



Water Resources Data California Water Year 1995

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-95-4
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1995

1994

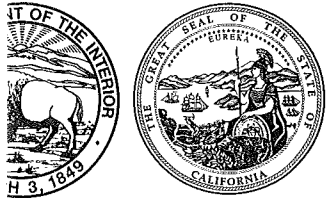
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Water Resources Data California Water Year 1995

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

by K.L. Markham, S.W. Anderson, G.L. Rockwell, and M.F. Friebe



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-95-4
Prepared in cooperation with the California Department of
Water Resources and with other agencies

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PREFACE

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

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

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

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

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE April 1996	3. REPORT TYPE AND DATES COVERED Annual--Oct. 1, 1994, to Sept. 30, 1995	
4. TITLE AND SUBTITLE Water Resources Data--California, Water Year 1995, Volume 4, Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line			5. FUNDING NUMBERS	
6. AUTHOR(S) K.L. Markham, S.W. Anderson, G.L. Rockwell, and M.F. Friebe				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division California District 2800 Cottage Way, Room W-2233 Sacramento, CA 95825			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-CA-95-4	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division California District 2800 Cottage Way, Room W-2233 Sacramento, CA 95825			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-CA-95-4	
11. SUPPLEMENTARY NOTES Prepared in cooperation with the California Department of Water Resources and with other agencies.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report may be purchased from the National Technical Information Service, Springfield, VA 22161			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Water-resources data for the 1995 water year for California consist of records of stage, discharge, and water quality of streams, stage and contents in lakes and reservoirs, and water levels and water quality in wells. Volume 4 contains discharge records for 181 gaging stations, stage and contents for 47 lakes and reservoirs, precipitation data for 3 stations, and water quality for 6 stations. Also included is one low-flow partial-record station. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.				
14. SUBJECT TERMS *California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Sampling sites, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Water analyses			15. NUMBER OF PAGES 428	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT	

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[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
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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
11391000	Sacramento River at Knights Landing	14,535	1941-80
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 Clío	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
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

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
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	1959-65
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 Keddie	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 Honcut Creek near Bangor	47.1	1961-81
11407500	South Honcut 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	1989-94
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
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

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
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
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
11387995	Black Butte Lake near Orland	738	1964-90
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
10341950	Little Truckee River below Diversion Dam near Sierraville	36.1	T	1994
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	1878, 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,T,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, 1988-94
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 1995
VOLUME 4--NORTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN
FROM HONEY LAKE BASIN TO OREGON STATE LINE

By K.L. Markham, S.W. Anderson, G.L. Rockwell, and M.F. Friebe

INTRODUCTION

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

This volume of the report includes records on surface water in the State. Specifically, it contains: (1) discharge records for 181 streamflow-gaging stations; (2) stage and content records for 47 lakes and reservoirs; (3) precipitation records for 3 stations; (4) water-quality records for 6 streamflow-gaging stations; and (5) 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. Beginning with the 1985 water year, a separate volume for ground-water levels and quality was published for California.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of 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-95-4." 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) 979-2605.

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 Regional County Sanitation District, Douglas Fraleigh, Director.
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 Corps of Engineers, U.S. Army; and 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 53 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 the activities of man.

National Stream-Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 142 sites in NASQAN are located generally at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) to provide a nationally consistent database useful for water-quality assessment and hydrologic research.

NASQAN was redesigned in 1995 and will be known as NASQAN II beginning in 1996. NASQAN II will focus on four of the largest river basins in the Nation--the Mississippi, the Columbia, the Colorado, and the Rio Grande. The objective of NASQAN II 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 remobilization 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 Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of wet atmospheric deposition, which includes snow, rain, sleet, and hail. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (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, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 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.

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 1995 water year that began October 1, 1994, and ended September 30, 1995. 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).

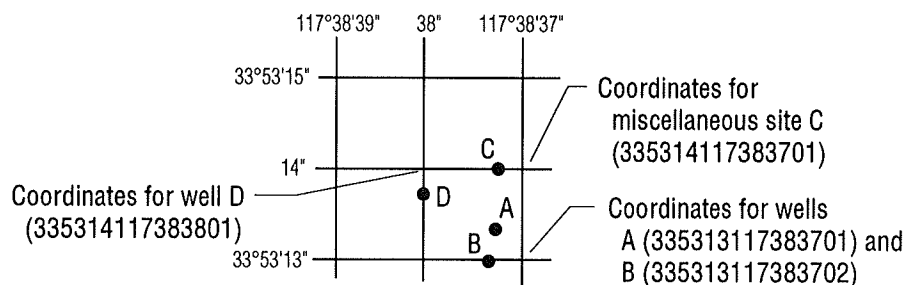


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

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 analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

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

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

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

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following 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 in current 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 (INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given period were distributed on it uniformly.

10 PERCENT EXCEEDS.--The discharge that is exceeded 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 22092, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

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

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 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 (1995) 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 22092

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. For the membrane filter method, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \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 (ft³/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 the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

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.

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

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 142 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

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.

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 [mg C/(m²/time) for periphyton and macrophytes and mg C/(m³/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 emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1995, is called the "1995 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, Department of the Interior. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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- 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.
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- 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.
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- 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.

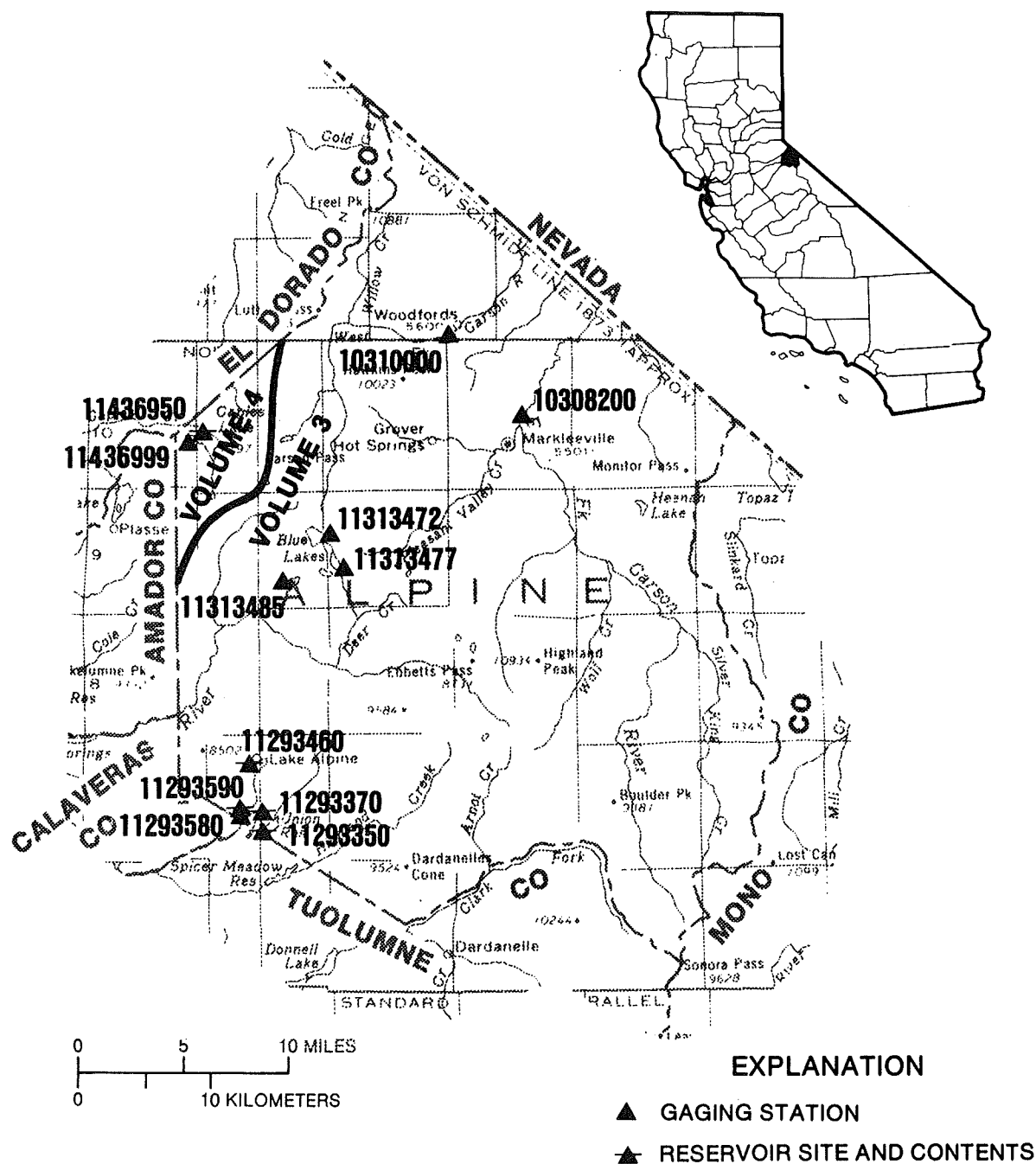


Figure 2. Location of discharge stations in Alpine County.
 (NOTE: Records for stations 10308200 through 10310000 and
 11293350 through 11313485 published in volume 3.)

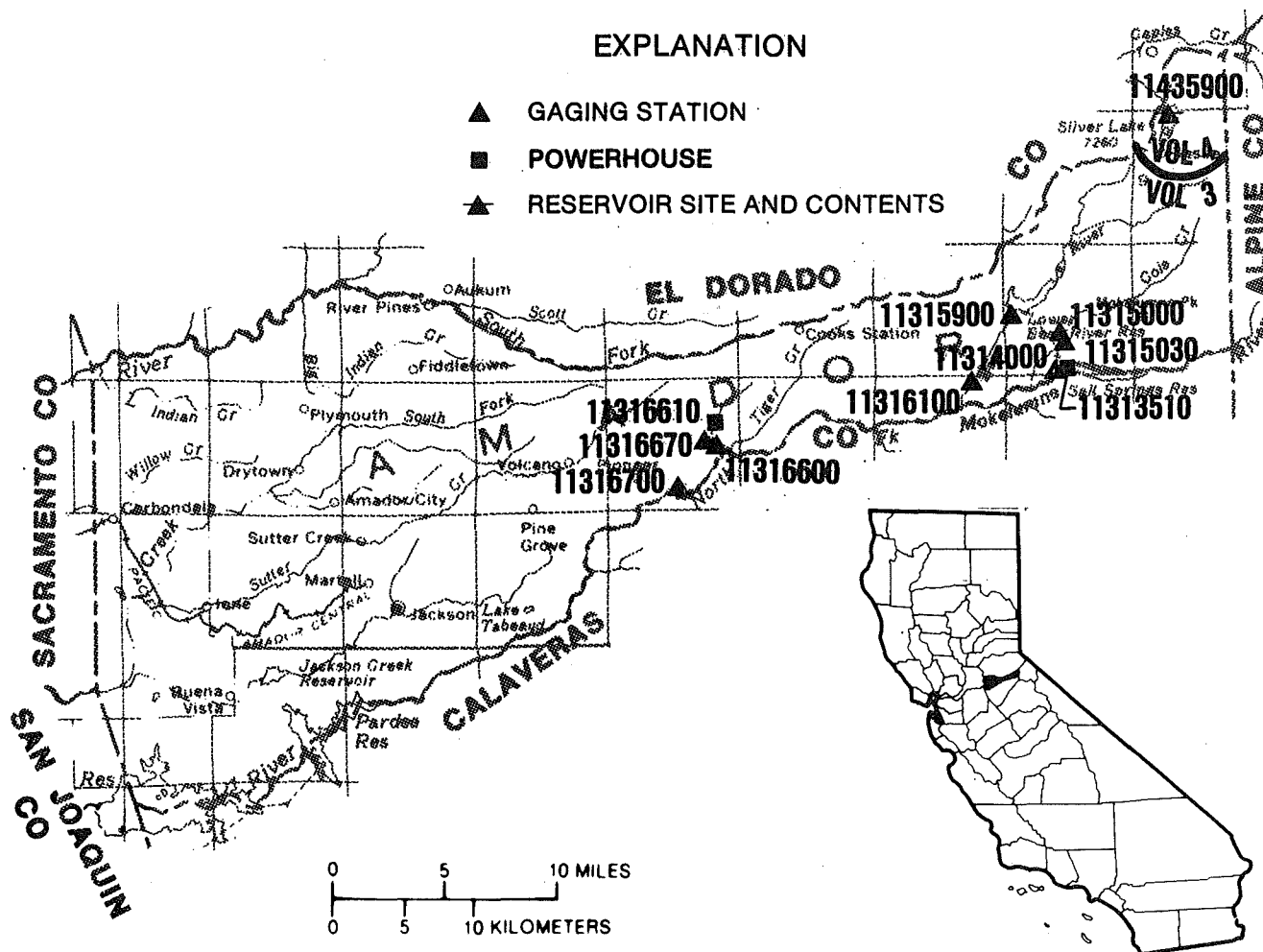
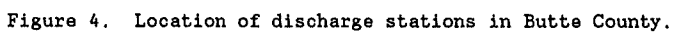


Figure 3. Location of discharge stations in Amador County.
(NOTE: Records for stations 11313510 through 11316700
published in volume 3.)



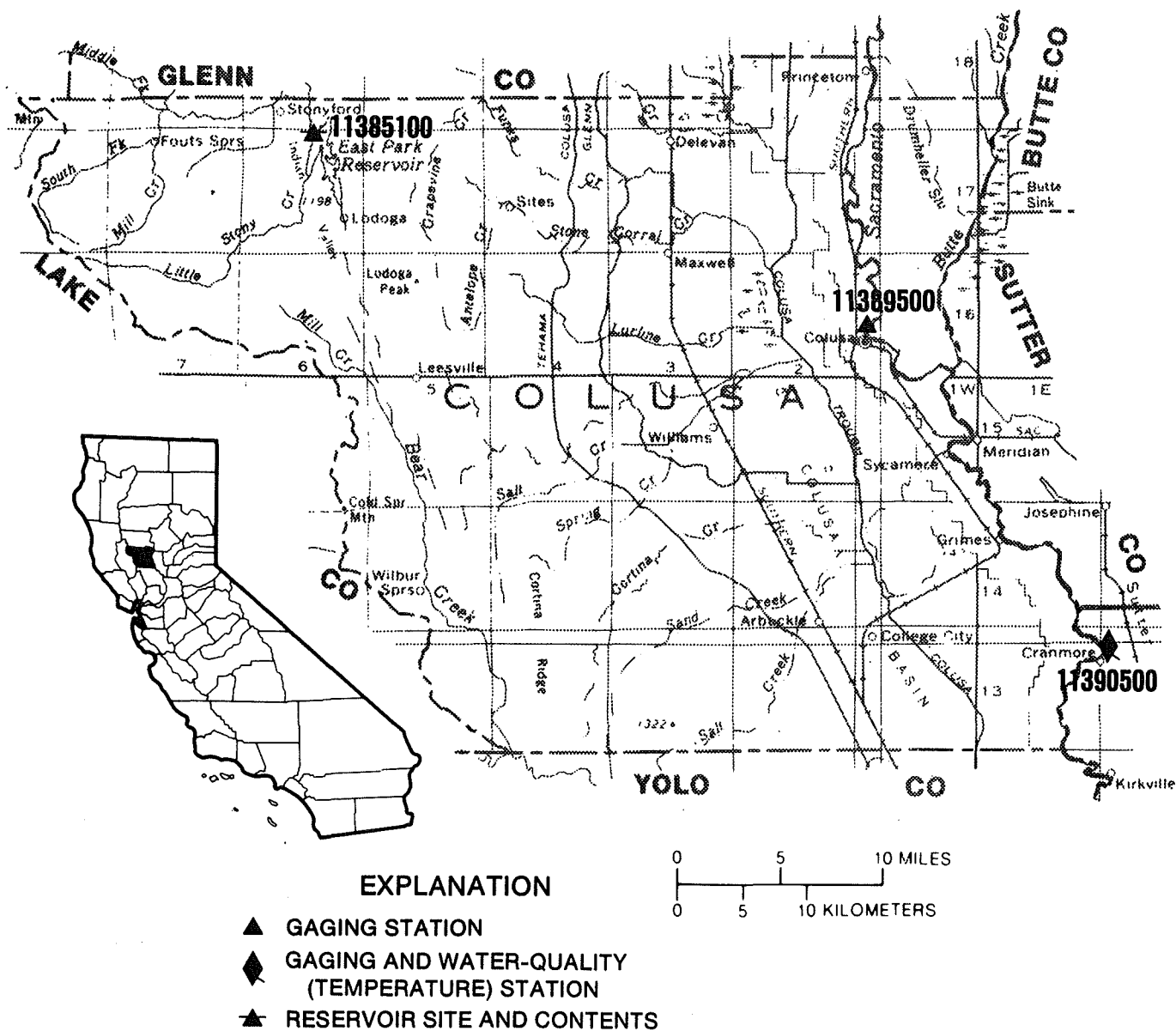


Figure 5. Location of discharge and water-quality stations in Colusa County.

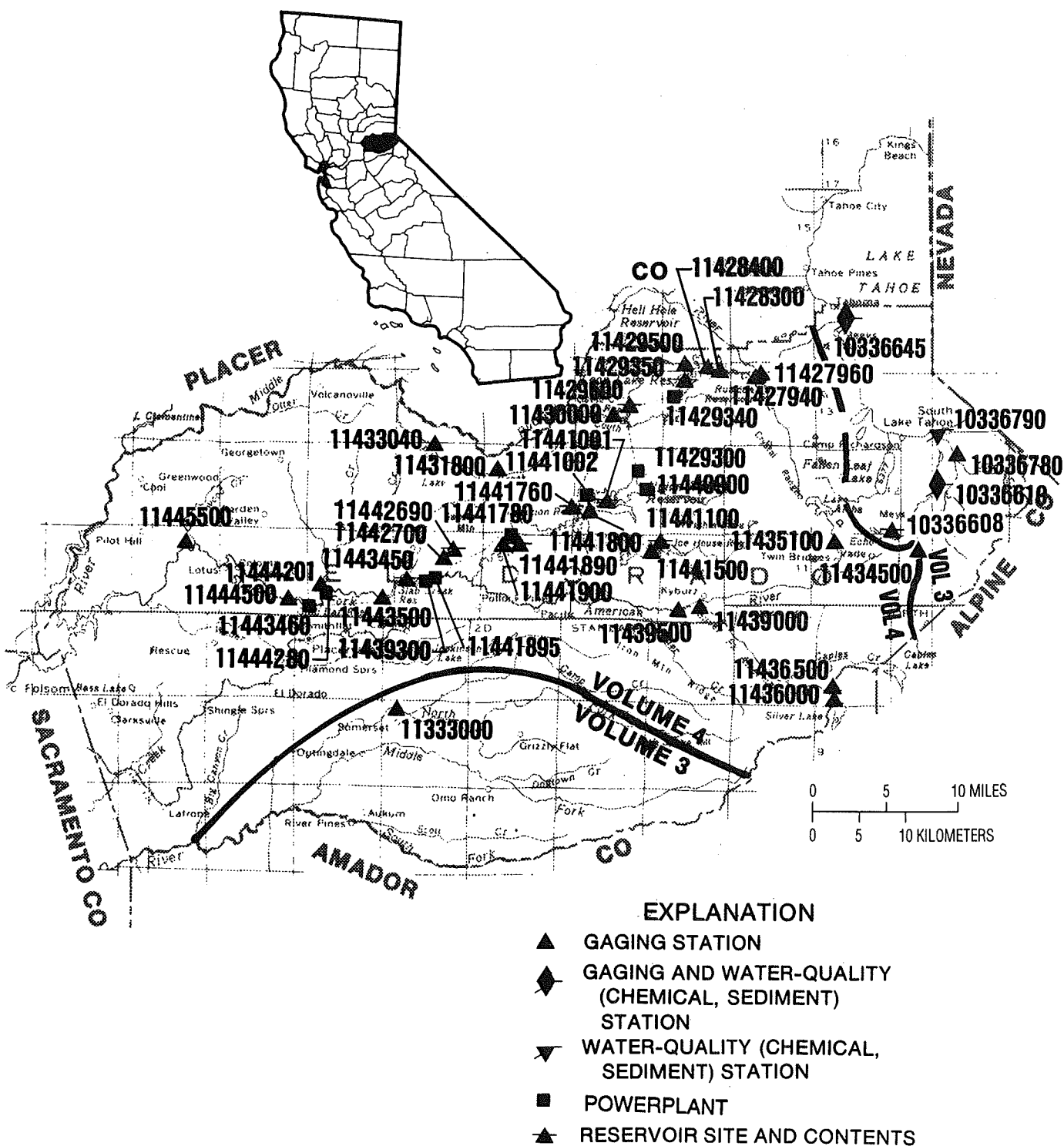


Figure 6. Location of discharge and water-quality stations in El Dorado County.
(NOTE: Record for station 11333000 published in volume 3.)

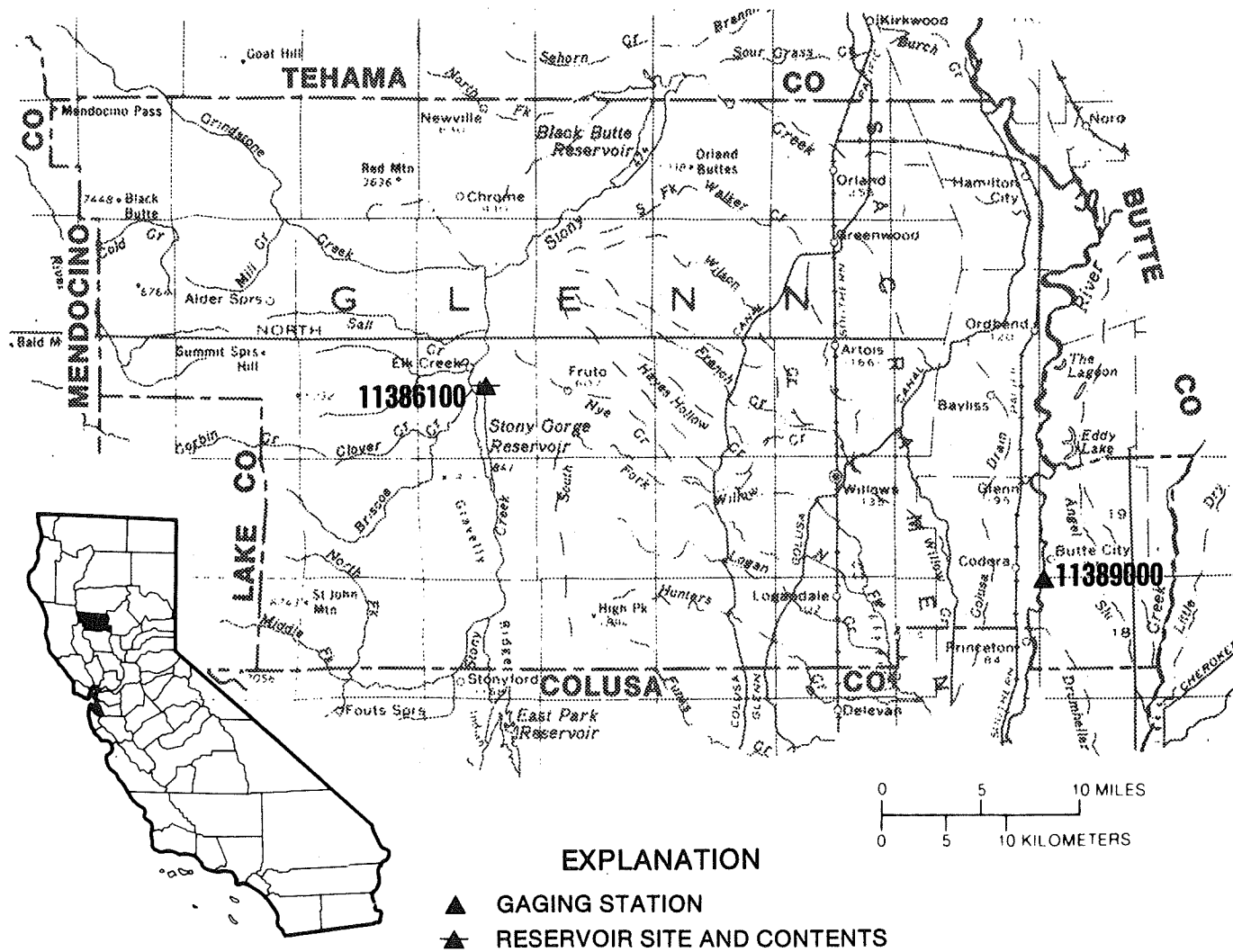
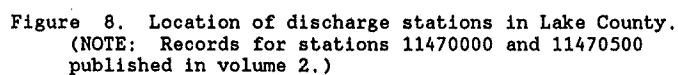
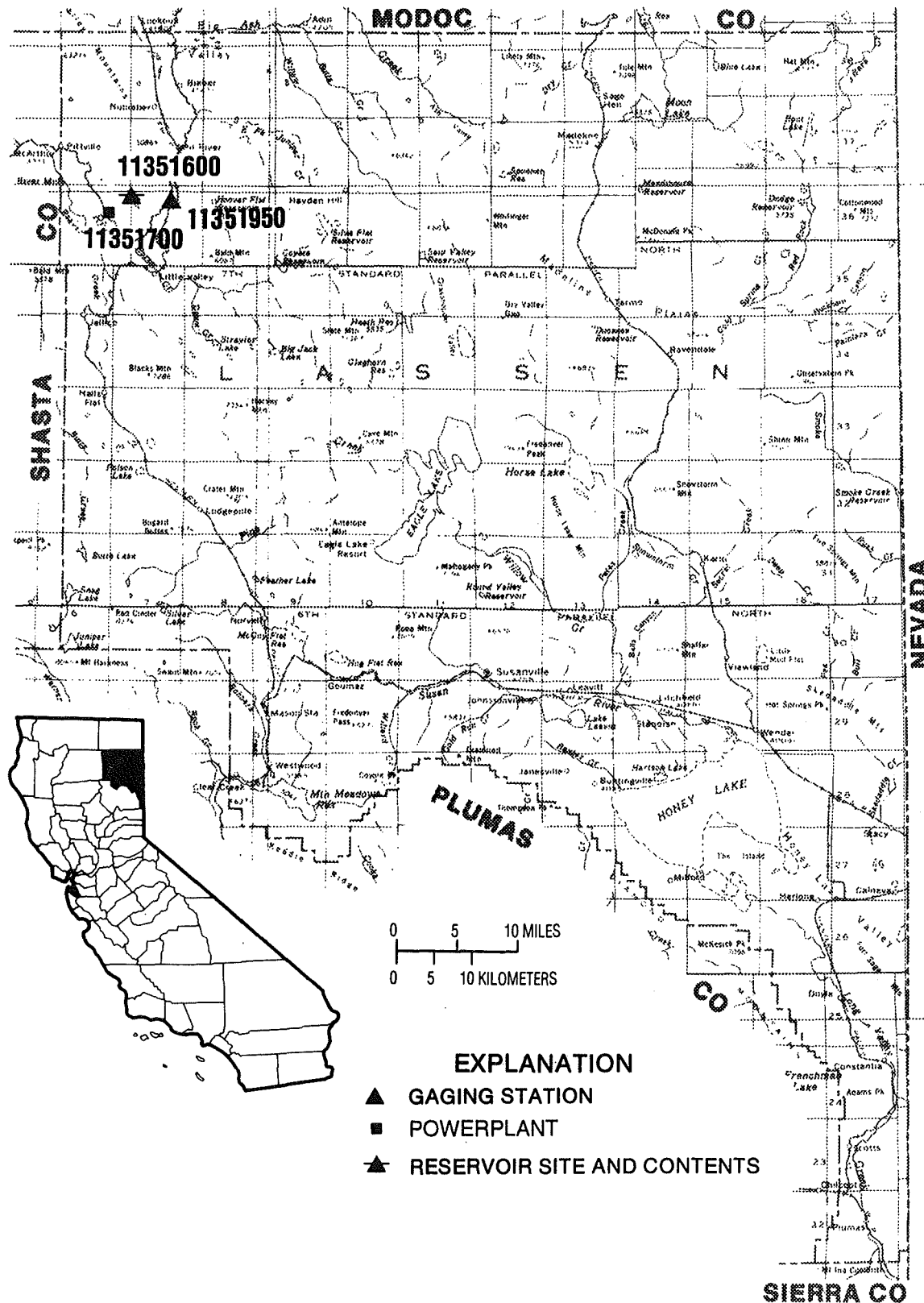


Figure 7. Location of discharge stations in Glenn County.





