1130	1240	746	653	788	667
27	776	627	586	767	1400	1330	1120	1230	762	610	807	664
28	807	594	590	827	1390	1310	1120	1230	785	619	777	642
29	809	602	638	800	1380	1300	1130	1230	746	658	768	634
30	765	602	643	627	---	1280	1140	1190	684	702	779	649
31	744	---	668	569	---	1270	---	1170	---	715	825	---
TOTAL	23297	19032	23998	23523	33399	42130	36290	35551	27563	20520	23878	21326
MEAN	752	634	774	759	1152	1359	1210	1147	919	662	770	711
MAX	809	739	1060	938	1470	1410	1300	1280	1160	726	825	844
MIN	703	573	558	569	647	1270	1030	991	684	600	712	634
AC-FT	46210	37750	47600	46660	66250	83560	71980	70520	54670	40700	47360	42300

SACRAMENTO RIVER BASIN

11367720 McCLOUD-IRON CANYON DIVERSION TUNNEL NEAR McCLOUD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	653	667	795	867	939	1097	1129	1023	893	778	743	707
MAX	1028	1205	1362	1451	1583	1592	1624	1729	1854	1305	1150	1123
(WY)	1984	1984	1974	1970	1970	1970	1966	1967	1967	1967	1971	1983
MIN	.000	.000	333	383	439	562	445	388	416	409	343	383
(WY)	1966	1966	1992	1992	1991	1991	1990	1977	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1966 - 1996	
ANNUAL TOTAL	355192		330507			
ANNUAL MEAN	973		903		857	
HIGHEST ANNUAL MEAN					1260	
LOWEST ANNUAL MEAN					453	
HIGHEST DAILY MEAN	1460	May 1	1470	Feb 26	1890	May 20 1967
LOWEST DAILY MEAN	329	Jan 2	558	Dec 6	.00	Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	441	Jan 1	590	Dec 1	.00	Oct 1 1965
ANNUAL RUNOFF (AC-FT)	704500		655600		621000	
10 PERCENT EXCEEDS	1390		1320		1400	
50 PERCENT EXCEEDS	898		778		792	
90 PERCENT EXCEEDS	630		626		471	

11367760 McCLOUD RIVER BELOW McCLOUD DAM, NEAR McCLOUD, CA

LOCATION.--Lat 41°07'44", long 122°04'08", in SW 1/4 NE 1/4 sec.27, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on left bank 0.1 mi downstream from Lizard Creek, 0.6 mi downstream from McCloud Dam, and 9 mi southeast of McCloud.

DRAINAGE AREA.--404 mi².

PERIOD OF RECORD.--April 1966 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Datum of gage is 2,398.76 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to Apr. 7, 1972, at datum 3.00 ft higher.

REMARKS.--Low flow regulated by Lake McCloud (station 11367740) since November 1965. Most of McCloud River runoff is diverted from reservoir through tunnel to Iron Canyon Reservoir (station 11363920) in Pit River basin. This station records fishwater release. The minimum release requirement is 40 ft³/s at all times. Prior to water year 1974, flow was computed up to 400 ft³/s. During water years 1975-81, because of channel changes, flow was computed up to 200 ft³/s. Currently, because of maximum required release, flow is computed to 220 ft³/s. See schematic diagram of Pit and McCloud River basins.

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	203	206	202	124	108	95	83	76	104	165	182	202
2	204	206	202	123	109	92	71	79	110	168	183	203
3	204	206	202	123	109	91	70	85	120	169	183	203
4	205	205	202	123	93	97	70	90	126	168	183	203
5	205	205	202	123	100	100	70	96	126	169	182	204
6	205	205	202	125	90	93	70	96	129	171	182	204
7	206	205	202	127	86	87	70	98	129	178	182	202
8	205	205	203	127	84	85	70	101	133	178	181	202
9	209	204	204	127	83	86	70	105	135	178	181	202
10	209	201	203	127	82	85	72	109	137	178	182	202
11	209	201	163	127	81	88	78	111	140	179	183	201
12	208	201	58	127	80	88	85	111	142	183	182	202
13	208	200	56	127	79	86	85	112	145	183	182	201
14	207	200	104	127	79	84	88	113	145	183	182	203
15	207	200	66	127	78	83	89	117	146	184	182	202
16	207	200	48	89	79	82	54	130	148	184	182	203
17	206	200	70	46	97	81	49	90	149	184	183	203
18	206	200	94	53	105	80	53	---	154	184	183	203
19	206	202	102	77	---	80	55	---	156	184	183	203
20	206	202	109	90	---	80	57	---	156	184	182	203
21	208	202	116	90	---	79	63	---	156	183	184	202
22	208	202	120	91	---	79	62	---	157	183	191	202
23	207	202	125	99	---	78	65	---	159	184	190	202
24	207	202	128	102	---	78	68	204	159	184	189	202
25	206	202	132	103	---	77	68	201	159	184	188	202
26	206	202	137	103	---	77	68	100	159	183	188	203
27	207	202	136	103	99	70	68	75	163	186	187	202
28	207	202	135	108	98	61	68	79	167	185	186	202
29	206	202	136	109	97	72	68	92	166	189	185	202
30	206	202	136	109	---	77	70	97	165	195	185	201
31	207	---	136	109	---	82	---	97	---	188	193	---
TOTAL	6400	6074	4331	3365	---	2573	2077	---	4340	5598	5711	6071
MEAN	206	202	140	109	---	83.0	69.2	---	145	181	184	202
MAX	209	206	204	127	---	100	89	---	167	195	193	204
MIN	203	200	48	46	---	61	49	---	104	165	181	201
AC-FT	12690	12050	8590	6670	---	5100	4120	---	8610	11100	11330	12040

SACRAMENTO RIVER BASIN

11367800 McCloud River at Ah-Di-Na, near McCloud, CA

LOCATION.--Lat 41°06'39", long 122°05'42", in NE 1/4 SW 1/4 sec.33, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on right bank at Ah-Di-Na, 1.8 mi downstream from Squirrel Creek, 3.9 mi downstream from McCloud Dam, and 9.6 mi south of McCloud.

DRAINAGE AREA.--427 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,160 ft above sea level, from topographic map.

REMARKS.--Low flow completely regulated by Lake McCloud (station 11367740) 3.9 mi upstream since November 1965.

Diversion to Iron Canyon Reservoir (station 11363920) through McCloud-Iron Canyon diversion tunnel (station 11367720) started Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins. This station records fishwater release. The minimum release requirements range from 160 to 210 ft³/s per schedule outlined in Federal Energy Regulatory Commission License 2106. See schematic diagram of Pit and McCloud 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.--Prior to completion of McCloud Dam in 1965, maximum discharge, 9,660 ft³/s, Dec. 22, 1964, gage height, 9.43 ft, from rating curve extended above 2,500 ft³/s; minimum daily, 86 ft³/s, Oct. 1-26, 1964. Since completion of McCloud Dam, maximum discharge, 26,400 ft³/s, Jan. 16, 1974, gage height, 13.68 ft in gage well, 15.38 ft from floodmarks, from rating curve extended above 8,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 41 ft³/s, Dec. 18-20, 1971 (caused by valve malfunction at McCloud Dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 12.5 ft, discharge, 17,800 ft³/s, from rating curve extended above 2,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	0345	6,390	7.88	May 17	2030	5,360	7.29

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	225	225	230	171	172	273	270	178	210	209	212	221
2	225	223	223	168	171	263	263	178	212	210	213	220
3	225	223	225	167	173	263	241	178	217	210	213	220
4	225	223	228	167	325	469	222	180	217	209	212	220
5	225	220	231	166	919	540	209	185	213	209	211	220
6	225	221	226	166	648	426	198	180	211	209	211	220
7	225	223	224	167	507	362	192	178	210	210	210	220
8	225	223	224	167	432	335	185	178	210	210	209	220
9	226	223	225	176	379	347	182	178	211	209	209	220
10	228	222	231	174	341	363	178	178	209	209	209	220
11	228	220	252	171	317	502	178	178	210	209	210	220
12	228	220	403	171	296	512	181	176	210	211	209	220
13	228	220	303	170	279	431	175	178	211	211	209	224
14	225	220	265	169	265	372	175	192	209	211	210	222
15	225	220	466	177	248	336	179	199	211	211	209	228
16	225	220	246	229	261	314	201	238	210	211	209	223
17	225	220	192	210	1040	297	182	1950	210	211	209	220
18	225	222	187	172	1170	285	176	3620	210	212	209	220
19	225	223	178	171	2640	277	180	1250	212	212	209	220
20	225	223	175	182	3260	271	178	865	211	211	209	220
21	225	223	175	184	5280	263	183	766	209	211	209	220
22	225	223	175	174	1940	252	176	626	211	211	212	220
23	225	223	177	175	1350	240	185	402	211	209	211	220
24	225	223	177	177	627	228	231	379	211	210	211	220
25	225	223	177	173	544	217	236	328	214	210	210	220
26	225	223	182	170	443	207	220	225	209	214	210	220
27	225	223	180	172	320	198	209	216	212	215	209	220
28	225	222	178	169	305	175	194	216	209	217	209	220
29	225	223	183	169	291	178	185	218	209	217	209	220
30	223	220	185	168	---	178	178	213	210	219	208	220
31	225	---	185	171	---	182	---	208	---	216	210	---
TOTAL	6986	6660	6908	5413	24943	9556	5942	14434	6329	6553	6509	6618
MEAN	225	222	223	175	860	308	198	466	211	211	210	221
MAX	228	225	466	229	5280	540	270	3620	217	219	213	228
MIN	223	220	175	166	171	175	175	176	209	209	208	220
AC-FT	13860	13210	13700	10740	49470	18950	11790	28630	12550	13000	12910	13130

SACRAMENTO RIVER BASIN

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11367800 McCLOUD RIVER AT AH-DI-NA, NEAR McCLOUD, 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	253	287	293	423	410	490	361	340	250	225	223	234
MAX	919	1140	1863	2211	1769	2107	2102	1498	1173	1035	992	954
(WY)	1966	1974	1965	1970	1986	1983	1965	1965	1965	1965	1965	1965
MIN	180	182	93.2	93.4	119	167	166	162	160	159	155	182
(WY)	1978	1978	1972	1972	1972	1977	1968	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1965 - 1996	
ANNUAL TOTAL	168033		106851			
ANNUAL MEAN	460		292		315	
HIGHEST ANNUAL MEAN					1326	
LOWEST ANNUAL MEAN					168	
HIGHEST DAILY MEAN	6660	Mar 11	5280	Feb 21	17300	Jan 16 1974
LOWEST DAILY MEAN	169	Jan 2	166	Jan 5	41	Dec 18 1971
ANNUAL SEVEN-DAY MINIMUM	176	Dec 19	167	Jan 2	42	Dec 15 1971
INSTANTANEOUS PEAK FLOW			6390	Feb 21	26400	Jan 16 1974
INSTANTANEOUS PEAK STAGE			7.88	Feb 21	13.68	Jan 16 1974
ANNUAL RUNOFF (AC-FT)	333300		211900		228500	
10 PERCENT EXCEEDS	812		337		485	
50 PERCENT EXCEEDS	223		216		205	
90 PERCENT EXCEEDS	191		176		168	

SACRAMENTO RIVER BASIN

11368000 McCLOUD RIVER ABOVE SHASTA LAKE, CA

LOCATION.--Lat 40°57'30", long 122°13'07", unsurveyed, T.36 N., R.3 W., Shasta County, Hydrologic Unit 18020004, on right bank just upstream from Shasta Lake, 0.2 mi downstream from Big Bollibokka Creek, and 11.3 mi east of Lamaine.

DRAINAGE AREA.--604 mi².

PERIOD OF RECORD.--October 1945 to current year. Prior to 1950, published as "above Shasta Reservoir."
TEMPERATURE: Water years 1956-59.

REVISED RECORDS.--WSP 1445: 1953(M). WSP 1931: Drainage area. WDR CA-94-4: 1993(P).

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Low flow completely regulated by Lake McCloud (station 11367740) 16.5 mi upstream since Nov. 3, 1965. Diversions to Iron Canyon Reservoir (station 11363920) began Dec. 1, 1965. See schematic diagram of Pit and McCloud River basins.

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, 45,500 ft³/s, Jan. 16, 1974, gage height, 28.26 ft, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 109 ft³/s, Dec. 16-20, 1971. Minimum prior to regulation by Lake McCloud, 820 ft³/s, Jan. 3, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 5	0530	8,060	17.07	Mar. 5	0015	4,530	14.57
Feb. 21	0615	14,200	20.19	May 17	2245	10,500	18.42

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	305	303	347	383	735	1540	1200	667	697	446	365	334
2	305	300	317	369	721	1520	1170	638	675	441	360	335
3	305	300	322	363	696	1550	1030	615	660	439	359	334
4	305	300	370	356	2040	3290	930	595	647	436	357	334
5	304	300	381	349	5940	3970	858	584	627	432	357	332
6	305	300	346	342	3700	2800	806	566	614	425	353	332
7	305	300	323	340	2710	2170	762	546	596	423	352	330
8	305	300	314	335	2160	1900	728	536	588	419	350	331
9	306	304	313	381	1800	1920	701	522	577	417	347	328
10	306	301	342	395	1550	1930	681	516	564	412	344	327
11	308	298	701	365	1350	2580	650	502	555	408	343	328
12	312	296	2810	358	1200	2670	635	492	546	407	343	328
13	312	296	1670	352	1080	2220	608	488	539	405	340	347
14	309	296	1100	346	978	1870	593	517	530	404	343	348
15	309	296	3020	420	896	1620	597	589	524	403	340	391
16	309	301	1380	1020	917	1450	899	647	516	402	338	356
17	309	301	844	1250	4270	1320	818	5120	508	400	338	344
18	305	307	663	875	5240	1220	835	7220	501	398	337	341
19	305	301	557	712	7050	1150	844	3450	499	392	338	340
20	305	300	495	846	8290	1080	846	2430	493	388	338	336
21	305	302	456	1140	12000	1020	839	2150	486	381	337	337
22	305	304	428	869	5780	969	805	1860	478	378	338	336
23	305	301	408	733	4030	914	773	1420	475	374	335	336
24	305	300	394	774	2690	866	1040	1270	474	377	333	334
25	303	306	379	800	2100	819	1020	1140	497	374	331	331
26	304	310	374	712	1870	778	952	950	477	373	331	329
27	301	301	371	734	1490	777	879	908	495	378	331	328
28	301	300	367	682	1440	731	812	839	473	380	331	328
29	301	300	399	648	1580	686	752	803	458	387	329	327
30	300	304	420	650	---	663	699	764	452	381	325	328
31	301	---	403	677	---	652	---	724	---	375	325	---
TOTAL	9465	9028	21014	18576	86303	48645	24762	40068	16221	12455	10588	10090
MEAN	305	301	678	599	2976	1569	825	1293	541	402	342	336
MAX	312	310	3020	1250	12000	3970	1200	7220	697	446	365	391
MIN	300	296	313	335	696	652	593	488	452	373	325	327
AC-FT	18770	17910	41680	36850	171200	96490	49120	79470	32170	24700	21000	20010

11368000 McCLOUD RIVER ABOVE SHASTA LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1965, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1121	1252	2080	2077	2617	2177	2467	1965	1460	1159	1059	1020
MAX	1899	2162	6513	4525	7493	3966	4599	2978	2248	1715	1489	1395
(WY)	1951	1951	1956	1953	1958	1958	1963	1958	1958	1958	1958	1958
MIN	856	870	856	903	1040	1265	1320	1085	1069	901	852	839
(WY)	1950	1950	1950	1949	1948	1964	1964	1947	1949	1950	1950	1950

SUMMARY STATISTICS

WATER YEARS 1946 - 1965

ANNUAL MEAN	1699
HIGHEST ANNUAL MEAN	2703
LOWEST ANNUAL MEAN	1213
HIGHEST DAILY MEAN	36100
LOWEST DAILY MEAN	825
ANNUAL SEVEN-DAY MINIMUM	826
INSTANTANEOUS PEAK FLOW	a45200
INSTANTANEOUS PEAK STAGE	28.20
ANNUAL RUNOFF (AC-FT)	1231000
10 PERCENT EXCEEDS	2670
50 PERCENT EXCEEDS	1270
90 PERCENT EXCEEDS	928

a from rating curve extended above 6,400 ft³/s on basis of slope-area measurement of peak flow.

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	305	580	779	1355	1416	1663	953	663	410	316	279	285
MAX	468	4068	2402	6043	5118	5825	2794	1930	952	443	372	340
(WY)	1990	1974	1984	1970	1986	1983	1982	1983	1983	1983	1983	1983
MIN	206	227	235	222	232	248	226	232	215	200	192	200
(WY)	1992	1992	1977	1991	1977	1977	1977	1977	1977	1977	1991	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1967 - 1996

ANNUAL TOTAL	519378	307215	
ANNUAL MEAN	1423	839	748
HIGHEST ANNUAL MEAN			1720
LOWEST ANNUAL MEAN			230
HIGHEST DAILY MEAN	17700	Jan 14	36300
LOWEST DAILY MEAN	277	Jan 2	109
ANNUAL SEVEN-DAY MINIMUM	298	Nov 10	113
INSTANTANEOUS PEAK FLOW			45500
INSTANTANEOUS PEAK STAGE			28.26
ANNUAL RUNOFF (AC-FT)	1030000	609400	541500
10 PERCENT EXCEEDS	2910	1630	1460
50 PERCENT EXCEEDS	459	430	353
90 PERCENT EXCEEDS	304	305	243

SACRAMENTO RIVER BASIN

11370000 SHASTA LAKE NEAR REDDING, CA

LOCATION.--Lat 40°43'08", long 122°25'12", in SE 1/4 NW 1/4 sec.15, T.33 N., R.5 W., Shasta County, Hydrologic Unit 18020005, in Shasta Dam on Sacramento River near right bank, 2 mi downstream from Squaw Creek, and 9.5 mi north of Redding.

DRAINAGE AREA.--6,421 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--November 1942 to current year. Prior to 1950, published as Shasta Reservoir near Redding.

CHEMICAL DATA: Water years 1978-80.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation). Prior to July 10, 1944, nonrecording gage at various sites near dam at same datum. Contents based on capacity table dated May 8, 1967, provided by U.S. Bureau of Reclamation.

REMARKS.--Lake is formed by concrete gravity-type dam completed in 1949; regulation began Dec. 30, 1943. Usable capacity, 4,436,400 acre-ft between elevations 737.75 ft, invert of lowest set of river outlets, and 1,067.0 ft, top of flashboard gates on drum-type spillway gates. Operating pool from elevation, 840.0 ft, capacity, 587,127 acre-ft to 1,067.0 ft, capacity, 4,552,090 acre-ft. Dead storage, 115,800 acre-ft. Installation of flashboard gates on top of drum gates completed Nov. 12, 1964. All water passes down the Sacramento River, most of which is through powerplant at dam. Figures given represent total contents at 2400 hours. Lake is used for flood control, power generation, irrigation, and recreation. See schematic diagram of Pit and McCloud River basins.

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

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 4,550,300 acre-ft, May 19, 1967, elevation, 1,066.94 ft; minimum since first filling, 562,600 acre-ft, Sept. 13, 1977, elevation, 836.68 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 4,525,619 acre-ft, May 28, elevation, 1,066.11 ft; minimum, 3,037,809 acre-ft, Dec. 3, 8, elevation, 1,009.39 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated May 8, 1967)

830	515,543	870	843,589	910	1,291,854	950	1,876,996	990	2,616,622	1,030	3,533,478
840	587,127	880	943,929	920	1,424,780	960	2,046,829	1,000	2,828,544	1,050	4,063,108
850	665,511	890	1,051,713	930	1,566,238	970	2,226,093	1,010	3,051,750	1,067	4,552,090
860	751,027	900	1,167,888	940	1,717,255	980	2,416,019	1,020	3,286,929		

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	3128965	3104317	3040551	3271046	3527679	3665079	3903837	4313435	4505767	4176660	3732925	3275137
2	3128030	3104548	3038038	3274896	3535251	3634824	3922724	4316894	4498662	4164824	3718761	3264065
3	3125931	3102460	3037809	3276821	3546148	3612962	3939790	4323549	4487436	4151027	3703598	3256637
4	3123830	3100603	3039409	3277302	3588635	3614761	3955798	4330213	4478596	4139234	3690025	3249455
5	3124763	3097817	3039865	3279950	3674949	3626337	3971058	4336583	4465040	4126061	3676505	3244906
6	3125230	3094815	3040780	3279468	3724534	3636890	3986342	4341217	4457698	4111519	3660149	3237729
7	3121731	3092275	3039636	3281635	3768483	3639732	3998389	4346427	4445375	4096453	3643092	3228438
8	3119173	3091812	3037809	3282838	3801589	3637921	4010994	4351638	4431890	4081435	3626337	3219385
9	3120333	3091350	3038038	3286688	3832095	3636114	4025847	4354242	4413784	4068107	3612962	3210832
10	3118709	3089504	3041923	3292954	3843536	3640764	4038513	4355401	4399207	4055370	3595798	3203724
11	3119173	3086964	3057493	3295604	3846733	3660407	4048737	4354532	4389902	4040999	3574097	3197800
12	3120798	3084422	3109888	3302833	3842737	3679105	4060345	4353373	4380310	4023373	3557046	3189986
13	3121497	3081190	3133165	3306931	3819060	3688983	4070050	4351638	4368133	4008244	3541839	3184798
14	3120565	3080265	3153748	3309581	3786233	3696289	4083377	4347297	4355691	3991545	3526670	3180553
15	3119405	3079342	3198510	3313934	3753450	3702814	4098407	4344692	4348742	3977052	3510785	3171592
16	3119173	3077494	3221053	3334766	3735022	3710646	4114308	4362347	4336873	3965065	3495467	3165475
17	3120333	3074954	3232012	3358864	3765045	3724009	4128863	4418746	4327314	3953620	3482424	3158672
18	3119405	3071966	3239399	3379168	3814559	3732137	4142878	4484194	4313435	3945211	3465950	3152106
19	3118245	3068061	3241076	3389718	3866243	3741588	4159190	4504585	4302770	3929214	3452249	3146710
20	3119870	3067372	3245385	3412363	3928672	3753450	4175528	4511690	4290665	3917058	3435357	3142284
21	3119870	3065075	3250412	3435606	4000029	3763993	4190807	4520866	4285778	3900329	3420766	3134331
22	3118245	3064155	3251610	3451006	3996470	3773783	4205527	4521162	4270856	3885550	3405950	3125230
23	3118940	3060020	3254004	3463701	3966971	3788881	4219176	4520276	4260525	3871588	3394146	3120565
24	3115692	3058183	3256158	3482673	3921644	3803179	4241391	4520276	4249101	3858224	3375988	3115459
25	3113602	3055197	3256158	3503247	3867314	3814824	4257098	4519980	4242820	3842737	3359108	3110816
26	3111513	3051293	3256158	3517341	3806355	3824113	4271430	4520866	4235681	3830501	3344746	3106406
27	3109424	3049693	3256158	3523644	3752922	3837415	4280611	4525023	4227987	3812178	3331859	3103853
28	3110584	3047636	3254961	3525411	3710646	3849138	4290950	4525619	4218607	3792855	3319747	3098514
29	3108031	3043294	3259750	3523140	3694202	3859294	4298734	4522347	4208654	3778019	3311270	3092506
30	3107334	3040780	3263824	3520871	---	3871052	4307671	4516131	4194202	3763201	3303074	3088810
31	3104548	---	3267676	3519357	---	3882865	---	4512579	---	3747388	3289338	---
MAX	3128965	3104548	3267676	3525411	4000029	3882865	4307671	4525619	4505767	4176660	3732925	3275137
MIN	3104548	3040780	3037809	3271046	3527679	3612962	3903837	4313435	4194202	3747388	3289338	3088810
a	1012.29	1009.52	1019.20	1029.44	1036.26	1043.39	1058.65	1065.67	1054.68	1038.29	1020.10	1011.61
b	-31883	-63768	+226896	+251681	+174845	+188663	+424806	+204908	-318377	-446814	-458050	-200528

CAL YR 1995 b +1225034

WTR YR 1996 b -47621

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

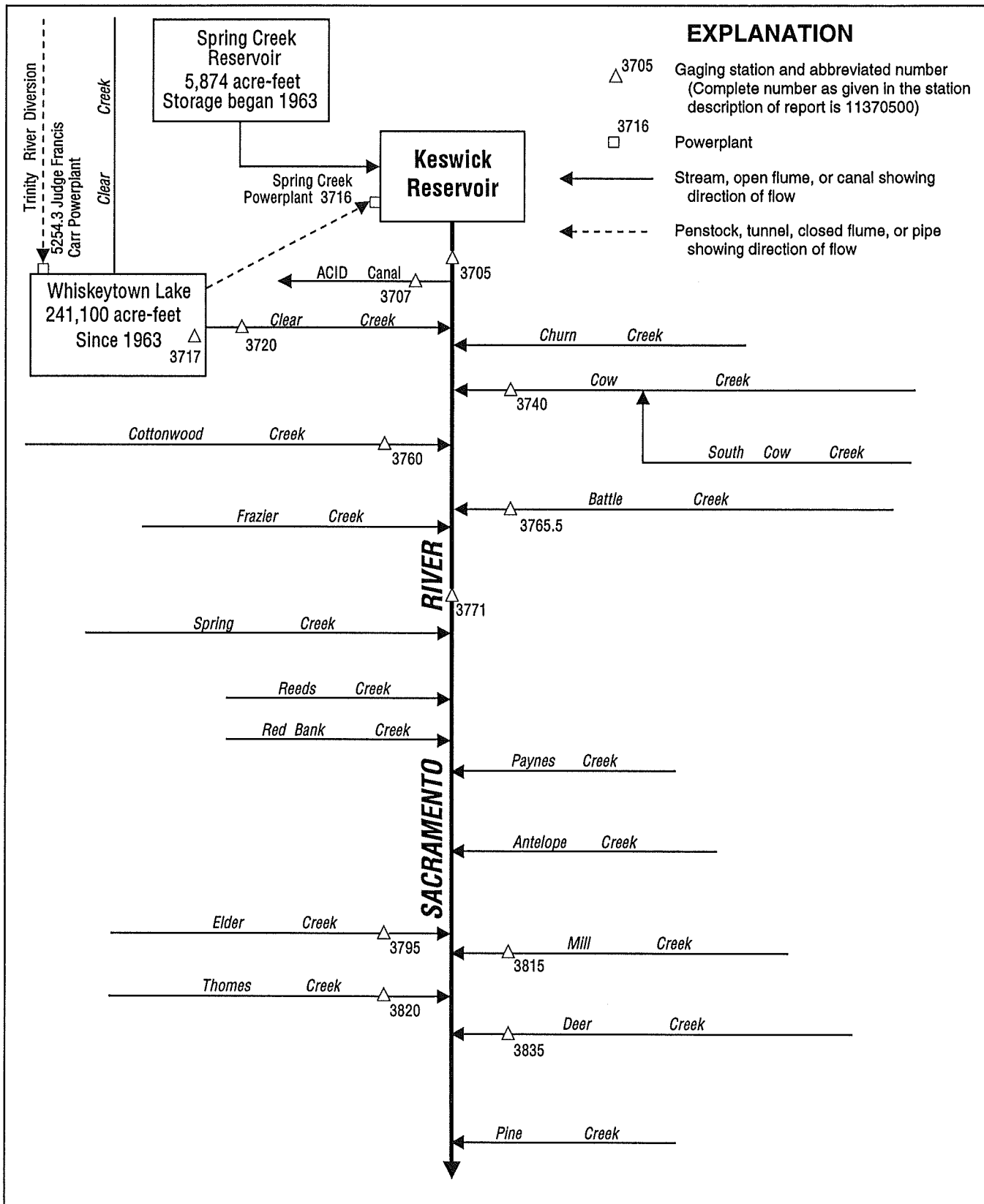


Figure 24. Diversions and storage in upper Sacramento River basin.

SACRAMENTO RIVER BASIN

11370500 SACRAMENTO RIVER AT KESWICK, CA

LOCATION.--Lat 40°36'04", long 122°26'36", in SW 1/4 NW 1/4 sec.28, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020101, on right bank 0.4 mi upstream from Middle Creek, 0.8 mi downstream from Keswick Dam, 1.6 mi downstream from Keswick, and 10 mi downstream from Shasta Dam.

DRAINAGE AREA.--6,468 mi², excluding Goose Lake basin.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1951-94. Published as "near Keswick" in 1951 and 1953, and as "at Keswick Dam, near Keswick" in 1968-69.

BIOLOGICAL DATA: Water years 1979-81.

SPECIFIC CONDUCTANCE: Water years 1978-94.

WATER TEMPERATURE: Water years 1978-94.

SEDIMENT DATA: Water years 1978-94.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 479.81 ft above sea level. Prior to Oct. 1, 1939, at site 1.5 mi upstream at datum 20.2 ft higher and Oct. 1, 1939, to Apr. 30, 1942, at site 1.5 mi upstream at datum 15.2 ft higher. Aug. 20, 1960, to July 3, 1973, auxiliary water-stage recorder at city of Redding pumping plant 2.1 mi downstream.

REMARKS.--Records good. Flow completely regulated by Shasta Lake (station 11370000) beginning Dec. 30, 1943. Minor regulation by Keswick Reservoir since 1950, total capacity, 23,800 acre-ft, operational capacity, 4,170 acre-ft, between normal operating elevations of 579.0 ft and 586.0 ft. No diversion between Shasta Dam and station at Keswick. Since December 1963, water is released from Whiskeytown Lake (station 11371700), through a tunnel to Spring Creek Powerplant (station 11371600), and then into Keswick Reservoir. See schematic diagrams of upper Sacramento River basin and Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186,000 ft³/s, Feb. 23, 1940, gage height, 47.2 ft, site and datum thgn in use, from rating curve extended above 75,000 ft³/s on basis of peak discharge at Kennet plus 4,000 ft³/s estimated inflow; minimum observed, 2,730 ft³/s, Aug. 22, 1939. Since regulation by Shasta Dam in 1943, maximum discharge, 81,400 ft³/s, Apr. 1, 1974, gage height, 31.92 ft; maximum gage height, 32.22 ft, Jan. 24, 1970; minimum discharge, 154 ft³/s, May 15, 1948.

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	7730	4940	5420	5240	8980	39300	5400	7940	12900	14700	15000	13100
2	6780	4910	5410	5240	7600	39500	5460	8250	13500	14900	14400	12300
3	e6550	4920	5390	5240	6400	35400	5340	7810	14500	14500	13500	11700
4	6330	5090	5400	5140	5950	34500	5340	7260	14700	13900	13400	11100
5	5840	5400	5380	4850	7140	29800	5470	7320	14900	14100	14000	10100
6	5590	5430	5400	4630	9930	25600	5480	e7300	14700	14800	14400	10500
7	5580	5400	5420	4630	9940	25800	5320	6760	14900	14800	14500	11200
8	5560	5420	5430	4640	9940	25700	5280	6660	14900	14800	14700	11100
9	5400	5390	5400	4660	10400	25500	e5470	7470	14900	14900	15000	11100
10	5240	5380	5430	4640	19700	22000	e5370	8630	14900	14900	15100	10200
11	5050	5400	5480	4640	20800	19900	e5200	8900	14100	14900	15200	10000
12	5090	5390	6300	4650	23700	17800	e5230	9100	14000	15000	15100	10100
13	5100	5380	5510	4650	32200	19600	e5220	9230	14100	14800	15100	9620
14	5050	5360	5310	4650	34400	19500	e5250	9510	14500	14400	15100	9550
15	5060	5410	5530	4660	34700	16800	e5190	9360	14400	13400	15200	9520
16	5080	5380	5150	4890	30200	14300	e5070	8700	14500	13800	15000	9480
17	5110	5360	5150	4770	30200	11900	e4890	7690	13800	13600	14100	9500
18	5120	5360	5210	4720	32800	11800	e4850	9120	13700	13100	14000	9410
19	5120	5410	5250	4800	37300	10300	e4870	15000	13000	13800	14000	9470
20	5150	5430	5160	4960	35800	8630	4920	15100	13000	14100	14600	9050
21	5140	5410	5180	4950	37900	7280	4910	14200	13200	14100	14600	8930
22	5150	5390	5200	4790	48300	5990	4910	17800	13800	14400	14700	9060
23	e5110	5420	5140	4740	52100	5390	4910	15100	13600	14600	14600	9580
24	e5120	5410	5160	4750	55100	5240	4910	14100	13300	14600	14500	8590
25	5500	5430	5190	4710	54300	5350	4920	14100	13500	14300	14700	8190
26	5430	5420	5230	4950	54700	5310	5980	12600	13400	14300	14500	8190
27	5430	5450	5200	12300	49400	5400	6980	10700	13200	15000	14600	8330
28	5440	5460	5180	13800	47300	5490	7180	12200	13000	15000	13600	7850
29	5430	5440	5230	14000	39000	5450	7200	13500	13600	14900	12300	7830
30	5320	5410	5250	12200	---	5310	7080	14000	14100	15000	12100	7790
31	4910	---	5220	10400	---	5310	---	13000	---	15100	12700	---
TOTAL	169510	160400	165310	187890	846180	515150	163600	328410	418600	448500	444300	292440
MEAN	5468	5347	5333	6061	29180	16620	5453	10590	13950	14470	14330	9748
MAX	7730	5460	6300	14000	55100	39500	7200	17800	14900	15100	15200	13100
MIN	4910	4910	5140	4630	5950	5240	4850	6660	12900	13100	12100	7790
AC-FT	336200	318200	327900	372700	1678000	1022000	324500	651400	830300	889600	881300	580100

e Estimated.

11370500 SACRAMENTO RIVER AT KESWICK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5992	5603	6611	10610	11700	6564	6714	8212	8564	9951	10030	7331
MAX	8572	8970	16680	32870	44170	14490	21180	13400	10300	11810	11870	10030
(WY)	1959	1958	1951	1953	1958	1957	1958	1948	1948	1951	1958	1958
MIN	4785	4064	3726	3234	3060	2546	2830	5247	6437	7480	7057	5239
(WY)	1948	1952	1960	1962	1950	1950	1950	1951	1947	1947	1947	1947

SUMMARY STATISTICS

WATER YEARS 1946 - 1962

ANNUAL MEAN	8141
HIGHEST ANNUAL MEAN	13910
LOWEST ANNUAL MEAN	5364
HIGHEST DAILY MEAN	75800
LOWEST DAILY MEAN	2360
ANNUAL SEVEN-DAY MINIMUM	2440
INSTANTANEOUS PEAK FLOW	78800
INSTANTANEOUS PEAK STAGE	31.55
INSTANTANEOUS LOW FLOW	154
ANNUAL RUNOFF (AC-FT)	5898000
10 PERCENT EXCEEDS	11600
50 PERCENT EXCEEDS	7000
90 PERCENT EXCEEDS	3720

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	6237	7319	9757	10770	12720	11210	9053	10510	11270	12470	11600	8216
MAX	10290	23430	27340	37250	38970	47170	26840	17410	14960	14840	14330	11800
(WY)	1984	1974	1974	1970	1983	1983	1974	1995	1983	1995	1996	1971
MIN	3431	3182	2847	3258	3268	2869	3096	6953	7342	7754	8070	4564
(WY)	1978	1993	1978	1993	1990	1991	1991	1992	1992	1992	1992	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	5181150	4140290	
ANNUAL MEAN	14190	11310	10090
HIGHEST ANNUAL MEAN			18230
LOWEST ANNUAL MEAN			5390
HIGHEST DAILY MEAN	74800	Mar 17	79700
LOWEST DAILY MEAN	3690	Jan 3	2360
ANNUAL SEVEN-DAY MINIMUM	3790	Jan 1	2460
INSTANTANEOUS PEAK FLOW			56100
INSTANTANEOUS PEAK STAGE			28.52
INSTANTANEOUS LOW FLOW			32.22
ANNUAL RUNOFF (AC-FT)	10280000	8212000	7308000
10 PERCENT EXCEEDS	29400	15700	14800
50 PERCENT EXCEEDS	12100	8800	8480
90 PERCENT EXCEEDS	5130	5050	3920

11370700 ANDERSON-COTTONWOOD IRRIGATION DISTRICT CANAL AT SHARON STREET, AT REDDING, CA

LOCATION.--Lat 40°34'08", long 122°22'49", unsurveyed, Shasta County, Hydrologic Unit 18020101, on right bank of canal 10 ft upstream from Sharon Street, 900 ft downstream from Parkview Avenue, and 0.75 mi southwest of Mercy Hospital.

PERIOD OF RECORD.--April to September 1989, April 1991 to current year (beginning October 1994, irrigation season only).

GAGE.--Water-stage recorder and acoustic-velocity meter. Elevation of gage is 480 ft above sea level, from topographic map.

REMARKS.--Records good. Canal diverts from Sacramento River 0.3 mi downstream from Southern Pacific Railroad bridge and 0.1 mi upstream from Highway 273; water is used for irrigation. See schematic diagrams for upper Sacramento River basin and Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 370 ft³/s, June 9, 1989; minimum, no flow at times 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	289	---	---	---	---	---	---	239	303	293	271	300
2	287	---	---	---	---	---	---	241	304	295	271	277
3	282	---	---	---	---	---	---	241	301	293	269	278
4	268	---	---	---	---	---	---	240	297	288	269	278
5	284	---	---	---	---	---	---	241	292	287	271	269
6	290	---	---	---	---	---	---	258	297	285	269	274
7	288	---	---	---	---	---	---	282	302	286	266	274
8	288	---	---	---	---	---	---	303	299	285	272	273
9	286	---	---	---	---	---	---	309	299	265	270	273
10	285	---	---	---	---	---	---	314	300	191	270	271
11	284	---	---	---	---	---	---	310	297	275	271	269
12	284	---	---	---	---	---	---	311	297	273	271	269
13	284	---	---	---	---	---	---	310	288	282	272	271
14	284	---	---	---	---	---	---	310	276	279	269	266
15	284	---	---	---	---	---	---	306	298	284	270	266
16	283	---	---	---	---	---	---	290	297	285	271	265
17	286	---	---	---	---	---	---	273	295	281	273	261
18	287	---	---	---	---	---	39	283	294	276	274	258
19	287	---	---	---	---	---	42	297	296	274	273	263
20	177	---	---	---	---	---	46	297	296	275	281	261
21	---	---	---	---	---	---	45	290	293	274	271	260
22	---	---	---	---	---	---	45	290	297	272	273	255
23	---	---	---	---	---	---	44	289	297	269	276	266
24	---	---	---	---	---	---	46	277	295	268	286	271
25	---	---	---	---	---	---	44	283	290	272	275	268
26	---	---	---	---	---	---	45	292	289	275	277	261
27	---	---	---	---	---	---	45	282	290	276	282	266
28	---	---	---	---	---	---	44	294	296	275	277	266
29	---	---	---	---	---	---	43	299	296	278	281	265
30	---	---	---	---	---	---	126	300	293	274	272	262
31	---	---	---	---	---	---	---	302	---	269	289	---
TOTAL	---	---	---	---	---	---	---	8853	8864	8554	8482	8056
MEAN	---	---	---	---	---	---	---	286	295	276	274	269
MAX	---	---	---	---	---	---	---	314	304	295	289	300
MIN	---	---	---	---	---	---	---	239	276	191	266	255
AC-FT	---	---	---	---	---	---	---	17560	17580	16970	16820	15980

KLAMATH RIVER BASIN

97

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010212, at powerplant 1.6 mi downstream from Mill Creek and 3.8 mi south of French Gulch.

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

GAGE.--Recorded powerplant output.

REMARKS.--Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of upper Sacramento River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,000 ft³/s, Oct. 18, 1987; no flow for many days most years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1265	0	1052	0	0	2972	1101	1291	743	3153	2987	3106
2	977	0	0	0	0	3057	1102	1254	837	3196	2972	2895
3	1391	0	0	0	0	1623	1130	1435	743	3225	3135	3048
4	3035	0	0	792	0	1604	1185	1632	450	3194	3212	3097
5	1730	0	0	0	674	1598	1187	1390	1134	3199	2555	3130
6	1076	0	0	0	1069	1600	1100	1123	882	3212	1673	3178
7	1378	10	648	0	1573	1597	1115	1234	1794	3175	1675	3175
8	1435	5	0	928	2052	2017	1203	1435	1710	2981	1644	3143
9	1417	381	0	7	3113	2038	1095	1405	2018	3207	3060	3180
10	1256	0	198	0	2834	2056	1210	1365	2084	3214	3057	3144
11	1325	0	508	0	2900	2072	953	589	2135	3164	3143	3154
12	1291	0	0	0	3132	2435	1640	432	1899	3160	3172	1799
13	1466	0	0	0	3257	2384	1575	629	1963	2980	3138	2565
14	1455	1008	0	0	3199	2388	1454	431	1675	3126	3139	2126
15	1681	1836	0	0	3184	567	1316	427	3010	3211	3103	1900
16	1523	0	0	0	3168	634	1348	267	2871	3123	3100	1898
17	1013	0	0	0	3176	465	943	395	2784	3000	3092	2410
18	1103	0	0	0	3186	580	606	149	2785	3081	3114	2168
19	1114	746	230	0	3202	474	1279	271	2845	2843	2621	2163
20	1157	503	1	0	3216	507	1488	551	2849	2846	3105	2019
21	0	0	460	0	1597	505	1912	181	2802	3125	3128	1724
22	0	763	633	0	492	996	1854	201	2690	3142	3172	2234
23	0	0	1	0	500	1059	1737	124	2774	3140	3178	2220
24	0	0	0	0	501	996	1708	0	2723	3179	3177	2103
25	0	749	501	98	523	925	1887	916	3056	2892	3178	1352
26	0	163	368	4	552	0	1832	721	3184	3047	3183	2055
27	0	17	438	2017	586	0	1697	610	3181	3025	2823	2418
28	9	1076	0	2097	1094	1304	1709	0	3163	3006	3196	2472
29	0	0	2	2051	1977	1087	1334	0	3228	3016	3120	2485
30	118	0	0	1181	---	1196	1265	871	3218	3100	3089	2483
31	0	---	0	0	---	1384	---	753	---	3039	3174	---
TOTAL	28215	7257	5040	9175	50757	42120	40965	22082	67230	96001	91115	74844
MEAN	910	242	163	296	1750	1359	1365	712	2241	3097	2939	2495
MAX	3035	1836	1052	2097	3257	3057	1912	1632	3228	3225	3212	3180
MIN	0	0	0	0	0	0	606	0	450	2843	1644	1352
AC-FT	55960	14390	10000	18200	100700	83550	81250	43800	133400	190400	180700	148500

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, 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	1363	862	701	604	824	875	1145	1311	1842	2338	2250	2145
MAX	3363	2158	2891	2755	3222	3111	3220	3512	3662	3589	3236	3504
(WY)	1988	1967	1979	1982	1974	1974	1970	1974	1969	1968	1977	1988
MIN	166	18.0	.16	.000	.34	.000	.000	.097	.63	253	507	457
(WY)	1994	1992	1993	1986	1988	1988	1978	1991	1993	1978	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1963 - 1996
ANNUAL TOTAL	453247	534801	
ANNUAL MEAN	1242	1461	1370
HIGHEST ANNUAL MEAN			2485
LOWEST ANNUAL MEAN			301
HIGHEST DAILY MEAN	3469 May 25	3257 Feb 13	4000 Oct 18 1987
LOWEST DAILY MEAN	0 Jan 1	0 Oct 21	0 May 6 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 5	.00 Oct 21	.00 Oct 14 1969
ANNUAL RUNOFF (AC-FT)	899000	1061000	992600
10 PERCENT EXCEEDS	3140	3160	3150
50 PERCENT EXCEEDS	501	1310	1130
90 PERCENT EXCEEDS	.00	.00	.00

SACRAMENTO RIVER BASIN

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11371600 SPRING CREEK POWERPLANT AT KESWICK, CA

LOCATION.--Lat 40°37'41", long 122°27'59", in NE 1/4 SE 1/4 sec.18, T.32 N., R.5 W., Shasta County, Hydrologic Unit 18020112, at powerplant on Spring Creek, 0.4 mi northwest of Keswick, and 4.9 mi northwest of Redding.

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

GAGE.--Discharge computed from powerplant output.

REMARKS.--Water is released from Whiskeytown Lake (station 11371700) through a tunnel to powerplant and then into Keswick Reservoir. Spring Creek Reservoir releases into Keswick Reservoir at Spring Creek Powerplant. See schematic diagrams of upper Sacramento River and Pit and McCloud River basins.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,800 ft³/s, May 2, 1983; no flow for 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	1382	255	179	263	1811	3896	987	1500	993	3338	3038	3133
2	1387	433	279	219	1816	3888	1124	1578	914	2994	3098	3136
3	1924	270	271	304	365	3947	1003	1595	901	2988	3087	3084
4	2281	557	257	251	1137	4018	1004	1595	943	2985	3098	3101
5	1528	387	275	257	1784	3950	1001	1596	1473	3029	2707	3076
6	1533	262	272	268	1854	3933	1003	1383	1333	3508	1774	3133
7	1488	616	275	263	1895	3916	995	1389	2042	3505	1470	3078
8	1412	826	274	274	1916	3955	1002	1506	2009	3514	1469	3080
9	1451	1008	254	270	2182	3956	1006	1508	2027	3490	3066	3075
10	1383	271	328	259	2278	3970	1007	1618	1978	3337	3062	3024
11	1540	501	256	1240	3656	3992	1003	812	1979	3258	3141	3032
12	1416	604	1411	736	3653	3979	992	746	2066	2643	2699	2269
13	1326	268	2005	258	3648	3958	1005	799	1881	2691	3164	2233
14	1507	1225	2004	273	3735	3943	1026	738	1894	3046	3153	2116
15	1336	1206	1188	263	3944	2601	1000	745	3136	3325	3201	1938
16	1739	441	1476	695	3947	2834	1004	746	2892	3695	3132	1957
17	1491	168	368	1216	3947	2925	1002	534	2897	3061	3504	2395
18	1374	678	267	985	3968	1828	998	2164	2879	2974	3473	2403
19	1743	685	264	1194	4007	735	1006	712	2874	2987	2018	2458
20	2154	694	258	1253	3960	739	1449	459	2892	2993	3140	2300
21	960	268	282	1154	3878	261	1501	461	2953	3006	3160	1489
22	869	265	270	1244	1172	264	1501	554	2924	3013	3170	1953
23	853	265	254	775	1177	263	1471	487	2873	2999	3166	2088
24	84	258	262	786	1702	277	1480	630	2973	2935	3064	1931
25	71	273	279	1124	1657	257	816	1148	2957	3061	3067	1937
26	616	241	281	310	1666	287	1481	1155	3393	3069	3062	1918
27	1242	263	272	1933	2632	283	1485	1090	3264	3002	3092	2440
28	1015	256	254	1918	3919	954	1502	279	3249	2971	3026	2382
29	277	266	245	1892	3942	953	1462	274	3375	3011	2943	2369
30	293	270	746	1851	---	1000	1496	946	3377	3036	3017	2441
31	275	---	865	1826	---	993	---	920	---	3006	3212	---
TOTAL	37950	13980	16171	25554	77248	72755	34812	31667	71341	96470	90473	74969
MEAN	1224	466	522	824	2664	2347	1160	1022	2378	3112	2918	2499
MAX	2281	1225	2005	1933	4007	4018	1502	2164	3393	3695	3504	3136
MIN	71	168	179	219	365	257	816	274	901	2643	1469	1489
AC-FT	75270	27730	32080	50690	153200	144300	69050	62810	141500	191300	179500	148700
a	214	180	1930	1350	6620	4460	819	1470	361	99	173	238

a Discharge, in acre-feet, from Spring Creek Reservoir, provided by U.S. Bureau of Reclamation.

SACRAMENTO RIVER BASIN

11371600 SPRING CREEK POWERPLANT AT KESWICK, CA--Continued

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	1651	1304	1123	1338	1576	1636	1363	1527	1998	2400	2339	2295
MAX	3691	3173	4031	4532	4497	4364	4405	4265	3866	3886	3654	3526
(WY)	1989	1967	1974	1974	1974	1983	1983	1983	1969	1968	1977	1988
MIN	265	.87	1.55	2.10	3.36	86.6	5.23	5.45	158	250	467	416
(WY)	1978	1992	1992	1991	1991	1988	1987	1991	1989	1978	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1964 - 1996			
ANNUAL TOTAL	742984				643390							
ANNUAL MEAN	2036				1758							
HIGHEST ANNUAL MEAN									1712			
LOWEST ANNUAL MEAN									3389			
HIGHEST DAILY MEAN	4737				4018				748			
LOWEST DAILY MEAN	71				71				4800			
ANNUAL SEVEN-DAY MINIMUM	250				250				0			
ANNUAL RUNOFF (AC-FT)	1474000				1276000				1240000			
TOTAL DISCHARGE (AC-FT) a	42738				17914							
10 PERCENT EXCEEDS	4030				3380				3500			
50 PERCENT EXCEEDS	1980				1500				1580			
90 PERCENT EXCEEDS	260				268				12			

a Discharge, in acre-feet, from Spring Creek Reservoir, provided by U.S. Bureau of Reclamation.

11371700 WHISKEYTOWN LAKE NEAR IGO, CA

LOCATION.--Lat 40°37'03", long 122°31'31", unsurveyed, Shasta County, Hydrologic Unit 18010112, Whiskeytown-Shasta-Trinity National Recreation Area, at outlet works to Spring Creek Powerplant on Clear Creek, 1.8 mi downstream from Whiskey Creek, and 7.8 mi northeast of Igo.

DRAINAGE AREA.--200 mi².

PERIOD OF RECORD.--May 1963 to current year. Prior to October 1964 published as Whiskeytown Reservoir near Igo. GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation). Contents based on capacity table dated April 1962 provided by U.S. Bureau of Reclamation.

REMARKS.--Lake is formed by earth and rockfill dam. Storage began in May 1963. Usable capacity, 241,088 acre-ft between elevations 972.0 ft, invert of sluice pipe, and 1,210.00 ft, crest of glory hole spillway. Dead storage 8 acre-ft. Normal operating pool is from elevation 1,197.0 ft, capacity, 201,288 acre-ft, to 1,210.0 ft, capacity, 241,096 acre-ft. Transbasin water enters the reservoir through Judge Francis Carr Powerplant (station 11525430) and is released through Spring Creek Tunnel to Spring Creek Powerplant (station 11371600) and Keswick Reservoir. Figures given represent total contents at 2400 hours. Lake is used for power generation and recreation. See schematic diagrams of upper Sacramento River and Pit and McClood River basins.

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

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft, Mar. 2, 1983, elevation, 1,215.34 ft; minimum since first filling, 145,562 acre-ft, Dec. 27, 1992, elevation, 1,176.05 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 240,648 acre-ft, May 17, elevation, 1,209.86 ft; minimum, 190,692 acre-ft, Mar. 18, elevation, 1,193.30 ft.

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

1,015	714	1,040	3,055	1,080	15,076	1,140	73,960
1,020	994	1,050	4,898	1,100	27,542	1,180	155,276
1,030	1,797	1,060	7,418	1,120	46,701	1,220	274,389

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	238407	219145	207333	204739	194435	222054	210574	238087	238888	237291	237228	237927
2	237673	218203	206654	204563	191652	223349	211263	237704	237863	237863	237863	237355
3	236751	217473	206212	204327	192104	221013	212251	237927	239143	238503	236751	237228
4	238599	216319	205918	205711	193467	219696	213270	238439	238599	239111	236846	237164
5	239431	215382	205446	205417	196983	218203	214205	238503	238247	239624	236687	237228
6	238631	214748	204946	205063	198999	215804	215050	238407	237482	239015	236528	237228
7	238567	213421	205800	204739	201201	212999	215774	238599	237260	238407	236973	237355
8	238695	211682	205181	206301	203917	210814	216926	238599	236846	237355	237386	237386
9	238695	210664	204680	206242	208046	208818	217838	238888	237037	236687	237355	237514
10	238631	209917	204769	205977	209293	206654	218841	238663	237450	236560	237260	237673
11	238343	208759	207185	204739	209353	205417	219696	238599	238183	236560	237386	237863
12	237959	207482	210604	203420	209769	204504	220584	238343	238279	237991	238599	237069
13	238087	206949	208135	203041	210514	203157	222146	238439	238471	238919	238567	238375
14	238311	206566	205829	202632	210544	201639	223349	238375	238087	239175	238471	238375
15	239303	208076	206477	202544	209858	198913	224583	238311	237927	239015	238215	238343
16	239015	207214	204680	203070	209383	195633	226256	238503	238311	237831	237991	238119
17	238279	206802	204563	202106	212191	191963	226784	240648	238311	237704	237101	238727
18	237704	205417	204504	201785	213903	190692	226566	237991	238343	237959	236211	237927
19	236783	205564	204769	200651	216045	191426	227810	237991	238503	237577	237386	237069
20	234749	205152	204504	199869	219084	191991	228338	238855	238631	237228	237291	237069
21	232603	204621	205004	199086	219298	193581	229652	239175	238567	237482	237164	237482
22	230717	205623	206036	197673	221870	196064	230998	239175	238151	237768	237164	238151
23	228869	205004	205741	197127	223750	198710	232004	239079	237863	238087	237101	238759
24	228431	204504	205299	196610	223935	201172	232950	238599	237800	238567	237228	239111
25	228027	205505	205888	195489	223534	203450	235797	238791	238311	237959	237291	237863
26	226597	205358	206212	195404	222978	203683	236846	238919	237991	237800	237355	238055
27	223904	204828	206713	197098	220247	204121	237545	238695	238183	237641	237514	238247
28	221595	206477	206330	198478	216896	205653	238247	238663	238311	237641	237704	238439
29	220890	205918	206507	199724	219971	206566	238343	238599	237991	237514	238215	238599
30	220431	205358	205947	199782	---	207660	238247	238759	237609	237577	238183	238855
31	219757	---	204828	197012	---	209145	---	238855	---	237482	238023	---
MAX	239431	219145	210604	206301	223935	223349	238343	240648	239143	239624	238599	239111
MIN	219757	204504	204504	195404	191652	190692	210574	237704	236846	236560	236211	237069
a	1203.19	1198.39	1198.21	1195.52	1203.26	1199.67	1209.11	1209.30	1208.91	1208.87	1209.04	1209.30
b	-18458	-14399	-530	-7816	+22959	-10826	+29102	+608	-1246	-127	+541	+832

CAL YR 1995 b -2150

WTR YR 1996 b +640

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11372000 CLEAR CREEK NEAR IGO, CA

LOCATION.--Lat 40°30'48", long 122°31'23", unsurveyed, Shasta County, Hydrologic Unit 18020112, on left bank at old highway bridge on Redding-Igo Road 1.0 mi northeast of Igo, 7.0 mi downstream from Whiskeytown Dam, 8.3 mi southwest of Redding, and 10.4 mi upstream from mouth.

DRAINAGE AREA.--228 mi².

PERIOD OF RECORD.--October 1940 to current year.

CHEMICAL DATA: Water years 1958-79.

WATER TEMPERATURE: Water years 1965-79.

REVISED RECORDS.--WSP 1345: Drainage area. WSP 1395: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 672.99 ft above sea level.

REMARKS.--Records good. Low flow completely regulated by Whiskeytown Lake (station 11371700) since May 1963. Transbasin diversion from Trinity River through Judge Francis Carr Powerplant (station 11525430) to Whiskeytown Lake began in April 1963. Diversions from Whiskeytown Lake to Spring Creek Powerplant (station 11371600) began in December 1963. See schematic diagrams of upper Sacramento River and Pit and McCloud River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s, Dec. 21, 1955, gage height, 13.75 ft; minimum daily, 9.0 ft³/s, Sept. 4-7, 1950. Since completion of Whiskeytown Dam in 1963, maximum discharge, 19,200 ft³/s, Mar. 3, 1983, gage height, 12.73 ft, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 30 ft³/s, Oct. 10, 11, 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	85	147	158	196	269	570	220	105	80	82	54	52
2	99	147	157	186	248	446	206	104	77	82	55	52
3	100	146	157	181	239	393	199	100	76	74	55	52
4	100	146	163	178	505	434	194	75	78	62	55	52
5	104	146	160	174	763	422	190	74	74	62	55	54
6	144	147	159	171	423	358	190	73	71	60	55	54
7	144	147	158	170	339	323	188	72	70	59	55	54
8	144	147	156	168	297	300	186	71	69	58	54	54
9	144	146	156	177	271	284	186	71	68	58	54	54
10	144	146	163	173	251	273	184	71	68	57	54	54
11	145	146	329	170	236	327	178	70	67	57	52	52
12	145	146	1410	168	225	297	179	69	66	57	53	53
13	141	146	288	167	215	276	179	68	65	57	52	56
14	146	143	267	165	209	260	178	69	65	57	53	57
15	146	142	753	190	205	248	180	72	64	58	53	60
16	141	154	266	514	232	240	200	261	64	56	53	58
17	144	154	212	303	423	232	186	370	65	56	53	56
18	145	154	194	330	545	225	182	240	66	59	53	55
19	144	154	184	377	684	220	183	145	63	57	52	53
20	145	154	178	528	554	215	183	119	62	56	53	53
21	145	154	174	463	541	211	183	144	64	55	53	52
22	142	154	175	303	411	207	181	138	63	55	53	52
23	144	154	173	274	352	204	179	118	65	55	52	52
24	146	154	170	339	320	201	190	108	62	56	52	52
25	148	154	167	315	289	200	182	100	62	55	52	54
26	148	154	166	273	268	197	178	97	63	55	52	54
27	148	153	166	504	257	199	177	100	66	55	53	54
28	148	154	166	403	374	189	171	91	68	54	53	54
29	147	154	212	315	977	195	146	88	84	54	53	54
30	147	155	259	309	---	193	122	85	83	55	53	54
31	148	---	215	293	---	193	---	82	---	55	56	---
TOTAL	4261	4498	7711	8477	10922	8532	5480	3450	2058	1828	1655	1617
MEAN	137	150	249	273	377	275	183	111	68.6	59.0	53.4	53.9
MAX	148	155	1410	528	977	570	220	370	84	82	56	60
MIN	85	142	156	165	205	189	122	68	62	54	52	52
AC-FT	8450	8920	15290	16810	21660	16920	10870	6840	4080	3630	3280	3210

SACRAMENTO RIVER BASIN

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11372000 CLEAR CREEK NEAR IGO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.7	150	597	807	1226	834	676	347	161	63.4	35.1	32.8
MAX	373	427	2336	2513	5753	2595	2431	773	289	126	64.6	89.7
(WY)	1951	1951	1956	1941	1958	1941	1941	1957	1953	1941	1941	1957
MIN	25.8	39.0	47.0	65.5	142	168	172	87.6	66.5	24.3	14.3	13.4
(WY)	1950	1960	1950	1947	1948	1955	1944	1947	1950	1950	1950	1944

SUMMARY STATISTICS

WATER YEARS 1941 - 1962

ANNUAL MEAN	413	
HIGHEST ANNUAL MEAN	1092	1941
LOWEST ANNUAL MEAN	128	1944
HIGHEST DAILY MEAN	15100	Mar 1 1941
LOWEST DAILY MEAN	9.0	Sep 4 1950
ANNUAL SEVEN-DAY MINIMUM	9.5	Sep 1 1950
INSTANTANEOUS PEAK FLOW	24500	Dec 21 1955
INSTANTANEOUS PEAK STAGE	13.75	Dec 21 1955
ANNUAL RUNOFF (AC-FT)	299000	
10 PERCENT EXCEEDS	929	
50 PERCENT EXCEEDS	133	
90 PERCENT EXCEEDS	27	

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	65.7	138	192	276	262	339	152	91.3	66.7	56.6	52.1	51.9
MAX	317	299	625	1358	1509	3437	668	419	249	117	73.3	71.6
(WY)	1993	1974	1965	1970	1983	1983	1974	1982	1993	1982	1995	1995
MIN	38.8	70.7	94.2	54.3	49.7	51.3	50.7	48.6	42.9	39.2	37.9	37.9
(WY)	1978	1969	1977	1977	1977	1977	1977	1966	1966	1966	1966	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1965 - 1996

ANNUAL TOTAL	101057	60489	
ANNUAL MEAN	277	165	146
HIGHEST ANNUAL MEAN			570
LOWEST ANNUAL MEAN			57.9
HIGHEST DAILY MEAN	4850	Jan 10	1410
LOWEST DAILY MEAN	66	Sep 25	52
ANNUAL SEVEN-DAY MINIMUM	70	Sep 22	52
INSTANTANEOUS PEAK FLOW			5480
INSTANTANEOUS PEAK STAGE			8.55
ANNUAL RUNOFF (AC-FT)	200400	120000	105800
10 PERCENT EXCEEDS	458	311	221
50 PERCENT EXCEEDS	142	146	70
90 PERCENT EXCEEDS	73	54	49

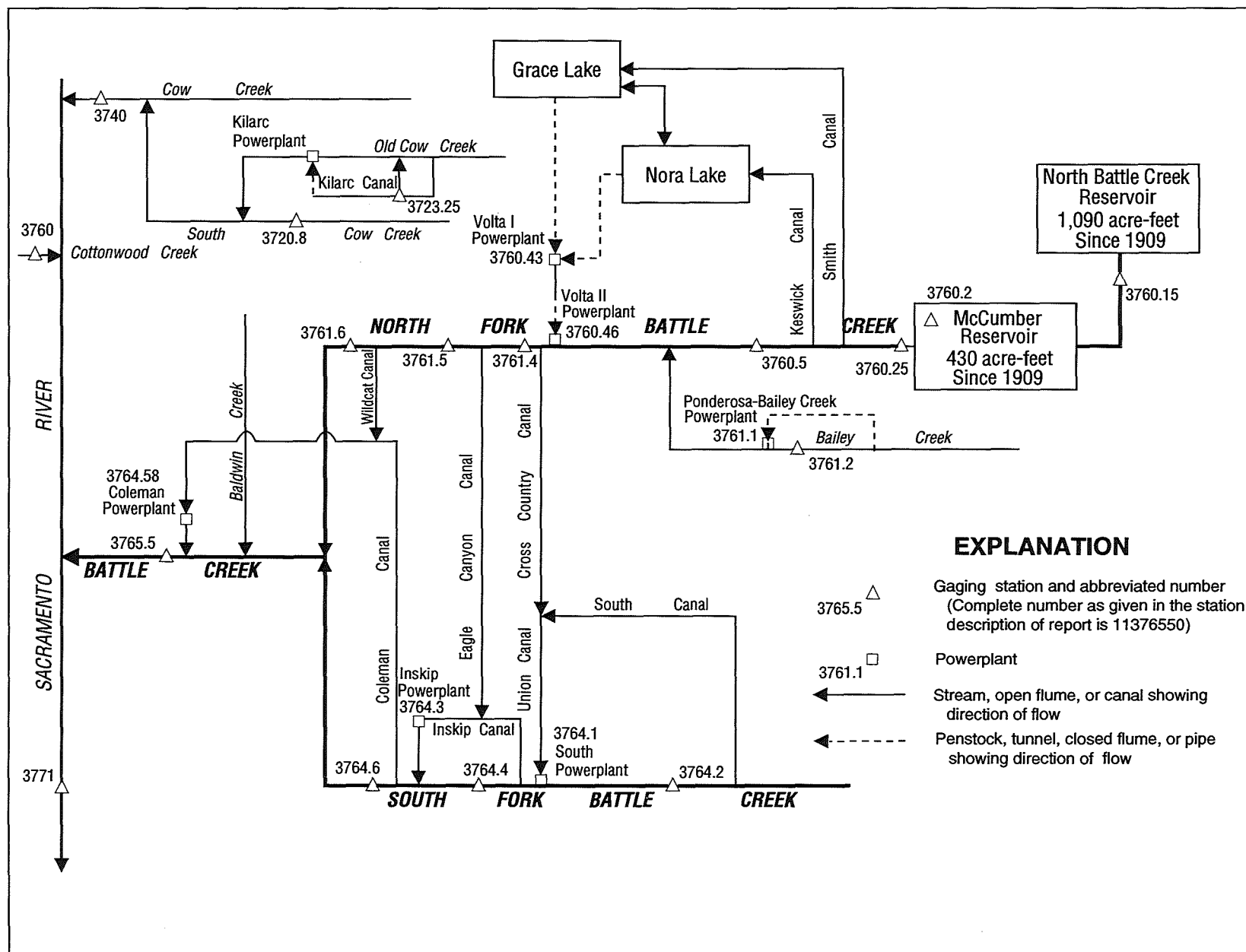


Figure 25. Diversions and storage in Battle Creek basin.

SACRAMENTO RIVER BASIN

105

11372080 SOUTH COW CREEK CANAL DIVERSION TO SOUTH COW CREEK NEAR WHITMORE, CA

LOCATION.--Lat 40°35'35", long 121°58'53", in NE 1/4 NW 1/4 sec.33, T.32 N., R.1 W., Shasta County, Hydrologic Unit 18020118, on left bank 2.5 mi northeast of Cow Creek Powerplant and 4.3 mi southwest of Whitmore.

PERIOD OF RECORD.--October 1986 to current year (operated as a low-flow station only). Unpublished records for water years 1984-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirements are 2.0 ft³/s during dry years and 4.0 ft³/s during normal years. Flow is computed to 7.0 ft³/s. See schematic diagram of Battle Creek 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	5.7	5.1	5.1	5.3	6.2	6.4	5.8	6.2	6.1	5.8	4.8	4.1
2	5.2	5.1	5.1	5.3	6.3	6.3	5.9	6.2	6.2	5.8	4.7	4.1
3	5.2	5.1	5.1	5.3	6.3	6.4	5.9	6.2	6.2	5.9	4.7	4.1
4	5.2	5.1	5.3	5.2	---	---	5.9	6.0	6.4	5.9	4.6	4.0
5	5.2	5.1	5.1	5.1	---	---	5.9	6.0	6.3	5.9	4.6	4.3
6	5.2	5.1	5.1	5.1	6.5	---	5.9	5.8	6.2	5.9	4.6	5.7
7	5.2	5.1	5.1	5.1	6.5	6.5	5.8	5.7	6.1	5.9	4.6	5.7
8	5.2	5.1	5.1	5.1	6.3	6.2	5.8	5.8	6.0	5.8	4.6	5.7
9	5.2	5.1	5.1	---	6.4	6.2	5.9	5.8	6.0	5.8	4.6	5.7
10	5.2	5.1	---	5.7	6.5	6.2	5.9	5.8	5.9	5.9	4.6	5.7
11	5.2	5.1	---	5.1	6.3	---	5.9	5.7	5.8	5.9	4.6	5.7
12	5.2	5.1	---	5.1	6.1	---	5.9	5.7	5.8	5.9	4.6	5.7
13	5.2	5.1	---	5.1	---	6.7	5.9	5.8	5.7	5.9	4.9	5.7
14	5.2	5.1	---	5.1	---	6.4	5.9	6.0	5.6	5.9	5.1	5.7
15	5.2	5.1	---	---	---	6.2	5.9	5.9	5.5	4.7	4.5	5.7
16	5.2	5.1	---	---	---	6.0	---	---	5.5	4.7	4.4	5.7
17	5.2	5.1	---	5.9	---	6.2	---	---	6.1	5.1	4.4	5.7
18	5.1	5.1	---	---	---	6.4	6.0	---	---	4.9	4.4	5.7
19	5.1	5.1	---	---	---	6.3	6.1	---	6.0	5.0	4.4	5.7
20	5.1	5.1	5.1	---	---	6.3	6.1	6.4	5.8	5.0	4.3	5.7
21	5.1	---	---	---	---	6.2	6.1	---	5.8	5.0	4.4	5.7
22	5.1	5.1	5.1	5.3	---	6.3	6.3	---	5.7	5.0	4.3	5.7
23	5.1	5.1	5.1	5.9	---	6.3	6.3	5.9	5.8	4.9	4.3	5.7
24	5.1	5.1	5.1	---	---	5.8	---	6.1	5.8	4.9	4.5	5.7
25	5.1	5.1	5.1	---	6.1	5.8	---	6.1	5.8	4.9	5.5	5.7
26	5.1	5.1	5.1	6.3	---	6.4	6.8	---	6.4	4.9	5.5	5.4
27	5.1	5.1	5.1	---	6.8	6.3	6.7	---	6.3	4.9	5.2	5.1
28	5.2	5.1	5.1	6.5	6.8	5.9	6.5	6.6	5.9	4.8	4.9	5.1
29	5.1	5.1	---	6.3	6.7	5.8	6.3	6.4	5.8	4.8	4.1	5.1
30	5.1	5.1	6.4	6.4	---	5.8	6.2	6.2	5.8	4.8	4.2	5.1
31	5.1	---	5.8	6.3	---	5.8	---	6.0	---	4.8	4.1	---
TOTAL	160.4	---	---	---	---	---	---	---	---	165.3	143.0	160.4
MEAN	5.17	---	---	---	---	---	---	---	---	5.33	4.61	5.35
MAX	5.7	---	---	---	---	---	---	---	---	5.9	5.5	5.7
MIN	5.1	---	---	---	---	---	---	---	---	4.7	4.1	4.0
AC-FT	318	---	---	---	---	---	---	---	---	328	284	318

11372325 KILARC CANAL DIVERSION TO OLD COW CREEK NEAR WHITMORE, CA

LOCATION.--Lat 40°41'13", long 121°48'27", in SW 1/4 NE 1/4 sec.25, T.32 N., R.1 E., Shasta County, Hydrologic Unit 18020118, on right bank of Kilarc Canal 3.6 mi upstream of Kilarc Powerplant and 6.9 mi northeast of Whitmore.

PERIOD OF RECORD.--October 1986 to current year (operated as a low-flow station only). Unpublished records for water years 1983-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Cipolletti weir. Elevation of gage is 3,840 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 2.0 ft³/s during dry or normal years. Flow is computed to 5.0 ft³/s. See schematic diagram of Battle Creek 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	3.0	3.0	3.0	3.0	3.2	3.7	3.6	3.5	3.5	2.9	2.9	2.9
2	3.0	3.1	3.0	3.0	3.1	3.7	3.4	3.5	3.5	2.9	2.9	2.9
3	3.0	3.1	3.0	3.0	3.2	3.7	3.5	3.5	3.5	2.9	2.9	2.9
4	3.0	3.5	3.0	3.0	3.9	3.7	3.7	3.5	3.6	2.9	2.9	2.9
5	3.0	3.0	3.0	3.0	4.3	3.7	3.7	3.6	3.8	2.9	2.9	2.9
6	3.0	3.0	3.0	3.0	3.8	3.7	3.6	3.6	3.7	3.0	2.9	3.0
7	3.0	3.0	3.0	3.0	3.5	3.7	3.6	3.6	3.7	2.9	2.9	3.0
8	3.0	3.0	3.0	3.0	3.6	3.6	3.6	3.6	3.7	2.9	2.9	3.0
9	3.0	3.0	3.0	3.0	3.7	3.7	3.6	3.5	3.6	2.9	2.9	3.0
10	3.0	3.0	3.0	3.0	3.7	3.7	3.6	3.5	3.6	3.0	2.9	3.0
11	3.0	3.0	3.0	3.0	3.7	3.8	3.5	3.5	3.5	2.9	2.9	3.0
12	3.0	3.0	---	3.0	3.7	3.7	3.5	3.6	3.5	2.9	2.9	3.0
13	3.0	3.0	---	3.0	3.7	3.7	3.5	3.6	3.5	3.0	2.9	3.0
14	3.0	3.0	---	3.0	3.7	3.7	3.5	3.7	3.4	2.9	2.9	3.0
15	3.0	3.0	---	3.2	3.7	3.7	3.5	3.7	3.3	2.9	2.9	3.0
16	3.0	3.0	3.5	3.5	3.7	3.7	3.6	3.7	3.3	2.9	2.9	3.0
17	3.0	3.0	3.2	3.4	3.8	3.7	3.5	3.8	3.3	2.9	2.9	3.0
18	3.0	3.0	3.0	3.2	3.9	3.7	3.4	3.6	3.2	2.9	2.9	3.0
19	3.0	3.0	3.0	3.2	3.8	3.7	3.4	4.0	3.2	2.9	2.9	3.0
20	3.0	3.0	3.0	3.3	3.7	3.7	3.5	3.8	3.1	2.9	2.9	3.0
21	3.0	3.0	3.0	3.4	3.7	3.7	3.6	3.9	3.0	2.9	2.9	3.0
22	3.0	3.0	3.0	3.2	3.7	3.7	3.6	4.0	3.0	2.9	2.9	3.0
23	3.0	3.0	3.0	3.2	3.6	3.7	3.5	3.8	3.0	2.9	2.9	3.0
24	3.0	3.0	3.0	3.2	3.6	3.7	3.7	3.7	3.0	2.9	2.9	3.0
25	3.0	3.0	3.0	3.2	3.5	3.6	3.7	3.6	3.1	2.9	2.9	3.0
26	3.1	3.0	3.0	3.2	3.6	3.6	3.7	3.6	3.1	2.9	2.9	3.0
27	3.1	3.0	3.0	3.1	3.7	3.6	3.6	3.7	3.0	2.9	2.9	3.0
28	3.1	3.0	3.0	3.2	3.7	3.7	3.6	3.6	3.0	2.9	2.9	3.0
29	3.1	3.0	3.0	3.5	3.7	3.7	3.5	3.7	3.0	2.9	2.9	3.0
30	3.1	3.0	3.1	3.9	---	3.7	3.5	3.6	3.0	2.9	2.9	3.0
31	3.1	---	3.1	3.5	---	3.7	---	3.6	---	2.9	2.9	---
TOTAL	93.6	90.7	---	98.4	106.2	114.4	106.8	113.2	99.7	90.2	89.9	89.5
MEAN	3.02	3.02	---	3.17	3.66	3.69	3.56	3.65	3.32	2.91	2.90	2.98
MAX	3.1	3.5	---	3.9	4.3	3.8	3.7	4.0	3.8	3.0	2.9	3.0
MIN	3.0	3.0	---	3.0	3.1	3.6	3.4	3.5	3.0	2.9	2.9	2.9
AC-FT	186	180	---	195	211	227	212	225	198	179	178	178

SACRAMENTO RIVER BASIN

107

11374000 COW CREEK NEAR MILLVILLE, CA

LOCATION.--Lat 40°30'19", long 122°13'56", in NE 1/4 NW 1/4 sec.32, T.31 N., R.3 W., Shasta County, Hydrologic Unit 18020101, on right bank 2.9 mi upstream from mouth, 4.2 mi southwest of Millville, and 4.3 mi downstream from Little Cow Creek.

DRAINAGE AREA.--425 mi².

PERIOD OF RECORD.--October 1949 to current year.

CHEMICAL DATA: Water years 1959-66.

WATER TEMPERATURE: Water years 1966-71, 1973-76, 1978-79.

SEDIMENT DATA: Water year 1978.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 385.7 ft above sea level. Prior to June 11, 1987, at datum 3.00 ft higher.

REMARKS.--Records good. Numerous small diversions upstream from station for irrigation. See schematic diagrams of upper Sacramento River and Battle Creek basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft³/s, Nov. 16, 1981, gage height, 24.22 ft, present datum; maximum gage height, 24.55 ft, Dec. 27, 1951, present datum; minimum daily, 0.02 ft³/s, July 29, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1937 or 1940 reached a stage of 26.8 ft from floodmarks, present datum; probable backwater effect from high flows on the Sacramento River.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,900 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0545	17,100	15.46	Feb. 4	2345	18,800	16.04
Jan. 16	1845	20,800	16.72				

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	88	139	651	1360	1450	2010	647	501	138	59	40
2	62	90	190	490	1100	1170	2270	610	448	128	57	40
3	63	91	144	408	1010	1050	1400	578	409	123	51	42
4	61	91	238	366	9930	2500	1080	539	377	109	45	45
5	61	95	239	335	7170	2690	936	517	358	112	51	45
6	64	100	241	309	2780	1680	840	487	332	103	50	49
7	67	97	186	285	1970	1360	788	459	311	97	52	46
8	68	95	160	272	1590	1160	752	440	284	95	52	50
9	66	100	146	311	1370	1030	714	429	263	96	51	46
10	68	102	151	588	1210	976	739	402	258	93	45	45
11	69	98	567	359	1090	1760	673	393	238	84	41	45
12	83	97	6150	299	980	3570	629	383	218	86	40	45
13	81	101	1460	273	909	1690	581	379	205	84	39	74
14	75	101	749	256	845	1320	553	443	205	95	39	97
15	71	99	7720	782	788	1100	551	571	196	86	40	92
16	67	99	1320	7720	1160	1010	1130	748	185	82	40	99
17	69	102	674	2480	1350	922	1200	1310	186	81	39	85
18	69	103	472	2590	1570	868	2100	5230	185	103	41	73
19	62	106	373	3590	5530	825	1170	2260	177	94	42	70
20	65	110	316	3970	6500	796	1520	1320	173	85	38	74
21	71	114	275	4560	6660	772	1080	2010	166	75	39	69
22	66	119	252	1700	2900	746	969	3290	165	76	43	63
23	68	116	238	1360	2010	706	854	1660	168	80	44	69
24	69	111	220	3490	2520	657	1840	1260	169	82	40	67
25	71	116	206	3600	1560	629	1360	1040	176	76	42	62
26	77	138	198	1560	1280	588	1060	884	187	69	49	58
27	78	130	195	3780	1170	594	908	971	212	65	55	50
28	78	121	237	2820	1340	1050	803	780	205	64	58	46
29	76	119	871	1790	1950	686	726	697	173	73	48	51
30	83	119	1750	2290	---	607	680	638	148	66	47	49
31	85	---	1060	1790	---	575	---	600	---	61	45	---
TOTAL	2176	3168	27137	55074	71602	36537	31916	31975	7278	2761	1422	1786
MEAN	70.2	106	875	1777	2469	1179	1064	1031	243	89.1	45.9	59.5
MAX	85	138	7720	7720	9930	3570	2270	5230	501	138	59	99
MIN	61	88	139	256	788	575	551	379	148	61	38	40
AC-FT	4320	6280	53830	109200	142000	72470	63310	63420	14440	5480	2820	3540

SACRAMENTO RIVER BASIN

11374000 COW CREEK NEAR MILLVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	478	1128	1676	1591	1388	857	530	215	59.7	36.0	46.5
MAX	1057	2539	3929	5593	4634	5275	3012	1795	952	218	115	130
(WY)	1963	1982	1984	1970	1986	1983	1963	1967	1993	1983	1983	1983
MIN	19.4	58.3	76.1	80.7	103	118	63.0	54.1	13.5	.63	.74	3.19
(WY)	1992	1992	1991	1991	1977	1977	1977	1992	1992	1977	1977	1992

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1950 - 1996

ANNUAL TOTAL	466881	272832	
ANNUAL MEAN	1279	745	674
HIGHEST ANNUAL MEAN			1505
LOWEST ANNUAL MEAN			66.8
HIGHEST DAILY MEAN	14600	Mar 14	9930
LOWEST DAILY MEAN	51	Sep 20	38
ANNUAL SEVEN-DAY MINIMUM	58	Sep 15	40
INSTANTANEOUS PEAK FLOW			20800
INSTANTANEOUS PEAK STAGE			16.72
ANNUAL RUNOFF (AC-FT)	926100	541200	488300
10 PERCENT EXCEEDS	3690	1790	1580
50 PERCENT EXCEEDS	373	228	187
90 PERCENT EXCEEDS	65	50	24

SACRAMENTO RIVER BASIN

109

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA

LOCATION.--Lat 40°23'14", long 122°14'15", in NE 1/4 NE 1/4 sec.7, T.29 N., R.3 W., Shasta County, Hydrologic Unit 18020102, on left bank 2.2 mi east of Cottonwood and 2.5 mi upstream from mouth.
DRAINAGE AREA.--927 mi².

PERIOD OF RECORD.--October 1940 to current year.

CHEMICAL DATA: Water years 1982-85.

WATER TEMPERATURE: Water years 1963-67, 1977-85.

SEDIMENT DATA: Water years 1957-67, 1977-85.

REVISED RECORDS.--WSP 1345: 1943, 1944(M), 1946-47, 1949(M), 1951-52. WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 363.80 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to July 26, 1963, on right bank at datum 3.59 ft higher. July 26, 1963, to Sept. 13, 1972, at site 250 ft downstream on right bank at present datum. Sept. 21, 1967, to Jan. 14, 1968, supplementary gage at a site 1,450 ft downstream on right bank at datum 2.35 ft higher.

REMARKS.--Records fair. Small diversions for irrigation upstream from station. At times during irrigation season, Cottonwood Creek receives water from the Sacramento River by way of Anderson-Cottonwood Irrigation District Canal. See schematic diagrams of upper Sacramento River and Battle Creek basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,000 ft³/s, Mar. 1, 1983, gage height, 21.59 ft from rating curve extended above 34,000 ft³/s on basis of runoff comparisons with upstream stations then in use; minimum, 15 ft³/s several days during September 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	1715	13,900	11.76	Feb. 29	0915	12,000	11.14
Feb. 5	0315	14,400	11.86				

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	75	55	71	e1150	3670	4760	1380	688	561	224	99	59
2	76	56	73	e898	3030	3530	1680	704	524	208	84	45
3	89	56	82	e798	2610	3130	1400	662	507	193	87	44
4	88	56	98	701	6550	3480	1250	588	510	185	94	51
5	95	56	119	628	10600	4940	1150	534	492	179	89	61
6	96	56	128	572	7160	3750	1090	504	456	178	77	65
7	101	57	124	528	5750	3190	1070	487	427	163	82	64
8	96	58	113	485	4700	2910	1070	470	403	156	85	65
9	82	61	104	464	4130	2840	1070	454	377	152	69	73
10	82	61	101	584	3640	2890	1050	441	357	151	69	74
11	75	61	141	524	3180	4110	979	425	358	144	66	61
12	76	61	3580	475	2820	4820	916	420	351	131	69	55
13	90	62	2500	448	2550	3850	863	426	344	132	73	65
14	85	61	1440	425	2320	3230	820	469	333	133	68	61
15	91	61	e4500	764	2120	2850	795	535	320	125	61	69
16	89	61	e1500	6900	2080	2600	878	653	313	120	62	71
17	94	61	e650	6050	2290	2410	875	1010	298	127	63	74
18	83	62	e460	5510	3110	2320	837	1190	272	134	67	83
19	81	64	e400	5410	4710	2280	785	1040	266	130	60	107
20	71	63	e365	4860	6090	2160	797	819	269	116	60	101
21	72	63	e335	5960	8730	1990	753	809	266	109	63	83
22	67	63	e315	3500	5380	1840	762	1870	256	116	57	74
23	61	63	e310	3060	3720	1700	755	1290	242	119	53	78
24	59	65	e310	3860	3140	1560	786	1030	246	123	60	74
25	57	65	e315	4300	2600	1460	883	878	261	103	64	65
26	58	65	e340	3250	2250	1360	814	833	246	105	63	62
27	59	65	e360	5280	1990	1310	762	1210	288	93	65	71
28	60	69	e435	5890	2010	1510	726	764	305	94	64	74
29	59	69	e950	4270	7400	1410	693	691	280	86	81	66
30	56	71	e2500	4480	---	1300	668	634	248	94	74	69
31	56	---	e1850	4540	---	1230	---	591	---	96	60	---
TOTAL	2379	1847	24569	86564	120330	82720	28357	23119	10376	4219	2188	2064
MEAN	76.7	61.6	793	2792	4149	2668	945	746	346	136	70.6	68.8
MAX	101	71	4500	6900	10600	4940	1680	1870	561	224	99	107
MIN	56	55	71	425	1990	1230	668	420	242	86	53	44
AC-FT	4720	3660	48730	171700	238700	164100	56250	45860	20580	8370	4340	4090

e Estimated.

SACRAMENTO RIVER BASIN

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, 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	130	349	1212	2114	2291	1925	1171	624	298	114	69.4	76.9
MAX	805	1828	5428	9193	10800	10770	4270	2447	979	365	169	164
(WY)	1958	1985	1984	1995	1958	1983	1941	1983	1993	1983	1983	1983
MIN	50.6	52.2	49.8	60.3	76.3	146	136	165	74.5	36.8	26.4	30.8
(WY)	1995	1991	1991	1991	1977	1977	1977	1977	1977	1994	1945	1945

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1941 - 1996

ANNUAL TOTAL	782243		388732									
ANNUAL MEAN	2143		1062							858		
HIGHEST ANNUAL MEAN										2714		1983
LOWEST ANNUAL MEAN										94.4		1977
HIGHEST DAILY MEAN	40500	Jan 9	10600	Feb 5	54300	Jan 16	1974					
LOWEST DAILY MEAN	55	Nov 1	44	Sep 3	15	Sep 7	1945					
ANNUAL SEVEN-DAY MINIMUM	56	Oct 30	55	Aug 31	16	Sep 4	1945					
INSTANTANEOUS PEAK FLOW			14400	Feb 5	86000	Mar 1	1983					
INSTANTANEOUS PEAK STAGE			11.86	Feb 5	21.59	Mar 1	1983					
ANNUAL RUNOFF (AC-FT)	1552000		771000		621700							
10 PERCENT EXCEEDS	6180		3510		2010							
50 PERCENT EXCEEDS	450		317		220							
90 PERCENT EXCEEDS	66		61		57							

11376015 NORTH FORK BATTLE CREEK BELOW NORTH BATTLE CREEK DAM, NEAR MANZANITA LAKE, CA

LOCATION.--Lat 40°36'10", long 121°39'17", in SE 1/4 SE 1/4 sec.20, T.32 N., R.3 E., Shasta County, Hydrologic Unit 18020118, Lassen National Forest, on left bank 300 ft downstream from North Battle Creek Dam and 6.7 mi northwest of Manzanita Lake.

DRAINAGE AREA.--6.40 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-87 available in files of the U.S. Geological Survey. Fragmentary records for water years 1920-77 in files of the Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and a compound weir consisting of a 5-ft rectangular and V-notch weir. Elevation of gage is 5,560 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 0.30 ft³/s Oct. 1-31 and Apr. 1 to Sept. 30. No license requirement Nov. 1 to Mar. 31, records not computed. Each fall, North Battle Creek Reservoir is drafted and flows may exceed the rated limits of the weirs; flow is computed to 50 ft³/s. See schematic diagram of Battle Creek 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	1.6	---	---	---	---	---	21	21	e14	1.9	1.1	.95
2	1.5	---	---	---	---	---	20	22	e13	2.3	1.0	.91
3	1.6	---	---	---	---	---	15	21	e12	2.5	1.0	1.3
4	1.4	---	---	---	---	---	13	19	e1.5	2.4	.98	.95
5	1.7	---	---	---	---	---	13	18	e1.5	2.4	1.0	.97
6	1.8	---	---	---	---	---	14	18	e1.5	e2.4	1.3	.91
7	1.5	---	---	---	---	---	15	17	e1.6	e2.4	1.4	1.1
8	1.6	---	---	---	---	---	18	17	e3.9	e2.4	1.4	1.3
9	1.5	---	---	---	---	---	19	16	e5.0	2.0	1.5	1.3
10	1.5	---	---	---	---	---	9.2	16	e6.0	1.4	1.5	1.4
11	2.3	---	---	---	---	---	1.8	16	e6.2	1.3	1.3	2.5
12	3.1	---	---	---	---	---	1.8	16	e5.2	1.4	1.3	3.2
13	3.0	---	---	---	---	---	1.8	6.2	4.3	1.4	1.1	3.0
14	3.0	---	---	---	---	---	1.8	2.1	4.0	1.2	1.3	2.9
15	3.0	---	---	---	---	---	1.8	2.2	3.6	1.3	1.5	2.8
16	3.0	---	---	---	---	---	3.2	19	3.3	1.5	1.5	2.7
17	2.9	---	---	---	---	---	11	33	3.0	1.3	1.5	2.8
18	2.9	---	---	---	---	---	13	38	2.9	1.4	1.5	4.0
19	13	---	---	---	---	---	12	37	2.6	1.4	1.5	4.8
20	21	---	---	---	---	---	11	28	2.6	1.3	1.4	5.0
21	21	---	---	---	---	---	9.8	37	2.5	1.4	1.3	5.2
22	21	---	---	---	---	---	10	---	2.2	1.3	1.3	5.2
23	20	---	---	---	---	---	11	34	2.1	1.4	1.2	5.2
24	20	---	---	---	---	---	20	30	2.0	1.5	1.2	5.2
25	20	---	---	---	---	---	19	27	2.1	1.4	1.0	5.2
26	20	---	---	---	---	---	18	25	2.8	1.4	1.0	5.2
27	20	---	---	---	---	---	19	30	3.4	1.3	1.2	5.2
28	19	---	---	---	---	---	17	e24	2.8	1.4	1.4	5.2
29	19	---	---	---	---	---	17	e20	2.4	1.4	1.3	5.2
30	15	---	---	---	---	---	20	e19	2.1	1.3	1.1	5.2
31	9.7	---	---	---	---	---	---	e16	---	1.3	1.0	---
TOTAL	277.6	---	---	---	---	---	377.2	---	122.1	50.7	39.08	96.79
MEAN	8.95	---	---	---	---	---	12.6	---	4.07	1.64	1.26	3.23
MAX	21	---	---	---	---	---	21	---	14	2.5	1.5	5.2
MIN	1.4	---	---	---	---	---	1.8	---	1.5	1.2	.98	.91
AC-FT	551	---	---	---	---	---	748	---	242	101	78	192

e Estimated.

11376025 NORTH FORK BATTLE CREEK BELOW MCCUMBER DAM, NEAR MANZANITA LAKE, CA

LOCATION.--Lat 40°32'15", long 121°43'53", in SW 1/4 SE 1/4 sec.15, T.31 N., R.2 E., Shasta County, Hydrologic Unit 18020118, on right bank 300 ft downstream from McCumber Dam, 3.0 mi northwest of Viola, and 9.0 mi west of Manzanita Lake.

DRAINAGE AREA.--27.6 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-87 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch weir. Elevation of gage is 4,080 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. Prior to water year 1995 flow computed to 211 ft³/s. The minimum release requirement is 0.30 ft³/s at all times; flow is computed to 610 ft³/s. See schematic diagram of Battle Creek 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	35	22	22	37	37	53	89	56	51	16	21	20
2	26	20	22	41	36	51	91	58	48	15	21	18
3	21	20	22	43	33	52	73	57	43	15	21	18
4	21	22	23	42	35	65	63	54	34	16	21	18
5	21	24	23	42	58	67	58	52	32	15	20	19
6	19	22	25	41	79	55	57	50	31	15	19	19
7	18	21	26	31	67	51	60	49	30	15	19	18
8	18	21	26	25	62	49	61	48	31	14	19	18
9	18	21	26	25	60	51	63	47	32	14	19	18
10	18	28	26	25	58	54	61	45	32	13	19	18
11	18	31	26	25	57	67	41	43	32	12	19	19
12	18	31	30	24	56	66	36	43	31	12	19	23
13	18	31	45	23	52	58	34	40	29	12	19	25
14	18	31	53	22	52	52	31	32	29	17	19	25
15	18	31	53	22	52	50	35	31	28	23	19	26
16	10	30	52	22	55	50	47	59	27	23	19	26
17	2.8	30	50	36	86	49	50	80	25	21	19	30
18	17	29	37	43	117	48	54	96	25	22	19	32
19	41	26	27	43	183	51	55	107	24	23	19	32
20	41	20	25	43	160	54	53	80	22	24	19	32
21	37	17	23	42	191	54	50	103	22	23	20	32
22	37	17	24	42	127	56	50	192	21	23	20	30
23	37	17	24	42	104	50	52	121	20	21	20	31
24	37	17	24	42	94	42	78	96	20	20	20	31
25	37	18	24	47	81	39	80	82	20	19	20	30
26	37	19	24	49	69	37	70	74	22	20	20	30
27	37	21	24	48	65	42	66	91	23	20	20	31
28	37	22	24	47	61	71	58	72	21	20	20	31
29	37	22	24	47	56	51	53	66	19	20	21	31
30	37	22	24	43	---	45	55	63	18	21	20	32
31	29	---	29	40	---	43	---	56	---	21	21	---
TOTAL	815.8	703	907	1144	2243	1623	1724	2143	842	565	611	763
MEAN	26.3	23.4	29.3	36.9	77.3	52.4	57.5	69.1	28.1	18.2	19.7	25.4
MAX	41	31	53	49	191	71	91	192	51	24	21	32
MIN	2.8	17	22	22	33	37	31	31	18	12	19	18
AC-FT	1620	1390	1800	2270	4450	3220	3420	4250	1670	1120	1210	1510
a	279	186	272	139	436	428	445	445	436	403	395	253

CAL YR 1995 TOTAL 15995.8 MEAN 43.8 MAX 481 MIN 1.1 AC-FT 31730

WTR YR 1996 TOTAL 14083.8 MEAN 38.5 MAX 192 MIN 2.8 AC-FT 27940

a Contents, in acre-feet, at end of month for McCumber Reservoir (station 11376020), provided by Pacific Gas & Electric Co.

POWERPLANTS IN BATTLE CREEK BASIN

11376043 VOLTA NO. 1 POWERPLANT NEAR MANTON, CA, in NW 1/4 NE 1/4 sec.16, T.30 N., R.1 E., Shasta County, Hydrologic Unit 18020118, 1.7 mi north of Manton. Powerplant consists of one unit with a total of 8,550 KW normal operating capacity. See schematic diagram of Battle Creek basin.

11376046 VOLTA NO. 2 POWERPLANT NEAR MANTON, CA, in NE 1/4 SW 1/4 sec.16, T.30 N., R.1 E., Shasta County, Hydrologic Unit 18020118, 1.2 mi northeast of Manton. Powerplant consists of one unit with a total of 956 KW normal operating capacity. See schematic diagram of Battle Creek basin.

11376410 SOUTH POWERPLANT NEAR MANTON, CA, in NE 1/4 SE 1/4 sec.5, T.29 N., R.1 E., Tehama County, Hydrologic Unit 18020118, 2.7 mi south of Manton. Powerplant consists of one unit with a total of 6,750 KW normal operating capacity. See schematic diagram of Battle Creek basin.

11376430 INSKIP POWERPLANT NEAR MANTON, CA, in NE 1/4 NW 1/4 sec.3, T.29 N., R.1 W., Tehama County, Hydrologic Unit 18020118, 5.5 mi southwest of Manton. Powerplant consists of one unit with a total of 7,650 KW normal operating capacity. See schematic diagram of Battle Creek basin.

11376458 COLEMAN POWERPLANT NEAR COTTONWOOD, CA, in SW 1/4 SW 1/4 sec.32, T.30 N., R.2 W., Shasta County, Hydrologic Unit 18020006, 8.5 mi east of Cottonwood. Powerplant consists of one unit with a total of 12,150 KW normal operating capacity. See schematic diagram of Battle Creek basin.

MONTHLY DISCHARGE, IN ACRE-FEET, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Volta No. 1	Volta No. 2	South	Inskip	Coleman
Oct.	4,600	2,960	9,580	12,330	14,730
Nov.	4,020	4,860	10,120	12,660	13,970
Dec.	4,790	5,800	11,300	14,230	14,250
Jan.	5,420	6,600	11,960	16,260	18,990
Feb.	6,640	7,050	10,990	15,530	18,220
Mar.	7,230	7,560	11,900	16,740	19,990
Apr.	7,050	7,250	11,500	16,250	19,190
May	2,720	5,170	11,760	16,460	19,680
June	0	4,140	11,500	16,280	18,400
July	0	4,950	11,560	16,050	17,570
Aug.	2,890	5,190	11,270	11,280	11,770
Sept.	4,430	5,450	10,380	11,700	11,950

NOTE.--Records were provided by Pacific Gas & Electric Co., in connection with a Federal Energy Regulatory Commission project. Unpublished records for water years 1979-86 available in files of U.S. Geological Survey. Fragmentary records prior to water year 1979 available in files of Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11376050 NORTH FORK BATTLE CREEK BELOW DIVERSION TO KESWICK DITCH, NEAR MANTON, CA

LOCATION.--Lat 40°30'00", long 121°48'29", in NW 1/4 NE 1/4 sec.36, T.31 N., R.1 E., Shasta County, Hydrologic Unit 18020118, on right bank 4.2 mi east of Shingletown and 5.5 mi northeast of Manton.

PERIOD OF RECORD.--October 1986 to current year (operated as a low-flow station only). Unpublished records for water years 1978-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 3,600 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 3.0 ft³/s at all times; flow is computed to 5.6 ft³/s. See schematic diagram of Battle Creek 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	3.5	---	3.6	3.5	3.7	4.3	4.4	3.6	---	4.0	3.6	3.5
2	3.4	---	3.6	3.6	3.7	4.3	4.3	3.6	---	4.0	3.6	3.5
3	3.4	---	3.6	3.6	3.6	4.3	4.4	3.6	---	4.0	3.6	3.5
4	3.4	---	3.6	3.6	3.5	4.3	4.4	3.6	---	4.0	3.6	3.5
5	3.3	---	3.6	3.6	3.7	4.2	4.4	3.6	---	4.0	3.6	3.5
6	3.4	---	3.6	3.6	4.0	4.2	4.4	3.6	---	4.0	3.5	3.5
7	3.4	---	3.7	3.5	4.0	4.2	4.5	3.6	---	4.0	3.5	3.5
8	3.4	---	3.6	3.4	4.1	4.2	4.4	3.6	---	4.0	3.5	3.5
9	3.4	---	3.6	3.4	4.2	4.2	4.5	3.6	---	4.1	3.5	3.5
10	3.4	---	3.6	3.4	4.2	4.2	4.5	3.6	---	4.1	3.6	3.5
11	3.4	3.5	3.7	3.4	4.3	4.2	4.4	3.6	3.5	3.7	3.6	3.5
12	3.4	3.5	---	3.4	4.4	4.0	4.4	3.7	3.6	3.5	3.5	3.6
13	3.4	3.5	3.5	3.3	4.4	4.0	4.5	---	3.6	3.6	3.5	3.7
14	3.4	3.5	3.7	3.4	4.4	3.9	4.5	---	3.6	3.6	3.6	3.7
15	3.4	3.5	3.8	3.5	4.4	3.9	4.5	---	3.6	3.6	3.6	3.8
16	---	3.5	3.8	3.7	4.4	3.9	4.4	---	3.6	3.6	3.6	3.8
17	---	3.4	3.8	3.8	4.3	3.9	4.4	---	3.6	3.7	3.5	3.8
18	---	3.4	3.7	3.9	4.1	4.0	4.4	---	3.6	3.7	3.5	3.8
19	3.5	3.4	3.5	3.9	4.1	4.0	4.4	---	3.7	3.7	3.5	3.7
20	3.5	3.4	3.4	3.7	4.2	4.0	4.4	---	3.8	3.7	3.5	3.6
21	3.4	3.4	3.4	3.6	4.3	4.0	4.4	---	3.8	3.7	3.5	3.6
22	3.4	3.4	3.4	3.6	4.2	4.1	4.4	---	3.8	3.7	3.5	3.6
23	3.3	3.4	3.4	3.6	4.3	4.1	4.4	---	3.8	3.6	3.4	3.6
24	3.3	3.4	3.4	3.6	4.3	4.1	4.1	---	3.9	3.6	3.5	3.5
25	3.3	3.4	3.4	3.6	4.3	4.3	3.7	---	4.0	3.7	3.5	3.5
26	3.3	3.4	3.4	3.7	4.3	4.4	3.7	---	4.0	3.6	3.5	3.5
27	3.3	3.4	3.4	3.6	4.3	4.4	3.7	---	4.0	3.6	3.5	3.5
28	3.3	3.5	3.4	3.5	4.3	4.4	3.6	---	4.0	3.6	3.5	3.5
29	3.3	3.4	3.4	3.6	4.3	4.4	3.6	---	4.0	3.6	3.5	3.5
30	3.3	3.4	3.5	3.6	---	4.5	3.6	---	4.0	3.6	3.5	3.5
31	---	---	3.5	3.7	---	4.5	---	---	---	3.6	3.5	---
TOTAL	---	---	---	110.9	120.3	129.4	127.7	---	---	116.5	109.4	107.3
MEAN	---	---	---	3.58	4.15	4.17	4.26	---	---	3.76	3.53	3.58
MAX	---	---	---	3.9	4.4	4.5	4.5	---	---	4.1	3.6	3.8
MIN	---	---	---	3.3	3.5	3.9	3.6	---	---	3.5	3.4	3.5
AC-FT	---	---	---	220	239	257	253	---	---	231	217	213

NOTE: Canal was out of service Oct. 16-18, Oct. 31 to Nov. 10, Dec. 12, May 13 to June 10 and all flow remained in the natural channel.

11376120 BAILEY CREEK BELOW DIVERSION TO PONDEROSA-BAILEY CREEK POWERPLANT, NEAR MANTON, CA

LOCATION.--Lat 40°27'59", long 121°59'20", in NE 1/4 SE 1/4 sec.11, T.30 N., R.1 E., Shasta County, Hydrologic Unit 18020118, on right bank 250 ft downstream from Spring Creek, 0.4 mi upstream from Ponderosa Way, 3.3 mi northeast of Manton, and 3.9 mi southeast of Shingletown.

DRAINAGE AREA.--29.6 mi².

PERIOD OF RECORD.--January 1990 to current year (operated as low-flow station only).

GAGE.--Water-stage recorder and V-notch weir. Elevation of gage is 2,650 ft above sea level, from topographic map.

REMARKS.--During times of powerplant operation the minimum release requirement is 17 ft³/s; flow is computed to 109 ft³/s. See schematic diagram of Battle Creek basin.

COOPERATION.--Records were collected by Snow Mountain Hydro, 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	16	21	17	17	17	23	17	17	17	24	17
2	20	16	22	17	17	17	17	17	21	17	23	17
3	20	16	17	17	17	17	17	17	30	17	23	17
4	20	16	23	17	65	17	17	17	32	21	22	17
5	20	17	17	17	99	17	17	17	40	17	21	17
6	20	17	18	17	26	17	17	21	49	17	20	17
7	20	17	17	17	22	17	17	17	58	17	20	17
8	20	17	17	17	17	17	17	17	60	17	19	17
9	20	17	19	17	17	17	19	17	49	17	19	17
10	20	17	23	17	17	20	17	17	31	17	19	17
11	20	17	17	17	17	17	17	17	24	17	19	17
12	19	17	---	17	17	17	17	17	21	17	19	16
13	19	17	47	17	19	17	17	17	20	20	18	17
14	19	17	17	17	17	17	17	30	19	17	18	17
15	19	17	17	17	17	17	17	28	17	17	19	17
16	19	17	17	17	17	17	17	104	17	17	21	19
17	19	17	17	17	17	17	17	103	17	17	20	17
18	19	18	17	18	17	17	17	89	17	17	20	18
19	19	17	17	17	24	17	20	55	17	17	20	18
20	19	17	17	17	19	17	17	21	17	17	20	18
21	19	18	17	17	35	17	17	44	17	17	20	17
22	19	17	17	17	17	17	17	95	17	17	20	17
23	19	17	17	17	21	17	17	41	17	17	20	17
24	19	17	20	17	18	17	17	22	17	17	20	17
25	19	17	17	17	17	17	20	19	17	17	20	17
26	19	18	20	17	17	17	17	27	17	17	20	17
27	19	18	17	17	17	17	17	64	17	17	20	17
28	19	17	17	17	17	17	17	37	17	17	20	17
29	19	17	19	17	17	17	17	22	17	17	19	17
30	18	18	17	17	---	17	17	19	17	17	17	17
31	16	---	17	17	---	17	---	17	---	19	17	---
TOTAL	596	511	---	528	671	530	524	1062	743	536	617	514
MEAN	19.2	17.0	---	17.0	23.1	17.1	17.5	34.3	24.8	17.3	19.9	17.1
MAX	20	18	---	18	99	20	23	104	60	21	24	19
MIN	16	16	---	17	17	17	17	17	17	17	17	16
AC-FT	1180	1010	---	1050	1330	1050	1040	2110	1470	1060	1220	1020
a	0	0	841	986	2450	2030	2070	3200	3070	1630	0	0

a Discharge, in acre-feet, for Ponderosa-Bailey Creek Powerplant (station 11376110), provided by Snow Mountain Hydro.

11376140 NORTH FORK BATTLE CREEK BELOW DIVERSION TO CROSS COUNTRY CANAL, NEAR MANTON, CA

LOCATION.--Lat 40°27'16", long 121°51'35", in SW 1/4 NW 1/4 sec.15, T.30 N., R.1 E., Shasta County, Hydrologic Unit 18020118, on left bank at diversion dam 800 ft downstream (revised) from Volta No. 2 Powerplant and 1.4 mi northeast of Manton.

DRAINAGE AREA.--133 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-87 available in files of the U.S. Geological Survey. Fragmentary records for water year 1977 in files of Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and metal Alaskan fishladder. Elevation of gage is 2,240 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 3.0 ft³/s at all times; flow is computed to 6.8 ft³/s. See schematic diagram of Battle Creek 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	5.8	---	6.4	---	---	---	---	---	---	---	---	6.5
2	5.9	---	---	---	---	---	---	---	---	---	---	6.5
3	5.9	---	---	---	---	---	---	---	---	---	---	6.5
4	6.6	---	---	---	---	---	---	---	---	---	---	6.5
5	5.9	---	---	---	---	---	---	---	---	---	---	6.5
6	5.4	---	---	---	---	---	---	---	---	---	---	6.5
7	5.5	---	---	---	---	---	---	---	---	---	---	6.4
8	5.4	---	---	---	---	---	---	---	---	---	---	6.5
9	5.4	---	6.8	---	---	---	---	---	---	---	---	---
10	5.6	---	---	---	---	---	---	---	---	---	---	---
11	5.7	5.5	---	---	---	---	---	---	---	---	---	---
12	5.9	5.5	---	---	---	---	---	---	---	---	---	6.5
13	5.5	5.8	---	---	---	---	---	---	---	---	6.0	6.5
14	5.5	6.0	6.8	---	---	---	---	---	---	---	6.5	6.4
15	5.6	5.5	---	---	---	---	---	---	---	---	6.5	6.5
16	---	5.1	6.3	---	---	---	---	---	---	---	6.5	6.5
17	---	5.6	6.0	---	---	---	---	---	---	---	6.5	6.4
18	---	6.2	5.6	---	---	---	---	---	---	---	6.5	6.5
19	6.4	6.4	5.8	---	---	---	---	---	---	---	6.5	6.5
20	6.1	6.4	---	---	---	---	---	---	---	---	6.5	6.5
21	6.5	5.8	---	---	---	---	---	---	---	---	6.5	6.6
22	---	4.9	---	---	---	---	---	---	---	---	6.5	6.5
23	6.7	4.7	---	---	---	---	---	---	---	---	6.5	6.5
24	6.8	5.2	---	---	---	---	---	---	---	---	6.5	6.5
25	5.6	5.1	---	---	---	---	---	---	---	---	6.5	6.5
26	4.8	4.8	---	---	---	---	---	---	---	---	6.5	6.5
27	4.9	4.6	---	---	---	---	---	---	---	---	6.5	6.5
28	5.0	4.5	---	---	---	---	---	---	---	---	6.5	6.4
29	5.1	4.6	---	---	---	---	---	---	---	---	6.5	6.5
30	5.1	4.6	---	---	---	---	---	---	---	---	6.5	5.6
31	6.8	---	---	---	---	---	---	---	---	---	6.5	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

NOTE: Canal was out of service Oct. 16-18 and all flow remained in the natural channel.

11376150 NORTH FORK BATTLE CREEK BELOW DIVERSION TO EAGLE CANYON CANAL, NEAR MANTON, CA

LOCATION.--Lat 40°25'26", long 121°55'09", in NW 1/4 SE 1/4 sec.25, T.30 N., R.1 W., Tehama County, Hydrologic Unit 18020118, on left bank at diversion dam to Eagle Canyon Canal and 2.8 mi southwest of Manton.

DRAINAGE AREA.--186 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-87 available in files of the U.S. Geological Survey. Fragmentary records for water year 1977 available in files of Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and metal Alaskan fishladder. Elevation of gage is 1,400 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. Prior to water year 1996 flow computed to 7.2 ft³/s. The minimum release requirement is 3.0 ft³/s at all times; flow is computed to 50 ft³/s. See schematic diagram of Battle Creek 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	e31	e27	e26	e38	---	---	---	---	---	---	e33	e32
2	e40	e26	e27	e33	---	---	---	---	---	---	e33	e31
3	e24	e26	e26	e33	---	---	---	---	---	---	e33	e30
4	e15	e26	---	e29	---	---	---	---	---	---	e33	e29
5	e23	e26	e36	e25	---	---	---	---	---	---	e33	e29
6	e23	e26	e28	e25	---	---	---	---	---	e50	e33	e29
7	e23	e26	e24	e24	---	---	---	---	---	e48	e32	e29
8	e23	e26	e24	e23	---	---	---	---	---	e50	e32	e30
9	e23	e27	e23	e26	---	---	---	---	---	e49	e33	---
10	e22	e26	e24	e28	---	---	---	---	---	e43	e33	---
11	e22	e26	e25	e25	---	---	---	---	---	e40	e33	---
12	e23	e26	---	---	---	---	---	---	---	e38	e34	e35
13	e23	e26	---	e23	---	---	---	---	---	e35	e33	e36
14	e22	e26	---	e23	---	---	---	---	---	e44	e33	e36
15	e22	e26	---	e27	---	---	---	---	---	e43	e33	e36
16	---	e26	---	---	---	---	---	---	---	e43	e32	---
17	e47	e26	---	---	---	---	---	---	---	e36	e32	e37
18	e30	e26	---	---	---	---	---	---	---	e33	e32	e36
19	e26	e26	e24	---	---	---	---	---	---	e25	e32	e34
20	e26	e26	e22	---	---	---	---	---	---	e20	e31	e32
21	e25	e25	e20	---	---	---	---	---	---	e20	e31	e32
22	e25	---	e24	---	---	---	---	---	---	e22	e31	e32
23	e25	e25	e27	---	---	---	---	---	---	e23	e31	e32
24	e25	e25	e27	---	---	---	---	---	---	e27	e31	e32
25	e26	e25	e27	---	---	---	---	---	---	e33	e31	e31
26	e27	e25	e27	---	---	---	---	---	---	e34	e34	e31
27	e27	e25	e27	---	---	---	---	---	---	e34	e35	e31
28	e27	e25	e27	---	---	---	---	---	---	e34	e33	e32
29	e27	e25	---	---	---	---	---	---	---	e34	e32	e32
30	e27	e25	---	---	---	---	---	---	---	e34	e32	e32
31	e27	---	---	---	---	---	---	---	---	e34	e32	---
TOTAL	---	---	---	---	---	---	---	---	---	---	1006	---
MEAN	---	---	---	---	---	---	---	---	---	---	32.5	---
MAX	---	---	---	---	---	---	---	---	---	---	35	---
MIN	---	---	---	---	---	---	---	---	---	---	31	---
AC-FT	---	---	---	---	---	---	---	---	---	---	2000	---

e Estimated.

[illegible]

119

[illegible]

SACRAMENTO RIVER BASIN

11376440 SOUTH FORK BATTLE CREEK BELOW DIVERSION TO INSKIP CANAL, NEAR MANTON, CA

LOCATION.--Lat 40°23'43", long 121°52'57", in NW 1/4 SE 1/4 sec.5, T.29 N., R.1 E., Tehama County, Hydrologic Unit 18020118, on left bank at diversion dam to Inskip Canal and 2.8 mi south of Manton.

DRAINAGE AREA.--88.3 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-87 available in files of the U.S. Geological Survey. Fragmentary records for water year 1977 available in files of Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and metal Alaskan fishladder. Elevation of gage is 1,440 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. The minimum release requirement is 5.0 ft³/s at all times; flow is computed to 12 ft³/s. See schematic diagram of Battle Creek 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

[illegible]

SACRAMENTO RIVER BASIN

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11376460 SOUTH FORK BATTLE CREEK BELOW DIVERSION TO COLEMAN DITCH, NEAR MANTON, CA

LOCATION.--Lat 40°24'10", long 121°58'02", in NW 1/4 NW 1/4 sec.3, T.29 N., R.1 W., Tehama County, Hydrologic Unit 18020118, on right bank 7.5 mi southwest of Shingletown and 5.7 mi southwest of Manton.

DRAINAGE AREA.--102 mi².

PERIOD OF RECORD.--October 1987 to current year (operated as a low-flow station only). Unpublished records for water years 1978-86 available in files of the U.S. Geological Survey. Fragmentary records for water year 1977 available in files of Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and metal Alaskan fishladder. Elevation of gage is 980 ft above sea level, from topographic map.

REMARKS.--This station records fishwater release only. Prior to water year 1996 flow computed to 10 ft³/s. The minimum release requirement is 5.0 ft³/s at all times; flow is computed to 45 ft³/s. See schematic diagram of Battle Creek 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.

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	e30	e26	e26	---	---	---	---	---	---	e25	e30	e30
2	e30	e26	e26	---	---	---	---	---	---	e25	e30	e30
3	e30	e26	e26	e35	---	---	---	---	---	e25	e30	e30
4	e30	e26	e26	e22	---	---	---	---	---	e25	e29	e30
5	e32	e26	e26	e24	---	---	---	---	---	e25	e29	e28
6	e30	e26	e26	e26	---	---	---	---	---	e24	e30	e28
7	e30	e26	e26	e26	---	---	---	---	---	e24	e30	e28
8	e30	e26	e26	e26	---	---	---	---	---	e24	e30	e29
9	e30	e26	e26	e26	---	---	---	---	---	e24	e30	e29
10	e30	e26	e32	e45	---	---	---	---	---	e24	e30	e30
11	e30	e26	e43	e26	---	---	---	---	---	e24	e30	e29
12	e30	e26	---	e26	---	---	---	---	e28	e24	e30	e29
13	e30	e26	---	e26	---	---	---	---	e28	e24	e30	e28
14	e30	e26	---	e26	---	---	---	---	e28	e26	e30	e29
15	e30	e26	---	---	---	---	---	---	e28	e26	e30	e28
16	e30	e26	---	---	---	---	---	---	e27	e26	e30	e28
17	e30	e26	---	---	---	---	---	---	e27	e26	e30	e28
18	e30	e26	e26	---	---	---	---	---	e27	e26	e30	e28
19	e30	e26	e26	---	---	---	---	---	e27	e26	e30	e31
20	e30	e26	e26	---	---	---	---	---	e27	e26	e30	e31
21	e30	e26	e26	---	---	---	---	---	e27	e26	e30	e31
22	e30	e26	e26	---	---	---	---	---	e27	e26	e30	e31
23	e30	e26	e26	---	---	---	---	---	e26	e26	e30	e31
24	e30	e26	e26	---	---	---	---	---	e26	e26	e30	e31
25	e30	e26	e26	---	---	---	---	---	e26	e29	e30	e31
26	e28	e26	e26	---	---	---	---	---	e32	e30	e30	e31
27	e26	e26	e26	---	---	---	---	---	e26	e30	e30	e31
28	e26	e26	e26	---	---	---	---	---	e26	e30	e30	e32
29	e26	e26	---	---	---	---	---	---	e25	e30	e30	e31
30	e26	e26	---	---	---	---	---	---	e25	e30	e30	e32
31	e26	---	---	---	---	---	---	---	---	e30	e29	---
TOTAL	910	780	---	---	---	---	---	---	---	812	927	893
MEAN	29.4	26.0	---	---	---	---	---	---	---	26.2	29.9	29.8
MAX	32	26	---	---	---	---	---	---	---	30	30	32
MIN	26	26	---	---	---	---	---	---	---	24	29	28
AC-FT	1800	1550	---	---	---	---	---	---	---	1610	1840	1770

e Estimated.

11376550 BATTLE CREEK BELOW COLEMAN FISH HATCHERY, NEAR COTTONWOOD, CA

LOCATION.--Lat 40°23'54", long 122°08'43", in SW 1/4 NE 1/4 sec.1, T.29 N., R.3 W., Shasta County, Hydrologic Unit 18020101, U.S. Fish and Wildlife Service land, on right bank 3.7 mi downstream from Spring Branch, 5.7 mi upstream from mouth, and 7.0 mi east of Cottonwood.

DRAINAGE AREA.--357 mi².

PERIOD OF RECORD.--October 1961 to current year. October 1940 to September 1961 at site 0.6 mi upstream published as "near Cottonwood"; low-flow records not equivalent owing to Coleman Fish Hatchery diversion, maximum flows considered equivalent.

CHEMICAL DATA: Water years 1962-66.

WATER TEMPERATURE: Water years 1966-79.

SEDIMENT DATA: Water years 1962-70.

GAGE.--Water-stage recorder. Elevation of gage is 415 ft above sea level, from topographic map.

REMARKS.--Records fair. Some regulation at low flows by five small powerplants, several small reservoirs, and Coleman Fish Hatchery. Coleman Fish Hatchery diverts from 50 to 90 ft³/s and pumps ground water for temperature control, which is returned above the station. At times, 10 ft³/s diverted upstream from station for irrigation. See schematic diagrams of Battle Creek and upper Sacramento River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s, Jan. 24, 1970, gage height, 14.75 ft, from rating curve extended above 4,200 ft³/s on basis of slope-area measurement of peak flow; minimum, 52 ft³/s, Aug. 8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 15.8 ft, Dec. 11, 1937, from floodmarks, site and datum then in use, discharge, 35,000 ft³/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1000	5,210	6.92	Feb. 21	0600	4,050	6.09
Jan. 16	1200	4,710	6.57	May 22	0315	3,500	5.66
Feb. 4	1300	6,440	7.72				

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	321	304	320	550	668	777	1100	748	695	413	285	275
2	311	302	351	492	623	743	1140	761	683	414	281	275
3	310	275	328	462	592	735	911	755	670	417	282	271
4	310	302	401	448	3230	962	816	715	649	414	283	257
5	313	308	428	430	2210	968	769	695	643	412	285	277
6	328	305	399	419	1330	818	755	681	635	418	283	282
7	321	307	384	414	1040	772	757	677	625	414	274	263
8	319	287	357	402	899	748	772	672	618	403	275	262
9	313	283	345	434	833	744	773	658	605	398	272	246
10	322	308	342	532	787	749	801	646	575	391	275	252
11	317	298	428	418	765	949	747	642	558	343	272	265
12	320	293	2490	406	735	1190	697	654	547	339	280	259
13	316	282	817	394	722	886	672	683	536	338	299	273
14	313	293	527	386	708	798	657	714	537	348	268	283
15	310	322	1570	579	685	769	660	720	526	351	269	287
16	293	322	686	2070	728	759	826	1020	515	349	264	304
17	298	312	528	1010	936	742	815	1430	508	342	260	285
18	308	310	466	2140	1130	754	882	1570	494	333	263	283
19	311	298	422	1240	1820	751	787	1520	477	330	259	279
20	319	306	405	810	1660	747	e800	1010	468	332	269	276
21	300	299	384	851	2650	738	e750	1490	471	323	272	273
22	301	300	379	678	1450	749	e760	2120	459	318	272	272
23	312	296	381	725	1130	725	746	1160	451	312	292	274
24	305	289	372	913	1070	685	789	955	447	310	288	275
25	314	273	370	748	951	669	843	875	451	311	285	275
26	323	310	365	623	861	645	790	831	454	305	271	271
27	316	306	373	1780	816	653	762	1030	460	307	280	272
28	317	306	391	1010	807	861	731	854	443	302	281	270
29	333	300	694	762	863	738	706	790	422	310	291	268
30	333	296	1020	856	---	686	727	763	416	292	281	269
31	318	---	725	786	---	660	---	721	---	284	277	---
TOTAL	9745	8992	17448	23768	32699	24170	23741	28560	16038	10873	8588	8173
MEAN	314	300	563	767	1128	780	791	921	535	351	277	272
MAX	333	322	2490	2140	3230	1190	1140	2120	695	418	299	304
MIN	293	273	320	386	592	645	657	642	416	284	259	246
AC-FT	19330	17840	34610	47140	64860	47940	47090	56650	31810	21570	17030	16210

e Estimated.

11376550 BATTLE CREEK BELOW COLEMAN FISH HATCHERY, NEAR COTTONWOOD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	294	412	556	758	712	742	645	609	472	326	262	258
MAX	589	1058	1602	2434	1919	1802	1160	1306	1074	666	461	423
(WY)	1963	1982	1984	1970	1986	1983	1995	1995	1983	1983	1983	1983
MIN	139	205	224	234	260	266	231	266	207	168	160	154
(WY)	1993	1993	1992	1991	1977	1977	1977	1977	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1962 - 1996			
ANNUAL TOTAL	311164				212795							
ANNUAL MEAN	853				581				503			
HIGHEST ANNUAL MEAN									869			
LOWEST ANNUAL MEAN									238			
HIGHEST DAILY MEAN	6430				Apr 29				10900			
LOWEST DAILY MEAN	273				Nov 25				102			
ANNUAL SEVEN-DAY MINIMUM	292				Nov 8				110			
INSTANTANEOUS PEAK FLOW					6440				Feb 4			
INSTANTANEOUS PEAK STAGE					7.72				Feb 4			
ANNUAL RUNOFF (AC-FT)	617200				422100				364300			
10 PERCENT EXCEEDS	1550				950				880			
50 PERCENT EXCEEDS	633				429				365			
90 PERCENT EXCEEDS	310				275				222			

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA

LOCATION.--Lat 40°17'19", long 122°11'08", in NW 1/4 NE 1/4 sec.15, T.28 N., R.3 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.7 mi upstream from Bend Bridge, and 8.1 mi northeast of Red Bluff.

DRAINAGE AREA.--8,900 mi², excluding Goose Lake basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1879-88 annual observed maximums only, published in WSP 1315-A. January 1892 to current year. Monthly discharges only for some periods and yearly estimates for some incomplete years, published in WSP 1315-A. Published as "at Red Bluff" 1894-96, as "at Jellys Ferry" 1895-1902, and as "near Red Bluff" 1903-68 (station 11378000).

CHEMICAL DATA: Water years 1955-80.

SPECIFIC CONDUCTANCE: Water years 1955-63.

WATER TEMPERATURE: Water years 1955-80.

SEDIMENT DATA: Water years 1958-70, 1977-83.

REVISED RECORDS.--WSP 861: 1904, 1907, 1909, 1914-15, 1927-28. WSP 1315-A: 1916(M), 1918(M), 1941(M). WSP 1931: Drainage area. WDR CA-69-2: 1965.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 285.77 ft above sea level. See WSP 2131 for history of changes prior to September 1968.

REMARKS.--Records good. Flow completely regulated by Shasta Lake (station 11370000), 52 mi upstream, since Dec. 30, 1943. Diversions, in addition to those on tributaries, for irrigation of about 22,000 acres between stations at Keswick and above Bend Bridge. Transbasin diversion from Trinity River to Whiskeytown Lake (station 11371700) via Judge Francis Carr Powerplant (station 11525430) started in April 1963. See schematic diagrams of upper Sacramento River and Battle Creek basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291,000 ft³/s, Feb. 28, 1940, gage height, 38.9 ft, site and datum then in use, from rating curve extended above 170,000 ft³/s on basis of velocity-area studies; minimum (water years 1892-1994), 2,000 ft³/s, Mar. 29, 1944. Since regulation by Shasta Lake in 1943, maximum discharge, 170,000 ft³/s, Dec. 22, 1964, gage height, 28.15 ft, site and datum then in use; maximum gage height, 36.60 ft, Jan. 24, 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	8230	5730	6270	8860	16000	48900	11300	9670	14400	14700	15200	13000
2	7730	5730	6330	8080	13400	46900	13400	10300	14800	15200	14800	12500
3	7140	5710	6310	7620	11500	43200	10400	9930	15500	15100	14000	11800
4	7060	5710	6480	7290	30500	43500	9610	9370	16200	14600	13500	11200
5	e7020	6090	6590	6890	37400	42500	9320	9100	16300	14200	13900	10500
6	e7000	6160	6490	6410	23000	35200	9160	9080	16100	14700	14500	10100
7	e6900	6170	6460	6310	19600	32900	9020	8860	16000	15100	14600	11000
8	e6610	6190	6400	6240	17800	32000	8860	8600	16100	15100	14700	11000
9	e6410	6190	6350	6290	16900	31700	8860	8780	16100	15200	15100	11000
10	e6380	6180	6370	6980	22200	28900	9120	9510	16100	15300	15200	10600
11	e6100	6180	6930	6510	25500	29100	8760	9960	15600	15100	15300	10100
12	5700	6170	26900	6340	25500	31300	8670	10200	15000	15100	15400	10000
13	5670	6180	14700	6230	33400	28000	8520	10400	15000	15100	15400	9970
14	5630	6130	9280	6160	36700	26500	8500	10800	15500	14800	15200	9760
15	5590	6170	30000	7250	37000	24000	8470	11000	15400	14000	15500	9740
16	5600	6170	13000	27600	35000	20900	9040	10900	15400	13600	15200	9730
17	5600	6120	8960	19300	34100	18200	9190	15100	15000	13900	14500	9700
18	5640	6140	8150	18500	36500	16900	10100	18000	14300	13400	14000	9640
19	5660	6160	7650	20200	51100	15900	8900	20900	13900	13500	14100	9640
20	5700	6190	7320	16100	55400	14100	9260	18900	13500	14200	14400	9500
21	5880	6180	7090	25200	61300	12500	8810	17900	13500	14200	14700	9260
22	5910	6170	7010	12800	56300	11100	8690	27100	14100	14400	14600	9240
23	6050	6180	7030	10600	57400	10100	8620	21300	14100	14700	14800	9690
24	6050	6170	6940	14100	61600	9540	9250	18200	13800	14700	14500	9310
25	6090	6190	6890	17100	59600	9310	9200	17300	13000	14600	14700	8760
26	6190	6200	6850	11200	58300	9230	8900	16000	12500	14400	14500	8730
27	6150	6220	6810	22700	55100	9060	9700	14700	13000	14800	14300	8790
28	6170	6210	6760	28200	53600	9910	9900	13800	13600	15200	14000	8630
29	6180	6240	8130	22300	54000	9460	9810	15400	13400	15100	12700	8480
30	6200	6220	13800	21900	---	9030	9460	15900	14100	15100	12000	8440
31	5810	---	10700	19500	---	8900	---	15200	---	15200	12000	---
TOTAL	194050	183450	284950	410760	1095700	718740	280800	422160	441300	454300	447300	299810
MEAN	6260	6115	9192	13250	37780	23190	9360	13620	14710	14650	14430	9994
MAX	8230	6240	30000	28200	61600	48900	13400	27100	16300	15300	15500	13000
MIN	5590	5710	6270	6160	11500	8900	8470	8600	12500	13400	12000	8440
AC-FT	384900	363900	565200	814700	2173000	1426000	557000	837400	875300	901100	887200	594700

e Estimated.

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1892 - 1943, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4853	7538	11940	18960	24760	22210	18280	12310	7635	5127	4381	4404
MAX	10910	21420	42780	72340	69240	73280	38810	27910	17640	10170	9050	8481
(WY)	1905	1904	1893	1909	1902	1904	1904	1896	1906	1893	1893	1893
MIN	2847	3300	3618	4142	4778	4434	4014	3253	2969	2622	2505	2551
(WY)	1933	1937	1937	1937	1920	1924	1924	1924	1924	1931	1931	1934

SUMMARY STATISTICS

WATER YEARS 1892 - 1943

ANNUAL MEAN	11800
HIGHEST ANNUAL MEAN	22180
LOWEST ANNUAL MEAN	4096
HIGHEST DAILY MEAN	261000
LOWEST DAILY MEAN	2400
ANNUAL SEVEN-DAY MINIMUM	2470
INSTANTANEOUS PEAK FLOW	291000
INSTANTANEOUS PEAK STAGE	38.9
ANNUAL RUNOFF (AC-FT)	8545000
10 PERCENT EXCEEDS	24000
50 PERCENT EXCEEDS	6500
90 PERCENT EXCEEDS	3520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6501	6932	11440	16840	19340	11950	10210	10260	9469	10030	10030	7510
MAX	10490	11180	29530	52620	76870	24840	32420	17830	12930	11630	11800	10230
(WY)	1958	1958	1956	1956	1958	1958	1958	1948	1948	1951	1958	1958
MIN	5468	4681	4336	5104	4579	4727	5335	6788	7253	7476	7080	5289
(WY)	1960	1960	1960	1957	1948	1955	1950	1947	1947	1947	1947	1947

SUMMARY STATISTICS

WATER YEARS 1946 - 1962

ANNUAL MEAN	10840
HIGHEST ANNUAL MEAN	20330
LOWEST ANNUAL MEAN	6690
HIGHEST DAILY MEAN	125000
LOWEST DAILY MEAN	3640
ANNUAL SEVEN-DAY MINIMUM	3830
INSTANTANEOUS PEAK FLOW	139000
INSTANTANEOUS PEAK STAGE	24.98
ANNUAL RUNOFF (AC-FT)	7852000
10 PERCENT EXCEEDS	16900
50 PERCENT EXCEEDS	8430
90 PERCENT EXCEEDS	5190

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	6823	9256	13880	17850	19010	17670	12310	12160	11960	12680	11650	8468
MAX	10600	29690	43350	61060	58190	75830	35110	22920	17460	15690	14930	12040
(WY)	1984	1974	1984	1970	1983	1983	1974	1995	1983	1995	1995	1995
MIN	3935	4068	4296	4573	4700	5476	4804	7322	7431	7811	7998	5323
(WY)	1978	1993	1977	1992	1990	1994	1991	1992	1992	1992	1992	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	7553440	5233320	
ANNUAL MEAN	20690	14300	12790
HIGHEST ANNUAL MEAN			25450
LOWEST ANNUAL MEAN			6494
HIGHEST DAILY MEAN	107000	Mar 15	61600
LOWEST DAILY MEAN	5200	Jan 2	5590
ANNUAL SEVEN-DAY MINIMUM	5630	Oct 13	5630
INSTANTANEOUS PEAK FLOW			69900
INSTANTANEOUS PEAK STAGE			21.99
ANNUAL RUNOFF (AC-FT)	14980000	10380000	9265000
10 PERCENT EXCEEDS	45400	27000	19500
50 PERCENT EXCEEDS	15200	11100	9970
90 PERCENT EXCEEDS	6170	6180	5380

SACRAMENTO RIVER BASIN

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1955 to current year.

CHEMICAL DATA: Water years 1955-81, February 1996 to September 1996. Published as "Sacramento River at Bend" from May 1955 to September 1973; as Sacramento River at Bend Bridge (station 11377200) from October 1973 to September 1976.

WATER TEMPERATURE: Water years 1955 to June 1980 (water years 1955-63 reported as station 11377200; water years 1964-70 as station 11378000).

SEDIMENT DATA: Water year 1958-70 (water years 1958-67 reported as station 11378500; water years 1968-70 as station 11377200), 1977 to May 1983, February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

CHEMICAL DATA: May 1955 to September 1963.

SPECIFIC CONDUCTANCE: May 1955 to September 1963.

WATER TEMPERATURES: May 1955 to June 1980.

SUSPENDED SEDIMENT: October 1957 to September 1970, January 1977 to May 1980 (storm season only for water years 1977, 1979-80).

REMARKS.--National Water-Quality Assessment (NAWQA) Program site established February 1996. Samples collected from Bend Bridge, 2.7 mi downstream from gaging station.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
FEB											
13...	1130	34000	134	7.9	10.0	759	11.5	102	11	5.3	
MAR											
08...	1020	32100	118	7.6	9.0	757	11.6	101	11	5.0	
APR											
24...	1030	8560	121	7.6	12.5	760	11.3	107	11	5.3	
MAY											
30...	0930	15900	110	7.7	11.5	753	11.8	109	11	4.6	
JUN											
27...	1000	12600	108	7.4	11.5	756	10.6	98	9.3	5.0	
JUL											
11...	1430	15100	106	7.9	13.5	756	11.5	111	8.9	4.7	
AUG											
29...	1030	12900	108	7.5	13.0	754	10.4	99	9.4	4.9	
SEP											
20...	1300	9500	106	7.8	13.0	760	10.7	102	9.0	5.1	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB											
13...	6.6	22	1.3	51	4.2	2.2	<0.10	24	89	91	
MAR											
08...	5.8	20	1.1	60	3.7	2.0	<0.10	21	85	82	
APR											
24...	5.8	20	0.90	52	5.2	2.4	<0.10	20	67	83	
MAY											
30...	5.8	21	1.2	47	3.8	2.1	<0.10	21	85	81	
JUN											
27...	5.1	20	1.0	35	3.1	1.8	<0.10	19	72	75	
JUL											
11...	5.1	21	1.0	47	2.8	1.8	<0.10	20	75	76	
AUG											
29...	4.9	19	0.90	46	3.1	1.7	<0.10	18	66	75	
SEP											
20...	4.6	18	0.90	46	3.3	1.7	<0.10	18	65	74	

SACRAMENTO RIVER BASIN

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11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 13...	0.12	<0.010	0.160	<0.015	0.20	<0.20	0.090	0.020	<0.010	10
MAR 08...	0.12	--	--	--	--	--	--	--	--	12
APR 24...	0.09	<0.010	0.070	<0.015	<0.20	<0.20	0.040	0.020	0.020	11
MAY 30...	0.12	<0.010	0.080	<0.015	<0.20	<0.20	0.040	0.040	0.020	101
JUN 27...	0.10	<0.010	0.070	<0.015	<0.20	<0.20	0.010	<0.010	0.020	8.0
JUL 11...	0.10	<0.010	0.120	0.020	<0.20	<0.20	0.130	<0.010	0.020	10
AUG 29...	0.09	<0.010	0.100	0.020	<0.20	<0.20	0.010	<0.010	0.020	7.0
SEP 20...	0.09	<0.010	0.100	<0.015	<0.20	<0.20	0.040	0.010	0.020	7.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 13...	<1.0	1	22	<1.0	<1.0	1.0	<1.0	2.0	10	<1.0
MAR 08...	<1.0	<1	16	<1.0	<1.0	1.0	<1.0	2.0	24	<1.0
APR 24...	<1.0	<1	17	<1.0	<1.0	1.0	<1.0	2.0	18	<1.0
MAY 30...	<1.0	<1	18	<1.0	<1.0	<1.0	<1.0	2.0	65	<1.0
JUN 27...	<1.0	1	15	<1.0	<1.0	<1.0	<1.0	1.0	13	<1.0
JUL 11...	<1.0	1	14	<1.0	<1.0	<1.0	<1.0	1.0	9.0	<1.0
AUG 29...	<1.0	1	14	<1.0	<1.0	<1.0	<1.0	1.0	11	<1.0
SEP 20...	<1.0	<1	14	<1.0	<1.0	<1.0	<1.0	1.0	11	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 13...	4.0	<1.0	2.0	<1	<1.0	2.0	<1.0	1.6	0.20
MAR 08...	4.0	<1.0	2.0	<1	<1.0	1.0	<1.0	2.9	0.50
APR 24...	3.0	<1.0	1.0	<1	<1.0	2.0	<1.0	2.0	0.20
MAY 30...	3.0	<1.0	2.0	<1	<1.0	4.0	<1.0	1.5	0.20
JUN 27...	2.0	<1.0	2.0	<1	<1.0	2.0	<1.0	1.4	0.10
JUL 11...	2.0	<1.0	1.0	<1	<1.0	2.0	<1.0	1.4	0.80
AUG 29...	2.0	<1.0	2.0	<1	<1.0	2.0	<1.0	0.90	0.80
SEP 20...	2.0	<1.0	1.0	<1	<1.0	2.0	<1.0	1.2	0.30

SACRAMENTO RIVER BASIN

11377100 SACRAMENTO RIVER ABOVE BEND BRIDGE, NEAR RED BLUFF, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
13...N	1130	34000	10.0	--	--
MAR					
08...N	1020	32100	9.0	54	4680
APR					
24...N	1030	8560	12.5	16	370
MAY					
30...N	0930	15900	11.5	11	472
JUN					
27...N	1000	12600	11.5	4	136
JUL					
11...N	1430	15100	13.5	5	204
AUG					
29...N	1030	12900	13.0	8	279
SEP					
20...N	1300	9500	13.0	4	103

SACRAMENTO RIVER BASIN

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11379500 ELDER CREEK NEAR PASKENTA, CA

LOCATION.--Lat 40°01'29", long 122°30'31", in SE 1/4 NW 1/4 sec.14, T.25 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 2.5 mi downstream from South Fork Elder Creek, 8.2 mi northwest of Flourney, and 10 mi north of Paskenta.

DRAINAGE AREA.--92.4 mi².

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

CHEMICAL DATA: Water years 1959-66.

WATER TEMPERATURE: Water year 1963.

SEDIMENT DATA: Water years 1963-70.

REVISED RECORDS.--WSP 1515: 1956. WDR CA-70-2: 1967(P). WDR CA-75-4: 1966-67(P), 1969-71(P), 1973(P).

WDR CA-78-4: Drainage area. WDR CA-94-4: 1993(P).

GAGE.--Water-stage recorder. Datum of gage is 718.1 ft above sea level. Prior to Aug. 13, 1965, water-stage recorder at site 300 ft downstream at datum 5.13 ft lower.

REMARKS.--Records good. No regulation or large diversion upstream from station. See schematic diagram of upper Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s, Feb. 28, 1983, gage height, 12.10 ft, from rating curve extended above 5,200 ft³/s on basis of slope-area measurements at gage height 11.34 ft and of peak flow; maximum gage height, 13.90 ft, Feb. 24, 1958, site and datum then in use; no flow at times some years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0630	3,640	7.65	Feb. 4	2130	2,480	6.72
Jan. 16	1115	2,030	6.29				

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	4.8	5.6	7.6	70	304	580	221	86	46	14	3.1	1.2
2	4.4	5.8	8.2	56	242	400	210	84	43	13	3.0	1.2
3	4.2	5.8	8.2	49	224	365	180	79	40	12	2.9	1.3
4	3.9	5.6	11	44	1110	480	162	72	38	12	2.9	1.4
5	3.9	5.7	11	39	1140	554	149	68	35	12	3.0	1.5
6	4.1	5.8	10	34	611	379	147	63	33	11	2.9	1.4
7	4.3	5.8	11	32	476	323	154	61	31	11	2.9	1.4
8	4.4	5.8	10	31	406	309	162	58	30	9.8	2.7	1.3
9	4.5	5.8	10	31	366	329	162	55	29	9.5	2.3	1.3
10	4.6	6.0	14	34	318	379	149	52	27	9.1	2.1	1.3
11	4.7	6.1	75	29	277	513	137	49	27	8.8	1.8	1.2
12	4.7	6.1	996	27	249	638	125	48	26	8.3	1.8	1.3
13	4.4	6.1	196	26	232	463	116	47	25	8.0	1.5	2.1
14	4.4	6.1	139	24	217	364	110	52	24	7.7	1.5	3.9
15	4.4	6.3	869	159	203	313	108	52	23	7.5	1.4	4.0
16	4.5	6.4	178	909	238	287	118	99	23	7.3	1.4	4.2
17	4.8	6.6	99	377	256	271	111	118	22	7.2	1.3	3.7
18	4.6	6.7	72	419	452	279	106	131	21	7.0	1.4	3.2
19	4.5	6.7	55	446	798	281	100	89	20	6.7	1.6	2.9
20	4.5	6.7	45	356	766	264	95	74	20	6.2	1.8	2.8
21	4.5	6.9	38	367	1040	248	90	120	20	5.7	1.9	2.6
22	4.4	7.0	38	225	525	233	91	150	19	5.6	1.8	2.3
23	4.5	7.0	37	171	382	210	91	107	18	5.5	1.7	2.3
24	4.7	7.0	33	261	320	192	107	89	18	5.7	1.5	2.2
25	4.9	7.0	30	315	270	176	107	78	20	5.3	1.4	2.2
26	5.0	7.0	27	196	234	163	103	70	21	4.6	1.5	1.9
27	5.0	7.0	27	633	210	160	97	70	22	4.4	1.6	1.7
28	4.9	7.0	30	393	266	177	90	60	21	4.3	1.9	1.8
29	4.9	7.2	35	252	1070	157	86	56	18	4.3	1.7	1.8
30	4.8	7.3	104	284	---	147	86	57	16	4.1	1.5	1.9
31	4.9	---	99	410	---	141	---	50	---	3.6	1.3	---
TOTAL	141.1	191.9	3323.0	6699	13202	9775	3770	2344	776	241.2	61.1	63.3
MEAN	4.55	6.40	107	216	455	315	126	75.6	25.9	7.78	1.97	2.11
MAX	5.0	7.3	996	909	1140	638	221	150	46	14	3.1	4.2
MIN	3.9	5.6	7.6	24	203	141	86	47	16	3.6	1.3	1.2
AC-FT	280	381	6590	13290	26190	19390	7480	4650	1540	478	121	126

SACRAMENTO RIVER BASIN

11379500 ELDER CREEK NEAR PASKENTA, 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	9.45	48.5	130	248	278	235	146	76.9	27.8	8.25	3.18	3.03
MAX	102	310	649	1208	1636	1176	497	355	128	28.7	11.1	11.3
(WY)	1958	1974	1984	1995	1958	1983	1958	1983	1967	1983	1983	1978
MIN	.66	2.89	4.06	5.38	7.00	22.6	13.8	13.4	2.52	.32	.002	.14
(WY)	1992	1991	1991	1991	1977	1964	1977	1977	1977	1977	1994	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1949 - 1996

ANNUAL TOTAL	95770.5	40587.6	
ANNUAL MEAN	262	111	100
HIGHEST ANNUAL MEAN			303
LOWEST ANNUAL MEAN			6.69
HIGHEST DAILY MEAN	5110	Jan 9	7650
LOWEST DAILY MEAN	3.8	Sep 21	.00
ANNUAL SEVEN-DAY MINIMUM	4.1	Sep 19	.00
INSTANTANEOUS PEAK FLOW			17700
INSTANTANEOUS PEAK STAGE			13.90
ANNUAL RUNOFF (AC-FT)	190000	80510	72720
10 PERCENT EXCEEDS	679	325	233
50 PERCENT EXCEEDS	43	26	19
90 PERCENT EXCEEDS	4.7	1.9	1.5

SACRAMENTO RIVER BASIN

131

11381500 MILL CREEK NEAR LOS MOLINOS, CA

LOCATION.--Lat 40°03'17", long 122°01'23", in NE 1/4 NW 1/4 sec.6, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on right bank 4.5 mi northeast of Los Molinos and 5.5 mi upstream from mouth.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--September 1909 to August 1913 (fragmentary), October 1928 to current year.

REVISED RECORDS.--WSP 1315-A: 1929(M). WSP 1931: Drainage area. WSP 2131: 1938(M).

GAGE.--Water-stage recorder. Elevation of gage is 385 ft above sea level, from topographic map. Prior to September 1913, nonrecording gage at site 0.3 mi downstream at different datum.

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

EXTREMES FOR PERIOD OF RECORD (water years 1929-96).--Maximum discharge, 36,400 ft³/s, Dec. 11, 1937, gage height, 23.4 ft, from floodmarks, from rating curve extended above 14,000 ft³/s on basis of step-backwater computation and slope-area measurement of peak flow; minimum, 49 ft³/s, Dec. 13, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0845	5,820	10.00	Feb. 21	0800	5,230	9.55
Feb. 4	1330	4,590	9.03	May 18	0115	2,580	7.11

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	131	122	127	344	365	435	777	460	434	231	145	115
2	128	122	151	276	321	398	804	474	440	232	143	113
3	125	121	130	247	292	385	619	465	459	230	142	113
4	125	121	178	224	2470	671	512	417	454	226	139	113
5	125	122	186	204	2190	819	452	407	464	220	139	113
6	125	123	176	190	1130	577	431	393	464	213	137	113
7	125	123	165	181	800	485	431	395	467	210	137	113
8	125	123	146	175	640	440	449	393	460	207	137	111
9	125	124	140	173	552	430	454	390	440	204	133	110
10	125	124	139	199	501	433	450	390	408	200	132	110
11	125	123	226	180	471	553	410	398	388	193	132	110
12	125	123	2520	171	441	676	383	433	371	188	132	110
13	125	123	689	166	425	562	361	472	355	185	132	111
14	123	123	331	162	414	482	345	520	343	190	130	117
15	125	123	1240	210	398	445	345	512	331	184	128	115
16	125	123	446	1100	426	431	502	715	320	178	127	143
17	125	123	279	779	719	416	583	1350	307	174	127	122
18	125	123	222	1010	1070	430	731	1680	291	171	127	115
19	125	123	193	669	1550	429	518	1170	280	169	125	113
20	123	123	176	467	1720	432	476	807	274	166	125	113
21	123	121	166	660	2940	427	432	898	271	162	125	113
22	123	123	161	560	1320	422	412	1100	265	159	123	110
23	123	121	159	408	876	398	417	793	262	155	122	110
24	123	121	154	546	751	367	506	648	262	155	122	110
25	123	122	150	613	594	346	559	587	252	153	120	108
26	123	138	147	409	501	326	511	566	250	151	118	108
27	123	131	147	770	445	372	484	595	258	149	117	108
28	123	124	150	680	437	515	442	534	241	148	117	106
29	122	123	292	480	541	392	419	490	230	149	117	105
30	121	123	656	433	---	352	437	462	228	149	117	105
31	121	---	513	407	---	332	---	442	---	147	115	---
TOTAL	3853	3702	10555	13093	25300	14178	14652	19356	10269	5648	3982	3376
MEAN	124	123	340	422	872	457	488	624	342	182	128	113
MAX	131	138	2520	1100	2940	819	804	1680	467	232	145	143
MIN	121	121	127	162	292	326	345	390	228	147	115	105
AC-FT	7640	7340	20940	25970	50180	28120	29060	38390	20370	11200	7900	6700

SACRAMENTO RIVER BASIN

11381500 MILL CREEK NEAR LOS MOLINOS, 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	125	199	342	433	471	451	432	441	327	176	117	106
MAX	684	1039	1365	1837	1744	1278	862	923	736	456	230	168
(WY)	1963	1974	1965	1970	1986	1983	1982	1938	1983	1983	1983	1983
MIN	76.0	75.1	87.4	96.8	98.6	107	111	122	94.9	67.8	61.4	65.4
(WY)	1930	1930	1977	1977	1977	1977	1977	1977	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1929 - 1996			
ANNUAL TOTAL	196135				127964							
ANNUAL MEAN	537				350				301			
HIGHEST ANNUAL MEAN									576			
LOWEST ANNUAL MEAN									93.6			
HIGHEST DAILY MEAN	5650				2940				12800			
LOWEST DAILY MEAN	121				105				52			
ANNUAL SEVEN-DAY MINIMUM	121				107				60			
INSTANTANEOUS PEAK FLOW					5820				36400			
INSTANTANEOUS PEAK STAGE					10.00				23.40			
ANNUAL RUNOFF (AC-FT)	389000				253800				217900			
10 PERCENT EXCEEDS	985				657				577			
50 PERCENT EXCEEDS	355				226				177			
90 PERCENT EXCEEDS	123				121				91			

11382000 THOMES CREEK AT PASKENTA, CA

LOCATION.--Lat 39°53'16", long 122°31'41", in SE 1/4 SW 1/4 sec.34, T.24 N., R.6 W., Tehama County, Hydrologic Unit 18020103, on left bank 1.0 mi downstream from highway bridge and 1.2 mi downstream from Digger Creek at Paskenta.

DRAINAGE AREA.--203 mi².

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to 1943, published as Thomas Creek at Paskenta.

CHEMICAL DATA: Water years 1959-81.

WATER TEMPERATURE: Water years 1962-79, 1981-83.

SEDIMENT DATA: Water years 1963-73, 1981-83.

REVISED RECORDS.--WSP 1345: 1923, 1924-28(M), 1938, 1940(M). WDR CA-78-4: Drainage area. WDR CA-79-4: 1965(M). WDR CA-81-4: 1980(M). WDR CA-86-4.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 720 ft above sea level, from topographic map. Prior to June 20, 1942, nonrecording gage and water-stage recorder at several sites about 1.5 mi upstream at different datums; June 21, 1942, to Sept. 30, 1959, water-stage recorder at site 1.4 mi upstream at datum 732.85 ft and Oct. 1, 1959, to Oct. 9, 1974, at datum 731.10 ft above sea level.

REMARKS.--Records fair. No storage or large diversions upstream from station. See schematic diagram of upper Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,800 ft³/s, Dec. 22, 1964, gage height, 12.7 ft, from floodmarks, present site and datum, from rating curve extended above 6,000 ft³/s on basis of slope-area measurements at gage height 10.10 ft and of peak flow; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0545	6,600	7.77	Feb. 4	1500	3,840	6.58
Dec. 15	0445	4,770	7.03	Feb. 21	0430	4,600	6.90
Jan. 16	1445	5,170	7.21				

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	e6.6	6.4	13	727	1050	783	1190	e540	455	60	12	3.9
2	e6.6	6.8	16	514	915	719	1110	e540	415	57	11	3.6
3	e6.6	6.7	26	405	823	812	871	522	384	54	10	3.5
4	e6.5	6.8	43	325	2290	1250	722	474	346	50	9.7	3.5
5	e6.2	6.9	77	274	2670	1430	655	437	309	49	9.2	3.3
6	e6.0	7.1	92	239	2280	1020	666	411	276	47	9.4	3.4
7	e6.0	7.3	57	212	1960	920	753	389	245	45	8.9	3.4
8	e6.0	7.4	47	193	1830	964	797	371	209	43	8.6	3.4
9	e6.2	7.5	35	189	1790	1170	794	355	173	40	8.0	3.3
10	e6.3	7.6	31	237	1560	1290	680	349	146	39	7.9	3.2
11	e6.3	7.9	365	188	1410	1840	575	345	132	37	7.3	3.1
12	e6.2	8.1	3450	171	1360	2060	498	386	122	34	6.4	3.5
13	e6.2	8.2	1260	158	1280	1560	433	417	115	32	5.9	4.4
14	e6.1	8.3	605	146	1210	1230	391	489	107	31	5.6	5.9
15	e6.1	8.5	2370	768	1080	1120	391	476	103	30	5.4	4.7
16	e6.2	8.8	806	2510	1390	1150	474	525	97	29	5.8	4.5
17	e6.2	8.8	397	1650	1650	1160	418	1110	92	30	5.8	5.4
18	e6.4	8.9	275	1410	2550	1380	369	1550	85	28	5.6	5.9
19	e6.3	8.9	204	1320	2960	1400	357	1080	79	26	5.2	6.2
20	e6.1	9.2	166	982	2720	1260	333	847	77	25	5.4	5.7
21	e6.0	9.8	136	1110	3030	1140	329	1270	73	23	5.4	5.5
22	e5.9	9.7	130	801	1800	1040	374	1440	72	21	5.0	5.3
23	e5.9	9.9	112	680	1310	876	389	1010	67	20	4.8	4.7
24	e5.9	10	97	1130	1100	758	958	848	101	19	4.6	4.6
25	e5.9	10	85	1370	905	679	784	767	89	19	4.7	4.5
26	5.8	11	77	867	765	599	725	716	105	17	4.3	4.2
27	5.9	11	74	1400	689	609	589	683	98	16	4.4	3.9
28	6.1	13	106	1370	644	1040	510	639	85	15	4.4	4.0
29	6.1	13	522	974	1010	769	512	604	74	14	4.4	4.2
30	6.1	12	1920	1010	---	656	e533	563	66	14	4.1	3.8
31	6.3	---	1150	1130	---	601	---	507	---	13	3.8	---
TOTAL	191.0	265.5	14744	24460	46031	33285	18180	20660	4797	977	203.0	128.5
MEAN	6.16	8.85	476	789	1587	1074	606	666	160	31.5	6.55	4.28
MAX	6.6	13	3450	2510	3030	2060	1190	1550	455	60	12	6.2
MIN	5.8	6.4	13	146	644	599	329	345	66	13	3.8	3.1
AC-FT	379	527	29240	48520	91300	66020	36060	40980	9510	1940	403	255

e Estimated.

SACRAMENTO RIVER BASIN

11382000 THOMES CREEK AT PASKENTA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.7	159	395	583	706	620	551	354	116	23.5	6.28	5.08
MAX	310	1500	2879	2900	3483	2080	1879	1406	591	133	38.1	25.5
(WY)	1963	1921	1965	1970	1986	1995	1969	1983	1983	1983	1983	1986
MIN	.000	2.85	6.93	12.4	23.2	48.9	45.3	18.2	1.41	.000	.000	.000
(WY)	1930	1933	1937	1937	1977	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1921 - 1996			
ANNUAL TOTAL	243716.6				163922.0							
ANNUAL MEAN	668				448							
HIGHEST ANNUAL MEAN									293			
LOWEST ANNUAL MEAN									772			
HIGHEST DAILY MEAN	11000				3450				21.5			
LOWEST DAILY MEAN	5.8				3.1				29800			
ANNUAL SEVEN-DAY MINIMUM	5.9				3.3				.00			
INSTANTANEOUS PEAK FLOW					6600				.00			
INSTANTANEOUS PEAK STAGE					7.77				37800			
ANNUAL RUNOFF (AC-FT)	483400				325100				12.70			
10 PERCENT EXCEEDS	1800				1280				212500			
50 PERCENT EXCEEDS	176				105				765			
90 PERCENT EXCEEDS	6.5				5.4				74			
									2.4			

SACRAMENTO RIVER BASIN

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11383500 DEER CREEK NEAR VINA, CA

LOCATION.--Lat 40°00'51", long 121°56'50", in NW 1/4 NE 1/4 sec.23, T.25 N., R.1 W., Tehama County, Hydrologic Unit 18020103, on left bank 0.5 mi upstream from irrigation diversion dam and 7.9 mi northeast of Vina.

DRAINAGE AREA.--208 mi².

PERIOD OF RECORD.--October 1911 to September 1915, March 1920 to current year. December 1937 to January 1939 first published in WDR CA-94-4. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1940-42(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 479.2 ft above sea level, from river-profile survey. Prior to Oct. 9, 1928, nonrecording gage at site 0.8 mi downstream at different datum. Oct. 9, 1928, to Jan. 19, 1939, water-stage recorder at present site at datum 2.64 ft higher.