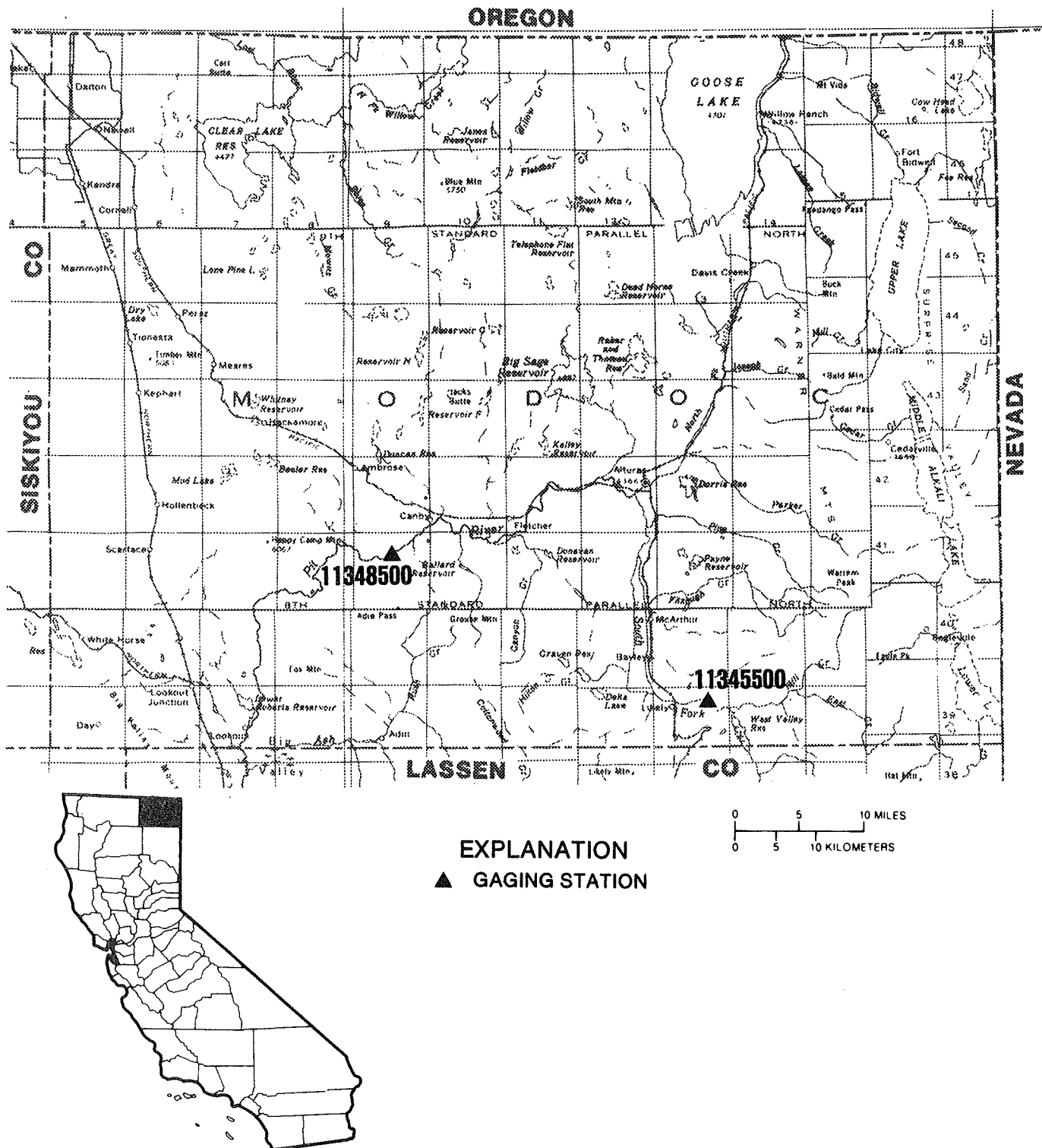


Figure 10. Location of discharge stations in Modoc County.

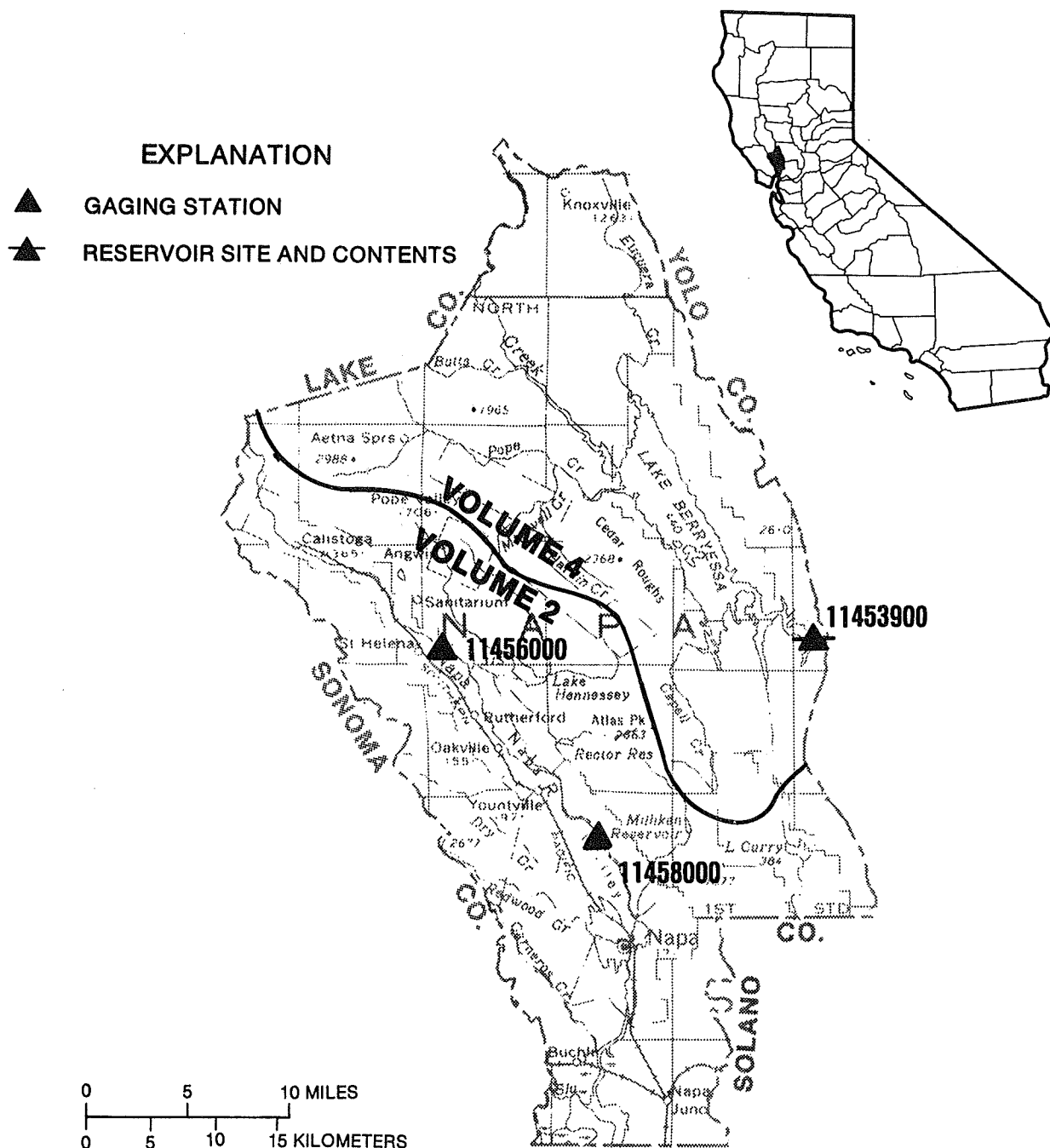


Figure 11. Location of discharge stations in Napa County.
 (NOTE: Records for stations 11456000 and 11458000 published in volume 2.)

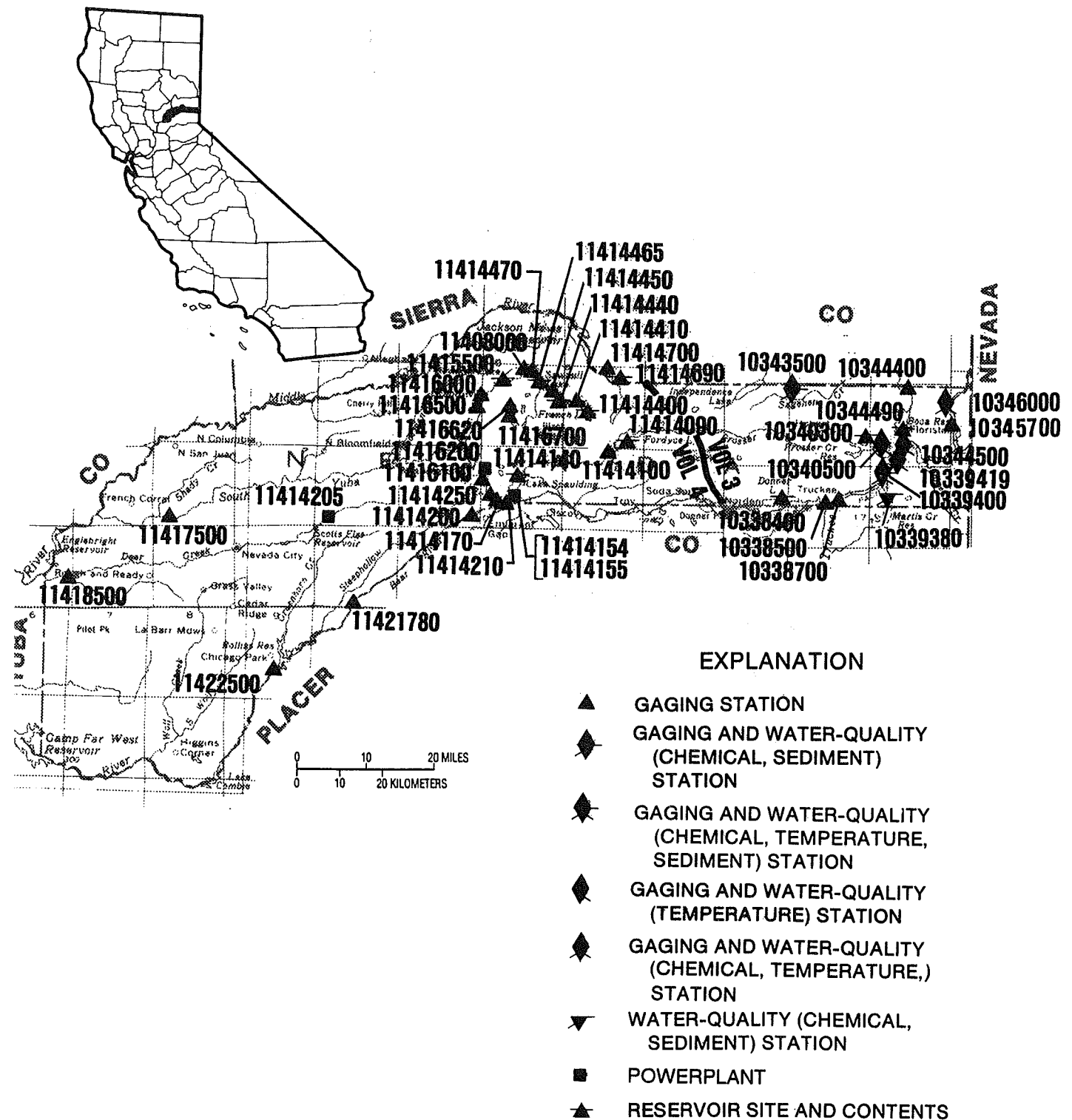


Figure 12. Location of discharge and water-quality stations in Nevada County.
 (NOTE: Records for stations 10338400 through 10346000 published in volume 3.)

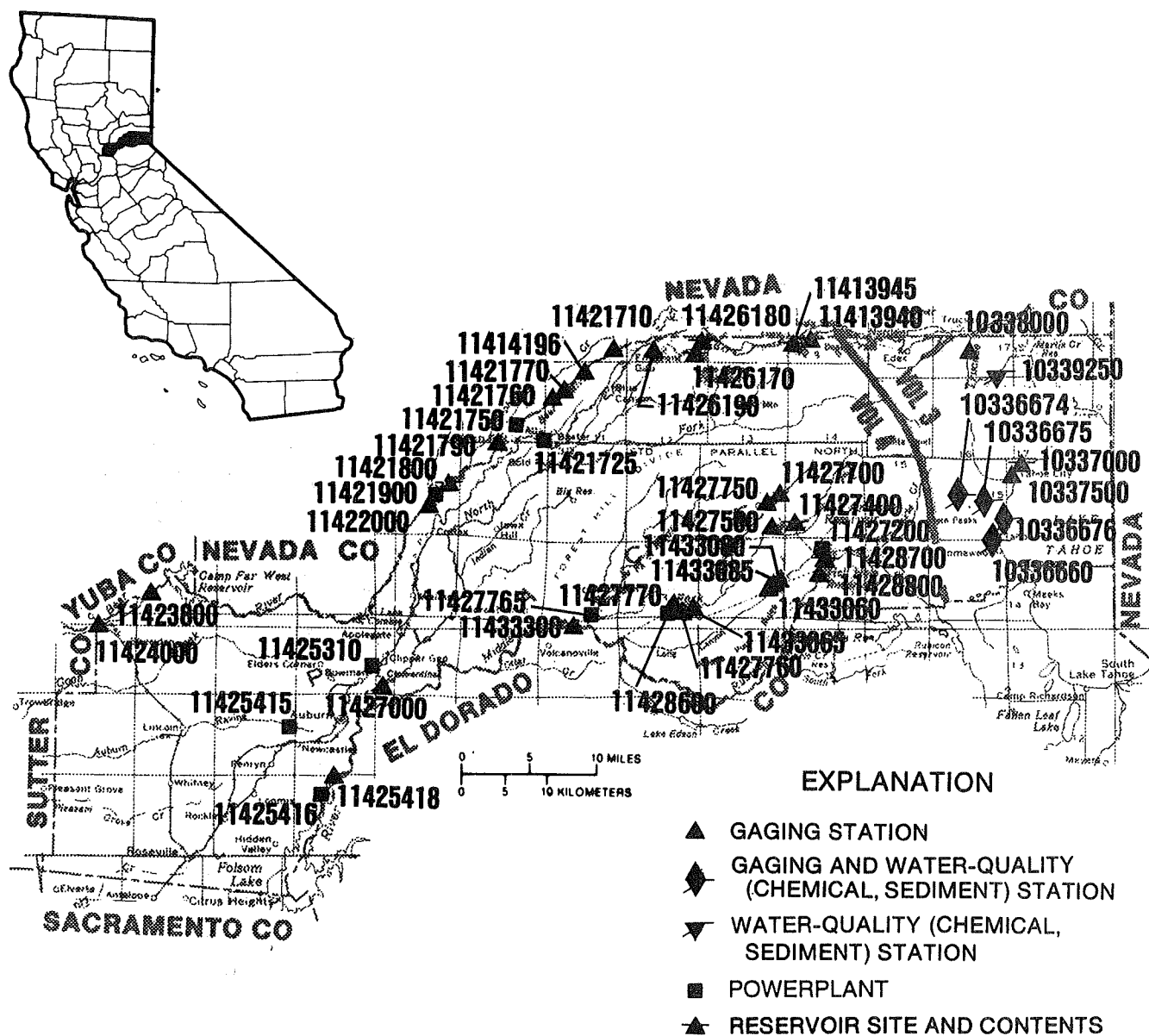
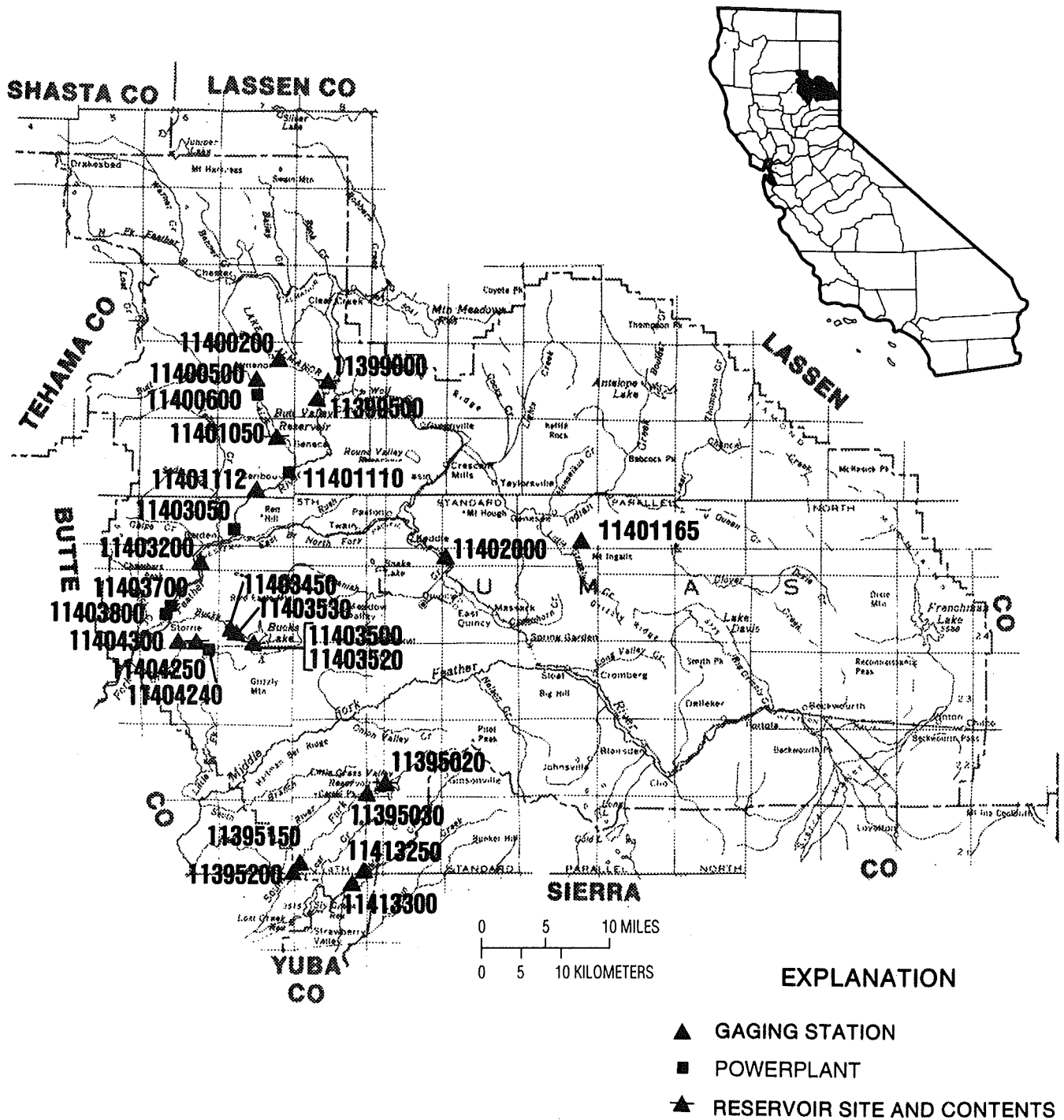


Figure 13. Location of discharge and water-quality stations in Placer County.
 (NOTE: Records for stations 10336660 through 10339250 published in volume 3.)



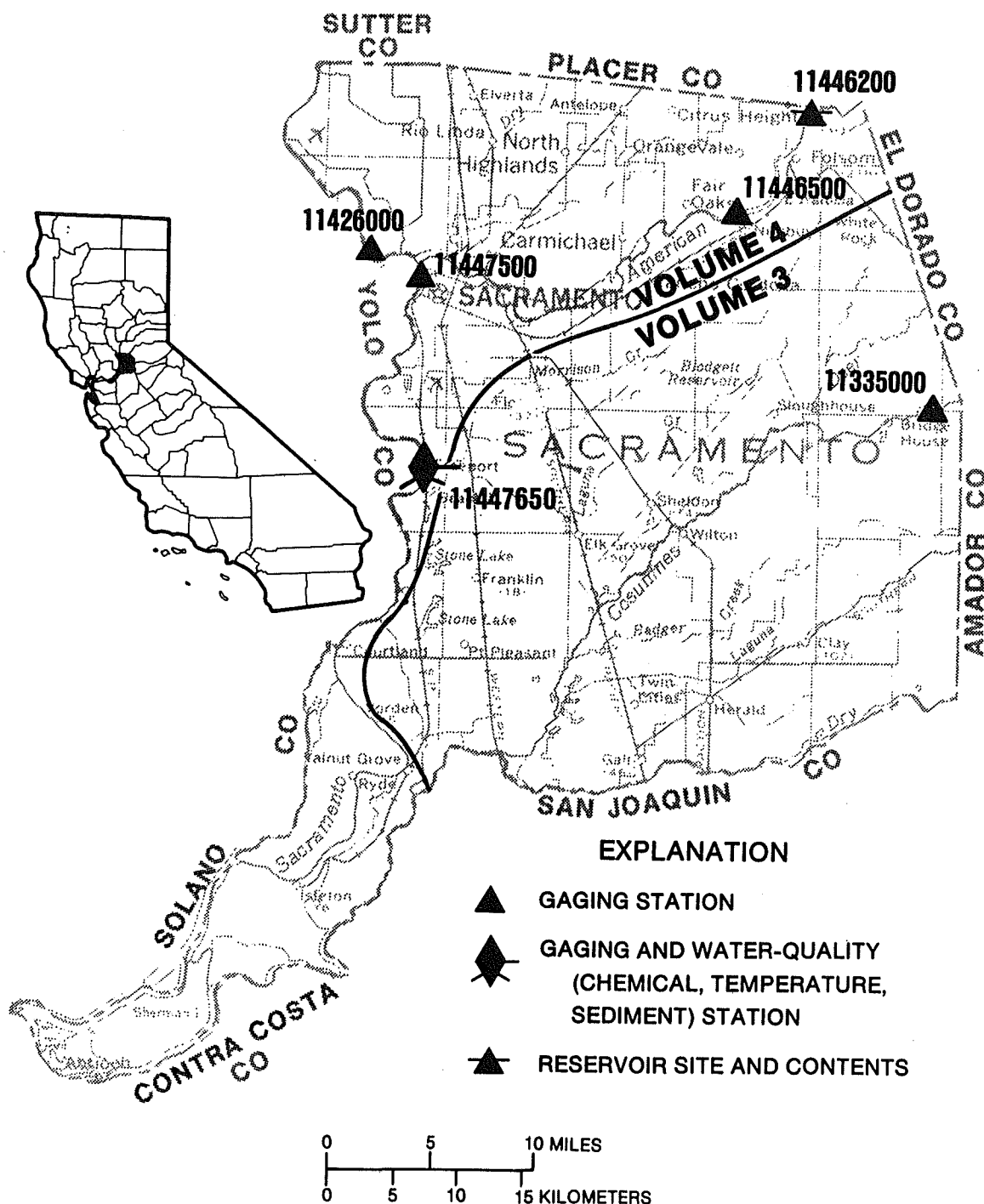
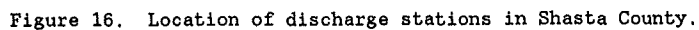


Figure 15. Location of discharge and water-quality stations in Sacramento County.
(NOTE: Record for station 11335000 published in volume 3.)





EXPLANATION

- ▲ GAGING STATION
- ▲ RESERVOIR SITE AND CONTENTS

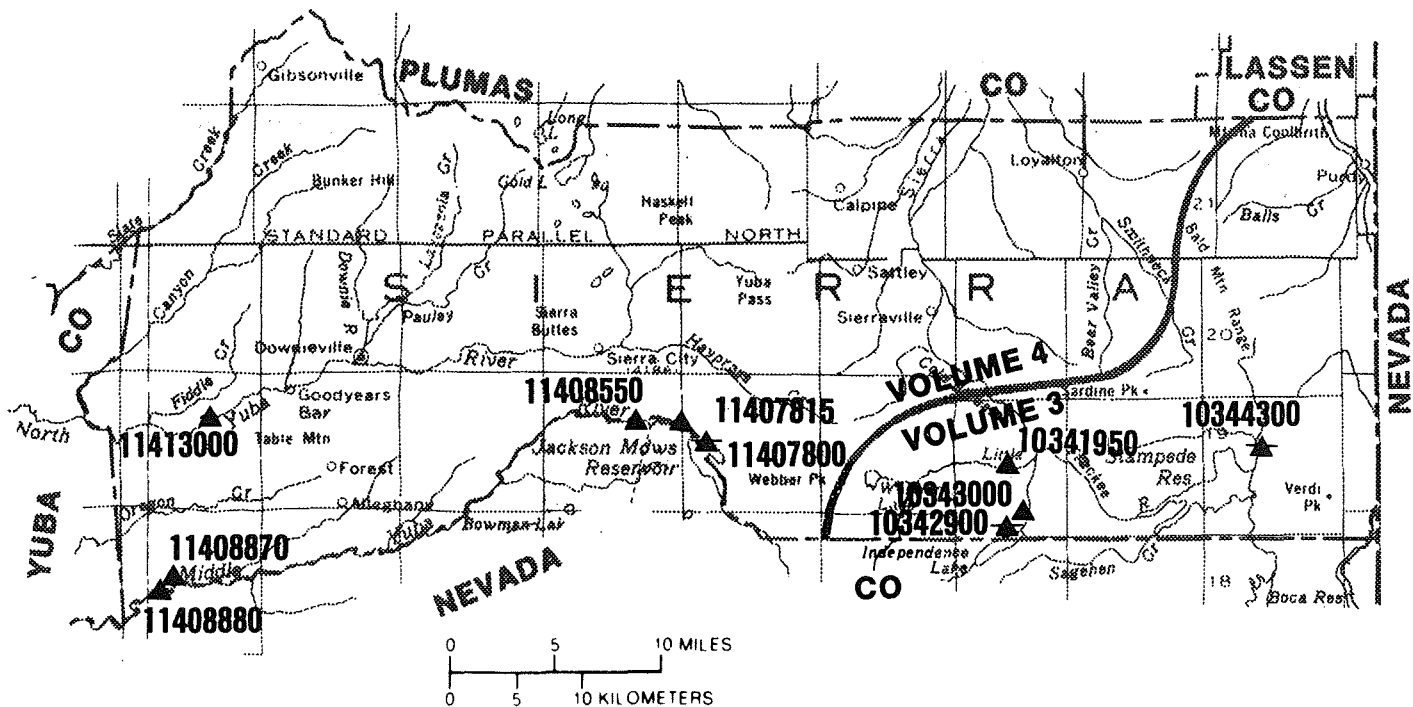


Figure 17. Location of discharge stations in Sierra County.
 (NOTE: Records for stations 10341950 through 10344300 published in volume 3.)

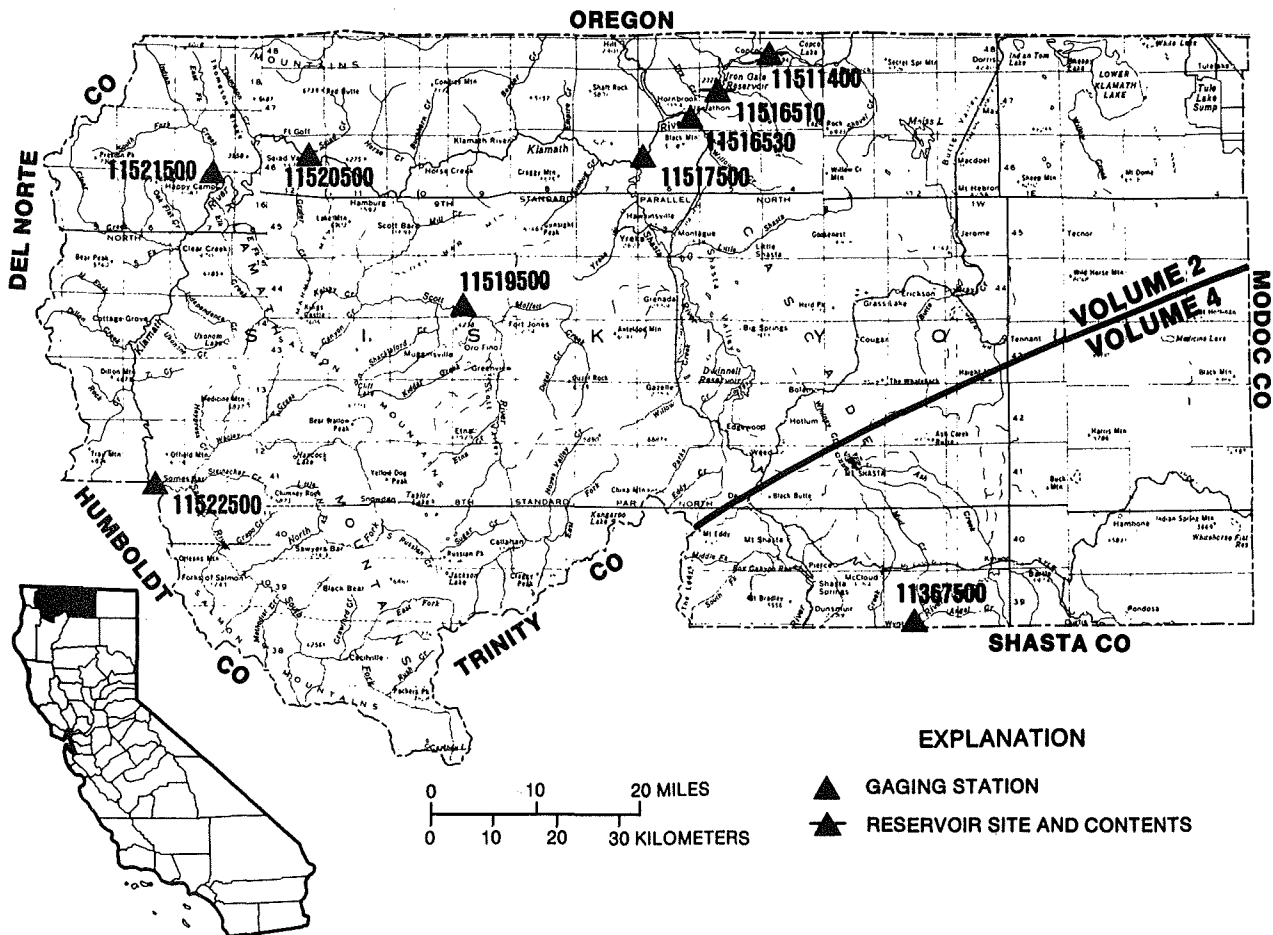
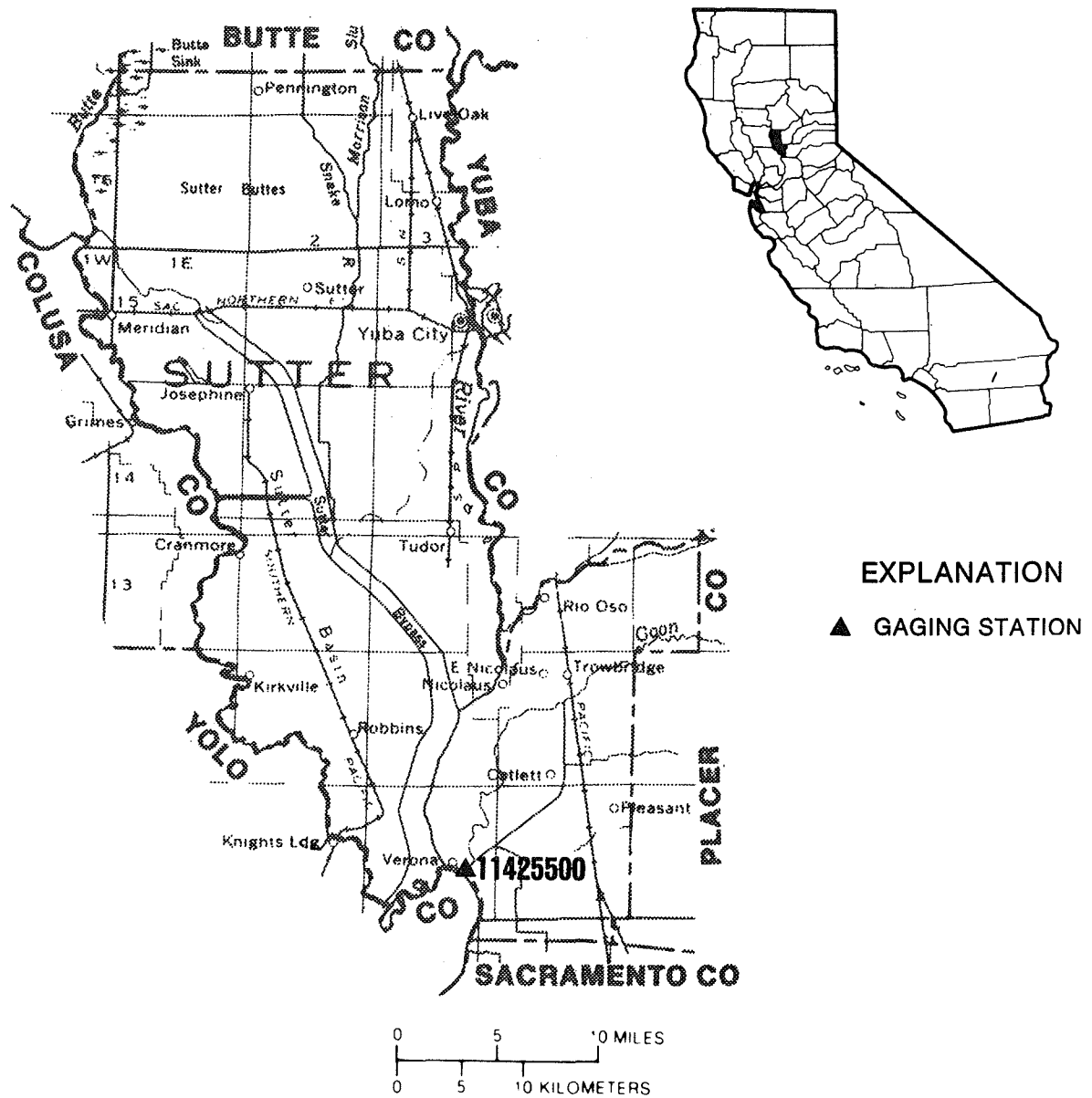


Figure 18. Location of discharge stations in Siskiyou County.
 (NOTE: Records for stations 11511400 through 11522500
 published in volume 2.)



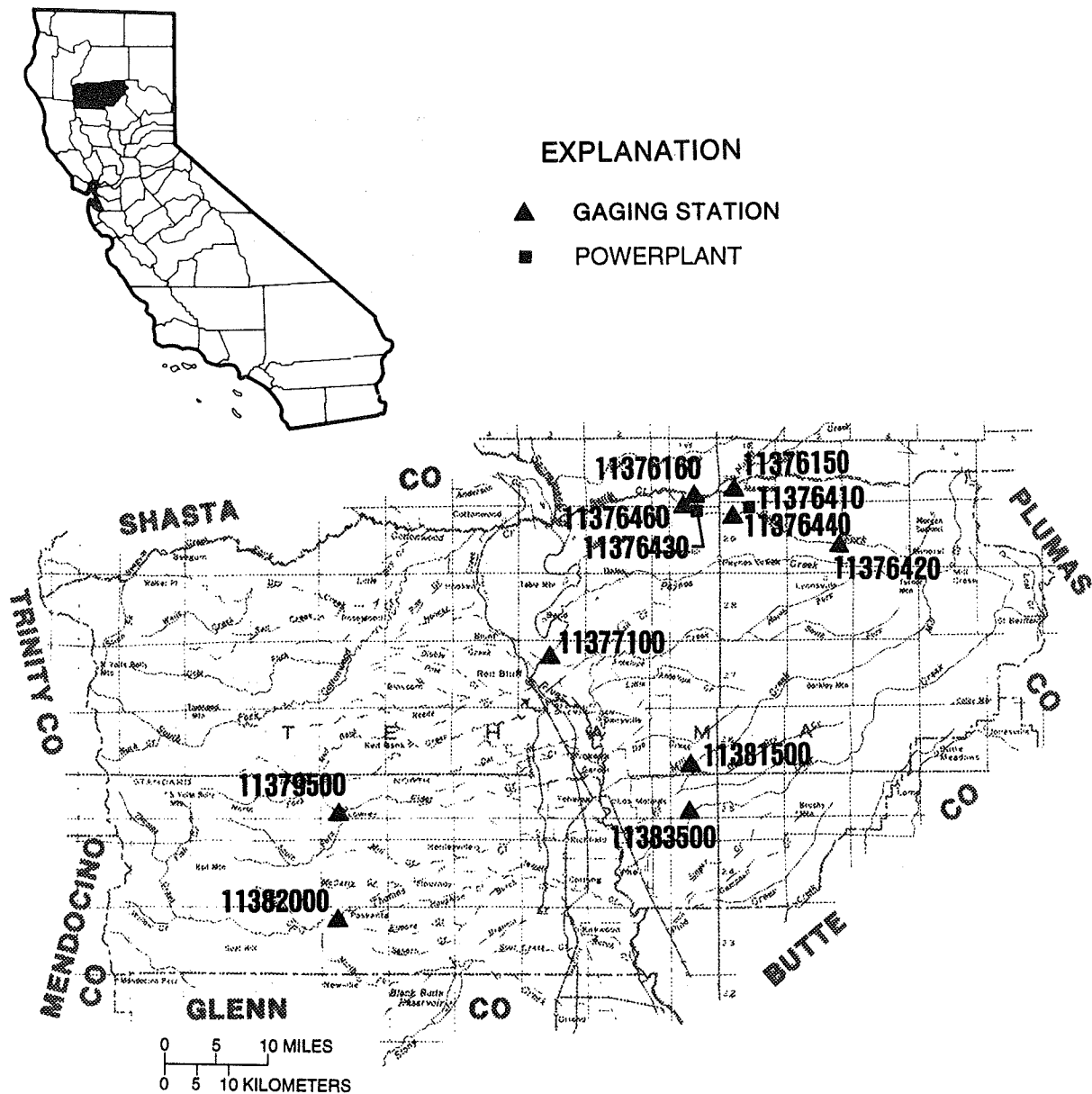


Figure 20. Location of discharge stations in Tehama County.

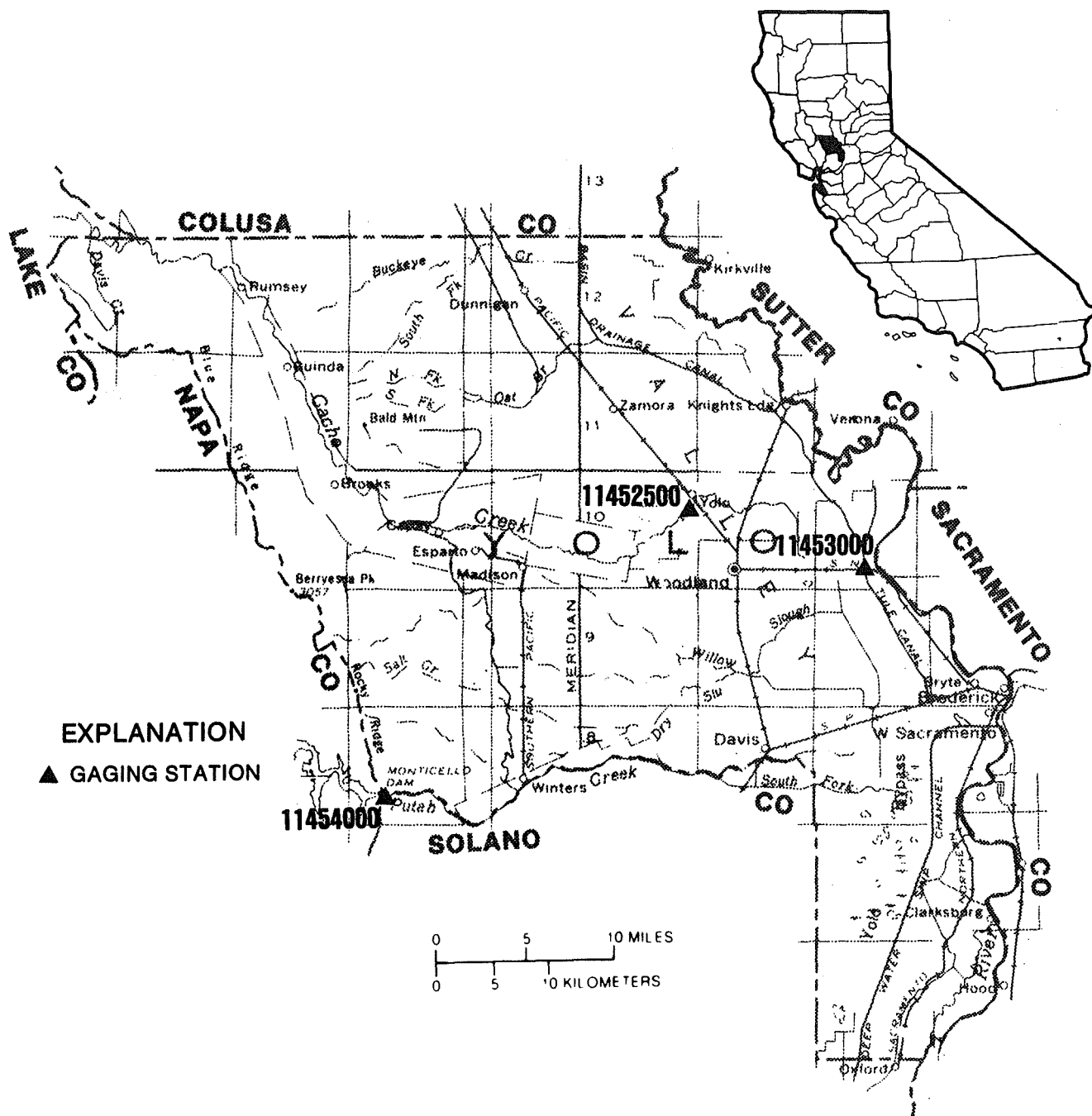


Figure 21. Location of discharge stations in Yolo County.

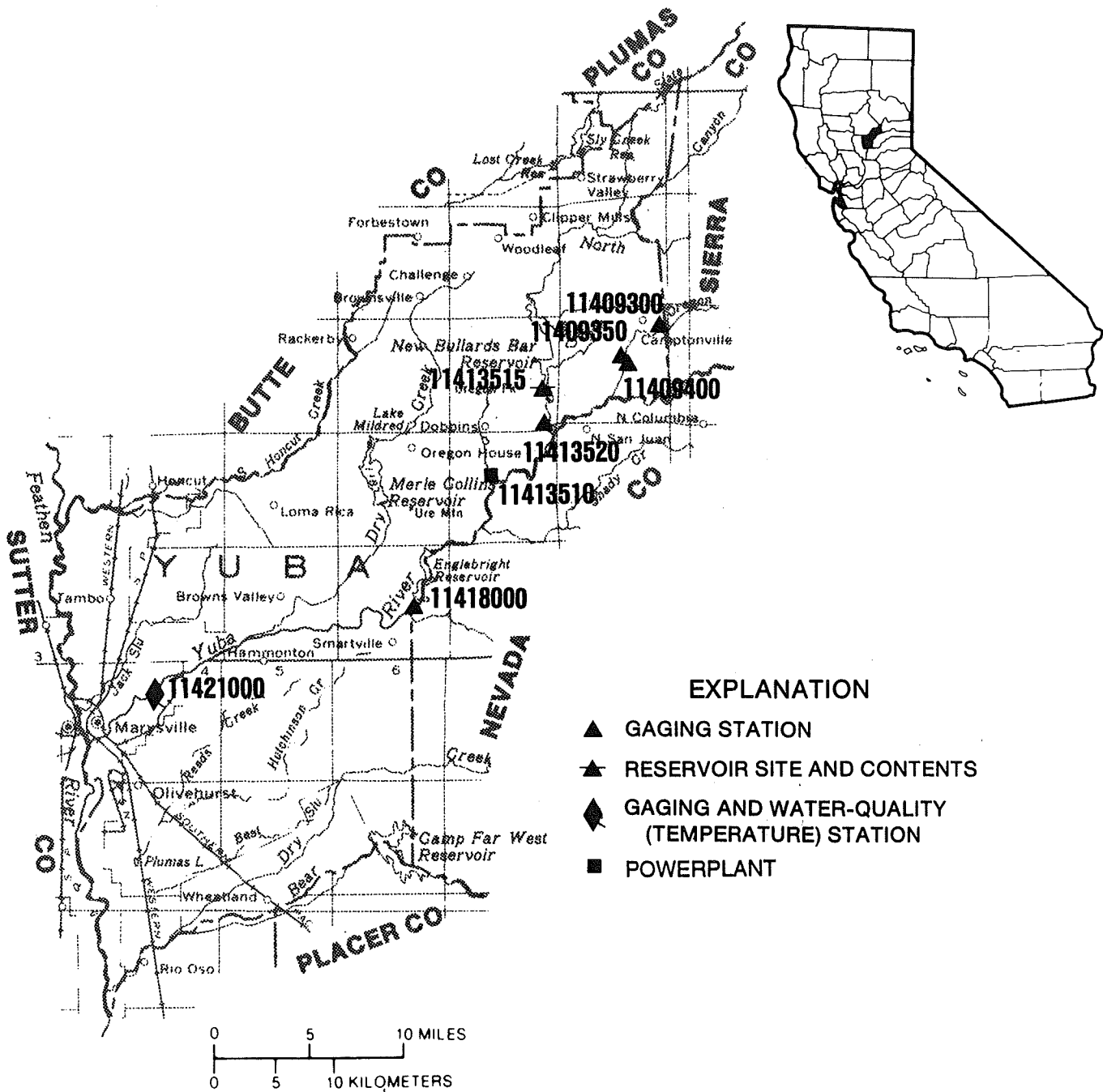


Figure 22. Location of discharge and water-quality stations in Yuba County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

PRINTED OUTPUTREMARK

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

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).

SACRAMENTO RIVER BASIN

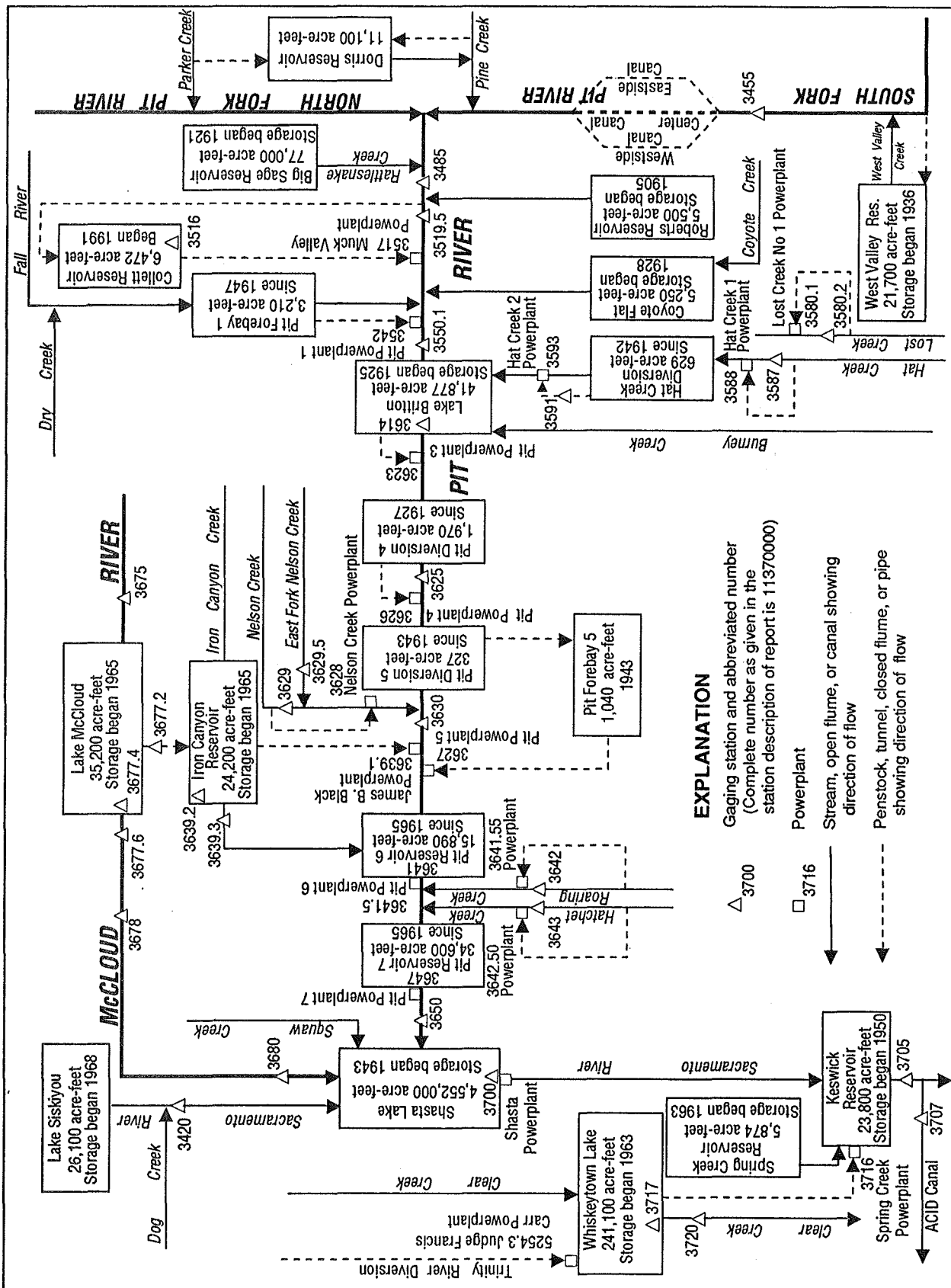


Figure 23. Diversions and storage in Pit and McCloud River basins.

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.--No estimated daily discharges. Records good. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	1615	*43,100	*20.16	Mar. 14	1645	26,000	15.00
Feb. 1	0200	14,400	11.99	Apr. 7	1445	13,100	11.62
Mar. 10	1700	34,500	17.61				

Minimum daily, 183 ft³/s, Oct. 3.

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	190	209	210	246	13200	1510	2090	5660	2130	796	363	289
2	186	210	221	237	9210	1950	2140	4930	2080	813	357	287
3	183	203	250	243	6310	2950	2030	3800	2110	763	352	286
4	186	211	242	419	4950	2280	2120	3330	1980	722	345	286
5	193	248	218	420	4110	1990	2200	2990	1800	682	341	286
6	194	263	224	542	3560	1690	3290	2640	1540	667	339	284
7	193	248	212	3870	3160	1490	11000	2460	1380	645	337	282
8	191	224	203	12900	2920	2290	7420	2420	1260	630	336	281
9	190	415	197	32800	2570	16300	4900	2430	1190	621	331	280
10	190	251	195	23300	2320	23600	3740	2230	1190	629	330	280
11	190	207	204	13200	2160	17700	3180	2080	1200	593	329	279
12	191	200	224	14900	2040	9440	3710	1980	1230	574	326	277
13	189	193	218	16100	1950	10100	6530	1900	1220	584	323	276
14	191	184	266	19400	1810	20100	4520	1760	1670	543	321	274
15	191	227	262	8400	1700	14000	3520	1810	2640	522	318	273
16	193	231	382	5290	1620	7940	2970	1920	1740	510	316	272
17	195	250	383	3810	1560	5910	2630	2100	1480	492	314	274
18	196	218	443	2990	1490	7290	2390	2240	1380	486	314	271
19	192	197	379	2500	1270	6300	2190	2340	1260	480	310	267
20	195	194	323	2130	1260	8400	2190	2460	1160	466	308	267
21	195	189	298	1900	1410	6760	1970	2550	1060	455	305	264
22	195	185	284	2310	1460	5840	1850	2530	1040	454	303	265
23	195	184	279	4820	1550	4770	1850	2550	1040	440	302	264
24	193	197	303	6560	1540	3900	1930	2440	1060	431	300	266
25	195	296	297	6410	1610	3350	2060	2310	1050	415	299	266
26	196	234	274	5000	1590	3010	2190	2260	1040	409	297	268
27	198	213	272	4340	1530	2790	2470	2250	1010	401	297	269
28	205	202	326	3980	1510	2640	2370	2270	946	390	296	270
29	198	196	296	4530	---	2540	3280	2240	925	386	296	270
30	197	194	272	7360	---	2410	2930	2210	833	376	294	267
31	197	---	257	11100	---	2140	---	2190	---	368	292	---
TOTAL	5983	6673	8414	222007	81370	203380	97660	79280	41644	16743	9891	8240
MEAN	193	222	271	7162	2906	6561	3255	2557	1388	540	319	275
MAX	205	415	443	32800	13200	23600	11000	5660	2640	813	363	289
MIN	183	184	195	237	1260	1490	1850	1760	833	368	292	264
AC-FT	11870	13240	16690	440400	161400	403400	193700	157300	82600	33210	19620	16340

SACRAMENTO RIVER BASIN

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11342000 SACRAMENTO RIVER AT DELTA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	362	792	1287	1794	2194	2228	2004	1667	780	329	231	230
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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1945 - 1995		
ANNUAL TOTAL	173095			781285					
ANNUAL MEAN	474			2141			1153		
HIGHEST ANNUAL MEAN							2715		
LOWEST ANNUAL MEAN							228		
HIGHEST DAILY MEAN	5160			Jan 24			32800		
LOWEST DAILY MEAN	171			Aug 13			183		
ANNUAL SEVEN-DAY MINIMUM	172			Aug 25			189		
INSTANTANEOUS PEAK FLOW							43100		
INSTANTANEOUS PEAK STAGE							20.16		
ANNUAL RUNOFF (AC-FT)	343300			1550000			20.16		
10 PERCENT EXCEEDS	1010			4940			Jan 9		
50 PERCENT EXCEEDS	263			630			Oct 3		
90 PERCENT EXCEEDS	175			197			Oct 1		
							Jan 9		
							27.20		
							69800		
							Jan 16		
							Jan 16		
							835100		
							2580		
							520		
							197		

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, Nov. 18-24, Dec. 7-12 and Dec. 29 to Jan. 6, 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 794 ft³/s, May 6, gage height, 4.77 ft; minimum daily, 9.0 ft³/s, Feb. 19.