REMARKS.--Records excellent. No storage or large diversions upstream from station. See schematic diagram of upper Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s, Dec. 10, 1937, gage height, 19.2 ft, present datum, from floodmarks, from rating curve extended above 9,200 ft³/s on basis of velocity-area studies; minimum, 43 ft³/s, Dec. 13, 1932.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0900	4,520	9.03	Feb. 21	0715	6,600	10.43
Dec. 15	0600	2,660	7.28	May 18	0315	2,620	7.24
Feb. 4	2330	4,950	9.35				

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	118	116	119	355	486	737	847	497	381	178	130	108
2	118	118	135	298	440	650	1000	485	359	173	128	108
3	117	117	124	270	410	628	821	472	337	171	127	107
4	116	116	149	250	2590	1150	706	450	324	167	127	107
5	115	116	171	233	2950	1400	641	431	312	164	127	107
6	115	116	145	222	1550	1010	607	412	300	163	124	107
7	116	116	138	213	1090	845	595	400	289	160	123	107
8	116	116	130	206	875	737	591	385	277	159	122	108
9	116	116	126	205	740	697	577	373	266	159	121	108
10	116	118	124	232	663	665	589	362	259	156	119	108
11	116	117	176	210	620	794	542	350	254	153	118	108
12	116	116	2270	199	581	1020	510	345	249	151	118	108
13	115	116	716	194	557	888	480	343	242	151	133	114
14	115	115	370	189	530	774	457	345	236	157	121	120
15	115	115	1450	246	498	710	448	357	229	157	118	119
16	115	115	534	1090	504	670	647	616	224	151	117	129
17	115	115	341	963	738	630	714	1080	219	149	116	115
18	115	116	275	968	1190	625	906	1990	214	148	115	112
19	115	117	242	774	2150	615	717	1410	212	147	115	111
20	116	116	220	639	2550	606	653	996	207	145	115	111
21	116	117	207	909	4560	588	608	1090	203	144	115	112
22	116	118	198	673	2310	576	586	1290	205	143	114	112
23	116	118	193	521	1480	547	572	954	198	141	113	111
24	116	117	185	628	1220	504	653	797	199	140	112	110
25	116	116	178	771	974	478	718	687	198	139	112	110
26	116	138	174	556	813	446	642	609	202	137	111	109
27	116	127	174	896	710	434	601	567	210	136	111	108
28	116	119	184	848	702	654	559	508	198	136	112	108
29	116	118	255	638	947	535	526	470	189	141	111	108
30	116	118	470	563	---	481	508	439	182	135	109	108
31	116	---	466	525	---	457	---	409	---	131	108	---
TOTAL	3592	3529	10639	15484	35428	21551	19021	19919	7374	4682	3662	3318
MEAN	116	118	343	499	1222	695	634	643	246	151	118	111
MAX	118	138	2270	1090	4560	1400	1000	1990	381	178	133	129
MIN	115	115	119	189	410	434	448	343	182	131	108	107
AC-FT	7120	7000	21100	30710	70270	42750	37730	39510	14630	9290	7260	6580

SACRAMENTO RIVER BASIN

11383500 DEER CREEK NEAR VINA, 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	113	195	368	525	622	585	536	392	199	117	97.5	94.6
MAX	775	984	1825	2458	2600	2105	1494	1193	572	267	194	174
(WY)	1963	1974	1956	1970	1986	1983	1982	1995	1983	1983	1983	1983
MIN	63.4	65.2	82.5	87.4	95.3	109	99.5	77.2	66.1	55.8	53.3	55.2
(WY)	1935	1930	1931	1991	1977	1977	1977	1924	1924	1931	1931	1931

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1912 - 1996			
ANNUAL TOTAL	261895				148199							
ANNUAL MEAN	718				405							
HIGHEST ANNUAL MEAN									319			
LOWEST ANNUAL MEAN									700			
HIGHEST DAILY MEAN	9530				4560				86.2			
LOWEST DAILY MEAN	115				107				14300			
ANNUAL SEVEN-DAY MINIMUM	115				107				52			
INSTANTANEOUS PEAK FLOW					6600				53			
INSTANTANEOUS PEAK STAGE					10.43				23800			
ANNUAL RUNOFF (AC-FT)	519500				294000				19.20			
10 PERCENT EXCEEDS	1600				847				231300			
50 PERCENT EXCEEDS	311				205				679			
90 PERCENT EXCEEDS	116				115				144			
									78			

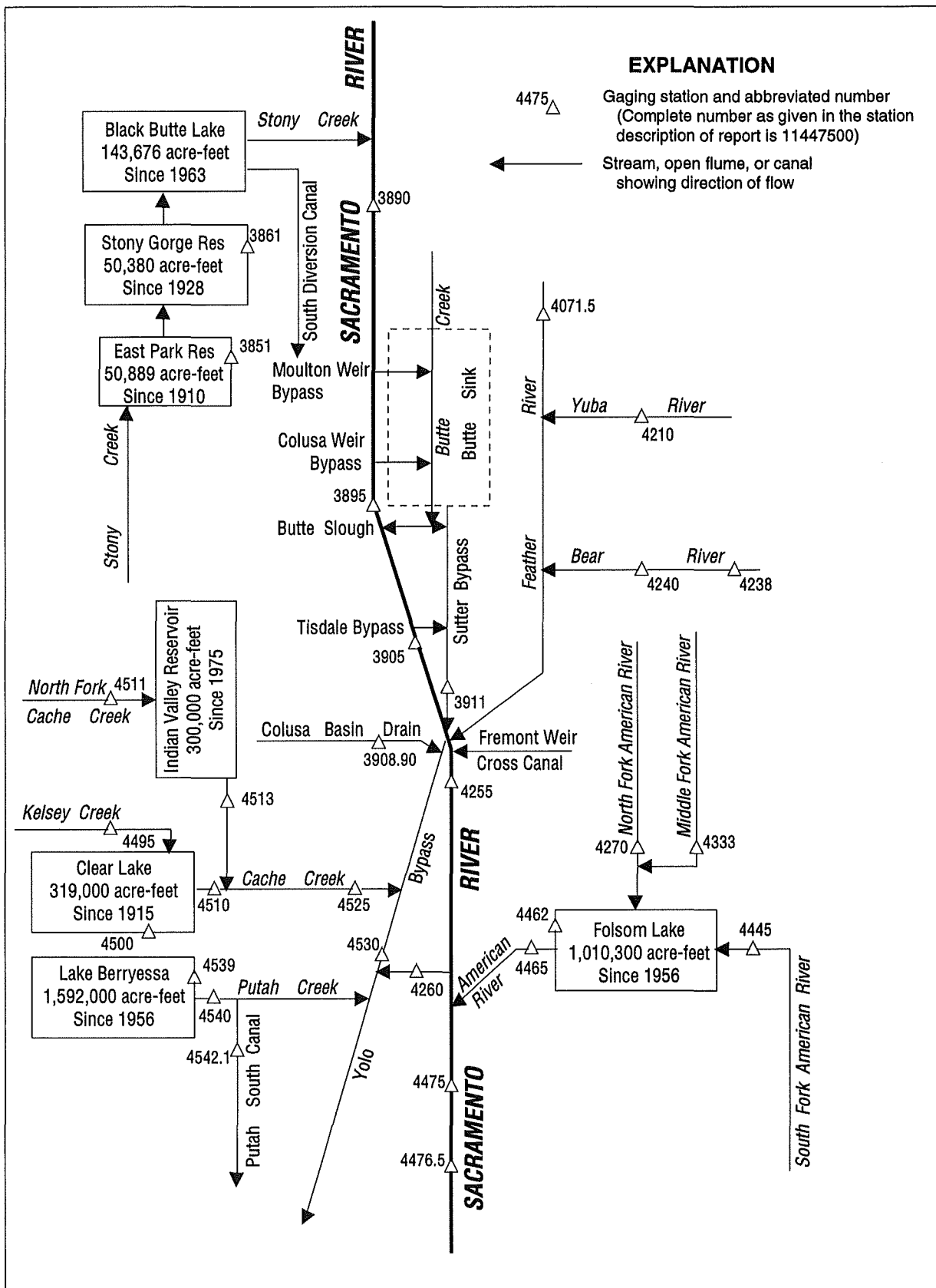


Figure 26. Diversions and storage in lower Sacramento River basin.

SACRAMENTO RIVER BASIN

RESERVOIRS IN STONY CREEK BASIN, CA

11385100 EAST PARK RESERVOIR NEAR STONYFORD.--Lat 39°21'24", long 122°30'53", in SW 1/4 NE 1/4 sec.3, T.17 N., R.6 W., Colusa County, Hydrologic Unit 18020115, near south side of spillway section on East Park Dam on Little Stony Creek, 1.9 mi southeast of Stonyford. DRAINAGE AREA, 98.2 mi². PERIOD OF RECORD, October 1969 to current year. GAGE, nonrecording gage read once daily. Datum of gage is sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by a concrete arch-type dam. Storage began in 1910. Capacity, 48,210 acre-ft, between elevations 1,131.68 ft, invert of sluice pipe, and 1,198.18 ft, crest of spillway. Capacity increased to 50,889 acre-ft with the addition of flashboards to an elevation of 1,199.68 ft. Dead storage, 279 acre-ft. Records of contents provided by U.S. Bureau of Reclamation. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,500 acre-ft, Mar. 30, 1974, elevation, 1,201.10 ft; minimum, 280 acre-ft, Aug. 8 to Oct. 31, 1972, Apr. 30 to Nov. 1, 1977, elevation, 1,131.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 51,038 acre-ft, May 31, June 4, elevation, 1,199.76 ft; minimum, 41,384 acre-ft, Nov. 28-30, several days in December, elevation, 1,194.12

11386100 STONY GORGE RESERVOIR NEAR ELK CREEK.--Lat 39°35'09", long 122°31'54", in NE 1/4 SE 1/4 sec.16, T.20 N., R.6 W., Glenn County, Hydrologic Unit 18020115, on south end of Stony Gorge Dam on Stony Creek, 1.3 mi southeast of Elk Creek. DRAINAGE AREA, 301 mi². PERIOD OF RECORD, October 1969 to current year. GAGE, nonrecording gage read once daily. Datum of gage is sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by slab and buttress-type dam. Storage began in 1928. Capacity, 50,380 acre-ft between elevations 728.0 ft, top of low intake, and 841.0 ft, crest of spillway. No dead storage. Records of contents provided by U.S. Bureau of Reclamation. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 54,630 acre-ft, Mar. 26, 1971, elevation, 844.20 ft; minimum, 3,810 acre-ft, Nov. 6, 1971, elevation, 779.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 50,267 acre-ft, Mar. 29, elevation, 840.91 ft; minimum, 33,454 acre-ft, Sept. 10, elevation, 826.48 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
11385100 EAST PARK RESERVOIR				11386100 STONY GORGE RESERVOIR		
Sept. 30.....	1,196.28	44,943	-3,164	828.39	35,462	-13,761
Oct. 31.....	1,194.38	41,805	-3,138	830.24	37,470	2,008
Nov. 30.....	1,194.12	41,384	-421	830.42	37,669	199
Dec. 31.....	1,196.98	46,129	4,745	833.34	40,975	3,306
CAL YR 1995	--	--	34,015	--	--	28,442
Jan. 31.....	1,198.84	49,382	3,253	831.65	39,042	-1,933
Feb. 29.....	1,198.88	49,453	71	831.65	39,042	0
Mar. 31.....	1,198.40	48,603	-850	840.41	49,622	10,580
Apr. 30.....	1,198.32	48,461	-142	839.40	48,331	-1,291
May 31.....	1,199.76	51,038	2,577	839.40	48,331	0
June 30.....	1,199.24	50,098	-940	838.01	46,583	-1,748
July 31.....	1,198.52	48,815	-1,283	833.08	40,673	-5,910
Aug. 31.....	1,196.84	45,892	-2,923	828.05	35,098	-5,575
Sept. 30.....	1,194.94	42,713	-3,179	827.54	34,560	-538
WTR YR 1996	--	--	-2,230	--	--	-902

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA

LOCATION.--Lat 39°27'28", long 121°59'35", in SE 1/4 NE 1/4 sec.32, T.19 N., R.1 W., Glenn County, Hydrologic Unit 18020104, on left bank 100 ft upstream from highway bridge, 0.5 mi south of Butte City, and at mile 115.8 upstream from Sacramento.

DRAINAGE AREA.--12,080 mi².

PERIOD OF RECORD.--April 1921 to June 1995 (water discharge), (prior to October 1938, low-water periods only), July 1995 to current year (gage heights only). Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1955-66.

WATER TEMPERATURE: Water years 1955-58, 1960-67, 1969-81.

SEDIMENT DATA: Water years 1978-80.

REVISED RECORDS.--WDR CA-86-4: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.92 ft below sea level. Prior to December 1930, at site 0.5 mi upstream at same datum.

REMARKS.--Natural flow affected by storage reservoirs, power developments, diversions for irrigation, return flow from irrigated areas, and bypassing for flood control. When discharge exceeds about 90,000 ft³/s, overbank flow into Butte basin occurs upstream from left (east) bank levee. The combined overbank flow and tributary runoff then flows south on the east bank floodplain into the Butte Sink and Sutter Bypass. See schematic diagram showing diversions and storage in the lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD (since 1941).--Maximum gage height, 96.87 ft, Feb. 7, 1942; minimum gage height prior to October 1990 is unknown. Minimum gage height since October 1990, 67.03 ft, June 10, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 89.80 ft, Feb. 22; minimum 69.71 ft, Nov. 5.

GAGE HEIGHT, FEET, 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	71.57	71.13	69.92	69.73	---	---	74.69	72.97	78.74	77.41	87.73	86.96
2	71.26	70.97	69.79	69.73	---	---	73.28	72.27	77.56	76.28	86.96	85.04
3	71.27	70.66	69.79	69.73	---	---	72.60	72.05	76.28	75.27	85.04	84.14
4	70.93	70.57	69.88	69.72	---	---	72.45	71.83	82.51	75.17	84.14	83.47
5	70.89	70.55	69.89	69.71	---	---	72.20	71.65	88.83	82.45	84.93	83.55
6	70.70	70.39	70.04	69.78	---	---	72.01	71.26	89.30	84.54	84.90	83.18
7	70.66	70.35	70.11	69.94	---	---	71.71	71.09	84.54	80.54	83.18	81.54
8	70.57	70.30	70.10	69.95	---	---	71.42	70.99	80.54	78.67	81.56	80.86
9	70.44	70.28	70.19	69.95	---	---	71.35	70.94	78.67	77.41	80.87	80.56
10	70.46	70.18	70.22	69.99	---	---	71.52	70.95	77.42	76.75	80.73	80.23
11	70.31	70.09	70.11	69.99	---	---	71.76	71.04	78.29	76.87	80.59	79.70
12	70.29	70.02	70.18	69.98	---	---	71.23	70.84	78.28	78.20	83.06	80.07
13	70.11	70.02	70.26	70.00	---	---	71.15	70.73	79.21	78.09	83.18	80.70
14	70.24	69.95	70.23	69.99	---	---	70.92	70.67	80.44	79.21	81.23	79.86
15	70.08	69.92	70.22	69.96	---	---	71.06	70.68	81.01	80.44	79.92	79.21
16	70.13	69.91	70.20	70.00	---	---	77.28	71.01	81.00	80.90	79.21	78.20
17	70.11	69.90	70.20	70.00	---	---	83.36	77.28	80.92	80.35	78.23	77.15
18	69.99	69.88	70.09	69.94	---	---	81.40	75.93	81.10	80.36	77.15	76.32
19	69.99	69.82	70.09	69.88	72.87	72.33	83.03	76.86	83.75	81.10	76.66	76.13
20	69.96	69.77	70.04	69.94	72.71	72.16	80.96	77.29	87.26	83.75	76.15	75.55
21	69.86	69.74	70.20	69.94	72.58	71.97	80.14	76.54	88.83	87.23	75.60	74.76
22	69.95	69.77	70.25	69.96	72.44	71.85	80.51	76.84	89.80	88.79	74.81	74.20
23	69.92	69.80	70.30	69.97	72.18	71.35	76.84	74.90	89.46	87.89	74.29	73.73
24	69.92	69.79	70.30	69.97	71.77	71.23	75.18	74.44	87.93	87.45	73.85	73.32
25	69.91	69.77	70.28	69.90	71.55	71.12	76.83	75.14	88.36	87.49	73.43	73.03
26	70.11	69.73	70.12	69.96	71.46	71.07	77.00	75.09	88.11	87.24	73.15	72.87
27	70.00	69.81	70.32	69.98	71.41	70.96	78.53	75.05	87.24	86.72	72.98	72.74
28	70.07	69.79	70.19	70.00	71.47	70.95	82.14	78.53	86.72	85.81	73.12	72.70
29	70.04	69.75	---	---	71.26	71.00	81.74	79.08	87.09	85.79	73.45	73.07
30	69.94	69.80	---	---	75.90	71.24	79.08	78.33	---	---	73.11	72.72
31	70.02	69.82	---	---	76.14	74.32	78.92	78.35	---	---	72.77	72.57
MONTH	71.57	69.73	---	---	---	---	83.36	70.67	89.80	75.17	87.73	72.57

SACRAMENTO RIVER BASIN

11389000 SACRAMENTO RIVER AT BUTTE CITY, CA--Continued

GAGE HEIGHT, FEET, 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	72.73	72.55	71.68	71.39	73.53	72.82	72.41	71.97	72.86	71.79	72.21	71.85
2	75.46	72.71	71.69	71.45	73.05	72.89	72.56	72.21	72.99	71.99	72.29	72.21
3	75.19	73.78	71.72	71.61	73.12	72.94	72.62	72.52	72.99	72.22	72.27	72.02
4	73.92	73.21	71.62	71.35	73.27	72.98	72.61	72.32	72.37	71.69	72.04	71.83
5	73.37	72.92	71.37	71.10	73.29	73.14	72.45	72.27	71.93	71.82	71.85	71.63
6	72.99	72.79	71.13	71.04	73.28	73.18	72.32	72.02	72.17	71.84	71.67	71.37
7	72.82	72.70	71.08	70.95	73.27	72.99	72.47	72.19	72.44	72.10	71.66	71.37
8	72.74	72.59	70.98	70.76	73.17	73.01	72.54	72.37	72.43	72.17	71.77	71.66
9	72.68	72.48	70.79	70.68	73.16	72.80	72.57	72.35	72.39	72.22	71.83	71.68
10	72.54	72.45	70.91	70.68	73.11	72.98	72.58	72.42	72.47	72.32	71.82	71.55
11	72.62	72.33	71.23	70.88	73.10	72.75	72.54	72.44	72.49	72.39	71.71	71.38
12	72.36	72.17	71.33	71.10	73.05	72.64	72.47	72.32	72.61	72.31	71.47	71.38
13	72.30	72.04	71.45	71.29	72.70	72.56	72.46	72.32	72.62	72.47	71.55	71.42
14	72.09	71.95	71.61	71.38	72.71	72.40	72.47	72.25	72.76	72.51	71.55	71.40
15	72.00	71.88	71.92	71.58	72.76	72.60	72.43	72.02	72.93	72.34	71.67	71.46
16	72.06	71.87	71.95	71.48	72.75	72.60	72.33	71.81	72.72	72.10	72.05	71.60
17	72.56	72.03	74.28	71.63	72.72	72.61	72.10	71.84	72.81	72.45	71.78	71.55
18	72.79	72.34	75.57	74.11	72.72	72.34	72.10	71.85	72.48	72.23	71.69	71.54
19	73.05	72.35	76.02	75.23	72.46	72.32	71.97	71.31	72.32	72.16	71.65	71.52
20	72.74	72.10	76.15	75.40	72.40	72.11	72.09	71.78	72.31	72.22	71.66	71.54
21	72.48	72.04	75.43	75.02	72.24	72.08	72.13	71.94	72.56	72.24	71.69	71.39
22	72.06	71.83	77.40	75.00	72.23	71.64	72.17	71.89	72.60	72.38	71.41	71.35
23	71.88	71.80	77.75	76.52	72.35	72.23	72.45	71.88	72.62	72.42	71.40	71.31
24	71.86	71.71	76.52	75.27	72.37	72.19	72.54	72.04	72.66	72.42	71.59	71.36
25	72.48	71.71	75.27	74.65	72.31	72.14	72.47	72.21	72.57	72.44	71.51	71.21
26	72.36	71.88	74.68	74.25	72.18	71.80	72.38	71.82	72.64	72.55	71.21	71.09
27	71.96	71.84	74.25	73.88	71.89	71.78	72.33	72.04	72.67	72.51	71.11	71.01
28	72.12	71.94	73.91	73.17	72.21	71.82	72.55	72.14	72.70	72.53	71.12	71.04
29	72.12	71.91	73.50	73.11	72.20	72.01	72.57	72.36	72.73	72.12	71.09	70.91
30	71.93	71.65	73.55	73.40	72.13	71.97	72.49	72.17	72.32	71.07	70.94	70.91
31	---	---	73.57	73.45	---	---	72.61	72.31	72.03	71.80	---	---
MONTH	75.46	71.65	77.75	70.68	73.53	71.64	72.62	71.31	72.99	71.07	72.29	70.91

SACRAMENTO RIVER BASIN

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11389500 SACRAMENTO RIVER AT COLUSA, CA

LOCATION.--Lat 39°12'51", long 121°59'57", at north end of Jimeno Grant, Colusa County, Hydrologic Unit 18020104, on right bank 60 ft downstream from highway bridge at Colusa and at mile 89.4 upstream from Sacramento.

DRAINAGE AREA.--12,090 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1921 to current year (prior to October 1940, low-water periods only).

REVISED RECORDS.--WSP 1345: 1952. WDR CA-77-4: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.95 ft below sea level. Prior to December 1930, water-stage recorder in center fender pier 50 ft upstream from bridge at same datum.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, including Shasta Lake (station 11370000) since 1943, power development, bypassing for flood contrl, diversions for irrigation, and return flow from irrigated areas. When discharge exceeds about 30,000 ft³/s, flow begins over Colusa Weir, 2.5 mi upstream on left bank, into Butte Sink and Sutter Bypass. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1941-96), 51,800 ft³/s, Mar. 4, 1983, gage height, 68.50 ft; maximum gage height, 69.20 ft, Feb. 18, 1942; minimum recorded, 820 ft³/s, July 25, 26, 1931, gage height, 34.79 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	8350	5600	6630	16400	27600	35600	11800	8500	13100	10600	11200	10400
2	7830	5460	6690	13800	25200	35300	13300	8080	12400	11000	11300	11000
3	7530	5500	6800	12200	22200	33800	16600	8390	12300	11400	11100	11000
4	6840	5520	6830	11500	21000	32900	14800	8110	12400	11400	10600	10600
5	6600	5510	7010	11000	32100	32800	13500	7470	12600	11100	10100	10200
6	6510	5710	7320	10500	36700	33400	12900	6960	12700	10700	10100	9720
7	6270	6000	7250	9810	33400	31900	12500	6860	12600	10900	10800	9370
8	6140	6070	7240	9430	30000	30500	12200	6560	12300	11300	11000	9830
9	6100	6140	7340	9240	27900	29900	11900	6150	12400	11400	10900	10100
10	6040	6240	7570	e9160	25500	29600	11600	6060	12300	11500	11100	10100
11	5850	6340	7750	e9430	25000	29000	11600	6520	12200	11500	11300	9890
12	5670	6360	9380	e9000	27100	29700	11100	7110	12000	11400	11400	9510
13	5480	6400	25400	e8900	27300	31000	10600	7320	11500	11300	11500	9550
14	5390	6420	24400	e8800	28900	29800	10300	7590	11300	11300	11600	9630
15	5290	6450	16600	e8600	30100	28900	10000	8100	11400	11200	11500	9570
16	5300	6510	26400	e10300	30400	27900	9810	8850	11400	10800	11700	10100
17	5310	6570	24100	e24000	30200	26000	10300	9230	11300	10200	11600	9950
18	5320	6590	16400	e33000	30000	23400	11200	14000	11200	10300	11300	9700
19	5290	6480	13600	e30000	30800	21500	11900	17500	10800	10000	10900	9550
20	5200	6540	12500	29000	33500	20600	11000	19400	10500	9820	11000	9540
21	5150	6600	12000	25000	35900	19100	10600	18900	10200	10300	11100	9570
22	5200	6670	11500	27600	37300	17100	10100	18300	10100	10400	11600	9200
23	5280	6660	10900	23700	37500	15600	9630	22300	10300	10400	11700	9090
24	5300	6660	10000	19100	36500	14500	9430	21700	10500	10700	11800	9240
25	5350	6630	9730	18900	36200	13600	9600	18800	10300	10800	11600	9240
26	5290	6630	9440	21400	36100	13100	10400	16800	10000	10800	11700	8710
27	5450	6670	9350	20000	35700	12700	9580	15400	9830	10700	11900	8470
28	5380	6680	9140	26500	35200	12300	9600	14300	9970	10700	11700	8380
29	5350	6680	9150	30100	34700	13100	9770	13000	10500	11200	11800	8380
30	5440	6680	11700	28300	---	13000	9250	13100	10400	11300	11100	8180
31	5560	---	17900	27700	---	12100	---	13300	---	11200	10500	---
TOTAL	181060	188970	368020	552370	900000	749700	336870	364660	340800	337620	348500	287770
MEAN	5841	6299	11870	17820	31030	24180	11230	11760	11360	10890	11240	9592
MAX	8350	6680	26400	33000	37500	35600	16600	22300	13100	11500	11900	11000
MIN	5150	5460	6630	8600	21000	12100	9250	6060	9830	9820	10100	8180
AC-FT	359100	374800	730000	1096000	1785000	1487000	668200	723300	676000	669700	691200	570800

e Estimated.

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6572	8822	13480	17280	19160	16990	12520	10480	8711	8476	8215	7163
MAX	12040	27000	38000	37630	41270	44450	31490	26680	18730	13150	11920	10510
(WY)	1958	1974	1984	1974	1983	1983	1982	1983	1983	1983	1983	1967
MIN	3219	3860	4141	5193	5147	5852	4966	5015	4852	5073	5081	4322
(WY)	1978	1993	1977	1991	1991	1977	1994	1947	1992	1992	1947	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1946 - 1996

ANNUAL TOTAL	6639150	4956340	
ANNUAL MEAN	18190	13540	11460
HIGHEST ANNUAL MEAN			21790
LOWEST ANNUAL MEAN			5671
HIGHEST DAILY MEAN	48400	Jan 11	37500
LOWEST DAILY MEAN	5120	Jan 3	5150
ANNUAL SEVEN-DAY MINIMUM	5250	Oct 18	5250
INSTANTANEOUS PEAK FLOW			37900
INSTANTANEOUS PEAK STAGE			66.39
INSTANTANEOUS LOW FLOW			5150
ANNUAL RUNOFF (AC-FT)	13170000	9831000	8299000
10 PERCENT EXCEEDS	39700	29000	23800
50 PERCENT EXCEEDS	12800	10900	8240
90 PERCENT EXCEEDS	6200	6260	5310

SACRAMENTO RIVER BASIN

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11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA.--Water years 1959-66, February 1996 to September 1996.

SPECIFIC CONDUCTANCE.--October 1995 to September 1996.

WATER TEMPERATURE.--Water years 1975, 1977-80, October 1995 to September 1996.

SEDIMENT.--Water years 1973-80, February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1995 to September 1996.

WATER TEMPERATURE: October 1995 to September 1996.

INSTRUMENTATION.--Water quality monitor since October 1995.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 174 microsiemens, Oct. 13; minimum recorded, 98 microsiemens, May 23-25.

WATER TEMPERATURE: Maximum recorded, 20.0°C, May 13, several days in July, Aug. 1; minimum recorded, 6.5°C, Jan. 20, 29.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT DIS- SOLVED SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
28...	1210	35300	121	8.0	8.5	761	11.2	96	11	5.1
MAR										
20...	1100	20700	145	7.7	13.0	765	10.1	96	13	6.5
APR										
02...	1220	13000	160	7.8	12.0	765	10.0	93	14	6.9
MAY										
16...	1300	8980	128	7.8	16.5	761	10.3	105	11	5.3
JUN										
17...	1100	11300	119	7.8	17.5	762	10.4	109	11	5.0
JUL										
16...	1300	10900	117	8.1	19.0	763	9.3	101	10	5.1
AUG										
14...	1030	11600	116	7.8	18.5	763	9.8	104	9.5	5.0
SEP										
25...	1300	9270	123	7.8	17.5	763	9.4	99	9.9	5.3

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
28...	6.4	22	1.2	53	4.6	2.8	<0.10	21	97	88
MAR										
20...	6.4	19	1.2	59	6.8	3.0	<0.10	21	104	98
APR										
02...	7.0	19	1.0	62	8.4	4.0	<0.10	21	99	105
MAY										
16...	6.2	21	1.1	52	4.9	2.9	<0.10	20	94	86
JUN										
17...	6.0	21	1.1	50	4.0	2.5	<0.10	20	82	84
JUL										
16...	5.6	20	1.1	52	3.3	2.2	<0.10	20	79	81
AUG										
14...	5.5	21	1.1	50	3.4	2.0	<0.10	19	72	78
SEP										
25...	5.8	21	1.1	54	4.0	2.5	<0.10	19	100	83

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 28...	0.13	<0.010	0.150	0.020	0.30	<0.20	0.040	0.030	0.030	10
MAR 20...	0.14	0.020	0.240	<0.015	0.50	<0.20	0.130	0.030	0.040	9.0
APR 02...	0.13	<0.010	0.290	<0.015	<0.20	<0.20	0.030	0.010	0.010	8.0
MAY 16...	0.13	0.010	0.050	<0.015	0.20	<0.20	0.070	<0.010	<0.010	7.0
JUN 17...	0.11	<0.010	0.080	0.020	<0.20	<0.20	0.020	<0.010	0.020	28
JUL 16...	0.11	<0.010	0.130	0.030	<0.20	<0.20	0.020	0.020	0.030	10
AUG 14...	0.10	0.010	0.090	0.020	<0.20	<0.20	0.020	0.030	0.030	8.0
SEP 25...	0.14	0.020	0.130	<0.015	<0.20	<0.20	0.040	<0.010	0.020	5.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 28...	<1.0	1	19	<1.0	<1.0	1.0	<1.0	2.0	16	<1.0
MAR 20...	<1.0	1	23	<1.0	<1.0	1.0	<1.0	1.0	8.0	<1.0
APR 02...	<1.0	2	24	<1.0	<1.0	1.0	<1.0	2.0	20	<1.0
MAY 16...	<1.0	<1	21	<1.0	<1.0	<1.0	<1.0	2.0	12	<1.0
JUN 17...	<1.0	2	18	<1.0	<1.0	<1.0	<1.0	2.0	46	<1.0
JUL 16...	<1.0	1	18	<1.0	<1.0	<1.0	<1.0	1.0	12	<1.0
AUG 14...	<1.0	1	16	<1.0	<1.0	<1.0	<1.0	1.0	11	<1.0
SEP 25...	<1.0	1	17	<1.0	<1.0	<1.0	<1.0	1.0	10	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 28...	4.0	<1.0	2.0	<1	<1.0	2.0	<1.0	1.4	0.50
MAR 20...	11	<1.0	2.0	<1	<1.0	<1.0	<1.0	1.6	0.70
APR 02...	10	<1.0	2.0	<1	<1.0	2.0	<1.0	1.5	0.70
MAY 16...	5.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.3	0.60
JUN 17...	4.0	<1.0	1.0	<1	<1.0	2.0	<1.0	1.2	0.30
JUL 16...	3.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.3	--
AUG 14...	2.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.4	0.20
SEP 25...	3.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.2	0.40

SACRAMENTO RIVER BASIN

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11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
28...N	1210	35300	8.5	151	14400
MAR					
20...N	1100	20700	13.0	153	8550
APR					
02...N	1220	13000	12.0	86	3020
MAY					
16...N	1300	8980	16.5	52	1260
JUN					
17...N	1100	11300	17.5	59	1800
JUL					
16...N	1300	10900	19.0	32	942
AUG					
14...N	1030	11600	18.5	45	1410
SEP					
25...N	1300	9270	17.5	30	751

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	140	129	145	141	150	149	129	122	146	144	122	119
2	141	134	144	141	150	149	137	129	149	146	124	119
3	145	141	144	140	151	150	143	137	153	149	127	124
4	---	---	140	134	152	151	151	143	154	150	129	127
5	---	---	139	137	153	148	155	151	150	126	129	126
6	---	---	141	139	148	142	158	155	126	117	126	125
7	146	138	142	140	142	141	158	157	129	117	132	126
8	151	146	143	142	142	141	158	157	139	129	134	132
9	155	151	142	141	142	140	158	158	144	139	134	133
10	171	154	144	142	141	140	158	157	147	144	134	132
11	173	155	146	144	140	132	159	156	149	147	134	132
12	172	160	146	145	132	125	156	154	149	148	134	131
13	174	171	146	144	129	104	156	154	148	147	131	128
14	173	155	147	144	115	104	155	153	147	146	133	128
15	168	154	147	146	129	115	153	150	146	138	136	133
16	166	159	148	147	129	107	150	147	139	138	139	136
17	168	166	149	148	119	107	147	108	138	137	141	139
18	169	168	150	149	136	119	116	106	139	137	143	141
19	169	167	151	150	146	136	125	112	139	135	147	143
20	171	168	152	150	155	146	116	109	135	126	147	144
21	172	168	153	152	161	155	130	116	126	113	148	145
22	168	164	153	151	164	161	130	121	113	110	152	145
23	164	162	152	151	166	164	131	121	116	110	155	148
24	162	155	152	150	165	159	137	131	122	116	158	152
25	155	152	151	149	159	157	147	137	122	121	164	155
26	152	146	153	151	158	157	147	143	122	121	168	164
27	146	133	153	152	158	157	144	141	123	121	169	168
28	142	135	152	151	157	153	148	144	122	121	170	168
29	143	141	151	151	153	152	145	138	123	122	170	166
30	145	142	151	149	152	144	140	137	---	---	166	164
31	145	144	---	---	144	121	144	140	---	---	169	166
MONTH	---	---	153	134	166	104	159	106	154	110	170	119

SACRAMENTO RIVER BASIN

11389500 SACRAMENTO RIVER AT COLUSA, 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	170	168	137	135	124	120	110	109	121	120	118	113
2	170	152	137	135	127	123	111	109	121	119	121	118
3	152	147	137	135	131	127	110	109	119	117	123	121
4	147	141	136	133	135	131	111	109	121	118	128	123
5	144	141	135	133	140	134	114	111	123	121	128	124
6	148	144	136	134	149	140	113	112	125	123	124	123
7	152	148	137	135	155	149	113	110	124	123	123	123
8	154	152	137	135	157	154	110	108	123	122	123	123
9	156	154	138	136	158	156	108	106	122	121	124	121
10	157	156	138	137	158	156	108	106	122	121	128	113
11	158	157	138	136	156	152	108	106	121	118	113	108
12	158	156	138	136	152	149	110	108	118	117	109	108
13	157	155	138	136	149	147	112	109	118	115	110	109
14	159	156	136	133	147	142	115	112	117	115	111	110
15	161	159	133	130	142	132	117	115	117	116	111	110
16	162	160	130	126	132	124	123	117	118	117	111	110
17	163	162	126	121	124	118	132	123	120	118	110	109
18	162	160	121	116	118	114	136	132	125	119	111	110
19	160	157	116	113	115	114	138	136	126	122	113	111
20	157	152	113	108	116	115	135	132	123	122	115	113
21	153	152	108	103	116	111	132	130	128	123	116	115
22	154	152	103	101	111	108	131	128	127	124	119	116
23	155	153	101	98	109	107	133	131	124	120	122	119
24	155	151	99	98	108	106	132	126	120	117	125	122
25	151	149	101	98	107	105	126	125	117	116	129	125
26	149	144	103	100	107	106	125	124	119	117	132	129
27	144	140	106	103	106	105	126	125	117	109	136	132
28	140	138	111	106	107	105	128	126	109	108	140	136
29	138	136	114	110	109	106	128	126	109	108	144	140
30	136	135	118	114	110	108	126	123	110	108	149	144
31	---	---	121	118	---	---	123	121	113	109	---	---
MONTH	170	135	138	98	158	105	138	106	128	108	149	108

SACRAMENTO RIVER BASIN

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11389500 SACRAMENTO RIVER AT COLUSA, 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	16.5	15.5	15.0	12.5	12.5	10.5	10.0	9.0	8.5	9.5	8.5
2	17.0	16.0	15.5	15.0	12.5	12.0	10.5	10.0	9.5	9.0	10.5	9.5
3	17.5	16.0	15.0	14.5	12.5	12.0	11.0	10.5	9.5	9.0	10.5	10.5
4	---	---	14.5	14.0	12.5	12.0	11.0	10.5	10.5	9.0	10.5	10.0
5	---	---	14.0	13.5	13.0	12.5	11.5	11.0	11.5	10.5	10.0	10.0
6	---	---	13.5	13.0	13.0	13.0	11.5	11.0	11.5	11.5	10.0	9.5
7	16.0	15.5	13.5	13.0	13.5	13.0	11.0	11.0	11.5	11.0	10.0	9.5
8	16.0	15.5	13.5	13.0	13.5	13.0	11.0	10.5	11.0	10.5	10.5	10.0
9	16.5	16.0	14.0	13.5	13.0	13.0	11.0	10.5	11.0	10.5	11.5	10.5
10	16.5	16.0	14.0	14.0	13.0	12.5	10.5	10.0	11.0	10.5	11.5	11.0
11	17.0	16.0	14.0	14.0	12.5	12.5	10.5	10.0	11.5	11.0	11.0	11.0
12	16.5	15.5	14.5	14.0	12.5	12.0	10.5	10.0	11.0	11.0	11.0	10.5
13	15.5	14.5	14.5	14.0	12.5	12.0	10.0	10.0	11.0	10.5	11.5	11.0
14	15.5	15.0	14.5	14.0	12.0	11.5	10.0	9.5	10.5	10.5	11.5	11.0
15	16.0	15.0	15.0	14.5	11.5	11.5	10.0	9.5	10.5	10.5	12.0	11.5
16	16.5	15.5	15.0	14.5	11.5	10.5	10.5	9.5	11.0	10.5	12.0	11.5
17	16.5	15.5	15.0	15.0	10.5	10.0	10.5	9.0	11.0	10.5	12.5	12.0
18	17.0	16.0	15.5	15.0	10.0	9.5	9.0	8.5	11.5	11.0	13.5	12.0
19	17.0	16.5	15.0	14.5	10.0	10.0	8.5	7.0	11.5	10.5	14.0	12.5
20	17.0	16.0	14.5	14.0	10.0	10.0	7.0	6.5	10.5	10.5	14.5	13.0
21	16.5	15.5	14.5	14.0	10.0	9.5	8.0	7.0	10.5	10.5	14.5	13.5
22	15.5	14.0	14.0	13.5	10.0	9.5	8.0	7.5	10.5	10.0	14.5	13.5
23	14.5	13.5	14.0	13.5	10.0	9.5	7.5	7.5	10.0	9.5	14.0	13.0
24	14.5	13.5	13.5	13.0	10.0	9.5	8.0	7.5	9.5	9.0	13.5	12.5
25	14.0	13.5	13.5	13.0	9.5	9.5	8.0	8.0	9.5	9.0	13.0	12.0
26	14.5	14.0	13.5	12.5	9.5	9.0	8.0	8.0	9.0	9.0	12.5	12.0
27	15.0	14.0	12.5	12.0	9.5	9.5	8.0	7.5	9.0	8.5	13.0	12.0
28	14.5	14.5	12.5	12.0	9.5	9.5	8.5	7.0	8.5	8.5	12.5	12.0
29	15.5	14.5	12.5	12.0	10.0	9.5	7.0	6.5	9.0	8.5	12.5	12.0
30	16.0	15.5	12.5	12.0	10.5	10.0	8.0	7.0	---	---	12.5	12.0
31	15.5	15.0	---	---	10.5	10.0	9.0	8.0	---	---	13.0	12.5
MONTH	---	---	15.5	12.0	13.5	9.0	11.5	6.5	11.5	8.5	14.5	8.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	13.0	12.0	18.0	17.0	17.5	16.0	19.5	19.0	20.0	18.5	19.0	19.0
2	12.5	12.0	18.5	17.5	18.0	16.5	19.5	19.0	19.5	18.5	19.0	18.5
3	13.0	11.5	18.0	17.5	18.5	17.5	19.5	18.5	19.5	18.0	18.5	18.0
4	13.5	12.5	17.5	16.5	18.5	17.5	19.0	18.0	19.0	18.0	18.0	17.5
5	14.0	13.5	17.0	16.0	18.5	17.5	19.5	18.5	19.0	18.5	18.0	17.5
6	15.0	14.0	17.0	16.0	18.5	17.5	19.5	18.5	19.0	18.5	18.0	17.5
7	15.5	15.0	17.0	15.5	19.0	17.5	19.5	19.0	19.0	18.5	18.0	17.5
8	16.5	15.5	17.5	16.0	19.0	17.5	19.5	18.5	19.0	18.0	18.0	17.5
9	16.5	15.5	18.0	16.0	19.0	17.5	19.5	18.5	19.5	18.5	18.0	18.0
10	16.0	15.5	18.5	17.0	18.5	17.0	20.0	19.0	19.5	18.5	18.0	18.0
11	15.5	14.5	19.0	17.5	18.0	16.5	20.0	19.0	19.5	18.5	18.0	17.5
12	14.5	14.0	19.5	18.0	18.0	17.0	19.5	18.5	19.5	18.5	18.0	17.5
13	14.5	14.0	20.0	18.5	18.0	17.0	19.5	19.0	19.5	18.0	17.5	16.5
14	15.0	14.0	19.0	18.5	18.0	17.5	20.0	18.5	19.5	18.5	17.0	16.5
15	15.0	14.0	18.5	17.0	18.5	17.5	19.5	19.0	19.5	18.5	17.5	16.5
16	14.5	13.5	17.0	16.0	18.5	17.5	20.0	19.0	19.5	18.5	17.0	16.5
17	14.0	13.0	16.0	15.0	18.5	17.5	20.0	19.5	19.0	18.0	17.0	16.5
18	13.5	12.5	15.0	13.5	18.0	17.0	20.0	19.5	18.5	17.5	17.0	16.5
19	13.0	11.5	15.0	14.0	18.0	17.0	20.0	19.5	18.0	17.5	17.0	16.5
20	11.5	11.0	15.5	14.5	18.0	17.0	19.5	19.0	18.0	17.5	17.5	16.5
21	12.5	11.0	15.0	14.0	18.0	17.5	19.5	19.0	18.0	17.0	18.0	17.0
22	13.0	12.0	14.0	13.0	18.5	18.0	19.5	19.0	18.0	17.0	18.5	17.5
23	14.0	13.0	14.0	13.0	19.0	18.5	19.5	18.5	18.5	17.5	18.5	17.5
24	15.5	14.0	14.5	13.5	18.5	17.5	19.0	18.0	18.5	17.5	18.0	17.5
25	16.0	15.0	16.0	14.0	17.5	16.5	19.0	18.0	18.5	17.5	17.5	17.0
26	16.5	16.0	16.5	15.0	17.0	16.5	19.5	18.5	18.5	17.5	18.0	17.0
27	16.5	15.5	17.5	15.5	17.0	16.5	19.5	19.0	18.0	17.0	18.5	17.5
28	16.0	15.5	17.5	16.0	17.5	16.5	20.0	19.0	18.0	17.0	18.5	17.5
29	16.5	15.5	18.0	16.5	18.0	17.0	20.0	19.0	18.0	17.0	18.5	18.0
30	17.5	16.0	18.0	17.0	19.0	18.0	20.0	19.0	18.5	18.0	19.0	18.0
31	---	---	18.0	16.5	---	---	20.0	19.0	19.0	18.5	---	---
MONTH	17.5	11.0	20.0	13.0	19.0	16.0	20.0	18.0	20.0	17.0	19.0	16.5

SACRAMENTO RIVER BASIN

11389720 BUTTE CREEK BELOW DIVERSION DAM, NEAR STIRLING CITY, CA

LOCATION.--Lat 39°58'53", long 121°35'15", unsurveyed, T.25 N., R.3 E., Butte County, Hydrologic Unit 18020120, on left bank 400 ft downstream from diversion dam, 0.1 mi upstream from Haw Creek, and 6.2 mi northwest of Stirling City.

DRAINAGE AREA.--61.3 mi².

PERIOD OF RECORD.--January to February 1986, June 1986 to current year (low-flow records only).

GAGE.--Water-stage recorder. Elevation of gage is 2,840 ft above sea level, from topographic map.

REMARKS.--No records computed above 40 ft³/s. Flow regulated by diversion dam 400 ft upstream. Most of the water is diverted at diversion dam to Butte Creek Canal and then to De Sabla Powerplant (station 11389750).

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

[illegible]

SACRAMENTO RIVER BASIN

149

11389740 BUTTE CREEK BELOW FORKS OF BUTTE DIVERSION DAM, NEAR DE SABLA, CA

LOCATION.--Lat 39°54'05", long 121°37'24", in NW 1/4 NE 1/4 sec.34, T.24 N., R.3 E., Butte County, Hydrologic Unit 18020120, on left bank 30 ft downstream from diversion dam, 0.2 mi upstream from American Ravine, and 2.0 mi north of De Sabla.

DRAINAGE AREA.--96.4 mi².

PERIOD OF RECORD.--April 1992 to current year (low-flow records only).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,900 ft above sea level, from topographic map.

REMARKS.--No records computed above 60 ft³/s. Flow regulated by Forks of Butte Diversion Dam 30 ft upstream. Water is diverted out of creek to Butte Canal 7.4 mi upstream by Pacific Gas and Electric Co. Water is diverted 30 ft upstream to Forks of Butte Powerplant (station 11389747).

COOPERATION.--Records were collected by Energy Growth Partnership I, 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	37	35	39	47	47	---	---	---	47	48	40	34
2	47	35	39	47	47	---	---	---	47	59	37	34
3	48	35	37	47	48	---	---	---	47	59	39	35
4	47	35	48	47	---	---	---	---	47	59	39	35
5	48	35	45	49	---	---	---	---	50	58	43	35
6	48	35	40	51	---	---	---	48	47	59	39	37
7	47	35	42	49	---	---	---	48	47	58	38	35
8	47	35	39	48	---	---	---	47	48	58	38	36
9	47	35	38	48	---	---	---	47	47	58	37	36
10	47	35	39	50	---	---	---	47	47	57	37	36
11	47	35	55	46	---	---	---	47	47	59	37	35
12	47	35	---	45	---	---	---	47	47	48	54	36
13	47	35	---	44	---	---	54	47	47	47	37	39
14	47	35	48	44	---	---	48	48	47	47	36	38
15	47	35	---	---	---	---	---	50	58	46	35	46
16	47	35	---	---	---	---	---	---	47	46	36	42
17	47	35	47	---	---	---	---	---	47	45	36	39
18	47	35	47	57	---	---	---	---	47	44	37	38
19	47	35	47	57	---	---	---	---	47	44	46	37
20	47	35	52	---	---	---	---	---	47	43	47	37
21	47	35	54	---	---	---	---	---	47	42	47	35
22	47	35	52	48	---	---	---	---	47	42	47	34
23	47	35	50	48	---	---	---	---	47	41	47	34
24	47	35	47	---	---	---	---	---	57	41	47	34
25	47	35	46	---	---	---	---	---	47	41	47	33
26	43	35	48	---	---	52	---	---	47	43	47	33
27	35	35	47	---	---	54	---	---	---	42	47	33
28	e35	35	47	---	---	---	---	---	47	37	47	33
29	e35	35	48	---	---	---	---	---	47	36	46	33
30	e35	35	48	47	---	52	---	---	47	35	36	33
31	e35	---	47	48	---	48	---	57	---	40	35	---
TOTAL	1386	1050	---	---	---	---	---	---	---	1482	1281	1075
MEAN	44.7	35.0	---	---	---	---	---	---	---	47.8	41.3	35.8
MAX	48	35	---	---	---	---	---	---	---	59	54	46
MIN	35	35	---	---	---	---	---	---	---	35	35	33
AC-FT	2750	2080	---	---	---	---	---	---	---	2940	2540	2130
a	1460	0	3080	8110	14040	15340	14860	14680	5290	36	821	2

e Estimated.

a Diversion, in acre-feet, to Forks of Butte Powerplant, provided by Energy Growth Partnership I.

SACRAMENTO RIVER BASIN

11389780 BUTTE CREEK BELOW CENTERVILLE DIVERSION DAM, NEAR PARADISE, CA

LOCATION.--Lat 39°52'01", long 121°37'58", in SW 1/4 NW 1/4 sec.10, T.23 N., R.3 E., Butte County, Hydrologic Unit 18020120, on left bank 400 ft downstream from Centerville diversion dam, 0.2 mi downstream from De Sabla Powerplant, and 6.8 mi north of Paradise.

DRAINAGE AREA.--101 mi².

PERIOD OF RECORD.--November 1985 to February 1986, June 1986 to current year (low-flow records only).

GAGE.--Water-stage recorder. Elevation of gage is 1,130 ft above sea level, from topographic map.

REMARKS.--No records computed above 60 ft³/s. Flow regulated by several reservoirs and diversions upstream. Most of the water is diverted at Centerville Diversion Dam to the Centerville Powerplant (station 11389775).

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	---	---	---	---	---	---	---	---	---	---	---	45
2	---	---	---	---	---	---	---	---	---	51	57	45
3	47	---	---	---	---	---	---	---	---	46	57	45
4	46	---	---	---	---	---	---	---	---	46	57	45
5	56	---	---	52	---	---	---	---	---	46	56	45
6	---	---	---	50	---	---	---	---	---	46	56	45
7	---	---	---	55	---	---	---	---	---	47	54	45
8	---	---	---	52	---	---	---	---	---	---	54	45
9	---	---	---	50	---	---	---	---	---	---	53	45
10	---	---	---	48	---	---	---	---	---	---	56	45
11	---	---	---	47	---	---	---	---	---	---	---	46
12	41	---	---	49	---	---	---	---	---	---	---	45
13	46	---	---	48	---	---	---	---	---	---	47	45
14	45	---	---	48	---	---	---	---	---	---	49	44
15	46	---	---	---	---	---	---	---	---	---	46	57
16	47	---	---	---	---	---	---	---	---	---	43	44
17	48	---	---	---	---	---	---	---	---	---	---	45
18	48	---	---	---	---	---	---	---	---	47	---	46
19	48	---	---	---	---	---	---	---	---	47	---	46
20	49	---	46	---	---	---	---	---	---	47	---	46
21	49	---	50	---	---	---	---	---	---	47	---	46
22	---	---	55	---	---	---	---	---	---	60	---	47
23	---	---	57	---	---	---	---	---	---	---	---	47
24	---	---	49	---	---	---	---	---	---	---	---	47
25	---	---	45	---	---	---	---	---	---	---	60	47
26	---	---	47	---	---	---	---	---	---	---	56	47
27	---	---	52	---	---	---	---	---	---	---	54	47
28	---	---	---	---	---	---	---	---	---	---	55	47
29	---	---	---	---	---	---	---	---	---	---	---	47
30	---	---	---	---	---	---	---	---	---	---	43	48
31	---	---	---	---	---	---	---	---	---	58	44	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	1384
MEAN	---	---	---	---	---	---	---	---	---	---	---	46.1
MAX	---	---	---	---	---	---	---	---	---	---	---	57
MIN	---	---	---	---	---	---	---	---	---	---	---	44
AC-FT	---	---	---	---	---	---	---	---	---	---	---	2750
a	3550	2260	5190	8660	7680	9120	9190	9680	9690	4170	3720	6650

CAL YR 1995 a 76440

WTR YR 1996 a 79550

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

11389800 TOADTOWN CANAL ABOVE BUTTE CANAL, NEAR STIRLING CITY, CA

LOCATION.--Lat 39°53'09", long 121°36'35", in NE 1/4 NW 1/4 sec.2, T.23 N., R.3 E., Butte County, Hydrologic Unit 18020120, on right bank 600 ft upstream from Butte Canal and 4.6 mi west of Stirling City.

PERIOD OF RECORD.--October 1986 to current year. Monthly discharges for water years 1931-86 are published as a line item to Butte Creek near Chico (station 11390000).

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 2,790 ft above sea level, from topographic map.

REMARKS.--Canal diverts from right bank of West Branch Feather River, in sec.16, T.24 N., R.4 E. at Hendricks Diversion Dam to Hendricks Canal, flows through tunnel down Long Ravine to Toadtown Canal, and discharges into Butte Canal. Butte Canal flows to De Sabla Powerplant (station 11389750) on Butte Creek.

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, 127 ft³/s, Feb. 12, May 20, 1995, 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	19	33	39	91	119	98	114	119	117	74	.40	72
2	2.2	34	41	104	118	103	108	119	117	72	.32	72
3	8.5	33	35	120	106	103	113	119	118	70	.31	72
4	7.8	33	50	111	100	94	118	119	117	68	.24	73
5	16	33	48	80	76	77	119	119	117	66	.24	77
6	32	33	41	75	104	110	119	119	117	65	.24	76
7	34	33	42	72	102	120	120	119	117	64	.17	75
8	34	33	37	71	121	119	121	119	116	59	.17	75
9	34	33	35	72	120	113	120	119	116	57	.17	74
10	33	33	36	75	122	114	112	118	116	60	5.7	74
11	55	32	77	69	122	118	119	119	116	59	22	73
12	70	32	43	68	120	118	119	118	114	58	42	69
13	69	32	41	65	120	115	120	118	116	58	114	71
14	69	32	99	63	120	115	117	113	116	57	113	72
15	72	32	85	95	120	116	112	109	111	55	115	89
16	71	32	90	114	107	118	112	111	106	54	96	78
17	71	33	96	112	101	118	102	106	104	53	43	73
18	71	34	83	111	101	118	102	103	102	54	37	71
19	70	33	73	114	101	118	110	98	97	52	27	70
20	70	33	70	112	100	118	116	98	92	51	14	70
21	69	33	86	100	73	118	120	102	92	50	17	69
22	48	30	85	106	89	118	119	101	92	19	17	69
23	34	29	83	112	114	118	116	100	86	.74	14	68
24	34	29	80	119	103	120	116	109	84	.86	9.4	67
25	34	30	78	118	110	119	119	111	82	.91	8.6	68
26	34	32	77	121	111	119	119	115	88	.62	12	68
27	33	30	81	103	112	116	120	114	94	.58	16	71
28	33	29	93	98	106	115	121	115	88	.51	16	66
29	33	29	93	96	92	119	121	117	82	.51	39	65
30	33	31	92	96	---	117	120	117	78	.42	71	66
31	33	---	91	106	---	114	---	117	---	.41	71	---
TOTAL	1326.5	958	2100	2969	3110	3516	3484	3500	3108	1280.56	921.96	2153
MEAN	42.8	31.9	67.7	95.8	107	113	116	113	104	41.3	29.7	71.8
MAX	72	34	99	121	122	120	121	119	118	74	115	89
MIN	2.2	29	35	63	73	77	102	98	78	.41	.17	65
AC-FT	2630	1900	4170	5890	6170	6970	6910	6940	6160	2540	1830	4270
a	2890	4040	6590	8650	8310	9780	10090	10320	9930	5890	3450	6830

a Discharge, in acre-feet, at De Sabla Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11389800 TOADTOWN CANAL ABOVE BUTTE CANAL, NEAR STIRLING CITY, 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	28.9	32.3	45.2	66.1	81.3	105	114	107	78.9	63.4	44.4	24.2
MAX	57.8	51.0	91.5	95.8	118	117	119	118	119	114	99.7	71.8
(WY)	1987	1990	1988	1996	1995	1993	1992	1993	1995	1995	1995	1996
MIN	7.72	17.1	18.9	22.1	32.8	77.7	104	79.5	39.2	41.3	12.0	2.24
(WY)	1989	1992	1991	1991	1991	1995	1990	1990	1987	1996	1991	1992

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1987 - 1996

ANNUAL TOTAL	30601.65			28427.02					
ANNUAL MEAN	83.8			77.7			65.8		
HIGHEST ANNUAL MEAN							83.8		
LOWEST ANNUAL MEAN							50.7		
HIGHEST DAILY MEAN	127			Feb 12			127		
LOWEST DAILY MEAN	.00			Sep 20			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			Sep 20			.00		
ANNUAL RUNOFF (AC-FT)	60700			56380			47640		
ANNUAL DISCHARGE (AC-FT) a	88410			86760					
10 PERCENT EXCEEDS	122			119			117		
50 PERCENT EXCEEDS	104			82			61		
90 PERCENT EXCEEDS	32			28			14		

a Discharge, in acre-feet, at De Sabla Powerplant, provided by Pacific Gas & Electric Co.

11390000 BUTTE CREEK NEAR CHICO, CA

LOCATION.--Lat 39°43'34", long 121°42'28", in NW 1/4 NW 1/4 sec.36, T.22 N., R.2 E., Butte County, Hydrologic Unit 18020105, on right bank 0.7 mi downstream from Little Butte Creek and 7.5 mi east of Chico.

DRAINAGE AREA.--147 mi².

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

CHEMICAL DATA: Water years 1953-79.

WATER TEMPERATURE: Water years 1962-79.

REVISED RECORDS.--WSP 1445: 1953(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 320 ft above sea level, from topographic map. Prior to Aug. 13, 1944, water-stage recorder at site 0.4 mi upstream at different datum. Aug. 13, 1944, to June 5, 1986, at datum 3.00 ft higher.

REMARKS.--Records good. Flow slightly regulated by storage in Magalia Reservoir, usable capacity, 2,640 acre-ft, and since 1957 by Paradise Reservoir, usable capacity, 11,500 acre-ft. Diversions upstream from station for irrigation and domestic use of about 7,000 acre-ft annually. Butte Creek receives water above station from West Branch Feather River by way of Toadtown Canal (11389800).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s, Feb. 17, 1986, gage height, 17.52 ft, present datum, from rating curve extended above 6,100 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 10 ft³/s, Nov. 29, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1145	5,090	6.65	Feb. 21	0830	6,210	7.40
Feb. 4	1515	6,320	7.47	May 17	2315	3,670	5.58

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	114	120	333	548	955	1070	624	522	244	105	154
2	93	114	150	306	506	884	1140	615	498	237	97	154
3	88	115	123	307	476	859	896	604	474	231	97	155
4	88	113	165	294	3700	1610	784	572	460	226	98	157
5	88	113	177	251	3660	1650	719	552	446	219	97	163
6	114	113	150	236	1850	1230	689	529	430	217	97	163
7	113	113	153	227	1280	1060	678	521	416	215	95	161
8	116	112	131	222	1060	971	666	510	401	210	95	163
9	116	114	124	219	925	935	656	496	389	198	92	162
10	116	114	125	231	836	921	654	485	378	203	92	162
11	122	113	300	211	770	1230	621	474	372	201	105	165
12	157	113	2580	200	718	1670	603	472	363	197	122	156
13	160	113	620	202	688	1330	573	477	351	196	200	163
14	156	113	374	198	650	1110	553	489	343	196	207	174
15	157	113	1310	261	618	989	566	502	337	193	209	200
16	161	113	615	873	619	916	850	1030	331	189	203	203
17	163	113	386	746	795	857	856	1900	318	182	132	173
18	163	116	306	674	1130	829	1020	2330	312	178	120	166
19	161	117	266	638	2420	797	866	1470	304	176	122	163
20	158	116	242	558	2800	772	814	1100	292	174	103	163
21	159	116	244	823	4620	744	757	1150	286	170	102	161
22	145	115	242	557	2580	725	716	1230	288	143	102	160
23	117	112	238	469	1800	685	691	1000	274	112	100	158
24	111	110	226	627	1490	647	786	877	270	111	99	158
25	111	111	219	976	1250	619	812	805	270	109	99	158
26	111	119	211	628	1080	589	747	737	279	107	97	155
27	112	114	214	870	967	577	711	695	305	106	93	158
28	113	111	237	876	1020	692	667	646	281	106	94	151
29	111	111	280	672	1090	616	634	616	264	107	105	150
30	111	112	443	570	---	578	628	581	254	103	154	150
31	113	---	397	551	---	554	---	550	---	101	154	---
TOTAL	3918	3406	11368	14806	41946	28601	22423	24639	10508	5357	3687	4879
MEAN	126	114	367	478	1446	923	747	795	350	173	119	163
MAX	163	119	2580	976	4620	1670	1140	2330	522	244	209	203
MIN	88	110	120	198	476	554	553	472	254	101	92	150
AC-FT	7770	6760	22550	29370	83200	56730	44480	48870	20840	10630	7310	9680

SACRAMENTO RIVER BASIN

11390000 BUTTE CREEK NEAR CHICO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	138	224	442	658	790	767	684	502	281	163	131	118
MAX	775	1269	2061	2711	2925	2601	1848	1314	667	321	223	175
(WY)	1963	1974	1956	1970	1986	1995	1982	1995	1983	1983	1975	1967
MIN	65.8	77.8	89.5	91.0	114	123	114	134	79.4	54.4	46.1	51.9
(WY)	1992	1992	1991	1991	1977	1977	1977	1977	1977	1977	1931	1992
SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR					FOR 1996 WATER YEAR				WATER YEARS 1931 - 1996		
ANNUAL TOTAL	310004					175538						
ANNUAL MEAN	849					480						
HIGHEST ANNUAL MEAN										406		
LOWEST ANNUAL MEAN										834		
HIGHEST DAILY MEAN	7660					4620				84.0		
LOWEST DAILY MEAN	79					88				16600		
ANNUAL SEVEN-DAY MINIMUM	82					95				44		
INSTANTANEOUS PEAK FLOW						6320				44		
INSTANTANEOUS PEAK STAGE						7.47				22000		
ANNUAL RUNOFF (AC-FT)	614900					348200				17.52		
10 PERCENT EXCEEDS	1950					1010				842		
50 PERCENT EXCEEDS	386					257				206		
90 PERCENT EXCEEDS	113					111				100		

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA

LOCATION.--Lat 39°00'36", long 121°49'25", in NW 1/4 NE 1/4 sec.2, T.13 N., R.1 E., Colusa County, Hydrologic Unit 18020104, on right bank 1,200 ft downstream from Wilkins Slough, 5.8 mi southeast of Grimes, and at mile 62.9 upstream from Sacramento.

DRAINAGE AREA.--12,926 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1931 to current year (prior to October 1938, low-water periods only). Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1965, published as "below Wilkins Slough."

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.00 ft below sea level.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, power development, bypassing for flood control, diversions for irrigation, and return flow from irrigated areas. When discharge exceeds about 23,000 ft³/s, flow begins over Tisdale Weir, 1.0 mi upstream on left bank, into Sutter Bypass. Records tabulated below do not include flow over Tisdale Weir. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1939-96), 32,700 ft³/s, Feb. 20, 1986, gage height, 52.50 ft; maximum gage height, 52.75 ft, Mar. 1, 1940; minimum daily, 645 ft³/s, Aug. 9, 1939.

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	8760	5020	5390	16300	24500	27100	12400	9100	13400	9070	9910	9710
2	8270	4830	5470	13800	23600	27000	14200	8450	12700	9670	9990	10100
3	7780	4840	5550	12000	22600	26500	17400	8350	12200	10100	9920	10500
4	6870	4790	5620	11200	22500	26200	15900	8130	12300	10300	9550	10100
5	6650	4790	5890	10500	26700	26100	14900	7540	12700	10000	8850	9650
6	6550	4880	6290	9990	28600	26100	13900	6970	12900	9630	8620	9310
7	6320	5140	6250	9260	27700	25600	13400	6650	12700	9440	9120	8890
8	6180	5200	6230	8750	26400	25100	13000	6290	12300	9940	9750	9040
9	6080	5300	6330	8510	25300	24300	12700	5790	12400	10100	9700	9560
10	6070	5340	6560	8430	24300	21700	12400	5640	12300	10200	9800	9730
11	5850	5420	7040	8700	24300	19500	12200	6120	12000	10200	10100	9600
12	5690	5430	9430	8540	25000	17800	11900	6850	11700	10200	10200	9200
13	5560	5430	22700	8100	24700	16700	11300	7150	11000	10000	10300	9090
14	5410	5390	22400	7850	25000	15600	11000	7300	10600	10100	10400	9250
15	5290	5380	17900	7810	25400	14800	10800	7690	10600	9940	10400	9200
16	5260	5430	23900	9480	25500	13600	10700	8880	10800	9620	10500	9530
17	5240	5510	22400	21700	25400	12900	10800	9820	10700	8910	10500	9770
18	5240	5520	17200	24000	25300	12200	11700	13800	10600	8870	10300	9470
19	5190	5420	14200	24400	25700	11400	12400	18300	10000	8730	9890	9240
20	5110	5420	12800	24400	26700	10700	12300	20800	9680	8380	9780	9100
21	5010	5400	12000	23400	27400	9880	11600	21100	9200	8670	9940	9150
22	4960	5470	11400	24100	28000	8710	11300	20300	9010	8970	10500	8880
23	5030	5490	10700	22600	28200	8000	10700	22200	9200	8890	10800	8630
24	4970	5450	9720	19900	27900	7650	10400	22900	9500	9070	10800	8610
25	4980	5420	9330	19600	27900	13700	10200	21200	9460	9320	10800	8880
26	4910	5400	8880	21700	27800	13600	11000	18700	9190	9410	10800	8480
27	4990	5410	8690	21000	27600	13200	10500	16700	8620	9400	11000	8060
28	4950	5410	8410	24300	27200	12900	10100	15100	8410	9290	11000	7910
29	4880	5420	8380	25100	26900	13500	10300	13600	8820	9730	11100	7930
30	4940	5410	11000	24600	---	13400	9820	13200	8980	10000	10700	7730
31	4990	---	17200	24500	---	12600	---	13500	---	9950	9990	---
TOTAL	177980	158760	345260	504520	754100	528040	361220	378120	323970	296100	315010	274300
MEAN	5741	5292	11140	16270	26000	17030	12040	12200	10800	9552	10160	9143
MAX	8760	5520	23900	25100	28600	27100	17400	22900	13400	10300	11100	10500
MIN	4880	4790	5390	7810	22500	7650	9820	5640	8410	8380	8620	7730
AC-FT	353000	314900	684800	1001000	1496000	1047000	716500	750000	642600	587300	624800	544100

SACRAMENTO RIVER BASIN

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6600	8551	12180	14760	16450	15250	11400	9314	7612	7247	7234	7176
MAX	11800	20510	27430	27280	28440	29490	24920	23110	17710	11980	10810	10620
(WY)	1958	1974	1984	1974	1983	1983	1982	1983	1983	1983	1983	1967
MIN	3330	3839	4103	5281	5012	5152	4201	3397	3451	3784	4086	4065
(WY)	1978	1993	1977	1991	1991	1977	1994	1992	1992	1992	1947	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1946 - 1996			
ANNUAL TOTAL	5363870				4417380							
ANNUAL MEAN	14700				12070				10290			
HIGHEST ANNUAL MEAN									17980			
LOWEST ANNUAL MEAN									5109			
HIGHEST DAILY MEAN	30300				28600				32600			
LOWEST DAILY MEAN	4790				4790				2720			
ANNUAL SEVEN-DAY MINIMUM	4880				4880				2880			
INSTANTANEOUS PEAK FLOW					28800				32700			
INSTANTANEOUS PEAK STAGE					50.16				52.50			
ANNUAL RUNOFF (AC-FT)	10640000				8762000				7452000			
10 PERCENT EXCEEDS	26900				24400				21800			
50 PERCENT EXCEEDS	12100				9990				7940			
90 PERCENT EXCEEDS	5420				5420				5010			

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1966 to current year.

INSTRUMENTATION.--Temperature recorder since October 1966.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 25.5°C, Sept. 6-8, 1977, June 3-5, 1992; minimum recorded, 3.5°C, Dec. 23-25, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 21.0°C, July 2, 10, 14, 29, 31; minimum recorded, 8.5°C, Jan. 16.

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	18.0	17.5	---	---	12.5	12.0	10.0	10.0	---	---	---	---
2	18.0	17.0	---	---	12.5	12.0	10.5	10.0	---	---	---	---
3	18.0	16.5	---	---	12.0	12.0	10.5	10.0	---	---	---	---
4	---	---	---	---	12.0	12.0	10.5	10.5	---	---	---	---
5	---	---	---	---	12.5	12.0	11.0	10.5	---	---	---	---
6	---	---	---	---	13.0	12.5	11.0	10.5	---	---	---	---
7	---	---	---	---	13.0	13.0	11.0	10.5	---	---	---	---
8	---	---	---	---	13.0	13.0	11.0	10.5	---	---	---	---
9	---	---	---	---	13.0	13.0	10.5	10.0	---	---	---	---
10	---	---	---	---	13.0	12.5	10.5	10.0	---	---	---	---
11	---	---	---	---	12.5	12.0	10.0	10.0	---	---	---	---
12	---	---	---	---	12.5	12.0	10.0	9.5	---	---	---	---
13	---	---	---	---	12.5	12.0	10.0	9.5	---	---	---	---
14	---	---	---	---	12.0	11.5	10.0	9.5	---	---	---	---
15	---	---	---	---	11.5	11.0	9.5	9.0	---	---	---	---
16	---	---	---	---	11.0	10.5	10.0	8.5	---	---	---	---
17	---	---	---	---	10.5	10.0	---	---	---	---	---	---
18	---	---	---	---	10.0	9.5	---	---	---	---	---	---
19	---	---	---	---	9.5	9.5	---	---	---	---	---	---
20	---	---	---	---	9.5	9.5	---	---	---	---	---	---
21	---	---	---	---	9.5	9.5	---	---	---	---	---	---
22	---	---	---	---	9.5	9.0	---	---	---	---	---	---
23	---	---	---	---	9.5	9.0	---	---	---	---	---	---
24	---	---	---	---	9.5	9.0	---	---	---	---	---	---
25	---	---	---	---	9.5	9.0	---	---	---	---	---	---
26	---	---	---	---	9.0	9.0	---	---	---	---	13.0	12.0
27	---	---	---	---	9.5	9.0	---	---	---	---	13.0	12.5
28	---	---	---	---	9.5	9.0	---	---	---	---	13.0	12.5
29	---	---	12.0	11.5	9.5	9.0	---	---	---	---	13.0	12.5
30	---	---	12.5	11.5	9.5	9.5	---	---	---	---	13.0	12.0
31	---	---	---	---	10.0	9.5	---	---	---	---	13.5	12.5
MONTH	---	---	---	---	13.0	9.0	---	---	---	---	---	---

SACRAMENTO RIVER BASIN

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, 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	13.5	12.5	18.0	17.0	18.0	17.5	20.5	18.5	20.5	19.5	20.0	19.0
2	13.0	12.5	18.5	18.0	18.5	17.0	21.0	19.5	20.5	19.0	20.0	19.0
3	13.0	12.5	18.5	18.0	19.5	18.0	20.5	19.0	20.0	19.0	19.5	18.5
4	14.0	12.5	18.0	17.0	20.0	18.5	20.0	19.0	20.0	18.5	19.0	18.0
5	15.0	13.5	17.5	16.5	20.0	18.5	20.0	19.0	20.0	18.5	19.0	17.5
6	15.5	14.0	17.0	16.5	19.5	18.5	20.5	19.0	20.0	18.5	18.5	17.5
7	16.5	15.0	17.0	16.5	20.0	18.5	20.5	19.0	20.0	18.5	18.5	17.5
8	17.0	15.5	17.0	16.5	20.0	18.5	20.5	19.0	20.0	18.5	19.0	18.0
9	17.0	16.0	17.5	16.5	20.0	19.0	20.5	19.0	20.0	18.5	19.0	18.0
10	17.0	16.0	18.0	17.0	19.5	18.5	21.0	19.5	20.5	19.0	19.0	18.0
11	16.5	15.5	19.0	18.0	19.5	18.5	20.5	19.5	20.5	19.0	19.0	18.0
12	16.0	15.0	19.0	18.5	19.5	18.0	20.5	19.5	20.5	19.0	19.0	18.0
13	15.0	14.0	19.5	19.0	19.5	18.0	20.5	19.0	20.0	19.0	18.5	18.0
14	15.0	14.5	19.5	19.0	20.0	18.5	21.0	19.5	20.5	19.0	18.0	17.0
15	15.0	14.5	19.0	18.0	20.0	18.5	20.5	19.0	20.0	19.0	18.0	17.0
16	15.0	14.5	18.0	17.0	19.5	18.5	20.5	19.0	20.5	19.0	18.0	17.5
17	14.5	14.0	17.0	15.5	19.5	18.0	20.5	19.0	19.5	18.5	17.5	17.0
18	14.0	13.5	16.0	14.5	19.0	18.0	20.5	19.5	19.0	18.0	17.5	17.0
19	13.5	12.5	15.0	13.5	19.0	17.5	20.5	19.0	19.0	17.5	17.5	16.5
20	12.5	11.5	15.5	14.5	19.0	17.5	20.5	19.0	18.5	17.5	18.0	17.0
21	12.5	11.0	15.5	14.0	19.0	17.5	20.5	19.0	19.0	17.5	18.5	17.5
22	13.0	12.5	14.0	14.0	19.5	18.0	20.5	19.0	19.0	17.5	18.5	18.0
23	14.0	13.0	14.0	13.5	20.0	18.5	20.0	19.0	19.0	18.0	18.5	18.0
24	15.0	14.0	14.5	13.5	19.5	18.5	20.0	18.5	19.5	18.0	18.5	18.0
25	16.0	15.0	15.0	14.5	19.0	17.5	20.0	18.5	19.5	18.0	18.5	18.0
26	17.0	15.5	16.5	15.0	18.0	17.0	20.0	18.5	19.0	18.0	18.0	17.5
27	16.5	16.0	17.0	16.0	18.0	16.5	20.0	19.0	19.0	17.5	18.5	17.5
28	16.5	15.5	17.5	16.5	18.0	17.0	20.5	19.0	19.0	17.5	18.5	18.0
29	16.5	15.5	18.0	17.0	19.0	17.5	21.0	19.5	19.0	17.5	19.0	18.5
30	17.5	16.0	18.5	17.5	19.5	18.0	20.5	19.5	19.5	18.0	19.0	18.5
31	---	---	18.5	17.5	---	---	21.0	19.5	20.0	18.5	---	---
MONTH	17.5	11.0	19.5	13.5	20.0	16.5	21.0	18.5	20.5	17.5	20.0	16.5

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS LANDING, CA

LOCATION.--Lat 38°48'45", long 121°46'23", in NW 1/4 SE 1/4, sec.8, T.11 N., R.2 E., Yolo County, Hydrologic Unit 18020104, on downstream side of bridge over "Ridgecut" at the intersection of Road 99E and Road 108, and 3.2 mi west of Knights Landing.

WATER-STAGE RECORDS

PERIOD OF RECORD.--October 1995 to September 1996 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Water stage is affected by diversions for irrigation, and return flow from irrigated areas. Gage was out of operation April 24 to June 7 due to bridge construction. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 28.65 ft, Feb. 11, 1996; minimum elevation recorded, 19.69 ft, Dec. 3, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 28.65 ft, Feb. 11; minimum elevation recorded, 19.69 ft, Dec. 3.

GAGE HEIGHT, FEET, 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	---	---	---	---	19.98	19.80	22.16	21.83	25.72	25.42	26.02	25.93
2	---	---	---	---	19.80	19.70	22.17	22.12	25.81	25.68	26.00	25.92
3	---	---	---	---	19.74	19.69	22.13	21.49	25.79	25.45	25.97	25.66
4	---	---	---	---	20.58	19.73	21.49	21.20	27.12	25.45	25.68	25.32
5	---	---	---	---	21.79	20.58	21.20	20.92	27.65	27.12	25.51	25.29
6	---	---	---	---	21.78	21.66	20.92	20.56	27.97	27.63	25.63	25.49
7	---	---	---	---	21.80	21.63	20.56	20.44	28.29	27.94	25.61	25.32
8	---	---	---	---	21.78	20.86	20.45	20.35	28.46	28.23	25.33	24.76
9	---	---	---	---	20.86	20.31	20.35	20.30	28.58	28.43	24.76	24.14
10	---	---	---	---	20.31	20.17	20.37	20.31	28.64	28.50	24.14	23.77
11	---	---	---	---	20.66	20.16	20.32	20.20	28.65	28.54	23.78	23.67
12	---	---	---	---	24.55	20.66	20.20	20.01	28.59	28.39	---	---
13	---	---	---	---	25.34	24.42	20.01	19.89	28.44	28.10	---	---
14	---	---	---	---	25.57	25.34	19.89	19.83	28.12	27.69	---	---
15	---	---	---	---	25.76	25.51	19.89	19.84	27.72	27.26	---	---
16	---	---	---	---	25.72	25.61	21.05	19.89	27.27	26.71	---	---
17	---	---	21.77	20.40	25.63	25.42	23.46	21.05	26.74	26.12	---	---
18	---	---	21.79	21.58	25.44	24.97	24.20	23.46	26.12	25.47	---	---
19	---	---	21.77	21.63	24.97	24.39	24.69	24.17	25.53	25.15	---	---
20	---	---	21.72	21.08	24.40	23.82	25.03	24.68	25.94	25.25	---	---
21	---	---	21.08	20.43	23.82	23.02	25.08	24.98	26.85	25.94	---	---
22	---	---	20.43	20.11	23.02	22.26	25.02	24.68	27.39	26.84	---	---
23	---	---	20.11	19.91	22.26	21.76	24.70	24.49	27.67	27.39	---	---
24	---	---	20.03	19.85	21.79	21.71	24.50	24.24	27.73	27.63	---	---
25	---	---	20.24	20.03	21.79	21.69	24.29	23.98	27.69	27.43	---	---
26	---	---	20.37	20.24	21.77	21.67	23.99	23.64	27.43	27.02	---	---
27	---	---	20.49	20.34	21.71	21.53	24.83	23.57	27.04	26.61	---	---
28	---	---	20.47	20.43	21.58	21.50	25.24	24.82	26.65	26.26	---	---
29	---	---	20.46	20.19	21.55	21.45	25.32	25.20	26.28	26.01	---	---
30	---	---	20.20	19.98	21.47	21.40	25.24	24.85	---	---	---	---
31	---	---	---	---	21.85	21.42	25.43	24.83	---	---	---	---
MONTH	---	---	---	---	25.76	19.69	25.43	19.83	28.65	25.15	---	---

SACRAMENTO RIVER BASIN

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS LANDING, CA--Continued

GAGE HEIGHT, FEET, 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	---	---	---	---	---	---	22.63	21.65	21.84	21.58	22.16	22.06
2	---	---	---	---	---	---	21.70	21.57	21.76	21.62	22.12	22.04
3	---	---	---	---	---	---	21.77	21.59	21.69	21.64	22.16	22.04
4	23.02	22.73	---	---	---	---	21.72	21.60	21.64	21.58	22.30	22.16
5	22.73	22.69	---	---	---	---	21.61	21.57	21.76	21.59	22.33	22.25
6	22.70	22.57	---	---	---	---	21.68	21.57	21.76	21.66	22.25	22.17
7	22.57	22.41	---	---	---	---	21.73	21.65	21.66	21.60	22.25	22.15
8	22.42	22.29	---	---	22.95	21.88	21.71	21.66	21.76	21.59	22.25	22.16
9	22.29	22.17	---	---	21.88	21.54	21.69	21.64	21.79	21.70	22.22	22.13
10	22.17	21.95	---	---	21.61	21.57	21.65	21.59	21.70	21.62	22.18	22.12
11	21.95	21.83	---	---	21.59	21.55	21.69	21.59	21.93	21.63	22.16	22.09
12	21.86	21.73	---	---	21.72	21.58	21.73	21.67	21.96	21.91	22.22	22.09
13	21.73	21.68	---	---	21.72	21.62	21.74	21.67	21.92	21.86	22.24	22.16
14	21.74	21.68	---	---	21.63	21.56	21.74	21.66	21.87	21.77	22.35	22.22
15	21.70	21.56	---	---	21.73	21.57	21.70	21.56	21.77	21.60	22.32	22.10
16	21.60	21.55	---	---	21.68	21.57	21.75	21.58	21.81	21.60	22.13	22.01
17	21.73	21.58	---	---	21.73	21.62	21.76	21.69	22.08	21.73	22.08	22.01
18	21.84	21.71	---	---	21.69	21.57	21.71	21.67	22.17	22.08	22.05	21.87
19	22.03	21.84	---	---	21.74	21.57	21.73	21.62	22.24	22.11	21.97	21.85
20	22.15	22.02	---	---	21.74	21.57	21.66	21.57	22.70	22.17	21.98	21.85
21	22.27	22.15	---	---	21.70	21.59	21.75	21.65	23.03	22.69	21.96	21.87
22	22.37	22.22	---	---	21.68	21.64	21.71	21.59	22.69	22.36	21.87	21.77
23	22.23	21.31	---	---	21.73	21.56	21.64	21.57	22.36	22.26	21.79	21.71
24	---	---	---	---	21.69	21.55	21.75	21.58	22.36	22.26	21.80	21.75
25	---	---	---	---	21.72	21.56	21.75	21.64	22.46	22.32	21.80	21.76
26	---	---	---	---	21.77	21.56	21.67	21.60	22.60	22.45	21.81	21.77
27	---	---	---	---	22.33	21.77	21.72	21.61	23.01	22.57	21.77	21.65
28	---	---	---	---	22.57	22.33	21.77	21.66	23.20	22.44	21.78	21.70
29	---	---	---	---	22.64	22.49	21.81	21.72	22.44	22.04	21.75	21.66
30	---	---	---	---	22.49	22.41	21.94	21.79	22.12	22.05	21.77	21.63
31	---	---	---	---	---	---	21.99	21.84	22.10	22.06	---	---
MONTH	---	---	---	---	---	---	22.63	21.56	23.20	21.58	22.35	21.63

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA.--February 1996 to September 1996.

SPECIFIC CONDUCTANCE.--October 1995 to September 1996.

WATER TEMPERATURE.--October 1995 to September 1996.

SEDIMENT DATA.--February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1995 to September 1996.

WATER TEMPERATURE: October 1995 to September 1996.

INSTRUMENTATION.--Water-quality monitor since October 1995.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument. Gage was out of operation April 24 to June 7 due to bridge construction.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,060 microsiemens, Jan. 16; minimum recorded, 305 microsiemens, Dec. 12.

WATER TEMPERATURE: Maximum recorded, 30.0°C, June 9, July 30, 31; minimum recorded, 7.5°C, Dec. 25.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
07...	1030	4430	284	7.7	14.0	768	7.1	68	17	9.7
MAR										
06...	1030	--	505	8.1	11.5	768	9.6	87	31	20
APR										
23...	1030	--	595	8.1	16.5	768	8.9	91	34	24
MAY										
22...	1000	--	460	7.9	18.5	765	--	--	24	16
JUN										
14...	1000	--	733	7.9	26.0	764	5.8	71	37	27
JUL										
23...	1000	--	759	8.3	26.5	762	12.5	157	37	31
AUG										
27...	1000	907	595	7.9	22.0	760	6.0	69	35	25
SEP										
09...	1030	1180	592	7.8	20.5	760	5.8	64	34	25

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
07...	27	41	3.0	92	27	13	0.20	11	175	169
MAR										
06...	49	40	2.3	160	58	22	0.30	14	320	304
APR										
23...	60	41	2.0	210	67	29	0.30	15	341	359
MAY										
22...	50	46	2.1	130	65	18	0.40	15	288	277
JUN										
14...	83	47	2.9	170	110	40	0.50	19	456	451
JUL										
23...	84	45	1.7	200	81	39	0.50	25	451	463
AUG										
27...	56	39	1.7	210	43	23	0.40	25	350	357
SEP										
09...	57	39	1.9	170	41	24	0.10	22	347	348

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS LANDING, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 07...	0.24	0.020	0.420	0.020	1.0	0.40	0.320	0.110	0.090	6.0
MAR 06...	0.44	0.030	0.530	<0.015	0.60	0.50	0.130	0.090	0.080	5.0
APR 23...	0.46	0.030	0.920	0.060	0.60	0.30	0.190	0.100	0.100	9.0
MAY 22...	0.39	0.030	0.470	<0.015	1.0	0.50	0.210	0.070	0.040	8.0
JUN 14...	0.62	0.060	0.190	0.050	1.1	0.50	0.300	0.110	0.100	10
JUL 23...	0.61	0.040	0.250	0.060	0.90	0.50	0.110	0.080	0.090	4.0
AUG 27...	0.48	0.010	0.390	0.020	0.60	0.40	0.150	0.050	0.090	5.0
SEP 09...	0.47	0.020	0.210	0.040	0.60	0.30	0.150	0.070	0.090	4.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 07...	<1.0	2	51	<1.0	<1.0	2.0	<1.0	3.0	22	<1.0
MAR 06...	<1.0	1	64	<1.0	<1.0	2.0	<1.0	3.0	12	<1.0
APR 23...	<1.0	2	80	<1.0	<1.0	2.0	<1.0	2.0	30	<1.0
MAY 22...	<1.0	2	63	<1.0	<1.0	<1.0	<1.0	4.0	14	<1.0
JUN 14...	<1.0	5	108	<1.0	<1.0	2.0	<1.0	6.0	11	<1.0
JUL 23...	<1.0	6	114	<1.0	<1.0	4.0	<1.0	3.0	4.0	<1.0
AUG 27...	<1.0	5	88	<1.0	<1.0	<1.0	<1.0	2.0	17	<1.0
SEP 09...	<1.0	3	80	<1.0	<1.0	2.0	<1.0	2.0	13	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 07...	12	<1.0	2.0	<1	<1.0	<1.0	<1.0	8.2	1.4
MAR 06...	5.0	2.0	3.0	<1	<1.0	<1.0	<1.0	6.2	1.3
APR 23...	31	2.0	2.0	<1	<1.0	<1.0	1.0	4.0	1.2
MAY 22...	2.0	2.0	3.0	<1	<1.0	<1.0	<1.0	4.5	1.3
JUN 14...	4.0	4.0	3.0	<1	<1.0	2.0	1.0	5.2	0.80
JUL 23...	29	4.0	3.0	<1	<1.0	<1.0	1.0	5.8	2.7
AUG 27...	15	3.0	4.0	<1	<1.0	<1.0	<1.0	4.7	1.1
SEP 09...	10	2.0	2.0	<1	<1.0	<1.0	<1.0	7.9	1.0

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS LANDING, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
07...N	1030	4430	14.0	373	4460
MAR					
06...N	1030	--	11.5	202	--
APR					
23...N	1030	--	16.5	101	--
MAY					
22...N	1000	--	18.5	170	--
JUN					
14...N	1000	--	26.0	146	--
JUL					
23...N	1000	--	26.5	95	--
AUG					
27...N	1000	907	22.0	109	267
SEP					
09...N	1030	1180	20.5	136	433

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	---	---	---	---	635	618	886	856	638	484	651	550
2	---	---	---	---	632	617	889	876	547	469	572	456
3	---	---	---	---	638	628	894	874	632	533	569	456
4	---	---	---	---	644	634	902	885	632	361	630	534
5	---	---	---	---	638	616	917	895	402	350	698	595
6	---	---	---	---	618	605	928	903	394	344	703	439
7	---	---	---	---	611	597	940	916	395	345	537	455
8	---	---	---	---	604	594	986	919	409	354	618	536
9	---	---	---	---	628	595	1010	964	424	363	679	593
10	---	---	---	---	618	603	987	953	425	392	734	664
11	---	---	---	---	612	580	980	924	439	400	774	686
12	---	---	---	---	583	305	972	926	465	409	---	---
13	---	---	---	---	498	360	981	942	505	443	---	---
14	---	---	---	---	508	465	996	957	529	465	---	---
15	---	---	---	---	525	495	1050	979	569	504	---	---
16	---	---	---	---	577	499	1060	943	615	524	---	---
17	---	---	682	662	580	557	975	837	631	550	---	---
18	---	---	664	640	594	563	912	862	665	590	---	---
19	---	---	647	619	620	583	692	568	674	580	---	---
20	---	---	627	614	649	620	722	529	705	617	---	---
21	---	---	630	624	665	647	582	526	718	469	---	---
22	---	---	641	626	684	663	695	578	538	426	---	---
23	---	---	654	634	733	680	743	669	464	393	---	---
24	---	---	649	635	748	721	758	703	459	402	---	---
25	---	---	645	635	765	741	754	674	552	434	---	---
26	---	---	649	641	788	756	786	724	576	505	---	---
27	---	---	642	627	804	779	790	618	652	522	---	---
28	---	---	633	614	807	789	730	497	667	569	---	---
29	---	---	623	616	855	804	593	493	671	604	---	---
30	---	---	621	616	838	822	657	558	---	---	---	---
31	---	---	---	---	872	832	686	625	---	---	---	---
MONTH	---	---	---	---	872	305	1060	493	718	344	---	---

SACRAMENTO RIVER BASIN

11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS 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	---	---	---	---	---	---	656	630	655	643	590	568
2	---	---	---	---	---	---	675	615	668	651	594	589
3	---	---	---	---	---	---	698	675	710	668	591	585
4	743	714	---	---	---	---	684	612	703	687	586	575
5	770	738	---	---	---	---	661	638	703	695	579	569
6	775	761	---	---	---	---	680	643	695	679	580	571
7	762	707	---	---	---	---	717	676	714	689	577	567
8	754	736	---	---	771	651	726	701	708	689	580	572
9	758	736	---	---	753	646	739	715	698	686	584	571
10	759	748	---	---	690	663	756	707	703	684	610	581
11	749	735	---	---	707	631	758	682	693	665	607	584
12	783	737	---	---	728	698	725	668	687	665	584	562
13	798	783	---	---	734	718	730	707	665	637	577	557
14	797	786	---	---	742	694	721	694	670	656	562	555
15	805	781	---	---	726	675	729	709	677	661	555	540
16	782	770	---	---	753	726	743	713	677	647	565	540
17	772	728	---	---	822	753	749	734	672	657	582	565
18	760	731	---	---	814	729	774	744	660	641	579	574
19	771	747	---	---	772	757	781	768	651	621	586	564
20	767	732	---	---	783	749	771	756	646	613	586	560
21	746	636	---	---	760	711	767	756	649	612	571	542
22	648	589	---	---	713	639	766	745	642	624	555	535
23	605	565	---	---	668	630	759	749	642	624	547	535
24	---	---	---	---	696	656	762	744	633	615	557	541
25	---	---	---	---	744	696	744	713	625	607	567	557
26	---	---	---	---	749	739	721	704	610	598	592	562
27	---	---	---	---	746	726	720	696	602	588	646	591
28	---	---	---	---	795	744	696	655	593	573	608	577
29	---	---	---	---	803	701	675	656	580	572	582	570
30	---	---	---	---	701	654	680	666	579	570	600	577
31	---	---	---	---	---	---	666	643	575	568	---	---
MONTH	---	---	---	---	---	---	781	612	714	568	646	535

SACRAMENTO RIVER BASIN

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11390890 COLUSA BASIN DRAIN AT ROAD 99E, NEAR KNIGHTS 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	---	---	---	---	13.0	12.0	10.5	9.5	10.0	9.0	11.0	9.0
2	---	---	---	---	13.0	12.0	11.0	10.0	10.5	9.5	12.5	10.5
3	---	---	---	---	12.5	11.5	11.0	10.5	11.0	10.5	13.5	12.5
4	---	---	---	---	13.0	12.0	11.0	10.5	13.0	11.0	13.5	13.0
5	---	---	---	---	13.5	13.0	11.5	11.0	13.5	12.5	13.5	12.5
6	---	---	---	---	13.5	12.5	11.5	10.5	14.0	13.5	12.5	11.0
7	---	---	---	---	14.0	13.0	11.0	11.0	14.5	14.0	12.5	11.0
8	---	---	---	---	13.5	13.0	11.0	10.5	14.5	14.5	14.5	12.5
9	---	---	---	---	13.5	13.0	11.0	10.5	15.0	14.5	15.5	14.0
10	---	---	---	---	13.0	12.5	11.0	9.5	15.5	14.5	15.5	14.5
11	---	---	---	---	12.5	12.5	11.0	10.0	15.5	15.0	16.0	15.0
12	---	---	---	---	13.0	12.5	10.0	9.5	16.0	15.0	---	---
13	---	---	---	---	13.0	12.5	9.5	9.5	16.0	15.5	---	---
14	---	---	---	---	12.5	11.5	9.5	9.0	15.5	15.0	---	---
15	---	---	---	---	12.0	11.5	9.0	8.5	15.5	15.0	---	---
16	---	---	---	---	11.5	10.5	10.5	9.0	16.5	15.0	---	---
17	---	---	17.0	15.5	10.5	10.0	10.5	9.0	16.5	16.0	---	---
18	---	---	16.5	16.0	10.0	9.5	11.0	10.0	16.5	15.5	---	---
19	---	---	16.5	15.5	9.5	9.0	10.0	9.5	15.5	14.5	---	---
20	---	---	16.0	15.0	9.5	9.0	9.5	8.5	14.5	13.5	---	---
21	---	---	16.0	15.0	9.5	9.0	9.0	8.5	13.5	12.5	---	---
22	---	---	15.5	14.5	9.0	8.5	9.5	9.0	12.5	11.5	---	---
23	---	---	15.0	14.0	9.0	8.0	9.0	8.0	11.5	11.0	---	---
24	---	---	14.5	13.5	8.5	8.0	8.5	8.0	11.0	10.5	---	---
25	---	---	14.5	13.5	8.5	7.5	8.5	8.0	10.5	10.0	---	---
26	---	---	14.5	13.0	8.5	8.0	9.0	8.5	10.5	10.0	---	---
27	---	---	13.0	11.5	9.0	8.5	9.5	8.5	10.0	8.5	---	---
28	---	---	12.5	11.5	9.0	8.5	9.5	8.5	8.5	8.0	---	---
29	---	---	12.5	11.5	9.0	8.5	9.5	9.0	9.0	8.0	---	---
30	---	---	12.5	11.0	9.5	9.0	9.5	9.0	---	---	---	---
31	---	---	---	---	10.5	9.5	9.5	9.0	---	---	---	---
MONTH	---	---	---	---	14.0	7.5	11.5	8.0	16.5	8.0	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	---	---	---	---	---	---	28.5	25.5	29.5	27.0	25.0	23.0
2	---	---	---	---	---	---	29.5	26.5	28.5	26.5	25.0	23.0
3	---	---	---	---	---	---	29.0	26.5	28.5	26.0	24.0	22.0
4	17.0	15.5	---	---	---	---	27.0	25.5	27.5	26.0	23.0	21.0
5	18.5	16.5	---	---	---	---	27.5	25.5	27.5	25.0	21.5	20.5
6	20.0	18.5	---	---	---	---	27.5	26.5	25.5	24.0	21.5	19.5
7	21.0	19.5	---	---	---	---	28.0	26.5	25.5	24.0	21.5	19.5
8	21.5	20.0	---	---	29.5	27.5	28.5	26.5	26.5	24.5	22.0	19.5
9	21.0	19.5	---	---	30.0	27.5	27.0	26.0	28.0	25.5	22.5	20.0
10	20.5	19.0	---	---	29.0	27.0	28.0	26.5	28.5	26.0	22.5	20.5
11	20.5	18.5	---	---	29.0	26.5	29.0	26.5	28.5	26.5	22.5	21.0
12	19.5	17.5	---	---	29.5	26.0	28.5	26.5	28.5	27.5	22.0	20.0
13	19.0	17.5	---	---	28.0	25.5	28.0	26.5	29.0	27.5	21.0	20.0
14	19.0	17.5	---	---	27.0	25.0	29.5	27.5	29.0	27.5	21.0	19.5
15	19.0	17.5	---	---	26.0	24.5	28.0	26.5	29.0	26.5	21.0	19.5
16	17.5	16.5	---	---	26.5	24.5	28.0	25.5	28.5	26.5	20.5	19.0
17	17.5	16.0	---	---	24.5	23.5	26.5	24.5	28.0	25.5	20.5	19.0
18	17.0	15.0	---	---	26.0	24.0	26.0	24.5	27.0	24.5	20.0	18.0
19	17.0	15.0	---	---	25.0	24.0	26.0	25.0	25.0	23.5	20.5	18.5
20	15.0	13.5	---	---	25.0	23.0	26.5	25.0	24.0	22.0	21.0	19.0
21	16.0	14.0	---	---	24.5	23.0	26.5	26.0	24.0	23.0	21.5	19.5
22	16.0	15.0	---	---	25.0	23.5	27.0	26.0	24.5	22.5	21.5	20.0
23	17.0	15.5	---	---	25.5	24.0	27.0	26.0	25.0	23.0	22.5	21.0
24	---	---	---	---	25.0	24.0	27.0	25.5	25.5	23.5	22.5	21.0
25	---	---	---	---	24.0	23.0	27.5	26.0	25.0	23.0	22.5	21.0
26	---	---	---	---	24.5	22.5	28.0	26.0	24.5	22.5	22.5	20.5
27	---	---	---	---	24.0	22.5	28.0	26.0	24.0	22.0	22.5	20.5
28	---	---	---	---	24.5	23.0	28.5	26.5	23.5	21.5	22.5	21.0
29	---	---	---	---	25.0	23.5	29.5	27.0	24.5	22.0	22.5	21.0
30	---	---	---	---	25.5	24.0	30.0	27.5	25.0	22.5	22.5	21.5
31	---	---	---	---	---	---	30.0	28.0	25.0	23.0	---	---
MONTH	---	---	---	---	---	---	30.0	24.5	29.5	21.5	25.0	18.0

SACRAMENTO RIVER BASIN

11391100 SACRAMENTO SLOUGH NEAR KNIGHTS LANDING, CA

LOCATION.--Lat 38°47'06", long 121°39'12", in SE 1/4 NE 1/4, sec.20, T.11 N., R.3 E., Sutter County, Hydrologic Unit 18020104, on right bank 200 ft upstream of Karnak Pumping Plant, and 3.6 mi east of Knights Landing.

WATER-STAGE RECORDS

PERIOD OF RECORD.--October 1995 to September 1996 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Water stage is affected by storage reservoirs, power development, Karnak Pumping Plant, diversions for irrigation, and return flow from irrigated areas. Interruptions in record were due to malfunction of the recording instrument. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 33.83 ft, Mar. 9, 1996; minimum elevation recorded, 2.37 ft, May 20, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 33.83 ft, Mar. 9; minimum elevation recorded, 2.37 ft, May 20.

GAGE HEIGHT, FEET, 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	---	---	13.96	13.12	14.06	13.88	21.14	20.37	---	---	---	---
2	---	---	13.50	13.07	14.16	14.06	21.16	20.37	---	---	---	---
3	---	---	13.51	13.27	14.17	14.14	20.37	19.49	---	---	---	---
4	---	---	13.27	13.01	14.15	13.92	19.63	18.65	---	---	---	---
5	16.46	16.23	13.38	13.02	14.20	13.82	---	---	---	---	---	---
6	16.33	15.97	13.54	13.36	14.35	14.00	---	---	---	---	---	---
7	16.05	15.45	13.74	13.54	14.43	14.35	---	---	---	---	---	---
8	15.49	14.83	14.01	13.74	14.37	14.26	---	---	---	---	---	---
9	14.92	14.40	14.08	14.01	14.40	14.37	---	---	---	---	33.83	33.61
10	14.69	14.00	14.08	14.01	14.53	14.40	---	---	---	---	33.61	33.44
11	14.10	13.49	14.02	13.91	15.93	14.53	---	---	---	---	33.46	33.36
12	13.70	13.31	13.91	13.86	18.31	15.91	---	---	---	---	33.66	33.40
13	13.32	13.22	13.87	13.78	24.18	18.31	---	---	---	---	33.77	33.66
14	13.22	13.08	13.84	13.71	26.78	24.18	---	---	---	---	33.70	33.57
15	13.10	12.98	13.87	13.83	27.17	26.78	---	---	---	---	33.58	33.41
16	12.99	12.85	13.88	13.83	27.25	26.81	---	---	---	---	33.41	33.17
17	12.95	12.85	13.86	13.81	28.29	27.25	---	---	---	---	33.17	32.81
18	12.97	12.92	14.12	13.86	28.44	28.19	---	---	---	---	32.81	32.03
19	12.92	12.87	14.10	14.06	28.19	27.21	---	---	---	---	32.03	31.02
20	12.92	12.87	14.09	14.03	27.21	25.87	---	---	---	---	31.02	30.03
21	12.91	12.76	14.10	14.02	25.87	24.17	---	---	---	---	30.03	29.08
22	12.80	12.60	14.02	13.96	24.17	22.33	---	---	---	---	29.08	28.15
23	12.71	12.63	13.99	13.97	22.33	20.83	---	---	---	---	28.15	27.09
24	12.77	12.71	13.97	13.68	20.89	19.56	---	---	---	---	27.09	25.86
25	12.75	12.64	13.68	13.57	19.71	18.47	---	---	---	---	25.86	24.66
26	12.77	12.70	13.62	13.55	18.58	18.07	---	---	---	---	24.66	23.29
27	12.73	12.68	13.56	13.46	18.16	17.80	---	---	---	---	23.29	22.31
28	12.81	12.73	13.51	13.46	17.92	16.94	---	---	---	---	22.37	21.53
29	12.85	12.79	13.60	13.51	17.14	16.66	---	---	---	---	21.66	21.42
30	13.03	12.81	13.88	13.60	17.26	16.58	---	---	---	---	21.81	21.66
31	13.95	13.03	---	---	20.37	17.26	---	---	---	---	21.76	21.27
MONTH	---	---	14.12	13.01	28.44	13.82	---	---	---	---	---	---

SACRAMENTO RIVER BASIN

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11391100 SACRAMENTO SLOUGH NEAR KNIGHTS LANDING, CA--Continued

GAGE HEIGHT, FEET, 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	22.05	21.20	19.09	18.43	14.15	13.11	19.31	18.55	18.94	18.13	18.58	18.10
2	25.53	22.05	18.66	18.03	14.74	14.05	18.73	18.29	19.01	18.34	18.52	18.38
3	26.70	25.53	18.52	18.21	15.06	14.50	18.61	18.07	18.92	18.35	18.46	17.89
4	26.76	26.45	18.82	18.52	15.71	14.76	18.49	17.98	18.90	18.26	18.35	17.70
5	26.46	25.64	18.91	18.23	16.03	15.43	18.61	17.92	19.03	18.27	18.46	17.61
6	25.64	24.77	18.46	17.27	16.36	15.71	18.88	18.16	19.08	18.44	18.64	17.73
7	24.78	24.05	17.53	16.29	16.60	16.01	19.06	18.42	18.87	18.31	18.87	17.86
8	24.09	23.50	16.60	15.66	16.83	16.26	18.93	18.46	18.65	18.12	19.26	18.26
9	23.58	23.10	16.04	15.17	17.28	16.50	18.85	18.39	18.57	18.03	19.33	18.42
10	23.15	22.67	15.71	14.66	17.63	16.83	18.83	18.40	18.50	17.99	19.45	18.56
11	22.73	22.48	15.16	14.46	17.91	17.29	18.82	18.38	18.31	17.85	19.51	18.57
12	22.65	22.33	15.12	14.57	18.36	17.54	19.02	18.38	18.22	17.74	19.62	18.69
13	22.46	22.07	15.32	14.83	18.65	17.95	19.15	18.63	18.09	17.60	19.65	18.67
14	22.18	21.80	15.09	14.89	18.97	18.12	19.04	18.67	17.85	17.36	19.60	18.73
15	21.93	21.64	20.81	15.08	19.76	18.44	19.04	18.56	18.03	17.42	19.81	18.74
16	22.09	21.67	20.20	13.91	19.98	19.19	19.20	18.58	18.02	17.51	20.03	18.93
17	23.03	22.09	13.91	9.00	20.09	19.25	19.34	18.68	18.17	17.42	20.15	19.19
18	24.18	23.03	9.00	4.86	20.26	19.36	19.43	18.84	18.56	17.71	20.39	19.42
19	24.59	24.18	4.86	2.40	20.59	19.64	19.44	18.89	18.76	17.94	20.65	19.75
20	24.64	24.40	2.49	2.37	20.83	19.91	19.66	18.90	18.90	18.24	20.77	19.94
21	24.40	23.55	2.93	2.48	21.09	20.07	19.61	19.10	18.81	18.30	20.81	20.29
22	23.55	22.35	3.89	2.93	21.09	20.29	19.34	18.92	18.43	17.86	21.01	20.34
23	22.40	21.77	4.06	3.82	20.98	20.18	19.27	18.70	18.13	17.61	21.24	20.60
24	21.87	21.09	3.82	3.51	20.85	20.11	19.15	18.59	18.08	17.48	21.48	20.82
25	21.17	20.05	4.26	3.54	20.80	20.06	19.09	18.54	18.07	17.45	21.44	21.07
26	20.17	19.81	6.11	4.26	20.92	20.07	19.16	18.55	18.29	17.49	21.59	21.01
27	19.95	19.66	7.78	6.11	21.15	20.20	19.23	18.57	18.21	17.63	21.92	21.21
28	19.80	19.36	9.20	7.78	21.08	20.37	19.19	18.52	18.29	17.55	22.10	21.73
29	19.59	19.30	10.71	9.20	20.71	19.97	18.97	18.37	18.26	17.54	22.10	21.77
30	19.45	18.99	12.21	10.71	19.98	19.31	18.63	17.99	18.44	17.57	21.84	21.67
31	---	---	13.19	12.20	---	---	18.76	18.02	18.42	17.77	---	---
MONTH	26.76	18.99	20.81	2.37	21.15	13.11	19.66	17.92	19.08	17.36	22.10	17.61

11391100 SACRAMENTO SLOUGH NEAR KNIGHTS LANDING, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA.--February 1996 to September 1996.

SPECIFIC CONDUCTANCE.--October 1995 to September 1996.

WATER TEMPERATURE.--October 1995 to September 1996.

SEDIMENT DATA.--February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1995 to September 1996.

WATER TEMPERATURE: October 1995 to September 1996.

INSTRUMENTATION.--Water-quality monitor since October 1995.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument. Specific conductance and water temperature are affected by irrigation-return flow and pumping.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 531 microsiemens, Apr. 3; minimum recorded, 72 microsiemens, May 28.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 30, 31; minimum recorded, 8.0°C, Dec. 25, 26.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB									
12...	1230	--	242	7.6	16.0	766	8.4	85	17
MAR									
11...	1300	--	153	7.8	12.5	766	11.2	105	13
APR									
22...	1100	--	278	7.9	16.0	769	9.1	92	22
MAY									
23...	1030	--	189	7.6	15.0	766	10.1	99	13
JUN									
13...	1030	--	309	7.9	26.0	761	5.9	73	25
JUL									
22...	1050	--	323	7.9	28.0	765	5.1	65	25
AUG									
26...	1100	901	310	7.8	24.0	759	6.8	81	24
SEP									
10...	1100	868	325	7.5	22.0	760	9.0	103	24

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
12...	15	28	1.6	82	8.2	17	<0.10	21	143	144
MAR										
11...	7.4	21	1.2	68	6.6	3.6	<0.10	22	92	101
APR										
22...	15	22	1.5	130	7.9	8.7	<0.10	22	157	172
MAY										
23...	12	29	1.1	62	6.9	13	<0.10	22	116	116
JUN										
13...	17	22	1.8	130	11	9.4	0.20	26	181	190
JUL										
22...	16	21	1.3	100	8.8	9.2	0.20	26	184	193
AUG										
26...	16	21	1.6	140	6.3	6.1	0.10	26	193	190
SEP										
10...	17	22	2.1	140	6.8	7.6	0.10	27	195	195

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11391100 SACRAMENTO SLOUGH NEAR KNIGHTS LANDING, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 12...	0.19	0.010	0.350	0.040	0.40	0.20	0.140	0.040	0.040	5.0
MAR 11...	0.13	<0.010	0.160	0.130	<0.20	<0.20	0.030	0.020	0.030	7.0
APR 22...	0.21	0.010	0.230	0.020	0.50	0.20	0.110	0.050	0.050	19
MAY 23...	0.16	<0.010	<0.050	<0.015	0.30	<0.20	0.060	0.040	<0.010	6.0
JUN 13...	0.25	0.020	0.090	0.040	0.90	0.20	0.270	0.090	0.090	11
JUL 22...	0.25	0.020	0.230	0.040	0.60	0.20	0.200	0.090	0.130	7.0
AUG 26...	0.26	<0.010	0.110	<0.015	0.40	0.30	0.100	0.070	0.080	6.0
SEP 10...	0.27	<0.010	0.110	<0.020	0.40	0.30	0.110	0.060	0.090	5.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 12...	<1.0	1	30	<1.0	<1.0	1.0	<1.0	2.0	15	<1.0
MAR 11...	<1.0	1	24	<1.0	<1.0	1.0	<1.0	2.0	20	<1.0
APR 22...	<1.0	2	45	<1.0	<1.0	2.0	<1.0	2.0	25	<1.0
MAY 23...	<1.0	2	26	<1.0	<1.0	<1.0	<1.0	2.0	8.0	<1.0
JUN 13...	<1.0	6	61	<1.0	<1.0	<1.0	<1.0	3.0	13	<1.0
JUL 22...	<1.0	6	64	<1.0	<1.0	1.0	<1.0	3.0	17	<1.0
AUG 26...	<1.0	6	58	<1.0	<1.0	2.0	<1.0	2.0	41	<1.0
SEP 10...	<1.0	4	57	<1.0	<1.0	<1.0	<1.0	2.0	22	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 12...	30	<1.0	2.0	<1	<1.0	1.0	<1.0	3.0	9.4
MAR 11...	10	<1.0	2.0	<1	<1.0	<1.0	<1.0	2.0	0.50
APR 22...	36	<1.0	2.0	<1	<1.0	<1.0	<1.0	2.7	0.90
MAY 23...	14	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.6	0.30
JUN 13...	65	1.0	2.0	<1	<1.0	<1.0	<1.0	3.9	2.1
JUL 22...	11	1.0	2.0	<1	<1.0	<1.0	<1.0	--	1.2
AUG 26...	18	1.0	3.0	<1	<1.0	<1.0	<1.0	3.3	0.60
SEP 10...	25	1.0	2.0	<1	<1.0	<1.0	<1.0	3.7	1.6

SACRAMENTO RIVER BASIN

11391100 SACRAMENTO SLOUGH NEAR KNIGHTS LANDING, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
12...N	1230	--	16.0	47	--
MAR					
11...N	1300	--	12.5	43	--
APR					
22...N	1100	--	16.0	67	--
MAY					
23...N	1030	--	15.0	56	--
JUN					
13...N	1030	--	26.0	108	--
JUL					
22...N	1050	--	28.0	79	--
AUG					
26...N	1100	901	24.0	73	178
SEP					
10...N	1100	868	22.0	69	162

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	---	---	341	319	362	347	362	351	---	---	---	---
2	---	---	328	308	357	350	373	357	---	---	---	---
3	---	---	316	312	362	347	373	359	---	---	---	---
4	---	---	319	295	363	337	360	319	---	---	---	---
5	347	336	304	293	343	330	---	---	---	---	---	---
6	341	332	300	290	352	342	---	---	---	---	---	---
7	339	329	298	284	366	352	---	---	---	---	---	---
8	---	---	292	284	375	366	---	---	---	---	---	---
9	---	---	298	286	382	370	---	---	---	---	---	---
10	---	---	303	293	371	360	---	---	---	---	---	---
11	---	---	306	296	361	341	---	---	---	---	---	---
12	---	---	305	299	342	335	---	---	---	---	---	---
13	---	---	313	302	357	319	---	---	---	---	174	163
14	---	---	319	307	331	282	---	---	---	---	188	174
15	---	---	321	309	336	285	---	---	---	---	202	188
16	---	---	322	302	285	263	---	---	---	---	218	202
17	362	355	309	294	272	261	---	---	---	---	234	218
18	387	362	309	302	271	242	---	---	---	---	251	234
19	388	384	314	303	242	225	---	---	---	---	273	251
20	385	382	322	311	249	226	---	---	---	---	291	273
21	382	355	333	313	268	249	---	---	---	---	315	291
22	361	357	329	319	278	268	---	---	---	---	339	315
23	361	355	333	322	291	278	---	---	---	---	342	338
24	366	355	342	332	307	291	---	---	---	---	340	328
25	369	357	347	337	317	307	---	---	---	---	328	300
26	368	357	348	338	335	317	---	---	---	---	300	279
27	376	368	350	341	353	335	---	---	---	---	281	264
28	381	376	361	350	360	353	---	---	---	---	293	274
29	379	361	368	361	365	360	---	---	---	---	285	277
30	363	344	372	357	364	358	---	---	---	---	296	279
31	344	328	---	---	364	361	---	---	---	---	296	278
MONTH	---	---	372	284	382	225	---	---	---	---	---	---

11391100 SACRAMENTO SLOUGH NEAR KNIGHTS 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	287	270	186	181	214	162	296	288	346	343	421	338
2	424	271	208	184	241	214	296	290	347	344	402	333
3	531	282	210	202	266	241	304	296	350	338	343	334
4	390	322	224	210	332	266	309	301	340	260	423	335
5	323	256	221	154	384	332	301	293	260	206	417	336
6	261	246	194	153	406	384	297	293	222	210	403	342
7	248	245	193	164	412	406	295	291	222	203	361	352
8	268	245	171	145	411	392	295	292	223	206	360	346
9	288	258	185	147	392	381	301	295	237	223	368	360
10	291	261	185	166	382	363	307	300	236	221	445	339
11	287	259	169	163	364	351	312	307	239	220	340	306
12	288	261	172	166	352	315	320	312	250	225	413	315
13	291	267	177	172	316	308	324	320	267	219	376	344
14	280	262	190	177	315	312	330	324	271	224	382	366
15	276	268	197	190	318	315	336	330	252	242	374	366
16	291	276	204	197	323	318	344	336	260	246	375	343
17	340	291	208	79	327	312	348	344	263	251	359	349
18	400	339	109	88	315	311	354	347	269	255	362	356
19	487	400	119	107	315	310	363	354	277	260	358	349
20	489	377	130	119	316	309	364	360	270	258	413	339
21	383	264	119	104	316	313	360	338	282	270	348	306
22	278	244	119	105	317	313	338	323	326	282	335	302
23	248	206	144	119	318	311	353	336	298	285	355	335
24	216	192	170	144	316	312	369	351	303	292	416	354
25	203	188	182	170	317	313	376	368	314	299	371	365
26	217	203	183	171	315	306	376	370	319	314	455	367
27	225	205	171	77	306	302	372	365	326	317	433	369
28	230	221	77	72	304	300	371	368	338	326	382	374
29	236	230	101	74	303	299	371	354	348	338	448	380
30	238	177	129	101	303	294	356	345	354	347	382	377
31	---	---	162	129	---	---	346	338	359	350	---	---
MONTH	531	177	224	72	412	162	376	288	359	203	455	302

SACRAMENTO RIVER BASIN

11391100 SACRAMENTO SLOUGH NEAR KNIGHTS 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	---	---	16.5	14.5	13.0	12.5	11.0	10.0	---	---	---	---
2	---	---	16.0	15.0	13.0	12.5	11.0	10.5	---	---	---	---
3	---	---	16.0	14.5	12.5	12.0	11.0	10.5	---	---	---	---
4	---	---	15.5	14.0	13.0	12.5	11.0	11.0	---	---	---	---
5	19.0	18.0	15.0	14.0	14.0	13.0	---	---	---	---	---	---
6	19.0	18.0	15.0	14.0	13.5	13.0	---	---	---	---	---	---
7	19.5	18.0	15.0	14.0	14.0	13.5	---	---	---	---	---	---
8	---	---	15.5	14.0	13.5	13.0	---	---	---	---	---	---
9	---	---	15.5	14.5	13.5	13.0	---	---	---	---	11.5	11.0
10	---	---	15.0	14.0	13.5	13.0	---	---	---	---	12.0	11.5
11	---	---	15.0	14.0	13.0	13.0	---	---	---	---	14.0	12.0
12	---	---	15.5	14.0	13.5	13.0	---	---	---	---	14.5	12.5
13	---	---	15.5	14.5	13.0	12.5	---	---	---	---	13.5	12.5
14	---	---	15.5	14.5	12.5	12.5	---	---	---	---	13.5	13.0
15	---	---	16.0	14.5	12.5	12.0	---	---	---	---	13.5	12.5
16	---	---	16.0	15.0	12.0	10.5	---	---	---	---	15.0	12.5
17	18.5	16.5	16.0	15.0	11.0	10.0	---	---	---	---	15.0	13.0
18	19.0	17.0	16.0	15.0	11.0	10.0	---	---	---	---	15.5	13.0
19	19.0	17.0	16.0	15.0	10.0	9.5	---	---	---	---	16.5	13.5
20	19.5	17.5	15.5	14.5	10.0	9.5	---	---	---	---	18.0	14.0
21	19.0	17.0	15.5	15.0	9.5	9.0	---	---	---	---	18.0	14.5
22	17.0	14.0	15.0	14.5	9.0	8.5	---	---	---	---	18.0	17.5
23	16.0	14.0	15.0	14.0	9.0	8.5	---	---	---	---	17.5	16.5
24	16.0	14.0	14.5	14.0	9.0	8.5	---	---	---	---	17.0	16.0
25	16.0	14.0	14.5	13.5	9.0	8.0	---	---	---	---	16.0	15.0
26	16.5	14.5	14.0	13.5	8.5	8.0	---	---	---	---	16.0	14.0
27	16.5	15.0	13.0	12.0	9.0	8.5	---	---	---	---	15.5	14.5
28	16.5	15.0	13.0	12.0	9.5	9.0	---	---	---	---	16.0	14.5
29	17.0	15.0	13.0	12.0	9.5	9.0	---	---	---	---	16.0	14.5
30	16.5	15.0	13.0	12.0	10.0	9.5	---	---	---	---	16.5	14.5
31	16.0	15.0	---	---	10.5	10.0	---	---	---	---	16.5	15.0
MONTH	---	---	16.5	12.0	14.0	8.0	---	---	---	---	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	16.0	15.0	22.0	20.5	26.0	23.0	29.0	26.5	30.5	28.5	26.0	24.5
2	15.0	13.0	23.0	21.5	27.5	24.5	29.0	27.0	29.5	27.5	25.5	24.0
3	16.5	14.0	22.5	21.0	28.0	26.0	28.5	26.0	29.0	27.5	24.5	23.5
4	17.5	15.5	22.5	21.0	28.5	26.5	28.0	26.0	29.0	27.0	24.0	22.5
5	18.5	15.5	22.0	20.0	29.0	27.0	28.5	26.0	28.5	26.5	23.0	22.0
6	20.0	17.0	22.0	20.5	29.5	28.0	29.0	26.5	27.0	25.0	23.0	21.5
7	21.0	18.5	22.0	20.0	30.0	28.5	29.5	27.0	27.5	25.5	23.0	21.5
8	20.5	19.0	22.0	20.0	30.0	28.0	29.0	27.0	27.5	25.5	23.5	21.5
9	20.0	18.5	22.5	19.5	30.0	28.5	29.0	27.0	29.0	26.5	23.5	21.5
10	20.0	18.5	23.0	20.0	29.5	28.0	29.5	27.0	29.5	27.0	23.5	22.0
11	20.0	18.5	24.0	21.0	28.5	27.5	29.0	27.0	29.5	28.0	23.5	22.0
12	19.5	18.0	26.0	22.5	28.5	27.5	29.0	26.5	29.5	28.5	22.5	21.5
13	19.5	17.5	26.0	24.0	28.0	26.5	28.5	26.5	30.0	28.0	22.0	21.0
14	20.0	18.0	26.0	24.0	27.5	25.5	29.0	26.5	30.0	28.5	22.0	20.0
15	19.5	18.5	24.5	22.0	27.5	25.5	28.5	26.5	29.5	28.0	21.5	20.5
16	18.5	17.5	22.0	19.0	26.5	25.0	28.0	25.5	29.5	27.5	21.0	20.0
17	18.0	16.5	19.0	17.5	26.0	23.5	27.0	25.5	28.5	27.0	21.5	19.5
18	16.5	15.5	17.5	17.0	26.0	24.0	27.0	25.0	27.5	26.5	21.0	19.5
19	16.0	15.5	18.0	16.5	27.0	24.5	27.0	26.0	26.5	25.5	21.5	20.0
20	15.5	14.0	18.0	15.0	26.5	23.5	28.0	26.0	26.0	24.0	22.0	20.0
21	16.5	15.0	17.5	15.5	26.0	23.5	29.0	27.0	26.0	24.5	22.5	21.0
22	17.0	15.5	17.5	15.5	26.5	24.0	29.0	27.0	26.5	24.5	22.5	21.0
23	17.5	16.0	17.0	14.5	27.5	25.0	29.0	27.0	26.5	25.0	23.0	21.0
24	18.5	17.0	16.5	14.5	26.5	24.5	29.0	27.0	26.5	25.0	23.0	21.0
25	18.5	17.0	18.0	15.0	25.0	23.0	29.5	27.5	26.0	24.5	23.0	21.0
26	19.5	18.0	18.5	15.5	24.5	23.0	29.0	28.0	25.5	24.0	23.0	21.0
27	19.5	18.5	20.5	18.5	24.5	22.0	29.0	27.5	24.5	23.5	23.0	21.0
28	18.5	17.5	22.0	20.5	26.0	22.5	29.5	27.5	25.0	23.5	23.5	21.5
29	20.0	18.0	22.5	20.0	27.0	24.0	30.5	28.5	25.5	24.0	23.5	21.5
30	21.0	19.0	23.5	20.0	28.5	25.0	31.0	29.0	26.0	24.5	23.5	21.5
31	---	---	24.5	21.0	---	---	31.0	29.0	26.0	24.5	---	---
MONTH	21.0	13.0	26.0	14.5	30.0	22.0	31.0	25.0	30.5	23.5	26.0	19.5

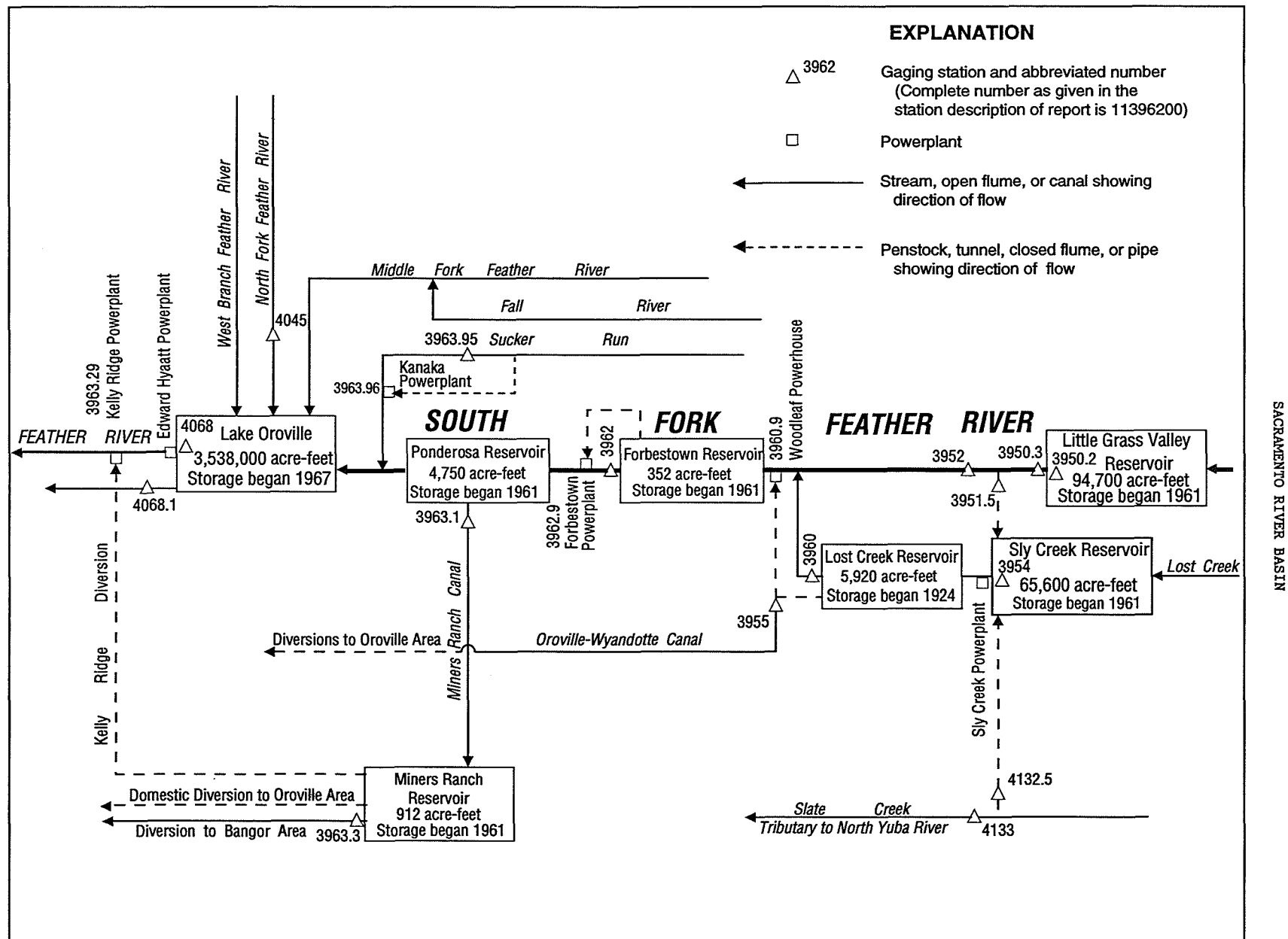


Figure 27. Diversions and storage in South Fork Feather River basin.

11395020 LITTLE GRASS VALLEY RESERVOIR NEAR LA PORTE, CA

LOCATION.--Lat 39°43'25", long 121°01'10", in SE 1/4 NW 1/4 sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 300 ft upstream from dam on South Fork Feather River, 3.3 mi northwest of La Porte.

DRAINAGE AREA.--25.8 mi².

PERIOD OF RECORD.--October 1961 to current year. Monthend elevation and contents only, October 1961 to October 1962.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Oroville-Wyandotte Irrigation District). Prior to Nov. 1, 1962, in valve chamber in dam at same datum.

REMARKS.--Reservoir is formed by rockfill dam. Storage began in October 1961. Total capacity, 94,700 acre-ft between elevations 4,876 ft, invert of release valve, and 5,047 ft, top of spillway gates, all of which is available for release. Water is released down South Fork Feather River for power development and irrigation. See schematic diagram of South Fork Feather River basin. Records represent total contents at 2400 hours.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 98,000 acre-ft, May 1, 1995, and May 17, 1996, elevation, 5,049.0 ft; minimum since reservoir first filled, 30,300 acre-ft, many days during 1977, elevation, 4,994.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 98,000 acre-ft, May 17, elevation, 5,049.0 ft; minimum, 49,400 acre-ft, Nov. 25, elevation, 5,014.3 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1963)

4,990	26,300	5,030	68,900
5,000	34,600	5,040	83,500
5,010	44,400	5,048	96,300
5,020	55,900	5,049	98,000

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	59700	52900	49500	54800	62600	74600	82000	93500	95200	89600	82500	75000
2	59700	52700	49500	55000	62800	74300	82500	94000	95000	89500	82200	74700
3	59500	52600	49500	55100	63000	74100	82900	94500	94700	89200	81900	74400
4	59300	52300	49600	55200	65500	74100	83300	95000	94700	89000	81600	74100
5	59100	52100	49700	55200	68400	74300	83800	95300	94500	88700	81400	74000
6	58900	51900	49700	55300	69900	74400	84100	95500	94300	88500	81100	73700
7	58700	51600	49700	55400	70800	74600	84600	95600	94200	88400	81000	73400
8	58500	51400	49700	55400	71400	74900	85100	95600	94000	88100	80700	73300
9	58200	51200	49700	55500	71500	75000	85700	95800	93800	87900	80400	73000
10	58000	51000	49700	55700	71500	75200	86200	95800	93700	87600	80300	72700
11	57700	50700	50400	55800	71700	75500	86600	95800	93500	87400	80000	72400
12	57400	50500	52400	55800	71700	75600	87100	95800	93300	87100	79800	72200
13	57200	50400	52900	55900	71700	75700	87400	95800	93200	87000	79500	72000
14	56900	50200	53100	55900	71700	75700	87700	96000	93000	86600	79400	71700
15	56700	49900	53500	56100	71700	75900	88400	96500	92800	86300	79100	71700
16	56500	49700	53600	57300	72000	76200	89300	97100	92500	86200	78800	71400
17	56300	49600	53600	57700	73300	76500	90100	97800	92400	85800	78500	71200
18	56000	49600	53700	58500	75200	76600	90400	95600	92200	85500	78400	70900
19	55800	49600	53800	58900	77100	76900	90300	95500	91900	85400	78100	70600
20	55500	49500	53800	59300	77600	77200	90300	96100	91700	85200	77900	70500
21	55300	49500	53800	59500	77500	77600	90100	96600	91500	84900	77600	70200
22	55100	49500	54000	59900	76900	78100	89800	96600	91400	84700	77400	69900
23	54800	49500	54000	60200	76500	78400	89600	96500	91200	84400	77200	69800
24	54600	49500	54000	60800	76000	78700	89600	96300	90900	84300	76900	69500
25	54400	49500	54000	61000	75700	79000	90100	96300	90700	84000	76600	69300
26	54300	49500	54000	61200	75500	79100	90700	96100	90600	83800	76500	69000
27	54000	49500	54000	61700	75200	79700	91200	96000	90400	83500	76200	68800
28	53800	49500	54200	62000	75000	80100	91700	95800	90300	83300	75900	68500
29	53600	49500	54300	62100	74900	80400	92400	95600	90100	83000	75700	68400
30	53400	49500	54500	62300	---	80700	92800	95500	89800	82900	75500	68100
31	53100	---	54700	62500	---	81000	---	95300	---	82600	75200	---
MAX	59700	52900	54700	62500	77600	81000	92800	97800	95200	89600	82500	75000
MIN	53100	49500	49500	54800	62600	74100	82000	93500	89800	82600	75200	68100
a	5017.6	5014.4	5019.0	5025.1	5034.1	5038.3	5045.9	5047.4	5044.0	5039.4	5034.3	5029.4
b	-6700	-3600	+5200	+7800	+12400	+6100	+11800	+2500	-5500	-7200	-7400	-7100

CAL YR 1995 b +8500

WTR YR 1996 b +8300

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11395030 SOUTH FORK FEATHER RIVER BELOW LITTLE GRASS VALLEY DAM, CA

LOCATION.--Lat 39°43'26", long 121°01'16", in SW 1/4 NW 1/4 sec.31, T.22 N., R.9 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.1 mi downstream from Little Grass Valley Dam and 3.5 mi northwest of La Porte.

DRAINAGE AREA.--25.9 mi².

PERIOD OF RECORD.--October 1927 to September 1933 (published as "near La Porte"), October 1960 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,809.0 ft above sea level. Prior to Oct. 1, 1960, at site 0.4 mi upstream at different datum. Oct. 1, 1960, to Oct. 30, 1962, at present site and datum. Nov. 1, 1962, to May 31, 1966, at site on outlet works at base of Little Grass Valley Dam 0.1 mi upstream at datum 4,850.00 ft above sea level.

REMARKS.--Flow regulated by Little Grass Valley Reservoir (station 11395020) beginning in October 1961. No diversion upstream from station. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,780 ft³/s, Feb. 18, 1966, gage height, 14.78 ft; minimum, 0.2 ft³/s, Oct. 28-31, Nov. 2, 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	45	108	11	13	12	255	44	22	204	119	119	118
2	45	108	11	13	12	255	43	22	189	119	119	118
3	45	108	11	12	12	255	42	21	185	119	119	118
4	45	108	11	12	29	256	41	23	145	119	119	118
5	83	108	11	12	30	139	41	45	121	119	119	118
6	110	108	11	12	17	39	42	86	121	119	119	118
7	110	108	11	12	15	39	43	122	121	119	119	118
8	110	108	11	12	145	39	43	145	121	119	118	118
9	109	107	11	12	244	41	43	156	121	119	119	118
10	109	107	11	12	245	49	42	160	121	119	119	118
11	109	107	14	12	245	74	42	163	120	119	119	118
12	109	107	31	12	245	99	42	170	120	119	118	118
13	109	107	14	12	244	110	42	193	120	119	118	118
14	109	107	12	12	244	114	42	204	120	119	119	117
15	109	107	12	12	244	74	42	249	120	119	119	118
16	109	107	12	19	246	40	45	776	120	119	119	118
17	109	50	12	15	254	40	43	1910	120	119	119	117
18	109	11	12	13	257	40	173	2930	120	119	119	117
19	109	11	12	13	512	40	300	919	120	119	118	117
20	109	11	12	13	882	40	300	200	120	119	118	117
21	109	11	12	13	961	40	300	371	120	119	118	117
22	109	11	12	12	775	40	299	493	120	119	118	117
23	109	11	12	12	583	40	299	459	120	119	119	117
24	109	11	11	12	485	40	303	387	120	119	118	117
25	109	11	11	13	408	40	133	337	119	119	119	116
26	109	11	11	12	345	40	22	300	119	119	118	116
27	109	11	11	12	296	40	22	274	119	119	118	116
28	109	11	11	12	268	42	21	245	119	119	118	116
29	108	11	12	12	260	40	21	220	119	118	118	116
30	108	11	14	12	---	40	22	224	119	119	118	116
31	108	---	14	12	---	40	---	230	---	119	118	---
TOTAL	3097	1913	384	389	8515	2480	2937	12056	3843	3688	3675	3519
MEAN	99.9	63.8	12.4	12.5	294	80.0	97.9	389	128	119	119	117
MAX	110	108	31	19	961	256	303	2930	204	119	119	118
MIN	45	11	11	12	12	39	21	21	119	118	118	116
AC-FT	6140	3790	762	772	16890	4920	5830	23910	7620	7320	7290	6980

SACRAMENTO RIVER BASIN

11395030 SOUTH FORK FEATHER RIVER BELOW LITTLE GRASS VALLEY DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1933, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.56	19.5	47.6	26.3	45.2	134	181	201	78.8	7.70	1.74	1.35
MAX	6.62	94.5	206	51.3	94.7	386	301	384	169	13.7	2.54	1.72
(WY)	1932	1928	1930	1928	1930	1928	1930	1932	1933	1932	1932	1930
MIN	1.43	1.67	2.65	3.60	3.55	14.5	106	48.9	13.8	2.38	1.06	1.04
(WY)	1929	1930	1933	1933	1933	1933	1933	1931	1931	1931	1931	1931

SUMMARY STATISTICS

WATER YEARS 1928 - 1933

ANNUAL MEAN	62.3	
HIGHEST ANNUAL MEAN	85.6	1932
LOWEST ANNUAL MEAN	28.0	1931
HIGHEST DAILY MEAN	1800	Mar 25 1928
LOWEST DAILY MEAN	.90	Aug 25 1931
ANNUAL SEVEN-DAY MINIMUM	.90	Sep 1 1931
INSTANTANEOUS PEAK FLOW	2600	Mar 26 1928
INSTANTANEOUS PEAK STAGE	7.00	Mar 26 1928
ANNUAL RUNOFF (AC-FT)	45140	
10 PERCENT EXCEEDS	202	
50 PERCENT EXCEEDS	10	
90 PERCENT EXCEEDS	1.4	

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	98.5	73.7	68.7	87.3	103	103	79.5	142	92.6	115	145	170
MAX	305	404	420	626	694	586	317	489	396	350	344	389
(WY)	1970	1982	1982	1970	1986	1995	1989	1995	1983	1983	1968	1984
MIN	13.0	2.94	4.01	2.36	2.25	3.70	4.31	4.38	3.99	3.71	7.43	10.0
(WY)	1986	1976	1979	1964	1976	1964	1964	1977	1977	1977	1976	1981

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1963 - 1996

ANNUAL TOTAL	73984	46496	
ANNUAL MEAN	203	127	107
HIGHEST ANNUAL MEAN			250
LOWEST ANNUAL MEAN			29.5
HIGHEST DAILY MEAN	2310	May 2	2930
LOWEST DAILY MEAN	11	Nov 18	11
ANNUAL SEVEN-DAY MINIMUM	11	Nov 18	11
INSTANTANEOUS PEAK FLOW			4880
INSTANTANEOUS PEAK STAGE			12.50
ANNUAL RUNOFF (AC-FT)	146700	92220	77180
10 PERCENT EXCEEDS	449	245	252
50 PERCENT EXCEEDS	111	112	38
90 PERCENT EXCEEDS	12	12	5.1

11395150 SOUTH FORK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°38'55", long 120°07'00", in NW 1/4 SW 1/4 sec.29, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, 3.2 mi upstream from Rock Creek, and 5.8 mi north of Strawberry Valley.

PERIOD OF RECORD.--October 1973 to current year. Records of daily discharge for November 1961 to September 1973 are in files of the U.S. Geological Survey. Monthly diversion used to adjust South Fork Feather River below diversion dam near Strawberry Valley (station 11395200) since October 1961.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Tunnel diverts water from South Fork Feather River to Sly Creek Reservoir (station 11395400) for power development. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 570 ft³/s, Mar. 13, May 25-29, June 3, 1983; no flow many days in 1980-82 and Mar. 11-28, 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	44	108	13	79	97	314	212	81	246	124	116	112
2	44	108	11	71	92	309	230	76	228	123	117	112
3	43	108	9.3	64	89	311	199	71	218	122	116	111
4	43	107	19	57	404	386	174	66	193	121	116	110
5	58	107	18	49	520	323	158	76	151	119	116	109
6	109	107	13	43	430	156	148	117	148	118	117	108
7	110	107	12	39	289	145	143	152	146	118	117	108
8	109	110	9.9	35	305	141	138	171	144	118	115	109
9	109	112	9.2	34	416	148	133	180	142	118	113	109
10	109	112	9.4	33	402	162	125	185	141	117	112	109
11	108	111	57	29	392	220	117	187	139	118	112	109
12	110	111	378	28	387	266	110	194	138	119	113	109
13	109	111	124	26	386	264	103	203	136	119	113	109
14	108	96	71	25	379	255	98	223	135	118	111	110
15	108	117	78	33	371	223	98	280	134	118	111	116
16	108	117	58	152	394	163	148	557	132	118	111	111
17	108	79	43	130	513	161	144	544	131	118	111	110
18	108	9.0	35	109	551	167	220	182	131	118	112	109
19	109	8.4	30	118	558	171	382	128	130	117	111	110
20	108	8.2	27	96	547	172	378	111	130	118	112	110
21	109	8.3	25	87	552	165	374	329	130	116	114	111
22	110	8.3	23	76	544	158	373	564	129	116	115	111
23	111	8.2	22	67	538	142	374	562	129	117	115	109
24	111	7.9	20	80	529	129	443	559	129	115	115	110
25	110	11	19	143	522	120	309	552	129	118	115	107
26	109	11	18	98	486	111	132	504	134	117	114	108
27	108	8.4	19	129	398	110	119	406	130	116	114	106
28	109	8.3	20	136	357	152	107	322	127	118	114	108
29	109	8.2	40	109	331	125	97	279	126	118	115	108
30	109	8.2	95	95	---	116	88	268	126	117	114	107
31	109	---	105	101	---	110	---	271	---	117	113	---
TOTAL	3066	1941.4	1430.8	2371	11779	5895	5874	8400	4382	3664	3530	3285
MEAN	98.9	64.7	46.2	76.5	406	190	196	271	146	118	114	109
MAX	111	117	378	152	558	386	443	564	246	124	117	116
MIN	43	7.9	9.2	25	89	110	88	66	126	115	111	106
AC-FT	6080	3850	2840	4700	23360	11690	11650	16660	8690	7270	7000	6520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1996, BY WATER YEAR (WY)

	MEAN	83.4	99.1	101	116	132	168	144	175	105	114	126	151
MAX	176	377	462	381	406	454	429	520	421	363	327	390	
(WY)	1975	1982	1982	1974	1996	1983	1989	1993	1983	1983	1983	1978	
MIN	6.21	4.14	3.36	5.99	8.49	9.71	8.68	16.4	7.22	4.43	4.03	.000	
(WY)	1986	1977	1977	1977	1977	1977	1977	1977	1977	1977	1981	1981	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1974 - 1996

ANNUAL TOTAL	69269.20	55618.2	
ANNUAL MEAN	190	152	126
HIGHEST ANNUAL MEAN			294
LOWEST ANNUAL MEAN			35.0
HIGHEST DAILY MEAN	557	564	570
LOWEST DAILY MEAN	.00 Mar 11	7.9 Nov 24	.00 Jan 16 1980
ANNUAL SEVEN-DAY MINIMUM	.00 Mar 11	8.3 Nov 18	.00 Jan 16 1980
ANNUAL RUNOFF (AC-FT)	137400	110300	91440
10 PERCENT EXCEEDS	348	373	317
50 PERCENT EXCEEDS	196	115	78
90 PERCENT EXCEEDS	12	30	8.0

SACRAMENTO RIVER BASIN

11395200 SOUTH FORK FEATHER RIVER BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°38'51", long 121°07'04", in NE 1/4 SE 1/4 sec.30, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.1 mi downstream from diversion dam, 3.1 mi upstream from Rock Creek, and 5.8 mi north of Strawberry Valley.

DRAINAGE AREA.--37.7 mi².

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

REVISED RECORDS.--WDR CA-80-4: 1976(M).

GAGE.--Water-stage recorder and since May 8, 1987, sharp crested rectangular weir. Datum of gage is 3,535.02 ft above sea level (levels by Oroville-Wyandotte Irrigation District).

REMARKS.--Flow regulated by Little Grass Valley Reservoir (station 11395020) since October 1961. South Fork Diversion Tunnel, maximum capacity, about 600 ft³/s 500 ft upstream, diverts to Sly Creek Reservoir (station 11395400); diversion began in November 1961. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,870 ft³/s, Feb. 17, 1986, gage height, 14.92 ft, from rating curve extended above 40 ft³/s on basis of computation of peak flow over diversion dam from floodmark; minimum daily, 0.3 ft³/s, Dec. 25, 1962, to Jan. 2, 1963, Mar. 1-3, 1963.

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	12	5.5	5.6	5.7	6.0	6.2	10	10	11	11	12
2	11	12	5.5	5.6	5.6	6.0	6.2	10	10	11	11	11
3	11	12	5.5	5.6	5.6	6.0	6.0	10	11	11	11	12
4	11	12	5.5	5.6	225	6.3	6.0	10	11	11	11	12
5	11	12	5.5	5.5	424	6.2	6.0	10	11	11	11	11
6	11	12	5.5	5.5	7.0	5.8	6.0	10	11	11	11	12
7	11	12	5.5	5.5	6.0	5.8	6.0	10	11	11	11	11
8	11	8.1	5.5	5.5	27	5.8	5.9	11	11	11	11	11
9	11	5.8	5.5	5.5	5.8	5.8	5.8	11	11	11	11	11
10	11	5.8	5.5	5.5	5.8	5.8	5.8	11	11	11	12	11
11	11	5.8	5.7	5.5	5.8	6.0	5.8	11	11	11	12	11
12	11	5.8	16	5.5	5.8	6.0	5.8	11	11	11	12	11
13	11	5.8	5.8	5.5	5.8	6.0	5.8	11	11	11	12	11
14	11	50	5.6	5.5	5.8	6.0	5.8	11	11	11	12	11
15	11	5.5	5.8	5.5	5.8	5.9	5.8	11	11	11	12	12
16	11	5.6	5.6	5.8	5.9	5.8	6.0	502	11	11	12	12
17	11	5.5	5.5	5.7	30	5.8	6.0	1660	11	11	12	12
18	11	5.5	5.5	5.7	98	5.8	27	3260	11	11	12	12
19	11	5.5	5.5	5.8	598	5.8	5.2	1250	11	11	12	11
20	11	5.5	5.5	5.7	1050	5.8	5.3	291	11	11	12	11
21	11	5.5	5.5	5.7	1140	5.8	5.3	316	11	11	12	11
22	11	5.5	5.5	5.7	746	5.8	5.3	255	11	11	12	11
23	11	5.5	5.5	5.6	402	5.8	5.3	179	11	11	11	11
24	12	5.5	5.5	5.8	212	5.8	5.4	89	11	11	12	11
25	12	5.5	5.5	5.9	82	5.8	5.2	24	11	11	12	11
26	12	5.5	5.5	5.8	9.9	5.8	5.1	10	11	11	11	11
27	12	5.5	5.5	5.9	6.2	5.9	5.1	10	11	11	12	12
28	12	5.5	5.5	5.8	6.2	5.9	5.1	10	11	11	12	12
29	12	5.5	5.6	5.8	6.0	5.8	5.1	10	11	11	12	12
30	12	5.5	5.7	5.8	---	5.8	8.2	10	11	11	11	13
31	12	---	5.7	5.8	---	5.8	---	10	---	11	11	---
TOTAL	349	259.2	182.5	175.2	5138.7	182.4	193.5	8044	328	341	359	343
MEAN	11.3	8.64	5.89	5.65	177	5.88	6.45	259	10.9	11.0	11.6	11.4
MAX	12	50	16	5.9	1140	6.3	27	3260	11	11	12	13
MIN	11	5.5	5.5	5.5	5.6	5.8	5.1	10	10	11	11	11
AC-FT	692	514	362	348	10190	362	384	15960	651	676	712	680

11395200 SOUTH FORK FEATHER RIVER BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA--Continued

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	10.1	14.1	37.8	64.5	58.8	53.1	26.9	44.3	16.0	9.50	10.1	10.5
MAX	16.1	226	808	885	1113	741	317	417	82.5	13.3	18.5	18.8
(WY)	1982	1982	1965	1970	1986	1995	1982	1995	1983	1968	1973	1973
MIN	2.92	2.62	2.41	3.94	2.73	3.79	3.68	3.61	2.20	2.57	3.32	3.45
(WY)	1978	1978	1980	1976	1978	1980	1970	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1964 - 1996			
ANNUAL TOTAL	43701.7				15895.5							
ANNUAL MEAN	120				43.4							
HIGHEST ANNUAL MEAN									29.6			
LOWEST ANNUAL MEAN									120			
HIGHEST DAILY MEAN	3320				3260				3.72			
LOWEST DAILY MEAN	5.5				5.1				7970			
ANNUAL SEVEN-DAY MINIMUM	5.5				5.2				.70			
INSTANTANEOUS PEAK FLOW					4320				1.1			
INSTANTANEOUS PEAK STAGE					10.90				8870			
ANNUAL RUNOFF (AC-FT)	86680				31530				14.92			
10 PERCENT EXCEEDS	237				12				21420			
50 PERCENT EXCEEDS	11				11				12			
90 PERCENT EXCEEDS	5.5				5.5				7.8			
									4.3			

11395400 SLY CREEK RESERVOIR NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°35'01", long 121°06'59", in NE 1/4 NE 1/4 sec.19, T.20 N., R.8 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 100 ft upstream from dam on Lost Creek, 1.4 mi northwest of Strawberry Valley.

DRAINAGE AREA.--24.0 mi².

PERIOD OF RECORD.--November 1961 to current year (fragmentary prior to Mar. 14, 1962).

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Oroville-Wyandotte Irrigation District). Prior to Sept. 30, 1966, water-stage recorder in valve chamber inside dam at same datum. Oct. 1, 1966, to December 1974, nonrecording gage read once daily.

REMARKS.--Reservoir is formed by earthfill dam. Storage began in November 1961. Total capacity, 65,600 acre-ft between elevations 3,285 ft, invert of outlet, and 3,531 ft, top of spillway gate, all of which is available for release. Water is diverted into reservoir from South Fork Feather River through South Fork Diversion Tunnel and from North Yuba River basin through Slate Creek Tunnel (station 11413250). See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 65,600 acre-ft, June 22, 1978, elevation, 3,530.9 ft; minimum observed under normal operating conditions since reservoir first filled, 860 acre-ft, Feb. 11, 1976, elevation, 3,320.0 ft. Reservoir completely drained for powerplant construction, Sept. 12 to Oct. 17, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 65,100 acre-ft, May 24, elevation, 3,530.1 ft; minimum, 16,300 acre-ft, Dec. 11, elevation, 3,418.9 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1946)

3,310	450	3,360	4,300	3,450	26,300
3,315	655	3,380	7,360	3,480	38,500
3,320	860	3,400	11,500	3,510	53,400
3,340	2,150	3,420	16,600	3,531	65,600

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	44200	26900	17300	21600	34500	57600	60500	64000	64100	56900	43400	26700
2	43600	27000	17400	22000	34300	57400	61300	64200	64100	56700	42800	26400
3	42900	26700	17100	22100	34800	57100	61700	63600	64100	56400	42400	25700
4	42100	26500	17200	22100	38500	57800	61100	63000	63900	55900	41400	25300
5	40800	26700	17300	21900	42400	58400	60700	62400	63700	55400	41100	24800
6	39600	26600	17300	21900	e43900	58300	60300	e62500	63300	54900	40600	23800
7	39200	26000	17200	21600	e45300	58000	59800	63200	63000	54800	40300	23700
8	38500	25400	17300	21900	e46800	57700	59300	64100	62900	54400	39600	23700
9	38100	25000	16800	22100	e48200	57500	58800	64500	62700	54200	38900	23100
10	37100	25100	16400	22000	49400	57300	58400	64700	62500	53700	38500	22800
11	36300	24600	16400	21900	50600	57800	57600	65000	62200	53400	38000	22500
12	35700	24000	e19900	21600	51600	58400	57500	64900	62000	52900	36900	22300
13	34900	23600	e19900	21400	52500	58700	57400	64900	61800	52500	36300	22400
14	34000	23100	e20000	21200	53800	58800	57300	64900	61600	51800	35700	21900
15	33200	22600	e20300	21100	54200	58800	57400	64900	61400	51600	35300	22100
16	33100	22800	e20900	22300	54900	58700	58200	64800	61200	51400	35000	22100
17	33300	22300	20800	23800	56400	58600	58800	64800	60900	50900	35000	22100
18	33500	22300	21000	24800	58200	58600	59100	63800	60700	50300	35000	22200
19	33700	22100	21200	25800	60400	58600	59000	64000	60400	49800	34700	22400
20	34000	21400	21400	26700	61100	58600	59100	64100	59800	49300	34200	22400
21	33500	21000	21100	27400	60900	58700	58900	64500	59800	48900	33400	22100
22	33100	20500	21300	28000	60100	58600	59100	64900	59300	48400	32600	22000
23	31900	20300	21000	28200	59700	58700	59800	65000	59200	48000	32100	22000
24	30800	19600	20800	28900	59500	58300	61300	64900	59200	47700	31700	21900
25	29600	19700	20400	30000	59100	58200	62700	65000	58100	47100	31300	21800
26	29200	19300	20100	30700	58900	58200	63400	64900	57900	46600	30700	21800
27	28100	18900	20300	31400	58700	58600	63500	64500	58200	46000	29600	21800
28	27200	18500	19900	e33300	58400	59000	63600	64200	57900	45500	29000	21800
29	26300	17800	19900	34000	58000	59100	63700	63900	57500	44900	28700	22000
30	26300	17900	20400	34100	---	59100	63900	63900	57300	44500	28200	22200
31	26500	---	21200	34000	---	59100	---	64000	---	43800	27200	---
MAX	44200	27000	21400	34100	61100	59100	63900	65000	64100	56900	43400	26700
MIN	26300	17800	16400	21100	34300	57100	57300	62400	57300	43800	27200	21800
a	3450.6	3424.4	3435.0	3469.8	3518.1	3520.1	3528.0	3528.3	3516.9	3491.3	3452.3	3438.2
b	-17600	-8600	+3300	+12800	+24000	+1100	+4800	+100	-6700	-13500	-16600	-5000

CAL YR 1995 b +8700

WTR YR 1996 b -21900

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11395500 OROVILLE-WYANDOTTE CANAL NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°33'15", long 121°11'31", in NW 1/4 NE 1/4 sec.33, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, in concrete valve house at head of canal and 2.5 mi north of Clipper Mills.

PERIOD OF RECORD.--October 1927 to September 1941 (published as Forbestown Ditch), October 1953 to current year. Monthly discharge only for October 1953 to September 1961, published with records for Lost Creek near Clipper Mills.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 3,166.0 ft above sea level (levels by Oroville-Wyandotte Irrigation District). Prior to Sept. 30, 1941, nonrecording gages and Oct. 1, 1941, to Nov. 16, 1962, water-stage recorder at sites at different datums 4 mi upstream in abandoned part of canal, 0.3 mi downstream from Lost Creek Dam.

REMARKS.--Water is discharged to canal through valve in Woodleaf Penstock. Prior to Nov. 16, 1962, canal diverted from Lost Creek Dam. Water is used for irrigation and domestic supply. Demand for water reduced when a large lumber mill closed at Woodleaf in 1962. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 43 ft³/s, Aug. 9 to Sept. 9, 1937, Aug. 13-15, 1977; 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	20	6.3	13	.00	.00	.00	.00	2.3	2.4	8.6	19	23
2	20	6.3	14	.00	.00	.00	.00	2.4	2.4	8.5	19	23
3	20	6.3	14	.00	.00	.00	.00	2.4	2.4	8.5	19	24
4	20	6.3	5.8	.00	.00	.00	.00	2.4	2.4	8.6	19	24
5	20	6.3	.00	.00	.00	.00	.00	2.4	2.4	8.6	19	24
6	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	8.5	19	24
7	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	8.6	19	23
8	20	6.3	.00	.00	.00	.00	.00	2.4	2.4	8.5	19	23
9	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	8.5	21	23
10	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	11	22	23
11	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	22	23
12	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	22	23
13	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	22	24
14	20	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	23	23
15	14	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	23	23
16	12	6.4	.00	.00	.00	.00	.00	2.4	2.4	14	24	23
17	12	11	.00	.00	.00	.00	.00	2.4	2.4	15	24	23
18	10	14	.00	.00	.00	.00	.00	2.5	6.6	16	25	24
19	9.3	14	.00	.00	.00	.00	.00	2.4	8.7	16	29	23
20	9.3	14	.00	.00	.00	.00	.00	2.4	8.6	16	28	24
21	9.3	13	.00	.00	.00	.00	.00	2.4	8.6	16	26	23
22	9.3	12	.00	.00	.00	.00	.00	2.4	8.6	16	24	24
23	9.3	12	.00	.00	.00	.00	.00	2.5	8.6	16	22	23
24	9.3	12	.00	.00	.00	.00	.00	2.4	8.6	18	23	23
25	9.3	12	.00	.00	.00	.00	.00	2.4	8.7	19	24	24
26	9.3	12	.00	.00	.00	.00	.00	2.4	8.7	19	24	23
27	9.3	4.2	6.7	.00	.00	.00	.00	2.4	8.7	19	24	24
28	9.3	.00	10	.00	.00	.00	.00	2.4	8.7	19	24	23
29	9.3	6.1	6.5	.00	.00	.00	.00	2.4	8.7	19	23	23
30	7.6	12	.00	.00	---	.00	1.2	2.4	8.6	19	23	23
31	6.3	---	.00	.00	---	.00	---	2.4	---	19	23	---
TOTAL	444.2	250.10	70.00	0.00	0.00	0.00	1.20	74.5	151.2	433.9	697	700
MEAN	14.3	8.34	2.26	.000	.000	.000	.040	2.40	5.04	14.0	22.5	23.3
MAX	20	14	14	.00	.00	.00	1.2	2.5	8.7	19	29	24
MIN	6.3	.00	.00	.00	.00	.00	.00	2.3	2.4	8.5	19	23
AC-FT	881	496	139	.00	.00	.00	2.4	148	300	861	1380	1390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

	MEAN	12.7	5.92	2.35	1.42	.83	.92	1.89	5.49	12.2	17.4	20.6	19.6
MAX	20.2	16.5	8.64	6.89	5.34	6.70	11.4	20.2	29.3	26.4	37.4	30.9	
(WY)	1967	1968	1977	1968	1977	1964	1977	1977	1963	1976	1977	1977	
MIN	3.75	.84	.000	.000	.000	.000	.000	.000	2.31	8.79	9.47	9.29	
(WY)	1990	1992	1982	1980	1963	1963	1963	1975	1967	1965	1965	1965	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1963 - 1996			
ANNUAL TOTAL	2318.94				2822.10							
ANNUAL MEAN	6.35				7.71				8.49			
HIGHEST ANNUAL MEAN									16.7			
LOWEST ANNUAL MEAN									4.92			
HIGHEST DAILY MEAN	20				29				43			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	4600				5600				6150			
10 PERCENT EXCEEDS	17				23				22			
50 PERCENT EXCEEDS	1.7				2.4				5.6			
90 PERCENT EXCEEDS	.00				.00				.00			

SACRAMENTO RIVER BASIN

11396000 LOST CREEK NEAR CLIPPER MILLS, CA

LOCATION.--Lat 39°34'25", long 121°08'26", in SE 1/4 SW 1/4 sec.24, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on left bank 0.3 mi downstream from Lost Creek Reservoir and 2.8 mi north of Clipper Mills.

DRAINAGE AREA.--30.0 mi².

PERIOD OF RECORD.--October 1927 to September 1941, October 1948 to current year. Records for Woodleaf Powerplant from February 1963 to September 1966 in files of the U.S. Geological Survey.

REVISED RECORDS.--WSP 1395: 1954. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Sharp crested weir for low-water control since June 20, 1987. Elevation of gage is 3,170 ft above sea level, from topographic map. Prior to June 20, 1987, at site 100 ft downstream at same datum.

REMARKS.--Flow regulated by Sly Creek Reservoir (station 11395400) 1.5 mi upstream and Lost Creek Reservoir 0.3 mi upstream, usable capacity, 5,920 acre-ft with flashboards. Water is diverted into Sly Creek Reservoir through South Fork Diversion Tunnel from South Fork Feather River and through Slate Creek Tunnel (station 11413250) from North Yuba River basin. Woodleaf Tunnel diverts from Lost Creek Reservoir to Woodleaf Powerplant. Oroville-Wyandotte Canal (station 11395500) diverts from Woodleaf Penstock for irrigation and domestic use. Records represent seepage, release, and spill from Lost Creek Reservoir to Lost Creek. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s, Dec. 22, 1955, gage height, 6.90 ft, at site then in use; no flow at times 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	5.4	3.8	3.5	3.7	4.1	473	6.7	5.6	5.6	6.0	5.2	6.4
2	5.4	3.5	3.5	3.7	4.0	387	6.2	5.5	5.6	5.7	5.2	5.9
3	4.8	3.5	3.4	3.7	4.0	378	6.0	194	5.6	5.3	5.2	5.8
4	3.6	3.5	3.6	3.7	7.3	417	5.8	350	5.6	5.3	7.6	5.8
5	3.5	3.5	3.5	3.5	8.3	415	5.8	349	5.6	5.6	5.9	5.8
6	4.3	3.4	3.4	3.5	5.6	381	5.8	142	5.4	8.4	5.2	5.8
7	3.9	3.4	3.4	3.5	4.8	377	5.7	5.6	5.4	6.7	5.2	5.9
8	3.7	3.5	3.4	3.5	4.5	374	5.6	5.6	5.4	5.4	5.2	5.8
9	3.7	3.5	3.4	3.5	4.3	371	5.6	5.6	5.4	5.3	5.2	5.7
10	3.9	3.5	3.4	3.5	4.1	371	5.6	5.6	5.4	5.2	5.2	5.7
11	3.9	3.5	4.0	3.5	4.0	389	5.6	5.5	5.4	5.2	5.1	5.8
12	3.7	3.5	5.6	3.5	4.0	389	5.5	5.4	5.4	5.2	5.6	5.8
13	3.6	3.5	4.0	3.5	3.9	374	5.4	5.4	5.4	5.2	6.9	5.8
14	4.0	3.5	3.7	3.5	3.9	386	5.4	5.4	5.4	5.7	5.8	6.4
15	3.9	3.5	4.4	3.7	25	383	5.5	130	5.4	6.1	6.2	7.2
16	4.7	3.5	3.8	4.7	291	379	5.7	980	5.4	5.2	8.2	6.5
17	4.7	3.5	3.7	4.1	272	377	5.9	1110	5.4	5.2	7.5	6.5
18	4.5	3.5	3.7	4.4	296	375	6.0	1530	5.4	5.2	5.3	6.3
19	4.4	3.5	3.7	4.3	351	357	5.8	498	5.4	5.2	5.1	6.2
20	4.1	3.5	3.5	4.1	1170	358	5.7	395	7.2	5.2	5.4	6.0
21	3.5	3.5	3.5	4.4	1770	358	5.6	350	9.6	5.3	5.8	6.0
22	3.4	3.5	3.5	4.1	1630	343	5.6	517	5.9	5.2	5.8	6.2
23	3.5	3.5	3.5	4.0	1240	425	5.6	634	6.1	5.4	5.9	6.2
24	3.6	3.5	3.5	5.6	1070	324	5.6	645	5.3	5.2	5.9	6.2
25	4.3	3.5	3.5	5.4	1030	231	5.6	500	9.5	5.2	5.8	6.2
26	3.8	3.5	3.5	4.5	763	4.8	5.6	473	14	5.2	5.8	6.2
27	4.0	3.5	3.6	5.5	583	3.9	14	586	11	5.2	5.9	6.2
28	5.1	3.5	3.5	4.9	577	3.9	139	427	5.8	5.2	6.0	6.2
29	5.1	3.5	3.8	4.5	567	4.9	5.6	323	5.8	5.2	6.0	6.2
30	4.7	3.5	4.0	4.2	---	5.6	5.6	163	6.4	5.2	5.9	6.0
31	4.1	---	3.8	4.3	---	5.6	---	6.5	---	5.2	6.4	---
TOTAL	128.8	105.1	114.3	126.5	11701.8	9420.7	313.1	10357.7	190.2	169.8	181.4	182.7
MEAN	4.15	3.50	3.69	4.08	404	304	10.4	334	6.34	5.48	5.85	6.09
MAX	5.4	3.8	5.6	5.6	1770	473	139	1530	14	8.4	8.2	7.2
MIN	3.4	3.4	3.4	3.5	3.9	3.9	5.4	5.4	5.3	5.2	5.1	5.7
AC-FT	255	208	227	251	23210	18690	621	20540	377	337	360	362
a	24230	14240	10440	11810	29880	34020	32740	30310	26190	24330	24450	11940

a Diversion, in acre-feet, through Woodleaf Powerplant (station 11396090), provided by Oroville-Wyandotte Irrigation District.