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	14	22	28	e10	78	16	18	e656	609	346	206	180
2	14	24	31	e9.9	69	76	17	710	623	329	202	178
3	15	21	32	e9.8	50	78	16	564	629	315	199	178
4	17	22	31	e9.6	39	47	20	471	619	304	191	176
5	19	24	37	e9.5	34	26	27	511	623	290	188	153
6	17	26	30	e10	26	17	38	762	627	280	186	127
7	17	26	e30	14	16	15	59	702	623	269	208	123
8	20	23	e29	10	39	15	81	578	596	257	237	123
9	23	25	e28	41	38	41	72	481	555	244	231	106
10	25	24	e27	181	24	82	64	440	518	230	229	70
11	28	24	e26	131	16	96	63	407	493	219	252	27
12	28	26	e25	85	13	61	72	398	473	211	255	27
13	27	22	25	107	11	42	83	377	461	207	255	27
14	29	27	26	151	12	36	77	353	444	188	264	76
15	30	24	27	97	14	37	69	346	439	175	286	182
16	30	21	34	62	12	33	54	346	507	160	299	200
17	30	19	32	42	9.9	30	55	350	546	154	301	217
18	30	e19	24	30	13	32	79	371	533	180	296	212
19	28	e20	20	24	9.0	34	74	389	533	263	277	211
20	28	e21	16	21	9.4	35	80	405	516	308	254	190
21	28	e22	13	26	10	32	86	436	490	301	255	144
22	28	e23	12	23	10	28	76	464	457	295	255	111
23	26	e24	11	29	11	31	70	483	423	286	241	109
24	26	e25	11	28	12	32	76	498	400	260	226	108
25	27	26	9.6	26	14	31	93	508	391	213	223	107
26	27	28	10	23	14	27	112	526	382	189	219	108
27	28	34	11	20	14	23	120	542	377	184	219	111
28	29	31	12	54	14	20	117	566	373	178	219	92
29	29	29	e11	64	---	16	204	575	368	175	221	72
30	24	25	e11	51	---	15	306	591	355	169	219	52
31	20	---	e10	54	---	15	---	602	---	184	202	---
TOTAL	761	727	679.6	1452.8	631.3	1119	2378	15418	14983	7363	7315	3797
MEAN	24.5	24.2	21.9	46.9	22.5	36.1	79.3	497	499	238	236	127
MAX	30	34	37	181	78	96	306	762	629	346	301	217
MIN	14	19	9.6	9.5	9.0	15	16	346	355	154	186	27
AC-FT	1510	1440	1350	2880	1250	2220	4720	30580	29720	14600	14510	7530

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.1	28.2	28.5	29.9	34.7	48.5	107	228	174	88.0	113	55.8
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1929 - 1995			
ANNUAL TOTAL	22079.9				56624.7							
ANNUAL MEAN	60.5				155				80.8			
HIGHEST ANNUAL MEAN									183			
LOWEST ANNUAL MEAN									27.3			
HIGHEST DAILY MEAN	190				762				1220			
LOWEST DAILY MEAN	6.8				9.0				.80			
ANNUAL SEVEN-DAY MINIMUM	6.9				9.8				1.1			
INSTANTANEOUS PEAK FLOW					794				1620			
INSTANTANEOUS PEAK STAGE					4.77				6.05			
ANNUAL RUNOFF (AC-FT)	43800				112300				58540			
10 PERCENT EXCEEDS	146				467				185			
50 PERCENT EXCEEDS	29				63				42			
90 PERCENT EXCEEDS	10				14				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.--No estimated daily discharges. Records fair. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0800	3,290	8.08	Mar. 13	2030	2,410	6.96
Feb. 2	1815	1,020	4.81	Apr. 7	2400	1,070	4.90
Mar. 4	2245	1,440	5.52	May 2	1415	*5,620	*10.39

Minimum daily, 13.0 ft³/s, Aug. 14.

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	69	44	103	81	782	229	601	3890	776	437	56	93
2	52	56	147	60	988	367	561	5300	792	449	52	91
3	37	66	202	55	914	953	527	4880	799	441	85	104
4	38	61	172	55	631	1360	473	4120	844	408	104	107
5	41	53	130	55	473	1310	431	3620	824	349	80	127
6	40	50	163	57	407	818	655	3320	861	312	63	129
7	59	52	131	78	368	537	987	3420	895	181	66	120
8	64	59	86	246	332	435	1020	3440	933	266	53	105
9	41	66	128	804	421	1320	929	3300	925	231	50	96
10	35	76	137	2650	557	1810	819	3060	822	282	60	64
11	28	65	109	3130	512	2020	705	2770	683	196	55	66
12	26	83	90	2350	422	2150	651	2540	609	201	29	69
13	22	75	79	1950	352	2320	609	2350	377	166	17	73
14	20	69	81	1940	295	2290	655	2160	418	183	13	56
15	19	77	83	2090	271	2220	686	1970	512	150	22	46
16	23	72	94	1790	243	1820	641	1810	663	214	28	41
17	55	63	100	1300	273	1400	609	1640	801	187	25	34
18	98	72	129	615	424	1090	596	1490	974	143	20	36
19	73	90	283	413	695	1020	658	1350	1080	101	20	29
20	87	117	333	352	557	1370	724	1200	1050	74	22	28
21	66	105	294	305	427	1610	801	1100	1020	49	20	35
22	61	71	213	281	374	1470	839	1030	936	71	16	33
23	58	88	165	271	335	1310	787	994	808	110	19	27
24	95	89	132	291	303	1210	688	973	702	111	30	23
25	60	52	119	328	280	1230	607	923	606	117	116	26
26	50	88	107	368	263	1140	568	850	555	108	179	38
27	43	90	101	358	251	1020	576	801	534	117	220	34
28	36	76	101	334	241	974	599	768	515	103	164	34
29	30	86	142	580	---	908	971	798	503	98	123	121
30	39	86	98	632	---	783	1990	806	480	87	100	89
31	40	---	82	652	---	682	---	794	---	63	105	---
TOTAL	1505	2197	4334	24471	12391	39176	21963	67467	22297	6005	2012	1974
MEAN	48.5	73.2	140	789	443	1264	732	2176	743	194	64.9	65.8
MAX	98	117	333	3130	988	2320	1990	5300	1080	449	220	129
MIN	19	44	79	55	241	229	431	768	377	49	13	23
AC-FT	2990	4360	8600	48540	24580	77710	43560	133800	44230	11910	3990	3920

SACRAMENTO RIVER BASIN

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11348500 PIT RIVER NEAR CANBY, CA --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.4	103	189	294	409	548	469	451	266	65.7	42.7	62.8
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1904 - 1995			
ANNUAL TOTAL	33076.35				205792							
ANNUAL MEAN	90.6				564				246			
HIGHEST ANNUAL MEAN									676			
LOWEST ANNUAL MEAN									22.4			
HIGHEST DAILY MEAN	543				May 8				8580			
LOWEST DAILY MEAN	.45				Jul 10				.10			
ANNUAL SEVEN-DAY MINIMUM	1.2				Jul 16				.13			
INSTANTANEOUS PEAK FLOW					5620				May 2			
INSTANTANEOUS PEAK STAGE					10.39				May 2			
ANNUAL RUNOFF (AC-FT)	65610				408200				15.00			
10 PERCENT EXCEEDS	191				1380				632			
50 PERCENT EXCEEDS	72				243				92			
90 PERCENT EXCEEDS	7.7				39				15			

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	990	1118	3129	3272	5984	7551	4207	e180
2	---	---	---	---	1133	1254	3161	3332	6053	7597	3931	e178
3	---	---	---	---	1171	1412	3185	3322	6156	7450	3653	e178
4	---	---	---	---	1312	1552	3205	3483	6248	7429	3375	e178
5	---	---	---	---	1446	1694	3055	3638	6262	7408	3364	e178
6	---	---	---	---	1573	1831	3091	3776	6274	7326	3354	e178
7	---	---	---	---	1698	1958	3130	3910	6136	7278	3074	e178
8	---	---	---	---	1656	1891	3158	4017	6156	7596	2790	e178
9	---	---	---	919	1776	2043	3191	4108	6172	7609	2505	e178
10	---	---	---	1970	1868	2176	3219	4021	6212	7380	2224	e186
11	---	---	---	1933	1992	2289	3245	4041	6250	7328	1939	e198
12	---	---	---	1896	2088	2403	3095	4114	6262	7268	1930	e198
13	---	---	---	1877	2188	2508	3135	4190	6299	7159	1926	e198
14	---	---	---	1868	2115	2607	3159	4262	6179	7061	1645	e276
15	---	---	---	1872	1967	2519	3187	4322	6135	7262	1366	e348
16	---	---	---	1870	1898	2617	3210	4289	6167	7429	1081	e394
17	---	---	---	1850	1836	2701	3234	4191	6685	7229	792	e394
18	---	---	---	1768	1774	2786	3262	4249	7053	7073	510	e330
19	---	---	---	1713	1719	2852	3104	4299	7089	6925	507	e274
20	---	---	---	1654	1666	2927	3137	4364	7015	6664	505	e274
21	---	---	---	1597	1614	2980	3159	4424	6765	6307	e356	e274
22	---	---	---	1537	1559	2877	3178	4478	6753	6287	e290	e274
23	---	---	---	1474	1502	2949	3195	4373	6820	6269	e290	e274
24	---	---	---	1411	1442	3015	3206	4280	6982	5920	e256	e274
25	---	---	---	1349	1381	3066	3217	4359	7473	5636	e238	e274
26	---	---	---	1290	1316	3277	3056	4550	7500	5358	e238	e274
27	---	---	---	1236	1237	3305	3087	4966	7403	5076	e238	e274
28	---	---	---	1182	1171	3160	3111	5361	7329	4794	e196	e287
29	---	---	---	1125	---	3020	3180	5740	7331	4782	e186	e371
30	---	---	---	1075	---	3059	3217	5907	7422	4764	e182	e399
31	---	---	---	1030	---	3093	---	5910	---	4487	e180	---
MAX	---	---	---	---	2190	3300	3260	5910	7500	7610	4210	399
MIN	---	---	---	---	990	1120	3050	3270	5980	4490	180	178
a	198	2270	7050	28530	34280	35320	34160	33800	29120	10780	4000	377

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

e Estimated.

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 September 1995.

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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,400 ft³/s, May 3; no flow many days during the year.

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	.00	38	54	54	1390	55	1850	6420	639	133	22	15
2	.00	37	54	55	1900	515	1670	9070	600	103	11	11
3	.00	47	53	54	2180	1390	1470	10400	590	54	.00	.00
4	.00	48	55	54	1970	2250	1280	9180	571	54	.00	1.0
5	1.0	31	54	54	1520	2450	1120	8170	629	54	.00	9.0
6	3.0	48	53	54	1040	2190	1110	6930	591	54	.00	7.0
7	5.0	53	54	54	809	1720	1850	6280	590	54	.00	5.0
8	9.0	53	54	54	973	1070	2680	5570	649	54	.00	7.0
9	6.0	42	54	265	1260	1160	2880	5080	659	54	.00	7.0
10	4.0	52	54	2410	1300	2950	2530	4710	669	54	.00	34
11	3.0	53	54	5110	1190	5680	2140	4430	610	54	.00	53
12	26	54	54	6570	974	7080	1770	4130	456	53	.00	46
13	28	54	54	5060	755	6240	1640	3860	229	53	.00	31
14	28	54	54	4950	601	5340	1720	3600	54	53	.00	42
15	40	53	54	6190	481	5100	1720	3260	55	54	.00	54
16	18	48	54	5140	367	5370	1640	2950	203	53	.00	53
17	21	54	54	3660	374	4840	1510	2620	376	54	.00	44
18	17	54	54	2530	570	3830	1460	2360	481	54	.00	32
19	14	52	54	1610	972	3460	1490	2070	610	53	.00	26
20	29	54	54	843	1210	3150	1580	1810	742	53	.00	25
21	39	53	54	651	1090	4120	1680	1570	775	47	.00	21
22	38	48	54	527	755	5420	1600	1390	764	24	.00	15
23	33	53	54	492	554	4730	1540	1220	659	18	.00	16
24	29	54	54	519	439	4000	1370	1100	580	14	5.0	16
25	30	53	54	519	346	3540	1190	1050	507	16	5.0	26
26	32	53	54	482	278	3190	996	984	258	3.0	5.0	45
27	43	54	54	474	230	2870	888	923	54	.00	5.0	27
28	48	54	54	537	119	2570	923	830	54	.00	5.0	26
29	45	54	54	518	---	2350	1550	753	54	33	7.0	53
30	36	54	54	650	---	2170	3470	690	54	41	19	53
31	41	---	54	926	---	1990	---	649	---	31	16	---
TOTAL	666.00	1509	1673	51066	25647	102790	50317	114059	13762	1429.00	100.00	800.00
MEAN	21.5	50.3	54.0	1647	916	3316	1677	3679	459	46.1	3.23	26.7
MAX	48	54	55	6570	2180	7080	3470	10400	775	133	22	54
MIN	.00	31	53	54	119	55	888	649	54	.00	.00	.00
AC-FT	1320	2990	3320	101300	50870	203900	99800	226200	27300	2830	198	1590

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.5	50.3	54.0	1647	916	3316	1677	3679	459	46.1	3.23	26.7
MAX	21.5	50.3	54.0	1647	916	3316	1677	3679	459	46.1	3.23	26.7
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	21.5	50.3	54.0	1647	916	3316	1677	3679	459	46.1	3.23	26.7
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1995 WATER YEAR

ANNUAL TOTAL	363818.00		
ANNUAL MEAN	997		
HIGHEST DAILY MEAN	10400	May	3
LOWEST DAILY MEAN	.00	Oct	1
ANNUAL SEVEN-DAY MINIMUM	.00	Aug	3
ANNUAL RUNOFF (AC-FT)	721600		
10 PERCENT EXCEEDS	3340		
50 PERCENT EXCEEDS	54		
90 PERCENT EXCEEDS	5.0		

SACRAMENTO RIVER BASIN

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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.--No estimated daily discharges. 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.

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	877	972	996	937	1370	1380	1780	2290	1430	1500	1110	1020
2	907	845	995	893	1560	1440	1800	2290	1460	1190	1110	1060
3	944	988	989	994	1290	1730	1750	2290	1450	1330	1160	1090
4	856	953	1100	989	1370	1660	1670	2370	1340	1220	1210	1110
5	940	1000	966	939	1370	1550	1670	2290	1400	1240	1150	1150
6	963	1000	920	952	1340	1410	1830	2210	1420	1210	1090	1050
7	872	930	1110	974	1250	1330	2160	2040	1430	1300	1190	1100
8	965	964	955	1270	1520	1330	2270	1940	1360	1190	1130	1130
9	912	879	981	853	1100	1540	2210	1850	1400	1150	1120	1100
10	934	1140	986	886	1630	2260	2270	2040	1190	1250	1050	1070
11	953	951	1000	1830	1220	2260	2240	1840	1360	1230	1210	1050
12	918	995	935	1550	1220	2260	1980	1810	1320	1230	1130	1140
13	952	954	1000	1740	1370	2490	2230	1860	1370	1210	1150	1060
14	1040	792	969	1680	1380	2260	2300	1960	1380	1200	1010	1130
15	1050	1100	1040	2190	1280	2280	2310	1840	1550	1180	1110	1100
16	903	901	920	2050	1310	2270	2320	1930	1590	1160	1090	1110
17	850	979	978	1520	1260	2280	1910	1740	1540	1120	1180	1090
18	912	1120	943	1250	1200	2260	1850	1670	1460	1220	1120	1130
19	967	909	1100	1480	1270	2260	1770	1690	1430	1220	1130	1110
20	959	909	994	1250	1360	2180	1740	1680	1400	1150	1100	1170
21	941	991	918	1260	1080	2270	1790	1770	1210	1160	1100	1110
22	947	967	982	1300	1200	2260	1690	1600	1310	1140	1140	1120
23	916	916	969	1110	1200	2260	1600	1690	1320	1170	1090	1120
24	959	987	1030	1260	1190	2260	1630	1620	1430	1170	1130	1080
25	952	1040	953	1230	1180	2260	1640	1500	1330	1120	1090	1140
26	965	1050	885	1290	1350	2120	1630	1640	1320	1140	1090	1100
27	957	967	961	1360	1200	1870	1650	1550	1310	1180	1100	1130
28	982	959	1050	1190	1180	1890	1720	1680	1300	1150	1010	1110
29	898	978	1050	1360	---	1890	2100	1540	1270	1140	1210	1160
30	1020	1010	940	1280	---	1810	2300	1490	789	1160	1050	1110
31	967	---	963	1220	---	1780	---	1520	---	1170	1070	---
TOTAL	29178	29144	30578	40087	36250	61100	57810	57230	40869	37200	34630	33150
MEAN	941	971	986	1293	1295	1971	1927	1846	1362	1200	1117	1105
MAX	1050	1140	1110	2190	1630	2490	2320	2370	1590	1500	1210	1170
MIN	850	792	885	853	1080	1330	1600	1490	789	1120	1010	1020
AC-FT	57870	57810	60650	79510	71900	121200	114700	113500	81060	73790	68690	65750

SACRAMENTO RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1092	1106	1102	1131	1110	1381	1346	1242	1103	1021	992	1030
MAX	1318	1283	1274	1293	1321	1971	1927	1846	1362	1200	1144	1177
(WY)	1987	1987	1987	1995	1987	1995	1995	1995	1995	1995	1987	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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1987 - 1995	
ANNUAL TOTAL	343883.00		487226			
ANNUAL MEAN	942		1335		1138	
HIGHEST ANNUAL MEAN					1335	
LOWEST ANNUAL MEAN					955	
HIGHEST DAILY MEAN	1560	Mar 15	2490	Mar 13	2490	Mar 13 1995
LOWEST DAILY MEAN	.00	Feb 9	789	Jun 30	.00	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	68	Feb 8	908	Oct 1	68	Feb 8 1994
ANNUAL RUNOFF (AC-FT)	682100		966400		824500	
10 PERCENT EXCEEDS	1070		2040		1370	
50 PERCENT EXCEEDS	959		1190		1100	
90 PERCENT EXCEEDS	831		946		922	

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 fair. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	0245	10,400	11.47	Apr. 9	2245	6,630	9.74
Feb. 3	0530	5,110	8.88	May 3	0915	*16,600	*13.65

Minimum daily, 610 ft³/s, Oct. 7.

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	692	1060	1220	1240	e3800	e2760	4610	10400	2720	2180	1460	1200
2	624	999	1310	1190	4210	e3060	4390	13500	2660	1990	1440	1250
3	912	1140	1330	1310	4430	e4750	4190	15900	2600	2070	1450	1260
4	644	960	1470	1280	4380	e5550	3930	14300	2510	1950	1490	1280
5	779	1210	1350	1220	3990	e4980	3840	13000	2570	1860	1390	1330
6	960	1140	1340	1240	3440	e3690	3850	11800	2640	1820	1300	1230
7	610	1120	1400	1300	3040	e3170	4510	10500	2690	1820	1390	1300
8	703	1140	1300	1890	3530	e2960	5800	9420	2590	1710	1420	1310
9	651	1100	1270	2870	3490	e5140	6330	8400	2650	1430	1410	1250
10	883	1330	1250	7190	3540	e7480	5830	8080	2560	1650	1390	1240
11	1000	1120	1270	7250	3230	e7850	5140	7690	2560	1640	1510	1210
12	1040	1170	1250	9420	3070	e8090	4670	7340	2480	1610	1380	1300
13	1010	1130	1330	8900	2940	e9110	4610	7130	2300	1670	1320	1270
14	1090	665	1270	8640	2850	e8650	4740	6920	2170	1600	1160	1310
15	1060	1310	1330	9610	e2650	e8400	4690	6410	2170	1610	1510	1290
16	1030	1110	1260	e8800	e2620	e7400	4640	6130	2510	1440	1380	1320
17	760	1180	1260	e7500	e2580	e6500	4230	5580	2320	1400	1450	1280
18	998	1340	1260	e5060	e2720	e5900	4180	5090	2350	1640	1410	1360
19	1090	1120	1480	e4790	e3260	e5680	4270	4780	2520	1590	1340	1280
20	940	1090	1360	e4000	e3170	e6220	4110	4450	2730	1600	1300	1350
21	1050	1220	1350	e3360	e2560	e6920	4270	4230	2740	1560	1300	1310
22	840	1190	1440	e2980	e2680	e6610	4080	3900	2790	1500	1330	1280
23	1040	1140	1440	e2500	e2620	e6250	3930	3850	2670	1410	1280	1280
24	1060	1210	1350	e2900	e2530	e6230	3830	3590	2650	1390	1320	1220
25	1070	1310	1380	e3060	e2480	e6300	3650	3400	2290	1470	1270	1270
26	1130	1270	1260	e3260	e2760	e5910	3480	3310	2230	1470	1290	1270
27	1110	1180	1280	e3340	e2500	e5390	3370	3010	2220	1490	1280	1310
28	1040	1190	1420	e2920	e2430	e5310	3500	2980	2160	1440	1210	1540
29	1020	1220	1360	e3690	---	e5200	5290	2800	2010	1400	1360	1290
30	1180	1260	1270	e3510	---	e4970	7370	2710	1510	1400	1300	1340
31	1090	---	1230	e3420	---	4830	---	2780	---	1380	1300	---
TOTAL	29106	34624	41090	129640	87500	181260	135330	213380	73570	50190	42140	38730
MEAN	939	1154	1325	4182	3125	5847	4511	6883	2452	1619	1359	1291
MAX	1180	1340	1480	9610	4430	9110	7370	15900	2790	2180	1510	1540
MIN	610	665	1220	1190	2430	2760	3370	2710	1510	1380	1160	1200
AC-FT	57730	68680	81500	257100	173600	359500	268400	423200	145900	99550	83580	76820

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1367	1588	1760	2091	2624	3191	2497	2187	1563	1283	1249	1288
MAX	1722	3181	3834	5351	8539	8539	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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1975 - 1995	
ANNUAL TOTAL	427512		1056560			
ANNUAL MEAN	1171		2895			
HIGHEST ANNUAL MEAN					1885	
LOWEST ANNUAL MEAN					2895	
HIGHEST DAILY MEAN	2300		15900		1149	
LOWEST DAILY MEAN	535		610		28800	
ANNUAL SEVEN-DAY MINIMUM	663		746		535	
INSTANTANEOUS PEAK FLOW			16600		663	
INSTANTANEOUS PEAK STAGE			13.65		30000	
ANNUAL RUNOFF (AC-FT)	848000		2096000		17.03	
10 PERCENT EXCEEDS	1580		6270			
50 PERCENT EXCEEDS	1180		1650			
90 PERCENT EXCEEDS	750		1120			

SACRAMENTO RIVER BASIN

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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 60 ft³/s. See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records were collected by Highland Hydro Constructors, 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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	15	16	16	19	16	16	---	17	15	15	15
2	16	16	16	16	16	22	18	---	19	15	15	15
3	16	15	16	16	15	26	19	---	16	15	15	15
4	16	15	16	16	15	18	16	---	16	15	15	15
5	16	15	30	16	16	16	16	---	16	15	15	15
6	16	15	33	16	16	16	17	---	16	15	15	15
7	16	15	16	19	16	16	20	---	16	15	15	15
8	16	15	16	16	16	16	20	47	16	15	15	15
9	15	15	16	---	15	---	17	26	16	15	15	15
10	16	15	16	---	15	---	15	21	16	15	15	15
11	16	19	16	32	15	---	15	17	16	15	15	15
12	16	15	16	59	15	---	16	16	16	15	15	15
13	16	15	16	---	15	---	21	26	16	15	15	15
14	16	15	16	26	16	---	22	16	16	15	15	15
15	16	15	16	15	15	---	18	16	16	15	18	15
16	16	15	16	15	15	53	15	17	17	15	19	15
17	16	15	16	16	16	23	16	18	16	20	15	15
18	16	15	16	16	16	21	18	16	15	16	15	15
19	16	15	16	16	15	35	17	16	16	17	15	15
20	16	15	16	16	15	---	16	16	16	15	15	15
21	16	15	16	16	16	---	16	16	15	15	18	15
22	16	15	16	17	15	46	16	16	16	15	15	15
23	16	15	15	16	21	22	16	16	16	15	15	15
24	16	16	15	16	16	38	16	16	16	15	15	15
25	16	16	15	15	16	59	16	16	20	15	15	15
26	16	16	16	15	16	19	28	16	19	15	15	15
27	15	16	16	15	16	19	22	16	15	15	15	15
28	15	16	22	15	16	22	25	19	15	15	15	15
29	15	16	16	15	---	18	---	18	15	15	15	15
30	15	16	16	15	---	24	---	17	16	15	18	15
31	15	---	16	16	---	16	---	17	---	15	15	---
TOTAL	490	462	530	---	444	---	---	---	487	473	478	450
MEAN	15.8	15.4	17.1	---	15.9	---	---	---	16.2	15.3	15.4	15.0
MAX	16	19	33	---	21	---	---	---	20	20	19	15
MIN	15	15	15	---	15	---	---	---	15	15	15	15
AC-FT	972	916	1050	---	881	---	---	---	966	938	948	893
a	2020	1970	1890	2310	2360	4200	3870	4290	2920	2670	2560	2580

CAL YR 1994 TOTAL 5742 MEAN 15.7 MAX 39 MIN 15 AC-FT 11390

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

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.--No estimated daily discharges. This station records fishwater release only. The minimum release requirement is 2.0 ft³/s at all times. Flow is computed to 4.0 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.8	2.6	2.8	2.7	2.8	2.8	2.9	2.8	2.6	2.6	2.9
2	2.7	2.9	2.6	2.7	2.8	2.8	2.8	2.9	2.8	2.6	2.7	2.9
3	2.7	2.9	2.6	2.7	2.8	2.8	2.7	2.9	2.8	2.6	2.7	3.0
4	2.7	3.0	2.6	2.7	2.8	2.8	2.7	2.9	2.7	2.6	2.7	3.0
5	2.7	3.0	2.4	2.7	2.9	2.8	2.7	2.9	2.8	2.6	2.7	2.9
6	2.7	3.0	2.5	2.7	2.9	2.8	2.7	2.9	2.8	2.7	2.7	2.9
7	2.7	2.9	2.9	2.7	2.8	2.8	2.6	2.8	2.9	2.7	2.7	3.0
8	2.7	2.9	3.0	2.7	2.8	2.9	2.6	2.8	2.8	2.7	2.7	3.0
9	2.6	2.9	3.0	---	2.8	3.1	2.5	2.8	2.8	2.7	2.8	3.0
10	2.5	2.9	3.0	---	2.8	3.0	2.6	2.8	2.7	2.7	2.8	3.0
11	2.6	2.9	3.0	3.0	2.9	3.0	2.7	2.8	2.7	2.7	2.9	3.0
12	2.7	2.7	2.9	3.0	3.0	3.0	2.7	2.8	2.7	2.7	3.0	3.0
13	2.8	2.7	2.8	3.0	3.1	3.0	2.7	2.8	2.7	2.7	3.0	2.9
14	2.7	2.5	2.7	3.0	3.0	3.0	2.8	2.8	2.7	2.6	3.0	2.9
15	2.7	2.8	2.8	3.0	3.0	3.0	2.8	2.8	2.6	2.5	3.0	3.0
16	2.7	3.1	2.8	3.0	2.9	3.0	2.7	2.8	2.5	2.6	3.0	2.9
17	2.7	3.1	2.7	2.9	2.9	3.0	2.7	2.8	2.5	2.6	3.0	2.9
18	2.7	2.9	2.7	2.8	2.9	3.0	2.7	2.8	2.7	2.7	3.0	2.9
19	2.7	3.0	2.8	2.8	2.9	2.9	2.7	2.9	2.8	2.8	3.0	2.9
20	2.7	3.1	2.6	2.8	2.9	---	2.7	2.9	2.8	3.3	3.0	2.9
21	2.7	3.1	2.7	2.8	2.9	---	2.7	2.8	2.8	3.3	2.9	2.9
22	2.7	2.9	2.8	2.9	2.9	---	2.8	2.7	2.6	3.2	2.9	2.9
23	2.7	2.8	2.7	2.9	2.9	---	2.8	2.6	2.5	3.1	2.8	3.0
24	2.7	2.7	2.7	2.9	2.8	3.0	2.8	2.5	2.7	3.0	2.8	3.0
25	2.7	2.7	2.7	2.9	2.9	3.0	2.8	2.6	2.9	3.0	2.8	2.9
26	2.8	2.7	2.7	2.9	2.9	3.0	2.8	2.6	2.8	2.9	2.7	3.0
27	2.9	2.7	2.7	2.9	2.9	3.0	2.8	2.5	2.7	2.8	2.7	3.0
28	2.9	2.7	2.7	2.9	2.8	2.9	2.8	2.5	2.7	2.7	2.7	2.9
29	2.9	2.7	2.8	2.9	---	2.8	2.9	2.6	2.6	2.7	2.8	2.9
30	2.8	2.6	2.7	2.8	---	2.8	2.9	2.6	2.6	2.7	2.9	2.9
31	2.8	---	2.7	2.7	---	2.8	---	2.7	---	2.6	2.9	---
TOTAL	84.3	85.6	84.9	---	80.6	---	82.0	85.5	81.5	85.7	87.9	88.3
MEAN	2.72	2.85	2.74	---	2.88	---	2.73	2.76	2.72	2.76	2.84	2.94
MAX	2.9	3.1	3.0	---	3.1	---	2.9	2.9	2.9	3.3	3.0	3.0
MIN	2.5	2.5	2.4	---	2.7	---	2.5	2.5	2.5	2.5	2.6	2.9
AC-FT	167	170	168	---	160	---	163	170	162	170	174	175

NOTE: Discharges were above 4.0 ft³/s Jan. 9, 10 and Mar. 20-23.