11396000 LOST CREEK NEAR CLIPPER MILLS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1961, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.78	8.61	66.0	93.4	170	175	191	129	29.9	6.42	4.23	5.13
MAX	13.4	121	544	485	562	467	423	441	153	34.7	10.2	15.3
(WY)	1928	1951	1956	1956	1958	1938	1938	1952	1952	1952	1961	1960
MIN	.20	.000	.000	.15	.50	25.7	4.68	1.21	1.33	.20	.10	.10
(WY)	1935	1960	1960	1960	1937	1933	1931	1931	1934	1939	1934	1934

SUMMARY STATISTICS

WATER YEARS 1928 - 1961

ANNUAL MEAN	73.0
HIGHEST ANNUAL MEAN	167
LOWEST ANNUAL MEAN	6.78
HIGHEST DAILY MEAN	3840
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	5000
INSTANTANEOUS PEAK STAGE	a6.90
ANNUAL RUNOFF (AC-FT)	52890
10 PERCENT EXCEEDS	212
50 PERCENT EXCEEDS	8.4
90 PERCENT EXCEEDS	.30

a Site then in use.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.2	6.81	27.3	37.5	57.7	73.8	58.0	45.2	33.4	3.64	3.04	2.63
MAX	392	179	355	411	512	573	410	454	750	16.0	22.2	6.28
(WY)	1963	1963	1982	1970	1986	1983	1993	1995	1995	1962	1966	1969
MIN	.006	.029	.094	.10	.35	.33	.22	.13	.097	.10	.000	.000
(WY)	1965	1975	1975	1962	1964	1964	1968	1968	1966	1963	1964	1963

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1962 - 1996

ANNUAL TOTAL	72843.8	32992.1	
ANNUAL MEAN	200	90.1	30.0
HIGHEST ANNUAL MEAN			200
LOWEST ANNUAL MEAN			.49
HIGHEST DAILY MEAN	1370	May 29	3900
LOWEST DAILY MEAN	3.4	Oct 22	.00
ANNUAL SEVEN-DAY MINIMUM	3.4	Dec 3	.00
INSTANTANEOUS PEAK FLOW			5000
INSTANTANEOUS PEAK STAGE			6.90
ANNUAL RUNOFF (AC-FT)	144500	65440	21760
TOTAL DIVERSION (AC-FT) b	276900	274600	
10 PERCENT EXCEEDS	698	376	9.0
50 PERCENT EXCEEDS	6.2	5.4	1.3
90 PERCENT EXCEEDS	3.5	3.5	.12

b Diversion, in acre-feet, through Woodleaf Powerplant, provided by Oroville-Wyandotte Irrigation District.

SACRAMENTO RIVER BASIN

11396200 SOUTH FORK FEATHER RIVER BELOW FORBESTOWN DAM, CA

LOCATION.--Lat 39°33'05", long 121°12'30", in SE 1/4 NE 1/4 sec.32, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, Plumas National Forest, on right bank 500 ft downstream from Forbestown Dam, 0.4 mi upstream from Oroleve Creek, and 4.0 mi northeast of Forbestown.

DRAINAGE AREA.--87.5 mi².

PERIOD OF RECORD.--July 1962 to current year. Records for Forbestown Powerplant from February 1963 to September 1966 in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 1,690 ft above sea level, from topographic map.

REMARKS.--Flow regulated by Little Grass Valley Reservoir (station 11395020), Sly Creek Reservoir (station 11395400), and smaller reservoirs. Water from North Yuba River basin is imported through Slate Creek Tunnel (station 11413250) to Sly Creek Reservoir. Oroville-Wyandotte Canal (station 11395500) diverts upstream from station. Tunnel 600 ft upstream from station diverts most flow through Forbestown Powerplant (station 11396290) except fishwater releases and uncontrolled spill over Forbestown Dam. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,400 ft³/s, Feb. 17, 1986, gage height, 16.07 ft, from rating curve extended above 5,400 ft³/s on basis of flow-over-dam measurement of peak flow; minimum daily, 0.6 ft³/s, Apr. 4, 1963.

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	30	11	5.4	5.4	5.4	405	118	619	214	20	11	11
2	16	11	5.3	5.3	5.4	323	119	600	208	11	11	11
3	10	11	5.3	5.3	5.4	328	67	724	235	11	11	11
4	10	10	5.3	5.3	257	485	69	879	202	11	11	11
5	10	11	5.3	5.3	961	539	39	875	210	11	11	11
6	10	11	5.3	5.3	235	429	19	572	217	11	11	11
7	10	7.5	5.3	5.3	99	394	23	193	214	11	11	11
8	10	5.3	5.3	5.3	106	375	12	258	157	11	11	148
9	10	5.4	5.3	5.4	60	363	26	241	157	11	11	355
10	10	5.4	5.4	5.4	39	360	37	387	138	11	11	189
11	10	5.3	5.6	5.3	28	415	35	502	138	11	11	193
12	10	5.3	160	5.3	8.8	439	35	582	108	11	11	207
13	10	5.3	51	5.3	5.5	400	29	579	204	11	11	142
14	10	5.4	15	5.3	5.6	376	25	544	23	11	100	120
15	10	5.3	5.6	5.4	5.6	363	24	622	24	11	12	145
16	11	5.3	5.4	5.7	240	350	50	1720	23	11	11	124
17	12	5.3	5.4	5.4	320	341	48	3050	21	11	11	146
18	14	5.4	5.5	5.6	412	333	93	5340	13	11	11	110
19	14	5.3	5.3	5.5	1030	329	56	2170	11	13	11	39
20	14	5.3	5.4	5.5	2540	318	55	983	11	11	11	137
21	15	5.3	5.4	5.5	3520	318	46	1040	11	11	11	262
22	15	5.4	5.4	5.5	2660	314	40	1140	11	11	11	167
23	12	5.4	5.3	5.5	1740	176	20	1200	11	11	11	166
24	11	5.4	5.3	6.0	1270	241	20	1080	10	11	11	165
25	11	5.4	5.3	5.7	1060	215	385	879	11	11	11	176
26	18	5.4	5.3	5.5	732	27	495	862	11	11	11	146
27	11	5.4	5.4	5.8	534	11	826	956	11	11	11	132
28	11	5.5	5.3	5.7	528	27	746	827	11	11	11	168
29	11	5.5	5.4	5.5	489	44	623	619	11	11	11	37
30	11	5.5	5.3	5.3	---	39	618	418	11	11	11	37
31	11	---	5.4	5.4	---	36	---	226	---	11	11	---
TOTAL	378	196.0	376.2	169.0	18901.7	9113	4598	30687	2637	352	431	3588
MEAN	12.2	6.53	12.1	5.45	652	294	153	990	87.9	11.4	13.9	120
MAX	30	11	160	6.0	3520	539	746	5340	235	20	100	355
MIN	10	5.3	5.3	5.3	5.4	11	12	193	10	11	11	11
AC-FT	750	389	746	335	37490	18080	9120	60870	5230	698	855	7120
a	24330	14490	11370	15620	35700	40040	30930	8260	23840	24990	24320	6610

a Diversion, in acre-feet, to Forbestown Powerplant (station 11396290), provided by Oroville-Wyandotte Irrigation District.

11396200 SOUTH FORK FEATHER RIVER BELOW FORBESTOWN DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.9	22.0	69.7	129	172	165	108	102	31.4	12.7	11.2	14.3
MAX	520	240	677	1369	2000	1472	718	990	290	37.1	27.3	120
(WY)	1963	1982	1982	1970	1986	1995	1982	1996	1995	1962	1986	1996
MIN	4.21	3.68	3.37	4.06	4.46	4.47	4.06	4.02	2.90	4.04	3.37	3.84
(WY)	1978	1976	1976	1976	1972	1972	1964	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1962 - 1996	
ANNUAL TOTAL	115965.4		71426.9			
ANNUAL MEAN	318		195		71.6	
HIGHEST ANNUAL MEAN					317	
LOWEST ANNUAL MEAN					4.36	
HIGHEST DAILY MEAN	4410	Mar 11	5340	May 18	13900	Feb 18 1986
LOWEST DAILY MEAN	5.3	Nov 8	5.3	Nov 8	.60	Apr 4 1963
ANNUAL SEVEN-DAY MINIMUM	5.3	Dec 2	5.3	Dec 2	1.7	Mar 25 1980
INSTANTANEOUS PEAK FLOW			6900	May 18	15400	Feb 17 1986
INSTANTANEOUS PEAK STAGE			13.10	May 18	16.07	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	230000		141700		51860	
TOTAL DIVERSION (AC-FT) a	342300		260500			
10 PERCENT EXCEEDS	636		552		116	
50 PERCENT EXCEEDS	15		11		10	
90 PERCENT EXCEEDS	5.4		5.3		4.9	

a Diversion, in acre-feet, to Forbestown Powerplant, provided by Oroville-Wyandotte Irrigation District.

SACRAMENTO RIVER BASIN

11396310 MINERS RANCH CANAL BELOW PONDEROSA DAM, NEAR FORBESTOWN, CA

LOCATION.--Lat 39°33'00", long 121°18'20", in SE 1/4 NW 1/4 sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on right bank 800 ft downstream from Ponderosa Dam and 3 mi northwest of Forbestown.

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR CA-88-4: diversion only.

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

REMARKS.--Canal diverts from South Fork Feather River at Ponderosa Dam. Water is used for power development and irrigation. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 314 ft³/s, May 13, 1984; 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	45	268	262	268	265	263	266	233	280	285	267	285
2	76	255	163	266	265	262	265	270	280	285	287	252
3	243	226	60	263	265	262	263	271	280	259	287	279
4	279	244	91	263	257	261	263	270	280	286	287	287
5	277	256	101	263	247	260	265	270	254	286	287	287
6	274	267	101	262	257	261	266	270	283	286	287	288
7	274	211	157	260	264	260	268	270	232	286	288	287
8	274	225	267	264	264	265	270	271	283	286	287	285
9	274	281	267	221	262	266	272	272	283	286	285	281
10	274	276	254	127	263	266	272	272	283	266	285	278
11	273	273	239	263	263	265	271	272	283	291	285	266
12	276	272	229	265	266	262	271	271	283	290	285	157
13	245	271	213	263	268	261	271	272	283	291	285	151
14	281	269	199	265	269	257	271	272	282	290	285	151
15	280	269	231	265	267	263	271	272	283	289	287	150
16	280	269	218	261	263	266	271	189	283	287	289	152
17	279	268	176	256	261	265	268	274	281	283	289	151
18	246	268	33	256	262	265	264	274	280	282	288	151
19	188	265	34	258	263	267	260	272	279	254	289	151
20	146	254	244	263	261	269	260	270	280	284	289	151
21	232	267	268	265	252	269	260	268	280	286	288	151
22	281	265	266	265	253	269	264	265	280	287	284	151
23	277	256	256	265	257	269	267	261	280	286	282	151
24	271	246	251	266	259	268	267	268	260	287	282	151
25	270	269	256	264	259	266	267	269	279	287	283	151
26	271	265	259	265	263	267	267	272	280	287	283	151
27	276	248	265	264	264	267	267	274	279	287	283	151
28	278	243	267	265	265	266	267	278	280	287	282	88
29	278	269	268	231	265	267	233	280	282	287	282	.00
30	278	265	267	266	---	266	268	280	283	287	284	.00
31	274	---	267	265	---	266	---	281	---	286	285	---
TOTAL	7770	7780	6429	7953	7589	8206	7975	8303	8338	8806	8836	5585.00
MEAN	251	259	207	257	262	265	266	268	278	284	285	186
MAX	281	281	268	268	269	269	272	281	283	291	289	288
MIN	45	211	33	127	247	257	233	189	232	254	267	.00
AC-FT	15410	15430	12750	15770	15050	16280	15820	16470	16540	17470	17530	11080
a	13480	14500	11690	15260	14660	15650	15040	15180	14900	15460	15470	9650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

MEAN	176	192	193	193	208	209	206	214	231	242	243	186
MAX	263	269	254	257	262	265	276	276	283	284	289	270
(WY)	1980	1992	1981	1986	1996	1996	1987	1992	1992	1996	1986	1980
MIN	26.6	20.9	18.1	16.6	10.5	16.8	14.5	22.2	51.9	49.3	43.0	25.0
(WY)	1987	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1963 - 1996
ANNUAL TOTAL	90858.00	93570.00	
ANNUAL MEAN	249	256	208
HIGHEST ANNUAL MEAN			256
LOWEST ANNUAL MEAN			52.2
HIGHEST DAILY MEAN	292	291	314
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	30	99	.00
ANNUAL RUNOFF (AC-FT)	180200	185600	150800
10 PERCENT EXCEEDS	283	286	276
50 PERCENT EXCEEDS	266	267	244
90 PERCENT EXCEEDS	211	212	46

a Discharge, in acre-ft, through Kelly Ridge Powerplant (station 11396329), provided by Oroville-Wyandotte Irrigation District

11396330 BANGOR CANAL BELOW MINERS RANCH RESERVOIR, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'15", long 121°27'16", in NE 1/4 SW 1/4 sec.18, T.19 N., R.5 E., Butte County, Hydrologic Unit 18020124, on left bank 400 ft downstream from outlet at Miners Ranch Dam and 5 mi east of Oroville.

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

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 815 ft above sea level, from topographic map.

REMARKS.--Flow regulated by Miners Ranch Reservoir, capacity, 912 acre-ft. Canal completed in November 1962. Water is used for irrigation. See schematic diagram of South Fork Feather River basin.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 65 ft³/s, Aug. 17-20, 1963; no flow for several days in 1965, 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	16	12	8.0	6.2	6.2	6.5	8.0	8.4	15	17	19	19
2	16	12	8.1	6.3	6.2	6.5	7.7	10	16	17	18	19
3	16	12	7.8	6.2	6.2	6.5	8.1	12	16	18	18	18
4	15	12	7.8	5.8	4.8	6.5	8.2	12	16	18	18	19
5	14	12	7.9	5.8	2.7	6.2	8.0	12	16	19	19	19
6	13	12	8.0	5.8	3.0	5.7	8.5	12	16	18	19	19
7	14	11	8.2	5.8	2.9	5.5	8.5	12	16	19	19	19
8	14	10	7.3	5.8	3.8	5.8	8.5	12	17	19	18	19
9	14	10	7.2	6.1	5.8	6.0	8.5	12	17	19	18	19
10	14	10	7.2	6.2	5.8	6.2	8.5	12	17	18	18	18
11	14	10	5.7	6.0	6.0	6.2	8.5	12	17	18	19	18
12	14	10	3.7	6.0	6.0	6.1	8.5	12	17	18	19	18
13	14	10	3.8	6.0	5.9	6.1	8.8	14	17	18	19	19
14	14	9.9	5.0	6.0	6.1	6.2	8.8	15	17	19	19	18
15	14	10	5.0	6.0	6.0	6.2	8.8	15	18	19	19	18
16	14	11	5.0	6.0	6.0	6.2	8.8	15	18	18	19	18
17	14	10	5.0	6.0	6.0	6.2	8.3	16	17	18	19	18
18	14	10	5.0	5.9	6.0	7.0	8.2	16	17	18	19	18
19	14	10	5.1	5.8	6.0	8.0	8.0	16	18	18	19	18
20	14	8.9	5.0	5.8	6.0	8.0	8.4	16	18	18	19	19
21	14	8.0	5.6	5.8	6.6	8.0	8.5	16	18	18	19	19
22	14	8.0	6.0	5.8	5.9	8.0	8.3	16	18	18	18	19
23	14	8.2	6.0	5.8	5.8	8.0	8.2	16	17	18	18	18
24	14	8.3	6.0	5.8	5.8	8.0	8.5	16	17	18	19	18
25	14	8.2	6.0	5.8	5.8	8.0	8.5	16	17	18	19	19
26	13	8.2	6.0	6.2	5.8	8.0	8.5	16	17	18	19	18
27	12	7.9	6.0	6.5	5.8	8.1	8.3	16	17	18	19	19
28	12	8.0	6.2	6.4	6.0	8.1	8.2	16	17	19	19	19
29	13	8.4	6.3	6.2	6.3	8.0	8.3	16	17	19	19	18
30	13	8.2	6.1	5.9	---	8.0	8.2	16	17	19	19	18
31	12	---	6.2	5.9	---	8.0	---	16	---	19	19	---
TOTAL	431	294.2	192.2	185.6	161.2	215.8	251.1	437.4	508	566	581	555
MEAN	13.9	9.81	6.20	5.99	5.56	6.96	8.37	14.1	16.9	18.3	18.7	18.5
MAX	16	12	8.2	6.5	6.6	8.1	8.8	16	18	19	19	19
MIN	12	7.9	3.7	5.8	2.7	5.5	7.7	8.4	15	17	18	18
AC-FT	855	584	381	368	320	428	498	868	1010	1120	1150	1100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

MEAN	17.0	7.84	5.35	4.50	4.07	4.30	8.61	16.4	22.3	24.8	24.9	22.4
MAX	29.7	14.3	11.2	12.0	7.68	8.27	20.3	27.8	42.0	56.4	53.4	36.2
(WY)	1965	1972	1975	1963	1980	1988	1970	1970	1963	1963	1963	1963
MIN	5.42	1.47	.035	.30	.25	.20	2.65	6.41	11.7	16.0	17.1	14.4
(WY)	1985	1969	1966	1966	1966	1966	1983	1995	1993	1982	1992	1993

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1963 - 1996

ANNUAL TOTAL	3582.05	4378.5	
ANNUAL MEAN	9.81	12.0	13.3
HIGHEST ANNUAL MEAN			18.0
LOWEST ANNUAL MEAN			8.95
HIGHEST DAILY MEAN	20 Jun 30	19 Jul 5	65 Aug 17 1963
LOWEST DAILY MEAN	.49 Jan 13	2.7 Feb 5	.00 Jan 7 1965
ANNUAL SEVEN-DAY MINIMUM	.85 Jan 12	4.1 Feb 4	.00 Jan 7 1965
ANNUAL RUNOFF (AC-FT)	7100	8680	9670
10 PERCENT EXCEEDS	18	19	28
50 PERCENT EXCEEDS	8.0	12	11
90 PERCENT EXCEEDS	3.2	5.8	2.8

11396395 SUCKER RUN AT KANAKA DIVERSION, NEAR FEATHER FALLS, CA

LOCATION.--Lat 39°33'44", long 121°16'46", in SE 1/4 NE 1/4 sec.27, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on left bank at Kanaka Diversion Measuring Weir, 2.5 mi upstream from confluence with South Fork Feather River, and 2.5 mi southwest of Feather Falls.

DRAINAGE AREA.--15.5 mi².

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

GAGE.--Water-stage recorder and 120 degree V-notch weir. Elevation of gage is 1,660 ft above sea level, from topographic map.

REMARKS.--Water from creek is diverted upstream from gage to Kanaka Powerplant (station 11396396). See schematic diagram of South Fork Feather River basin. See following page for records of combined discharge of creek and powerplant.

COOPERATION.--Records provided by STS Hydro Power Ltd., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Creek only, maximum discharge, 750 ft³/s, Jan. 14, 1995, gage height, 3.75 ft; minimum daily, 1.2 ft³/s, Aug. 21, 22, 27, 1992, Aug. 13, 1994.
Combined flow: Maximum discharge, 760 ft³/s, Jan. 14, 1995; minimum daily, 1.2 ft³/s, Aug. 21, 22, 27, 1992, Aug. 13, 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	6.4	6.6	7.5	6.5	14	14	63	9.5	9.1	8.3	8.5	6.0
2	6.2	6.7	7.3	6.1	14	14	35	8.4	9.3	8.4	8.3	5.8
3	6.2	6.7	7.2	5.5	14	14	16	9.7	9.3	8.4	8.3	5.8
4	6.0	6.3	6.0	5.1	164	75	14	8.3	9.6	8.1	8.4	5.9
5	6.0	6.2	5.8	5.1	148	77	15	12	8.9	8.1	8.2	6.0
6	6.0	6.2	7.8	5.1	48	40	14	8.7	12	8.1	8.1	6.0
7	6.1	6.2	6.4	5.1	26	28	13	8.5	9.0	8.4	8.1	5.8
8	6.1	6.2	7.5	5.1	17	20	13	8.3	8.9	8.6	8.0	5.8
9	6.2	6.3	7.4	5.2	14	15	13	8.3	8.8	9.0	7.7	5.7
10	6.1	6.5	7.4	5.1	14	14	13	8.6	8.8	8.9	7.5	5.6
11	6.0	6.4	7.8	5.0	14	34	13	8.3	8.7	8.8	7.4	5.6
12	6.2	6.4	7.9	5.0	14	36	13	8.4	8.6	8.8	7.4	5.7
13	6.0	6.4	28	5.0	14	21	13	8.5	8.5	8.9	7.6	6.1
14	5.8	6.4	15	5.0	14	14	13	8.6	8.4	8.9	7.2	6.9
15	5.9	6.4	18	5.4	14	14	14	12	9.2	8.2	7.0	7.1
16	6.1	6.3	9.2	22	14	14	18	e66	8.9	8.2	7.0	7.3
17	6.2	6.4	6.1	7.5	15	14	22	e65	8.8	8.2	6.8	6.5
18	6.2	6.7	5.2	15	22	14	36	e85	8.7	8.2	6.9	6.4
19	6.0	6.8	5.1	10	65	14	16	e30	8.6	8.2	7.0	6.1
20	6.0	6.8	5.1	8.0	102	14	17	e15	8.6	8.6	7.0	6.1
21	6.1	6.7	5.1	21	177	14	15	e40	8.5	8.8	6.8	6.0
22	6.0	6.8	5.3	7.8	69	14	15	e35	8.4	8.7	6.7	6.0
23	6.0	6.8	5.2	6.6	40	14	14	e35	8.3	9.4	6.7	5.9
24	6.1	6.6	5.1	41	34	14	16	e12	8.3	9.4	6.6	5.9
25	6.2	6.9	5.1	51	23	13	14	9.9	8.3	9.4	6.5	5.8
26	6.4	7.4	5.1	11	16	13	14	10.4	8.2	9.4	6.4	5.7
27	6.4	6.8	5.1	66	16	13	14	10.5	8.2	9.2	6.4	5.6
28	6.5	6.7	5.3	32	15	14	14	9.8	8.2	9.3	6.4	5.5
29	6.4	6.7	7.4	12	15	13	14	8.9	8.2	8.9	6.3	5.6
30	6.4	6.7	13	9.2	---	13	14	8.8	8.1	8.8	6.2	5.6
31	6.4	---	8.4	9.3	---	14	---	8.9	---	8.6	6.0	---
TOTAL	190.6	197.0	318.9	408.7	1166	649	528	586.3	263.4	269.2	223.4	179.8
MEAN	6.15	6.57	10.3	13.2	40.2	20.9	17.6	18.9	8.78	8.68	7.21	5.99
MAX	6.5	7.4	7.9	66	177	77	63	85	12	9.4	8.5	7.3
MIN	5.8	6.2	5.1	5.0	14	13	13	8.3	8.1	8.1	6.0	5.5
AC-FT	378	391	633	811	2310	1290	1050	1160	522	534	443	357

e Estimated.

11396395 SUCKER RUN AT KANAKA DIVERSION, NEAR FEATHER FALLS, 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	4.11	4.97	7.06	24.6	20.1	28.1	16.2	14.3	7.35	6.08	4.03	3.51
MAX	7.19	7.32	10.3	89.4	40.2	92.0	37.5	45.5	8.93	13.7	8.09	7.11
(WY)	1990	1990	1996	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	2.36	3.44	4.34	4.44	5.11	12.1	9.83	6.40	4.24	2.85	1.55	1.33
(WY)	1995	1993	1991	1991	1991	1994	1994	1992	1992	1994	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1989 - 1996			
ANNUAL TOTAL	10489.8				4980.3							
ANNUAL MEAN	28.7				13.6				11.8			
HIGHEST ANNUAL MEAN									28.2			
LOWEST ANNUAL MEAN									6.29			
HIGHEST DAILY MEAN	425				177				425			
LOWEST DAILY MEAN	5.0				5.0				1.2			
ANNUAL SEVEN-DAY MINIMUM	5.1				5.1				1.3			
INSTANTANEOUS PEAK FLOW					341				750			
INSTANTANEOUS PEAK STAGE					3.19				3.75			
ANNUAL RUNOFF (AC-FT)	20810				9880				8540			
10 PERCENT EXCEEDS	70				21				16			
50 PERCENT EXCEEDS	9.3				8.3				6.5			
90 PERCENT EXCEEDS	6.1				5.8				2.4			

11396397 SUCKER RUN AT KANAKA DIVERSION, NEAR FEATHER FALLS, CA--Continued

SUCKER RUN AND KANAKA HYDROELECTRIC PROJECT POWERPLANT,
 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	6.4	6.6	7.5	17	32	43	90	27	30	16	8.5	6.0
2	6.2	6.7	7.3	14	28	42	70	27	29	15	8.3	5.8
3	6.2	6.7	7.2	13	27	43	45	26	27	15	8.3	5.8
4	6.0	6.3	11	12	190	110	39	25	27	14	8.4	5.9
5	6.0	6.2	8.8	11	182	113	36	26	26	14	8.2	6.0
6	6.0	6.2	7.8	11	84	75	34	25	26	14	8.1	6.0
7	6.1	6.2	8.4	10	60	63	32	23	25	13	8.1	5.8
8	6.1	6.2	7.5	10	47	55	30	23	24	13	8.0	5.8
9	6.2	6.3	7.4	10	40	49	29	22	23	12	7.7	5.7
10	6.1	6.5	7.4	10	35	46	29	22	22	12	7.5	5.6
11	6.0	6.4	19	9.5	31	68	28	21	22	12	7.4	5.6
12	6.2	6.4	79	9.4	29	71	28	20	21	12	7.4	5.7
13	6.0	6.4	28	9.3	27	56	27	20	20	12	7.6	6.1
14	5.8	6.4	19	9.1	26	47	26	21	19	12	7.2	6.9
15	5.9	6.4	43	12	25	44	28	26	20	12	7.0	7.1
16	6.1	6.3	25	44	25	41	46	e89	20	11	7.0	7.3
17	6.2	6.4	16	26	34	39	52	e100	19	11	6.8	6.5
18	6.2	6.7	13	36	44	37	71	e116	19	11	6.9	6.4
19	6.0	6.8	12	35	100	36	47	e64	19	11	7.0	6.1
20	6.0	6.8	10	26	138	34	51	e49	19	11	7.0	6.1
21	6.1	6.7	10	53	205	33	44	e74	18	10	6.8	6.0
22	6.0	6.8	10	30	105	33	41	e70	18	10	6.7	6.0
23	6.0	6.8	9.8	25	75	32	38	e69	17	9.4	6.7	5.9
24	6.1	6.6	9.5	71	69	31	44	e46	17	9.4	6.6	5.9
25	6.2	6.9	9.3	87	58	29	38	41	17	9.4	6.5	5.8
26	6.4	7.4	9.0	41	49	29	35	39	19	9.4	6.4	5.7
27	6.4	6.8	9.0	101	45	29	33	37	20	9.2	6.4	5.6
28	6.5	6.7	10	68	45	32	31	36	18	9.3	6.4	5.5
29	6.4	6.7	19	44	46	28	30	34	17	8.9	6.3	5.6
30	6.4	6.7	38	36	---	27	29	33	16	8.8	6.2	5.6
31	6.4	---	24	35	---	27	---	32	---	8.6	6.0	---
TOTAL	190.6	197.0	501.9	925.3	1901	1442	1201	1283	634	355.4	223.4	179.8
MEAN	6.15	6.57	16.2	29.8	65.6	46.5	40.0	41.4	21.1	11.5	7.21	5.99
MAX	6.5	7.4	79	101	205	113	90	116	30	16	8.5	7.3
MIN	5.8	6.2	7.2	9.1	25	27	26	20	16	8.6	6.0	5.5
AC-FT	378	391	996	1840	3770	2860	2380	2540	1260	705	443	357

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	4.11	5.13	10.5	36.2	33.2	41.5	27.5	22.4	12.2	6.79	4.22	3.51
MAX	7.19	7.32	16.9	117	65.6	113	72.1	71.3	28.7	16.5	9.63	7.11
(WY)	1990	1990	1995	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	2.36	3.44	4.34	4.52	5.22	14.3	10.1	6.40	4.27	2.85	1.55	1.33
(WY)	1995	1993	1991	1991	1991	1994	1994	1992	1992	1994	1994	1992

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1989 - 1996

ANNUAL TOTAL	15279.7	9034.4	
ANNUAL MEAN	41.9	24.7	
HIGHEST ANNUAL MEAN			17.4
LOWEST ANNUAL MEAN			41.5
HIGHEST DAILY MEAN	437	205	7.86
LOWEST DAILY MEAN	5.8	5.5	1.2
ANNUAL SEVEN-DAY MINIMUM	6.0	5.7	1.3
INSTANTANEOUS PEAK FLOW		352	760
ANNUAL RUNOFF (AC-FT)	30310	17920	12630
10 PERCENT EXCEEDS	100	51	39
50 PERCENT EXCEEDS	21	14	7.3
90 PERCENT EXCEEDS	6.4	6.1	2.4

e Estimated.

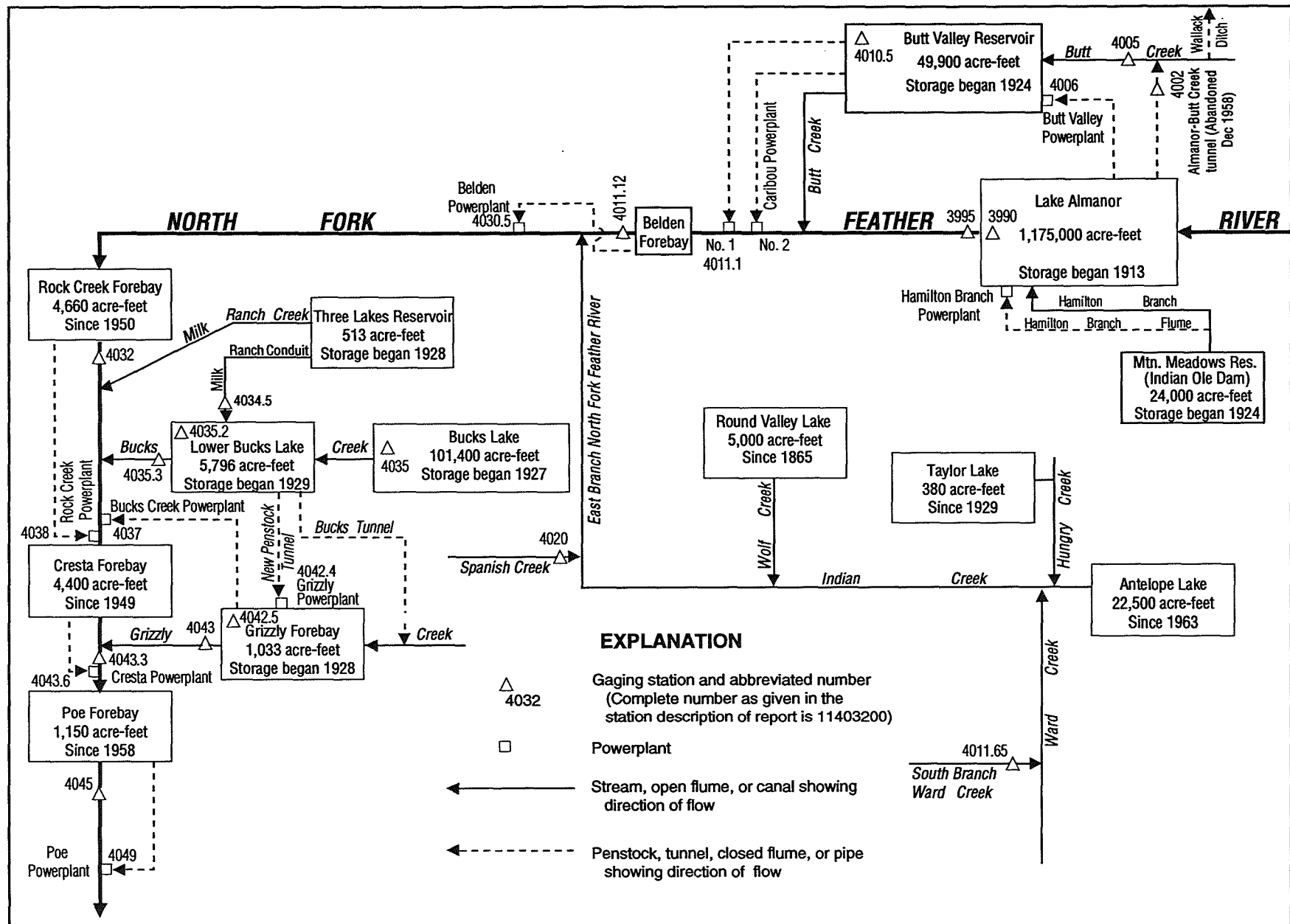


Figure 28. Diversions and storage in North Fork Feather River basin.

11399000 LAKE ALMANOR AT PRATTVILLE, CA

LOCATION.--Lat 40°12'46", long 121°09'43", in SW 1/4 NE 1/4 sec.11, T.27 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Lassen National Forest, at intake tower to Butt Valley Tunnel at Prattville, 4.7 mi northwest of Lake Almanor Dam, and 5.6 mi northwest of Canyonadam.

DRAINAGE AREA.--491 mi².

PERIOD OF RECORD.--July 1913 to current year. Monthly contents only for some periods, published in WSP 1315-A. Published as "near Prattville" 1937-60. Prior to October 1964, records published as usable contents.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is 10.23 ft below sea level (levels by Pacific Gas & Electric Co.). Prior to June 1, 1965, nonrecording gage at site 4.7 mi southeast at same datum.

REMARKS.--Lake is formed by earthfill dam; storage began in July 1913; dam raised to gage height 4,455 ft in 1917 and 4,515 ft in 1927. Usable capacity, 1,174,887 acre-ft between gage heights 4,422 ft, invert of outlet, and 4,495.5 ft, maximum storage limit. Dead storage, 8,948 acre-ft. Water is diverted by tunnel and penstock to Butt Valley Powerplant (station 11400600) and then is used for power development in the North Fork Feather River. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather 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, 1,142,960 acre-ft, June 8, 1982, gage height, 4,494.00 ft; minimum, 5,230 acre-ft, Feb. 5, 1918, gage height, 4,416.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,129,715 acre-ft, May 27, 28, gage height, 4,493.51 ft; minimum, 864,344 acre-ft, Dec. 10, gage height, 4,483.21 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on surveys by Pacific Gas & Electric Co. in 1924 and 1926)

4,422	8,948	4,434	49,510	4,460	376,686
4,424	10,067	4,437	74,189	4,470	565,519
4,426	11,260	4,440	101,869	4,480	787,304
4,428	13,480	4,445	156,414	4,490	1,036,269
4,430	21,200	4,450	220,848	4,495.5	1,183,835
4,432	34,173	4,455	294,531		

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	954693	914941	867519	874126	898525	996167	1037840	1050731	1126474	1086526	1020048	950639
2	953679	911948	867519	873881	895801	998235	1038628	1052840	1127824	1084129	1017442	948615
3	952665	907962	868007	872656	896048	1001081	1037315	1054424	1127014	1081999	1015098	946087
4	951146	904978	868496	871921	901501	1006005	1036528	1056536	1127284	1079604	1013277	943813
5	948615	902245	868007	870942	905972	1008859	1036003	1058914	1126474	1077475	1009898	941542
6	947603	899021	868007	870698	909456	1010677	1035216	1060235	1126474	1075614	1008080	939524
7	945076	896543	866297	872656	913444	1012757	1035479	1062087	1125935	1073487	1005745	937760
8	945076	893574	865565	871677	914691	1014838	1036003	1063675	1125665	1071363	1004708	935746
9	946592	890609	864588	870942	917688	1017181	1036003	1065793	1125395	1069505	1001599	933733
10	948109	887648	864344	869719	920438	1020048	1036269	1067118	1123777	1066588	999011	931722
11	949374	885922	865565	868741	922941	1024485	1036003	1068709	1122969	1064469	996942	929963
12	950133	885183	872901	868252	925447	1028144	1036003	1070567	1121353	1062352	994359	927955
13	951652	884198	876088	868741	928206	1030761	1036269	1071894	1119738	1061089	992552	926199
14	953172	885676	876333	868985	930716	1031809	1036003	1074285	1118124	1059178	989715	924444
15	954439	886908	880508	870942	932727	1034692	1036791	1077741	1116243	1057064	987912	922691
16	954439	888141	881491	874616	935494	1037840	1038103	1085993	1114094	1054687	985337	920939
17	952919	888141	880754	877069	939776	1039941	1040204	1095597	1112483	1051785	982766	919188
18	950386	886908	879525	881000	946592	1040992	1039679	1104701	1110872	1049676	980197	917188
19	947603	885922	877560	882229	954186	1040729	1039679	1110604	1108457	1047306	977376	916189
20	945581	885183	875842	883213	962310	1040992	1039153	1114631	1106311	1045463	974814	914192
21	943561	883459	875352	884937	970212	1040729	1038891	1119738	1104165	1043358	972767	912446
22	940533	881737	873391	885676	974047	1039416	1038103	1123238	1102557	1041255	970723	910701
23	939020	879525	873636	887648	978914	1038365	1037578	1125395	1100145	1039941	969446	908958
24	936249	877806	874126	888388	981738	1040467	1038891	1127284	1099074	1037315	966895	907713
25	934236	875352	873636	890115	984565	1039153	1039679	1128364	1097469	1035479	965365	905972
26	932727	873146	872656	890115	987396	1038365	1040992	1128364	1095597	1033381	962819	904232
27	930214	870698	871187	893821	989457	1037315	1041781	1129715	1093460	1031285	960531	902494
28	927202	870698	870453	895058	992810	1037053	1043621	1129715	1091858	1028929	959006	900757
29	924444	869230	869474	897039	994617	1034954	1045463	1129174	1089991	1027883	956975	899269
30	921439	868496	872656	899269	---	1033905	1047569	1128904	1088391	1025269	955200	897534
31	918438	---	874126	899764	---	1033643	---	1128634	---	1022918	952919	---
MAX	954693	914941	881491	899764	994617	1040992	1047569	1129715	1127824	1086526	1020048	950639
MIN	918438	868496	864344	868252	895801	996167	1035216	1050731	1088391	1022918	952919	897534
a	4485.40	4483.38	4483.61	4484.65	4488.40	4489.90	4490.43	4493.47	4491.97	4489.49	4486.87	4484.56
b	-35494	-49942	+5630	+25638	+94853	+39026	+13926	+81065	-40243	-65473	-69999	-55385

CAL YR 1995 MAX 1137013 MIN 695730 b +179072

WTR YR 1996 MAX 1129715 MIN 864344 b -56398

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

b Change in contents, in acre-feet.

11399500 NORTH FORK FEATHER RIVER NEAR PRATTVILLE, CA

LOCATION.--Lat 40°10'06", long 121°05'31", in NE 1/4 SW 1/4 sec.28, T.27 N., R.8 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.4 mi downstream from Almanor Dam, 4.5 mi southeast of Prattville, and 9 mi upstream from Butt Creek.

DRAINAGE AREA.--493 mi².

PERIOD OF RECORD.--June 1905 to current year. Published as "below Prattville" prior to 1911. No record for January, February, or March 1911. Estimated mean discharge for water year 1911 published in WSP 1315-A.

REVISED RECORDS.--WSP 1245: 1951 (yearly summaries). WSP 1285: 1952 (yearly summaries). WDR CA-88-4: 1987 (monthly and yearly totals for Butt Valley Powerplant).

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 4,379.86 ft above sea level. Prior to Oct. 1, 1936, nonrecording gages or water-stage recorders at several sites within 0.5 mi of present site at various datums.

REMARKS.--Flow regulated since 1913 by Lake Almanor (station 11399000) 0.5 mi upstream and since 1924 by Mountain Meadows Reservoir, capacity, 24,000 acre-ft, 12 mi upstream on Hamilton Branch. Water diverted from Lake Almanor to Butt Valley Reservoir (station 11401050) through old Almanor-Butt Creek Tunnel from May 1921 to December 1958, for use at Caribou Powerplant. Old tunnel closed Dec. 30, 1958, and diversion began Dec. 31, 1958, to Butt Valley Powerplant (station 11400600) at upstream end of Butt Valley Reservoir. See schematic diagram of North Fork Feather 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, 10,000 ft³/s, Mar. 19, 1907, before construction of dam, gage height, 16.2 ft, at former site, from rating curve extended above 3,700 ft³/s; no flow at times during 1914, 1919, 1923.

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	36	34	33	37	40	36	36	707	694	706	399
2	37	36	34	33	37	40	36	36	706	693	705	398
3	37	36	34	34	37	40	36	36	705	693	703	398
4	37	35	34	35	38	40	36	36	704	692	703	396
5	37	35	34	35	38	40	36	36	606	691	702	436
6	37	35	34	35	38	40	36	36	458	689	698	505
7	37	35	34	35	38	38	36	36	458	688	693	503
8	37	35	34	35	38	36	36	36	458	687	695	502
9	37	35	34	35	38	36	36	36	458	685	698	490
10	37	35	34	35	38	36	36	36	571	683	696	430
11	37	35	34	35	39	36	36	36	693	682	694	398
12	37	35	35	35	39	37	35	36	692	682	693	402
13	37	35	34	35	39	37	35	36	692	681	692	407
14	37	35	34	35	39	37	35	36	689	681	690	406
15	37	35	34	35	39	37	35	36	688	679	691	406
16	37	35	34	35	39	37	36	36	688	677	696	405
17	37	35	34	35	39	37	36	285	687	677	694	407
18	37	35	33	36	38	37	36	708	697	676	692	407
19	37	35	33	37	41	37	36	711	709	673	690	401
20	36	35	33	37	41	36	36	715	708	672	689	398
21	36	35	33	37	42	36	35	720	706	672	602	398
22	36	35	33	37	41	36	35	724	704	682	392	398
23	36	35	33	37	40	36	35	723	703	700	342	397
24	36	35	33	37	40	36	35	724	703	698	401	396
25	36	35	33	37	40	35	35	725	703	695	399	395
26	36	34	33	37	40	35	35	725	702	696	401	394
27	36	34	33	38	40	36	35	726	700	694	402	393
28	37	34	33	37	40	36	35	726	698	693	402	392
29	36	34	33	37	40	36	35	717	698	702	402	391
30	36	34	33	37	---	35	35	707	696	709	402	391
31	36	---	33	38	---	35	---	708	---	708	400	---
TOTAL	1136	1048	1041	1109	1134	1146	1066	10920	19787	21324	18465	12439
MEAN	36.6	34.9	33.6	35.8	39.1	37.0	35.5	352	660	688	596	415
MAX	37	36	35	38	42	40	36	726	709	709	706	505
MIN	36	34	33	33	37	35	35	36	458	672	342	391
AC-FT	2250	2080	2060	2200	2250	2270	2110	21660	39250	42300	36630	24670
a	79940	89600	67020	38730	8920	40670	90370	16280	16230	62500	63050	61910

a Diversion, in acre-feet, to Butt Valley Powerplant, provided by Pacific Gas & Electric Co.

11399500 NORTH FORK FEATHER RIVER NEAR PRATTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1958, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	498	393	371	282	349	272	318	327	349	479	602	569
MAX	1607	1414	1418	1489	2124	1609	1852	2206	1065	1280	1755	1762
(WY)	1931	1931	1938	1946	1938	1929	1938	1938	1935	1929	1929	1929
MIN	3.80	3.32	3.41	3.20	3.20	3.61	2.63	2.02	2.11	8.02	3.72	3.16
(WY)	1942	1940	1937	1944	1944	1944	1939	1939	1939	1943	1937	1937

SUMMARY STATISTICS

WATER YEARS 1925 - 1958

ANNUAL TOTAL	
ANNUAL MEAN	401
HIGHEST ANNUAL MEAN	1061
LOWEST ANNUAL MEAN	27.1
HIGHEST DAILY MEAN	2670
LOWEST DAILY MEAN	.50
ANNUAL SEVEN-DAY MINIMUM	.87
INSTANTANEOUS PEAK FLOW	2710
INSTANTANEOUS PEAK STAGE	6.95
ANNUAL RUNOFF (AC-FT)	290600
10 PERCENT EXCEEDS	1060
50 PERCENT EXCEEDS	60
90 PERCENT EXCEEDS	4.4

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	35.3	31.8	32.1	33.2	34.8	34.0	42.3	51.0	70.5	65.4	50.8	45.3
MAX	50.3	40.6	40.4	48.1	64.6	53.7	293	352	660	688	596	415
(WY)	1982	1969	1979	1974	1978	1978	1983	1996	1996	1996	1996	1996
MIN	17.3	8.65	7.47	8.67	10.0	9.90	10.1	15.7	16.0	15.4	14.9	15.0
(WY)	1978	1960	1960	1960	1962	1964	1964	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1960 - 1996

ANNUAL TOTAL	23184	90615	
ANNUAL MEAN	63.5	248	43.9
HIGHEST ANNUAL MEAN			248
LOWEST ANNUAL MEAN			22.3
HIGHEST DAILY MEAN	730	May 6	803
LOWEST DAILY MEAN	33	Dec 18	2.9
ANNUAL SEVEN-DAY MINIMUM	33	Dec 18	4.7
INSTANTANEOUS PEAK FLOW		730	10000
INSTANTANEOUS PEAK STAGE		4.80	16.20
ANNUAL RUNOFF (AC-FT)	45990	179700	31810
ANNUAL DIVERSION (AC-FT) a	1013000	635200	
10 PERCENT EXCEEDS	38	699	39
50 PERCENT EXCEEDS	37	37	36
90 PERCENT EXCEEDS	35	34	31

a Diversion, in acre-feet, to Butt Valley Powerplant, provided by Pacific Gas & Electric Co.

11400500 BUTT CREEK BELOW ALMANOR-BUTT CREEK TUNNEL, NEAR PRATTVILLE, CA

LOCATION.--Lat 40°11'14", long 121°11'13", in NE 1/4 NW 1/4 sec.22, T.27 N., R.7 E., Plumas County, Hydrologic Unit 18020121, on right bank 500 ft downstream from outlet of old Almanor-Butt Creek Tunnel, and 2.2 mi southwest of Prattville.

DRAINAGE AREA.--69.3 mi².

PERIOD OF RECORD.--October 1936 to September 1959, October 1964 to current year. Published as "below tunnel No. 1" 1938-40. Records for water years 1937-38 published in WSP 1515. Records prior to 1964 not equivalent owing to inflow from Almanor-Butt Creek Tunnel.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,300 ft above sea level, from topographic map. Prior to Oct. 5, 1937, at site 200 ft downstream at datum 4 ft lower.

REMARKS.--No regulation upstream from station. Howell-Bunger valve in conduit from Lake Almanor (station 11399000) to Butt Valley Powerplant (station 11400600) is opened for short periods several times a year, causing sharp peaks. Wallack Ditch upstream from station diverts about 3 ft³/s during each irrigation season into Yellow Creek basin. Some inflow 500 ft upstream that is the leakage from the abandoned Almanor-Butt Creek Tunnel at Outlet (station 11400200) is included in the table below. See schematic diagram of North Fork Feather 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, 3,870 ft³/s, Feb. 17, 1986, gage height, 5.90 ft, from rating curve extended above 1,400 ft³/s; minimum daily, 26 ft³/s, several days during May and June 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	60	60	62	88	82	133	334	220	136	71	64	55
2	58	60	63	81	81	131	285	225	132	71	63	55
3	57	60	59	79	80	137	240	218	127	75	63	55
4	57	60	77	75	180	161	218	201	124	74	64	55
5	57	60	68	72	317	150	212	191	120	74	63	56
6	58	60	62	72	207	136	216	182	114	73	63	55
7	60	60	63	71	172	132	229	179	110	73	61	55
8	60	59	60	70	156	135	243	174	108	73	58	55
9	60	58	58	73	146	144	240	194	105	72	59	55
10	60	58	60	77	146	150	236	176	385	71	58	54
11	60	58	83	71	147	171	216	175	303	70	58	54
12	60	58	417	69	146	171	204	182	98	69	58	54
13	59	58	148	67	148	159	192	190	93	72	59	56
14	60	58	90	66	145	155	187	198	83	81	58	56
15	60	58	101	93	142	162	199	205	79	72	57	58
16	60	58	86	195	170	170	274	417	77	70	57	56
17	60	58	75	157	282	176	232	564	76	69	58	55
18	60	58	72	114	407	190	216	570	75	68	58	55
19	60	58	70	107	521	204	196	411	75	67	58	54
20	60	58	67	96	458	215	180	305	72	66	58	54
21	60	58	65	92	514	215	172	361	75	66	57	54
22	59	58	65	86	325	213	171	307	73	66	56	54
23	60	58	64	84	248	192	170	244	198	66	56	54
24	60	57	60	85	217	181	251	217	425	66	57	54
25	60	60	61	94	191	172	234	199	299	65	57	54
26	60	66	62	86	173	162	228	186	82	65	57	53
27	61	59	64	92	159	173	222	183	80	65	56	52
28	61	58	63	93	149	276	208	167	78	69	55	52
29	61	58	71	86	142	192	203	159	76	68	56	52
30	60	58	98	85	---	178	211	150	73	66	56	52
31	60	---	121	83	---	175	---	142	---	64	55	---
TOTAL	1848	1765	2635	2759	6251	5311	6619	7492	3951	2157	1813	1633
MEAN	59.6	58.8	85.0	89.0	216	171	221	242	132	69.6	58.5	54.4
MAX	61	66	417	195	521	276	334	570	425	81	64	58
MIN	57	57	58	66	80	131	170	142	72	64	55	52
AC-FT	3670	3500	5230	5470	12400	10530	13130	14860	7840	4280	3600	3240
a	541	526	521	555	536	580	539	594	581	603	591	571

a Inflow, in acre-feet, from Almanor-Butt Creek Tunnel at Outlet, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11400500 BUTT CREEK BELOW ALMANOR-BUTT CREEK TUNNEL, NEAR PRATTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	390	360	370	309	310	343	350	388	384	408	400	396
MAX	985	1073	1419	1098	1025	1050	1178	1176	1092	1038	1019	990
(WY)	1943	1938	1959	1953	1941	1953	1952	1956	1958	1953	1953	1953
MIN	32.3	39.2	39.3	39.4	38.0	47.8	47.5	42.7	32.9	28.7	27.8	29.4
(WY)	1989	1992	1991	1992	1937	1977	1977	1976	1976	1977	1977	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1937 - 1996			
ANNUAL TOTAL	67124				44234							
ANNUAL MEAN	184				121				368			
HIGHEST ANNUAL MEAN									974			
LOWEST ANNUAL MEAN									40.1			
HIGHEST DAILY MEAN	1480				570				2830			
LOWEST DAILY MEAN	41				52				26			
ANNUAL SEVEN-DAY MINIMUM	41				53				26			
INSTANTANEOUS PEAK FLOW					789				3870			
INSTANTANEOUS PEAK STAGE					2.96				5.90			
ANNUAL RUNOFF (AC-FT)	133100				87740				266300			
ANNUAL TOTAL, INFLOW (AC-FT) a	6250				6740							
10 PERCENT EXCEEDS	384				221				993			
50 PERCENT EXCEEDS	92				74				103			
90 PERCENT EXCEEDS	58				57				42			

a Inflow, in acre-feet, from Almanor-Butt Creek Tunnel at Outlet, provided by Pacific Gas & Electric Co.

11401050 BUTT VALLEY RESERVOIR NEAR CARIBOU, CA

LOCATION.--Lat 40°06'59", long 121°08'42", in SE 1/4 SW 1/4 sec.12, T.26 N., R.7 E., Plumas County, Hydrologic Unit 18020121, on center intake tower in Butt Valley Reservoir, 2.5 mi north of Caribou, and 5.4 mi southwest of Canyon Dam.

DRAINAGE AREA.--83.5 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1983-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 10.23 ft below sea level (levels by Great Western Power Co.).

REMARKS.--Lake is formed by earthfill dam. Storage began in 1924. Usable capacity, 49,930 acre-ft between elevations 4,075.9 ft, invert of outlet tunnel, and 4,132.1 ft, crest of spillway. Water is diverted by tunnel and penstock to Caribou powerplants (station 11401110). Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather 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, 52,667 acre-ft, Feb. 18, 19, 1986, elevation, 4,133.80 ft; minimum, 4,341 acre-ft, June 23, 1996, elevation, 4,095.04 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,131 acre-ft, Feb. 10, elevation, 4,131.60 ft; minimum, 4,341 acre-ft, June 23, elevation, 4,095.04 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by Great Western Power Co. in 1923 and 1924)

4,090	1,754	4,120	31,592
4,100	8,024	4,130	46,591
4,110	18,395	4,137	57,891

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	42541	35701	29696	33955	43932	33883	32875	15257	4393	4373	4419	4419
2	42618	35555	29696	34460	45570	34244	33162	14722	4393	4360	4438	4438
3	43157	35481	29417	33883	45727	34679	33594	14175	4432	4406	4432	4445
4	43621	35335	29139	33883	46828	35336	33667	13634	4451	4406	4451	4406
5	45256	35263	29626	33811	47699	35919	33811	13103	4393	4432	4438	4386
6	44787	35190	29835	33233	48333	36289	34027	12580	4419	4419	4432	4406
7	43932	35044	30113	33306	48812	36658	33017	12056	4451	4412	4406	4432
8	43311	34971	29765	32590	48892	37027	32376	11570	4451	4393	4380	4425
9	43465	34825	28930	33378	48812	37471	32162	11105	4451	4406	4432	4419
10	43543	34752	28035	33522	49131	37919	30747	10607	4380	4386	4425	4419
11	43621	34898	29139	34388	49051	38591	28861	10160	4393	4445	4412	4406
12	43698	34825	32804	35335	49051	39191	27416	9680	4406	4451	4432	4412
13	44010	34388	33594	35919	48971	39720	25858	9242	4406	4484	4445	4451
14	44243	32661	33667	36510	48971	40173	24747	8791	4399	4432	4451	4458
15	44321	31028	33811	37027	48732	40022	24787	8382	4406	4438	4464	4471
16	42926	29000	32889	38217	48732	38516	24339	8234	4412	4445	4419	4464
17	42464	27966	32091	38591	48652	34971	23655	8190	4412	4445	4445	4484
18	41849	28585	31451	39418	48812	32804	23017	7925	4425	4477	4471	4451
19	41239	28930	32590	40097	48732	33090	22500	7518	4412	4477	4432	4432
20	40628	28722	33666	41086	48016	34316	21860	7108	4425	4432	4412	4412
21	39946	29696	34388	41925	47224	34971	21227	6872	4432	4399	4399	4412
22	39267	30113	35190	42156	45963	34099	20611	6103	4438	4406	4419	4438
23	38591	28654	34971	43311	44632	33955	20004	5738	4341	4412	4432	4451
24	37919	27760	33667	44243	43157	33162	19414	5399	4406	4412	4445	4451
25	37174	27691	33233	44321	41010	33161	18808	5078	4451	4419	4438	4458
26	36510	29000	33324	44477	37994	33162	18147	4751	4458	4419	4432	4438
27	36215	29417	33017	45257	34099	33667	17697	4484	4464	4399	4471	4432
28	36141	28791	33017	45570	32732	34316	16957	4406	4412	4412	4445	4425
29	35993	28653	33522	45178	33450	34388	16368	4412	4419	4419	4484	4425
30	35919	29209	33234	44243	---	34460	15808	4406	4432	4432	4393	4393
31	35847	---	32804	43776	---	33306	---	4406	---	4406	4406	---
MAX	45256	35701	35190	45570	49131	40173	34027	15257	4464	4477	4484	4484
MIN	35847	27691	28035	32590	32732	32804	15808	4406	4341	4360	4380	4386
a	4122.95	4118.30	4120.85	4128.20	4121.30	4121.20	4107.78	4095.14	4095.18	4095.14	4095.14	4095.12
b	-8318	-6638	+3595	+10972	-10326	-144	-17498	-11402	+26	-26	0	-13
c	87500	95810	68170	34420	36530	54310	120500	63420	59970	64230	63440	61910

CAL YR 1995 MAX 47937 MIN 27691 b -4667 c 1151000

WTR YR 1996 MAX 49131 MIN 4341 b -39772 c 810200

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Discharge, in acre-feet, through Caribou powerplants, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA

LOCATION.--Lat 40°04'17", long 121°09'49", in NE 1/4 NW 1/4 sec.35, T.26 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.4 mi downstream from Belden Dam, 0.5 mi upstream from Deadwood Canyon, and 6.4 mi northeast of Belden.

DRAINAGE AREA.--612 mi².

PERIOD OF RECORD.--October 1969 to current year. July 1959 to September 1969 in files of Pacific Gas & Electric Co.

REVISED RECORDS.--WDR CA-78-4: 1977 (monthly and yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 2,800.77 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Flow regulated by Butt Valley Reservoir (station 11401050), Lake Almanor (station 11399000), Belden Reservoir, and Mountain Meadows Reservoir, combined capacity, 1,267,000 acre-ft. Diversion to Belden Powerplant (station 11403050) began on Aug. 27, 1969. See schematic diagram of North Fork Feather 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, 3,230 ft³/s, Sept. 30, 1987, gage height, 8.96 ft; minimum daily, 2.3 ft³/s, Oct. 25, 1981.

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	62	63	63	64	64	102	65	143	141	142	141	142
2	62	63	62	64	64	103	64	142	142	141	141	119
3	62	62	62	64	64	103	64	141	144	143	141	61
4	62	63	63	64	64	151	64	141	143	142	141	62
5	62	63	63	64	64	151	64	142	142	143	142	61
6	62	63	62	64	65	192	64	142	142	142	143	61
7	63	63	63	63	64	178	63	142	142	143	142	60
8	63	63	63	64	64	159	64	142	142	143	142	61
9	62	63	63	64	64	158	64	142	142	142	142	61
10	62	63	63	64	64	158	65	142	143	142	142	61
11	62	63	63	64	63	159	64	142	143	142	142	61
12	62	63	63	64	64	243	64	143	142	142	142	61
13	61	63	62	64	64	184	64	143	142	142	142	61
14	62	63	63	64	64	157	63	142	141	142	143	61
15	61	63	63	63	64	88	63	142	142	144	142	62
16	61	63	62	64	64	66	65	142	141	144	142	61
17	63	63	63	63	64	65	65	144	141	141	141	62
18	62	63	63	64	64	64	65	144	142	141	141	61
19	63	63	64	64	64	64	65	142	142	141	141	61
20	64	63	63	64	64	64	65	141	141	141	141	61
21	63	64	63	64	64	65	65	142	142	142	141	61
22	63	63	63	63	63	65	65	142	142	141	141	61
23	62	63	63	64	63	65	64	142	143	142	141	61
24	62	62	63	65	63	65	63	143	142	141	142	61
25	62	63	62	63	64	64	108	142	143	141	141	61
26	63	62	62	63	64	65	144	142	141	141	141	61
27	62	63	62	63	64	65	143	142	140	142	141	61
28	62	62	63	64	64	65	143	142	142	142	142	61
29	62	62	64	64	79	65	143	143	143	142	143	61
30	62	63	64	64	---	65	142	144	141	142	141	61
31	64	---	64	64	---	65	---	141	---	141	142	---
TOTAL	1930	1886	1949	1978	1868	3323	2364	4409	4259	4400	4390	1971
MEAN	62.3	62.9	62.9	63.8	64.4	107	78.8	142	142	142	142	65.7
MAX	64	64	64	65	79	243	144	144	144	144	143	142
MIN	61	62	62	63	63	64	63	141	140	141	141	60
AC-FT	3830	3740	3870	3920	3710	6590	4690	8750	8450	8730	8710	3910
a	91150	98840	70910	35760	44420	58760	127900	84960	97770	103800	96500	86760

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

SACRAMENTO RIVER BASIN

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11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA--Continued

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	140	152	129	104	96.4	107	168	173	147	139	135	130
MAX	1414	2487	1664	861	605	591	743	549	374	199	173	1134
(WY)	1975	1975	1975	1975	1975	1975	1983	1995	1995	1970	1970	1987
MIN	57.8	38.4	45.2	51.6	51.2	50.0	63.1	62.2	56.5	64.2	89.0	61.9
(WY)	1985	1981	1976	1976	1976	1976	1972	1971	1971	1971	1972	1976

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1970 - 1996			
ANNUAL TOTAL	61819				34727							
ANNUAL MEAN	169				94.9				135			
HIGHEST ANNUAL MEAN									745			
LOWEST ANNUAL MEAN									76.3			
HIGHEST DAILY MEAN	1570				May 2				2800			
LOWEST DAILY MEAN	60				Sep 11				2.3			
ANNUAL SEVEN-DAY MINIMUM	61				Sep 10				3.5			
INSTANTANEOUS PEAK FLOW					298				3230			
INSTANTANEOUS PEAK STAGE					4.38				8.96			
ANNUAL RUNOFF (AC-FT)	122600				68880				97920			
ANNUAL DIVERSION (AC-FT) a	1187000				997500							
10 PERCENT EXCEEDS	432				143				150			
50 PERCENT EXCEEDS	66				64				68			
90 PERCENT EXCEEDS	62				62				60			

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

SACRAMENTO RIVER BASIN

11401165 SOUTH BRANCH WARD CREEK BELOW DIVERSION DAM, NEAR GENESEE, CA

LOCATION.--Lat 40°00'07", long 120°42'07", in SE 1/4 NE 1/4 sec.26, T.25 N., R.11 E., Plumas County, Hydrologic Unit 18020122, on left bank 20 ft downstream from diversion dam, 30 ft downstream from Nye Creek, 3.5 mi upstream from Indian Creek, and 3.8 mi southeast of Genesee.

DRAINAGE AREA.--6.74 mi².

PERIOD OF RECORD.--October 1990 to current year (low flow records only).

GAGE.--Water-stage recorder and V-notch sharp-crested weir in concrete control. Elevation of gage is 5,300 ft above sea level, from topographic map.

REMARKS.--No records computed above 12 ft³/s. Flow regulated at diversion dam 20 ft upstream. Some water is diverted to Five Bears Powerplant and bypasses this gage. See schematic diagram of North Fork Feather River basin.

COOPERATION.--Records were collected by Henwood Energy Services Inc., 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	4.1	4.7	5.8	3.6	3.5	9.0	11	---	---	3.2	3.1	3.2
2	4.1	4.7	5.5	3.7	3.5	8.9	10	---	---	3.2	3.1	3.6
3	4.1	4.8	5.3	3.7	3.5	9.1	10	---	12	3.2	3.1	3.9
4	4.1	4.8	4.7	3.7	---	9.4	10	---	12	3.2	3.1	3.9
5	4.1	4.8	3.8	3.7	---	9.8	10	---	12	3.2	3.1	4.0
6	4.1	4.8	3.8	3.7	11	10	10	---	12	3.2	3.1	4.0
7	4.1	4.8	3.7	4.4	5.9	10	10	---	12	3.2	3.1	3.9
8	4.1	4.8	3.7	4.0	4.1	10	12	---	12	3.2	3.1	3.9
9	4.1	4.8	3.7	3.9	4.0	10	---	---	12	3.2	3.1	3.9
10	4.1	4.8	3.6	3.7	4.0	11	12	---	12	3.2	e3.1	3.9
11	4.1	4.8	3.7	3.7	4.1	10	11	---	12	3.2	e3.1	3.8
12	4.1	4.8	3.7	3.8	4.4	10	10	---	11	3.2	e3.1	3.8
13	4.2	4.8	3.7	3.7	4.7	10	10	---	11	3.3	e3.1	4.0
14	4.6	4.8	3.7	3.7	4.3	10	10	---	11	3.2	e3.2	4.1
15	4.6	4.8	3.6	3.7	4.3	10	11	---	6.5	3.2	e3.2	4.5
16	4.6	4.8	3.6	3.7	4.3	10	---	---	4.0	3.1	e3.2	4.3
17	4.6	4.8	3.6	3.6	---	10	12	---	3.9	3.1	e3.2	4.2
18	4.6	4.8	3.6	3.8	---	10	10	---	4.0	3.1	e3.2	4.1
19	4.6	4.8	3.6	3.8	---	10	10	---	3.9	3.1	3.2	4.0
20	4.6	4.8	3.6	3.7	---	10	10	---	3.9	3.1	3.2	4.0
21	4.6	4.8	3.7	3.7	8.2	11	10	---	3.8	3.1	3.1	3.9
22	4.7	4.8	3.7	3.7	4.5	10	10	---	3.8	3.1	3.1	3.9
23	4.7	4.8	3.7	3.7	4.1	10	10	---	3.8	3.1	3.1	3.9
24	4.7	4.8	3.6	3.7	5.1	10	---	---	3.8	3.1	3.1	3.9
25	4.7	5.5	3.6	3.7	4.7	10	---	---	3.8	3.1	3.1	3.8
26	4.7	5.5	3.6	3.7	4.9	10	---	---	3.8	3.1	3.1	3.7
27	4.7	5.1	3.6	3.7	5.1	10	---	---	3.8	3.1	3.2	3.7
28	4.7	5.1	3.6	3.7	3.8	10	---	---	3.5	3.1	3.2	3.7
29	4.7	5.0	3.6	3.7	3.7	10	---	12	3.2	3.1	3.2	3.7
30	4.7	5.0	3.6	3.7	---	10	---	11	3.2	3.1	3.2	3.7
31	4.7	---	3.6	3.7	---	10	---	12	---	3.1	3.2	---
TOTAL	137.2	146.2	119.9	116.0	---	308.2	---	---	---	97.7	97.3	116.9
MEAN	4.43	4.87	3.87	3.74	---	9.94	---	---	---	3.15	3.14	3.90
MAX	4.7	5.5	5.8	4.4	---	11	---	---	---	3.3	3.2	4.5
MIN	4.1	4.7	3.6	3.6	---	8.9	---	---	---	3.1	3.1	3.2
AC-FT	272	290	238	230	---	611	---	---	---	194	193	232

e Estimated.

11402000 SPANISH CREEK ABOVE BLACKHAWK CREEK, AT KEDDIE, CA

LOCATION.--Lat 40°00'11", long 120°57'12", in SE 1/4 NE 1/4 sec.27, T.25 N., R.9 E., Plumas County, Hydrologic Unit 18020122, on right bank 200 ft upstream from Blackhawk Creek and 0.9 mi southeast of Keddle.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1041: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 3,129.86 ft above sea level.

REMARKS.--Records good. Low flow regulated by five small reservoirs having a combined capacity of 800 acre-ft. Approximately 4,600 acres irrigated upstream from station (from information provided by U.S. Forest Service). City of Quincy diverts about 450 acre-ft annually for municipal supply. See schematic diagram of North Fork Feather River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft³/s, Feb. 17, 1986, gage height, 14.88 ft, from rating curve extended above 5,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 3.0 ft³/s, Sept. 4, 5, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1430	3,530	6.74	Feb. 21	0930	5,630	8.39
Jan. 16	1845	2,640	5.95	Mar. 5	0015	1,840	5.26
Jan. 27	2100	1,950	5.32	May 18	0230	3,640	6.87
Feb. 4	1700	5,560	8.34				

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	44	54	60	169	376	404	901	442	307	96	47	35
2	44	54	70	149	339	392	1110	447	289	89	45	34
3	38	53	61	138	304	411	935	429	269	83	45	31
4	44	54	64	130	2690	967	738	387	252	85	49	30
5	48	55	69	122	3570	1370	629	361	235	87	44	30
6	43	54	67	115	1620	819	586	340	214	83	43	31
7	46	52	71	110	1030	638	592	332	209	81	39	37
8	45	52	64	107	836	564	617	322	204	77	41	36
9	49	55	61	107	732	562	615	309	195	78	40	37
10	44	55	61	122	682	605	569	297	185	76	44	35
11	46	54	108	111	632	835	510	289	178	73	47	34
12	45	54	2040	106	563	1100	467	303	171	71	47	31
13	44	53	658	102	525	924	431	312	158	73	50	34
14	47	54	279	99	486	736	402	343	154	86	47	35
15	48	53	460	139	446	648	410	387	148	74	44	41
16	51	54	321	984	493	617	813	1170	150	69	43	67
17	51	54	207	829	979	591	710	2280	142	66	37	51
18	51	54	173	460	1420	610	779	2670	139	62	36	50
19	49	55	153	682	3310	640	683	1650	134	57	32	46
20	47	54	139	415	3580	668	593	1070	132	61	31	46
21	46	54	126	423	4050	631	516	971	131	63	34	40
22	47	54	119	331	2070	602	483	948	125	55	35	42
23	48	54	115	255	1270	514	477	720	120	46	25	46
24	54	54	106	428	1010	445	588	593	114	44	27	45
25	52	56	101	809	795	403	603	519	113	40	37	42
26	51	71	98	424	643	366	555	471	117	41	37	40
27	54	60	98	1140	552	357	522	468	119	45	34	39
28	54	57	108	983	489	772	463	410	112	53	34	37
29	53	57	109	517	443	523	424	377	104	60	34	38
30	50	56	149	399	---	434	423	347	100	48	31	34
31	50	---	195	396	---	396	---	326	---	47	34	---
TOTAL	1483	1650	6510	11301	35935	19544	18144	20290	5020	2069	1213	1174
MEAN	47.8	55.0	210	365	1239	630	605	655	167	66.7	39.1	39.1
MAX	54	71	2040	1140	4050	1370	1110	2670	307	96	50	67
MIN	38	52	60	99	304	357	402	289	100	40	25	30
AC-FT	2940	3270	12910	22420	71280	38770	35990	40250	9960	4100	2410	2330

11402000 SPANISH CREEK ABOVE BLACKHAWK CREEK, AT KEDDIE, 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	58.9	131	276	407	512	566	570	433	170	51.8	28.6	30.4
MAX	702	1015	1498	2150	2843	2043	1715	1301	755	187	74.6	63.8
(WY)	1963	1982	1956	1970	1986	1995	1952	1938	1983	1983	1983	1983
MIN	18.4	34.9	35.3	37.5	50.5	56.1	44.3	50.6	18.6	10.8	5.10	7.57
(WY)	1989	1991	1977	1937	1991	1977	1977	1977	1977	1934	1934	1934

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1934 - 1996			
ANNUAL TOTAL	237324				124333							
ANNUAL MEAN	650				340				268			
HIGHEST ANNUAL MEAN									641			
LOWEST ANNUAL MEAN									34.1			
HIGHEST DAILY MEAN	9490				Mar 10				14200			
LOWEST DAILY MEAN	38				Oct 3				3.0			
ANNUAL SEVEN-DAY MINIMUM	41				Sep 15				4.4			
INSTANTANEOUS PEAK FLOW					5630				Feb 21			
INSTANTANEOUS PEAK STAGE					8.39				Feb 21			
ANNUAL RUNOFF (AC-FT)	470700				246600				194300			
10 PERCENT EXCEEDS	1440				799				646			
50 PERCENT EXCEEDS	266				115				88			
90 PERCENT EXCEEDS	48				40				24			

11403200 NORTH FORK FEATHER RIVER BELOW ROCK CREEK DIVERSION DAM, CA

LOCATION.--Lat 39°58'49", long 121°16'33", in SW 1/4 NW 1/4 sec.35, T.25 N., R.6 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 0.7 mi downstream from Rock Creek Diversion Dam and 5.0 mi northeast of Storrie.

DRAINAGE AREA.--1,773 mi².

PERIOD OF RECORD.--October 1985 to February 1986, October 1986 to current year. Unpublished records for water years 1982-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 2,120 ft above sea level, from topographic map.

REMARKS.--Low and medium flow regulated by Rock Creek Forebay 0.7 mi upstream. Most of the flow is diverted to Rock Creek powerplant (station 11403800). Diversion to Rock Creek Powerplant began Feb. 28, 1950. See schematic diagram of North Fork Feather 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, 79,400 ft³/s, Feb. 19, 1986, gage height, unknown, on basis of slope-area measurement of peak flow; minimum daily, 50 ft³/s, Feb. 7, 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	124	87	54	61	91	97	3640	1070	646	113	118	112
2	123	53	53	61	90	97	5130	915	555	114	118	112
3	123	53	53	61	89	96	4760	1090	435	113	118	110
4	123	53	54	61	4100	488	3880	669	328	112	119	109
5	123	53	54	60	10100	2310	3350	550	225	112	118	110
6	123	149	53	60	5040	760	3210	393	127	113	119	111
7	122	791	53	60	2170	318	3310	284	133	113	119	112
8	114	796	52	58	2000	148	3410	148	134	113	119	113
9	72	783	52	60	1360	98	4210	120	133	112	118	113
10	55	782	53	60	799	98	4270	183	130	112	118	114
11	54	123	57	60	845	788	3090	118	126	112	119	113
12	59	54	5400	58	462	2120	2840	117	124	112	119	112
13	68	53	1350	66	289	1760	2550	272	120	112	118	112
14	89	53	61	76	91	1110	2310	348	115	112	119	112
15	121	53	73	79	88	1090	1740	533	115	112	119	113
16	122	54	66	137	114	1710	3600	3510	115	113	119	113
17	122	53	63	532	2030	2700	3880	8250	115	113	118	113
18	121	54	61	118	7510	3100	3800	10400	114	112	118	114
19	121	53	61	120	9830	3130	3570	7840	114	113	118	113
20	120	53	61	119	12800	2990	3050	5370	113	113	121	113
21	122	53	60	120	13200	2930	2700	3080	113	113	121	112
22	122	53	59	111	8040	4110	2480	1760	112	114	122	112
23	122	53	59	92	5020	3200	2140	1310	112	113	120	112
24	122	53	59	103	3410	1180	2500	2390	113	114	118	113
25	122	54	59	104	2620	1580	2560	3070	113	113	119	110
26	122	54	59	97	2350	1460	2320	1500	113	113	118	113
27	122	54	59	205	2340	2120	2210	1450	112	113	118	113
28	122	53	59	476	990	3410	1590	1240	113	114	118	112
29	122	53	62	97	98	2950	1240	1150	113	114	117	111
30	122	54	63	94	---	2480	1090	952	113	113	116	111
31	123	---	62	93	---	2230	---	778	---	115	113	---
TOTAL	3442	4737	8444	3559	97966	52658	90430	60860	5144	3500	3672	3363
MEAN	111	158	272	115	3378	1699	3014	1963	171	113	118	112
MAX	124	796	5400	532	13200	4110	5130	10400	646	115	122	114
MIN	54	53	52	58	88	96	1090	117	112	112	113	109
AC-FT	6830	9400	16750	7060	194300	104400	179400	120700	10200	6940	7280	6670
a	101200	117900	117800	125400	180200	193600	189500	195400	162000	135400	120000	104600

a Diversion, in acre-feet, to Rock Creek Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11403200 NORTH FORK FEATHER RIVER BELOW ROCK CREEK DIVERSION DAM, 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	110	79.7	76.9	320	495	1660	1020	1060	371	111	106	104
MAX	175	171	272	2362	3378	8612	5384	7371	2684	163	125	121
(WY)	1987	1989	1996	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	52.7	53.2	52.4	52.0	52.9	52.9	54.2	55.3	55.7	55.3	53.0	53.0
(WY)	1988	1988	1995	1992	1994	1994	1990	1987	1987	1987	1987	1987

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1987 - 1996

ANNUAL TOTAL	861602	337775	
ANNUAL MEAN	2361	923	460
HIGHEST ANNUAL MEAN			2333
LOWEST ANNUAL MEAN			77.7
HIGHEST DAILY MEAN	41900	Mar 10	41900
LOWEST DAILY MEAN	51	Jan 19	50
ANNUAL SEVEN-DAY MINIMUM	52	Feb 10	51
INSTANTANEOUS PEAK FLOW			22800
INSTANTANEOUS PEAK STAGE			19.04
ANNUAL RUNOFF (AC-FT)	1709000	670000	333200
ANNUAL DIVERSION (AC-FT) a	1853000	1743000	
10 PERCENT EXCEEDS	6460	3080	238
50 PERCENT EXCEEDS	128	118	106
90 PERCENT EXCEEDS	53	58	53

a Diversion, in acre-feet, to Rock Creek Powerplant, provided by Pacific Gas & Electric Co.

11403450 MILK RANCH CONDUIT AT OUTLET, NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°54'09", long 121°13'36", in SW 1/4 SW 1/4 sec.29, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 150 ft upstream from right abutment of Lower Bucks Lake Dam, 200 ft upstream from outlet, and 3.4 mi northwest of Bucks Lodge.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1981-84 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder in 3-ft steel pipe. Elevation of gage is 5,050 ft above sea level.

REMARKS.--Conduit diverts from channel below Three Lakes Reservoir, capacity, 513 acre-ft, and from 12 additional diversions along the conduit. Water is used for power at Bucks Creek Powerplant (station 11403700) and Grizzly Powerplant (station 11404240). See schematic diagram of North Fork Feather 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, 71 ft³/s, Apr. 29, 1995, May 17, 1996; minimum daily, 0.25 ft³/s, Sept. 6, 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	5.0	6.8	2.3	12	13	25	50	67	47	11	1.6	.75
2	5.0	6.6	2.5	12	12	25	37	67	46	11	1.5	.75
3	5.0	6.4	2.2	13	12	24	34	66	43	9.2	1.5	.74
4	5.0	6.4	5.2	14	54	24	33	63	41	5.2	1.5	.75
5	5.0	6.4	5.7	13	56	22	35	57	38	5.0	1.4	3.4
6	5.0	6.3	4.1	12	40	21	40	55	35	4.8	1.3	7.7
7	4.9	6.2	4.3	12	39	21	48	55	32	4.6	1.3	7.6
8	4.9	6.0	3.5	12	36	21	51	54	28	4.5	1.2	7.6
9	4.8	5.9	3.2	12	35	24	48	53	26	4.3	1.2	7.5
10	4.7	5.6	2.7	12	36	24	44	54	24	4.1	1.2	7.4
11	4.7	5.3	14	12	35	25	39	58	22	3.8	1.2	7.4
12	4.7	5.0	45	12	35	23	37	66	21	3.6	1.1	7.3
13	4.7	4.6	14	12	35	22	35	67	20	3.6	1.1	7.4
14	4.8	4.1	11	11	34	22	37	68	19	3.4	1.0	7.5
15	4.8	3.8	10	15	33	23	47	68	18	3.2	1.0	8.6
16	4.8	2.7	9.4	43	47	25	58	70	17	3.1	.99	7.7
17	4.7	1.6	8.9	24	67	28	43	71	16	3.1	.98	7.4
18	4.7	1.4	8.7	18	68	33	37	68	16	3.0	1.0	7.2
19	4.6	1.4	8.4	17	67	37	33	68	15	2.8	.99	7.2
20	4.5	1.3	8.2	16	59	38	30	67	14	2.7	.97	7.2
21	4.5	1.3	8.1	15	51	38	29	69	14	2.5	.95	7.2
22	4.5	1.8	8.1	15	43	36	30	68	14	2.3	.93	7.2
23	4.5	1.9	8.0	14	39	30	33	67	13	2.2	.87	7.0
24	4.7	1.4	7.9	14	36	29	61	62	13	2.1	.85	7.0
25	6.0	1.9	7.9	15	32	27	56	62	13	2.0	.86	7.0
26	7.2	2.4	7.9	14	30	26	58	62	14	1.9	.85	6.8
27	7.2	1.8	7.9	14	28	29	54	62	14	1.8	.85	6.8
28	7.0	1.6	7.9	13	26	39	52	57	13	2.6	.85	6.8
29	6.8	1.5	12	12	25	29	55	54	12	2.3	.80	6.7
30	6.8	1.4	17	12	---	27	65	50	12	1.9	.78	6.6
31	6.8	---	17	13	---	27	---	48	---	1.7	.76	---
TOTAL	162.3	110.8	283.0	455	1123	844	1309	1923	670	119.3	33.38	188.19
MEAN	5.24	3.69	9.13	14.7	38.7	27.2	43.6	62.0	22.3	3.85	1.08	6.27
MAX	7.2	6.8	45	43	68	39	65	71	47	11	1.6	8.6
MIN	4.5	1.3	2.2	11	12	21	29	48	12	1.7	.76	.74
AC-FT	322	220	561	902	2230	1670	2600	3810	1330	237	66	373

SACRAMENTO RIVER BASIN

11403450 MILK RANCH CONDUIT AT OUTLET, NEAR BUCKS LODGE, 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	3.47	3.64	5.30	7.45	11.7	21.4	34.9	36.5	18.6	7.98	3.86	3.84
MAX	6.96	8.15	9.13	19.2	38.7	42.7	59.6	66.6	57.3	30.5	7.35	6.82
(WY)	1994	1990	1996	1995	1996	1989	1989	1993	1993	1995	1992	1990
MIN	.35	.65	1.19	1.23	2.39	7.93	15.5	21.1	5.31	1.30	.49	.32
(WY)	1989	1988	1991	1991	1991	1991	1991	1987	1992	1994	1987	1987

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1987 - 1996

ANNUAL TOTAL	7853.3	7220.97	
ANNUAL MEAN	21.5	19.7	13.2
HIGHEST ANNUAL MEAN			21.6
LOWEST ANNUAL MEAN			8.32
HIGHEST DAILY MEAN	71	Apr 29	71
LOWEST DAILY MEAN	1.3	Sep 3	.74
ANNUAL SEVEN-DAY MINIMUM	1.5	Nov 18	.76
ANNUAL RUNOFF (AC-FT)	15580	14320	9570
10 PERCENT EXCEEDS	51	54	38
50 PERCENT EXCEEDS	16	12	6.4
90 PERCENT EXCEEDS	2.8	1.4	1.1

11403500 BUCKS LAKE NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°53'45", long 121°12'08", in SE 1/4 NW 1/4 sec.33, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, in outlet structure 100 ft upstream from dam on Bucks Creek, 2.0 mi northwest of Bucks Lodge, and 15 mi west of Quincy.

DRAINAGE AREA.--28.6 mi².

PERIOD OF RECORD.--1927-28 (year-end contents only, published in WSP 1315-A), October 1928 to current year.

Prior to October 1954, published as Bucks Creek Reservoir near Bucks Ranch.

GAGE.--Water-stage recorder. Datum of gage is 3.50 ft below sea level (levels by Feather River Power Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam, completed in 1927; storage began in May 1927. Capacity, 101,400 acre-ft between elevations 5,064.75 ft, sill of outlet gate, and 5,154.85 ft, spillway crest. Storage of 274 acre-ft is not available for release. Released water flows down Bucks Creek to Lower Bucks Lake (station 11403520), where most of the water is diverted to Bucks Creek Tunnel (station 11404100), or Grizzly Powerplant (station 11304240) which discharges into Grizzly Creek. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather 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, 107,278 acre-ft, May 17, 1996, elevation, 5,157.9 ft; minimum, 12,330 acre-ft, Feb. 27, 1929, elevation, 5,090.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 107,278 acre-ft, May 17, elevation, 5,157.9 ft; minimum, 56,973 acre-ft, Nov. 22, elevation, 5,128.0 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Feather River Power Co. in 1927)

5,090	11,742	5,130	59,997
5,095	16,183	5,140	75,894
5,100	21,180	5,150	92,950
5,110	32,519	5,160	111,220
5,120	45,472		

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	71487	65581	57425	66527	74909	88579	90318	99743	103759	102843	96146	80889
2	71001	65109	57425	66686	75073	88579	90842	100105	104128	102476	95611	80386
3	70518	64637	57575	66844	74580	88405	91016	100651	104313	102293	95076	79883
4	70036	64169	57726	67003	77217	89098	91367	100651	104682	101744	94543	79381
5	69714	63701	57876	67003	78880	89098	91191	100651	105051	101744	94012	78880
6	69232	63389	57876	67161	79381	89098	91543	100833	105236	101380	93658	78381
7	68913	62922	58027	67320	79883	89098	91543	100833	105236	101380	93127	77881
8	68913	62458	58027	67478	80219	88925	92246	101016	105051	101016	92597	77383
9	68913	61994	58027	67637	80386	88752	92597	101016	104682	100469	92070	77217
10	68913	61685	58177	67795	80721	88579	92773	101198	104497	100105	91718	76721
11	68913	61223	59086	67795	81058	88925	93127	101198	104497	99924	91191	76225
12	68913	60764	62922	67955	81058	88752	92950	101562	104313	99382	90667	75731
13	68594	60457	63545	67955	81058	88579	93127	101744	103944	99020	90143	75237
14	68434	59997	63701	68114	80889	88579	93481	102109	103944	99201	89794	74745
15	68434	59541	64169	68434	80889	88579	94189	102293	103759	98839	89272	74580
16	68274	59086	64325	70036	80889	88405	94720	105051	103392	98839	88752	74089
17	67955	58782	64481	70357	81902	88232	95611	107278	103392	98839	88232	73763
18	67478	58328	64637	71001	83597	88059	95789	106535	103026	98839	87712	73273
19	67003	57876	64637	71325	85475	88405	95789	105605	103209	98839	87195	72785
20	66527	57726	64794	71649	86851	88752	95967	104867	103392	98839	86678	72297
21	66053	57425	64794	71811	87885	88925	95789	104682	103392	99020	86161	72297
22	65581	56973	64952	72135	88579	88925	95967	104497	103576	99020	85647	71973
23	65424	57124	65109	72459	89098	88752	95967	104128	103759	98478	85304	71811
24	65581	57274	65109	72947	89272	88579	96502	103759	103759	98478	84791	71649
25	65581	57425	65266	73110	89098	88232	97220	103576	103576	98478	84277	71163
26	65581	57425	65266	73273	88925	88405	97759	103392	103392	98478	83767	70679
27	65581	57425	65424	73926	88925	88579	97938	103392	103392	98478	83257	70518
28	65581	57425	65424	74089	88925	89098	98297	103209	103576	98118	82747	70036
29	65581	57425	65738	74252	88752	89272	98659	102843	103392	97579	82408	70036
30	65581	57274	66210	74580	---	89098	99201	103026	103026	97041	81902	69714
31	65738	---	66369	74745	---	89272	---	103392	---	96682	81395	---
MAX	71487	65581	66369	74745	89272	89272	99201	107278	105236	102843	96146	80889
MIN	65424	56973	57425	66527	74580	88059	90318	99743	103026	96682	81395	69714
a	5133.7	5128.2	5134.1	5139.3	5147.6	5147.9	5153.5	5155.8	5155.6	5152.1	5143.3	5136.2
b	-6073	-8464	+9095	+8376	+14007	+520	+9929	+4191	-366	-6344	-15287	-11681

CAL YR 1995 MAX 105236 MIN 44787 b +20758

WTR YR 1996 MAX 107278 MIN 56973 b -2097

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11403520 LOWER BUCKS LAKE NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°53'59", long 121°13'32", in NE 1/4 NW 1/4 sec.32, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, in outlet tower for Bucks Creek Tunnel 900 ft upstream from Buck Diversion Dam, 1.3 mi downstream from Bucks Lake Dam, and 3.2 mi northwest of Bucks Lodge.

DRAINAGE AREA.--31.3 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. Datum of gage is 3.50 ft below sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Lake is formed by concrete dam. Storage began in October 1929. Usable capacity, 5,796 acre-ft between elevations 4,952 ft, point of lowest drawdown, and 5,021.95 ft, crest of spillway. Water is received from Bucks Lake (station 11403500) and from Milk Ranch Conduit (station 11403450). Most of the water is diverted through Bucks Creek Tunnel (station 11404100) or Grizzly Powerplant (station 11404240) and discharges into Grizzly Creek for power development downstream. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather 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, 6,203 acre-ft, May 18, 1996, elevation, 5,024.6 ft; minimum, 99 acre-ft, Sept. 9, 1993, elevation, 4,956.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,203 acre-ft, May 18, elevation, 5,024.6 ft; minimum, 3,613 acre-ft, Dec. 16, elevation, 5,004.0 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Feather River Power Co. in 1928)

4,950	24		
4,960	194	5,000	3,175
4,970	624	5,010	4,307
4,980	1,314	5,020	5,573
4,990	2,171	5,030	6,981

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	4936	4142	4307	3783	3760	4189	4307	4083	4923	4797	4464	4416
2	4735	4476	4295	3794	3783	4047	4248	4130	4525	4860	4501	4685
3	4525	4440	4283	3816	3805	4260	4213	4036	4368	4785	4513	4973
4	4319	4319	4283	3828	4071	4024	4059	4071	4549	5024	4525	4822
5	4392	4213	4307	3839	4272	4154	4213	4106	4611	4822	4586	4648
6	4710	4165	4307	3851	4368	4071	4071	4118	4380	4948	4513	4501
7	5050	4106	4213	3874	4464	4083	4307	4189	4307	4822	4623	4561
8	5036	4047	4201	3885	4331	3978	4213	4024	4343	4822	4525	4623
9	5024	3978	4189	3909	4307	4083	4118	4047	4898	4898	4428	4392
10	5011	3909	4036	3920	4272	4236	4177	4083	4973	4948	4513	4343
11	4885	3885	4118	3932	4071	4012	4260	4165	4847	4772	4549	4272
12	4822	3805	4355	3932	4260	4224	4416	4024	4772	4822	4489	4118
13	4923	3909	4260	3943	4428	4201	4623	4130	4923	4936	4416	3943
14	5050	3794	3794	3955	4623	4059	4319	4130	4860	4810	4380	3897
15	4973	3771	3658	3989	4735	4154	4071	4236	4810	5050	4224	3828
16	4710	3726	3613	4165	4898	4059	4319	4272	4961	5050	4189	4118
17	4501	3726	3624	4213	5166	4142	4118	5735	4810	5063	4142	4012
18	4154	3862	3636	4272	5322	4189	4024	6203	5024	5063	4368	4295
19	4130	4272	3636	4307	5493	4201	4248	6112	4961	5063	4307	4685
20	3783	4224	3647	4343	5587	4106	4047	6022	4986	5076	4355	4986
21	3726	4001	3647	4368	5322	4036	4071	6008	5011	5076	4331	4835
22	3909	4189	3658	4154	4673	4213	4154	5980	5011	5076	4283	4873
23	3897	4189	3658	4165	4059	4106	4001	5925	5036	4636	4272	4999
24	3897	4165	3658	4118	3885	4165	4331	5884	4860	4636	4177	4898
25	3909	4154	3658	3978	3909	4307	4392	5857	4673	4636	4260	4835
26	3920	4142	3658	3726	3932	4012	4071	5830	5024	4636	4142	5050
27	3920	4118	3670	3658	3828	4083	4307	5857	5063	4636	4036	4785
28	3932	4083	3670	3681	4130	4213	4201	5857	4810	4537	3909	4986
29	3932	4177	3692	3703	4071	4154	4106	5830	4772	4549	3874	4835
30	3943	4307	3737	3726	---	4295	4106	5654	4860	4501	3862	4710
31	3955	---	3771	3749	---	4071	---	5388	---	4368	4095	---
MAX	5050	4476	4355	4368	5587	4307	4623	6203	5063	5076	4623	5050
MIN	3726	3726	3613	3658	3760	3978	4001	4024	4307	4368	3862	3828
a	5007.0	5010.0	5005.4	5005.2	5008.0	5008.0	5008.3	5018.6	5014.5	5010.5	5008.2	5013.3
b	-1006	+352	-536	-22	+322	0	+35	+1282	-528	-492	-273	+615

CAL YR 1995 MAX 6036 MIN 3613 b +101
WTR YR 1996 MAX 6203 MIN 3613 b -251

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

SACRAMENTO RIVER BASIN

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11403530 BUCKS CREEK BELOW DIVERSION DAM, NEAR BUCKS LODGE, CA

LOCATION.--Lat 39°54'16", long 121°13'47", in NW 1/4 SW 1/4 sec.29, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank 20 ft upstream from unnamed tributary, 0.2 mi downstream from diversion dam, and 3.6 mi northwest of Bucks Lodge.

DRAINAGE AREA.--31.5 mi².

PERIOD OF RECORD.--October 1990 to current year. Unpublished records for water years 1981-90 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir since Sept. 19, 1990. Elevation of gage is 4,850 ft above sea level, from topographic map.

REMARKS.--Records not computed for winter months. Flow regulated by diversion dam at lower Bucks Lake 0.2 mi upstream, where most of the flow is diverted to Grizzly Creek via Bucks Creek Tunnel outlet (station 11404100) or Grizzly Powerplant (station 11404240). Discharges for May 18-28, based on computation of flow over spillway at diversion dam at lower Bucks Lake (station 11403520). Prior to Sept. 19, 1990, low flows regulated by fixed-plate orifice at outlet of diversion dam. See schematic diagram of North Fork Feather 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	4.4	1.7	1.6	---	---	---	---	---	e4.5	e4.1	e3.8	e3.6
2	4.2	1.7	1.8	---	---	---	---	---	e4.5	e4.1	e3.8	e3.6
3	4.0	1.7	1.7	---	---	---	---	---	e4.5	e4.1	e3.8	e3.6
4	4.3	1.7	1.6	---	---	---	---	---	e4.5	e4.1	e3.8	e3.7
5	4.1	1.6	---	---	---	---	---	---	e4.5	e4.1	e3.8	e3.7
6	4.0	1.7	---	---	---	---	---	---	e4.5	e4.0	e3.8	e3.7
7	4.4	1.6	---	---	---	---	---	---	e4.5	e4.0	e3.8	e3.7
8	4.5	1.5	---	---	---	---	---	---	e4.4	e4.0	e3.8	e3.7
9	4.4	1.5	---	---	---	---	---	---	e4.4	e4.0	e3.8	e3.7
10	4.2	1.7	---	---	---	---	---	---	e4.4	e4.0	e3.8	e3.7
11	3.9	1.6	---	---	---	---	---	---	e4.4	e4.0	e3.8	e3.7
12	4.5	1.6	---	---	---	---	---	---	e4.4	e4.0	e3.7	e3.7
13	4.4	1.6	---	---	---	---	---	---	e4.4	e3.9	e3.7	e3.6
14	4.3	1.5	---	---	---	---	---	e4.5	e4.4	e3.9	e3.7	e3.6
15	4.1	1.6	---	---	---	---	---	e4.5	e4.3	e3.9	e3.7	e3.6
16	4.2	1.6	---	---	---	---	---	e4.5	e4.3	e3.9	e3.7	e3.6
17	4.1	1.6	---	---	---	---	---	e4.5	e4.3	e3.9	e3.7	3.6
18	4.2	1.6	---	---	---	---	---	1340	e4.3	e3.9	e3.7	3.6
19	4.2	1.7	---	---	---	---	---	962	e4.3	e3.9	e3.7	3.6
20	4.0	1.7	---	---	---	---	---	618	e4.3	e3.9	e3.7	3.7
21	3.8	1.7	---	---	---	---	---	450	e4.3	e3.9	e3.7	3.8
22	4.1	1.7	---	---	---	---	---	e441	e4.2	e3.9	e3.7	3.7
23	4.2	1.7	---	---	---	---	---	e324	e4.2	e3.9	e3.7	3.8
24	4.2	1.7	---	---	---	---	---	e154	e4.2	e3.9	e3.7	3.8
25	4.2	1.6	---	---	---	---	---	110	e4.2	e3.9	e3.7	3.8
26	4.0	1.8	---	---	---	---	---	e81	e4.2	e3.9	e3.8	3.7
27	3.8	1.7	---	---	---	---	---	e48	e4.2	e3.8	e3.8	3.8
28	3.9	1.7	---	---	---	---	---	e23	e4.2	e3.8	e3.7	3.7
29	4.2	1.6	---	---	---	---	---	e8.4	e4.1	e3.8	e3.6	3.8
30	4.1	1.5	---	---	---	---	---	e4.5	e4.1	e3.8	e3.6	3.8
31	3.3	---	---	---	---	---	---	e4.5	---	e3.8	e3.6	---
TOTAL	128.2	49.2	---	---	---	---	---	---	130.0	122.1	115.7	110.7
MEAN	4.14	1.64	---	---	---	---	---	---	4.33	3.94	3.73	3.69
MAX	4.5	1.8	---	---	---	---	---	---	4.5	4.1	3.8	3.8
MIN	3.3	1.5	---	---	---	---	---	---	4.1	3.8	3.6	3.6
AC-FT	254	98	---	---	---	---	---	---	258	242	229	220
a	7310	8180	1210	916	9000	13390	10480	19610	8170	8160	14980	11270

CAL YR 1995 a 145800

WTR YR 1996 a 112700

e Estimated.

a Diversion, in acre-feet, to Grizzly Powerplant, provided by Pacific Gas & Electric Co

SACRAMENTO RIVER BASIN

11404250 GRIZZLY FOREBAY NEAR STORRIE, CA

LOCATION.--Lat 39°53'32", long 121°17'25", in SW 1/4 NE 1/4 sec.34, T.24 N., R.6 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, in outlet tower for Bucks Creek Powerplant 100 ft upstream from Grizzly Diversion Dam, 2.4 mi southeast of Storrie, and 6.2 mi west of Bucks Lodge.

DRAINAGE AREA.--14.4 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. Datum of gage is 3.50 ft below sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Lake is formed by concrete dam. Storage began in July 1928. Usable capacity, 1,033 acre-ft between elevations 4,271 ft, bottom of diversion tunnel, and 4,316.0 ft, crest of spillway. Water is received from Bucks Creek via Bucks Creek Tunnel (station 11404100) and Grizzly Powerplant (station 11404240) which enter Grizzly Creek upstream. Most of the water is diverted through tunnel to Bucks Creek Powerplant (station 11403700) for power development downstream on North Fork Feather River. Figures given, including extremes, represent total contents. See schematic diagram of North Fork Feather 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, 1,252 acre-ft, Apr. 29, 1995, elevation, 4,319.6 ft; minimum, 216 acre-ft, Sept. 20, 1991, elevation, 4,282.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,216 acre-ft, Dec. 12, 13, elevation, 4,318.7 ft; minimum, 697 acre-ft, Dec. 16, elevation, 4,303.7 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Feather River Power Co. in 1928)

4,290	350	4,305	736
4,295	464	4,310	898
4,300	592	4,320	1,268

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	1086	841	1009	964	755	1027	1124	1071	1031	918	1045	1031
2	1060	825	999	1013	755	1053	1057	1064	1075	981	1031	818
3	1027	950	953	950	742	915	1013	1101	1002	974	1027	861
4	999	992	957	921	1193	1064	992	1139	780	988	1045	939
5	999	1016	981	936	1124	1064	1038	1139	739	1006	981	925
6	967	999	1006	946	960	995	1038	1128	864	1031	1042	992
7	992	828	1031	967	854	834	1075	1124	1002	1024	928	953
8	1013	864	985	971	908	918	1024	1135	908	1024	981	988
9	1031	908	988	939	939	877	1053	1135	834	1024	964	974
10	1053	988	773	878	818	821	1060	1135	1024	1027	864	939
11	1131	978	854	943	967	974	981	1135	1020	1020	857	891
12	1128	1020	1216	894	912	901	1024	1135	1064	1064	925	974
13	1128	946	1216	912	908	1020	864	1135	1086	891	915	1013
14	1128	988	831	915	884	960	834	1124	1024	706	884	995
15	1124	1024	751	905	891	946	854	1139	1045	724	844	1027
16	871	1002	697	1131	1038	960	1034	1189	1049	748	957	812
17	943	995	712	828	1154	974	1024	1213	1053	770	1009	915
18	1068	953	773	841	1189	1060	1031	1174	844	796	891	963
19	874	929	844	789	1166	1064	981	1150	761	815	950	1031
20	950	967	908	831	1150	884	960	1150	834	834	1002	928
21	767	831	805	721	1158	844	1031	1166	905	857	1034	953
22	818	891	867	921	1154	834	929	1147	974	874	1027	1027
23	796	915	921	932	1150	1031	1057	1150	1038	1009	918	925
24	802	939	974	992	1147	1053	1075	1150	857	1009	995	770
25	805	960	1024	971	1143	995	921	1150	932	1009	939	925
26	812	971	932	974	1139	1006	1034	1150	932	1009	999	1034
27	815	999	912	981	1090	1034	1034	1147	1006	1009	974	985
28	821	1027	960	871	1060	1057	1031	1147	974	988	921	1053
29	825	1016	981	825	1060	1042	1057	1147	871	891	921	978
30	828	995	936	724	---	1016	1071	1094	971	1002	867	1053
31	834	---	857	748	---	898	---	985	---	1042	957	---
MAX	1131	1027	1216	1131	1193	1064	1124	1213	1086	1064	1045	1053
MIN	767	825	697	721	742	821	834	985	739	706	844	770
a	4308.10	4312.80	4308.80	4305.40	4314.60	4310.00	4314.90	4312.50	4312.10	4314.10	4311.70	4314.40
b	-186	+161	-138	-109	+312	-162	+173	-86	-14	+71	-85	+96

CAL YR 1995 MAX 1252 MIN 697 b +99

WTR YR 1996 MAX 1216 MIN 697 b +33

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11404300 GRIZZLY CREEK BELOW DIVERSION DAM, NEAR STORRIE, CA

LOCATION.--Lat 39°53'29", long 121°17'35", in SW 1/4 NE 1/4 sec.34, T.24 N., R.6 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on right bank 0.2 mi downstream from diversion dam, and 2.4 mi southeast of Storrie.

DRAINAGE AREA.--14.4 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1976-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir, since Oct. 8, 1987. Elevation of gage is 4,320 ft above sea level, from topographic map. Prior to Oct. 8, 1987, at datum 1.79 ft higher.

REMARKS.--Flow regulated by diversion dam 0.2 mi upstream. There is considerable inflow upstream from the diversion dam from Bucks Creek Tunnel outlet (station 11404100) and Grizzly Powerplant (station 11404240). Most of the flow is diverted to Bucks Creek Powerplant (station 11403700) on North Fork Feather River. See schematic diagram of North Fork Feather 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, 5,870 ft³/s, Feb. 17, 1986, gage height, 9.54 ft, datum then in use, from rating curve extended above 260 ft³/s on basis of computation of spill over dam of peak flow; minimum daily, 1.9 ft³/s, June 14, 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	4.8	3.4	2.5	2.4	2.5	2.8	7.2	5.1	5.0	4.8	4.9	4.8
2	4.8	2.3	2.4	2.4	2.5	2.8	4.2	5.0	5.1	4.8	4.8	4.7
3	4.8	2.3	2.4	2.4	2.5	2.8	2.9	5.0	5.0	4.9	4.8	4.6
4	4.7	2.4	2.4	2.4	278	3.0	2.8	66	5.0	4.9	4.9	4.7
5	4.7	2.4	2.4	2.4	317	3.1	2.7	78	4.8	4.9	4.8	4.7
6	4.7	2.4	2.4	2.4	4.4	3.0	2.7	77	4.9	4.9	4.8	4.8
7	4.7	2.4	2.4	2.4	3.3	2.9	2.7	65	5.0	4.9	4.8	4.8
8	4.7	2.3	2.4	2.4	3.1	2.8	2.7	54	5.0	4.9	4.8	4.7
9	4.7	2.3	2.4	2.4	3.0	2.8	2.7	63	4.9	4.9	4.8	4.7
10	4.8	2.4	2.4	2.4	2.9	2.9	2.7	56	4.9	4.9	4.7	4.8
11	30	2.4	2.6	2.4	2.8	3.0	2.7	49	5.0	4.9	4.7	4.7
12	57	2.4	662	2.4	2.8	3.1	2.7	73	5.0	4.9	4.7	4.7
13	56	2.4	5.6	2.3	2.7	3.1	2.6	82	5.1	4.9	4.7	4.8
14	56	2.4	2.6	2.3	2.7	3.0	2.5	124	5.0	4.7	4.7	4.8
15	47	2.4	2.7	2.4	2.6	3.0	2.5	87	5.0	4.6	4.6	5.0
16	5.1	2.4	2.5	219	2.7	2.9	2.8	478	5.0	4.6	4.6	4.8
17	4.7	2.4	2.4	6.7	234	2.9	2.8	981	5.1	4.6	4.8	4.7
18	4.7	2.4	2.3	2.6	251	2.9	2.7	645	4.9	4.6	4.8	4.8
19	4.6	2.4	2.3	2.6	453	2.9	2.7	390	4.8	4.7	4.7	4.8
20	4.6	2.4	2.3	2.5	235	2.8	2.7	246	4.7	4.7	4.8	4.8
21	4.7	2.3	2.3	2.5	382	2.7	2.7	312	4.8	4.7	4.8	4.7
22	4.5	2.3	2.3	2.5	290	2.7	2.7	301	4.9	4.7	4.8	4.7
23	4.5	2.4	2.3	2.5	233	2.7	2.7	199	4.9	4.8	4.7	4.7
24	4.5	2.4	2.3	2.6	199	2.7	2.8	186	4.9	4.8	4.7	4.7
25	4.5	2.4	2.4	2.7	82	2.7	2.7	177	4.8	4.8	4.7	4.5
26	4.5	2.4	2.4	2.6	69	2.7	2.6	169	4.9	4.8	4.7	4.8
27	4.5	2.4	2.3	2.8	129	2.7	2.7	161	4.9	4.8	4.7	4.8
28	4.5	2.4	2.3	2.7	3.0	2.8	2.7	152	4.9	4.8	4.7	4.8
29	4.5	2.4	2.4	2.7	2.9	2.7	2.6	144	4.9	4.7	4.7	4.8
30	4.5	2.4	2.5	2.5	---	2.7	4.0	101	4.8	4.8	4.7	4.8
31	4.5	---	2.4	2.6	---	2.6	---	5.1	---	4.8	4.7	---
TOTAL	366.8	72.4	737.3	297.9	3198.4	88.2	88.2	5536.2	147.9	148.5	147.1	142.5
MEAN	11.8	2.41	23.8	9.61	110	2.85	2.94	179	4.93	4.79	4.75	4.75
MAX	57	3.4	662	219	453	3.1	7.2	981	5.1	4.9	4.9	5.0
MIN	4.5	2.3	2.3	2.3	2.5	2.6	2.5	5.0	4.7	4.6	4.6	4.5
AC-FT	728	144	1460	591	6340	175	175	10980	293	295	292	283
a	7290	8840	4700	5860	16980	21170	20620	21430	11020	9070	15490	11320

a Diversion, in acre-feet, to Bucks Creek Powerplant, provided by Pacific Gas & Electric Co.

11404300 GRIZZLY CREEK BELOW DIVERSION DAM, NEAR STORRIE, 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	4.61	3.83	4.80	13.1	48.8	47.5	25.1	45.2	19.9	6.04	3.60	3.44
MAX	11.8	19.2	23.8	92.9	392	174	215	277	182	26.3	5.49	4.96
(WY)	1996	1989	1996	1995	1986	1995	1995	1995	1995	1995	1991	1991
MIN	2.01	2.01	2.09	2.11	2.17	2.20	2.10	2.03	2.01	2.08	2.03	2.00
(WY)	1995	1988	1994	1994	1994	1988	1987	1987	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1986 - 1996			
ANNUAL TOTAL	31145.4				10971.4							
ANNUAL MEAN	85.3				30.0				18.7			
HIGHEST ANNUAL MEAN									82.7			
LOWEST ANNUAL MEAN									2.58			
HIGHEST DAILY MEAN	1480				981				3250			
LOWEST DAILY MEAN	2.2				2.3				1.9			
ANNUAL SEVEN-DAY MINIMUM	2.3				2.3				2.0			
INSTANTANEOUS PEAK FLOW					1600				5870			
INSTANTANEOUS PEAK STAGE					4.29				9.54			
ANNUAL RUNOFF (AC-FT)	61780				21760				13520			
ANNUAL TOTAL, DIVERSION (AC-FT) a	180100				153800							
10 PERCENT EXCEEDS	261				67				5.0			
50 PERCENT EXCEEDS	4.7				4.6				2.4			
90 PERCENT EXCEEDS	2.4				2.4				2.1			

a Diversion, in acre-feet, to Bucks Creek Powerplant, provided by Pacific Gas & Electric Co.

11404330 NORTH FORK FEATHER RIVER BELOW GRIZZLY CREEK, CA

LOCATION.--Lat 39°51'09", long 121°23'29", in NE 1/4 NW 1/4 sec.14, T.23 N., R.5 E., Butte County, Hydrologic Unit 18020121, Lassen National Forest, on left bank 0.7 mi upstream from Bear Ranch Creek, 1.6 mi downstream from Grizzly Creek, and 2.1 mi downstream from Cresta Dam.

DRAINAGE AREA.--1,914 mi².

PERIOD OF RECORD.--October 1985 to February 1986, October 1986 to current year. Unpublished records for water years 1982-85 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 1,480 ft above sea level, from topographic map.

REMARKS.--Flow regulated by numerous reservoirs upstream, combined capacity, 1,386,000 acre-ft. Most of the flow bypasses this station through Cresta Powerplant (station 11404360). Diversion through Cresta Powerplant began in 1949. See schematic diagram of North Fork Feather 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, about 86,000 ft³/s, Feb. 19, 1986, gage height, unknown, on the basis of flood routing the peak discharge between North Fork Feather River below Rock Creek Diversion Dam and North Fork Feather River at Pulga (stations 11403200, 11404500); minimum daily, 37 ft³/s, July 25, 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	86	94	99	118	207	242	4780	4410	900	111	53	60
2	84	92	100	117	191	233	6010	3390	795	110	53	60
3	85	91	95	113	187	235	5150	1540	654	107	53	59
4	85	91	101	111	6150	686	4310	1190	373	102	52	60
5	84	92	102	109	13500	3000	3720	995	195	99	54	61
6	83	92	99	108	7110	1420	3550	812	154	99	58	61
7	82	91	100	106	4410	828	3680	721	148	100	63	61
8	83	91	95	105	2600	623	3810	1980	141	99	62	60
9	84	92	95	105	2220	512	3710	429	137	98	61	61
10	81	92	94	105	1350	563	3800	479	143	98	60	60
11	83	91	191	102	1480	1350	3360	463	158	97	61	59
12	113	91	9630	101	1010	2820	3010	508	157	96	61	58
13	104	90	1150	99	788	2330	2690	686	142	96	61	59
14	105	91	155	96	558	1570	2460	827	128	96	60	60
15	107	92	384	116	494	1360	1910	996	125	95	58	80
16	85	92	193	1090	618	2210	4060	6090	124	87	58	66
17	88	92	150	1070	3500	2940	4320	14100	123	76	58	59
18	87	92	137	260	7420	3540	4120	15500	122	72	58	59
19	86	91	127	251	11200	3340	3840	11200	119	65	56	59
20	86	91	123	214	13600	3170	3230	7090	118	66	61	58
21	88	91	121	236	16100	3120	2830	6670	116	66	68	59
22	88	90	116	190	9750	4340	2610	6370	114	65	71	58
23	88	90	114	176	6270	3400	2370	4360	113	64	73	58
24	87	90	113	307	4520	1670	3340	3390	113	63	74	58
25	87	91	112	430	3260	1960	3040	3060	113	63	73	58
26	88	91	111	220	2840	1770	2740	2560	118	62	72	58
27	89	93	109	331	2800	1790	2580	2370	119	62	69	58
28	89	95	100	934	1600	3650	1980	1950	114	61	68	59
29	90	95	116	229	252	3210	1710	1680	112	61	69	58
30	89	95	144	208	---	2590	3870	1290	113	55	65	58
31	91	---	135	224	---	2330	---	1160	---	54	61	---
TOTAL	2755	2752	14511	7981	125985	62802	102590	108266	6101	2545	1924	1802
MEAN	88.9	91.7	468	257	4344	2026	3420	3492	203	82.1	62.1	60.1
MAX	113	95	9630	1090	16100	4340	6010	15500	900	111	74	80
MIN	81	90	94	96	187	233	1710	429	112	54	52	58
AC-FT	5460	5460	28780	15830	249800	124600	203500	214700	12100	5050	3820	3570
a	113900	121100	131500	142100	197600	215200	207500	212900	176900	143000	133500	119600

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

SACRAMENTO RIVER BASIN

11404330 NORTH FORK FEATHER RIVER BELOW GRIZZLY CREEK, 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	84.0	91.8	136	661	730	2336	1367	1474	473	77.6	65.3	62.7
MAX	182	256	468	4995	4344	10220	6777	9322	3842	221	120	86.9
(WY)	1986	1989	1996	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	57.4	57.8	59.0	55.7	61.5	86.0	78.0	67.7	55.6	55.4	55.5	56.0
(WY)	1992	1993	1990	1991	1991	1988	1988	1992	1988	1988	1988	1991

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1986 - 1996			
ANNUAL TOTAL	1150680				440014							
ANNUAL MEAN	3153				1202				629			
HIGHEST ANNUAL MEAN									3115			
LOWEST ANNUAL MEAN									75.2			
HIGHEST DAILY MEAN	48200				Mar 10				48200			
LOWEST DAILY MEAN	56				Jan 1				37			
ANNUAL SEVEN-DAY MINIMUM	83				Oct 5				52			
INSTANTANEOUS PEAK FLOW									86000			
INSTANTANEOUS PEAK STAGE									18.22			
ANNUAL RUNOFF (AC-FT)	2282000				872800				455800			
ANNUAL DIVERSION (AC-FT) a	2003000				1915000							
10 PERCENT EXCEEDS	8190				3660				821			
50 PERCENT EXCEEDS	160				113				68			
90 PERCENT EXCEEDS	86				60				56			

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

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA

LOCATION.--Lat 39°47'40", long 121°27'02", in SE 1/4 NE 1/4 sec.6, T.22 N., R.5 E., Butte County, Hydrologic Unit 18020121, Plumas National Forest, on left bank between railroad and highway bridges, 0.6 mi downstream from Flea Valley Creek and Pulga, and 1.6 mi downstream from Poe Dam.

DRAINAGE AREA.--1,953 mi².

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods and yearly estimates for water years 1911 and 1938, published in WSP 1315-A. Prior to October 1960, published as "at Big Bar."

CHEMICAL DATA: Water years 1963-66, 1972, 1977.

WATER TEMPERATURE: Water years 1963-83.

REVISED RECORDS.--WSP 931: 1938(M), 1940. WSP 1515: 1935. WDR CA-77-4: 1976 (yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 1,305.62 ft above sea level. Prior to Oct. 1, 1937, at site 1.1 mi upstream at different datum. Oct. 1, 1937, to Sept. 30, 1958, at present site at datum 5.00 ft higher.

REMARKS.--Flow regulated by Lake Almanor, Bucks Lake, Butt Valley Reservoir (stations 11399000, 11403500, 11401050), Mountain Meadows Reservoir, and five forebays, combined capacity, 1,386,000 acre-ft. Diversion through Poe Powerplant (station 11404900) began on May 29, 1958. See schematic diagram of North Fork Feather 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, 87,900 ft³/s, Feb. 19, 1986, gage height, 39.86 ft, from rating curve extended above 32,000 ft³/s on basis of slope area measurement of peak discharge; minimum daily, 5.4 ft³/s, Sept. 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	60	71	73	65	98	200	4950	1810	973	98	90	91
2	61	71	70	65	91	176	6960	1560	853	99	91	90
3	63	71	71	60	87	183	5580	1780	729	96	91	89
4	61	72	69	62	6610	642	4780	1360	441	93	90	91
5	61	71	69	61	15000	4280	4300	1160	284	93	91	90
6	409	70	66	61	7710	3910	3980	974	196	95	90	90
7	1170	71	67	61	4500	1800	4070	837	147	97	92	91
8	915	71	67	60	2790	1380	4240	663	106	95	92	91
9	65	69	66	60	2120	1030	4130	602	104	95	90	90
10	64	71	67	60	1460	990	4210	617	104	94	92	90
11	64	70	1050	59	1470	1830	3810	583	104	95	91	90
12	64	70	13200	58	1100	3490	3470	599	101	93	92	91
13	62	70	3470	59	907	2940	3170	739	102	93	92	92
14	63	67	2130	58	692	2120	2910	960	100	93	91	91
15	61	69	2660	64	594	1760	2310	1140	102	93	91	98
16	305	68	1870	896	686	2680	4390	5960	99	91	92	94
17	1360	70	1740	1100	3340	3380	4690	14000	100	92	90	93
18	1220	71	1280	153	7440	3980	4480	15700	99	93	92	91
19	1270	72	425	103	12400	3620	4220	11000	97	92	92	91
20	1240	69	70	97	14400	3560	3680	7000	100	92	89	92
21	1090	69	71	117	17600	3460	3270	6380	109	92	94	91
22	1220	68	70	94	11100	4590	3030	6160	105	92	91	92
23	923	68	72	86	6790	3720	2780	4120	104	92	91	90
24	922	70	70	180	5070	2050	3620	3300	104	93	93	93
25	1160	70	69	636	3750	2190	3440	2850	98	92	93	92
26	800	71	68	128	3410	2080	3110	2400	100	91	92	92
27	124	71	65	178	3310	2030	2960	2200	107	92	91	91
28	70	70	61	1020	2200	3960	2340	1840	102	90	93	91
29	72	69	67	150	517	3590	2060	1660	100	90	93	92
30	71	71	75	103	---	2940	2610	1310	98	90	92	93
31	72	---	69	105	---	2660	---	1130	---	90	92	---
TOTAL	15162	2101	29337	6059	137242	77221	113550	102394	5968	2886	2836	2743
MEAN	489	70.0	946	195	4732	2491	3785	3303	199	93.1	91.5	91.4
MAX	1360	72	13200	1100	17600	4590	6960	15700	973	99	94	98
MIN	60	67	61	58	87	176	2060	583	97	90	89	89
AC-FT	30070	4170	58190	12020	272200	153200	225200	203100	11840	5720	5630	5440
a	110300	133000	129500	163400	217100	228700	221900	234300	194800	155400	131400	106100

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

SACRAMENTO RIVER BASIN

11404500 NORTH FORK FEATHER RIVER AT PULGA, 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	980	1176	1701	2146	2761	2908	3554	3070	1602	986	930	884
MAX	2943	4594	10690	10380	14320	11960	13580	12460	7688	2771	2441	2430
(WY)	1963	1951	1956	1970	1986	1995	1952	1922	1911	1952	1952	1952
MIN	16.4	26.4	50.7	52.6	56.0	58.2	54.9	41.7	34.0	32.6	13.3	14.2
(WY)	1978	1978	1977	1977	1990	1977	1990	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1911 - 1996			
ANNUAL TOTAL	1257224				497499							
ANNUAL MEAN	3444				1359				1861			
HIGHEST ANNUAL MEAN									5320			
LOWEST ANNUAL MEAN									42.7			
HIGHEST DAILY MEAN	53200				Mar 10				81000			
LOWEST DAILY MEAN	55				Aug 22				5.4			
ANNUAL SEVEN-DAY MINIMUM	56				Aug 19				12			
INSTANTANEOUS PEAK FLOW					40300				Dec 12			
INSTANTANEOUS PEAK STAGE					24.94				Dec 12			
ANNUAL RUNOFF (AC-FT)	2494000				986800				1349000			
ANNUAL TOTAL, DIV (AC-FT) a	2181000				2026000							
10 PERCENT EXCEEDS	9010				3980				4630			
50 PERCENT EXCEEDS	181				98				1330			
90 PERCENT EXCEEDS	60				68				55			

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

11405120 PHILBROOK CREEK BELOW PHILBROOK DAM, NEAR BUTTE MEADOWS, CA

LOCATION.--Lat 40°01'48", long 121°28'36", unsurveyed, T.25 N., R.4 E., Butte County, Hydrologic Unit 18020121, Lassen National Forest, on right bank 500 ft downstream from outlet structure on Philbrook Dam, and 5.4 mi southeast of Butte Meadows.

DRAINAGE AREA.--5.05 mi².

PERIOD OF RECORD.--July 1989 to current year (no winter records). Unpublished records for water years 1986-89 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder, Parshall flume, and V-notch sharp-crested weir. Elevation of gage is 5,490 ft above sea level, from topographic map. October 1985 to July 1989, nonrecording gage at same site and datum. In June 1989, V-notch sharp-crested weir installed in flume to be used at low flows.

REMARKS.--Records not computed for winter months. Flow completely regulated by Philbrook Reservoir, usable capacity, 5,370 acre-ft, 500 ft upstream. Spillwater from Philbrook Reservoir bypasses this station.

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	3.0	3.1	---	---	---	---	3.6	3.6	3.5	3.8	2.8	34
2	3.0	2.9	---	---	---	---	3.4	3.6	3.5	3.8	2.8	34
3	2.9	---	---	---	---	---	3.4	3.6	3.5	3.8	2.8	34
4	3.0	---	---	---	---	---	3.4	3.6	3.5	3.8	2.8	38
5	3.0	---	---	---	---	---	3.4	3.6	3.5	3.8	2.8	40
6	3.0	---	---	---	---	---	3.4	3.6	3.5	3.8	2.8	40
7	3.0	---	---	---	---	---	3.4	3.6	3.5	3.8	2.8	40
8	3.0	---	---	---	---	---	3.4	3.6	3.6	3.8	2.8	39
9	3.0	---	---	---	---	---	3.4	3.6	3.6	3.8	2.9	39
10	3.0	---	---	---	---	---	3.4	3.6	3.6	3.8	2.9	39
11	40	---	---	---	---	---	3.4	3.6	3.6	3.8	2.9	36
12	42	---	---	---	---	---	3.4	3.6	3.6	3.8	49	33
13	43	---	---	---	---	---	3.4	3.6	3.6	3.8	79	33
14	45	---	---	---	---	---	3.4	3.6	3.7	3.8	76	33
15	48	---	---	---	---	---	3.4	3.6	3.8	3.8	76	33
16	45	---	---	---	---	---	3.5	4.3	3.8	3.8	34	33
17	44	---	---	---	---	---	3.5	4.9	3.8	3.8	7.4	32
18	44	---	---	---	---	---	3.5	4.3	3.8	3.8	3.8	32
19	42	---	---	---	---	---	3.5	3.9	3.8	3.8	3.8	32
20	42	---	---	---	---	---	3.4	3.8	3.8	3.8	3.8	32
21	42	---	---	---	---	---	3.4	3.8	3.8	3.8	3.8	32
22	3.6	---	---	---	---	---	3.4	3.8	3.8	3.8	3.8	32
23	2.2	---	---	---	---	---	3.4	3.6	3.8	3.8	3.8	31
24	2.3	---	---	---	---	---	3.8	3.6	3.8	3.8	3.8	32
25	2.4	---	---	---	---	---	3.6	3.5	3.8	3.8	3.8	33
26	2.3	---	---	---	---	---	3.6	3.5	3.8	3.4	3.8	37
27	2.1	---	---	---	---	---	3.6	3.5	3.8	2.9	3.8	40
28	2.2	---	---	---	---	---	3.6	3.5	3.8	2.9	3.8	40
29	2.4	---	---	---	---	---	3.6	3.5	3.8	2.9	30	39
30	2.5	---	---	---	---	---	3.6	3.5	3.8	2.8	34	41
31	2.8	---	---	---	---	---	---	3.5	---	2.8	34	---
TOTAL	531.7	---	---	---	---	---	104.2	114.5	110.6	112.7	492.3	1063
MEAN	17.2	---	---	---	---	---	3.47	3.69	3.69	3.64	15.9	35.4
MAX	48	---	---	---	---	---	3.8	4.9	3.8	3.8	79	41
MIN	2.1	---	---	---	---	---	3.4	3.5	3.5	2.8	2.8	31
AC-FT	1050	---	---	---	---	---	207	227	219	224	976	2110

SACRAMENTO RIVER BASIN

11405200 WEST BRANCH FEATHER RIVER BELOW HENDRICKS DIVERSION DAM, NEAR STIRLING CITY, CA

LOCATION.--Lat 39°56'03", long 121°31'43", in NW 1/4 SE 1/4 sec.16, T.24 N., R.4 E., Butte County, Hydrologic Unit 18020121, on right bank 200 ft upstream from road bridge, 1,800 ft downstream from Hendricks Diversion Dam, and 1.9 mi north of Stirling City.

DRAINAGE AREA, --46.1 mi².

PERIOD OF RECORD.--August 1986 to current year (low-flow records only).

GAGE.--Water-stage recorder. Elevation of gage is 3,210 ft above sea level, from topographic map.

REMARKS.--No records computed above 40 ft³/s. Most of the water is diverted at Hendricks diversion dam to the Hendricks Canal and Toadtown Canal (station 11389800) and then to De Sabla Powerplant (station 11389750) on Butte Creek.

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

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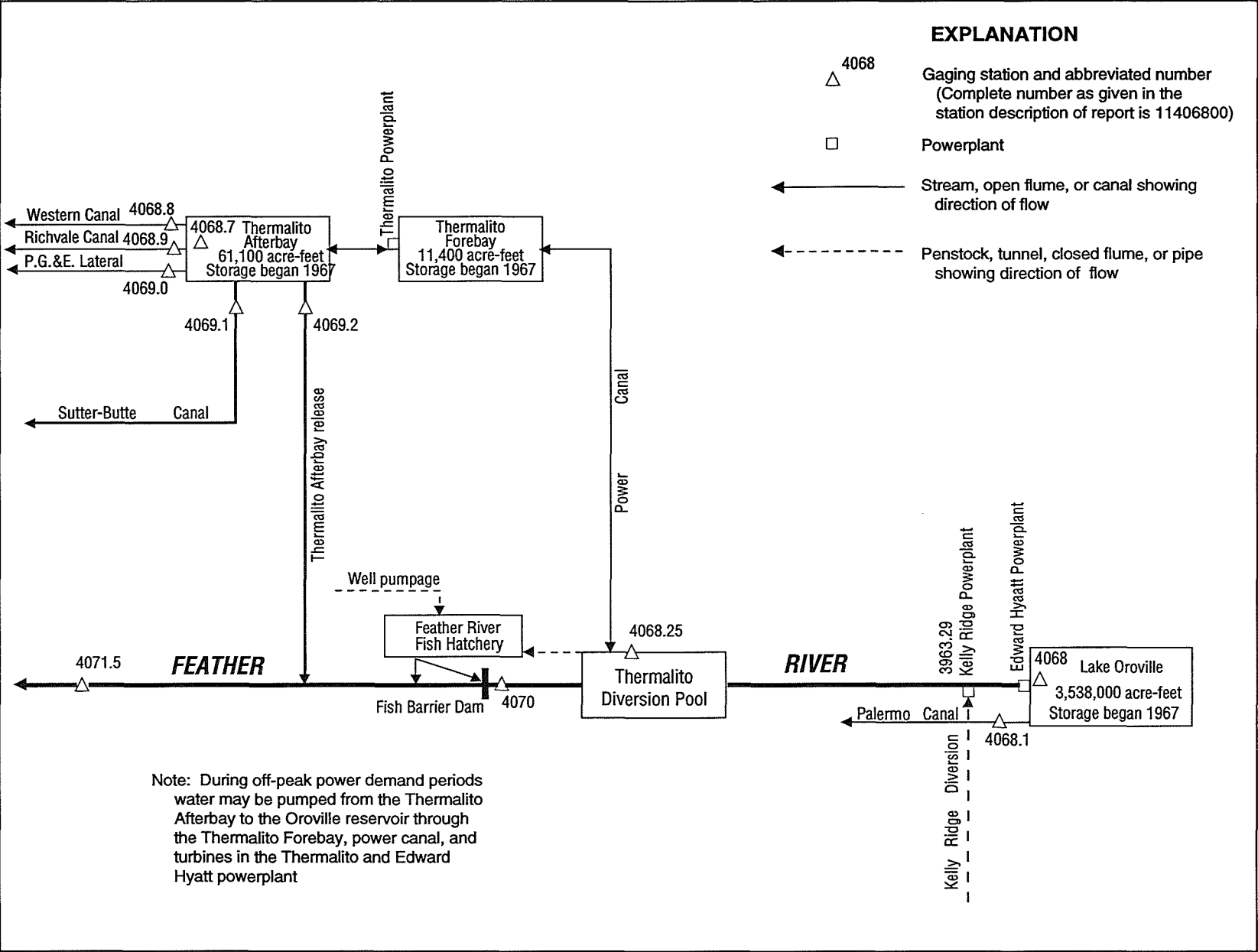


Figure 29. Diversions and storage from Feather River at Lake Oroville.

11406800 LAKE OROVILLE NEAR OROVILLE, CA

LOCATION.--Lat 39°32'06", long 121°28'25", in NE 1/4 SW 1/4 sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020123, near intake structure at left end of Oroville Dam on Feather River, 1.0 mi downstream from North Fork Feather River, and 4.2 mi east of Oroville.

DRAINAGE AREA.--3,607 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 0.47 ft above sea level (levels by California Department of Water Resources). Contents based on capacity table in use since Sept. 21, 1967.

REMARKS.--Reservoir is formed by an earthfill dam with concrete chute-type sidehill spillway completed May 13, 1968; storage began Nov. 14, 1967. Usable capacity, 2,685,385 acre-ft between elevations 640.0 ft, minimum power pool, and 900.0 ft, normal maximum pool. Dead storage, 852,192 acre-ft. Total capacity at normal maximum pool, 3,537,577 acre-ft; temporary detention storage occurred at times during construction; maximum was 155,200 acre-ft, Dec. 23, 1964. Water is released to Edward Hyatt Powerplant through penstock in left abutment of dam and to Palermo Canal (station 11406810) through concrete tunnel also in left abutment of dam. Three of the total of six turbines in the Edward Hyatt Powerplant are reversible and during periods of low power demand water is pumped at times from the river back into Lake Oroville. Records, including extremes, represent total contents at 2400 hours. See schematic diagram showing diversions and storage from Feather River at Lake Oroville. Maximum inflow of 266,000 ft³/s during a 2-hour period Feb. 17, 1986.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,536,000 acre-ft, June 4, 1973, gage height, 899.88 ft; minimum since initial storage began, 882,395 acre-ft, Sept. 7, 1977, gage height, 645.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,529,838 acre-ft, May 22, gage height, 899.51 ft; minimum, 2,687,877 acre-ft, Dec. 29, gage height, 840.88 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)									
(Based on table provided by California Department of Water Resources, dated Sept. 21, 1967)									
640	852,192	710	1,332,547	780	1,974,240	850	2,808,349		
650	911,975	720	1,413,685	790	2,080,969	860	2,944,741		
660	974,560	730	1,498,175	800	2,191,742	870	3,085,747		
670	1,040,003	740	1,586,086	810	2,306,597	880	3,231,454		
680	1,108,406	750	1,677,554	820	2,425,571	890	3,382,038		
690	1,179,915	760	1,772,690	830	2,548,850	900	3,537,577		
700	1,254,634	770	1,871,511	840	2,676,446				

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	2897447	2799237	2775886	2708483	2736306	2721845	3006071	3248076	3505126	3428639	3040118	2749103
2	2887450	2795492	2777882	2707045	2726703	2709791	3023555	3255665	3504969	3411668	3031475	2756245
3	2874614	2793620	2781478	2708222	2726046	2699993	3035865	3256856	3501203	3397367	3021719	2748707
4	2863585	2796695	2781611	2707437	2784677	2701950	3049205	3258942	3494618	3392917	3028786	2736570
5	2851772	2801914	2779081	2707568	2849874	2708483	3060733	3273422	3492582	3375614	3013112	2732357
6	2843103	2797230	2776152	2714504	2860187	2710445	3073436	3277760	3485540	3363098	2993847	2725258
7	2842021	2795358	2773758	2722370	2854077	2715683	3090909	3279406	3484132	3363408	2977183	2724076
8	2844727	2792284	2771764	2721714	2836344	2719222	3098521	3278059	3489451	3353809	2959470	2732357
9	2841345	2789480	2768310	2718435	2822052	2730647	3104995	3278658	3499634	3342109	2941140	2723289
10	2837560	2789213	2764461	2717648	2817210	2744745	3110758	3278059	3493365	3325446	2940725	2715420
11	2835399	2792551	2766319	2715158	2812508	2759026	3113931	3288547	3489764	3307035	2933111	2712147
12	2831890	2798970	2814657	2710838	2806336	2776951	3114363	3302068	3485540	3286448	2922338	2709007
13	2827979	2796562	2813313	2714765	2797364	2790014	3117827	3305830	3482413	3273272	2906369	2706914
14	2822052	2793888	2806068	2715813	2788812	2798434	3123751	3309747	3478195	3270731	2892240	2714242
15	2820572	2787611	2805800	2715551	2778814	2801781	3124185	3320308	3486165	3255069	2878160	2724076
16	2817076	2783877	2806470	2731699	2770701	2820169	3125921	3356852	3497439	3237532	2863585	2724207
17	2818824	2779347	2802182	2743821	2772030	2837830	3129973	3420146	3492582	3221989	2858421	2724601
18	2818017	2778149	2789613	2750425	2779214	2849603	3133160	3470394	3486478	3206791	2864401	2723814
19	2818555	2782144	2773226	2755319	2804192	2861545	3136348	3484289	3478195	3190030	2848935	2721320
20	2818286	2776019	2756377	2763665	2836479	2872569	3147673	3483663	3470862	3181527	2834319	2718959
21	2818824	2774955	2742633	2777749	2871479	2873932	3156695	3503086	3461205	3181527	2823399	2721845
22	2820169	2771366	2728017	2776152	2850687	2876659	3161942	3529838	3465720	3165151	2810092	2725784
23	2820572	2776552	2722239	2770834	2809689	2886493	3166173	3522428	3479132	3150145	2796027	2722895
24	2819631	2780146	2721451	2774955	2782677	2904034	3178891	3511096	3469771	3130552	2793620	2722501
25	2814657	2782544	2721583	2782944	2755846	2908156	3186803	3512511	3460116	3114219	2799505	2721058
26	2813448	2782944	2710838	2777483	2738678	2914897	3191351	3514399	3453276	3094067	2786144	2719877
27	2811971	2783077	2701298	2778548	2738151	2923442	3209296	3520380	3450946	3087323	2781212	2723026
28	2813582	2780412	2693604	2779746	2736701	2936155	3228200	3515028	3441949	3089044	2772961	2729069
29	2816538	2778814	2687877	2774290	2729463	2945716	3238570	3514084	3439005	3076296	2759424	2735384
30	2808079	2775753	2694125	2761942	---	2965459	3243172	3512039	3441019	3064013	2746725	2735516
31	2800576	---	2720281	2750028	---	2985016	---	3504341	---	3052191	2743821	---
MAX	2897447	2801914	2814657	2782944	2871479	2985016	3243172	3529838	3505126	3428639	3040118	2756245
MIN	2800576	2771366	2687877	2707045	2726046	2699993	3006071	3248076	3439005	3052191	2743821	2706914
a	849.42	847.56	841.97	845.62	844.06	862.89	880.79	897.89	893.83	867.65	845.15	844.52
b	-96597	-24823	-73672	+47947	-20565	+255553	+258156	+261169	-63322	-388828	-308370	-8305
c	6581	2559	823	710	1144	2841	4067	5699	8136	10508	9888	7290

CAL YR 1995 b +1033837

WTR YR 1996 b -161657

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

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.

11406810 PALERMO CANAL NEAR OROVILLE, CA

LOCATION.--Lat 39°31'59", long 121°28'54", in SW 1/4 SW 1/4 sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank 50 ft downstream from Oroville Dam and 4.4 mi east of Oroville.

PERIOD OF RECORD.--April 1965 to current year. Daily discharge records of diversion from Kelly Ridge Penstock for period April 1965 to October 1968, when Kelly Ridge Penstock supplied the entire flow of Palermo Canal, are in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 547.67 ft above sea level (levels by California Department of Water Resources). April 1965 to October 1968, water-stage recorder and Parshall flume at site of diversion from Kelly Ridge Penstock, 0.4 mi downstream at different datum.

REMARKS.--Canal diverts from left end of Oroville Dam. Water is used for irrigation near Oroville. During period of construction of Oroville Dam, water was released from Kelly Ridge Penstock to meet irrigation requirements. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 28 ft³/s, several days during July to September 1967; no flow at times 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	19	9.8	5.9	4.9	.00	4.8	2.5	8.7	9.7	18	18	19
2	19	8.7	5.9	4.9	.00	4.7	.00	10	10	18	18	19
3	19	8.0	5.9	4.9	.00	4.7	2.9	12	14	18	18	19
4	19	8.0	5.9	4.9	.00	4.7	4.9	12	17	18	18	19
5	19	8.0	5.9	4.9	.00	4.7	4.9	12	18	18	18	19
6	18	8.1	6.1	4.9	.00	4.7	4.9	13	18	18	18	19
7	16	8.1	6.0	4.9	.00	4.8	4.9	16	18	18	18	19
8	16	8.1	6.0	4.9	.00	4.9	4.7	16	18	18	18	19
9	16	9.4	6.0	5.0	.00	4.9	4.8	16	18	18	18	19
10	16	10	6.0	5.0	.00	4.9	4.9	16	18	18	18	19
11	16	10	3.9	5.0	.00	4.9	4.8	16	18	18	18	19
12	15	10	1.0	5.0	3.4	4.9	5.1	16	18	18	18	19
13	14	9.9	.00	5.0	5.1	4.9	5.1	17	18	18	18	19
14	14	9.9	1.9	5.0	5.1	4.9	5.1	18	18	18	18	19
15	14	9.9	2.8	5.1	5.1	5.0	5.1	18	18	18	18	19
16	14	9.9	2.8	2.4	3.9	5.0	5.0	13	18	18	18	19
17	14	9.9	2.9	.00	2.9	4.9	5.0	9.6	18	18	18	19
18	13	9.9	2.8	.00	2.9	5.0	5.0	9.7	18	18	18	19
19	12	9.9	4.9	.00	2.9	5.1	5.0	9.9	18	18	18	19
20	11	8.3	7.0	.00	.90	5.1	5.1	10	18	18	18	19
21	10	7.6	7.6	.00	.00	5.2	5.1	9.9	18	17	18	19
22	9.9	7.9	7.5	.00	.00	5.2	5.1	9.7	18	17	18	19
23	9.9	8.0	7.5	.00	.00	4.9	5.1	9.7	18	18	19	19
24	9.9	8.0	7.6	.00	.00	5.0	5.1	9.8	18	18	19	19
25	9.9	8.0	7.8	.00	.00	5.1	5.1	9.7	18	18	19	19
26	9.9	8.0	7.8	.00	3.3	5.1	5.2	9.8	18	18	19	19
27	10	7.2	2.5	.00	5.4	4.7	5.2	9.8	18	18	19	19
28	10	5.8	.00	.00	5.3	4.7	5.1	9.6	18	18	19	19
29	10	5.8	4.0	.00	5.3	4.8	5.1	9.6	18	18	19	19
30	10	5.8	4.8	.00	---	4.7	7.7	9.6	18	18	19	17
31	9.7	---	4.9	.00	---	4.7	---	9.6	---	18	19	---
TOTAL	423.2	255.9	151.60	76.70	51.50	151.6	143.50	375.7	518.7	556	567	568
MEAN	13.7	8.53	4.89	2.47	1.78	4.89	4.78	12.1	17.3	17.9	18.3	18.9
MAX	19	10	7.8	5.1	5.4	5.2	7.7	18	18	18	19	19
MIN	9.7	5.8	.00	.00	.00	4.7	.00	8.7	9.7	17	18	17
AC-FT	839	508	301	152	102	301	285	745	1030	1100	1120	1130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

	MEAN	12.4	5.33	3.35	2.75	2.36	2.73	6.08	14.4	19.0	19.6	19.9	18.9
MAX	18.0	8.56	5.94	5.12	5.33	6.22	19.1	22.3	24.5	24.5	24.5	24.5	22.8
(WY)	1979	1994	1975	1971	1974	1988	1970	1976	1976	1975	1978	1975	1975
MIN	6.85	2.04	.000	.21	.000	.000	.000	3.21	13.4	16.0	16.2	13.8	
(WY)	1973	1983	1982	1995	1975	1979	1991	1995	1993	1991	1991	1985	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1969 - 1996

ANNUAL TOTAL	3078.66	3839.40	
ANNUAL MEAN	8.43	10.5	10.6
HIGHEST ANNUAL MEAN			13.3
LOWEST ANNUAL MEAN			7.54
HIGHEST DAILY MEAN	19	Sep 26	26
LOWEST DAILY MEAN	.00	Jan 5	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 5	.00
ANNUAL RUNOFF (AC-FT)	6110	7620	7680
10 PERCENT EXCEEDS	17	19	21
50 PERCENT EXCEEDS	7.5	9.7	8.9
90 PERCENT EXCEEDS	.00	1.6	1.4

11406870 THERMALITO AFTERBAY NEAR OROVILLE, CA

LOCATION.--Lat 39°27'30", long 121°38'17", in NE 1/4 SE 1/4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, at dam 195 ft northeast of centerline of outlet structure and 5.7 mi southwest of Oroville.

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

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft above sea level (levels by California Department of Water Resources). Auxiliary water-stage recorder 90 ft southwest of centerline of Western Canal outlet, and 7.2 mi west of Oroville.

REMARKS.--Reservoir is formed by an earthfill dam completed in 1967. Diversion from the reservoir began Oct. 12, 1967. Usable capacity, 61,144 acre-ft between gage heights 120.0 and 139.0 ft, extreme operating levels. Normal operating range is 123 to 136.5 ft. Water is released to four canals (stations 11406880, 11406890, 11406900, and 11406910) and to the Feather River (station 11406920) from the reservoir. Total maximum release to the four canals is approximately 4,000 ft³/s. Water is pumped, at times, from Thermalito Afterbay back into Thermalito Forebay during off-peak periods to be re-released through Thermalito Powerplant for power generation during peak-demand periods. Records, including extremes, represent total contents at 2400 hours. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 57,300 acre-ft, May 24, 1969, gage height, 136.56 ft; minimum since initial operation began, 5,590 acre-ft, Mar. 1, 1968, gage height, 119.09 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,977 acre-ft, Aug. 30, gage height, 135.78 ft; minimum, 12,611 acre-ft, Dec. 5, gage height, 122.87 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by California Department of Water Resources, dated Oct. 10, 1968)

119	5,465	124	15,157	130	32,150
120	7,054	126	20,171	134	46,719
122	10,792	128	25,832	139	68,198

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	16787	35069	21938	38070	31424	45345	42804	38322	31064	30737	38503	42614
2	16130	37140	16836	41484	30933	46760	45267	37603	27104	35416	37603	31721
3	17581	38829	12850	41784	21305	46721	48190	40812	30478	38394	35975	36115
4	19299	36010	12698	43108	19986	45541	47393	40590	37318	31358	19614	43261
5	19959	29641	12611	43376	19641	46129	44568	30380	39852	34966	22946	43337
6	21524	33629	13712	37496	18986	47314	39412	30900	43414	35312	30510	46957
7	20413	34724	13046	28062	19038	46800	29258	32920	45228	24529	36080	45932
8	16275	37747	13355	27567	20332	49356	30868	36080	41110	21060	42614	34004
9	16106	40072	14254	30737	21497	42425	32418	38974	30219	20439	48791	40294
10	15699	40183	17406	30835	22077	33156	34346	43070	34140	23889	38974	44375
11	14969	37318	22664	32954	22383	31754	38070	40146	36820	28783	33325	44220
12	15226	30413	30542	34175	22636	32987	43299	32052	41934	36750	32786	44917
13	16130	29290	33021	29545	23173	36291	43261	35800	41409	37926	37104	45190
14	16959	29321	31523	26011	28972	39011	40220	39962	45697	30672	41036	35625
15	16058	31886	30672	26889	36010	43414	43376	40479	35243	33426	42614	24179
16	16567	35000	22664	29481	40331	33697	45424	44723	23516	36538	45073	24822
17	16396	36891	16812	33190	40813	25861	46168	48030	26615	38647	42010	24237
18	17985	35940	17833	37490	40738	26615	46247	47393	31326	40516	26615	25711
19	18367	30966	21662	42160	40479	24324	43605	46760	38358	43644	30413	28031
20	17858	32685	28531	41709	40516	22551	36361	46523	44917	37711	36221	29769
21	19483	33562	39069	33902	40405	30445	32551	44840	50127	24295	38178	27319
22	15580	35940	42387	38322	40887	40924	32052	37104	43720	26737	42236	23918
23	14783	30802	39595	42690	41859	42956	32418	35312	28187	28846	46681	26555
24	16324	26585	34106	41709	42047	35000	31787	36045	33426	34072	40738	27504
25	19853	23861	25651	41934	41784	40627	37890	35521	38503	39521	23981	28343
26	22021	20843	28909	41521	42010	43759	45893	33190	42652	46721	32351	28688
27	24558	20226	35000	40775	42842	44801	40590	30380	42918	42463	32019	27257
28	22077	22805	42652	35590	39888	47353	32418	34038	45893	30251	35590	21442
29	19800	22664	50045	30835	44298	50944	31227	32485	41222	32887	44762	16058
30	27319	22918	49275	30542	---	43452	34966	30998	29385	34004	53977	15771
31	35208	---	43989	30478	---	34896	---	34483	---	36714	51108	---
MAX	35208	40183	50045	43376	44298	50944	48190	48030	50127	46721	53977	46957
MIN	14783	20226	12611	26011	18986	22551	29258	30380	23516	20439	19614	15771
a	130.90	127.00	133.30	129.49	133.38	130.81	130.83	130.69	129.15	131.33	135.09	124.26
b	+7859	-12290	+21071	-13511	+13820	-9402	+70	-483	-5098	+7329	+14394	-35337
c	1218	645	198	257	427	876	1256	1348	2032	2339	2340	1578

CAL YR 1995 b +7062
WTR YR 1996 b -11578

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

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.

SACRAMENTO RIVER BASIN

223

11406880 WESTERN CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank 500 ft downstream from Thermalito Afterbay Dam and 7.3 mi west of Oroville.

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

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.--Water is diverted from Thermalito Afterbay and is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,200 ft³/s, May 12, 1981, May 6, 7, 1984, May 6-8, 1990, May 3-5, 1994, May 10-13, 1996; no flow at times 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	50	538	378	73	.00	.00	.00	218	547	873	923	359
2	96	584	398	73	.00	.00	.00	243	548	884	923	348
3	177	631	397	73	.00	.00	.00	268	571	899	922	333
4	198	598	398	74	.00	.00	.00	299	598	898	922	289
5	198	573	372	73	.00	.00	.00	404	598	898	911	243
6	198	573	336	72	.00	.00	.00	576	616	910	877	214
7	198	537	323	73	.00	.00	.00	807	708	936	849	179
8	198	512	309	73	.00	.00	.00	998	748	946	848	155
9	198	523	298	74	.00	.00	.00	1140	748	958	850	148
10	198	499	284	28	.00	.00	.00	1200	748	973	848	128
11	198	473	187	.00	.00	.00	.00	1200	748	974	848	98
12	229	472	40	.00	.00	.00	.00	1200	749	974	848	88
13	287	422	.00	.00	.00	.00	.00	1200	748	973	848	79
14	323	341	.00	.00	.00	.00	.00	1170	748	973	849	73
15	323	291	.00	.00	.00	.00	19	1140	770	988	833	72
16	323	273	.00	.00	.00	.00	50	956	798	998	813	73
17	354	273	.00	.00	.00	.00	50	678	799	998	798	73
18	373	273	53	.00	.00	.00	50	428	814	998	785	73
19	397	273	92	.00	.00	.00	50	292	837	998	763	81
20	423	273	99	.00	.00	.00	50	273	848	997	720	111
21	423	273	99	.00	.00	.00	50	273	871	997	693	122
22	423	273	99	.00	.00	.00	50	272	898	999	667	122
23	446	273	98	.00	.00	.00	50	273	897	998	658	124
24	488	273	98	.00	.00	.00	80	274	914	985	646	123
25	487	273	98	.00	.00	.00	98	273	940	959	625	147
26	473	273	98	.00	.00	.00	87	273	948	948	603	163
27	504	273	99	.00	.00	.00	67	273	926	933	539	177
28	509	286	99	.00	.00	.00	68	314	884	922	498	193
29	498	298	83	.00	.00	.00	126	373	872	923	483	192
30	514	325	72	.00	---	.00	199	422	873	923	430	193
31	523	---	72	.00	---	.00	---	531	---	923	381	---
TOTAL	10227	11752	4979.00	686.00	0.00	0.00	1144.00	18241	23312	29556	23201	4773
MEAN	330	392	161	22.1	.000	.000	38.1	588	777	953	748	159
MAX	523	631	398	74	.00	.00	199	1200	948	999	923	359
MIN	50	273	.00	.00	.00	.00	.00	218	547	873	381	72
AC-FT	20290	23310	9880	1360	.00	.00	2270	36180	46240	58620	46020	9470

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

	252	226	111	26.7	.000	.46	148	675	689	770	653	169
MEAN	252	226	111	26.7	.000	.46	148	675	689	770	653	169
MAX	539	607	365	155	.000	12.4	566	930	959	1032	890	305
(WY)	1975	1975	1977	1977	1968	1972	1977	1985	1981	1981	1981	1995
MIN	95.2	38.9	.000	.000	.000	.000	1.00	271	477	504	456	49.9
(WY)	1990	1974	1971	1969	1968	1968	1982	1995	1983	1970	1970	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	109523.00	127871.00	
ANNUAL MEAN	300	349	
HIGHEST ANNUAL MEAN			312
LOWEST ANNUAL MEAN			403
HIGHEST DAILY MEAN	853	May 31	1200
LOWEST DAILY MEAN	.00	Jan 4	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 4	.00
ANNUAL RUNOFF (AC-FT)	217200	253600	225800
10 PERCENT EXCEEDS	809	923	821
50 PERCENT EXCEEDS	228	270	207
90 PERCENT EXCEEDS	.00	.00	.00

11406890 RICHVALE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on right bank 500 ft downstream from axis of Thermalito Afterbay Dam and 7.3 mi west of Oroville.

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

REVISED RECORDS.--WDR CA-91-4: 1990.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.--Canal diverts from Thermalito Afterbay; water is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 511 ft³/s, May 16, 1974; 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	184	263	140	.00	.00	.00	321	289	374	384	179
2	.00	201	263	142	.00	.00	.00	288	289	374	384	157
3	.00	243	263	142	.00	.00	.00	274	254	374	382	154
4	.00	254	267	143	.00	.00	.00	274	239	373	381	155
5	.00	254	258	143	.00	.00	.00	323	228	373	384	127
6	.00	255	251	140	.00	.00	.00	349	224	373	384	113
7	.00	254	250	139	.00	.00	.00	363	225	373	383	95
8	.00	237	252	143	.00	.00	.00	404	223	372	384	82
9	12	229	252	144	.00	.00	.00	419	245	374	384	66
10	20	230	251	145	.00	.00	.00	433	263	374	382	59
11	20	229	251	144	.00	.00	.00	417	291	374	383	60
12	32	229	168	146	.00	.00	.00	429	304	374	383	60
13	54	230	117	142	.00	.00	.00	439	314	374	376	61
14	61	231	116	143	.00	.00	.00	434	336	373	363	43
15	59	230	116	143	.00	.00	.00	429	353	374	351	28
16	99	230	117	143	.00	.00	10	429	357	374	349	24
17	161	237	117	141	.00	.00	9.7	350	369	373	338	26
18	203	240	116	142	.00	.00	7.0	265	373	374	322	25
19	209	239	133	48	.00	.00	14	193	374	373	318	17
20	209	239	142	.00	.00	.00	14	143	373	373	319	10
21	210	229	141	.00	.00	.00	18	144	374	379	318	10
22	209	226	141	.00	.00	.00	22	147	374	383	318	10
23	191	224	140	.00	.00	.00	22	139	373	383	311	10
24	162	225	140	.00	.00	.00	40	115	370	384	278	10
25	165	224	140	.00	.00	.00	62	115	374	384	262	10
26	169	225	139	.00	.00	.00	90	161	374	384	257	10
27	169	225	140	.00	.00	.00	123	203	373	383	243	10
28	169	233	140	.00	.00	.00	177	266	374	383	238	10
29	168	256	140	.00	.00	.00	206	289	373	383	239	10
30	169	265	140	.00	---	.00	283	289	373	384	218	10
31	180	---	140	.00	---	.00	---	289	---	384	201	---
TOTAL	3100.00	7007	5504	2613.00	0.00	0.00	1097.70	9133	9655	11684	10217	1641
MEAN	100	234	178	84.3	.000	.000	36.6	295	322	377	330	54.7
MAX	210	265	267	146	.00	.00	283	439	374	384	384	179
MIN	.00	184	116	.00	.00	.00	.00	115	223	372	201	10
AC-FT	6150	13900	10920	5180	.00	.00	2180	18120	19150	23180	20270	3250

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

	MEAN	17.4	37.4	32.1	8.34	.000	.27	68.9	277	285	307	268	74.5
MAX	100	234	184	84.3	.000	6.32	201	436	400	390	373	154	
(WY)	1996	1996	1994	1996	1969	1972	1972	1974	1979	1981	1974	1995	
MIN	.000	.000	.000	.000	.000	.000	.000	104	129	140	130	8.43	
(WY)	1972	1969	1969	1969	1969	1969	1969	1983	1991	1991	1991	1977	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	58959.00	61651.70	
ANNUAL MEAN	162	168	116
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			66.4
HIGHEST DAILY MEAN	390	439	511
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	116900	122300	84320
10 PERCENT EXCEEDS	360	374	348
50 PERCENT EXCEEDS	155	145	32
90 PERCENT EXCEEDS	.00	.00	.00

11406900 PACIFIC GAS & ELECTRIC CO. LATERAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°29'22", long 121°41'12", in SE 1/4 NW 1/4 sec.19, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank 82 ft downstream from axis of Thermalito Afterbay Dam and 7.2 mi west of Oroville.