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	246	246	246	302	291	364	387	313	387	302	291
2	223	257	246	235	291	295	360	398	313	387	294	291
3	195	246	246	235	302	302	336	387	313	387	280	291
4	195	235	246	246	302	302	325	387	313	387	302	291
5	206	235	257	246	302	302	313	387	347	387	281	280
6	195	239	268	246	313	336	328	387	347	398	313	280
7	195	257	257	246	313	325	364	387	351	392	313	283
8	195	246	257	280	310	318	364	387	375	375	313	291
9	195	246	246	50	302	347	364	377	364	375	309	291
10	223	280	246	.00	302	375	364	364	364	375	306	291
11	184	246	246	364	302	375	347	367	364	398	313	280
12	195	246	246	313	302	375	347	375	347	387	299	283
13	195	280	246	302	302	375	352	375	336	387	302	302
14	195	246	246	336	302	347	368	375	336	364	302	302
15	195	84	246	347	302	353	354	375	347	364	291	306
16	206	235	246	364	302	375	347	347	375	364	285	313
17	200	238	246	325	295	364	347	364	375	347	272	313
18	197	246	246	325	302	364	347	356	375	353	291	291
19	231	225	233	313	302	347	347	344	375	387	291	302
20	235	246	257	280	302	161	347	364	388	398	291	302
21	235	246	246	280	291	.00	347	364	420	385	282	302
22	235	250	246	302	291	.00	347	364	398	364	278	302
23	206	261	246	302	280	142	347	336	398	352	302	302
24	206	268	246	291	280	246	344	313	398	328	306	302
25	206	280	246	302	280	398	325	309	398	317	313	302
26	235	280	246	302	280	364	336	302	398	327	313	302
27	223	246	246	302	286	336	336	302	376	340	305	325
28	223	235	257	302	299	443	336	302	387	345	291	325
29	223	235	246	302	---	347	347	302	387	342	291	291
30	223	235	246	302	---	347	387	313	387	342	280	291
31	235	---	246	302	---	364	---	313	---	313	283	---
TOTAL	6489	7315	7690	8588.00	8339	9616.00	10437	11010	10965	11354	9194	8918
MEAN	209	244	248	277	298	310	348	355	365	366	297	297
MAX	235	280	268	364	313	443	387	398	420	398	313	325
MIN	184	84	233	.00	280	.00	313	302	313	313	272	280
AC-FT	12870	14510	15250	17030	16540	19070	20700	21840	21750	22520	18240	17690
a	18270	19920	20560	21590	20700	30340	30570	32330	31670	31390	26290	24950

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	279	278	313	316	313	315	285	256	263	257	241	247
MAX	432	423	410	406	403	379	348	355	365	366	301	307
(WY)	1987	1987	1987	1987	1987	1989	1995	1995	1995	1995	1987	1987
MIN	187	72.5	248	266	254	258	203	150	200	195	170	192
(WY)	1993	1990	1995	1993	1992	1992	1992	1991	1994	1994	1992	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1987 - 1995			
ANNUAL TOTAL	82525				109915.00							
ANNUAL MEAN	226				301				280			
HIGHEST ANNUAL MEAN									362			
LOWEST ANNUAL MEAN									225			
HIGHEST DAILY MEAN	280				443				453			
LOWEST DAILY MEAN	84				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	184				180				.00			
ANNUAL RUNOFF (AC-FT)	163700				218000				202900			
10 PERCENT EXCEEDS	268				375				375			
50 PERCENT EXCEEDS	223				302				280			
90 PERCENT EXCEEDS	186				235				198			

SACRAMENTO RIVER BASIN

63

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	10	9.7	9.4	10	9.5	10	11	9.5	9.3	9.5	9.1
2	9.5	10	9.6	9.2	10	10	9.7	11	9.5	9.2	9.5	8.5
3	9.5	10	9.8	9.4	10	11	9.9	11	9.4	9.4	9.5	9.5
4	9.6	9.9	9.8	9.2	10	11	9.7	11	9.4	9.3	9.5	11
5	9.7	10	9.6	9.3	10	10	9.8	11	9.4	9.1	9.4	11
6	9.5	10	9.6	9.4	10	10	9.9	11	9.4	9.2	9.5	11
7	9.5	10	9.5	9.7	10	10	10	11	9.4	9.3	9.6	11
8	9.4	10	9.5	10	10	10	10	11	9.2	9.4	9.4	10
9	9.5	10	9.5	11	10	11	9.9	11	9.1	9.6	9.2	10
10	9.5	10	9.4	---	10	12	9.8	11	9.1	9.6	9.3	11
11	9.4	10	9.5	---	10	12	9.7	11	9.2	9.7	9.3	10
12	9.4	10	9.5	---	10	12	10	11	9.0	9.6	9.4	10
13	9.3	10	9.4	11	---	12	10	11	9.2	9.4	9.3	10
14	9.4	10	9.3	11	---	12	10	11	9.5	9.2	9.3	11
15	9.4	10	9.3	11	---	12	10	11	9.6	9.3	9.4	11
16	9.3	10	9.4	11	---	11	9.9	10	9.8	9.2	9.3	11
17	9.3	10	9.4	10	8.8	10	9.8	10	9.7	9.0	9.3	11
18	9.8	10	9.5	10	8.8	10	10	10	9.7	8.9	9.5	11
19	9.4	10	9.4	10	9.2	10	9.8	10	9.6	9.2	9.5	11
20	9.6	10	9.4	10	9.2	10	10	10	9.6	9.4	9.3	11
21	9.5	10	9.5	10	9.1	11	9.9	10	9.6	9.1	9.6	10
22	9.6	9.9	9.3	10	9.5	11	9.8	10	9.6	9.3	9.5	10
23	9.6	9.7	9.5	10	9.5	11	9.8	9.8	9.6	9.5	9.5	10
24	9.6	9.6	9.5	10	9.2	11	9.7	9.8	9.7	9.6	9.0	10
25	9.8	10	9.3	10	9.4	11	9.8	9.7	9.6	9.8	9.2	10
26	9.7	9.8	9.5	10	9.4	11	9.9	9.7	9.7	9.8	9.3	11
27	9.6	9.6	9.3	10	9.4	11	10	9.6	9.6	9.7	9.3	11
28	9.6	9.6	9.6	10	9.5	10	9.9	9.6	9.5	9.7	9.3	11
29	9.9	9.5	9.3	10	---	9.9	10	9.7	9.3	9.6	9.3	11
30	10	9.6	9.3	10	---	9.7	11	9.5	9.3	9.6	9.1	11
31	9.9	---	9.2	10	---	9.7	---	9.8	---	9.6	9.4	---
TOTAL	296.4	297.2	293.4	---	---	331.8	297.7	322.2	283.8	291.6	290.5	314.1
MEAN	9.56	9.91	9.46	---	---	10.7	9.92	10.4	9.46	9.41	9.37	10.5
MAX	10	10	9.8	---	---	12	11	11	9.8	9.8	9.6	11
MIN	9.3	9.5	9.2	---	---	9.5	9.7	9.5	9.0	8.9	9.0	8.5
AC-FT	588	589	582	---	---	658	590	639	563	578	576	623

NOTE: Canal was out of service Jan. 10-13, Feb. 13-16 and all flow remained in the natural channel.

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, 41,072 acre-ft, Mar. 12, elevation, 2,757.35 ft; minimum, 29,293 acre-ft, Nov. 23, elevation, 2,747.15 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, 19,348 acre-ft, Aug. 27, elevation, 2,654.60 ft; minimum, 3,233 acre-ft, Jan. 22, elevation, 2,593.30 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, 35,027 acre-ft, Apr. 6, May 3, elevation, 2,679.60 ft; minimum, 19,744 acre-ft, Mar. 1, elevation, 2,644.70 ft.

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

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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)
	11361400	LAKE BRITTON		11363920	IRON CANYON RESERVOIR		11367740	LAKE McCLOUD	
Sept. 30.....	2,751.45	33,948	--	2,646.30	15,969	--	2,654.80	23,621	--
Oct. 31.....	2,755.35	38,564	+4,616	2,639.00	13,373	-2,569	2,646.70	20,477	-3,144
Nov. 30.....	2,751.00	33,439	-5,125	2,637.70	12,944	-429	2,646.40	20,366	-111
Dec. 31.....	2,749.85	32,162	-1,277	2,637.70	12,944	0	2,647.60	20,813	+447
CAL YR 1994..	--	--	-2,819	--	--	+2,669	--	--	+1,856
Jan. 31.....	2,756.80	40,373	+8,211	2,602.30	4,457	-8,487	2,662.60	26,917	+6,104
Feb. 28.....	2,753.30	36,092	-4,281	2,612.30	6,234	+1,777	2,645.10	19,809	-7,028
Mar. 31.....	2,755.40	38,625	+2,533	2,596.70	3,660	-2,574	2,678.00	34,204	+14,315
Apr. 30.....	2,756.70	40,246	+1,621	2,597.70	3,794	+134	2,678.90	34,665	+461
May 31.....	2,756.50	39,994	-252	2,605.50	4,975	+1,181	2,676.80	33,596	-1,069
June 30.....	2,751.90	34,462	-5,532	2,627.90	9,995	+5,020	2,673.50	31,959	-1,637
July 31.....	2,755.10	38,257	+3,795	2,646.10	15,893	+5,898	2,672.50	31,474	-485
Aug. 31.....	2,753.80	36,685	-1,572	2,650.40	17,581	+1,688	2,673.10	31,764	+290
Sept. 30.....	2,754.80	37,891	+1,206	2,644.40	15,260	-2,321	2,668.40	29,535	-2,229
WTR YR 1995..	--	--	+3,943	--	--	-709	--	--	+5,914

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,300 ft³/s, May 3, gage height, 13.95 ft; minimum daily, 155 ft³/s, Dec. 2.

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	166	165	159	157	1850	162	2440	9990	159	176	165	159
2	165	169	155	159	2160	168	2300	13300	160	183	167	158
3	163	160	159	160	2770	486	1720	15200	160	187	167	159
4	163	163	160	161	2180	2710	1640	14100	160	187	168	160
5	172	164	160	161	1850	2650	1320	12100	160	185	167	161
6	167	160	158	160	1470	2460	1950	10500	160	182	167	161
7	166	159	157	163	517	2020	3120	8560	159	179	166	159
8	165	160	156	161	167	1120	4400	6860	159	182	165	160
9	166	162	156	180	523	2240	4920	6140	160	186	165	161
10	166	161	157	6320	811	7290	4510	5870	160	186	166	159
11	166	158	159	5720	415	11600	3020	5500	160	182	166	158
12	165	158	159	7830	205	12700	2980	4840	160	182	168	158
13	163	161	158	7720	284	12000	2830	4760	167	179	166	166
14	162	164	158	8210	162	9660	3080	4410	165	178	168	166
15	160	168	158	8360	163	9680	2960	4040	163	179	168	161
16	159	170	160	8170	162	10000	2610	3790	161	176	167	158
17	162	161	160	5660	162	7860	1930	3340	160	172	163	157
18	163	160	161	2920	162	6520	1790	2290	160	176	160	159
19	160	160	160	1990	162	5830	2040	2280	160	178	163	158
20	161	160	160	844	163	6000	2020	2030	176	176	173	158
21	164	162	159	183	185	7880	2040	1610	917	174	207	156
22	164	160	157	176	164	8530	2010	1560	188	174	160	157
23	164	158	157	172	160	8370	1630	1170	189	175	159	159
24	164	159	158	164	159	6950	1390	1120	188	176	162	158
25	162	161	164	164	158	5840	1510	941	185	172	170	163
26	165	162	161	164	162	4840	956	511	181	169	178	162
27	165	165	161	164	161	4120	728	386	179	167	178	161
28	168	165	161	163	161	3310	1170	176	179	166	160	163
29	156	163	156	162	---	3270	4050	176	181	166	158	164
30	163	163	158	164	---	3010	6760	161	182	166	158	160
31	162	---	157	170	---	2520	---	160	---	166	158	---
TOTAL	5077	4861	4919	67052	17648	171896	75824	147871	5798	5482	5173	4799
MEAN	164	162	159	2163	630	5545	2527	4770	193	177	167	160
MAX	172	170	164	8360	2770	12700	6760	15200	917	187	207	166
MIN	156	158	155	157	158	162	728	160	159	166	158	156
AC-FT	10070	9640	9760	133000	35000	341000	150400	293300	11500	10870	10260	9520
a	74660	88170	94290	146200	162700	177100	169900	174400	165500	113000	101200	92670
b	91050	102600	110100	196000	217900	243000	239900	245100	205200	138900	119400	107600

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	1952
LOWEST ANNUAL MEAN	1703	1934
HIGHEST DAILY MEAN	26200	Dec 12 1937
LOWEST DAILY MEAN	234	Sep 13 1953
ANNUAL SEVEN-DAY MINIMUM	1450	Aug 2 1936
INSTANTANEOUS PEAK FLOW	a30200	Dec 12 1937
INSTANTANEOUS PEAK STAGE	17.90	Dec 12 1937
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	239	225	424	921	970	1172	808	504	222	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1955 - 1995

ANNUAL TOTAL	58689	516400	
ANNUAL MEAN	161	1415	495
HIGHEST ANNUAL MEAN			1868
LOWEST ANNUAL MEAN			98.4
HIGHEST DAILY MEAN	186	Jun 2	15200
LOWEST DAILY MEAN	155	Jan 5	155
ANNUAL SEVEN-DAY MINIMUM	157	Jan 17	157
INSTANTANEOUS PEAK FLOW			16300
INSTANTANEOUS PEAK STAGE			13.95
ANNUAL RUNOFF (AC-FT)	116400	1024000	358900
10 PERCENT EXCEEDS	164	5150	1130
50 PERCENT EXCEEDS	160	166	154
90 PERCENT EXCEEDS	158	159	59

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 fair. 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, 450 ft³/s, Mar. 14, 1995; minimum daily, 7.4 ft³/s, Sept. 8, 21, 22, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 450 ft³/s, Mar. 14; minimum daily, 8.1 ft³/s, Oct. 30, 31.

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	8.9	9.2	14	11	254	30	62	154	21	16	17	15
2	8.8	8.8	15	10	173	82	62	111	21	19	17	16
3	8.6	8.6	16	10	130	111	62	91	22	16	17	15
4	8.8	8.7	15	10	104	94	62	77	21	16	17	15
5	8.8	9.4	12	10	89	80	e70	66	20	16	17	16
6	8.8	12	12	14	75	69	e93	55	18	16	18	16
7	8.7	10	11	22	69	60	e160	48	20	16	18	16
8	8.6	8.7	10	92	64	78	205	45	22	16	18	16
9	8.6	12	10	195	55	276	177	41	23	16	18	15
10	8.6	11	10	148	49	266	118	38	24	16	18	14
11	8.3	10	10	113	44	211	105	37	23	16	17	14
12	8.3	11	e10	158	48	246	97	34	20	16	17	14
13	8.3	9.9	e10	244	47	267	108	32	13	16	17	15
14	8.3	9.4	e10	272	34	355	91	30	17	16	17	15
15	8.4	9.5	e10	175	27	326	82	29	34	16	17	15
16	8.4	9.8	11	114	22	212	74	28	17	16	17	15
17	8.4	10	13	70	20	185	67	32	17	16	17	15
18	8.4	9.4	15	50	22	170	66	35	36	16	17	15
19	8.4	9.3	13	43	21	145	59	34	23	16	17	15
20	8.3	9.4	12	36	21	197	58	34	18	16	17	14
21	8.3	9.4	12	29	23	177	51	33	17	16	17	13
22	8.3	9.4	12	26	26	e174	45	31	16	16	16	13
23	8.3	9.4	12	24	29	e174	43	28	16	16	16	13
24	8.3	9.5	12	37	30	e117	42	27	16	16	16	13
25	8.3	10	12	21	29	e100	40	26	16	16	16	13
26	8.3	9.7	11	35	28	e84	38	25	16	16	16	13
27	8.3	9.5	12	21	25	e89	39	25	16	16	16	13
28	8.4	9.3	13	33	23	e68	42	24	16	17	16	14
29	8.2	9.3	12	40	---	e66	146	23	16	17	16	14
30	8.1	9.5	11	87	---	63	96	22	16	17	15	13
31	8.1	---	11	189	---	62	---	22	---	17	16	---
TOTAL	261.6	291.1	369	2339	1581	4634	2460	1337	591	503	521	433
MEAN	8.44	9.70	11.9	75.5	56.5	149	82.0	43.1	19.7	16.2	16.8	14.4
MAX	8.9	12	16	272	254	355	205	154	36	19	18	16
MIN	8.1	8.6	10	10	20	30	38	22	13	16	15	13
AC-FT	519	577	732	4640	3140	9190	4880	2650	1170	998	1030	859
a	0	0	7.9	1200	2710	2640	2830	3120	2240	488	20	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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	10.8	14.1	45.5	36.4	82.6	49.4	30.1	17.1	12.9	12.5	11.2
MAX	13.6	11.9	16.3	75.5	56.5	149	82.0	43.1	19.7	16.2	16.8	14.4
(WY)	1994	1994	1994	1995	1995	1995	1995	1995	1995	1995	1995	1995
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1994 - 1995			
ANNUAL TOTAL	4605.2				15320.7							
ANNUAL MEAN	12.6				42.0				27.8			
HIGHEST ANNUAL MEAN									42.0			
LOWEST ANNUAL MEAN									13.6			
HIGHEST DAILY MEAN	20				Feb 27				355			
LOWEST DAILY MEAN	7.4				Sep 8				8.1			
ANNUAL SEVEN-DAY MINIMUM	7.5				Sep 17				8.2			
INSTANTANEOUS PEAK FLOW					450				Mar 14			
ANNUAL RUNOFF (AC-FT)	9130				30390				20130			
10 PERCENT EXCEEDS	17				109				62			
50 PERCENT EXCEEDS	13				17				16			
90 PERCENT EXCEEDS	8.0				9.3				8.4			

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 267 ft³/s, Mar. 15; minimum daily, 0.07 ft³/s, Oct. 11.

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	.10	.34	.69	.50	43	12	54	111	6.2	13	7.8	5.7
2	.11	.42	.72	.50	32	18	53	93	5.9	13	7.7	5.7
3	.13	.34	1.3	.50	21	23	52	80	5.5	13	7.5	5.6
4	.13	.34	.79	.50	18	20	53	72	5.2	13	7.4	5.4
5	.13	.39	.69	.50	16	18	57	67	5.1	12	7.3	5.4
6	.13	.44	.66	.90	15	17	126	61	4.8	12	7.4	5.4
7	.12	.44	.56	1.9	14	16	131	58	4.8	12	7.3	5.3
8	.10	.39	.56	7.2	15	18	106	55	4.6	12	7.1	5.4
9	.10	.79	.56	13	13	83	89	53	4.3	12	6.9	5.2
10	.10	.51	.58	13	12	93	80	51	4.1	12	6.8	5.1
11	.07	.45	.62	11	12	83	75	50	4.1	11	6.8	5.1
12	.09	.50	.56	14	12	83	73	47	3.8	11	6.8	5.1
13	.10	.42	.56	37	12	89	81	46	7.4	11	6.7	5.1
14	.10	.39	.59	65	11	162	70	43	12	11	6.6	5.0
15	.10	.42	.57	27	10	207	65	42	14	10	6.5	5.1
16	.10	.48	.65	13	10	158	61	40	12	10	6.5	5.0
17	.10	.52	.62	8.0	10	129	58	27	12	9.8	6.5	5.0
18	.10	.42	.69	6.0	10	128	57	20	16	9.9	6.4	5.0
19	.10	.41	.62	5.3	10	115	54	17	13	9.7	6.2	5.0
20	.10	.40	.56	4.5	10	150	53	16	12	9.5	6.2	5.1
21	.10	.39	.53	3.8	10	131	50	15	13	9.4	6.2	4.9
22	.10	.39	.50	3.6	10	110	48	15	14	9.3	6.1	4.7
23	.10	.40	.51	6.7	10	94	46	14	14	9.3	6.1	4.7
24	.10	.45	.59	9.6	10	84	46	13	14	9.1	6.0	4.8
25	.10	.70	.53	9.0	10	75	45	12	14	8.7	6.0	4.9
26	.10	.58	.50	11	10	69	44	11	14	8.6	6.0	5.0
27	.10	.54	.53	11	11	64	45	9.7	14	8.5	6.0	5.0
28	.10	.50	.61	12	11	60	44	8.7	13	8.2	5.9	5.0
29	.10	.50	.53	13	---	58	96	7.6	13	8.1	5.9	5.0
30	.10	.51	.50	14	---	55	77	7.0	13	8.1	5.8	4.8
31	.10	---	.51	33	---	54	---	6.6	---	7.9	5.8	---
TOTAL	3.21	13.77	18.99	356.00	388	2476	1989	1168.6	292.8	322.1	204.2	153.5
MEAN	.10	.46	.61	11.5	13.9	79.9	66.3	37.7	9.76	10.4	6.59	5.12
MAX	.13	.79	1.3	65	43	207	131	111	16	13	7.8	5.7
MIN	.07	.34	.50	.50	10	12	44	6.6	3.8	7.9	5.8	4.7
AC-FT	6.4	27	38	706	770	4910	3950	2320	581	639	405	304

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.42	1.65	2.07	7.24	8.60	42.8	35.0	20.7	6.00	5.51	3.34	2.60
MAX	2.74	2.84	3.53	11.5	13.9	79.9	66.3	37.7	9.76	10.4	6.59	5.12
(WY)	1994	1994	1994	1995	1995	1995	1995	1995	1995	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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1994 - 1995	
ANNUAL TOTAL	719.24		7386.17			
ANNUAL MEAN	1.97		20.2		11.4	
HIGHEST ANNUAL MEAN					20.2	
LOWEST ANNUAL MEAN					2.64	
HIGHEST DAILY MEAN	7.1 Mar 17		207 Mar 15		207 Mar 15 1995	
LOWEST DAILY MEAN	.07 Aug 12		.07 Oct 11		.07 Aug 12 1994	
ANNUAL SEVEN-DAY MINIMUM	.07 Aug 12		.09 Oct 8		.07 Aug 12 1994	
INSTANTANEOUS PEAK FLOW			267 Mar 15		267 Mar 15 1995	
ANNUAL RUNOFF (AC-FT)	1430		14650		8290	
10 PERCENT EXCEEDS	4.4		64		33	
50 PERCENT EXCEEDS	1.1		7.8		3.4	
90 PERCENT EXCEEDS	.07		.39		.10	

SACRAMENTO RIVER BASIN

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	1145	13,400	13.45	Apr. 8	2030	6,300	11.21
Mar. 11	1500	*29,300	unknown	May 3	1615	19,900	*14.92

Minimum daily, 134 ft³/s, Sept. 22.

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	141	154	159	142	1460	243	3040	12000	218	181	153	143
2	148	148	151	139	2480	345	2930	15200	219	170	151	145
3	141	144	159	140	3060	430	2300	17500	216	174	150	145
4	142	144	146	142	2400	2880	2080	16500	222	178	150	144
5	142	150	144	141	2050	2780	1750	13900	222	173	145	150
6	146	148	146	153	1690	2580	3010	12000	191	168	148	149
7	146	148	147	199	917	2120	4120	9640	195	163	150	143
8	149	148	148	395	344	1450	5340	7660	210	161	150	142
9	149	161	140	614	546	3030	5830	6740	207	150	151	145
10	148	155	144	5290	1180	8410	5330	6370	201	158	151	150
11	149	149	142	6070	811	e13900	3670	6020	200	157	153	153
12	144	151	148	8240	580	15100	3630	5240	203	163	144	137
13	141	154	147	8970	766	14500	3500	5130	189	170	145	140
14	147	144	155	9210	329	12100	3690	4750	236	166	150	146
15	147	150	149	8960	328	11800	3510	4340	286	164	159	142
16	151	148	152	8660	262	10800	3060	4030	238	156	164	148
17	148	148	149	5920	250	9260	2390	3580	239	154	152	146
18	145	145	152	3100	248	7630	2160	2460	292	159	150	142
19	153	141	147	2110	247	6750	2360	2370	257	160	150	150
20	152	145	152	1130	247	7480	2400	2290	243	154	151	151
21	150	144	148	260	413	9930	2410	1800	699	163	150	142
22	164	144	151	233	460	10700	2370	1840	220	165	149	134
23	169	148	149	249	332	10300	1970	1360	212	147	156	135
24	169	141	149	231	246	8670	1690	1290	207	155	152	137
25	153	156	142	223	243	7220	1820	1090	204	156	143	143
26	152	149	141	277	240	5940	1360	856	196	157	140	156
27	153	147	144	316	238	5060	1120	536	195	158	138	143
28	151	145	146	327	235	4100	1310	469	189	152	144	151
29	151	147	145	322	---	4020	4990	463	189	148	145	143
30	146	146	143	372	---	3720	7920	356	188	146	148	138
31	143	---	145	532	---	3160	---	228	---	154	147	---
TOTAL	4630	4442	4580	73067	22602	206408	93060	168008	6983	4980	4629	4333
MEAN	149	148	148	2357	807	6658	3102	5420	233	161	149	144
MAX	169	161	159	9210	3060	15100	7920	17500	699	181	164	156
MIN	141	141	140	139	235	243	1120	228	188	146	138	134
AC-FT	9180	8810	9080	144900	44830	409400	184600	333200	13850	9880	9180	8590

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.42	1.65	2.07	7.24	8.60	42.8	35.0	20.7	6.00	5.51	3.34	2.60
MAX	2.74	2.84	3.53	11.5	13.9	79.9	66.3	37.7	9.76	10.4	6.59	5.12
(WY)	1994	1994	1994	1995	1995	1995	1995	1995	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1994 - 1995			
ANNUAL TOTAL	719.24				7386.17							
ANNUAL MEAN	1.97				20.2				11.4			
HIGHEST ANNUAL MEAN									20.2			
LOWEST ANNUAL MEAN									2.64			
HIGHEST DAILY MEAN	7.1 Mar 17				207 Mar 15				207 Mar 15			
LOWEST DAILY MEAN	.07 Aug 12				.07 Oct 11				.07 Aug 12			
ANNUAL SEVEN-DAY MINIMUM	.07 Aug 12				.09 Oct 8				.07 Aug 12			
INSTANTANEOUS PEAK FLOW					267 Mar 15				267 Mar 15			
ANNUAL RUNOFF (AC-FT)	1430				14650				8290			
10 PERCENT EXCEEDS	4.4				64				33			
50 PERCENT EXCEEDS	1.1				7.8				3.4			
90 PERCENT EXCEEDS	.07				.39				.10			

SACRAMENTO RIVER BASIN

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	1145	13,400	13.45	Apr. 8	2030	6,300	11.21
Mar. 11	1500	*29,300	unknown	May 3	1615	19,900	*14.92

Minimum daily, 134 ft³/s, Sept. 22.