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

GAGE.--Water-stage recorder. Datum of gage is 113.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.--Flow regulated at outlet works from Thermalito Afterbay; water is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 46 ft³/s, Apr. 24, 1977, May 16, 1978; 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	5.2	.00	.00	.00	.00	23	5.5	15	14	.00
2	.00	.00	6.0	.00	.00	.00	.00	17	9.1	15	12	.00
3	.00	.00	5.6	.00	.00	.00	.00	12	11	15	13	.00
4	.00	.00	4.5	.00	.00	.00	.00	24	9.8	15	13	.00
5	.00	.00	2.1	.00	.00	.00	.00	26	8.8	15	13	.00
6	.00	.00	.84	.00	.00	.00	.00	21	11	15	13	.00
7	.00	.00	.80	.00	.00	.00	.00	19	13	15	13	.00
8	.00	8.7	.79	1.8	.00	.00	.00	28	13	15	13	.00
9	.00	15	.79	3.2	.00	.00	.00	34	15	15	13	.00
10	.00	15	.76	3.2	.00	.00	.00	32	16	15	14	.00
11	.00	15	.72	3.3	.00	.00	.00	19	16	15	14	.00
12	.00	15	.28	1.3	.00	.00	.00	12	13	15	14	.00
13	.00	15	.00	.00	.00	.00	.00	5.5	10	15	14	.00
14	.00	15	.00	.00	.00	.00	.00	1.2	10	15	14	.00
15	.00	12	.00	.00	.00	.00	.00	2.2	11	15	13	.00
16	.00	8.9	.00	.00	.00	.00	.00	1.7	11	15	13	.00
17	.00	9.1	.00	.00	.00	.00	.00	.38	12	16	13	.00
18	.00	9.1	.00	.00	.00	.00	.00	.00	10	16	13	.00
19	.00	8.9	.00	.00	.00	.00	.00	.00	8.9	16	13	.00
20	.00	8.8	.00	.00	.00	.00	.00	.00	10	16	13	.00
21	.00	8.9	.49	.00	.00	.00	.00	.00	11	16	13	.00
22	.00	9.1	.92	.00	.00	.00	.00	7.3	12	16	13	.00
23	.00	8.9	.95	.00	.00	.00	.00	12	14	16	10	.00
24	.00	4.4	.94	.00	.00	.00	.00	6.3	15	15	7.7	.00
25	.00	1.8	.86	.00	.00	.00	.00	.00	16	15	6.1	.00
26	.00	1.8	.82	.00	.00	.00	.00	.52	17	15	4.8	.00
27	.00	1.5	.89	.00	.00	.00	.00	3.5	17	15	4.7	.00
28	.00	1.3	.92	.00	.00	.00	6.7	4.7	16	15	4.8	.00
29	.00	1.3	.40	.00	.00	.00	15	3.2	16	15	5.0	.00
30	.00	2.9	.00	.00	---	.00	19	3.4	16	15	2.0	.00
31	.00	---	.00	.00	---	.00	---	4.4	---	15	.00	---
TOTAL	0.00	197.40	35.57	12.80	0.00	0.00	40.70	323.30	374.1	472	336.10	0.00
MEAN	.000	6.58	1.15	.41	.000	.000	1.36	10.4	12.5	15.2	10.8	.000
MAX	.00	15	6.0	3.3	.00	.00	19	34	17	16	14	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	5.5	15	.00	.00
AC-FT	.00	392	71	25	.00	.00	81	641	742	936	667	.00

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

	MEAN	MAX	(WY)	MIN	(WY)
1968	.096	1.90	1995	.000	1969
1969	1.54	6.58	1996	.000	1969
1970	.68	3.49	1987	.000	1969
1971	.061	.51	1994	.000	1969
1972	.000	.000	1969	.000	1969
1973	.000	.000	1977	.000	1969
1974	3.54	14.8	1975	6.55	1974
1975	12.9	23.2	1981	8.60	1994
1976	12.4	18.3	1981	9.37	1993
1977	13.2	17.1	1981	9.70	1970
1978	10.7	13.9	1995	7.12	1988
1979	1.27	2.62	1972	.000	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1968 - 1996
ANNUAL TOTAL	1816.69	1791.97	
ANNUAL MEAN	4.98	4.90	4.78
HIGHEST ANNUAL MEAN			5.93
LOWEST ANNUAL MEAN			3.67
HIGHEST DAILY MEAN	20 May 22	34 May 9	46 Apr 24 1977
LOWEST DAILY MEAN	.00 Jan 6	.00 Oct 1	.00 Sep 9 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 6	.00 Oct 1	.00 Sep 9 1968
ANNUAL RUNOFF (AC-FT)	3600	3550	3460
10 PERCENT EXCEEDS	15	15	15
50 PERCENT EXCEEDS	.82	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

SACRAMENTO RIVER BASIN

11406910 SUTTER-BUTTE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.--Lat 39°27'01", long 121°39'27", in NW corner of Boga Fernandez Grant, T.18 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank 675 ft downstream from Thermalito Afterbay Dam and 6.8 mi southwest of Oroville.

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

GAGE.--Water-stage recorder. Datum of gage is 109.97 ft above sea level (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 109.50 ft lower.

REMARKS.--Water is diverted from Thermalito Afterbay and is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,110 ft³/s, Apr. 22-24, 1968; 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	311	534	478	370	.00	.00	.00	511	1350	1510	1610	1120
2	284	572	469	371	.00	.00	.00	661	1340	1510	1600	1120
3	276	572	468	382	.00	.00	.00	849	1330	1530	1600	1100
4	278	589	467	386	.00	.00	.00	1100	1360	1530	1600	1090
5	285	596	510	386	.00	.00	.00	1300	1450	1530	1580	1050
6	297	582	525	385	.00	.00	.00	1370	1480	1540	1580	1030
7	298	576	521	384	.00	.00	.00	1420	1490	1540	1560	968
8	296	575	532	386	.00	.00	.00	1520	1470	1550	1550	952
9	299	569	534	395	.00	.00	.00	1630	1460	1560	1540	956
10	311	553	533	397	.00	.00	.00	1690	1470	1560	1530	943
11	336	536	509	389	.00	.00	.00	1700	1460	1570	1530	900
12	313	532	474	386	.00	.00	.00	1710	1480	1580	1520	874
13	294	532	381	386	.00	.00	.00	1730	1500	1590	1500	838
14	275	532	347	387	.00	.00	.00	1720	1530	1600	1500	787
15	275	545	347	388	.00	.00	.00	1710	1530	1610	1520	731
16	299	551	346	373	.00	.00	.00	1550	1530	1640	1510	677
17	338	512	347	262	.00	.00	.00	1180	1520	1650	1510	631
18	395	493	358	200	.00	.00	.00	957	1500	1640	1510	602
19	402	475	362	98	.00	.00	.00	944	1490	1640	1510	561
20	477	483	363	.00	.00	.00	.00	924	1500	1630	1510	528
21	509	498	364	.00	.00	.00	.00	909	1500	1630	1480	531
22	517	499	363	.00	.00	.00	.00	838	1520	1620	1430	534
23	506	497	343	.00	.00	.00	.00	808	1530	1620	1430	521
24	531	498	337	.00	.00	.00	.00	790	1540	1630	1430	490
25	567	496	336	.00	.00	.00	.00	819	1580	1630	1410	497
26	576	488	338	.00	.00	.00	148	907	1590	1640	1340	491
27	565	487	337	.00	.00	.00	197	1050	1570	1640	1300	496
28	547	473	361	.00	.00	.00	160	1290	1540	1630	1290	471
29	540	475	373	.00	.00	.00	207	1460	1530	1600	1220	451
30	549	478	372	.00	---	.00	407	1440	1520	1590	1150	452
31	494	---	371	.00	---	.00	---	1420	---	1610	1120	---
TOTAL	12240	15798	12766	6711.00	0.00	0.00	1119.00	37907	44660	49350	45470	22392
MEAN	395	527	412	216	.000	.000	37.3	1223	1489	1592	1467	746
MAX	576	596	534	397	.00	.00	407	1730	1590	1650	1610	1120
MIN	275	473	336	.00	.00	.00	.00	511	1330	1510	1120	451
AC-FT	24280	31340	25320	13310	.00	.00	2220	75190	88580	97890	90190	44410

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

	MEAN	366	108	79.8	19.7	26.0	100	554	1401	1380	1473	1358	726
	MAX	661	527	412	216	374	571	1294	1815	1643	1709	1608	893
	(WY)	1975	1996	1996	1996	1977	1976	1968	1975	1975	1981	1982	1995
	MIN	77.2	.000	.000	.000	.000	.000	.000	519	826	834	776	283
	(WY)	1978	1975	1971	1969	1969	1978	1983	1977	1992	1991	1991	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1968 - 1996			
ANNUAL TOTAL	239010.00				248413.00							
ANNUAL MEAN	655				679				634			
HIGHEST ANNUAL MEAN									765			
LOWEST ANNUAL MEAN									401			
HIGHEST DAILY MEAN	1590				1730				2110			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	474100				492700				459000			
10 PERCENT EXCEEDS	1500				1570				1560			
50 PERCENT EXCEEDS	498				497				403			
90 PERCENT EXCEEDS	.00				.00				.00			

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER, NEAR OROVILLE, CA

LOCATION.--Lat 39°27'23", long 121°38'10", in NW 1/4 SE 1/4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on left bank of outlet channel 955 ft downstream from centerline of Thermalito Afterbay Dam and 5.7 mi southwest of Oroville.

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

WATER TEMPERATURE: Water years 1969-92.

GAGE.--Water-stage recorder. Datum of gage is 113.47 ft above sea level (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 13.00 ft lower.

REMARKS.--Flow regulated by gates of Thermalito Afterbay outlet 955 ft upstream. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,600 ft³/s, Jan. 28, 1970, gage height, 23.30 ft, datum then in use; no flow for many days during 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	5840	788	796	1400	12700	13500	6250	5420	7400	6410	4400	2390
2	5440	790	790	1400	11700	13500	9450	5420	7430	6420	4400	2380
3	5440	790	794	1400	10700	13500	9450	6410	6440	6420	4900	2390
4	5440	789	797	1410	9950	13400	9450	6410	5420	6420	5410	2390
5	5190	794	791	1400	12200	13500	9450	5150	4920	6420	5420	2390
6	4170	792	789	1400	14100	12000	9450	4140	4400	6420	5420	2390
7	3150	793	793	1400	13600	9970	9440	3400	4400	6410	5420	2390
8	2150	795	797	1410	13100	8440	9450	2890	3400	6420	5420	2380
9	1150	788	794	1410	13200	8430	9450	2390	3380	6420	5420	2390
10	898	789	792	1410	13500	8430	9450	1890	3400	6420	5410	2390
11	894	790	794	1410	13500	8440	9450	1680	3400	6170	5410	2390
12	890	791	3720	1410	13500	8440	9450	1480	3410	5920	5410	2390
13	896	792	8460	1410	13500	8440	9450	1280	3400	5920	5410	2390
14	899	791	8470	1410	10500	8440	9450	1080	2900	5920	5420	1890
15	795	793	8460	1410	10400	8440	9480	877	2380	5920	5410	1680
16	794	795	8460	1650	11400	8440	13200	875	2380	6170	5150	1480
17	795	793	8440	2060	13700	8430	13500	5840	2390	6420	4390	1280
18	742	795	8170	2890	14100	8440	13500	13000	2390	6420	4390	1180
19	792	795	7190	2900	14100	8430	13400	13100	2390	6420	4400	1180
20	788	794	6190	2890	14100	8440	11400	13100	2400	6420	4400	1180
21	789	790	5170	4120	14100	8450	9450	10400	2400	6410	4400	1180
22	788	792	4440	4410	14100	7950	9450	10300	2390	6420	4400	1180
23	749	790	4440	4780	14100	6420	8930	13800	2380	6410	4400	1180
24	546	794	4420	7050	14100	6410	6910	12600	2390	5920	4390	1180
25	791	796	4420	7930	14100	5930	5430	12400	2390	5410	3640	1180
26	787	792	4170	9940	14000	5410	5420	10400	2400	5420	3400	1180
27	796	793	3150	12200	13500	5420	5410	9440	2900	5420	2660	1180
28	789	794	2160	12500	13500	5420	5410	9450	3630	5410	2390	1170
29	789	793	1660	12700	13500	5420	5420	9440	4640	5420	2390	1170
30	794	790	1410	13500	---	5410	5420	9450	5650	4910	2390	1180
31	796	---	1410	13500	---	5410	---	8420	---	4400	2380	---
TOTAL	55567	23761	113137	136110	378550	266700	270820	211932	109200	187430	138250	52700
MEAN	1792	792	3650	4391	13050	8603	9027	6837	3640	6046	4460	1757
MAX	5840	796	8470	13500	14100	13500	13500	13800	7430	6420	5420	2390
MIN	546	788	789	1400	9950	5410	5410	875	2380	4400	2380	1170
AC-FT	110200	47130	224400	270000	750900	529000	537200	420400	216600	371800	274200	104500

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

	1943	2479	3968	4280	4755	5619	4702	3592	3028	3562	3372	2887
MEAN	1943	2479	3968	4280	4755	5619	4702	3592	3028	3562	3372	2887
MAX	5867	11020	15120	14490	14600	16890	15410	12340	9717	6678	7043	7085
(WY)	1975	1974	1984	1970	1983	1983	1983	1983	1983	1983	1974	1974
MIN	145	336	56.7	391	345	239	207	549	337	.13	116	398
(WY)	1978	1978	1968	1993	1968	1992	1992	1977	1990	1968	1968	1968

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1968 - 1996
ANNUAL TOTAL	2446614	1944157	
ANNUAL MEAN	6703	5312	3782
HIGHEST ANNUAL MEAN			9352
LOWEST ANNUAL MEAN			970
HIGHEST DAILY MEAN	17300	Mar 11	21200
LOWEST DAILY MEAN	546	Oct 24	.00
ANNUAL SEVEN-DAY MINIMUM	625	Jan 3	.00
INSTANTANEOUS PEAK FLOW		15500	21600
INSTANTANEOUS PEAK STAGE		8.45	23.30
ANNUAL RUNOFF (AC-FT)	4853000	3856000	2740000
10 PERCENT EXCEEDS	14900	12800	9120
50 PERCENT EXCEEDS	5440	4710	2220
90 PERCENT EXCEEDS	792	793	457

11407000 FEATHER RIVER AT OROVILLE, CA

LOCATION.--Lat 39°31'18", long 121°32'48", in Boga Fernandez Grant, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank 300 ft upstream from fish barrier dam on Feather River, 0.4 mi downstream from Thermalito Diversion Dam, 0.8 mi northeast of Oroville Post Office, and 4.8 mi downstream from Oroville Dam.
DRAINAGE AREA.--3,624 mi².

PERIOD OF RECORD.--October 1901 to current year. Monthly discharge only for some periods, published in WSP 1315-A. October 1934 to September 1961 published as "near Oroville."

CHEMICAL DATA: Water years 1906-07, 1951-77.

SPECIFIC CONDUCTANCE: Water years 1972-78.

WATER TEMPERATURE: Water years 1954-92.

SEDIMENT DATA: Water years 1957-79.

REVISED RECORDS.--WSP 843: 1907(M), 1909(M), 1914-15(M), 1919(M), 1927-28(M). WSP 881: 1913-28 (yearly summaries). WSP 1515: 1906-8. WSP 1931: Drainage area. WDR CA-74-2: 1968-70, adjusted monthly discharge.

GAGE.--Water-stage recorder. Datum of gage is 148.97 ft above sea level (levels by California Department of Water Resources). See WSP 1931 for history of changes prior to Oct. 1, 1964.

REMARKS.--Flow completely regulated by Lake Oroville (station 11406800) beginning November 1967, and Thermalito Diversion Pool (station 11406825), capacity 13,500 acre-ft. Diversions upstream from station for power and irrigation. Feather River Fish Hatchery diverts up to 120 ft³/s at Thermalito Diversion Dam 0.4 mi upstream from gage. Daily figures shown are combined figures of river flow and diversion to fish hatchery. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Prior to completion of Oroville Dam: Maximum discharge observed, 230,000 ft³/s Mar. 19, 1907, elevation, 167.5 ft above sea level, site and datum then in use; minimum, 300 ft³/s, estimated, Nov. 9, 1931.

Combined flow (since completion of Oroville Dam): Maximum discharge, 134,000 ft³/s, Feb. 18, 1986, gage height, 23.22 ft; minimum daily, 222 ft³/s, Sept. 19, 1972.

EXTREMES FOR CURRENT YEAR.--River only: Maximum daily discharge, 30,100 ft³/s, Feb. 22; minimum daily, 512 ft³/s, June 3.

Combined flow: Maximum daily discharge, 30,200 ft³/s, Feb. 22; minimum daily, 608 ft³/s, June 2, 3.

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	1170	1590	1580	1570	620	612	639	618	617	620	653	618
2	1590	1590	1590	1580	624	613	625	619	608	620	657	619
3	1590	1600	1590	1560	624	611	625	622	608	621	654	620
4	1600	1590	1580	1580	749	615	624	633	617	620	643	621
5	1590	1600	1590	1590	4020	612	623	633	619	622	644	620
6	1590	1590	1590	1570	10100	609	614	635	618	621	646	620
7	1590	1590	1570	1580	10100	610	613	633	621	621	648	619
8	1590	1590	1590	1570	10100	611	611	635	624	621	650	624
9	1580	1590	1600	1580	7450	610	614	634	624	622	641	626
10	1590	1610	1590	1570	611	610	615	633	628	624	638	624
11	1590	1600	1590	1590	614	613	617	642	611	621	642	624
12	1600	1590	1590	1580	612	613	623	637	616	621	642	627
13	1600	1590	1580	1580	611	611	621	637	616	621	643	625
14	1600	1600	1590	1560	612	612	623	643	616	622	635	625
15	1600	1600	1590	1570	611	611	639	646	617	624	635	626
16	1610	1590	1590	904	611	610	633	657	622	639	639	626
17	1600	1590	1590	634	2670	611	635	767	628	629	639	625
18	1590	1590	1580	629	7400	611	635	7480	619	645	641	625
19	1600	1590	1580	642	10100	631	635	10100	616	642	631	625
20	1590	1590	1580	624	11700	610	638	7630	621	628	636	625
21	1590	1590	1570	628	21500	612	636	2440	624	633	634	625
22	1600	1590	1570	624	30200	613	634	1850	623	634	634	624
23	1590	1590	1580	621	30100	619	634	6180	611	645	640	624
24	1590	1590	1580	621	20600	619	633	7380	616	644	630	625
25	1590	1590	1590	632	15200	630	635	730	618	642	631	625
26	1590	1590	1590	660	10000	622	623	612	648	645	632	625
27	1590	1580	1580	643	618	635	624	611	624	644	634	618
28	1600	1580	1580	631	610	634	621	610	616	643	633	618
29	1590	1580	1590	654	612	635	623	611	620	644	625	620
30	1600	1590	1580	636	---	635	620	614	621	641	623	619
31	1600	---	1580	637	---	634	---	612	---	634	625	---
TOTAL	48990	47740	49120	34050	209979	19134	18785	58384	18587	19553	19798	18687
MEAN	1580	1591	1585	1098	7241	617	626	1883	620	631	639	623
MAX	1610	1610	1600	1590	30200	635	639	10100	648	645	657	627
MIN	1170	1580	1570	621	610	609	611	610	608	620	623	618
AC-FT	97170	94690	97430	67540	416500	37950	37260	115800	36870	38780	39270	37070
MEAN a	2890	3020	5160	6390	20220	13310	14210	15210	5950	3670	3130	2770
AC-FTa	178000	179900	317400	392900	1163000	818400	845600	935400	353900	225800	192400	164700

a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay.

11407000 FEATHER RIVER AT OROVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1967, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2085	3069	5296	6790	9463	10080	12120	9930	5176	2505	1980	1792
MAX	12370	19710	28410	39860	28030	39760	30100	25150	15650	5999	3265	2883
(WY)	1963	1904	1956	1909	1904	1904	1911	1938	1911	1907	1967	1967
MIN	745	853	1102	1350	1714	1564	2146	1246	924	852	956	992
(WY)	1933	1933	1950	1947	1933	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1902 - 1967

ANNUAL MEAN	5834	
HIGHEST ANNUAL MEAN	12860	1907
LOWEST ANNUAL MEAN	1623	1924
HIGHEST DAILY MEAN	187000	Mar 19 1907
LOWEST DAILY MEAN	577	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	652	Sep 30 1932
INSTANTANEOUS PEAK FLOW	230000	Mar 19 1907
INSTANTANEOUS PEAK STAGE	167.5	Mar 19 1907
ANNUAL RUNOFF (AC-FT)	4226000	
10 PERCENT EXCEEDS	13300	
50 PERCENT EXCEEDS	2870	
90 PERCENT EXCEEDS	1470	

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	527	720	1016	2490	2207	2213	1053	786	497	494	479	480
MAX	1580	3313	6953	23240	25180	18870	7064	7916	998	775	639	644
(WY)	1996	1982	1984	1970	1986	1995	1982	1995	1989	1992	1996	1988
MIN	399	397	392	401	399	404	401	387	405	404	393	389
(WY)	1969	1979	1979	1976	1978	1978	1977	1969	1974	1981	1979	1972

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1969 - 1996

ANNUAL TOTAL	1166002	562807	
ANNUAL MEAN	3195	1538	1076
ANNUAL MEAN ADJUSTED a	12580	7944	b 6057
HIGHEST ANNUAL MEAN			3014
LOWEST ANNUAL MEAN			404
HIGHEST DAILY MEAN	70100	Mar 12	30200
LOWEST DAILY MEAN	612	Aug 7	608
ANNUAL SEVEN-DAY MINIMUM	614	Aug 10	611
INSTANTANEOUS PEAK FLOW			
INSTANTANEOUS PEAK STAGE			
ANNUAL RUNOFF (AC-FT)	2313000	1116000	779500
ANNUAL RUNOFF (AC-FT) ADJUSTED a	9108000	5767000	b 4388000
10 PERCENT EXCEEDS	1600	1600	642
50 PERCENT EXCEEDS	640	635	419
90 PERCENT EXCEEDS	618	613	401

a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay.

b Includes water year 1968.

SACRAMENTO RIVER BASIN

11407150 FEATHER RIVER NEAR GRIDLEY, CA

LOCATION.--Lat 39°22'00", long 121°38'46", in Boga Fernandez Grant, T.18 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank 300 ft upstream from highway bridge and 2.7 mi east of Gridley.

DRAINAGE AREA.--3,676 mi².

PERIOD OF RECORD.--October 1964 to current year. January 1944 to September 1964 are published in reports by California Department of Water Resources.

CHEMICAL DATA: Water years 1979-81.

WATER TEMPERATURE: Water years 1965-93.

SEDIMENT DATA: Water years 1965-93.

REVISED RECORDS.--WDR CA-80-4: 1967(M), 1968(M).

GAGE.--Water-stage recorder. Datum of gage is 2.91 ft below sea level. Prior to Mar. 13, 1966, water-stage recorder on left bank, at same datum. Mar. 14, 1966, to Sept. 30, 1973, gage at present location, with datum 47.09 ft above sea level.

REMARKS.--Records good. Flow regulated by Lake Oroville since November 1967 (station 11406800) and Thermalito Afterbay release to Feather River since December 1967 (station 11406920). See schematic diagrams showing diversions and storage from Feather River at Lake Oroville and lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 151,000 ft³/s, Dec. 23, 1964, gage height, 100.43 ft, present datum; minimum daily, 117 ft³/s, June 27, 1966. Since completion of Oroville Dam in 1967, maximum discharge, 150,000 ft³/s, Feb. 19, 1986, gage height, 100.06 ft; minimum daily, 366 ft³/s, July 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 102.25 ft, present datum, discharge 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	6830	2160	2240	2700	13400	13500	6120	5580	8150	7170	4990	3070
2	6810	2170	2220	2700	12300	13400	9070	5570	8220	7220	4970	3060
3	6820	2160	2220	2700	11300	13300	9060	6340	7440	7220	5460	3100
4	6840	2170	2230	2680	10600	13200	9030	6420	6310	7210	5960	3100
5	6840	2170	2240	2680	10500	13200	9040	5420	5850	7200	6050	3090
6	6070	2180	2230	2670	10400	11900	9040	4480	5210	7220	6050	3090
7	4880	2190	2220	2670	10400	10100	9030	3660	5180	7200	6070	3100
8	3960	2190	2220	2670	10400	8650	9040	3140	4060	7190	6080	3110
9	2980	2200	2230	2670	17500	8530	9030	2640	3910	7200	6080	3120
10	2800	2190	2230	2660	14300	8500	9010	2150	3940	7210	6100	3110
11	2460	2200	2280	2670	13700	8520	9020	1910	3880	7000	6110	3110
12	2280	2200	4160	2670	13600	8520	9020	1710	3890	6690	6110	3110
13	2270	2210	9280	2650	13500	8470	9020	1520	3870	6680	6110	3120
14	2270	2210	9280	2650	e12000	8460	9020	1360	3380	6660	6110	2620
15	2270	2210	9310	2670	e11000	8450	9020	1150	2670	6650	6110	2390
16	2270	2210	9320	2630	e11900	8420	11900	1200	2650	6840	5930	2150
17	2200	2220	9350	2500	e16300	8410	12500	5020	2660	7140	5220	1940
18	2090	2220	9150	3040	e21300	8430	12500	17300	2660	7120	5150	1810
19	2160	2210	8370	3470	e24000	8420	12500	21800	2660	7100	5160	1780
20	2160	2190	7560	3410	e25500	8420	10900	20900	2640	7090	5160	1790
21	2150	2200	6530	3950	31800	8410	9160	13900	2650	7090	5160	1780
22	2140	2210	5790	4960	43800	8030	9050	10500	2630	7090	5190	1790
23	2150	2220	5730	4970	44900	6720	8710	18400	2620	7080	5190	1790
24	1930	2230	5710	6370	39100	6620	7100	19200	2640	6640	5200	1790
25	2160	2220	5710	7750	31900	6610	5720	13900	2610	6140	4510	1790
26	2150	2220	5540	9100	27800	6330	5630	11000	2660	6060	4170	1800
27	2170	2200	4650	11300	14600	5710	5580	10000	3170	6050	3460	1810
28	2160	2190	3600	12500	13800	5710	5580	9840	3990	6040	3090	1810
29	2170	2220	3250	12500	13600	5670	5590	9830	5210	6080	3090	1820
30	2170	2210	3000	13300	---	5670	5590	9810	6310	5630	3080	1820
31	2180	---	2800	13800	---	5650	---	9050	---	5070	3070	---
TOTAL	100790	65980	152650	155660	545200	269930	260580	254700	123720	209980	160190	72770
MEAN	3251	2199	4924	5021	18800	8707	8686	8216	4124	6774	5167	2426
MAX	6840	2230	9350	13800	44900	13500	12500	21800	8220	7220	6110	3120
MIN	1930	2160	2220	2500	10400	5650	5580	1150	2610	5070	3070	1780
AC-FT	199900	130900	302800	308800	1081000	535400	516900	505200	245400	416500	317700	144300

e Estimated.

11407150 FEATHER RIVER NEAR GRIDLEY, 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	2416	3150	5175	7034	7149	8080	5887	4384	3524	4172	3927	3419
MAX	6520	12940	22700	37860	34170	33530	22630	19010	9996	7145	7565	7872
(WY)	1975	1974	1984	1970	1986	1983	1982	1995	1983	1983	1974	1974
MIN	853	855	832	936	905	895	804	809	913	1708	1059	1002
(WY)	1978	1978	1978	1992	1991	1992	1991	1977	1990	1970	1991	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1969 - 1996			
ANNUAL TOTAL	3588200				2372150							
ANNUAL MEAN	9831				6481				4852			
HIGHEST ANNUAL MEAN									11880			
LOWEST ANNUAL MEAN									1394			
HIGHEST DAILY MEAN	86200				Mar 12				146000			
LOWEST DAILY MEAN	1190				Jan 1				602			
ANNUAL SEVEN-DAY MINIMUM	1240				Jan 1				611			
INSTANTANEOUS PEAK FLOW					45700				Feb 23			
INSTANTANEOUS PEAK STAGE					88.24				Feb 23			
ANNUAL RUNOFF (AC-FT)	7117000				4705000				3515000			
10 PERCENT EXCEEDS	18600				12500				9950			
50 PERCENT EXCEEDS	6560				5570				2710			
90 PERCENT EXCEEDS	2200				2170				1080			

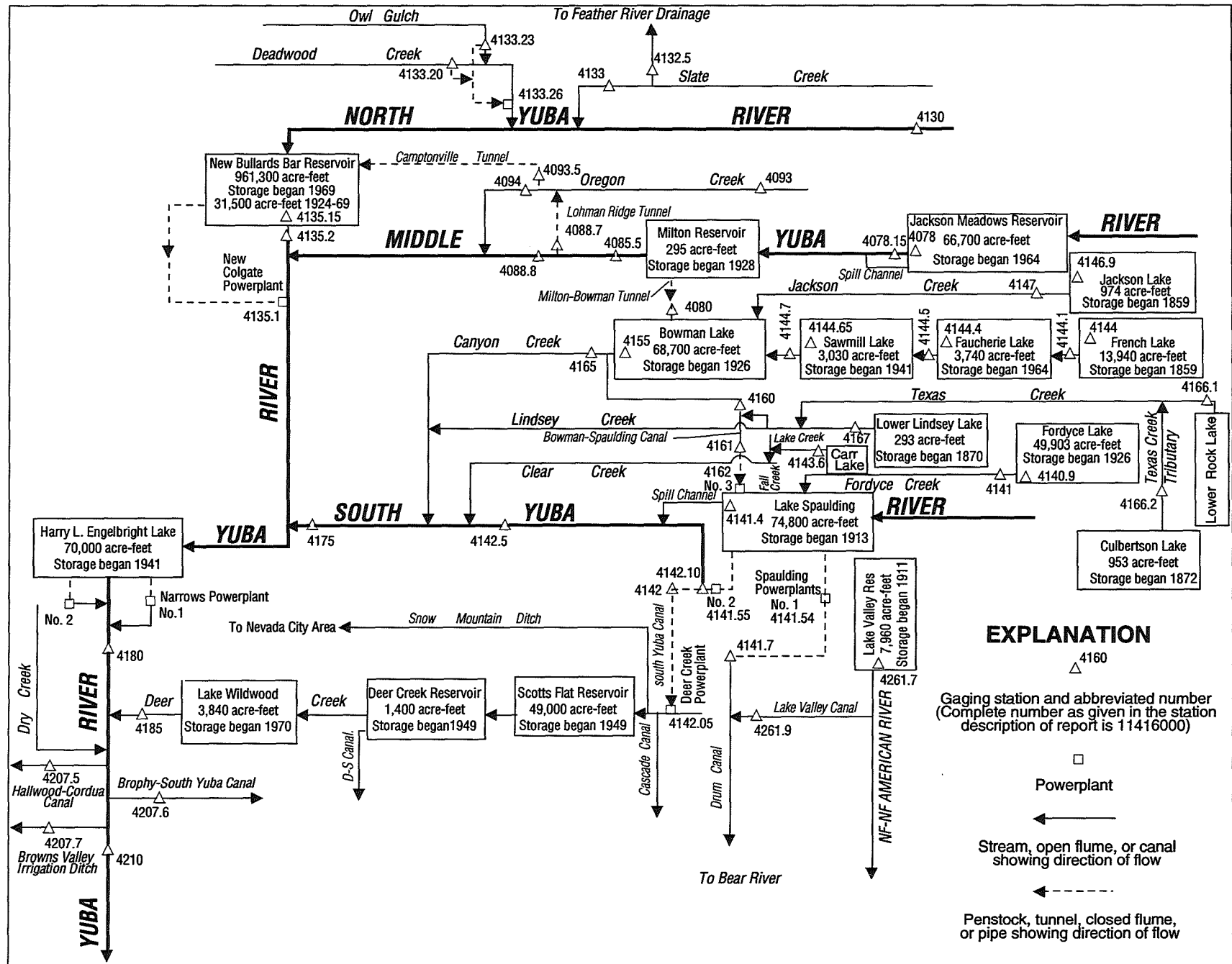


Figure 30. Diversions and storage in Yuba River basin.

11407800 JACKSON MEADOWS RESERVOIR NEAR SIERRA CITY, CA

LOCATION.--Lat 39°30'33", long 120°33'08", in NW 1/4 SE 1/4 sec.18, T.19 N., R.13 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank at Jackson Meadows Dam on Middle Yuba River, 0.7 mi downstream from Pass Creek, and 5.7 mi southeast of Sierra City.

DRAINAGE AREA.--37.6 mi².

PERIOD OF RECORD.--November 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Nov. 9, 1964. Usable capacity, 66,700 acre-ft between elevations 5,933.0 ft, bottom of intake tower, and 6,036.0 ft, top of radial spillway gates. Dead contents, 2,500 acre-ft. Records, including extremes, represent total contents. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,100 acre-ft, May 31 and June 1, 1993, elevation, 6,037.78 ft; minimum since reservoir first filled, 2,500 acre-ft, Sept. 27-29, 1976, elevation, 5,933.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 70,900 acre-ft, May 19, elevation, unknown; minimum, 29,400 acre-ft, Nov. 24, elevation, 5992.30 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Nevada Irrigation District, dated February 1965)

5,930	2,000	5,990	27,600
5,940	3,920	6,000	35,300
5,950	6,760	6,010	43,900
5,960	10,600	6,020	53,200
5,970	15,400	6,030	63,000
5,980	21,000	6,040	73,500

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	43000	29800	29500	34500	39800	54600	54900	56100	69300	68800	68500	60200
2	42500	29800	29500	34600	39800	54600	54900	56700	69300	68800	68300	59900
3	41900	29700	29500	34700	39900	54600	54800	57100	69200	68800	68200	59600
4	41300	29700	29600	34800	41500	54700	54800	57400	69200	68800	68000	59300
5	40700	29700	29600	34900	44500	54600	54800	57700	69100	68900	67800	59000
6	40000	29700	29600	35000	45700	54600	54800	58000	69100	68900	67600	58700
7	39400	29700	29600	35100	46500	54600	55000	58300	69000	68900	67300	58500
8	38800	29600	29600	35200	47100	54500	55100	58500	68900	68900	67000	58200
9	38200	29600	29600	35200	47700	54500	55200	58700	68600	68900	66700	57900
10	37600	29600	29600	35300	48100	54500	55200	58900	68400	68900	66400	57600
11	36900	29600	30100	35400	48600	54600	55200	59300	68200	68900	66200	57300
12	36300	29600	32600	35500	49100	54500	55100	60000	68100	68900	65900	57000
13	35700	29600	32900	35500	49500	54500	55000	60800	68000	69000	65600	56700
14	35100	29500	33100	35600	49900	54500	55000	61900	67800	69000	65300	56400
15	34500	29500	33200	35700	50200	54400	55100	64100	67600	69000	65000	56300
16	33900	29500	33300	36500	50600	54400	55300	65700	67500	69000	64700	56000
17	33400	29500	33400	36900	51600	54500	55200	63900	67500	68900	64400	55800
18	32800	29500	33500	37200	52500	54600	55100	62100	67700	68900	64100	55500
19	32200	29500	33500	37500	53400	54700	54900	e70900	67800	68900	63800	55200
20	31700	29500	33600	37700	54100	54800	54800	70500	67900	68900	63500	54900
21	31100	29400	33600	37900	54600	54800	54700	e70400	68000	68900	63200	54600
22	30500	29400	33600	38100	54700	54900	54700	70400	68100	68800	62900	54300
23	30000	29400	33700	38300	54800	54800	54800	70100	68100	68800	62600	54100
24	29900	29400	33700	38600	54800	54800	55000	69900	68200	68800	62400	53800
25	29900	29400	33700	38800	54700	54700	55200	69800	68300	68800	62100	53500
26	29900	29400	33800	38900	54700	54700	55400	69800	68400	68700	61800	53200
27	29900	29400	33800	39200	54600	54700	55400	69800	68500	68700	61500	52900
28	29900	29400	33800	39300	54600	54800	55400	69700	68600	68700	61300	52600
29	29800	29400	33900	39400	54600	54700	55500	69600	68700	68700	61000	52400
30	29800	29400	34100	39500	---	54700	55600	69500	68700	68700	60700	52100
31	29800	---	34400	39700	---	54600	---	69400	---	68600	60400	---
MAX	43000	29800	34400	39700	54800	54900	55600	70900	69300	69000	68500	60200
MIN	29800	29400	29500	34500	39800	54400	54700	56100	67500	68600	60400	52100
a	5992.86	5992.32	5998.76	6005.02	6021.42	6021.45	6022.48	6036.07	6035.48	6035.37	6027.40	6018.82
b	-13800	-400	+5000	+5300	+14900	0	+1000	+13800	-700	-100	-8200	-8300

CAL YR 1995 MAX 69700 MIN 20700 b +13700

WTR YR 1996 MAX 70900 MIN 29400 b +8500

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11407815 MIDDLE YUBA RIVER, CONTROLLED RELEASE AT JACKSON MEADOWS DAM, NEAR SIERRA CITY, CA

LOCATION.--Lat 39°30'36", long 120°33'15", in NW 1/4 SE 1/4 sec.18, T.19 N., R.13 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, in outlet structure near right bank below Jackson Meadows Dam on Middle Yuba River, 0.7 mi downstream from Pass Creek, and 5.7 mi southeast of Sierra City.

DRAINAGE AREA.--37.6 mi².

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

GAGE.--Ultrasonic meter measures flow in two outlet pipes. Elevation of gage is 5,910 ft. above sea level, from topographic map.

REMARKS.--Records good, including estimated daily discharges. Flow regulated by Jackson Meadows Reservoir (station 11407800). Flow over the spillway bypasses this station. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 415 ft³/s, May 23, 28, 1996; minimum daily, 7.9 ft³/s, several days November 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	306	9.7	9.6	10	10	e70	85	253	413	12	38	e142
2	305	9.7	9.7	10	10	e70	86	389	413	12	e78	e142
3	e315	9.7	9.7	10	10	e70	86	390	413	12	e78	e142
4	e325	9.7	9.7	10	10	e70	85	390	413	12	e90	e142
5	324	9.7	9.7	10	11	e70	85	391	390	12	e124	e142
6	323	9.7	9.7	10	11	e79	86	391	365	12	e142	e142
7	322	9.7	9.7	10	11	e88	85	392	365	12	e142	e142
8	321	9.7	9.7	10	11	e88	86	392	365	12	e142	e142
9	319	9.7	9.7	10	11	85	86	392	365	12	e142	e145
10	317	9.7	9.7	10	11	85	86	392	318	12	e142	e148
11	316	9.7	9.7	10	11	85	97	392	269	12	e142	e148
12	314	9.7	9.8	10	11	87	105	393	242	12	e142	e148
13	313	9.7	9.9	10	11	88	104	395	223	12	e142	e148
14	311	9.7	9.9	10	34	88	105	397	223	12	e142	e148
15	311	9.7	9.9	10	70	88	104	400	214	12	e142	e148
16	309	9.6	10	10	70	86	104	406	161	12	e142	e148
17	308	9.6	10	10	e70	85	104	411	69	12	e142	148
18	307	9.6	10	10	e70	85	104	414	11	12	e142	148
19	305	9.6	10	10	e70	85	103	411	12	12	e142	147
20	304	9.6	10	10	e70	85	103	411	12	12	e142	147
21	302	9.6	10	10	e70	85	103	411	12	12	142	147
22	301	9.6	10	10	e70	85	103	412	12	12	142	147
23	216	9.6	10	10	e70	85	104	415	12	12	142	147
24	66	9.6	10	10	e70	85	104	414	12	12	142	146
25	9.8	9.6	10	10	e70	85	104	414	12	11	142	146
26	9.7	9.6	10	10	e70	85	105	414	12	11	e142	147
27	9.7	9.7	10	10	e70	86	105	414	12	11	e142	148
28	9.7	9.7	10	10	e70	85	105	415	12	11	e142	148
29	9.7	9.7	10	10	e70	85	104	414	12	11	e142	148
30	9.7	9.7	10	10	---	85	105	414	12	12	e142	148
31	9.7	---	10	10	---	85	---	413	---	12	e142	---
TOTAL	7228.0	289.9	306.1	310	1223	2573	2931	12352	5376	367	4100	4379
MEAN	233	9.66	9.87	10.0	42.2	83.0	97.7	398	179	11.8	132	146
MAX	325	9.7	10	10	70	88	105	415	413	12	142	148
MIN	9.7	9.6	9.6	10	10	70	85	253	11	11	38	142
AC-FT	14340	575	607	615	2430	5100	5810	24500	10660	728	8130	8690

CAL YR 1995 TOTAL 43916.3 MEAN 120 MAX 408 MIN 8.0 AC-FT 87110
WTR YR 1996 TOTAL 41435.0 MEAN 113 MAX 415 MIN 9.6 AC-FT 82190

e Estimated.

11408000 MILTON-BOWMAN TUNNEL OUTLET NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'37", long 120°36'37", in NW 1/4 NE 1/4 sec.3, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 100 ft downstream from tunnel outlet near upper end of Bowman Lake, and 6.9 mi east of Graniteville.

PERIOD OF RECORD.--May 1928 to September 1930, February 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1962, published as "Milton-Bowman tunnel at outlet."

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 5,592.51 ft above sea level. Prior to Sept. 22, 1964, at datum 0.56 ft higher.

REMARKS.--Records good except estimated daily discharges, which are fair. Tunnel diverts from Middle Yuba River at Milton Reservoir, in sec.12, T.19 N., R.12 E., and discharges into Bowman Lake. Nearly the entire flow of Middle Yuba River is diverted during low and medium flows. Middle Yuba River is regulated by Jackson Meadows Reservoir (station 11407800) since November 1964. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 492 ft³/s, Feb. 11, 1941; minimum daily, 0.4 ft³/s, Oct. 7, 1944.

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	293	8.0	10	18	17	142	229	55	35	14	18	131
2	292	7.9	11	17	16	137	278	55	35	14	71	131
3	294	7.9	8.8	17	91	138	254	54	35	14	74	131
4	308	7.9	12	e17	179	163	230	51	34	13	75	131
5	309	7.9	11	e17	87	184	217	50	33	13	79	131
6	309	7.9	9.8	e17	60	165	223	50	32	13	109	131
7	308	7.9	9.7	e17	50	156	252	49	30	13	134	130
8	307	7.9	8.9	e17	44	144	298	48	28	13	135	130
9	307	7.9	8.7	e18	42	138	344	47	26	13	134	132
10	306	7.8	8.5	e18	41	138	323	48	25	13	134	138
11	304	7.7	22	e18	40	154	156	50	24	12	134	138
12	303	7.7	131	e18	40	162	48	53	24	12	134	138
13	301	7.6	40	e18	50	149	46	55	23	13	134	138
14	300	7.6	22	e19	94	138	46	58	23	14	134	138
15	299	7.6	20	57	101	131	47	67	22	13	134	142
16	298	7.6	17	49	136	130	55	85	22	12	134	142
17	297	7.6	15	33	142	133	48	82	98	12	133	138
18	296	7.7	15	32	160	146	45	74	24	12	133	138
19	294	7.7	14	26	165	168	43	60	18	12	133	138
20	293	7.6	13	25	e175	202	41	52	17	12	133	137
21	292	7.6	13	22	e190	230	40	52	16	12	138	137
22	289	7.6	13	21	e200	258	40	52	16	12	133	137
23	242	7.6	12	22	e210	256	41	48	15	12	133	136
24	89	7.6	12	22	e202	227	47	45	15	12	133	136
25	13	9.0	12	19	e194	204	48	44	15	11	132	136
26	9.4	12	12	21	e187	185	50	40	17	11	132	135
27	8.8	8.6	12	18	176	180	51	39	16	11	132	135
28	8.5	8.2	12	17	163	244	49	38	15	12	132	135
29	8.2	8.1	13	17	150	222	49	37	15	12	132	135
30	7.9	7.9	17	17	---	200	52	36	14	11	131	135
31	8.5	---	20	17	---	184	---	35	---	11	131	---
TOTAL	6994.3	239.6	555.4	681	3402	5408	3690	1609	762	384	3758	4060
MEAN	226	7.99	17.9	22.0	117	174	123	51.9	25.4	12.4	121	135
MAX	309	12	131	57	210	258	344	85	98	14	138	142
MIN	7.9	7.6	8.5	17	16	130	40	35	14	11	18	130
AC-FT	13870	475	1100	1350	6750	10730	7320	3190	1510	762	7450	8050

e Estimated.

SACRAMENTO RIVER BASIN

11408000 MILTON-BOWMAN TUNNEL OUTLET NEAR GRANITEVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1964, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.00	14.6	31.4	35.3	51.6	72.9	176	242	142	28.6	6.77	3.88
MAX	101	65.4	118	124	143	213	294	414	272	90.9	26.8	10.1
(WY)	1963	1951	1956	1942	1963	1940	1936	1937	1933	1938	1952	1952
MIN	.50	.50	.70	1.00	4.28	9.19	19.7	45.6	24.8	4.21	2.06	1.00
(WY)	1931	1931	1931	1931	1931	1933	1938	1936	1934	1939	1964	1931

SUMMARY STATISTICS

WATER YEARS 1928 - 1964

ANNUAL MEAN	67.9	
HIGHEST ANNUAL MEAN	97.2	1930
LOWEST ANNUAL MEAN	33.5	1949
HIGHEST DAILY MEAN	492	Feb 11 1941
LOWEST DAILY MEAN	.40	Oct 7 1944
ANNUAL SEVEN-DAY MINIMUM	.50	Oct 1 1930
ANNUAL RUNOFF (AC-FT)	49180	
10 PERCENT EXCEEDS	220	
50 PERCENT EXCEEDS	20	
90 PERCENT EXCEEDS	3.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	150	129	59.8	38.1	38.2	47.3	42.9	80.2	71.2	63.4	88.4	156
MAX	310	368	357	211	197	265	128	333	224	174	253	300
(WY)	1981	1973	1973	1985	1985	1986	1975	1969	1993	1976	1968	1974
MIN	1.52	1.34	1.25	1.17	1.20	1.68	5.38	7.69	5.23	3.95	2.20	1.72
(WY)	1977	1977	1977	1977	1977	1977	1977	1986	1976	1977	1993	1981

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	26840.9	31543.3	
ANNUAL MEAN	73.5	86.2	80.5
HIGHEST ANNUAL MEAN			133
LOWEST ANNUAL MEAN			14.5
HIGHEST DAILY MEAN	309	Oct 5	344
LOWEST DAILY MEAN	6.4	Jul 9	7.6
ANNUAL SEVEN-DAY MINIMUM	7.6	Jul 3	7.6
ANNUAL RUNOFF (AC-FT)	53240	62570	58310
10 PERCENT EXCEEDS	295	224	259
50 PERCENT EXCEEDS	16	47	24
90 PERCENT EXCEEDS	8.1	8.9	5.0

11408550 MIDDLE YUBA RIVER BELOW MILTON DAM, NEAR SIERRA CITY, CA

LOCATION.--Lat 39°31'19", long 120°34'57", in SW 1/4 SW 1/4 sec.12, T.19 N., R.12 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 350 ft downstream from Milton Dam, and 4.1 mi southeast of Sierra City.

DRAINAGE AREA.--39.9 mi².

PERIOD OF RECORD.--October 1987 to current year. Unpublished records for water years 1965-87 available in files of the U.S. Geological Survey.

REVISED RECORDS.--WDR CA-88-4: Drainage area.

GAGE.--Water-stage recorder, sharp-crested weir, and crest-stage gage. Elevation of gage is 5,690 ft above sea level, from topographic map. Prior to October 1987, nonrecording gage 450 ft downstream at different datum.

REMARKS.--Records good. Middle Yuba River is regulated by Jackson Meadows Reservoir (station 11407800) since November 1964 and Milton Reservoir. Tunnel diverts from Middle Yuba River at Milton Dam, in sec.12, T.19 N., R.12 E., and discharges into Bowman Lake via Milton-Bowman Tunnel (station 11408000). Practically the entire flow of Middle Yuba River is diverted during low and medium flows. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,230 ft³/s, May 18, 1996, gage height, 11.32 ft; minimum daily, 0.77 ft³/s, Nov. 3, 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	3.9	3.2	3.2	3.2	3.2	3.5	3.7	428	394	3.2	3.8	4.0
2	3.8	3.2	3.3	3.2	3.2	3.5	3.8	373	394	3.2	3.9	4.0
3	3.8	3.2	3.3	3.2	3.2	3.5	3.7	371	398	3.2	4.0	4.0
4	3.8	3.2	3.3	3.2	3.8	3.5	3.6	373	398	3.2	4.0	4.0
5	3.8	3.2	3.3	3.2	3.9	3.4	3.6	377	376	3.2	4.0	4.0
6	3.8	3.2	3.3	3.2	3.5	3.4	3.6	381	348	3.2	4.0	4.0
7	3.8	3.2	3.3	3.2	3.4	3.4	3.6	385	347	3.2	4.0	4.0
8	3.8	3.2	3.2	3.2	3.4	3.4	3.7	387	348	3.2	4.1	4.0
9	3.8	3.2	3.2	3.2	3.3	3.4	3.8	388	345	3.2	4.1	4.0
10	3.8	3.2	3.2	3.2	3.3	3.4	67	389	309	3.4	4.1	4.0
11	3.8	3.2	3.4	3.2	3.3	3.4	247	394	263	3.7	4.1	4.0
12	3.8	3.2	3.9	3.2	3.3	3.4	315	398	238	3.8	4.1	4.0
13	3.8	3.2	3.4	3.2	3.3	3.4	283	400	213	3.8	4.1	4.0
14	3.8	3.2	3.3	3.2	3.3	3.4	267	407	212	3.8	4.1	4.0
15	3.8	3.2	3.3	3.2	3.3	3.4	290	437	204	3.8	4.1	4.0
16	3.8	3.2	3.3	3.5	3.3	3.4	396	527	152	3.8	4.1	4.2
17	3.8	3.2	3.2	3.4	3.6	3.4	380	1060	66	3.8	4.1	4.1
18	3.8	3.2	3.2	3.4	3.6	3.4	328	2020	3.3	3.8	4.1	4.1
19	3.8	3.2	3.2	3.3	3.7	3.4	276	1360	3.1	3.8	4.1	4.1
20	3.8	3.2	3.2	3.3	3.6	3.4	233	891	3.1	3.8	4.1	4.1
21	3.8	3.2	3.2	3.3	3.5	3.5	203	709	3.1	3.8	4.1	4.0
22	3.7	3.2	3.2	3.3	3.5	3.6	185	732	3.1	3.8	4.1	4.0
23	3.6	3.2	3.2	3.3	3.5	3.6	184	643	3.1	3.8	4.1	4.0
24	3.4	3.2	3.2	3.2	3.6	3.6	243	531	3.1	3.8	4.1	4.0
25	3.3	3.2	3.2	3.3	3.6	3.6	318	471	3.1	3.7	4.1	4.0
26	3.3	3.3	3.2	3.2	3.5	3.5	378	451	3.2	3.8	4.1	4.0
27	3.2	3.3	3.2	3.2	3.5	3.5	432	445	3.2	3.8	4.1	4.0
28	3.2	3.3	3.2	3.2	3.5	3.7	439	432	3.2	3.8	4.1	4.0
29	3.2	3.2	3.2	3.2	3.5	3.6	427	407	3.2	3.8	4.1	4.0
30	3.2	3.2	3.2	3.2	---	3.6	480	398	3.2	3.8	4.1	4.0
31	3.2	---	3.2	3.2	---	3.6	---	393	---	3.8	4.1	---
TOTAL	113.2	96.3	101.2	100.5	100.2	107.8	6404.1	17358	5046.0	111.8	126.1	120.6
MEAN	3.65	3.21	3.26	3.24	3.46	3.48	213	560	168	3.61	4.07	4.02
MAX	3.9	3.3	3.9	3.5	3.9	3.7	480	2020	398	3.8	4.1	4.2
MIN	3.2	3.2	3.2	3.2	3.2	3.4	3.6	371	3.1	3.2	3.8	4.0
AC-FT	225	191	201	199	199	214	12700	34430	10010	222	250	239

11408550 MIDDLE YUBA RIVER BELOW MILTON DAM, NEAR SIERRA CITY, 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	4.19	3.77	3.55	3.56	24.7	10.2	47.4	154	127	22.3	4.01	3.97
MAX	7.02	4.94	3.92	4.03	195	61.3	213	723	631	119	5.36	4.68
(WY)	1994	1994	1988	1995	1993	1995	1996	1995	1995	1995	1993	1993
MIN	3.55	3.21	3.26	3.24	3.19	3.45	3.09	3.58	3.38	3.37	3.39	3.42
(WY)	1989	1996	1989	1996	1989	1990	1994	1990	1990	1988	1995	1990

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1988 - 1996

ANNUAL TOTAL	53291.8	29785.8	
ANNUAL MEAN	146	81.4	33.9
HIGHEST ANNUAL MEAN			146
LOWEST ANNUAL MEAN			3.53
HIGHEST DAILY MEAN	1310	May 2	2020
LOWEST DAILY MEAN	3.2	Oct 27	3.1
ANNUAL SEVEN-DAY MINIMUM	3.2	Oct 27	3.1
INSTANTANEOUS PEAK FLOW			2230
INSTANTANEOUS PEAK STAGE			11.32
ANNUAL RUNOFF (AC-FT)	105700	59080	24590
10 PERCENT EXCEEDS	562	380	7.3
50 PERCENT EXCEEDS	4.0	3.6	3.8
90 PERCENT EXCEEDS	3.2	3.2	3.3

11408870 LOHMAN RIDGE TUNNEL AT INTAKE, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°24'25", long 120°59'43", in SW 1/4 NE 1/4 sec.20, T.18 N., R.8 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, at tunnel intake at Our House Dam and 4.0 mi southeast of Camptonville.

PERIOD OF RECORD.--October 1988 to current year. Records of monthly diversion published with Middle Yuba River below Our House Dam, near Camptonville (station 11408880) for water years 1969-88.

GAGE.--Water-stage recorder. Datum of gage is 2,014.77 ft above sea level.

REMARKS.--Records good. Tunnel diverts water from Middle Yuba River to New Bullards Bar Reservoir (station 11413515) for power development. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 839 ft³/s, Mar. 25, 1989; 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	12	7.3	14	312	481	27	619	746	702	96	30	11
2	11	7.4	39	235	445	27	727	736	680	92	28	11
3	11	7.6	22	206	419	27	731	742	663	88	28	11
4	9.7	6.7	65	181	666	29	680	748	645	84	28	11
5	8.9	6.2	72	162	386	30	603	749	622	80	28	12
6	9.2	6.2	56	143	533	364	573	745	568	77	27	11
7	9.3	6.7	39	127	737	669	581	739	559	75	26	11
8	9.4	6.8	29	118	706	596	600	728	548	73	25	10
9	9.4	6.6	21	112	674	594	607	700	531	70	24	9.7
10	9.4	7.1	18	113	648	588	603	698	514	67	23	9.3
11	8.9	7.0	223	101	629	700	680	700	441	64	22	8.9
12	9.3	6.1	573	95	618	766	721	760	427	62	22	9.2
13	8.9	6.0	532	89	613	674	687	778	378	62	23	14
14	8.3	6.0	400	84	602	621	643	784	364	62	21	19
15	8.1	5.9	385	106	582	573	662	801	354	58	20	19
16	7.7	5.5	321	491	624	557	765	814	332	55	19	56
17	8.7	5.4	204	689	753	549	745	727	279	53	18	28
18	8.2	5.9	171	603	790	564	744	322	178	51	18	18
19	7.8	7.2	137	713	799	577	725	229	150	49	18	15
20	7.3	6.4	118	546	759	592	708	211	141	48	18	15
21	7.2	5.5	106	525	676	574	679	448	132	46	17	14
22	6.8	5.5	98	437	469	573	650	759	127	44	17	13
23	6.3	5.6	93	371	255	510	637	804	122	43	16	12
24	7.1	5.5	83	571	245	476	743	794	118	41	15	12
25	7.6	11	76	681	236	447	763	792	118	39	15	12
26	7.1	43	72	490	90	418	759	784	134	38	15	11
27	7.6	20	72	706	55	404	756	785	140	36	14	9.8
28	7.4	11	86	737	43	581	719	788	118	36	14	9.6
29	6.9	9.2	109	546	26	476	729	784	110	37	14	9.5
30	6.3	7.9	367	493	---	447	748	777	102	34	13	9.0
31	6.5	---	429	497	---	427	---	747	---	32	12	---
TOTAL	259.3	254.2	5030	11280	14559	14457	20587	21719	10297	1792	628	421.0
MEAN	8.36	8.47	162	364	502	466	686	701	343	57.8	20.3	14.0
MAX	12	43	573	737	799	766	765	814	702	96	30	56
MIN	6.3	5.4	14	84	26	27	573	211	102	32	12	8.9
AC-FT	514	504	9980	22370	28880	28680	40830	43080	20420	3550	1250	835

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

	11.6	24.2	79.3	204	275	386	456	288	196	62.9	10.2	4.98
MEAN	51.4	72.1	164	509	502	644	688	701	503	269	35.8	14.8
MAX	(WY) 1990	1989	1995	1995	1996	1993	1995	1996	1993	1995	1995	1995
MIN	.000	1.42	1.36	2.18	16.6	257	182	38.0	10.6	.86	.000	.000
(WY)	1989	1991	1991	1991	1991	1994	1994	1995	1995	1994	1992	1992

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1989 - 1996

ANNUAL TOTAL	86955.7	101283.5	
ANNUAL MEAN	238	277	166
HIGHEST ANNUAL MEAN			280
LOWEST ANNUAL MEAN			73.1
HIGHEST DAILY MEAN	835	814	839
LOWEST DAILY MEAN	5.1	5.4	.00
ANNUAL SEVEN-DAY MINIMUM	5.8	5.8	.00
ANNUAL RUNOFF (AC-FT)	172500	200900	120000
10 PERCENT EXCEEDS	713	736	543
50 PERCENT EXCEEDS	69	101	43
90 PERCENT EXCEEDS	7.4	7.7	.00

SACRAMENTO RIVER BASIN

11408880 MIDDLE YUBA RIVER BELOW OUR HOUSE DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°24'42", long 120°59'49", in SW 1/4 NW 1/4 sec.20, T.18 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 300 ft downstream from Our House Dam, and 4.0 mi southeast of Camptonville.

DRAINAGE AREA.--145 mi².

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

GAGE.--Water-stage recorder, sharp-crested weir since Oct. 16, 1990, and crest-stage gage. Datum of gage is 1,957.51 ft above sea level. Prior to Nov. 4, 1970, water-stage recorder at datum 10 ft higher. Prior to Oct. 1, 1987, at site 75 ft downstream.

REMARKS.--Records good. Natural flow of stream affected by Jackson Meadows Reservoir (station 11407800), Milton Bowman Tunnel (station 11408000), which diverts upstream from station to Bowman Lake (station 11415500), and Lohman Ridge Tunnel (station 11408870), which diverts 300 ft upstream to Oregon Creek and then to New Bullards Bar Reservoir (station 11413515) via Camptonville Tunnel (station 11409350). Other small diversions upstream from station. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,600 ft³/s, Feb. 17, 1986, gage height, 27.4 ft, from floodmark, present datum, from rating curve extended above 8,600 ft³/s on basis of theoretical rating of Our House Dam spillway; minimum daily, 2.1 ft³/s, Jan. 10, 1982.

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	35	37	594	420	517	52	35	35	33
2	33	33	33	34	36	591	623	407	52	35	35	33
3	33	33	33	33	36	617	208	339	52	34	35	33
4	33	33	34	33	2150	961	43	205	53	34	35	33
5	33	32	34	33	4090	1070	39	119	54	34	35	33
6	33	33	34	32	1830	366	38	92	53	34	35	33
7	33	32	33	32	843	44	38	78	53	34	34	33
8	33	33	33	32	613	42	39	65	53	34	33	33
9	33	33	33	32	436	41	39	57	53	34	33	33
10	33	33	33	32	306	40	39	55	53	34	33	33
11	33	33	36	32	206	105	59	54	52	34	33	33
12	33	33	1760	32	147	168	169	61	53	34	33	33
13	33	33	426	32	131	83	64	106	53	34	33	33
14	33	33	39	32	76	40	50	185	52	34	33	33
15	33	33	40	32	43	38	55	556	52	34	33	33
16	33	33	39	577	42	37	643	2640	41	34	33	34
17	33	33	36	443	417	37	735	3300	34	34	33	34
18	33	33	34	148	781	37	778	4830	34	34	33	33
19	33	33	33	297	1400	37	430	3300	35	34	33	33
20	33	33	32	40	1800	37	189	2130	35	34	33	34
21	33	33	32	40	2070	36	64	1340	35	35	33	34
22	33	33	31	39	1090	37	55	1230	35	35	33	33
23	33	33	31	38	815	36	54	930	35	35	33	33
24	33	33	31	251	845	35	231	771	35	35	33	33
25	33	33	31	646	726	34	437	574	35	35	33	33
26	33	33	31	47	407	34	483	465	35	35	33	33
27	33	33	31	533	592	34	546	374	35	35	33	33
28	33	33	31	442	686	36	523	272	35	35	33	33
29	33	33	32	44	631	35	423	169	35	35	33	33
30	33	33	35	37	---	34	483	85	35	35	33	33
31	33	---	36	37	---	34	---	54	---	35	33	---
TOTAL	1023	988	3160	4147	23282	5370	7997	25360	1319	1067	1036	994
MEAN	33.0	32.9	102	134	803	173	267	818	44.0	34.4	33.4	33.1
MAX	33	33	1760	646	4090	1070	778	4830	54	35	35	34
MIN	33	32	31	32	36	34	38	54	34	34	33	33
AC-FT	2030	1960	6270	8230	46180	10650	15860	50300	2620	2120	2050	1970

11408880 MIDDLE YUBA RIVER BELOW OUR HOUSE DAM, NEAR CAMPTONVILLE, 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	30.4	80.3	144	294	224	257	171	236	118	33.0	29.4	29.4
MAX	52.7	462	1040	1854	1521	1228	1368	1697	994	49.6	42.1	39.6
(WY)	1983	1982	1982	1970	1986	1995	1982	1995	1995	1983	1984	1986
MIN	16.6	20.4	20.7	7.10	28.0	31.3	33.9	32.5	28.8	17.5	13.0	14.3
(WY)	1978	1978	1987	1987	1977	1976	1970	1970	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1969 - 1996			
ANNUAL TOTAL	166265				75743							
ANNUAL MEAN	456				207				137			
HIGHEST ANNUAL MEAN									481			
LOWEST ANNUAL MEAN									26.3			
HIGHEST DAILY MEAN	5970				Mar 10				17000			
LOWEST DAILY MEAN	31				Jul 25				2.1			
ANNUAL SEVEN-DAY MINIMUM	31				Dec 22				3.2			
INSTANTANEOUS PEAK FLOW					31				Dec 22			
INSTANTANEOUS PEAK STAGE					6510				May 18			
INSTANTANEOUS LOW FLOW					23.21				May 18			
ANNUAL RUNOFF (AC-FT)	329800				150200				27.40			
10 PERCENT EXCEEDS	1670				581				2.1			
50 PERCENT EXCEEDS	41				35				99260			
90 PERCENT EXCEEDS	32				33				153			
									34			
									25			

SACRAMENTO RIVER BASIN

11409300 OREGON CREEK AT CAMPTONVILLE, CA

LOCATION.--Lat 39°26'46", long 121°02'43", in SE 1/4 NE 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 25 ft downstream from county bridge, 0.5 mi southeast of Camptonville, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--23.0 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 2,230 ft above sea level, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,550 ft³/s, Feb. 17, 1986, gage height, 11.56 ft, from rating curve extended above 1,600 ft³/s; minimum daily, 0.53 ft³/s, Aug. 14-16, 1977, Sept. 6, 1988.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1515	549	6.52	Feb. 21	0845	1140	7.53
Jan. 18	2115	687	6.81	Mar. 4	1815	558	6.34
Jan. 25	0100	1370	7.93	Apr. 1	1845	702	6.68
Feb. 5	0500	1650	8.30	May 18	0045	970	7.23

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	2.7	2.6	4.0	82	177	126	288	104	82	17	5.2	2.7
2	2.6	2.7	7.5	68	156	122	367	98	75	16	5.0	2.7
3	2.6	2.8	4.7	56	144	127	272	91	69	15	4.9	2.7
4	2.5	2.7	13	43	863	307	208	85	62	15	5.0	2.7
5	2.3	2.7	11	30	1230	408	172	78	58	14	4.8	2.9
6	2.4	2.7	8.5	27	664	272	151	72	54	13	4.7	2.9
7	2.4	2.7	7.5	25	443	224	138	68	49	13	4.6	2.8
8	2.5	2.7	6.3	23	334	203	127	62	45	12	4.5	2.8
9	2.5	2.7	5.5	21	279	198	119	58	43	13	4.3	2.7
10	2.5	2.8	5.2	21	243	197	113	54	40	11	4.6	2.6
11	2.5	2.8	45	19	212	299	105	50	37	11	4.8	2.6
12	2.5	2.8	315	18	190	374	99	48	35	10	3.9	2.6
13	2.6	2.8	118	18	176	311	91	45	32	11	3.9	3.0
14	2.5	2.7	70	45	163	250	84	45	30	9.9	3.8	3.9
15	2.4	2.7	80	21	149	210	83	59	28	9.5	3.7	4.7
16	2.5	2.7	70	257	145	185	177	337	28	8.9	3.5	6.7
17	2.6	2.7	44	237	226	167	218	598	27	8.7	3.6	4.5
18	2.6	2.8	31	266	297	157	306	703	24	8.5	3.6	3.7
19	2.5	2.9	25	322	670	147	214	433	23	8.4	3.6	3.5
20	2.5	2.9	22	183	741	140	186	300	22	8.0	3.6	3.4
21	2.5	2.9	20	163	894	131	167	316	22	7.8	3.6	3.3
22	2.4	2.9	19	126	592	128	153	342	21	9.5	3.5	3.2
23	2.4	2.9	18	105	405	118	142	266	20	9.7	3.4	3.2
24	2.5	2.8	16	359	315	108	167	215	20	6.6	3.3	3.1
25	2.6	3.3	15	646	251	99	177	176	20	6.3	3.2	3.0
26	2.6	8.0	13	248	203	91	164	152	21	6.1	3.2	2.9
27	2.7	4.2	15	449	173	87	149	134	23	5.9	3.1	2.8
28	2.7	3.4	21	392	154	117	134	120	20	5.9	3.1	2.7
29	2.6	3.2	33	245	138	104	121	110	19	5.9	3.0	2.7
30	2.5	3.1	114	186	---	97	112	99	18	5.5	2.9	2.7
31	2.6	---	99	195	---	92	---	91	---	5.3	2.8	---
TOTAL	78.3	91.6	1276.2	4896	10627	5596	5004	5409	1067	307.4	120.7	95.7
MEAN	2.53	3.05	41.2	158	366	181	167	174	35.6	9.92	3.89	3.19
MAX	2.7	8.0	315	646	1230	408	367	703	82	17	5.2	6.7
MIN	2.3	2.6	4.0	18	138	87	83	45	18	5.3	2.8	2.6
AC-FT	155	182	2530	9710	21080	11100	9930	10730	2120	610	239	190

11409300 OREGON CREEK AT CAMPTONVILLE, 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	5.38	34.5	77.0	148	155	174	114	62.6	18.0	5.74	2.79	2.80
MAX	16.9	214	407	547	664	453	391	198	47.8	13.0	5.83	9.12
(WY)	1982	1974	1984	1970	1986	1989	1982	1995	1983	1995	1983	1983
MIN	.84	3.03	2.30	3.88	6.27	10.8	7.64	9.45	3.61	1.11	.68	.67
(WY)	1989	1991	1977	1991	1991	1977	1977	1987	1987	1977	1977	1988

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1968 - 1996	
ANNUAL TOTAL	43224.0		34568.9			
ANNUAL MEAN	118		94.5		66.3	
HIGHEST ANNUAL MEAN					146	
LOWEST ANNUAL MEAN					5.38	
HIGHEST DAILY MEAN	1710	Jan 10	1230	Feb 5	3200	Feb 17 1986
LOWEST DAILY MEAN	2.3	Oct 5	2.3	Oct 5	.53	Aug 14 1977
ANNUAL SEVEN-DAY MINIMUM	2.4	Oct 4	2.4	Oct 4	.54	Aug 11 1977
INSTANTANEOUS PEAK FLOW			1650	Feb 5	4550	Feb 17 1986
INSTANTANEOUS PEAK STAGE			8.30	Feb 5	11.56	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	85730		68570		48000	
10 PERCENT EXCEEDS	304		268		170	
50 PERCENT EXCEEDS	30		21		14	
90 PERCENT EXCEEDS	2.6		2.7		2.1	

11409350 CAMPTONVILLE TUNNEL AT INTAKE, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°26'25", long 121°03'30", in NW 1/4 SW 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, at tunnel intake at Log Cabin Dam 1.0 mi southwest of town of Camptonville.

PERIOD OF RECORD.--October 1988 to current year. Records of monthly diversion published with Oregon Creek below Log Cabin Dam near Camptonville (station 11409400) for water years 1969-88.

GAGE.--Water-stage recorder. Datum of gage is 1,952.00 ft above sea level (from contractor's drawings).

REMARKS.--Records fair. Water is diverted to Oregon Creek from the Middle Yuba River through Lohman Ridge Tunnel (station 11408870) 1,000 ft upstream. Camptonville Tunnel diverts water from Oregon Creek to New Bullards Bar Reservoir (station 11413515) for power development. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,090 ft³/s, Mar. 25, 1989; 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	3.2	.94	6.7	386	668	51	763	788	816	99	25	5.7
2	2.7	1.1	33	292	614	39	954	781	800	92	23	5.3
3	2.4	1.3	17	248	571	41	870	780	788	87	23	5.0
4	1.9	.81	56	210	836	53	813	781	770	83	23	5.2
5	1.3	.51	65	175	840	62	748	778	748	79	22	5.8
6	1.5	.46	49	152	914	414	712	773	699	76	22	5.4
7	1.9	.67	33	135	950	822	710	767	681	75	21	5.0
8	2.0	.84	24	122	876	769	716	758	666	71	20	4.3
9	2.0	.73	17	114	823	761	716	739	648	67	19	3.7
10	2.0	.99	13	115	804	758	709	735	633	65	18	3.4
11	1.9	.99	235	102	785	876	748	727	550	61	17	3.3
12	2.0	.58	813	95	765	972	772	755	519	59	17	3.9
13	1.9	.38	650	89	754	881	750	764	469	60	18	6.7
14	1.2	.34	490	83	739	808	718	767	451	58	16	14
15	1.1	.37	467	109	710	756	726	783	437	54	15	13
16	.99	.04	410	597	732	724	838	985	422	51	14	45
17	1.7	.01	255	859	846	701	854	1060	375	48	13	23
18	1.5	.14	192	788	906	708	930	928	267	46	13	14
19	1.1	1.1	149	927	1040	715	846	687	229	44	13	9.7
20	.81	.84	124	725	966	721	836	575	214	43	13	9.0
21	.74	.22	108	696	927	701	808	722	195	41	12	7.8
22	.53	.15	98	583	421	696	768	994	184	39	12	6.9
23	.09	.17	92	490	108	649	751	973	165	38	11	6.3
24	.52	.14	83	771	88	595	817	918	146	35	10	6.3
25	.96	3.0	76	918	72	556	837	896	137	34	9.8	5.7
26	.79	36	71	804	64	518	827	880	152	31	9.3	4.8
27	.96	15	70	892	69	501	816	872	162	30	11	3.6
28	.94	5.2	87	908	61	684	788	869	129	29	8.7	3.3
29	.73	3.2	113	818	60	606	786	867	118	31	8.5	3.2
30	.29	2.2	460	685	---	554	794	863	108	28	8.0	2.9
31	.37	---	512	692	---	518	---	846	---	26	6.4	---
TOTAL	42.02	78.42	5868.7	14580	18009	18210	23721	25411	12678	1680	471.7	241.2
MEAN	1.36	2.61	189	470	621	587	791	820	423	54.2	15.2	8.04
MAX	3.2	36	813	927	1040	972	954	1060	816	99	25	45
MIN	.09	.01	6.7	83	60	39	709	575	108	26	6.4	2.9
AC-FT	83	156	11640	28920	35720	36120	47050	50400	25150	3330	936	478

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

MEAN	12.0	28.3	87.3	268	355	547	542	339	234	69.4	7.48	2.58
MAX	54.9	105	189	695	668	793	867	820	542	347	33.8	8.04
(WY)	1990	1989	1996	1995	1993	1993	1995	1996	1993	1995	1995	1996
MIN	.000	1.28	.83	1.16	16.7	308	173	53.2	7.22	.11	.000	.000
(WY)	1989	1991	1991	1991	1991	1994	1994	1992	1992	1994	1992	1991

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1989 - 1996

ANNUAL TOTAL	119069.34	120991.04	
ANNUAL MEAN	326	331	207
HIGHEST ANNUAL MEAN			335
LOWEST ANNUAL MEAN			75.7
HIGHEST DAILY MEAN	1050	1060	1090
LOWEST DAILY MEAN	.01	.01	.00
ANNUAL SEVEN-DAY MINIMUM	.27	.27	.00
ANNUAL RUNOFF (AC-FT)	236200	240000	149700
10 PERCENT EXCEEDS	864	837	715
50 PERCENT EXCEEDS	149	98	48
90 PERCENT EXCEEDS	1.1	1.1	.00

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, CA

LOCATION.--Lat 39°26'22", long 121°03'29", in SW 1/4 SW 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 500 ft downstream from Log Cabin Dam, 670 ft upstream from High Point Ravine, and 1.1 mi southwest of Camptonville.

DRAINAGE AREA.--29.1 mi².

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

WATER TEMPERATURE: Water years 1972-79.

REVISED RECORDS.--WDR CA-81-4: 1980(M).

GAGE.--Water-stage recorder, sharp-crested weir since Nov. 13, 1990, and crest-stage gage. Datum of gage is 1,912.73 ft above sea level (levels by Yuba County Water Agency). Prior to July 24, 1973, at site 470 ft downstream at datum 8.40 ft lower. July 24, 1973, to Sept. 30, 1986, at site on right bank. Oct. 1, 1986 to Nov. 13, 1990 a sharp-crested weir was put in at same location and gage house located on left bank. The weir was deemed too shallow so a new sharp-crested weir was put in 70 ft downstream at a datum 7.24 ft lower.

REMARKS.--Records good. Lohman Ridge Tunnel (station 11408870) diverts water into the basin from the Middle Yuba River. Camptonville Tunnel (station 11409350), maximum capacity, about 1,000 ft³/s, 520 ft upstream, diverts water out of the basin to New Bullards Bar Reservoir (station 11413515); diversion began October 1968. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s, Feb. 17, 1986, gage height, 11.24 ft, datum then in use, from rating curve extended above 50 ft³/s based on flow-over-dam computation; minimum daily, 0.34 ft³/s, Sept. 18, 1972.

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	e10	11	17	13	170	83	15	16	12	11	10
2	11	e10	11	15	13	174	25	15	16	12	e11	10
3	11	e10	11	14	13	175	15	15	15	12	e11	10
4	10	e10	12	14	767	308	15	15	15	12	e10	10
5	9.7	e10	14	13	836	438	14	15	15	12	e10	10
6	10	e10	14	13	e92	185	14	15	15	12	11	10
7	10	e10	11	13	52	21	14	15	15	12	11	10
8	10	11	11	13	20	20	14	15	15	12	11	10
9	10	10	11	13	32	20	14	15	15	12	11	10
10	10	11	11	13	19	20	14	16	15	12	11	10
11	10	11	15	12	19	22	14	17	14	12	11	10
12	10	10	48	12	19	23	14	17	15	12	11	10
13	10	10	21	12	19	22	14	17	16	12	11	11
14	10	10	19	12	18	21	14	17	15	12	11	11
15	10	10	19	12	17	19	15	17	15	12	11	11
16	10	10	19	93	17	17	16	34	12	12	11	13
17	e10	10	17	23	18	17	16	194	10	12	10	12
18	e10	10	15	58	19	17	19	135	11	12	10	11
19	e10	10	13	40	284	17	16	17	11	12	10	11
20	e10	10	13	16	415	17	15	16	11	12	10	11
21	e10	10	12	16	616	17	15	36	11	12	10	11
22	e10	10	12	15	676	17	15	50	11	12	11	11
23	e10	10	12	13	510	17	15	26	11	12	10	11
24	e10	10	12	179	457	17	15	20	11	12	10	11
25	e10	10	12	474	430	14	16	19	11	12	10	11
26	e10	12	12	15	296	12	16	19	11	11	10	11
27	e10	11	12	194	209	12	15	19	12	11	10	10
28	e10	11	12	150	188	13	15	19	11	11	10	10
29	e10	10	13	18	170	13	15	17	11	11	10	10
30	e10	10	18	14	---	13	15	16	11	11	10	10
31	e10	---	18	14	---	13	---	16	---	11	10	---
TOTAL	312.7	307	461	1530	6254	1881	527	889	393	366	325	317
MEAN	10.1	10.2	14.9	49.4	216	60.7	17.6	28.7	13.1	11.8	10.5	10.6
MAX	11	12	48	474	836	438	83	194	16	12	11	13
MIN	9.7	10	11	12	13	12	14	15	10	11	10	10
AC-FT	620	609	914	3030	12400	3730	1050	1760	780	726	645	629

e Estimated.

SACRAMENTO RIVER BASIN

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, 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	6.36	16.7	45.9	87.7	65.2	49.4	31.0	20.0	11.5	8.41	6.59	5.87
MAX	12.8	72.5	273	604	617	189	268	111	22.0	15.2	13.1	14.3
(WY)	1972	1982	1982	1969	1986	1969	1969	1969	1969	1983	1983	1984
MIN	1.95	2.27	1.97	4.57	3.39	7.14	8.11	8.00	4.89	1.82	1.32	1.37
(WY)	1989	1977	1977	1977	1977	1977	1986	1986	1987	1977	1977	1988

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	17942.7		13562.7									
ANNUAL MEAN	49.2		37.1									
HIGHEST ANNUAL MEAN									29.4			
LOWEST ANNUAL MEAN									128			1969
HIGHEST DAILY MEAN	1690	Jan 10				836	Feb 5		4.20			1977
LOWEST DAILY MEAN	9.7	Oct 5				9.7	Oct 5		5340		Feb 17	1986
ANNUAL SEVEN-DAY MINIMUM	10	Oct 4				10	Oct 4		.34		Sep 18	1972
INSTANTANEOUS PEAK FLOW						1760	Feb 5		.74		Sep 18	1972
INSTANTANEOUS PEAK STAGE									6400		Feb 17	1986
ANNUAL RUNOFF (AC-FT)	35590					26900			11.24		Feb 17	1986
10 PERCENT EXCEEDS	42					28			21320			
50 PERCENT EXCEEDS	13					12			18			
90 PERCENT EXCEEDS	10					10			10			
									3.3			

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA

LOCATION.--Lat 39°31'30", long 120°56'13", in NE 1/4 SW 1/4 sec.11, T.19 N., R.9 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 200 ft downstream from St. Catherine Creek, 3.1 mi southwest of Goodyears Bar, and 6.4 mi southwest of Downieville.

DRAINAGE AREA.--250 mi².

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1949, published as North Fork Yuba River below Goodyears Bar. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1041: 1944. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,453 ft above sea level (river-profile survey).

REMARKS.--Records good. Several small diversions upstream from station for irrigation and mining. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s, Feb. 1, 1963, gage height, 23.8 ft (corrected), from floodmarks, from rating curve extended above 8,500 ft³/s on basis of one float measurement at 17,900 ft³/s and slope-area measurements at gage heights 19.15 and 23.8 ft; minimum daily, 60 ft³/s, Sept. 7-14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1100	10,800	12.88	Feb. 19	2200	7,260	10.95
Jan. 16	1945	4,480	9.00	May 17	2400	15,100	14.86
Feb. 5	0615	11,300	13.09				

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	173	192	748	977	1190	2020	2450	1850	543	273	191
2	197	174	262	625	905	1170	2120	2590	1900	524	267	190
3	193	172	194	575	851	1200	1820	2490	1910	504	265	190
4	191	171	326	522	5050	1760	1620	2260	1860	489	264	189
5	189	170	334	476	8570	2070	1540	2120	1780	473	261	190
6	189	171	296	442	4260	1620	1560	2100	1720	458	257	190
7	189	170	255	423	2880	1460	1700	2070	1670	449	253	188
8	189	168	217	406	2330	1370	1880	2020	1570	439	247	187
9	189	170	198	399	2070	1400	2010	1930	1440	428	242	185
10	187	170	189	405	1920	1420	1950	1940	1330	415	239	183
11	186	168	712	373	1820	1650	1780	2050	1220	402	237	182
12	184	167	6970	360	1770	1750	1660	2380	1160	393	236	180
13	183	167	1960	347	1760	1590	1500	2630	1110	410	240	192
14	181	165	1040	335	1700	1440	1480	2990	1030	404	232	204
15	180	165	960	410	1610	1370	1620	4110	966	379	228	233
16	180	164	885	2040	1810	1360	2480	9920	914	364	223	286
17	180	164	661	1970	3320	1360	2160	11700	866	356	221	220
18	178	163	517	1480	3970	1440	2030	10200	828	350	220	202
19	177	165	439	1730	5640	1560	1810	5760	792	341	221	196
20	177	164	395	1270	5280	1660	1650	4010	760	336	218	192
21	177	161	364	1190	4980	1660	1520	3820	733	327	216	190
22	174	161	347	1070	3370	1690	1480	3910	707	321	215	187
23	174	161	334	953	2550	1480	1520	3150	683	316	209	185
24	176	160	311	1200	2190	1350	2140	2700	663	311	208	184
25	176	176	303	1790	1870	1260	2380	2540	651	303	208	183
26	176	283	295	1170	1650	1180	2380	2450	690	296	205	181
27	176	190	295	1680	1500	1170	2350	2360	687	292	203	177
28	174	174	319	1620	1370	1630	2140	2230	630	297	202	175
29	174	171	378	1180	1260	1320	2040	2130	595	301	201	175
30	172	167	788	1020	---	1220	2260	2000	568	286	196	175
31	172	---	1050	1010	---	1170	---	1880	---	279	193	---
TOTAL	5640	5165	21786	29219	79233	44970	56600	106890	33283	11786	7100	5782
MEAN	182	172	703	943	2732	1451	1887	3448	1109	380	229	193
MAX	200	283	6970	2040	8570	2070	2480	11700	1910	543	273	286
MIN	172	160	189	335	851	1170	1480	1880	568	279	193	175
AC-FT	11190	10240	43210	57960	157200	89200	112300	212000	66020	23380	14080	11470

SACRAMENTO RIVER BASIN

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	187	357	625	823	946	1068	1380	1798	1110	366	185	150
MAX	1407	2380	3830	4031	4367	3074	2822	3894	3627	1384	417	256
(WY)	1963	1951	1965	1970	1986	1995	1982	1952	1983	1983	1983	1983
MIN	71.8	107	97.3	117	138	151	241	335	170	82.7	66.8	71.0
(WY)	1978	1978	1977	1991	1977	1977	1977	1977	1992	1977	1977	1977

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1931 - 1996

ANNUAL TOTAL	552484	407454		
ANNUAL MEAN	1514	1113		
HIGHEST ANNUAL MEAN			748	
LOWEST ANNUAL MEAN			1566	1982
HIGHEST DAILY MEAN	11400	May 1	141	1977
LOWEST DAILY MEAN	160	Nov 24	26500	Jan 13 1980
ANNUAL SEVEN-DAY MINIMUM	162	Nov 18	60	Sep 7 1977
INSTANTANEOUS PEAK FLOW			60	Sep 7 1977
INSTANTANEOUS PEAK STAGE			15100	May 17
INSTANTANEOUS LOW FLOW			14.86	May 17
ANNUAL RUNOFF (AC-FT)	1096000	808200	25.80	Feb 1 1963
10 PERCENT EXCEEDS	3460	2280	60	Sep 7 1977
50 PERCENT EXCEEDS	966	510		
90 PERCENT EXCEEDS	176	176		

11413250 SLATE CREEK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'57", long 121°03'03", in SE 1/4 SW 1/4 sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 30 ft upstream from diversion dam on Slate Creek, 0.3 mi upstream from Feney Ravine, and 4.5 mi northeast of town of Strawberry Valley.

PERIOD OF RECORD.--February 1962 to current year. Monthly discharge only published as adjustment to Slate Creek below diversion dam near Strawberry Valley (station 11413300) February 1962 to September 1966; records of daily discharge are in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Tunnel diverts water from Slate Creek to Sly Creek Reservoir (station 11395400) for power development. See schematic diagrams of South Fork Feather and Yuba River basins.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 863 ft³/s, Apr. 6, 1963; 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	.00	.00	.00	189	243	222	459	465	193	34	.00	.00
2	.00	.00	.00	151	220	219	506	466	181	32	.00	.00
3	.00	.00	.00	133	206	221	227	423	170	30	.00	.00
4	.00	.00	.00	113	638	531	.00	346	156	28	.00	.00
5	.00	.00	18	96	504	700	.00	302	143	27	.00	.00
6	.00	.00	23	85	716	386	.00	283	133	26	.00	.00
7	.00	.00	15	78	813	331	.00	270	124	24	.00	.00
8	.00	.00	9.2	72	758	317	.00	249	114	23	.00	.00
9	.00	.00	6.2	69	637	349	.00	231	105	22	.00	.00
10	.00	.00	4.7	68	582	386	.00	222	96	20	.00	.00
11	.00	.00	143	60	559	637	.00	228	89	19	.00	.00
12	.00	.00	491	57	567	815	231	262	84	18	.00	.00
13	.00	.00	256	52	571	634	321	277	78	17	.00	.00
14	.00	.00	168	49	529	437	304	306	72	16	.00	.00
15	.00	.00	182	70	489	402	326	441	68	16	.00	.00
16	.00	.00	120	497	734	397	506	531	64	15	.00	.00
17	.00	.00	77	507	831	413	488	538	61	14	.00	.00
18	.00	.00	58	341	846	466	210	532	58	14	.00	.00
19	.00	.00	43	351	854	558	.00	515	55	13	.00	.00
20	.00	.00	34	263	851	638	.00	490	52	12	.00	.00
21	.00	.00	27	223	848	586	.00	494	50	12	.00	.00
22	.00	.00	39	182	832	513	202	525	48	11	.00	.00
23	.00	.00	46	155	821	403	355	522	45	11	.00	.00
24	.00	.00	40	185	811	348	472	519	43	10	.00	.00
25	.00	.00	38	348	552	308	518	494	42	9.6	.00	.00
26	.00	.00	35	228	382	275	518	435	48	8.9	.00	.00
27	.00	.00	35	401	321	303	512	374	56	8.4	.00	.00
28	.00	.00	37	454	282	721	467	288	44	9.3	.00	.00
29	.00	.00	75	281	244	404	433	260	39	4.3	.00	.00
30	.00	.00	249	225	---	344	450	237	36	.00	.00	.00
31	.00	---	283	242	---	314	---	211	---	.00	.00	---
TOTAL	0.00	0.00	2552.10	6225	17241	13578	7505.00	11736	2547	504.50	0.00	0.00
MEAN	.000	.000	82.3	201	595	438	250	379	84.9	16.3	.000	.000
MAX	.00	.00	491	507	854	815	518	538	193	34	.00	.00
MIN	.00	.00	.00	49	206	219	.00	211	36	.00	.00	.00
AC-FT	.00	.00	5060	12350	34200	26930	14890	23280	5050	1000	.00	.00

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	8.99	64.4	87.2	120	142	214	229	202	105	22.7	3.17	1.66
MAX	43.5	321	302	408	595	588	690	638	360	144	24.2	21.1
(WY)	1983	1984	1967	1995	1996	1993	1993	1973	1995	1983	1983	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.028	.000	.000	.000
(WY)	1963	1963	1974	1965	1965	1969	1969	1977	1977	1966	1963	1963

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1963 - 1996			
ANNUAL TOTAL	76848.50				61888.60							
ANNUAL MEAN	211				169				99.7			
HIGHEST ANNUAL MEAN									209			
LOWEST ANNUAL MEAN									.002			
HIGHEST DAILY MEAN	857				854				863			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	152400				122800				72220			
10 PERCENT EXCEEDS	556				518				327			
50 PERCENT EXCEEDS	67				39				15			
90 PERCENT EXCEEDS	.00				.00				.00			

11413300 SLATE CREEK BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°36'52", long 121°03'04", in SE 1/4 SW 1/4 sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 300 ft downstream from diversion dam, 0.2 mi upstream from Feney Ravine, and 4.5 mi northeast of town of Strawberry Valley.

DRAINAGE AREA.--49.4 mi².

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

GAGE.--Water-stage recorder and 130° V-notch weir since October 1982. Elevation of gage is 3,570 ft above sea level, from topographic map.

REMARKS.--Slate Creek Tunnel (station 11413250) diverts up to 900 ft³/s from Slate Creek Reservoir, capacity, 223 acre-ft, at diversion dam 300 ft upstream, to Sly Creek Reservoir (station 11395400). Diversion began in February 1962. See schematic diagrams of South Fork Feather and Yuba River basins.

COOPERATION.--Records provided by Oroville-Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 13,600 ft³/s, Feb. 17, 1986, gage height, 16.89 ft, from rating curve extended above 5,500 ft³/s on basis of computed flow over dam at gage heights 12.75, 15.90, and 16.89 ft; minimum, 0.3 ft³/s, Mar. 4, 5, 1962.

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	11	17	11	11	30	294	11	11	11	19	12
2	12	11	28	11	11	30	239	11	11	11	18	12
3	12	11	16	11	11	30	403	11	11	11	18	12
4	12	11	49	11	1720	71	527	11	11	11	18	12
5	11	11	30	11	3350	56	465	11	11	11	18	12
6	12	11	11	11	785	30	451	11	11	11	18	12
7	12	11	11	11	183	30	480	11	11	11	17	12
8	12	11	11	11	28	30	505	11	11	11	17	12
9	12	11	11	11	20	30	505	11	11	11	16	11
10	12	11	11	11	21	30	461	11	11	11	16	11
11	12	11	11	11	21	42	411	11	11	11	16	11
12	12	11	1830	11	31	50	146	11	11	11	16	11
13	11	11	244	11	15	31	11	11	11	11	16	12
14	11	11	32	11	12	30	11	11	11	11	15	13
15	11	11	43	11	12	30	11	31	11	11	15	17
16	11	11	51	218	30	30	137	985	11	11	15	26
17	11	11	50	26	786	30	19	2140	11	11	14	15
18	11	11	48	12	1530	25	257	2130	11	11	14	14
19	11	11	47	13	2150	15	429	1090	11	11	14	13
20	11	11	47	11	1730	11	382	487	11	11	14	13
21	11	11	46	11	1520	11	351	461	11	11	14	12
22	11	11	25	11	611	11	149	438	11	11	14	12
23	11	11	11	11	221	11	11	208	11	11	13	12
24	11	11	11	12	75	11	93	84	11	11	13	12
25	11	15	11	12	31	11	88	31	11	11	13	12
26	11	31	11	12	31	10	64	29	11	11	13	12
27	11	14	11	12	31	11	31	29	11	11	13	11
28	11	12	11	12	30	57	11	29	11	11	13	11
29	11	12	11	15	30	11	11	17	11	17	13	11
30	11	12	11	11	---	10	11	11	11	21	12	11
31	11	---	11	11	---	10	---	11	---	20	12	---
TOTAL	353	360	2768	575	15037	825	6964	8365	330	366	467	379
MEAN	11.4	12.0	89.3	18.5	519	26.6	232	270	11.0	11.8	15.1	12.6
MAX	13	31	1830	218	3350	71	527	2140	11	21	19	26
MIN	11	11	11	11	11	10	11	11	11	11	12	11
AC-FT	700	714	5490	1140	29830	1640	13810	16590	655	726	926	752

11413300 SLATE CREEK BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, 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	25.9	56.6	133	231	204	222	189	202	49.2	11.8	11.0	10.2
MAX	437	545	1303	1334	1415	901	753	795	481	17.3	19.3	15.3
(WY)	1963	1974	1965	1970	1986	1983	1982	1983	1983	1969	1965	1983
MIN	5.85	7.51	5.80	9.04	8.49	6.61	6.12	6.15	6.95	5.17	3.82	6.13
(WY)	1971	1977	1977	1975	1973	1968	1968	1968	1973	1977	1977	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1963 - 1996			
ANNUAL TOTAL	75301				36789							
ANNUAL MEAN	206				101				112			
HIGHEST ANNUAL MEAN									352			
LOWEST ANNUAL MEAN									10.4			
HIGHEST DAILY MEAN	5370				Mar 9				10600			
LOWEST DAILY MEAN	10				Aug 3				.86			
ANNUAL SEVEN-DAY MINIMUM	10				Aug 3				.95			
INSTANTANEOUS PEAK FLOW					6550				Feb 5			
INSTANTANEOUS PEAK STAGE					13.76				Feb 5			
ANNUAL RUNOFF (AC-FT)	149400				72970				81040			
10 PERCENT EXCEEDS	531				190				320			
50 PERCENT EXCEEDS	14				11				11			
90 PERCENT EXCEEDS	11				11				8.1			

11413320 DEADWOOD CREEK NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°33'00", long 121°05'36", in SW 1/4 SW 1/4 sec.33, T.20 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank 250 ft upstream of confluence with Owl Gulch, and 1.3 mi southeast of Strawberry Valley.

DRAINAGE AREA.--3.16 mi².

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

GAGE.--Water-stage recorder and 120° V-notch weir. Elevation of gage is 3,275 ft above sea level, from topographic map.

REMARKS.--Water from creek is diverted at gage to Deadwood Creek Powerplant (station 11413326). See schematic diagram of Yuba River Basin.

COOPERATION.--Records provided by Yuba County Water Agency, 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, 100 ft³/s, Feb. 5, 1996; minimum daily, 1.8 ft³/s, Oct. 2, 3, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.9	2.7	2.7	13	2.7	5.4	94	3.0	4.0	2.9	2.8
2	1.8	2.7	3.2	2.7	13	3.9	5.4	54	3.0	2.9	2.9	2.8
3	1.8	2.3	6.8	2.7	13	4.2	5.6	22	3.0	2.9	3.5	2.8
4	3.0	2.1	6.2	2.7	13	2.8	6.3	17	5.4	2.9	5.0	2.8
5	3.0	2.6	3.6	2.7	13	2.8	6.5	17	2.9	2.9	2.8	2.8
6	2.3	7.6	2.8	2.8	13	2.8	7.8	14	2.9	2.9	2.8	2.8
7	2.1	5.5	2.7	9.7	9.9	2.8	e32	11	2.9	2.9	2.8	2.8
8	2.2	2.7	2.7	e42	4.6	2.9	e25	8.8	2.9	2.9	2.8	2.8
9	2.0	3.3	3.3	e58	2.8	84	e21	7.0	2.9	2.9	2.8	2.8
10	2.0	3.3	4.3	e67	2.8	84	e17	5.8	2.9	2.9	2.8	2.8
11	2.0	3.2	4.1	e52	2.8	66	e14	5.3	2.9	6.2	2.8	2.8
12	2.0	3.0	4.2	e31	2.8	41	e12	5.4	2.9	8.5	2.8	2.8
13	2.0	3.0	4.1	54	2.8	48	e20	7.5	3.2	3.6	2.8	2.7
14	2.0	2.6	4.1	57	2.8	42	e12	4.4	2.9	2.9	2.8	2.7
15	2.0	2.6	4.2	e48	4.4	35	e10	4.5	4.5	2.9	2.8	3.1
16	1.9	2.9	3.3	e30	3.1	25	e9.0	3.5	3.0	2.9	2.8	3.3
17	2.0	3.3	3.5	e11	2.8	20	e7.3	5.1	3.0	2.9	2.8	3.3
18	2.0	3.4	4.1	e9.9	2.8	21	e8.3	4.4	3.0	2.9	3.1	3.5
19	2.0	2.8	4.4	e3.8	2.8	14	e5.6	3.2	3.0	2.9	2.8	3.6
20	2.0	2.6	4.0	e4.6	2.7	28	e7.2	3.2	2.9	2.9	2.8	3.8
21	2.0	2.6	3.9	e3.5	2.7	23	e4.9	3.2	2.9	2.9	2.8	3.9
22	1.9	2.6	3.9	e5.2	2.7	20	e3.9	3.2	2.9	2.9	2.8	3.9
23	1.9	2.6	3.8	e13	2.7	18	e3.7	3.0	2.9	2.9	2.9	4.0
24	2.0	2.5	3.9	e14	2.7	31	e3.6	3.1	2.9	2.9	2.8	4.1
25	1.9	4.2	2.6	e7.3	2.7	30	e3.6	3.0	2.9	2.9	2.8	4.0
26	1.9	3.6	2.6	e10	2.7	21	e3.6	3.0	2.9	2.9	2.8	4.0
27	1.9	3.0	2.6	e15	2.7	6.8	e3.8	3.0	2.9	2.9	2.8	4.1
28	2.0	2.8	2.6	e12	2.7	5.9	e6.0	3.0	4.3	2.9	2.8	4.2
29	2.0	2.7	2.6	e7.2	---	5.9	e27	3.0	6.9	2.9	2.8	4.2
30	1.9	2.7	2.6	e17	---	5.8	e24	3.0	8.6	2.9	2.8	5.0
31	1.9	---	2.6	e16	---	5.3	---	3.0	---	2.9	2.8	---
TOTAL	63.3	92.7	112.0	614.5	149.5	705.6	321.5	330.6	103.2	100.6	90.3	101.0
MEAN	2.04	3.09	3.61	19.8	5.34	22.8	10.7	10.7	3.44	3.25	2.91	3.37
MAX	3.0	7.6	6.8	67	13	84	32	94	8.6	8.5	5.0	5.0
MIN	1.8	1.9	2.6	2.7	2.7	2.7	3.6	3.0	2.9	2.9	2.8	2.7
AC-FT	126	184	222	1220	297	1400	638	656	205	200	179	200
a	0	11	233	1300	1460	2010	2240	2270	1340	706	344	92

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

MEAN	2.04	3.09	3.61	19.8	5.34	22.8	10.7	10.7	3.44	3.25	2.91	3.37
MAX	2.04	3.09	3.61	19.8	5.34	22.8	10.7	10.7	3.44	3.25	2.91	3.37
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	2.04	3.09	3.61	19.8	5.34	22.8	10.7	10.7	3.44	3.25	2.91	3.37
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1995 WATER YEAR

ANNUAL TOTAL	2784.8
ANNUAL MEAN	7.63
HIGHEST DAILY MEAN	94 May 1
LOWEST DAILY MEAN	1.8 Oct 2
ANNUAL SEVEN-DAY MINIMUM	1.9 Oct 21
ANNUAL RUNOFF (AC-FT)	5520
ANNUAL RUNOFF (AC-FT) a	12020
10 PERCENT EXCEEDS	17
50 PERCENT EXCEEDS	3.0
90 PERCENT EXCEEDS	2.6

e Estimated

a Diversion, in acre-ft, to Deadwood Creek Powerplant, provided by Yuba County Water Agency.

11413320 DEADWOOD CREEK NEAR STRAWBERRY VALLEY, CA--Continued

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	5.0	4.1	4.0	2.5	2.9	2.9	3.1	2.8	2.9	2.8	2.8	2.7
2	4.9	4.1	4.2	2.5	2.9	2.8	26	2.8	2.9	2.8	2.8	2.7
3	4.9	4.0	3.9	2.5	2.9	2.8	3.7	2.8	2.9	2.8	6.8	2.8
4	4.8	3.9	2.6	2.5	14	23	2.9	2.8	2.9	2.8	7.2	2.7
5	4.7	3.9	2.6	2.5	100	15	2.8	2.8	2.9	2.8	7.0	2.8
6	4.8	3.9	3.5	2.6	24	6.2	2.7	2.8	2.9	2.8	2.8	2.8
7	4.8	3.9	3.3	2.6	12	4.8	2.7	2.8	2.9	2.8	2.8	5.1
8	4.7	3.9	4.1	2.6	6.4	4.1	2.7	2.8	2.9	2.8	2.8	5.1
9	4.6	3.9	4.0	2.7	3.6	3.7	2.8	2.8	2.9	2.8	2.8	5.0
10	4.7	3.9	4.0	2.7	3.0	3.6	2.8	2.8	2.9	2.8	2.8	5.0
11	4.7	3.9	3.3	2.7	2.8	16	2.8	2.8	2.9	2.8	2.8	4.9
12	4.7	3.9	37	2.7	2.8	13	2.8	2.8	2.9	2.8	2.8	5.0
13	4.5	3.8	14	2.7	2.8	7.2	2.8	2.8	2.9	2.8	2.8	5.3
14	4.5	3.8	9.5	2.7	2.8	4.9	2.8	2.8	2.8	2.8	2.8	5.4
15	4.5	3.8	9.3	2.7	2.7	3.8	2.8	3.0	2.8	3.1	2.8	6.4
16	4.6	3.9	2.5	23	2.7	3.3	3.1	3.5	2.8	2.8	2.8	5.6
17	4.6	3.9	2.5	3.3	2.9	3.1	4.1	5.8	2.8	2.8	2.8	2.7
18	4.6	3.9	2.5	2.8	8.3	3.0	3.9	7.9	2.8	2.8	2.8	2.7
19	4.5	3.9	2.5	6.2	24	2.9	2.9	3.4	2.8	2.8	2.8	2.7
20	4.5	3.9	2.5	2.8	33	2.8	2.9	3.2	2.8	2.8	2.8	5.0
21	4.5	3.9	2.5	2.9	48	2.9	2.9	3.2	2.8	2.8	2.8	5.0
22	4.5	3.9	2.5	2.8	24	2.9	2.8	3.5	2.8	2.8	2.8	5.0
23	4.3	3.9	2.5	2.8	16	2.9	2.8	3.2	2.8	2.8	2.8	4.9
24	4.1	3.8	2.5	7.6	11	2.9	2.9	3.2	2.8	2.8	2.8	4.9
25	4.1	4.6	2.5	11	6.3	2.9	2.8	3.2	2.8	2.8	2.8	4.8
26	4.1	4.3	2.5	2.7	4.1	2.9	2.8	3.1	2.9	2.8	2.8	4.8
27	4.1	3.9	2.5	14	5.5	2.9	2.8	3.1	2.9	2.8	2.8	4.7
28	4.1	3.9	2.5	4.0	3.0	2.9	2.8	3.1	2.8	2.8	2.7	4.7
29	4.1	3.8	2.5	3.1	3.0	2.9	2.8	3.1	2.8	2.8	2.7	4.7
30	3.9	3.8	2.6	2.9	---	2.9	2.8	3.1	2.8	2.8	2.7	4.7
31	4.0	---	2.5	2.9	---	2.9	---	2.8	---	2.8	2.7	---
TOTAL	139.4	118.0	149.4	134.0	377.4	160.8	111.3	100.6	85.5	87.1	99.0	130.6
MEAN	4.50	3.93	4.82	4.32	13.0	5.19	3.71	3.25	2.85	2.81	3.19	4.35
MAX	5.0	4.6	37	23	100	23	26	7.9	2.9	3.1	7.2	6.4
MIN	3.9	3.8	2.5	2.5	2.7	2.8	2.7	2.8	2.8	2.8	2.7	2.7
AC-FT	276	234	296	266	749	319	221	200	170	173	196	259
a	0	0	363	1150	2050	2160	1800	1770	1140	537	199	31

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

MEAN	3.27	3.51	4.22	12.1	9.24	14.0	7.21	6.95	3.14	3.03	3.05	3.86
MAX	4.50	3.93	4.82	19.8	13.0	22.8	10.7	10.7	3.44	3.25	3.19	4.35
(WY)	1996	1996	1996	1995	1996	1995	1995	1995	1995	1995	1996	1996
MIN	2.04	3.09	3.61	4.32	5.34	5.19	3.71	3.25	2.85	2.81	2.91	3.37
(WY)	1995	1995	1995	1996	1995	1996	1996	1996	1996	1996	1995	1995

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1995 - 1996	
ANNUAL TOTAL	2923.6		1693.1			
ANNUAL MEAN	8.01		4.63		6.13	
HIGHEST ANNUAL MEAN					7.63	
LOWEST ANNUAL MEAN					4.63	
HIGHEST DAILY MEAN	94	May 1	100	Feb 5	100	Feb 5 1996
LOWEST DAILY MEAN	2.5	Dec 16	2.5	Dec 16	1.8	Oct 2 1994
ANNUAL SEVEN-DAY MINIMUM	2.5	Dec 16	2.5	Dec 16	1.9	Oct 21 1994
ANNUAL RUNOFF (AC-FT)	5800		3360		4440	
ANNUAL RUNOFF (AC-FT) a	12140		11200			
10 PERCENT EXCEEDS	17		5.5		12	
50 PERCENT EXCEEDS	3.9		2.9		2.9	
90 PERCENT EXCEEDS	2.8		2.7		2.6	

a Diversion, in acre-ft, to Deadwood Creek Powerplant, provided by Yuba County Water Agency.

11413323 OWL GULCH NEAR STRAWBERRY VALLEY, CA

LOCATION.--Lat 39°32'44", long 121°05'39", in SW 1/4 SW 1/4 sec.33, T.20 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on left bank 250 ft upstream from Deadwood Creek, and 1.3 mi southeast of Strawberry Valley.

DRAINAGE AREA.--2.07 mi².

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

GAGE.--Water-stage recorder and 120° V-notch weir. Elevation of gage is 3,050 ft above sea level, from topographic map.

REMARKS.--Water from creek is diverted at gage to Deadwood Creek Powerplant (station 11413326). See schematic diagram of Yuba River Basin.

COOPERATION.--Records provided by Yuba County Water Agency, 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, 98 ft³/s, Feb. 5, 1996; minimum daily, 0.90 ft³/s, several days in October 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.1	1.3	1.7	e17	2.0	7.2	35	1.9	2.5	1.8	1.8
2	.90	1.0	1.9	1.7	e12	3.8	7.2	26	1.9	1.8	1.8	1.7
3	1.4	1.0	2.4	1.7	e8.5	4.0	8.2	27	1.9	1.8	1.9	1.7
4	1.1	2.7	1.5	1.8	e6.5	2.5	9.4	24	3.0	1.8	2.3	1.8
5	1.0	2.8	2.0	2.0	e5.9	2.4	9.2	24	1.9	1.8	1.8	1.8
6	1.0	1.7	1.8	2.3	e5.4	2.2	9.4	22	1.9	1.9	1.8	1.7
7	1.0	1.4	1.8	8.6	e5.0	2.2	11	21	1.9	1.8	1.8	1.7
8	1.0	1.3	1.8	28	e4.2	2.6	11	20	1.9	1.8	1.8	1.7
9	1.0	1.4	2.5	38	2.8	47	11	18	1.9	1.8	1.8	1.7
10	1.0	2.0	2.9	39	2.6	57	12	15	1.9	1.8	1.8	1.7
11	1.0	1.7	2.7	32	2.5	60	11	12	1.9	2.6	1.8	1.7
12	1.0	1.7	2.7	19	2.4	39	11	11	1.9	3.8	1.8	1.7
13	1.0	1.4	2.6	44	2.7	41	12	13	2.0	2.2	1.8	1.7
14	1.0	1.3	2.5	33	2.5	38	11	8.3	1.9	1.9	1.7	1.7
15	.90	1.4	2.6	e33	3.6	32	11	7.6	2.6	1.9	1.8	1.7
16	.90	1.4	2.1	e32	2.5	22	11	6.5	2.1	1.9	1.8	1.8
17	.90	1.8	2.0	e20	2.4	13	9.7	7.2	2.0	1.9	1.8	1.8
18	1.0	1.6	2.7	e19	2.2	11	9.8	3.5	2.0	1.9	1.9	1.8
19	1.0	1.4	2.6	e15	2.3	9.7	8.2	2.4	2.0	1.9	1.8	1.8
20	1.0	1.3	2.5	e12	2.2	14	9.0	2.3	1.9	1.8	1.8	1.8
21	1.0	1.3	2.4	e6.5	2.1	11	7.3	2.3	1.9	1.8	1.8	1.8
22	1.0	1.2	2.3	e9.6	2.0	10	5.8	2.2	1.9	1.8	1.8	1.8
23	.90	1.2	2.3	e17	2.0	10	4.1	2.2	1.9	1.8	1.8	1.8
24	.90	1.3	2.3	e16	2.0	11	3.0	2.2	1.8	1.8	1.8	1.8
25	.90	3.1	1.8	e16	2.0	11	2.7	2.1	1.8	1.8	1.8	1.8
26	1.0	1.7	1.8	e15	2.0	9.9	2.6	2.1	1.8	1.8	1.8	1.8
27	.90	1.5	1.8	e16	2.0	7.5	3.1	2.1	1.8	1.8	1.8	1.8
28	.90	1.4	1.8	e18	2.0	7.3	5.3	2.0	2.4	1.8	1.8	1.8
29	.90	1.3	1.8	e18	---	7.5	14	2.0	3.0	1.8	1.7	1.8
30	.90	1.3	1.8	e20	---	7.2	15	2.0	4.1	1.8	1.8	1.9
31	1.3	---	1.8	e13	---	7.2	---	2.0	---	1.8	1.8	---
TOTAL	30.60	46.7	66.8	548.9	111.3	505.0	262.2	329.0	62.8	60.4	56.3	52.9
MEAN	.99	1.56	2.15	17.7	3.97	16.3	8.74	10.6	2.09	1.95	1.82	1.76
MAX	1.4	3.1	2.9	44	17	60	15	35	4.1	3.8	2.3	1.9
MIN	.90	1.0	1.3	1.7	2.0	2.0	2.6	2.0	1.8	1.8	1.7	1.7
AC-FT	61	93	132	1090	221	1000	520	653	125	120	112	105

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

	.99	1.56	2.15	17.7	3.97	16.3	8.74	10.6	2.09	1.95	1.82	1.76
MEAN	.99	1.56	2.15	17.7	3.97	16.3	8.74	10.6	2.09	1.95	1.82	1.76
MAX	.99	1.56	2.15	17.7	3.97	16.3	8.74	10.6	2.09	1.95	1.82	1.76
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	.99	1.56	2.15	17.7	3.97	16.3	8.74	10.6	2.09	1.95	1.82	1.76
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1995 WATER YEAR

ANNUAL TOTAL	2132.90
ANNUAL MEAN	5.84
HIGHEST DAILY MEAN	60 Mar 11
LOWEST DAILY MEAN	.90 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.91 Oct 23
ANNUAL RUNOFF (AC-FT)	4230
10 PERCENT EXCEEDS	15
50 PERCENT EXCEEDS	2.0
90 PERCENT EXCEEDS	1.3

e Estimated.

SACRAMENTO RIVER BASIN

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11413323 OWL GULCH NEAR STRAWBERRY VALLEY, CA--Continued

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	1.9	1.7	1.8	1.8	2.2	4.2	5.5	2.0	2.0	1.7	1.7	1.6
2	1.9	1.7	1.7	1.8	2.2	3.2	5.5	2.0	1.9	1.7	1.7	1.6
3	1.8	1.7	1.7	1.7	2.8	2.5	2.4	2.0	1.8	1.7	2.5	1.6
4	1.8	1.7	1.8	1.8	19	13	2.3	2.0	1.8	1.7	2.6	1.6
5	1.8	1.6	1.8	1.8	98	13	2.2	2.0	1.8	1.7	2.6	1.6
6	1.8	1.6	1.7	1.8	11	11	2.3	2.0	1.8	1.7	1.7	1.6
7	1.8	1.6	1.7	1.7	5.9	10	2.1	2.0	1.8	1.7	1.7	1.8
8	1.8	1.6	1.7	1.7	5.5	9.1	2.1	1.9	1.8	1.7	1.7	1.8
9	1.8	1.6	1.7	2.0	4.0	8.2	2.1	1.8	1.8	1.7	1.7	1.8
10	1.8	1.7	1.7	2.0	3.1	7.6	2.0	1.8	1.8	1.7	1.6	1.8
11	1.8	1.6	2.1	2.0	2.7	14	2.0	1.8	1.8	1.7	1.7	1.8
12	1.8	1.6	4.3	2.0	2.5	13	2.2	1.8	1.8	1.7	1.6	1.8
13	1.7	1.6	4.3	2.0	2.4	11	2.1	1.8	1.8	1.7	1.7	1.8
14	1.7	1.6	4.3	2.0	2.4	9.5	2.1	1.8	1.8	1.7	1.7	1.9
15	1.7	1.6	5.3	2.0	2.1	8.2	2.1	1.8	1.8	2.9	1.6	2.1
16	1.7	1.6	1.8	3.3	2.1	6.5	2.5	6.5	1.8	1.7	1.6	2.0
17	1.7	1.6	1.8	2.3	2.3	4.2	3.2	7.9	1.8	1.7	1.7	1.7
18	1.7	1.6	1.8	4.0	7.4	3.3	3.2	8.4	1.8	1.7	1.7	1.6
19	1.7	1.6	1.8	2.3	14	2.7	2.1	3.4	1.7	1.7	1.7	1.6
20	1.7	1.6	1.8	2.1	18	2.6	2.3	1.3	1.7	1.7	1.7	1.8
21	1.7	1.6	1.7	2.2	34	2.4	2.3	7.3	1.8	1.7	1.7	1.8
22	1.6	1.6	1.8	2.0	25	2.3	2.3	5.4	1.8	1.7	1.7	1.8
23	1.6	1.6	1.7	2.0	24	2.3	2.3	3.0	1.8	1.7	1.7	1.8
24	1.6	1.6	1.7	5.5	23	2.3	2.6	2.8	1.8	1.7	1.7	1.8
25	1.6	1.8	1.7	19	21	2.2	2.5	2.6	1.8	1.7	1.7	1.8
26	1.6	1.8	1.7	7.6	16	2.3	2.4	2.5	1.7	1.7	1.7	1.7
27	1.6	1.7	1.7	9.1	12	2.3	2.4	2.3	1.7	1.7	1.6	1.7
28	1.6	1.6	1.7	22	4.2	2.2	2.3	2.3	1.7	1.7	1.6	1.7
29	1.6	1.6	1.7	10	3.5	2.1	2.3	2.2	1.8	1.7	1.6	1.7
30	1.6	1.6	1.8	2.6	---	2.1	2.3	2.1	1.8	1.7	1.6	1.7
31	1.7	---	1.7	2.7	---	2.0	---	2.0	---	1.7	1.6	---
TOTAL	53.2	49.0	65.5	126.8	372.3	181.3	76.0	90.5	53.8	53.9	54.4	52.4
MEAN	1.72	1.63	2.11	4.09	12.8	5.85	2.53	2.92	1.79	1.74	1.75	1.75
MAX	1.9	1.8	5.3	22	98	14	5.5	8.4	2.0	2.9	2.6	2.1
MIN	1.6	1.6	1.7	1.7	2.1	2.0	2.0	1.3	1.7	1.7	1.6	1.6
AC-FT	106	97	130	252	738	360	151	180	107	107	108	104

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

MEAN	1.35	1.59	2.13	10.9	8.48	11.1	5.64	6.77	1.94	1.84	1.79	1.75
MAX	1.72	1.63	2.15	17.7	12.8	16.3	8.74	10.6	2.09	1.95	1.82	1.76
(WY)	1996	1996	1995	1995	1996	1995	1995	1995	1995	1995	1995	1995
MIN	.99	1.56	2.11	4.09	3.97	5.85	2.53	2.92	1.79	1.74	1.75	1.75
(WY)	1995	1995	1996	1996	1995	1996	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1995 - 1996	
ANNUAL TOTAL	2156.5		1229.1			
ANNUAL MEAN	5.91		3.36		4.60	
HIGHEST ANNUAL MEAN					5.84	
LOWEST ANNUAL MEAN					3.36	
HIGHEST DAILY MEAN	60	Mar 11	98	Feb 5	98	Feb 5 1996
LOWEST DAILY MEAN	1.6	Oct 22	1.3	May 20	.90	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	1.6	Oct 22	1.6	Oct 22	.91	Oct 23 1994
ANNUAL RUNOFF (AC-FT)	4280		2440		3330	
10 PERCENT EXCEEDS	15		5.6		11	
50 PERCENT EXCEEDS	1.9		1.8		1.8	
90 PERCENT EXCEEDS	1.7		1.6		1.6	

11413510 NEW COLGATE POWERPLANT NEAR FRENCH CORRAL, CA

LOCATION.--Lat 39°19'51", long 121°11'23", in NE 1/4 SE 1/4 sec.16, T.17 N., R.7 E., Yuba County, Hydrologic Unit 18020125, at powerplant on right bank of Yuba River, 0.3 mi upstream from Dobbins Creek, and 2.3 mi northwest of French Corral.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1969, published as "Colgate Powerplant."

GAGE.--Recorded output from powerplant turbines.

REMARKS.--Water is diverted from North Yuba River at New Bullards Bar Reservoir (station 11413515). Colgate Powerplant was rebuilt during the 1970 water year with an increased capacity. Prior to Oct. 31, 1973, Browns Valley Ditch diverted up to 10 ft³/s at times from the head of the penstock for use in irrigation. See schematic diagram of Yuba River basin.

COOPERATION.--Records provided by Yuba County Water Agency, 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	1360	1300	1200	1130	3030	1750	2540	3260	3530	1920	2640	2600
2	1500	1300	868	1360	3080	1750	2150	3320	3540	1160	2860	2420
3	1450	1300	986	1480	3130	1760	2140	2900	3440	2280	2460	2580
4	824	1300	1130	1550	3130	1590	2540	3090	3550	2210	2510	2610
5	1570	1300	578	1490	3090	1790	2340	3120	3560	2200	2540	2760
6	596	1310	1260	1440	3080	1760	2710	3140	3560	2130	2610	2290
7	620	1000	1020	1550	3080	3540	2850	3340	3340	1840	2850	2370
8	1040	203	925	1760	3100	3540	3100	3150	3240	1920	2780	1270
9	1080	1050	946	1530	3100	3540	3270	2520	2590	1610	2510	876
10	1240	1270	1110	1300	3100	3540	3300	3370	2720	2070	2020	548
11	1300	1230	560	1420	3100	3530	3370	3080	2690	2190	3030	600
12	1300	1110	1610	1840	3100	3540	3440	3130	2940	2340	2920	480
13	1300	1160	3100	1580	2810	3540	3210	3140	2340	1450	2600	914
14	1310	1440	3100	1610	3090	3050	2400	3460	2890	2020	3000	460
15	1310	1150	3100	1390	3090	3550	3070	3520	1180	2000	2640	421
16	1310	1140	3120	729	3090	3550	2870	3520	977	1870	2710	745
17	1300	1050	3120	88	3080	3490	1450	3070	1400	2270	2160	712
18	1300	1420	3120	2290	3080	3330	1590	1870	1240	2220	2010	90
19	1310	1200	2520	1100	2800	3540	1010	3070	1180	1440	2300	759
20	1300	1480	589	1910	1660	3550	1750	3490	1640	2050	1810	857
21	1310	682	2120	2130	1330	3550	2970	3550	1340	2060	2270	233
22	1310	1210	1080	2540	1480	3540	3110	3590	1800	2120	1840	521
23	1310	1100	1170	2400	1730	3540	1460	3590	1890	2500	2090	734
24	1300	1380	1470	1050	1730	3540	3460	3590	2170	2460	2070	457
25	1310	895	1210	71	1730	3540	2530	3590	1650	2260	1970	484
26	1310	790	1650	936	1720	3540	2750	3590	1750	2790	2320	643
27	1310	1320	1610	2830	1740	3540	2710	3590	2250	1270	1890	569
28	1310	898	1580	2010	1740	3540	2430	3590	1660	2220	1730	882
29	1330	1020	1310	3020	1750	3540	2600	3510	1730	2760	2220	1680
30	1240	1100	806	3030	---	2960	3220	3610	2230	2630	2280	2020
31	1300	---	823	3010	---	3020	---	3610	---	2440	2280	---
TOTAL	38660	34108	48791	51574	74770	97080	78340	101970	70017	64700	73720	34585
MEAN	1247	1137	1574	1664	2578	3132	2611	3289	2334	2087	2378	1153
MAX	1570	1480	3120	3030	3130	3550	3460	3610	3560	2790	3030	2760
MIN	596	203	560	71	1330	1590	1010	1870	977	1160	1730	90
AC-FT	76680	67650	96780	102300	148300	192600	155400	202300	138900	128300	146200	68600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

MEAN	1208	1154	1395	1475	1555	1584	1656	1481	1641	1724	1873	1413
MAX	2497	2433	3262	3496	3449	3519	3508	3565	3629	3057	3130	2995
(WY)	1976	1976	1975	1984	1995	1980	1993	1982	1983	1983	1984	1980
MIN	.000	302	96.6	152	54.6	39.3	103	206	404	386	319	.000
(WY)	1975	1978	1978	1977	1977	1977	1979	1977	1977	1977	1977	1974

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1971 - 1996

ANNUAL TOTAL	804790	768315	
ANNUAL MEAN	2205	2099	1514
HIGHEST ANNUAL MEAN			2686
LOWEST ANNUAL MEAN			316
HIGHEST DAILY MEAN	3550	3610	4200
LOWEST DAILY MEAN	53	71	.00
ANNUAL SEVEN-DAY MINIMUM	111	520	.00
ANNUAL RUNOFF (AC-FT)	1596000	1524000	1097000
10 PERCENT EXCEEDS	3470	3520	3360
50 PERCENT EXCEEDS	2050	2030	1220
90 PERCENT EXCEEDS	762	909	141

11413515 NEW BULLARDS BAR RESERVOIR NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°23'34", long 121°08'25", in SE 1/4 NW 1/4 sec.25, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, in center of dam on North Yuba River, 2.2 mi upstream from Middle Yuba River, and 2.4 mi northwest of North San Juan.

DRAINAGE AREA.--489 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Yuba County Water Agency).

REMARKS.--Reservoir is formed by concrete-arch dam with a concrete-sidehill spillway. Spill controlled by three 30-ft by 53-ft radial gates. Storage began in January 1969. Usable capacity, 727,380 acre-ft between elevations 1,732.0 ft, minimum power pool, and 1,955.0 ft, normal gross pool. Dead storage, 233,920 acre-ft. Total capacity at normal gross pool, 961,300 acre-ft, elevation, 1,955.0 ft. Water is released to New Colgate Powerplant (station 11413510) through a tunnel at the dam. Water is diverted into the reservoir from Middle Yuba River via Lohman Ridge Tunnel to Oregon Creek then via Camptonville Tunnel (stations 11408870 and 11409350). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Yuba River basin.

COOPERATION.--Records provided by Yuba County Water Agency, 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, 972,224 acre-ft, June 27, 1995, elevation, 1,957.27 ft; minimum since reservoir first filled, 178,230 acre-ft, Dec. 29, 1980, elevation, 1,700.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 963,364 acre-ft, June 3, elevation, 1,955.43 ft; minimum, 667,049 acre-ft, Jan. 15, elevation, 1,886.02 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Yuba County Water Agency in 1969)

1,600	64,900	1,750	270,110
1,630	90,570	1,800	389,977
1,660	122,993	1,850	539,748
1,690	162,983	1,900	721,130
1,720	211,768	1,960	985,471

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	788688	730684	680678	683779	739475	761893	803179	905008	963172	940040	850200	729565
2	786212	728248	679724	683702	738548	763332	807819	907493	963172	939474	845488	725499
3	783951	726813	678503	683242	737139	764854	816034	910490	963364	936646	841451	721051
4	782737	724783	677550	682400	760251	770965	820076	912477	963028	934012	837120	716618
5	780274	722796	677664	681481	797329	777649	823570	913957	962453	931280	833284	711928
6	779398	720812	676369	680564	809569	782070	826251	915300	961494	928713	829067	708042
7	778732	719426	675190	679189	813375	783365	828721	916088	960870	926561	824736	704012
8	777274	719268	674088	677474	813332	784034	831022	917155	960008	924273	820206	702061
9	775694	717725	672912	676027	811150	784746	833763	919105	959913	922595	816163	700854
10	773867	715790	671358	675000	808373	785626	836029	919942	959530	919989	812989	700309
11	771918	713936	674544	673823	805135	788982	837688	920361	958620	917062	807862	699686
12	769972	712282	700815	671547	801820	793317	838519	922175	957043	913865	803052	699297
13	768071	710553	704051	669882	798556	795849	838781	924506	956326	912292	798810	698286
14	766091	708316	702607	667993	795089	798133	840356	927075	954178	909705	793823	697976
15	764072	706553	702061	667049	791295	798852	841407	932415	955276	907078	789444	697782
16	762140	704794	699880	676369	788520	799318	846632	946759	956565	904594	784872	697433
17	760169	703270	696463	685390	792179	799657	853734	959194	956804	901382	781359	696618
18	758242	701048	692707	689004	799022	800420	860609	959290	956995	898222	778148	696890
19	756319	699297	689582	695842	806157	801141	867833	956278	957281	896440	774407	696036
20	754358	696890	690160	698831	806924	801948	872806	955419	956374	893521	771504	694990
21	752319	695997	687580	700893	806711	802627	874827	956135	956135	890471	767823	694990
22	750324	694099	686887	701087	797287	803392	875952	956852	954894	887427	764937	694447
23	748292	692437	686004	701009	788226	803349	879781	956421	953272	883667	761564	693558
24	746345	690276	684469	708669	780482	802500	882129	957090	951129	879961	758201	693133
25	744320	689120	683281	720297	772498	801226	886838	958716	950986	876537	755012	692785
26	742339	688503	681176	725380	768071	799657	890744	959817	948990	872177	751138	692012
27	740361	686618	679380	731724	765802	797921	894523	960583	946996	870608	748008	691471
28	738467	685313	677550	737984	764072	798344	897857	961158	945621	867028	745292	690276
29	736456	683779	677169	739515	762386	797498	900602	962117	944437	862567	741652	687541
30	734609	682170	679647	739596	---	797118	902620	962788	942024	858343	737904	684200
31	732645	---	682708	739717	---	796356	---	963028	---	854486	734007	---
MAX	788688	730684	704051	739717	813375	803392	902620	963028	963364	940040	850200	729565
MIN	732645	682170	671358	667049	737139	761893	803179	905008	942024	854486	734007	684200
a	1902.89	1890.00	1890.14	1904.65	1910.22	1918.37	1942.49	1955.36	1950.95	1931.81	1903.23	1890.53
b	-58019	-50475	+536	+57011	+22669	+33970	+106264	+60408	-21004	-87538	-120479	-49807

CAL YR 1995 b +152024

WTR YR 1996 b -106464

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA

LOCATION.--Lat 39°23'26", long 121°08'36", in SE 1/4 NW 1/4 sec.25, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank at old Colgate Dam, 0.2 mi downstream from New Bullards Bar Dam, and 2.5 mi northwest of North San Juan.

DRAINAGE AREA.--490 mi².

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder, and sharp-crested low-water control since Oct. 1, 1986. Elevation of gage is 1,350 ft above sea level, from topographic map. Auxiliary water-stage recorder for high flow 0.9 mi downstream at different datum.

REMARKS.--Records good. Flow regulated by New Bullards Bar Reservoir (station 11413515) since 1969. Prior to 1969, flow regulated by Bullards Bar Reservoir (usable capacity, 31,500 acre-ft). New Colgate Powerplant (station 11413510) diverts at New Bullards Bar Dam 0.2 mi upstream. Water is diverted to Feather River basin through Slate Creek Tunnel (station 11413250). Camptonville Tunnel (station 11409350) diverts water from Middle Yuba River to New Bullards Bar Reservoir. Records include flow over New Bullards Bar Reservoir spillway. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,200 ft³/s, Jan. 22, 1970, gage height, 35.29 ft, at auxiliary gage, from rating curve extended above 40,000 ft³/s on basis of computation of flow over old Colgate Dam; minimum daily, 0.42 ft³/s, Nov. 5, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 49.8 ft, from floodmarks, discharge, 91,600 ft³/s, at auxiliary gage, from computation of flow over old Colgate 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	6.4	6.0	6.2	6.0	5.8	1770	7.8	6.8	7.8	7.4	6.5	6.1
2	6.4	6.0	6.0	6.0	5.8	957	6.7	6.9	7.8	7.4	6.4	5.7
3	6.4	6.0	7.6	6.0	5.7	6.2	6.3	7.2	7.6	7.4	6.4	5.6
4	6.4	6.0	6.4	6.0	9.1	7.9	6.2	7.2	7.9	7.4	6.4	5.6
5	8.3	6.0	6.0	6.0	8.8	8.1	6.2	7.2	8.1	7.4	6.4	5.6
6	8.7	6.0	6.0	6.0	1040	6.2	6.2	7.2	8.0	7.4	6.4	5.6
7	6.7	6.0	6.1	6.0	2090	152	6.2	7.2	8.0	7.4	6.5	5.6
8	6.3	6.0	8.0	6.0	2680	6.2	6.2	7.2	8.0	7.2	6.4	5.6
9	6.3	6.0	6.0	6.0	3040	6.2	6.2	7.2	8.0	7.3	6.4	5.6
10	6.3	6.0	6.0	6.0	2990	6.2	6.2	7.2	8.0	7.2	6.4	5.6
11	6.3	6.0	7.8	6.0	2920	6.8	6.2	7.2	8.0	7.2	6.4	5.6
12	6.3	6.0	8.5	6.0	2850	6.9	6.2	7.1	7.8	7.0	6.4	5.7
13	6.3	6.0	6.2	6.0	2950	6.5	6.2	7.1	7.6	8.6	7.8	6.1
14	6.3	6.0	5.7	6.0	2670	6.2	6.2	7.2	7.6	7.7	6.6	6.0
15	6.3	6.0	6.3	6.0	2570	6.2	6.4	7.6	7.5	7.1	6.6	5.8
16	6.3	6.0	6.1	9.0	2470	6.2	7.4	3800	7.4	7.0	6.5	5.6
17	6.3	6.0	6.0	6.2	2460	6.0	8.1	10700	7.4	7.0	6.4	5.7
18	6.3	6.0	6.0	7.2	3870	6.0	7.0	17700	7.4	7.0	6.4	5.6
19	6.3	6.0	6.0	6.5	9240	6.0	7.2	9420	7.4	7.0	6.4	5.6
20	6.3	6.0	6.0	6.3	13700	6.0	8.5	4050	7.5	6.9	6.4	5.6
21	6.3	6.7	6.0	6.6	14400	6.0	7.0	3440	7.8	15	6.4	5.6
22	6.3	6.0	6.0	6.1	12800	6.0	7.0	3750	7.8	6.7	6.4	5.6
23	6.3	6.0	6.0	6.3	8950	6.0	7.0	2860	7.7	6.6	6.4	5.6
24	6.3	6.0	6.0	11	6730	6.0	7.0	1390	7.6	6.6	6.3	5.6
25	6.3	6.1	6.0	7.7	6050	6.0	6.8	566	7.6	8.6	6.2	5.6
26	6.1	6.0	6.0	6.1	3800	6.0	6.8	563	7.5	6.6	6.2	5.6
27	6.0	6.0	6.0	8.5	2570	6.0	6.8	563	7.4	6.6	6.2	5.6
28	6.0	6.0	6.0	6.4	2090	6.0	6.9	442	7.4	6.6	6.2	5.6
29	6.0	6.0	6.0	6.1	e1790	6.0	6.9	90	7.4	7.1	6.2	5.6
30	6.0	6.0	6.0	6.0	---	6.0	6.8	7.8	7.4	8.0	6.2	5.6
31	6.0	---	6.0	6.0	---	6.0	---	7.8	---	6.6	6.2	---
TOTAL	198.8	180.8	194.9	202.0	116755.2	3054.8	202.6	59457.1	230.4	231.0	199.0	169.9
MEAN	6.41	6.03	6.29	6.52	4026	98.5	6.75	1918	7.68	7.45	6.42	5.66
MAX	8.7	6.7	8.5	11	14400	1770	8.5	17700	8.1	15	7.8	6.1
MIN	6.0	6.0	5.7	6.0	5.7	6.0	6.2	6.8	7.4	6.6	6.2	5.6
AC-FT	394	359	387	401	231600	6060	402	117900	457	458	395	337

e Estimated.

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.6	39.3	226	625	939	716	433	569	249	40.7	7.67	8.22
MAX	381	404	3570	8990	7457	4648	4144	4289	3759	759	25.4	45.9
(WY)	1975	1967	1984	1970	1986	1995	1982	1967	1967	1967	1967	1969
MIN	2.60	3.41	4.97	4.65	2.10	5.32	3.09	4.12	1.92	3.48	3.21	2.89
(WY)	1971	1971	1978	1981	1971	1976	1970	1970	1970	1977	1977	1966

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1966 - 1996

ANNUAL TOTAL	322931.3	181076.5	
ANNUAL MEAN	885	495	320
HIGHEST ANNUAL MEAN			1560
LOWEST ANNUAL MEAN			4.62
HIGHEST DAILY MEAN	18500	May 2	17700
LOWEST DAILY MEAN	5.7	Dec 14	5.6
ANNUAL SEVEN-DAY MINIMUM	5.8	Feb 23	5.6
INSTANTANEOUS PEAK FLOW			20900
INSTANTANEOUS PEAK STAGE			23.55
ANNUAL RUNOFF (AC-FT)	640500		359200
10 PERCENT EXCEEDS	3000		564
50 PERCENT EXCEEDS	6.8		6.4
90 PERCENT EXCEEDS	6.0		6.0

11413940 KIDD LAKE NEAR SODA SPRINGS. CA

LOCATION.--Lat 39°18'41", long 120°25'54", in SW 1/4 NW 1/4 sec.29, T.17 N., R.14 E., Placer County, Hydrologic Unit 18020125, on outlet structure on Kidd Lake Dam and 3.0 mi west of Soda Springs.

DRAINAGE AREA.--1.00 mi².

PERIOD OF RECORD.--July 1991 to current year. Unpublished records for water years 1966-91 available in files of the U.S. Geological Survey.

GAGE.--Staff gage, observed occasionally. Water-stage recorder not operational entire year. Datum of gage is 6,600.3 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to July 1991, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1855. Usable capacity, 1,505 acre-ft between gate heights 0.0 ft, invert of outlet, and 27.3 ft, crest of spillway. Water is used for power development downstream. Records, including extremes, represent usable contents at 2400 hours.

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 contents observed, 1,559 acre-ft, June 6, 22, 1995, May 22, 1996, gage height, 27.9 ft; minimum recorded, no storage Dec. 1, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,559 acre-ft, May 22, gage height, 27.9 ft; minimum recorded, no storage Nov. 9.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated April 1965)

0	0	16	654
4	117	20	918
8	259	28	1568

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY INSTANTANEOUS VALUES[illegible]

11413945 LOWER CASCADE LAKE NEAR SODA SPRINGS, CA

LOCATION.--Lat 39°18'12", long 120°26'19", in SE 1/4 SE 1/4 sec.30, T.17 N., R.14 E., Placer County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Lower Cascade Lake Dam and 3.6 mi southwest of Soda Springs.

DRAINAGE AREA.--1.02 mi².

PERIOD OF RECORD.--July 1991 to current year. Unpublished records for water years 1966-90 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 6,560.4 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to July 1991, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1860. Usable capacity, 484 acre-ft between gage heights 0.0 ft, invert of outlet, and 21.5 ft, crest of spillway. Water is used for power development downstream. Records, including extremes, represent usable contents at 2400 hours.

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 contents, 617 acre-ft, Apr. 29, 1995, gage height, 25.89 ft; no storage on some days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 508 acre-ft, May 17, gage height, 22.36 ft; no storage on several days.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated April 1965)

0	0	16	318
4	62	20	435
8	133	22	500
12	218	23	530

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	341	59	72	143	126	221	197	494	489	388	317	174
2	338	51	73	141	124	218	197	493	489	388	301	178
3	333	44	74	139	121	217	197	492	488	387	277	182
4	328	15	76	137	144	219	196	491	488	388	254	184
5	324	7	77	134	185	219	196	491	488	388	231	184
6	318	5	78	131	193	216	197	491	487	388	209	185
7	314	4	78	129	195	212	201	491	486	388	188	185
8	308	e0	78	126	196	209	207	490	484	388	168	185
9	302	e0	78	124	196	207	214	491	481	388	149	185
10	293	e0	79	121	196	205	220	491	478	387	131	185
11	285	e0	92	119	195	205	223	492	474	387	114	184
12	276	e0	152	117	196	203	226	494	469	388	99	189
13	268	e0	158	115	196	200	227	495	465	388	79	e186
14	259	e0	160	113	197	198	229	496	460	388	9	e184
15	250	e0	164	112	196	195	235	507	455	388	e0	e181
16	242	e0	166	128	199	193	247	506	449	388	e0	e181
17	233	e0	166	131	213	191	251	508	444	388	e0	e165
18	223	40	167	135	220	191	252	497	441	387	e0	e149
19	214	53	168	135	228	192	255	492	435	387	9	e133
20	204	61	167	135	234	195	261	491	430	387	84	e117
21	193	67	163	136	238	197	267	495	425	387	99	e110
22	182	68	159	134	238	200	271	494	421	387	109	e103
23	171	68	156	134	237	199	278	489	416	387	119	e96
24	160	68	153	139	237	198	298	489	412	383	127	e79
25	149	71	149	138	235	196	328	489	408	374	135	e62
26	137	71	146	135	233	194	361	489	406	366	141	e72
27	126	71	143	139	230	194	396	489	401	358	147	e82
28	114	71	139	136	228	197	425	489	397	349	155	e92
29	102	71	137	134	224	196	454	489	394	341	161	e102
30	86	71	140	131	---	194	490	489	389	334	164	e99
31	76	---	144	129	---	193	---	488	---	325	169	---
MAX	341	71	168	143	238	221	490	508	489	388	317	189
MIN	76	0	72	112	121	191	196	488	389	325	0	62
a	4.83	4.54	8.56	7.80	12.27	10.87	21.69	21.64	18.47	16.26	9.76	
b	-270	-5	+73	-15	+95	-31	+297	-2	-99	-64	-156	-70

CAL YR 1995 MAX 617 MIN 0 b +67

WTR YR 1996 MAX 508 MIN 0 b -247

e Estimated.

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

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11414090 FORDYCE LAKE NEAR CISCO, CA

LOCATION.--Lat 39°22'44", long 120°29'40", in NE 1/4 SE 1/4 sec.34, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, near left abutment of Fordyce Dam on Fordyce Creek and 5.3 mi northeast of Cisco.

DRAINAGE AREA.--31.7 mi².

PERIOD OF RECORD.--October 1977 to current year. Periodic gage heights only for October 1965 to September 1976 and daily contents for water year 1977 are in the files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 6,290.5 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to Nov. 29, 1976, nonrecording gage on upstream side of dam at same datum.

REMARKS.--Lake is formed by a rockfill dam; storage began in 1926. In 1980 the capacity of Fordyce Lake was increased by the addition of 3 ft of flashboards. Capacity, 49,903 acre-ft between gage heights 0.85 ft, bottom of outlet valve, and 114.6 ft, top of flashboards in spillway. Released water flows down Fordyce Creek (station 11414100) to Lake Spaulding (station 11414140) for use in a power and irrigation system. See schematic diagram of Yuba 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, 49,903 acre-ft, June 27, July 4, 6, 1982, June 9, 15-17, 1984, and several days in June 1989, gage height, 114.60 ft; minimum, 250 acre-ft, Oct. 31 to Nov. 7, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,816 acre-ft, June 11, gage height, 114.49 ft; minimum, 1,689 acre-ft, Sept. 30, gage height, 15.63 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated May 1981)

4	219	20	2,608	40	8,183	80	26,770
5	278	25	3,827	50	11,797	90	32,820
10	774	30	5,170	60	16,174	100	39,342
15	1,570	35	6,628	70	21,196	114.6	49,903

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	25470	19005	12495	20194	23699	34001	33134	40037	48883	42179	19663	4964
2	25304	18642	12507	20355	23593	34046	33134	40703	48974	41584	18869	4374
3	25139	18276	12520	20501	23311	34135	32945	41256	48959	40793	18092	4153
4	24980	17924	12693	20606	24274	34326	32927	41500	49066	39914	17324	4062
5	24770	17559	12767	20695	26828	34448	32858	41717	48883	39030	16565	3990
6	24612	17202	12809	20774	27703	34473	32883	41997	48982	38197	16212	3959
7	24426	16848	12855	20858	27969	34116	33084	42236	49043	37292	16150	3941
8	24251	16493	12876	20926	28183	33982	33443	42186	49119	36397	16098	3908
9	24078	16136	12893	21006	28492	33893	33874	42116	49325	35498	16042	3878
10	23905	15769	12931	21058	28743	33893	34218	42165	49585	34582	15995	3817
11	23721	15401	13494	21217	28982	e33745	34409	42489	49816	33684	15938	3722
12	23532	15046	17188	21260	29222	e33597	34544	43111	49746	32801	15704	3628
13	23311	14687	17677	21297	29481	33450	34621	43840	49716	31952	15234	3550
14	23097	14336	17879	21323	29735	33304	34788	44705	49693	31118	14791	3458
15	22888	13990	18067	21430	29977	33273	35155	46978	49608	30238	14377	3394
16	22670	13641	18207	21928	30432	e33200	35627	47944	49723	29360	13967	3322
17	22457	13297	18306	22230	31266	33134	35842	46620	49700	28480	13541	3240
18	22246	12952	18406	22474	31927	33266	35888	45273	49486	27591	13160	3159
19	22030	12598	18486	22615	32457	33412	35881	44099	49020	26706	12755	2997
20	21809	12335	18557	22719	32807	33576	35829	43639	48533	25843	12372	2709
21	21601	12323	18617	22855	33134	33570	35744	43675	48019	24974	11966	2439
22	21377	12327	18682	22927	33311	33754	35666	44077	47479	24128	11466	2161
23	21170	12335	18738	23031	33462	33697	35718	44603	46911	23284	10771	1900
24	20948	12339	18788	23245	33601	33595	36057	45135	46346	22730	10067	1781
25	20727	12405	18833	23300	33703	33494	36482	45786	45750	22659	9372	1721
26	20517	12425	18863	23350	33779	33450	37061	46576	45200	22599	8682	1718
27	20288	12429	18909	23516	33855	33513	37637	47389	44625	22534	8022	1716
28	20075	12433	18959	23549	33912	33361	38124	48133	43998	22474	7383	1698
29	19843	12442	19035	23582	33963	33241	38660	48647	43389	22073	6766	1695
30	19601	12450	19427	23632	---	33121	39458	48784	42793	21254	6156	1689
31	19320	---	19977	23677	---	33210	---	48761	---	20460	5554	---
MAX	25470	19005	19977	23677	33963	34473	39458	48784	49816	42179	19663	4964
MIN	19320	12323	12495	20194	23311	33121	32858	40037	42793	20460	5554	1689
a	66.39	51.61	67.67	74.57	91.81	90.62	100.17	113.11	104.98	68.60	31.35	15.63
b	-6304	-6870	+7527	+3700	+10286	-753	+6248	+9303	-5968	-22333	-14906	-3865

CAL YR 1995 MAX 47449 MIN 5390 b +14564
WTR YR 1996 MAX 49816 MIN 1689 b -23935

e Estimated.

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

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

263

11414100 FORDYCE CREEK BELOW FORDYCE DAM, NEAR CISCO, CA

LOCATION.--Lat 39°22'48", long 120°29'54", in NW 1/4 SE 1/4 sec.34, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 850 ft downstream from Fordyce Dam, and 5.3 mi northeast of Cisco.

DRAINAGE AREA.--31.7 mi².

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,250 ft above sea level, from topographic map.

REMARKS.--Flow regulated by Fordyce Lake (station 11414090). See schematic diagram of Yuba 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, 4,660 ft³/s, July 9, 1974, gage height, 7.90 ft in gage well, 6.82 ft from high-water marks, from rating curve extended above 1,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 3.5 ft³/s, Jan. 2-9, 1979.

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	151	201	14	20	24	39	159	393	547	411	447	328
2	145	197	14	20	114	40	158	354	632	411	442	321
3	139	196	14	20	193	40	159	325	791	507	437	174
4	132	194	16	20	210	40	159	366	843	564	432	52
5	128	194	15	20	211	40	158	365	796	560	427	34
6	128	193	14	20	210	86	159	367	671	525	181	17
7	128	191	14	20	211	155	159	408	661	564	24	17
8	127	191	14	20	123	155	160	525	549	559	24	17
9	127	194	14	20	32	156	161	525	377	554	24	17
10	126	197	14	21	32	156	161	524	284	552	24	40
11	126	195	20	21	33	155	161	525	255	545	24	53
12	140	194	29	20	34	155	161	525	437	542	155	52
13	151	193	19	20	34	155	162	567	371	537	241	51
14	150	192	19	20	34	154	162	657	315	531	240	50
15	150	190	19	21	34	154	164	587	290	528	238	50
16	149	190	19	26	36	154	165	3350	184	525	236	50
17	148	188	19	22	38	155	164	3750	223	519	235	48
18	147	187	19	21	37	155	164	3080	326	514	233	48
19	146	194	19	21	39	158	163	1290	435	509	232	100
20	146	129	19	22	38	160	163	714	434	503	230	164
21	145	13	19	23	38	160	164	582	434	498	228	161
22	142	13	19	23	38	160	165	398	432	492	303	156
23	142	13	19	23	39	159	166	226	430	486	390	152
24	141	13	19	23	39	158	167	152	427	299	384	62
25	141	13	19	23	39	159	167	156	425	27	378	5.9
26	140	13	19	23	39	159	168	159	423	28	371	5.9
27	140	13	19	23	39	159	169	161	419	28	364	7.3
28	139	13	19	23	39	160	170	161	419	28	356	8.6
29	139	13	19	23	39	158	172	288	416	238	348	7.7
30	139	13	22	23	---	158	196	495	413	457	342	7.2
31	178	---	21	24	---	159	---	548	---	451	334	---
TOTAL	4370	3930	558	669	2066	4211	4926	22523	13659	13492	8324	2256.6
MEAN	141	131	18.0	21.6	71.2	136	164	727	455	435	269	75.2
MAX	178	201	29	26	211	160	196	3750	843	564	447	328
MIN	126	13	14	20	24	39	158	152	184	27	24	5.9
AC-FT	8670	7800	1110	1330	4100	8350	9770	44670	27090	26760	16510	4480

SACRAMENTO RIVER BASIN

11414100 FORDYCE CREEK BELOW FORDYCE DAM, NEAR CISCO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.9	38.7	25.8	29.1	58.6	67.2	64.7	184	362	292	214	142
MAX	428	236	173	105	328	353	315	727	957	542	403	497
(WY)	1976	1977	1982	1982	1984	1984	1986	1996	1995	1995	1983	1980
MIN	4.35	3.90	3.75	4.76	4.78	5.07	9.21	17.0	36.4	21.7	11.4	4.84
(WY)	1978	1979	1979	1981	1977	1977	1977	1977	1976	1981	1987	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	85517.1		80984.6			
ANNUAL MEAN	234		221			
HIGHEST ANNUAL MEAN						131
LOWEST ANNUAL MEAN						288
HIGHEST DAILY MEAN	1460	Jun 27	3750	May 17		1982
LOWEST DAILY MEAN	7.7	Jan 1	5.9	Sep 25		1981
ANNUAL SEVEN-DAY MINIMUM	8.0	Jan 1	13	Nov 21		3750
INSTANTANEOUS PEAK FLOW			4590	May 16		49.3
INSTANTANEOUS PEAK STAGE			7.86	May 16		3.5
ANNUAL RUNOFF (AC-FT)	169600		160600			3.5
10 PERCENT EXCEEDS	755		520			Jan 2
50 PERCENT EXCEEDS	127		158			1979
90 PERCENT EXCEEDS	13		19			Jul 9
						1974
						7.90
						94740
						411
						30
						6.7

11414140 LAKE SPAULDING NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'35", long 120°38'32", in SE 1/4 NE 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, near center of Spaulding Dam on South Yuba River and 2.5 mi northeast of Emigrant Gap.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,809.6 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to July 1968, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by three concrete-arch dams with spillway on the middle arch. Storage began in 1913. Capacity, 74,773 acre-ft between gage heights 0.6 ft, bottom of outlet, and 205.0 ft, top of radial gates. Released water flows through Spaulding Powerplants Nos. 1 and 2 (stations 11414154 and 11414155). Flow through Powerplant No. 1 is transported out of Yuba River basin by Drum Canal to Bear River basin. See schematic diagrams of Yuba and Bear River basins.

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, 75,100 acre-ft, July 13, 1967, gage height, 205.5 ft; minimum, 914 acre-ft, Feb. 28, 1976, gage height, 25.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,787 acre-ft, May 29, gage height, 204.96 ft; minimum, 18,029 acre-ft, Dec. 7, gage height, 95.84 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated Apr. 23, 1965)

20	566	70	9,632
25	874	100	19,541
30	1,352	150	41,545
40	2,742	200	71,329
50	4,578	206	75,473

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	49419	29395	18666	32126	43054	55852	53096	68259	74356	71146	56655	50578
2	50090	28517	18583	32126	43719	55020	53288	68392	74522	70849	56529	51028
3	50754	27629	18493	32213	42812	54377	53271	68127	74383	70727	56415	50840
4	51365	26743	18978	32664	43243	54054	53218	67777	74536	70862	56301	50204
5	51348	25857	19065	33011	57506	53329	53189	67586	74585	70990	56163	49571
6	50692	25218	18526	33299	62842	52568	53475	67948	74564	70977	55739	49033
7	50056	24861	18029	33588	63835	51956	54395	68491	74578	70626	54949	48960
8	49419	24462	18562	33854	64033	51497	55626	68810	74661	70188	54136	48887
9	48697	24118	18501	34113	63605	51285	56992	68970	74640	69678	53346	48330
10	47759	23769	18414	34264	63064	51153	58052	69256	74592	69196	52556	47671
11	46961	23418	19524	34179	62500	51382	58509	69751	74459	68671	51634	46988
12	46430	23076	24700	33906	62127	51159	58748	70491	74654	68153	50771	46332
13	45567	22733	35043	33616	61926	50743	58717	71166	74654	68398	50079	45946
14	44679	22388	34633	33308	62045	50300	58944	72386	74431	68777	49358	46033
15	43825	22127	34047	33224	61944	49989	59720	74181	74216	68286	48697	46131
16	42991	21920	33644	37300	62601	49887	61863	71329	73771	67724	48136	45805
17	42132	21741	33168	39550	64090	50085	62487	72393	73356	67145	48419	45248
18	41240	21566	32535	40419	64020	50601	62645	70053	73052	66543	48692	44668
19	40409	21392	31611	41096	64238	51411	62475	70060	73011	65930	48603	44192
20	39555	21171	30724	41297	63414	52209	62127	67625	72942	65249	48397	44038
21	38669	20625	29976	41343	62791	52898	61686	68272	72839	64610	48186	44288
22	37823	20215	29562	41307	62096	53405	61367	74356	72681	63886	48047	44775
23	36962	20256	29654	41189	61517	53300	61592	74307	72510	63223	48236	45540
24	36095	20286	29769	41153	60899	52991	62956	74217	72345	62354	48753	46093
25	35224	20383	29875	41540	60035	52579	64366	74453	72530	60923	49330	46463
26	34382	20465	29566	41586	59006	52169	65865	74585	72366	59714	49543	46846
27	33555	20186	29089	41778	58156	51922	66648	74682	72229	58705	49633	47230
28	32710	19685	28573	41856	57367	52771	66798	74766	71983	57852	49644	47571
29	31861	19193	28250	41421	56607	52620	67047	74787	71717	57258	49582	47903
30	31011	18757	29919	40746	---	52365	67553	74363	71445	57107	49594	48247
31	30202	---	31889	40148	---	52088	---	74342	---	56770	50102	---
MAX	51365	29395	35043	41856	64238	55852	67553	74787	74661	71146	56655	51028
MIN	30202	18757	18029	32126	42812	49887	53096	67586	71445	56770	48047	44038
a	126.47	97.85	130.60	147.35	177.19	169.66	194.36	204.23	200.15	177.24	165.80	162.47
b	-18484	-11445	+13132	+8259	+16459	-4519	+15465	+6789	-2897	-14675	-6668	-1855
c	29110	19470	18880	23080	37550	36930	38840	43310	40800	42140	33290	20850
d	3330	2470	1760	2810	8190	9840	9680	10590	6640	3130	3730	1240

CAL YR 1995 MAX 73912 MIN 15673 b +15031 c 370400 d 74070

WTR YR 1996 MAX 74787 MIN 18029 b -439 c 384300 d 63390

e Estimated.

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

b Change in contents, in acre-feet.

c Diversion, in acre-feet, to Spaulding No. 1 Powerplant, provided by Pacific Gas & Electric Co.

d Diversion, in acre-feet, to Spaulding No. 2 Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11414170 DRUM CANAL AT TUNNEL OUTLET, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'03", long 120°39'08", in SE 1/4 SW 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, 100 ft downstream from tunnel outlet, 1.0 mi downstream from Spaulding No. 1 Powerplant, and 1.7 mi northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1972, published as "Drum Canal at intake."

GAGE.--Water-stage recorder. Elevation of gage is 4,880 ft above sea level, from topographic map. Prior to Oct. 1, 1968, in powerplant 0.7 mi upstream at different datum.

REMARKS.--Canal diverts from Spaulding No. 1 Powerplant (station 11414154) at Lake Spaulding Dam. Most of the water from Drum Canal enters the Bear River via Drum No. 1 and 2 Powerplant (station 11414196) at Drum Afterbay. Some of the water is diverted out of Drum Forebay to Alta Powerplant (station 11421725). See schematic diagrams of Yuba and Bear River basins.

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, 860 ft³/s, May 17, 1986; no flow for several 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	.00	799	110	569	776	844	830	848	835	819	702	274
2	.00	801	109	569	785	851	837	845	835	817	702	276
3	.00	796	109	512	784	847	834	845	835	774	701	544
4	7.4	798	110	257	588	850	832	844	838	688	702	642
5	313	797	187	258	595	843	833	843	839	684	702	635
6	650	661	442	257	748	838	834	843	839	685	701	524
7	657	527	113	255	808	840	837	815	837	683	699	336
8	663	524	113	256	810	843	839	836	841	683	697	337
9	722	515	113	256	813	841	842	831	839	686	694	561
10	824	507	113	255	835	839	844	839	840	685	691	617
11	758	504	430	311	845	815	844	838	812	694	752	612
12	628	501	268	383	846	827	845	835	810	700	788	607
13	810	498	241	381	843	832	845	831	831	302	781	509
14	822	494	703	380	843	835	846	830	826	301	786	306
15	803	449	736	377	843	836	844	832	815	672	789	332
16	797	420	579	232	844	835	841	803	819	696	655	508
17	803	401	575	105	851	835	842	810	823	705	310	597
18	802	400	637	350	851	837	818	821	821	705	310	599
19	799	399	770	416	829	838	837	822	822	704	499	601
20	798	400	763	433	775	838	835	828	822	712	539	512
21	797	419	690	458	784	840	834	831	820	723	536	329
22	798	336	512	457	797	839	838	830	819	726	534	235
23	797	106	253	486	836	839	841	797	820	724	477	71
24	799	106	226	500	841	841	839	839	820	721	303	.54
25	804	106	227	305	842	839	843	837	596	718	268	.00
26	800	107	435	446	842	837	846	834	824	714	441	.00
27	794	233	547	482	840	837	846	838	824	711	511	.00
28	801	303	544	436	841	802	840	837	824	708	542	.00
29	801	302	542	641	845	826	844	839	821	705	564	.00
30	800	275	548	747	---	834	846	837	820	704	511	.00
31	800	---	563	756	---	839	---	835	---	702	272	---
TOTAL	20447.40	13484	12308	12526	23380	25937	25176	25793	24567	21251	18159	10564.54
MEAN	660	449	397	404	806	837	839	832	819	686	586	352
MAX	824	801	770	756	851	851	846	848	841	819	789	642
MIN	.00	106	109	105	588	802	818	797	596	301	268	.00
AC-FT	40560	26750	24410	24850	46370	51450	49940	51160	48730	42150	36020	20950
a	39760	27840	26550	26300	45380	49940	48270	48930	47090	41410	34850	18900
b	1490	918	653	901	1310	1010	825	464	549	1300	1240	720

a Discharge, in acre-feet, to Drum No. 1 and 2 Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, to Alta Powerplant, provided by Pacific Gas & Electric Co.

11414170 DRUM CANAL AT TUNNEL OUTLET, NEAR EMIGRANT GAP, 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	413	426	448	460	482	521	601	630	622	605	567	366
MAX	817	824	835	837	833	838	839	842	844	820	804	661
(WY)	1983	1984	1984	1984	1984	1984	1996	1978	1978	1983	1983	1986
MIN	.000	29.5	31.1	30.7	.000	22.6	22.9	5.77	166	178	.000	.000
(WY)	1966	1987	1977	1991	1991	1988	1988	1976	1977	1977	1965	1965

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1965 - 1996			
ANNUAL TOTAL	245109.40				233592.94							
ANNUAL MEAN	672				638				512			
HIGHEST ANNUAL MEAN									796			
LOWEST ANNUAL MEAN									101			
HIGHEST DAILY MEAN	833				851				860			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.08				.00			
ANNUAL RUNOFF (AC-FT)	486200				463300				370900			
ANNUAL DISCHARGE (AC-FT) a	480400				455200							
ANNUAL DISCHARGE (AC-FT) b	10540				11370							
10 PERCENT EXCEEDS	825				841				825			
50 PERCENT EXCEEDS	794				754				561			
90 PERCENT EXCEEDS	186				256				37			

a Discharge, in acre-feet, to Drum No. 1 and 2 Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, to Alta Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11414200 SOUTH YUBA CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°18'49", long 120°39'43", in SE 1/4 NE 1/4 sec.30, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank of concrete flume 400 ft downstream from Bowman Lake Road and 2.5 mi northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,590 ft above sea level, from topographic map.

REMARKS.--Canal diverts from Spaulding No. 2 Powerplant (station 11414155) at Lake Spaulding Dam. Downstream from the gage, some flow is diverted to Bear River. The remainder of the water enters Deer Creek at Deer Creek Powerplant (station 11414205). See schematic diagrams of Yuba and Bear River basins.