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	141	154	159	142	1460	243	3040	12000	218	181	153	143
2	148	148	151	139	2480	345	2930	15200	219	170	151	145
3	141	144	159	140	3060	430	2300	17500	216	174	150	145
4	142	144	146	142	2400	2880	2080	16500	222	178	150	144
5	142	150	144	141	2050	2780	1750	13900	222	173	145	150
6	146	148	146	153	1690	2580	3010	12000	191	168	148	149
7	146	148	147	199	917	2120	4120	9640	195	163	150	143
8	149	148	148	395	344	1450	5340	7660	210	161	150	142
9	149	161	140	614	546	3030	5830	6740	207	150	151	145
10	148	155	144	5290	1180	8410	5330	6370	201	158	151	150
11	149	149	142	6070	811	e13900	3670	6020	200	157	153	153
12	144	151	148	8240	580	15100	3630	5240	203	163	144	137
13	141	154	147	8970	766	14500	3500	5130	189	170	145	140
14	147	144	155	9210	329	12100	3690	4750	236	166	150	146
15	147	150	149	8960	328	11800	3510	4340	286	164	159	142
16	151	148	152	8660	262	10800	3060	4030	238	156	164	148
17	148	148	149	5920	250	9260	2390	3580	239	154	152	146
18	145	145	152	3100	248	7630	2160	2460	292	159	150	142
19	153	141	147	2110	247	6750	2360	2370	257	160	150	150
20	152	145	152	1130	247	7480	2400	2290	243	154	151	151
21	150	144	148	260	413	9930	2410	1800	699	163	150	142
22	164	144	151	233	460	10700	2370	1840	220	165	149	134
23	169	148	149	249	332	10300	1970	1360	212	147	156	135
24	169	141	149	231	246	8670	1690	1290	207	155	152	137
25	153	156	142	223	243	7220	1820	1090	204	156	143	143
26	152	149	141	277	240	5940	1360	856	196	157	140	156
27	153	147	144	316	238	5060	1120	536	195	158	138	143
28	151	145	146	327	235	4100	1310	469	189	152	144	151
29	151	147	145	322	---	4020	4990	463	189	148	145	143
30	146	146	143	372	---	3720	7920	356	188	146	148	138
31	143	---	145	532	---	3160	---	228	---	154	147	---
TOTAL	4630	4442	4580	73067	22602	206408	93060	168008	6983	4980	4629	4333
MEAN	149	148	148	2357	807	6658	3102	5420	233	161	149	144
MAX	169	161	159	9210	3060	15100	7920	17500	699	181	164	156
MIN	141	141	140	139	235	243	1120	228	188	146	138	134
AC-FT	9180	8810	9080	144900	44830	409400	184600	333200	13850	9880	9180	8590

e Estimated.

SACRAMENTO RIVER BASIN

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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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	209	214	484	973	1132	1398	1133	624	241	131	130	124
MAX	2322	2469	3889	8804	9457	6658	8441	5420	1656	163	448	284
(WY)	1944	1944	1965	1970	1986	1995	1952	1995	1971	1971	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1944 - 1995

ANNUAL TOTAL	53942	597722	
ANNUAL MEAN	148	1638	563
HIGHEST ANNUAL MEAN			1638
LOWEST ANNUAL MEAN			86.5
HIGHEST DAILY MEAN	201	Feb 28	17500
LOWEST DAILY MEAN	132	May 2	134
ANNUAL SEVEN-DAY MINIMUM	135	Jun 27	141
INSTANTANEOUS PEAK FLOW			29300
INSTANTANEOUS PEAK STAGE			14.92
ANNUAL RUNOFF (AC-FT)	107000	1186000	408200
10 PERCENT EXCEEDS	160	5870	1500
50 PERCENT EXCEEDS	146	169	136
90 PERCENT EXCEEDS	137	144	72

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	665	867	537	1770	946	1640	1690	1370	613	1050	615
2	253	694	322	.00	1610	949	1530	1350	1190	350	688	508
3	452	397	263	486	1640	1280	1590	1310	1320	728	797	832
4	496	815	368	1170	1510	1850	1590	1470	1030	579	921	772
5	570	431	862	790	1570	1570	1580	1640	1170	1100	788	1360
6	803	172	226	837	1560	996	1670	1500	1200	1140	911	649
7	928	407	270	719	876	1190	1710	1580	1360	1100	917	626
8	34	550	675	1590	1560	1200	1870	1440	1310	879	815	850
9	42	613	481	1790	1540	1600	1720	1490	1120	.00	1180	335
10	806	232	112	1910	1630	1870	1610	1610	1150	589	761	724
11	790	485	178	1950	1500	1630	1600	1550	999	1080	856	987
12	766	129	685	1940	1400	1750	1640	1540	1230	1200	452	672
13	590	294	754	1930	1480	1850	1570	1630	915	1030	43	970
14	595	552	1010	1930	1400	1850	1620	1470	934	869	810	795
15	442	1040	349	1930	1280	1850	1590	1600	1030	1170	1190	928
16	246	732	202	1910	1420	1870	1520	1360	1380	646	308	435
17	900	185	364	1790	1260	1880	1600	1530	1330	910	914	678
18	637	730	159	1850	1280	1710	1590	1550	746	1040	986	1100
19	597	251	765	1470	1170	1680	1630	1250	1400	1030	810	907
20	686	76	630	1460	1160	1710	1580	1290	1250	1070	796	1480
21	722	887	784	1600	1040	1600	1580	878	1270	1040	1020	903
22	.00	496	605	1540	882	1710	1470	1450	1140	510	782	1120
23	136	622	123	1400	826	1490	1490	1490	1300	894	585	828
24	1290	68	249	1250	1000	1610	1300	1470	1200	754	876	84
25	1070	443	.00	1630	953	1530	1650	1420	1040	824	899	910
26	1240	314	548	1540	1080	1440	1620	1400	938	908	256	1430
27	1010	497	474	1400	934	1550	1500	1260	953	1040	557	1090
28	505	755	459	1060	941	1650	1640	1420	1230	857	1200	460
29	273	612	682	1430	---	1550	1630	1450	1060	667	1110	799
30	64	638	789	1300	---	1550	1550	1470	1380	858	631	1290
31	520	---	657	1360	---	1590	---	1630	---	1040	1080	---
TOTAL	17696.00	14782	14912.00	43499.00	36272	48501	47880	45188	34945	26516.00	24989	25137
MEAN	571	493	481	1403	1295	1565	1596	1458	1165	855	806	838
MAX	1290	1040	1010	1950	1770	1880	1870	1690	1400	1200	1200	1480
MIN	.00	68	.00	.00	826	946	1300	878	746	.00	43	84
AC-FT	35100	29320	29580	86280	71950	96200	94970	89630	69310	52590	49570	49860
a	96980	113300	121700	213300	229300	252400	243300	248400	224500	155100	132000	122000

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	729	737	864	952	989	1152	1137	996	876	833	795	775
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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1966 - 1995
ANNUAL TOTAL	210996.00	380317.00	
ANNUAL MEAN	578	1042	898
HIGHEST ANNUAL MEAN			1313
LOWEST ANNUAL MEAN			547
HIGHEST DAILY MEAN	1550	1950	2420
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	226	351	.00
ANNUAL RUNOFF (AC-FT)	418500	754400	650800
10 PERCENT EXCEEDS	943	1630	1490
50 PERCENT EXCEEDS	592	1040	863
90 PERCENT EXCEEDS	167	343	378

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.--No estimated daily discharges. 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 fighwater 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.9	3.8	3.9	5.4	3.8	3.8	4.1	3.8	3.8	3.8	3.8
2	3.8	3.9	3.9	3.9	4.2	4.0	3.8	3.8	3.8	3.8	3.7	3.8
3	3.8	3.9	3.9	3.9	3.9	4.2	3.8	3.8	3.8	3.8	3.7	3.8
4	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.9
5	3.8	3.9	3.9	3.8	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.9
6	3.8	3.9	3.8	3.9	3.8	3.8	5.0	3.8	3.8	3.8	3.7	3.8
7	3.8	3.8	3.8	6.1	3.8	3.8	6.1	3.8	3.7	3.8	3.7	3.8
8	3.8	3.8	3.9	---	3.8	3.9	4.9	3.8	3.8	3.8	3.7	3.8
9	3.8	3.9	3.8	---	3.8	11	4.2	3.8	3.8	3.8	3.8	3.8
10	3.8	3.8	3.8	---	3.8	11	3.9	3.8	3.8	3.8	3.8	3.9
11	3.8	3.8	3.8	9.6	3.8	---	3.8	3.8	3.8	3.8	3.8	3.9
12	3.8	3.8	3.9	11	3.8	11	3.8	3.8	3.8	3.7	3.8	3.9
13	3.8	3.8	3.9	---	3.8	10	4.0	3.8	3.8	3.8	3.8	3.9
14	3.8	3.8	3.8	---	3.8	---	3.8	3.8	3.8	3.7	3.8	3.9
15	3.8	3.8	3.8	---	3.8	11	3.8	3.8	3.9	3.8	3.8	3.9
16	3.8	3.8	3.9	6.4	3.8	8.9	3.8	3.8	3.8	3.8	3.8	3.9
17	3.8	3.8	4.0	4.3	3.8	6.9	3.8	3.8	3.8	3.8	3.8	3.9
18	3.8	3.8	4.1	3.9	3.8	5.6	3.8	3.8	3.8	3.8	3.8	3.9
19	3.8	3.8	4.0	3.9	3.8	4.6	3.7	3.8	3.8	3.7	3.8	3.9
20	3.8	3.8	3.9	3.9	3.8	6.2	3.8	3.8	3.8	3.7	3.8	3.8
21	3.8	3.8	3.8	3.9	3.8	4.9	3.8	3.8	3.8	3.8	3.8	3.8
22	3.8	3.8	3.9	3.9	3.8	4.5	3.8	3.8	3.8	3.8	3.8	3.7
23	3.8	3.9	3.9	3.9	3.8	4.2	3.8	3.8	3.8	3.8	3.8	3.7
24	3.8	3.9	3.9	3.9	3.8	4.0	3.8	3.8	3.8	3.8	3.8	3.8
25	3.8	3.9	3.9	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.8	3.8
26	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.7	3.8	3.8	3.8	3.8
27	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.8
28	3.8	3.8	4.0	3.9	3.8	3.8	3.8	3.8	3.8	3.7	3.9	3.8
29	3.8	3.9	3.9	3.8	---	3.8	4.0	3.8	3.8	3.7	3.9	3.8
30	3.8	3.8	3.8	4.0	---	3.8	3.9	3.8	3.8	3.8	3.8	3.8
31	3.8	---	3.8	5.6	---	3.8	---	3.8	---	3.8	3.8	---
TOTAL	117.9	115.1	120.3	---	108.5	---	119.6	118.0	114.0	117.2	117.5	115.0
MEAN	3.80	3.84	3.88	---	3.87	---	3.99	3.81	3.80	3.78	3.79	3.83
MAX	3.9	3.9	4.1	---	5.4	---	6.1	4.1	3.9	3.8	3.9	3.9
MIN	3.8	3.8	3.8	---	3.8	---	3.7	3.7	3.7	3.7	3.7	3.7
AC-FT	234	228	239	---	215	---	237	234	226	232	233	228

SACRAMENTO RIVER BASIN

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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.--No estimated daily discharges. 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 1991-95) 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s, Jan. 13, gage-height, 4.84 ft; minimum daily, 8.9 ft³/s, several days during October.

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	10	12	16	18	562	46	202	630	30	19	16	19
2	10	12	17	17	381	164	191	413	17	16	16	19
3	9.3	11	28	17	294	200	180	343	17	17	16	19
4	10	11	16	19	258	160	166	297	17	17	16	19
5	10	14	16	19	221	139	162	266	17	17	17	19
6	10	15	16	17	200	113	353	277	17	17	17	19
7	10	13	17	74	178	91	388	207	17	17	16	19
8	10	12	19	154	160	117	324	185	17	17	16	19
9	8.9	19	17	474	143	722	280	176	18	17	16	19
10	8.9	17	16	412	129	625	256	156	15	17	16	19
11	8.9	15	16	222	113	494	233	145	15	17	16	19
12	8.9	14	17	342	111	538	214	128	23	17	16	19
13	9.3	13	18	933	147	635	253	118	16	17	16	19
14	9.3	13	21	994	108	1060	209	102	16	17	16	19
15	9.3	14	19	600	80	794	198	91	27	17	16	19
16	9.3	16	16	374	66	557	170	83	15	17	16	19
17	9.3	16	16	245	58	402	148	79	16	16	16	19
18	8.9	14	16	195	52	391	164	79	29	16	16	19
19	8.9	13	16	160	48	388	128	79	16	16	16	18
20	8.9	13	16	134	47	534	152	60	16	16	16	18
21	9.3	13	17	104	46	525	117	56	16	16	16	17
22	9.3	12	20	114	44	428	103	50	17	16	16	17
23	8.9	12	19	162	37	381	94	44	17	16	16	17
24	9.3	12	20	136	34	314	87	44	17	16	16	17
25	9.3	22	20	114	32	288	79	44	16	16	18	18
26	10	16	19	174	30	264	71	44	17	16	21	18
27	10	15	19	226	30	248	84	44	18	16	21	18
28	10	14	20	235	29	233	83	44	17	16	21	18
29	9.3	14	18	221	---	223	347	44	17	16	21	18
30	9.3	14	19	299	---	211	264	44	17	16	20	18
31	9.3	---	18	485	---	204	---	44	---	16	19	---
TOTAL	292.1	421	558	7690	3638	11489	5700	4416	540	513	527	554
MEAN	9.42	14.0	18.0	248	130	371	190	142	18.0	16.5	17.0	18.5
MAX	10	22	28	994	562	1060	388	630	30	19	21	19
MIN	8.9	11	16	17	29	46	71	44	15	16	16	17
AC-FT	579	835	1110	15250	7220	22790	11310	8760	1070	1020	1050	1100
a	0	12	238	3440	5290	5380	5860	5080	3560	1500	450	0

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

SACRAMENTO RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.0	14.1	18.2	73.4	62.2	155	93.0	60.7	20.7	13.7	12.1	11.9
MAX	18.5	16.1	28.7	248	130	371	190	142	31.0	16.5	18.9	18.5
(WY)	1994	1994	1993	1995	1995	1995	1995	1995	1993	1995	1993	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1991 - 1995			
ANNUAL TOTAL	7484.9				36338.1							
ANNUAL MEAN	20.5				99.6				45.6			
HIGHEST ANNUAL MEAN									99.6			
LOWEST ANNUAL MEAN									20.1			
HIGHEST DAILY MEAN	91				1060				1220			
LOWEST DAILY MEAN	8.0				8.9				6.6			
ANNUAL SEVEN-DAY MINIMUM	8.1				9.1				6.6			
INSTANTANEOUS PEAK FLOW					1690				1690			
INSTANTANEOUS PEAK STAGE					4.84				4.84			
ANNUAL RUNOFF (AC-FT)	14850				72080				33040			
10 PERCENT EXCEEDS	41				290				104			
50 PERCENT EXCEEDS	15				19				17			
90 PERCENT EXCEEDS	8.9				12				8.6			

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.--No estimated daily discharges. 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 1991-95) 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s, Jan. 9, gage height, 5.70 ft; minimum daily, 10 ft³/s, for many days during October.

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	10	14	19	17	391	21	148	410	18	18	18	24
2	10	12	20	17	269	115	138	149	18	18	18	24
3	11	11	17	16	219	163	132	64	18	18	18	24
4	12	11	17	16	185	125	127	37	18	18	18	24
5	12	12	19	17	157	111	128	120	18	18	18	23
6	11	14	20	20	142	88	234	162	18	18	18	23
7	11	15	18	28	132	69	291	144	18	18	18	23
8	10	13	17	177	125	111	229	133	18	18	18	23
9	10	19	16	787	109	635	189	129	21	18	18	23
10	10	17	17	644	97	561	167	117	23	18	18	23
11	10	15	17	360	83	427	155	123	26	18	18	23
12	10	15	17	378	70	398	149	107	25	18	18	22
13	10	14	17	680	90	371	208	99	20	18	18	22
14	10	14	17	580	60	654	155	80	21	18	22	22
15	10	14	16	331	34	534	136	75	72	18	27	22
16	10	14	16	237	27	342	123	66	31	18	27	22
17	10	14	18	177	23	261	118	56	27	18	27	22
18	10	14	21	144	29	312	124	50	99	18	27	22
19	10	14	20	120	30	294	109	41	41	18	27	21
20	10	13	18	106	29	405	117	34	23	18	27	21
21	10	13	18	83	25	331	98	27	18	18	27	21
22	10	14	18	82	22	249	87	22	19	18	27	20
23	10	18	18	97	20	213	76	18	18	18	26	21
24	10	15	18	86	18	188	67	18	18	18	26	21
25	10	17	17	71	17	169	60	18	18	18	25	21
26	10	14	17	109	17	150	53	18	18	18	25	21
27	10	14	17	109	18	150	77	21	18	18	25	21
28	11	14	18	136	17	145	84	18	18	18	25	21
29	10	14	17	145	---	146	296	18	18	18	25	21
30	10	14	16	205	---	145	217	18	18	18	25	21
31	10	---	16	355	---	142	---	18	---	18	25	---
TOTAL	318	426	547	6330	2455	8025	4292	2410	754	558	699	662
MEAN	10.3	14.2	17.6	204	87.7	259	143	77.7	25.1	18.0	22.5	22.1
MAX	12	19	21	787	391	654	296	410	99	18	27	24
MIN	10	11	16	16	17	21	53	18	18	18	18	20
AC-FT	631	845	1080	12560	4870	15920	8510	4780	1500	1110	1390	1310
a	0	4.0	42	3010	4510	4230	4870	4660	3600	1550	228	0

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

SACRAMENTO RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.7	13.7	17.5	58.2	35.5	114	75.5	35.6	25.5	13.9	13.7	12.5
MAX	30.5	22.1	25.6	204	87.7	259	175	77.7	53.1	18.4	22.5	22.1
(WY)	1994	1994	1993	1995	1995	1995	1993	1995	1993	1993	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1991 - 1995			
ANNUAL TOTAL	7270.9				27476							
ANNUAL MEAN	19.9				75.3				35.9			
HIGHEST ANNUAL MEAN									75.3			
LOWEST ANNUAL MEAN									10.6			
HIGHEST DAILY MEAN	137				Feb 27				787			
LOWEST DAILY MEAN	9.5				Sep 20				3.8			
ANNUAL SEVEN-DAY MINIMUM	9.7				Sep 16				3.8			
INSTANTANEOUS PEAK FLOW					1220				1930			
INSTANTANEOUS PEAK STAGE					5.70				7.06			
ANNUAL RUNOFF (AC-FT)	14420				54500				25980			
10 PERCENT EXCEEDS	21				188				86			
50 PERCENT EXCEEDS	20				21				18			
90 PERCENT EXCEEDS	10				13				6.4			

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,500 ft³/s, Mar. 14, gage height, 71.19 ft; minimum daily, 681 ft³/s, Oct. 1.

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	681	3090	4060	3460	e14100	6150	10500	e21000	e5960	e2060	2650	3450
2	808	4880	2320	1630	e12500	7680	10500	e21200	e6280	e1540	1680	2110
3	2090	3270	3290	3880	e12600	8260	9670	e22200	e6680	e4460	2660	2320
4	2830	4030	3030	5990	e10600	8800	9490	e21000	e4500	e4560	3710	2590
5	2610	3260	4030	2290	e10400	10000	9380	e18700	e5120	e4360	4090	4360
6	2760	1970	1770	5700	e9900	9020	13600	e17700	e6150	e4240	2820	3530
7	3000	2890	2040	5510	e8800	8590	14900	e15900	e5430	e5300	2790	3000
8	2400	4670	3140	7300	8570	8550	15200	e14300	e6510	e2780	2530	3880
9	1790	6710	3320	9560	8510	18800	14400	e13600	e5780	e774	3090	1320
10	3270	3930	3110	13900	8490	22300	13500	e13900	e5370	e3840	2100	1690
11	2090	4240	2260	14600	8190	25600	11500	e13400	e4040	e4230	3250	3160
12	2140	5700	2640	20100	7080	25800	11600	e12500	e5700	e4140	1700	4020
13	3610	5880	2650	26300	7950	25600	11500	e12400	e4900	e4450	2820	e2650
14	4560	6240	4170	27000	7580	29300	11500	e11900	e4940	e4230	2650	e3760
15	3880	7680	2060	21000	7690	26600	10900	e11200	e4940	e4060	3460	e3700
16	3760	6390	2970	17700	6380	21100	10400	e11400	e6840	e2440	3480	e1920
17	4560	5280	2710	14500	6980	18500	9800	e10400	e6030	e4100	3460	e2430
18	4700	4640	1890	11800	6660	16700	9670	e9600	e4640	e3890	3740	e2850
19	2960	3850	5270	9910	7010	15700	9680	e8800	e6190	e4370	2570	e3130
20	3420	1820	3040	8970	5190	18700	9670	e9400	e5920	e4760	2250	e4060
21	5370	2980	3000	e7520	6020	19000	9470	e7800	e6310	4560	4210	e4210
22	2660	3910	5700	e7720	5790	19500	9290	e7990	e5550	4620	2700	e3670
23	1520	5200	4700	e8140	6680	18500	8880	e8520	e6290	4330	3290	e2010
24	4480	3400	2050	e6940	6640	16200	8550	e7320	e5470	2240	3350	e934
25	4170	2090	2160	e7460	6650	14900	8620	e7560	e5930	3110	3960	e2730
26	5490	2930	3210	e8310	5460	13300	8680	e7450	e4840	3590	1650	e4470
27	6750	4550	2950	e7520	5680	12500	8640	e6190	e6040	3160	1790	e3520
28	4300	5730	5340	e7470	6010	11600	8620	e6300	e4860	2760	3590	e2930
29	3610	3970	5550	e8390	---	11400	13200	e6840	e5270	5570	3780	e3390
30	2660	3740	3730	e8610	---	10900	15200	e5810	e6210	6140	4060	e2680
31	2840	---	4290	e11900	---	10500	---	e6580	---	4140	2960	---
TOTAL	101769	128920	102450	321080	224110	490050	326510	368860	168690	118804	92840	90474
MEAN	3283	4297	3305	10360	8004	15810	10880	11900	5623	3832	2995	3016
MAX	6750	7680	5700	27000	14100	29300	15200	22200	6840	6140	4210	4470
MIN	681	1820	1770	1630	5190	6150	8550	5810	4040	774	1650	934
AC-FT	201900	255700	203200	636900	444500	972000	647600	731600	334600	235600	184100	179500
a	15277	14862	15303	15434	14581	15461	15382	14581	11827	13660	15329	15147
b	147100	159800	170200	377400	368300	444200	446800	441700	328500	223300	198900	184400
c	33215	33492	33032	33677	31544	33955	33769	31945	29971	20435	33123	33445

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.

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3300	3983	4641	6337	6777	8061	6577	5340	3909	3247	3074	3069
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	1135322	2534557	
ANNUAL MEAN	3110	6944	4850
HIGHEST ANNUAL MEAN			7693 1974
LOWEST ANNUAL MEAN			2808 1992
HIGHEST DAILY MEAN	7680	Nov 15	29300 Mar 14 53900 Jan 23 1970
LOWEST DAILY MEAN	273	Aug 7	681 Oct 1 30 Jul 12 1975
ANNUAL SEVEN-DAY MINIMUM	1700	Sep 22	2110 Oct 1 939 Sep 5 1966
INSTANTANEOUS PEAK FLOW			36500 Mar 14 73000 Jan 24 1970
INSTANTANEOUS PEAK STAGE			71.19 Mar 14 74.65 Feb 19 1986
ANNUAL RUNOFF (AC-FT)	2252000	5027000	3514000
10 PERCENT EXCEEDS	4670	14200	8400
50 PERCENT EXCEEDS	2970	5280	3960
90 PERCENT EXCEEDS	1750	2320	2020

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0945	4,120	4.91	Mar. 14	2300	6,310	6.45
Feb. 1	2330	1,750	2.82	Apr. 7	2145	4,600	5.28
Mar. 10	1930	*6,860	*6.67	June 15	1200	1,630	2.69

Minimum daily, 546 ft³/s, several days.

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	e566	560	556	546	1620	792	1200	1670	1200	987	867	828
2	e566	557	556	546	1540	860	1200	2050	1190	975	865	827
3	e566	556	560	546	1200	1100	1190	1750	1210	965	862	827
4	e566	558	556	546	1080	1030	1210	1600	1180	957	860	827
5	e566	560	556	546	1010	952	1260	1530	1160	949	860	825
6	e566	561	556	551	967	900	1820	1450	1130	945	859	824
7	565	558	556	575	937	866	3930	1380	1110	937	856	822
8	566	557	556	713	926	899	3300	1350	1090	932	852	821
9	565	567	556	1460	900	3440	2260	1410	1080	928	852	820
10	565	561	556	1990	873	5050	1890	1380	1070	927	851	818
11	565	561	556	1410	852	4580	e1510	1360	1070	926	848	815
12	565	560	556	1160	844	2940	e1550	1340	1070	926	847	814
13	565	556	553	1560	839	2340	e1750	1300	1060	925	846	813
14	565	556	555	3390	811	4120	e1400	1270	1110	917	846	831
15	564	558	554	1860	786	4310	e1100	1260	1490	913	846	832
16	562	557	556	1240	773	2630	e1000	1260	1330	907	846	831
17	562	556	552	1030	765	2100	e1300	1250	1190	903	846	829
18	561	556	556	911	756	2060	e1150	1260	1170	901	846	827
19	561	556	552	844	753	1980	e1100	1260	1140	899	844	826
20	561	556	551	798	753	2250	e1050	1280	1100	895	842	824
21	561	556	551	766	756	2180	e1000	1290	1080	892	841	822
22	561	556	551	757	758	1800	e1000	1280	1070	889	840	821
23	561	556	551	774	763	1620	e1000	1280	1050	887	840	821
24	561	557	553	773	770	1520	e1100	1270	1040	886	840	820
25	561	558	551	764	774	1410	e1200	1240	1030	884	839	820
26	561	556	551	755	776	1330	e1200	1230	1020	881	838	820
27	561	556	552	746	776	1290	1490	1220	1010	878	836	820
28	560	556	552	752	781	1250	1290	1220	1010	874	834	819
29	559	556	549	778	---	1230	1390	1220	995	873	833	816
30	559	556	546	880	---	1210	1890	1210	987	871	832	815
31	558	---	546	1130	---	1200	---	1210	---	869	831	---
TOTAL	17451	16730	17158	31097	25139	61239	44730	42080	33442	28298	26245	24675
MEAN	563	558	553	1003	898	1975	1491	1357	1115	913	847	822
MAX	566	567	560	3390	1620	5050	3930	2050	1490	987	867	832
MIN	558	556	546	546	753	792	1000	1210	987	869	831	813
AC-FT	34610	33180	34030	61680	49860	121500	88720	83470	66330	56130	52060	48940

e Estimated.