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, 165 ft³/s, Aug. 3, 1965; no flow at times 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	64	52	48	37	30	149	3.5	152	149	66	64	69
2	63	51	47	37	30	147	3.0	152	149	62	64	69
3	64	52	46	37	31	147	2.8	153	150	62	63	64
4	66	51	46	36	31	148	88	153	150	63	62	68
5	67	50	46	37	62	147	140	153	150	63	61	67
6	68	48	46	39	139	148	141	152	151	63	61	67
7	66	47	46	39	139	148	141	153	149	64	62	69
8	66	46	46	39	139	147	142	153	149	64	65	70
9	65	47	47	39	142	147	143	153	148	64	67	69
10	66	47	46	50	145	147	142	152	148	64	66	69
11	66	47	42	79	146	145	140	152	148	64	66	69
12	68	46	26	99	145	144	141	152	146	63	64	68
13	69	46	20	102	145	146	142	152	146	65	79	67
14	67	47	19	101	146	148	147	152	131	66	83	68
15	67	48	23	80	146	149	152	152	112	64	77	68
16	67	48	34	63	146	147	154	152	111	63	66	69
17	67	48	39	58	146	147	153	151	86	63	67	66
18	68	48	38	59	147	150	153	151	69	63	68	67
19	68	50	38	44	146	151	153	152	69	63	69	62
20	68	49	38	59	142	151	152	153	69	64	69	64
21	68	48	38	59	140	148	151	153	69	64	69	64
22	68	49	38	62	140	145	148	153	68	63	69	63
23	69	47	40	69	140	146	146	152	68	63	69	60
24	68	48	40	66	142	147	111	152	68	63	69	59
25	60	49	40	61	144	147	135	152	68	62	69	61
26	53	48	40	67	145	147	142	152	68	62	69	61
27	51	48	40	51	145	147	148	153	68	62	69	60
28	51	48	41	55	147	147	146	153	67	62	69	71
29	52	48	41	48	149	147	146	153	67	62	68	74
30	52	48	35	34	---	146	150	152	67	62	70	73
31	52	---	37	31	---	58	---	150	---	64	70	---
TOTAL	1974	1449	1211	1737	3635	4478	3856.3	4720	3258	1962	2103	1995
MEAN	63.7	48.3	39.1	56.0	125	144	129	152	109	63.3	67.8	66.5
MAX	69	52	48	102	149	151	154	153	151	66	83	74
MIN	51	46	19	31	30	58	2.8	150	67	62	61	59
AC-FT	3920	2870	2400	3450	7210	8880	7650	9360	6460	3890	4170	3960
a	3560	2550	2260	2950	3500	3790	1540	5270	5040	3640	3680	3630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

	MEAN	80.5	68.8	68.6	76.9	80.3	82.4	73.8	107	109	95.6	91.9	89.4
MAX	158	157	157	155	151	147	146	156	163	160	155	152	152
(WY)	1966	1966	1966	1984	1984	1980	1967	1980	1965	1965	1965	1965	1965
MIN	35.9	14.7	33.4	40.3	36.9	31.2	11.3	27.2	46.9	46.1	41.7	38.0	38.0
(WY)	1978	1995	1978	1991	1988	1977	1979	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1965 - 1996

ANNUAL TOTAL	35800.1	32378.3	
ANNUAL MEAN	98.1	88.5	85.4
HIGHEST ANNUAL MEAN			124
LOWEST ANNUAL MEAN			47.2
HIGHEST DAILY MEAN	160	May 5	154
LOWEST DAILY MEAN	2.7	May 2	2.8
ANNUAL SEVEN-DAY MINIMUM	27	Jan 9	28
ANNUAL RUNOFF (AC-FT)	71010		64220
ANNUAL DISCHARGE (AC-FT) a	43250		41400
10 PERCENT EXCEEDS	153		151
50 PERCENT EXCEEDS	70		68
90 PERCENT EXCEEDS	40		41

a Discharge, in acre-feet, to Deer Creek Powerplant, provided by Pacific Gas & Electric Co.

11414210 SOUTH YUBA RIVER BELOW SPAULDING NO. 2 POWERPLANT, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'28", long 120°38'42", in NE 1/4 SE 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank 200 ft downstream from Spaulding No. 2 Powerplant, 0.2 mi downstream from Spaulding Dam, and 2.3 mi northeast of Emigrant Gap.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1965-85 in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir and steel-lipped rectangular weir. Elevation of gage is 4,670 ft above sea level, from topographic map. Prior to June 1988, at same site and different datum.

REMARKS.--Flow regulated by Lake Spaulding (station 11414140) 0.2 mi upstream. Water is released at the intake to South Yuba Canal (station 11414200) 100 ft upstream. See schematic diagrams of Yuba and Bear River basins.

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, 194 ft³/s, Apr. 14, June 8, 1986, gage height, 3.37 ft, from rating curve extended above 45 ft³/s, on basis of weir formula; minimum daily, 0.09 ft³/s, Nov. 5-7, 1985.

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	4.0	5.0	4.8	1.0	2.6	29	32	29	28	2.2	4.0	5.5
2	4.0	5.0	4.6	1.4	2.5	30	32	29	29	2.1	4.1	3.4
3	4.0	5.0	4.5	1.9	2.5	30	34	29	30	2.1	4.3	4.6
4	4.0	5.0	4.1	1.8	12	31	35	29	30	2.1	4.3	6.7
5	4.2	5.0	2.6	1.8	17	29	35	29	30	2.1	4.3	6.7
6	4.5	5.0	2.6	1.8	37	29	35	29	30	2.1	4.3	6.5
7	4.5	4.9	2.5	1.8	37	29	35	29	30	2.1	4.3	5.7
8	4.5	4.8	2.8	1.8	37	29	35	29	30	2.1	4.3	4.9
9	4.5	4.8	3.3	1.8	35	29	35	29	30	2.1	4.3	5.0
10	4.7	4.8	3.3	1.8	32	29	36	29	29	2.1	4.3	5.0
11	4.7	4.8	6.9	1.9	32	30	38	30	15	2.1	4.1	5.0
12	4.5	4.8	9.2	2.0	32	32	38	31	1.3	2.1	4.0	5.0
13	4.5	4.8	1.9	2.0	32	30	38	31	16	2.1	9.1	5.0
14	4.5	4.8	1.4	2.2	32	28	34	31	15	2.1	9.9	5.0
15	4.5	4.8	1.5	2.6	32	28	32	34	1.9	2.1	5.0	5.1
16	4.5	5.1	1.3	6.7	32	28	33	37	1.8	2.1	5.0	5.0
17	4.5	5.6	1.2	2.5	32	28	33	36	2.0	2.1	4.8	4.8
18	4.5	5.6	1.2	3.7	33	29	33	34	2.1	2.1	4.8	4.8
19	4.5	5.7	1.2	2.8	34	29	33	30	2.1	2.6	4.8	4.8
20	4.8	6.4	1.2	2.4	34	29	33	28	2.1	3.0	4.8	4.8
21	5.0	5.2	1.1	2.3	37	31	32	28	2.1	3.0	4.8	4.8
22	5.0	4.8	1.1	2.3	35	33	34	29	2.3	3.0	4.8	4.8
23	5.0	4.6	1.1	2.3	35	33	36	29	2.3	3.0	4.8	6.8
24	5.0	4.5	1.5	2.3	33	32	26	29	2.3	3.2	4.8	5.5
25	5.0	4.8	2.0	3.4	32	32	31	29	2.2	3.4	5.0	6.0
26	5.0	4.8	2.0	2.3	31	31	32	29	2.2	3.4	5.6	4.3
27	5.0	4.8	1.8	3.5	30	31	32	29	2.2	3.4	5.6	4.2
28	5.0	4.8	1.6	2.5	30	32	32	29	2.2	3.8	5.5	4.0
29	5.0	4.8	2.1	2.3	29	32	32	29	2.2	4.0	7.4	4.0
30	5.0	4.8	2.4	2.4	---	32	31	29	2.2	4.0	6.8	4.0
31	5.0	---	1.4	3.0	---	32	---	29	---	4.0	5.0	---
TOTAL	143.4	149.6	80.2	74.3	831.6	936	1007	930	377.5	81.7	158.9	151.7
MEAN	4.63	4.99	2.59	2.40	28.7	30.2	33.6	30.0	12.6	2.64	5.13	5.06
MAX	5.0	6.4	9.2	6.7	37	33	38	37	30	4.0	9.9	6.8
MIN	4.0	4.5	1.1	1.0	2.5	28	26	28	1.3	2.1	4.0	3.4
AC-FT	284	297	159	147	1650	1860	2000	1840	749	162	315	301

11414210 SOUTH YUBA RIVER BELOW SPAULDING NO. 2 POWERPLANT, NEAR EMIGRANT GAP, 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	4.03	4.01	3.18	4.09	11.8	19.6	23.5	23.3	24.0	5.21	4.20	4.11
MAX	5.85	6.23	5.15	17.7	61.4	111	118	85.8	111	20.7	6.08	5.86
(WY)	1993	1995	1991	1995	1986	1986	1986	1986	1986	1995	1994	1989
MIN	1.50	1.52	1.72	1.70	2.13	1.95	2.05	1.75	1.71	1.71	1.55	1.58
(WY)	1986	1986	1987	1989	1989	1988	1987	1987	1987	1986	1986	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1986 - 1996	
ANNUAL TOTAL	6399.2		4921.9			
ANNUAL MEAN	17.5		13.4		10.9	
HIGHEST ANNUAL MEAN					41.3	1986
LOWEST ANNUAL MEAN					2.05	1988
HIGHEST DAILY MEAN	158	May 1	38	Apr 11	166	Jun 14 1986
LOWEST DAILY MEAN	1.1	Dec 21	1.0	Jan 1	.09	Nov 5 1985
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 17	1.2	Dec 17	.64	Nov 4 1985
INSTANTANEOUS PEAK FLOW			68	Sep 23	194	Apr 14 1986
INSTANTANEOUS PEAK STAGE			2.16	Sep 23	3.37	Apr 14 1986
ANNUAL RUNOFF (AC-FT)	12690		9760		7890	
10 PERCENT EXCEEDS	35		32		32	
50 PERCENT EXCEEDS	8.3		5.0		4.0	
90 PERCENT EXCEEDS	2.2		2.1		1.6	

11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°19'07", long 120°39'24", in SW 1/4 SW 1/4 sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank 50 ft downstream from road bridge, 0.8 mi downstream from Spaulding Nos. 1 and 2 Powerplants, and 1.6 mi northeast of Emigrant Gap.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,432.44 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Flow regulated by Lake Spaulding (station 11414140) 0.8 mi upstream. Lake Spaulding receives water from Canyon Creek via the Bowman-Spaulding Canal (station 11416100). Most of the water is diverted out of the Yuba River just downstream from Spaulding Dam via Drum Canal (station 11414170) and South Yuba Canal (station 11414200). See schematic diagrams of Yuba and Bear River basins.

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, 24,000 ft³/s, May 16, 1996, gage height, 20.99 ft, from rating curve extended above 8,800 ft³/s on basis of spillway rating at Spaulding Dam; minimum daily, 2.1 ft³/s, on several days during July and September 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	5.4	5.5	6.7	12	23	33	204	854	483	6.4	5.7	6.7
2	5.3	5.6	6.5	10	20	35	193	1100	592	6.3	5.7	12
3	5.3	5.5	6.3	9.3	19	35	139	1030	840	6.2	5.8	14
4	5.2	5.5	9.5	8.4	198	70	42	889	689	6.1	5.8	14
5	5.2	5.5	6.8	7.7	189	51	41	754	706	6.0	5.9	10
6	5.4	5.5	6.0	7.3	88	40	40	563	594	5.9	5.8	8.8
7	5.3	5.4	5.9	6.9	66	39	40	505	558	8.7	5.7	7.8
8	5.3	5.4	5.4	6.6	59	40	39	615	377	32	5.7	6.4
9	5.3	5.4	5.8	6.4	68	42	41	647	212	37	5.6	6.3
10	5.3	5.4	5.7	6.2	66	42	42	702	70	37	5.4	6.3
11	5.3	5.4	32	6.1	58	59	41	771	28	36	5.5	6.4
12	5.3	5.4	167	6.0	49	57	40	940	8.9	26	5.7	6.5
13	5.2	5.4	32	5.8	85	44	37	1130	23	9.1	11	6.8
14	5.3	5.4	18	5.7	127	40	e34	1200	27	6.9	12	6.6
15	5.2	5.4	16	8.3	114	39	23	2500	8.7	6.3	6.0	8.4
16	5.2	5.6	14	62	157	39	45	15900	7.8	5.9	5.8	7.5
17	5.2	5.9	11	31	552	38	43	8470	7.3	5.7	5.8	7.1
18	5.2	6.0	10	28	1010	39	e43	8610	7.5	5.3	5.8	6.9
19	5.2	6.0	8.9	30	1100	38	43	1980	7.6	5.5	5.8	6.7
20	5.4	7.7	7.8	19	1140	37	42	371	8.4	5.9	5.8	6.7
21	5.5	20	7.1	17	640	38	41	175	7.5	5.7	5.8	6.7
22	5.5	8.4	6.7	14	292	40	39	547	7.4	5.5	5.7	6.7
23	5.6	6.3	6.2	13	94	38	42	618	7.3	5.4	5.7	9.7
24	5.6	5.7	6.2	14	45	36	17	279	7.3	5.4	5.5	8.4
25	5.6	7.0	6.7	32	39	35	54	198	7.6	5.5	5.9	8.9
26	5.5	7.0	6.5	21	37	35	43	305	8.8	5.4	6.8	6.2
27	5.5	6.1	6.4	36	35	35	379	335	8.1	5.3	6.9	6.0
28	5.5	5.8	6.3	31	34	51	491	269	7.4	5.6	7.0	6.1
29	5.5	5.7	9.7	22	34	40	473	333	7.0	5.8	9.3	6.0
30	5.5	5.6	19	19	---	38	658	678	6.7	5.7	9.6	6.0
31	5.5	---	17	25	---	121	---	500	---	5.7	6.5	---
TOTAL	166.3	190.5	479.1	526.7	6438	1364	3449	53768	5330.3	325.2	201.0	232.6
MEAN	5.36	6.35	15.5	17.0	222	44.0	115	1734	178	10.5	6.48	7.75
MAX	5.6	20	167	62	1140	121	658	15900	840	37	12	14
MIN	5.2	5.4	5.4	5.7	19	33	17	175	6.7	5.3	5.4	6.0
AC-FT	330	378	950	1040	12770	2710	6840	106600	10570	645	399	461

e Estimated.

SACRAMENTO RIVER BASIN

11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.16	45.5	46.6	53.7	85.8	66.8	74.2	329	419	69.9	6.09	6.32
MAX	18.8	683	685	583	1626	1304	620	1734	2613	822	9.44	10.3
(WY)	1972	1984	1982	1970	1986	1986	1982	1996	1983	1983	1971	1986
MIN	2.68	4.51	5.44	4.51	5.58	5.10	3.41	5.29	3.05	2.34	2.43	2.73
(WY)	1978	1978	1977	1976	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1966 - 1996			
ANNUAL TOTAL	123131.1				72470.7							
ANNUAL MEAN	337				198				103			
HIGHEST ANNUAL MEAN									369			
LOWEST ANNUAL MEAN									4.35			
HIGHEST DAILY MEAN	5030				May 1				18000			
LOWEST DAILY MEAN	5.2				Oct 4				2.1			
ANNUAL SEVEN-DAY MINIMUM	5.2				Oct 13				2.1			
INSTANTANEOUS PEAK FLOW					24000				May 16			
INSTANTANEOUS PEAK STAGE					20.99				May 16			
ANNUAL RUNOFF (AC-FT)	244200				143700				74970			
10 PERCENT EXCEEDS	1560				485				66			
50 PERCENT EXCEEDS	26				8.9				7.4			
90 PERCENT EXCEEDS	5.5				5.5				5.3			

11414360 LAKE CREEK BELOW CARR LAKE, NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°23'57", long 120°38'31", in SE 1/4 NE 1/4 sec.29, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 65 ft downstream from Carr Lake, 2.0 mi upstream from Fall Creek, and 5.8 mi southeast of Graniteville.

DRAINAGE AREA.--0.48 mi².

PERIOD OF RECORD.--October 1995 to September 1996. Unpublished records for water years 1965-95 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and compound rectangular weir. Elevation of gage is 6,650 ft above sea level (levels by Pacific Gas & Electric Co.). August 1965 to November 1975, nonrecording gage at site 65 ft upstream at different datum. November 1975 to July 1984, nonrecording gage at same site but different datum. July 1984 to September 1995, nonrecording gage at same site and datum.

REMARKS.--April 17 to July 1 values missing due to equipment failure. Flow regulated by Carr Lake. See schematic diagram of Yuba 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	2.4	2.9	1.3	1.2	.31	.83	.93	---	---	---	.91	.57
2	2.4	3.0	1.3	1.1	.27	.86	.99	---	---	1.9	.91	.54
3	2.4	3.1	1.3	1.2	.26	.86	.99	---	---	1.9	.91	.54
4	2.4	3.1	1.3	1.1	.33	.83	.97	---	---	1.9	.91	.50
5	2.0	3.1	1.3	1.1	.38	.83	.99	---	---	1.9	.91	.48
6	2.0	3.1	1.3	.99	.37	.95	.99	---	---	1.8	.91	.51
7	2.4	2.9	1.3	.99	.37	.91	.99	---	---	1.6	.79	.54
8	2.4	2.9	1.3	.99	.37	.88	.99	---	---	1.3	.75	.54
9	2.4	2.9	1.3	.91	.37	.83	.99	---	---	1.2	.75	.54
10	2.4	2.9	1.2	.63	.37	.91	1.3	---	---	1.0	.75	.54
11	2.1	2.9	1.6	.60	.37	.91	5.1	---	---	.91	.75	.48
12	2.4	2.9	2.3	.60	.37	.91	3.2	---	---	.91	.75	.52
13	2.7	2.9	2.3	.55	.40	.91	2.7	---	---	.91	.73	2.0
14	2.9	2.9	2.3	.54	.42	.83	2.5	---	---	.95	.69	3.2
15	2.9	2.9	2.1	.48	.42	.83	2.7	---	---	.99	.77	3.0
16	2.9	2.9	2.1	.47	.42	.80	6.6	---	---	.99	.83	2.8
17	2.9	2.9	2.0	.42	.40	.80	---	---	---	.99	.83	2.8
18	2.9	3.0	1.9	.40	.42	.83	---	---	---	.99	.83	3.1
19	2.8	3.1	1.9	.37	.44	.83	---	---	---	.99	.77	3.9
20	2.8	3.2	1.9	.37	.49	.75	---	---	---	.99	.75	3.9
21	2.9	3.3	1.8	.37	.64	.75	---	---	---	.99	.75	3.8
22	2.8	3.3	1.7	.37	.67	.80	---	---	---	.99	.69	3.5
23	2.8	3.3	1.6	.37	.68	.78	---	---	---	.92	.63	3.2
24	2.8	3.3	1.6	.41	.75	.75	---	---	---	.83	.60	3.1
25	2.8	3.2	1.6	.48	.75	.73	---	---	---	.83	.60	3.1
26	2.8	3.0	1.5	.44	.83	.67	---	---	---	.83	.66	3.1
27	2.8	2.8	1.5	.33	.83	.69	---	---	---	.87	.75	1.8
28	2.8	2.2	1.5	.32	.83	.82	---	---	---	.91	.75	1.9
29	2.8	1.3	1.4	.32	.83	.83	---	---	---	.91	.75	1.9
30	2.8	1.3	1.3	.32	---	.88	---	---	---	.91	.74	1.9
31	2.9	---	1.2	.32	---	.91	---	---	---	.91	.64	---
TOTAL	81.5	86.5	50.0	19.06	14.36	25.70	---	---	---	---	23.76	58.30
MEAN	2.63	2.88	1.61	.61	.50	.83	---	---	---	---	.77	1.94
MAX	2.9	3.3	2.3	1.2	.83	.95	---	---	---	---	.91	3.9
MIN	2.0	1.3	1.2	.32	.26	.67	---	---	---	---	.60	.48
AC-FT	162	172	99	38	28	51	---	---	---	---	47	116

11414400 FRENCH LAKE NEAR CISCO, CA

LOCATION.--Lat 39°25'16", long 120°32'28", in SE 1/4 SW 1/4 sec.17, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank near French Lake Dam on Canyon Creek, 0.5 mi upstream from Weil Lake, and 8.2 mi north of Cisco.

DRAINAGE AREA.--4.60 mi².

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1966-86 available in the files of the U.S. Geological Survey.

GAGE.--Staff gages, observed approximately weekly except during the winter months. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed on natural lake by rock-filled dam completed in 1859. Usable capacity, 13,940 acre-ft between elevations 6,594.90 ft, invert of outlet gate, and 6,660.28 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation 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.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

6,610	1,805	6,640	8,006
6,620	3,636	6,650	10,701
6,630	5,677	6,662	14,542

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY INSTANTANEOUS VALUES[illegible]

275

LOCATION.--Lat 39°25'16", long 120°32'30", in SE 1/4 SW 1/4 sec.17, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 10 ft downstream from outlet at French Lake Dam on Canyon Creek, 0.5 mi upstream from Weil Lake, and 8.2 mi north of Cisco.

PERIOD OF RECORD.--January 1989 to current year (low flow records only). Unpublished records for water years 1967-88 available in files of the U.S. Geological Survey.

REMARKS.--No records computed above 3.2 ft³/s. Flow regulated by French Lake (station 11414400). Flow over the spillway bypasses this station. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

[illegible]

LOCATION.--Lat 39°25'45", long 120°34'04", in SE 1/4 NE 1/4 sec.13, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, near right bank end of Faucherie Dam on Canyon Creek, 8.5 mi north of Cisco.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1965-86 available in files of the U.S. Geological Survey.

REMARKS.--Reservoir is formed on natural lake by earth-filled dam initially constructed prior to 1880 and enlarged in 1964. Usable capacity, 3,740 acre-ft between elevations 6,090.00 ft, invert of outlet gate, and 6,123.00 ft, crest of spillway. Dead storage, below elevation 6,090 ft, 240 acre-ft. Figures given represent total contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Yuba River basin.

6,090	240	6,110	2,216
6,095	628	6,115	2,854
6,100	1,095	6,120	3,540
6,105	1,629	6,125	4,280

[illegible]

11414450 CANYON CREEK BELOW FAUCHERIE LAKE, NEAR CISCO, CA

LOCATION.--Lat 39°25'46", long 120°34'06", in SE 1/4 NE 1/4 sec.13, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 80 ft downstream from Faucherie Dam on Canyon Creek, 8.5 mi north of Cisco.

DRAINAGE AREA.--8.97 mi².

PERIOD OF RECORD.--January 1989 to current year (low flow records only). Unpublished records for water years 1965-88 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,080 ft above sea level, from topographic map. October 1964 to July 1988, nonrecording gage at site 10 ft downstream at different datum. July 1988 to January 1989, nonrecording gage at same site and datum.

REMARKS.--No records computed above 3.2 ft³/s. Flow regulated by Faucherie Lake (station 11414440). Flow over the spillway bypasses this station. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation District, 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	3.0	2.9	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1
2	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
6	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
7	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
8	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
9	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
10	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
11	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
12	3.0	3.0	3.1	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
13	3.0	3.0	3.1	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
14	3.0	3.0	3.1	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
15	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
16	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
17	3.0	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
18	3.0	3.1	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
19	3.0	3.1	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
20	3.0	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
21	3.0	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
22	3.0	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
23	3.0	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
24	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
25	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
26	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
27	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
28	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
29	2.9	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0
30	2.9	3.0	3.0	2.9	---	2.9	2.9	3.0	3.0	3.0	3.1	3.0
31	2.9	---	3.0	2.9	---	2.9	---	3.0	---	3.0	3.1	---
TOTAL	92.2	91.1	93.3	91.8	84.1	89.9	87.0	92.4	90.0	93.0	94.0	90.1
MEAN	2.97	3.04	3.01	2.96	2.90	2.90	2.90	2.98	3.00	3.00	3.03	3.00
MAX	3.0	3.1	3.1	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.1
MIN	2.9	2.9	3.0	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0
AC-FT	183	181	185	182	167	178	173	183	179	184	186	179

WTR YR 1996 TOTAL 1088.9 MEAN 2.98 MAX 3.1 MIN 2.9 AC-FT 2160

SACRAMENTO RIVER BASIN

11414465 SAWMILL LAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°26'44", long 120°36'02", in NW 1/4 NW 1/4 sec.11, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, near right bank end of Sawmill Lake Dam on Canyon Creek, 0.8 mi upstream from Bowman Lake, and 7.2 mi east of Graniteville.

DRAINAGE AREA.--16.4 mi².

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1966-86 available in files of the U.S. Geological Survey.

GAGE.--Staff gages, observed approximately weekly during the summer months. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed by a rock-filled dam initially constructed prior to 1880 and enlarged in 1941. Usable capacity, 3,030 acre-ft between elevations 5,805 ft, base of dam, and 5,860 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation 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.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

5,805	0	5,850	2,000
5,820	110	5,860	3,030
5,830	430	5,863	3,375
5,840	1,130		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2979	---	---	---	---	---	---	---	---	---	---
2	---	2979	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	2979	---	---	---	---	---	---	---	---	3076	3050	---
5	---	---	---	---	---	---	---	---	3122	---	2989	---
6	---	---	---	---	---	---	---	---	3122	---	---	---
7	---	2979	---	---	---	---	---	3122	---	---	2884	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	3030	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	3059	2350	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	3030	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	2979	---	---	---	---	---	---	---	---	---	---	0
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	3053	---	---
20	---	---	---	---	---	---	---	---	---	---	1643	---
21	---	---	---	---	---	---	---	---	---	---	1522	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	2979	---	---	---	---	---	---	3134	---	3054	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	2979	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	3076	---	920	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	e780
30	---	2979	---	---	---	---	---	---	---	---	e366	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

11414470 CANYON CREEK BELOW SAWMILL LAKE, NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°26'44", long 120°36'05", in NW 1/4 NW 1/4 sec.11, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 130 ft downstream from outlet at Sawmill Lake Dam on Canyon Creek, 0.8 mi upstream from Bowman Lake, and 7.2 mi east of Graniteville.

DRAINAGE AREA.--16.4 mi².

PERIOD OF RECORD.--October 1989 to current year. Unpublished records for water years 1965-89 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir in concrete control. Elevation of gage is 5,790 ft above sea level, from topographic map. September 1964 to July 6, 1988, nonrecording gage at two sites 470 ft downstream at different datum. July 7, 1988, to January 1989, nonrecording gage at same site and datum.

REMARKS.--Flow completely regulated by Sawmill Lake (station 11414465). Flow over the spillway bypasses this station. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 128 ft³/s, Mar. 8-11, 1993, gage height, 2.02 ft; minimum daily, 2.5 ft³/s, Oct. 7, 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	4.1	3.1	3.5	3.7	3.7	3.4	3.4	3.4	3.3	2.9	3.2	e48
2	3.8	2.9	3.5	3.8	3.7	3.4	3.4	3.4	3.3	2.9	3.2	e45
3	3.8	3.0	3.5	3.8	3.8	3.4	3.4	3.4	3.3	3.0	3.2	e42
4	3.6	3.1	3.5	3.8	3.8	3.4	3.4	3.4	3.3	3.1	3.2	e40
5	3.3	3.2	3.6	3.8	5.4	3.4	3.4	3.4	3.2	3.1	3.2	e37
6	3.2	3.5	3.6	3.8	3.4	3.4	3.4	3.4	3.2	3.1	3.2	e35
7	3.2	3.7	3.6	3.8	3.4	3.4	3.4	3.4	3.2	3.1	3.2	e32
8	3.2	3.7	3.6	3.8	3.4	3.4	3.4	3.4	3.2	3.1	56	e30
9	3.2	3.7	3.6	3.8	3.4	3.4	3.4	3.4	3.2	3.1	57	e27
10	3.2	3.7	3.5	3.8	3.4	3.4	3.4	3.4	3.2	3.1	57	e25
11	3.2	3.7	3.6	3.8	3.4	3.4	3.4	3.4	3.2	3.1	57	e22
12	3.2	3.7	17	3.8	3.4	3.4	3.4	3.4	3.2	3.1	57	e20
13	3.2	3.7	3.3	3.8	3.4	3.4	3.4	3.4	3.2	3.1	56	e17
14	3.2	3.7	3.3	3.7	3.4	3.4	3.4	3.4	3.2	3.1	56	e15
15	3.2	3.6	3.7	3.7	3.4	3.4	3.4	4.1	3.2	3.1	56	e13
16	3.2	3.5	3.7	3.8	3.4	3.4	3.5	24	3.2	3.2	54	e10
17	3.1	3.5	3.7	3.7	3.4	3.4	3.4	4.9	3.2	3.2	54	e7.1
18	3.1	3.5	3.7	3.7	3.4	3.4	3.4	4.6	3.2	3.2	54	e6.5
19	3.2	3.5	3.7	3.7	3.5	3.4	3.4	3.3	3.2	3.2	54	e5.9
20	3.3	3.5	3.7	3.7	3.4	3.4	3.4	3.3	3.2	3.2	58	e5.3
21	3.2	3.5	3.7	3.7	3.4	3.4	3.4	3.3	3.2	3.2	61	e4.7
22	3.1	3.5	3.7	3.7	3.4	3.4	3.4	3.3	3.2	3.2	61	e4.1
23	3.2	3.5	3.7	3.7	3.4	3.4	3.4	3.3	3.2	3.2	59	e3.7
24	3.1	3.5	3.7	3.7	3.4	3.4	3.4	3.3	3.2	3.2	59	e7.5
25	3.1	3.5	3.7	3.8	3.4	3.4	3.4	3.3	3.2	3.2	57	e12
26	3.1	3.5	3.7	3.8	3.4	3.4	3.4	3.3	3.2	3.2	57	e15
27	3.2	3.5	3.7	3.7	3.4	3.4	3.4	3.3	2.9	3.2	57	e9.2
28	3.1	3.5	3.7	3.7	3.4	3.4	3.4	3.3	2.9	3.2	56	e4.0
29	3.1	3.5	3.7	3.7	3.4	3.4	3.4	3.3	2.9	3.2	54	e4.6
30	3.1	3.4	3.7	3.7	---	3.4	3.4	3.3	2.9	3.2	54	e4.6
31	3.2	---	3.7	3.7	---	3.4	---	3.3	---	3.2	e51	---
TOTAL	101.0	104.4	125.6	116.2	102.1	105.4	102.1	128.1	95.2	97.2	1403.2	552.2
MEAN	3.26	3.48	4.05	3.75	3.52	3.40	3.40	4.13	3.17	3.14	45.3	18.4
MAX	4.1	3.7	17	3.8	5.4	3.4	3.5	24	3.3	3.2	61	48
MIN	3.1	2.9	3.3	3.7	3.4	3.4	3.4	3.3	2.9	2.9	3.2	3.7
AC-FT	200	207	249	230	203	209	203	254	189	193	2780	1100

e Estimated.

SACRAMENTO RIVER BASIN

11414470 CANYON CREEK BELOW SAWMILL LAKE, NEAR GRANITEVILLE, 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	9.64	13.6	16.7	13.5	8.00	18.1	17.9	15.1	5.00	4.57	13.5	16.6
MAX	33.6	37.1	61.4	56.7	17.6	95.1	96.0	88.6	7.62	6.50	45.3	51.2
(WY)	1992	1991	1990	1990	1990	1993	1993	1993	1993	1993	1996	1992
MIN	3.26	3.14	3.83	3.73	3.52	3.40	3.40	2.68	3.17	3.10	3.78	4.17
(WY)	1996	1993	1992	1992	1996	1996	1990	1989	1996	1990	1992	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1989 - 1996		
ANNUAL TOTAL	2511.3			3032.7					
ANNUAL MEAN	6.88			8.29			12.9		
HIGHEST ANNUAL MEAN							28.8		
LOWEST ANNUAL MEAN							7.17		
HIGHEST DAILY MEAN	17			Dec 12			128		
LOWEST DAILY MEAN	2.9			Nov 2			2.5		
ANNUAL SEVEN-DAY MINIMUM	3.1			Oct 28			2.6		
INSTANTANEOUS PEAK FLOW				90			128		
INSTANTANEOUS PEAK STAGE				1.85			2.02		
ANNUAL RUNOFF (AC-FT)	4980			6020			9330		
10 PERCENT EXCEEDS	13			23			53		
50 PERCENT EXCEEDS	6.1			3.4			4.5		
90 PERCENT EXCEEDS	3.5			3.2			3.2		

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LOCATION.--Lat 39°27'52", long 120°33'44", in SW 1/4 SW 1/4 sec.31, T.19 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Jackson Lake Dam on Jackson Creek, 3.0 mi upstream from Bowman Lake, and 8.0 mi southeast of Sierra City.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1965-86 available in files of U.S. Geological Survey.

REMARKS.--Reservoir is formed on natural lake by earth-filled dam completed in 1859. Usable capacity, 974 acre-ft between gage height 0.0 ft, invert of outlet, and 22.67 ft, crest of spillway. Dead storage below gage height 0.0 ft, 360 acre-ft. Figures given represent total contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

0	360	15	958
5	545	20	1,185
10	730	24	1,407

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY INSTANTANEOUS VALUES[illegible]

SACRAMENTO RIVER BASIN

11414700 JACKSON CREEK BELOW JACKSON LAKE, NEAR SIERRA CITY, CA

LOCATION.--Lat 39°27'53", long 120°33'46", in SW 1/4 SW 1/4 sec.31, T.19 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 75 ft downstream from Jackson Lake Dam on Jackson Creek, 3.0 mi upstream from Bowman Lake, and 8.0 mi southeast of Sierra City.

DRAINAGE AREA.--0.65 mi².

PERIOD OF RECORD.--January 1989 to September 1992, April 1993 to current year (low-flow records only).
Unpublished records for water years 1965-88 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,570 ft above sea level, from topographic map. October 1964 to October 1986, nonrecording gage at site 25 ft downstream at different datum. October 1986 to January 1989, nonrecording gage at same site and datum.

REMARKS.--No records computed above 2.9 ft³/s. Flow regulated by Jackson Lake (station 11414690). Flow over the spillway bypasses this station. See schematic diagram of Yuba River basin.

COOPERATION.--Records were collected by Nevada Irrigation District, 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	.97	1.1	1.1	.96	.96	.96	.97	.92	.92	2.3	1.5	1.4
2	.99	1.1	1.1	.96	.96	.96	.96	.92	.92	2.3	1.5	1.4
3	.99	1.1	1.1	.96	.96	.96	.96	.92	.92	2.3	1.5	1.4
4	.99	1.1	1.1	.96	.96	.96	.96	.92	.91	2.3	1.5	1.4
5	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.2	1.5	---
6	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.2	1.5	---
7	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.2	1.5	---
8	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.2	1.5	---
9	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.1	1.5	---
10	1.0	1.1	1.1	.96	.96	.96	.96	.92	.89	2.1	1.5	---
11	1.0	1.1	1.1	.96	.96	.96	.97	.92	.89	2.1	1.5	---
12	1.0	1.1	1.3	.96	.96	.96	.96	.92	1.8	2.1	1.5	---
13	1.0	1.1	1.1	.96	.96	.96	.92	.92	2.2	2.1	1.5	1.4
14	1.0	1.1	.92	.96	.96	.96	.92	.94	2.2	2.1	1.5	1.5
15	1.0	1.1	.92	.96	.96	.97	.93	.96	2.2	2.1	1.5	1.6
16	1.0	1.1	.93	1.0	.96	.96	.94	.99	2.2	2.1	1.5	1.3
17	1.0	1.1	.92	1.0	.96	.96	.92	.98	2.2	2.1	1.5	1.1
18	1.1	1.1	.92	1.0	.96	.96	.92	.96	2.2	2.2	1.5	1.1
19	1.1	1.1	.92	1.0	.96	.96	.92	.92	2.2	2.3	1.5	1.1
20	1.1	1.1	.92	1.0	.96	.96	.92	.92	2.2	2.3	1.5	1.1
21	1.1	1.1	.92	1.0	.96	.96	.92	.94	2.2	2.3	1.5	1.1
22	1.1	1.1	.92	1.0	.96	.96	.92	.94	2.2	2.3	1.5	1.1
23	1.1	1.1	.92	1.0	.96	.96	.92	.92	2.2	2.3	1.5	1.1
24	1.1	1.1	.94	.96	.96	.96	.94	.92	2.2	1.8	1.5	1.1
25	1.1	1.1	.96	.96	.96	.96	.92	.92	2.2	1.5	1.5	1.1
26	1.1	1.1	.96	.96	.96	.96	.92	.92	2.2	1.5	1.5	1.1
27	1.1	1.1	.96	.96	.96	.96	.92	.92	2.3	1.5	1.5	1.1
28	1.1	1.1	.96	.96	.96	.96	.92	.92	2.3	1.5	1.5	1.1
29	1.1	1.1	.96	.96	.96	.96	.92	.92	2.3	1.5	1.5	1.1
30	1.1	1.1	.96	.96	---	.96	.92	.92	2.3	1.5	1.5	1.1
31	1.1	---	.96	.96	---	.96	---	.92	---	1.5	1.4	---
TOTAL	32.34	33.0	31.37	30.08	27.84	29.77	28.15	28.79	51.70	62.9	46.4	---
MEAN	1.04	1.10	1.01	.97	.96	.96	.94	.93	1.72	2.03	1.50	---
MAX	1.1	1.1	1.3	1.0	.96	.97	.97	.99	2.3	2.3	1.5	---
MIN	.97	1.1	.92	.96	.96	.96	.92	.92	.89	1.5	1.4	---
AC-FT	64	65	62	60	55	59	56	57	103	125	92	---

11415500 BOWMAN LAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°27'01", long 120°39'09", in SE 1/4 SW 1/4 sec.5, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank near rockfill portion of Bowman Dam on Canyon Creek, 4.6 mi east of Graniteville, and 8 mi south of Sigra City.

DRAINAGE AREA.--27.1 mi².

PERIOD OF RECORD.--December 1926 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Nevada Irrigation District). Prior to Oct. 8, 1964, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by one rockfill and one concrete-arch dam; storage began in November 1926. Total capacity, 68,700 acre-ft between elevations 5,400 ft, bottom of outlet tunnel, and 5,563.6 ft, top of radial spillway gates and crest of concrete-arch dam. Flashboards are occasionally added, increasing elevation to 5,565.8 ft and capacity to 70,400 acre-ft, all of which is available for release. Lake receives water from Middle Yuba River via Milton-Bowman Tunnel (station 11408000), and releases it through Bowman-Spaulding Canal (station 11416000) which conveys it to reservoirs of Pacific Gas & Electric Co. Water is eventually used for irrigation by Nevada Irrigation District. Records, including extremes, represent total contents. See schematic diagram of Yuba River basin.

COOPERATION.--Selected gage-height readings provided by Nevada Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,000 acre-ft, May 30, 1965, elevation, 5,566.5 ft; lake completely drained for inspection and repair Nov. 25 to Dec. 9, 1949, Oct. 1-20, 1966, Oct. 4-29, 1972, and Sept. 21-30, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 69,800 acre-ft, May 17, elevation, unknown; minimum, 37,600 acre-ft, Dec. 10, elevation, 5,522.48 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table dated Nov. 24, 1926)

5,419.6	0	5,470	10,200
5,430	900	5,480	14,200
5,440	2,100	5,510	30,000
5,450	4,100	5,540	49,800
5,460	6,900	5,570	73,800

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	47200	45800	38100	41300	40400	54900	54400	58400	68200	58500	52600	45000
2	47300	45500	38000	41200	40100	54600	55100	58800	68200	58000	52100	44800
3	47400	45200	37900	41000	39800	54300	55200	59100	68200	57500	51800	44600
4	47600	44900	38000	40800	42600	54500	55300	59200	68100	57000	51200	44300
5	47700	44700	38000	40500	47100	54800	55300	59200	68000	56500	50800	44100
6	47800	44400	38000	40300	48400	54900	55400	59400	67900	56300	50500	43800
7	47900	44100	37900	40000	49000	54900	55800	59500	67800	56400	50300	43500
8	48000	43800	37800	39700	49300	54600	56400	59600	67600	56400	50100	43200
9	48200	43500	37700	39400	49600	54300	57300	59600	67300	56500	49800	42900
10	48300	43300	37600	39300	49800	54100	57900	59600	67000	56500	49600	42700
11	48400	43000	38600	39100	50000	54100	58000	59900	66700	56500	49400	42500
12	48500	42700	44000	38900	50200	54000	57900	60300	66500	56600	49200	42200
13	48700	42400	44500	38700	50300	53700	57600	60800	66200	56600	49000	41900
14	48800	42100	44700	38500	50200	53400	57400	61600	65800	56700	48800	41700
15	48900	41800	44700	38400	50100	53200	57400	63900	65500	56700	48500	41500
16	49000	41500	44500	39700	50300	52900	58100	69100	65000	56700	48300	41200
17	49100	41200	44300	40300	51500	52800	58200	69800	64800	56700	48000	41000
18	49200	40900	44100	40700	52600	52700	58000	69200	64400	56700	47800	40700
19	49300	40700	43900	40800	53900	52800	57700	68600	63900	56700	47500	40400
20	49400	40400	43600	40900	54600	53000	57300	68500	63500	56700	47300	40100
21	49500	40100	43300	41000	55200	53300	56900	69100	63000	56700	47200	39800
22	49500	39800	43000	41000	55800	53600	56500	69000	62600	56700	47000	39600
23	49500	39500	42700	41000	56000	53700	56200	68800	62100	56700	46800	39400
24	49200	39200	42300	41200	56100	53700	56500	68600	61600	56500	46700	39400
25	48800	39000	42000	41200	56100	53600	56800	68600	61100	56300	46500	39200
26	48400	38800	41600	41000	55900	53500	57200	68600	60700	56000	46300	39100
27	47900	38500	41300	41100	55700	53500	57400	68600	60300	55500	46100	39000
28	47500	38400	41000	40900	55500	53900	57500	68600	59900	54900	45900	38900
29	47000	38300	40900	40800	55200	54000	57600	68500	59500	54400	45700	38800
30	46600	38200	41100	40700	---	53900	58000	68400	59000	53800	45500	38700
31	46200	---	41400	40600	---	53800	---	68300	---	53200	45200	---
MAX	49500	45800	44700	41300	56100	54900	58200	69800	68200	58500	52600	45000
MIN	46200	38200	37600	38400	39800	52700	54400	58400	59000	53200	45200	38700
a	5534.89	5523.27	5528.01	5526.82	5546.83	5545.11	5550.21	5563.23	5551.53	5544.39	5533.58	5524.10
b	-900	-8000	+3200	-800	+14600	-1400	+4200	+10300	-9300	-5800	-8000	-6500

CAL YR 1995 MAX 56700 MIN 22600 b +12000

WTR YR 1996 MAX 69800 MIN 37600 b -8400

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11416000 BOWMAN-SPAULDING CANAL INTAKE NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°26'26", long 120°39'29", in NW 1/4 SW 1/4 sec.8, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 0.6 mi downstream from Bowman Dam, 4.2 mi east of Graniteville, and 8.5 mi south of Sierra City.

PERIOD OF RECORD.--October 1927 to current year. Prior to October 1970, published as Bowman-Spauldning Canal at intake or Bowman-Spauldning Canal intake, near Sierra City.

REVISED RECORDS.--WSP 1395: 1935-36, 1940.

GAGE.--Water-stage recorder. Datum of gage is 5,390.39 ft above sea level. Prior to July 1965 at site 0.3 mi upstream at different datum.

REMARKS.--Records good. Canal diverts from left bank of Canyon Creek at diversion dam 500 ft downstream from Bowman Dam. Water is diverted to Lake Spaulding (station 11414140) and after passing through several powerplants is used for irrigation by Nevada Irrigation District. See schematic diagram of Yuba 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	238	189	75	162	187	222	211	193	268	284	300	278
2	227	153	74	187	212	222	98	186	269	283	305	278
3	229	156	74	208	211	223	215	187	290	281	309	277
4	236	159	77	208	215	185	199	187	305	281	308	277
5	237	159	76	206	182	189	187	203	306	280	271	276
6	237	158	75	206	168	216	187	220	304	102	296	275
7	238	157	75	206	154	216	187	227	306	.57	296	274
8	238	157	75	205	155	249	187	223	306	.57	297	273
9	237	157	75	205	155	237	188	226	306	.52	297	273
10	237	157	75	171	159	227	176	225	295	.42	286	272
11	238	156	84	147	163	227	159	225	289	.36	296	233
12	238	156	97	154	163	227	159	227	293	.28	296	271
13	237	156	84	154	179	234	159	228	293	.28	285	270
14	237	156	91	155	198	239	159	225	296	.22	296	269
15	237	155	149	156	204	236	159	190	300	.16	302	269
16	236	155	169	163	173	230	161	120	301	.12	302	268
17	236	155	168	158	135	227	160	68	301	.08	300	267
18	236	155	167	159	103	216	160	8.8	304	.06	300	257
19	236	155	183	159	106	206	160	24	298	.05	295	267
20	235	158	198	158	103	207	160	142	291	.06	285	265
21	235	162	202	159	70	185	161	111	290	.16	280	265
22	234	159	208	159	72	169	187	96	290	.12	274	264
23	234	154	209	159	164	188	232	181	295	18	278	212
24	233	154	209	160	174	206	215	204	297	93	279	183
25	233	154	207	178	173	221	181	217	296	139	279	193
26	232	154	207	199	180	233	176	228	278	158	278	196
27	230	113	206	200	194	232	196	233	268	242	276	192
28	230	74	185	199	202	236	197	251	273	299	272	192
29	229	75	162	179	213	224	200	268	282	279	271	192
30	228	74	164	163	---	216	204	268	284	260	275	192
31	227	---	163	164	---	216	---	268	---	302	278	---
TOTAL	7265	4432	4263	5446	4767	6761	5380	5859.8	8774	3305.03	8962	7470
MEAN	234	148	138	176	164	218	179	189	292	107	289	249
MAX	238	189	209	208	215	249	232	268	306	302	309	278
MIN	227	74	74	147	70	169	98	8.8	268	.05	271	183
AC-FT	14410	8790	8460	10800	9460	13410	10670	11620	17400	6560	17780	14820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

MEAN	199	192	168	150	134	133	91.0	75.7	101	211	233	235
MAX	304	302	299	261	253	257	246	239	292	303	307	308
(WY)	1975	1975	1975	1985	1974	1980	1970	1970	1996	1972	1971	1989
MIN	35.6	4.71	.000	.000	.000	.50	.000	.000	.043	1.41	1.05	7.96
(WY)	1973	1965	1932	1932	1932	1952	1928	1928	1965	1952	1952	1952

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1928 - 1996

ANNUAL TOTAL	68386.70	72684.83	
ANNUAL MEAN	187	199	161
HIGHEST ANNUAL MEAN			236
LOWEST ANNUAL MEAN			64.4
HIGHEST DAILY MEAN	308	309	345
LOWEST DAILY MEAN	.50	.05	.00
ANNUAL SEVEN-DAY MINIMUM	10	.09	.00
ANNUAL RUNOFF (AC-FT)	135600	144200	116700
10 PERCENT EXCEEDS	281	292	272
50 PERCENT EXCEEDS	207	206	199
90 PERCENT EXCEEDS	75	84	2.1

11416100 BOWMAN-SPAULDING CANAL AT JORDAN CREEK SIPHON VENTURI, NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°20'32", long 120°38'26", in SW 1/4 NW 1/4 sec.16, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, at outlet of Jordan Creek Siphon, 0.6 mi downstream from Fuller Lake and 3.5 mi northeast of Emigrant Gap.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and Venturi section. Elevation of gage is 5,340 ft above sea level, from topographic map.

REMARKS.--Records show water diverted from Bowman Lake (station 11415500) plus numerous small tributaries before it enters Lake Spaulding (station 11414140). Most of the water at this gage flows downstream through Spaulding No. 3 Powerplant (station 11416200). See schematic diagram of Yuba 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, 335 ft³/s, Dec. 25, 1983; 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	273	204	78	206	219	269	306	318	309	288	306	280
2	245	170	78	208	248	277	228	317	302	288	305	275
3	237	165	79	236	253	279	279	316	301	292	306	274
4	238	167	88	240	294	289	310	308	321	289	307	276
5	245	169	93	238	311	259	291	300	326	288	293	280
6	250	169	92	235	269	267	285	310	326	240	287	280
7	250	169	89	233	265	272	293	323	324	66	295	280
8	248	168	86	232	271	289	305	321	325	5.3	299	280
9	248	168	83	230	262	308	314	321	323	.00	302	279
10	248	166	76	189	256	304	315	321	321	.00	297	279
11	251	166	82	163	253	307	290	320	309	.00	290	263
12	250	166	265	166	254	312	269	320	304	.00	295	263
13	249	164	129	167	267	304	255	320	306	.00	294	284
14	249	164	125	168	294	302	249	323	306	.00	287	293
15	249	163	144	170	302	302	253	329	307	.00	297	295
16	247	162	183	248	306	301	293	318	308	.00	300	298
17	247	161	186	303	292	301	276	326	308	.00	300	294
18	251	159	182	236	177	309	280	300	310	.00	300	292
19	253	158	183	262	244	308	262	266	320	.00	299	299
20	251	156	205	219	295	309	249	276	316	.00	294	303
21	241	152	211	202	316	306	237	292	309	.00	285	306
22	250	155	221	215	222	285	238	279	310	.00	280	306
23	250	155	223	220	245	265	281	283	307	.00	276	287
24	251	149	225	226	265	272	316	283	316	.00	280	224
25	245	155	220	246	257	276	319	281	317	.00	280	213
26	249	159	221	266	243	293	307	280	312	62	280	224
27	247	114	220	261	245	300	313	284	288	173	280	217
28	245	73	216	259	255	304	314	286	280	251	276	217
29	246	75	182	242	257	287	311	310	284	283	274	215
30	245	77	205	210	---	300	317	318	290	266	275	217
31	248	---	224	208	---	300	---	316	---	280	279	---
TOTAL	7696	4598	4894	6904	7637	9056	8555	9465	9285	3071.30	9018	8093
MEAN	248	153	158	223	263	292	285	305	309	99.1	291	270
MAX	273	204	265	303	316	312	319	329	326	292	307	306
MIN	237	73	76	163	177	259	228	266	280	.00	274	213
AC-FT	15270	9120	9710	13690	15150	17960	16970	18770	18420	6090	17890	16050
a	15010	8950	9520	13020	14720	17710	16620	17800	17540	4520	17850	16320

a Discharge, in acre-feet, through Spaulding No. 3 Powerplant, provided by Pacific Gas & Electric Co.

11416100 BOWMAN-SPAULDING CANAL AT JORDAN CREEK SIPHON VENTURI, NEAR EMIGRANT GAP, 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	191	198	199	195	183	206	217	229	230	211	249	260
MAX	306	308	312	313	311	311	311	319	315	305	316	311
(WY)	1983	1984	1984	1984	1995	1983	1980	1983	1983	1983	1993	1983
MIN	29.5	.000	41.9	37.8	21.4	26.3	19.3	33.9	.000	45.6	40.2	143
(WY)	1973	1965	1978	1977	1991	1977	1977	1965	1965	1991	1988	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1965 - 1996		
ANNUAL TOTAL	95627			88272.30					
ANNUAL MEAN	262			241			214		
HIGHEST ANNUAL MEAN							304		
LOWEST ANNUAL MEAN							77.9		
HIGHEST DAILY MEAN	324			329			335		
LOWEST DAILY MEAN	22			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	78			.00			.00		
ANNUAL RUNOFF (AC-FT)	189700			175100			155000		
ANNUAL DISCHARGE (AC-FT) a	176400			169600					
10 PERCENT EXCEEDS	316			312			306		
50 PERCENT EXCEEDS	292			266			250		
90 PERCENT EXCEEDS	159			128			62		

a Discharge, in acre-feet, through Spaulding No. 3 Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

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11416500 CANYON CREEK BELOW BOWMAN LAKE, CA

LOCATION.--Lat 39°26'23", long 120°39'37", in NE 1/4 SE 1/4 sec.7, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank 1 mi downstream from Bowman Dam, 3.5 mi upstream from Texas Creek, and 8.8 mi south of Sierra City.

DRAINAGE AREA.--28.3 mi².

PERIOD OF RECORD.--January 1927 to current year.

REVISED RECORDS.--WSP 1315-A: 1930(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,300 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Bowman Lake (station 11415500), several smaller reservoirs, and diversion into Bowman-Spaulding Canal (station 11416000). See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft³/s, Mar. 8, 1986, gage height, 9.08 ft, from rating curve extended above 1,500 ft³/s, on basis of computation of flow over Bowman Dam; maximum gage height, 9.42 ft in gage well, 10.32 ft from floodmarks, Jan. 22, 1970; no flow at times 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	4.7	4.9	5.4	6.4	6.7	143	166	195	84	3.4	5.9	4.0
2	4.6	4.7	4.8	6.1	6.7	143	79	206	83	3.4	6.0	3.8
3	4.6	4.8	4.6	5.8	6.4	144	161	207	56	3.4	6.1	3.7
4	4.6	4.9	7.5	5.5	43	109	181	207	38	3.4	6.0	3.8
5	4.7	4.9	5.9	5.3	31	32	186	182	42	3.4	5.9	3.7
6	4.8	5.2	5.0	5.0	11	6.7	197	150	43	3.1	5.9	3.7
7	4.8	4.9	4.7	4.9	8.7	29	198	140	42	3.0	4.9	3.7
8	4.4	5.1	4.3	4.9	8.3	108	198	148	44	3.5	3.6	3.7
9	4.3	5.2	4.2	4.9	7.8	124	199	143	47	7.1	3.5	3.7
10	4.3	5.2	4.2	4.8	8.4	138	214	146	57	11	3.5	3.7
11	4.3	5.2	19	4.6	8.2	140	235	146	41	11	3.4	3.5
12	4.4	5.2	42	5.6	9.5	136	235	143	18	11	3.4	3.6
13	4.3	5.2	11	5.9	66	126	234	148	16	11	3.3	3.9
14	4.4	5.2	6.9	4.9	125	118	233	152	13	11	3.4	4.0
15	4.6	5.3	6.2	6.6	121	122	234	207	8.7	11	3.4	4.9
16	4.8	5.5	5.8	23	164	131	248	455	6.9	10	3.4	4.2
17	4.9	5.5	5.5	9.0	222	135	240	2060	6.1	10	3.4	3.9
18	4.9	5.5	5.3	8.7	256	151	239	2120	3.8	8.6	3.2	3.8
19	5.0	5.5	5.2	8.9	277	165	235	957	3.6	5.4	3.0	3.8
20	5.2	5.5	5.1	6.9	272	164	235	464	3.6	14	3.0	3.8
21	5.2	5.5	4.9	6.5	185	191	235	192	3.6	51	3.1	3.8
22	5.2	5.3	4.9	6.1	75	215	204	718	3.6	26	3.0	3.9
23	5.0	5.2	4.9	5.9	167	190	147	394	3.6	12	2.9	3.8
24	5.1	5.2	4.8	9.3	200	165	172	278	3.6	5.0	2.9	3.8
25	5.2	5.9	4.9	11	200	146	211	169	3.6	5.0	2.7	3.9
26	5.2	5.7	4.6	6.9	199	127	217	137	3.7	4.9	2.7	4.0
27	5.2	5.3	4.7	7.2	188	132	191	131	3.6	5.3	3.7	3.9
28	5.2	3.9	4.9	6.8	175	142	190	109	3.5	5.8	9.2	4.0
29	5.2	2.1	7.6	5.9	158	143	185	84	3.4	5.7	9.2	4.0
30	5.2	4.1	13	5.8	---	153	181	84	3.4	5.6	7.5	4.0
31	5.2	---	9.9	6.4	---	153	---	84	---	5.8	4.9	---
TOTAL	149.5	151.6	231.7	215.5	3205.7	4121.7	6090	10956	692.3	279.8	136.0	116.0
MEAN	4.82	5.05	7.47	6.95	111	133	203	353	23.1	9.03	4.39	3.87
MAX	5.2	5.9	42	23	277	215	248	2120	84	51	9.2	4.9
MIN	4.3	2.1	4.2	4.6	6.4	6.7	79	84	3.4	3.0	2.7	3.5
AC-FT	297	301	460	427	6360	8180	12080	21730	1370	555	270	230

SACRAMENTO RIVER BASIN

11416500 CANYON CREEK BELOW BOWMAN LAKE, 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	2.96	6.26	16.5	17.5	16.9	27.0	42.6	126	143	13.8	2.56	2.33
MAX	24.1	195	360	438	198	629	325	773	542	314	37.3	17.0
(WY)	1973	1984	1965	1970	1965	1986	1940	1963	1952	1952	1952	1952
MIN	.13	.19	.20	.20	.50	.58	.46	.43	.30	.029	.000	.000
(WY)	1935	1940	1937	1937	1933	1935	1934	1947	1977	1935	1934	1963

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1927 - 1996

ANNUAL TOTAL	29884.8	26345.8	
ANNUAL MEAN	81.9	72.0	34.4
HIGHEST ANNUAL MEAN			165
LOWEST ANNUAL MEAN			.81
HIGHEST DAILY MEAN	425	May 1	3120
LOWEST DAILY MEAN	2.1	Nov 29	.00
ANNUAL SEVEN-DAY MINIMUM	4.1	Jul 12	.00
INSTANTANEOUS PEAK FLOW			3970
INSTANTANEOUS PEAK STAGE			9.42
ANNUAL RUNOFF (AC-FT)	59280	52260	24920
10 PERCENT EXCEEDS	259	198	49
50 PERCENT EXCEEDS	7.6	5.9	3.0
90 PERCENT EXCEEDS	4.6	3.6	.30

11416610 TEXAS CREEK BELOW LOWER ROCK LAKE, NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°25'42", long 120°37'19", in SW 1/4 NW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 200 ft downstream from outlet structure on Lower Rock Lake Dam, and 6.4 mi east of Graniteville.

DRAINAGE AREA.--0.36 mi².

PERIOD OF RECORD.--October 1995 to September 1996 (low-flow records only). Unpublished records for water years 1974 and 1979-95 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,615 ft above sea level, from topographic map. August 1965 to August 1995, nonrecording gage at same site and datum.

REMARKS.--Records not computed for winter months or above 1.2 ft³/s. Flow regulated by Lower Rock Lake. See schematic diagram of Yuba 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	1.1	1.0	---	---	---	---	---	---	---	.29	.24	.24
2	1.0	1.0	---	---	---	---	---	---	---	.26	.20	.24
3	---	---	---	---	---	---	---	---	---	.23	.20	.24
4	1.2	---	---	---	---	---	---	---	---	.22	.20	.24
5	1.2	---	---	---	---	---	---	---	---	.20	.20	.25
6	---	---	---	---	---	---	---	---	---	.20	.20	.25
7	---	---	---	---	---	---	---	---	---	.19	.24	.25
8	---	---	---	---	---	---	---	---	---	.40	.30	.25
9	---	---	---	---	---	---	---	---	---	.52	.30	.25
10	---	---	---	---	---	---	---	---	---	.39	.30	.25
11	1.2	---	---	---	---	---	---	---	---	.30	.31	.25
12	1.2	---	---	---	---	---	---	---	---	.26	.32	.24
13	1.2	---	---	---	---	---	---	---	---	.22	.32	.24
14	1.2	---	---	---	---	---	---	---	---	.18	.29	.24
15	1.2	---	---	---	---	---	---	---	---	.21	.27	.25
16	1.2	---	---	---	---	---	---	---	---	.31	.27	.25
17	1.1	---	---	---	---	---	---	---	---	.42	.27	---
18	1.1	---	---	---	---	---	---	---	---	.47	.27	---
19	1.1	---	---	---	---	---	---	---	.34	.49	.27	---
20	1.1	---	---	---	---	---	---	---	.31	.50	.26	---
21	1.1	---	---	---	---	---	---	---	.25	.50	.25	---
22	.99	---	---	---	---	---	---	---	.22	.51	.25	---
23	.97	---	---	---	---	---	---	---	.20	.49	.25	---
24	.97	---	---	---	---	---	---	---	.20	.33	.26	---
25	.95	---	---	---	---	---	---	---	.23	.28	.29	---
26	1.1	---	---	---	---	---	---	---	.30	.27	.30	---
27	---	---	---	---	---	---	---	---	.36	.27	.31	---
28	1.2	---	---	---	---	---	---	---	.37	.25	.32	---
29	1.2	---	---	---	---	---	---	---	.35	.25	.32	---
30	1.2	---	---	---	---	---	---	---	.30	.25	.32	---
31	1.1	---	---	---	---	---	---	---	---	.25	.29	---
TOTAL	---	---	---	---	---	---	---	---	---	9.91	8.39	---
MEAN	---	---	---	---	---	---	---	---	---	.32	.27	---
MAX	---	---	---	---	---	---	---	---	---	.52	.32	---
MIN	---	---	---	---	---	---	---	---	---	.18	.20	---
AC-FT	---	---	---	---	---	---	---	---	---	20	17	---

SACRAMENTO RIVER BASIN

11416620 TEXAS CREEK TRIBUTARY BELOW CULBERTSON LAKE, NEAR GRANITEVILLE, CA

LOCATION.--Lat 39°25'17", long 120°37'21", in SW 1/4 SW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 150 ft downstream from outlet structure on Culbertson Lake Dam, 0.15 mi upstream from Texas Creek, and 6.4 mi east of Graniteville.

DRAINAGE AREA.--0.44 mi².

PERIOD OF RECORD.--October 1988 to current year (low-flow records only). Unpublished records for water years 1965-88 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,420 ft above sea level. October 1965 to August 1988, nonrecording gage at site 10 ft downstream at different datum. August to September 1988, nonrecording gage at same site and datum.

REMARKS.--Records not computed for winter months or above 1.2 ft³/s. Low and medium flow regulated by Culbertson Lake (capacity, 953 acre-ft). See schematic diagram of Yuba 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	---	---	---	---	---	---	---	---	---	.76	.73	.76
2	---	---	---	---	---	---	---	---	---	.76	.73	.73
3	---	---	---	---	---	---	---	---	---	.74	.74	.72
4	---	---	---	---	---	---	---	---	---	.75	.75	.74
5	---	---	---	---	---	---	---	---	---	.72	.68	.78
6	---	---	---	---	---	---	---	---	---	.70	.67	.70
7	---	---	---	---	---	---	---	---	---	.68	.75	.71
8	---	---	---	---	---	---	---	---	---	.66	.79	.73
9	---	---	---	---	---	---	---	---	---	.62	.75	.72
10	---	---	---	---	---	---	---	---	---	.61	.70	.70
11	---	---	---	---	---	---	---	---	---	.58	.64	.70
12	---	---	---	---	---	---	---	---	---	.57	.75	.70
13	---	---	---	---	---	---	---	---	---	1.2	.56	.70
14	---	---	---	---	---	---	---	---	.94	.65	.81	.70
15	---	---	---	---	---	---	---	---	.87	.83	.79	.71
16	---	---	---	---	---	---	---	---	.83	.85	.77	.71
17	---	---	---	---	---	---	---	---	.82	.82	.75	---
18	---	.75	---	---	---	---	---	---	.82	.81	.72	---
19	---	---	---	---	---	---	---	---	.79	.79	.70	---
20	---	---	---	---	---	---	---	---	.79	.78	.73	---
21	---	---	---	---	---	---	---	---	.79	.77	.78	---
22	---	---	---	---	---	---	---	---	.77	.77	.76	---
23	---	---	---	---	---	---	---	---	.75	.76	.75	---
24	---	---	---	---	---	---	---	---	.73	.76	.76	---
25	---	---	---	---	---	---	---	---	.72	.76	.79	---
26	---	---	---	---	---	---	---	---	.74	.75	.79	---
27	---	---	---	---	---	---	---	---	.77	.75	.70	---
28	---	---	---	---	---	---	---	---	.78	.73	.60	---
29	---	---	---	---	---	---	---	---	.76	.73	.57	---
30	---	---	---	---	---	---	---	---	.76	.73	.56	---
31	---	---	---	---	---	---	---	---	---	.73	.63	---
TOTAL	---	---	---	---	---	---	---	---	---	22.48	22.48	---
MEAN	---	---	---	---	---	---	---	---	---	.73	.73	---
MAX	---	---	---	---	---	---	---	---	---	.85	.84	---
MIN	---	---	---	---	---	---	---	---	---	.56	.56	---
AC-FT	---	---	---	---	---	---	---	---	---	45	45	---

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LOCATION.--Lat 39°24'43", long 120°38'35", in NE 1/4 SE 1/4 sec.20, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 10 ft downstream from outlet structure on Lower Lindsey Lake Dam and 5.5 mi east of Graniteville.

PERIOD OF RECORD.--October 1988 to current year (low-flow records only). Unpublished records for water years 1965-88 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,225 ft above sea level, from topographic map. October 1965 to July 1984, nonrecording gage at same site and different datum. July 1984 to August 1988, nonrecording gage at same site and different datum.

REMARKS.--August 1-19 missing due to equipment failure. Records not computed for winter months or above 1.2 ft³/s. Low and medium flow regulated by Lower Lindsey Lake, capacity, 293 acre-ft. Spillway flows bypass this station. See schematic diagram of Yuba 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]

SACRAMENTO RIVER BASIN

11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, CA

LOCATION.--Lat 39°17'32", long 121°06'13", in NW 1/4 SE 1/4 sec.32, T.17 N., R.8 E., Nevada County, Hydrologic Unit 18020125, on left bank at Jones Bar, 100 ft upstream from Rush Creek, 0.9 mi downstream from bridge on State Highway 49, and 5 mi northwest of Grass Valley.

DRAINAGE AREA.--308 mi².

PERIOD OF RECORD.--October 1940 to September 1948, April 1959 to current year. Published as South Fork Yuba River at Jones Bar 1940-48, and as South Yuba River at Jones Bar 1959-63. Yearly discharge for the 1947 water year published in WSP 1315-A.

SEDIMENT DATA: Water years 1966-74.

WATER TEMPERATURE: Water years 1965-79 (daily records).

REVISED RECORDS.--WSP 1315-A: 1942-43(M), drainage area at former site. WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,060 ft above sea level, from river-profile map. Oct. 1, 1940, to Sept. 30, 1948, at site 150 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good. Flow regulated by Lake Spaulding, Fordyce Lake, and Bowman Lake (stations 11414140, 11414090, and 11415500) and many smaller reservoirs. Diversions into and out of basin for several powerplants and for irrigation. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,600 ft³/s, Dec. 22, 1964, gage height, 25.0 ft, from floodmarks, from rating curve extended above 23,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 1.0 ft³/s, Sept. 10-13, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 30.7 ft, from floodmarks, present datum, at site 100 ft upstream.

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	47	52	330	692	852	2190	1610	1020	148	71	50
2	49	48	87	256	597	841	2090	1910	1100	142	68	47
3	47	48	78	221	543	852	1460	1900	1300	135	67	48
4	46	48	90	195	3950	1860	1200	1730	1230	131	68	51
5	45	47	138	176	5900	2170	991	1530	1190	127	68	53
6	45	47	100	162	2440	1320	920	1330	980	124	67	53
7	46	47	90	151	1540	1090	931	1070	1020	128	67	50
8	46	47	80	143	1190	1050	916	1190	890	131	65	49
9	46	47	69	136	1020	1050	898	1230	612	149	62	48
10	46	47	65	137	920	1040	878	1260	434	153	59	47
11	46	48	197	128	838	1320	870	1330	392	155	58	47
12	46	47	3290	120	767	1560	848	1500	317	151	57	46
13	47	e62	1120	117	756	1260	804	1710	279	144	59	50
14	46	48	476	113	876	1070	775	1830	283	124	58	63
15	45	47	523	134	831	983	773	3040	265	116	60	60
16	45	48	466	911	862	942	1270	13400	234	112	59	75
17	46	47	294	1020	1470	912	1410	11400	223	109	54	67
18	47	48	226	637	2750	914	1750	12800	216	107	53	57
19	46	49	188	1030	4660	926	1160	5940	199	103	54	54
20	46	50	166	583	5420	907	1040	2300	185	97	54	53
21	46	49	151	743	5360	874	951	1420	180	96	53	51
22	46	60	141	532	2740	910	896	2350	175	134	53	51
23	45	57	137	460	1870	858	806	2180	169	113	53	51
24	46	50	124	1350	1630	763	874	1420	165	93	51	51
25	46	51	117	2010	1380	724	940	1070	164	83	50	52
26	47	e82	113	836	1190	659	907	1090	181	77	49	53
27	47	73	112	1940	1070	650	1020	1070	205	76	49	50
28	47	55	142	1650	975	1180	1230	1010	179	75	48	48
29	47	53	172	909	916	899	1250	890	166	79	50	47
30	46	51	484	695	---	757	1360	1130	157	74	52	47
31	46	---	446	721	---	728	---	1230	---	73	54	---
TOTAL	1434	1548	9934	18546	55153	31921	33408	84870	14110	3559	1790	1569
MEAN	46.3	51.6	320	598	1902	1030	1114	2738	470	115	57.7	52.3
MAX	49	82	3290	2010	5900	2170	2190	13400	1300	155	71	75
MIN	45	47	52	113	543	650	773	890	157	73	48	46
AC-FT	2840	3070	19700	36790	109400	63320	66260	168300	27990	7060	3550	3110

e Estimated.

11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, 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	82.7	207	463	703	765	765	695	905	664	122	38.3	38.3
MAX	1197	1350	3756	2964	4078	3029	2804	3323	3618	996	84.9	132
(WY)	1963	1984	1965	1970	1986	1986	1982	1963	1967	1983	1983	1965
MIN	11.7	24.2	37.4	45.0	64.0	67.2	51.1	68.3	31.8	11.6	3.05	1.42
(WY)	1945	1960	1960	1991	1977	1977	1977	1992	1977	1947	1947	1947

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1941 - 1996		
ANNUAL TOTAL	411966			257842					
ANNUAL MEAN	1129			704			459		
HIGHEST ANNUAL MEAN							1135		
LOWEST ANNUAL MEAN							42.6		
HIGHEST DAILY MEAN	9100			May 1			22800		
LOWEST DAILY MEAN	45			Oct 5			1.0		
ANNUAL SEVEN-DAY MINIMUM	46			Oct 4			1.0		
INSTANTANEOUS PEAK FLOW				17500			53600		
INSTANTANEOUS PEAK STAGE				16.46			25.00		
ANNUAL RUNOFF (AC-FT)	817100			511400			332500		
10 PERCENT EXCEEDS	3150			1510			1130		
50 PERCENT EXCEEDS	447			164			123		
90 PERCENT EXCEEDS	47			47			27		

11418000 YUBA RIVER BELOW ENGLEBRIGHT DAM, NEAR SMARTVILLE, CA

LOCATION.--Lat 39°14'07", long 121°16'23", in NW 1/4 NW 1/4 sec.23, T.16 N., R.6 E., Yuba County, Hydrologic Unit 18020125, on right bank 2,000 ft downstream from Englebright Dam, 0.5 mi upstream from Deer Creek, and 2.3 mi northeast of Smartville.

DRAINAGE AREA.--1,108 mi².

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1953, published as "at Narrows Dam." October 1953 to Sept. 30, 1969, published as "at Englebright Dam." If records for Deer Creek near Smartville (station 11418500) since 1941 are added to records at this station, records equivalent to those published from 1903 to 1941 as Yuba River at Smartville (station 11419000) can be obtained.

WATER TEMPERATURE: Water years 1973-78.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and acoustic velocity meters. Datum of gage is 278.68 ft above sea level (levels by International Engineering Co.). Prior to Sept. 19, 1958, at site 2,000 ft upstream at datum 248.31 ft higher, and Sept. 19, 1958, to Sept. 30, 1969, at datum 278.68 ft lower. Supplementary gage 2,000 ft upstream since Oct. 1, 1969, at Englebright Dam at datum 248.31 ft higher.

REMARKS.--Diversions up to 1,800 ft³/s (see stations 11413250, 11414190, and 11414200) out of basin for power and irrigation upstream from station. Flow regulation by Lake Spaulding (station 11414140), Jackson Meadows and New Bullards Bar Reservoirs (stations 11407800 and 11413515), Englebright Reservoir beginning in 1941, capacity, 70,000 acre-ft, Bowman and Fordyce Lakes (stations 11415500 and 11414090), and many smaller reservoirs. See schematic diagram of Yuba River basin. Flow is determined by adding the discharges provided by Narrows Powerplant No. 1 (1141970), Narrows Powerplant No. 2 (11417980) and spill over Englebright Dam (11417950).

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, 171,000 ft³/s, Dec. 22, 1964, gage height, 546.14 ft, site and datum then in use, from rating curve extended above 25,000 ft³/s on basis of computation of peak flow over spillways of dam at gage heights 544.72 and 546.14 ft; no flow at times in 1942, 1949, 1956, 1958-61, 1968-69.

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	1260	1250	1100	1620	3860	4660	4300	3980	4420	2070	2570	2500
2	1250	1250	1090	1630	3850	3810	6190	4960	4450	2060	2610	2500
3	1250	1250	1100	1630	3850	3800	4090	4830	4480	2060	2570	2500
4	1250	1250	1100	1630	8830	3510	4130	4900	4610	2040	2560	2500
5	1250	1250	1100	1630	18200	5630	3820	4670	4520	2060	2580	2570
6	1250	1240	1100	1630	9600	4640	3800	4420	4390	2070	2560	2510
7	1250	1240	1100	1630	8130	4660	3800	4360	4210	2070	2550	2280
8	1240	1240	1100	1620	7530	4650	3800	4260	4070	2060	2560	1460
9	1240	1230	1100	1620	7670	4610	3800	4240	3980	2060	2560	818
10	1240	1230	1090	1630	7310	4590	3830	4120	3950	2060	2530	719
11	1240	1230	1090	1620	7020	4840	3850	4220	3850	2060	2560	690
12	1240	1230	2150	1620	6740	5670	3850	4430	3050	2070	2560	680
13	1240	1230	4380	1620	6530	5160	3850	4630	3040	2080	2940	680
14	1240	1240	4020	1620	6560	4400	3840	5100	2770	2070	2600	690
15	1240	1230	3890	1620	6380	4530	3830	6110	1550	2080	2600	690
16	1240	1240	3910	1630	6290	4510	3740	25100	1550	2060	2590	690
17	1240	1230	3890	2150	6820	4440	3850	29800	1540	2070	2430	690
18	1240	1230	3880	3190	10300	4210	3860	41900	1540	2070	2400	590
19	1240	1230	3750	3210	18100	4420	3860	25000	1540	2060	2380	665
20	1250	1230	2320	3200	24800	4410	3840	13400	1540	2060	2080	666
21	1240	1150	1640	3190	26700	4340	3570	10700	1700	2070	2080	662
22	1240	1100	1640	3200	21100	4370	3460	12000	2060	2010	2080	634
23	1250	1090	1650	3200	16100	4330	3800	10400	2060	2490	2080	629
24	1240	1090	1640	3210	13200	4240	3810	7500	2060	2450	2080	634
25	1240	1090	1630	3660	11700	4190	3820	5490	2070	2500	2060	634
26	1250	1090	1640	3730	8980	4140	3720	5270	2060	2380	2060	659
27	1240	1090	1630	3730	6260	4110	3760	5220	2060	2070	2060	659
28	1250	1090	1630	4320	5710	4390	3760	5060	2060	2150	2080	934
29	1250	1090	1630	4440	5090	4410	3770	4560	2070	2590	2170	934
30	1240	1090	1630	4080	---	4100	3760	4490	2070	2560	2310	1150
31	1250	---	1630	3860	---	3800	---	4650	---	2560	2550	---
TOTAL	38580	35720	62250	78370	293210	137570	117160	279770	85320	67120	74400	34617
MEAN	1245	1191	2008	2528	10110	4438	3905	9025	2844	2165	2400	1154
MAX	1260	1250	4380	4440	26700	5670	6190	41900	4610	2590	2940	2570
MIN	1240	1090	1090	1620	3850	3510	3460	3980	1540	2010	2060	590
AC-FT	76520	70850	123500	155400	581600	272900	232400	554900	169200	133100	147600	68660
a	23660	21510	13350	7700	1740	150	2550	28980	46120	54020	46340	13720

a Combined flow, in acre-feet, from Browns Valley Irrigation Ditch (11420750), Brophy South Canal (11420760) and Hallwood-Cordua Irrigation District Canal (11420770).

11418000 YUBA RIVER BELOW ENGLEBRIGHT DAM, NEAR SMARTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	947	1226	2644	3270	3864	3568	3787	4075	2662	1317	1218	994
MAX	5206	8964	18100	14750	17330	13060	11950	13330	9017	4034	3140	3144
(WY)	1963	1951	1965	1970	1986	1995	1982	1952	1983	1983	1980	1980
MIN	207	41.3	175	283	211	199	437	367	501	430	326	202
(WY)	1960	1942	1960	1977	1977	1977	1976	1977	1977	1977	1944	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1942 - 1996			
ANNUAL TOTAL	1789196				1304087							
ANNUAL MEAN	4902				3563				2457			
HIGHEST ANNUAL MEAN									5251			
LOWEST ANNUAL MEAN									414			
HIGHEST DAILY MEAN	36100				Mar 10				124000			
LOWEST DAILY MEAN	698				Sep 25				.00			
ANNUAL SEVEN-DAY MINIMUM	700				Sep 22				.00			
INSTANTANEOUS PEAK FLOW					50400				May 18			
INSTANTANEOUS PEAK STAGE					24.72				May 18			
ANNUAL RUNOFF (AC-FT)	3549000				2587000				1780000			
ANNUAL DISCHARGE (AC-FT) a	81530				259800							
10 PERCENT EXCEEDS	10300				5680				5260			
50 PERCENT EXCEEDS	3900				2490				1240			
90 PERCENT EXCEEDS	1090				1100				435			

a Combined flow, in acre-feet, from Browns Valley Irrigation Ditch (11420750), Brophy South Canal (11420760) and Hallwood-Cordua Irrigation District Canal (11420750).

SACRAMENTO RIVER BASIN

11418500 DEER CREEK NEAR SMARTVILLE, CA

LOCATION.--Lat 39°13'28", long 121°16'03", in SW 1/4 SE 1/4 sec.23, T.16 N., R.6 E., Nevada County, Hydrologic Unit 18020125, on left bank 400 ft upstream from county road bridge, 0.9 mi upstream from mouth, and 2 mi northeast of Smartville.

DRAINAGE AREA.--84.6 mi².

PERIOD OF RECORD.--June 1935 to current year.

WATER TEMPERATURE: Water years 1974-79.

SEDIMENT DATA: Water years 1974-79.

REVISED RECORDS.--WSP 1395: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 630 ft above sea level, from river-profile map. June 21, 1935, to Nov. 30, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good. Natural flow of stream is affected by Scotts Flat Reservoir beginning in 1949, usable capacity, 26,300 acre-ft, increased to 49,000 acre-ft in July 1964; Deer Creek Reservoir, capacity, 1,400 acre-ft beginning 1949; Lake Wildwood, capacity, 3,840 acre-ft beginning in 1970, power developments, and diversion for irrigation. At times water from South Yuba River is diverted to Deer Creek and water from Deer Creek is diverted to Bear River. See schematic diagram of Yuba River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s, Feb. 17, 1986, gage height, 14.05 ft, from rating curve extended above 5,200 ft³/s; minimum daily, 0.06 ft³/s, Aug. 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1928 reached a stage of 14.5 ft from floodmarks, discharge, 14,000 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	7.1	1.7	4.6	51	253	352	1210	128	150	6.3	2.6	4.0
2	6.6	2.4	5.0	36	265	324	864	120	140	5.2	3.1	3.5
3	6.4	2.9	4.7	32	250	313	408	104	129	4.5	3.3	2.5
4	6.4	2.9	5.4	28	2520	922	315	111	116	5.1	3.8	1.8
5	4.9	3.0	5.7	26	2740	957	261	92	103	4.9	4.1	2.0
6	5.0	2.6	5.0	24	1160	624	233	85	96	4.9	3.6	2.4
7	6.6	2.1	5.8	23	724	502	209	82	91	4.4	4.1	3.3
8	7.0	1.9	5.1	23	561	440	190	80	84	3.4	4.5	4.4
9	6.1	1.9	5.7	22	474	408	176	79	78	3.9	4.6	3.6
10	6.8	2.2	4.6	24	396	392	171	77	72	3.6	5.4	3.8
11	7.5	2.8	34	21	380	541	147	76	71	3.6	4.4	3.7
12	7.3	3.0	377	21	333	892	140	75	69	4.0	3.5	3.2
13	7.9	3.0	64	21	297	618	135	73	57	5.7	4.8	3.6
14	8.4	3.1	37	20	280	490	130	78	58	6.5	4.5	5.8
15	8.1	3.4	70	34	262	424	137	128	56	6.4	3.9	5.5
16	214	3.4	48	546	257	378	286	1340	52	6.2	3.4	5.7
17	353	3.8	20	235	301	343	389	689	48	5.8	3.4	4.3
18	346	3.9	15	167	350	313	917	967	47	5.7	3.3	3.1
19	335	4.0	13	254	1390	288	266	526	27	6.9	2.8	2.9
20	167	3.5	12	101	1770	264	258	371	12	6.8	2.4	2.8
21	4.1	3.1	19	596	2640	239	223	440	9.9	6.9	2.6	3.2
22	3.9	3.7	23	205	1240	225	220	511	9.6	5.0	2.9	2.9
23	3.8	4.1	24	162	826	219	213	352	8.7	5.2	3.3	2.7
24	4.1	4.1	22	1660	812	209	214	295	6.1	5.1	4.3	2.2
25	3.9	4.2	20	1250	639	199	218	262	6.6	5.6	3.7	2.5
26	3.8	4.6	19	335	553	186	202	246	11	4.5	2.6	2.4
27	3.6	4.8	20	1270	462	172	184	230	13	4.8	2.1	2.5
28	3.5	4.5	33	542	417	201	166	212	13	4.6	2.5	2.6
29	3.6	4.6	103	311	391	183	149	198	11	3.4	2.8	3.2
30	3.6	4.4	371	258	---	161	140	180	8.5	3.2	3.2	2.6
31	3.3	---	107	286	---	146	---	164	---	3.2	4.3	---
TOTAL	1558.3	99.6	1502.6	8584	22943	11925	8771	8371	1653.4	155.3	109.8	98.7
MEAN	50.3	3.32	48.5	277	791	385	292	270	55.1	5.01	3.54	3.29
MAX	353	4.8	377	1660	2740	957	1210	1340	150	6.9	5.4	5.8
MIN	3.3	1.7	4.6	20	250	146	130	73	6.1	3.2	2.1	1.8
AC-FT	3090	198	2980	17030	45510	23650	17400	16600	3280	308	218	196

SACRAMENTO RIVER BASIN

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11418500 DEER CREEK NEAR SMARTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.4	63.6	162	288	363	330	187	70.7	19.7	6.46	4.91	5.82
MAX	373	388	960	998	1399	1162	887	301	107	23.2	14.2	19.1
(WY)	1963	1951	1956	1956	1986	1938	1982	1995	1942	1874	1969	1980
MIN	1.07	2.25	2.89	5.25	14.5	10.5	3.91	3.58	.48	.36	.33	.27
(WY)	1989	1940	1977	1991	1991	1977	1977	1981	1977	1940	1940	1937

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1936 - 1996
ANNUAL TOTAL	90429.8	65771.7	
ANNUAL MEAN	248	180	126
HIGHEST ANNUAL MEAN			327
LOWEST ANNUAL MEAN			5.48
HIGHEST DAILY MEAN	4580 Jan 10	2740 Feb 5	10200 Feb 17 1986
LOWEST DAILY MEAN	1.7 Nov 1	1.7 Nov 1	.06 Aug 5 1977
ANNUAL SEVEN-DAY MINIMUM	2.4 Nov 5	2.4 Nov 5	.16 Aug 3 1940
INSTANTANEOUS PEAK FLOW		5710 Feb 21	12100 Feb 17 1986
INSTANTANEOUS PEAK STAGE		10.32 Feb 21	14.05 Feb 17 1986
ANNUAL RUNOFF (AC-FT)	179400	130500	91460
10 PERCENT EXCEEDS	607	466	311
50 PERCENT EXCEEDS	58	22	18
90 PERCENT EXCEEDS	4.3	3.1	2.6

SACRAMENTO RIVER BASIN

11421000 YUBA RIVER NEAR MARYSVILLE, CA

LOCATION.--Lat 39°10'33", long 121°31'26", in New Helvetia Grant, Yuba County, Hydrologic Unit 18020107, on left bank 4.2 mi northeast of Marysville and 5 mi downstream from Dry Creek.

DRAINAGE AREA.--1,339 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year (prior to October 1943, low-water periods only). Published as "at Marysville" October 1940 to September 1957. Separate records published for two sites August 1954 to September 1955. Yearly discharge for the 1945 water year published in WSP 1315-A.

REVISED RECORDS.--WSP 1715: 1956(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.95 ft below sea level. Prior to August 1954 and Oct. 1, 1956, to Sept. 30, 1957, at Simpson Lane Bridge in Marysville 4.2 mi downstream at same datum. Sept. 3, 1963, to Sept. 23, 1968, auxiliary water-stage recorder at Simpson Lane Bridge at same datum.

REMARKS.--Records good. Flow regulated by New Bullards Bar Reservoir since January 1969, and several other reservoirs. Many diversions upstream from station for power and for irrigation. See schematic diagrams of Yuba and lower Sacramento River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1944, 1947-96), 180,000 ft³/s, Dec. 22, 1964, gage height, 90.15 ft, from floodmarks, from rating curve extended above 91,000 ft³/s on basis of U.S. Army Corps of Engineers flood-routing study; minimum recorded, 10 ft³/s, July 2, 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	998	870	867	1670	4800	5780	5510	3610	4470	1210	1710	2070
2	985	882	866	1640	4690	4800	9150	4300	4410	1200	1710	2080
3	978	893	878	1630	4630	4670	5340	4470	4390	1180	1720	2130
4	957	912	890	1630	10000	4780	4900	4560	4550	1190	1720	2200
5	974	922	901	1610	22600	7460	4630	4270	4270	1200	1730	2290
6	967	933	913	1600	11900	6410	4510	3860	4080	1190	1750	2320
7	966	947	933	1600	9700	5720	4420	3700	3860	1190	1760	1930
8	966	939	921	1590	8620	5660	4380	3580	3680	1190	1770	1420
9	956	931	922	1600	8420	5530	4400	3580	3550	1180	1770	959
10	964	933	927	1600	7990	5470	4420	3360	3480	1170	1760	600
11	972	933	1050	1590	7610	5850	4400	3390	3190	1180	1770	574
12	964	930	2060	1590	7360	7950	4390	3610	2320	1180	1790	576
13	942	924	4350	1590	7150	7120	4390	3860	2210	1190	2250	569
14	929	928	4180	1580	7150	5770	4370	4430	2080	1200	1980	565
15	903	921	4080	1620	7050	5490	4360	5220	982	1210	1760	573
16	1010	920	4080	2290	6960	5410	4430	19700	903	1200	1760	572
17	1250	924	4020	2280	7260	5250	4580	24700	894	1190	1410	562
18	1260	927	3990	3380	9780	4910	5660	37200	883	1180	1330	537
19	1250	934	3950	3680	16200	5080	4770	27000	809	1180	1340	494
20	1150	942	2130	3520	24700	5050	4650	15400	756	1170	1300	520
21	872	915	1690	4210	27400	4950	4210	12000	777	1180	1290	510
22	835	848	1680	3700	22900	4950	3460	13100	1140	1160	1290	516
23	828	854	1660	3600	17400	4930	4350	11600	1170	1540	1290	511
24	831	857	1640	4630	14200	4820	4340	9040	1180	1630	1300	510
25	854	866	1620	5860	12600	4730	4370	6780	1190	1620	1330	502
26	884	863	1600	4450	10600	4640	4180	6250	1200	1600	1350	486
27	900	863	1580	5780	7660	4570	4180	6040	1220	1240	1390	483
28	893	863	1580	5280	7020	4770	4120	5720	1230	1220	1410	575
29	887	861	1640	5320	6270	5040	3970	5050	1240	1760	1450	1010
30	879	859	2160	4740	---	4630	3790	4720	1220	1610	1510	1360
31	879	---	1810	4780	---	4430	---	4810	---	1710	1950	---
TOTAL	29883	27094	61568	91640	320620	166620	138630	268910	67334	40050	49650	30004
MEAN	964	903	1986	2956	11060	5375	4621	8675	2244	1292	1602	1000
MAX	1260	947	4350	5860	27400	7950	9150	37200	4550	1760	2250	2320
MIN	828	848	866	1580	4630	4430	3460	3360	756	1160	1290	483
AC-FT	59270	53740	122100	181800	635900	330500	275000	533400	133600	79440	98480	59510

SACRAMENTO RIVER BASIN

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11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1968, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	507	846	3323	3574	4555	3928	4965	5064	2610	514	218	240
MAX	6222	8586	18650	13160	12470	7321	10400	13750	8712	2669	551	458
(WY)	1963	1951	1965	1956	1958	1958	1952	1952	1952	1952	1967	1952
MIN	50.5	116	157	573	965	1360	2139	1264	265	30.5	35.3	47.9
(WY)	1962	1960	1960	1960	1948	1964	1961	1947	1959	1959	1959	1961

SUMMARY STATISTICS

WATER YEARS 1944 - 1968

ANNUAL MEAN	2518	
HIGHEST ANNUAL MEAN	5393	1952
LOWEST ANNUAL MEAN	882	1961
HIGHEST DAILY MEAN	136000	Dec 23 1955
LOWEST DAILY MEAN	15	Nov 7 1959
ANNUAL SEVEN-DAY MINIMUM	15	Nov 5 1959
INSTANTANEOUS PEAK FLOW	180000	Dec 22 1964
INSTANTANEOUS PEAK STAGE	90.15	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	1824000	
10 PERCENT EXCEEDS	6450	
50 PERCENT EXCEEDS	822	
90 PERCENT EXCEEDS	108	

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	1159	1482	2365	3689	4284	4441	2932	2322	1871	1242	1403	1378
MAX	2731	4475	11430	17080	20970	15100	14280	9721	8633	3735	2829	2900
(WY)	1976	1984	1984	1970	1986	1983	1982	1995	1983	1983	1984	1980
MIN	132	182	371	230	211	188	173	166	155	88.4	71.7	85.8
(WY)	1970	1970	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1970 - 1996

ANNUAL TOTAL	1792467	1292003	
ANNUAL MEAN	4911	3530	2372
HIGHEST ANNUAL MEAN			5818
LOWEST ANNUAL MEAN			229
HIGHEST DAILY MEAN	34600	Mar 11	37200
LOWEST DAILY MEAN	481	Sep 24	483
ANNUAL SEVEN-DAY MINIMUM	489	Sep 18	503
INSTANTANEOUS PEAK FLOW			42700
INSTANTANEOUS PEAK STAGE			75.98
ANNUAL RUNOFF (AC-FT)	3555000	2563000	1718000
10 PERCENT EXCEEDS	9590	7030	4950
50 PERCENT EXCEEDS	4080	1720	1280
90 PERCENT EXCEEDS	867	867	304

SACRAMENTO RIVER BASIN

11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-52, 1973-80, 1990 to current year. Published as Yuba River at Marysville (station 11421500) during water years 1966, 1973-76.

CHEMICAL DATA: Water years 1951-52, 1973-80, February 1996 to September 1996. Published as Yuba River at Marysville (station 11421500) during water years 1966, 1973-76.

WATER TEMPERATURE: Water years 1973-78, 1990 to current year.

SEDIMENT DATA: February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1972 to September 1978, October 1989 to current year.

INSTRUMENTATION.--Temperature recorder November 1972 to September 1978, October 1989 to current year.

REMARKS.--Water temperatures can be affected by releases from Englebright Reservoir located approximately 13 mi upstream from station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 28.5°C, July 16, 30, 1977, Aug. 11, 1992; minimum recorded, 4.5°C, Dec. 22, 23, 29-31, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 19.5°C, July 10, 14, 15, 21; minimum recorded, 8.0°C, Jan. 26, Mar. 6.

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 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)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
27...	1240	7590	63	7.5	8.5	758	11.6	99	7.1	2.6
MAR										
21...	1210	4960	65	7.6	11.5	760	11.8	108	7.0	2.5
APR										
03...	1040	5270	65	7.3	10.0	770	12.2	107	7.1	2.5
MAY										
17...	1010	22500	46	7.3	11.5	760	13.0	119	5.2	1.6
JUN										
19...	0950	842	76	7.6	14.5	763	10.3	100	8.6	3.1
JUL										
25...	1100	1610	70	7.6	15.0	763	10.7	105	8.5	2.8
AUG										
12...	1100	1780	70	7.5	15.0	762	12.1	119	7.4	2.5
SEP										
12...	1030	578	81	7.6	15.0	760	15.9	158	8.8	3.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB										
27...	2.0	13	0.40	25	2.6	0.90	<0.10	13	56	46
MAR										
21...	2.1	14	0.40	27	2.6	0.90	<0.10	13	47	47
APR										
03...	2.1	14	0.40	27	2.5	1.2	<0.10	13	49	47
MAY										
17...	1.8	16	0.50	16	1.5	1.1	<0.10	10	48	35
JUN										
19...	2.3	13	0.50	31	4.4	1.1	<0.10	13	52	54
JUL										
25...	2.1	12	0.40	30	3.1	0.80	<0.10	13	51	51
AUG										
12...	1.9	12	0.50	32	3.1	0.70	<0.10	12	47	47
SEP										
12...	2.3	12	0.50	33	5.2	0.90	<0.10	12	59	55

SACRAMENTO RIVER BASIN

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11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 27...	0.08	0.010	<0.050	<0.015	0.40	<0.20	0.010	0.010	<0.010	34
MAR 21...	0.06	0.010	<0.050	<0.015	<0.20	<0.20	0.010	<0.010	0.020	10
APR 03...	0.07	<0.010	0.070	<0.015	<0.20	<0.20	0.020	<0.010	<0.010	9.0
MAY 17...	0.06	<0.010	0.050	<0.015	0.20	<0.20	0.110	0.020	<0.010	93
JUN 19...	0.07	<0.010	0.050	0.030	<0.20	<0.20	0.020	<0.010	<0.010	12
JUL 25...	0.07	<0.010	0.060	0.020	<0.20	<0.20	0.020	0.010	0.010	7.0
AUG 12...	0.06	0.010	<0.050	0.020	<0.20	<0.20	0.020	0.010	<0.010	6.0
SEP 12...	0.08	<0.010	0.060	<0.015	<0.20	<0.20	<0.010	<0.010	<0.010	4.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 27...	<1.0	<1	9.0	<1.0	<1.0	<1.0	<1.0	2.0	39	<1.0
MAR 21...	<1.0	<1	10	<1.0	<1.0	<1.0	<1.0	<1.0	13	<1.0
APR 03...	<1.0	<1	9.0	<1.0	<1.0	1.0	<1.0	<1.0	14	<1.0
MAY 17...	<1.0	<1	11	<1.0	<1.0	<1.0	<1.0	<1.0	86	<1.0
JUN 19...	<1.0	<1	14	<1.0	<1.0	<1.0	<1.0	3.0	23	<1.0
JUL 25...	<1.0	<1	12	<1.0	<1.0	<1.0	<1.0	<1.0	18	<1.0
AUG 12...	<1.0	<1	11	<1.0	<1.0	<1.0	<1.0	<1.0	9.0	<1.0
SEP 12...	<1.0	<1	15	<1.0	<1.0	<1.0	<1.0	<1.0	14	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 27...	3.0	<1.0	1.0	<1	<1.0	2.0	<1.0	1.3	0.40
MAR 21...	5.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.0	0.70
APR 03...	3.0	<1.0	1.0	<1	<1.0	1.0	<1.0	1.1	0.60
MAY 17...	7.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.6	1.2
JUN 19...	15	<1.0	1.0	<1	<1.0	<1.0	<1.0	0.90	0.30
JUL 25...	6.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	0.80	0.20
AUG 12...	4.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.1	0.20
SEP 12...	19	<1.0	<1.0	<1	<1.0	<1.0	<1.0	0.70	0.20

SACRAMENTO RIVER BASIN

11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

SUSPENDED-SEDIMENT DATA, WATER YEAR 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)
FEB					
27...N	1240	7590	8.5	31	635
MAR					
21...N	1210	4960	11.5	9	121
APR					
03...N	1040	5270	10.0	18	256
MAY					
17...N	1010	22500	11.5	134	8140
JUN					
19...N	0950	842	14.5	3	6.8
JUL					
25...N	1100	1610	15.0	8	35
AUG					
12...N	1100	1780	15.0	2	9.6
SEP					
12...N	1030	578	15.0	5	7.8

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	13.0	14.0	12.0	12.0	11.0	11.0	9.0	10.5	8.5	10.5	8.5
2	17.0	13.0	13.0	11.5	12.5	11.0	11.0	9.0	10.0	9.0	11.0	8.5
3	17.0	13.5	13.5	11.0	11.0	10.5	10.5	9.0	9.5	9.0	9.5	9.0
4	16.0	12.5	13.0	10.5	11.5	11.0	10.5	9.5	11.0	9.5	9.5	9.0
5	16.0	12.5	13.0	11.0	13.0	11.0	11.0	9.5	10.5	9.5	9.5	8.5
6	16.0	12.5	13.0	11.0	11.5	11.0	11.0	9.0	10.5	10.0	10.0	8.0
7	16.0	12.5	13.5	11.0	11.5	10.5	10.5	9.0	10.5	9.5	10.5	8.5
8	16.0	12.5	13.5	11.0	12.0	10.5	10.5	9.5	10.5	9.5	11.0	8.5
9	16.0	12.5	13.5	11.0	11.5	11.0	10.0	9.5	10.5	9.5	11.0	9.0
10	16.0	12.5	13.5	11.0	11.0	11.0	11.0	9.0	11.0	10.0	10.5	9.0
11	16.0	13.0	13.0	11.0	11.5	11.0	11.0	9.0	11.5	10.0	10.5	9.5
12	15.5	12.5	13.5	11.0	12.0	10.0	10.0	9.0	11.5	10.0	10.0	9.0
13	15.5	12.0	13.5	11.0	11.0	10.0	10.0	9.5	11.5	10.0	11.0	9.0
14	16.0	12.5	13.5	11.0	11.0	10.0	9.5	9.0	11.5	10.0	11.5	9.0
15	15.5	12.5	13.5	11.0	11.0	10.0	10.0	9.0	11.5	10.0	11.5	9.0
16	15.5	12.5	13.5	11.5	10.5	9.5	11.0	10.0	11.5	10.5	11.5	9.0
17	15.5	12.5	13.5	11.0	10.5	9.5	10.5	9.0	11.5	10.5	12.0	9.5
18	16.0	12.5	13.0	11.5	10.5	9.5	9.5	9.0	11.5	10.5	12.0	9.5
19	16.0	12.5	13.0	11.0	10.5	9.0	10.5	9.0	10.5	10.5	12.5	10.0
20	16.0	12.5	12.5	11.0	10.5	9.0	10.0	9.0	10.5	10.0	12.5	10.0
21	15.0	12.5	12.0	11.0	10.0	9.0	10.0	9.0	10.5	9.5	12.5	10.0
22	14.5	11.0	12.5	10.5	9.5	9.0	10.5	8.5	10.0	9.0	11.0	9.5
23	14.5	11.5	12.5	10.5	10.5	9.0	9.0	8.5	10.0	9.0	12.0	9.0
24	14.5	11.5	12.5	10.5	10.0	8.5	9.5	9.0	10.0	9.0	11.5	9.5
25	14.0	11.0	12.0	10.5	10.0	8.5	10.0	8.5	10.0	9.0	11.5	9.0
26	14.5	11.5	12.0	10.5	10.0	8.5	9.0	8.0	10.0	8.5	11.5	9.0
27	14.0	11.5	12.0	9.5	10.0	8.5	9.5	8.5	9.0	8.5	10.5	9.0
28	14.0	11.5	12.0	10.0	10.0	9.5	10.0	8.5	9.0	8.5	11.0	9.0
29	14.5	11.5	12.0	10.0	10.0	9.5	9.0	8.5	9.5	8.5	11.0	8.5
30	14.0	11.5	12.5	10.0	10.0	9.5	9.5	8.5	---	---	11.5	9.0
31	13.5	11.5	---	---	11.0	9.5	10.0	9.0	---	---	11.5	9.0
MONTH	17.0	11.0	14.0	9.5	13.0	8.5	11.0	8.0	11.5	8.5	12.5	8.0

11421000 YUBA RIVER NEAR MARYSVILLE, 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	9.5	15.0	11.0	15.5	12.0	19.0	14.0	18.0	13.5	17.0	12.5
2	11.5	10.0	14.5	11.0	16.0	12.5	19.0	14.0	18.0	13.0	16.5	12.5
3	12.0	9.5	14.0	11.0	16.0	12.5	19.0	13.5	17.5	13.0	16.5	12.5
4	12.5	9.5	14.0	11.0	16.0	12.5	19.0	13.5	17.5	13.0	16.0	12.5
5	12.5	9.5	13.5	11.0	16.0	12.5	19.0	13.5	17.5	13.0	16.0	12.0
6	13.0	10.0	13.5	10.5	16.5	13.0	19.0	13.5	17.5	13.0	16.0	12.0
7	13.5	10.0	14.0	10.5	16.5	13.0	19.0	14.0	17.5	13.0	16.5	12.0
8	13.5	10.5	14.0	10.5	16.5	13.0	19.0	14.0	18.0	13.0	17.0	12.5
9	12.0	10.5	14.0	10.5	16.5	13.0	19.0	14.0	17.5	13.0	17.5	13.0
10	13.0	10.0	14.5	10.5	16.5	12.5	19.5	14.0	18.0	13.5	19.0	14.0
11	12.5	10.0	14.5	10.5	16.5	12.5	19.0	14.0	18.0	13.5	18.5	14.5
12	13.0	10.0	15.0	11.0	17.5	13.0	19.0	14.0	16.5	13.5	18.0	14.0
13	13.0	10.0	15.0	11.5	17.0	13.0	19.0	14.5	17.0	13.5	16.0	14.5
14	13.0	10.0	14.0	12.0	17.5	12.5	19.5	14.5	17.5	13.0	18.0	13.5
15	12.0	10.5	13.0	12.0	18.5	13.5	19.5	14.0	17.5	13.0	18.0	14.5
16	12.5	10.5	12.5	11.5	18.5	13.5	19.0	14.0	17.5	13.0	17.5	13.5
17	11.5	10.0	11.5	11.0	18.5	13.0	19.0	14.0	18.0	13.0	17.0	13.5
18	13.0	10.0	12.0	11.0	18.5	13.5	19.0	14.0	16.0	13.0	17.5	13.5
19	10.5	10.0	13.0	11.0	19.0	13.5	19.0	13.5	17.0	13.0	18.0	14.0
20	11.5	10.0	13.5	11.5	18.5	13.5	19.0	13.5	17.0	12.5	18.0	14.0
21	12.5	9.5	12.5	11.5	19.0	13.5	19.5	14.0	17.5	12.5	18.5	14.5
22	12.5	10.0	13.0	11.5	18.5	13.5	18.5	14.0	17.5	13.0	18.0	14.5
23	12.5	10.0	13.5	11.5	18.5	13.5	18.5	13.5	17.5	13.0	18.0	14.5
24	12.5	10.5	14.0	11.5	18.0	13.5	18.5	13.5	17.5	13.0	18.0	14.5
25	13.5	10.0	15.0	12.0	17.5	13.0	18.5	13.5	17.5	13.0	18.0	14.5
26	14.5	10.5	15.0	12.0	17.5	13.5	18.5	13.5	17.5	12.5	18.5	14.5
27	14.0	10.5	14.5	12.0	18.0	13.0	18.0	13.5	17.0	12.5	18.5	14.5
28	14.5	10.5	15.0	12.0	18.0	13.0	19.0	14.0	17.5	12.5	18.5	14.5
29	14.5	11.0	15.0	12.0	18.5	13.0	18.0	13.5	17.5	13.0	17.5	13.5
30	15.0	11.0	15.0	12.0	19.0	13.5	18.5	14.0	17.5	13.0	17.5	14.0
31	---	---	15.0	12.0	---	---	18.0	13.5	17.0	13.0	---	---
MONTH	15.0	9.5	15.0	10.5	19.0	12.0	19.5	13.5	18.0	12.5	19.0	12.0

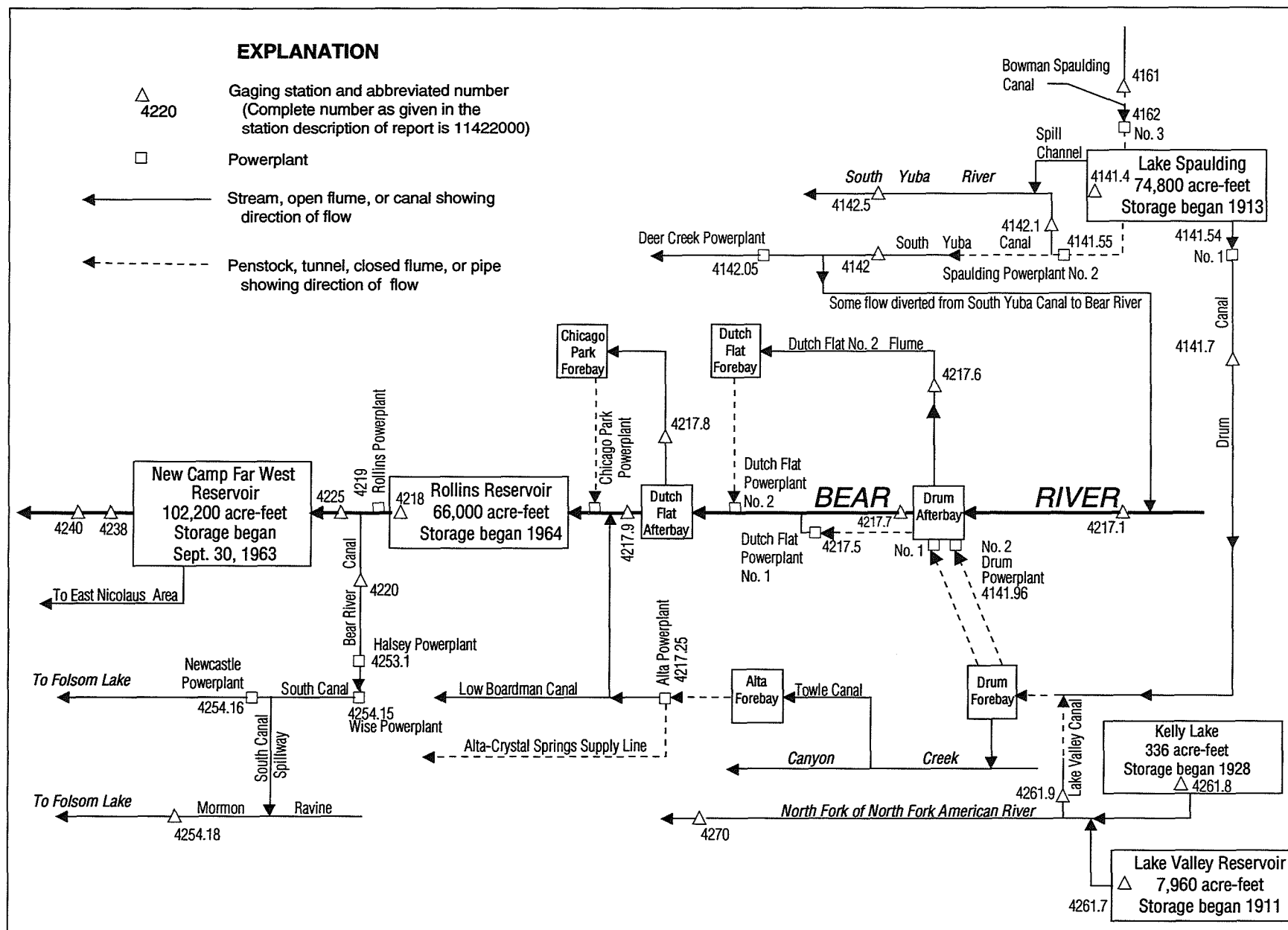


Figure 31. Diversions and storage in Bear River basin.

11421710 BEAR RIVER NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°18'23", long 120°40'41", in NW 1/4 SW 1/4 sec.30, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020126, on left bank 20 ft upstream from Highway 20 Bridge and 0.7 mi northwest of Emigrant Gap.

DRAINAGE AREA.--0.76 mi².

PERIOD OF RECORD.--October 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 concrete culvert. Elevation of gage is 4,550 ft above sea level, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.--No records computed above 160 ft³/s. Some water is diverted into stream from South Yuba Canal (station 11414200). See schematic diagram of Bear 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	6.3	6.1	7.5	8.9	17	---	---	134	115	5.2	5.0	6.5
2	5.7	6.1	6.9	8.0	15	---	160	134	115	5.1	5.0	6.2
3	5.7	6.1	5.8	7.0	14	---	94	132	105	5.1	5.0	5.6
4	5.8	6.1	7.0	5.8	---	---	---	131	87	5.2	5.0	5.6
5	6.1	6.1	5.0	5.7	---	---	---	132	87	5.5	5.0	5.7
6	6.6	5.8	5.8	5.7	---	---	---	e132	87	5.4	5.0	5.9
7	6.1	5.3	6.3	6.1	---	---	---	e132	86	5.3	5.1	6.8
8	5.9	6.0	6.4	5.7	---	---	---	131	85	5.3	5.1	7.7
9	6.1	6.4	6.1	5.6	---	---	---	124	85	5.2	5.2	7.3
10	7.2	6.1	5.9	5.5	---	---	---	109	85	5.0	5.1	7.3
11	6.3	5.9	25	6.1	---	---	---	103	63	5.0	5.1	6.8
12	5.3	5.7	106	6.3	---	---	---	e103	52	5.1	5.1	6.8
13	6.1	5.7	18	5.7	---	---	---	e103	74	5.2	5.0	6.6
14	5.8	5.7	12	6.4	---	---	---	e110	46	5.0	5.0	7.1
15	5.5	5.7	12	8.5	---	---	---	154	7.7	5.4	16	9.2
16	5.5	5.5	9.5	51	---	---	---	---	5.8	5.2	5.1	7.4
17	5.6	5.7	7.5	19	---	---	---	---	5.4	5.3	5.1	7.0
18	5.5	6.1	6.8	20	---	---	---	---	5.8	5.1	5.0	6.7
19	5.7	6.1	6.5	24	---	---	---	---	5.5	5.0	5.2	6.7
20	5.7	6.1	6.2	14	---	159	---	---	5.3	5.0	5.2	6.2
21	5.9	5.6	6.0	12	---	157	149	---	5.2	5.0	5.3	5.7
22	6.1	5.2	5.6	10	---	158	138	154	5.1	5.0	6.1	6.8
23	6.3	5.8	5.7	9.7	---	156	133	111	5.0	5.1	6.0	14
24	6.5	6.5	6.0	11	---	155	108	124	5.0	5.0	5.7	10
25	6.5	7.9	5.7	25	---	156	128	123	5.0	5.0	5.5	7.7
26	6.5	7.7	5.9	15	---	---	128	122	5.9	5.0	5.9	6.5
27	6.5	6.9	6.1	35	---	---	128	121	5.6	5.0	6.1	7.3
28	6.5	6.9	6.5	26	---	---	128	120	5.2	5.0	6.3	16
29	6.1	6.8	9.4	17	---	---	128	119	5.1	5.0	6.7	24
30	6.1	6.9	16	15	---	---	129	118	5.3	5.0	6.5	24
31	6.1	---	12	20	---	115	---	116	---	5.0	6.3	---
TOTAL	187.6	184.5	357.1	420.7	---	---	---	---	1259.9	158.7	178.7	257.1
MEAN	6.05	6.15	11.5	13.6	---	---	---	---	42.0	5.12	5.76	8.57
MAX	7.2	7.9	106	51	---	---	---	---	115	5.5	16	24
MIN	5.3	5.2	5.0	5.5	---	---	---	---	5.0	5.0	5.0	5.6
AC-FT	372	366	708	834	---	---	---	---	2500	315	354	510

e Estimated.

SACRAMENTO RIVER BASIN

11421750 DUTCH FLAT NO. 1 POWERPLANT NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°13'02", long 120°50'04", in SE 1/4 SE 1/4 sec.27, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, in powerplant on left bank of Dutch Flat Afterbay and 0.8 mi north of Dutch Flat.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Discharge computed from powerplant output. Elevation of gage is 2,740 ft above sea level, from topographic map.

REMARKS.--Water is diverted from Drum Afterbay through Dutch Flat Tunnel and discharges into Dutch Flat Afterbay. See schematic diagram of Bear 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, 571 ft³/s, Apr. 13, May 9, 1982, Nov. 17, 1983, and June 24, 1987; 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	.00	432	.00	219	309	393	408	406	370	328	267	.00
2	.00	413	.00	217	321	423	451	367	369	341	256	.00
3	47	390	.00	177	285	423	371	368	357	299	283	178
4	.00	386	.00	.00	406	461	421	373	349	218	246	235
5	130	403	.00	.00	535	507	479	364	356	240	199	322
6	96	323	190	.00	535	439	456	368	297	243	270	78
7	.00	182	.00	.00	539	441	413	403	359	247	272	.00
8	45	160	.00	.00	417	445	521	374	320	246	258	.00
9	136	136	.00	.00	370	408	438	341	315	287	229	248
10	196	136	.00	.00	531	431	432	348	336	268	228	185
11	284	161	234	.00	411	457	433	348	317	296	300	185
12	95	152	134	49	472	479	434	376	290	243	289	173
13	311	133	90	.00	413	455	433	371	294	116	300	109
14	328	159	279	.00	432	420	305	366	318	68	315	.00
15	296	.00	311	.00	397	432	433	423	268	347	279	.00
16	338	.00	198	.00	400	409	555	541	279	237	243	171
17	339	.00	160	.00	451	433	501	477	261	234	.00	159
18	294	.00	299	.00	438	411	488	558	281	224	.00	159
19	333	.00	276	.00	546	410	441	532	283	261	200	187
20	343	.00	307	.00	540	409	447	411	245	249	136	193
21	326	.00	254	.00	540	377	416	438	300	230	182	.00
22	351	.00	158	.00	467	467	403	453	285	260	174	.00
23	385	.00	.00	.00	413	408	421	394	290	266	230	.00
24	343	.00	.00	.00	426	365	388	393	297	274	.00	.00
25	355	.00	.00	.00	473	344	359	396	66	236	.00	.00
26	337	.00	162	87	416	414	391	397	333	236	198	.00
27	361	.00	180	223	426	435	386	377	345	278	174	.00
28	334	.00	174	210	414	424	367	378	309	229	159	.00
29	343	.00	245	260	430	435	421	393	338	227	219	.00
30	363	.00	262	277	---	434	454	395	288	227	151	.00
31	391	---	301	274	---	394	---	370	---	204	.00	---
TOTAL	7500.00	3566.00	4214.00	1993.00	12753	13183	12866	12499	9115	7659	6057.00	2582.00
MEAN	242	119	136	64.3	440	425	429	403	304	247	195	86.1
MAX	391	432	311	277	546	507	555	558	370	347	315	322
MIN	.00	.00	.00	.00	285	344	305	341	66	68	.00	.00
AC-FT	14880	7070	8360	3950	25300	26150	25520	24790	18080	15190	12010	5120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

	155	195	208	235	226	258	286	298	276	237	205	139
MEAN	155	195	208	235	226	258	286	298	276	237	205	139
MAX	371	408	472	534	508	532	540	532	528	517	386	377
(WY)	1976	1966	1982	1965	1965	1965	1965	1986	1965	1965	1995	1976
MIN	.000	.000	13.0	9.32	.000	.000	9.53	1.16	.000	.000	.000	.000
(WY)	1987	1987	1977	1991	1991	1968	1968	1976	1968	1970	1965	1965

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1965 - 1996
ANNUAL TOTAL	111459.00	93987.00	
ANNUAL MEAN	305	257	227
HIGHEST ANNUAL MEAN			384
LOWEST ANNUAL MEAN			67.6
HIGHEST DAILY MEAN	560	558	571
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	221100	186400	164200
10 PERCENT EXCEEDS	451	438	436
50 PERCENT EXCEEDS	346	285	228
90 PERCENT EXCEEDS	.00	.00	.00

11421770 BEAR RIVER BELOW DRUM AFTERBAY, NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'16", long 120°46'26", in SW 1/4 NW 1/4 sec.17, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 60 ft downstream from Drum Afterbay Dam and 3.5 mi west of Blue Canyon.

DRAINAGE AREA.--12.3 mi².

PERIOD OF RECORD.--April 1966 to current year, low flows only April to September 1966.

GAGE.--Water-stage recorder and 4-ft steel Cipolletti weir set in a concrete broad-crested weir. Elevation of gage is 3,300 ft above sea level, from topographic map. April 1966 to May 25, 1967, water-stage recorder at present site at different datum. May 26, 1967, to Feb. 11, 1968, water-stage recorder at site 1,000 ft downstream at different datum.

REMARKS.--Water for Dutch Flat No. 1 Powerplant (station 11421750) and Dutch Flat No. 2 Flume (station 11421760) is diverted from Drum Afterbay just upstream from station. See schematic diagram of Bear 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, 7,530 ft³/s, Apr. 11, 1982, gage height, 4.64 ft, from rating curve extended above 1,200 ft³/s; minimum daily, 1.0 ft³/s, Dec. 9, 1967.

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	6.1	6.2	6.2	6.1	11	116	11	11	12	13	13
2	5.6	6.1	6.2	6.3	6.3	11	43	11	11	11	13	13
3	5.8	6.1	6.2	6.3	6.3	11	11	11	11	12	13	13
4	5.9	6.1	6.2	6.4	313	172	11	11	11	12	13	13
5	5.9	6.1	6.2	6.4	670	93	11	11	11	12	13	13
6	5.9	6.1	6.2	6.4	e21	37	11	11	11	12	13	13
7	5.9	6.1	6.2	6.4	e19	33	11	11	11	12	13	13
8	5.9	6.1	6.3	6.3	e19	35	42	11	11	12	13	13
9	5.9	6.1	6.2	6.4	e12	26	27	11	11	12	13	13
10	5.9	6.1	6.2	6.3	12	22	11	11	11	12	13	13
11	6.0	6.1	6.0	6.4	6.3	97	11	11	11	12	13	13
12	5.9	6.0	342	6.3	6.3	70	11	11	11	12	13	13
13	5.9	6.1	10	6.3	6.3	41	11	11	11	12	14	13
14	6.0	6.1	11	6.4	6.3	25	11	11	11	12	14	13
15	6.0	6.1	11	6.3	6.3	25	11	10	11	12	14	13
16	6.0	6.1	11	6.3	6.3	26	48	209	11	12	14	13
17	6.0	6.1	9.4	6.3	37	20	60	168	11	12	13	13
18	5.9	6.1	6.9	6.3	39	16	47	121	11	12	14	13
19	5.7	6.0	6.2	6.3	319	11	11	11	11	12	14	13
20	5.8	6.0	6.2	6.3	128	11	11	30	11	12	14	13
21	6.0	6.0	6.2	6.1	95	11	11	45	11	13	13	13
22	6.0	6.1	6.1	6.3	7.0	11	11	19	11	12	14	13
23	6.1	6.1	6.2	6.3	73	11	11	11	12	12	13	13
24	6.1	6.1	6.2	6.2	37	12	11	11	11	12	14	13
25	6.1	6.1	6.2	6.3	6.4	43	11	11	11	12	14	13
26	6.1	6.1	6.2	6.4	12	11	11	11	12	13	14	13
27	5.9	6.0	6.2	6.2	6.4	11	11	11	11	12	14	13
28	5.9	6.2	6.2	6.3	6.4	11	11	11	11	12	13	13
29	6.1	6.2	6.2	6.4	9.7	63	11	11	11	12	13	13
30	6.1	6.3	6.1	6.3	---	11	11	11	11	12	13	13
31	6.1	---	6.2	6.2	---	11	---	11	---	13	13	---
TOTAL	184.2	182.9	549.8	195.6	1898.4	999	636	866	332	374	415	390
MEAN	5.94	6.10	17.7	6.31	65.5	32.2	21.2	27.9	11.1	12.1	13.4	13.0
MAX	6.1	6.3	342	6.4	670	172	116	209	12	13	14	13
MIN	5.6	6.0	6.0	6.1	6.1	11	11	10	11	11	13	13
AC-FT	365	363	1090	388	3770	1980	1260	1720	659	742	823	774
a	22680	20110	18390	26540	32340	34400	32520	33070	31330	24390	21290	12800

a Diversion, in acre-feet, to Dutch Flat No. 2 Flume.

e Estimated.

11421770 BEAR RIVER BELOW DRUM AFTERBAY, NEAR BLUE CANYON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.03	7.95	11.4	16.3	33.6	37.0	44.0	26.7	12.0	10.2	9.88	9.80
MAX	11.9	35.2	82.3	116	306	364	411	320	94.9	34.5	26.6	13.2
(WY)	1987	1984	1984	1980	1986	1986	1986	1982	1986	1986	1986	1986
MIN	2.68	2.58	2.44	5.13	4.03	2.47	2.49	2.50	2.43	2.56	2.45	2.77
(WY)	1978	1978	1978	1981	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1966 - 1996			
ANNUAL TOTAL	6796.6				7022.9							
ANNUAL MEAN	18.6				19.2				18.7			
HIGHEST ANNUAL MEAN									122			
LOWEST ANNUAL MEAN									3.54			
HIGHEST DAILY MEAN	486				670				1930			
LOWEST DAILY MEAN	5.4				5.6				1.0			
ANNUAL SEVEN-DAY MINIMUM	5.5				5.8				2.3			
INSTANTANEOUS PEAK FLOW					3660				7530			
INSTANTANEOUS PEAK STAGE					3.90				4.64			
ANNUAL RUNOFF (AC-FT)	13480				13930				13530			
ANNUAL DIVERSION (AC-FT) a	317700				309900							
10 PERCENT EXCEEDS	12				23				12			
50 PERCENT EXCEEDS	11				11				6.9			
90 PERCENT EXCEEDS	5.6				6.1				5.2			

a Diversion, in acre-feet, to Dutch Flat No 2 Flume.

11421790 BEAR RIVER BELOW DUTCH FLAT AFTERBAY, NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NE 1/4 NW 1/4 sec.34, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, at left bank downstream end of spillway on Dutch Flat Afterbay Dam, 0.6 mi north of Dutch Flat.

DRAINAGE AREA.--21.5 mi².

PERIOD OF RECORD.--December 1965 to current year.

REVISED RECORDS.--WDR CA-82-4: 1978, 1979(M), 1980.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above sea level, from topographic map.

REMARKS.--Records excellent except for discharges above 20 ft³/s, which are good. Water is imported from South Yuba River basin via Drum Canal above forebay (station 11414190). Chicago Park Flume (station 11421780) diverts upstream from station to Chicago Park Powerplant. Records include spill over Dutch Flat Afterbay Dam. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,240 ft³/s, Feb. 17, 1986; minimum daily, 0.08 ft³/s, Mar. 8-19, 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	11	11	5.9	5.9	5.9	54	100	11	11	11	12	12
2	11	8.3	5.9	5.8	5.8	73	58	11	11	11	12	12
3	11	5.9	5.9	5.8	5.8	84	9.0	11	11	12	12	12
4	11	5.9	5.9	5.9	552	455	8.8	11	11	12	12	12
5	11	5.9	5.9	5.9	1300	505	13	11	11	12	12	12
6	12	5.9	5.9	5.8	257	190	11	11	11	12	12	12
7	12	6.0	5.9	5.8	340	195	6.2	11	12	12	12	11
8	12	6.0	5.9	5.8	164	160	12	11	12	12	12	12
9	12	6.0	5.9	5.8	155	118	6.1	11	12	12	12	12
10	12	6.0	5.9	5.8	361	132	6.0	11	11	12	12	12
11	12	5.9	5.9	5.7	111	267	5.9	11	11	12	12	12
12	12	5.9	136	5.7	246	324	5.9	11	12	12	12	12
13	11	5.9	5.9	5.7	57	217	5.9	11	12	12	12	12
14	11	5.9	5.9	5.7	88	120	6.5	11	12	12	12	12
15	11	5.9	5.9	5.7	74	133	5.9	12	12	12	12	12
16	11	5.9	5.9	5.7	14	119	130	425	11	12	12	12
17	11	5.9	5.9	5.7	104	105	226	353	11	12	12	12
18	11	5.9	5.9	5.7	145	77	184	532	12	12	12	12
19	11	5.9	5.9	5.7	687	53	82	249	12	12	12	12
20	11	5.9	5.8	5.7	621	54	82	99	12	12	12	12
21	11	5.9	5.8	5.7	580	13	38	96	12	12	12	11
22	11	5.9	5.8	5.7	260	58	29	112	12	12	12	11
23	11	5.9	5.9	5.7	190	37	25	47	12	12	12	11
24	11	5.9	5.9	5.7	206	15	13	11	12	12	12	21
25	11	5.9	5.9	5.8	172	6.1	49	11	11	12	12	37
26	11	5.9	5.8	5.7	77	5.9	12	11	12	12	12	37
27	11	5.9	5.8	5.9	100	14	5.9	11	12	12	12	29
28	11	5.9	5.8	5.9	63	15	5.8	11	12	12	12	21
29	11	5.9	5.8	5.8	68	7.4	5.8	11	12	12	12	21
30	11	5.9	5.9	5.8	---	7.8	7.9	11	11	12	12	14
31	11	---	5.8	5.8	---	6.8	---	11	---	12	12	---
TOTAL	348	184.9	312.2	178.8	7009.5	3621.0	1155.6	2167	348	370	372	452
MEAN	11.2	6.16	10.1	5.77	242	117	38.5	69.9	11.6	11.9	12.0	15.1
MAX	12	11	136	5.9	1300	505	226	532	12	12	12	37
MIN	11	5.9	5.8	5.7	5.8	5.9	5.8	11	11	11	12	11
AC-FT	690	367	619	355	13900	7180	2290	4300	690	734	738	897
a	38450	27730	29140	35690	59640	64090	61150	61650	52770	44560	37120	20040

a Diversion, in acre-feet, to Chicago Park Flume.

SACRAMENTO RIVER BASIN

11421790 BEAR RIVER BELOW DUTCH FLAT AFTERBAY, NEAR DUTCH FLAT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.3	11.3	36.3	39.6	59.2	64.1	61.9	22.0	11.3	10.8	10.5	14.1
MAX	266	71.1	242	221	380	395	601	108	27.4	22.0	13.1	21.3
(WY)	1968	1984	1966	1970	1986	1966	1969	1995	1974	1970	1969	1983
MIN	4.81	2.65	2.42	4.94	4.10	4.26	3.94	5.30	5.13	5.00	5.00	5.00
(WY)	1978	1968	1968	1975	1974	1973	1973	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1966 - 1996	
ANNUAL TOTAL	22659.9		16519.0			
ANNUAL MEAN	62.1		45.1		28.7	
HIGHEST ANNUAL MEAN					80.1	
LOWEST ANNUAL MEAN					5.53	
HIGHEST DAILY MEAN	1090	Mar 10	1300	Feb 5	3400	Feb 17 1986
LOWEST DAILY MEAN	5.8	Dec 20	5.7	Jan 11	.08	Mar 8 1968
ANNUAL SEVEN-DAY MINIMUM	5.8	Dec 25	5.7	Jan 11	.08	Mar 8 1968
INSTANTANEOUS PEAK FLOW			2820	Feb 5	4240	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	44950		32770		20760	
ANNUAL DIVERSION (AC-FT) a	567300		532000			
10 PERCENT EXCEEDS	181		118		20	
50 PERCENT EXCEEDS	12		12		9.1	
90 PERCENT EXCEEDS	5.9		5.8		5.0	

a Diversion, in acre-feet, to Chicago Park Flume.

11421800 ROLLINS RESERVOIR NEAR COLFAX, CA

LOCATION.--Lat 39°08'08", long 120°56'57", in NE 1/4 SE 1/4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on left bank 300 ft upstream from Rollins Dam on Bear River, 2.3 mi north of Colfax.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.--Reservoir is formed by an earthfill dam. Storage began Dec. 15, 1964. Usable capacity, 66,000 acre-ft between elevations 1,970.0 ft, invert of outlet tunnel, and 2,171.0 ft, spillway crest. Dead storage, 270 acre-ft. Several diversions into and out of basin upstream for power development and irrigation. Water is normally released through Rollins Powerplant (station 11421900). Part of the water then is diverted to Bear River Canal (station 11422000) for power development. Water is later used for irrigation. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,700 acre-ft, Feb. 17, 1986, elevation, 2,177.7 ft; minimum since reservoir first filled, 4,250 acre-ft, Oct. 10, 1977, elevation, 2,022.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 68,400 acre-ft, Feb. 4, elevation, 2,173.89 ft; minimum, 32,600 acre-ft, Oct. 9, elevation, 2,119.82 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Nevada Irrigation District in 1964)

2,020	3,920	2,100	23,900
2,030	5,320	2,120	32,700
2,040	6,990	2,140	43,800
2,050	8,940	2,160	57,300
2,060	11,200	2,178	72,000
2,080	16,800		

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	e39100	57400	52900	54900	66700	66800	67600	66600	66500	66100	61100	57900
2	e37500	57400	53100	54800	66700	e66800	67000	66600	66500	66100	61100	57300
3	e35900	57400	53200	54600	66600	e67000	66800	66500	66500	66000	61100	57100
4	e34500	57400	53500	53700	68400	e67200	66800	66500	66500	65700	61200	57400
5	33100	57400	53600	52700	67800	67300	66800	66500	66500	65400	61400	57600
6	32900	57200	54700	52200	67200	67000	66700	66500	66400	65200	61800	57500
7	32700	56700	54700	52000	67100	e67000	66700	66600	66400	65000	62100	56900
8	32700	56100	54500	51800	67000	e67000	66800	66500	66400	64800	62500	56300
9	32600	55600	54300	51500	e66900	e67200	66700	66400	66400	64500	62800	56200
10	32900	55100	54200	51300	66900	e67200	66700	66500	66400	64200	63100	56300
11	33100	54600	55200	51100	66800	67200	66700	66500	66400	64000	63500	56400
12	33000	54500	58400	51100	66900	67200	66700	66500	66200	63700	63800	56500
13	33000	54000	58300	51000	66800	67100	66600	66400	66300	62800	63700	56500
14	33400	53400	58400	51000	66800	66900	66500	66500	66400	61800	63800	56000
15	34900	52700	59200	51100	66800	66800	66700	66700	66300	61500	63800	55500
16	36400	52000	59200	53000	66800	66800	66900	67300	66300	61200	63800	55400
17	37900	51200	59100	54100	66900	66800	67000	67500	66300	60900	62700	55600
18	39500	50600	59000	55100	67100	66800	66900	67300	66100	60800	61700	55900
19	41100	50500	59200	56000	68000	66700	66800	67000	66200	60600	61300	56100
20	42700	50000	59300	56200	67700	66700	66800	66800	66200	60500	60800	56300
21	44200	50400	59200	56800	67800	66700	66700	66900	66300	60400	60700	55700
22	45700	50800	58800	57000	67300	66700	66700	66900	66300	60200	60700	55200
23	47300	50900	57800	57100	67200	66700	66600	66700	66200	60100	60600	54300
24	48800	50900	56800	60900	67100	66700	66700	66700	66200	60100	60000	53300
25	50300	51000	55800	64900	67000	66600	66600	66600	65800	60300	59400	52300
26	51900	51200	55200	65700	66900	66600	66600	66600	65800	60500	59300	51300
27	53300	51600	54900	67500	66800	66700	66600	66600	65900	60500	59200	50300
28	54700	52100	54700	67000	66800	66700	66600	66600	66000	60600	59200	49300
29	56100	52500	54500	66700	66800	66700	66600	66600	66100	60700	59200	48300
30	57300	52700	54900	66600	---	66700	66500	66600	66100	60900	59200	47300
31	57300	---	55000	66700	---	66600	---	66500	---	61000	58600	---
MAX	57300	57400	59300	67500	68400	67300	67600	67500	66500	66100	63800	57900
MIN	32600	50000	52900	51000	66600	66600	66500	66400	65800	60100	58600	47300
a	2160.02	2153.64	2156.79	2171.86	2171.96	2171.77	2171.65	2171.66	2171.14	2164.74	2161.73	2145.52
b	+16500	-4600	+2300	+11700	+100	-200	-100	0	-400	-5100	-2400	-11300
c	21920	35080	36440	45240	55760	62090	62080	60160	58200	54880	41130	32610

CAL YR 1995 MAX 68800 MIN 32600 b +11300 c 599900

WTR YR 1996 MAX 68400 MIN 32600 b +6500 c 565600

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Discharge, in acre-feet, through Rollins Powerplant, provided by Nevada Irrigation District.

SACRAMENTO RIVER BASIN

11422000 BEAR RIVER CANAL INTAKE NEAR COLFAX, CA

LOCATION.--Lat 39°07'58", long 120°57'12", in SW 1/4 SE 1/4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on right bank 400 ft downstream from canal inlet, 0.2 mi downstream from Rollins Dam, and 2.2 mi north of Colfax.

PERIOD OF RECORD.--January 1912 to September 1953, October 1964 to current year. Monthly discharge only for some periods published in WSP 1315-A. Prior to October 1912, published as Pacific Gas & Electric Co.'s Canal near Colfax; October 1912 to September 1953, published as Bear River Canal near Colfax.

GAGE.--Water-stage recorder. Elevation of gage is 1,950 ft above sea level, from topographic map. Prior to Mar. 25, 1946, water-stage recorder at site 1.5 mi downstream at different datum.

REMARKS.--Canal diverts from left bank of Bear River. Water is used to develop power at Halsey and Wise Powerplants (stations 11425310 and 11425415). Part of the water is distributed for irrigation, and the remainder is eventually spilled into North Fork American River. Capacity of canal is believed to have been increased in 1917 and 1931. See schematic diagram of Bear 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, 531 ft³/s, Oct. 5, 6, 1980; 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	441	256	103	445	229	256	227	169	452	429	426	448
2	441	256	95	445	420	256	227	334	452	429	425	447
3	441	256	117	445	447	255	227	379	452	428	425	448
4	441	256	113	445	361	255	227	405	453	427	433	448
5	441	256	111	445	299	255	228	431	454	427	440	447
6	441	256	111	444	375	232	228	443	454	426	439	447
7	440	256	141	445	315	217	228	446	446	426	443	447
8	440	256	203	446	233	216	327	445	441	426	446	446
9	439	256	214	446	234	216	437	445	434	425	446	446
10	439	256	213	448	234	216	150	444	430	424	447	446
11	441	256	236	448	233	217	2.0	443	430	424	447	446
12	439	253	257	448	233	217	22	443	431	423	448	445
13	439	255	255	448	259	217	76	442	431	423	446	446
14	442	255	255	448	260	216	76	402	430	422	446	446
15	44	255	255	448	259	314	77	25	430	423	446	446
16	5.3	255	255	420	259	415	77	340	430	424	446	442
17	5.3	255	254	402	259	398	78	378	430	423	446	448
18	5.3	255	332	400	259	341	78	384	430	423	446	446
19	5.3	255	451	399	259	355	79	384	430	424	447	445
20	5.3	255	450	398	259	374	79	383	430	425	447	446
21	5.3	254	450	399	258	384	80	383	431	425	442	444
22	5.3	212	449	426	257	384	80	424	431	425	441	444
23	5.3	88	448	366	257	384	57	448	432	425	441	444
24	5.3	80	448	288	257	384	3.1	448	432	426	441	442
25	5.3	72	447	331	257	384	3.2	448	431	426	441	442
26	5.3	72	447	350	257	385	3.3	449	431	426	440	444
27	40	72	446	294	256	385	3.4	450	430	426	439	450
28	72	118	446	349	256	385	3.5	450	430	426	442	448
29	61	146	446	395	256	385	3.6	451	430	426	442	447
30	99	136	446	395	---	385	3.8	451	429	426	446	449
31	256	---	446	396	---	277	---	451	---	426	447	---
TOTAL	6795.3	6359	9340	12702	7997	9560	3390.9	12418	13077	13184	13697	13380
MEAN	219	212	301	410	276	308	113	401	436	425	442	446
MAX	442	256	451	448	447	415	437	451	454	429	448	450
MIN	5.3	72	95	288	229	216	2.0	25	429	422	425	442
AC-FT	13480	12610	18530	25190	15860	18960	6730	24630	25940	26150	27170	26540
a	11820	0	8750	21690	13510	17020	1380	21450	22560	22950	23660	23250
b	9410	0	9770	20700	3360	8980	1350	17340	19800	18790	20870	21260

a Discharge, in acre-feet, to Halsey Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, to Wise Powerplant, provided by Pacific Gas & Electric Co.

11422000 BEAR RIVER CANAL INTAKE NEAR COLFAX, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 1931, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	184	158	156	124	139	154	200	253	253	250	251	235
MAX	300	285	281	257	265	257	286	278	300	317	300	300
(WY)	1929	1929	1925	1925	1925	1922	1925	1925	1927	1931	1926	1927
MIN	.000	.000	.000	.000	.000	.000	53.2	158	180	162	167	83.7
(WY)	1930	1930	1930	1930	1930	1930	1931	1931	1931	1918	1918	1924

SUMMARY STATISTICS

WATER YEARS 1918 - 1931

ANNUAL MEAN	197	
HIGHEST ANNUAL MEAN	245	1929
LOWEST ANNUAL MEAN	121	1931
HIGHEST DAILY MEAN	345	Aug 2 1931
LOWEST DAILY MEAN	.00	Nov 12 1917
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 17 1918
ANNUAL RUNOFF (AC-FT)	142400	
10 PERCENT EXCEEDS	300	
50 PERCENT EXCEEDS	232	
90 PERCENT EXCEEDS	.00	

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	336	318	371	358	349	320	308	386	400	408	408	394
MAX	492	495	488	479	478	485	490	498	499	493	497	496
(WY)	1968	1968	1976	1979	1980	1980	1978	1978	1978	1967	1967	1967
MIN	68.8	27.9	52.7	8.65	27.8	18.5	18.4	106	139	143	136	114
(WY)	1978	1978	1977	1946	1946	1977	1940	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1932 - 1996

ANNUAL TOTAL	131739.3	121900.2	
ANNUAL MEAN	361	333	363
HIGHEST ANNUAL MEAN			462
LOWEST ANNUAL MEAN			118
HIGHEST DAILY MEAN	452	Jan 5	531
LOWEST DAILY MEAN	5.3	Oct 16	.00
ANNUAL SEVEN-DAY MINIMUM	5.3	Oct 16	.00
ANNUAL RUNOFF (AC-FT)	261300	241800	263200
ANNUAL TOTAL (AC-FT) a	217000	188000	
ANNUAL TOTAL (AC-FT) b	212100	151600	
10 PERCENT EXCEEDS	444	447	476
50 PERCENT EXCEEDS	410	423	425
90 PERCENT EXCEEDS	185	79	137

a Discharge, in acre-feet, to Halsey Powerplant, provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, to Wise Powerplant, provided by Pacific Gas & Electric Co.

11422500 BEAR RIVER BELOW ROLLINS DAM, NEAR COLFAX, CA

LOCATION.--Lat 39°07'53", long 120°57'29", in SE 1/4 SW 1/4 sec.22, T.15 N., R.9 E., Nevada County, Hydrologic Unit 18020126, on right bank 20 ft upstream from new highway bridge, 0.5 mi downstream from Rollins Dam, and 2.2 mi north of Colfax.

DRAINAGE AREA.--105 mi².

PERIOD OF RECORD.--January 1912 to September 1913, October 1913 to July 1915 (gage heights and discharge measurements only), August 1915 to June 1917, November 1949 to September 1953, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to August 1964, published as Bear River near Colfax. Records for November and December 1911 include diversion to Bear River Canal and are not equivalent.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,927.41 ft above sea level. Prior to Aug. 8, 1915, nonrecording gages at several sites above diversion dam 0.3 mi upstream at different datums. Aug. 8, 1915, to June 30, 1917, nonrecording gage 0.7 mi downstream at different datum. Nov. 1, 1949, to Sept. 30, 1953, at site 0.2 mi downstream at different datum. Aug. 17, 1964, to Feb. 4, 1986, at present site and datum. Feb. 5, 1986, to Mar. 19, 1987, at site 160 ft downstream at datum 8.00 ft lower.

REMARKS.--Records good except estimated daily discharges, which are fair. Flow regulated by Rollins Reservoir (station 11421800) beginning Dec. 15, 1964. Bear River Canal (station 11422000) diverts upstream from station. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (prior to construction of Rollins Dam in 1964), 9,620 ft³/s, Nov. 20, 1950, gage height, 21.40 ft, site and datum then in use, from rating curve extended above 3,600 ft³/s on basis of slope-area measurement of peak flow; no flow at times in 1912, 1952. Maximum discharge since construction of Rollins Dam, 22,500 ft³/s, Feb. 17, 1986, gage height, 20.62 ft, site and datum then in use, from rating curve extended above 11,600 ft³/s; minimum daily, 0.5 ft³/s, Nov. 17, 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	329	611	23	382	1230	1440	1590	1140	816	485	281	130
2	321	602	23	385	973	1420	2170	1010	790	483	280	127
3	313	613	24	392	843	1460	1660	902	763	478	281	125
4	305	613	26	394	2520	1920	1470	863	732	471	272	129
5	296	613	26	393	3990	2530	1450	813	748	470	196	133
6	290	613	26	197	e2570	2010	1410	786	668	469	122	147
7	290	613	26	28	e2180	1770	1350	801	671	470	122	137
8	289	611	26	27	e1870	1730	1250	830	685	470	124	128
9	286	608	27	26	e1760	1670	1190	692	698	460	131	114
10	287	607	27	23	1640	1600	1390	725	700	456	133	102
11	284	606	130	23	1480	1760	1520	775	690	456	133	99
12	280	375	582	23	1420	2110	1460	752	607	456	220	99
13	279	599	599	23	1370	1920	1390	691	553	456	359	102
14	185	600	596	23	1330	1730	1320	745	623	452	358	103
15	82	597	596	23	1310	1530	1340	1230	660	452	357	102
16	83	596	596	29	1240	1380	1500	1830	582	456	357	91
17	81	592	596	25	1260	1320	1650	1810	550	447	354	82
18	77	576	521	98	1410	1340	1840	2220	522	445	352	80
19	76	277	397	424	2420	1280	1630	1750	485	443	351	78
20	77	435	394	430	3060	1220	1570	1400	497	444	348	76
21	78	28	394	434	3060	1180	1500	1340	528	445	222	77
22	78	29	394	415	2520	1140	1440	1380	580	446	131	78
23	79	26	394	456	1980	1160	1450	1250	540	444	133	78
24	80	23	391	572	1950	1110	1520	1070	517	363	132	78
25	81	21	387	543	1860	1080	1440	1030	481	288	131	78
26	82	22	384	510	1660	1060	1490	994	477	285	130	78
27	83	21	377	1390	1570	1040	1430	966	473	284	130	78
28	72	23	378	2000	1510	1210	1420	934	470	283	130	79
29	71	24	378	1260	1450	1160	1330	910	475	283	130	79
30	100	27	382	1120	---	1100	1360	890	488	283	130	79
31	588	---	382	1060	---	1190	---	865	---	283	131	---
TOTAL	5902	11601	9502	13128	53436	45570	44530	33394	18069	12906	6661	2966
MEAN	190	387	307	423	1843	1470	1484	1077	602	416	215	98.9
MAX	588	613	599	2000	3990	2530	2170	2220	816	485	359	147
MIN	71	21	23	23	843	1040	1190	691	470	283	122	76
AC-FT	11710	23010	18850	26040	106000	90390	88330	66240	35840	25600	13210	5880

e Estimated.

11422500 BEAR RIVER BELOW ROLLINS DAM, NEAR COLFAX, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1953, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.0	300	474	804	778	635	586	314	133	46.2	36.3	47.0
MAX	73.8	1016	1372	1103	1354	1110	1126	578	226	109	102	89.7
(WY)	1951	1951	1951	1951	1916	1916	1952	1952	1953	1916	1916	1916
MIN	12.7	19.8	58.4	287	201	127	151	165	35.1	.000	.000	.000
(WY)	1913	1953	1953	1913	1913	1913	1912	1916	1913	1913	1913	1913

SUMMARY STATISTICS

WATER YEARS 1912 - 1953

ANNUAL MEAN	356	
HIGHEST ANNUAL MEAN	534	1951
LOWEST ANNUAL MEAN	126	1913
HIGHEST DAILY MEAN	5760	Nov 20 1950
LOWEST DAILY MEAN	.00	Jul 5 1912
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 11 1912
INSTANTANEOUS PEAK FLOW	9620	Nov 20 1950
INSTANTANEOUS PEAK STAGE	21.40	Nov 20 1950
ANNUAL RUNOFF (AC-FT)	258000	
10 PERCENT EXCEEDS	879	
50 PERCENT EXCEEDS	138	
90 PERCENT EXCEEDS	1.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	111	199	321	566	665	747	646	483	335	242	195	149
MAX	282	1267	1842	2128	2889	2324	2516	1211	728	538	420	383
(WY)	1984	1984	1984	1970	1986	1983	1982	1995	1995	1983	1995	1983
MIN	21.3	10.3	6.53	6.67	5.14	4.56	16.6	21.8	15.2	22.8	34.3	34.4
(WY)	1978	1978	1978	1977	1977	1977	1976	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	304579	257665	
ANNUAL MEAN	834	704	387
HIGHEST ANNUAL MEAN			972
LOWEST ANNUAL MEAN			19.0
HIGHEST DAILY MEAN	6050	Mar 11	3990
LOWEST DAILY MEAN	21	Nov 25	21
ANNUAL SEVEN-DAY MINIMUM	23	Nov 23	23
INSTANTANEOUS PEAK FLOW			6830
INSTANTANEOUS PEAK STAGE			8.19
ANNUAL RUNOFF (AC-FT)	604100	511100	280200
10 PERCENT EXCEEDS	1660	1590	939
50 PERCENT EXCEEDS	606	477	129
90 PERCENT EXCEEDS	80	77	22

SACRAMENTO RIVER BASIN

11423800 BEAR RIVER FISH RELEASE BELOW NEW CAMP FAR WEST RESERVOIR, NEAR WHEATLAND, CA

LOCATION.--Lat 39°02'30", Long 121°19'52", in NE 1/4 NW 1/4 sec.29, T.14 N., R.6 E., Placer County, Hydrologic Unit 18020108, on left bank 5.4 mi northeast of Wheatland and 1.2 mi downstream from New Camp Far West Reservoir.

DRAINAGE AREA.--Not determined.

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

GAGE.--Water-stage recorder. Elevation of gage is 120 ft above sea level, from topographic map.

REMARKS.--The gage measures required fish-release flow and is entirely regulated by New Camp Far West Reservoir.

See schematic diagrams of Bear River basin and lower Sacramento River basin.

COOPERATION.--Records provided by South Sutter 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, 43 ft³/s, Dec. 4, 1994; minimum daily, 8.0 ft³/s, July 2, 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	13	13	23	14	15	14	29	29	29	12	11	11
2	13	13	23	15	15	14	31	28	29	11	11	11
3	12	13	29	13	14	14	31	26	28	11	11	11
4	12	18	31	13	14	14	31	26	32	11	11	11
5	13	19	26	13	18	15	31	27	32	11	11	11
6	14	19	18	13	18	14	31	28	31	11	11	11
7	14	18	13	13	14	14	31	29	31	11	11	11
8	14	18	12	13	15	13	31	29	31	11	12	11
9	14	18	13	13	15	13	30	29	31	11	12	11
10	14	18	13	34	14	13	28	29	31	11	11	11
11	14	17	16	31	14	13	28	29	31	11	12	12
12	14	17	17	27	14	14	28	30	31	11	11	12
13	14	18	16	21	14	14	28	29	31	11	11	12
14	14	17	15	18	14	14	27	29	30	11	11	12
15	14	17	17	15	14	14	27	29	31	11	12	12
16	23	17	14	16	14	14	27	32	31	11	12	12
17	16	17	14	15	14	13	27	33	30	11	12	12
18	12	17	14	15	14	13	29	36	30	11	12	12
19	12	17	13	15	15	13	28	36	30	11	12	12
20	12	18	15	16	15	13	28	33	30	11	12	12
21	12	18	15	16	16	13	28	32	30	11	12	11
22	12	21	15	16	16	13	28	33	30	11	12	11
23	12	22	15	17	15	13	28	33	30	11	11	12
24	12	21	14	15	14	13	28	33	30	11	11	13
25	12	20	14	17	14	13	30	31	30	13	11	12
26	12	19	14	15	14	13	30	31	30	13	11	12
27	12	19	14	16	14	13	31	30	28	13	11	12
28	13	18	14	16	15	13	31	30	27	12	11	12
29	13	21	14	15	15	27	30	30	26	12	11	12
30	13	23	14	15	---	28	31	30	28	12	11	12
31	13	---	14	15	---	28	---	30	---	12	11	---
TOTAL	414	541	509	516	427	460	876	939	899	352	352	349
MEAN	13.4	18.0	16.4	16.6	14.7	14.8	29.2	30.3	30.0	11.4	11.4	11.6
MAX	23	23	31	34	18	28	31	36	32	13	12	13
MIN	12	13	12	13	14	13	27	26	26	11	11	11
AC-FT	821	1070	1010	1020	847	912	1740	1860	1780	698	698	692

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	12.3	12.8	12.6	13.7	13.3	14.1	28.1	28.2	27.9	11.4	11.4	11.4
MAX	13.4	18.0	16.4	21.7	18.7	21.7	32.0	30.5	30.1	12.9	13.0	13.0
(WY)	1996	1996	1996	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	11.0	11.0	11.0	10.9	11.0	11.2	26.5	25.9	25.8	11.0	10.8	10.8
(WY)	1991	1991	1991	1991	1991	1991	1990	1990	1990	1992	1990	1990

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1990 - 1996

ANNUAL TOTAL	7338	6634	
ANNUAL MEAN	20.1	18.1	16.4
HIGHEST ANNUAL MEAN			19.5
LOWEST ANNUAL MEAN			15.0
HIGHEST DAILY MEAN	36	36	43
LOWEST DAILY MEAN	8.0	11	8.0
ANNUAL SEVEN-DAY MINIMUM	12	11	10
ANNUAL RUNOFF (AC-FT)	14550	13160	11900
10 PERCENT EXCEEDS	31	30	28
50 PERCENT EXCEEDS	18	14	12
90 PERCENT EXCEEDS	13	11	11

SACRAMENTO RIVER BASIN

317

11424000 BEAR RIVER NEAR WHEATLAND, CA

LOCATION.--Lat 39°00'00", long 121°24'20", in SE 1/4 SW 1/4 sec.3, T.13 N., R.5 E., Placer County, Hydrologic Unit 18020108, on right bank 200 ft downstream from bridge on State Highway 65, 1 mi southeast of Wheatland, and 6.5 mi downstream from New Camp Far West Reservoir.

DRAINAGE AREA.--292 mi².

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.92 ft above sea level. See WSP 2131 for history of changes prior to May 28, 1970.

REMARKS.--Records good except for estimated daily discharges which are fair. Natural flow of stream affected by inflow from Yuba and American River basins. Flow regulated by Lake Combie, usable capacity, 7,840 acre-ft, since 1928; Rollins Reservoir (station 11421800), since December 1964; and New Camp Far West Reservoir, usable capacity, 102,200 acre-ft, since October 1963. Many diversions for irrigation and power. See schematic diagrams of Bear and lower Sacramento River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s, Feb. 17, 1986, gage height, 21.60 ft; 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	19	14	725	725	1250	1650	1560	1150	466	33	19	22
2	19	14	720	691	1220	1590	3390	e570	410	26	20	25
3	17	15	380	696	1070	1550	2430	592	351	25	18	23
4	17	224	42	707	3050	1700	1910	531	323	24	18	22
5	21	800	35	704	9310	2710	1690	486	e190	25	28	23
6	21	791	e22	702	4540	2630	1610	368	268	23	46	22
7	20	789	e17	703	2580	2120	1550	308	254	17	22	24
8	21	787	14	700	2160	1890	1470	e170	248	20	18	23
9	21	791	26	700	1930	1780	1310	289	250	20	21	22
10	20	780	36	356	1780	1690	1200	274	202	20	22	22
11	20	650	46	35	1720	1770	1320	267	141	22	21	22
12	21	646	53	26	1600	2450	1370	275	133	21	21	22
13	20	767	41	20	1540	2600	1340	209	119	21	21	24
14	22	580	34	15	1480	2190	1290	145	e90	23	20	24
15	22	474	104	14	1450	1910	1240	153	e75	22	21	24
16	23	475	701	19	1430	1680	1320	1090	e70	20	22	23
17	23	508	733	16	1400	1520	1570	2010	e70	20	20	21
18	14	622	651	15	1460	1450	2240	2520	e75	24	21	24
19	13	642	556	160	2680	1430	2010	2210	e80	23	21	25
20	13	732	603	718	5280	1440	1760	1680	70	23	20	25
21	13	659	849	724	6490	1310	1620	1330	41	21	20	23
22	12	592	728	706	5300	1230	1520	1450	40	24	20	22
23	13	431	721	709	3030	1190	1400	1280	38	23	21	23
24	13	104	720	755	2510	1180	1340	1140	38	22	22	22
25	12	54	718	3200	2460	1140	1240	953	38	22	21	24
26	11	23	719	1770	2320	1100	1250	857	36	23	20	24
27	13	21	720	2020	2010	1080	1390	769	37	21	18	25
28	14	20	717	3180	1840	1090	1250	700	37	18	20	26
29	14	307	727	2080	1730	1160	1180	634	36	20	22	21
30	13	726	724	1500	---	1150	1280	555	35	21	23	21
31	13	---	719	1320	---	1130	---	504	---	20	23	---
TOTAL	528	14038	13601	25686	76620	50510	47050	25469	4261	687	670	693
MEAN	17.0	468	439	829	2642	1629	1568	822	142	22.2	21.6	23.1
MAX	23	800	849	3200	9310	2710	3390	2520	466	33	46	26
MIN	11	14	14	14	1070	1080	1180	145	35	17	18	21
AC-FT	1050	27840	26980	50950	152000	100200	93320	50520	8450	1360	1330	1370

e Estimated.

SACRAMENTO RIVER BASIN

11424000 BEAR RIVER NEAR WHEATLAND, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.8	184	565	826	1240	1033	770	306	79.0	12.6	16.7	18.4
MAX	1348	1980	3501	3004	3360	2918	2553	939	245	55.4	148	215
(WY)	1963	1951	1956	1956	1936	1938	1958	1942	1932	1952	1935	1935
MIN	2.05	9.14	21.3	68.0	156	192	11.3	.57	.71	.53	.65	.30
(WY)	1961	1960	1960	1947	1933	1933	1959	1959	1959	1959	1939	1939

SUMMARY STATISTICS

WATER YEARS 1930 - 1963

ANNUAL MEAN	424	
HIGHEST ANNUAL MEAN	891	1951
LOWEST ANNUAL MEAN	70.0	1933
HIGHEST DAILY MEAN	22100	Dec 23 1955
LOWEST DAILY MEAN	.00	Sep 18 1939
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 18 1939
INSTANTANEOUS PEAK FLOW	33000	Dec 22 1955
INSTANTANEOUS PEAK STAGE	20.83	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	307500	
10 PERCENT EXCEEDS	1060	
50 PERCENT EXCEEDS	77	
90 PERCENT EXCEEDS	3.6	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.9	150	424	878	1151	1184	729	234	61.6	18.9	15.4	14.4
MAX	58.5	1606	2668	3525	5201	3845	3796	1035	328	72.6	29.5	36.9
(WY)	1972	1984	1984	1970	1986	1983	1982	1983	1995	1995	1967	1971
MIN	.002	.056	.000	.14	.62	1.07	.60	4.05	3.17	2.95	4.72	1.31
(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 1966 - 1996

ANNUAL TOTAL	336329	259813	
ANNUAL MEAN	921	710	403
HIGHEST ANNUAL MEAN			1191
LOWEST ANNUAL MEAN			3.42
HIGHEST DAILY MEAN	11700	Mar 11	9310
LOWEST DAILY MEAN	11	Aug 19	11
ANNUAL SEVEN-DAY MINIMUM	12	Oct 20	12
INSTANTANEOUS PEAK FLOW			10800
INSTANTANEOUS PEAK STAGE			14.02
ANNUAL RUNOFF (AC-FT)	667100	515300	291600
10 PERCENT EXCEEDS	2200	1800	1180
50 PERCENT EXCEEDS	431	267	23
90 PERCENT EXCEEDS	19	20	7.4

SACRAMENTO RIVER BASIN

319

11425000 FEATHER RIVER NEAR NICOLAUS, CA

LOCATION.--Lat 38°53'26", long 121°36'12", in SE 1/4 NE 1/4 sec. 14, T.12 N, R.3 E, Sutter County, Hydrologic Unit 18020106, on left bank 1.7 mi southwest of Nicolaus, 4.2 mi downstream from Bear River, and at mile 8.1.

DRAINAGE AREA.--5,921 mi².

PERIOD OF RECORD.--February 1996 to September 1996.

CHEMICAL DATA: February 1996 to September 1996.

SEDIMENT DATA: February 1996 to September 1996.

REMARKS.--Site was relocated 1.7 downstream on September 20, 1973, where discharge data was recorded from June 1921 to December 1942 and April 1943 to September 1973 by the U.S. Geological Survey. The California Department of Water Resources has operated the gage since 1986 and has continued to provide discharge data to current year. The National Water-Quality Assessment (NAWQA) Program began monitoring this site for water-quality data in February 1996.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
23...	1020	43100	74	7.8	10.0	769	10.7	94	6.9	3.1
MAR										
19...	1330	8220	75	7.7	14.0	766	12.0	116	7.4	3.2
APR										
04...	1520	8880	73	7.4	13.0	768	11.1	104	7.7	3.0
MAY										
14...	0940	1020	85	7.5	17.0	759	9.5	98	8.5	3.4
JUN										
11...	1030	3180	78	7.6	19.5	761	9.2	101	7.9	3.2
JUL										
26...	1000	4920	76	7.4	20.0	759	9.6	106	8.5	3.3
AUG										
15...	0930	5450	79	7.6	20.5	763	9.0	100	7.9	3.2
SEP										
11...	1030	2580	87	7.6	19.5	763	15.7	170	8.7	3.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
23...	2.8	16	0.80	29	1.9	1.3	<0.10	13	52	50
MAR										
19...	3.0	17	0.70	32	2.3	1.7	<0.10	13	57	53
APR										
04...	3.0	17	0.80	30	2.7	1.6	<0.10	12	50	52
MAY										
14...	3.3	17	0.60	34	3.4	2.3	<0.10	13	61	58
JUN										
11...	2.9	16	0.60	34	2.8	1.5	<0.10	13	53	54
JUL										
26...	3.1	16	0.80	32	1.9	1.2	<0.10	14	57	56
AUG										
15...	2.9	16	0.70	35	2.0	1.0	<0.10	13	51	54
SEP										
11...	3.6	17	0.80	42	2.6	1.8	<0.10	13	66	59

SACRAMENTO RIVER BASIN

11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 23...	0.07	0.010	0.080	<0.015	<0.20	<0.20	0.030	0.020	0.010	19
MAR 19...	0.08	<0.010	0.060	<0.015	<0.20	<0.20	0.030	0.020	0.010	60
APR 04...	0.07	<0.010	0.100	<0.015	0.20	<0.20	0.040	<0.010	<0.010	12
MAY 14...	0.08	0.020	0.140	<0.015	0.30	<0.20	0.010	0.020	<0.010	7.0
JUN 11...	0.07	0.020	0.060	<0.015	<0.20	<0.20	0.020	<0.010	<0.010	22
JUL 26...	0.08	<0.010	0.070	0.020	<0.20	<0.20	0.030	0.020	0.020	8.0
AUG 15...	0.07	0.010	<0.050	0.020	<0.20	<0.20	<0.010	<0.010	0.010	8.0
SEP 11...	0.09	<0.010	0.060	<0.015	<0.20	<0.20	<0.010	<0.010	<0.010	5.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 23...	<1.0	<1	13	<1.0	<1.0	<1.0	<1.0	1.0	23	<1.0
MAR 19...	<1.0	<1	13	<1.0	<1.0	<1.0	<1.0	1.0	84	<1.0
APR 04...	<1.0	1	12	<1.0	<1.0	<1.0	<1.0	1.0	25	<1.0
MAY 14...	<1.0	<1	14	<1.0	<1.0	1.0	<1.0	1.0	17	<1.0
JUN 11...	<1.0	<1	14	<1.0	<1.0	<1.0	<1.0	1.0	40	<1.0
JUL 26...	<1.0	<1	13	<1.0	<1.0	<1.0	<1.0	<1.0	23	<1.0
AUG 15...	<1.0	<1	13	<1.0	<1.0	<1.0	<1.0	<1.0	16	<1.0
SEP 11...	<1.0	<1	15	<1.0	<1.0	<1.0	<1.0	<1.0	20	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)
FEB 23...	8.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	2.7	0.40
MAR 19...	10	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.7	0.50
APR 04...	3.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.7	0.60
MAY 14...	5.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	--	--
JUN 11...	3.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.3	0.20
JUL 26...	1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.3	0.30
AUG 15...	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.30
SEP 11...	5.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.5	0.20

SACRAMENTO RIVER BASIN

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11425000 FEATHER RIVER NEAR NICOLAUS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
23...N	1020	43100	10.0	88	10200
MAR					
19...N	1330	8220	14.0	92	2040
APR					
04...N	1520	8880	13.0	45	1080
MAY					
14...N	0940	1020	17.0	16	44
JUN					
11...N	1030	3180	19.5	17	146
JUL					
26...N	1000	4920	20.0	15	199
AUG					
15...N	0930	5450	20.5	11	162
SEP					
11...N	1030	2580	19.5	16	111

SACRAMENTO RIVER BASIN

11425418 MORMON RAVINE NEAR NEWCASTLE, CA

LOCATION.--Lat 38°50'12", long 121°05'36", in SE 1/4 NW 1/4 sec.4, T.11 N., R.8 E., Placer County, Hydrologic Unit 18020128, on right bank 200 ft upstream from Folsom Lake, 700 ft north of Newcastle Powerplant, and 3.3 mi southeast of Newcastle.

DRAINAGE AREA.--3.84 mi².

PERIOD OF RECORD.--October 1989 to current year (low-flow records only).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 500 ft above sea level, from topographic map.

REMARKS.--Records not computed above 8.5 ft³/s. Low flow augmented by release from end of South Canal. Most of the water in South Canal is diverted to Newcastle Powerplant (station 11425416). See schematic diagram of Bear 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	7.6	1.9	---	---	---	---	---	2.8	7.8	---	6.8	5.6
2	7.3	1.9	---	---	---	---	---	---	7.3	---	6.0	5.8
3	7.7	2.6	---	---	---	---	---	7.6	7.5	---	6.4	6.0
4	7.0	2.8	---	---	---	---	---	8.5	7.2	---	6.7	6.2
5	---	1.5	---	8.0	---	---	---	7.5	6.8	---	6.9	6.4
6	7.0	1.7	---	7.7	---	---	---	7.4	6.5	---	5.9	6.6
7	6.8	5.1	---	7.7	---	---	---	7.1	6.9	---	8.3	6.6
8	6.6	1.6	---	7.6	---	---	---	7.2	7.1	---	---	6.2
9	6.6	1.4	6.6	7.2	---	---	8.5	7.3	7.2	---	---	6.0
10	6.7	1.4	6.6	7.2	---	---	---	6.8	7.3	---	---	6.2
11	6.8	1.2	---	7.8	---	---	6.7	6.8	7.4	---	---	6.1
12	7.1	1.2	---	8.2	---	---	3.5	6.5	7.1	7.8	---	6.9
13	7.2	1.1	---	8.1	---	---	3.1	6.6	7.5	6.6	7.7	7.7
14	7.2	.98	---	8.0	---	---	3.0	---	7.3	6.0	---	8.0
15	4.5	.93	---	---	---	---	3.0	---	7.4	6.3	7.8	8.2
16	2.3	.95	---	---	---	---	---	---	7.9	6.8	8.3	---
17	1.6	.86	---	---	---	---	---	---	8.3	6.6	---	7.5
18	.95	.86	---	---	---	---	---	---	7.5	---	---	7.7
19	.77	.83	---	---	---	---	---	---	7.6	---	---	7.4
20	.71	.93	---	---	---	---	---	---	7.3	6.6	---	7.5
21	.73	.92	8.2	---	---	---	---	---	7.3	6.0	---	7.2
22	.83	.93	7.9	---	---	---	---	---	7.2	5.8	---	7.0
23	.68	.99	8.2	---	---	---	---	---	7.2	6.8	---	6.8
24	.91	1.1	7.7	---	---	---	3.6	---	7.1	8.2	---	7.2
25	1.0	1.2	7.6	---	---	---	3.0	---	7.3	---	---	7.4
26	1.2	1.4	7.5	---	---	---	2.6	---	7.4	7.5	---	7.4
27	1.2	1.4	7.7	---	---	---	2.3	8.5	8.2	7.9	---	7.5
28	1.0	1.4	---	---	---	---	2.1	---	7.0	6.9	---	7.4
29	.94	1.5	---	---	---	---	1.8	---	6.7	6.8	---	7.5
30	.94	---	---	---	---	---	2.0	8.4	6.3	6.0	6.2	7.2
31	1.1	---	---	---	---	---	---	8.2	---	6.8	5.7	---
TOTAL	---	---	---	---	---	---	---	---	218.6	---	---	---
MEAN	---	---	---	---	---	---	---	---	7.29	---	---	---
MAX	---	---	---	---	---	---	---	---	8.3	---	---	---
MIN	---	---	---	---	---	---	---	---	6.3	---	---	---
AC-FT	---	---	---	---	---	---	---	---	434	---	---	---
a	6640	0	10500	18600	11680	14630	990	8900	6150	56	918	11200

CAL YEAR 1995 a 105000

WTR YEAR 1996 a 90280

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

11425500 SACRAMENTO RIVER AT VERONA, CA

LOCATION.--Lat 38°46'28", long 121°35'50", in SW 1/4 NW 1/4 sec.25, T.11 N., R.3 E., Sutter County, Hydrologic Unit 18020109, on left bank 1.3 mi southeast of Verona, 1.5 mi downstream from Feather River, 6.2 mi east of Knights Landing, and at mile 19.1 upstream from Sacramento.

DRAINAGE AREA.--21,251 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--May 1926 to September 1929 (low-water periods only), October 1929 to current year.

REVISED RECORDS.--WDR CA-77-4: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.00 ft below sea level. May 1926 to Sept. 30, 1987, at site 0.5 mi upstream at same datum.

REMARKS.--Records good except for period of estimated daily discharge which is fair. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, return flow from irrigated areas, and bypassing for flood control. When discharge exceeds about 55,000 ft³/s, flow begins over Fremont Weir, 3.5 mi upstream on right bank, into Yolo Bypass (station 11453000). See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,900 ft³/s, Feb. 20, 1986, gage height, 42.11 ft, site then in use, 41.45 ft at current site; minimum daily, 304 ft³/s, July 23, 24, 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	18900	9170	10600	25500	57300	61400	26100	21100	28600	16400	17100	17300
2	18300	9240	10800	24600	56800	61100	32500	20100	26900	17600	16800	17200
3	17400	9500	10800	22300	55000	60900	38800	20000	26000	17900	16900	17700
4	16500	9110	10400	20400	53700	60500	38900	20800	25000	18200	17000	18100
5	15900	9290	10000	19000	60600	60800	36700	20600	23800	18100	17000	18000
6	15500	9550	10500	17800	64700	60700	34600	e20800	23200	17600	16600	17600
7	14500	9710	10900	17200	65700	60000	32900	e18700	22500	17200	16800	17400
8	13300	10200	10700	16600	64800	59200	31700	e16700	21900	17300	17400	16500
9	12200	10600	10900	16000	63200	58400	30800	e15500	21100	17500	17600	16300
10	11700	10600	11000	15600	61600	57900	29900	e14400	20500	17500	17800	16100
11	10700	10600	11600	14900	59600	57600	29400	e13100	19800	17600	18200	16000
12	10100	10500	14700	15100	58700	58300	29200	e12900	19000	17400	18400	15800
13	9820	10400	24500	14800	58400	59200	28600	e13200	18100	17000	18600	15600
14	9640	10300	37500	14300	58100	58700	28100	e13500	17400	17100	19200	15600
15	9470	10500	39000	14100	57700	58000	27700	e13300	16300	17200	18900	15400
16	9260	10400	38600	14600	57700	57400	27800	e14000	15200	16900	18800	15000
17	9230	10100	41900	20000	58200	56600	30000	e26900	15100	16700	18800	15000
18	9270	10500	41700	31400	59200	54900	32400	e48700	14800	16400	17900	14500
19	9170	10600	38200	35600	60900	52200	34700	e56400	14300	16300	17500	13900
20	9150	10700	33800	38500	63500	49100	34800	e62000	13600	16100	17200	13600
21	8960	10900	30000	41300	65900	45900	32900	59300	13200	15900	17200	13400
22	8660	10800	27100	44400	68000	42600	30200	57100	12900	16400	17800	13300
23	8640	10700	24400	45100	68200	39100	28400	55200	13100	16600	18500	12800
24	8750	10300	22200	43700	67700	35500	27200	56200	13500	16900	18700	12400
25	8630	10100	20500	44500	66700	33000	25100	55500	13600	17000	18800	12300
26	8760	10100	19300	45600	65600	30400	23600	50700	13500	16800	18500	12300
27	8710	9920	18700	45800	64200	28100	23200	44500	13200	16700	18300	11900
28	8850	9890	17600	49500	62500	26900	22600	38900	13000	16600	18200	11400
29	8880	9930	16500	53100	61800	26400	22400	35200	13700	16900	18200	11300
30	8900	10400	16600	55700	---	26700	22000	32200	15000	17600	17900	11700
31	9210	---	20800	57000	---	26200	---	30300	---	17500	17600	---
TOTAL	346960	304610	661800	934000	1786000	1523700	893200	977800	537800	528900	554200	445400
MEAN	11190	10150	21350	30130	61590	49150	29770	31540	17930	17060	17880	14850
MAX	18900	10900	41900	57000	68200	61400	38900	62000	28600	18200	19200	18100
MIN	8630	9110	10000	14100	53700	26200	22000	12900	12900	15900	16600	11300
AC-FT	688200	604200	1313000	1853000	3543000	3022000	1772000	1939000	1067000	1049000	1099000	883500

e Estimated.

SACRAMENTO RIVER BASIN

11425500 SACRAMENTO RIVER AT VERONA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1943, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5623	8493	17140	28130	33500	35320	34370	24600	12750	3943	2603	4242
MAX	7816	23510	41690	56930	57860	57700	55330	53730	33480	9176	5036	5895
(WY)	1939	1938	1938	1941	1942	1938	1938	1938	1938	1938	1938	1938
MIN	3462	3923	5968	7819	11730	13860	5932	3103	1872	497	846	2960
(WY)	1933	1933	1937	1937	1933	1931	1931	1931	1931	1931	1931	1934

SUMMARY STATISTICS

WATER YEARS 1930 - 1943

ANNUAL MEAN	17470
HIGHEST ANNUAL MEAN	31300
LOWEST ANNUAL MEAN	6286
HIGHEST DAILY MEAN	76900
LOWEST DAILY MEAN	304
ANNUAL SEVEN-DAY MINIMUM	313
INSTANTANEOUS PEAK FLOW	79200
INSTANTANEOUS PEAK STAGE	41.20
ANNUAL RUNOFF (AC-FT)	12650000
10 PERCENT EXCEEDS	50700
50 PERCENT EXCEEDS	8620
90 PERCENT EXCEEDS	2680

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10630	14010	22200	29060	33620	31720	25060	20270	14060	11230	11780	12650
MAX	24920	43300	64470	63790	67300	71340	62140	51600	38790	24550	21400	22110
(WY)	1963	1974	1984	1974	1983	1983	1982	1952	1983	1983	1983	1971
MIN	4725	5987	6586	8561	7591	6731	6188	5118	4858	4848	5385	6300
(WY)	1978	1993	1960	1991	1991	1977	1977	1992	1992	1947	1947	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1946 - 1996

ANNUAL TOTAL	12126870	9494370	
ANNUAL MEAN	33220	25940	19620
HIGHEST ANNUAL MEAN			39150
LOWEST ANNUAL MEAN			7178
HIGHEST DAILY MEAN	80700	Mar 13	68200
LOWEST DAILY MEAN	8630	Oct 25	8630
ANNUAL SEVEN-DAY MINIMUM	8710	Oct 22	8710
INSTANTANEOUS PEAK FLOW			68400
INSTANTANEOUS PEAK STAGE			35.54
ANNUAL RUNOFF (AC-FT)	24050000	18830000	14220000
10 PERCENT EXCEEDS	66200	58100	45800
50 PERCENT EXCEEDS	26800	17900	13300
90 PERCENT EXCEEDS	10300	10300	7400

11425500 SACRAMENTO RIVER AT VERONA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1952, 1969-70, February 1996 to September 1996.

SPECIFIC CONDUCTANCE: October 1995 to September 1996.

WATER TEMPERATURE: Water year 1980. October 1995 to September 1996.

SEDIMENT DATA: Water year 1980, February 1996 to September 1996.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1995 to September 1996.

WATER TEMPERATURE: October 1995 to September 1996.

INSTRUMENTATION.--Water quality monitor since October 1995.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 204 microsiemens, Nov. 6; minimum recorded, 59 microsiemens, July 25.

WATER TEMPERATURE: Maximum recorded, 23.0°C, July 2, 30, 31; minimum recorded, 8.0°C, Jan. 23, 24.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
22...	1020	68100	75	7.6	10.5	765	10.6	95	7.0	3.2
MAR										
19...	1010	52400	119	7.6	13.5	766	12.8	122	12	6.0
APR										
04...	1020	39200	120	7.6	12.5	768	10.4	97	11	5.7
MAY										
14...	1140	14000	121	7.8	18.5	759	9.4	101	11	5.4
JUN										
11...	1130	19900	98	7.8	19.5	761	9.1	99	9.6	4.5
JUL										
18...	1240	16400	112	8.0	20.5	765	9.3	103	9.4	4.5
AUG										
15...	1230	18900	118	7.9	22.0	763	9.0	103	10	5.2
SEP										
26...	1200	12400	147	7.8	19.0	763	9.0	97	12	6.9

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB										
22...	3.1	17	1.0	128	2.4	19	<0.10	13	68	66
MAR										
19...	6.4	20	1.0	56	5.3	4.0	<0.10	18	88	90
APR										
04...	6.9	22	1.0	51	6.3	5.1	<0.10	18	82	89
MAY										
14...	6.7	22	0.90	51	5.6	4.1	<0.10	17	88	83
JUN										
11...	5.1	20	0.80	44	4.2	3.1	<0.10	16	73	72
JUL										
18...	5.1	20	1.0	47	3.2	2.2	<0.10	16	73	71
AUG										
15...	6.0	22	0.90	53	4.2	2.4	<0.10	17	88	79
SEP										
26...	8.8	24	1.1	63	5.9	4.1	<0.10	19	101	98

11425500 SACRAMENTO RIVER AT VERONA, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 22...	0.09	<0.010	0.100	<0.015	<0.20	<0.20	0.050	0.030	0.020	47
MAR 19...	0.12	0.010	0.160	<0.015	0.20	<0.20	0.080	0.030	0.020	7.0
APR 04...	0.11	<0.010	0.260	<0.015	0.30	<0.20	0.080	0.020	0.020	7.0
MAY 14...	0.12	0.020	0.130	<0.015	0.20	<0.20	0.040	<0.010	<0.010	7.0
JUN 11...	0.10	0.010	0.080	<0.015	0.20	<0.20	0.050	0.020	0.020	29
JUL 18...	0.10	<0.010	0.110	0.030	<0.20	<0.20	0.020	<0.010	0.020	8.0
AUG 15...	0.12	0.010	0.080	0.020	<0.20	<0.20	0.010	0.030	0.030	6.0
SEP 26...	0.14	<0.010	0.100	<0.015	<0.20	<0.20	0.040	0.020	0.020	4.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 22...	<1.0	<1	20	<1.0	<1.0	<1.0	<1.0	2.0	110	<1.0
MAR 19...	<1.0	1	22	<1.0	<1.0	<1.0	<1.0	2.0	14	<1.0
APR 04...	<1.0	2	21	<1.0	<1.0	1.0	<1.0	1.0	13	<1.0
MAY 14...	<1.0	1	20	<1.0	<1.0	1.0	<1.0	2.0	11	<1.0
JUN 11...	<1.0	<1	19	<1.0	<1.0	<1.0	<1.0	2.0	51	<1.0
JUL 18...	<1.0	1	16	<1.0	<1.0	<1.0	<1.0	<1.0	12	<1.0
AUG 15...	<1.0	1	19	<1.0	<1.0	1.0	<1.0	2.0	8.0	<1.0
SEP 26...	<1.0	1	22	<1.0	<1.0	<1.0	<1.0	1.0	14	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
FEB 22...	24	<1.0	2.0	<1	<1.0	4.0	<1.0	3.2	0.40
MAR 19...	7.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	3.6	0.80
APR 04...	3.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.9	0.80
MAY 14...	6.0	<1.0	<1.0	<1	<1.0	2.0	<1.0	1.3	0.20
JUN 11...	3.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.3	0.20
JUL 18...	1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.20
AUG 15...	2.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	1.6	0.20
SEP 26...	4.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.40

SACRAMENTO RIVER BASIN

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11425500 SACRAMENTO RIVER AT VERONA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, 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)
FEB					
22...N	1020	68100	10.5	100	18400
MAR					
19...N	1010	52400	13.5	60	8490
APR					
04...N	1020	39200	12.5	82	8680
MAY					
14...N	1140	14000	18.5	49	1850
JUN					
11...N	1130	19900	19.5	46	2470
JUL					
18...N	1240	16400	20.5	28	1240
AUG					
15...N	1230	18900	22.0	33	1680
SEP					
26...N	1200	12400	19.0	32	1070

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	125	93	179	168	119	115	126	124	100	97	95	92
2	133	94	185	179	124	119	124	121	97	94	95	92
3	108	89	181	175	124	123	125	120	98	93	99	95
4	106	89	194	181	126	124	125	109	116	95	101	98
5	99	88	200	194	129	126	111	108	111	81	108	100
6	106	89	204	200	132	129	110	107	81	76	104	98
7	124	92	200	194	134	132	110	109	83	77	100	97
8	135	124	194	183	137	134	110	109	85	83	104	99
9	141	105	183	159	141	137	110	98	85	80	108	104
10	---	---	168	158	142	141	107	98	84	81	111	107
11	---	---	175	168	143	135	100	97	85	81	116	110
12	---	---	174	167	143	133	114	100	83	80	128	114
13	---	---	167	138	161	130	105	100	87	82	129	124
14	---	---	138	117	136	131	114	99	87	84	124	119
15	---	---	117	114	133	117	110	98	87	85	127	123
16	---	---	117	115	118	101	104	98	86	83	130	127
17	---	---	118	112	108	101	114	104	87	81	132	130
18	---	---	117	112	105	96	115	101	81	77	135	129
19	---	---	122	117	101	96	106	104	100	80	130	119
20	---	---	126	122	98	95	108	106	102	98	118	117
21	---	---	135	126	99	95	108	99	98	84	117	116
22	---	---	135	120	101	97	111	101	91	85	117	115
23	---	---	120	119	105	100	107	101	89	79	118	114
24	---	---	120	119	103	99	105	101	79	72	118	113
25	---	---	126	120	101	99	101	93	81	73	117	112
26	---	---	128	126	107	101	96	92	82	80	116	113
27	107	103	129	127	107	102	97	95	88	79	115	108
28	114	102	128	120	104	102	101	96	92	88	126	109
29	143	114	120	115	117	104	96	91	95	87	119	106
30	154	143	115	114	121	117	94	93	---	---	117	106
31	168	154	---	---	131	121	97	93	---	---	119	104
MONTH	---	---	204	112	161	95	126	91	116	72	135	92

SACRAMENTO RIVER BASIN

11425500 SACRAMENTO RIVER AT VERONA, 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	122	100	108	102	94	84	129	110	72	70	141	98
2	146	107	117	102	96	81	118	104	71	69	121	93
3	107	99	123	112	95	82	115	101	75	69	121	100
4	120	100	125	112	98	88	114	101	75	73	123	99
5	133	120	123	113	99	91	117	100	76	68	122	95
6	120	110	125	120	107	91	105	98	75	67	121	96
7	116	111	---	---	105	94	106	97	75	70	124	94
8	117	115	---	---	100	93	104	97	77	70	126	98
9	119	115	---	---	110	93	103	98	81	74	143	107
10	127	118	---	---	113	104	104	100	80	73	150	113
11	143	125	---	---	104	93	105	100	79	76	167	150
12	153	143	---	---	94	82	109	101	78	69	165	148
13	147	126	---	---	99	87	110	105	78	71	167	126
14	126	102	---	---	101	89	110	103	79	65	152	124
15	107	102	---	---	105	94	122	110	77	67	171	140
16	111	104	150	111	127	105	128	122	77	70	168	145
17	105	100	111	82	143	124	128	120	80	70	173	150
18	107	99	85	68	147	122	121	100	81	73	174	156
19	111	104	74	66	146	127	100	91	79	75	177	157
20	105	100	85	74	151	131	92	87	94	75	178	157
21	109	102	85	78	159	139	91	87	94	76	173	154
22	114	106	88	80	160	143	91	88	99	81	170	147
23	106	103	87	76	158	140	94	90	108	82	165	146
24	109	103	82	76	154	132	95	60	109	82	162	136
25	115	109	86	81	142	124	66	59	101	81	146	132
26	112	106	91	83	151	135	74	63	97	84	150	132
27	112	106	88	82	152	132	74	61	109	88	160	139
28	115	107	92	85	156	129	70	64	123	94	151	139
29	115	109	92	85	142	129	73	64	134	104	147	134
30	111	102	96	88	140	126	78	63	138	102	144	127
31	---	---	94	84	---	---	78	65	142	105	---	---
MONTH	153	99	---	---	160	81	129	59	142	65	178	93

11425500 SACRAMENTO RIVER AT VERONA, 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	16.5	15.0	14.5	12.5	12.0	10.5	10.0	9.5	9.0	9.5	9.0
2	17.0	16.5	15.0	14.5	12.5	12.5	10.5	10.0	9.5	9.5	10.0	9.5
3	17.5	16.5	14.5	14.0	12.5	12.0	10.5	10.0	10.0	9.5	10.5	10.0
4	17.0	15.5	14.5	13.5	12.0	12.0	10.5	10.0	11.5	10.0	10.5	10.0
5	16.5	15.0	14.0	13.5	13.0	12.0	10.5	10.0	12.5	11.5	10.5	10.0
6	16.5	14.5	14.0	13.5	13.0	12.5	10.5	10.0	12.5	12.0	10.5	10.0
7	16.0	15.0	14.5	13.5	13.0	12.5	10.5	10.0	12.0	11.5	10.5	10.0
8	16.5	15.0	14.5	14.0	12.5	12.5	10.5	10.0	11.5	11.0	11.0	10.5
9	17.0	15.0	14.5	14.0	12.5	12.0	10.5	10.0	11.0	11.0	12.0	11.0
10	---	---	14.5	14.0	12.5	12.0	10.5	10.0	11.5	11.0	12.0	11.5
11	---	---	14.5	14.0	12.5	12.0	10.5	9.5	11.5	11.0	12.0	11.5
12	---	---	14.5	13.5	12.5	12.5	10.0	9.5	11.0	11.0	12.0	11.5
13	---	---	14.5	14.0	12.5	12.0	10.0	9.5	11.0	11.0	12.0	11.5
14	---	---	14.5	14.0	12.0	11.5	9.5	9.0	11.5	11.0	12.0	11.5
15	---	---	14.5	14.0	11.5	11.0	9.0	9.0	11.0	11.0	12.5	12.0
16	---	---	15.0	14.0	11.5	11.0	10.0	9.0	11.5	11.0	13.0	12.0
17	---	---	15.0	14.0	11.0	10.0	10.0	9.5	11.5	11.0	13.5	12.5
18	---	---	15.0	14.5	10.0	10.0	10.0	9.5	11.5	11.0	13.5	13.0
19	---	---	15.0	14.0	10.0	10.0	9.5	9.0	11.5	11.0	14.0	13.5
20	---	---	14.5	13.5	10.0	9.5	9.5	8.5	12.0	11.5	14.0	13.5
21	---	---	14.0	13.5	9.5	9.0	9.0	8.5	11.5	11.0	14.0	13.5
22	---	---	13.5	13.0	9.5	9.0	9.0	9.0	11.5	10.5	14.0	13.5
23	---	---	13.5	13.0	9.5	9.0	9.0	8.0	10.5	10.0	13.5	13.0
24	---	---	13.5	12.5	9.5	9.0	8.5	8.0	10.5	10.0	13.0	12.5
25	---	---	13.0	12.5	9.5	8.5	9.0	8.5	10.0	10.0	13.0	12.5
26	---	---	13.0	12.0	9.0	8.5	8.5	8.5	10.0	9.5	13.0	12.0
27	14.5	14.0	12.0	11.5	9.5	9.0	9.0	8.5	9.5	9.0	13.0	12.5
28	14.5	14.0	11.5	11.0	9.5	9.0	9.0	8.5	9.0	9.0	13.0	12.5
29	15.5	14.5	11.5	11.0	9.5	9.5	9.0	9.0	9.0	9.0	12.5	12.0
30	15.0	14.5	12.5	11.0	10.0	9.5	9.0	8.5	---	---	13.0	12.0
31	15.0	14.5	---	---	10.5	10.0	9.0	8.5	---	---	13.0	12.0
MONTH	---	---	15.0	11.0	13.0	8.5	10.5	8.0	12.5	9.0	14.0	9.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	13.0	12.0	16.5	15.5	18.0	17.0	22.5	20.5	22.5	20.5	21.5	19.5
2	13.0	12.0	17.0	16.5	18.0	17.5	23.0	20.5	22.0	20.0	21.0	19.0
3	13.0	12.5	17.0	16.5	19.0	17.5	22.5	20.0	21.5	19.5	20.5	18.5
4	13.0	12.5	16.5	16.0	19.5	18.5	21.5	20.0	21.5	19.5	20.0	18.0
5	13.5	13.0	16.5	15.5	20.0	19.0	21.0	19.5	21.0	19.0	19.5	18.0
6	14.5	13.0	16.0	15.5	20.5	19.0	22.0	19.5	21.0	19.0	19.5	17.5
7	15.0	13.5	---	---	20.5	19.5	22.5	20.0	21.0	19.0	19.5	17.5
8	15.0	14.0	---	---	20.5	19.5	22.0	20.0	21.0	19.0	20.0	18.0
9	15.0	14.5	---	---	21.0	20.0	22.0	20.0	21.0	19.0	20.0	18.5
10	15.0	14.0	---	---	21.0	20.0	22.5	20.5	21.5	19.5	20.5	19.0
11	15.0	14.0	---	---	21.0	19.5	22.0	20.0	21.5	20.0	20.5	19.5
12	14.5	13.5	---	---	21.0	19.5	21.5	20.0	22.0	20.0	20.0	18.5
13	14.0	13.0	---	---	21.0	19.5	22.0	20.0	22.0	20.5	20.0	18.5
14	13.5	12.5	---	---	21.5	19.5	22.5	20.5	22.0	20.0	19.5	18.0
15	13.0	13.0	---	---	21.5	19.5	22.5	20.5	22.0	20.0	19.0	18.5
16	13.0	12.5	17.0	14.0	21.5	20.0	22.0	20.0	21.5	19.5	19.0	18.0
17	12.5	11.5	14.0	12.5	21.0	19.5	22.0	20.0	21.0	19.0	19.0	18.0
18	12.5	11.5	13.5	12.5	21.0	20.0	22.0	20.0	20.5	19.0	18.5	17.5
19	12.5	11.5	13.5	12.5	21.0	20.0	22.0	20.0	20.0	18.5	19.0	18.0
20	11.5	11.0	15.0	13.5	20.5	19.5	22.0	19.5	20.0	18.0	19.0	18.0
21	12.5	11.5	14.5	14.0	21.0	19.5	22.0	19.5	20.0	18.0	19.5	18.5
22	13.0	12.0	14.5	13.5	21.0	20.0	22.0	20.0	20.5	18.5	19.5	19.0
23	13.0	12.5	14.5	14.0	22.0	20.5	22.0	20.0	20.5	19.0	20.0	19.0
24	14.0	13.0	14.5	14.0	21.5	20.5	22.0	20.0	20.5	19.0	19.5	19.0
25	14.5	13.5	15.0	14.0	21.0	19.5	21.5	19.5	20.5	18.5	19.5	19.0
26	15.5	14.5	16.0	15.0	20.5	19.5	21.5	19.5	20.0	18.5	19.5	19.0
27	15.0	14.5	16.5	15.5	20.0	18.5	21.5	20.0	20.0	18.5	19.5	18.5
28	15.0	14.0	17.0	16.0	20.5	19.0	22.0	20.0	20.5	18.5	19.5	19.0
29	15.5	14.5	17.0	16.5	21.0	19.5	22.5	20.5	20.5	19.0	20.0	19.0
30	16.0	15.0	17.5	16.5	21.5	20.0	23.0	21.0	21.0	20.0	20.0	19.5
31	---	---	17.5	16.5	---	---	23.0	20.5	21.5	20.0	---	---
MONTH	16.0	11.0	---	---	22.0	17.0	23.0	19.5	22.5	18.0	21.5	17.5

SACRAMENTO RIVER BASIN

11426000 SACRAMENTO WEIR SPILL TO YOLO BYPASS, NEAR SACRAMENTO, CA

LOCATION.--Lat 38°36'25", long 121°33'15", unsurveyed, Sacramento County, Hydrologic Unit 18020109, on right bank 100 ft upstream from weir, 3.2 mi upstream from American River, 4 mi northwest of Sacramento, and 4.2 mi upstream from Sacramento.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for water years 1940-51, published in WSP 1735. Published as Sacramento Weir near Sacramento 1939-61. Gage-height records collected at same site February 1926 to September 1934 and major flood flows only October 1934 to September 1939 are contained in reports of California Department of Water Resources.

GAGE.--Water-stage recorder and concrete weir crest. Datum of gage is 3.00 ft below sea level. October 1939 to September 1942, October 1959 to September 1963, water-stage recorder or nonrecording gage at downstream end of weir. October 1942 to September 1959, water-stage recorder on left bank of Sacramento River opposite center of weir. February 1963 to September 1985, water-stage recorder on right bank of Sacramento River 100 ft downstream from end of weir.

REMARKS.--Crest of weir is at gage height 20.2 ft and top of movable gates at 28.0 ft. Weir consists of 48 gates each 38.1 ft long. Flow over weir enters Yolo Bypass by way of Sacramento Bypass. Flow regulated by weir gates. February 1963 to September 1985, stage was obtained by averaging the stage obtained at sites on the Sacramento River above and below the weir. See schematic diagram of lower Sacramento River basin.

COOPERATION.--Records provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 128,000 ft³/s, Feb. 20, 1986, gage height, 30.84 ft; maximum gage height, 33.01 ft, Dec. 23, 1955; no flow 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	158	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	125	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	110	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	101	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	192	91	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	480	82	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	528	53	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	475	34	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	370	10	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	302	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	226	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	163	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	144	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	154	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	110	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	106	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	139	.00	.00	21	.00	.00	.00	.00
18	.00	.00	.00	.00	168	.00	.00	177	.00	.00	.00	.00
19	.00	.00	.00	.00	278	.00	.00	259	.00	.00	.00	.00
20	.00	.00	.00	.00	461	.00	.00	269	.00	.00	.00	.00
21	.00	.00	.00	.00	562	.00	.00	202	.00	.00	.00	.00
22	.00	.00	.00	.00	590	.00	.00	101	.00	.00	.00	.00
23	.00	.00	.00	.00	547	.00	.00	12	.00	.00	.00	.00
24	.00	.00	.00	.00	494	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	442	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	370	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	293	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	221	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	187	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	8002.00	764.00	0.00	1041.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.276	24.6	.000	33.6	.000	.000	.000	.000
MAX	.00	.00	.00	.00	590	158	.00	269	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	15870	1520	.00	2060	.00	.00	.00	.00

11426000 SACRAMENTO WEIR SPILL TO YOLO BYPASS, NEAR SACRAMENTO, 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	1.37	137	580	495	752	574	93.8	2.36	.000	.000	.000	.000
MAX	72.6	7014	12470	6997	23920	17830	2042	79.1	.000	.000	.000	.000
(WY)	1963	1951	1965	1970	1986	1983	1982	1983	1943	1943	1943	1943
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1944	1944	1944	1944	1944	1944	1944	1943	1943	1943	1943	1943

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1943 - 1996
ANNUAL TOTAL	231171.00	9807.00	
ANNUAL MEAN	633	26.8	214
HIGHEST ANNUAL MEAN			2075
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	28300	Mar 13	590
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			595
INSTANTANEOUS PEAK STAGE			27.20
ANNUAL RUNOFF (AC-FT)	458500	19450	154900
10 PERCENT EXCEEDS	202	62	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

SACRAMENTO RIVER BASIN

11426170 LAKE VALLEY RESERVOIR NEAR CISCO, CA

LOCATION.--Lat 39°18'01", long 120°35'46", in NE 1/4 NW 1/4 sec.35, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, on dam near left abutment on North Fork of North Fork American River and 1.3 mi west of Cisco.

DRAINAGE AREA.--4.54 mi².

PERIOD OF RECORD.--July 1987 to current year. Unpublished records for water years 1980-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 5,727.4 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to July 1987, nonrecording gage at same site and datum.

REMARKS.--Missing days are due to equipment malfunction. Lake is formed by an earthfill dam; storage began in 1911. Usable capacity, 7,960 acre-ft between gage heights 6.2 ft, natural rim of lake, and 57.5 ft, top of flashboards. Released water is diverted downstream to Lake Valley Canal (station 11426190) and then to several powerplants. Records, including extremes, represent usable contents at 2400 hours. See schematic diagrams of Bear and Yuba River basins.

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 contents, 8,017 acre-ft, May 8, 1989, gage height, 57.68 ft; minimum, 1,153 acre-ft, Feb. 28, 1990, gage height, 25.01 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 7,949 acre-ft, June 8, gage height, 57.45 ft; minimum, 3,498 acre-ft, Jan. 14, gage height, 40.19 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated June 18, 1965)

8	41	17	476	40	3,455
10	102	20	693	50	5,810
12	189	25	1,152	59	8,411
14	304	30	1,830		

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	6943	5614	4051	3705	4191	---	---	---	7842	7821	6856	5685
2	6916	5546	4001	3685	4169	---	---	---	7845	7812	6817	5650
3	6908	5481	3955	3666	4148	---	---	---	7845	7800	6777	5614
4	6862	5423	3925	3659	4582	---	7277	---	7860	7788	6738	5573
5	6854	5362	3884	3650	5043	---	---	---	7892	7779	6699	5535
6	6839	5309	3833	3636	---	---	---	---	7919	7770	6662	5501
7	6825	5255	3783	3622	---	---	---	---	7937	7761	6623	5466
8	6814	5204	3730	3606	---	---	---	---	7949	7746	6587	5432
9	6800	5151	3676	3594	---	---	7328	---	7946	7734	6548	5403
10	6786	5098	3622	3576	---	---	7322	---	7943	7722	6512	5369
11	6769	5048	3712	3557	---	---	7301	---	7934	7707	6473	5335
12	6763	4992	4250	3539	5420	---	7289	---	7928	7695	6438	5302
13	6769	4955	4277	3519	5491	---	7274	---	7919	7680	6402	5283
14	6766	4899	4250	3498	5528	---	7274	---	7916	7668	6366	5250
15	6724	4846	4250	3516	5528	---	7310	---	7913	7653	6328	5243
16	6657	4796	4220	3902	---	---	7378	---	7907	7632	6289	5216
17	6595	4743	4175	3998	---	---	7348	---	7904	7593	6250	5188
18	6529	4691	4137	4104	---	---	7295	---	7898	7531	6214	5153
19	6465	4639	4093	4144	---	---	7277	---	7892	7468	6176	5124
20	6405	4587	4051	4164	---	---	7250	7722	7883	7405	6138	5094
21	6344	4530	4005	4184	---	---	7236	7788	7877	7345	6100	5064
22	6267	4477	3966	4178	---	---	7230	7788	7871	7286	6058	5041
23	6201	4423	3916	4187	---	---	7245	7758	7860	7227	6025	5034
24	6138	4368	3872	4252	---	---	7292	7752	7854	7173	5986	5022
25	6064	4345	3824	4245	---	---	7313	7761	7845	7134	5950	4983
26	5997	4297	3776	4227	---	---	7334	7800	7857	7092	5911	4934
27	5933	4241	3735	4279	---	---	---	7928	7851	7053	5873	4894
28	5865	4189	3692	4259	---	---	---	7943	7845	7014	5837	4858
29	5799	4137	3671	4238	---	---	---	7928	7839	6975	5799	4830
30	5730	4081	3699	4218	---	---	---	7895	7830	6937	5763	4816
31	5680	---	3723	4209	---	---	---	7863	---	6896	5721	---
MAX	6943	5614	4277	4279	---	---	---	---	7949	7821	6856	5685
MIN	5680	4081	3622	3498	---	---	---	---	7830	6896	5721	4816
a	49.53	42.73	41.17	43.29				57.16	57.05	53.92	49.68	45.94
b	-1275	-1599	-358	+486					-33	-934	-1175	-905
c	986	1760	1670	1620	1900	2210	2180	2170	444	477	764	629
CAL YR 1995	MAX 8009	MIN 2391	b +1284	c 16790								
WTR YR 1996			b -2139	c 16810								

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

b Change in contents, in acre-feet.

c Diversion, in acre-feet, to Lake Valley Canal, provided by Pacific Gas & Electric Co.

11426180 KELLY LAKE NEAR CISCO, CA

LOCATION.--Lat 39°18'40", long 120°34'49", in SE 1/4 NW 1/4 sec.25, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on outlet structure on Kelly Lake Dam on unnamed tributary to North Fork of North Fork American River, and 2.2 mi west of Cisco.

DRAINAGE AREA.--0.58 mi².

PERIOD OF RECORD.--October 1991 to current year. Unpublished records for water years 1965-91 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 5,888.9 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to October 1991, nonrecording gage at same site and datum.

REMARKS.--No record Jan. 16 to Feb. 11 due to equipment malfunction. Reservoir is formed on natural lake by rock-fill dam completed in 1928. Usable capacity, 336 acre-ft between gage heights 0.0 ft, invert of outlet, and 17.1 ft, top of flashboards. Water is used for power development downstream. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of Bear 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 contents, 359 acre-ft, May 15, 1996, gage height, 17.96 ft; no storage Oct. 1-24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 359 acre-ft, May 15, gage height, 17.96 ft; minimum recorded, 8 acre-ft, Nov. 17, 18, gage height, 0.50 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated December 1933)

0	0	12	213
4	61	16	308
8	130	19	387

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	184	130	19	95	---	316	323	329	338	326	302	282
2	184	125	20	94	---	316	320	336	337	325	301	280
3	183	116	20	97	---	317	318	335	337	324	301	281
4	183	105	22	99	---	319	318	334	337	324	300	280
5	183	94	22	101	---	317	319	334	336	323	300	279
6	182	84	23	103	---	316	320	334	336	322	299	278
7	182	74	23	104	---	316	321	333	336	322	298	277
8	182	66	24	106	---	316	322	333	336	321	298	276
9	181	58	24	108	---	316	321	333	335	320	297	275
10	181	50	24	109	---	318	320	334	335	320	296	275
11	181	43	40	110	---	319	319	336	335	319	295	274
12	180	37	107	112	317	317	319	337	334	318	295	273
13	180	31	115	114	320	317	318	337	334	317	294	274
14	179	26	116	115	318	316	319	340	334	316	293	274
15	179	18	122	121	318	316	322	359	333	316	292	277
16	179	9	122	---	321	317	324	346	333	315	291	277
17	179	8	124	---	326	318	321	356	332	315	290	276
18	178	8	126	---	324	319	318	342	331	314	291	275
19	178	9	127	---	331	319	319	337	331	313	289	275
20	178	9	125	---	322	319	317	334	330	313	290	274
21	178	9	119	---	320	319	317	339	330	312	288	274
22	178	15	113	---	318	319	317	336	329	310	287	274
23	175	15	108	---	318	318	319	335	328	309	287	273
24	170	15	102	---	318	317	322	336	328	310	286	273
25	165	17	97	---	318	317	321	338	328	309	285	272
26	160	18	92	---	317	317	321	339	329	309	284	272
27	155	18	88	---	317	320	321	339	328	307	283	271
28	150	18	83	---	317	320	319	339	328	306	284	270
29	145	18	82	---	316	318	320	338	327	304	283	270
30	141	18	89	---	---	318	320	338	326	303	283	270
31	134	---	95	---	---	317	---	338	---	303	282	---
MAX	184	130	127	---	---	320	324	359	338	326	302	282
MIN	134	8	19	---	---	316	317	329	326	303	282	270
a	8.22	1.17	6.05		16.30	16.35	16.47	17.18	16.69	15.79	14.98	14.48
b	-51	-116	+77			+1	+3	+18	-12	-23	-21	-12

WTR YR 1996 b +85

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

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA

LOCATION.--Lat 38°56'10", long 121°01'22", in SW 1/4 NW 1/4 sec.31, T.13 N., R.9 E., Placer County, Hydrologic Unit 18020128, on left bank 50 ft upstream from crest of North Fork Dam, 2 mi upstream from Middle Fork, and 4 mi northeast of Auburn.

DRAINAGE AREA.--342 mi².

PERIOD OF RECORD.--October 1941 to current year.

CHEMICAL DATA: Water years 1977-80.

WATER TEMPERATURE: Water years 1959-83.

SEDIMENT DATA: Water year 1980 (periodic record).

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and ogee section of concrete debris dam. Datum of gage is 715.0 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good. Minor regulation by Lake Clementine, usable capacity, 12,800 acre-ft, formed by North Fork Dam. Storage in Big Reservoir and Lake Valley Reservoir (station 11426170), combined capacity, 10,300 acre-ft upstream from station. Lake Valley Canal (station 11426190) diverts from North Fork of North Fork American River into Bear River basin for power development in powerplants of Pacific Gas & Electric Co. Combined storage and diversion have small effect on natural flow. See schematic diagrams of Bear and lower Sacramento River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s, Dec. 23, 1964, gage height, 11.87 ft, from rating curve extended above 24,000 ft³/s on basis of computed flow over crest of dam at gage height 10.22 ft; no flow Aug. 27-30, Sept. 2-11, 1944; Oct. 5, 6, 1963; Nov. 7-10, 1965, caused by operation of valve in North Fork Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1430	13,500	5.61	Feb. 5	0815	19,500	6.56
Jan. 16	2215	6,240	4.09	Feb. 20	0145	10,100	4.97
Jan. 25	0115	7,440	4.39	May 16	0845	19,200	6.52

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	49	65	954	1440	1440	2320	2220	1300	299	112	67
2	63	49	81	642	1270	1410	3660	2310	1330	293	108	66
3	62	50	92	544	1130	1420	2550	2130	1350	285	106	66
4	62	50	101	468	6970	2550	2080	1860	1270	283	107	66
5	62	49	166	402	15100	4360	1860	1680	1190	271	105	65
6	61	50	129	358	6660	3020	1810	1680	1100	257	104	64
7	61	55	115	331	3940	2470	1950	1630	1090	247	103	58
8	62	59	103	314	3030	2110	2140	1620	1010	243	102	59
9	61	59	90	298	2530	2020	2220	1440	896	235	95	58
10	60	64	80	293	2230	1970	2180	1490	795	225	93	57
11	58	61	185	279	2050	2470	1900	1520	726	216	89	57
12	57	60	7810	265	1920	3200	1710	1830	681	207	90	56
13	56	60	2840	252	1930	2850	1530	1990	679	232	86	57
14	58	62	1160	241	1840	2310	1460	2190	618	250	83	60
15	60	61	820	240	1670	2030	1610	2720	559	221	80	72
16	57	59	772	1720	1790	1940	2380	12300	528	203	78	77
17	56	58	517	3170	2500	1890	2300	8600	502	191	77	79
18	59	52	422	1430	2970	2000	2330	11100	474	184	76	68
19	57	53	364	2040	5270	2070	1800	5560	448	174	76	64
20	58	54	314	1350	7490	2170	1660	3530	437	168	75	62
21	55	52	279	1440	6770	2010	1500	2910	422	164	74	61
22	53	49	265	1210	4950	1980	1430	3410	398	151	74	61
23	51	49	256	948	3340	1720	1450	2670	376	142	74	60
24	51	49	244	2400	2880	1490	1760	2180	365	138	74	61
25	50	51	228	4940	2510	1360	2130	1900	358	136	72	61
26	48	61	216	2130	2150	1240	2140	1830	347	131	69	60
27	49	74	216	3220	1890	1190	2230	1760	385	127	75	58
28	49	67	256	3800	1700	1890	1990	1640	354	123	77	56
29	49	62	279	2220	1550	1630	1790	1550	319	124	76	55
30	49	62	964	1620	---	1390	2030	1490	303	120	73	55
31	49	---	1530	1490	---	1270	---	1360	---	116	69	---
TOTAL	1747	1690	20959	41009	101470	62870	59900	92100	20610	6156	2652	1866
MEAN	56.4	56.3	676	1323	3499	2028	1997	2971	687	199	85.5	62.2
MAX	64	74	7810	4940	15100	4360	3660	12300	1350	299	112	79
MIN	48	49	65	240	1130	1190	1430	1360	303	116	69	55
AC-FT	3470	3350	41570	81340	201300	124700	118800	182700	40880	12210	5260	3700

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	106	378	868	1269	1405	1503	1578	1624	782	192	65.7	49.4
MAX	1749	3307	5781	5335	8403	5187	4490	3688	2855	928	214	121
(WY)	1963	1951	1965	1970	1986	1995	1982	1952	1983	1983	1983	1982
MIN	18.3	35.6	33.9	44.6	70.5	114	207	273	71.7	25.8	13.4	14.9
(WY)	1978	1960	1977	1991	1991	1977	1977	1992	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1942 - 1996			
ANNUAL TOTAL	630147				413029							
ANNUAL MEAN	1726				1128							
HIGHEST ANNUAL MEAN									815			
LOWEST ANNUAL MEAN									1843			
HIGHEST DAILY MEAN	18200				15100				88.5			
LOWEST DAILY MEAN	48				48				45900			
ANNUAL SEVEN-DAY MINIMUM	49				49				.00			
INSTANTANEOUS PEAK FLOW					19500				.00			
INSTANTANEOUS PEAK STAGE					6.56				65400			
ANNUAL RUNOFF (AC-FT)	1250000				819200				11.87			
10 PERCENT EXCEEDS	3680				2500				590600			
50 PERCENT EXCEEDS	957				316				2040			
90 PERCENT EXCEEDS	59				57				272			
									40			

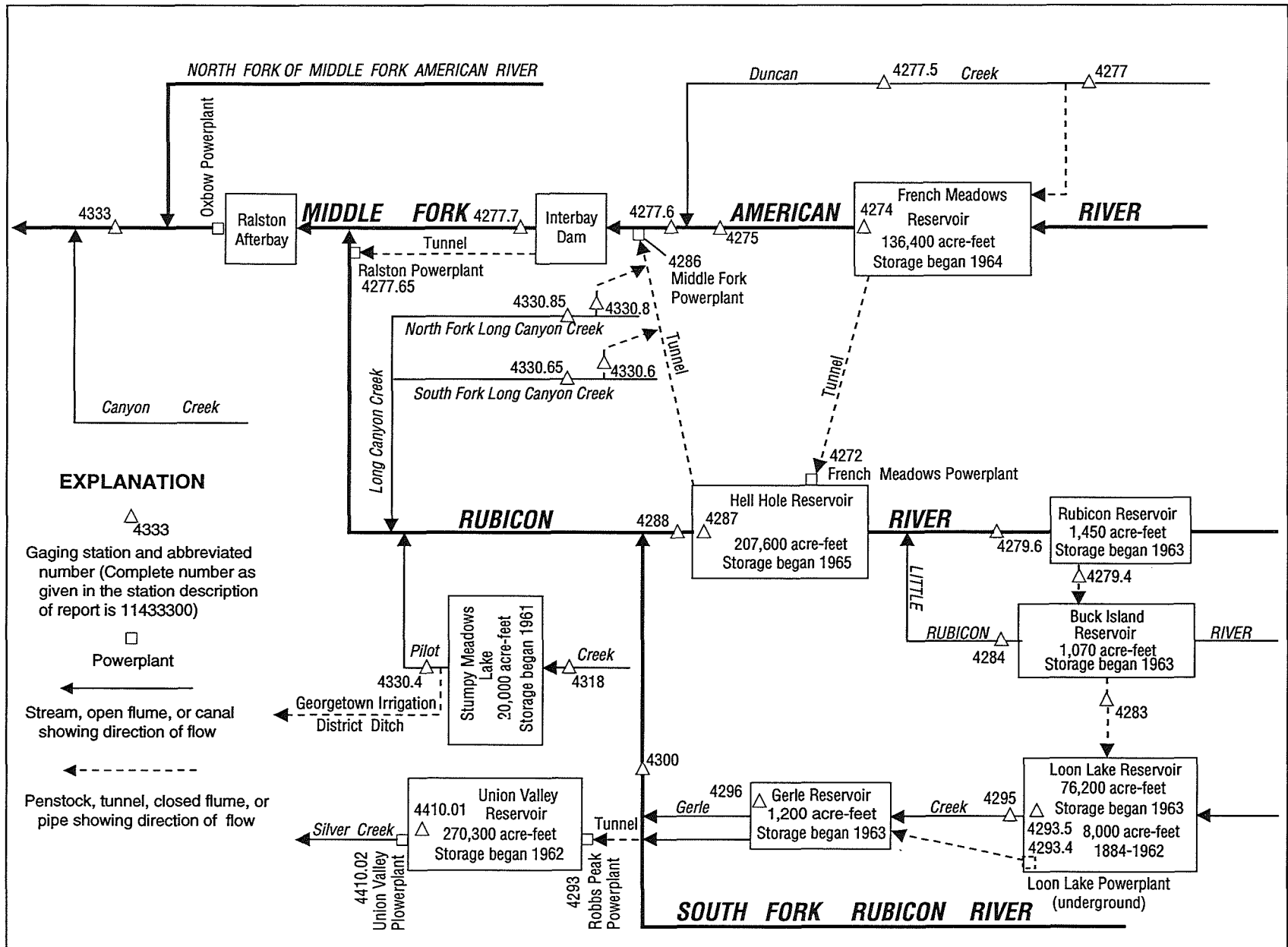


Figure 32. Diversions and storage in Middle Fork American and Rubicon River basins.

11427400 FRENCH MEADOWS RESERVOIR NEAR FORESTHILL, CA

LOCATION.--Lat 39°06'32", long 120°25'49", in SW 1/4 NE 1/4 sec.32, T.15 N., R.14 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 2.2 mi upstream from dam on Middle Fork American River, 6.9 mi upstream from Chipmunk Creek, and 21 mi northeast of Foresthill.

DRAINAGE AREA.--47.0 mi².

PERIOD OF RECORD.--December 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Placer County Water Agency).

REMARKS.--Reservoir is formed by rockfill dam with earth core. Storage began Dec. 21, 1964. Usable capacity, 125,601 acre-ft between elevations 5,125 ft, minimum operating level, and 5,263 ft, top of radial gates. Dead storage, 10,804 acre-ft. Reservoir is used to store water for hydroelectric power. Up to 400 ft³/s diverted from Duncan Creek through a tunnel to reservoir. Water is released through a tunnel to French Meadows Powerplant (station 11427200) at Hell Hole Reservoir (station 11428700) on the Rubicon River; releases began Dec. 13, 1965. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 137,700 acre-ft, May 19, 1966, elevation, 5,263.9 ft; minimum since reservoir first filled, 28,500 acre-ft, Oct. 21-24, 1991, elevation, 5,157.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 136,400 acre-ft, May 16, elevation, 5,263.0 ft; minimum, 56,500 acre-ft, Nov. 22-24, 28-30, Dec. 1, elevation, 5,193.6 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey by Placer County Water Agency in 1965)

5,125	10,800	5,200	62,400
5,130	13,100	5,230	94,100
5,150	23,700	5,270	146,500
5,170	37,100		

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	90600	69500	56500	65900	77900	105300	105000	124900	135400	129400	113500	100200
2	90000	69200	56600	66300	78100	104800	105400	126000	135400	128900	113000	99800
3	89300	68500	56600	66600	78300	104700	105600	126800	135400	128500	112500	99500
4	88600	67800	56700	66900	82600	104700	105800	127600	135400	128100	111900	99100
5	87900	67000	56800	67100	87400	104500	106100	128200	135400	127600	111400	98800
6	87100	66300	56800	67300	89500	104200	106900	128700	135400	127200	110800	98400
7	86500	65600	56900	67500	90900	103900	108100	129300	135400	126700	110200	98100
8	85800	64800	56900	67700	92000	103600	109000	129700	135400	126100	109700	97700
9	85100	64200	56900	67900	93000	103200	110100	130100	135300	125700	109100	97200
10	84400	63400	56900	68000	94000	103200	111000	130500	135300	125200	108600	96900
11	83700	62700	57600	68200	95000	103300	111700	131100	135100	124800	108100	96400
12	83100	62100	61900	68300	95700	103400	112200	131800	134900	124300	107500	96100
13	82300	61300	62700	68500	96300	103200	112900	132800	134600	123700	106900	95700
14	81500	60600	62700	68600	96800	103000	113500	133700	134300	123200	106400	95400
15	80900	59900	62500	68800	97200	102700	114100	135700	133900	122800	105600	95100
16	80100	59200	62700	70600	98100	102500	115800	135000	133600	122200	105100	94800
17	79400	58500	62800	71700	100000	102500	116700	134700	133200	121700	104800	94400
18	79000	58400	62900	72600	101400	102600	117200	134700	132800	121000	104400	94000
19	78200	58200	63000	73300	104300	102800	117500	134400	132300	120500	104000	93600
20	77600	57700	63100	73700	105900	103200	117900	135000	131900	120000	103700	93300
21	76900	57000	63200	74200	106700	103600	118000	136000	131400	119500	103300	92800
22	76100	56500	63300	74600	107000	103900	118200	135400	130900	118900	103000	92600
23	75400	56500	63400	75000	107000	104000	118500	135400	130800	118300	102600	92200
24	74700	56500	63400	75600	107000	103900	119100	135700	130900	117800	102100	91900
25	73900	56600	63500	75900	106900	103800	119700	136000	131100	117200	101900	91500
26	73300	56600	63500	76100	106600	103800	120700	136100	131200	116600	101500	91100
27	72600	56600	63600	76700	106400	103800	121400	136100	131100	116200	101500	90700
28	71800	56500	63700	77000	106000	104400	122100	136000	130700	115700	101400	90500
29	71100	56500	63900	77200	105600	104500	122800	135800	130200	115200	101300	90200
30	70400	56500	64700	77400	---	104500	123800	135700	130000	114500	100800	90000
31	69700	---	65400	77600	---	104500	---	135600	---	114000	100400	---
MAX	90600	69500	65400	77600	107000	105300	123800	136100	135400	129400	113500	100200
MIN	69700	56500	56500	65900	77900	102500	105000	124900	130000	114000	100400	90000
a	5207.4	5193.6	5203.1	5215.1	5239.7	5238.8	5253.9	5262.4	5258.4	5246.4	5235.4	5226.4
b	-21600	-13200	+8900	+12200	+28000	-1100	+19300	+11800	-5600	-16000	-13600	-10400

CAL YR 1995 b +23300

WTR YR 1996 b -1300

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

SACRAMENTO RIVER BASIN

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA

LOCATION.--Lat 39°06'35", long 120°28'49", in SW 1/4 NW 1/4 sec.36, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 0.6 mi downstream from French Meadows Dam, 4.1 mi upstream from Chipmunk Creek, and 14 mi south of Cisco.

DRAINAGE AREA.--47.9 mi².

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

REVISED RECORDS.--WSP 1445: 1953-54. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,920 ft above sea level, from topographic map. Prior to Oct. 1, 1962, at site 0.8 mi upstream at different datum.

REMARKS.--Considerable regulation by French Meadows Reservoir (station 11427400) 0.6 mi upstream beginning December 1964. Water diverted into basin from Duncan Creek to French Meadows Reservoir since December 1964. Water diverted out of basin from French Meadows Reservoir through French Meadows Powerplant (station 11427200) to Hell Hole Reservoir (station 11428700) since December 1965. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 21,500 ft³/s, Jan. 31, 1963, gage height, 14.20 ft, from rating curve extended above 1,100 ft³/s on basis of peak flow at former site; minimum, 0.3 ft³/s, Oct. 4, 5, 21-25, 1960, Oct. 5, 6, 1961. Maximum discharge since construction of French Meadows Dam in 1964, 6,050 ft³/s, May 16, 1966, gage height, 11.61 ft, from flow over spillway of French Meadows Reservoir; minimum daily, 0.8 ft³/s, Oct. 22-25, 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	8.8	9.1	8.5	12	13	12	20	11	68	25	11	11
2	8.8	9.1	8.8	12	13	12	18	11	30	23	11	11
3	8.8	9.1	8.8	11	12	13	15	11	13	18	11	10
4	8.8	8.8	9.2	11	45	20	13	10	14	12	11	11
5	8.8	8.8	8.8	11	46	16	13	10	14	11	11	11
6	8.8	8.8	8.8	11	25	14	13	10	14	11	11	11
7	8.8	8.8	9.1	11	20	14	13	10	14	10	11	11
8	8.8	8.8	9.1	11	18	14	13	9.9	14	10	11	11
9	8.8	8.8	9.1	11	17	14	13	9.8	14	10	11	11
10	8.8	8.8	9.1	11	17	16	12	9.5	14	10	11	10
11	8.8	8.8	12	11	17	21	12	9.4	14	10	11	9.4
12	8.8	8.8	26	11	18	18	11	9.4	13	10	11	9.1
13	8.8	8.8	14	11	19	16	11	9.9	13	10	11	9.4
14	8.8	8.8	11	10	17	15	11	10	13	10	11	9.4
15	8.8	8.8	11	11	16	15	10	290	13	10	11	9.8
16	8.8	8.8	11	27	19	15	16	3430	13	10	11	9.4
17	8.8	8.8	10	18	26	16	15	2680	13	10	11	9.4
18	8.8	8.8	10	15	23	17	16	1730	13	10	11	9.4
19	8.8	8.8	10	16	52	15	13	799	13	10	11	9.4
20	9.0	8.8	10	13	35	14	12	141	13	10	11	9.4
21	9.1	8.8	10	13	29	14	12	84	13	10	11	9.4
22	9.1	8.8	10	12	20	13	12	626	13	10	11	9.4
23	9.1	8.8	10	12	17	12	12	169	13	10	11	9.4
24	9.1	8.8	10	12	16	12	11	44	e13	10	11	9.4
25	9.1	9.0	10	17	14	11	11	38	e13	10	11	9.4
26	9.1	8.8	9.9	13	14	11	11	34	e22	10	11	9.4
27	9.1	8.8	9.8	14	13	11	10	82	33	10	11	9.4
28	9.1	8.8	10	14	13	19	10	109	30	11	11	9.4
29	9.1	8.4	11	13	12	13	10	105	29	11	11	9.4
30	9.1	8.4	15	13	---	12	11	101	27	11	11	9.4
31	9.1	---	14	14	---	12	---	101	---	11	11	---
TOTAL	276.3	264.1	334.0	402	616	447	380	10703.9	546	354	341	296.1
MEAN	8.91	8.80	10.8	13.0	21.2	14.4	12.7	345	18.2	11.4	11.0	9.87
MAX	9.1	9.1	26	27	52	21	20	3430	68	25	11	11
MIN	8.8	8.4	8.5	10	12	11	10	9.4	13	10	11	9.1
AC-FT	548	524	662	797	1220	887	754	21230	1080	702	676	587
a	21390	12660	817	0	12200	23340	14640	23350	17390	17650	13330	9630

e Estimated.

a Diversion, in acre-feet, from French Meadows Reservoir to Hell Hole Reservoir through French Meadows Powerplant, provided by Placer County Water Agency.

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1964, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.8	20.3	101	92.5	143	151	356	550	297	52.4	6.04	2.10
MAX	222	106	882	377	561	367	537	1110	775	232	25.3	5.06
(WY)	1963	1964	1956	1956	1963	1960	1962	1958	1952	1952	1952	1952
MIN	.40	1.60	1.76	5.57	40.1	55.2	187	210	69.7	6.22	1.57	.64
(WY)	1961	1960	1960	1960	1955	1962	1955	1959	1959	1959	1959	1961

SUMMARY STATISTICS

WATER YEARS 1952 - 1964

ANNUAL MEAN	149	
HIGHEST ANNUAL MEAN	265	1956
LOWEST ANNUAL MEAN	68.7	1961
HIGHEST DAILY MEAN	11300	Dec 23 1955
LOWEST DAILY MEAN	.30	Oct 22 1960
ANNUAL SEVEN-DAY MINIMUM	.34	Oct 19 1960
INSTANTANEOUS PEAK FLOW	21500	Jan 31 1963
INSTANTANEOUS PEAK STAGE	14.20	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	108000	
10 PERCENT EXCEEDS	446	
50 PERCENT EXCEEDS	38	
90 PERCENT EXCEEDS	1.5	

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	15.7	10.3	12.7	13.1	18.7	23.7	24.7	52.8	43.0	16.1	8.40	12.0
MAX	266	42.7	83.3	53.6	200	375	248	518	272	136	15.0	136
(WY)	1966	1966	1965	1964	1982	1986	1965	1965	1995	1983	1965	1965
MIN	1.67	3.16	3.91	4.37	4.52	4.40	4.47	3.95	3.68	2.98	2.76	2.70
(WY)	1965	1978	1977	1977	1977	1977	1977	1976	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1965 - 1996

ANNUAL TOTAL	18724.8	14960.4	
ANNUAL MEAN	51.3	40.9	20.9
HIGHEST ANNUAL MEAN			97.3
LOWEST ANNUAL MEAN			3.90
HIGHEST DAILY MEAN	681	Jun 27	3430
LOWEST DAILY MEAN	4.7	Feb 17	8.4
ANNUAL SEVEN-DAY MINIMUM	5.4	Feb 11	8.6
INSTANTANEOUS PEAK FLOW			6050
INSTANTANEOUS PEAK STAGE			11.61
ANNUAL RUNOFF (AC-FT)	37140	29670	15170
TOTAL DIVERSION (AC-FT) a	212800	166400	
10 PERCENT EXCEEDS	156	21	15
50 PERCENT EXCEEDS	10	11	9.5
90 PERCENT EXCEEDS	8.8	8.8	5.6

a Diversion, in acre-feet, from French Meadows Reservoir to Hell Hole Reservoir through French Meadows Powerplant, provided by Placer County Water Agency.

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°08'09", long 120°28'39", in NE 1/4 NW 1/4 sec.24, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank 0.2 mi upstream from diversion dam, 0.5 mi downstream from Little Duncan Creek, 2 mi northwest of French Meadows, and 20 mi northeast of Foresthill.

DRAINAGE AREA.--9.94 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 5,270 ft above sea level, from topographic map. Prior to Sept. 3, 1965, at site 150 ft upstream at datum 9.56 ft higher.

REMARKS.--No regulation or diversion upstream from station. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 3,650 ft³/s, Dec. 22, 1964, gage height, 10.6 ft, from floodmarks, from rating curve extended above 400 ft³/s on basis of computation of flow over diversion dam; minimum daily, 0.10 ft³/s, several days during July and August 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1330	915	8.35	Feb. 19	1945	459	7.67
Jan. 16	1600	641	7.96	May 16	0600	1,510	9.03
Feb. 5	0445	817	8.21				

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	1.2	1.4	50	24	38	86	225	60	6.4	1.5	.70
2	1.3	1.2	2.6	45	22	40	84	225	60	6.0	1.4	.70
3	1.2	1.2	1.8	40	21	40	78	201	56	5.7	1.3	.71
4	1.2	1.1	13	35	430	42	74	171	51	5.3	1.4	.71
5	1.2	1.1	5.9	30	593	e36	75	156	44	5.0	1.3	.73
6	1.1	1.1	4.1	27	269	37	88	150	39	4.7	1.3	.77
7	1.1	1.1	5.8	26	169	36	113	147	35	4.4	1.2	.74
8	1.1	1.1	3.4	24	134	37	135	136	31	4.2	1.1	.72
9	1.1	1.1	2.8	23	114	42	147	132	27	4.0	1.1	.71
10	1.1	1.1	2.5	22	103	50	142	136	23	3.8	1.0	.71
11	1.1	1.1	110	20	97	65	124	158	20	3.6	.97	.69
12	1.1	1.1	555	20	99	54	110	191	18	3.5	1.0	.70
13	1.2	1.1	101	18	101	48	97	212	16	3.4	.99	1.3
14	1.1	1.1	46	17	98	46	101	205	15	3.2	.95	1.2
15	1.1	1.1	35	19	95	49	111	375	13	3.1	.90	2.9
16	1.1	1.1	27	246	142	54	182	924	12	2.9	.87	1.8
17	1.1	1.1	23	153	233	64	134	736	11	2.9	.86	1.2
18	1.1	1.0	20	95	211	76	105	619	11	2.8	.86	1.1
19	1.1	1.0	18	74	310	94	86	320	9.8	2.7	.86	1.1
20	1.1	1.0	17	56	252	103	73	214	9.2	2.6	.87	1.0
21	1.1	1.0	15	49	161	109	66	224	8.7	2.4	.87	.96
22	1.1	1.0	15	40	115	104	66	210	8.3	2.3	.84	.95
23	1.1	1.0	14	e36	89	83	79	159	7.8	2.2	.80	.95
24	1.1	1.0	13	e32	75	73	102	130	7.5	2.1	.84	.92
25	1.1	1.9	12	e30	63	65	121	115	7.6	1.9	.83	.90
26	1.1	4.1	12	e27	e51	60	156	107	10	1.8	.81	.88
27	1.1	1.4	12	e24	e45	62	166	98	9.8	1.8	.81	.84
28	1.1	1.3	12	e23	e43	106	156	88	8.2	2.0	.81	.84
29	1.1	1.2	22	e22	39	74	164	80	7.5	1.9	.77	.84
30	1.1	1.2	83	21	---	68	198	71	6.8	1.7	.73	.83
31	1.1	---	78	23	---	66	---	63	---	1.6	.72	---
TOTAL	34.9	37.1	1283.3	1367	4198	1921	3419	6978	643.2	101.9	30.56	29.10
MEAN	1.13	1.24	41.4	44.1	145	62.0	114	225	21.4	3.29	.99	.97
MAX	1.3	4.1	555	246	593	109	198	924	60	6.4	1.5	2.9
MIN	1.1	1.0	1.4	17	21	36	66	63	6.8	1.6	.72	.69
AC-FT	69	74	2550	2710	8330	3810	6780	13840	1280	202	61	58

e Estimated.

SACRAMENTO RIVER BASIN

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11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, 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	4.24	18.0	31.4	38.6	41.7	51.0	75.4	120	58.1	8.98	1.57	1.10
MAX	51.1	172	256	193	291	161	162	245	316	100	10.4	4.51
(WY)	1963	1984	1965	1970	1986	1986	1989	1993	1983	1983	1983	1982
MIN	.22	1.09	.76	1.76	3.24	5.75	12.7	12.9	2.71	.51	.19	.34
(WY)	1978	1977	1977	1991	1977	1977	1977	1992	1992	1977	1977	1960

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1960 - 1996
ANNUAL TOTAL	28742.1	20043.06	
ANNUAL MEAN	78.7	54.8	37.4
HIGHEST ANNUAL MEAN			86.8
LOWEST ANNUAL MEAN			4.27
HIGHEST DAILY MEAN	920 May 1	924 May 16	2300 Dec 22 1964
LOWEST DAILY MEAN	1.0 Nov 18	.69 Sep 11	.10 Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	1.0 Nov 18	.71 Aug 30	.11 Aug 8 1977
INSTANTANEOUS PEAK FLOW		1510 May 16	3650 Dec 22 1964
INSTANTANEOUS PEAK STAGE		9.03 May 16	10.60 Dec 22 1964
ANNUAL RUNOFF (AC-FT)	57010	39760	27120
10 PERCENT EXCEEDS	233	151	104
50 PERCENT EXCEEDS	31	13	8.9
90 PERCENT EXCEEDS	1.1	.94	.73

11427750 DUNCAN CREEK BELOW DIVERSION DAM, NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39°07'59", long 120°28'58", in NE 1/4 SE 1/4 sec.23, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 800 ft downstream from unnamed right bank tributary, 1,000 ft downstream from Duncan Creek Diversion Dam, and 20 mi northeast of Foresthill.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,210 ft above sea level, from topographic map.

REMARKS.--Natural flow affected by transmountain diversion through Duncan Creek Diversion Tunnel to French Meadows Reservoir (station 11427400). Maximum design flow of tunnel is 400 ft³/s. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 3,640 ft³/s, Dec. 22, 1964, gage height, 8.74 ft, in gage well, 10.0 ft, from floodmarks, from rating curve extended above 400 ft³/s on basis of computation of peak flow over diversion dam; no flow at times in 1965-66.

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	1.4	1.1	1.5	16	13	12	19	11	10	6.8	1.6	.71
2	1.4	1.1	3.2	15	12	12	19	11	10	6.3	1.5	.71
3	1.3	1.1	2.0	14	12	12	18	11	10	5.8	1.4	.71
4	1.2	1.1	10	14	270	13	17	10	10	5.5	1.5	.73
5	1.1	1.1	7.0	13	461	12	18	9.8	9.9	5.3	1.4	.73
6	1.1	1.1	4.8	13	93	12	19	9.5	9.9	5.1	1.4	.78
7	1.1	1.1	6.4	13	23	12	20	10	9.9	4.8	1.4	.75
8	1.1	1.1	3.7	12	21	12	21	11	9.9	4.5	1.3	.75
9	1.1	1.1	2.8	12	20	13	15	11	9.8	4.3	1.2	.74
10	1.1	1.1	2.5	12	20	14	12	11	9.5	4.0	1.2	.71
11	1.1	1.1	21	12	20	15	11	11	9.3	3.8	1.1	.69
12	1.1	1.1	465	12	21	14	10	12	9.3	3.6	1.1	.71
13	1.1	1.1	39	12	22	13	10	14	9.2	3.5	1.2	1.3
14	1.1	1.1	14	12	21	13	10	13	10	3.3	1.1	1.3
15	1.1	1.1	13	12	20	13	10	187	11	3.1	1.1	2.8
16	1.1	1.1	12	130	23	14	13	761	11	3.0	1.1	1.9
17	1.1	1.1	12	34	32	16	12	595	11	2.9	1.0	1.2
18	1.1	1.1	12	18	25	18	11	495	11	2.8	.99	1.1
19	1.1	1.1	12	17	75	20	10	177	11	2.7	.93	1.1
20	1.1	1.1	12	15	47	19	9.7	63	10	2.6	.93	1.0
21	1.1	1.1	11	15	23	18	9.3	75	9.6	2.4	.93	.99
22	1.1	1.1	11	14	18	17	10	72	9.1	2.3	.92	.99
23	1.1	1.1	11	e14	16	14	12	18	8.6	2.2	.87	.99
24	1.1	1.1	11	e13	15	13	13	14	8.3	2.1	.87	.93
25	1.1	1.6	11	e13	14	12	13	13	8.3	2.0	.87	.93
26	1.1	5.4	11	e13	13	11	13	12	9.6	1.9	.85	.92
27	1.1	1.6	11	e13	13	13	12	12	11	1.9	.81	.87
28	1.1	1.4	11	13	13	19	12	11	9.1	2.1	.81	.87
29	1.1	1.3	12	13	12	17	11	11	8.2	2.0	.80	.88
30	1.1	1.3	20	13	---	16	11	11	7.5	1.8	.75	.84
31	1.1	---	20	13	---	16	---	11	---	1.7	.74	---
TOTAL	35.0	39.0	795.9	555	1388	445	401.0	2693.3	291.0	106.1	33.67	29.63
MEAN	1.13	1.30	25.7	17.9	47.9	14.4	13.4	86.9	9.70	3.42	1.09	.99
MAX	1.4	5.4	465	130	461	20	21	761	11	6.8	1.6	2.8
MIN	1.1	1.1	1.5	12	12	11	9.3	9.5	7.5	1.7	.74	.69
AC-FT	69	77	1580	1100	2750	883	795	5340	577	210	67	59

e Estimated.

11427750 DUNCAN CREEK BELOW DIVERSION DAM, NEAR FRENCH MEADOWS, 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	2.16	8.80	20.2	25.4	22.1	19.1	15.6	30.0	11.1	3.82	1.38	1.06
MAX	17.3	76.1	244	163	237	80.3	91.7	149	53.1	21.9	5.87	3.61
(WY)	1983	1982	1965	1970	1986	1986	1982	1967	1983	1983	1983	1983
MIN	.061	1.15	.76	1.69	2.02	2.63	4.80	3.88	2.15	.44	.28	.090
(WY)	1966	1991	1977	1991	1974	1965	1974	1976	1965	1965	1977	1965

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1965 - 1996	
ANNUAL TOTAL	9541.3		6812.60			
ANNUAL MEAN	26.1		18.6		13.4	
HIGHEST ANNUAL MEAN					43.1	
LOWEST ANNUAL MEAN					2.16	
HIGHEST DAILY MEAN	721	May 1	761	May 16	2160	Dec 22 1964
LOWEST DAILY MEAN	1.1	Oct 5	.69	Sep 11	.00	Sep 10 1965
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 5	.73	Aug 30	.00	Sep 10 1965
INSTANTANEOUS PEAK FLOW			1040	May 16	3640	Dec 22 1964
INSTANTANEOUS PEAK STAGE			5.30	May 16	8.74	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	18930		13510		9690	
10 PERCENT EXCEEDS	47		19		15	
50 PERCENT EXCEEDS	9.8		9.9		5.2	
90 PERCENT EXCEEDS	1.1		1.0		.70	

11427760 MIDDLE FORK AMERICAN RIVER ABOVE MIDDLE FORK POWERPLANT, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'31", long 120°35'40", in NW 1/4 NW 1/4 sec.36, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 300 ft upstream from Middle Fork Powerplant, 3.7 mi upstream from Big Mosquito Creek, and 11 mi east of Foresthill.

DRAINAGE AREA.--87.8 mi².

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,540 ft above sea level, from topographic map. Prior to May 15, 1980, at datum 5.00 ft higher. May 15, 1980, to Oct. 11, 1984, at datum 4.00 ft higher.

REMARKS.--Considerable regulation by French Meadows Reservoir (station 11427400) 11 mi upstream. Transbasin diversions from French Meadows Reservoir to Hell Hole Reservoir (station 11428700) through French Meadows Powerplant (station 11427200). See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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. 13, 1980, gage height, 8.47 ft, datum then in use, from rating curve extended above 2,500 ft³/s; minimum daily, 5.3 ft³/s, Sept. 11, 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	21	18	18	112	191	209	316	163	210	67	31	19
2	20	18	22	97	176	202	360	156	158	64	31	19
3	20	18	21	89	166	213	318	148	124	60	31	18
4	20	18	42	83	874	387	284	139	117	54	31	18
5	20	18	33	77	1490	433	265	132	110	52	31	19
6	20	18	27	73	766	339	257	125	104	51	30	18
7	20	18	27	70	527	304	257	120	100	49	29	18
8	20	18	25	67	448	283	255	116	97	48	28	18
9	20	18	22	65	397	287	247	112	94	47	28	18
10	20	18	21	63	369	302	232	109	90	46	27	18
11	20	18	72	61	349	399	216	105	89	45	27	17
12	19	18	781	59	344	403	203	102	87	44	27	17
13	19	18	252	57	347	360	189	99	84	44	26	19
14	19	17	110	56	334	326	179	102	81	43	26	21
15	19	17	99	62	315	306	174	443	81	41	25	23
16	19	17	80	332	346	297	254	3570	79	40	25	22
17	19	17	68	308	441	293	236	2520	78	40	24	20
18	19	17	62	207	436	303	266	2140	76	39	24	19
19	18	17	58	251	883	314	224	1270	75	39	23	19
20	18	17	55	183	896	310	216	489	72	38	23	19
21	18	17	52	171	769	298	202	366	70	37	23	18
22	18	17	51	142	578	287	197	955	69	36	23	18
23	18	17	49	131	465	258	197	588	67	36	22	18
24	18	17	47	169	404	235	203	293	65	35	22	18
25	18	18	46	273	343	218	199	267	64	35	21	18
26	18	28	46	181	296	201	197	243	68	34	21	18
27	18	21	46	291	263	197	192	266	88	34	21	18
28	18	19	48	288	240	321	180	299	79	34	21	18
29	18	18	58	213	222	249	170	276	74	34	20	18
30	18	18	142	184	---	229	168	258	70	33	20	18
31	18	---	146	197	---	219	---	245	---	32	20	---
TOTAL	588	543	2626	4612	13675	8982	6853	16216	2720	1331	781	559
MEAN	19.0	18.1	84.7	149	472	290	228	523	90.7	42.9	25.2	18.6
MAX	21	28	781	332	1490	433	360	3570	210	67	31	23
MIN	18	17	18	56	166	197	168	99	64	32	20	17
AC-FT	1170	1080	5210	9150	27120	17820	13590	32160	5400	2640	1550	1110

11427760 MIDDLE FORK AMERICAN RIVER ABOVE MIDDLE FORK POWERPLANT, NEAR FORESTHILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.3	47.9	82.4	161	169	213	181	176	95.8	36.3	19.3	17.2
MAX	270	262	413	680	969	696	601	600	451	184	33.2	29.5
(WY)	1966	1984	1982	1970	1986	1986	1982	1982	1995	1983	1983	1982
MIN	7.43	12.9	12.2	15.7	18.4	21.7	19.3	21.5	15.4	8.64	6.35	6.58
(WY)	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1966 - 1996			
ANNUAL TOTAL	84021				59486							
ANNUAL MEAN	230				163				102			
HIGHEST ANNUAL MEAN									271			
LOWEST ANNUAL MEAN									14.3			
HIGHEST DAILY MEAN	1620				3570				5290			
LOWEST DAILY MEAN	17				17				5.3			
ANNUAL SEVEN-DAY MINIMUM	17				17				5.5			
INSTANTANEOUS PEAK FLOW					6840				9860			
INSTANTANEOUS PEAK STAGE					12.40				8.47			
ANNUAL RUNOFF (AC-FT)	166700				118000				73900			
10 PERCENT EXCEEDS	568				340				248			
50 PERCENT EXCEEDS	134				66				38			
90 PERCENT EXCEEDS	18				18				15			

SACRAMENTO RIVER BASIN

11427770 MIDDLE FORK AMERICAN RIVER BELOW INTERBAY DAM, NEAR FORESTHILL, CA

LOCATION.--Lat 39°01'35", long 120°36'09", in SW 1/4 SE 1/4 sec.26, T.14 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank at Interbay Dam (revised), 3.3 mi upstream from Big Mosquito Creek, and 10.6 mi east of Foresthill.

DRAINAGE AREA.--89.1 mi².

PERIOD OF RECORD.--October 1965 to current year (since October 1985, operated as low-flow station only).

GAGE.--Acoustic-velocity meter system. Elevation of gage is 2,470 ft above sea level, from topographic map. Prior to February 1986, water-stage recorder at same site. March 1986 to September 1987, nonrecording gage and V-notch sharp-crested weir at same site and datum as previous gage.

REMARKS.--Flow regulated by French Meadows Reservoir (station 11427400) and after Aug. 22, 1966, by Interbay Reservoir (usable capacity, 130 acre-ft between normal operating limits) 500 ft upstream. Water is diverted out of the basin from French Meadows Reservoir to Hell Hole Reservoir (station 11428700) and from Interbay Reservoir to Ralston Powerplant (station 11427765). Water is diverted into the basin from Hell Hole Reservoir to Middle Fork Powerplant (station 11428600) and through South Fork and Middle Fork Long Canyon Creek Diversion Tunnels (stations 11433060 and 11433080). See schematic diagram of Middle Fork American and Rubicon River basins. Beginning October 1985, only flows less than 35 ft³/s are computed.

COOPERATION.--Records provided by Placer County Water Agency, 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 (water years 1966-85), 9,900 ft³/s, Jan. 13, 1980, gage height, 7.95 ft; minimum daily, 1.0 ft³/s, Oct. 25-30, 1966, Jan. 19, 1967.

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	24	23	24	24	24	24	---	---	24	24	24
2	20	24	23	24	24	24	24	---	---	24	24	24
3	20	24	23	24	24	24	24	---	---	24	24	24
4	20	24	23	24	---	24	24	---	---	24	24	24
5	22	24	24	24	---	24	24	---	---	24	24	24
6	24	24	24	24	---	24	24	---	---	24	24	24
7	23	24	24	24	24	24	24	---	---	24	24	24
8	24	24	24	24	24	24	---	---	---	24	24	24
9	24	24	24	24	24	24	---	---	---	24	24	24
10	24	23	23	24	24	24	---	24	---	23	24	24
11	24	24	23	24	24	24	---	24	23	24	24	24
12	24	24	---	24	24	24	---	24	23	24	24	24
13	24	24	24	24	24	24	---	24	23	24	24	24
14	24	24	24	23	24	24	---	---	23	24	24	24
15	24	24	23	24	24	24	---	---	23	24	24	24
16	24	24	24	---	24	24	---	---	23	24	24	24
17	24	24	24	24	24	24	---	---	23	24	24	24
18	24	24	23	24	24	24	---	---	23	24	24	24
19	24	24	24	24	---	24	---	---	23	24	24	24
20	24	21	23	24	---	24	---	---	23	24	24	24
21	24	21	23	24	---	24	---	---	23	24	24	24
22	24	22	24	24	---	24	---	---	23	24	24	24
23	24	20	24	24	---	24	---	---	23	24	24	24
24	24	20	24	24	---	24	---	---	23	24	24	24
25	24	22	24	24	---	24	---	---	23	24	24	24
26	24	23	24	24	---	24	---	---	23	24	24	22
27	24	23	24	24	---	24	---	---	23	24	24	20
28	24	22	24	24	---	24	---	---	24	24	24	20
29	24	21	24	24	---	24	---	---	25	24	24	20
30	24	22	24	24	---	24	---	---	24	24	24	19
31	24	---	24	24	---	24	---	---	---	24	24	---
TOTAL	726	692	---	---	---	744	---	---	---	743	744	701
MEAN	23.4	23.1	---	---	---	24.0	---	---	---	24.0	24.0	23.4
MAX	24	24	---	---	---	24	---	---	---	24	24	24
MIN	20	20	---	---	---	24	---	---	---	23	24	19
AC-FT	1440	1370	---	---	---	1480	---	---	---	1470	1480	1390
a	41790	31180	24990	25110	42810	57590	56010	53520	51400	44000	44420	34030

a Diversion, in acre-feet, through Ralston Powerplant, provided by Placer County Water Agency.

11427770 MIDDLE FORK AMERICAN RIVER BELOW INTERBAY DAM, NEAR FORESTHILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1985, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.5	27.4	73.8	93.7	86.6	101	117	118	78.2	29.4	18.8	18.3
MAX	270	140	548	398	928	508	868	857	313	152	23.7	24.7
(WY)	1966	1984	1984	1980	1982	1983	1982	1982	1967	1983	1983	1983
MIN	5.84	6.38	6.22	6.15	9.32	7.61	11.6	11.1	11.3	7.52	5.86	5.68
(WY)	1978	1968	1968	1968	1968	1968	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

WATER YEARS 1966 - 1985

ANNUAL MEAN	66.0	
HIGHEST ANNUAL MEAN	347	1982
LOWEST ANNUAL MEAN	10.0	1968
HIGHEST DAILY MEAN	8090	Feb 16 1982
LOWEST DAILY MEAN	1.0	Oct 25 1966
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 25 1966
INSTANTANEOUS PEAK FLOW	9900	Jan 13 1980
INSTANTANEOUS PEAK STAGE	7.95	Jan 13 1980
ANNUAL RUNOFF (AC-FT)	47810	
10 PERCENT EXCEEDS	141	
50 PERCENT EXCEEDS	22	
90 PERCENT EXCEEDS	11	

SACRAMENTO RIVER BASIN

11427940 RUBICON-ROCKBOUND TUNNEL NEAR MEEKS BAY, CA

LOCATION.--Lat 38°59'16", long 120°13'29", in NE 1/4 SE 1/4 sec.8, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at tunnel intake 100 ft upstream from diversion dam on Rubicon River, 3.5 mi upstream from Rubicon Springs, and 6.4 mi southwest of Meeks Bay.

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

GAGE.--Water-stage recorder. Datum of gage is 6,533.23 ft above sea level (levels by Sacramento Municipal Utility District). Auxiliary water-stage recorder since Aug. 26, 1966, 220 ft downstream from tunnel outlet at different datum.

REMARKS.--Tunnel diverts water from Rubicon River to Rockbound Lake which flows into Buck Island Lake. Water is then diverted via Buck-Loon tunnel (station 11428300) to Loon Lake (station 11429350) for power development. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility District, 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	4.8	.06	.01	195	29	38	76	504	402	196	26	.05
2	4.1	.05	1.2	113	28	39	96	537	552	213	23	.04
3	3.6	.05	3.1	88	26	47	74	479	675	219	17	.04
4	3.0	.05	124	68	405	60	69	370	663	207	13	.04
5	2.6	.05	137	54	1100	43	79	349	594	178	11	.03
6	2.4	.05	74	46	684	46	106	392	584	149	9.8	.03
7	1.8	.05	42	44	286	46	159	388	655	162	9.2	.03
8	1.4	.04	29	45	173	42	237	437	621	166	8.6	.03
9	.91	.04	18	44	133	57	289	404	507	157	7.9	.02
10	.53	.03	12	43	113	67	248	441	445	148	7.3	.02
11	.23	.03	200	38	100	78	183	501	393	135	7.2	.02
12	.09	.03	971	36	101	63	156	636	375	147	7.8	.02
13	.08	.02	448	35	107	50	123	709	420	153	8.8	.03
14	.08	.02	174	34	108	42	133	829	366	173	8.9	.03
15	.08	.01	101	33	103	43	213	942	316	131	7.9	.04
16	.08	.01	76	113	140	53	266	934	311	103	6.6	.04
17	.08	.01	61	171	216	66	169	867	300	81	5.3	.04
18	.08	.01	53	97	191	97	114	836	275	67	4.2	.03
19	.08	.00	44	62	157	124	84	458	259	59	3.1	.03
20	.08	.00	39	49	127	147	71	289	273	50	2.0	.03
21	.08	.00	35	44	89	151	60	382	263	48	1.0	.03
22	.07	.00	33	39	72	154	68	614	206	50	.39	.03
23	.05	.00	32	37	67	112	113	415	196	52	.15	.02
24	.05	.00	28	34	58	78	289	284	210	49	.11	.02
25	.05	.00	27	34	53	62	355	267	179	49	.10	.02
26	.06	.00	26	36	50	53	386	333	170	44	.08	.02
27	.06	.00	26	40	46	59	427	394	151	37	.07	.01
28	.06	.00	26	36	44	78	344	343	68	36	.07	.01
29	.06	.05	30	35	41	63	298	356	11	36	.06	.02
30	.06	.08	246	33	---	54	426	367	134	32	.05	.02
31	.05	---	418	30	---	53	---	341	---	29	.05	---
TOTAL	26.75	0.74	3534.31	1806	4847	2165	5711	15398	10574	3356	196.73	0.84
MEAN	.86	.025	114	58.3	167	69.8	190	497	352	108	6.35	.028
MAX	4.8	.08	971	195	1100	154	427	942	675	219	26	.05
MIN	.05	.00	.01	30	26	38	60	267	11	29	.05	.01
AC-FT	53	1.5	7010	3580	9610	4290	11330	30540	20970	6660	390	1.7

11427940 RUBICON-ROCKBOUND TUNNEL NEAR MEEKS BAY, CA--Continued

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	17.0	48.4	43.7	45.9	44.4	65.2	153	359	315	113	19.0	10.9
MAX	149	277	204	222	187	196	295	655	789	519	168	91.0
(WY)	1983	1984	1965	1970	1986	1986	1989	1969	1983	1983	1983	1982
MIN	.000	.000	.000	.000	3.44	13.5	24.6	110	33.8	.77	.000	.000
(WY)	1964	1964	1977	1977	1991	1977	1975	1977	1976	1976	1964	1964

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1964 - 1996			
ANNUAL TOTAL	69194.05				47616.37							
ANNUAL MEAN	190				130				103			
HIGHEST ANNUAL MEAN									197			
LOWEST ANNUAL MEAN									30.5			
HIGHEST DAILY MEAN	971				1100				1120			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	137200				94450				74520			
10 PERCENT EXCEEDS	674				396				334			
50 PERCENT EXCEEDS	64				47				26			
90 PERCENT EXCEEDS	.06				.03				.00			

SACRAMENTO RIVER BASIN

11427960 RUBICON RIVER BELOW RUBICON DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 38°59'20", long 120°13'20", in NW 1/4 SW 1/4 sec.9, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, at outlet structure on diversion dam on Rubicon River, 3.3 mi upstream from Rubicon Springs, and 6.2 mi southwest of Meeks Bay.

PERIOD OF RECORD.--October 1991 to current year (low-flow records only). Unpublished records for water years 1964-91 available in files of the U.S. Geological Survey.

GAGE.--Differential-pressure gage and orifice control in outlet pipes. Auxiliary nonrecording gage 1,300 ft downstream at different datum. Datum of gage is 6,520 ft above sea level from topographic map. Prior to Sept. 4, 1991, nonrecording gage at site 1,300 ft downstream at different datum.

REMARKS.--Records not computed above 10 ft³/s. Flow regulated by Rubicon Reservoir. Flow over the spillway bypasses this station. Most of the water is diverted through Rubicon-Rockbound Tunnel (station 11427940) to Rockbound Lake, which flows into Buck Island Lake. Water is then diverted via Buck-Loon tunnel (station 11428300) to Loon Lake (station 11429350) for power development. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility District, 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.46	6.5	6.4	7.1	6.7	6.7	8.1	8.3	7.9	6.8	7.3
2	1.5	.68	6.5	6.4	7.2	6.7	6.7	8.4	8.1	7.8	7.0	7.3
3	1.5	.95	6.5	6.4	7.0	6.7	6.7	7.9	8.2	7.9	8.0	7.3
4	1.5	1.9	6.6	6.4	6.8	6.7	6.7	7.3	8.3	7.8	8.0	7.3
5	1.5	6.3	6.6	6.4	6.7	6.7	6.8	6.9	8.2	7.8	8.0	7.3
6	3.7	7.5	6.6	6.5	6.7	6.6	6.9	6.7	7.8	7.9	8.0	7.2
7	6.2	7.0	6.6	6.6	6.7	6.6	6.9	6.6	7.1	8.0	8.0	7.2
8	6.2	6.7	6.6	6.7	6.7	6.6	6.9	6.6	6.7	8.0	8.0	7.2
9	6.1	6.7	6.6	6.7	6.6	7.7	6.7	6.8	6.8	7.9	7.8	7.2
10	6.1	6.6	6.6	7.2	6.6	8.5	6.6	6.9	7.4	7.9	7.8	7.2
11	6.1	6.6	6.5	7.3	6.6	7.9	6.6	7.0	8.1	7.7	7.8	7.2
12	6.0	6.6	6.5	7.0	6.6	7.4	6.6	6.9	8.2	7.5	7.7	7.3
13	6.0	6.6	6.5	7.1	6.6	7.1	6.8	6.6	8.2	7.3	7.6	7.5
14	5.9	6.5	6.5	7.9	6.6	7.2	6.7	6.5	8.3	7.2	7.6	7.6
15	5.9	6.5	6.5	7.8	6.6	7.4	6.4	6.3	8.2	7.3	7.6	7.7
16	5.9	6.5	6.5	7.2	6.5	7.3	6.3	6.2	7.7	7.4	7.6	7.8
17	5.9	6.5	6.6	6.9	6.5	7.1	6.3	6.4	7.1	7.5	7.6	7.9
18	5.9	6.4	6.5	6.8	6.5	7.1	6.2	6.7	7.2	7.2	7.6	6.8
19	5.9	6.5	6.6	6.6	6.6	7.5	6.1	7.0	7.6	7.1	7.5	4.8
20	5.7	6.5	6.6	6.6	6.6	7.3	6.0	7.4	7.5	7.2	7.5	5.6
21	5.3	6.5	6.5	6.5	6.7	7.2	6.1	7.6	7.4	7.1	7.5	7.7
22	4.8	6.5	6.5	6.5	6.7	6.9	6.0	7.7	7.6	7.1	7.5	7.1
23	4.4	6.5	6.5	6.5	6.7	6.9	6.0	7.5	7.8	6.9	7.6	7.1
24	3.9	6.5	6.4	6.5	6.7	6.8	6.1	7.4	8.0	6.9	7.6	7.1
25	3.5	6.4	6.5	6.5	6.7	6.8	6.4	7.3	8.1	6.9	7.5	7.1
26	3.0	6.4	6.5	6.5	6.8	6.7	6.4	7.5	8.0	6.9	7.4	7.1
27	2.6	6.5	6.5	6.5	6.7	6.7	6.5	7.8	8.0	6.8	7.4	7.1
28	2.2	6.6	6.5	6.5	6.7	6.7	6.7	7.9	8.0	7.0	7.3	7.1
29	1.7	6.6	6.4	6.5	---	6.6	7.0	7.9	8.0	7.2	7.3	7.1
30	1.3	6.6	6.5	6.5	---	6.6	7.9	8.0	8.0	7.0	7.3	7.0
31	.81	---	6.5	6.8	---	6.6	---	8.2	---	6.8	7.3	---
TOTAL	128.51	175.09	202.3	208.7	187.5	217.3	196.7	224.0	233.9	228.9	235.2	214.2
MEAN	4.15	5.84	6.53	6.73	6.70	7.01	6.56	7.23	7.80	7.38	7.59	7.14
MAX	6.2	7.5	6.6	7.9	7.2	8.5	7.9	8.4	8.3	8.0	8.0	7.9
MIN	.81	.46	6.4	6.4	6.5	6.6	6.0	6.2	6.7	6.8	6.8	4.8
AC-FT	255	347	401	414	372	431	390	444	464	454	467	425

CAL YR 1994 TOTAL 1923.00 MEAN 5.27 MAX 7.9 MIN .46 AC-FT 3810
WTR YR 1995 TOTAL 2452.30 MEAN 6.72 MAX 8.5 MIN .46 AC-FT 4860

SACRAMENTO RIVER BASIN

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11427960 RUBICON RIVER BELOW RUBICON DAM, NEAR MEEKS BAY, CA--Continued

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	5.8	3.8	7.3	e6.9	7.0	7.1	7.2	7.0	8.0	6.5	6.4
2	6.9	5.7	3.8	6.9	e6.9	7.0	7.2	7.3	7.3	8.0	6.5	6.3
3	6.8	5.7	3.9	6.8	e6.9	7.0	7.1	7.2	7.5	8.1	6.5	6.3
4	6.8	5.6	4.2	6.7	e8.2	7.1	7.1	6.9	7.4	8.0	6.5	5.7
5	6.9	5.5	5.6	6.7	e9.3	7.0	7.1	6.9	7.3	7.9	6.5	4.7
6	7.0	5.4	6.8	6.7	e8.6	7.0	7.3	7.0	7.2	7.9	6.5	4.7
7	7.0	5.4	6.6	e6.7	8.1	7.0	7.5	7.0	7.3	7.9	6.5	4.7
8	7.0	5.3	6.5	e6.7	7.7	7.0	7.8	7.1	7.3	7.2	6.5	4.7
9	7.0	5.3	6.4	e6.7	7.5	7.1	8.0	7.0	7.1	7.1	6.5	4.7
10	7.0	5.2	6.4	e6.8	7.4	7.1	7.9	7.1	7.0	8.5	6.5	4.7
11	6.9	5.2	7.0	e7.0	7.3	7.2	7.6	7.3	6.9	8.5	6.5	4.7
12	6.8	5.1	8.1	e7.0	7.3	7.1	7.5	7.6	6.8	8.5	6.5	4.7
13	6.8	5.0	8.0	e7.0	7.3	7.0	7.4	7.7	6.9	8.5	6.5	4.6
14	6.8	4.8	7.2	e7.0	7.3	7.0	7.4	7.8	6.8	8.6	6.5	4.6
15	6.8	4.7	6.9	e7.0	7.3	7.0	7.7	7.1	6.7	8.5	6.5	4.6
16	6.8	4.6	6.8	e7.2	7.5	7.1	7.9	7.2	6.7	8.4	e6.5	4.7
17	6.8	4.6	6.7	e7.4	7.8	7.1	7.6	7.7	6.7	8.3	e6.5	5.3
18	6.8	4.6	6.7	e7.3	7.7	7.3	7.3	7.5	6.6	8.3	e6.5	6.3
19	6.8	4.5	6.6	e7.2	7.6	7.4	7.2	7.2	6.5	8.3	e6.5	6.3
20	6.8	4.4	6.6	e7.1	7.4	7.5	7.1	6.8	6.6	8.2	6.5	6.2
21	6.7	4.4	6.6	e7.0	7.3	7.5	7.1	7.0	6.5	8.2	6.3	6.2
22	6.7	4.4	6.5	e7.0	7.2	7.5	7.1	7.5	6.4	8.2	6.4	6.2
23	6.6	4.4	6.5	e7.0	7.1	7.3	7.3	7.1	6.3	7.6	6.4	6.0
24	6.5	4.4	6.5	e7.0	7.1	7.2	7.9	6.8	6.4	6.9	6.4	4.7
25	6.4	4.3	6.5	e7.0	7.0	7.1	8.2	6.7	6.3	6.8	6.4	3.0
26	6.3	4.3	6.5	e7.0	7.0	7.0	8.2	6.9	6.2	6.6	6.4	3.0
27	6.2	4.3	6.5	e6.9	7.0	7.1	8.4	7.0	6.2	6.5	6.4	3.0
28	6.1	4.3	6.5	e6.9	7.0	7.1	8.2	6.9	6.4	6.5	6.4	3.0
29	6.1	4.1	6.5	e6.9	7.0	7.1	8.0	6.9	7.3	6.5	6.4	3.0
30	5.9	3.8	7.4	e6.9	---	7.0	7.7	7.0	7.9	6.5	6.4	2.6
31	5.8	---	7.9	e6.9	---	7.0	---	6.9	---	6.5	6.4	---
TOTAL	206.8	145.1	198.5	215.7	215.7	220.9	226.9	221.3	205.5	239.5	200.3	145.6
MEAN	6.67	4.84	6.40	6.96	7.44	7.13	7.56	7.14	6.85	7.73	6.46	4.85
MAX	7.0	5.8	8.1	7.4	9.3	7.5	8.4	7.8	7.9	8.6	6.5	6.4
MIN	5.8	3.8	3.8	6.7	6.9	7.0	7.1	6.7	6.2	6.5	6.3	2.6
AC-FT	410	288	394	428	428	438	450	439	408	475	397	289
CAL YR 1995	TOTAL 2496.8 MEAN 6.84 MAX 8.5 MIN 3.8 AC-FT 4950											
WTR YR 1996	TOTAL 2441.8 MEAN 6.67 MAX 9.3 MIN 2.6 AC-FT 4840											

e Estimated.

SACRAMENTO RIVER BASIN

11428300 BUCK-LOON TUNNEL NEAR MEEKS BAY, CA

LOCATION.--Lat 39°00'17", long 120°15'21", in SE 1/4 NW 1/4 sec.6, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at tunnel intake near left abutment of diversion dam, 7.4 mi southwest of Meeks Bay.

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

GAGE.--Water-stage recorder. Datum of gage is 6,425.0 ft above sea level (levels by Sacramento Municipal Utility District).

REMARKS.--Tunnel diverts water from Buck Island Lake and discharges into Loon Lake (station 11429350). Buck Island Lake receives water from Rubicon River via Rubicon-Rockbound Tunnel (station 11427940). Gates are closed at the tunnel entrance during the summer and opened during the fall to raise the level of Buck Island Lake for recreational purposes. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility District, 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	1.5	1.2	.00	343	38	51	90	617	472	177	22	.24
2	1.7	1.2	.00	176	36	49	132	677	609	226	20	.24
3	1.9	1.2	.00	123	34	56	113	642	764	236	16	.24
4	1.8	1.2	4.5	96	236	85	96	515	793	236	13	.24
5	1.6	1.2	139	77	1140	87	97	456	735	206	11	.24
6	1.5	1.1	117	63	952	65	120	497	688	164	9.0	.24
7	1.5	1.1	72	56	491	62	181	505	759	158	8.0	.24
8	1.5	1.1	48	54	269	57	284	548	770	170	7.2	.24
9	1.5	1.1	145	54	190	62	377	523	663	164	6.4	.24
10	1.5	1.0	51	54	154	79	358	547	571	156	5.8	.24
11	1.5	1.0	120	51	135	100	271	595	515	140	5.4	.24
12	1.5	.98	1110	46	128	98	222	789	473	139	5.2	.24
13	1.5	.95	784	44	133	77	176	929	518	143	5.5	.24
14	1.5	.92	312	42	136	62	161	1070	489	171	6.1	.24
15	1.5	.89	166	43	132	56	242	1150	423	150	6.4	.24
16	1.5	.86	113	101	157	62	367	1160	400	113	6.1	.24
17	1.5	.82	86	242	286	76	284	1120	389	87	5.3	.24
18	1.4	.78	71	165	314	106	183	1100	363	68	4.5	.24
19	1.4	.75	61	111	255	145	127	761	330	57	3.3	.24
20	1.4	.70	53	75	215	181	103	425	331	50	1.8	.24
21	1.4	.65	47	70	153	197	84	413	342	43	1.1	.24
22	1.4	.58	43	58	114	208	82	771	282	41	.68	.24
23	1.4	.48	42	51	92	172	114	619	249	43	.43	.24
24	1.4	.37	38	57	86	119	303	412	259	44	.27	.24
25	1.4	.29	36	59	75	91	480	349	246	42	.25	.24
26	1.3	.36	34	48	67	75	497	417	231	40	.25	.24
27	1.3	.26	33	56	62	74	556	493	218	35	.25	.24
28	1.3	.16	33	56	58	102	484	462	63	31	.24	.24
29	1.3	.07	36	46	54	95	396	455	10	30	.24	.24
30	1.3	.02	199	43	---	80	504	471	64	28	.24	.24
31	1.3	---	544	40	---	72	---	443	---	25	.24	---
TOTAL	45.5	23.29	4537.50	2600	6192	2901	7484	19931	13019	3413	172.19	7.20
MEAN	1.47	.78	146	83.9	214	93.6	249	643	434	110	5.55	.24
MAX	1.9	1.2	1110	343	1140	208	556	1160	793	236	.22	.24
MIN	1.3	.02	.00	40	34	49	82	349	10	25	.24	.24
AC-FT	90	46	9000	5160	12280	5750	14840	39530	25820	6770	342	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

	MEAN	22.3	65.9	59.9	64.0	59.6	86.1	196	458	393	133	20.9	13.6
MAX	182	405	264	297	254	239	356	861	993	643	197	116	
(WY)	1983	1984	1965	1970	1986	1989	1989	1969	1983	1995	1983	1982	
MIN	.000	.000	.000	.25	5.46	19.1	36.8	145	31.8	.97	.000	.000	
(WY)	1964	1964	1977	1991	1991	1977	1967	1977	1976	1987	1964	1964	

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	88213.00	60325.68	
ANNUAL MEAN	242	165	131
HIGHEST ANNUAL MEAN			245
LOWEST ANNUAL MEAN			39.2
HIGHEST DAILY MEAN	1110	Dec 12	1160
LOWEST DAILY MEAN	.00	Dec 1	.00
ANNUAL SEVEN-DAY MINIMUM	.07	Nov 27	.07
ANNUAL RUNOFF (AC-FT)	175000	119700	95060
10 PERCENT EXCEEDS	864	504	417
50 PERCENT EXCEEDS	85	62	35
90 PERCENT EXCEEDS	1.3	.24	.04

11428400 LITTLE RUBICON RIVER BELOW BUCK ISLAND DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°00'18", long 120°15'19", in SW 1/4 NW 1/4 sec.6, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, at outlet structure on Buck Island Diversion Dam, 7.4 mi southwest of Meeks Bay.

DRAINAGE AREA.--6.00 mi².

PERIOD OF RECORD.--October 1990 to current year (low-flow records only). Unpublished records for water years 1964-90 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,420 ft above sea level, from topographic map. Aug. 14, 1964, to Oct. 4, 1973, nonrecording gage at site 60 ft downstream at different datum. Nonrecording gage at present site Oct. 4, 1973, to Aug. 26, 1986, at different datum and Aug. 27, 1986, to Sept. 30, 1990, at same datum.

REMARKS.--No records computed above 2 ft³/s. Flow regulated by Buck Island Reservoir. Flow over the spillway bypasses this station. Most of the water is diverted at Buck Island Reservoir via Buck-Loon Tunnel (station 11428300) to Loon Lake (station 11429350). Buck Island Lake receives water from Rubicon River via Rubicon-Rockbound Tunnel (station 11427940). See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility District, 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	1.2	1.2	1.2	1.5	1.2	1.3	1.3	1.7	1.5	1.1	1.1	1.2
2	1.2	1.2	1.4	1.4	1.2	1.2	1.4	1.7	1.5	1.1	1.1	1.2
3	1.2	1.2	1.4	1.3	1.1	1.2	1.3	1.7	1.6	1.1	1.1	1.2
4	1.2	1.2	1.4	1.3	1.3	1.2	1.3	1.6	1.6	1.1	1.1	1.2
5	1.2	1.2	1.6	1.3	---	1.2	1.3	1.6	1.6	1.0	1.1	1.2
6	1.2	1.2	1.7	1.2	---	1.2	1.3	1.6	1.5	1.0	1.1	1.2
7	1.2	1.2	1.7	1.2	1.6	1.2	1.4	1.6	1.6	.99	1.1	1.2
8	1.2	1.2	1.6	1.2	1.5	1.2	1.5	1.6	1.6	1.1	1.1	1.2
9	1.2	1.2	1.5	1.2	1.4	1.2	1.6	1.6	1.5	1.1	1.1	1.2
10	1.2	1.2	1.2	1.2	1.3	1.3	1.6	1.6	1.5	1.0	1.1	1.2
11	1.3	1.2	1.3	1.2	1.4	1.2	1.5	1.6	1.4	1.1	1.1	1.2
12	1.3	1.2	---	1.2	1.3	1.3	1.4	1.8	1.3	1.2	1.1	1.2
13	1.3	1.2	---	1.2	1.3	1.3	1.4	1.8	1.3	1.2	1.1	1.2
14	1.3	1.2	1.5	1.2	1.3	1.3	1.4	---	1.3	1.1	1.1	1.2
15	1.3	1.2	1.4	1.2	1.4	1.3	1.4	---	1.2	1.1	1.1	1.2
16	1.3	1.2	1.3	1.3	1.4	e1.3	1.5	---	1.2	1.1	e1.1	1.2
17	1.3	1.2	1.3	1.4	1.5	e1.3	1.5	---	1.2	1.1	e1.1	1.2
18	1.3	1.2	1.2	1.4	1.4	e1.3	1.4	---	1.2	1.1	e1.1	1.2
19	1.3	1.2	1.2	1.3	1.4	e1.4	1.4	---	1.1	1.0	e1.1	1.2
20	1.3	e1.2	1.2	1.3	1.4	e1.4	1.3	1.4	1.1	1.0	1.1	1.2
21	1.3	e1.2	1.2	1.3	1.3	1.4	1.3	1.4	1.1	1.0	1.2	1.3
22	1.3	1.2	1.2	1.3	1.3	1.4	1.3	1.6	1.1	1.1	1.2	1.3
23	1.3	1.2	1.2	1.3	1.3	1.4	1.3	1.5	1.0	1.2	1.2	1.3
24	1.3	1.2	1.2	1.3	1.3	1.3	1.5	1.4	1.0	1.2	1.2	1.3
25	1.3	1.2	1.2	1.3	1.3	1.3	1.6	1.4	1.0	1.2	1.2	1.3
26	1.3	1.2	1.2	e1.3	1.3	1.3	1.6	1.4	1.0	1.2	1.2	1.3
27	1.3	1.1	1.2	e1.3	1.3	1.3	1.6	1.4	1.0	1.2	1.2	1.2
28	1.3	1.1	1.2	e1.3	1.3	1.3	1.6	1.4	1.1	1.1	1.2	1.2
29	1.3	1.2	1.2	e1.3	1.3	1.3	1.6	1.4	1.1	1.1	1.2	1.2
30	1.3	1.1	1.4	1.3	---	1.3	1.6	1.4	1.1	1.1	1.2	1.2
31	1.2	---	1.6	1.2	---	1.3	---	1.4	---	1.1	1.2	---
TOTAL	39.2	35.7	---	39.7	---	39.9	43.2	---	38.3	34.09	35.2	36.6
MEAN	1.26	1.19	---	1.28	---	1.29	1.44	---	1.28	1.10	1.14	1.22
MAX	1.3	1.2	---	1.5	---	1.4	1.6	---	1.6	1.2	1.2	1.3
MIN	1.2	1.1	---	1.2	---	1.2	1.3	---	1.0	.99	1.1	1.2
AC-FT	78	71	---	79	---	79	86	---	76	68	70	73

e Estimated.

SACRAMENTO RIVER BASIN

11428700 HELL HOLE RESERVOIR NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'54", long 120°24'50", in SE 1/4 NW 1/4 sec.16, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi upstream from Hell Hole Dam on Rubicon River and 15.6 mi west of Meeks Bay.

DRAINAGE AREA.--114 mi².

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Placer County Water Agency).

REMARKS.--Reservoir is formed by rockfill dam with earth core. Storage began Dec. 6, 1965. Usable capacity, 207,342 acre-ft between elevations 4,287.65 ft, invert of river outlet, and 4,630.0 ft, crest of ogee spillway. Dead storage 248 acre-ft. Reservoir is used to store water for hydroelectric power. Water is diverted into reservoir from French Meadows Reservoir (11427400) on the Middle Fork American River through French Meadows Powerplant (station 11427200). Water is diverted out of reservoir to the Middle Fork American River through Middle Fork Powerplant. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 213,300 acre-ft, May 16, 1996, elevation, 4,634.5 ft; minimum since reservoir first filled, 37,499 acre-ft, Mar. 23, 1973, elevation, 4,428.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 213,300 acre-ft, May 16, elevation, 4,634.5 ft; minimum, 113,200 acre-ft, Sept. 29, elevation, 4,538.7 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Placer County Water Agency in 1966)

4,340	5,220	4,400	24,200	4,550	122,700
4,360	9,840	4,450	49,600	4,600	171,900
4,380	16,200	4,500	83,000	4,650	233,400

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	165000	141300	122600	123300	123100	170600	185900	199800	208000	194400	169400	136800
2	165500	140300	121800	123000	122900	170500	187000	201300	208100	194100	168600	135700
3	166200	139700	121000	122500	123000	170600	187500	202500	208100	193600	167500	135100
4	166700	139200	120800	122400	129000	172000	187700	203400	208100	193100	166300	134200
5	167200	138500	119900	121800	139900	172500	187800	204100	208100	192100	165200	133000
6	167400	137900	119100	121800	143000	172800	187800	205000	208000	191300	164200	132000
7	167400	137300	118300	121600	144600	172900	188200	205800	208000	190400	163300	131400
8	167200	136700	117800	120900	145900	173000	188900	206500	207800	189700	162300	130500
9	166100	136400	117000	120200	147000	173300	189700	207100	207700	188900	161300	129500
10	164900	136700	116500	119500	147900	173900	190300	208100	207200	188100	160100	129000
11	163600	136200	117200	119000	148900	175000	190600	208600	206800	187100	159300	128100
12	162400	135600	127200	118500	150300	175800	190700	208700	206500	186200	158300	127000
13	161200	135200	127800	118400	151900	176200	190300	208800	206100	185300	157400	126000
14	160000	134500	128000	118200	153500	176400	190000	208800	205700	184400	156300	125000
15	158700	133900	128500	117600	154500	176600	190300	211000	205500	183700	155400	123900
16	157600	133400	128900	119500	156100	177000	192000	210900	205000	182800	154600	123000
17	156300	133000	128600	120400	159600	177400	192500	211100	204600	181800	153400	122000
18	154900	132100	127900	120800	162200	178200	192700	209600	203900	181000	152400	120900
19	153600	131200	127100	121300	166600	179300	192600	208700	203400	180100	151400	119900
20	152400	131400	126300	121500	169300	180300	192400	208500	202700	179300	150500	118900
21	151300	131400	125400	121900	171100	181400	191900	208800	202100	178500	149500	117900
22	150000	130800	124400	121800	171900	182300	191500	208600	201400	177400	148500	117300
23	148800	129800	124100	121500	172100	182800	191600	208200	200300	176500	147500	116700
24	147500	128800	123900	121800	172200	183000	192400	208100	198800	175500	146600	116300
25	146300	127800	123700	122000	172200	183100	193100	208100	197600	174600	145600	115900
26	145100	127000	122900	122000	171900	183100	194300	208100	196400	173600	144500	115600
27	144500	125900	122000	122700	171500	183100	195500	208000	195400	173800	143100	114800
28	144000	125000	121200	122900	171000	184300	196200	208000	194500	173000	141400	113700
29	143400	124300	120600	123000	170900	184500	197000	208100	195100	172400	140300	113200
30	142900	123500	121900	123100	---	184600	198300	208100	194900	171300	139200	113300
31	142400	---	123000	123100	---	184600	---	208100	---	170300	138000	---
MAX	167400	141300	128900	123300	172200	184600	198300	211100	208100	194400	169400	136800
MIN	142400	123500	116500	117600	122900	170500	185900	199800	194500	170300	138000	113200
a	4571.8	4550.9	4550.3	4550.4	4599.1	4611.1	4622.5	4630.4	4619.7	4598.6	4567.2	4538.8
b	-21900	-18900	-500	+100	+47800	+13700	+13700	+9800	-13200	-24600	-32300	-24700

CAL YR 1995 b +46600

WTR YR 1996 b -51000

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

11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'24", long 120°24'25", in NE 1/4 NE 1/4 sec.21, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 600 ft downstream from outlet of dam, and 15.3 mi west of Meeks Bay.

DRAINAGE AREA.--114 mi².

PERIOD OF RECORD.--November 1965 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 4,231.52 ft above sea level (levels by Placer County Water Agency).

REMARKS.--Flow completely regulated by Hell Hole Reservoir (station 11428700) 600 ft upstream from station. During years when Hell Hole Dam spills, records include flow which bypasses the station. Transbasin diversions upstream from station through Buck-Loon Tunnel (station 11428300) to Loon Lake Reservoir (station 11429350); from Middle Fork American River basin through tunnel from French Meadows Reservoir (station 11427400) to Hell Hole Reservoir; from Hell Hole Reservoir through tunnel to Middle Fork Powerplant (station 11428600). Diversion began Sept. 8, 1966. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s, May 16, 1996, including flow over spillway; no flow Aug. 25 to Sept. 11, 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	30	23	22	13	14	15	20	20	261	23	23	22
2	30	22	22	13	14	15	19	20	270	23	23	22
3	30	22	22	13	14	18	16	20	330	23	23	22
4	30	22	23	12	41	25	15	19	362	23	23	22
5	30	22	22	12	40	18	14	19	340	23	23	22
6	25	22	22	12	24	15	14	19	307	23	23	22
7	22	22	22	12	20	14	15	19	269	23	23	22
8	22	22	22	12	19	15	15	19	209	23	23	22
9	22	22	22	12	19	16	15	19	85	23	23	22
10	22	22	22	12	18	16	15	82	29	22	23	21
11	22	22	24	12	18	18	15	509	24	22	22	21
12	22	22	42	12	18	17	14	846	23	22	23	22
13	22	22	28	12	18	15	14	1020	23	26	23	22
14	22	22	24	12	17	14	14	1190	23	26	23	22
15	22	23	17	12	17	14	14	3310	23	23	23	22
16	22	22	13	20	17	14	18	8720	22	23	23	22
17	22	23	13	16	21	14	17	4680	22	23	23	22
18	25	23	13	17	21	14	18	4710	22	23	23	22
19	23	23	13	17	34	15	16	1550	22	23	23	22
20	23	23	13	14	27	15	15	789	22	23	23	22
21	22	23	13	13	24	15	15	819	22	23	23	22
22	22	23	12	13	19	15	15	1060	22	23	23	22
23	22	23	12	22	18	15	14	672	22	23	22	22
24	23	23	12	33	17	15	15	377	22	23	22	22
25	23	23	12	36	16	14	15	281	22	24	22	22
26	23	23	12	32	16	14	16	310	23	23	22	22
27	23	23	12	32	15	14	16	310	23	23	26	22
28	23	23	12	22	15	17	15	280	23	23	31	22
29	23	23	13	15	15	15	18	309	23	23	30	25
30	23	22	15	13	---	15	20	320	24	23	22	28
31	23	---	15	15	---	14	---	320	---	23	22	---
TOTAL	738	675	561	513	586	480	472	32638	2914	717	724	667
MEAN	23.8	22.5	18.1	16.5	20.2	15.5	15.7	1053	97.1	23.1	23.4	22.2
MAX	30	23	42	36	41	25	20	8720	362	26	31	28
MIN	22	22	12	12	14	14	14	19	22	22	22	21
AC-FT	1460	1340	1110	1020	1160	952	936	64740	5780	1420	1440	1320
a	42150	31330	22270	17540	29100	44650	53050	55820	51100	43990	44530	33730

a Diversion, in acre-feet, from Hell Hole Reservoir through Middle Fork Powerplant, provided by Placer County Water Agency.

SACRAMENTO RIVER BASIN

11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.6	16.9	25.4	16.3	22.2	32.9	23.0	73.2	107	41.1	14.7	16.1
MAX	40.6	25.8	318	30.8	172	478	129	1053	1007	303	23.6	36.7
(WY)	1989	1984	1982	1969	1982	1986	1982	1996	1995	1983	1995	1989
MIN	7.14	7.51	7.57	6.24	6.34	6.33	7.78	7.92	7.74	6.93	6.50	6.43
(WY)	1974	1977	1989	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1966 - 1996			
ANNUAL TOTAL	46596.9				41685							
ANNUAL MEAN	128				114				34.4			
HIGHEST ANNUAL MEAN									126			
LOWEST ANNUAL MEAN									7.11			
HIGHEST DAILY MEAN	1740				8720				8720			
LOWEST DAILY MEAN	7.1				12				.00			
ANNUAL SEVEN-DAY MINIMUM	8.6				12				.00			
INSTANTANEOUS PEAK FLOW					12300				12300			
ANNUAL RUNOFF (AC-FT)	92420				82680				24960			
TOTAL DIVERSION (AC-FT) a	514800				469300							
10 PERCENT EXCEEDS	395				33				26			
50 PERCENT EXCEEDS	24				22				17			
90 PERCENT EXCEEDS	11				14				8.5			

a Diversion, in acre-feet, from Hell Hole Reservoir through Middle Fork Powerplant, provided by Placer County Water Agency.

11429350 LOON LAKE NEAR MEEKS BAY, CA

LOCATION.--Lat 38°58'59", long 120°19'22", in SE 1/4 SW 1/4 sec.8, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerplant intake structure, 1.6 mi southwest of right bank end of Loon Lake Dam on Gerje Creek, and 10 mi southwest of Meeks Bay.
DRAINAGE AREA.--7.96 mi²

RESERVOIR STORAGE RECORDS

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

REVISED RECORDS.--WDR CA-76-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

Prior to Sept. 23, 1975, at site 1.6 mi northeast on right bank end of Loon Lake Dam at same datum.

REMARKS.--Reservoir is formed by an earthfill dam completed Dec. 27, 1963; storage began Dec. 5, 1963. Prior to September 1962, reservoir was formed by granite-block dam built in 1884, capacity, 8,000 acre-ft. Usable capacity, 73,868 acre-ft, between elevations 6,325 ft, invert of fishwater release valve, and 6,410 ft, crest of spillway. Dead storage, 2,300 acre-ft. Lake receives water from Rubicon River via Rubicon-Rockbound tunnel to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck-Loon Tunnel (stations 11427940, 11428300). Records, including extremes, represent total contents. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 77,700 acre-ft, June 6, 1969, elevation, 6,411.1 ft; minimum since reservoir first filled, 3,262 acre-ft, Nov. 8, 9, 1988, elevation, 6,328.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 77,092 acre-ft, May 17, elevation, 6,410.66 ft; minimum, 29,099 acre-ft, Dec. 1, 2, elevation, 6,370.81 ft.

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

(Based on table provided by Sacramento Municipal Utility District recomputed October 1991)

6,330	3,478	6,370	28,323
6,340	7,116	6,390	50,058
6,350	12,469	6,412	78,983
6,360	19,570		

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	34287	29856	29099	42469	49552	62743	60379	66722	73776	75358	66708	57399
2	33956	29827	29099	42856	49624	62221	60521	67887	74011	75553	66655	57297
3	33780	29788	29119	43129	49708	61635	60612	68911	74538	75595	66628	57196
4	33739	29759	29235	43334	51197	61648	60676	69709	75274	75567	66615	57132
5	33677	29729	29593	43529	54496	61596	60521	70347	75330	75553	66602	57095
6	33636	29690	29885	43666	56589	61207	60573	70715	75386	75414	66575	57044
7	33616	29661	30052	43781	57729	60702	60909	71083	76084	75428	66522	56703
8	33585	29632	30071	43896	58416	60405	61557	71589	76014	75330	66495	56123
9	33554	29613	30356	44022	58901	60289	62378	71931	75804	75274	66188	55445
10	33503	29593	30415	44126	59273	60160	62992	72631	75609	75372	65391	55045
11	33451	29564	31087	44206	59645	59980	62940	72631	75302	75525	64280	54995
12	33451	29535	34724	44287	60031	60070	63018	73196	74954	75707	63648	54957
13	33379	29515	36560	44356	60302	60083	62508	73873	75121	75414	62639	54945
14	33267	29486	37309	44425	60573	60044	62000	74829	74843	75762	61909	54908
15	33164	29389	37827	44587	60780	59877	61752	76182	74344	75581	61142	54920
16	32991	29360	38098	45282	60909	59774	62665	77022	74177	75302	60663	54895
17	32675	29331	38239	45923	61713	59504	63110	77092	74191	74413	60147	54845
18	32411	29322	38391	46485	62665	59504	63254	76826	74260	73472	59375	54733
19	32199	29283	38511	46826	63714	59774	63228	76223	74871	73099	59209	54596
20	31316	29273	38620	47039	64557	60070	62796	75149	75483	72741	59170	54546
21	30790	29235	38686	47416	65126	60444	62273	74607	75567	72013	59145	54210
22	30701	29215	38806	47570	65192	60909	61922	75010	75107	71548	59093	54123
23	30671	29206	38860	47807	65165	61077	61974	74732	75052	71138	59042	53763
24	30248	29177	38915	48271	65192	61129	62208	74149	75107	70620	59029	53170
25	30199	29196	38959	48462	65073	60974	62770	73707	75497	70184	59004	52763
26	30179	29215	39014	48569	64821	60612	63753	73679	75721	70021	58889	52604
27	30150	29177	39090	49023	64240	59992	64742	73845	75734	70035	58697	52358
28	30140	29167	39145	49155	63543	60018	65126	73845	75609	69682	58072	52321
29	29944	29138	39354	49251	63280	60108	65258	73886	75525	68722	57843	52113
30	29895	29138	40182	49371	---	60083	65882	73997	75386	67860	57487	52064
31	29876	---	41634	49479	---	60083	---	73983	---	67283	57449	---
MAX	34287	29856	41634	49479	65192	62743	65882	77092	76084	75762	66708	57399
MIN	29876	29138	29099	42469	49552	59504	60379	66722	73776	67283	57449	52064
a	6371.61	6370.83	6382.78	6389.52	6400.49	6396.03	6402.46	6408.43	6409.44	6403.51	6395.97	6391.65
b	-4432	-738	+12496	+7845	+13801	-3197	+5799	+8101	+1403	-8103	-9834	-5385

CAL YR 1995 MAX 76182 MIN 19761 b +5447

WTR YR 1996 MAX 77092 MIN 29099 b +17756

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11429350 LOON LAKE NEAR MEEKS BAY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June to September 1996.

SITE 1 AT EAST END (Lat 39°00'21", long 120°17'10", in NW 1/4 NW 1/4 sec.3, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)
JUN											
04...	1430	6409	29.0	0.0	63	6.7	13.5	29.0	605	8.8	107
				3.0	63	6.5	13.5	--	605	8.8	107
				6.0	62	6.4	12.5	--	605	8.8	105
				9.0	63	6.3	12.0	--	605	8.9	105
				12.0	62	6.3	11.0	--	605	9.0	104
				15.0	62	6.3	11.0	--	605	9.1	104
				18.0	62	6.3	11.0	--	605	9.0	103
				21.0	62	6.2	10.5	--	605	9.0	103
				24.0	62	6.2	10.5	--	605	9.1	102
				27.0	62	6.2	10.5	--	605	9.1	102
SEP											
17...	1116	6394	46.0	0.0	69	6.2	16.5	40.0	605	7.2	93
				3.0	69	6.1	16.5	--	605	7.2	93
				6.0	69	6.1	16.5	--	605	7.2	93
				9.0	69	6.0	16.5	--	605	7.2	93
				12.0	69	6.0	16.5	--	605	7.2	93
				15.0	69	6.1	16.5	--	605	7.1	92
				18.0	69	6.1	16.5	--	605	7.1	92
				21.0	69	6.1	16.5	--	605	7.1	92
				24.0	69	6.1	16.5	--	605	7.2	93
				27.0	69	6.1	16.5	--	605	7.1	92
				30.0	69	6.1	16.5	--	605	7.1	92
				33.0	69	6.1	16.5	--	605	7.1	92
				36.0	69	6.1	16.5	--	605	7.1	92
				39.0	69	6.1	16.5	--	605	7.1	92
				42.0	69	6.1	16.5	--	605	7.1	92

11429350 LOON LAKE NEAR MEEKS BAY, CA--Continued

SITE 2 NEAR SPILLWAY (Lat 39°00'08", long 120°18'32", in SW 1/4 NW 1/4 sec.4, T.13 N., R.15 E.,
El Dorado County, Hydrologic Unit 18020128)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN											
04...	1500	6409	78.0	0.0	60	6.4	12.0	35.0	605	9.0	106
				3.0	60	6.3	12.0	--	605	9.0	105
				6.0	60	6.3	11.5	--	605	9.0	104
				9.0	60	6.2	11.0	--	605	9.0	103
				12.0	60	6.2	10.5	--	605	9.1	103
				15.0	60	6.2	10.5	--	605	9.1	102
				18.0	61	6.2	10.5	--	605	9.1	102
				21.0	61	6.2	10.0	--	605	9.1	102
				24.0	61	6.2	10.0	--	605	9.1	102
				27.0	60	6.2	10.0	--	605	9.1	102
				30.0	61	6.2	10.0	--	605	9.1	102
				33.0	61	6.2	9.5	--	605	9.2	102
				36.0	60	6.2	9.5	--	605	9.2	101
				39.0	60	6.2	9.0	--	605	9.2	100
				42.0	60	6.2	8.0	--	605	9.3	99
				45.0	60	6.2	8.0	--	605	9.3	99
				48.0	60	6.2	8.0	--	605	9.2	98
				51.0	61	6.1	7.5	--	605	9.2	98
				54.0	60	6.1	7.5	--	605	9.2	97
				57.0	61	6.1	7.5	--	605	9.2	97
				60.0	60	6.1	7.5	--	605	9.2	96
				63.0	60	6.1	7.5	--	605	9.2	96
				66.0	60	6.1	7.0	--	605	9.2	96
				69.0	61	6.1	7.0	--	605	9.1	95
				72.0	60	6.1	7.0	--	605	9.1	95
				75.0	61	6.1	7.0	--	605	9.1	95
SEP											
17...	1152	6394	70.0	0.0	67	6.3	16.5	41.0	605	7.2	93
				3.0	67	6.2	16.5	--	605	7.2	93
				6.0	67	6.2	16.5	--	605	7.2	93
				9.0	68	6.2	16.5	--	605	7.2	93
				12.0	67	6.2	16.5	--	605	7.2	93
				15.0	68	6.2	16.5	--	605	7.2	93
				18.0	68	6.2	16.5	--	605	7.2	93
				21.0	68	6.2	16.5	--	605	7.2	93
				24.0	68	6.2	16.5	--	605	7.2	93
				27.0	67	6.2	16.5	--	605	7.2	93
				30.0	68	6.2	16.5	--	605	7.2	93
				33.0	68	6.2	16.5	--	605	7.2	93
				36.0	68	6.2	16.5	--	605	7.1	92
				39.0	68	6.2	16.5	--	605	7.1	92
				42.0	68	6.2	16.5	--	605	7.1	92
				45.0	68	6.2	16.5	--	605	7.1	92
				48.0	68	6.2	16.5	--	605	7.1	92
				54.0	68	6.2	16.5	--	605	7.1	92
				54.0	68	6.2	16.5	--	605	7.1	92
				57.0	68	6.2	16.5	--	605	7.0	90
				60.0	71	5.9	14.5	--	605	6.2	77

SACRAMENTO RIVER BASIN

11429350 LOON LAKE NEAR MEEKS BAY, CA--Continued

SITE 3 NEAR WEST END (Lat 38°59'26", long 120°19'33", in SW 1/4 NW 1/4 sec.8, T.13 N., R.15 E.,
El Dorado County, Hydrologic Unit 18020128)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN											
04...	1545	6409	63.0	0.0	60	6.3	11.5	32.0	605	9.0	104
				3.0	61	6.2	11.5	--	605	9.0	104
				6.0	60	6.2	11.0	--	605	9.1	104
				9.0	60	6.2	11.0	--	605	9.1	103
				12.0	60	6.2	10.5	--	605	9.0	103
				15.0	61	6.2	10.5	--	605	9.0	102
				18.0	60	6.3	9.5	--	605	9.2	102
				21.0	60	6.2	9.0	--	605	9.2	101
				27.0	61	6.2	9.0	--	605	9.2	101
				30.0	61	6.2	9.0	--	605	9.2	101
				33.0	61	6.2	8.5	--	605	9.2	100
				36.0	62	6.2	8.0	--	605	9.2	99
				39.0	61	6.2	8.0	--	605	9.2	98
				42.0	61	6.2	7.5	--	605	9.2	97
				45.0	61	6.2	7.5	--	605	9.2	97
				48.0	61	6.2	7.5	--	605	9.1	96
				51.0	61	6.1	7.5	--	605	9.1	95
				54.0	62	6.1	7.0	--	605	9.0	94
				57.0	61	6.1	7.0	--	605	8.0	94
SEP											
17...	1237	6394	43.0	0.0	68	6.1	16.5	41.0	605	7.2	93
				3.0	68	6.1	16.5	--	605	7.2	93
				6.0	68	6.1	16.0	--	605	7.2	93
				9.0	68	6.1	16.0	--	605	7.2	93
				12.0	67	6.1	16.0	--	605	7.2	92
				15.0	68	6.1	16.0	--	605	7.2	92
				18.0	68	6.1	16.0	--	605	7.2	92
				21.0	68	6.2	16.0	--	605	7.2	92
				24.0	68	6.2	16.0	--	605	7.2	92
				27.0	67	6.2	16.0	--	605	7.2	92
				30.0	68	6.2	16.0	--	605	7.2	92
				33.0	68	6.2	16.0	--	605	7.2	92
				36.0	68	6.2	16.0	--	605	7.2	92
				39.0	68	6.2	16.0	--	605	7.2	92

11429500 GERLE CREEK BELOW LOON LAKE DAM, NEAR MEEKS BAY, CA

LOCATION.--Lat 39°00'20", long 120°18'52", in NE 1/4 NE 1/4 sec.5, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 0.3 mi downstream from Loon Lake Dam, and 11 mi southwest of Meeks Bay.

DRAINAGE AREA.--8.01 mi².

PERIOD OF RECORD.--July 1910 to April 1914 (fragmentary), August 1962 to current year. Prior to August 1962, published as "near Rubicon Springs."

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,250 ft above sea level, from topographic map. Prior to August 1962, nonrecording gage at site 1,400 ft upstream at different datum.

REMARKS.--Records good. Beginning in 1884, flow regulated by Loon Lake (station 11429350). Original dam was dismantled during September and October 1962 to permit construction of a new earthfill dam, which was completed Dec. 27, 1963. Loon Lake receives water from Rubicon River via Buck-Loon Tunnel (station 11428300). Since August 1971, most of the water is diverted past the station via Loon Lake Powerplant (station 11429340) and returns to Gerle Creek at Gerle Creek Dam. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 3,240 ft³/s, unregulated, Feb. 1, 1963, gage height, 12.65 ft, from rating curve extended above 970 ft³/s on basis of slope-area measurement of peak flow; no flow Oct. 15, 1913. Maximum discharge since construction of Loon Lake Dam in 1963, 1,050 ft³/s, June 5, 1969, gage height, 9.03 ft; minimum daily, 3.6 ft³/s, Sept. 27, 28, Nov. 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	9.2	11	10	12	11	12	11	12	8.6	9.5	8.9	8.9
2	9.2	9.5	10	12	11	12	11	12	8.9	9.5	8.9	8.9
3	9.2	9.5	11	12	11	12	10	11	8.9	10	8.9	8.9
4	9.2	9.5	12	11	19	12	11	10	8.9	9.6	8.9	8.9
5	9.2	9.5	10	11	19	12	11	10	8.9	9.5	8.9	8.9
6	9.2	9.5	10	11	13	11	11	10	8.9	9.5	8.9	8.9
7	9.2	9.5	10	11	13	12	12	11	8.9	9.5	8.9	8.9
8	9.2	9.5	10	11	12	12	11	10	10	9.5	8.9	8.9
9	9.2	9.5	10	11	12	12	11	10	10	9.5	8.9	8.9
10	9.2	9.5	10	11	12	12	10	10	10	9.5	8.9	8.9
11	9.2	9.5	14	11	12	12	10	10	8.9	9.5	8.9	8.9
12	9.3	9.5	20	11	13	12	10	11	8.9	9.5	8.9	8.9
13	9.5	9.6	12	11	13	12	10	11	8.7	9.4	8.9	8.9
14	9.5	9.6	11	11	12	12	10	11	8.6	9.2	8.9	8.9
15	9.5	9.5	11	11	12	12	11	16	8.2	9.8	8.7	8.9
16	9.5	9.5	11	14	13	12	12	289	8.0	9.3	8.6	8.9
17	9.5	9.5	11	12	14	12	10	403	8.3	9.2	8.6	8.9
18	9.3	9.5	10	11	13	12	9.8	395	8.9	9.2	8.6	8.9
19	9.2	9.5	10	11	15	12	9.5	150	8.9	9.2	8.4	8.9
20	9.2	9.5	10	11	13	12	9.5	11	8.9	9.2	8.4	8.9
21	9.2	9.5	10	11	12	12	9.2	9.8	9.1	9.2	8.6	8.9
22	9.2	9.5	10	11	12	12	9.8	9.2	9.2	9.0	8.6	8.9
23	9.3	9.5	10	11	12	12	11	8.9	9.2	8.9	8.6	8.9
24	9.5	9.5	10	11	12	12	11	8.9	9.2	8.9	8.6	8.9
25	9.5	9.9	10	11	12	11	12	8.6	9.5	8.9	8.6	8.9
26	9.5	10	10	11	12	11	12	8.6	11	8.9	8.6	8.9
27	9.5	10	10	11	12	11	12	8.6	9.6	8.9	8.7	8.9
28	9.5	10	10	11	12	11	11	8.6	9.5	8.9	8.9	8.9
29	9.5	10	12	11	12	10	12	8.6	9.5	8.9	8.9	8.9
30	9.3	10	14	11	---	10	12	8.6	9.5	8.9	8.9	8.9
31	9.2	---	12	11	---	10	---	8.6	---	8.9	8.9	---
TOTAL	288.9	289.6	341	348	371	361	322.8	1510.0	273.6	287.4	271.8	267.0
MEAN	9.32	9.65	11.0	11.2	12.8	11.6	10.8	48.7	9.12	9.27	8.77	8.90
MAX	9.5	11	20	14	19	12	12	403	11	10	8.9	8.9
MIN	9.2	9.5	10	11	11	10	9.2	8.6	8.0	8.9	8.4	8.9
AC-FT	573	574	676	690	736	716	640	3000	543	570	539	530
a	3210	67	0	16	4330	11500	14660	35290	24160	14770	8710	4110

a Diversion, in acre-feet, to Loon Lake Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11429500 GERLE CREEK BELOW LOON LAKE DAM, NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1970, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	132	165	74.7	103	192	133	63.0	390	341	232	115
MAX	190	356	343	134	261	347	244	209	721	493	351	338
(WY)	1970	1966	1966	1968	1970	1970	1967	1969	1969	1967	1969	1967
MIN	7.53	7.93	8.95	8.41	9.13	9.57	8.75	10.5	185	196	50.8	8.20
(WY)	1965	1968	1969	1965	1968	1968	1965	1968	1966	1965	1965	1970

SUMMARY STATISTICS

WATER YEARS 1965 - 1970

ANNUAL MEAN	171
HIGHEST ANNUAL MEAN	217
LOWEST ANNUAL MEAN	127
HIGHEST DAILY MEAN	1030
LOWEST DAILY MEAN	6.0
ANNUAL SEVEN-DAY MINIMUM	6.4
INSTANTANEOUS PEAK FLOW	1050
INSTANTANEOUS PEAK STAGE	9.03
ANNUAL RUNOFF (AC-FT)	124100
10 PERCENT EXCEEDS	394
50 PERCENT EXCEEDS	28
90 PERCENT EXCEEDS	8.1

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	8.72	8.65	9.27	8.87	8.93	9.01	8.86	10.9	8.80	8.87	8.44	8.44
MAX	13.3	9.97	23.9	11.2	12.8	11.6	10.8	48.7	12.0	15.7	10.2	11.2
(WY)	1993	1995	1984	1996	1996	1996	1996	1996	1983	1995	1974	1974
MIN	3.93	4.00	4.45	4.61	5.12	4.67	4.27	4.64	4.13	4.30	4.09	3.99
(WY)	1978	1978	1978	1978	1978	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1972 - 1996

ANNUAL TOTAL	3810.7	4932.1	
ANNUAL MEAN	10.4	13.5	8.98
HIGHEST ANNUAL MEAN			13.5
LOWEST ANNUAL MEAN			6.06
HIGHEST DAILY MEAN	50	Jul 11	403
LOWEST DAILY MEAN	8.0	Apr 21	8.0
ANNUAL SEVEN-DAY MINIMUM	8.2	Apr 16	8.5
INSTANTANEOUS PEAK FLOW			510
INSTANTANEOUS PEAK STAGE			6.65
ANNUAL RUNOFF (AC-FT)	7560	9780	6510
ANNUAL DIVERSION (AC-FT) a	202300	120800	
10 PERCENT EXCEEDS	12	12	10
50 PERCENT EXCEEDS	9.5	9.7	8.6
90 PERCENT EXCEEDS	8.9	8.9	7.9

a Diversion, in acre-feet, to Loon Lake Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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11429600 GERLE RESERVOIR NEAR MEEKS BAY, CA

LOCATION.--Lat 38°57'59", long 120°23'33", in SE 1/4 SW 1/4 sec.15, T.13 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank side of upstream face of dam on Gerle Creek, 0.2 mi downstream from Angel Creek, and 15.2 mi southwest of Meeks Bay.

DRAINAGE AREA.--28.7 mi².

PERIOD OF RECORD.--October 1993 to current year. Unpublished records for water years 1980-93 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

Prior to June 9, 1988, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete dam completed in 1970. Storage began in 1970. Usable capacity, 1,200 acre-ft, below elevation 5,230.9 ft, crest of spillway. Most of the water is diverted at this reservoir to Robbs Peak Powerplant (station 11429300). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 1,349 acre-ft, May 17, 1996, elevation, 5,233.12 ft; minimum, 845 acre-ft, Dec. 15, 1994, elevation, 5,222.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,349 acre-ft, May 17, elevation, 5,233.12 ft; minimum, 854 acre-ft, Jan. 30, elevation, 5,222.37 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sacramento Municipal Utility District, recomputed October 1991)

5,200	203	5,220	761
5,205	304	5,225	964
5,210	431	5,230	1,193
5,215	583	5,235	1,448

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	915	893	915	931	913	1018	1079	1101	1109	1079	1051	1030
2	981	903	926	922	920	1057	1017	1049	1095	1011	1035	1064
3	943	910	938	898	919	1067	969	1007	1075	1073	1034	1087
4	942	917	887	906	1296	1046	1002	1023	1038	1084	1034	1083
5	941	923	930	940	1319	981	1027	1020	1139	1071	1033	1076
6	940	930	923	890	1017	1008	1025	1033	1069	1087	1033	1071
7	939	937	945	909	986	1048	1043	1075	1030	1033	1031	1120
8	939	942	912	858	972	994	1030	1066	1146	1149	1029	1093
9	937	949	927	951	972	990	1026	1095	1146	1072	1085	1059
10	953	955	937	886	959	1010	1017	1041	1188	1044	1178	1077
11	949	961	948	931	977	1034	1080	1160	1144	1056	1106	1074
12	947	914	1220	906	1007	970	1046	1092	1056	1124	1085	1068
13	954	921	944	899	991	951	1069	1088	1065	1094	1132	1064
14	930	927	923	909	981	957	1095	1116	1146	1110	1131	1060
15	923	921	874	933	990	1027	1078	1327	1154	1092	1111	1059
16	933	929	932	1128	1033	1027	1081	1338	1068	1137	1084	1057
17	962	936	892	936	1112	1074	1059	1349	1010	1127	1061	1055
18	926	942	898	933	1006	1024	1011	1316	1010	1152	1102	1093
19	992	948	939	916	1281	1027	991	1284	1060	1124	1010	1157
20	1035	954	857	899	1016	1021	1073	1273	1109	1138	1006	1168
21	942	878	926	889	984	1016	1058	1208	1089	1147	1003	1071
22	923	886	885	868	1045	989	999	1146	1109	1082	1000	1103
23	915	894	919	904	1008	987	1016	1188	1038	1068	996	1073
24	931	901	920	947	1002	982	1081	1105	1058	1092	992	1095
25	906	914	893	899	999	984	1108	1141	988	1079	1002	1052
26	905	930	948	899	999	1001	1065	1048	1148	1086	1024	1120
27	904	937	887	886	1048	1104	1073	1136	1056	1087	1116	1053
28	901	945	948	951	1030	1013	1109	1142	1044	1024	1027	987
29	986	951	904	881	1011	961	1092	1080	1133	1140	1076	987
30	894	958	1006	854	---	970	1079	1057	1150	1143	1070	974
31	893	---	941	888	---	984	---	1108	---	1126	1034	---
MAX	1035	961	1220	1128	1319	1104	1109	1349	1188	1152	1178	1168
MIN	893	878	857	854	913	951	969	1007	988	1011	992	974
a	5223.31	5224.85	5224.45	5223.20	5225.99	5225.42	5227.48	5228.20	5229.09	5228.58	5226.59	5225.22
b	-22	+65	-17	-53	+123	-27	+95	+29	+42	-24	-92	-60

CAL YR 1995 MAX 1344 MIN 857 b -8

WTR YR 1996 MAX 1349 MIN 854 b +59

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°57'17", long 120°24'02", in SW 1/4 SW 1/4 sec.22, T.13 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 600 ft downstream from Gerle Creek, 1.2 mi downstream from South Fork Rubicon River Diversion Dam, and 18 mi east of Georgetown.

DRAINAGE AREA.--47.6 mi².

PERIOD OF RECORD.--February 1910 to June 1914 (published as Little South Fork Rubicon River below Gerle Creek near Quintette), August 1961 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,970 ft above sea level, from topographic map. Feb. 1, 1910, to June 21, 1914, nonrecording gage at site about 700 ft downstream at different datum.

REMARKS.--Beginning in 1884, flow regulated by Loon Lake (station 11429350). Original dam was dismantled during September and October 1962 to permit construction of a new earthfill dam completed Dec. 27, 1963. Loon Lake receives water from Rubicon River via Rubicon-Rockbound Tunnel to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck-Loon Tunnel (stations 11427940 and 11428300). Prior to Dec. 3, 1961, water was diverted out of the basin in Georgetown Divide Ditch. Water is diverted 1.2 mi upstream at South Fork Rubicon River Diversion Dam to Robbs Peak Powerplant (station 11429300). Diversion of up to 1,440 ft³/s to Silver Creek basin began in October 1962. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 11,500 ft³/s, Jan. 31, 1963, gage height, 12.32 ft, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.8 ft³/s, Sept. 21, 1962.

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	9.7	6.0	8.0	9.8	10	20	11	13	12	11	11
2	11	5.7	6.1	7.7	9.4	13	19	11	12	11	11	11
3	11	5.7	6.0	7.4	9.2	13	15	11	12	11	11	11
4	11	5.7	7.0	7.3	387	24	13	11	12	11	11	12
5	11	5.7	6.1	7.0	2150	17	12	11	12	11	11	12
6	11	5.7	6.0	6.9	377	14	12	12	13	11	11	12
7	11	5.7	6.2	6.8	15	13	12	12	12	10	11	12
8	11	5.8	6.0	6.7	13	13	12	12	12	10	10	12
9	11	5.9	6.0	6.6	13	13	12	12	12	11	11	11
10	11	5.9	6.1	6.7	12	14	11	12	12	11	12	11
11	11	5.9	11	6.6	12	19	11	12	13	10	12	12
12	11	6.0	610	6.6	12	16	11	15	12	10	11	11
13	11	5.9	14	6.5	12	14	11	12	11	11	12	12
14	11	5.8	9.4	6.6	12	13	10	12	12	11	12	11
15	11	5.9	8.6	7.3	12	13	10	517	12	11	12	12
16	11	5.8	7.8	18	13	13	33	3200	11	11	11	11
17	11	5.8	7.5	13	19	14	15	1620	11	11	12	11
18	11	5.9	7.3	12	19	14	17	1850	11	11	12	12
19	11	5.9	7.2	12	164	14	13	642	11	11	11	12
20	11	5.9	6.9	9.5	87	14	13	252	11	11	11	13
21	11	5.8	6.7	9.2	26	13	12	114	12	11	11	13
22	11	5.7	6.7	8.3	17	13	11	82	12	11	11	12
23	11	5.7	6.6	8.2	14	12	10	15	11	11	11	12
24	11	5.7	6.4	8.4	13	11	10	14	11	11	11	12
25	11	6.3	6.4	11	12	11	10	14	12	11	11	12
26	11	6.1	6.3	8.9	12	11	35	13	12	10	11	12
27	11	5.8	6.3	13	11	11	9.7	13	12	11	11	12
28	11	5.9	6.4	12	11	19	9.2	13	11	11	12	11
29	11	5.9	7.2	10	10	13	9.0	13	11	11	11	11
30	11	5.9	9.5	9.4	---	12	9.7	13	12	11	11	11
31	11	---	9.3	9.9	---	11	---	12	---	11	11	---
TOTAL	341	179.1	829.0	277.5	3483.4	425	407.6	8563	353	337	348	350
MEAN	11.0	5.97	26.7	8.95	120	13.7	13.6	276	11.8	10.9	11.2	11.7
MAX	11	9.7	610	18	2150	24	35	3200	13	12	12	13
MIN	11	5.7	6.0	6.5	9.2	10	9.0	11	11	10	10	11
AC-FT	676	355	1640	550	6910	843	808	16980	700	668	690	694

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, 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	10.7	20.4	35.1	48.5	38.3	20.3	13.6	28.2	21.3	13.1	9.03	9.18
MAX	52.2	268	396	484	524	130	141	276	249	92.5	12.5	22.3
(WY)	1963	1984	1965	1980	1986	1986	1982	1996	1983	1967	1983	1982
MIN	2.40	2.75	4.79	4.86	5.03	3.11	2.35	2.42	2.29	2.36	2.03	1.99
(WY)	1978	1978	1968	1968	1966	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1963 - 1996
ANNUAL TOTAL	14302.6	15893.6	
ANNUAL MEAN	39.2	43.4	22.3
HIGHEST ANNUAL MEAN			63.8
LOWEST ANNUAL MEAN			3.59
HIGHEST DAILY MEAN	2090	May 1	5990
LOWEST DAILY MEAN	5.7	Nov 2	1.3
ANNUAL SEVEN-DAY MINIMUM	5.7	Nov 2	1.5
INSTANTANEOUS PEAK FLOW		5670	May 16
INSTANTANEOUS PEAK STAGE		10.00	May 16
ANNUAL RUNOFF (AC-FT)	28370	31520	16130
10 PERCENT EXCEEDS	26	14	13
50 PERCENT EXCEEDS	11	11	8.1
90 PERCENT EXCEEDS	6.2	6.2	5.2

11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, CA

LOCATION.--Lat 38°53'41", long 120°34'02", in NE 1/4 NW 1/4 sec.18, T.12 N., R.13 E., El Dorado County, Hydrologic Unit 18020128, on right bank 2.1 mi upstream from Stumpy Meadows Dam and 12.5 mi east of Georgetown.

DRAINAGE AREA.--11.7 mi².

PERIOD OF RECORD.--October 1960 to current year. Prior to October 1971, published as "above Stumpy Meadows Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 4,280 ft above sea level, from topographic map.

REMARKS.--Records good including estimated daily discharges. No regulation or diversion upstream from station. See schematic diagram of Middle Fork American and Rubicon River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft³/s, Feb. 17, 1986, gage height, 7.15 ft, from rating curve extended above 540 ft³/s on basis of slope-area measurement at gage height 6.31 ft; maximum gage height, 8.05 ft, Jan. 31, 1963; minimum daily, 0.14 ft³/s, Aug. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft³/s or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1530	266	3.52	Mar. 4	1715	216	3.12
Feb. 5	0630	742	4.35	Apr. 1	1845	155	2.87
Feb. 19	2215	506	3.90	May 16	0945	197	3.05

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	7.4	8.2	12	15	37	54	103	41	35	17	9.8	6.6
2	7.2	8.4	14	14	33	51	105	40	33	16	9.5	6.6
3	7.1	8.4	13	13	31	58	89	38	31	16	9.6	6.5
4	7.0	8.1	17	12	348	136	81	37	30	16	9.7	6.6
5	7.0	8.1	15	11	531	141	76	35	29	15	9.5	6.7
6	7.1	8.1	14	11	213	105	73	34	28	15	9.5	6.6
7	7.1	8.0	14	10	133	92	72	33	27	15	9.3	6.6
8	7.1	8.0	13	10	104	83	70	32	26	15	8.9	6.5
9	7.1	8.2	12	10	89	81	67	31	26	14	8.7	6.4
10	7.1	8.8	12	9.7	80	85	63	30	25	14	8.6	6.3
11	7.0	8.4	e36	9.5	74	115	59	29	24	14	8.4	6.3
12	7.1	8.1	107	9.4	69	121	56	28	24	14	8.4	6.3
13	7.0	8.1	38	9.1	67	108	54	28	23	14	8.3	7.3
14	6.5	8.1	24	9.1	63	98	51	28	22	13	8.1	7.9
15	6.1	8.1	18	10	60	91	49	39	22	13	7.9	9.2
16	6.2	8.1	15	59	66	87	77	128	21	13	7.8	8.6
17	6.3	8.4	14	47	94	86	71	87	21	13	7.8	7.6
18	6.1	8.8	12	43	98	87	88	115	20	13	7.7	7.2
19	6.1	9.1	12	50	259	87	69	77	20	12	7.7	7.1
20	6.0	8.4	11	34	301	85	64	63	19	12	7.6	6.9
21	6.0	8.8	10	30	270	81	61	62	19	12	7.6	6.8
22	6.1	8.8	10	24	181	79	58	65	19	12	7.5	6.7
23	6.1	8.4	9.9	21	132	73	56	56	18	11	7.3	6.6
24	6.2	8.4	9.6	27	110	68	55	52	18	11	7.2	6.6
25	6.3	10	9.3	46	92	63	52	48	19	11	7.2	6.5
26	6.3	17	8.9	32	80	59	50	46	22	11	7.2	6.3
27	6.2	13	8.9	68	71	58	49	44	22	11	7.1	6.2
28	6.1	13	9.0	69	63	92	46	42	20	11	7.0	6.2
29	6.1	11	11	47	58	69	44	40	18	11	6.9	6.2
30	7.0	12	18	38	---	63	43	38	17	10	6.7	6.1
31	7.8	---	17	40	---	60	---	36	---	10	6.6	---
TOTAL	205.8	276.3	544.6	837.8	3807	2616	1951	1502	698	405	251.1	204.0
MEAN	6.64	9.21	17.6	27.0	131	84.4	65.0	48.5	23.3	13.1	8.10	6.80
MAX	7.8	17	107	69	531	141	105	128	35	17	9.8	9.2
MIN	6.0	8.0	8.9	9.1	31	51	43	28	17	10	6.6	6.1
AC-FT	408	548	1080	1660	7550	5190	3870	2980	1380	803	498	405

e Estimated.