SACRAMENTO RIVER BASIN

11367500 McCLOUD RIVER NEAR McCLOUD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	760	785	851	889	959	1040	1121	1116	944	829	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1931 - 1995

ANNUAL TOTAL	221317	368284	
ANNUAL MEAN	606	1009	907
HIGHEST ANNUAL MEAN			1406
LOWEST ANNUAL MEAN			589
HIGHEST DAILY MEAN	751	Jan 24	5050
LOWEST DAILY MEAN	546	Dec 30	546
ANNUAL SEVEN-DAY MINIMUM	550	Dec 25	546
INSTANTANEOUS PEAK FLOW			6660
INSTANTANEOUS PEAK STAGE			6.67
ANNUAL RUNOFF (AC-FT)	439000	730500	656800
10 PERCENT EXCEEDS	674	1500	1240
50 PERCENT EXCEEDS	586	852	833
90 PERCENT EXCEEDS	556	556	601

SACRAMENTO RIVER BASIN

85

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371	412	451	430	1300	864	1390	1460	1300	971	784	683
2	348	432	395	329	1330	862	1400	1400	1270	906	766	658
3	355	407	350	337	1360	928	1380	1370	1250	884	755	658
4	371	456	333	469	1350	1060	1380	1360	1220	847	760	658
5	377	421	418	484	1350	1130	1390	1370	1200	860	745	704
6	417	357	367	511	1340	1070	1410	1390	1160	875	749	692
7	455	340	333	529	1260	1060	1370	1390	1170	875	747	669
8	390	364	386	681	1280	1060	1400	1380	1150	875	742	675
9	326	392	379	902	1290	1210	1400	1390	1130	794	765	638
10	387	336	299	1080	1300	1330	1410	1400	1130	778	750	638
11	422	347	261	1170	1300	960	1410	1410	1090	801	750	662
12	444	295	333	1190	1280	1280	1400	1400	1100	822	706	655
13	442	295	395	1230	1280	1300	1400	1410	1060	837	642	671
14	433	354	451	1190	1260	1300	1400	1390	1040	829	649	667
15	417	446	398	1250	1230	1300	1400	1410	1050	853	687	675
16	377	469	347	1300	1220	1340	1390	1380	1080	830	646	644
17	419	395	336	1340	1180	1390	1400	1370	1090	826	657	636
18	425	438	291	1400	1160	1400	1400	1390	1050	837	673	666
19	419	376	367	1370	1120	1400	1420	1340	1060	839	669	669
20	422	299	398	1340	1100	1400	1410	1330	1070	850	671	721
21	436	363	443	1340	1050	1390	1420	1270	1070	857	692	716
22	335	360	443	1350	997	1390	1400	1270	1060	814	696	736
23	307	401	370	1320	940	1390	1400	1280	1060	813	675	729
24	307	315	333	1260	935	1390	1350	1300	1060	795	685	657
25	492	326	247	1270	920	1370	1370	1300	1040	783	692	668
26	549	311	311	1280	925	1380	1400	1300	1030	780	651	725
27	564	337	330	1260	898	1380	1380	1260	1010	791	634	744
28	511	386	344	1190	879	1390	1400	1270	1020	789	673	699
29	435	395	389	1190	---	1400	1410	1280	1010	772	701	689
30	344	410	430	1190	---	1390	1390	1280	1020	767	692	731
31	380	---	443	1200	---	1390	---	1300	---	769	709	---
TOTAL	12677	11235	11371	32382	32834	38904	41880	41850	33050	25719	21813	20433
MEAN	409	374	367	1045	1173	1255	1396	1350	1102	830	704	681
MAX	564	469	451	1400	1360	1400	1420	1460	1300	971	784	744
MIN	307	295	247	329	879	862	1350	1260	1010	767	634	636
AC-FT	25140	22280	22550	64230	65130	77170	83070	83010	65550	51010	43270	40530

SACRAMENTO RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	650	668	796	871	932	1088	1127	1019	892	782	742	706
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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1966 - 1995	
ANNUAL TOTAL	176492		324148			
ANNUAL MEAN	484		888			
HIGHEST ANNUAL MEAN					856	
LOWEST ANNUAL MEAN					1260	1967
HIGHEST DAILY MEAN	710	Mar 6	1460	May 1	453	1992
LOWEST DAILY MEAN	247	Dec 25	247	Dec 25	1890	May 20 1967
ANNUAL SEVEN-DAY MINIMUM	332	Dec 23	332	Dec 23	.00	Oct 1 1965
ANNUAL RUNOFF (AC-FT)	350100		642900		.00	Oct 1 1965
10 PERCENT EXCEEDS	607		1390			
50 PERCENT EXCEEDS	488		850			
90 PERCENT EXCEEDS	353		362			

SACRAMENTO RIVER BASIN

87

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	171	172	149	64	79	89	---	148	169	186	200
2	168	171	172	149	60	64	89	---	148	169	188	200
3	168	171	172	149	55	55	72	---	150	170	188	201
4	168	171	172	148	52	54	56	---	153	172	188	203
5	171	172	172	148	51	53	56	---	153	172	191	203
6	171	170	172	145	49	52	---	---	154	172	180	203
7	169	169	171	95	49	51	---	219	154	173	190	203
8	168	170	171	91	48	53	---	208	156	173	190	203
9	168	166	172	167	44	114	---	154	159	176	190	203
10	168	168	171	134	44	---	---	146	166	176	190	203
11	168	169	171	115	44	---	---	146	166	176	190	202
12	168	171	172	---	44	---	---	132	166	176	190	203
13	169	171	172	---	45	---	---	97	169	176	190	203
14	170	171	172	---	44	---	---	75	168	176	190	203
15	170	171	170	---	48	---	---	86	113	176	190	203
16	169	175	159	---	52	---	---	109	105	182	190	203
17	170	175	157	68	56	---	---	111	105	182	190	203
18	171	171	158	---	64	---	---	114	122	180	191	203
19	170	172	156	62	66	---	83	117	142	176	190	203
20	170	172	155	56	68	---	61	118	148	179	190	203
21	170	172	157	53	68	---	55	119	153	179	191	203
22	170	172	158	52	67	---	54	121	155	179	191	202
23	170	172	157	53	67	---	53	124	158	179	191	202
24	171	172	156	53	67	---	53	126	161	179	191	202
25	171	172	157	52	67	---	56	129	161	179	191	204
26	171	172	157	52	67	e86	58	133	163	179	191	203
27	171	173	158	51	66	e86	59	135	164	179	191	203
28	171	172	158	50	68	e86	59	137	166	182	191	203
29	171	172	158	51	---	e86	---	140	166	182	191	203
30	171	172	158	54	---	90	---	141	169	182	192	203
31	171	---	158	60	---	89	---	145	---	182	193	---
TOTAL	5259	5138	5091	---	1584	---	---	---	4561	5482	5896	6079
MEAN	170	171	164	---	56.6	---	---	---	152	177	190	203
MAX	171	175	172	---	68	---	---	---	169	182	193	204
MIN	167	166	155	---	44	---	---	---	105	169	186	200
AC-FT	10430	10190	10100	---	3140	---	---	---	9050	10870	11690	12060

e Estimated.

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0630	7,510	8.44	Apr. 7	1515	6,960	8.18
Mar. 10	2230	*10,600	*9.70				

Minimum daily, 169 ft³/s, Jan. 2, 4, 5.

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	185	189	190	170	803	190	300	1070	214	216	215	224
2	185	187	190	169	640	218	305	1450	214	214	214	225
3	185	187	195	170	490	384	288	477	214	214	214	225
4	185	189	191	169	415	320	278	848	215	216	214	228
5	190	190	190	169	367	275	292	603	214	216	216	228
6	190	192	190	172	332	244	842	392	214	215	216	227
7	187	188	188	274	307	221	5690	373	215	214	216	227
8	185	188	187	804	289	263	3900	361	215	214	215	227
9	185	196	188	2300	263	1810	1930	306	216	216	215	226
10	185	188	187	1920	242	4290	1130	292	217	216	215	226
11	185	186	188	1500	225	6660	1000	283	216	215	215	226
12	185	189	190	2720	215	3990	825	267	214	215	215	226
13	186	187	189	2850	209	2950	911	226	216	216	215	226
14	187	187	191	6100	191	6130	979	190	236	214	215	225
15	187	189	189	2200	183	6060	630	196	244	214	215	225
16	187	193	180	987	179	2780	442	219	215	219	215	225
17	187	193	178	427	175	1620	421	215	217	218	215	225
18	187	187	183	350	176	1600	423	214	212	218	215	225
19	187	187	179	298	175	1280	270	214	212	218	215	225
20	187	187	178	261	176	2030	241	214	214	216	215	225
21	187	187	178	233	178	2080	216	213	215	216	215	225
22	187	187	178	225	179	1240	205	214	216	216	215	225
23	185	187	178	284	182	1030	197	214	216	215	215	225
24	187	188	179	304	183	744	191	214	218	215	215	224
25	187	190	178	298	182	555	191	214	214	215	215	225
26	187	188	178	296	180	331	194	214	216	214	215	225
27	187	188	181	302	177	310	196	214	215	214	215	225
28	187	187	185	315	178	298	197	214	216	216	215	225
29	187	187	183	338	---	292	626	214	214	216	215	225
30	186	187	181	421	---	289	858	216	217	216	215	225
31	185	---	180	642	---	290	---	214	---	215	215	---
TOTAL	5779	5655	5720	27668	7491	50774	24168	10765	6501	6682	6665	6765
MEAN	186	188	185	893	268	1638	806	347	217	216	215	225
MAX	190	196	195	6100	803	6660	5690	1450	244	219	216	228
MIN	185	186	178	169	175	190	191	190	212	214	214	224
AC-FT	11460	11220	11350	54880	14860	100700	47940	21350	12890	13250	13220	13420

SACRAMENTO RIVER BASIN

89

11367800 McCLOUD RIVER AT AH-DI-NA, NEAR McCLOUD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	290	295	431	395	496	366	336	251	226	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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1965 - 1995
ANNUAL TOTAL	65201	164633	
ANNUAL MEAN	179	451	316
HIGHEST ANNUAL MEAN			1326
LOWEST ANNUAL MEAN			168
HIGHEST DAILY MEAN	318	Jan 24	6660
LOWEST DAILY MEAN	149	Feb 20	169
ANNUAL SEVEN-DAY MINIMUM	165	Feb 15	171
INSTANTANEOUS PEAK FLOW			10600
INSTANTANEOUS PEAK STAGE			9.70
ANNUAL RUNOFF (AC-FT)	129300	326500	229100
10 PERCENT EXCEEDS	190	812	494
50 PERCENT EXCEEDS	177	215	205
90 PERCENT EXCEEDS	169	185	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 Lamoine.

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0500	21,900	22.86	Mar. 10	2030	*23,000	*23.18
Feb. 1	0130	6,270	15.95	Apr. 7	1415	15,200	20.60

Minimum daily, 224 ft³/s, Oct. 3.

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	229	241	261	288	5860	614	1550	2800	519	458	367	322
2	225	241	265	277	4380	806	1490	3140	514	455	365	323
3	224	242	310	279	3240	2550	1390	1910	514	452	363	322
4	225	243	297	322	2580	1910	1310	1980	510	448	361	323
5	230	261	273	325	2160	1480	1300	1680	500	439	361	324
6	232	277	276	380	1870	1230	2400	1270	493	436	361	322
7	230	259	267	1690	1660	1070	12400	1160	490	434	359	322
8	226	247	261	6310	1510	1310	8270	1090	483	430	355	322
9	225	358	257	17000	1350	10300	4680	1020	477	431	354	321
10	227	283	256	11900	1220	13600	3390	946	473	431	352	321
11	225	260	263	10700	1120	16800	2900	899	468	422	347	319
12	225	258	276	12900	1060	10600	2490	857	463	420	346	318
13	225	255	271	11200	1040	8490	2530	808	464	418	344	315
14	227	248	304	17700	947	14800	2420	722	595	408	342	315
15	227	274	297	7450	882	14000	1960	701	1010	405	339	313
16	226	279	336	4290	834	6970	1630	708	666	406	338	312
17	228	283	328	2690	793	4680	1410	684	601	407	337	312
18	231	262	350	2110	758	4110	1480	664	574	409	336	311
19	232	253	336	1740	727	3610	1170	649	545	409	333	309
20	232	251	303	1480	707	5190	1140	633	523	403	331	308
21	232	251	287	1300	692	5280	1020	620	509	398	329	305
22	232	248	279	1310	681	4190	962	610	498	397	329	305
23	231	247	276	2220	671	3640	913	597	483	393	329	305
24	232	251	292	2690	660	2920	876	586	483	388	328	305
25	232	299	284	2620	647	2480	845	578	473	386	323	307
26	232	272	280	2540	631	1960	822	566	472	383	320	308
27	233	263	284	2700	614	1800	845	560	469	378	321	308
28	236	257	343	2630	601	1710	835	552	464	378	320	311
29	233	255	341	2680	---	1660	1820	541	458	377	320	309
30	232	252	319	3270	---	1600	2120	532	459	375	320	309
31	232	---	303	4960	---	1550	---	317	---	370	317	---
TOTAL	7108	7870	9075	139951	39895	152910	68368	30380	15650	12744	10547	9426
MEAN	229	262	293	4515	1425	4933	2279	980	522	411	340	314
MAX	236	358	350	17700	5860	16800	12400	3140	1010	458	367	324
MIN	224	241	256	277	601	614	822	317	458	370	317	305
AC-FT	14100	15610	18000	277600	79130	303300	135600	60260	31040	25280	20920	18700

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	305	589	782	1381	1361	1666	957	641	406	313	277	284
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	121295	503924	
ANNUAL MEAN	332	1381	744
HIGHEST ANNUAL MEAN			1720
LOWEST ANNUAL MEAN			230
HIGHEST DAILY MEAN	2210	Jan 24	17700
LOWEST DAILY MEAN	204	Aug 18	224
ANNUAL SEVEN-DAY MINIMUM	204	Aug 16	226
INSTANTANEOUS PEAK FLOW			23000
INSTANTANEOUS PEAK STAGE			23.18
ANNUAL RUNOFF (AC-FT)	240600	999500	539200
10 PERCENT EXCEEDS	525	2840	1450
50 PERCENT EXCEEDS	276	431	351
90 PERCENT EXCEEDS	217	247	242

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, 4,305,940 acre-ft, June 19, elevation, 1,058.59 ft; minimum, 2,019,842 acre-ft, Dec. 2, elevation, 958.45 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2093680	2023137	2020883	2044211	3565694	3458710	3931114	4202688	4296429	4221449	3821187	3382839
2	2085731	2023484	2019842	2041943	3576642	3482673	3933554	4228841	4299888	4204962	3802384	3374520
3	2079562	2020362	2022790	2043689	3563403	3517846	3939247	4244532	4303058	4193069	3785172	3363509
4	2075524	2021750	2022964	2049273	3538545	3550203	3948465	4249959	4299888	4181185	3771927	3352292
5	2071660	2020535	2025045	2053462	3510785	3576387	3959068	4246247	4296718	4169049	3758192	3344502
6	2068675	2021750	2023137	2066041	3475683	3597335	3997018	4236539	4294124	4159754	3743962	3336468
7	2066041	2020362	2021230	2103774	3435854	3615276	4085044	4224291	4292970	4151027	3726106	3327014
8	2063412	2020883	2020709	2214132	3402753	3647743	4127741	4204962	4293836	4138392	3708037	3319264
9	2060096	2032172	2021402	2431863	3375743	3815354	4140917	4194765	4291528	4121014	3694463	3306448
10	2059048	2032347	2021056	2585628	3358622	3979503	4148211	4191370	4289223	4109288	3679105	3293677
11	2057129	2035314	2022270	2714806	3349371	4073381	4142036	4188258	4284055	4095339	3666375	3285003
12	2055208	2038105	2023137	2874007	3339877	4103148	4119334	4186845	4280899	4083099	3648778	3276580
13	2054335	2037581	2023137	3044894	3338416	4134190	4100917	4187408	4278030	4072270	3631222	3262862
14	2054335	2040199	2029730	3218671	3341337	4245389	4087264	4189674	4285778	4058962	3616048	3252807
15	2052765	2040723	2031125	3299702	3344015	4284055	4075049	4196181	4291528	4046804	3605014	3245625
16	2050495	2039501	2034615	3350588	3348640	4240537	4064776	4205812	4294124	4031347	3593496	3233680
17	2049971	2038105	2036011	3379168	3354482	4170173	4062002	4220596	4297872	4018421	3579953	3222959
18	2047353	2037930	2035487	3384554	3361308	4107054	4061725	4236539	4300753	4005506	3565949	3214150
19	2045085	2036186	2038280	3357404	3370361	4042935	4063664	4248530	4305940	3995378	3549189	3204196
20	2042642	2031999	2040373	3325803	3376233	4044042	4070605	4252528	4305651	3984975	3531462	3196851
21	2042991	2032172	2041595	3302111	3384308	4038789	4078933	4260813	4301904	3972964	3517593	3190222
22	2037408	2031475	2044386	3291025	3393900	4039619	4092270	4269707	4296718	3959886	3507008	3183855
23	2033918	2031475	2042292	3327257	3403738	4027496	4106775	4276022	4290950	3946840	3487189	3176545
24	2035662	2027473	2042292	3371584	3414339	4001673	4124097	4280611	4283484	3928943	3473187	3166648
25	2033743	2024871	2039152	3406196	3423237	3985523	4142317	4285491	4277455	3912470	3461705	3158907
26	2034267	2022097	2038629	3431887	3430900	3971877	4159190	4291239	4269707	3899248	3447282	3156562
27	2035139	2023484	2038803	3451752	3439581	3949008	4172428	4295275	4262533	3884475	3433124	3153278
28	2032172	2022617	2039849	3443307	3448523	3935722	4160318	4297295	4255383	3867314	3422742	3148822
29	2030253	2020709	2039849	3444053	---	3927589	4161445	4297872	4245389	3857157	3413105	3142498
30	2025738	2020535	2040896	3460456	---	3925692	4165106	4296429	4237107	3847800	3403984	3136431
31	2024178	---	2042642	3519357	---	3927861	---	4296429	---	3836086	3390703	---
MAX	2093680	2040723	2044386	3519357	3576642	4284055	4172428	4297872	4305940	4221449	3821187	3382839
MIN	2024178	2020362	2019842	2041943	3338416	3458710	3931114	4186845	4237107	3836086	3390703	3136431
a	958.70	958.49	959.76	1029.44	1026.61	1045.06	1053.65	1058.26	1056.19	1041.64	1024.27	1013.66
b	-77464	-3643	+22107	+1476715	-70834	+479383	+237245	+131323	-59322	-401021	-445383	-254272
c	5385	1285	800	554	2839	4265	6527	9238	13920	16875	16993	11552

CAL YR 1994 b -919307

WTR YR 1995 b +1034789

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.

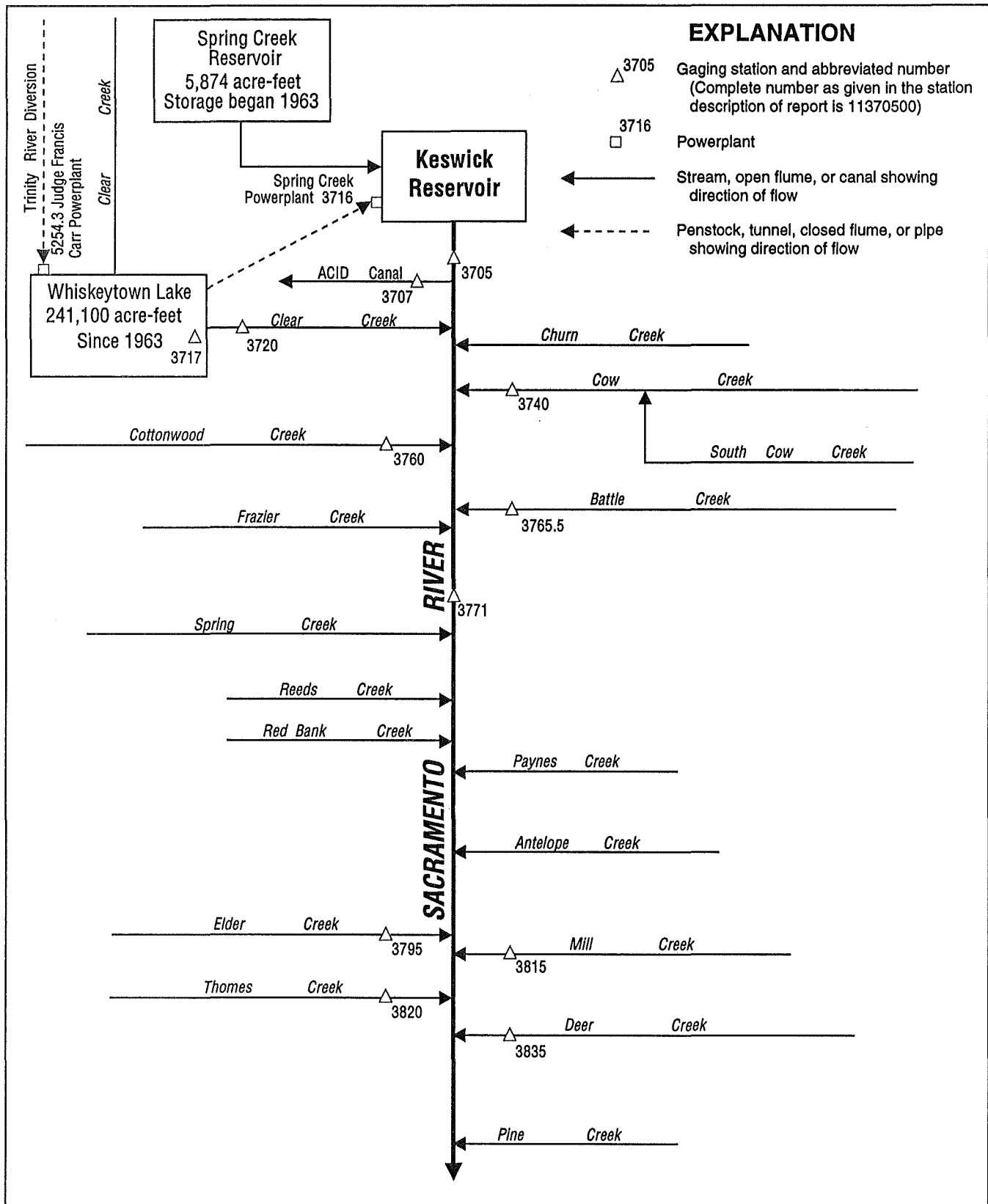


Figure 24. Diversions and storage in upper Sacramento River basin.

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186,000 ft³/s, Feb. 23, 1940, gage height, 47.2 ft, site and datum then 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75,500 ft³/s, Mar. 17, gage height, 32.16 ft; minimum daily, 3,380 ft³/s, Oct. 12.

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	5830	4010	3930	3880	30200	4860	16100	22400	12900	15200	14600	10500
2	5600	3920	3910	3800	35500	4940	16300	24600	12100	15300	14800	11100
3	5400	3940	3910	3690	38700	4900	14500	26700	12700	15200	14900	11500
4	5190	3980	3900	3710	37800	4950	12500	29800	12700	15300	14700	11300
5	5050	3960	3890	3690	37300	5000	10900	29800	13200	15300	15300	11400
6	4860	3960	3930	3710	37400	4830	11900	30100	13400	13500	14800	11300
7	4620	3970	3880	4040	37100	4840	15600	29800	13100	14600	14800	11300
8	4400	3970	3920	5400	32900	5040	24800	29700	12500	14200	15100	11300
9	4130	3880	3910	8970	28600	7890	25700	25300	12400	14600	14900	11400
10	3690	3890	3900	8480	23800	16100	24900	21800	12600	14700	14600	11500
11	3510	3890	3930	9560	19500	46400	27200	19900	12400	14500	13600	11500
12	3380	3890	3920	9850	16700	56300	35200	17900	12700	14400	13900	11500
13	3450	3870	3900	10100	14300	58100	34800	16500	12900	14500	14300	11700
14	3850	3890	3910	10800	12600	51800	30300	14900	12600	14800	14600	11800
15	3900	3830	3880	14200	10700	61400	25400	12200	12100	15000	13600	11300
16	3870	3830	3980	14500	9200	70700	22100	10700	11100	15000	12400	11200
17	3880	3890	3970	16200	7930	74800	18700	9260	11100	14800	12600	11100
18	3870	3890	3950	22400	6770	70900	16100	7940	10600	15000	14400	10600
19	3920	3890	3940	35300	5860	68300	14300	7180	9850	14900	14700	10700
20	3860	3920	3930	34800	5700	49800	12200	11300	12100	14600	14500	10800
21	3940	3890	3890	29200	5610	48300	10100	11600	13900	14900	14600	11000
22	3940	3910	3900	24400	5400	48800	9020	11900	13800	15000	13500	10100
23	3970	3930	3880	15400	5250	48100	7310	12500	14000	15000	14300	9750
24	e4020	3920	3890	10800	5060	47800	6390	12800	15000	15000	13900	9340
25	e4140	3920	3880	12800	5040	39200	5980	12900	14600	15000	13300	9140
26	3930	3900	3890	15200	5020	33200	6640	12800	14900	15100	12400	9140
27	3980	3900	3890	18600	5050	33300	9800	12900	15400	15000	12400	9190
28	3980	4060	3890	31300	4910	28200	21600	13300	14300	14800	12700	9130
29	3960	4080	3920	26900	---	24500	25200	13200	15100	14900	12900	8770
30	3970	3930	3900	25600	---	20200	24700	14100	15200	14900	12600	7970
31	3970	---	3910	21400	---	17000	---	13900	---	14900	11800	---
TOTAL	130060	117710	121230	458680	489900	1060450	536240	539680	391250	459900	431500	318330
MEAN	4195	3924	3911	14800	17500	34210	17870	17410	13040	14840	13920	10610
MAX	5830	4080	3980	35300	38700	74800	35200	30100	15400	15300	15300	11800
MIN	3380	3830	3880	3690	4910	4830	5980	7180	9850	13500	11800	7970
AC-FT	258000	233500	240500	909800	971700	2103000	1064000	1070000	776000	912200	855900	631400

e Estimated.

SACRAMENTO RIVER BASIN

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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	14400	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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6261	7381	9895	10920	12190	11040	9165	10510	11190	12410	11510	8168
MAX	10290	23430	27340	37250	38970	47170	26840	17410	14960	14840	14330	11800
(WY)	1984	1974	1974	1970	1983	1983	1974	1995	1983	1995	1971	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	2421120	5054930	
ANNUAL MEAN	6633	13850	10050
HIGHEST ANNUAL MEAN			18230
LOWEST ANNUAL MEAN			5390
HIGHEST DAILY MEAN	13100	Jul 19	79700
LOWEST DAILY MEAN	3350	Mar 19	2360
ANNUAL SEVEN-DAY MINIMUM	3370	Mar 16	2460
INSTANTANEOUS PEAK FLOW			81400
INSTANTANEOUS PEAK STAGE			32.22
INSTANTANEOUS LOW FLOW			154
ANNUAL RUNOFF (AC-FT)	4802000	10030000	7280000
10 PERCENT EXCEEDS	12100	29400	14700
50 PERCENT EXCEEDS	4420	12100	8480
90 PERCENT EXCEEDS	3470	3890	3900

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 diagram for 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	---	---	---	---	---	---	---	305	280	278	288
2	227	---	---	---	---	---	---	93	303	280	280	289
3	235	---	---	---	---	---	---	107	303	277	281	289
4	234	---	---	---	---	---	---	115	300	278	279	287
5	233	---	---	---	---	---	---	102	304	286	280	288
6	237	---	---	---	---	---	---	.00	309	290	281	286
7	236	---	---	---	---	---	---	.00	310	290	285	286
8	236	---	---	---	---	---	---	.00	292	289	288	286
9	234	---	---	---	---	---	---	.00	292	281	291	285
10	230	---	---	---	---	---	---	58	293	273	294	284
11	227	---	---	---	---	---	---	101	295	274	301	282
12	225	---	---	---	---	---	---	111	299	272	306	282
13	223	---	---	---	---	---	---	118	301	271	307	280
14	228	---	---	---	---	---	---	106	298	272	307	279
15	231	---	---	---	---	---	---	58	292	274	302	277
16	230	---	---	---	---	---	---	.00	284	271	296	276
17	230	---	---	---	---	---	---	.00	280	278	296	275
18	228	---	---	---	---	---	---	.00	279	280	295	268
19	227	---	---	---	---	---	---	45	275	277	294	276
20	222	---	---	---	---	---	---	192	280	272	294	276
21	214	---	---	---	---	---	---	194	276	264	296	277
22	220	---	---	---	---	---	---	220	281	264	296	277
23	241	---	---	---	---	---	---	247	282	263	302	273
24	e53	---	---	---	---	---	---	260	286	262	303	280
25	---	---	---	---	---	---	---	256	284	262	301	265
26	---	---	---	---	---	---	---	273	283	259	299	266
27	---	---	---	---	---	---	---	279	281	256	298	266
28	---	---	---	---	---	---	---	285	278	257	293	275
29	---	---	---	---	---	---	---	292	281	256	287	274
30	---	---	---	---	---	---	---	293	280	237	288	276
31	---	---	---	---	---	---	---	299	---	193	290	---
TOTAL	---	---	---	---	---	---	---	---	8706	8338	9088	8368
MEAN	---	---	---	---	---	---	---	---	290	269	293	279
MAX	---	---	---	---	---	---	---	---	310	290	307	289
MIN	---	---	---	---	---	---	---	---	275	193	278	265
AC-FT	---	---	---	---	---	---	---	---	17270	16540	18030	16600

e Estimated.