SACRAMENTO RIVER BASIN

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11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, 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	6.50	12.9	24.7	42.1	47.4	53.8	48.0	36.2	15.1	8.21	5.27	4.75
MAX	24.8	74.1	159	187	373	195	139	118	50.4	17.7	16.2	16.3
(WY)	1963	1984	1965	1980	1986	1983	1982	1967	1967	1961	1961	1961
MIN	.87	2.79	3.35	4.55	4.64	4.82	3.38	4.06	1.93	.64	.18	.50
(WY)	1978	1977	1977	1991	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1961 - 1996			
ANNUAL TOTAL	19723.2				13298.6				25.3			
ANNUAL MEAN	54.0				36.3				64.8			
HIGHEST ANNUAL MEAN									2.96			
LOWEST ANNUAL MEAN									1983			
HIGHEST DAILY MEAN	675				Jan 14				2840			
LOWEST DAILY MEAN	6.0				Oct 20				.14			
ANNUAL SEVEN-DAY MINIMUM	6.1				Oct 18				.15			
INSTANTANEOUS PEAK FLOW					742				Feb 5			
INSTANTANEOUS PEAK STAGE					4.35				Feb 5			
ANNUAL RUNOFF (AC-FT)	39120				26380				18330			
10 PERCENT EXCEEDS	132				86				58			
50 PERCENT EXCEEDS	18				15				10			
90 PERCENT EXCEEDS	7.3				6.7				3.3			

SACRAMENTO RIVER BASIN

11433040 PILOT CREEK BELOW MUTTON CANYON, NEAR GEORGETOWN, CA

LOCATION.--Lat 38°55'25", long 120°38'27", in NE 1/4 NW 1/4 sec.4, T.12 N., R.12 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank 450 ft downstream from Mutton Canyon, 500 ft downstream from Georgetown Divide Diversion Dam, 2.5 mi downstream from Stumpy Meadows Dam, and 10 mi east of Georgetown.

DRAINAGE AREA.--21.1 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,760 ft above sea level, from topographic map.

REMARKS.--Records good except estimated periods which are fair. Flow regulated by Stumpy Meadows Lake 2.5 mi upstream, usable capacity, 17,500 acre-ft, completed in November 1961. Georgetown Irrigation District Ditch, capacity, about 60 ft³/s, diverts water out of Pilot Creek, 500 ft upstream from station. See schematic diagram of Middle Fork American and Rubicon River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,330 ft³/s, Feb. 18, 1986, gage height, 10.86 ft, from rating curve extended above 970 ft³/s on basis of slope-area measurement at gage height 10.06 ft; minimum daily, 0.20 ft³/s, Sept. 24, Nov. 1-5, 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	4.1	4.1	3.8	4.0	84	99	150	41	41	6.1	5.3	4.4
2	4.2	4.1	4.4	3.7	73	92	182	39	38	6.0	5.3	4.4
3	4.3	4.1	4.0	3.6	65	100	138	36	33	6.1	5.6	4.3
4	4.3	4.1	5.3	3.5	435	263	121	34	30	6.4	5.7	4.3
5	4.3	4.1	4.3	3.5	1060	330	110	32	28	6.3	5.5	4.3
6	4.3	4.1	4.1	3.6	519	233	105	30	25	5.9	5.1	4.3
7	4.3	4.1	4.1	3.6	325	197	102	29	23	5.9	5.0	4.3
8	4.3	4.1	3.9	3.5	235	173	98	26	22	5.8	4.9	4.2
9	4.3	4.1	3.9	3.5	191	161	94	25	20	5.8	4.8	4.3
10	4.3	4.1	3.8	3.4	162	166	90	25	18	5.8	4.8	4.4
11	4.3	4.1	8.9	3.3	140	208	83	24	17	5.7	4.7	4.4
12	4.3	4.1	30	3.3	128	249	79	22	16	5.6	4.7	4.4
13	4.3	e4.1	11	3.3	116	213	74	21	15	5.6	4.6	4.5
14	4.3	e4.1	7.0	3.3	105	187	70	19	13	5.6	4.5	4.6
15	4.3	e4.1	7.1	3.6	99	169	66	43	12	5.5	4.5	4.9
16	4.3	e4.1	5.8	23	103	158	112	223	12	5.5	4.5	4.7
17	4.3	e4.1	4.7	12	137	148	110	138	11	5.5	4.7	4.5
18	4.2	e4.1	4.2	30	159	143	135	164	10	5.4	4.6	4.4
19	4.1	e4.1	4.0	104	344	139	102	115	9.5	5.4	4.6	4.3
20	4.1	e4.1	3.8	66	497	133	96	89	8.1	5.3	4.6	4.3
21	4.1	e4.1	3.7	71	496	125	85	93	6.9	5.3	4.6	4.3
22	4.1	e4.1	3.6	46	373	124	80	100	6.7	5.2	4.5	4.3
23	4.1	e4.1	3.5	38	271	117	71	83	6.7	5.2	4.5	4.4
24	4.1	e4.1	3.4	90	238	104	62	72	6.8	5.2	4.5	4.5
25	4.1	e4.6	3.3	166	189	95	60	66	6.4	5.1	4.5	4.5
26	4.1	e4.1	3.3	80	157	85	56	61	8.9	5.1	4.5	4.4
27	4.1	e4.0	3.4	187	136	84	52	58	9.7	5.1	4.5	4.4
28	4.1	e3.9	3.6	201	119	147	49	55	6.8	5.1	4.5	4.4
29	4.1	e3.8	4.3	126	107	107	45	51	6.4	5.1	4.4	4.4
30	4.1	3.8	6.7	96	---	89	43	46	6.2	5.2	4.4	4.3
31	4.1	---	4.6	97	---	82	---	43	---	5.3	4.4	---
TOTAL	130.3	122.6	171.5	1485.7	7063	4720	2720	1903	473.1	172.1	147.3	132.1
MEAN	4.20	4.09	5.53	47.9	244	152	90.7	61.4	15.8	5.55	4.75	4.40
MAX	4.3	4.6	30	201	1060	330	182	223	41	6.4	5.7	4.9
MIN	4.1	3.8	3.3	3.3	65	82	43	19	6.2	5.1	4.4	4.2
AC-FT	258	243	340	2950	14010	9360	5400	3770	938	341	292	262

e Estimated.

11433040 PILOT CREEK BELOW MUTTON CANYON, NEAR GEORGETOWN, 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	2.73	5.79	28.2	49.3	72.2	75.1	68.4	38.0	8.82	4.09	3.20	2.73
MAX	7.19	28.6	340	279	585	370	289	171	54.4	15.6	13.4	8.54
(WY)	1963	1984	1965	1970	1986	1983	1982	1995	1967	1983	1983	1983
MIN	.46	.46	.54	.53	.89	1.21	.98	1.12	.66	.45	.38	.37
(WY)	1962	1962	1962	1962	1991	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1961 - 1996	
ANNUAL TOTAL	27250.7		19240.7			
ANNUAL MEAN	74.7		52.6		29.7	
HIGHEST ANNUAL MEAN					109	
LOWEST ANNUAL MEAN					.84	
HIGHEST DAILY MEAN	914	Mar 11	1060	Feb 5	4350	Feb 17 1986
LOWEST DAILY MEAN	2.7	Jan 2	3.3	Dec 25	.20	Sep 24 1966
ANNUAL SEVEN-DAY MINIMUM	3.4	Dec 22	3.4	Jan 8	.23	Oct 30 1966
INSTANTANEOUS PEAK FLOW			1450	Feb 5	6330	Feb 18 1986
INSTANTANEOUS PEAK STAGE			7.71	Feb 5	10.86	Feb 18 1986
ANNUAL RUNOFF (AC-FT)	54050		38160		21500	
10 PERCENT EXCEEDS	207		149		83	
50 PERCENT EXCEEDS	7.0		5.8		3.8	
90 PERCENT EXCEEDS	3.8		4.1		1.1	

SACRAMENTO RIVER BASIN

11433060 SOUTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°03'04", long 120°28'14", in SW 1/4 NE 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at diversion dam, 3.3 mi upstream from confluence with North and South Forks Long Canyon Creek, and 17.2 mi east of Volcanoville.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 4,630 ft above sea level, from topographic map.

REMARKS.--Tunnel completed in September 1965; diversion began in February 1966. Flow is diverted from South Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork Powerplant on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 251 ft³/s, Nov. 12, 1973; no flow for part 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	16	32	76	50	.00	.00	.00	.00
2	.00	.00	.00	.00	15	32	75	50	.00	.00	.00	.00
3	.00	.00	.00	.00	14	37	60	47	.00	.00	.00	.00
4	.00	.00	.00	.00	49	70	54	44	.00	.00	.00	.00
5	.00	.00	.00	.00	92	59	52	41	.00	.00	.00	.00
6	.00	.00	.00	.00	117	45	54	38	.00	.00	.00	.00
7	.00	.00	.00	.00	95	39	58	36	.00	.00	.00	.00
8	.00	.00	.00	.00	82	40	60	34	.00	.00	.00	.00
9	.00	.00	.00	.00	74	47	60	32	.00	.00	.00	.00
10	.00	.00	.00	.00	72	53	57	31	.00	.00	.00	.00
11	.00	.00	.00	.00	72	76	52	31	.00	.00	.00	.00
12	.00	.00	.00	.00	81	63	50	31	.00	.00	.00	.00
13	.00	.00	.00	.00	84	50	45	32	.00	.00	.00	.00
14	.00	.00	.00	.00	75	45	44	32	.00	.00	.00	.00
15	.00	.00	.00	.00	69	47	45	60	.00	.00	.00	.00
16	.00	.00	.00	55	90	50	90	79	.00	.00	.00	.00
17	.00	.00	.00	45	145	54	68	.00	.00	.00	.00	.00
18	.00	.00	.00	29	126	61	66	.00	.00	.00	.00	.00
19	.00	.00	.00	33	178	66	52	.00	.00	.00	.00	.00
20	.00	.00	.00	22	113	65	49	.00	.00	.00	.00	.00
21	.00	.00	.00	19	141	63	45	.00	.00	.00	.00	.00
22	.00	.00	.00	15	98	58	45	.00	.00	.00	.00	.00
23	.00	.00	.00	14	75	50	47	.00	.00	.00	.00	.00
24	.00	.00	.00	12	63	45	48	.00	.00	.00	.00	.00
25	.00	.00	.00	16	53	42	47	.00	.00	.00	.00	.00
26	.00	.00	.00	13	45	39	50	.00	.00	.00	.00	.00
27	.00	.00	.00	18	40	41	49	.00	.00	.00	.00	.00
28	.00	.00	.00	17	36	80	47	.00	.00	.00	.00	.00
29	.00	.00	.00	13	33	50	47	.00	.00	.00	.00	.00
30	.00	.00	.00	13	---	45	49	.00	.00	.00	.00	.00
31	.00	---	.00	16	---	43	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	350.00	2243	1587	1641	668.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	11.3	77.3	51.2	54.7	21.5	.000	.000	.000	.000
MAX	.00	.00	.00	55	178	80	90	79	.00	.00	.00	.00
MIN	.00	.00	.00	.00	14	32	44	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	694	4450	3150	3250	1320	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.002	3.65	5.39	10.0	12.3	21.2	27.3	23.9	7.68	.31	.002	.000
MAX	.034	37.2	38.6	42.1	77.3	77.7	67.8	80.6	47.5	4.54	.067	.001
(WY)	1980	1974	1984	1974	1986	1989	1980	1975	1967	1983	1983	1972
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1966	1966	1966	1966	1991	1974	1974	1974	1966	1966	1966	1966

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1966 - 1996
ANNUAL TOTAL	6016.80	6489.00	
ANNUAL MEAN	16.5	17.7	9.29
HIGHEST ANNUAL MEAN			20.6
LOWEST ANNUAL MEAN			.43
HIGHEST DAILY MEAN	126	Mar 3	251
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	11930	12870	6730
10 PERCENT EXCEEDS	60	60	31
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11433065 SOUTH FORK LONG CANYON CREEK BELOW DIVERSION DAM, NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°03'04", long 120°28'14", in SW 1/4 NE 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 21 ft below diversion dam, 3.3 mi upstream from confluence of North and South Forks Long Canyon Creek, and 17.2 mi east of Volcanoville.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,630 ft above sea level, from topographic map.

REMARKS.--Discharge is computed only during periods of operation of South Fork Long Canyon Creek Diversion Tunnel (station 11433060). See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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	---	---	---	---	6.7	5.8	6.7	6.3	---	---	---	---
2	---	---	---	---	6.5	5.9	6.8	6.5	---	---	---	---
3	---	---	---	---	6.5	6.1	6.7	6.5	---	---	---	---
4	---	---	---	---	18	6.7	6.7	6.3	---	---	---	---
5	---	---	---	---	19	6.5	6.7	6.3	---	---	---	---
6	---	---	---	---	7.0	6.3	6.7	6.3	---	---	---	---
7	---	---	---	---	7.0	7.1	6.8	6.1	---	---	---	---
8	---	---	---	---	7.0	8.3	6.7	6.1	---	---	---	---
9	---	---	---	---	6.8	8.5	6.7	6.1	---	---	---	---
10	---	---	---	---	6.8	8.7	6.7	6.1	---	---	---	---
11	---	---	---	---	6.8	9.0	6.5	6.1	---	---	---	---
12	---	---	---	---	6.8	8.7	6.5	6.1	---	---	---	---
13	---	---	---	---	7.0	8.5	6.5	6.3	---	---	---	---
14	---	---	---	---	7.0	8.3	6.5	6.5	---	---	---	---
15	---	---	---	---	7.0	8.3	6.3	6.8	---	---	---	---
16	---	---	---	6.8	7.0	8.5	6.7	18	---	---	---	---
17	---	---	---	5.8	6.8	8.5	6.7	---	---	---	---	---
18	---	---	---	6.1	6.8	8.3	6.5	---	---	---	---	---
19	---	---	---	6.5	12	7.6	6.3	---	---	---	---	---
20	---	---	---	6.3	9.3	6.7	6.3	---	---	---	---	---
21	---	---	---	6.3	6.5	6.7	6.3	---	---	---	---	---
22	---	---	---	6.3	6.1	6.7	6.3	---	---	---	---	---
23	---	---	---	6.1	6.1	6.5	6.3	---	---	---	---	---
24	---	---	---	6.1	6.1	6.5	6.1	---	---	---	---	---
25	---	---	---	6.3	5.9	6.5	6.1	---	---	---	---	---
26	---	---	---	6.3	5.9	6.5	6.1	---	---	---	---	---
27	---	---	---	6.5	5.9	6.5	6.1	---	---	---	---	---
28	---	---	---	6.3	5.9	6.8	6.1	---	---	---	---	---
29	---	---	---	6.3	5.9	6.7	6.1	---	---	---	---	---
30	---	---	---	6.5	---	6.7	6.1	---	---	---	---	---
31	---	---	---	6.7	---	6.5	---	---	---	---	---	---
TOTAL	---	---	---	---	222.1	224.9	193.6	---	---	---	---	---
MEAN	---	---	---	---	7.66	7.25	6.45	---	---	---	---	---
MAX	---	---	---	---	19	9.0	6.8	---	---	---	---	---
MIN	---	---	---	---	5.9	5.8	6.1	---	---	---	---	---
AC-FT	---	---	---	---	441	446	384	---	---	---	---	---

11433080 NORTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°02'57", long 120°28'56", in SW 1/4 NW 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank at diversion dam, 3.2 mi upstream from confluence of North and South Forks Long Canyon Creek, and 16.9 mi east of Volcanoville.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 4,700 ft above sea level, from topographic map.

REMARKS.--Tunnel completed in September 1965 and diversions began in February 1966. Flow is diverted from North Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork Powerplant (stations 11428700 and 11428600) on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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, 75 ft³/s, May 25, 1983; no flow for part 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	8.1	12	43	24	.00	.00	.00	.00
2	.00	.00	.00	.00	7.5	14	43	23	.00	.00	.00	.00
3	.00	.00	.00	.00	7.1	15	34	20	.00	.00	.00	.00
4	.00	.00	.00	.00	20	28	29	18	.00	.00	.00	.00
5	.00	.00	.00	.00	22	23	29	16	.00	.00	.00	.00
6	.00	.00	.00	.00	60	17	31	15	.00	.00	.00	.00
7	.00	.00	.00	.00	48	16	34	14	.00	.00	.00	.00
8	.00	.00	.00	.00	42	18	35	12	.00	.00	.00	.00
9	.00	.00	.00	.00	38	23	34	12	.00	.00	.00	.00
10	.00	.00	.00	.00	38	28	31	11	.00	.00	.00	.00
11	.00	.00	.00	.00	38	39	26	10	.00	.00	.00	.00
12	.00	.00	.00	.00	42	30	24	9.5	.00	.00	.00	.00
13	.00	.00	.00	.00	43	23	22	9.1	.00	.00	.00	.00
14	.00	.00	.00	.00	38	22	22	8.7	.00	.00	.00	.00
15	.00	.00	.00	.00	35	23	23	25	.00	.00	.00	.00
16	.00	.00	.00	22	51	26	55	22	.00	.00	.00	.00
17	.00	.00	.00	23	69	30	35	.00	.00	.00	.00	.00
18	.00	.00	.00	18	63	34	33	.00	.00	.00	.00	.00
19	.00	.00	.00	21	64	38	26	.00	.00	.00	.00	.00
20	.00	.00	.00	12	50	37	24	.00	.00	.00	.00	.00
21	.00	.00	.00	10	64	35	23	.00	.00	.00	.00	.00
22	.00	.00	.00	8.1	42	30	24	.00	.00	.00	.00	.00
23	.00	.00	.00	7.3	33	25	27	.00	.00	.00	.00	.00
24	.00	.00	.00	6.4	28	23	27	.00	.00	.00	.00	.00
25	.00	.00	.00	10	22	19	26	.00	.00	.00	.00	.00
26	.00	.00	.00	7.5	18	17	29	.00	.00	.00	.00	.00
27	.00	.00	.00	8.9	16	19	26	.00	.00	.00	.00	.00
28	.00	.00	.00	8.9	14	43	24	.00	.00	.00	.00	.00
29	.00	.00	.00	6.8	13	26	23	.00	.00	.00	.00	.00
30	.00	.00	.00	6.0	---	23	24	.00	.00	.00	.00	.00
31	.00	---	.00	7.3	---	23	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	183.20	1033.7	779	886	249.30	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	5.91	35.6	25.1	29.5	8.04	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	23	69	43	55	25	.00	.00	.00	.00
MIN	.00	.00	.00	.00	7.1	12	22	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	363	2050	1550	1760	494	.00	.00	.00	.00

11433080 NORTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.050	.88	1.65	3.32	5.67	10.2	12.7	10.1	2.15	.019	.003	.004
MAX	.74	13.2	12.1	15.2	35.6	35.5	33.0	34.6	21.5	.20	.093	.077
(WY)	1980	1982	1984	1995	1996	1993	1993	1975	1983	1973	1973	1973
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1966	1966	1966	1966	1974	1974	1974	1974	1966	1966	1966	1966

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1966 - 1996
ANNUAL TOTAL	2880.30	3131.20	
ANNUAL MEAN	7.89	8.56	3.89
HIGHEST ANNUAL MEAN			9.85
LOWEST ANNUAL MEAN			.007
HIGHEST DAILY MEAN	58 Apr 28	69 Feb 17	75 May 25 1983
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1965
ANNUAL RUNOFF (AC-FT)	5710	6210	2820
10 PERCENT EXCEEDS	31	30	14
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

SACRAMENTO RIVER BASIN

11433085 NORTH FORK LONG CANYON CREEK BELOW DIVERSION DAM, NEAR VOLCANOVILLE, CA

LOCATION.--Lat 39°02'57", long 120°28'56", in SW 1/4 NW 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank 26 ft below diversion dam, 3.2 mi upstream from confluence of North and South Forks Long Canyon Creek, and 16.9 mi east of Volcanoville.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,700 ft above sea level, from topographic map.

REMARKS.--Discharge is computed only during periods of operation of North Fork Long Canyon Creek Diversion Tunnel (station 11433080). See schematic diagram of Middle Fork American and Rubicon River basins.

COOPERATION.--Records provided by Placer County Water Agency, 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	---	---	---	---	3.1	3.1	3.4	3.1	---	---	---	---
2	---	---	---	---	3.1	3.1	3.4	3.0	---	---	---	---
3	---	---	---	---	3.1	3.2	3.3	2.9	---	---	---	---
4	---	---	---	---	e6.9	3.4	3.2	2.9	---	---	---	---
5	---	---	---	---	e7.8	3.3	3.2	2.9	---	---	---	---
6	---	---	---	---	3.5	3.2	3.3	2.9	---	---	---	---
7	---	---	---	---	3.4	3.1	3.3	3.0	---	---	---	---
8	---	---	---	---	3.6	3.2	3.3	3.0	---	---	---	---
9	---	---	---	---	3.5	3.3	3.3	3.0	---	---	---	---
10	---	---	---	---	3.5	3.5	3.3	3.2	---	---	---	---
11	---	---	---	---	3.5	3.7	3.2	3.2	---	---	---	---
12	---	---	---	---	3.6	3.5	3.1	3.2	---	---	---	---
13	---	---	---	---	3.6	3.6	3.0	3.2	---	---	---	---
14	---	---	---	---	3.4	3.7	3.0	3.1	---	---	---	---
15	---	---	---	---	3.4	3.8	3.0	3.8	---	---	---	---
16	---	---	---	e6.9	3.5	3.9	3.6	e8.5	---	---	---	---
17	---	---	---	4.1	e4.8	4.0	3.4	---	---	---	---	---
18	---	---	---	3.3	3.2	4.0	3.3	---	---	---	---	---
19	---	---	---	3.0	e7.2	3.6	3.2	---	---	---	---	---
20	---	---	---	3.6	4.9	3.3	3.1	---	---	---	---	---
21	---	---	---	3.8	2.8	3.3	3.1	---	---	---	---	---
22	---	---	---	3.6	2.8	3.2	3.1	---	---	---	---	---
23	---	---	---	3.2	2.8	3.1	3.2	---	---	---	---	---
24	---	---	---	3.1	2.7	3.1	3.2	---	---	---	---	---
25	---	---	---	e3.1	2.6	3.0	3.1	---	---	---	---	---
26	---	---	---	3.1	2.9	3.0	3.1	---	---	---	---	---
27	---	---	---	3.2	3.2	3.0	3.0	---	---	---	---	---
28	---	---	---	3.2	3.1	3.5	2.9	---	---	---	---	---
29	---	---	---	3.1	3.1	3.3	3.0	---	---	---	---	---
30	---	---	---	3.0	---	3.1	3.0	---	---	---	---	---
31	---	---	---	3.1	---	3.1	---	---	---	---	---	---
TOTAL	---	---	---	---	108.6	104.2	95.6	---	---	---	---	---
MEAN	---	---	---	---	3.74	3.36	3.19	---	---	---	---	---
MAX	---	---	---	---	7.8	4.0	3.6	---	---	---	---	---
MIN	---	---	---	---	2.6	3.0	2.9	---	---	---	---	---
AC-FT	---	---	---	---	215	207	190	---	---	---	---	---

e Estimated.

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA

LOCATION.--Lat 39°00'22", long 120°45'35", in NW 1/4 NW 1/4 sec.4, T.13 N., R.11 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on right bank 1.6 mi downstream from Oxbow Powerplant and 3.3 mi east of Foresthill.

DRAINAGE AREA.--524 mi².

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

CHEMICAL DATA: Water year 1979.

BIOLOGICAL DATA: Water year 1979.

GAGE.--Water-stage recorder. Elevation of gage is 1,070 ft above sea level, from topographic map. Prior to Oct. 22, 1965, at site 3.2 mi downstream at different datum. Oct. 22, 1965, to Aug. 28, 1985, at site 400 ft downstream at different datum.

REMARKS.--Flow regulated by French Meadows Reservoir, Hell Hole Reservoir, Loon Lake (stations 11427400, 11428700, and 11429350), Stumpy Meadows Lake, usable capacity, 17,500 acre-ft, and several smaller reservoirs. Robbs Peak Powerplant (station 11429300) and Georgetown Divide Ditch, capacity about 60 ft³/s, divert water out of basin upstream from station. See schematic diagrams of Middle Fork American and Rubicon River basins and lower Sacramento River basin.

COOPERATION.--Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310,000 ft³/s, Dec. 23, 1964, gage height, 69.0 ft from floodmarks, site and datum then in use, caused by overtopping of the partly constructed Hell Hole Dam on the Rubicon River, from rating curve extended above 28,000 ft³/s on basis of slope-area measurement at gage height 38.0 ft and slope-conveyance study at gage height 69.0 ft, at site and datum then in use; next highest peak, 113,000 ft³/s, Feb. 1, 1963, gage height, 38.00 ft, site and datum then in use; minimum, 35 ft³/s, Oct. 10-20, 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	187	806	512	799	1710	2270	2620	1900	1990	966	895	837
2	145	741	567	986	1630	2170	3240	1870	1960	856	734	814
3	136	641	569	859	1350	2240	2820	1810	1870	869	978	616
4	124	835	513	619	8000	3860	2480	1770	1900	828	948	666
5	96	763	682	890	16000	4840	2350	1710	1850	1000	926	921
6	93	767	625	491	6070	3610	2270	1680	1760	1020	938	736
7	95	779	567	543	3810	3180	2260	1660	1720	999	916	585
8	500	728	445	806	3180	2960	2290	1620	1650	950	852	693
9	1060	598	588	1050	2780	2910	2300	1590	1560	1020	880	793
10	1070	257	283	723	2540	2930	2250	1530	1490	916	931	535
11	1080	796	665	604	2380	3470	2140	1670	1430	1000	865	843
12	1080	723	4860	649	2240	3650	2060	2110	1390	999	876	813
13	1080	714	2270	411	2220	3320	2040	2310	1350	917	892	799
14	1080	763	1150	426	2030	3000	1980	2450	1290	1000	953	769
15	1080	774	947	683	2210	2820	1950	4320	1210	854	857	867
16	1080	744	583	1980	2270	2720	2390	23500	1210	937	847	816
17	1020	598	677	2350	2410	2630	2410	13500	1200	948	839	809
18	1140	615	791	1550	2780	2620	2670	15400	1200	979	780	808
19	1080	641	852	2260	5760	2570	2370	6760	1200	951	729	812
20	1080	739	781	1590	7390	2510	2290	4470	1190	839	819	833
21	1080	421	808	1240	6180	2450	2210	3540	1190	866	789	799
22	1080	286	804	1330	4910	2360	2150	4680	1180	942	753	571
23	1080	485	464	1190	4180	2290	2110	3650	1180	958	771	554
24	1080	579	413	1600	3770	2170	2110	3010	1170	975	760	512
25	1080	635	382	3410	3340	2070	2100	2540	1170	854	746	509
26	1080	620	673	1820	3070	1950	2070	2470	1180	934	803	466
27	806	662	722	2950	2820	1940	2080	2420	1200	354	857	608
28	638	589	713	3310	2660	2540	1970	2350	1160	768	885	796
29	850	455	759	2110	2430	2240	1910	2160	443	889	766	520
30	669	579	917	1680	---	2060	1910	2130	743	764	822	274
31	734	---	1060	1730	---	2010	---	2030	---	942	884	---
TOTAL	24483	19333	26642	42639	112120	84360	67800	124610	41036	28094	26291	20974
MEAN	790	644	859	1375	3866	2721	2260	4020	1368	906	848	699
MAX	1140	835	4860	3410	16000	4840	3240	23500	1990	1020	978	921
MIN	93	257	283	411	1350	1940	1910	1530	443	354	729	274
AC-FT	48560	38350	52840	84570	222400	167300	134500	247200	81390	55720	52150	41600

SACRAMENTO RIVER BASIN

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1996, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	451	649	1091	1500	1819	1845	1777	1566	1007	641	596	511
MAX	1634	2951	7172	5939	8815	5076	5572	4642	3300	1836	1142	1084
(WY)	1963	1984	1965	1980	1986	1983	1982	1963	1983	1983	1983	1983
MIN	54.3	47.1	64.8	85.2	111	240	110	120	124	99.2	47.2	42.8
(WY)	1961	1960	1960	1991	1991	1977	1977	1977	1977	1966	1959	1962

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1959 - 1996			
ANNUAL TOTAL	795967				618382							
ANNUAL MEAN	2181				1690				1118			
HIGHEST ANNUAL MEAN									2723			
LOWEST ANNUAL MEAN									179			
HIGHEST DAILY MEAN	15900				Jan 14				23500			
LOWEST DAILY MEAN	93				Oct 6				May 16			
ANNUAL SEVEN-DAY MINIMUM	125				Oct 1				35			
INSTANTANEOUS PEAK FLOW					37800				May 16			
INSTANTANEOUS PEAK STAGE					23.38				May 16			
ANNUAL RUNOFF (AC-FT)	1579000				1227000				69.00			
10 PERCENT EXCEEDS	3940				2950				809600			
50 PERCENT EXCEEDS	1740				1070				2380			
90 PERCENT EXCEEDS	494				570				727			
									93			

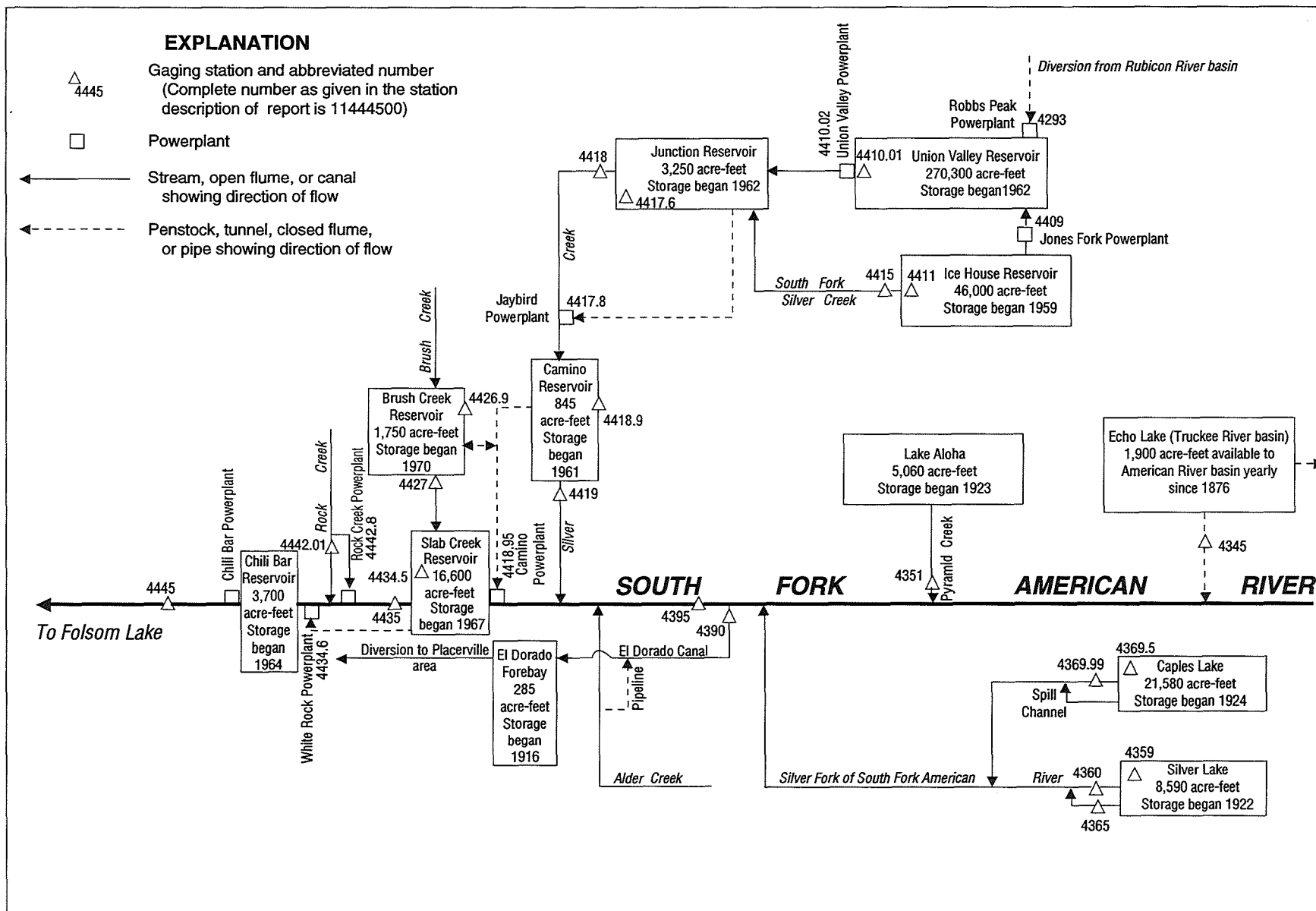


Figure 33. Diversions and storage in South Fork American River basin.

SACRAMENTO RIVER BASIN

11434500 ECHO LAKE CONDUIT NEAR PHILLIPS, CA

LOCATION.--Lat 38°49'52", long 120°02'12", in NW 1/4 NW 1/4 sec.6, T.11 N., R.18 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank in Berkeley Municipal Camp, 0.5 mi downstream from intake, and 2.4 mi northeast of Phillips.

PERIOD OF RECORD.--August 1923 to current year. Monthly discharge only for July 1933, published in WSP 1315-A. Published as Echo Lake Flume near Vade prior to 1943, and as Echo Lake Conduit near Vade for 1944-53.

REVISED RECORDS.--WSP 1315-A: July 1933.

GAGE.--Water-stage recorder. Elevation of gage is 7,420 ft above sea level, from topographic map. Prior to July 16, 1929, nonrecording gage at site 0.4 mi upstream at different datum.

REMARKS.--Conduit diverts from Echo Lake (station 10336608) in Truckee River basin into South Fork American River basin for power and irrigation. See schematic diagram of South Fork American 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 33 ft³/s, Sept. 10, 11, 1980; no flow 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	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e19
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e19
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e18
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.3
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.5
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.4
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.5
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	467.70
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	15.6
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	928

e Estimated.

11434500 ECHO LAKE CONDUIT NEAR PHILLIPS, 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	8.62	3.69	.49	.13	.14	.22	.15	.000	.11	.25	.96	13.0
MAX	24.1	20.4	7.13	4.88	4.73	6.70	4.77	.000	5.90	9.39	15.0	22.1
(WY)	1984	1976	1970	1990	1990	1976	1990	1928	1924	1928	1927	1956
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1928	1928	1928	1928	1928	1928	1928	1928	1928	1929	1929	1928

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1923 - 1996

ANNUAL TOTAL						467.70						
ANNUAL MEAN						1.28				2.29		
HIGHEST ANNUAL MEAN										4.92		1976
LOWEST ANNUAL MEAN										.19		1993
HIGHEST DAILY MEAN						23	Sep 4		33		Sep 10	1980
LOWEST DAILY MEAN				.00	Jan 1	.00	Oct 1		.00		Jun 1	1924
ANNUAL SEVEN-DAY MINIMUM				.00	Jan 1	.00	Oct 1		.00		Jun 1	1924
ANNUAL RUNOFF (AC-FT)						928			1660			
10 PERCENT EXCEEDS				.00		.00			10			
50 PERCENT EXCEEDS				.00		.00			.00			
90 PERCENT EXCEEDS				.00		.00			.00			

SACRAMENTO RIVER BASIN

11435100 PYRAMID CREEK AT TWIN BRIDGES, CA

LOCATION.--Lat 38°48'57", long 120°06'58", in NW 1/4 SW 1/4 sec.9, T.11 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.5 mi northeast of Twin Brdges, 2.2 mi west of Phillips, and 3.6 mi downstream from Lake Aloha.

DRAINAGE AREA.--8.76 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,320 ft above sea level, from topographic map. Prior to October 1987, at datum 1.00 ft higher.

REMARKS.--Flow regulated by Lake Aloha, capacity, 5,060 acre-ft. Lake of the Woods, Ropi Lake, and Toem Lake (unknown capacities) also regulate at times. See schematic diagram of South Fork American 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft³/s, May 16, 1996, gage height, 5.73 ft, present datum, from rating curve extended above 300 ft³/s; minimum daily, 0.03 ft³/s, Oct. 26-28, 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	87	2.8	2	37	20	e19	30	104	140	69	79	55
2	85	2.7	3.2	26	15	20	30	103	177	82	78	53
3	74	2.6	3.7	23	15	22	27	94	198	93	75	47
4	72	2.5	109	20	99	22	27	82	204	100	75	45
5	70	2.5	43	18	265	27	30	84	195	95	75	44
6	69	2.4	20	17	88	29	38	84	202	88	74	43
7	67	2.2	18	18	49	23	53	89	220	84	73	41
8	66	2.2	14	18	40	25	69	97	204	84	74	39
9	64	2.2	11	17	34	29	73	95	179	86	73	36
10	62	2	9.1	17	31	26	58	104	169	86	72	32
11	60	1.9	40	16	31	25	46	124	150	84	72	13
12	57	1.9	224	15	35	24	40	142	152	90	72	6.1
13	53	1.8	60	15	36	22	35	159	163	110	72	5.5
14	47	1.8	30	14	34	21	45	216	150	110	71	5.5
15	42	1.7	24	15	34	23	58	443	134	91	70	6.7
16	35	1.7	22	36	52	26	60	605	128	75	70	8.3
17	22	1.7	18	35	56	31	41	297	125	56	68	5.8
18	13	1.6	16	21	41	39	35	294	117	45	68	5
19	10	1.5	15	29	44	47	29	145	110	40	65	4.7
20	8.2	1.5	15	21	41	51	28	110	110	35	65	4.6
21	6.8	1.4	14	21	33	50	27	116	110	34	64	4.4
22	6	1.3	14	21	34	44	31	169	100	38	63	4.4
23	5.2	1.3	13	22	e28	34	56	128	94	58	63	4.4
24	4.7	1.4	13	29	e26	28	80	104	90	56	62	4.4
25	4.3	1.5	12	50	e26	25	84	93	85	57	61	4.4
26	3.9	2.5	12	28	e26	24	93	103	82	83	61	4.4
27	3.6	2.1	12	23	e26	26	90	123	73	83	59	4.3
28	3.3	2	14	29	e26	29	75	114	64	83	58	4.3
29	3	2	21	26	e22	27	79	127	60	82	57	4.2
30	2.9	2	110	25	---	25	99	123	60	80	57	4.3
31	2.8	---	103	23	---	26	---	120	---	79	56	---
TOTAL	1109.7	58.7	1035.0	725	1307	889	1566	4791	4045	2336	2102	543.7
MEAN	35.8	1.96	33.4	23.4	45.1	28.7	52.2	155	135	75.4	67.8	18.1
MAX	87	2.8	224	50	265	51	99	605	220	110	79	55
MIN	2.8	1.3	2.0	14	15	19	27	82	60	34	56	4.2
AC-FT	2200	116	2050	1440	2590	1760	3110	9500	8020	4630	4170	1080

e Estimated.

SACRAMENTO RIVER BASIN

381

11435100 PYRAMID CREEK AT TWIN BRIDGES, 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	12.2	17.2	15.2	16.2	17.4	23.9	39.6	95.9	95.8	70.4	45.1	16.5
MAX	35.8	53.8	52.5	56.4	55.6	63.2	66.9	160	213	198	90.2	77.4
(WY)	1996	1974	1982	1980	1982	1982	1982	1974	1983	1995	1974	1983
MIN	.18	.74	1.93	2.25	3.54	7.13	14.7	29.5	18.4	32.3	2.52	.28
(WY)	1991	1991	1991	1991	1991	1977	1975	1977	1987	1991	1981	1981

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1971 - 1996	
ANNUAL TOTAL	25076.6		20508.1			
ANNUAL MEAN	68.7		56.0		38.9	
HIGHEST ANNUAL MEAN					65.1	
LOWEST ANNUAL MEAN					15.3	
HIGHEST DAILY MEAN	295		605		605	
LOWEST DAILY MEAN	1.3		1.3		.03	
ANNUAL SEVEN-DAY MINIMUM	1.4		1.4		.04	
INSTANTANEOUS PEAK FLOW			1190		1190	
INSTANTANEOUS PEAK STAGE			5.73		5.73	
ANNUAL RUNOFF (AC-FT)	49740		40680		28180	
10 PERCENT EXCEEDS	186		115		96	
50 PERCENT EXCEEDS	42		39		20	
90 PERCENT EXCEEDS	3.5		3.5		2.9	

SACRAMENTO RIVER BASIN

11435900 SILVER LAKE NEAR KIRKWOOD, CA

LOCATION.--Lat 38°40'07", long 120°07'14", in NW 1/4 SE 1/4 sec.32, T.10 N., R.17 E., Amador County, Hydrologic Unit 18020129, Eldorado National Forest, on outlet structure, 3.5 mi southwest of Kirkwood.

DRAINAGE AREA.--15.2 mi².

PERIOD OF RECORD.--October 1985 to current year. Unpublished records for water years 1981-85 available in files of U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 7,184.3 ft above sea level (levels by Pacific Gas & Electric Co.). October 1985 to Mar. 5, 1991, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earthfill and rock masonry dam initially constructed in 1876 and enlarged in 1929. Capacity, 8,590 acre-ft between gage heights 0.0 ft, invert of outlet, and 22.7 ft, top of radial gates and flashboards. Released water is used for power development on South Fork American River. See schematic diagram of South Fork American River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,791 acre-ft, June 3, 1996, gage height, 23.10 ft; minimum, 0 acre-ft, Feb. 13, 15, 20, 22, 27, 1991, gage height, 0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,791 acre-ft, June 3, gage height, 23.10 ft; minimum, 1,381 acre-ft, Dec. 10, gage height, 4.87 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., recomputed Oct. 1, 1989)

0.0	0	12.0	3,840
2.0	540	15.0	5,010
4.0	1,120	18.0	6,350
6.0	1,720	21.0	7,740
9.0	2,730	24.0	9,241

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	5138	2684	1555	2927	3412	3893	4090	4654	8570	8555	7760	6667
2	5036	2621	1531	2978	3397	3882	4098	4642	8721	8585	7707	6634
3	4934	2554	1510	3017	3385	3908	4083	4571	8791	8600	7664	6579
4	4833	2488	1504	3039	3798	3957	4075	4504	8696	8565	7631	6496
5	4745	2418	1486	3050	4646	3946	4090	4508	8620	8545	7589	6414
6	4658	2356	1465	3065	4508	3923	4147	4520	8691	8525	7551	6331
7	4575	2301	1447	3079	4329	3916	4216	4610	8706	8500	7518	6253
8	4489	2247	1429	3086	4216	3904	4224	4753	8610	8485	7481	6174
9	4407	2206	1402	3097	4140	3923	4232	4946	8455	8480	7443	6078
10	4321	2165	1381	3094	4094	3934	4239	5211	8405	8460	7410	5945
11	4235	2124	1528	3097	4064	3957	4224	5664	8480	8435	7373	5817
12	4155	2091	2128	3105	4060	3938	4182	6174	8570	8445	7340	5709
13	4075	2050	2219	3108	4060	3927	4147	6625	8605	8440	7307	5614
14	3995	2014	2243	3112	4060	3908	4193	7025	8550	8430	7270	5520
15	3912	1979	2277	3127	4060	3900	4247	8014	8525	8400	7238	5431
16	3836	1947	2267	3200	4109	3912	4267	8545	8520	8365	7205	5353
17	3760	1908	2277	3215	4151	3950	4209	8044	8515	8325	7173	5267
18	3680	1886	2274	3256	4151	4007	4136	7969	8530	8290	7131	5198
19	3596	1844	2260	3278	4163	4060	4083	7594	8545	8255	7094	5142
20	3517	1809	2233	3282	4136	4102	4041	7528	8540	8220	7062	5091
21	3453	1768	2216	3308	4117	4128	4010	7755	8555	8185	7025	5036
22	3378	1739	2209	3304	4056	4147	3999	8009	8530	8144	6998	5002
23	3311	1711	2202	3319	4014	4105	4052	8164	8505	8109	6970	4982
24	3234	1678	2185	3408	4003	4067	4174	8265	8475	8069	6943	4962
25	3160	1672	2172	3397	3976	4045	4313	8330	8515	8029	6911	4938
26	3094	1633	2158	3385	3950	4026	4453	8465	8550	7989	6869	4905
27	3028	1597	2151	3464	3927	4029	4492	8520	8505	7944	6842	4889
28	2960	1584	2134	3449	3908	4052	4461	8475	8480	7914	6805	4877
29	2891	1582	2158	3438	3904	4041	4512	8500	8500	7879	6773	4857
30	2823	1570	2530	3434	---	4029	4602	8480	8525	7839	6741	4841
31	2751	---	2841	3423	---	4029	---	8495	---	7810	6699	---
MAX	5138	2684	2841	3464	4646	4147	4602	8545	8791	8600	7760	6667
MIN	2751	1570	1381	2927	3385	3882	3999	4504	8405	7810	6699	4841
a	9.06	5.50	9.31	10.90	12.17	12.50	13.98	22.51	22.57	21.14	18.76	14.58
b	-2477	-1181	+1271	+582	+481	+125	+573	+3893	+30	-715	-1111	-1858

CAL YR 1995 MAX 8585 MIN 1381 b +1304
WTR YR 1996 MAX 8791 MIN 1381 b -387

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

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.--Lat 38°40'18", long 120°07'19", in NE 1/4 SW 1/4 sec.32, T.10 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 1,000 ft downstream from Silver Lake Dam and 3.5 mi southwest of Kirkwood.

DRAINAGE AREA.--15.2 mi².

PERIOD OF RECORD.--September 1922 to current year. Records for water year 1923 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.--WDR CA-75-4: 1927(M), 1929(M), 1932(M), 1937-38(M), 1940-45(M), 1950-53(M), 1955-58(M), 1963(M), 1965(M), 1967(M), 1969-70(M), 1973(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 8, 1986. Datum of gage is 7,198.0 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.--Low and medium flow regulated by Silver Lake (station 11435900) 1,000 ft upstream. Some water, in addition to that released through dam and over spillway, escapes from Silver Lake through porous rock formation and is measured at staff gage (station 11436500) 0.25 mi east of station. For leakage from Silver Lake, refer to monthly figures below. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s, Feb. 19, 1986, gage height, 6.22 ft, from rating curve extended above 430 ft³/s; no flow many days in February and March 1948, Jan. 13, 14, 1954, Nov. 3, 1959, to Feb. 5, 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	46	30	8.6	14	15	23	37	241	143	16	2.6	3.2
2	46	30	11	14	15	22	46	253	157	12	2.8	3.3
3	45	29	11	14	15	22	41	238	190	16	2.9	9.5
4	44	29	11	14	15	28	36	211	250	27	2.9	29
5	44	29	10	14	120	33	35	196	224	25	3.0	34
6	43	28	10	14	228	29	44	202	184	19	3.1	34
7	43	28	10	14	165	25	68	184	202	19	3.1	34
8	42	22	10	14	113	23	90	145	213	9.9	3.1	34
9	41	17	9.9	14	90	24	115	119	214	4.9	3.2	46
10	41	17	9.8	14	77	26	122	105	150	4.9	3.2	73
11	40	17	10	14	69	29	110	81	83	4.9	3.2	72
12	39	16	12	14	64	31	100	87	78	4.6	3.2	60
13	38	16	12	14	64	28	91	108	102	3.7	3.1	46
14	38	16	12	14	65	25	90	100	115	3.0	3.0	44
15	37	16	12	14	64	23	102	137	100	3.0	3.0	44
16	36	16	12	14	69	23	120	544	85	2.9	3.0	43
17	35	16	12	15	80	25	107	536	76	2.6	3.0	43
18	35	15	12	15	82	35	94	399	57	3.0	3.1	33
19	35	15	12	15	85	55	80	334	51	3.4	2.6	26
20	34	15	12	15	83	69	71	167	58	3.2	2.6	26
21	34	15	12	15	80	76	59	46	58	3.1	2.6	22
22	33	15	12	15	73	81	51	31	58	3.2	2.6	13
23	33	15	12	15	59	77	53	41	58	3.3	3.0	6.7
24	33	15	12	15	50	67	78	58	58	3.3	3.6	6.7
25	32	15	12	15	41	55	106	69	58	3.3	3.3	6.7
26	32	14	12	15	34	43	155	79	58	3.3	3.3	6.7
27	32	14	12	15	30	39	189	116	58	3.0	3.3	6.2
28	31	10	12	15	27	47	188	155	38	2.8	3.3	6.2
29	31	5.1	12	15	24	40	182	139	19	2.6	3.2	6.4
30	31	5.1	13	15	---	34	213	142	19	2.6	3.2	6.5
31	30	---	14	15	---	32	---	139	---	2.6	3.3	---
TOTAL	1154	540.2	354.3	449	1996	1189	2873	5402	3214	221.1	94.4	824.1
MEAN	37.2	18.0	11.4	14.5	68.8	38.4	95.8	174	107	7.13	3.05	27.5
MAX	46	30	14	15	228	81	213	544	250	27	3.6	73
MIN	30	5.1	8.6	14	15	22	35	31	19	2.6	2.6	3.2
AC-FT	2290	1070	703	891	3960	2360	5700	10710	6370	439	187	1630
a	15	0	0	0	0	0	.06	387	791	719	397	121

a Leakage, in acre-feet, from Silver Lake, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, 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	24.9	18.6	15.9	12.9	13.6	15.3	42.3	126	86.9	19.1	8.58	38.0
MAX	54.3	110	116	71.2	93.2	98.2	133	306	353	186	50.5	74.6
(WY)	1953	1951	1951	1970	1963	1986	1943	1969	1983	1983	1987	1983
MIN	.11	.15	.000	.000	.093	.013	.20	1.37	1.43	.91	.44	.16
(WY)	1930	1929	1960	1960	1948	1948	1924	1977	1977	1959	1925	1923

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1923 - 1996

ANNUAL TOTAL	28434.1	18311.1	
ANNUAL MEAN	77.9	50.0	
HIGHEST ANNUAL MEAN			35.2
LOWEST ANNUAL MEAN			85.4
HIGHEST DAILY MEAN	446	Jun 5	544 May 16
LOWEST DAILY MEAN	5.1	Nov 29	2.6 Jul 17
ANNUAL SEVEN-DAY MINIMUM	5.9	Aug 29	2.7 Jul 28
INSTANTANEOUS PEAK FLOW			892 May 17
INSTANTANEOUS PEAK STAGE			5.52 May 17
ANNUAL RUNOFF (AC-FT)	56400	36320	25520
TOTAL LEAKAGE (AC-FT) a	1810	2430	
10 PERCENT EXCEEDS	244	121	94
50 PERCENT EXCEEDS	32	28	11
90 PERCENT EXCEEDS	12	3.2	.70

a Leakage, in acre-feet, from Silver Lake, provided by Pacific Gas & Electric Co.

11436950 CAPLES LAKE NEAR KIRKWOOD, CA

LOCATION.--Lat 38°42'27", long 120°02'55", in SW 1/4 SW 1/4 sec.18, T.10 N., R.18 E., Alpine County, Hydrologic Unit 18020129, Eldorado National Forest, on Caples Lake Dam near the center of the earthfill portion and 1.3 mi east of Kirkwood.

DRAINAGE AREA.--13.5 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 Oct. 1, 1991. Datum of gage is 7,894.0 ft above sea level (levels by Pacific Gas & Electric Co.). Prior to Oct. 1, 1991, nonrecording gage read periodically except for the periods Oct. 16, 1986, to Sept. 30, 1987, Dec. 18, 1990, to May 26, 1991, and July 30 to Sept. 16, 1991, when there was a water-stage recorder at same site and datum.

REMARKS.--Lake is formed by one earthfill and one concrete dam at spillway; dam was completed and storage began in 1924. Capacity, 21,581 acre-ft, between gage heights 6.0 and 62.0 ft, top of 3 ft of flashboards; capacity, 19,751 acre-ft at spillway level. Released water is measured at Caples Creek Release (station 11436999). When gage height is above spillway crest of 59.0 ft, there is leakage or spill which is not measured. Released water is used for power development on South Fork American River. See schematic diagram of South Fork American River basin.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 21,642 acre-ft, July 3, 1996, gage height, 62.10 ft; minimum, 2,427 acre-ft, Mar. 30, 31, 1987, gage height, 20.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,642 acre-ft, July 3, gage height, 62.10 ft; minimum, 11,883 acre-ft, Jan. 15, gage height 44.69 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated Mar. 24, 1934)

15.0	1,061	45.0	12,037
20.0	2,238	50.0	14,609
25.0	3,703	55.0	17,390
30.0	5,442	60.0	20,356
35.0	7,432	63.0	22,201
40.0	9,648		

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	18398	14975	12924	12540	12380	14433	15597	17900	20997	21402	21581	19552
2	18328	14840	12873	12505	12380	14454	15597	18175	21113	21605	21562	19427
3	18175	14738	12838	12475	12370	14481	15597	18428	21211	21642	21544	19289
4	18075	14636	12822	12430	12646	14609	15564	18629	21242	21587	21550	19188
5	17976	14523	12767	12385	13046	14652	15531	18836	21236	21538	21538	19092
6	17842	14390	12736	12325	13174	14684	15531	19044	21340	21494	21507	18943
7	17720	14300	12681	12290	13251	14689	15558	19247	21390	21494	21507	18860
8	17598	14205	12646	12225	13292	14716	15630	19247	21377	21494	21457	18753
9	17511	14115	12610	12185	13317	14743	15707	19182	21316	21494	21408	18676
10	17396	14057	12540	12126	13364	14754	15784	19170	21273	21494	21371	18676
11	17269	14004	12661	12062	13390	14786	15818	19253	21316	21494	21291	18652
12	17177	13931	12985	11997	13446	14845	15845	19456	21457	21494	21229	18605
13	17034	13847	13031	11973	13477	14872	15879	19661	21476	21464	21137	18517
14	16948	13815	13010	11903	13503	14872	15934	20046	21359	21464	21058	18410
15	16806	13732	13021	11883	13555	14872	15990	20874	21303	21427	21027	18310
16	16703	13690	12995	11923	13638	14894	16185	21285	21353	21414	20984	18216
17	16596	13622	12954	11893	13695	14915	16258	20966	21383	21359	20899	18099
18	16505	13550	12924	11948	13774	14942	16347	20776	21433	21316	20868	18023
19	16376	13514	12888	11968	13920	14996	16314	20563	21470	21273	20758	17947
20	16263	13441	12838	11973	14031	15067	16314	20441	21494	21273	20678	17847
21	16129	13353	12772	12027	14178	15143	16314	20380	21494	21297	20605	17760
22	15995	13323	12736	12022	14263	15202	16319	20429	21464	21340	20538	17720
23	15890	13256	12651	12096	14273	15230	16336	20477	21402	21396	20453	17685
24	15806	13189	12615	12205	14332	15262	16404	20508	21371	21439	20380	17685
25	15696	13138	12555	12205	14353	15306	16545	20483	21359	21482	20265	17656
26	15586	13077	12490	12215	14380	15328	16771	20556	21285	21501	20180	17644
27	15492	13041	12425	12320	14380	15377	16982	20697	21205	21525	20083	17633
28	15377	12975	12365	12320	14433	15426	17131	20788	21180	21544	19992	17586
29	15268	12975	12345	12325	14433	15454	17327	20843	21217	21562	19889	17592
30	15164	12965	12470	12325	---	15481	17586	20899	21303	21569	19775	17569
31	15083	---	12555	12380	---	15498	---	20899	---	21587	19679	---
MAX	18398	14975	13031	12540	14433	15498	17586	21285	21494	21642	21581	19552
MIN	15083	12965	12345	11883	12370	14433	15531	17900	20997	21273	19679	17569
a	50.88	46.85	46.04	45.69	49.67	51.64	55.34	60.89	61.55	62.01	58.88	55.31
b	-3392	-2118	-410	-175	+2053	+1065	+2088	+3313	+404	+284	-1908	-2110

CAL YR 1995 MAX 21569 MIN 10205 b -1172
WTR YR 1996 MAX 21642 MIN 11883 b -906

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

SACRAMENTO RIVER BASIN

11436999 CAPLES CREEK RELEASE BELOW CAPLES DAM, NEAR KIRKWOOD, CA

LOCATION.--Lat 38°42'31", long 120°03'02", in NW 1/4 SW 1/4 sec.18, T.10 N., R.18 E., Alpine County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 500 ft downstream from main dam and outlet gate of Caples Lake and 1.3 mi east of Kirkwood.

DRAINAGE AREA.--13.5 mi².

PERIOD OF RECORD.--October 1992 to current year. Records for September 1922 to September 1992 were published as station 11437000, Caples Lake Outlet. This record combined the spillway discharge. Records for water year 1945 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1969, published as Twin Lakes Outlet near Kirkwood.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,730 ft above sea level, from topographic map.

REMARKS.--Flow regulated by Caples Lake (station 11436950) 500 ft upstream. Flow over Caples Lake Spillway bypasses this gage. No diversion upstream from station. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 254 ft³/s, July 2, 1995, gage height, 3.09 ft; minimum daily, 5.5 ft³/s, Sept. 10, 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	56	52	16	36	9.0	9.6	10	33	77	46	8.2	55
2	56	52	29	37	9.0	9.7	20	33	77	32	9.4	55
3	56	52	29	37	9.0	9.7	31	33	77	62	10	55
4	56	52	29	37	9.9	9.7	30	33	76	95	10	55
5	56	52	30	37	11	9.7	30	34	75	101	10	55
6	56	52	30	37	9.5	9.7	31	34	75	102	10	54
7	56	51	25	37	9.4	9.7	31	72	77	103	10	54
8	56	41	22	37	9.4	9.7	31	146	76	91	17	54
9	56	30	22	37	9.4	9.7	31	173	77	84	30	22
10	56	30	24	37	9.4	9.8	31	173	78	83	35	5.5
11	56	30	27	37	9.4	9.9	31	172	80	82	35	5.8
12	56	30	28	37	9.5	9.9	31	172	79	83	35	13
13	56	30	27	36	9.6	9.9	31	173	112	80	35	42
14	55	30	27	36	9.7	9.9	32	135	140	77	35	51
15	55	30	27	36	9.7	9.9	32	109	117	66	35	51
16	54	29	26	36	9.7	9.9	32	111	95	58	35	50
17	54	29	26	22	9.7	9.9	31	135	95	58	35	51
18	55	29	26	9.0	9.7	10	31	158	104	58	35	44
19	55	29	26	9.0	9.5	10	31	157	122	40	38	39
20	55	29	29	9.0	9.4	10	31	156	129	25	40	39
21	55	29	36	9.0	9.5	10	31	157	128	16	40	35
22	55	29	36	9.0	9.4	10	31	131	130	8.7	40	21
23	53	29	36	9.0	9.4	10	31	96	128	8.7	44	7.8
24	53	29	36	9.0	9.5	9.9	32	95	127	8.7	46	7.8
25	52	29	36	9.0	9.5	9.9	32	96	128	8.7	46	7.8
26	52	29	36	9.0	9.6	9.9	32	88	127	8.8	46	7.8
27	52	29	36	9.0	9.7	10	33	76	110	8.8	46	7.8
28	52	17	36	9.0	9.6	10	33	76	73	8.8	46	7.8
29	52	7.3	36	9.0	9.6	10	33	76	53	8.6	51	7.8
30	52	7.2	37	9.0	---	10	33	77	53	8.2	55	7.8
31	52	---	37	9.0	---	10	---	77	---	8.2	55	---
TOTAL	1691	993.5	923	735.0	276.7	306.0	910	3287	2895	1528.2	1022.6	968.7
MEAN	54.5	33.1	29.8	23.7	9.54	9.87	30.3	106	96.5	49.3	33.0	32.3
MAX	56	52	37	37	11	10	33	173	140	103	55	55
MIN	52	7.2	16	9.0	9.0	9.6	10	33	53	8.2	8.2	5.5
AC-FT	3350	1970	1830	1460	549	607	1800	6520	5740	3030	2030	1920

SACRAMENTO RIVER BASIN

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11436999 CAPLES CREEK RELEASE BELOW CAPLES DAM, NEAR KIRKWOOD, 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	24.4	18.7	21.2	22.3	21.6	18.2	34.6	52.4	106	79.5	35.7	31.1
MAX	54.5	33.1	29.8	33.4	44.4	30.0	83.5	106	203	183	64.5	55.3
(WY)	1996	1996	1996	1994	1994	1995	1995	1996	1995	1995	1995	1995
MIN	8.42	9.01	12.9	14.0	9.54	9.87	9.37	8.63	9.34	11.6	22.5	17.0
(WY)	1993	1995	1993	1993	1996	1996	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1993 - 1996			
ANNUAL TOTAL	25619.5				15536.7							
ANNUAL MEAN	70.2				42.4				38.8			
HIGHEST ANNUAL MEAN									63.1			
LOWEST ANNUAL MEAN									20.8			
HIGHEST DAILY MEAN	252				173				252			
LOWEST DAILY MEAN	7.2				5.5				5.5			
ANNUAL SEVEN-DAY MINIMUM	18				7.8				6.5			
INSTANTANEOUS PEAK FLOW					175				254			
INSTANTANEOUS PEAK STAGE					2.82				3.09			
ANNUAL RUNOFF (AC-FT)	50820				30820				28140			
10 PERCENT EXCEEDS	226				95				93			
50 PERCENT EXCEEDS	54				33				20			
90 PERCENT EXCEEDS	19				9.0				8.9			

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA

LOCATION.--Lat 38°45'49", long 120°19'39", in SW 1/4 SW 1/4 sec.29, T.11 N., R.15 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 0.8 mi downstream from Silver Fork American River, and 1.9 mi southwest of Kyburz.

DRAINAGE AREA.--193 mi².

PERIOD OF RECORD.--August to December 1907, October 1922 to current year. Prior to October 1956, records for river and El Dorado Canal published separately; combined flow only, October 1956 to September 1960.

CHEMICAL DATA: Water years 1979, 1980.

BIOLOGICAL DATA: Water years 1979, 1980.

SUSPENDED SEDIMENT: Water year 1980.

WATER TEMPERATURE: Water years 1966-79.

REVISED RECORDS.--WSP 1445: 1923(M), 1925(M), 1927(M), 1928 (river only), 1935-37(M). WSP 1515: 1928 (combined). WSP 1931: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder for canal diversion (station 11439000). Elevation of gage is 3,840 ft above sea level, from topographic map. Prior to Oct. 1, 1962, at datum 1.00 ft higher.

REMARKS.--Low and medium flows regulated by Echo Lake, Silver Lake, Caples Lake (stations 10336608, 11435900, and 11436950), and Lake Aloha, total capacity, 37,100 acre-ft. Some water is diverted out of river 0.6 mi upstream at diversion dam to El Dorado Canal. Part of this water is used for irrigation and domestic use and the remainder is returned to river at El Dorado Powerplant (station 11439300). See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 17,400 ft³/s, Dec. 23, 1964, gage height, 10.92 ft, from rating curve extended above 6,300 ft³/s on basis of contracted-opening measurement at gage height 10.40 ft; minimum daily, 0.13 ft³/s, Nov. 26, 1977.
Combined flow: Maximum discharge, 17,500 ft³/s, Dec. 23, 1964; minimum daily, 10 ft³/s, Oct. 17, 19, 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	187	104	36	384	163	368	883	1940	1410	267	53	46
2	180	103	52	272	171	381	986	1950	1610	251	54	42
3	195	102	68	244	185	441	856	1930	1780	281	54	42
4	186	101	211	215	830	610	787	1690	1850	343	54	42
5	185	101	164	190	2980	544	803	1630	1760	298	55	41
6	184	100	93	175	1590	490	914	1670	1660	247	54	41
7	181	99	86	172	1020	484	1140	1670	1740	236	52	41
8	180	98	75	171	807	474	1350	1770	1680	228	52	40
9	178	72	64	166	687	563	1450	1670	1550	191	53	41
10	176	69	58	162	637	584	1330	1720	1350	179	55	41
11	171	68	103	151	608	650	1160	1870	1090	165	54	41
12	168	67	1540	152	648	618	1090	2140	995	175	54	41
13	164	67	460	149	709	507	950	2280	1080	199	53	42
14	159	67	215	143	695	427	1020	2390	1110	198	53	42
15	154	66	161	153	664	433	1240	3830	968	145	53	41
16	148	64	139	448	792	509	1750	8140	819	108	53	41
17	138	66	119	493	972	643	1290	4380	775	86	56	41
18	125	65	110	285	936	842	1220	4400	685	70	56	41
19	119	65	84	260	1340	963	972	2560	625	56	53	41
20	116	64	83	212	1340	1050	880	1980	603	58	52	42
21	113	64	92	198	934	1070	798	1760	575	61	52	43
22	110	63	108	175	758	1050	790	1870	511	58	52	42
23	109	63	100	173	646	855	922	1510	485	58	52	55
24	109	63	93	207	588	735	1180	1350	471	54	52	54
25	109	64	92	185	524	670	1370	1270	533	57	52	52
26	108	80	89	165	471	617	1680	1300	576	60	52	47
27	107	72	87	194	438	636	1780	1350	501	56	52	43
28	106	68	90	190	408	856	1640	1340	344	55	52	43
29	104	50	107	163	383	700	1620	1340	259	55	52	43
30	104	36	817	157	---	661	1940	1340	255	56	53	45
31	104	---	986	161	---	652	---	1310	---	55	53	---
TOTAL	4477	2231	6582	6565	22924	20083	35791	67350	29650	4406	1647	1297
MEAN	144	74.4	212	212	790	648	1193	2173	988	142	53.1	43.2
MAX	195	104	1540	493	2980	1070	1940	8140	1850	343	56	55
MIN	104	36	36	143	163	368	787	1270	255	54	52	40
AC-FT	8880	4430	13060	13020	45470	39830	70990	133600	58810	8740	3270	2570

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, 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	34.0	76.9	125	129	165	263	626	1193	824	173	22.9	21.3
MAX	223	1283	1587	937	1333	1252	1497	2765	3551	1628	343	417
(WY)	1984	1951	1951	1980	1986	1986	1982	1969	1983	1995	1983	1983
MIN	.77	.49	.69	.57	.76	2.42	38.9	56.8	.76	.62	.58	.54
(WY)	1929	1929	1931	1929	1931	1933	1977	1977	1924	1924	1926	1924

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1923 - 1996	
ANNUAL TOTAL	323719		203003			
ANNUAL MEAN	887		555		305	
HIGHEST ANNUAL MEAN					907	1983
LOWEST ANNUAL MEAN					19.4	1977
HIGHEST DAILY MEAN	6330	May 1	8140	May 16	12300	Dec 23 1964
LOWEST DAILY MEAN	36	Nov 30	36	Nov 30	.13	Nov 26 1977
ANNUAL SEVEN-DAY MINIMUM	55	Nov 27	41	Sep 5	.36	Nov 5 1928
INSTANTANEOUS PEAK FLOW			10900	May 16	17400	Dec 23 1964
INSTANTANEOUS PEAK STAGE			9.75	May 16	10.92	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	642100		402700		220700	
10 PERCENT EXCEEDS	2620		1600		1000	
50 PERCENT EXCEEDS	399		185		45	
90 PERCENT EXCEEDS	85		52		2.6	

SACRAMENTO RIVER BASIN

11439501 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

SOUTH FORK AMERICAN RIVER AND EL DORADO CANAL NEAR KYBURZ, CA
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	212	106	48	423	200	407	884	1970	1490	425	158	141
2	209	105	64	311	209	420	987	1980	1690	407	155	140
3	198	104	80	283	223	480	857	1960	1860	438	150	138
4	189	103	223	254	869	650	788	1720	1930	500	146	163
5	188	103	176	229	3020	583	804	1660	1840	454	144	180
6	187	102	104	213	1630	529	915	1700	1740	403	143	178
7	184	101	97	211	1060	523	1140	1700	1830	393	140	175
8	183	100	86	210	847	513	1350	1800	1770	385	137	172
9	181	76	75	205	727	603	1450	1710	1620	348	142	166
10	179	72	69	201	676	624	1330	1760	1420	336	156	150
11	173	71	125	190	647	690	1160	1910	1160	321	155	132
12	170	70	1560	191	687	657	1090	2180	1060	332	158	118
13	166	70	473	188	748	566	951	2320	1150	356	155	117
14	161	89	245	182	733	516	1020	2430	1180	355	153	149
15	156	125	199	192	702	524	1240	3870	1040	302	149	148
16	150	117	177	488	831	584	1750	8180	887	265	146	154
17	140	95	157	533	1010	683	1290	4420	843	241	145	145
18	127	92	150	324	975	844	1220	4440	753	221	142	138
19	121	91	138	299	1380	965	973	2600	721	211	141	115
20	118	85	136	251	1380	1050	881	2020	725	168	144	112
21	115	73	129	237	973	1070	799	1810	696	162	144	111
22	112	69	142	215	797	1050	791	1930	630	149	142	95
23	111	69	134	212	685	857	924	1580	604	155	142	72
24	111	69	126	246	627	737	1180	1430	594	155	151	56
25	111	70	125	231	563	672	1370	1350	656	150	147	54
26	110	87	125	217	510	619	1680	1380	714	162	145	49
27	109	79	127	237	477	638	1780	1430	655	165	142	45
28	108	74	130	228	447	858	1640	1420	501	166	141	45
29	106	72	147	201	422	701	1620	1420	415	166	138	45
30	106	66	857	195	---	662	1960	1420	413	165	145	47
31	106	---	1020	198	---	653	---	1390	---	161	143	---
TOTAL	4597	2605	7444	7795	24055	20928	35824	68890	32587	8617	4539	3550
MEAN	148	86.8	240	251	829	675	1194	2222	1086	278	146	118
MAX	212	125	1560	533	3020	1070	1960	8180	1930	500	158	180
MIN	106	66	48	182	200	407	788	1350	413	149	137	45
AC-FT	9120	5170	14770	15460	47710	41510	71060	136600	64640	17090	9000	7040
a	251	749	1730	2440	2230	1690	107	3030	5800	8350	5740	4470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1996, BY WATER YEAR (WY)

MEAN	110	162	217	219	266	372	735	1319	960	303	149	133
MAX	365	1301	1697	1058	1412	1344	1533	2905	3561	1637	357	424
(WY)	1983	1951	1951	1980	1986	1986	1982	1969	1983	1995	1983	1983
MIN	20.8	25.1	44.2	35.6	38.4	53.7	178	207	99.7	74.9	73.0	46.4
(WY)	1978	1930	1960	1929	1977	1977	1977	1977	1924	1931	1994	1987

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1923 - 1996	
ANNUAL TOTAL	332636		221431			
ANNUAL MEAN	911		605		412	
HIGHEST ANNUAL MEAN					980	
LOWEST ANNUAL MEAN					104	
HIGHEST DAILY MEAN	6330		8180		12400	
LOWEST DAILY MEAN	48		45		10	
ANNUAL SEVEN-DAY MINIMUM	69		49		13	
INSTANTANEOUS PEAK FLOW			10900		17500	
ANNUAL RUNOFF (AC-FT)	659800		439200		298700	
ANNUAL DIVERSION (AC-FT) a	17700		36580			
10 PERCENT EXCEEDS	2630		1620		1130	
50 PERCENT EXCEEDS	436		230		166	
90 PERCENT EXCEEDS	103		99		74	

a Diversion, in acre-feet, to El Dorado Canal, provided by Pacific Gas & Electric Co.

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA

LOCATION.--Lat 38°51'33", long 120°26'13", in NW 1/4 NW 1/4 sec.29, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in valve control house near left bank at Union Valley Dam on Silver Creek, 0.7 mi upstream from Little Silver Creek, and 6.6 mi north of Riverton.

DRAINAGE AREA.--83.7 mi².

RESERVOIR STORAGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam completed in December 1962; storage began May 1962. Usable capacity, 269,514 acre-ft between elevations 4,645.0 ft, minimum operating level, and 4,870.0 ft, top of radial spillway gates. Dead storage, 7,921 acre-ft. Reservoir receives water from the South Fork Rubicon River via Robbs Peak Powerplant (station 11429300) and from South Fork Silver Creek, since April 1985, via Jones Fork Powerplant (station 11440900). Water is used for power development in the South Fork American River basin. Discharge to Union Valley Powerplant (station 11441002) is shown as a line item below this table. Records, including extremes, represent total contents. See schematic diagrams of Middle Fork American and Rubicon River basins and South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 279,100 acre-ft, July 9, 1974, elevation, 4,870.6 ft; minimum since reservoir first filled, 18,900 acre-ft, Jan. 13, 1977, elevation, 4,683.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 274,892 acre-ft, June 28, elevation, 4,869.15 ft; minimum, 147,257 acre-ft, Dec. 10, elevation, 4,816.24 ft.

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

(Based on table provided by Sacramento Municipal Utility District, recomputed October 1991)

4,680	17,675	4,780	89,926
4,700	25,160	4,800	118,894
4,720	35,266	4,820	154,489
4,740	48,883	4,840	197,460
4,760	66,841	4,870	277,435

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	210991	175908	151014	158801	174362	228976	231626	257107	271567	273256	261250	235975
2	209248	174769	150418	159281	174876	228350	232866	258587	271922	273226	259787	235175
3	207906	173699	149996	159562	175499	228558	233369	259186	272307	272870	258587	234138
4	207006	172655	149977	159722	179666	230731	233369	259758	272248	272959	257590	233316
5	205408	171849	149671	159963	187786	232364	233316	260331	272514	272870	257050	232021
6	204228	171003	149289	159843	191774	232628	233820	260905	272959	272840	256199	231126
7	203531	169824	148641	159682	194358	232840	234776	261739	272870	272485	255519	230784
8	202240	168985	148660	159843	196406	232708	236162	262661	273404	272277	254305	230679
9	200764	168067	147578	159682	198211	232549	237260	263470	273582	271804	253292	230180
10	199461	167339	147257	159241	199674	232787	238710	263932	273523	270918	252506	229290
11	198447	166406	147824	159221	201191	234404	239034	265209	273493	270210	252282	228063
12	197249	165910	154137	158741	202670	233820	239087	266898	273790	269798	251666	226789
13	195939	164818	155805	158601	204396	232364	239465	268418	273315	269210	251190	225443
14	194544	163794	155805	158501	205746	231652	240005	269945	273226	268594	250520	223846
15	193710	162957	156219	158481	207006	231810	241142	274028	273285	268741	249574	222410
16	192694	162022	155903	161617	209322	232153	244441	274654	273048	268389	247826	221236
17	191820	161132	155667	163998	212744	232946	245483	272485	272248	268888	247854	220243
18	191086	160245	155549	163333	215331	233369	246529	270711	271627	269240	247854	219558
19	189624	159281	155470	166633	220777	233767	246942	268946	271981	269622	247356	218446
20	189829	158382	155136	167546	225521	234032	246860	270299	271656	269475	246584	217261
21	189329	157864	154920	168192	227959	234006	246887	272307	271627	269034	245565	216132
22	187945	156951	154822	168651	228819	233846	246804	274445	272722	268096	244139	214433
23	187402	156397	154489	169048	229682	233210	246694	274505	272662	267482	243237	213314
24	186366	155824	154098	169740	230102	232734	247854	273196	272870	266839	242719	212348
25	184909	155077	153668	170455	230075	232259	248852	271863	273582	266139	242638	211730
26	183304	154685	153415	171087	229656	231837	249546	271301	273850	265528	241278	210671
27	182218	153805	153434	171912	229394	231889	250744	271242	274803	264744	241007	209959
28	181357	153045	153103	172528	229264	233131	252029	271183	274892	263354	240790	208393
29	179819	152037	153279	173208	229421	232232	253320	271095	274058	262257	239411	206933
30	178574	151553	155647	173379	---	231099	255236	271154	273553	262199	238307	205891
31	176923	---	158003	173977	---	230259	---	271183	---	261451	237447	---
MAX	210991	175908	158003	173977	230102	234404	255236	274654	274892	273256	261250	235975
MIN	176923	151553	147257	158481	174362	232350	231626	257107	271567	261451	237447	205891
a	4830.89	4817.49	4821.78	4829.52	4852.89	4853.21	4862.38	4867.90	4868.70	4864.56	4855.92	4843.54
b	-35648	-25370	+6450	+15974	+55444	+838	+24977	+15947	+2370	-12102	-24004	-31556
c	39510	26450	15390	10300	19820	69880	66970	85850	50140	33210	38220	39610

CAL YR 1995 MAX 276685 MIN 119780 b +37558 c 641500

WTR YR 1996 MAX 274892 MIN 147257 b -6680 c 495400

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversion, in acre-feet, to Union Valley Powerplant, provided by Sacramento Municipal Utility District.

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June to September 1996.

SITE 1 IN THE EAST ARM (Lat 38°52'46", long 120°23'30", in SW 1/4 SE 1/4 sec.15, T.12 N., R.14 E.,
El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN											
05...	1027	4869	147.0	0.0	96	6.6	16.5	29.0	635	8.7	107
				3.0	96	6.4	16.5	--	635	8.7	107
				6.0	95	6.4	16.0	--	635	8.8	107
				9.0	91	6.3	14.5	--	635	9.1	107
				12.0	91	6.2	13.0	--	635	9.2	105
				15.0	91	6.2	12.5	--	635	9.1	103
				18.0	91	6.2	12.5	--	635	9.2	103
				21.0	90	6.2	12.0	--	635	9.3	104
				24.0	91	6.2	11.5	--	635	9.5	105
				27.0	90	6.2	11.0	--	635	9.5	104
				30.0	90	6.2	11.0	--	635	9.5	104
				33.0	92	6.2	10.5	--	635	9.5	102
				36.0	91	6.2	10.5	--	635	9.5	103
				39.0	92	6.2	10.5	--	635	9.5	102
				42.0	93	6.2	10.0	--	635	9.5	102
				45.0	93	6.1	10.0	--	635	9.4	100
				48.0	93	6.1	9.5	--	635	9.5	100
				51.0	91	6.1	9.0	--	635	9.5	99
				54.0	91	6.1	9.0	--	635	9.5	99
				57.0	91	6.1	9.0	--	635	9.5	99
				60.0	91	6.1	9.0	--	635	9.4	98
				63.0	90	6.0	9.0	--	635	9.5	98
				66.0	90	6.0	8.5	--	635	9.5	98
				69.0	89	6.0	8.5	--	635	9.5	97
				72.0	90	6.0	8.5	--	635	9.5	97
				75.0	90	6.0	8.5	--	635	9.5	97
SEP											
18...	1303	4849	125.0	0.0	97	6.3	19.0	29.0	640	7.4	96
				3.0	97	6.2	18.5	--	640	7.4	95
				6.0	98	6.2	18.5	--	640	7.3	93
				9.0	98	6.2	18.5	--	640	7.3	93
				12.0	98	6.2	18.5	--	640	7.3	93
				15.0	98	6.2	18.5	--	640	7.3	93
				18.0	98	6.2	18.5	--	640	7.3	93
				21.0	98	6.2	18.5	--	640	7.3	93
				24.0	98	6.2	18.5	--	640	7.3	93
				27.0	98	6.2	18.5	--	640	7.3	93
				30.0	98	6.2	18.5	--	640	7.3	93
				33.0	99	6.2	18.5	--	640	7.3	93
				36.0	98	6.2	18.5	--	640	7.3	93
				39.0	98	6.2	18.5	--	640	7.3	93
				42.0	98	6.2	18.5	--	640	7.2	92
				45.0	98	6.2	18.5	--	640	7.2	91
				48.0	98	6.2	18.5	--	640	7.2	91
				51.0	99	6.2	18.5	--	640	7.2	91
				54.0	98	6.1	17.5	--	640	6.8	85
				57.0	98	6.0	17.0	--	640	6.5	81
				60.0	98	5.9	17.0	--	640	6.5	81
				63.0	98	5.8	16.5	--	640	6.4	79
				66.0	99	5.8	16.5	--	640	6.4	78
				69.0	99	5.7	16.0	--	640	6.2	75
				72.0	99	5.7	16.0	--	640	6.1	74
				75.0	100	5.6	15.5	--	640	6.0	72
				78.0	99	5.6	15.5	--	640	6.0	72
				81.0	101	5.6	14.5	--	640	5.7	67
				84.0	101	5.6	14.5	--	640	5.6	65
				87.0	102	5.5	13.5	--	640	5.5	63
				90.0	102	5.5	13.5	--	640	5.4	62
				93.0	101	5.5	13.0	--	640	5.6	64
				96.0	101	5.5	13.0	--	640	5.5	62
				99.0	101	5.5	12.5	--	640	5.5	62
				102	104	5.5	12.0	--	640	5.2	58
				105	104	5.5	12.0	--	640	5.3	59
				108	105	5.4	12.0	--	640	5.0	55
				111	103	5.4	11.5	--	640	5.3	58
				114	103	5.4	11.5	--	640	5.2	57
				117	105	5.4	11.0	--	640	5.1	55
				120	105	5.4	11.0	--	640	5.0	54
				123	106	5.4	11.0	--	640	5.0	53

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA--Continued

SITE 2 AT THE MOUTH OF JONES FORK (Lat 38°51'38", long 120°24'35", in SW 1/4 NE 1/4 sec.28, T.12 N.,
R.14 E., El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN											
05...	1123	4869	177.0	0.0	99	6.5	17.0	24.5	635	8.8	110
				3.0	98	6.5	16.5	--	635	8.9	110
				6.0	97	6.5	15.5	--	635	9.0	109
				9.0	96	6.5	14.5	--	635	9.3	110
				12.0	94	6.4	13.5	--	635	9.5	110
				15.0	95	6.4	13.5	--	635	9.5	109
				18.0	94	6.4	12.5	--	635	9.6	108
				21.0	94	6.4	12.0	--	635	9.6	108
				24.0	94	6.4	12.0	--	635	9.5	107
				27.0	93	6.4	11.5	--	635	9.6	106
				30.0	94	6.4	11.0	--	635	9.6	105
				33.0	94	6.4	11.0	--	635	9.6	105
				36.0	93	6.4	11.0	--	635	9.7	105
				39.0	94	6.4	11.0	--	635	9.7	105
				42.0	94	6.4	10.5	--	635	9.6	103
				45.0	94	6.3	10.0	--	635	9.6	103
				48.0	94	6.3	10.0	--	635	9.5	101
				51.0	94	6.3	10.0	--	635	9.5	101
				54.0	94	6.2	9.5	--	635	9.5	100
				57.0	94	6.2	9.5	--	635	9.4	99
				60.0	94	6.2	9.0	--	635	9.5	99
				63.0	95	6.2	9.0	--	635	9.5	99
				66.0	95	6.2	9.0	--	635	9.5	98
				69.0	95	6.2	9.0	--	635	9.5	98
				72.0	95	6.2	8.5	--	635	9.5	98
				75.0	95	6.2	8.5	--	635	9.5	98

SACRAMENTO RIVER BASIN

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA--Continued

SITE 2--Continued

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
SEP											
18...	1149	4849	165.0	0.0	98	6.3	18.5	30.0	640	7.4	95
				3.0	98	6.1	18.5	--	640	7.4	94
				6.0	97	6.1	18.5	--	640	7.4	94
				9.0	97	6.1	18.5	--	640	7.4	94
				12.0	97	6.1	18.5	--	640	7.4	94
				15.0	97	6.1	18.5	--	640	7.4	94
				18.0	97	6.1	18.5	--	640	7.4	94
				21.0	97	6.2	18.5	--	640	7.3	93
				24.0	98	6.2	18.5	--	640	7.3	93
				24.0	98	6.2	18.5	--	640	7.3	93
				27.0	97	6.2	18.5	--	640	7.3	93
				30.0	97	6.2	18.5	--	640	7.3	93
				33.0	97	6.2	18.5	--	640	7.3	93
				36.0	97	6.2	18.5	--	640	7.3	93
				39.0	97	6.2	18.5	--	640	7.3	93
				42.0	98	6.2	18.5	--	640	7.3	93
				45.0	98	6.2	18.0	--	640	7.3	93
				48.0	97	6.2	18.0	--	640	7.3	93
				51.0	97	6.2	18.0	--	640	7.3	92
				54.0	97	6.2	18.0	--	640	7.3	93
				57.0	98	6.0	18.0	--	640	6.8	86
				60.0	98	5.9	17.5	--	640	6.6	82
				63.0	96	5.8	17.0	--	640	6.5	80
				66.0	97	5.8	16.5	--	640	6.6	81
				69.0	97	5.8	16.0	--	640	6.6	80
				72.0	96	5.7	16.0	--	640	6.6	80
				75.0	97	5.7	15.5	--	640	6.6	79
				78.0	96	5.7	15.0	--	640	6.6	78
				81.0	96	5.7	14.5	--	640	6.7	78
				84.0	96	5.6	14.0	--	640	6.6	76
				87.0	96	5.6	13.5	--	640	6.7	77
				90.0	96	5.6	13.5	--	640	6.7	76
				93.0	96	5.6	13.0	--	640	6.7	76
				96.0	96	5.6	12.5	--	640	6.7	75
				99.0	96	5.6	12.5	--	640	6.7	75
				102	96	5.6	12.0	--	640	6.8	75
				105	96	5.6	12.0	--	640	6.8	75
				108	95	5.6	12.0	--	640	6.8	75
				111	95	5.6	11.5	--	640	6.8	75
				114	95	5.6	11.5	--	640	6.8	74
				117	96	5.6	11.5	--	640	6.8	74
				120	96	5.6	11.0	--	640	6.8	74
				123	96	5.6	11.0	--	640	6.8	73
				126	96	5.6	11.0	--	640	6.8	73
				129	96	5.6	10.5	--	640	6.8	73
				132	96	5.6	10.5	--	640	6.8	73
				135	97	5.6	10.5	--	640	6.8	73
				138	95	5.6	10.5	--	640	7.0	75
				141	95	5.6	10.0	--	640	6.9	73
				144	96	5.6	10.0	--	640	6.9	73
				147	96	5.6	10.0	--	640	6.9	73
				150	96	5.6	10.0	--	640	6.9	73
				153	96	5.6	10.0	--	640	7.0	74
				156	97	5.6	10.0	--	640	6.8	72
				159	97	5.6	9.5	--	640	6.8	71

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA--Continued

SITE 3 NEAR THE SPILLWAY (Lat 38°51'39", long 120°25'59", in SE 1/4 SW 1/4 sec.20, T.12 N., R.14 E.,
El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN										
05...	1208	4869	132.0	0.0	98	6.6	16.5	27.5	635	9.0 111
				3.0	98	6.6	16.0	--	635	9.0 110
				6.0	98	6.6	16.0	--	635	9.0 110
				9.0	97	6.6	16.0	--	635	9.0 110
				12.0	98	6.5	15.5	--	635	9.1 110
				15.0	96	6.5	13.5	--	635	9.6 111
				18.0	95	6.5	13.0	--	635	9.6 109
				21.0	94	6.5	12.5	--	635	9.7 109
				24.0	94	6.5	12.0	--	635	9.7 108
				27.0	94	6.5	11.5	--	635	9.8 108
				30.0	93	6.5	11.5	--	635	9.8 108
				33.0	94	6.5	11.0	--	635	9.8 107
				36.0	94	6.5	11.0	--	635	9.8 107
				39.0	94	6.5	10.5	--	635	9.7 105
				42.0	94	6.4	10.5	--	635	9.6 103
				45.0	94	6.4	10.0	--	635	9.5 101
				48.0	93	6.3	10.0	--	635	9.5 101
				51.0	92	6.3	9.5	--	635	9.5 100
				54.0	93	6.3	9.5	--	635	9.5 100
				57.0	93	6.3	9.5	--	635	9.5 100
				60.0	93	6.3	9.0	--	635	9.5 99
				63.0	93	6.2	9.0	--	635	9.6 100
				66.0	93	6.2	9.0	--	635	9.6 99
				69.0	93	6.2	8.5	--	635	9.6 99
				72.0	93	6.2	8.5	--	635	9.6 98
				75.0	94	6.2	8.0	--	635	9.6 98

SACRAMENTO RIVER BASIN

11441001 UNION VALLEY RESERVOIR NEAR RIVERTON, CA--Continued

SITE 3--Continued

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
SEP 18...	1031	4849	171.0	0.0	98	6.4	18.5	28.0	640	7.5	96
				3.0	98	6.2	18.5	--	640	7.4	94
				6.0	98	6.2	18.5	--	640	7.4	94
				9.0	98	6.2	18.0	--	640	7.4	94
				12.0	98	6.2	18.0	--	640	7.4	94
				15.0	98	6.2	18.0	--	640	7.4	94
				18.0	98	6.2	18.0	--	640	7.4	94
				21.0	98	6.2	18.0	--	640	7.4	93
				24.0	98	6.2	18.0	--	640	7.4	93
				27.0	98	6.2	18.0	--	640	7.3	93
				30.0	98	6.2	18.0	--	640	7.3	93
				33.0	98	6.2	18.0	--	640	7.3	93
				36.0	98	6.2	18.0	--	640	7.3	93
				39.0	98	6.2	18.0	--	640	7.3	93
				42.0	98	6.2	18.0	--	640	7.3	93
				45.0	98	6.2	18.0	--	640	7.3	93
				48.0	98	6.2	18.0	--	640	7.3	93
				51.0	98	6.2	18.0	--	640	7.3	93
				54.0	98	6.2	18.0	--	640	7.3	93
				57.0	98	6.2	18.0	--	640	7.3	92
				60.0	98	6.1	18.0	--	640	7.1	90
				63.0	98	5.9	17.0	--	640	6.6	82
				66.0	98	5.8	16.5	--	640	6.6	81
				69.0	98	5.7	16.0	--	640	6.6	80
				72.0	97	5.7	16.0	--	640	6.6	80
				75.0	99	5.6	15.5	--	640	6.6	79
				78.0	98	5.6	14.5	--	640	6.7	79
				81.0	97	5.6	14.5	--	640	6.6	77
				84.0	96	5.6	14.0	--	640	6.6	76
				87.0	96	5.6	13.5	--	640	6.6	75
				90.0	98	5.5	13.0	--	640	6.6	75
				93.0	95	5.5	13.0	--	640	6.7	76
				96.0	96	5.5	12.5	--	640	6.8	76
				99.0	96	5.5	12.5	--	640	6.8	76
				102	96	5.5	12.0	--	640	6.8	75
				105	96	5.5	12.0	--	640	6.8	75
				108	96	5.5	11.5	--	640	6.8	75
				111	96	5.5	11.5	--	640	6.8	74
				114	95	5.5	11.5	--	640	6.9	75
				117	95	5.5	11.0	--	640	6.9	75
				120	95	5.5	11.0	--	640	6.9	75
				123	95	5.5	11.0	--	640	7.0	75
				126	95	5.5	11.0	--	640	7.0	75
				129	95	5.5	10.5	--	640	7.0	75
				132	95	5.5	10.5	--	640	7.1	76
				135	95	5.5	10.5	--	640	7.0	75
				138	95	5.5	10.5	--	640	7.1	76
				141	95	5.5	10.5	--	640	7.1	76
				144	95	5.5	10.5	--	640	7.1	76
				147	95	5.5	10.0	--	640	7.1	75
				150	95	5.5	10.0	--	640	7.1	75
				153	95	5.5	10.0	--	640	7.1	75
				156	95	5.5	10.0	--	640	7.1	75
				159	95	5.5	10.0	--	640	7.0	74

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA

LOCATION.--Lat 38°49'51", long 120°21'35", in SE 1/4 NW 1/4 sec.1, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in powerplant intake structure near right bank, 0.5 mi north of Ice House Dam on South Fork Silver Creek, and 5.2 mi northwest of Kyburz.

DRAINAGE AREA.--27.2 mi².

RESERVOIR STORAGE RECORDS

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

REVISED RECORDS.--WSP 1931: 1960.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

Prior to July 15, 1985, at site 0.5 mi downstream at Ice House Dam at same datum.

REMARKS.--Reservoir is formed by an earthfill dam; storage began Dec. 15, 1959. Usable capacity, 45,839 acre-ft between elevations 5,327.5 ft, centerline of fishwater outlet, and 5,450.0 ft, top of spillway gates. Dead storage, 160 acre-ft. Reservoir is used to store water for power development. Reservoir is also forebay for Jones Fork Powerplant (station 11440900), which diverts up to 350 ft³/s to powerplant completed in April 1985, then to Union Valley Reservoir (station 11441001). Records, including extremes, represent total contents.

See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 46,400 acre-ft, June 27, 1971, elevation, 5,450.6 ft; minimum since reservoir first filled, 1,450 acre-ft, Dec. 8, 1983, elevation, 5,347.9 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,927 acre-ft, July 13, elevation, 5,449.90 ft; minimum, 26,047 acre-ft, Nov. 24, elevation, 5,417.42 ft.

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

(Based on table provided by Sacramento Municipal Utility District, recomputed in October 1991)

5,345	1,080	5,400	17,665
5,350	1,801	5,420	27,406
5,360	3,751	5,440	39,167
5,380	9,663	5,451	46,721

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	27299	26381	26073	28950	30218	34421	34295	38573	44478	45734	42784	35641
2	27198	26366	26079	29038	30207	34307	34355	38914	44534	45798	42640	35439
3	27166	26345	26105	29082	30190	34295	34397	39212	44619	45856	42489	35238
4	27140	26324	26157	29104	30481	34367	34505	39381	44661	45770	42332	35031
5	27103	26303	26413	29115	31685	34367	34632	39544	44633	45655	42183	34656
6	27082	26282	26491	29093	32349	34295	34819	39682	44612	45569	42027	34271
7	27055	26261	26538	29087	32663	34193	35158	39872	44612	45491	41857	34056
8	27023	26240	26565	29076	32879	34103	35525	40168	44485	45541	41709	33770
9	26992	26224	26586	29071	33043	34044	35936	40313	44429	45619	41560	33592
10	26955	26204	26607	29060	33167	33996	36133	40505	44247	45698	41258	33509
11	26939	26188	26860	29044	33267	34008	36238	40824	44030	45755	40897	33408
12	26912	26167	28027	29033	33373	33972	36220	41278	43960	45841	40704	33308
13	26870	26151	28314	29027	33550	33942	36146	41742	43918	45927	40372	33231
14	26838	26136	28395	29005	33710	33853	36152	42203	43681	45870	40135	33137
15	26812	26115	28476	29038	33847	33764	36263	44107	43598	45741	40089	33073
16	26786	26105	28498	29291	34080	33693	36605	44852	43591	45627	40043	32949
17	26765	26094	28498	29456	34373	33657	36555	44093	43563	45527	40043	32494
18	26738	26089	28494	29628	34577	33698	36505	44556	43584	45413	39977	31990
19	26717	26084	28482	29716	34801	33794	36499	44443	43779	45313	39728	31456
20	26686	26073	28460	29772	34995	33924	36406	44485	43974	45185	39414	30927
21	26659	26068	28433	29827	35140	34062	36294	44753	44170	45057	39212	30605
22	26638	26063	28411	29833	35183	34223	36146	44505	44338	44901	39011	30577
23	26607	26052	28368	29894	35201	34253	36251	45114	44485	44675	38663	30543
24	26580	26047	28314	30072	35252	34229	36599	45057	44633	44450	38367	30515
25	26554	26084	28254	30106	35238	34175	36861	44993	44852	44177	38207	30481
26	26533	26084	28205	30123	35177	34121	37218	44944	45078	43960	37654	30448
27	26507	26084	28178	30235	34952	34121	37470	44894	45277	43793	37149	30408
28	26481	26073	28135	30229	34662	34277	37628	44817	45398	43591	36717	30375
29	26455	26073	28281	30223	34535	34277	37825	44718	45498	43210	36350	30341
30	26428	26068	28444	30223	---	34247	38207	44612	45598	43086	36053	30268
31	26407	---	28819	30223	---	34217	---	44513	---	42928	35825	---
MAX	27299	26381	28819	30235	35252	34421	38207	45114	45598	45927	42784	35641
MIN	26407	26047	26073	28950	30190	33657	34295	38573	43563	42928	35825	30268
a	5418.11	5417.46	5422.69	5425.16	5432.59	5432.06	5438.54	5447.91	5449.44	5445.63	5434.71	5425.24
b	-1244	-339	+2751	+1404	+4312	-318	+3990	+6306	+1085	-2670	-7103	-5557

CAL YR 1995 MAX 45992 MIN 17258 b +7564

WTR YR 1996 MAX 45927 MIN 26047 b +2617

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June to September 1996.

SITE 1 NEAR SPILLWAY (Lat 38°49'30", long 120°21'36", in NE 1/4 SW 1/4 sec.1, T.11 N., R.14 E.,
El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN 03...	1142	5448	140.0	0.0	87	6.7	16.0	24.5	630	8.4	104
				3.0	86	6.5	14.0	--	630	8.5	100
				6.0	86	6.5	14.0	--	630	8.6	101
				9.0	86	6.5	13.5	--	630	8.7	101
				12.0	86	6.5	13.0	--	630	8.7	101
				15.0	85	6.5	13.0	--	630	9.1	104
				18.0	85	6.5	11.5	--	630	9.1	101
				21.0	83	6.5	10.0	--	630	9.4	101
				24.0	83	6.5	8.5	--	630	9.5	99
				27.0	82	6.4	8.5	--	630	9.5	98
				30.0	82	6.4	8.0	--	630	9.4	97
				33.0	81	6.3	8.0	--	630	9.4	96
				36.0	82	6.3	8.0	--	630	9.4	96
				39.0	81	6.4	7.5	--	630	9.4	95
				42.0	81	6.4	7.5	--	630	9.4	95
				45.0	81	6.3	7.5	--	630	9.4	94
				48.0	81	6.4	7.0	--	630	9.3	92
				51.0	82	6.4	6.5	--	630	9.3	92
				54.0	83	6.3	6.5	--	630	9.3	92
				57.0	83	6.2	7.0	--	630	9.3	92
				60.0	83	6.2	6.5	--	630	9.3	92
				63.0	84	6.2	6.5	--	630	9.2	91
				66.0	84	6.2	6.5	--	630	9.2	91
				69.0	85	6.2	6.5	--	630	9.2	90
				72.0	85	6.2	6.5	--	630	9.2	90
				75.0	85	6.2	6.5	--	630	9.2	91
SEP 16...	1303	5430	111.0	0.0	89	6.3	18.5	41.0	620	7.4	97
				3.0	88	6.2	18.0	--	620	7.4	96
				6.0	88	6.2	17.5	--	620	7.4	96
				9.0	88	6.2	17.5	--	620	7.4	96
				12.0	87	6.2	17.5	--	620	7.4	96
				15.0	88	6.2	17.5	--	620	7.4	96
				18.0	88	6.2	17.5	--	620	7.4	96
				21.0	88	6.2	17.5	--	620	7.4	96
				24.0	88	6.2	17.5	--	620	7.4	96
				27.0	88	6.2	17.5	--	620	7.4	96
				30.0	88	6.2	17.5	--	620	7.4	96
				33.0	88	6.2	17.5	--	620	7.4	96
				36.0	88	6.2	17.5	--	620	7.4	96
				39.0	87	6.2	17.5	--	620	7.4	96
				42.0	88	6.2	17.5	--	620	7.4	95
				45.0	88	6.2	17.5	--	620	7.4	95
				48.0	80	6.0	14.5	--	620	8.4	102
				51.0	82	5.7	13.0	--	620	7.7	90
				54.0	84	5.6	12.0	--	620	6.8	78
				57.0	85	5.5	11.0	--	620	6.4	72
				60.0	86	5.5	10.0	--	620	6.5	71
				63.0	91	5.4	8.5	--	620	5.8	61
				66.0	91	5.4	8.0	--	620	5.8	60
				69.0	91	5.4	7.5	--	620	6.0	62
				72.0	90	5.4	7.5	--	620	6.2	63
				75.0	90	5.4	7.0	--	620	6.2	63
				78.0	89	5.4	7.0	--	620	6.2	63
				81.0	91	5.4	7.0	--	620	6.2	63
				84.0	90	5.4	7.0	--	620	6.2	63
				87.0	90	5.4	7.0	--	620	6.2	63
				90.0	90	5.3	7.0	--	620	6.0	61
				93.0	91	5.3	7.0	--	620	5.8	59
				96.0	92	5.3	7.0	--	620	5.6	57
				99.0	95	5.3	7.0	--	620	5.2	52
				102	96	5.3	7.0	--	620	5.0	50

SACRAMENTO RIVER BASIN

399

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA--Continued

SITE 2 AT MOUTH OF SOUTH ARM (Lat 38°49'14", long 120°20'25", in NE 1/4 NW 1/4 sec.7, T.11 N., R.15 E.,
El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN 03...	1335	5448	72.0	0.0	87	6.9	16.5	23.5	625	8.3	104
				3.0	86	6.7	15.0	--	625	8.4	102
				6.0	86	6.6	15.0	--	625	8.5	103
				9.0	86	6.6	14.5	--	625	8.5	102
				12.0	87	6.6	14.5	--	625	8.7	104
				15.0	86	6.6	14.0	--	625	8.8	104
				18.0	87	6.6	12.5	--	625	8.9	102
				21.0	86	6.5	11.0	--	625	9.0	100
				24.0	86	6.5	10.0	--	625	9.2	100
				27.0	82	6.5	9.5	--	625	9.3	100
				30.0	82	6.4	9.0	--	625	9.4	99
				33.0	84	6.3	8.5	--	625	9.3	98
				36.0	84	6.4	8.5	--	625	9.3	97
				39.0	83	6.3	8.0	--	625	9.3	95
				42.0	83	6.3	7.5	--	625	9.2	95
				45.0	83	6.3	7.5	--	625	9.2	94
				48.0	83	6.2	7.5	--	625	9.2	94
				51.0	83	6.2	7.0	--	625	9.1	92
				54.0	83	6.2	7.0	--	625	9.2	92
				57.0	83	6.2	7.0	--	625	9.2	92
SEP 16...	1400	5430	61.0	60.0	84	6.2	6.5	--	625	9.1	90
				63.0	84	6.2	6.5	--	625	9.0	90
				66.0	84	6.1	6.5	--	625	9.0	90
				69.0	84	6.1	6.5	--	625	9.0	89
				0.0	88	6.3	18.5	35.0	620	7.4	97
				3.0	88	6.3	18.0	--	620	7.4	97
				6.0	88	6.2	18.0	--	620	7.4	97
				9.0	88	6.2	18.0	--	620	7.4	96
				12.0	88	6.2	18.0	--	620	7.4	96
				15.0	88	6.2	17.5	--	620	7.4	96
				18.0	88	6.2	17.5	--	620	7.4	96
				21.0	88	6.3	17.5	--	620	7.3	94
				24.0	88	6.3	17.5	--	620	7.3	94
				27.0	88	6.3	17.5	--	620	7.3	94
				30.0	88	6.3	17.5	--	620	7.3	94
				33.0	88	6.3	17.5	--	620	7.3	94
				36.0	88	6.3	17.5	--	620	7.3	94
				39.0	88	6.3	17.5	--	620	7.3	94
				42.0	88	6.3	17.5	--	620	7.3	94
				45.0	88	6.3	17.0	--	620	7.3	94
				48.0	81	6.0	14.0	--	620	7.7	92
				51.0	85	5.7	13.0	--	620	6.7	78
				54.0	91	5.5	12.5	--	620	5.5	64

SACRAMENTO RIVER BASIN

11441100 ICE HOUSE RESERVOIR NEAR KYBURZ, CA--Continued

SITE 3 AT EAST END (Lat 38°49'05", long 120°19'17", in NE 1/4 NW 1/4 sec.8, T.11 N., R.15 E.,
El Dorado County, Hydrologic Unit 18020129)

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

DATE	TIME	RESER- VOIR ELEV- ATION (FEET ABOVE DATUM)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PARENCY SECCHI DISC, WATER, UNFLTRD (FEET)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)
JUN 03...	1420	5448	78.0	0.0	84	6.8	17.0	28.5	625	8.3	105
				3.0	84	6.7	16.5	--	625	8.4	105
				6.0	84	6.6	16.5	--	625	8.3	104
				9.0	78	6.6	13.0	--	625	8.8	102
				12.0	82	6.5	13.0	--	625	8.9	103
				15.0	77	6.5	12.0	--	625	8.9	102
				18.0	76	6.5	12.0	--	625	8.9	101
				21.0	71	6.5	11.5	--	625	8.9	100
				24.0	72	6.5	11.5	--	625	8.9	100
				27.0	67	6.5	10.5	--	625	9.0	99
				30.0	68	6.5	10.5	--	625	9.0	98
				33.0	70	6.4	9.0	--	625	9.1	97
				36.0	71	6.4	9.0	--	625	9.2	97
				39.0	72	6.4	8.5	--	625	9.2	96
				42.0	75	6.4	8.0	--	625	9.3	96
				45.0	76	6.3	8.0	--	625	9.3	96
				48.0	77	6.3	8.0	--	625	9.2	95
				51.0	71	6.3	7.5	--	625	9.3	95
				54.0	79	6.3	8.0	--	625	9.2	95
				57.0	80	6.3	8.0	--	625	9.2	95
				60.0	80	6.3	7.5	--	625	9.2	93
				63.0	81	6.3	7.5	--	625	9.1	93
				66.0	80	6.3	7.0	--	625	9.2	93
				69.0	84	6.2	6.5	--	625	9.0	90
				72.0	84	6.2	6.5	--	625	8.9	89
				75.0	85	6.2	6.5	--	625	8.9	89
SEP 16...	1435	5430	70.0	0.0	90	6.2	18.5	34.0	620	7.3	95
				3.0	90	6.1	18.0	--	620	7.2	94
				6.0	90	6.1	18.0	--	620	7.2	94
				9.0	90	6.1	18.0	--	620	7.2	94
				12.0	90	6.1	18.0	--	620	7.2	94
				15.0	90	6.1	18.0	--	620	7.2	94
				18.0	90	6.1	18.0	--	620	7.2	94
				21.0	91	6.2	18.0	--	620	7.2	94
				24.0	91	6.2	18.0	--	620	7.2	94
				27.0	91	6.2	18.0	--	620	7.1	92
				30.0	91	6.2	18.0	--	620	7.1	92
				33.0	91	6.2	17.5	--	620	7.1	92
				36.0	91	6.2	17.5	--	620	7.1	92
				39.0	92	6.1	17.5	--	620	7.1	92
				42.0	92	6.1	17.5	--	620	7.1	92
				45.0	97	6.1	16.5	--	620	6.8	86
				48.0	86	5.8	14.5	--	620	6.7	81
				51.0	90	5.6	13.0	--	620	5.6	66
				54.0	93	5.5	12.0	--	620	5.2	60
				57.0	98	5.4	11.5	--	620	3.9	44
				60.0	108	5.4	11.0	--	620	2.9	32

SACRAMENTO RIVER BASIN

401

11441500 SOUTH FORK SILVER CREEK NEAR ICE HOUSE, CA

LOCATION.--Lat 38°49'08", long 120°21'51", in NW 1/4 NW 1/4 sec.12, T.11 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 300 ft upstream from Peavine Creek, 0.4 mi downstream from Ice House Dam, and 4.8 mi northwest of Kyburz.

DRAINAGE AREA.--27.5 mi².

PERIOD OF RECORD.--October 1924 to current year.

REVISED RECORDS.--WSP 1395: 1928, 1938. WSP 1635: Drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,290 ft above sea level, from topographic map. Prior to Oct. 1, 1959, at site 0.3 mi upstream at different datum.

REMARKS.--Flow regulated by Ice House Reservoir (station 11441100) beginning in December 1959. Diversion to Jones Fork Powerplant (station 11440900) starting April 1985 bypasses station and returns to Silver Creek at Union Valley Reservoir (station 11441001). See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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 prior to construction of Ice House Dam in 1959, 3,940 ft³/s, Dec. 23, 1955, gage height, 6.71 ft, site and datum then in use, from rating curve extended above 540 ft³/s on basis of slope-area measurement at gage height 6.69 ft; no flow Oct. 31 to Nov. 9, 1958. Maximum discharge since construction of the dam, 7,530 ft³/s, May 16, 1996, gage height, 7.64 ft, from rating curve extended above 730 ft³/s on basis of computation of flow over dam at gage height 5.66 ft; minimum daily, 1.2 ft³/s, Mar. 17-19, 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	16	15	4.7	5.6	4.9	5.5	7.1	9.7	10	18	17	18
2	16	11	4.9	4.5	4.9	5.6	6.9	9.7	10	18	17	17
3	14	11	5.0	4.1	4.9	6.5	6.3	9.7	10	18	17	17
4	14	11	5.7	4.0	8.4	7.2	6.0	9.7	10	18	17	17
5	14	11	5.1	4.0	8.6	6.0	5.9	9.7	10	18	17	17
6	14	11	5.1	4.0	6.1	5.8	5.9	9.7	10	18	17	17
7	14	11	5.1	4.0	5.8	5.8	5.9	9.7	10	18	17	17
8	14	11	5.1	4.0	5.5	5.8	5.9	9.7	10	18	18	17
9	14	11	5.1	4.0	5.5	5.9	5.9	10	10	18	18	17
10	14	11	5.1	4.0	5.8	6.0	5.9	9.7	10	18	18	17
11	13	12	6.5	3.9	5.5	6.8	6.2	9.7	10	18	18	18
12	13	12	8.6	3.9	5.6	6.1	5.7	9.7	10	18	18	18
13	13	12	6.0	4.0	5.6	5.8	5.6	9.7	10	18	18	18
14	13	11	5.6	4.0	5.5	5.9	5.5	10	10	18	18	18
15	13	11	5.5	4.2	5.5	6.0	5.5	12	10	18	18	18
16	13	8.0	5.4	6.8	5.8	6.1	7.3	1250	9.9	18	18	18
17	13	4.9	5.4	4.8	6.1	6.2	6.7	828	9.9	17	18	18
18	13	4.9	5.4	5.4	6.1	6.3	6.9	228	9.8	17	18	18
19	13	4.9	5.4	5.1	8.3	6.3	6.5	145	9.8	17	18	18
20	13	5.1	5.4	4.7	7.2	6.2	6.6	11	10	17	18	18
21	13	4.9	5.4	4.7	6.5	6.2	6.2	11	10	17	18	17
22	13	4.9	5.4	4.5	6.0	6.0	5.8	11	10	17	18	17
23	13	4.9	5.4	4.6	6.0	6.0	5.5	11	10	17	18	17
24	13	5.0	5.4	4.7	5.9	5.8	5.4	11	10	17	18	18
25	13	5.2	5.4	4.8	5.6	5.6	5.4	11	10	17	18	17
26	13	5.2	5.2	4.6	5.6	5.6	5.4	11	10	17	18	18
27	13	5.0	5.4	4.8	5.6	6.3	5.4	10	10	17	18	18
28	13	4.9	5.4	4.9	5.4	8.7	5.4	10	10	17	18	18
29	13	4.9	5.9	4.6	5.4	6.4	5.3	10	13	17	18	18
30	13	4.8	6.5	4.6	---	6.1	8.1	10	19	17	18	18
31	13	---	5.9	4.8	---	6.0	---	10	---	17	18	---
TOTAL	417	249.5	171.4	140.6	173.6	190.5	182.1	2726.4	311.4	543	551	527
MEAN	13.5	8.32	5.53	4.54	5.99	6.15	6.07	87.9	10.4	17.5	17.8	17.6
MAX	16	15	8.6	6.8	8.6	8.7	8.1	1250	19	18	18	18
MIN	13	4.8	4.7	3.9	4.9	5.5	5.3	9.7	9.8	17	17	17
AC-FT	827	495	340	279	344	378	361	5410	618	1080	1090	1050
a	612	31	1370	2290	4460	7610	9620	16400	8050	4210	6200	4740

a Diversion, in acre-feet, to Jones Fork Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11441500 SOUTH FORK SILVER CREEK NEAR ICE HOUSE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1959, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.98	24.1	36.6	31.3	35.8	61.6	155	296	197	42.7	5.82	2.03
MAX	28.0	326	305	163	91.7	191	280	531	418	132	22.8	7.62
(WY)	1948	1951	1951	1956	1925	1928	1943	1952	1952	1952	1952	1952
MIN	.65	.64	2.34	3.00	3.00	6.92	54.9	66.2	35.0	2.92	.22	.18
(WY)	1933	1930	1933	1933	1933	1933	1944	1934	1931	1934	1931	1931

SUMMARY STATISTICS

WATER YEARS 1925 - 1959

ANNUAL MEAN	74.5
HIGHEST ANNUAL MEAN	123
LOWEST ANNUAL MEAN	25.3
HIGHEST DAILY MEAN	2780
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	3940
INSTANTANEOUS PEAK STAGE	6.71
ANNUAL RUNOFF (AC-FT)	53970
10 PERCENT EXCEEDS	237
50 PERCENT EXCEEDS	20
90 PERCENT EXCEEDS	1.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1984, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	87.6	49.4	57.1	71.2	43.6	56.0	125	157	78.1	80.9	90.1
MAX	330	332	171	216	316	199	348	449	382	363	378	360
(WY)	1970	1966	1980	1982	1971	1969	1983	1982	1983	1983	1983	1983
MIN	5.64	5.05	5.21	4.76	5.48	3.67	2.94	4.17	3.80	4.02	3.79	3.97
(WY)	1965	1963	1963	1967	1973	1984	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

WATER YEARS 1961 - 1984

ANNUAL MEAN	84.0
HIGHEST ANNUAL MEAN	226
LOWEST ANNUAL MEAN	24.8
HIGHEST DAILY MEAN	1560
LOWEST DAILY MEAN	1.3
ANNUAL SEVEN-DAY MINIMUM	1.4
INSTANTANEOUS PEAK FLOW	1930
INSTANTANEOUS PEAK STAGE	5.74
ANNUAL RUNOFF (AC-FT)	60830
10 PERCENT EXCEEDS	256
50 PERCENT EXCEEDS	12
90 PERCENT EXCEEDS	5.3

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	9.00	6.96	5.41	5.22	5.67	10.4	5.35	14.9	21.9	14.7	10.6	10.6
MAX	13.9	8.51	6.12	6.98	7.02	55.0	6.13	87.9	168	61.9	17.8	17.6
(WY)	1990	1987	1993	1995	1986	1986	1990	1996	1995	1995	1996	1996
MIN	5.32	5.65	4.78	3.65	3.97	4.13	4.01	5.49	5.54	5.46	5.21	5.29
(WY)	1989	1993	1990	1987	1987	1987	1986	1988	1988	1987	1992	1992

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1986 - 1996

ANNUAL TOTAL	9856.0	6183.5	
ANNUAL MEAN	27.0	16.9	10.1
HIGHEST ANNUAL MEAN			26.2
LOWEST ANNUAL MEAN			5.68
HIGHEST DAILY MEAN	451	Jun 26	1250
LOWEST DAILY MEAN	3.6	Apr 17	3.9
ANNUAL SEVEN-DAY MINIMUM	3.6	Apr 17	4.0
INSTANTANEOUS PEAK FLOW			7530
INSTANTANEOUS PEAK STAGE			7.64
ANNUAL RUNOFF (AC-FT)	19550	12260	7300
ANNUAL DIVERSION (AC-FT) a	89750	65590	
10 PERCENT EXCEEDS	17	18	16
50 PERCENT EXCEEDS	9.4	9.9	5.9
90 PERCENT EXCEEDS	5.1	4.9	4.5

a Diversion, in acre-feet, to Jones Fork Powerplant, provided by Sacramento Municipal Utility District.

11441760 JUNCTION RESERVOIR NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°51'07", long 120°27'22", in SW 1/4 SW 1/4 sec.30, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, in outlet structure to Jaybird Powerplant 100 ft upstream from left abutment of Junction Diversion Dam, 0.3 mi downstream from South Fork Silver Creek and 9.0 mi northeast of Pollock Pines.

DRAINAGE AREA.--147 mi².

PERIOD OF RECORD.--October 1991 to current year. Unpublished records for water years 1980-91 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District). Prior to Apr. 13, 1987, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete arch dam completed in 1962. Storage began in 1962. Usable capacity, 2,368 acre-ft, between elevations 4,397 ft, maximum drawdown level, and 4,450 ft, crest of spillway. Dead storage, 862 acre-ft. Most of the flow is diverted at this reservoir to Jaybird Powerplant (station 11441780). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 3,527 acre-ft, May 1, 1995, elevation, 4,455.34 ft; minimum, 875 acre-ft, Oct. 3, 1991, elevation, 4,397.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,520 acre-ft, May 16, elevation, 4,455.21 ft; minimum, 2,573 acre-ft, Apr. 24, elevation, 4,437.83 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sacramento Municipal Utility District, recomputed October 1991)

4,390	692	4,420	1,703
4,400	949	4,440	2,687
4,410	1,290	4,460	3,788

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	2759	3111	2968	2698	2688	2648	3200	2780	3226	2812	2803	3079
2	2930	3024	3050	2754	2757	2695	3022	2725	3221	2689	2883	2824
3	2974	3115	3001	2851	2667	2713	2955	3015	3256	2942	3067	2983
4	2886	3145	2903	2956	3127	2743	2880	3098	3255	3102	2866	2802
5	3103	2974	2895	2787	3039	2661	2870	2936	3258	2967	2821	3131
6	3105	2821	2858	2744	2947	2832	2841	3090	3224	2816	2854	2966
7	2827	3078	2970	2859	2988	2704	2945	3075	3212	2887	2861	3053
8	2938	2959	2645	2779	2862	2784	2770	3022	3135	2871	2784	3068
9	3119	2985	3068	2779	2777	2820	2863	2877	3191	2834	2944	2910
10	3114	3013	2704	2981	2811	2843	2687	2877	3136	2849	3084	2602
11	2917	3064	2757	2700	2834	2843	3021	3079	3142	3013	2881	3089
12	3000	2876	2650	2901	2886	3293	3210	3178	3101	2855	2744	3101
13	3092	3007	2660	2894	2826	3303	3205	3278	2994	3027	3004	2988
14	3042	3030	2783	2734	2930	3219	3219	3290	2912	3017	2877	3085
15	2921	3002	2661	2720	2847	3134	3201	3477	3060	2897	2849	3020
16	2921	3009	2754	2865	2775	2991	3138	3520	3046	3103	2977	3077
17	2977	3014	2875	2682	2711	2876	3171	3491	3026	2981	2971	3156
18	2835	2959	2785	2787	2690	3025	3127	3487	3134	3038	2879	2946
19	2807	2981	2689	2744	2964	3218	2913	3295	2961	2606	2980	2708
20	2902	3119	2862	2613	2836	3310	2911	3290	2932	2576	2892	2821
21	2905	2866	2787	2789	2900	3294	2929	3297	3150	2702	2833	2979
22	3111	2891	2679	2719	2999	3309	3062	3289	2771	2890	2850	3061
23	2747	2899	2717	2598	2813	3285	2974	3389	3133	2863	2986	2733
24	2863	2896	2804	2694	2682	3187	2573	3358	2961	2972	2979	3117
25	2841	3009	2849	2672	2619	3137	2612	3356	2705	3001	2696	2996
26	2844	2848	2741	2587	2703	3039	2940	3283	2875	2850	2801	2992
27	2917	2933	2836	2910	2661	3125	2989	3283	2932	2662	2699	2950
28	2874	2957	2887	2955	2933	3316	3119	3282	3107	2847	2843	2948
29	3097	3084	2806	2696	2758	3315	2982	3287	3134	3174	2894	2901
30	2766	2947	2803	2764	---	3314	3108	3262	2919	2840	2927	2957
31	2992	---	2729	2743	---	3269	---	3214	---	2631	2851	---
MAX	3119	3145	3068	2981	3127	3316	3219	3520	3258	3174	3084	3156
MIN	2747	2821	2645	2587	2619	2648	2573	2725	2705	2576	2696	2602
a	4445.66	4444.84	4440.78	4441.05	4441.32	4450.70	4447.78	4449.70	4444.31	4438.93	4443.06	4445.02
b	+69	-45	-218	+14	+15	+511	-161	+106	-295	-288	+220	+106

CAL YR 1995 MAX 3527 MIN 2197 b -167

WTR YR 1996 MAX 3520 MIN 2573 b +34

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11441800 SILVER CREEK BELOW JUNCTION DAM, NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°51'08", long 120°27'22", in SW 1/4 SW 1/4 sec.30, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, at outlet structure on Junction Dam, and 9 mi northeast of Pollock Pines.

DRAINAGE AREA.--147 mi².

PERIOD OF RECORD.--October 1987 to current year (low-flow records only). Unpublished records for water years 1965-87 available in files of the U.S. Geological Survey.

GAGE.--Differential-pressure gage and orifice control in outlet pipe. Auxiliary nonrecording gage 550 ft downstream at different datum. Elevation of gage is 4,280 ft above sea level, from topographic map. August 1964 to December 1986, nonrecording gage at site 500 ft downstream at different datum. December 1986 to September 1987, nonrecording gage at site 550 ft downstream.

REMARKS.--Records not computed above 30 ft³/s. Flow completely regulated by Junction Dam. Flow over the spillway bypasses this station. Diversion through Jaybird Powerplant (station 11441780) since 1962 bypasses this station. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility District, 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	21	16	11	12	13	19	---	21	---	---	21	22
2	21	13	11	12	13	19	12	22	---	---	21	22
3	21	13	11	12	13	19	12	21	---	---	21	22
4	21	13	11	12	17	21	12	21	---	---	21	22
5	21	13	11	12	---	20	12	21	---	---	21	22
6	21	12	11	12	16	19	12	21	---	---	22	21
7	21	12	11	12	14	19	12	21	---	---	22	22
8	21	13	11	12	14	19	12	21	---	---	22	21
9	21	14	11	12	14	19	12	21	---	---	21	22
10	21	14	11	12	13	19	12	21	---	---	21	22
11	21	14	12	12	13	20	11	21	---	---	21	22
12	21	14	12	12	13	---	11	21	---	---	22	22
13	22	13	10	12	13	---	11	---	---	24	21	22
14	22	14	11	12	13	---	11	---	---	24	21	22
15	22	14	12	12	13	20	11	---	---	24	21	22
16	22	12	11	14	13	19	12	---	---	24	21	22
17	22	11	16	13	13	19	12	---	---	20	21	22
18	21	11	12	14	14	19	12	---	---	24	22	22
19	21	11	13	13	17	20	12	---	---	21	21	22
20	22	11	12	13	17	---	12	---	---	21	21	22
21	21	11	12	13	16	---	12	---	---	21	22	21
22	22	11	12	12	15	---	12	---	---	21	21	21
23	23	11	12	17	17	---	12	---	---	21	21	21
24	23	11	12	20	23	---	12	---	---	21	22	22
25	24	11	12	20	22	15	12	---	---	21	21	21
26	24	11	12	20	22	12	12	---	---	21	22	21
27	24	11	12	20	21	12	12	---	---	21	21	21
28	24	11	12	20	19	---	12	---	---	21	22	21
29	24	11	12	17	19	---	12	---	---	21	22	21
30	24	11	13	13	---	---	17	---	---	21	22	21
31	24	---	12	13	---	---	---	---	---	21	22	---
TOTAL	683	368	364	432	---	---	---	---	---	---	663	649
MEAN	22.0	12.3	11.7	13.9	---	---	---	---	---	---	21.4	21.6
MAX	24	16	16	20	---	---	---	---	---	---	22	22
MIN	21	11	10	12	---	---	---	---	---	---	21	21
AC-FT	1350	730	722	857	---	---	---	---	---	---	1320	1290
a	39840	27380	19080	16010	38390	78380	79800	85610	53990	35540	39300	40460

CAL YR 1995 TOTAL 5683.8 MEAN 15.6 MAX 25 MIN 5.4 AC-FT 11270 a 688800
WTR YR 1996 a 553800

a Diversion, in acre-feet, to Jaybird Powerplant, provided by Sacramento Municipal Utility District.

11441890 CAMINO RESERVOIR NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°49'44", long 120°32'09", in NW 1/4 NW 1/4 sec.4, T.11 N., R.13 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in outlet tower to Camino Powerplant 100 ft upstream from right abutment of Camino Diversion Dam, 0.3 mi upstream from Round Tent Canyon, and 5.3 mi northwest of Pollock Pines.

DRAINAGE AREA.--160 mi².

PERIOD OF RECORD.--October 1991 to current year. Unpublished records for water years 1980-91 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

Prior to Apr. 8, 1987, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch dam completed in 1961. Storage began in 1961. Usable capacity, 763 acre-ft, between elevations 2,840 ft, centerline of outlet valve, and 2,915 ft, maximum water surface level. Dead storage, 50 acre-ft. Most of the water is diverted at this reservoir to Camino Powerplant (station 11441895). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 819 acre-ft, Jan. 21, 1993, elevation, 2,915.29 ft; minimum, 260 acre-ft, Jan. 27, 1993, elevation, 2,874.27 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 734 acre-ft, May 31, elevation, 2,910.57 ft; minimum, 399 acre-ft, June 12, elevation, 2,887.55 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sacramento Municipal Utility District, recomputed October 1991)

2,860	149	2,900	564
2,870	223	2,910	724
2,880	315	2,920	910
2,890	428		

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	611	614	653	642	590	556	622	677	696	601	681	625
2	652	649	662	601	593	567	649	668	639	654	566	613
3	587	690	626	579	634	537	641	616	674	614	657	603
4	584	655	642	633	713	661	649	632	636	647	626	640
5	694	646	629	609	649	550	630	613	702	684	683	674
6	653	617	657	610	624	510	699	639	596	616	611	586
7	604	631	637	660	593	563	616	660	656	588	621	601
8	605	651	620	496	633	574	633	639	623	601	578	551
9	585	625	666	624	643	654	660	640	624	604	731	549
10	610	643	561	627	640	644	604	681	605	644	672	573
11	563	650	624	580	642	628	618	650	658	658	671	629
12	644	588	536	647	629	885	680	633	399	628	488	612
13	666	616	586	639	650	618	645	619	692	599	524	669
14	640	594	569	640	609	623	682	703	651	686	419	583
15	682	586	580	681	609	606	683	648	624	670	597	634
16	608	642	590	701	677	595	629	666	716	642	596	612
17	630	568	610	587	691	589	677	694	657	586	634	568
18	586	637	595	593	662	692	670	678	701	633	639	612
19	586	670	617	610	623	682	634	696	597	596	607	576
20	708	621	603	627	597	692	626	616	580	586	557	589
21	627	645	598	606	596	630	647	686	682	464	633	630
22	684	640	621	594	677	690	673	714	679	617	603	618
23	629	653	598	694	620	623	621	705	660	627	591	610
24	638	655	623	619	653	722	663	672	692	654	639	600
25	714	657	633	636	639	600	603	670	675	633	571	646
26	593	638	583	529	653	607	621	663	660	543	601	645
27	647	635	621	655	656	626	638	694	668	650	623	610
28	667	627	592	577	541	628	650	704	626	681	595	559
29	657	668	690	586	575	630	631	633	619	622	635	654
30	650	588	568	585	---	602	661	637	613	585	601	688
31	704	---	557	629	---	630	---	734	---	521	678	---
MAX	714	690	690	701	713	722	699	734	716	686	731	688
MIN	563	568	536	496	541	510	603	613	399	464	419	549
a	2908.85	2901.61	2899.52	2904.25	2900.77	2904.31	2906.24	2910.57	2903.26	2897.00	2907.29	2907.89
b	+71	-116	-31	+72	-88	+89	+31	+73	-121	-92	+157	+10

CAL YR 1995 MAX 754 MIN 311 b -66
WTR YR 1996 MAX 734 MIN 399 b +55

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

SACRAMENTO RIVER BASIN

11441900 SILVER CREEK BELOW CAMINO DIVERSION DAM, CA

LOCATION.--Lat 38°49'26", long 120°32'18", on line between secs.4 and 5, T.11 N., R.13 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank 300 ft downstream from Round Tent Canyon, 0.4 mi downstream from diversion dam, and 5 mi northeast of Pollock Pines.

DRAINAGE AREA.--171 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 2,754.06 ft above sea level (Sacramento Municipal Utility District benchmark).

REMARKS.--Flow is regulated by Ice House Reservoir (station 11441100) since 1959, Union Valley Reservoir (station 11441001) since 1962, and Junction and Camino Reservoirs. Diversion to Camino Powerplant (station 11441895) since 1961 bypasses this station. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 22,800 ft³/s, Feb. 17, 1986, gage height, 11.70 ft, from rating curve extended above 4,700 ft³/s on basis of slope-area measurement at gage height 11.28 ft; maximum gage height 12.79 ft, May 16, 1996, backwater from log jam; minimum daily, 1.0 ft³/s, Nov. 1, 1980.

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	24	16	11	12	26	18	256	69	112	29	27	28
2	24	12	11	11	24	18	181	90	118	29	28	28
3	24	11	11	11	22	22	51	81	63	29	28	28
4	23	11	11	11	274	68	26	50	121	29	28	28
5	24	11	11	11	920	94	23	65	91	29	28	29
6	24	11	11	11	84	62	20	44	118	28	29	29
7	24	11	11	11	59	51	18	57	31	28	28	28
8	24	11	11	11	46	45	17	66	98	28	28	27
9	24	12	11	11	37	42	16	34	61	28	28	28
10	24	11	11	32	31	42	15	33	99	28	29	29
11	24	11	12	11	27	51	14	95	156	28	29	28
12	24	11	25	11	23	289	66	86	32	29	27	28
13	24	11	12	11	21	755	93	117	29	27	27	28
14	24	11	11	11	19	573	63	187	30	29	26	28
15	24	11	11	11	17	42	72	1280	30	28	26	29
16	24	11	11	31	16	37	126	e6170	29	28	28	28
17	24	11	11	29	18	33	114	5410	30	28	28	28
18	24	11	11	31	18	113	329	5400	30	28	29	29
19	24	11	11	42	51	184	175	3730	30	28	28	28
20	24	12	11	28	76	269	145	776	29	27	28	28
21	24	11	11	23	80	561	110	1100	29	27	28	28
22	24	11	11	18	63	433	93	485	30	27	28	29
23	23	11	11	16	49	527	115	795	29	28	28	28
24	24	11	11	21	41	265	75	1240	29	28	28	28
25	24	11	11	42	34	230	109	995	29	28	28	29
26	24	11	11	29	27	133	72	732	30	27	28	28
27	24	11	11	53	23	116	68	315	29	28	28	29
28	24	11	11	54	21	444	65	288	29	28	28	28
29	24	11	12	38	19	545	68	292	29	28	28	28
30	23	11	15	29	---	523	35	197	29	29	28	29
31	24	---	13	28	---	439	---	80	---	28	28	---
TOTAL	741	338	364	699	2166	7024	2630	30359	1629	871	865	848
MEAN	23.9	11.3	11.7	22.5	74.7	227	87.7	979	54.3	28.1	27.9	28.3
MAX	24	16	25	54	920	755	329	6170	156	29	29	29
MIN	23	11	11	11	16	18	14	33	29	27	26	27
AC-FT	1470	670	722	1390	4300	13930	5220	60220	3230	1730	1720	1680
a	40970	28690	22220	23230	53630	87850	84420	82520	55880	37960	40920	41710

e Estimated.

a Diversion, in acre-feet, to Camino Powerplant, provided by Sacramento Municipal Utility District.

11441900 SILVER CREEK BELOW CAMINO DIVERSION DAM, 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	28.1	47.4	66.2	106	113	112	126	204	130	65.6	33.1	26.4
MAX	138	1088	856	996	1168	1207	956	1505	1019	503	364	188
(WY)	1995	1984	1965	1970	1986	1986	1962	1995	1995	1995	1962	1962
MIN	3.12	3.44	5.39	5.21	5.45	3.56	3.14	3.30	3.29	2.98	3.11	3.18
(WY)	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1961 - 1996	
ANNUAL TOTAL	116211.3		48534			
ANNUAL MEAN	318		133		88.0	
HIGHEST ANNUAL MEAN					331	
LOWEST ANNUAL MEAN					4.16	
HIGHEST DAILY MEAN	7280	May 2	6170	May 16	9810	Feb 17 1986
LOWEST DAILY MEAN	7.7	Jan 3	11	Nov 3	1.0	Nov 1 1980
ANNUAL SEVEN-DAY MINIMUM	9.1	Feb 23	11	Nov 10	2.7	Mar 2 1977
INSTANTANEOUS PEAK FLOW			13000	May 16	22800	Feb 17 1986
INSTANTANEOUS PEAK STAGE			12.79	May 16	12.79	May 16 1996
ANNUAL RUNOFF (AC-FT)	230500		96270		63780	
ANNUAL DIVERSION (AC-FT) a	745000		600000			
10 PERCENT EXCEEDS	1080		177		135	
50 PERCENT EXCEEDS	24		28		19	
90 PERCENT EXCEEDS	11		11		6.7	

a Diversion, in acre-feet, to Camino Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11442690 BRUSH CREEK RESERVOIR NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°48'42", long 120°37'14", in NW 1/4 SE 1/4 sec.10, T.11 N., R.12 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in outlet tower to Camino Powerplant 200 ft upstream from left abutment of Brush Creek Diversion Dam, and 4.0 mi northwest of Pollock Pines.

DRAINAGE AREA.--7.99 mi².

PERIOD OF RECORD.--October 1991 to current year. Unpublished records for water years 1980-91 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District).

Prior to Apr. 7, 1987, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch dam completed in 1970. Storage began in 1970. Usable capacity, 1,273 acre-ft, between elevations 2,825 ft, invert of tunnel, and 2,915 ft, crest of spillway. Dead storage, 259 acre-ft. Most of the water is diverted at this reservoir to Camino Powerplant (station 11441895). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 1,512 acre-ft, Jan. 10, 1995, elevation, 2,914.07 ft (revised); minimum, 541 acre-ft, June 29, 1995, elevation, 2,853.64 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,479 acre-ft, Feb. 5, elevation, 2,912.42 ft; minimum, 679 acre-ft, June 7, elevation, 2,864.52 ft.

REVISIONS.--The maximum elevation for the water year 1995 has been revised to 2,914.07 ft, Jan. 10, 1995.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sacramento Municipal Utility District, recomputed October 1991)

2,820	220	2,870	753
2,830	300	2,880	900
2,840	393	2,890	1,062
2,850	499	2,900	1,239
2,860	619	2,915	1,532

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	1142	1285	1268	1260	1269	1107	1293	1187	896	1377	1442	1260
2	1141	1278	1265	1287	1280	1126	1342	1099	851	1283	1444	1240
3	1139	1271	1283	1268	1296	1154	1378	1101	831	1288	1447	1237
4	1145	1264	1278	1263	1399	1346	1405	1111	816	1297	1449	1213
5	1137	1256	1271	1259	1479	1294	1429	1118	778	1306	1452	1280
6	1136	1249	1267	1254	1464	1280	1315	1131	743	1313	1348	1260
7	1134	1241	1262	1251	1467	1267	1258	1111	679	1320	1337	1300
8	1133	1237	1255	1246	1311	1265	1254	1106	698	1328	1338	1288
9	1130	1281	1249	1241	1304	1280	1271	1114	693	1335	1340	1286
10	1128	1311	1242	1285	1301	1318	1288	1122	731	1341	1007	1286
11	1127	1298	1252	1245	1316	1375	1306	1070	944	1348	826	1285
12	1126	1290	1196	1221	1330	1351	1323	996	877	1355	963	1284
13	1134	1282	1215	1216	1344	1291	1339	991	883	1360	1086	1284
14	1241	1274	1216	1212	1356	1251	1355	932	802	1367	1083	1284
15	1302	1266	1227	1211	1366	1237	1370	940	922	1372	1083	1247
16	1356	1260	1233	1244	1377	1250	1309	1075	1124	1377	1083	1209
17	1352	1251	1235	1271	1392	1268	1277	1025	1071	1382	1199	1208
18	1349	1243	1234	1292	1213	1301	1313	1189	1060	1387	1280	1208
19	1345	1267	1233	1320	1179	1331	1262	1216	1087	1392	1267	1208
20	1344	1289	1231	1335	1195	1359	1242	1257	1311	1396	1265	1208
21	1341	1270	1228	1292	1256	1385	1243	1246	1304	1401	1265	1208
22	1338	1261	1225	1266	1196	1411	1259	1164	1281	1405	1265	1208
23	1332	1255	1222	1253	1138	1434	1273	1119	1291	1410	1264	1209
24	1331	1247	1217	1286	1097	1358	1288	1114	1298	1414	1264	1209
25	1313	1242	1214	1306	1069	1270	1301	1087	1310	1418	1264	1209
26	1303	1238	1209	1303	1058	1221	1312	1010	1326	1422	1264	1208
27	1305	1231	1206	1348	1060	1198	1323	962	1338	1426	1263	1207
28	1302	1271	1205	1397	1071	1209	1201	923	1375	1430	1263	1206
29	1300	1297	1206	1304	1089	1225	1169	931	1359	1433	1262	1206
30	1297	1268	1226	1269	---	1240	1176	947	1367	1436	1261	1206
31	1292	---	1234	1265	---	1253	---	961	---	1439	1261	---
MAX	1356	1311	1283	1397	1479	1434	1429	1257	1375	1439	1452	1300
MIN	1126	1231	1196	1211	1058	1107	1169	923	679	1283	826	1206
a	2902.89	2901.61	2899.73	2901.45	2891.60	2900.76	2896.56	2883.89	2906.81	2910.46	2901.22	2898.20
b	+149	-24	-34	+31	-194	+182	-77	-215	+406	+72	-178	-55

CAL YR 1995 MAX 1512 MIN 541 b -89

WTR YR 1996 MAX 1479 MIN 679 b +63

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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11442700 BRUSH CREEK BELOW BRUSH CREEK DAM, NEAR POLLOCK PINES, CA

LOCATION.--Lat 38°48'41", long 120°37'20", in NW 1/4 SE 1/4 sec.10, T.11 N., R.12 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, at outlet structure on Brush Creek Dam, and 4.0 mi northwest of Pollock Pines.

DRAINAGE AREA.--7.99 mi².

PERIOD OF RECORD.--October 1987 to current year. Unpublished records for water years 1971-87 available in files of the U.S. Geological Survey.

GAGE.--Differential-pressure gage and orifice control in outlet pipe. Auxiliary water-stage recorder 200 ft downstream at different datum. Elevation of gage is 2,700 ft above sea level, from topographic map. Prior to October 1987, nonrecording gage 400 ft downstream at different datum.

REMARKS.--Flow completely regulated by Brush Creek Reservoir (station 11442690). See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 8.4 ft³/s, Nov. 27-29, 1989; minimum daily, 2.1 ft³/s, many days in 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	3.3	6.4	6.7	6.9	6.8	6.8	6.5	6.2	5.9	3.4	3.4	3.5
2	3.3	6.4	6.6	6.8	6.9	6.8	6.3	6.3	5.9	3.4	3.4	3.5
3	3.3	6.5	6.7	6.8	6.8	6.8	6.3	6.3	4.5	3.3	3.4	3.5
4	3.3	6.5	6.7	6.8	6.9	6.9	6.2	6.3	3.5	3.3	3.4	3.5
5	3.3	6.6	6.7	6.9	6.9	6.6	6.2	6.2	3.5	3.3	3.5	3.5
6	3.3	6.5	6.7	6.9	6.8	6.7	6.2	6.2	3.5	3.3	3.4	3.5
7	3.3	6.7	6.7	6.9	6.8	6.6	6.2	6.3	3.7	3.3	3.4	3.5
8	3.3	6.6	6.8	6.9	6.8	6.6	6.1	6.2	3.8	3.3	3.4	3.5
9	3.3	6.6	6.8	6.9	6.8	6.6	6.3	6.2	3.7	3.3	3.4	3.5
10	3.3	6.6	6.8	6.9	6.8	6.6	6.3	6.3	3.6	3.3	3.4	3.5
11	3.3	6.5	6.8	6.9	6.8	6.6	6.3	6.2	3.8	3.3	3.4	3.5
12	3.4	6.5	6.9	6.8	6.8	6.6	6.3	6.2	3.5	3.3	3.4	3.5
13	3.4	6.5	6.8	6.8	6.8	6.6	6.3	6.2	3.3	3.3	3.4	3.5
14	3.5	6.5	6.8	6.9	6.8	6.6	6.4	6.1	3.3	3.3	3.4	3.5
15	3.5	6.5	6.9	6.9	6.8	6.6	6.4	6.0	3.3	3.3	3.4	3.5
16	3.5	6.5	6.9	6.9	6.8	6.6	6.4	6.0	3.5	3.3	3.4	3.5
17	3.5	6.5	6.9	6.9	6.8	6.7	6.4	6.0	3.7	3.3	3.4	3.5
18	3.5	6.5	6.9	6.9	6.8	6.7	6.4	6.0	3.6	3.3	3.4	3.5
19	3.5	6.5	6.9	6.9	6.8	6.7	6.3	6.0	3.6	3.3	3.5	3.5
20	3.5	6.6	6.8	6.9	6.9	6.5	6.3	6.0	3.8	3.3	3.5	3.5
21	3.5	6.6	6.8	6.9	6.9	6.5	6.3	6.1	3.7	3.3	3.5	3.5
22	3.5	6.5	6.8	6.9	6.8	6.4	6.3	6.0	3.7	3.3	3.5	3.4
23	3.5	6.5	6.9	6.9	6.8	6.4	6.3	6.0	4.0	3.3	3.5	3.5
24	3.4	6.5	6.8	6.9	6.8	6.4	6.4	6.0	3.7	3.3	3.5	3.5
25	3.4	6.6	6.8	6.8	6.8	6.4	6.3	6.0	3.3	3.4	3.5	3.4
26	3.4	6.6	6.8	6.8	6.8	6.3	6.3	6.0	3.3	3.4	3.5	3.4
27	3.4	6.6	6.8	6.8	6.8	6.4	6.3	6.0	3.4	3.4	3.5	3.4
28	3.4	6.6	6.8	6.8	6.8	6.4	6.3	6.0	3.4	3.5	3.5	3.4
29	3.4	6.6	6.8	6.8	6.8	6.4	6.2	6.0	3.4	3.5	3.5	3.4
30	3.4	6.6	6.9	6.8	---	6.3	6.3	6.0	3.4	3.4	3.5	3.4
31	4.8	---	6.9	6.8	---	6.3	---	6.0	---	3.4	3.5	---
TOTAL	106.7	196.2	210.9	212.7	197.7	203.4	189.1	189.3	112.3	103.4	106.8	104.3
MEAN	3.44	6.54	6.80	6.86	6.82	6.56	6.30	6.11	3.74	3.34	3.45	3.48
MAX	4.8	6.7	6.9	6.9	6.9	6.9	6.5	6.3	5.9	3.5	3.5	3.5
MIN	3.3	6.4	6.6	6.8	6.8	6.3	6.1	6.0	3.3	3.3	3.4	3.4
AC-FT	212	389	418	422	392	403	375	375	223	205	212	207

SACRAMENTO RIVER BASIN

11442700 BRUSH CREEK BELOW BRUSH CREEK DAM, NEAR POLLOCK PINES, 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	2.87	5.33	5.32	5.24	5.25	5.39	5.44	5.34	3.10	2.99	2.95	2.93
MAX	3.86	8.06	7.81	6.92	6.82	6.56	7.05	6.90	4.43	4.26	3.87	3.81
(WY)	1994	1990	1990	1990	1996	1996	1989	1995	1995	1995	1995	1993
MIN	2.44	4.16	4.09	4.10	4.12	4.39	4.23	4.28	2.24	2.18	2.14	2.14
(WY)	1993	1991	1988	1988	1988	1992	1988	1988	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1988 - 1996

ANNUAL TOTAL	1912.9	1932.8	
ANNUAL MEAN	5.24	5.28	4.34
HIGHEST ANNUAL MEAN			5.28
LOWEST ANNUAL MEAN			3.39
HIGHEST DAILY MEAN	7.0	Mar 13	6.9
LOWEST DAILY MEAN	3.3	Oct 1	3.3
ANNUAL SEVEN-DAY MINIMUM	3.3	Oct 1	3.3
ANNUAL RUNOFF (AC-FT)	3790	3830	3140
10 PERCENT EXCEEDS	6.9	6.8	6.8
50 PERCENT EXCEEDS	4.8	6.2	4.3
90 PERCENT EXCEEDS	3.5	3.3	2.4

11443450 SLAB CREEK RESERVOIR NEAR CAMINO, CA

LOCATION.--Lat 38°46'21", long 120°41'58", in SW 1/4 NE 1/4 sec.25, T.11 N., R.11 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on left bank 100 ft upstream from dam on South Fork American River, 1,600 ft upstream from Iowa Canyon, and 2.7 mi northwest of Camino.

DRAINAGE AREA.--493 mi².

PERIOD OF RECORD.--May 1987 to current year. Unpublished records for water years 1969-86 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Sacramento Municipal Utility District). Prior to May 26, 1987, nonrecording gage at same site and datum. September 1980 to October 1993, supplementary water-stage recorder at left abutment of dam operated by U.S. Geological Survey during periods of spill.

REMARKS.--Reservoir is formed by concrete-arch dam completed in 1967. Storage began in October 1967. Usable capacity, 16,567 acre-ft, between elevations 1,670 ft, invert of tunnel, and 1,850 ft, crest of spillway. Dead storage, 600 acre-ft. Reservoir receives water from South Fork American River and Silver Creek via El Dorado and Camino Powerplants (stations 11439300 and 11441895) 10 mi upstream. Nearly the entire flow is diverted at this reservoir to White Rock Powerplant (station 11443460). See South Fork American River near Camino (station 11443500) for additional information on diversions and releases from Slab Creek Reservoir. Records, including extremes, represent usable contents. See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 17,735 acre-ft, May 1, 1995, elevation, 1,855.56 ft; minimum, 3,917 acre-ft, Oct. 27, 1991, elevation, unknown.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,558 acre-ft, May 16, elevation, 1,853.43 ft, minimum, 12,933 acre-ft, Apr. 14, elevation, 1,831.00.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Sacramento Municipal Utility District recomputed October 1991)

1,730	1,688	1,800	8,124
1,740	2,276	1,820	11,073
1,750	2,966	1,840	14,587
1,760	3,763	1,850	16,567
1,780	5,700	1,855	17,615

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	15655	15562	15508	15461	15087	13927	14688	16078	15398	15725	15981	15691
2	15979	15679	15370	14924	15159	14106	15065	16571	16185	15707	15649	15832
3	15443	15713	15122	15054	14812	14342	14930	16608	16707	15852	15625	15605
4	15122	15433	15296	14562	16471	15417	14288	16252	16830	16142	16090	15508
5	15233	15645	15691	14891	17107	15915	14181	15754	16751	15583	16076	15882
6	15603	15758	15599	15272	16553	14797	14257	15828	16553	15611	16047	16276
7	15178	15465	15623	15512	15703	14957	14350	15311	16678	15748	15758	16045
8	15143	15423	15044	15215	14826	14401	14789	15683	16709	15585	15613	16041
9	15331	15345	15276	14799	14947	14421	15213	15862	16645	15893	15483	16108
10	15249	15133	15141	14619	14649	14384	14739	15941	16668	15800	14665	15830
11	14938	15104	15151	14934	14907	14350	14106	16356	16287	15229	13701	15570
12	14996	14866	16769	15132	14714	15015	13553	16811	16195	15149	13950	15524
13	15390	14728	15300	15003	14520	16041	13333	16753	16167	14949	13319	15532
14	15967	14858	14357	14911	14760	16161	12933	16726	15812	15100	13951	15744
15	16346	14543	14442	14535	14918	14607	13633	17373	15063	15701	14751	15985
16	16151	14674	15104	15566	14271	13846	14780	17558	13944	16017	15321	16287
17	15410	15062	15705	15137	13743	13937	14872	17318	15211	16289	15046	16185
18	15413	15204	16165	14431	13859	14115	15254	17282	16438	16056	15124	15641
19	15570	15611	15681	14762	14418	14282	14395	16988	15108	16220	15321	15651
20	15067	15356	14914	14644	16616	14928	14382	16986	15388	15806	15575	15354
21	14837	15176	14851	14803	16586	16329	13911	16923	16272	15935	15245	15844
22	15376	15339	14847	14916	15721	16563	13181	16805	16417	15524	15681	16124
23	15237	15208	14994	14876	14440	16181	13337	16948	16307	15997	15717	16130
24	14448	15278	14986	15132	14231	14876	13920	16776	16256	15540	15558	15723
25	15132	15528	15384	14621	14256	14145	14600	16742	15268	15542	15133	15663
26	16124	15744	15514	14657	14121	13453	14590	16631	15874	16140	15522	15237
27	16017	15490	15562	15471	13785	13489	14772	16325	16015	16175	16297	14976
28	15358	15570	15042	15685	14423	14241	14242	16209	16207	16037	15347	15202
29	15017	15394	14674	14207	13944	14665	14755	16102	16035	14949	15579	15161
30	15386	15390	15081	14370	---	14463	14943	15915	15479	15398	15366	14588
31	15459	---	15471	14667	---	14098	---	15526	---	15927	15639	---
MAX	16346	15758	16769	15685	17107	16563	15254	17558	16830	16289	16297	16287
MIN	14448	14543	14357	14207	13743	13453	12933	15311	13944	14949	13319	14588
a	1844.50	1844.15	1844.56	1840.42	1836.58	1837.41	1841.86	1844.84	1844.60	1846.85	1845.41	1840.01
b	+361	-69	+81	-804	-723	+154	+845	+583	-47	+448	-288	-1051

CAL YR 1995 MAX 17735 MIN 12374 b -106

WTR YR 1996 MAX 17558 MIN 12933 b -510

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

11443500 SOUTH FORK AMERICAN RIVER NEAR CAMINO, CA

LOCATION.--Lat 38°46'23", long 120°42'02", in SW 1/4 NE 1/4 sec.25, T.11 N., R.11 E., El Dorado County, Hydrologic Unit 18020129, on right bank 500 ft upstream from Iowa Canyon Creek, and 2.8 mi northwest of Camino.

DRAINAGE AREA.--493 mi².

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for October 1922, WSP 1315-A. Records for river and American River Flume, published separately October 1922 to September 1956, October 1962 to December 1964 when flume was destroyed. Records of river and flume combined October 1956 to September 1962.

REVISED RECORDS.--WSP 931: 1928, 1938, 1940(M). WSP 1931: Drainage area at former site.

GAGE.--Acoustic-velocity meter. Elevation of gage is 1,625 ft above sea level, from topographic map. Prior to May 26, 1987, water-stage recorder at different datum at site 1,000 ft downstream. Auxiliary water-stage recorder on Slab Creek Dam records spill discharges which are combined with release discharges. See WSP 2131 for history of changes prior to Oct. 12, 1966.

REMARKS.--Flow regulated by several reservoirs. Since 1967 diversion from Slab Creek Dam to White Rock Powerplant (station 11443460) bypasses this station. Echo Lake Conduit (station 11434500) imports up to 1,900 acre-ft each year from Truckee River basin. Variable amounts of El Dorado Canal water, up to 40 ft³/s May to October, and about 7 ft³/s remainder of the year, diverted for irrigation and domestic use between Pollock Pines and Placerville. Water from Jenkinson Lake in North Fork Cosumnes River basin diverted to Camino and substituted for flow from El Dorado Canal in some years. Since October 1962, water is imported from the Upper Rubicon River basin by way of Robbs Peak Powerplant (station 11429300). See schematic diagram of South Fork American River basin.

COOPERATION.--Records were collected by Sacramento Municipal Utility 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, 49,800 ft³/s, Dec. 23, 1955, gage height, 32.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 24,000 ft³/s on basis of computation of peak flow over dam; minimum daily, 1.3 ft³/s, Aug. 24, 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	36	36	36	36	36	36	36	36	37	37	36	36
2	36	36	36	36	36	36	38	37	37	37	36	36
3	36	36	36	36	36	36	36	200	45	37	36	36
4	36	36	36	36	36	36	36	153	555	37	36	36
5	36	36	36	36	5270	36	36	36	895	37	36	36
6	36	36	36	36	1330	36	36	36	518	37	37	36
7	36	36	36	36	127	36	36	36	379	37	37	36
8	36	36	36	36	36	36	36	36	599	37	37	36
9	36	36	36	36	36	36	36	36	748	37	36	36
10	36	36	36	36	36	36	36	36	381	37	37	36
11	36	36	36	36	36	36	36	36	44	37	40	36
12	36	36	426	36	36	36	36	362	280	37	36	36
13	36	36	81	36	36	36	36	1090	37	37	36	36
14	36	36	38	36	36	36	36	986	37	37	36	36
15	36	36	36	36	36	36	36	2430	37	37	36	36
16	36	36	36	36	36	36	36	12400	36	37	e36	36
17	36	36	36	36	36	36	36	8110	36	36	e36	36
18	36	36	36	36	36	36	36	6820	37	36	e36	e36
19	36	36	36	36	36	36	36	4680	37	36	e36	e36
20	36	36	36	36	242	36	36	2220	36	36	36	e38
21	36	36	36	36	191	36	36	1770	37	36	36	e38
22	36	36	36	36	49	319	36	2380	37	37	36	e38
23	36	36	36	36	36	100	36	2200	37	37	36	e38
24	36	36	36	36	36	36	36	2130	37	37	36	e38
25	36	36	36	36	36	36	36	1280	37	36	36	e38
26	36	36	36	36	36	36	36	1340	36	37	36	e38
27	36	36	36	36	36	36	36	375	37	36	36	e38
28	36	36	36	36	36	36	36	37	37	36	36	e38
29	36	36	36	36	36	36	36	37	37	36	36	e38
30	36	36	36	36	---	36	36	36	37	36	36	e38
31	36	---	36	36	---	36	---	37	---	36	36	---
TOTAL	1116	1080	1553	1116	8037	1463	1082	51398	5190	1136	1124	1102
MEAN	36.0	36.0	50.1	36.0	277	47.2	36.1	1658	173	36.6	36.3	36.7
MAX	36	36	426	36	5270	319	38	12400	895	37	40	38
MIN	36	36	36	36	36	36	36	36	36	36	36	36
AC-FT	2210	2140	3080	2210	15940	2900	2150	101900	10290	2250	2230	2190
a	51300	34300	39980	57700	132900	182800	183000	190800	120900	56430	49880	50280

e Estimated.

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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11443500 SOUTH FORK AMERICAN RIVER NEAR CAMINO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.8	254	569	601	855	1171	2069	2681	1557	285	39.7	31.1
MAX	221	3951	4780	3422	2125	3367	4015	6382	4031	1310	168	150
(WY)	1952	1951	1951	1956	1927	1943	1952	1952	1952	1952	1951	1951
MIN	4.43	5.46	12.9	43.0	116	146	620	418	13.8	1.97	2.01	6.97
(WY)	1930	1930	1950	1929	1929	1924	1924	1934	1924	1931	1931	1955

SUMMARY STATISTICS

WATER YEARS 1923 - 1957

ANNUAL MEAN	846
HIGHEST ANNUAL MEAN	1760
LOWEST ANNUAL MEAN	161
HIGHEST DAILY MEAN	40000
LOWEST DAILY MEAN	1.3
ANNUAL SEVEN-DAY MINIMUM	1.5
INSTANTANEOUS PEAK FLOW	49800
INSTANTANEOUS PEAK STAGE	32.6
ANNUAL RUNOFF (AC-FT)	612700
10 PERCENT EXCEEDS	2520
50 PERCENT EXCEEDS	230
90 PERCENT EXCEEDS	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1957, COMBINED RIVER PLUS FLUME, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	167	364	684	713	959	1259	2176	2815	1695	413	154	142
MAX	288	4051	4780	3422	2229	3490	4181	6552	4201	1474	324	227
(WY)	1948	1951	1951	1956	1927	1943	1952	1952	1952	1952	1952	1952
MIN	44.1	49.8	134	141	212	252	727	533	97.3	50.2	35.5	53.4
(WY)	1930	1930	1924	1929	1933	1924	1924	1934	1924	1931	1931	1924

SUMMARY STATISTICS

WATER YEARS 1923 - 1957

ANNUAL MEAN	960
HIGHEST ANNUAL MEAN	1860
LOWEST ANNUAL MEAN	249
HIGHEST DAILY MEAN	40000
LOWEST DAILY MEAN	20
ANNUAL SEVEN-DAY MINIMUM	30
ANNUAL RUNOFF (AC-FT)	695700
10 PERCENT EXCEEDS	2660
50 PERCENT EXCEEDS	350
90 PERCENT EXCEEDS	120

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	48.7	92.9	118	211	202	119	138	356	271	84.6	34.6	34.3
MAX	453	1093	1112	1994	2709	1090	1402	2434	2619	936	45.1	48.2
(WY)	1968	1968	1984	1970	1986	1986	1971	1995	1995	1995	1980	1980
MIN	9.97	10.2	10.0	10.0	5.62	10.9	10.0	9.73	9.98	9.93	10.4	10.1
(WY)	1978	1978	1988	1988	1970	1992	1988	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1968 - 1996

ANNUAL TOTAL	223580	75397	
ANNUAL MEAN	613	206	142
HIGHEST ANNUAL MEAN			608
LOWEST ANNUAL MEAN			13.3
HIGHEST DAILY MEAN	9270	May 2	20200
LOWEST DAILY MEAN	10	Jan 1	2.4
ANNUAL SEVEN-DAY MINIMUM	10	Jan 1	2.6
INSTANTANEOUS PEAK FLOW			49800
INSTANTANEOUS PEAK STAGE			32.60
ANNUAL RUNOFF (AC-FT)	443500	149500	103000
ANNUAL DIVERSION (AC-FT) a	1463000	1150000	
10 PERCENT EXCEEDS	2530	46	74
50 PERCENT EXCEEDS	36	36	36
90 PERCENT EXCEEDS	10	36	11

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11444201 ROCK CREEK NEAR PLACERVILLE, CA

LOCATION.--Lat 38°47'39", long 120°46'28", in NE 1/4 NW 1/4 sec.20, T.11 N., R.11 E., El Dorado County, Hydrologic Unit 18020129, on left bank 500 ft downstream from Rock Creek Road and 4.0 mi north of Placerville.

DRAINAGE AREA.--73.0 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and broad-crested weir; water-stage recorder and sharp-crested weir. Elevation of gages is 1,305 ft above sea level, from topographic map.

REMARKS.--Records good. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11444200) and flow over a sharp-crested weir (station 11444260). Water is diverted upstream of weirs through a tunnel to Rock Creek Powerplant (station 11444280), returning to Rock Creek at its confluence with the South Fork American River. Extremes also represent combined flows. See schematic diagram of South Fork American River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s, Jan. 20, 1993; no flow Sept. 29 to Oct. 3, 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	21	23	23	24	66	21	224	24	23	42	24	15
2	21	23	34	38	39	24	307	25	23	28	24	15
3	21	24	26	39	25	33	184	26	26	38	23	16
4	21	23	40	37	711	354	145	26	26	24	23	15
5	20	22	30	34	1230	520	94	44	26	26	23	16
6	21	22	24	32	402	248	37	22	25	31	23	16
7	21	22	24	32	190	142	39	32	32	36	23	16
8	21	22	22	31	90	128	26	29	26	36	22	16
9	21	23	21	31	25	69	26	23	27	37	21	18
10	21	23	21	31	24	72	25	22	24	35	21	18
11	21	23	67	30	38	80	26	21	25	35	20	18
12	21	23	286	29	81	232	32	22	25	34	19	18
13	21	23	107	27	79	170	27	26	25	31	21	19
14	21	25	66	27	28	106	23	26	25	31	20	21
15	24	25	81	29	59	66	24	31	24	30	19	22
16	26	25	94	215	41	38	25	453	25	30	19	23
17	27	25	55	155	63	84	25	111	26	30	19	20
18	27	26	43	86	23	24	43	154	24	30	19	19
19	26	26	36	161	352	24	25	28	24	29	19	19
20	26	26	30	35	522	25	23	25	25	28	19	19
21	26	26	33	169	565	25	23	29	26	28	19	18
22	25	26	32	84	437	30	23	24	26	28	18	18
23	25	25	31	61	279	27	22	26	23	28	18	17
24	25	25	30	965	248	25	24	23	24	28	17	17
25	26	27	29	1310	179	26	24	24	25	27	17	17
26	26	38	29	273	67	26	26	26	26	27	16	16
27	25	26	29	535	54	24	24	27	24	26	17	16
28	25	24	34	429	43	23	23	24	24	26	17	15
29	24	22	44	145	33	22	23	24	22	26	17	15
30	22	22	116	144	---	23	24	24	25	25	16	15
31	22	---	52	116	---	25	---	25	---	25	15	---
TOTAL	720	735	1589	5354	5993	2736	1616	1446	751	935	608	523
MEAN	23.2	24.5	51.3	173	207	88.3	53.9	46.6	25.0	30.2	19.6	17.4
MAX	27	38	286	1310	1230	520	307	453	32	42	24	23
MIN	20	22	21	24	23	21	22	21	22	24	15	15
AC-FT	1430	1460	3150	10620	11890	5430	3210	2870	1490	1850	1210	1040
a	0	0	130	1150	3610	5730	3970	3950	2130	38	0	0

a Discharge, in acre-feet, through Rock Creek Powerplant near Placerville, provided by Sithe Energies U.S.A., Inc.

SACRAMENTO RIVER BASIN

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11444201 ROCK CREEK NEAR PLACERVILLE, 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	10.4	17.2	30.7	94.2	72.4	117	39.2	33.2	16.4	10.3	7.45	7.55
MAX	23.2	29.4	67.2	342	207	454	99.6	127	31.5	30.2	24.8	21.2
(WY)	1996	1995	1995	1995	1996	1995	1995	1995	1995	1996	1995	1995
MIN	4.60	6.15	9.97	11.4	12.5	16.4	16.6	11.3	6.35	3.18	1.97	1.86
(WY)	1993	1993	1990	1991	1991	1988	1994	1992	1992	1988	1994	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1987 - 1996		
ANNUAL TOTAL	38785			23006					
ANNUAL MEAN	106			62.9			38.0		
ANNUAL MEAN ^b	132			91.3					
HIGHEST ANNUAL MEAN							107		
LOWEST ANNUAL MEAN							14.3		
HIGHEST DAILY MEAN	1370			1310			1370		
LOWEST DAILY MEAN	18			15			.00		
ANNUAL SEVEN-DAY MINIMUM	19			15			.35		
INSTANTANEOUS PEAK FLOW				3430			3430		
ANNUAL RUNOFF (AC-FT)	76930			45630			27520		
ANNUAL RUNOFF (AC-FT) ^b	95700			66300					
10 PERCENT EXCEEDS	290			120			66		
50 PERCENT EXCEEDS	27			25			17		
90 PERCENT EXCEEDS	20			19			4.1		

^b Adjusted for Rock Creek Powerplant near Placerville.

SACRAMENTO RIVER BASIN

11444500 SOUTH FORK AMERICAN RIVER NEAR PLACERVILLE, CA

LOCATION.--Lat 38°46'16", long 120°48'55", in NE 1/4 SW 1/4 sec.25, T.11 N., R.10 E., El Dorado County, Hydrologic Unit 18020129, on right bank 700 ft downstream from Chili Bar Dam, 0.5 mi upstream from Big Canyon, and 2.5 mi north of Placerville.

DRAINAGE AREA.--598 mi².

PERIOD OF RECORD.--August 1911 to July 1920 (monthly discharge only for some periods, published in WSP 1315-A), July 1964 to current year.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 931.05 ft above sea level (levels by Pacific Gas & Electric Co.). Aug. 11, 1911, to July 31, 1920, nonrecording gage 0.6 mi downstream at different datum.

REMARKS.--Flow regulated by Chili Bar Reservoir, capacity, 3,700 acre-ft, Chili Bar Powerplant, and other storage and powerplants (see station 11443500). See schematic diagrams of South Fork American River and lower Sacramento River basins.

COOPERATION.--Records 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, 47,300 ft³/s, Dec. 23, 1964, gage height, 17.4 ft, from floodmarks, from rating curve extended above 18,000 ft³/s on basis of computations of flow over dam; minimum daily, 0.2 ft³/s, Nov. 12, 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	1020	754	379	1090	951	2190	3060	3060	3180	1290	756	676
2	1120	652	504	843	971	2190	3630	3530	2950	1110	1060	819
3	1350	745	609	881	1030	2260	3200	3670	3040	849	775	859
4	1010	815	450	731	2630	3360	3240	3610	3380	815	716	718
5	837	618	467	501	9330	4560	2880	3600	3510	1430	663	600
6	646	604	548	328	5260	4100	2770	3280	3570	1170	799	494
7	959	768	509	766	3370	3040	2910	3530	3180	995	655	931
8	854	699	801	754	2830	3200	2910	3200	3240	902	945	801
9	853	652	381	856	1990	2870	3050	3110	3150	1050	763	748
10	941	615	625	636	1960	2930	3390	3170	2940	1100	1490	1200
11	1060	601	659	765	1550	3130	3290	3170	2880	1100	1890	968
12	758	699	1920	363	1770	3390	3210	3330	2630	954	1030	522
13	618	676	2040	699	1800	3420	2930	3730	2480	1090	1050	829
14	591	582	1090	683	1740	3490	2970	4080	2810	839	825	895
15	585	752	899	944	1710	3640	2570	4880	2610	630	540	824
16	870	648	769	897	2200	3160	3160	16900	2570	499	753	1080
17	1130	361	469	1960	2230	2720	3370	12100	1650	662	691	895
18	818	496	692	1830	2240	2900	3450	11200	1190	916	502	1180
19	844	370	817	1410	3080	3030	3680	8250	1890	786	521	1050
20	758	645	898	1230	4120	2930	3050	4610	1190	664	520	1110
21	798	654	588	1080	4820	2820	3080	4290	563	883	1050	685
22	537	537	555	884	4490	3270	3140	4570	958	1030	636	835
23	788	497	650	1000	3960	3640	2740	4090	1210	872	748	993
24	1110	389	413	2060	3090	3660	2710	4980	1050	981	768	963
25	565	397	380	4340	2820	3150	2850	4330	1600	1070	688	834
26	523	390	702	1780	2690	2960	3400	4130	923	683	644	808
27	806	698	497	1470	2680	2510	3500	3670	743	681	480	806
28	1060	471	601	2180	1980	2890	3730	3490	875	1150	1050	847
29	1000	598	943	2460	2250	2980	3010	3400	1200	1570	885	1040
30	767	489	894	1200	---	3200	3380	3350	1370	960	1170	939
31	792	---	1140	1040	---	3160	---	3260	---	823	720	---
TOTAL	26368	17872	22889	37661	81542	96750	94260	149570	64532	29554	25783	25949
MEAN	851	596	738	1215	2812	3121	3142	4825	2151	953	832	865
MAX	1350	815	2040	4340	9330	4560	3730	16900	3570	1570	1890	1200
MIN	523	361	379	328	951	2190	2570	3060	563	499	480	494
AC-FT	52300	35450	45400	74700	161700	191900	187000	296700	128000	58620	51140	51470

SACRAMENTO RIVER BASIN

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11444500 SOUTH FORK AMERICAN RIVER NEAR PLACERVILLE, 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	503	772	1253	1647	1701	1883	2025	2513	1938	1156	932	802
MAX	935	3806	5386	4871	6613	5561	5382	6159	6496	3648	1483	1401
(WY)	1984	1984	1965	1970	1986	1983	1982	1995	1983	1983	1983	1995
MIN	204	106	320	188	125	124	255	295	228	88.2	142	244
(WY)	1988	1978	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	1002441	672730	
ANNUAL MEAN	2746	1838	1426
HIGHEST ANNUAL MEAN			3275
LOWEST ANNUAL MEAN			224
HIGHEST DAILY MEAN	14800	May 2	42000
LOWEST DAILY MEAN	361	Nov 17	.20
ANNUAL SEVEN-DAY MINIMUM	483	Nov 22	20
INSTANTANEOUS PEAK FLOW		25600	47300
INSTANTANEOUS PEAK STAGE		14.31	17.40
ANNUAL RUNOFF (AC-FT)	1988000	1334000	1033000
10 PERCENT EXCEEDS	5880	3520	3210
50 PERCENT EXCEEDS	1840	1050	977
90 PERCENT EXCEEDS	607	564	331

SACRAMENTO RIVER BASIN

11446200 FOLSOM LAKE NEAR FOLSOM, CA

LOCATION.--Lat 38°42'29", long 121°09'22", in NW 1/4 NE 1/4 sec.24, T.10 N., R.7 E., Sacramento County, Hydrologic Unit 18020128, near center of dam on American River, 0.7 mi downstream from South Fork American River, and 2.3 mi northeast of Folsom.

DRAINAGE AREA.--1,861 mi².

PERIOD OF RECORD.--February 1955 to current year. Prior to October 1959, published as Folsom Reservoir near Folsom.

REVISED RECORDS.--WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by concrete gravity-type dam with rolled-earth-wing dams, auxiliary dams, and dikes, completed May 14, 1956; storage began Feb. 25, 1955. Total capacity, 1,010,300 acre-ft between elevations 205.5 ft, invert of lower tier of river outlets, and 466.0 ft gross pool elevation, all of which are available for release. Spillway design flood pool elevation, 475.4 ft, capacity, 1,120,200 acre-ft. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of lower Sacramento River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,024,400 acre-ft, June 15, 1963, elevation, 467.23 ft; minimum since storage pool first filled, 140,600 acre-ft, Nov. 20, 21, 1977, elevation, 347.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 959,300 acre-ft, June 10, elevation, 464.41 ft; minimum, 280,700 acre-ft, Dec. 11, elevation, 383.68 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation in 1992)

345	123,600	380	258,600	440	703,800
350	137,900	390	314,100	460	908,400
360	170,600	400	376,900	479	1,125,000
370	210,500	420	525,500		

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	458600	384400	304000	319600	507000	360900	636400	786400	940300	900700	835800	760900
2	451800	382100	300600	320200	510000	360600	653500	792700	944700	897900	832700	759200
3	444900	380100	297800	321100	512600	361500	663400	799100	948100	895600	829400	756600
4	437500	377800	295400	321700	546600	371600	672000	802800	950300	893900	826100	754400
5	429900	375200	292800	322300	599200	397700	678800	805900	952500	892300	822800	753000
6	423500	372400	290400	321300	590900	416400	684500	809100	955400	891700	819700	750600
7	419600	369300	287800	320900	561200	427300	690200	813600	957000	891100	817400	747400
8	417300	367100	286600	320800	538100	437700	696700	818300	958600	890400	815700	746500
9	418000	365600	283800	321100	519000	446800	704100	822000	958800	889600	813400	745100
10	419600	363400	281100	322000	501800	455900	711500	826800	959300	887900	811600	745700
11	418900	359600	280700	322000	487500	467400	718200	832000	958800	887000	812100	744700
12	417800	357200	302600	321500	476200	484800	723900	838100	958500	885800	810700	743300
13	416500	354600	318800	320900	464800	500000	727200	845400	956700	882700	807000	741700
14	415400	351700	322700	319800	452800	512400	730900	854000	956200	880800	803400	740900
15	413300	350000	324300	319800	442000	523500	733100	868600	955200	877300	799600	740000
16	411400	347700	325800	324700	432400	532800	732900	927900	955200	873800	796300	739600
17	410700	344900	325000	340500	421200	541200	735100	910800	952800	870700	794100	739100
18	409200	341700	324200	348500	412100	549400	737500	915800	950500	868200	791400	738700
19	408400	338800	324300	359100	409900	556800	739100	911900	948200	865500	788200	739100
20	406700	336400	323800	366000	412600	564600	739700	903200	945000	862400	785500	739100
21	405400	333600	323000	373100	414200	572000	740300	897200	940400	859000	782900	738100
22	403600	330100	321900	377700	406900	579500	741400	899100	935600	855600	781100	736700
23	401700	326700	320400	381100	396100	586500	743100	902300	931700	854000	778900	735800
24	400800	323400	319000	394600	385300	593400	746000	908800	927800	852200	776800	735100
25	398900	320100	316400	433000	376200	599300	750800	912600	924300	850200	774200	736000
26	396700	317300	314300	445000	370300	603900	757700	916800	920800	849200	771600	733900
27	394600	314700	313400	460800	367500	606900	764900	921100	916200	846800	769000	731400
28	392300	312300	311600	483800	363800	612100	771200	925000	912100	843700	767000	730100
29	390300	309200	312000	497200	361900	617800	775900	928100	907600	843000	765100	728000
30	388900	307000	314000	501200	---	622400	781700	931900	902900	841200	763800	726300
31	386400	---	317700	504000	---	626900	---	936300	---	838500	762800	---
MAX	458600	384400	325800	504000	599200	626900	781700	936300	959300	900700	835800	760900
MIN	386400	307000	280700	319600	361900	360600	636400	786400	902900	838500	762800	726300
a	401.05	388.36	390.19	417.03	397.32	431.47	447.65	462.33	459.26	453.19	445.77	442.06
b	-78700	-79400	+10700	+186300	-142100	+265000	+154800	+154600	-33400	-64400	-75700	-36500
c	2445	1044	597	334	650	1620	3123	4984	6221	7452	6352	4363

CAL YR 1995 b +65400

WTR YR 1996 b +260200

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

SACRAMENTO RIVER BASIN

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11446500 AMERICAN RIVER AT FAIR OAKS, CA

LOCATION.--Lat 38°38'08", Long 121°13'36", in SE 1/4 NE 1/4 sec.17, T.9 N., R.7 E., Sacramento County, Hydrologic Unit 18020111, on right bank 2,100 ft downstream from Nimbus Dam, 2.4 mi east of Fair Oaks, 8.1 mi downstream from South Fork, and at mile 22.2.

DRAINAGE AREA.--1,888 mi².

PERIOD OF RECORD.--November 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

WATER TEMPERATURE: Water years 1961-65.

CHEMICAL DATA: Water years 1960-62.

REVISED RECORDS.--WSP 1181: 1928(M). WSP 1515: 1907(M), 1910, 1931(M), 1943(M). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.53 ft above sea level. See WSP 2131 for history of changes prior to July 15, 1970.

REMARKS.--Records good. Flow regulated by Folsom Lake beginning Feb. 25, 1955 (station 11446200). Some minor regulation of high flows by temporary pondage during period of construction January 1953 to February 1955. Diurnal fluctuations from Folsom Powerplant re-regulated by Nimbus Reservoir, capacity, 2,800 acre-ft between normal operating elevations 118.5 and 125.0 ft and by Nimbus Powerplant. Many diversions upstream from station for irrigation, municipal, and domestic water supply. Diversions for San Juan Suburban Water District, city of Folsom, city of Roseville, and State of California are made at Folsom Dam. Diversion to Folsom South Canal from Nimbus Reservoir started in June 1973. Some inflow from Bear and Yuba River basins. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s, Nov. 21, 1950, gage height, 31.85 ft, site and datum then in use; minimum, 3.6 ft³/s, Aug. 16, 1924. Maximum discharge since regulation by Folsom Lake in 1955, 134,000 ft³/s, Feb. 19, 1986, gage height, 27.96 ft; minimum daily, 160 ft³/s, Apr. 17, 1955.

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	5010	2420	2400	2400	3480	7520	5090	4570	4710	3700	3100	2480
2	4960	2430	2410	2410	2980	6930	5120	4580	4580	3600	3070	2490
3	5020	2460	2410	2410	2950	6440	5090	5040	4860	3190	3080	2490
4	5020	2490	2390	2210	3410	5930	4680	5680	5520	2820	3080	2490
5	4900	2490	2400	1970	19400	5290	4590	5680	5520	2750	3100	2340
6	4070	2510	2390	1970	26500	4800	4610	5260	5530	2500	2830	2480
7	3180	2550	2380	1960	27700	4580	4570	4630	5490	2450	2550	2490
8	2390	2440	2380	1980	21300	4580	4560	4540	5500	2460	2480	2160
9	1660	2420	2400	1950	17700	4610	4540	4420	5500	2460	2460	2100
10	1140	2420	2420	1950	15800	4610	4530	4060	5540	2470	2420	2070
11	2380	2410	2510	1970	13900	4620	4540	4090	5600	2440	2450	2030
12	2450	2430	2270	1970	12400	4600	4560	4120	5390	2710	3110	2080
13	2440	2410	2390	1980	12300	4570	5030	4130	5140	3100	3630	2080
14	2440	2380	2420	1970	12000	4580	5050	4100	4880	3090	3650	2070
15	2420	2370	2380	1970	11300	4580	5840	4470	4580	3060	3210	2040
16	2400	2410	2390	1960	11700	4620	8190	18600	4630	3080	2650	2040
17	2410	2490	2380	1980	12800	4620	8200	43700	4620	3030	2500	2040
18	2410	2470	2400	1970	13300	4650	8170	34400	4610	3000	2500	2040
19	2410	2460	2370	1980	16900	4630	7930	25100	4610	3040	2500	2040
20	2410	2480	2360	1970	22600	4640	7580	17900	4610	3080	2500	2060
21	2430	2410	2400	2000	21900	4630	7090	14000	4600	3060	2500	2050
22	2430	2420	2400	1990	21600	4610	6600	11800	4620	3090	2510	2040
23	2430	2400	2410	1980	18700	4570	6030	9770	4640	2830	2520	2040
24	2420	2380	2410	1970	16700	4580	5410	7900	4610	2540	2530	1710
25	2390	2350	2410	1970	14700	4620	4920	7200	4590	2490	2540	940
26	2420	2390	2420	1980	12100	4660	4570	6780	4590	2470	2500	2320
27	2440	2400	2420	1970	10200	5160	4610	6330	4600	2470	2480	2490
28	2460	2380	2410	1970	9210	5080	4630	6070	4580	2470	2480	2460
29	2490	2390	2400	1980	8320	4970	4610	5830	4600	2470	2480	2430
30	2440	2410	2400	3940	---	5000	4580	5260	4230	2690	2480	2450
31	2450	---	2410	3990	---	5090	---	4790	---	3700	2480	---
TOTAL	88320	72870	74340	66670	413850	154370	165520	294800	147080	88310	84370	65040
MEAN	2849	2429	2398	2151	14270	4980	5517	9510	4903	2849	2722	2168
MAX	5020	2550	2510	3990	27700	7520	8200	43700	5600	3700	3650	2490
MIN	1140	2350	2270	1950	2950	4570	4530	4060	4230	2440	2420	940
AC-FT	175200	144500	147500	132200	820900	306200	328300	584700	291700	175200	167300	129000

SACRAMENTO RIVER BASIN

11446500 AMERICAN RIVER AT FAIR OAKS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	455	1327	2504	4483	5831	6647	8258	8656	5149	1293	342	269
MAX	1430	16450	17360	24290	15540	24710	15640	18200	17720	6336	1497	813
(WY)	1905	1951	1951	1909	1909	1907	1907	1952	1911	1906	1907	1907
MIN	100	85.0	254	284	650	879	1988	1488	206	26.8	15.8	24.4
(WY)	1930	1930	1906	1918	1920	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS

WATER YEARS 1905 - 1954

ANNUAL MEAN	3752
HIGHEST ANNUAL MEAN	7896
LOWEST ANNUAL MEAN	731
HIGHEST DAILY MEAN	132000
LOWEST DAILY MEAN	4.6
ANNUAL SEVEN-DAY MINIMUM	4.8
INSTANTANEOUS PEAK FLOW	180000
INSTANTANEOUS PEAK STAGE	31.85
ANNUAL RUNOFF (AC-FT)	2718000
10 PERCENT EXCEEDS	9980
50 PERCENT EXCEEDS	1420
90 PERCENT EXCEEDS	216

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	1891	2398	3774	4936	5441	5194	4256	4289	3756	3671	2785	2267
MAX	4102	11700	19360	19190	31140	19340	17760	14270	9828	10710	4500	3924
(WY)	1970	1984	1965	1970	1986	1983	1982	1995	1983	1995	1983	1983
MIN	284	272	252	350	408	273	258	520	1135	869	855	602
(WY)	1978	1978	1978	1962	1991	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1956 - 1996

ANNUAL TOTAL	2662900	1715540	
ANNUAL MEAN	7296	4687	3715
HIGHEST ANNUAL MEAN			8854
LOWEST ANNUAL MEAN			778
HIGHEST DAILY MEAN	41800	Mar 12	43700
LOWEST DAILY MEAN	1140	Oct 10	940
ANNUAL SEVEN-DAY MINIMUM	1440	Jan 1	1840
INSTANTANEOUS PEAK FLOW			50600
INSTANTANEOUS PEAK STAGE			18.58
ANNUAL RUNOFF (AC-FT)	5282000	3403000	2691000
10 PERCENT EXCEEDS	17500	8000	7580
50 PERCENT EXCEEDS	5010	2890	2500
90 PERCENT EXCEEDS	2390	2040	858

11447000 AMERICAN RIVER AT SACRAMENTO, CA

LOCATION.--Lat 38°34'05", long 121°25'20", in Rio de Americanos Grant, Sacramento County, Hydrologic Unit 18020111, at Guy A. West Bridge at California State University, Sacramento, and 1,200 ft downstream from Howe Avenue Bridge, and 4.1 mi southeast of State Capitol.

DRAINAGE AREA.--1,936 mi².

PERIOD OF RECORD.--October 1977 to September 1978, February 1996 to September 1996.

CHEMICAL DATA.--October 1977 to September 1978, February 1996 to September 1996.

SEDIMENT DATA.--February 1996 to September 1996.

REMARKS.--Discharge values were obtained from the California Department of Water Resources at their H Street gaging-station location since September 1959. This site was relocated 2,000 ft downstream of the H Street Bridge in October 1977 through September 1978. The site was reestablished and relocated as described in the current location description in February 1996.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
21...	1010	21900	58	7.5	11.0	757	10.8	99	5.6	2.0
MAR										
18...	1100	4650	57	7.4	10.0	766	12.4	109	5.3	2.3
APR										
05...	0940	4610	54	7.0	10.0	766	12.0	106	5.4	2.1
MAY										
15...	1030	4050	50	7.5	14.5	760	11.1	110	5.0	1.7
JUN										
12...	1130	5580	40	7.4	16.0	758	10.0	101	4.0	1.4
JUL										
19...	1010	3060	42	7.5	17.0	763	8.2	84	4.2	1.4
AUG										
13...	1000	3620	44	7.2	19.0	763	9.0	97	4.4	1.4
SEP										
13...	0930	2090	46	7.4	18.0	758	10.7	114	4.9	1.5

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
21...	2.4	18	0.70	22	2.0	2.0	<0.10	11	50	40
MAR										
18...	2.3	18	0.60	23	2.1	1.9	<0.10	11	42	42
APR										
05...	2.4	19	0.60	21	1.8	1.7	<0.10	12	42	41
MAY										
15...	2.2	19	0.50	19	2.0	1.5	<0.10	11	44	38
JUN										
12...	1.7	18	0.60	16	1.4	1.0	<0.10	9.7	26	31
JUL										
19...	1.8	19	0.70	17	1.3	1.2	<0.10	10	38	33
AUG										
13...	1.9	19	0.70	17	1.5	1.3	<0.10	10	33	33
SEP										
13...	1.9	18	0.60	18	1.5	1.4	<0.10	9.9	39	34

SACRAMENTO RIVER BASIN

11447000 AMERICAN RIVER AT SACRAMENTO, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 21...	0.07	<0.010	0.120	0.020	<0.20	<0.20	<0.010	<0.010	0.020	--
MAR 18...	0.06	<0.010	0.130	0.020	<0.20	<0.20	0.020	0.010	<0.010	14
APR 05...	0.06	<0.010	0.110	<0.015	<0.20	<0.20	0.020	0.020	<0.010	12
MAY 15...	0.06	<0.010	0.110	<0.015	<0.20	<0.20	0.010	<0.010	<0.010	9.0
JUN 12...	0.03	0.010	0.070	0.060	<0.20	<0.20	0.050	<0.010	<0.010	29
JUL 19...	0.05	0.010	0.060	0.040	<0.20	<0.20	0.070	0.030	0.020	10
AUG 13...	0.05	0.010	<0.050	0.020	<0.20	<0.20	<0.010	0.010	0.010	7.0
SEP 13...	0.05	<0.010	<0.050	<0.015	<0.20	<0.20	0.010	<0.010	<0.010	6.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 21...	--	--	--	--	--	--	--	--	25	--
MAR 18...	<1.0	<1	12	<1.0	<1.0	<1.0	<1.0	<1.0	17	<1.0
APR 05...	<1.0	<1	12	<1.0	<1.0	<1.0	<1.0	<1.0	14	<1.0
MAY 15...	<1.0	<1	11	<1.0	<1.0	<1.0	<1.0	<1.0	9.0	<1.0
JUN 12...	<1.0	<1	10	<1.0	<1.0	<1.0	<1.0	1.0	25	<1.0
JUL 19...	<1.0	<1	10	<1.0	<1.0	<1.0	<1.0	<1.0	11	<1.0
AUG 13...	<1.0	<1	11	<1.0	<1.0	<1.0	<1.0	<1.0	6.0	<1.0
SEP 13...	<1.0	<1	11	<1.0	<1.0	<1.0	<1.0	<1.0	7.0	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
FEB 21...	10	--	--	--	--	--	--	6.4	1.7
MAR 18...	6.0	<1.0	1.0	<1	<1.0	1.0	<1.0	3.7	0.40
APR 05...	3.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	1.3	<0.10
MAY 15...	3.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	1.5	0.20
JUN 12...	2.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.20
JUL 19...	2.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.30
AUG 13...	2.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.5	0.40
SEP 13...	2.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.5	0.40

SACRAMENTO RIVER BASIN

423

11447000 AMERICAN RIVER AT SACRAMENTO, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB					
21...N	1010	21900	11.0	28	1660
MAR					
18...N	1100	4650	10.0	5	63
APR					
05...N	0940	4610	10.0	4	50
MAY					
15...N	1030	4050	14.5	3	33
JUN					
12...N	1130	5580	16.0	15	226
JUL					
19...N	1010	3060	17.0	4	33
AUG					
13...N	1000	3620	19.0	2	20
SEP					
13...N	0930	2090	18.0	2	11

SACRAMENTO RIVER BASIN

11447330 MAGPIE CREEK NEAR DEL PASO HEIGHTS, CA

LOCATION.--Lat 38°39'24", long 121°22'53", in Del Paso Grant, Sacramento County, Hydrologic Unit 18021111, on right bank 15 ft upstream from culvert on Watt Avenue, near intersection with Roseville Road, and 1 mi east of Del Paso Heights.

DRAINAGE AREA.--2.03 mi².

PERIOD OF RECORD.--October 1995 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 70 ft above sea level, from topographic map.

REMARKS.--Records good except for discharges below 1 ft³/s, which are poor. Low summer flow sustained by residential and industrial waste water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 522 ft³/s, Feb. 21, 1996, gage height, 5.83 ft; minimum daily, 0.06 ft³/s, Mar. 2, 7-9, 16, 1996.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	1215	519	5.81	Apr. 1	1600	495	5.62
Feb. 21	0645	522	5.83	May 15	2115	456	5.32

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	e.15	.36	.97	.44	.14	.08	48	.25	.44	.58	.77	.52
2	e.15	.45	.18	.55	.08	.06	.88	.28	.52	.60	.59	.44
3	e.15	.35	.10	.20	1.3	.18	.12	.22	.50	.49	.50	.35
4	e.15	.45	.10	.44	100	15	.13	.19	.58	.50	.64	.36
5	e.15	.33	.11	.18	27	.22	.11	.14	.74	.46	.56	.34
6	e.21	.34	.15	.12	.43	.08	.11	.14	.86	.58	.59	.36
7	e.32	.26	.34	.14	.16	.06	.09	.21	.86	.59	.64	.51
8	e.43	.11	.09	.47	.14	.06	.09	.17	.83	.49	.71	.58
9	e.54	.15	.10	1.2	.13	.06	.09	.21	.74	.56	.80	.43
10	e.65	.25	.26	.39	.12	.42	.09	.19	.58	.58	.88	.63
11	e.71	.31	71	.48	.14	3.1	.09	.20	.98	.60	1.0	.39
12	e.47	.33	104	.13	.12	26	.09	.23	1.2	.71	.80	.35
13	e.23	.23	22	.22	.13	.21	.10	.24	.97	.59	.99	.42
14	e.22	.18	2.5	.13	.13	.09	.12	1.3	1.0	.61	.98	.38
15	e.22	.15	22	3.2	.92	.07	.10	58	.98	.72	1.0	.41
16	e.22	.15	1.0	35	.56	.06	.88	20	.89	.79	.81	.29
17	e.21	.16	.29	.53	.70	.15	12	.72	.72	.67	1.1	.28
18	e.21	.18	.26	4.2	4.5	.46	1.0	.43	.75	.69	1.3	.28
19	e.21	.18	.30	.19	61	.07	4.0	.14	.57	.74	1.0	.30
20	e.21	.20	.22	7.0	9.9	.07	.29	.12	.53	.79	1.0	.37
21	e.21	.16	.22	9.9	61	.08	.11	2.1	.45	.96	1.1	.36
22	e.21	.15	2.7	.22	.35	.08	.12	.24	.42	.99	.90	.44
23	e.24	.17	.62	5.4	.14	.07	.11	.22	.44	.86	.76	.64
24	.28	.16	.25	11	1.7	.08	.12	.20	.33	.69	.60	.35
25	.31	.17	.32	2.4	.08	.08	.11	.24	.32	.92	.54	.35
26	.34	.14	.37	.10	.07	.12	.13	.29	.39	.67	.42	.44
27	.33	.15	3.6	23	1.6	.14	.13	.25	.45	.65	.28	.44
28	.35	.14	1.5	.52	.08	.13	.12	.34	.51	.93	.39	.41
29	.24	.13	44	.12	.18	.14	.19	.33	.43	.91	.53	.46
30	.26	.13	4.2	.55	---	.16	.24	.45	.51	.72	.51	.43
31	.28	---	.62	8.9	---	.12	---	.46	---	.98	.45	---
TOTAL	8.86	6.62	284.37	117.32	272.80	47.70	69.76	88.50	19.49	21.62	23.14	12.31
MEAN	.29	.22	9.17	3.78	9.41	1.54	2.33	2.85	.65	.70	.75	.41
MAX	.71	.45	104	35	100	26	48	58	1.2	.99	1.3	.64
MIN	.15	.11	.09	.10	.07	.06	.09	.12	.32	.46	.28	.28
AC-FT	18	13	564	233	541	95	138	176	39	43	46	24

e Estimated.

SACRAMENTO RIVER BASIN

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11447330 MAGPIE CREEK NEAR DEL PASO HEIGHTS, 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	.29	.22	9.17	3.78	9.41	1.54	2.33	2.85	.65	.70	.75	.41
MAX	.29	.22	9.17	3.78	9.41	1.54	2.33	2.85	.65	.70	.75	.41
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996
MIN	.29	.22	9.17	3.78	9.41	1.54	2.33	2.85	.65	.70	.75	.41
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1996 WATER YEAR

ANNUAL TOTAL	972.49	
ANNUAL MEAN	2.66	
HIGHEST DAILY MEAN	104	Dec 12
LOWEST DAILY MEAN	.06	Mar 2
ANNUAL SEVEN-DAY MINIMUM	.08	Mar 19
INSTANTANEOUS PEAK FLOW	522	Feb 21
INSTANTANEOUS PEAK STAGE	5.83	Feb 21
ANNUAL RUNOFF (AC-FT)	1930	
10 PERCENT EXCEEDS	1.5	
50 PERCENT EXCEEDS	.36	
90 PERCENT EXCEEDS	.11	

SACRAMENTO RIVER BASIN

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA

LOCATION.--Lat 38°38'01", long 121°22'54", in Del Paso Grant, Sacramento County, Hydrologic Unit 18021111, on right bank 500 ft upstream from bridge on Watt Avenue and at intersection with Longview Drive, and 1.3 mi east of Del Paso Heights.

DRAINAGE AREA.--31.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1963 to June 1978, December 1995 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map. Prior to December 1995, at site 0.3 mi upstream at different datum.

REMARKS.--Records good except for discharges below 1 ft³/s and estimated daily discharges, which are poor. Low summer flow sustained by residential and industrial waste water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s, Feb. 27, 1973, gage height, 14.29 ft, site and datum then in use; maximum gage height, 14.42 ft, Jan. 21, 1967, site and datum then in use; no flow for many days in most years.

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)
Dec. 12	1615	1,360	12.94	Mar. 12	1300	662	10.55
Jan. 16	1430	536	10.29	Apr. 1	2030	1,590	13.66
Feb. 4	1315	1,700	14.02	May 16	0515	1,250	12.65
Feb. 21	1115	1,400	13.05				

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	---	---	---	e10	12	3.4	495	2.6	1.7	1.4	2.0	1.6
2	---	---	---	e3.0	5.1	2.8	276	2.7	2.1	1.4	1.6	1.3
3	---	---	---	e1.5	7.8	3.3	9.7	3.4	2.4	1.4	1.7	1.2
4	---	---	---	e1.0	1100	90	5.2	2.3	2.5	1.4	1.7	.94
5	---	---	---	e.80	643	27	3.8	2.1	2.0	1.2	1.4	.97
6	---	---	---	.21	26	5.0	3.2	2.4	2.3	1.5	1.4	1.1
7	---	---	---	.02	14	3.0	3.1	2.9	2.3	1.7	1.8	1.3
8	---	---	---	.00	10	2.3	2.9	2.4	1.8	1.2	2.1	1.3
9	---	---	.00	.00	8.3	2.1	2.1	2.1	2.2	1.2	1.9	1.2
10	---	---	.00	1.1	7.0	4.2	1.9	2.4	1.8	1.1	2.3	1.2
11	---	---	403	.10	6.5	17	1.8	2.5	1.7	1.1	2.5	1.2
12	---	---	850	.00	5.8	328	1.8	3.1	1.4	1.1	2.1	1.3
13	---	---	55	.00	5.3	20	2.0	2.8	1.6	1.2	2.3	.95
14	---	---	28	.00	4.7	6.0	2.8	2.7	1.6	1.4	1.6	.93
15	---	---	93	7.3	4.2	3.7	3.0	165	2.2	1.2	1.4	1.4
16	---	---	14	227	12	2.9	14	532	1.6	1.4	1.3	1.2
17	---	---	4.6	14	11	2.5	23	11	1.1	1.5	1.4	.97
18	---	---	2.3	23	14	2.2	e100	21	1.4	1.4	1.6	.76
19	---	---	1.6	17	676	2.0	e35	4.4	1.9	1.4	1.5	.58
20	---	---	1.1	4.6	265	1.8	24	2.7	1.7	1.7	1.5	.65
21	---	---	.55	114	624	1.7	5.3	42	1.7	1.8	1.5	.90
22	---	---	2.3	7.0	31	1.8	3.7	9.6	1.9	1.7	1.4	.87
23	---	---	4.4	50	12	1.5	3.0	3.6	1.6	1.6	1.5	.94
24	---	---	1.1	95	25	1.5	2.7	2.4	1.6	1.6	1.5	.83
25	---	---	.39	161	12	1.3	2.9	2.3	1.4	2.4	1.8	.76
26	---	---	.06	8.5	6.8	1.3	2.5	2.4	1.8	1.9	1.5	.86
27	---	---	e.27	229	13	1.2	2.8	2.4	6.4	2.0	1.3	.82
28	---	---	e10	33	6.4	1.6	2.3	2.1	2.0	2.1	1.3	.80
29	---	---	e450	7.8	5.4	1.6	2.2	1.9	1.7	1.9	1.5	.81
30	---	---	e350	4.8	---	1.5	3.0	2.0	1.4	2.0	1.5	1.0
31	---	---	e60	82	---	1.2	---	1.9	---	2.1	1.5	---
TOTAL	---	---	---	1102.73	3573.3	545.4	1040.7	845.1	58.8	48.0	51.4	30.64
MEAN	---	---	---	35.6	123	17.6	34.7	27.3	1.96	1.55	1.66	1.02
MAX	---	---	---	229	1100	328	495	532	6.4	2.4	2.5	1.6
MIN	---	---	---	.00	4.2	1.2	1.8	1.9	1.1	1.1	1.3	.58
AC-FT	---	---	---	2190	7090	1080	2060	1680	117	95	102	61

e Estimated.

SACRAMENTO RIVER BASIN

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11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, 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	4.45	23.0	32.1	61.9	39.4	19.8	12.1	4.73	3.32	3.75	3.22	3.60
MAX	13.7	76.0	88.7	227	142	64.0	34.7	27.3	5.90	10.0	5.53	14.0
(WY)	1976	1974	1965	1969	1969	1975	1996	1996	1975	1974	1975	1965
MIN	.65	2.67	.51	3.15	.93	.85	.12	.64	.000	.000	.001	1.02
(WY)	1966	1976	1964	1976	1971	1966	1977	1965	1977	1977	1977	1996

SUMMARY STATISTICS

WATER YEARS 1963 - 1996

ANNUAL MEAN	16.1	
HIGHEST ANNUAL MEAN	37.8	1969
LOWEST ANNUAL MEAN	2.64	1977
HIGHEST DAILY MEAN	1280	Jan 13 1969
LOWEST DAILY MEAN	.00	Oct 27 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 31 1963
INSTANTANEOUS PEAK FLOW	2170	Feb 27 1973
INSTANTANEOUS PEAK STAGE	14.42	Jan 21 1967
ANNUAL RUNOFF (AC-FT)	11640	
10 PERCENT EXCEEDS	21	
50 PERCENT EXCEEDS	2.5	
90 PERCENT EXCEEDS	.38	

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1996 to September 1996.

CHEMICAL DATA: February 1996 to September 1996.

SEDIMENT DATA: February 1996 to September 1996.

REMARKS.--National Water-Quality Assessment (NAWQA) Program, urban runoff study. Variability of chemical concentrations result from fluctuations in discharge and storm-drain runoff.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	
FEB													
06...	0945	26	236	7.4	13.0	770	8.5	80	21	5.5	15	29	
MAR													
05...	0910	26	92	7.2	11.5	760	9.8	90	8.9	2.2	4.9	24	
APR													
01...	1020	47	--	--	--	--	--	--	--	--	--	--	
01...	1640	886	--	--	--	--	--	--	--	--	--	--	
01...	1950	1560	--	--	--	--	--	--	--	--	--	--	
02...	1000	45	--	--	--	--	--	--	--	--	--	--	
26...	1100	2.7	264	7.6	19.0	766	6.8	73	23	6.2	18	31	
MAY													
21...	1040	2.4	196	7.4	16.0	761	6.9	70	18	5.0	12	27	
JUN													
20...	1140	1.3	335	7.6	21.0	760	7.4	83	26	8.6	27	36	
JUL													
23...	1430	1.3	278	7.7	25.5	762	7.2	88	21	7.6	19	32	
AUG													
26...	1600	1.6	285	7.7	22.0	759	6.7	77	23	9.0	21	31	
SEP													
09...	1330	1.2	294	7.3	21.0	760	9.8	110	21	8.8	20	32	
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT. DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE 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)
FEB													
06...	4.2	61	12	19	<0.10	21	165	147	0.22	0.030	2.30	0.020	
MAR													
05...	2.0	19	3.7	5.1	<0.10	8.0	66	57	0.09	0.080	0.540	<0.015	
APR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	3.3	70	12	24	<0.10	25	172	161	0.23	0.020	0.720	0.050	
MAY													
21...	3.4	60	8.1	14	0.10	24	134	125	0.18	0.030	0.540	<0.015	
JUN													
20...	4.3	83	11	42	0.20	35	215	208	0.29	0.010	0.350	0.050	
JUL													
23...	4.0	63	9.6	26	0.20	36	181	176	0.25	0.010	0.210	0.050	
AUG													
26...	4.3	82	11	29	0.20	40	188	193	0.26	0.010	0.390	0.020	
SEP													
09...	4.2	62	10	29	0.20	40	201	189	0.27	0.030	0.730	0.050	

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

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
FEB 06...	1.3	1.2	0.290	0.220	0.170	325	<1.0	2	91	<1.0	<1.0	2.0
MAR 05...	1.0	0.60	0.190	0.080	<0.010	47	<1.0	1	34	<1.0	<1.0	<1.0
APR 01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
26...	0.90	0.80	0.150	0.110	0.100	5.0	<1.0	1	84	<1.0	<1.0	1.0
MAY 21...	0.80	0.60	0.170	0.130	0.080	11	<1.0	2	74	<1.0	<1.0	<1.0
JUN 20...	0.80	0.60	0.230	0.190	0.210	8.0	<1.0	3	80	<1.0	<1.0	1.0
JUL 23...	0.60	0.60	0.260	0.260	0.270	12	<1.0	5	73	<1.0	<1.0	1.0
AUG 26...	0.80	0.80	0.220	0.190	0.210	7.0	<1.0	6	77	<1.0	<1.0	1.0
SEP 09...	0.60	0.60	0.210	0.190	0.200	5.0	<1.0	4	79	<1.0	<1.0	1.0

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
FEB 06...	<1.0	7.0	360	<1.0	25	1.0	4.0	<1	<1.0	18	<1.0	9.3
MAR 05...	<1.0	4.0	80	<1.0	7.0	<1.0	3.0	<1	<1.0	11	<1.0	7.6
APR 01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
26...	<1.0	4.0	74	<1.0	31	3.0	3.0	<1	<1.0	7.0	<1.0	5.4
MAY 21...	<1.0	5.0	93	<1.0	29	2.0	4.0	<1	<1.0	8.0	<1.0	7.5
JUN 20...	<1.0	9.0	89	<1.0	21	7.0	3.0	<1	<1.0	5.0	<1.0	6.3
JUL 23...	<1.0	5.0	110	<1.0	17	3.0	2.0	<1	<1.0	3.0	<1.0	7.1
AUG 26...	<1.0	6.0	110	<1.0	12	12	3.0	<1	<1.0	5.0	<1.0	6.9
SEP 09...	<1.0	4.0	54	<1.0	9.0	5.0	2.0	<1	<1.0	4.0	<1.0	6.0

[illegible]

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA--Continued

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

[illegible][illegible][illegible]

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

[illegible][illegible]

SACRAMENTO RIVER BASIN

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA--Continued

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

DATE	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	TOLUENE TOTAL (UG/L)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER (UG/L)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L)	2,2-DI CHLORO- PRO- PANE WAT, WH TOTAL (UG/L)	VINYL CHLO- RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)
FEB 06...	--	--	--	--	--	--	--	--	--	--
MAR 05...	<0.800	<0.800	<0.800	<0.800	<0.800	--	--	<0.800	<0.800	<0.800
APR 01...	<0.100	0.290	<0.200	<0.100	<0.200	<10.0	<10.0	<0.100	<0.200	--
01...	<0.050	0.340	<0.100	<0.050	<0.100	<5.00	<5.00	<0.050	<0.100	--
01...	<0.050	0.600	<0.100	<0.050	<0.100	<5.00	<5.00	<0.050	<0.100	--
02...	<0.100	0.410	<0.200	<0.100	<0.200	<10.0	<10.0	<0.100	<0.200	--
26...	<0.050	0.110	<0.100	<0.050	<0.100	<5.00	<5.00	<0.050	<0.100	--
MAY 21...	<0.200	0.380	<0.400	<0.200	<0.400	<20.0	<20.0	<0.200	<0.400	--
JUN 20...	--	--	--	--	--	--	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	--	--	--
AUG 26...	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR 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)
FEB 06...N	0945	26	13.0	35	2.5
MAR 05...N	0910	26	11.5	87	6.1
APR 26...N	1100	2.7	19.0	26	0.19
MAY 21...N	1040	2.4	16.0	23	0.15
JUN 20...N	1140	1.3	21.0	13	0.05
JUL 23...N	1430	1.3	25.5	5	0.02
AUG 26...N	1600	1.6	22.0	12	0.05
SEP 09...N	1330	1.2	21.0	13	0.04

e Estimated

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA

LOCATION.--Lat 38°35'12", long 121°30'16", T.9 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, on left bank 1,000 ft upstream from I Street Bridge, in city of Sacramento, and 0.5 mi downstream from American River.

DRAINAGE AREA.--23,502 mi².

REVISED RECORDS.--WDR CA-76-4: Drainage area.

PERIOD OF RECORD.--January 1904 to July 1905 (gage heights only), June to November 1921, October 1948 to September 1979 (water discharge), October 1985 to September 1989 (peak elevation of year only, see station 11447650), October 1989 to September 30, 1996 (elevation only) (discontinued). Gage heights collected in this vicinity November 1879 to May 1888, December 1890 to September 1963, are contained in reports of National Weather Service. Elevation for October 1979 to September 1989 in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Oct. 15, 1912, nonrecording gage in vicinity of I Street Bridge. Oct. 15, 1912, to Nov. 16, 1956, water-stage recorder at various sites in vicinity of I Street Bridge. Prior to Nov. 16, 1956, datum of gages at low-water mark of Oct. 23, 1856, 0.12 ft above sea level.

REMARKS.--Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas. Floodflows bypass station through Yolo Bypass (see stations 11426000 and 11453000). See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD (since 1949).--Maximum elevation, 30.58 ft, Feb. 19, 1986; minimum elevation prior to October 1989 is unknown. Minimum elevation since October 1989, 0.67 ft, Nov. 15, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 25.54 ft, Feb. 22; minimum, 2.80 ft, Oct. 22.

GAGE HEIGHT, FEET, 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	7.35	6.83	4.12	3.09	4.59	3.42	8.55	7.30	18.91	18.79	21.15	20.86
2	7.42	6.76	4.01	3.04	4.59	3.59	8.43	8.05	18.79	18.43	20.86	20.68
3	7.11	6.46	4.11	3.15	4.60	3.55	8.05	7.57	18.43	17.86	20.68	20.55
4	6.79	6.02	4.15	3.14	4.68	3.59	7.57	7.01	19.22	17.79	20.63	20.48
5	6.52	5.96	4.36	3.11	4.69	3.48	7.02	6.46	24.19	19.22	20.57	20.41
6	6.39	5.76	4.34	3.33	4.76	3.50	6.55	5.97	25.17	24.19	20.41	20.21
7	6.11	5.37	4.35	3.22	4.82	3.68	6.21	5.61	25.46	25.16	20.21	19.97
8	5.60	4.84	4.57	3.24	4.74	3.65	6.03	5.43	25.24	23.99	19.97	19.74
9	5.18	4.17	4.88	3.53	4.62	3.63	5.83	5.20	23.99	23.16	19.74	19.52
10	4.78	3.81	4.61	3.69	4.86	3.59	5.62	4.99	23.16	22.40	19.52	19.36
11	5.10	3.61	4.39	3.40	5.95	4.09	5.32	4.70	22.40	21.58	19.46	19.34
12	4.91	3.57	4.29	3.28	7.60	5.64	5.24	4.49	21.58	21.10	20.04	19.39
13	4.43	3.31	4.23	3.21	9.59	7.05	5.31	4.57	21.10	21.04	20.05	19.88
14	4.45	3.18	4.12	3.11	12.04	9.59	5.37	4.49	21.06	20.84	19.89	19.62
15	4.53	3.37	4.20	3.25	12.44	12.04	5.46	4.41	20.84	20.71	19.63	19.42
16	4.54	3.23	4.14	3.23	12.32	11.84	6.56	4.55	20.87	20.63	19.43	19.25
17	3.98	2.92	4.04	3.07	13.17	12.32	7.56	5.79	21.22	20.87	19.25	18.96
18	3.89	2.91	4.29	3.21	13.19	12.94	10.82	7.56	21.63	21.22	18.96	18.40
19	3.90	2.93	4.46	3.38	12.94	11.83	11.69	10.82	23.57	21.63	18.40	17.54
20	4.06	3.05	4.61	3.49	11.83	10.59	12.59	11.68	24.93	23.57	17.54	16.61
21	4.06	3.17	4.89	3.61	10.59	9.71	13.62	12.59	25.49	24.87	16.61	15.66
22	3.98	2.80	4.83	3.68	9.71	8.93	14.29	13.62	25.54	25.41	15.66	14.62
23	4.21	2.93	4.87	3.58	8.97	8.19	14.46	14.28	25.41	24.68	14.62	13.28
24	4.34	3.02	4.73	3.57	8.36	7.53	14.45	14.14	24.69	24.22	13.28	12.17
25	4.44	3.06	4.86	3.38	7.73	7.00	14.64	14.17	24.22	23.59	12.17	11.30
26	4.41	3.05	4.70	3.51	7.27	6.62	14.71	14.64	23.59	22.80	11.30	10.37
27	4.49	2.98	4.31	3.14	6.89	6.34	15.33	14.64	22.80	22.11	10.37	9.89
28	4.61	3.06	4.11	3.05	6.64	5.93	16.24	15.33	22.11	21.51	10.02	9.53
29	4.60	3.21	3.98	3.01	6.30	5.51	17.20	16.24	21.51	21.15	9.62	9.37
30	4.44	3.28	4.26	3.16	6.33	5.62	18.39	17.20	---	---	9.72	9.37
31	4.46	3.37	---	---	7.32	5.76	18.91	18.39	---	---	9.65	9.39
MONTH	7.42	2.80	4.89	3.01	13.19	3.42	18.91	4.41	25.54	17.79	21.15	9.37

SACRAMENTO RIVER BASIN

11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

GAGE HEIGHT, FEET, 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	10.59	9.32	8.07	7.53	10.59	9.81	6.63	5.55	6.76	5.91	6.46	5.74
2	12.56	10.50	7.85	7.26	9.92	9.36	7.04	5.95	6.49	5.74	6.55	5.82
3	13.88	12.56	7.76	7.22	9.63	9.09	7.20	6.26	6.37	5.72	6.60	6.00
4	13.72	13.30	8.26	7.57	9.63	8.96	6.90	6.09	6.36	5.67	6.75	6.12
5	13.30	12.52	8.32	7.74	9.18	8.64	6.61	5.88	6.43	5.83	6.77	5.82
6	12.52	11.86	8.02	7.08	8.97	8.38	6.41	5.59	6.67	5.53	6.36	5.69
7	11.86	11.37	7.28	6.27	8.67	8.20	6.29	5.57	6.44	5.61	6.34	5.61
8	11.42	11.04	6.59	5.66	8.54	7.93	6.49	5.72	6.49	5.73	6.16	5.32
9	11.06	10.62	6.02	5.06	8.35	7.62	6.84	5.80	6.58	5.78	5.95	5.22
10	10.68	10.31	5.55	4.41	8.16	7.45	6.75	5.90	6.64	5.82	6.06	5.29
11	10.42	10.12	5.15	4.19	7.97	7.28	6.82	5.90	6.82	6.00	6.18	5.33
12	10.28	9.99	5.21	4.22	7.91	7.00	6.77	5.84	6.90	6.16	6.01	5.26
13	10.20	9.94	5.60	4.46	7.55	6.75	6.83	5.90	7.12	6.45	5.92	5.24
14	10.09	9.80	5.74	4.83	7.26	6.44	6.88	6.01	7.24	6.56	5.81	5.16
15	10.05	9.73	6.14	4.93	7.01	5.96	6.98	6.05	7.17	6.42	5.89	5.19
16	10.92	10.05	13.30	6.14	6.61	5.68	6.85	5.88	6.91	6.24	5.81	4.82
17	11.84	10.91	21.18	13.30	6.49	5.49	6.68	5.79	6.86	6.28	5.52	4.72
18	12.52	11.84	22.50	21.18	6.20	5.23	6.40	5.49	6.72	5.89	5.47	4.60
19	12.86	12.52	23.38	22.50	6.03	5.10	6.06	5.32	6.40	5.84	5.47	4.49
20	12.95	12.62	23.37	22.37	5.94	4.96	5.96	5.21	6.41	5.54	5.44	4.41
21	12.62	11.82	22.37	21.23	5.63	4.72	5.79	5.15	6.20	5.50	5.41	4.31
22	11.82	10.69	21.23	20.28	5.36	4.52	5.97	5.42	6.30	5.74	5.60	4.42
23	10.69	10.06	20.28	19.54	5.37	4.61	6.25	5.43	6.65	6.04	5.43	4.33
24	10.07	9.42	19.54	19.38	5.57	4.82	6.33	5.48	6.89	6.24	5.53	4.30
25	9.44	8.48	19.38	18.87	5.74	4.78	6.41	5.57	7.19	6.38	5.17	3.94
26	8.51	8.06	18.87	17.20	5.79	4.95	6.55	5.66	7.15	6.37	5.32	3.99
27	8.31	7.91	17.20	15.13	5.99	4.80	6.66	5.54	6.96	6.15	5.32	4.32
28	8.16	7.77	15.13	13.40	5.89	4.80	6.55	5.51	6.74	5.94	5.03	4.05
29	8.14	7.76	13.40	12.17	5.99	4.84	6.58	5.51	6.63	5.93	5.09	3.93
30	8.13	7.73	12.17	11.09	6.37	5.17	6.84	5.72	6.53	5.91	5.54	4.06
31	---	---	11.10	10.43	---	---	6.89	6.00	6.42	5.81	---	---
MONTH	13.72	7.73	23.38	4.19	10.59	4.52	7.20	5.15	7.24	5.50	6.77	3.93

SACRAMENTO RIVER BASIN

435

11447650 SACRAMENTO RIVER AT FREEPORT, CA

LOCATION.--Lat 38°27'15", long 121°29'54", in SW 1/4 SW 1/4 sec.13, T.7 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, on left bank 630 ft downstream from drawbridge at Freeport and 11 mi south of Sacramento.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1904 to July 1905 (gage heights only), June to November 1921, October 1948 to current year. Prior to October 1979, published as Sacramento River at Sacramento (station 11447500).

REVISED RECORD.--WDR CA-96-4: 1994-1995 (P).

GAGE.--Water-stage recorder and acoustic-velocity system. Datum of gage is sea level.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, return flow from irrigated areas, and tide. Floodflows bypass station through Sacramento Weir Spill to Yolo Bypass (stations 11426000 and 11453000). See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD (since 1949).--Maximum discharge, 117,000 ft³/s, Feb. 19, 1986, elevation, 25.00 ft; minimum daily, 3,970 ft³/s, Oct. 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known prior to Nov. 21, 1950, 103,000 ft³/s, Jan. 17, 1909, elevation, 29.6 ft, site then in use at present datum, from reports of California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 88,600 ft³/s, elevation, 19.52 ft, Feb. 7; maximum elevation, 20.06 ft, Feb. 23.

REVISIONS.--The maximum elevation for the water year 1995 has been revised to 21.61 ft, Mar. 11, 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	23600	12300	13000	27500	62900	70200	32900	26000	34700	20600	20800	20400
2	23500	11900	13200	28000	61800	69300	35000	24900	32600	21500	20600	20200
3	22700	11900	13200	26000	60700	69000	44200	24500	31400	21900	20600	20600
4	21700	11500	12900	23900	60700	68200	45300	25900	31300	22200	20800	21200
5	20400	11400	12400	22100	72700	68300	43500	26000	30000	22100	20500	21600
6	19600	12000	12800	20700	84400	68200	41200	24800	29500	21700	20700	21100
7	18000	12200	13200	19800	87900	67200	39300	22200	28800	20600	20300	20800
8	16200	12400	13300	19200	85100	66000	37500	20200	28200	20700	20600	19900
9	14500	12700	13500	18600	80600	65400	36700	18900	27600	21100	20900	19100
10	13200	13200	13300	18200	77900	64600	35500	17500	26900	21000	20800	18700
11	12400	13200	15000	17700	74100	64200	34800	16300	26100	20800	21100	18200
12	13000	13000	18000	17500	71300	65500	34600	16000	25200	20700	21800	18500
13	12400	13000	25700	17400	70300	66200	34400	16300	23800	20700	22700	18100
14	12000	12800	39400	16900	70000	65500	34100	16600	23200	20700	23200	18300
15	11700	13000	43100	16500	69100	64600	33300	17400	21700	20800	23200	17900
16	12400	13200	42100	16300	68700	63900	35200	24600	20000	20700	22300	18000
17	12000	12900	44800	20400	69900	63200	37500	63500	20100	20200	21900	17600
18	12000	12800	45600	30800	71400	61800	40300	73600	19800	20400	21400	17200
19	11700	13000	42900	37600	75200	59300	42500	77200	19700	20100	20700	16700
20	11500	13000	38600	41000	82100	56400	42800	77000	19000	19900	20600	16400
21	11400	13000	34500	44100	86200	53300	41100	73200	18600	19600	20400	16100
22	11200	13100	31300	47200	87800	49900	38200	69100	18300	20000	20900	16200
23	10900	13000	28800	48700	86800	46600	35300	65600	18300	20400	21600	15300
24	11000	12900	26400	47600	84000	42800	33700	64100	18500	20400	21800	14900
25	10800	12000	24500	47800	81800	39900	31400	63500	19000	20400	22000	14000
26	11100	12600	23100	49000	78900	37400	29000	59500	18500	20200	21700	14000
27	11100	12400	22500	49200	75700	34900	28400	53400	18800	20200	21700	14900
28	11200	12500	21700	52100	73300	33500	27600	47100	18200	20000	21500	14400
29	11400	12600	20400	55500	71600	32800	27400	42900	18500	19800	21500	13900
30	11600	12800	20300	59200	---	32700	26800	39200	19700	20600	21000	13800
31	12300	---	22200	62400	---	32500	---	36500	---	21200	20800	---
TOTAL	438500	378300	761700	1018900	2182900	1743300	1079500	1243500	706000	641200	660400	528000
MEAN	14150	12610	24570	32870	75270	56240	35980	40110	23530	20680	21300	17600
MAX	23600	13200	45600	62400	87900	70200	45300	77200	34700	22200	23200	21600
MIN	10800	11400	12400	16300	60700	32500	26800	16000	18200	19600	20300	13800
AC-FT	869800	750400	1511000	2021000	4330000	3458000	2141000	2466000	1400000	1272000	1310000	1047000

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, 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	12420	16440	25910	33980	39760	37530	29920	24920	17760	14450	14120	14700
MAX	28690	48820	74510	74830	79040	78290	76580	69820	48380	31000	25040	25060
(WY)	1963	1984	1984	1974	1983	1983	1982	1952	1983	1983	1983	1974
MIN	4494	6380	7208	8984	8003	6573	5961	6414	6865	6345	7061	6838
(WY)	1978	1993	1960	1991	1977	1977	1977	1992	1977	1949	1949	1977

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1949 - 1996
ANNUAL TOTAL	14520600	11382200	
ANNUAL MEAN	39780	31100	23410
HIGHEST ANNUAL MEAN			46900
LOWEST ANNUAL MEAN			7608
HIGHEST DAILY MEAN	99500	Mar 11	115000
LOWEST DAILY MEAN	10800	Oct 25	3970
ANNUAL SEVEN-DAY MINIMUM	11000	Oct 22	4060
INSTANTANEOUS PEAK FLOW			117000
INSTANTANEOUS PEAK STAGE			25.00
ANNUAL RUNOFF (AC-FT)	28800000	22580000	16960000
10 PERCENT EXCEEDS	77500	67500	54700
50 PERCENT EXCEEDS	33300	21600	15800
90 PERCENT EXCEEDS	12800	12800	8800

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL DATA: Water years 1959-95, February 1996 to September 1996.

BIOLOGICAL DATA: Water years 1974-81.

SPECIFIC CONDUCTANCE: Water years 1974-75, 1989-94, October 1995 to September 1996.

WATER TEMPERATURE: Water year 1960 to current year.

SEDIMENT DATA: Water year 1957 to current year (prior to water year 1980, published as 11447500 Sacramento River at Sacramento).

PERIOD OF DAILY RECORD.--

CHEMICAL DATA: June 1960 to June 1963.

SPECIFIC CONDUCTANCE: Water years 1974-75, 1989-94, October 1995 to September 1996.

WATER TEMPERATURE: June 1960 to current year.

SUSPENDED SEDIMENT: October 1956 to current year.

INSTRUMENTATION.--Temperature recorder June 1960 to November 1988. Water-quality monitor since November 1988.

REMARKS.--Records of sediment discharge from 1957 to 1979 were obtained at Sacramento and are considered equivalent. Additional specific-conductance and monthly chemical and trace-element data are available in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 318 microsiemens, Nov. 22, 1974; minimum recorded, 32 microsiemens, Apr. 6, 1974.

WATER TEMPERATURE: Maximum recorded, 27.0°C, Sept. 8, 1977; minimum recorded, 3.0°C, Dec. 25-27, 1990.

SEDIMENT CONCENTRATION: Maximum daily mean, 1,960 mg/L, Dec. 24, 1964; minimum daily, 2 mg/L, Jan. 27, 31, and Nov. 21, 1991.

SEDIMENT LOAD: Maximum daily, 525,000 tons, Dec. 24, 1964; minimum daily, 35 tons, Jan. 31, 1991.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 193 microsiemens, Jan. 18; minimum recorded, 53 microsiemens, May 19.

WATER TEMPERATURE: Maximum recorded, 23.5°C, July 30, 31, Aug. 1; minimum recorded, 8.0°C, Jan. 24, 25.

SEDIMENT CONCENTRATION: Maximum daily mean, 805 mg/L, Jan. 28, minimum daily mean, 6 mg/L, Nov. 9-11, 15.

SEDIMENT LOAD: Maximum daily, 119,000 tons, Jan. 29, 30; minimum daily, 210 tons, Nov. 9.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED OF (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
20...	1010	81100	101	7.4	11.0	755	10.6	97	8.8	4.1
MAR										
22...	1000	49500	133	7.8	13.5	761	10.2	98	12	5.9
APR										
01...	0930	32800	121	7.5	13.0	765	--	--	10	5.2
MAY										
13...	1400	15800	115	7.7	18.5	760	9.9	106	10	4.7
JUN										
10...	1100	28600	108	7.3	20.0	761	9.4	104	9.2	4.4
JUL										
17...	1100	22000	101	7.8	20.0	760	9.2	102	8.8	4.2
AUG										
16...	1100	23500	115	7.9	21.5	764	--	--	9.5	4.9
SEP										
24...	1130	19200	149	7.8	19.5	763	8.8	96	11	6.5

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT.DIS GRAN T. FIELD CAC03 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C 'DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
20...	5.6	23	1.0	46	3.1	3.4	<0.10	15	68	69
MAR										
22...	6.6	21	1.0	54	6.1	3.9	<0.10	17	87	87
APR										
01...	5.3	20	0.80	48	5.5	3.2	<0.10	18	78	81
MAY										
13...	5.6	21	0.80	45	5.0	3.6	<0.10	16	79	76
JUN										
10...	5.4	22	0.90	39	4.5	3.5	<0.10	16	73	73
JUL										
17...	4.9	21	1.0	146	3.0	2.3	<0.10	16	73	68
AUG										
16...	5.9	22	1.0	56	4.0	2.4	<0.10	16	88	75
SEP										
24...	8.6	25	1.1	62	6.0	5.9	<0.10	17	110	96

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

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

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 20...	0.09	<0.010	0.110	<0.015	<0.20	<0.20	0.060	0.010	0.020	10
MAR 22...	0.12	0.010	0.130	<0.015	0.20	<0.20	0.080	0.040	0.010	6.0
APR 01...	0.11	0.010	0.160	<0.015	<0.20	<0.20	0.040	0.020	0.010	8.0
MAY 13...	0.11	0.030	0.130	<0.015	0.30	<0.20	0.020	0.020	<0.010	7.0
JUN 10...	0.10	0.020	0.080	<0.015	0.20	<0.20	0.040	0.020	0.020	7.0
JUL 17...	0.10	<0.010	0.110	0.030	<0.20	<0.20	0.020	0.010	0.020	12
AUG 16...	0.12	0.010	0.070	0.030	<0.20	<0.20	0.020	<0.010	0.030	8.0
SEP 24...	0.15	0.020	0.140	<0.015	<0.20	<0.20	0.040	<0.010	0.030	5.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 20...	<1.0	<1	16	<1.0	<1.0	<1.0	<1.0	1.0	22	<1.0
MAR 22...	<1.0	1	21	<1.0	<1.0	<1.0	<1.0	1.0	14	<1.0
APR 01...	<1.0	<1	19	<1.0	<1.0	<1.0	<1.0	1.0	14	<1.0
MAY 13...	<1.0	<1	20	<1.0	<1.0	2.0	<1.0	1.0	13	<1.0
JUN 10...	<1.0	1	19	<1.0	<1.0	<1.0	<1.0	1.0	10	<1.0
JUL 17...	<1.0	1	17	<1.0	<1.0	<1.0	<1.0	<1.0	16	<1.0
AUG 16...	<1.0	<1	17	<1.0	<1.0	1.0	<1.0	1.0	14	<1.0
SEP 24...	<1.0	1	22	<1.0	<1.0	<1.0	<1.0	1.0	10	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)
FEB 20...	4.0	<1.0	<1.0	<1	<1.0	3.0	<1.0	2.8	0.50
MAR 22...	4.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.8	0.80
APR 01...	2.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	1.9	0.80
MAY 13...	4.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	1.4	0.20
JUN 10...	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.4	0.20
JUL 17...	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.3	0.30
AUG 16...	<1.0	<1.0	<1.0	<1	<1.0	1.0	<1.0	1.4	0.20
SEP 24...	2.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	1.5	0.60

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

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- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
JAN						
12...	1120	14400	10.0	41	1590	50
FEB						
20...N	1010	81100	11.0	57	12500	--
20...	1135	81400	11.0	107	23500	45
MAR						
22...N	1000	49500	13.5	68	9090	--
APR						
01...N	0930	32800	13.0	56	4960	--
01...	1420	33000	9.0	46	4100	86
MAY						
13...	1040	19600	18.5	37	1960	75
13...N	1400	15800	18.5	24	1020	--
21...	1308	73300	14.0	104	20600	50
JUN						
10...N	1100	28600	20.0	51	3940	--
25...	1112	19900	20.0	36	1930	87
JUL						
17...N	1100	22000	20.0	20	1190	--
AUG						
16...N	1100	23500	21.5	26	1650	--
SEP						
24...N	1130	19200	19.5	28	1450	--

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, 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
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	121	112	136	123	146	139	173	147	131	124	110	107
2	117	109	156	120	142	138	147	122	132	128	111	109
3	119	109	137	117	141	138	147	127	133	128	112	110
4	116	100	157	126	147	139	152	139	139	132	112	109
5	106	100	145	133	148	140	158	143	150	94	117	112
6	107	100	133	115	147	129	167	149	94	86	115	112
7	111	103	126	113	151	129	167	152	87	79	119	113
8	118	110	120	118	152	146	177	157	94	82	122	116
9	127	116	128	118	152	134	179	155	92	89	129	118
10	131	120	150	128	152	144	178	153	95	90	131	120
11	169	128	146	135	158	141	174	155	113	95	133	121
12	151	135	137	132	143	139	167	157	116	111	134	126
13	136	122	135	132	190	140	175	157	116	112	131	124
14	124	120	135	133	178	112	176	153	116	112	129	124
15	128	123	135	118	113	104	164	153	119	116	130	125
16	126	121	145	119	119	111	168	154	120	115	130	126
17	123	121	144	140	126	116	188	154	119	113	131	127
18	124	119	140	120	118	107	193	133	118	107	132	128
19	121	116	140	120	124	112	133	109	111	101	133	128
20	121	116	141	129	133	117	129	107	102	91	136	129
21	119	116	139	134	146	129	128	112	91	80	137	129
22	121	116	147	135	165	140	130	112	80	74	139	128
23	123	118	143	139	178	154	130	124	74	73	138	125
24	123	117	143	138	174	161	128	120	75	73	144	131
25	127	117	147	140	171	157	129	123	79	74	146	130
26	122	119	145	138	166	145	132	124	88	79	146	130
27	122	117	141	139	155	143	132	123	93	88	137	132
28	120	116	143	140	163	142	123	111	102	93	140	129
29	121	116	143	140	166	143	127	111	107	102	140	128
30	122	119	144	141	160	153	128	122	---	---	137	124
31	124	121	---	---	176	149	128	122	---	---	135	124
MONTH	169	100	157	113	190	104	193	107	150	73	146	107
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	133	119	115	105	100	89	111	98	123	116	162	154
2	151	116	112	105	102	90	123	101	126	116	163	154
3	133	106	113	106	104	90	126	108	120	108	164	155
4	130	109	114	103	104	89	115	103	122	110	159	148
5	130	113	113	102	99	90	110	102	122	109	163	153
6	128	111	113	102	99	89	109	99	117	106	167	154
7	131	116	117	108	104	92	106	94	123	110	170	156
8	131	115	118	107	108	96	102	94	127	114	172	161
9	129	115	120	108	127	98	102	93	129	113	173	159
10	126	116	120	108	127	103	105	94	125	115	179	163
11	127	114	118	110	116	102	103	94	129	118	177	165
12	131	115	120	111	106	98	104	95	131	119	185	162
13	129	114	120	112	105	97	105	96	132	115	183	165
14	124	113	118	110	109	101	104	97	126	114	188	167
15	125	114	113	106	111	102	108	100	123	112	189	169
16	123	110	107	102	113	107	111	101	127	113	192	168
17	117	105	103	61	120	110	109	99	129	113	184	165
18	109	100	61	58	120	111	107	99	129	117	181	164
19	104	96	65	53	124	114	108	100	130	120	178	164
20	108	99	72	65	127	119	108	98	133	120	177	161
21	115	105	80	72	131	121	110	95	135	119	180	162
22	117	106	84	79	132	121	108	98	142	127	173	159
23	114	106	86	80	129	116	112	104	146	133	173	152
24	114	105	83	77	125	115	116	104	146	133	166	151
25	119	109	85	81	124	111	116	103	146	131	169	151
26	124	112	93	84	120	109	117	109	143	132	167	152
27	123	115	98	92	119	104	121	110	146	136	159	144
28	123	109	98	92	113	103	121	112	148	138	160	143
29	117	106	100	91	112	100	126	115	157	146	153	143
30	117	108	99	89	113	98	129	118	164	150	155	143
31	---	---	101	91	---	---	123	114	162	149	---	---
MONTH	151	96	120	53	132	89	129	93	164	106	192	143

SACRAMENTO RIVER BASIN

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11447650 SACRAMENTO RIVER AT FREEPORT, 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	18.0	17.5	15.5	15.0	13.0	12.5	10.5	10.5	9.0	9.0	9.5	9.0
2	18.0	17.5	15.5	15.0	13.0	13.0	10.5	10.5	9.5	9.0	10.5	9.5
3	18.0	17.5	15.5	15.0	13.0	12.5	10.5	10.5	10.0	9.5	10.5	10.5
4	17.5	17.0	15.0	15.0	13.0	12.5	10.5	10.5	10.5	10.0	10.5	10.5
5	17.0	16.5	15.0	14.5	13.0	12.5	11.0	10.5	11.5	10.5	11.0	10.5
6	17.0	16.5	14.5	14.0	13.5	13.0	11.0	10.5	11.5	11.0	10.5	10.5
7	16.5	16.0	14.5	14.0	13.5	13.0	11.0	10.5	11.5	11.0	11.0	10.5
8	16.5	16.0	14.5	14.0	13.5	13.0	11.0	11.0	11.5	11.0	11.5	11.0
9	16.5	16.5	14.5	14.5	13.0	13.0	11.0	11.0	11.5	11.0	11.5	11.5
10	17.0	16.5	14.5	14.5	13.0	13.0	11.0	10.5	11.5	11.5	12.0	11.5
11	17.5	16.5	14.5	14.5	13.0	13.0	10.5	10.5	12.0	11.5	12.0	12.0
12	17.5	17.0	14.5	14.5	13.0	13.0	10.5	10.5	12.0	11.0	12.0	12.0
13	17.0	17.0	14.5	14.5	13.0	12.5	10.5	10.0	11.5	11.5	12.0	11.5
14	17.0	16.5	15.0	14.5	12.5	12.0	10.0	10.0	11.5	11.5	12.0	11.5
15	17.0	16.5	15.0	14.5	12.0	12.0	10.0	9.5	12.0	11.5	12.5	12.0
16	17.0	16.5	15.0	14.5	12.0	11.5	10.0	9.5	12.0	11.5	12.5	12.5
17	17.0	16.5	15.0	15.0	11.5	10.5	10.0	9.5	12.0	12.0	13.0	12.5
18	17.5	16.5	15.5	15.0	10.5	10.5	10.0	10.0	12.0	12.0	13.5	13.0
19	17.5	17.0	15.5	15.0	10.5	10.0	10.0	9.5	12.0	11.5	14.0	13.5
20	17.5	17.0	15.0	15.0	10.0	10.0	9.5	9.0	11.5	11.5	14.0	13.5
21	17.5	17.0	15.0	14.5	10.0	9.5	9.0	8.5	11.5	11.0	14.5	14.0
22	17.0	16.0	14.5	14.0	9.5	9.5	8.5	8.5	11.0	10.5	14.0	13.5
23	16.0	15.5	14.0	14.0	9.5	9.5	8.5	8.5	10.5	10.5	13.5	13.0
24	15.5	15.0	14.0	14.0	9.5	9.5	8.5	8.0	10.5	10.0	13.0	13.0
25	15.5	15.0	14.0	14.0	9.5	9.5	8.5	8.0	10.0	10.0	13.0	12.5
26	15.5	15.0	14.0	13.5	9.5	9.0	8.5	8.5	10.0	10.0	13.0	12.5
27	15.5	15.0	13.5	12.5	9.5	9.5	8.5	8.5	10.0	9.5	13.0	12.5
28	15.5	15.0	12.5	12.5	10.0	9.5	9.0	8.5	9.5	9.0	13.0	12.5
29	15.5	15.0	12.5	12.5	10.0	10.0	9.0	9.0	9.0	9.0	13.0	12.5
30	15.5	15.0	12.5	12.0	10.0	10.0	9.0	8.5	---	---	13.0	12.0
31	15.5	15.5	---	---	10.5	10.0	9.0	8.5	---	---	13.0	12.5
MONTH	18.0	15.0	15.5	12.0	13.5	9.0	11.0	8.0	12.0	9.0	14.5	9.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	12.5	17.5	16.5	18.0	17.5	21.5	20.5	23.5	22.0	21.5	21.0
2	13.0	12.5	17.5	17.0	18.5	18.0	22.0	21.0	22.5	21.5	21.5	20.5
3	13.0	12.5	18.0	17.0	19.0	18.5	22.0	21.0	22.5	21.5	21.5	20.5
4	13.5	13.0	17.0	16.5	19.5	18.5	22.0	21.0	22.0	21.0	21.0	20.0
5	14.0	13.0	16.5	16.0	19.5	19.0	21.5	20.5	22.0	21.0	20.5	19.5
6	14.5	14.0	16.5	16.0	20.0	19.5	21.5	20.5	21.0	20.0	20.0	19.0
7	15.0	14.5	16.5	16.0	20.0	19.5	22.0	21.0	21.5	20.5	20.0	19.0
8	15.5	14.5	17.0	16.0	20.0	19.5	22.0	21.0	22.0	20.5	20.0	19.5
9	15.5	15.0	17.0	16.0	20.5	19.5	22.0	20.5	22.0	21.0	20.5	19.5
10	15.5	14.5	17.5	16.0	20.5	20.0	22.0	21.0	22.5	21.0	20.5	20.0
11	15.0	14.5	18.0	16.5	20.0	19.5	22.0	21.5	22.5	21.5	20.5	20.0
12	15.0	14.5	19.0	17.5	20.0	19.5	22.0	21.0	22.5	22.0	20.0	20.0
13	15.0	14.5	19.5	18.5	20.0	19.5	22.0	21.0	22.5	21.5	20.0	19.5
14	14.5	14.0	19.5	18.5	20.0	19.5	22.0	21.0	22.5	21.5	19.5	19.5
15	14.5	14.0	19.0	18.0	20.5	19.5	22.0	21.0	22.5	21.5	19.5	19.0
16	14.0	14.0	18.0	16.5	20.0	19.5	21.5	21.0	22.5	21.5	19.5	18.5
17	14.0	13.0	16.5	13.0	20.0	19.5	21.5	20.5	22.0	21.0	19.0	18.5
18	13.0	12.5	13.0	12.5	20.0	19.5	21.5	20.5	21.5	20.5	19.0	18.5
19	13.0	12.5	13.5	12.5	20.5	19.5	21.5	20.5	21.5	20.5	19.0	18.5
20	12.5	12.0	14.0	13.5	20.0	19.5	22.0	20.5	20.5	19.5	19.0	18.5
21	12.5	12.0	14.5	14.0	20.0	19.5	22.5	21.0	20.5	19.5	19.5	19.0
22	13.0	12.5	14.5	14.0	20.0	19.5	22.0	21.0	21.0	20.0	19.5	19.0
23	13.5	13.0	15.0	14.5	20.5	19.5	22.0	21.0	21.0	20.0	19.5	19.5
24	14.0	13.5	15.0	14.5	20.5	20.0	22.5	21.0	21.0	20.5	20.0	19.5
25	15.0	14.0	15.0	14.5	20.0	19.5	22.0	21.0	21.0	20.5	20.0	19.5
26	15.5	15.0	16.0	15.0	19.5	19.0	22.0	21.0	20.5	20.0	20.0	19.5
27	16.0	15.5	16.5	16.0	19.0	19.0	22.0	21.0	20.5	20.0	20.0	19.5
28	16.0	15.5	17.0	16.5	19.5	18.5	22.5	21.0	20.5	20.0	19.5	19.5
29	16.0	15.5	17.0	17.0	20.0	19.0	23.0	22.0	21.0	20.0	20.0	19.5
30	16.5	16.0	17.5	17.0	20.5	20.0	23.5	22.0	21.5	20.5	20.0	19.5
31	---	---	18.0	17.0	---	---	23.5	22.5	21.5	21.0	---	---
MONTH	16.5	12.0	19.5	12.5	20.5	17.5	23.5	20.5	23.5	19.5	21.5	18.5

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, 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	23600	20	1250	12300	9	301	13000	12	414
2	23500	16	995	11900	8	258	13200	16	582
3	22700	13	769	11900	7	231	13200	22	794
4	21700	11	620	11500	7	226	12900	25	865
5	20400	13	696	11400	8	235	12400	26	868
6	19600	16	842	12000	8	255	12800	27	917
7	18000	20	988	12200	7	241	13200	25	882
8	16200	22	974	12400	7	224	13300	23	819
9	14500	24	939	12700	6	210	13500	22	797
10	13200	25	900	13200	6	214	13300	27	960
11	12400	22	727	13200	6	217	15000	34	1380
12	13000	18	624	13000	7	253	18000	43	2100
13	12400	15	489	13000	9	300	25700	55	3820
14	12000	13	415	12800	7	257	39400	70	7490
15	11700	11	362	13000	6	221	43100	90	10500
16	12400	10	347	13200	7	252	42100	114	13000
17	12000	11	363	12900	8	291	44800	129	15700
18	12000	13	419	12800	10	336	45600	126	15600
19	11700	15	463	13000	10	351	42900	124	14400
20	11500	15	456	13000	10	351	38600	118	12300
21	11400	14	442	13000	10	356	34500	110	10300
22	11200	14	425	13100	11	387	31300	103	8700
23	10900	14	412	13000	12	418	28800	96	7490
24	11000	14	416	12900	13	447	26400	90	6420
25	10800	14	399	12000	13	421	24500	84	5570
26	11100	12	346	12600	13	442	23100	79	4910
27	11100	10	286	12400	13	430	22500	74	4480
28	11200	8	249	12500	12	392	21700	69	4040
29	11400	9	265	12600	10	352	20400	64	3550
30	11600	9	289	12800	9	325	20300	60	3300
31	12300	10	325	---	---	---	22200	56	3380
TOTAL	438500	---	17472	378300	---	9194	761700	---	166328
JANUARY			FEBRUARY			MARCH			
1	27500	53	3910	62900	427	72500	70200	104	19700
2	28000	49	3730	61800	224	37400	69300	98	18300
3	26000	46	3240	60700	120	19700	69000	93	17300
4	23900	43	2780	60700	106	17500	68200	96	17700
5	22100	40	2410	72700	116	22700	68300	102	18900
6	20700	38	2110	84400	125	28600	68200	109	20100
7	19800	35	1880	87900	137	32500	67200	117	21200
8	19200	33	1710	85100	165	38000	66000	124	22100
9	18600	31	1550	80600	205	44700	65400	126	22200
10	18200	29	1420	77900	252	53000	64600	125	21900
11	17700	29	1380	74100	251	50200	64200	125	21700
12	17500	36	1680	71300	230	44200	65500	124	22000
13	17400	24	1140	70300	211	40000	66200	125	22300
14	16900	21	969	70000	192	36400	65500	142	25100
15	16500	20	875	69100	167	31200	64600	169	29400
16	16300	19	842	68700	143	26500	63900	200	34600
17	20400	30	1660	69900	122	22900	63200	238	40600
18	30800	53	4380	71400	104	20000	61800	281	46900
19	37600	91	9220	75200	88	17900	59300	303	48600
20	41000	129	14300	82100	81	18000	56400	318	48500
21	44100	171	20300	86200	94	21900	53300	334	48100
22	47200	226	28800	87800	110	26100	49900	351	47200
23	48700	299	39300	86800	128	30100	46600	366	46100
24	47600	396	50900	84000	132	29900	42800	357	41300
25	47800	521	67300	81800	129	28500	39900	339	36500
26	49000	620	82000	78900	126	26900	37400	321	32400
27	49200	709	94100	75700	123	25200	34900	304	28700
28	52100	805	113000	73300	117	23200	33500	285	25800
29	55500	794	119000	71600	110	21400	32800	205	18200
30	59200	743	119000	---	---	---	32700	132	11700
31	62400	682	115000	---	---	---	32500	85	7480
TOTAL	1018900	---	909886	2182900	---	907100	1743300	---	882580

SACRAMENTO RIVER BASIN

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11447650 SACRAMENTO RIVER AT FREEPORT, 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	32900	59	5280	26000	111	7760	34700	109	10200
2	35000	79	7480	24900	126	8440	32600	102	8980
3	44200	119	14200	24500	142	9410	31400	95	8090
4	45300	179	21900	25900	152	10600	31300	89	7550
5	43500	266	31200	26000	158	11100	30000	85	6910
6	41200	327	36300	24800	165	11100	29500	82	6530
7	39300	375	39800	22200	171	10300	28800	79	6130
8	37500	432	43700	20200	161	8790	28200	76	5770
9	36700	493	48800	18900	146	7460	27600	73	5430
10	35500	479	45900	17500	132	6260	26900	70	5090
11	34800	433	40600	16300	117	5150	26100	67	4750
12	34600	391	36500	16000	70	3010	25200	65	4410
13	34400	354	32900	16300	44	1930	23800	62	4000
14	34100	340	31300	16600	69	3100	23200	60	3750
15	33300	335	30100	17400	118	5540	21700	58	3380
16	35200	329	31300	24600	159	10600	20000	55	2990
17	37500	324	32800	63500	185	31700	20100	53	2890
18	40300	320	34800	73600	177	35200	19800	51	2740
19	42500	332	38100	77200	149	31100	19700	49	2620
20	42800	351	40600	77000	109	22700	19000	47	2430
21	41100	359	39800	73200	96	19100	18600	46	2290
22	38200	263	27200	69100	135	25300	18300	44	2160
23	35300	177	16900	65600	172	30400	18300	42	2080
24	33700	119	10800	64100	183	31600	18500	40	2020
25	31400	81	6870	63500	184	31500	19000	36	1840
26	29000	75	5860	59500	185	29700	18500	32	1610
27	28400	79	6030	53400	184	26600	18800	31	1600
28	27600	83	6170	47100	168	21300	18200	31	1510
29	27400	87	6470	42900	149	17300	18500	30	1500
30	26800	97	7050	39200	132	14000	19700	29	1560
31	---	---	---	36500	118	11600	---	---	---
TOTAL	1079500	---	776710	1243500	---	499650	706000	---	122810
JULY			AUGUST			SEPTEMBER			
1	20600	29	1600	20800	23	1280	20400	27	1480
2	21500	28	1630	20600	23	1280	20200	27	1460
3	21900	27	1620	20600	23	1290	20600	27	1500
4	22200	27	1610	20800	23	1320	21200	27	1540
5	22100	26	1570	20500	24	1310	21600	27	1580
6	21700	26	1500	20700	24	1330	21100	27	1540
7	20600	25	1390	20300	24	1320	20800	27	1520
8	20700	25	1370	20600	24	1350	19900	27	1460
9	21100	24	1370	20900	24	1380	19100	27	1400
10	21000	23	1330	20800	25	1390	18700	27	1380
11	20800	23	1290	21100	25	1420	18200	27	1340
12	20700	22	1250	21800	25	1480	18500	27	1370
13	20700	22	1220	22700	25	1550	18100	27	1340
14	20700	21	1190	23200	26	1600	18300	27	1360
15	20800	21	1170	23200	26	1620	17900	28	1330
16	20700	20	1140	22300	26	1560	18000	28	1340
17	20200	20	1090	21900	26	1540	17600	28	1310
18	20400	20	1110	21400	26	1510	17200	28	1290
19	20100	20	1100	20700	26	1460	16700	28	1250
20	19900	21	1100	20600	26	1460	16400	28	1230
21	19600	21	1100	20400	26	1450	16100	28	1210
22	20000	21	1130	20900	26	1480	16200	28	1220
23	20400	21	1160	21600	26	1540	15300	28	1150
24	20400	21	1170	21800	26	1550	14900	28	1130
25	20400	21	1180	22000	26	1570	14000	28	1060
26	20200	22	1180	21700	26	1550	14000	28	1060
27	20200	22	1190	21700	27	1560	14900	28	1130
28	20000	22	1190	21500	27	1540	14400	28	1090
29	19800	22	1190	21500	27	1550	13900	28	1050
30	20600	22	1250	21000	27	1510	13800	28	1040
31	21200	23	1290	20800	27	1500	---	---	---
TOTAL	641200	---	39680	660400	---	45250	528000	---	39160
YEAR	11382200		4415820						

SACRAMENTO RIVER BASIN

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA

LOCATION.--Lat 38°55'39", long 122°50'33", in SE 1/4 SE 1/4 sec.34, T.13 N., R.9 W., Lake County, Hydrologic Unit 18020116, on left bank 1.6 mi downstream from Widow Creek and 3.5 mi south of Kelseyville.

DRAINAGE AREA.--36.6 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1285: 1947-48(M), 1950-52(P). WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,475.44 ft above sea level. Prior to July 16, 1955, at site 600 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some minor diversions upstream from station. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,600 ft³/s, March 9, 1995, gage height, 13.80 ft; minimum daily, 0.13 ft³/s, Sept. 6-11, 1992.

EXTREMES FOR 1995 WATER YEAR (NOT PREVIOUSLY PUBLISHED).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	2215	6,740	12.71	Mar. 9	0915	8,600	13.80
Jan. 13	1945	3,810	10.54				

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0630	4,610	11.21	Feb. 4	unknown	2,950	9.72

REVISIONS.--The peak discharges reported for water years 1956-65, 1967-68, 1970-71, 1973-74, 1983-84, 1988, 1991 and 1993 have been revised as shown in the following table. They supersede figures published in WSP 1565, WSP 1635, WSP 1645, WSP 1715 and the reports for 1961-65, 1967-68, 1970-71, 1973-74, 1983-84, 1988, 1991, and 1993.

Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)
1956	Dec. 19, 1955	6,140	12.32
	Dec. 21, 1955	6,800	12.80
	Jan. 7, 1956	3,380	10.15
	Feb. 21, 1956	5,060	11.56
1957	Feb. 24, 1957	4,580	11.19
1958	Feb. 24, 1958	6,380	12.48
	Mar. 20, 1958	4,200	10.88
	Mar. 29, 1958	3,220	9.99
	Apr. 2, 1958	3,650	10.40
1959	Feb. 17, 1959	3,350	10.12
1960	Feb. 8, 1960	4,370	11.02
1961	Dec. 1, 1960	4,210	10.89
1962	Feb. 14, 1962	3,250	10.02
1963	Oct. 12, 1962	5,150	11.63
1964	Jan. 20, 1964	4,280	10.95
1965	Dec. 22, 1964	6,860	12.85
	Jan. 5, 1965	8,020	13.48
1967	Jan. 21, 1967	6,600	12.62
1968	Jan. 29, 1968	5,840	12.12
1970	Jan. 16, 1970	3,620	10.37
	Jan. 23, 1970	7,270	13.04
1971	Dec. 3, 1970	3,400	10.17
1973	Jan. 16, 1973	5,520	11.90
1974	Jan. 16, 1974	7,270	13.04
1983	Jan. 26, 1983	7,730	13.31
1984	Nov. 10, 1983	4,180	10.86
1986	Feb. 14, 1986	6,350	12.46
1991	Mar. 4, 1991	4,730	11.31
1993	Jan. 20, 1993	4,410	11.05

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA--(Continued)

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES (NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	2.7	9.3	25	251	37	136	638	35	18	7.9	e5.7
2	.82	3.0	8.2	32	210	55	124	275	34	17	7.6	e5.7
3	.80	3.1	23	34	179	108	113	199	34	17	7.3	e5.7
4	1.0	3.2	35	346	159	68	104	163	33	17	7.4	e5.6
5	2.2	4.5	34	258	141	54	98	141	32	15	7.3	e5.6
6	2.0	4.7	27	199	128	45	176	126	32	15	7.1	e5.6
7	1.7	4.7	20	2150	117	39	302	113	31	15	7.1	e5.5
8	1.5	4.7	16	4870	109	315	215	103	31	14	7.1	e5.5
9	1.4	28	14	4280	97	4460	168	96	30	14	6.9	e5.5
10	1.3	27	13	2450	90	2400	143	88	29	14	6.9	e5.4
11	1.4	10	13	1730	85	1430	128	81	29	15	7.0	e5.4
12	1.4	6.4	22	985	79	704	120	81	28	15	6.9	e5.3
13	1.4	5.1	25	2000	85	737	214	112	28	15	6.8	e5.3
14	1.6	4.5	29	1770	82	1090	135	86	29	13	6.7	e5.2
15	1.7	17	34	765	71	703	128	104	34	12	6.5	e5.2
16	1.6	18	34	461	66	450	132	85	32	12	6.5	e5.1
17	1.7	9.7	31	325	57	339	114	76	30	11	6.4	e5.1
18	1.8	7.1	26	252	59	293	105	69	30	12	6.3	e5.0
19	1.8	5.9	22	207	55	243	97	64	28	12	6.2	e5.0
20	1.9	5.4	19	187	54	816	94	60	27	12	6.1	e5.1
21	2.0	5.2	17	212	51	485	83	57	25	11	6.1	e5.1
22	2.0	4.9	15	712	48	1170	76	55	24	11	6.0	e5.1
23	2.0	4.6	14	806	46	701	71	51	23	11	5.9	e5.0
24	2.1	4.8	26	722	43	473	66	49	22	11	5.9	e5.0
25	2.2	31	29	437	41	352	62	46	21	11	6.0	e5.0
26	2.2	33	21	559	40	282	59	44	20	10	5.8	e5.0
27	2.3	22	20	522	39	239	64	42	19	9.6	5.7	e5.1
28	2.6	20	34	444	38	208	63	40	19	8.7	5.7	e5.1
29	2.7	14	30	345	---	182	167	38	18	8.5	e5.7	e5.2
30	2.5	11	24	411	---	162	120	36	18	8.4	e5.7	e5.3
31	2.6	---	22	311	---	148	---	35	---	8.0	e5.7	---
TOTAL	55.01	325.2	706.5	28807	2520	18788	3677	3253	825	393.2	202.2	158.4
MEAN	1.77	10.8	22.8	929	90.0	606	123	105	27.5	12.7	6.52	5.28
MAX	2.7	33	35	4870	251	4460	302	638	35	18	7.9	5.7
MIN	.79	2.7	8.2	25	38	37	59	35	18	8.0	5.7	5.0
AC-FT	109	645	1400	57140	5000	37270	7290	6450	1640	780	401	314

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1995, BY WATER YEAR (WY)

MEAN	11.7	46.4	124	204	200	154	78.3	30.0	12.3	5.48	3.42	3.67
MAX	154	334	688	929	919	640	429	163	31.8	15.4	8.92	16.3
(WY)	1963	1974	1956	1995	1986	1983	1982	1983	1983	1983	1983	1957
MIN	1.22	3.55	4.19	4.83	8.97	11.4	5.67	6.12	1.98	.46	.20	.16
(WY)	1992	1991	1991	1991	1977	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1947 - 1995

ANNUAL TOTAL	7037.21	59710.51	
ANNUAL MEAN	19.3	164	72.2
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			4.78
HIGHEST DAILY MEAN	486	Feb 17	6020
LOWEST DAILY MEAN	.32	Aug 21	.13
ANNUAL SEVEN-DAY MINIMUM	.32	Aug 19	.13
INSTANTANEOUS PEAK FLOW			8600
INSTANTANEOUS PEAK STAGE			13.80
ANNUAL RUNOFF (AC-FT)	13960	118400	52290
10 PERCENT EXCEEDS	35	331	148
50 PERCENT EXCEEDS	8.3	27	12
90 PERCENT EXCEEDS	.42	4.5	2.4

e Estimated

SACRAMENTO RIVER BASIN

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA--(Continued)

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	5.4	7.4	8.4	65	e206	e229	297	33	30	13	5.2	4.8
2	5.5	7.4	9.2	50	e156	e174	142	32	28	12	5.2	4.8
3	5.5	7.6	9.0	40	e139	e142	96	30	27	11	5.2	4.8
4	5.5	7.6	9.9	35	e1870	e266	77	27	26	11	5.2	4.8
5	5.5	7.9	9.5	30	e703	e378	67	26	25	11	5.2	4.9
6	5.5	e8.0	9.8	27	e342	e320	60	25	23	10	5.2	4.9
7	5.5	e8.1	11	24	e237	e293	56	24	22	9.4	5.2	4.9
8	5.5	e8.1	9.7	22	e181	190	52	23	21	9.3	5.2	4.8
9	5.6	e8.0	9.0	21	e143	170	48	22	20	8.4	5.1	4.8
10	5.6	e7.9	11	19	e115	152	46	21	20	8.1	5.0	4.8
11	5.7	e7.7	36	15	e97	231	44	20	20	7.8	4.9	4.8
12	5.7	7.6	1600	15	e82	310	41	20	19	7.5	4.9	4.9
13	5.8	7.2	261	16	e71	211	40	18	18	7.3	4.9	5.0
14	5.8	7.2	129	14	e63	171	38	19	17	7.1	4.8	5.1
15	5.9	7.2	598	20	e64	147	37	22	17	6.9	4.8	5.1
16	5.9	7.4	153	514	e86	130	60	55	17	6.8	4.8	5.2
17	6.0	7.4	87	210	e82	115	114	262	17	6.7	4.8	5.1
18	6.1	7.5	66	350	e160	104	151	235	16	6.6	4.9	5.1
19	6.1	7.5	50	261	e424	93	93	117	16	6.5	5.0	5.0
20	6.1	7.6	40	285	e390	84	82	82	16	6.4	5.0	5.0
21	6.2	7.8	34	358	e624	77	68	83	16	6.2	5.0	5.0
22	6.2	7.9	33	193	e354	71	61	82	16	6.0	5.0	5.0
23	6.2	7.9	30	146	e236	67	54	61	15	5.9	4.9	5.0
24	6.2	7.8	26	628	e196	62	59	53	15	5.9	4.9	5.0
25	6.5	7.7	23	510	e157	58	51	48	16	5.7	4.9	5.0
26	7.4	8.1	21	251	e129	55	46	44	17	5.6	4.9	5.0
27	7.4	8.3	20	778	e125	54	43	41	17	5.6	4.9	4.9
28	7.3	8.3	21	360	e176	55	39	38	17	5.5	5.0	5.0
29	7.3	8.3	110	244	e372	49	37	36	15	5.4	4.9	5.0
30	7.3	8.4	206	e186	---	46	35	34	14	5.3	4.9	5.0
31	7.3	---	98	e302	---	46	---	32	---	5.3	4.8	---
TOTAL	189.5	232.8	3738.5	5989	7980	4550	2134	1665	573	235.2	154.6	148.5
MEAN	6.11	7.76	121	193	275	147	71.1	53.7	19.1	7.59	4.99	4.95
MAX	7.4	8.4	1600	778	1870	378	297	262	30	13	5.2	5.2
MIN	5.4	7.2	8.4	14	63	46	35	18	14	5.3	4.8	4.8
AC-FT	376	462	7420	11880	15830	9020	4230	3300	1140	467	307	295

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1996, BY WATER YEAR (WY)

MEAN	11.6	45.6	124	203	202	154	78.1	30.5	12.4	5.53	3.45	3.70
MAX	154	334	688	929	919	640	429	163	31.8	15.4	8.92	16.3
(WY)	1963	1974	1956	1995	1986	1983	1982	1983	1983	1983	1983	1957
MIN	1.22	3.55	4.19	4.83	8.97	11.4	5.67	6.12	1.98	.46	.20	.16
(WY)	1992	1991	1991	1991	1977	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1947 - 1996		
ANNUAL TOTAL	62784.6			27590.1					
ANNUAL MEAN	172			75.4			72.2		
HIGHEST ANNUAL MEAN							206		
LOWEST ANNUAL MEAN							4.78		
HIGHEST DAILY MEAN	4870			1870			6020		
LOWEST DAILY MEAN	5.0			4.8			.13		
ANNUAL SEVEN-DAY MINIMUM	5.0			4.8			.13		
INSTANTANEOUS PEAK FLOW				4610			8600		
INSTANTANEOUS PEAK STAGE				11.21			13.80		
ANNUAL RUNOFF (AC-FT)	124500			54720			52340		
10 PERCENT EXCEEDS	345			210			149		
50 PERCENT EXCEEDS	28			17			12		
90 PERCENT EXCEEDS	5.6			5.0			2.5		

e Estimated

SACRAMENTO RIVER BASIN

447

11450000 CLEAR LAKE AT LAKEPORT, CA

LOCATION.--Lat 39°02'21", long 122°54'44", in NE 1/4 NE 1/4 sec.25, T.14 N., R.10 W., Lake County, Hydrologic Unit 18020116, in concrete block building at 410 Esplanade Street in Lakeport.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--1874-1900 (incomplete), January 1913 to April 1982, October 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,318.26 ft above sea level (California State Land Commission Benchmark). Prior to July 8, 1947, nonrecording gage, and July 8, 1947, to Mar. 17, 1949, at municipal wharf at foot of Third Street in Lakeport at datum 0.33 ft higher. Mar. 18, 1949, to Sept. 30, 1967, at private pier at foot of Fourth Street at datum 0.33 ft higher. Gage relocated at same datum, Apr. 20, 1982, and published as "at Clearlake" for 1982-84.

REMARKS.--This natural lake is regulated by gates on a dam at outlet, completed in 1915. Capacity between gage heights 0.00 and 7.56 ft, limits stipulated by court decree of 1920, about 319,000 acre-ft. Water is released down natural channel of Cache Creek (station 11451000), from which it is diverted for irrigation. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 11.34 ft, Feb. 21, 1986, minimum observed, -3.50 ft, Sept. 24-27, 1920.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 4, 1983, reached a stage of 11.24 ft, present datum, from floodmarks.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.48	2.86	2.73	4.04	6.19	7.82	7.70	7.48	7.05	5.72	4.25	3.29
2	3.46	2.85	2.71	4.08	6.19	7.82	7.69	7.45	7.03	5.68	4.18	3.26
3	3.42	2.85	2.71	4.08	6.18	7.80	7.63	7.42	7.02	5.61	4.13	3.23
4	3.39	2.83	2.75	4.11	6.46	7.83	7.59	7.40	6.99	5.57	4.10	3.16
5	3.36	2.82	2.75	4.13	6.81	7.98	7.58	7.37	6.96	5.54	4.06	3.16
6	3.32	2.81	2.75	4.13	6.93	8.04	7.59	7.34	6.92	5.50	4.04	3.13
7	3.29	2.81	2.77	4.14	6.96	8.04	7.60	7.30	6.87	5.45	4.02	3.12
8	3.27	2.80	2.77	4.15	6.94	8.00	7.60	7.27	6.82	5.41	3.99	3.10
9	3.24	2.79	2.78	4.17	6.90	7.95	7.59	7.24	6.75	5.37	3.97	3.08
10	3.22	2.81	2.77	4.19	6.85	7.88	7.57	7.21	6.69	5.32	3.94	3.07
11	3.19	2.80	2.85	4.18	6.79	7.86	7.57	7.19	6.65	5.27	3.90	3.04
12	3.20	2.79	3.19	4.17	6.74	7.88	7.54	7.15	6.61	5.22	3.87	3.01
13	3.16	2.80	3.40	4.17	6.67	7.83	7.56	7.12	6.56	5.19	3.84	2.97
14	3.12	2.78	3.45	4.18	6.61	7.77	7.55	7.09	6.51	5.13	3.79	2.96
15	3.09	2.78	3.51	4.21	6.60	7.70	7.56	7.07	6.46	5.08	3.75	2.91
16	3.06	2.77	3.58	4.36	6.64	7.63	7.55	7.14	6.40	5.02	3.72	2.91
17	3.04	2.76	3.60	4.51	6.64	7.55	7.59	7.15	6.33	4.94	3.67	2.89
18	3.02	2.76	3.62	4.62	6.65	7.48	7.64	7.19	6.28	4.88	3.63	2.89
19	3.00	2.76	3.60	4.81	6.85	7.47	7.64	7.21	6.23	4.84	3.60	2.88
20	2.98	2.77	3.59	4.91	7.10	7.49	7.65	7.21	6.17	4.80	3.56	2.87
21	2.95	2.74	3.59	5.02	7.42	7.50	7.65	7.21	6.13	4.76	3.54	2.84
22	2.94	2.74	3.61	5.06	7.61	7.46	7.65	7.21	6.08	4.72	3.52	2.83
23	2.93	2.74	3.60	5.10	7.66	7.51	7.63	7.22	6.01	4.66	3.50	2.82
24	2.92	2.74	3.60	5.21	7.68	7.52	7.60	7.22	5.94	4.62	3.48	2.81
25	2.91	2.71	3.60	5.47	7.66	7.54	7.57	7.22	5.92	4.57	3.44	2.80
26	2.90	2.72	3.60	5.61	7.62	7.55	7.56	7.20	5.88	4.54	3.40	2.79
27	2.90	2.72	3.61	5.84	7.58	7.56	7.55	7.18	5.84	4.49	3.38	2.78
28	2.89	2.71	3.62	5.99	7.56	7.56	7.54	7.15	5.80	4.46	3.36	2.77
29	2.88	2.70	3.71	6.06	7.76	7.60	7.52	7.13	5.77	4.41	3.35	2.76
30	2.87	2.71	3.90	6.13	---	7.61	7.51	7.09	5.74	4.37	3.32	2.74
31	2.86	---	3.98	6.19	---	7.63	---	7.07	---	4.32	3.30	---
MEAN	3.11	2.77	3.30	4.74	6.97	7.71	7.59	7.22	6.41	5.01	3.73	2.96
MAX	3.48	2.86	3.98	6.19	7.76	8.04	7.70	7.48	7.05	5.72	4.25	3.29
MIN	2.86	2.70	2.71	4.04	6.18	7.46	7.51	7.07	5.74	4.32	3.30	2.74

CAL YR 1995 MEAN 5.89 MAX 10.71 MIN 1.18
WTR YR 1996 MEAN 5.12 MAX 8.04 MIN 2.70

SACRAMENTO RIVER BASIN

11451000 CACHE CREEK NEAR LOWER LAKE, CA

LOCATION.--Lat 38°55'27", long 122°33'53", in sec.6, T.12 N., R.6 W., Lake County, Hydrologic Unit 18020116, on left bank 500 ft downstream from Clear Lake Dam, 1.9 mi downstream from Copsey Creek, and 2.5 mi northeast of Lower Lake.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder and rain gage (station 385525122335501). Datum of gage is 1,279.64 ft above sea level. Prior to Oct. 2, 1987, at datum 1.00 ft higher.

REMARKS.--Records poor. Flow completely regulated by Clear Lake (station 11450000) 500 ft upstream. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s, Feb. 24, 1958, gage height, 10.40 ft, present datum; maximum gage height, 10.54 ft, Mar. 9, 1995; no flow Nov. 8-20, 1977, Apr. 5, 6, 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	335	e40	1.4	e1.8	e1780	e2930	e883	478	637	477	583	102
2	335	e2.0	1.4	e1.7	e1780	e2930	e1820	564	e394	544	413	114
3	344	e2.0	1.4	e1.5	e1780	e2930	e2300	607	e320	637	261	129
4	332	e2.0	1.3	e1.5	e2700	e3250	e994	650	e495	650	247	131
5	319	e2.0	1.4	e1.5	e3080	e3630	e416	656	e706	613	235	126
6	317	e2.0	1.1	e1.5	e2520	e3160	e20	656	e700	594	233	113
7	294	e2.0	1.1	e1.5	e2470	e3060	e20	656	e710	629	267	100
8	275	e2.0	1.1	e1.5	e2470	e3160	e115	657	e726	648	300	99
9	271	e1.9	1.2	.84	e2430	e3160	e192	686	e717	612	311	86
10	284	e1.8	1.6	.84	e2430	e3160	e200	738	e702	626	310	74
11	295	e1.7	54	.83	e2280	e3160	e200	743	e695	634	354	70
12	266	e1.6	e1600	.83	e2280	e3340	e200	740	e697	613	353	61
13	254	e1.5	e1400	.83	e2190	e3250	e200	744	e718	596	399	54
14	316	e1.4	e500	49	e1690	e2930	e175	754	e744	601	423	50
15	306	e1.5	e500	404	e871	e2930	e150	657	e750	671	294	53
16	274	e1.6	e495	750	e871	e2790	e150	253	e755	693	296	48
17	247	e1.7	e500	e743	e1420	e2790	498	244	e725	681	256	46
18	246	e1.8	e505	e1190	e1960	e600	565	240	e671	661	199	44
19	244	e1.9	e495	e1320	e2690	e272	587	242	e624	661	192	42
20	244	e1.9	e500	e1320	e3160	e51	595	243	e552	672	197	42
21	106	e1.9	e168	e1320	e3160	e6.0	594	242	e563	657	198	43
22	e2.0	e1.9	e2.0	e1320	e2980	e5.8	903	246	e560	619	185	41
23	e2.0	e1.9	e2.0	e1320	e2890	e5.8	1070	244	e548	623	174	41
24	e2.0	e1.8	e1.9	e1320	e2890	e5.7	1070	278	e548	645	172	40
25	e2.0	e1.8	e1.9	e1450	e2790	e5.7	744	366	e539	631	155	41
26	e2.0	e1.8	e1.8	e1570	e2790	e5.7	586	470	e555	615	143	39
27	e2.0	e1.8	e1.8	e1960	e2690	e5.6	586	514	e589	600	139	47
28	e2.0	e1.8	e1.7	e1730	e2900	e5.5	585	499	590	616	130	39
29	e2.0	e1.9	e1.8	e1690	e3440	e5.4	520	552	514	641	111	39
30	e2.0	e1.9	e1.9	e1730	---	e5.5	450	598	461	654	106	166
31	e2.0	---	e1.9	e2430	---	e5.5	---	592	---	634	108	---
TOTAL	5924.0	92.8	6748.7	23632.67	69382	53545.2	17388	15809	18505	19448	7744	2120
MEAN	191	3.09	218	762	2392	1727	580	510	617	627	250	70.7
MAX	344	40	1600	2430	3440	3630	2300	754	755	693	583	166
MIN	2.0	1.4	1.1	.83	871	5.4	20	240	320	477	106	39
AC-FT	11750	184	13390	46880	137600	106200	34490	31360	36700	38580	15360	4210
a	0	0	11.56	5.87	9.58	2.31	2.53	1.89	0.04	0	0	0

e Estimated.

a Precipitation, in inches.

SACRAMENTO RIVER BASIN

449

11451000 CACHE CREEK NEAR LOWER LAKE, 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	27.7	16.8	114	593	756	778	548	312	366	392	311	161
MAX	191	683	2584	2915	3604	4919	3538	951	642	627	500	325
(WY)	1996	1984	1984	1965	1958	1983	1958	1983	1946	1996	1946	1995
MIN	.40	.17	.14	.18	.17	.32	.42	.40	.29	.41	.71	.55
(WY)	1978	1978	1991	1991	1991	1955	1990	1990	1991	1977	1977	1977

SUMMARY STATISTICS	FOR 1985 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1945 - 1996		
ANNUAL TOTAL	365704.63			240339.37					
ANNUAL MEAN	1002			657			363		
HIGHEST ANNUAL MEAN							1342		
LOWEST ANNUAL MEAN							.67		
HIGHEST DAILY MEAN	4680			3630			5280		
LOWEST DAILY MEAN	.96			.83			.00		
ANNUAL SEVEN-DAY MINIMUM	1.2			1.0			.00		
INSTANTANEOUS PEAK FLOW				4570			8000		
INSTANTANEOUS PEAK STAGE				9.44			10.54		
ANNUAL RUNOFF (AC-FT)	725400			476700			262700		
10 PERCENT EXCEEDS	3310			2340			604		
50 PERCENT EXCEEDS	386			333			49		
90 PERCENT EXCEEDS	1.9			1.8			1.0		

11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, CA

LOCATION.--Lat 39°09'56", long 122°37'08", in SE 1/4 NW 1/4 sec.10, T.15 N., R.7 W., Lake County, Hydrologic Unit 18020116, on right bank 0.5 mi upstream from Spanish Creek, 0.9 mi upstream from Hough Springs, and 10 mi northeast of Clearlake Oaks.

DRAINAGE AREA.--60.2 mi².

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,534.13 ft above sea level. Prior to Jan. 13, 1980, at datum 2.0 ft higher. Recording rain gage (station 391056122420801) 4.7 mi northwest of gage. Elevation of rain gage is 2,050 ft above sea level, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s, Feb. 17, 1986, gage height, 12.84 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement at gage height 11.23 ft; no flow at times in 1972, 1976-77, 1987-88, 1990-92, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s, or maximum.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0730	2,880	8.34	Feb. 4	1330	2,710	8.43
Dec. 15	0645	1,640	7.32	Feb. 21	0530	3,160	8.78
Jan. 16	1345	2,040	7.75	Mar. 5	0230	2,300	8.01
Jan. 24	2215	2,650	8.34				

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	.86	1.6	2.4	109	465	611	246	62	49	21	2.4	2.2
2	.78	1.6	2.6	71	379	534	189	59	44	19	2.1	2.2
3	.78	1.6	2.7	57	333	504	137	56	39	18	2.1	2.4
4	.71	1.6	4.1	48	1830	1220	115	54	45	17	2.1	2.5
5	.65	1.6	3.4	41	1560	1680	101	51	48	13	2.1	2.6
6	.73	1.7	3.1	36	791	909	92	50	45	12	1.9	2.9
7	.81	1.6	3.3	32	550	658	87	46	43	12	1.9	2.9
8	.82	1.6	3.2	30	427	531	79	44	41	11	1.7	2.8
9	.92	1.6	3.1	29	345	451	72	42	39	10	1.5	2.8
10	1.0	1.6	3.9	28	283	403	68	40	37	9.8	1.5	2.7
11	1.0	1.7	3.0	25	228	483	64	38	36	9.4	1.4	2.7
12	.95	1.8	1180	23	194	519	61	36	33	8.7	1.3	2.9
13	.97	1.8	230	22	169	440	59	34	27	8.1	1.3	3.2
14	1.0	1.8	86	21	152	368	57	35	22	7.8	1.2	3.6
15	1.1	1.8	765	35	144	318	72	38	21	7.3	1.3	4.0
16	1.2	1.8	170	823	187	280	147	93	20	7.0	1.4	3.8
17	1.2	1.8	80	418	203	246	169	185	19	6.5	1.3	3.8
18	1.2	1.9	56	765	515	225	230	232	18	6.8	1.4	3.4
19	1.2	1.9	41	782	1500	203	189	157	17	6.5	2.1	3.1
20	1.2	1.9	37	648	1460	182	181	112	16	6.1	2.1	3.2
21	1.2	1.9	30	792	2200	168	159	140	15	5.8	2.3	3.1
22	e1.2	1.9	31	420	1080	155	142	176	14	5.3	2.4	3.1
23	1.2	2.1	28	332	712	141	127	130	13	5.0	2.2	3.1
24	1.2	2.1	25	992	633	131	141	107	16	5.3	2.3	3.1
25	1.3	2.1	22	1230	494	120	128	88	19	4.6	2.1	3.1
26	1.4	2.1	19	574	401	110	115	77	20	4.2	2.1	3.1
27	1.5	2.1	18	1230	346	109	107	69	21	4.1	2.1	3.0
28	1.5	2.2	21	819	348	116	98	63	21	3.8	2.3	3.2
29	1.5	2.2	170	555	744	98	89	58	24	3.6	2.3	3.3
30	1.5	2.2	354	483	---	90	67	54	23	2.8	2.0	3.3
31	1.5	---	174	609	---	85	---	52	---	2.6	2.0	---
TOTAL	34.08	55.2	3598.8	12079	18673	12088	3588	2478	845	264.1	58.2	91.1
MEAN	1.10	1.84	116	390	644	390	120	79.9	28.2	8.52	1.88	3.04
MAX	1.5	2.2	1180	1230	2200	1680	246	232	49	21	2.4	4.0
MIN	.65	1.6	2.4	21	144	85	57	34	13	2.6	1.2	2.2
AC-FT	68	109	7140	23960	37040	23980	7120	4920	1680	524	115	181
a	0.00	0.00	11.53	11.51	0.01	2.12	3.80	3.86	0.00	0.00	0.00	0.00

e Estimated.

a Precipitation, in inches.

SACRAMENTO RIVER BASIN

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11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, 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	2.76	55.0	118	288	304	291	117	45.0	13.3	3.75	1.12	.93
MAX	12.4	405	698	1750	1287	1258	631	242	39.4	12.7	5.87	4.09
(WY)	1980	1982	1984	1995	1986	1995	1982	1995	1995	1983	1983	1983
MIN	.19	1.11	1.17	4.74	9.59	9.88	5.13	3.93	1.69	.19	.000	.000
(WY)	1992	1977	1977	1991	1991	1977	1977	1977	1977	1977	1977	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1972 - 1996			
ANNUAL TOTAL	124193.17				53852.48							
ANNUAL MEAN	340				147				102			
HIGHEST ANNUAL MEAN									335			
LOWEST ANNUAL MEAN									3.67			
HIGHEST DAILY MEAN	6140				2200				8340			
LOWEST DAILY MEAN	.58				.65				.00			
ANNUAL SEVEN-DAY MINIMUM	.61				.75				.00			
INSTANTANEOUS PEAK FLOW					3160				10800			
INSTANTANEOUS PEAK STAGE					8.78				12.84			
ANNUAL RUNOFF (AC-FT)	246300				106800				74250			
10 PERCENT EXCEEDS	1220				486				248			
50 PERCENT EXCEEDS	32				22				10			
90 PERCENT EXCEEDS	1.2				1.5				.42			

SACRAMENTO RIVER BASIN

11451300 NORTH FORK CACHE CREEK NEAR CLEARLAKE OAKS, CA

LOCATION.--Lat 39°04'50", long 122°32'07", in SE 1/4 SW 1/4 sec.4, T.14 N., R.6 W., Lake County, Hydrologic Unit 18020116, on right bank 2,500 ft downstream from Indian Valley Dam and 8 mi northeast of Clearlake Oaks.

DRAINAGE AREA.--121 mi².

PERIOD OF RECORD.--October 1983 to September 1985 (operated as a low-flow station only), October 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,320 ft above sea level, from topographic map. Recording rain gage (station 390500122321601) located on top of Indian Valley Dam.

REMARKS.--Records fair except for period of estimated discharge, which is poor. Flow completely regulated by Indian Valley Reservoir, capacity 300,000 acre-ft. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,390 ft³/s, Mar. 12, 1986, gage height, 9.80 ft; minimum daily, 0.37 ft³/s, Oct. 15, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 26, 1983, reached a stage of 12.74 ft, present datum, discharge about 9,500 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	10	8.0	2.4	7.0	1450	1150	e9.7	9.9	16	132	130	357
2	9.8	8.0	2.3	8.9	1420	1130	e9.7	10	286	124	272	357
3	9.8	7.8	2.4	8.9	1380	1100	e9.6	10	300	149	357	356
4	9.6	8.0	2.4	9.3	748	1080	e9.6	11	149	138	357	356
5	9.2	7.8	6.7	11	824	1090	e9.8	11	10	132	357	357
6	9.7	8.2	9.6	9.4	1550	1080	e9.7	11	9.9	132	356	362
7	9.7	8.3	9.6	9.2	1540	1060	e9.6	11	9.9	132	356	362
8	9.3	8.0	9.6	9.3	1520	1040	e9.7	11	9.8	134	356	362
9	9.0	8.0	9.6	9.3	1480	1030	e9.7	11	9.7	134	358	361
10	33	8.0	9.6	8.8	1450	644	e9.7	11	9.6	134	321	361
11	30	8.0	10	8.0	1400	43	e9.7	11	9.7	134	314	362
12	9.5	7.5	14	8.3	1370	11	e9.7	11	9.7	134	373	359
13	8.8	7.1	13	8.6	676	e9.6	e9.7	13	9.8	134	296	359
14	8.3	7.5	13	9.6	76	e10	e9.7	17	9.9	134	291	359
15	7.5	7.4	15	9.3	9.9	e10	9.9	12	9.6	134	363	359
16	7.0	7.4	15	140	9.3	e9.9	10	13	9.7	134	362	359
17	6.4	7.3	15	312	8.0	e9.9	11	17	9.8	134	361	359
18	14	7.2	15	560	8.3	e9.8	11	23	9.9	134	360	359
19	15	6.9	15	587	9.6	e10	11	29	65	131	359	359
20	16	6.9	16	583	347	e9.7	11	51	130	130	359	359
21	16	6.8	16	470	1690	e9.8	11	51	132	130	359	358
22	14	6.6	16	420	1900	e9.8	13	53	130	131	359	359
23	9.3	6.6	15	638	1710	e9.7	11	54	128	132	361	357
24	10	6.6	14	796	1350	e9.9	11	53	128	132	359	356
25	10	7.3	11	819	1310	e10	11	51	131	138	359	357
26	13	7.8	4.3	962	1270	e10	11	52	117	135	359	356
27	9.1	7.7	4.5	1530	1230	e10	12	53	132	136	358	356
28	8.3	7.9	4.9	1520	1190	e9.8	10	23	130	136	358	345
29	8.1	7.1	5.7	1510	1170	e9.8	9.6	16	130	136	359	291
30	8.0	2.4	5.9	1500	---	e9.8	9.6	16	132	136	358	123
31	8.1	---	6.2	1480	---	e9.8	---	15	---	134	356	---
TOTAL	355.5	220.1	308.7	13961.9	30096.1	10645.3	308.7	740.9	2373.0	4150	10603	10442
MEAN	11.5	7.34	9.96	450	1038	343	10.3	23.9	79.1	134	342	348
MAX	33	8.3	16	1530	1900	1150	13	54	300	149	373	362
MIN	6.4	2.4	2.3	7.0	8.0	9.6	9.6	9.9	9.6	124	130	123
AC-FT	705	437	612	27690	59700	21110	612	1470	4710	8230	21030	20710
a	0	0	6.46	9.31	4.32	1.28	1.90	1.59	0.13	0	0	0

e Estimated.

a Precipitation, in inches.

11451300 NORTH FORK CACHE CREEK NEAR CLEARLAKE OAKS, 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	10.3	9.31	11.8	49.6	167	145	172	207	219	182	127	70.3
MAX	17.3	12.0	28.3	450	1038	849	557	717	576	370	342	348
(WY)	1995	1987	1987	1996	1996	1986	1987	1987	1987	1988	1996	1996
MIN	6.65	6.96	7.21	7.02	4.62	1.90	8.26	6.98	8.10	8.16	8.17	9.10
(WY)	1994	1995	1994	1994	1994	1994	1993	1993	1993	1993	1990	1990

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1986 - 1996			
ANNUAL TOTAL	34383.44				84205.2				114			
ANNUAL MEAN	94.2				230				230			
HIGHEST ANNUAL MEAN									8.54			
LOWEST ANNUAL MEAN									4970			
HIGHEST DAILY MEAN	652				1900				Mar 11 1986			
LOWEST DAILY MEAN	.44				2.3				.37			
ANNUAL SEVEN-DAY MINIMUM	3.7				3.7				1.8			
INSTANTANEOUS PEAK FLOW					2100				5390			
INSTANTANEOUS PEAK STAGE					6.97				9.80			
ANNUAL RUNOFF (AC-FT)	68200				167000				82370			
10 PERCENT EXCEEDS	242				803				363			
50 PERCENT EXCEEDS	14				15				11			
90 PERCENT EXCEEDS	7.1				8.0				7.1			

SACRAMENTO RIVER BASIN

11451800 CACHE CREEK AT RUMSEY, CA

LOCATION.--Lat 38°53'26", long°122 14'14", in Canada de Capay Grant, Yolo County, Hydrologic Unit 18020110, midstream on Arbuckle Bridge at Rumsey.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--December 1975 to September 1976, February 1996 to September 1996.

CHEMICAL DATA: February 1996 to September 1996.

SEDIMENT DATA: December 1975 to September 1976, February 1996 to September 1996.

REMARKS.--Records of sediment discharge from December 1975 to September 1976 were obtained from the California Department of Water Resources; sediment data was discontinued in September 1976. DWR has provided discharge data from December 1975 to current year. This station replaced former station 11451760 (Cache Creek above Rumsey) in September 1976 and was reestablished February 1996 for NAWQA water-quality and sediment sampling purposes.

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)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
FEB										
09...	1150	4120	297	8.0	11.0	752	11.2	103	21	18
MAR										
07...	1340	5090	297	8.3	11.0	760	11.5	105	22	19
APR										
25...	1230	1040	344	8.3	16.5	762	10.2	104	23	20
MAY										
29...	1100	505	367	8.3	21.5	752	10.2	117	24	22
JUN										
26...	1200	692	300	8.4	22.0	749	9.4	110	21	17
JUL										
09...	1230	756	304	8.4	27.0	748	8.7	111	20	16
AUG										
28...	1230	511	263	8.2	22.0	765	10.0	114	18	16
SEP										
17...	1230	418	257	8.3	17.5	754	10.4	110	17	16

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT.DIS GRAN T. FIELD CACO3 (MG/L)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB										
09...	13	18	1.8	120	12	11	0.10	11	168	170
MAR										
07...	14	18	1.7	130	14	8.8	0.10	11	175	173
APR										
25...	18	22	2.1	150	18	13	0.10	5.4	192	190
MAY										
29...	22	24	2.3	150	17	16	0.10	5.6	208	203
JUN										
26...	15	21	2.0	120	11	11	0.10	7.1	172	165
JUL										
09...	13	19	2.0	95	8.9	9.5	0.10	8.9	168	158
AUG										
28...	11	18	1.3	110	7.0	9.5	0.20	11	134	146
SEP										
17...	12	19	1.1	100	6.8	10	0.10	11	145	143

SACRAMENTO RIVER BASIN

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11451800 CACHE CREEK AT RUMSEY, CA--Continued

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

DATE	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)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
FEB 09...	0.23	0.010	0.110	0.030	0.40	<0.20	0.120	<0.010	<0.010	9.0
MAR 07...	0.24	<0.010	0.070	<0.015	0.50	0.20	0.220	<0.010	0.010	8.0
APR 25...	0.26	<0.010	<0.050	<0.015	0.40	0.30	0.020	<0.010	<0.010	5.0
MAY 29...	0.28	<0.010	<0.050	0.020	0.50	0.30	0.060	0.020	<0.010	6.0
JUN 26...	0.23	<0.010	<0.050	<0.015	0.60	0.20	0.070	<0.010	<0.010	6.0
JUL 09...	0.23	0.030	0.190	0.060	2.0	0.50	<0.010	<0.010	<0.010	7.0
AUG 28...	0.18	0.030	0.260	<0.015	0.40	0.30	0.030	0.030	0.030	4.0
SEP 17...	0.20	<0.010	0.070	<0.015	<0.20	<0.20	0.020	0.040	0.030	4.0

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB 09...	<1.0	<1	53	<1.0	<1.0	4.0	<1.0	<1.0	3.0	<1.0
MAR 07...	<1.0	<1	53	<1.0	<1.0	2.0	<1.0	<1.0	<3.0	<1.0
APR 25...	<1.0	<1	75	<1.0	<1.0	2.0	<1.0	2.0	12	<1.0
MAY 29...	<1.0	<1	81	<1.0	<1.0	<1.0	<1.0	<1.0	14	<1.0
JUN 26...	<1.0	1	70	<1.0	<1.0	1.0	<1.0	<1.0	12	<1.0
JUL 09...	<1.0	2	69	<1.0	<1.0	1.0	<1.0	<1.0	10	<1.0
AUG 28...	<1.0	2	49	<1.0	<1.0	<1.0	<1.0	<1.0	10	<1.0
SEP 17...	<1.0	1	42	<1.0	<1.0	<1.0	<1.0	1.0	6.0	<1.0

DATE	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)	ZINC, DIS- SOLVED (UG/L AS ZN)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
FEB 09...	3.0	<1.0	3.0	<1	<1.0	<1.0	<1.0	4.2	0.30
MAR 07...	2.0	<1.0	2.0	<1	<1.0	<1.0	<1.0	3.5	0.60
APR 25...	1.0	<1.0	2.0	<1	<1.0	1.0	<1.0	3.1	1.0
MAY 29...	3.0	<1.0	2.0	<1	<1.0	<1.0	<1.0	3.1	0.40
JUN 26...	<1.0	<1.0	1.0	<1	<1.0	1.0	<1.0	3.2	0.30
JUL 09...	1.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	3.9	2.8
AUG 28...	3.0	<1.0	2.0	<1	<1.0	<1.0	<1.0	2.7	1.3
SEP 17...	3.0	<1.0	1.0	<1	<1.0	<1.0	<1.0	2.4	0.40

SACRAMENTO RIVER BASIN

11451800 CACHE CREEK AT RUMSEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB					
09...N	1150	4120	11.0	311	3460
MAR					
07...N	1340	5090	11.0	333	4580
APR					
25...N	1230	1040	16.5	51	143
MAY					
29...N	1100	505	21.5	29	40
JUN					
26...N	1200	692	22.0	30	56
JUL					
09...N	1230	756	27.0	32	65
AUG					
28...N	1230	511	22.0	14	19
SEP					
17...N	1230	418	17.5	10	11

SACRAMENTO RIVER BASIN

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11452500 CACHE CREEK AT YOLO, CA

LOCATION.--Lat 38°43'38", long 121°48'22", in Rio Jesus Maria Grant, Yolo County, Hydrologic Unit 18020129, on left bank 35 ft upstream from Interstate 5 highway bridge, 0.5 mi south of Yolo, and 7.3 mi downstream from Moore Dam.

DRAINAGE AREA.--1,139 mi².

PERIOD OF RECORD.--January 1903 to current year. Records for water year 1903 incomplete; yearly estimate published in WSP 1315-A.

WATER TEMPERATURE: Water years 1959-65, November 1966 to February 1967.

SEDIMENT DATA: Water years 1959-65, November 1966 to February 1967 (daily record), 1986 (periodic record).

REVISED RECORDS.--WSP 1315-A: 1914(M). WSP 1345: 1906. WSP 1445: 1955. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. See WSP 2131 for history of changes prior to Apr. 25, 1969. Apr. 25, 1969 to July 1976, at site 765 ft upstream at same datum.

REMARKS.--Records good. Some regulation by Clear Lake (station 11450000) beginning in 1915 and Indian Valley Reservoir beginning in 1974, capacity, 300,000 acre-ft. Diversions for irrigation of about 30,000 acres between Capay and Yolo, from data furnished by Clear Lake Water Co. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,400 ft³/s, Feb. 25, 1958, gage height, 85.35 ft, present datum; maximum stage observed, 86.4 ft (corrected), present datum, Mar. 10, 1904; 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	70	17	6.0	148	4820	5790	549	125	73	29	41	56
2	74	15	6.0	110	3910	4980	2320	91	66	27	30	65
3	76	14	6.2	94	3670	4700	2060	91	70	42	33	69
4	83	13	7.0	84	10300	4990	2110	91	60	39	42	78
5	96	13	7.1	77	11400	7500	1050	79	62	43	43	74
6	99	12	7.0	72	5600	5650	549	92	66	40	44	74
7	101	9.8	8.1	71	4770	5090	306	81	46	34	44	72
8	100	9.0	8.4	69	4380	4840	251	75	42	29	35	75
9	91	8.6	7.9	67	4160	4670	258	65	74	51	32	79
10	85	7.8	9.1	63	3990	4540	336	65	75	38	29	80
11	84	7.1	32	63	3850	4100	267	66	57	27	45	75
12	84	7.6	2000	63	3700	5710	223	70	55	29	44	87
13	86	7.4	2860	63	3600	4660	246	74	44	32	52	75
14	76	6.5	686	61	2940	3680	237	70	39	23	72	84
15	79	6.2	663	62	1860	3470	223	82	38	33	70	88
16	87	5.7	885	88	1530	3340	232	358	47	37	59	90
17	94	5.6	436	2360	1470	3190	244	169	45	70	65	84
18	93	5.6	378	1640	2110	3030	360	180	48	88	83	84
19	90	6.1	355	3590	3530	1490	646	196	47	84	83	86
20	87	6.1	335	2490	5170	968	602	108	35	46	77	85
21	88	6.1	324	2770	9620	744	558	92	27	58	77	86
22	92	5.4	252	2340	7300	589	521	86	47	66	72	86
23	112	5.1	129	2200	5860	519	777	87	59	57	75	86
24	67	6.0	102	2420	5120	478	797	69	66	39	73	86
25	48	6.4	91	4360	4770	445	779	72	50	32	73	88
26	39	6.2	81	3290	4550	415	448	76	50	41	90	88
27	32	6.0	75	5310	4480	392	305	75	67	61	86	85
28	27	5.6	70	5370	4480	348	290	93	59	44	86	92
29	25	5.4	69	4010	7430	303	280	83	73	36	81	99
30	21	5.6	69	3730	---	273	228	72	64	28	67	107
31	19	---	201	6020	---	246	---	69	---	38	63	---
TOTAL	2305	240.9	10165.8	53155	140370	91140	18052	3102	1651	1341	1866	2463
MEAN	74.4	8.03	328	1715	4840	2940	602	100	55.0	43.3	60.2	82.1
MAX	112	17	2860	6020	11400	7500	2320	358	75	88	90	107
MIN	19	5.1	6.0	61	1470	246	223	65	27	23	29	56
AC-FT	4570	478	20160	105400	278400	180800	35810	6150	3270	2660	3700	4890

SACRAMENTO RIVER BASIN

11452500 CACHE CREEK AT YOLO, 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	11.4	61.5	432	1352	1905	1494	875	197	59.6	25.5	10.7	5.95
MAX	335	1593	5644	7446	9262	10930	6353	1655	784	421	189	82.1
(WY)	1963	1984	1984	1914	1958	1983	1958	1904	1906	1907	1907	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1904	1906	1906	1920	1920	1920	1924	1919	1913	1912	1910	1903

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1903 - 1996

ANNUAL TOTAL	626684.48			325851.7					
ANNUAL MEAN	1717			890			528		
HIGHEST ANNUAL MEAN							2449		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	27800			Jan 9			11400		
LOWEST DAILY MEAN	.02			Jan 1			Feb 5		
ANNUAL SEVEN-DAY MINIMUM	5.7			Nov 17			5.1		
INSTANTANEOUS PEAK FLOW							Nov 23		
ANNUAL RUNOFF (AC-FT)	1243000			646300			5.7		
10 PERCENT EXCEEDS	5930			3930			Nov 17		
50 PERCENT EXCEEDS	84			82			Feb 4		
90 PERCENT EXCEEDS	9.5			13			Feb 4		
							73.05		
							Feb 4		
							41400		
							86.40		
							Mar 10		
							382300		
							1350		
							.42		
							.00		

11453000 YOLO BYPASS NEAR WOODLAND, CA

LOCATION.--Lat 38°40'40", long 121°38'35", unsurveyed, Yolo County, Hydrologic Unit 18020109, on left bank 300 ft upstream from Sacramento and Woodland Railroad Bridge, 6 mi upstream from Sacramento Bypass, 6 mi downstream from Fremont Weir, and 7 mi east of Woodland.

PERIOD OF RECORD.--October 1939 to current year (since October 1977, high-flow records only). Monthly discharge only for some periods, published in WSP 1315-A.

SEDIMENT DATA: Water years 1957-61, 1980.

REVISED RECORDS.--WDR CA-96-4: 1995(M).

GAGE.--Water-stage recorder. Datum of gage is 3.41 ft below sea level. Prior to Dec. 17, 1941, nonrecording gage, and Dec. 18-31, 1941, water-stage recorder, at datum 0.73 ft higher. Prior to Sept. 30, 1977, a supplementary water-stage recorder 6 mi downstream at different datum recorded low flow.

REMARKS.--Flow is from Cache Creek and Knights Landing Ridge Cut plus floodwater passing over Fremont Weir. Beginning October 1977, only flows above 1,000 ft³/s are computed. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 374,000 ft³/s, Feb. 20, 1986, gage height, 34.87 ft; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,400 ft³/s, Feb. 24, gage height, 27.96 ft.

REVISIONS.--The maximum discharge for water year 1995 has been revised to 210,000 ft³/s, Mar. 13, 1995, gage height, 30.94 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	---	---	---	---	9240	36900	---	---	---	---	---	---
2	---	---	---	---	8630	34800	1720	---	---	---	---	---
3	---	---	---	---	7180	33400	2250	---	---	---	---	---
4	---	---	---	---	8040	30700	3330	---	---	---	---	---
5	---	---	---	---	21300	31300	2680	---	---	---	---	---
6	---	---	---	---	43000	30600	2140	---	---	---	---	---
7	---	---	---	---	51800	28000	1600	---	---	---	---	---
8	---	---	---	---	49800	24600	1400	---	---	---	---	---
9	---	---	---	---	39600	20500	1300	---	---	---	---	---
10	---	---	---	---	30800	16400	1200	---	---	---	---	---
11	---	---	---	---	22300	12600	1100	---	---	---	---	---
12	---	---	---	---	17900	12400	1000	---	---	---	---	---
13	---	---	2280	---	16000	20100	---	---	---	---	---	---
14	---	---	3580	---	13800	19500	---	---	---	---	---	---
15	---	---	3760	---	10900	16400	---	---	---	---	---	---
16	---	---	3860	---	8710	12300	---	---	---	---	---	---
17	---	---	3830	---	8660	7980	---	---	---	---	---	---
18	---	---	3670	1630	11900	5690	---	2130	---	---	---	---
19	---	---	3290	3190	21100	4330	---	2680	---	---	---	---
20	---	---	2800	4730	35000	3060	---	7310	---	---	---	---
21	---	---	2150	4910	56200	2290	---	7840	---	---	---	---
22	---	---	1380	5040	85100	1910	1040	4440	---	---	---	---
23	---	---	---	4510	92800	1650	1000	2580	---	---	---	---
24	---	---	---	4460	90100	1410	---	1750	---	---	---	---
25	---	---	---	4930	78300	1330	---	1140	---	---	---	---
26	---	---	---	5350	64400	1230	---	---	---	---	---	---
27	---	---	---	5160	53800	1170	---	---	---	---	---	---
28	---	---	---	7310	42700	1130	---	---	---	---	---	---
29	---	---	---	6840	39300	1090	---	---	---	---	---	---
30	---	---	---	6240	---	1020	---	---	---	---	---	---
31	---	---	---	6870	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	1038360	---	---	---	---	---	---	---
MEAN	---	---	---	---	35810	---	---	---	---	---	---	---
MAX	---	---	---	---	92800	---	---	---	---	---	---	---
MIN	---	---	---	---	7180	---	---	---	---	---	---	---
AC-FT	---	---	---	---	2060000	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1977, BY WATER YEAR (WY)

	441	738	5638	13230	11240	3398	3849	430	144	20.7	26.1	51.0
MEAN	441	738	5638	13230	11240	3398	3849	430	144	20.7	26.1	51.0
MAX	13420	10890	48790	86470	92890	27910	37310	4546	1420	107	84.9	155
(WY)	1963	1951	1956	1970	1958	1958	1958	1952	1967	1958	1958	1954
MIN	1.01	2.19	.92	2.43	.88	3.55	.083	.55	.53	.000	.000	.63
(WY)	1977	1960	1977	1977	1977	1977	1976	1977	1977	1966	1966	1977

SUMMARY STATISTICS

WATER YEARS 1946 - 1977

ANNUAL MEAN	3230	
HIGHEST ANNUAL MEAN	13020	1958
LOWEST ANNUAL MEAN	1.53	1977
HIGHEST DAILY MEAN	259000	Dec 25 1964
LOWEST DAILY MEAN	.00	Jul 11 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 19 1963
INSTANTANEOUS PEAK FLOW	265000	Dec 25 1964
INSTANTANEOUS PEAK STAGE	32.48	Dec 25 1964
ANNUAL RUNOFF (AC-FT)	2340000	
10 PERCENT EXCEEDS	3080	
50 PERCENT EXCEEDS	35	
90 PERCENT EXCEEDS	1.9	

SACRAMENTO RIVER BASIN

11453900 LAKE BERRYESSA NEAR WINTERS, CA

LOCATION.--Lat 38°30'48", long 122°06'13", in SE 1/4 NW 1/4 sec.29, T.8 N., R.2 W., Napa County, Hydrologic Unit 18020117, near center of Monticello Dam on Putah Creek, 7.4 mi west of Winters.
DRAINAGE AREA.--566 mi².

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

REVISED RECORDS.--WSP 1735: 1958-60. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by concrete arch-gravity dam completed November 1956. Usable capacity, 1,592,000 acre-ft between elevations 253.25 ft, invert of outlet valves, and 440 ft crest of glory-hole spillway. Dead storage, 10,340 acre-ft. Water is released down Putah Creek and is diverted into Putah South Diversion Canal for irrigation of about 46,000 acres in the lower Sacramento Valley. Total diverted during current year was 188,700 acre-ft, provided by U.S. Bureau of Reclamation. Releases for irrigation began in May 1959. Records, including extremes, show total contents at 2400 hours. See schematic diagram of lower Sacramento River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,733,500 acre-ft, Mar. 2, 1983, elevation, 446.67 ft; minimum since irrigation pool first filled, 422,130 acre-ft, Dec. 1, 1992, elevation, 361.73 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,632,900 acre-ft, Mar. 12, elevation, 441.58 ft; minimum, 1,283,100 acre-ft, Dec. 9, elevation, 422.70 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation in 1956)

360	404,550	390	765,730	420	1,236,000
370	511,760	400	911,200	430	1,414,200
380	632,360	410	1,068,100	450	1,799,900

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	1318100	1295200	1285000	1342900	1448200	1623200	1615800	1598000	1590200	1548100	1495800	1445500
2	1317000	1295100	1284500	1342900	1451400	1622000	1616800	1596900	1589600	1546500	1493700	1444400
3	1316000	1294900	1284300	1343100	1454400	1620800	1615000	1595900	1589000	1545200	1491800	1443300
4	1314900	1294700	1284300	1343100	1498400	1625900	1613900	1594800	1587300	1542900	1490100	1442000
5	1314000	1294200	1284300	1343100	1515100	1630200	1612700	1593600	1586700	1541200	1488100	1440500
6	1313100	1293700	1284100	1343500	1521700	1629000	1611600	1592500	1585300	1539900	1486200	1439400
7	1311900	1293300	1284000	1343500	1525700	1627300	1611000	1591300	1584200	1538200	1484500	1438300
8	1311000	1292900	1283400	1343500	1528500	1625700	1609800	1590500	1583000	1536700	1482800	1437200
9	1310100	1292600	1283100	1343500	1531600	1624900	1608700	1589600	1581300	1535000	1481700	1435700
10	1309400	1291900	1284800	1343500	1533300	1623800	1607500	1588400	1580200	1533300	1480000	1434200
11	1308700	1291700	1300400	1343500	1535400	1624300	1606100	1587300	1578400	1531600	1478400	1432500
12	1307800	1291500	1324200	1343500	1536700	1632900	1605600	1585900	1577300	1529300	1476700	1431100
13	1307100	1290800	1329000	1343500	1537800	1631900	1604600	1585300	1575600	1527600	1475600	1429800
14	1306700	1290500	1329200	1343100	1542900	1629000	1603400	1584200	1574400	1525900	1473300	1428700
15	1305700	1290300	1334700	1343300	1540900	1627300	1602700	1585300	1572700	1524200	1471600	1427600
16	1305300	1290100	1336300	1355300	1542700	1625500	1602300	1586500	1571000	1522500	1470000	1425900
17	1304400	1289800	1336800	1357700	1544600	1623800	1601700	1588400	1569800	1520200	1468300	1425200
18	1303900	1289400	1337700	1365100	1549800	1623200	1601700	1591900	1568100	1518500	1466600	1423700
19	1303000	1289200	1338600	1368700	1563100	1621400	1601100	1592500	1566400	1517400	1464900	1422800
20	1302700	1289100	1339000	1372800	1574600	1620300	1600500	1593000	1565200	1515700	1463300	1422100
21	1302100	1288700	1339000	1379400	1595500	1618900	1600500	1593600	1563500	1514000	1461600	1421000
22	1301600	1288400	1339300	1381700	1601900	1617700	1600500	1593800	1561800	1512300	1459900	1419900
23	1300700	1288000	1339500	1383400	1605800	1616200	1600900	1593800	1560800	1510600	1458300	1418900
24	1299800	1287500	1339700	1392300	1606900	1615000	1600900	1593400	1558400	1508700	1457100	1417700
25	1299000	1287300	1340200	1402100	1608300	1613300	1601100	1593400	1557000	1507000	1455500	1416700
26	1298400	1287100	1339700	1404800	1609200	1612100	1600700	1593200	1555500	1505300	1453800	1415800
27	1297700	1286400	1340100	1421300	1610400	1611200	1600400	1593000	1553800	1503600	1452300	1414900
28	1297200	1285900	1339900	1426500	1613100	1609800	1599400	1592500	1552600	1501900	1451000	1413800
29	1296700	1285400	1340400	1429600	1622400	1609200	1598800	1591900	1551500	1500800	1449900	1413300
30	1296300	1285000	1342000	1433300	---	1608500	1598400	1591300	1549800	1499100	1448200	1412300
31	1295800	---	1342900	1444000	---	1607500	---	1590700	---	1497400	1447100	---
MAX	1318100	1295200	1342900	1444000	1622400	1632900	1616800	1598000	1590200	1548100	1495800	1445500
MIN	1295800	1285000	1283100	1342900	1448200	1607500	1598400	1584200	1549800	1497400	1447100	1412300
a	423.42	422.81	426.07	431.62	441.04	440.27	439.80	439.40	437.26	434.49	431.79	429.90
b	-23200	-10800	+57900	+101100	+178400	-14900	-9100	-7700	-40900	-52400	-50300	-34800
c	5397	2146	873	1057	1183	4058	5151	8332	9838	11302	9999	6901

CAL YR 1995 b +782550

WTR YR 1996 b +93300

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Evaporation, in acre-feet, provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

11454000 PUTAH CREEK NEAR WINTERS, CA

LOCATION.--Lat 38°30'55", long 122°04'51", in NE 1/4 NE 1/4 sec.28, T.8 N., R.2 W., Yolo County, Hydrologic Unit 18020109, on left bank 1 mi downstream from Cold Canyon, 1.3 mi downstream from Monticello Dam, and 6 mi west of Winters.

DRAINAGE AREA.--574 mi².

PERIOD OF RECORD.--July 1930 to current year.

CHEMICAL DATA: Water years 1951-66, 1973-81.

WATER TEMPERATURE: Water years 1966-81.

REVISED RECORDS.--WSP 901: 1937-38(M). WSP 1285: 1932(M), 1935-36(M), 1940(M), 1942-43(M), 1951, 1952(M).

WSP 1565: 1957. WSP 1931: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 160.75 ft above sea level (river-profile survey). June 28, 1930, to Feb. 29, 1940, at datum about 1 ft higher.

REMARKS.--Records good except for estimated record which is rated fair. Flow completely regulated by Lake

Berryessa (station 11453900) beginning January 1957. See schematic diagram of lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft³/s, Feb. 27, 1940, gage height, 30.5 ft, present datum, from rating curve extended above 30,000 ft³/s; no flow Sept. 6-15, 1950, July 26 to Sept. 1, Sept. 6-9, 1955. Since completion of Monticello Dam in 1957, maximum discharge, 18,700 ft³/s, Mar. 2, 1983, gage height, 19.55 ft; minimum daily, 6.1 ft³/s, Dec. 19, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1905, that of Feb. 27, 1940, on basis of records for station at Winters.

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	162	98	76	87	2640	1090	585	396	738	733	504
2	326	125	98	76	55	2980	1530	616	444	762	736	485
3	326	98	73	76	39	2660	1680	624	563	744	695	494
4	357	133	46	80	318	2500	1500	633	596	724	662	468
5	354	166	160	69	170	3220	1250	647	605	732	682	461
6	342	164	e240	55	76	3540	1110	640	639	710	706	461
7	342	155	e110	57	64	3200	1070	621	644	663	672	461
8	342	155	45	57	65	2700	1050	593	654	692	685	474
9	326	122	69	56	56	2250	1010	612	634	746	692	497
10	303	95	97	56	52	1910	957	639	638	771	682	510
11	287	133	95	65	49	1780	909	663	664	813	653	538
12	271	161	66	75	46	2480	871	642	679	834	655	546
13	258	158	148	73	45	3410	825	619	683	800	681	545
14	275	136	47	73	46	3380	795	610	661	760	729	512
15	279	96	72	73	50	2800	776	550	650	736	742	461
16	245	96	49	71	41	2150	775	202	682	740	726	426
17	214	70	60	47	27	1820	762	183	668	706	727	383
18	241	47	83	54	61	1730	760	206	627	672	663	367
19	266	70	50	52	117	1650	759	164	650	682	651	384
20	259	94	52	46	680	1570	630	161	658	722	707	397
21	241	94	75	61	987	1490	369	177	648	697	680	409
22	244	94	76	46	688	1440	222	189	668	732	652	409
23	223	94	77	43	603	1340	237	216	682	736	619	409
24	222	93	64	78	853	1280	290	239	672	694	586	397
25	239	91	47	78	895	1220	339	256	651	690	565	430
26	239	91	42	51	923	1150	418	291	651	711	555	461
27	259	91	56	146	942	1100	417	321	651	711	554	419
28	256	92	82	49	1020	1050	420	339	683	670	566	351
29	217	92	82	48	1500	998	472	377	701	665	576	315
30	188	94	80	45	---	947	522	420	720	710	577	303
31	173	---	76	102	---	907	---	435	---	708	559	---
TOTAL	8438	3362	2515	2034	10555	63292	23815	13470	19162	22471	20368	13277
MEAN	272	112	81.1	65.6	364	2042	794	435	639	725	657	443
MAX	357	166	240	146	1500	3540	1680	663	720	834	742	546
MIN	173	47	42	43	27	907	222	161	396	663	554	303
AC-FT	16740	6670	4990	4030	20940	125500	47240	26720	38010	44570	40400	26330

e Estimated.

SACRAMENTO RIVER BASIN

11454000 PUTAH CREEK NEAR WINTERS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1956, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.62	96.0	993	1284	1716	976	514	137	42.1	12.5	6.94	5.84
MAX	45.4	807	5110	3957	6468	3506	2729	452	156	63.7	31.7	20.8
(WY)	1951	1951	1956	1952	1938	1938	1941	1941	1942	1941	1941	1941
MIN	.89	3.17	7.16	44.6	66.7	118	40.8	12.3	6.72	2.39	.000	1.47
(WY)	1956	1956	1931	1947	1948	1932	1931	1931	1931	1955	1955	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1956

ANNUAL MEAN	477	
HIGHEST ANNUAL MEAN	1387	1941
LOWEST ANNUAL MEAN	48.1	1931
HIGHEST DAILY MEAN	54500	Feb 27 1940
LOWEST DAILY MEAN	.00	Sep 6 1950
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 6 1950
INSTANTANEOUS PEAK FLOW	81000	Feb 27 1940
INSTANTANEOUS PEAK STAGE	30.5	Feb 27 1940
ANNUAL RUNOFF (AC-FT)	345500	
10 PERCENT EXCEEDS	924	
50 PERCENT EXCEEDS	38	
90 PERCENT EXCEEDS	3.0	

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	225	89.7	112	424	544	747	632	545	589	623	544	399
MAX	476	263	1625	4406	4550	7791	5023	1018	773	802	681	610
(WY)	1972	1987	1984	1970	1983	1983	1982	1983	1981	1984	1975	1968
MIN	13.3	14.9	11.6	11.6	21.6	40.9	110	155	328	338	298	175
(WY)	1960	1963	1961	1960	1960	1962	1960	1960	1960	1960	1960	1960

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1960 - 1996

ANNUAL TOTAL	108646	202759	
ANNUAL MEAN	298	554	456
HIGHEST ANNUAL MEAN			1580
LOWEST ANNUAL MEAN			132
HIGHEST DAILY MEAN	768	Jan 9	3540 Mar 6
LOWEST DAILY MEAN	25	Apr 7	27 Feb 17
ANNUAL SEVEN-DAY MINIMUM	37	Apr 2	43 Feb 11
INSTANTANEOUS PEAK FLOW			3850 Mar 13
INSTANTANEOUS PEAK STAGE			13.22 Mar 13
ANNUAL RUNOFF (AC-FT)	215500	402200	330100
10 PERCENT EXCEEDS	634	1050	705
50 PERCENT EXCEEDS	240	461	342
90 PERCENT EXCEEDS	55	59	50

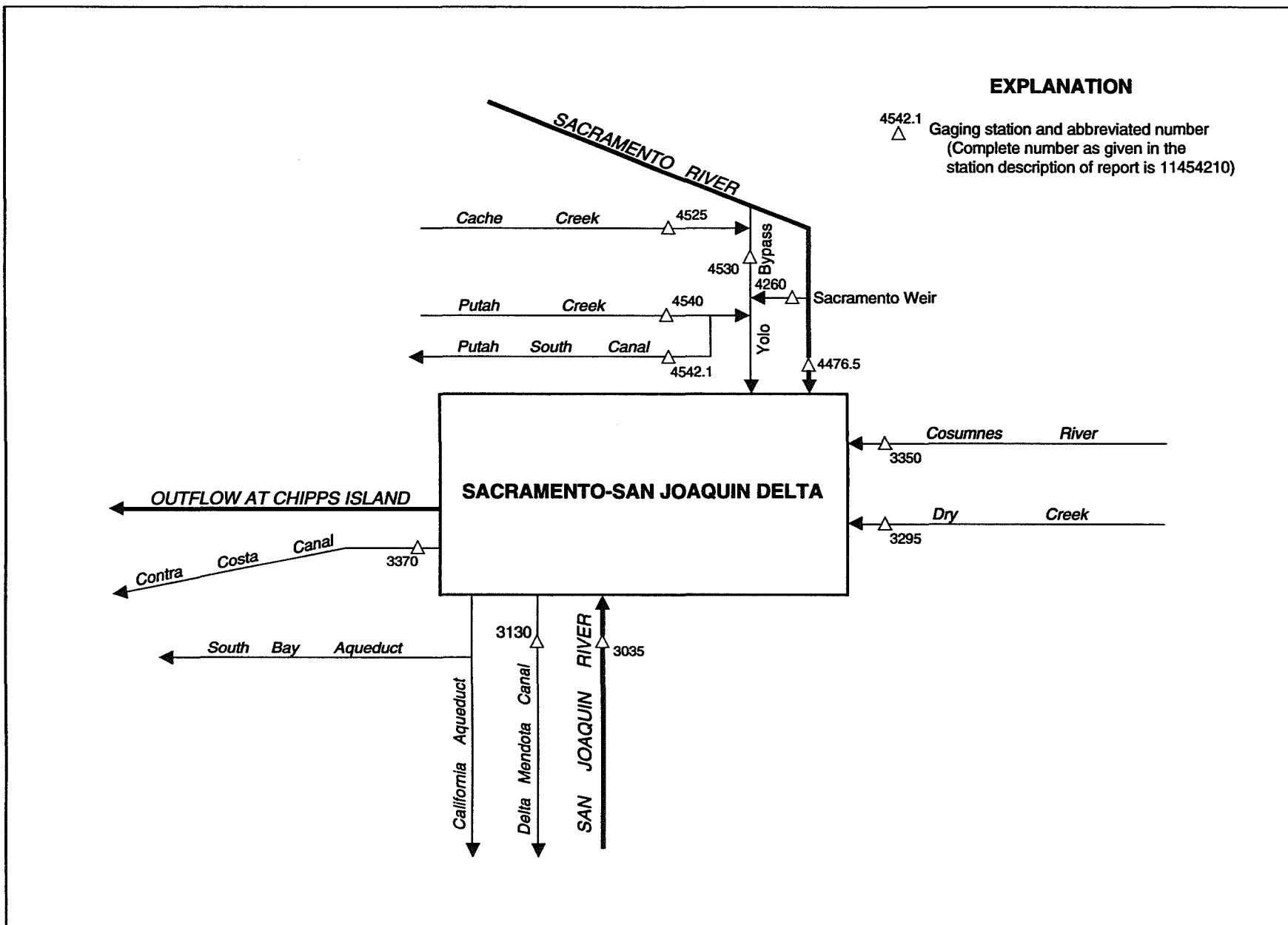


Figure 34. Principal inflows and diversions, Sacramento-San Joaquin Delta.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

Discharge measurements made at miscellaneous sites during water year 1996

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Sacramento River basin						
11341900	Dog Creek at Delta, CA	Lat 40°56'17", long 122°25'13", in SE 1/4 NE 1/4 sec.34, T.36 N., R.5 W., Shasta County, Hydrologic Unit 18020005, 0.1 mi upstream from mouth, 0.5 mi southwest of Delta, and 25 mi north of Redding.	17.3	a1975,	10-02-95	b6.26
				1976-84,	02-07-96	199
				1986-96	04-02-96	52.0

a Published as a miscellaneous measurement.

b Base flow.

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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.

U.S. DEPARTMENT OF THE INTERIOR
U.S. Geological Survey, Placer Hall
6000 J Street, Suite 2012
Sacramento, CA 95819-6129