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.--No estimated daily discharges. Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of Klamath River and Trinity River basins.

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

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1195	.00	.00	.00	.00	.00	528	.00	3428	2963	3105	2672
2	717	.00	.00	.00	2	.00	1598	.00	3433	3131	3098	2755
3	364	.00	.00	.00	.00	.00	1649	.00	3450	3135	3050	2747
4	.00	.00	.00	761	.00	.00	1630	.00	3427	3105	3095	2753
5	.00	.00	.00	.00	.00	.00	1006	66	3439	3139	3111	2746
6	244	.00	421	.00	.00	.00	1039	15	3440	3057	3128	2729
7	270	.00	.00	.00	.00	.00	.00	16	3451	3102	3121	2721
8	411	.00	768	.00	.00	.00	.00	2.0	3177	3115	3111	2765
9	409	.00	20	.00	25	.00	.00	143	3155	3149	3241	2311
10	.00	.00	.00	.00	.00	.00	.00	34	3170	3114	3146	2751
11	.00	.00	.00	.00	.00	.00	38	38	3170	3075	3043	2763
12	.00	.00	1060	.00	.00	.00	.00	31	3170	3122	2810	2770
13	.00	.00	.00	.00	.00	.00	21	.00	3177	3095	2770	2241
14	1059	.00	.00	.00	.00	.00	192	.00	3178	3102	2663	2258
15	770	.00	.00	.00	.00	.00	.00	13	2460	3166	2618	2264
16	408	.00	.00	.00	.00	.00	.00	2332	3011	3112	2626	2255
17	1189	.00	.00	4	.00	.00	.00	2356	3117	3087	2674	2254
18	.00	.00	1198	.00	.00	.00	.00	2123	3157	3084	2797	2254
19	.00	450	2	7	.00	.00	466	1081	3100	3086	2770	2229
20	.00	6	.00	2	.00	.00	740	234	3241	3167	2458	2256
21	.00	457	.00	.00	.00	1	1192	3309	3108	2443	2718	2219
22	11	.00	.00	.00	.00	.00	1097	3118	3102	3054	2773	2216
23	6	.00	727	.00	.00	3	1682	2898	3148	3184	2581	2244
24	.00	.00	.00	.00	.00	.00	1524	3309	3130	3164	2739	2269
25	10	.00	.00	13	.00	.00	713	3469	3138	3162	2764	2104
26	3	.00	.00	.00	.00	.00	581	3369	3057	3099	2743	2196
27	.00	.00	.00	.00	.00	.00	2	3392	2853	3195	2792	2269
28	.00	.00	.00	.00	46	.00	.00	3106	3105	3116	2737	2152
29	.00	2	.00	.00	---	.00	.00	3430	3103	3096	2754	2135
30	.00	564	.00	.00	---	23	.00	3432	3104	3104	2870	1383
31	.00	---	1012	.00	---	.00	---	3430	---	3120	2775	---
TOTAL	7066.00	1479.00	5208.00	787.00	73.00	27.00	15698.00	44746.00	95199	95843	88681	71681
MEAN	228	49.3	168	25.4	2.61	.87	523	1443	3173	3092	2861	2389
MAX	1190	564	1200	761	46	23	1680	3470	3450	3190	3240	2770
MIN	.00	.00	.00	.00	.00	.00	.00	.00	2460	2440	2460	1380
AC-FT	14020	2930	10330	1560	145	54	31140	88750	188800	190100	175900	142200

KLAMATH RIVER BASIN

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1378	881	718	614	794	859	1138	1329	1829	2315	2229	2134
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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1963 - 1995
ANNUAL TOTAL	423557.00	426488.00	
ANNUAL MEAN	1160	1168	1367
HIGHEST ANNUAL MEAN			2485
LOWEST ANNUAL MEAN			301
HIGHEST DAILY MEAN	3550 May 25	3470 May 25	4000 Oct 18 1987
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 4	.00 May 6 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 27	.00 Oct 14 1969
ANNUAL RUNOFF (AC-FT)	840100	845900	990500
10 PERCENT EXCEEDS	3390	3140	3150
50 PERCENT EXCEEDS	408	23	1110
90 PERCENT EXCEEDS	.00	.00	.00

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.--No estimated daily discharges. 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 diagram 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	118	25	252	3979	252	252	1028	3802	3340	3210	2753
2	820	230	41	299	4176	254	450	1014	4040	3944	3207	3689
3	476	467	47	302	2989	869	1394	1239	3796	3659	3362	2931
4	150	480	.00	998	2215	2183	1902	1234	3334	3245	3185	2855
5	150	500	32	281	2245	252	1919	1014	3382	3242	3224	3058
6	349	1161	259	272	1420	252	1894	475	3786	3210	3388	3101
7	150	781	273	2226	1098	248	1018	465	3830	3390	3380	3024
8	68	991	267	1322	720	252	1736	458	3936	3388	3122	2452
9	172	1008	263	2716	940	1572	1983	502	3048	3346	3283	3217
10	523	1012	253	4322	912	4084	1774	508	3397	3349	2989	2873
11	300	507	273	4404	1560	4069	1974	527	3508	3349	3398	2736
12	303	612	272	4387	290	4048	1973	596	3572	3354	3303	3186
13	286	661	259	4737	252	4235	1968	509	3584	3281	3133	2146
14	153	311	327	4383	1999	4200	1737	552	3441	3212	3394	2473
15	486	165	316	4447	490	2477	245	499	4116	3222	2794	2813
16	466	400	287	4229	270	211	248	1106	2838	3241	2802	2465
17	1502	24	254	4281	246	2197	248	1671	3630	3237	2838	2485
18	.00	17	279	4281	248	4123	243	2373	3630	3218	3102	2460
19	.00	82	269	4201	252	4137	730	500	3637	3222	2824	2462
20	.00	.00	259	4300	275	4160	328	250	3347	3006	2270	2376
21	3.0	.00	259	4208	273	4170	1104	3458	3344	3217	3198	2462
22	669	.00	274	311	781	3573	1319	3377	3329	3023	3277	2638
23	681	80	1.0	4302	248	4185	1738	4038	3649	2999	2373	2631
24	1365	97	55	4323	475	4184	1863	3729	3313	2825	2567	2547
25	711	11	.00	4274	250	4225	1731	4032	3129	3005	2724	2576
26	786	17	.00	4257	253	1931	1733	4047	3239	3404	2940	2711
27	634	47	2.0	4243	547	686	1748	3782	3653	3403	3166	2462
28	537	34	23	4233	905	1018	904	3773	3182	3006	3160	2321
29	497	.00	42	4218	---	916	993	4028	3071	3209	3030	2064
30	521	29	279	2567	---	1154	1025	3818	3077	3213	3191	1637
31	300	---	282	3945	---	723	---	3801	---	3211	2599	---
TOTAL	14388.00	9842.00	5472.00	97521	30308	70840	38174	58403	104640	100970	94433	79604
MEAN	464	328	177	3146	1082	2285	1272	1884	3488	3257	3046	2653
MAX	1502	1161	327	4737	4176	4235	1983	4047	4116	3944	3398	3689
MIN	.00	.00	.00	252	246	211	243	250	2838	2825	2270	1637
AC-FT	28540	19520	10850	193400	60120	140500	75720	115800	207600	200300	187300	157900
a	7.9	0	220	15030	4520	14470	2680	1610	660	831	387	226

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1665	1331	1142	1354	1541	1614	1369	1542	1987	2378	2321	2288
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 1994 CALENDAR YEAR					FOR 1995 WATER YEAR				WATER YEARS 1964 - 1995		
ANNUAL TOTAL	454599.00					704595.00						
ANNUAL MEAN	1245					1930				1711		
HIGHEST ANNUAL MEAN										3389		
LOWEST ANNUAL MEAN										748		
HIGHEST DAILY MEAN	3796					4737				4800		
LOWEST DAILY MEAN	.00					.00				.00		
ANNUAL SEVEN-DAY MINIMUM	.00					18				.00		
ANNUAL RUNOFF (AC-FT)	901700					1398000				1239000		
10 PERCENT EXCEEDS	3340					4030				3500		
50 PERCENT EXCEEDS	634					1930				1590		
90 PERCENT EXCEEDS	17					160				7.0		

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 diagram 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 (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, 248,680 acre-ft, Jan. 9, elevation, 1,212.34 ft; minimum, 204,180 acre-ft, Mar. 4, elevation, 1,197.99 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237768	224151	205741	206477	208254	206684	217473	230748	237609	239015	238471	239367
2	237831	223472	205594	205918	206477	207660	221288	230685	237228	237704	238439	237927
3	237673	222300	205623	205623	205682	207422	223225	229997	237260	237164	238119	238055
4	237482	221350	205476	206036	205387	204180	224182	229088	238183	237323	238023	238439
5	237228	220308	205299	205800	204445	204651	223904	228525	238951	237514	237927	238343
6	237037	217898	205682	205770	204533	205034	225015	228963	238791	237704	237895	238151
7	237291	216258	205122	206949	205093	205387	230811	229308	238599	237609	237704	237927
8	237927	214054	206124	222454	206242	208403	231437	229558	237704	237609	237863	239079
9	238503	212670	205623	248680	206448	222516	230842	229965	238439	237704	238279	237673
10	237831	210604	205063	247764	206566	231909	229652	230028	238631	237800	239240	237927
11	237545	209442	204739	245977	205211	235734	228244	230091	238471	237768	239079	238599
12	237037	208194	206360	246074	206183	235035	226753	230153	238215	237768	238599	238183
13	236687	206949	205918	247862	207244	235988	225199	230216	237958	237704	238439	238855
14	238407	206212	205800	246464	204533	242579	224151	230122	239240	237704	237991	238919
15	238888	205977	205299	242289	204769	246171	225603	230153	237291	237800	238119	238311
16	238823	205093	204887	237768	205387	247373	226908	233613	238503	237800	238215	238311
17	238279	204946	204563	232288	205947	234643	228183	236052	238407	237609	238183	238375
18	238087	204769	206625	226287	206448	239624	229245	236528	238215	237514	238087	238439
19	237831	205417	206242	219727	206919	235226	230247	238503	237768	237450	238023	238407
20	237609	205299	205800	212910	207304	233392	232382	239175	238247	237768	239367	238663
21	237355	206036	205358	206036	207660	229934	233802	239912	238439	236624	238663	238599
22	235893	205859	204828	209650	206890	228089	234528	240360	238567	236846	237736	238343
23	234528	205623	206212	210095	207244	224366	235543	238888	238119	237450	237545	238055
24	231814	205446	206242	215080	207067	219727	236052	239015	238343	238439	238311	238055
25	230466	205476	206212	218172	207304	214235	235035	238823	238855	238983	238919	237704
26	228995	205299	206094	216865	207541	213210	233676	238343	239015	238471	238983	237323
27	227716	205122	206124	213602	207214	214145	231562	238407	237895	238311	238727	237386
28	226753	204946	206094	209858	206301	214658	230998	237831	238119	238727	238375	237991
29	225758	204828	205977	206094	---	214959	230811	237482	238791	238695	238247	238375
30	224860	205800	205505	207482	---	214779	230404	237514	239303	238567	238119	238215
31	224521	---	206978	207422	---	215201	---	237577	---	238503	239111	---
MAX	238888	224151	206978	248680	208254	247373	236052	240360	239303	239015	239367	239367
MIN	224521	204769	204563	205623	204445	204180	217473	228525	237228	236624	237545	237323
a	1204.74	1198.54	1198.94	1199.09	1198.71	1201.69	1206.63	1208.90	1209.44	1209.19	1209.38	1209.10
b	-13502	-18721	+1178	+444	-1121	+8900	+15203	+7173	+1726	-800	+608	-896
c	617	112	58	12	165	255	441	761	1034	1374	1386	1030

CAL YR 1994 b +1532

WTR YR 1995 b +192

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.

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.--No estimated daily discharges. 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 diagram of upper Sacramento River basin.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,560 ft³/s, Jan. 10, gage height, 8.88 ft; minimum daily, 53 ft³/s, Oct. 1, 7, 11.

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	53	104	107	107	720	86	167	446	92	84	74	73
2	54	107	107	105	532	109	158	262	92	84	74	73
3	54	107	112	109	403	131	151	207	88	83	74	72
4	55	108	111	154	327	126	146	181	83	82	73	72
5	55	110	109	135	277	123	143	166	89	82	73	72
6	55	109	109	157	247	117	157	154	92	82	73	72
7	53	108	109	451	227	115	416	143	88	81	74	72
8	55	107	109	1770	236	445	287	135	87	81	73	72
9	55	114	109	2480	208	2030	223	149	87	81	73	72
10	55	106	107	4850	195	1950	198	131	87	81	73	72
11	53	105	112	3100	188	1070	182	102	87	80	74	72
12	55	105	115	3650	181	732	173	124	86	81	73	72
13	54	105	111	3900	177	1640	166	133	85	81	73	72
14	55	106	128	3980	167	2310	155	113	116	79	73	72
15	57	111	115	1700	157	1830	151	121	186	78	73	72
16	57	108	123	481	156	3140	145	118	112	77	74	72
17	76	107	113	273	153	2670	143	113	107	77	76	72
18	100	107	113	230	147	731	139	110	104	77	74	72
19	100	106	111	205	145	460	132	107	100	77	73	72
20	100	105	109	187	142	954	132	107	96	77	73	72
21	100	105	108	176	140	633	125	93	94	77	73	72
22	100	105	107	457	138	702	120	109	92	77	73	72
23	100	106	107	978	136	506	114	103	91	76	73	72
24	100	106	111	1120	133	406	113	100	89	76	73	69
25	100	110	109	826	132	326	112	93	88	76	73	66
26	99	106	107	591	130	275	111	90	87	76	73	71
27	99	106	108	514	129	240	119	90	87	75	73	70
28	99	105	110	506	112	217	119	89	85	75	73	70
29	99	105	108	450	---	200	276	87	85	75	73	72
30	99	106	107	709	---	186	186	88	85	75	73	72
31	99	---	107	746	---	176	---	91	---	74	73	---
TOTAL	2345	3205	3428	35097	6035	24636	4959	4155	2847	2437	2273	2148
MEAN	75.6	107	111	1132	216	795	165	134	94.9	78.6	73.3	71.6
MAX	100	114	128	4850	720	3140	416	446	186	84	76	73
MIN	53	104	107	105	112	86	111	87	83	74	73	66
AC-FT	4650	6360	6800	69610	11970	48870	9840	8240	5650	4830	4510	4260

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.3	138	190	276	258	341	151	90.6	66.7	56.5	52.1	51.8
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1965 - 1995

ANNUAL TOTAL	29176		93565	
ANNUAL MEAN	79.9		256	
HIGHEST ANNUAL MEAN				145
LOWEST ANNUAL MEAN				570
HIGHEST DAILY MEAN	315	Jan 25	4850	Jan 10
LOWEST DAILY MEAN	52	Aug 18	53	Oct 1
ANNUAL SEVEN-DAY MINIMUM	53	Aug 22	54	Oct 1
INSTANTANEOUS PEAK FLOW			5560	Jan 10
INSTANTANEOUS PEAK STAGE			8.88	Jan 10
ANNUAL RUNOFF (AC-FT)	57870		185600	105400
10 PERCENT EXCEEDS	110		450	216
50 PERCENT EXCEEDS	71		107	69
90 PERCENT EXCEEDS	53		72	49

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	---	3.7	5.3	---	---	5.4	5.9	5.5	5.5	5.0	5.1
2	3.5	3.8	3.7	5.4	4.6	---	5.3	5.6	5.6	5.7	4.8	5.1
3	3.5	3.8	---	5.5	6.0	---	5.3	5.5	5.5	5.9	4.9	5.1
4	3.5	3.8	3.9	3.7	5.9	5.9	5.4	5.7	5.5	5.9	4.7	5.1
5	3.6	3.8	4.1	---	5.8	5.9	5.5	5.5	5.5	5.5	4.3	5.1
6	3.6	3.8	4.4	---	5.9	5.8	5.8	5.5	5.3	5.3	4.3	5.1
7	3.6	---	3.7	---	5.9	5.8	5.5	5.5	---	5.1	---	5.1
8	3.7	---	3.7	---	6.0	---	5.4	5.4	5.4	5.1	5.7	5.1
9	3.7	---	3.7	---	5.8	---	5.3	5.5	5.5	5.1	4.9	5.1
10	3.7	3.7	3.7	---	5.9	---	5.4	5.4	5.5	5.1	5.2	5.1
11	3.7	3.7	3.7	6.0	5.8	6.0	5.3	5.8	5.5	5.1	5.2	5.1
12	3.7	3.7	4.3	6.1	5.8	5.7	5.4	5.7	5.5	5.1	5.2	5.1
13	3.8	3.7	4.8	---	6.0	5.6	5.3	5.6	5.4	5.1	5.2	5.1
14	3.8	---	4.3	6.0	5.9	5.7	5.3	5.4	5.9	5.0	---	5.1
15	3.8	4.8	3.8	5.9	5.8	5.6	5.4	5.4	---	5.0	5.5	5.1
16	3.8	3.7	3.7	6.1	---	---	5.4	5.4	6.3	5.0	5.4	5.1
17	3.8	3.7	3.7	5.9	5.8	5.4	5.5	5.5	5.9	5.1	---	5.1
18	3.8	3.7	3.7	5.9	5.8	5.4	5.5	5.5	6.1	5.1	---	5.1
19	3.8	3.8	3.7	5.8	5.8	5.4	5.4	5.5	5.7	---	5.2	5.1
20	3.8	3.7	3.7	5.8	5.7	5.6	5.5	5.5	5.4	---	5.6	5.1
21	3.8	3.7	3.7	5.8	5.8	5.4	5.4	5.5	5.4	5.4	---	5.1
22	3.8	---	3.7	6.1	5.9	5.5	5.4	5.5	5.4	5.0	---	5.1
23	3.8	3.8	3.7	5.9	5.9	5.4	5.4	5.4	5.5	5.0	---	5.1
24	3.8	3.7	3.7	6.0	5.9	5.4	5.5	5.5	5.4	4.9	5.1	5.1
25	3.8	---	3.7	5.8	5.9	5.4	5.5	5.6	5.4	5.2	5.1	5.1
26	3.8	4.4	3.7	6.0	5.9	5.3	5.5	5.5	5.6	5.1	5.1	5.1
27	3.8	3.7	---	---	5.9	5.3	5.5	5.5	5.5	5.0	5.1	5.2
28	3.8	3.7	---	6.3	5.9	---	5.4	5.5	5.4	5.0	5.1	5.2
29	3.8	3.7	4.4	5.9	---	5.4	5.8	5.5	5.3	---	5.1	5.2
30	3.8	3.7	3.7	---	---	5.3	5.7	5.4	5.4	5.3	5.1	5.2
31	3.8	---	3.7	---	---	5.3	---	5.4	---	5.2	5.1	---
TOTAL	115.4	---	---	---	---	---	163.4	171.1	---	---	---	153.4
MEAN	3.72	---	---	---	---	---	5.45	5.52	---	---	---	5.11
MAX	3.8	---	---	---	---	---	5.8	5.9	---	---	---	5.2
MIN	3.4	---	---	---	---	---	5.3	5.4	---	---	---	5.1
AC-FT	229	---	---	---	---	---	324	339	---	---	---	304

NOTE: Discharges were above 7.0 ft³/s many days during the year.

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
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	---	---	---	---	---	3.5	3.1	3.0
2	3.0	3.0	3.0	3.0	---	---	---	---	---	3.6	3.1	3.0
3	3.0	3.0	3.0	3.0	---	---	---	---	---	3.8	3.1	3.0
4	3.0	3.0	3.0	3.0	---	---	---	---	---	3.8	3.1	3.1
5	2.9	3.0	2.9	3.0	---	---	---	---	---	3.7	3.1	3.1
6	2.9	3.0	2.9	3.0	---	---	---	---	3.8	3.7	3.1	3.1
7	2.9	3.0	2.9	3.0	---	---	---	---	3.8	3.6	3.1	3.1
8	2.9	3.0	2.9	3.1	---	---	---	---	3.8	3.6	3.1	3.1
9	2.9	3.0	2.9	3.1	---	---	---	---	3.8	3.5	3.1	3.1
10	2.9	3.0	2.9	---	---	---	---	---	3.8	3.5	3.1	3.1
11	2.9	3.0	2.9	---	---	---	---	---	3.8	3.4	3.1	3.1
12	2.9	3.0	3.0	---	---	---	---	---	3.8	3.4	3.1	3.1
13	2.9	3.0	3.0	---	---	---	---	---	3.8	3.6	3.1	3.0
14	2.9	3.0	3.0	---	---	---	---	---	4.0	3.4	3.1	3.0
15	2.9	3.0	3.0	---	---	---	---	---	4.0	3.1	3.1	3.0
16	2.9	3.0	3.0	---	---	---	---	---	3.8	3.1	3.1	3.0
17	2.9	3.0	3.0	---	---	---	---	---	3.7	3.1	3.1	3.0
18	2.9	3.0	3.0	---	---	---	---	---	3.7	3.1	3.1	3.0
19	3.0	3.0	2.9	---	---	---	---	---	3.8	3.1	3.1	3.0
20	3.1	3.0	3.0	---	---	---	---	---	3.6	3.1	3.1	3.0
21	3.0	3.0	2.9	---	---	---	---	---	3.5	3.1	3.1	3.0
22	3.0	3.0	3.0	---	---	---	---	---	3.5	3.1	3.0	3.0
23	3.0	3.0	3.0	---	---	---	---	---	3.5	3.1	3.0	3.0
24	---	3.0	3.0	---	---	---	---	---	3.6	3.1	3.0	3.0
25	---	3.0	3.0	---	---	---	---	---	3.6	3.1	3.0	3.0
26	---	3.0	3.0	---	---	---	---	---	3.6	3.1	3.0	3.0
27	---	3.0	3.0	---	---	---	---	---	3.6	3.0	3.0	3.0
28	3.0	3.0	3.0	---	---	---	---	---	3.6	3.1	3.0	3.0
29	3.0	3.0	2.9	---	---	---	---	---	3.6	3.0	3.0	3.0
30	3.0	3.0	3.0	---	---	---	---	---	3.5	3.1	3.0	3.0
31	3.0	---	3.0	---	---	---	---	---	---	3.1	3.0	---
TOTAL	---	90.0	92.0	---	---	---	---	---	---	102.6	95.1	90.9
MEAN	---	3.00	2.97	---	---	---	---	---	---	3.31	3.07	3.03
MAX	---	3.0	3.0	---	---	---	---	---	---	3.8	3.1	3.1
MIN	---	3.0	2.9	---	---	---	---	---	---	3.0	3.0	3.0
AC-FT	---	179	182	---	---	---	---	---	---	204	189	180

NOTE: Canal was out of service Oct. 24-27, Jan. 10 to Mar. 31 and all flow remained in the natural channel. Discharges above 5.0 ft³/s April 1 to June 5.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	1945	22,900	17.38	Mar. 9	1215	18,000	15.76
Jan. 13	1530	21,700	17.00	Mar. 14	2200	*24,300	*17.83
Jan. 30	1015	15,600	14.90	Apr. 29	1300	22,200	17.16

Minimum daily, 20 ft³/s, Oct. 2, 3.

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	22	47	141	296	8410	532	1150	10200	533	233	91	69
2	20	65	173	266	4280	6060	1090	4670	541	181	87	65
3	20	63	2440	256	2750	6310	1020	2860	524	175	89	64
4	22	59	1520	845	2030	2730	974	2190	500	180	85	68
5	32	89	475	933	1640	1760	967	1870	499	204	82	65
6	30	106	401	1430	1410	1350	2250	1660	452	190	77	63
7	29	115	365	5340	1250	1130	2690	1410	430	186	77	61
8	28	93	249	8070	1450	2680	2400	1240	407	181	73	62
9	27	173	194	14200	1140	12300	1890	1190	384	178	71	61
10	27	378	167	9520	994	10100	1540	1120	379	178	75	60
11	28	173	173	3650	908	6170	1370	1170	407	174	74	61
12	30	123	1020	5060	849	5260	1270	1040	358	173	72	62
13	27	118	1860	14000	1490	8190	1760	1140	352	183	75	64
14	27	100	1800	6260	1220	14600	1390	957	457	166	77	60
15	27	133	1590	4010	948	9360	1210	930	889	163	74	61
16	28	306	1400	3060	819	4430	1110	894	997	161	72	63
17	27	191	867	2020	746	3240	1030	862	803	156	71	59
18	28	147	877	1490	717	3190	1510	863	1110	140	70	59
19	30	115	652	1180	666	3010	1130	787	840	152	68	58
20	30	103	452	1010	616	6950	1090	751	661	136	66	51
21	32	99	364	903	578	5480	976	732	582	122	64	56
22	29	95	310	3330	552	5250	899	719	531	112	64	62
23	31	92	276	7230	539	4420	853	703	485	116	66	62
24	33	93	485	4850	531	3550	818	680	437	116	66	60
25	32	319	576	2530	519	2520	813	662	398	114	58	65
26	32	362	370	3470	503	1940	803	632	305	110	62	68
27	35	205	323	4940	494	1670	955	619	300	114	59	70
28	37	209	1180	6420	485	1490	1060	612	343	106	62	73
29	38	168	595	3380	---	1360	8950	582	344	104	66	74
30	37	143	412	8490	---	1260	3750	559	336	97	68	67
31	41	---	336	10000	---	1170	---	542	---	94	68	---
TOTAL	916	4482	22043	138439	38534	139462	48718	44846	15584	4695	2229	1893
MEAN	29.5	149	711	4466	1376	4499	1624	1447	519	151	71.9	63.1
MAX	41	378	2440	14200	8410	14600	8950	10200	1110	233	91	74
MIN	20	47	141	256	485	532	803	542	300	94	58	51
AC-FT	1820	8890	43720	274600	76430	276600	96630	88950	30910	9310	4420	3750

SACRAMENTO RIVER BASIN

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11374000 COW CREEK NEAR MILLVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	129	486	1134	1674	1571	1393	853	519	215	59.1	35.8	46.2
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1950 - 1995			
ANNUAL TOTAL	107093.0				461841							
ANNUAL MEAN	293				1265				672			
HIGHEST ANNUAL MEAN									1505			
LOWEST ANNUAL MEAN									66.8			
HIGHEST DAILY MEAN	3380				Feb 10				14600			
LOWEST DAILY MEAN	2.4				Aug 14				20			
ANNUAL SEVEN-DAY MINIMUM	3.6				Aug 12				25			
INSTANTANEOUS PEAK FLOW									24300			
INSTANTANEOUS PEAK STAGE									Mar 14			
ANNUAL RUNOFF (AC-FT)	212400				916100				17.83			
10 PERCENT EXCEEDS	665				3500				Mar 14			
50 PERCENT EXCEEDS	143				412				48700			
90 PERCENT EXCEEDS	8.0				59				24.55			

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 good. 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 diagram of upper Sacramento River basin.

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. 9	0945	*48,600	*18.54	Mar. 10	1930	38,000	16.71
Jan. 13	2215	24,700	14.50	Mar. 14	2200	29,600	14.92
Jan. 23	0315	19,200	13.09	Mar. 20	1630	15,900	12.27
Feb. 1	0300	21,100	13.61				

Minimum daily, 32 ft³/s, Oct. 3.

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	41	38	79	160	18000	1110	3320	2810	810	405	143	88
2	35	38	89	154	12100	1140	3100	2850	781	393	138	89
3	32	38	153	167	8190	1470	2900	2250	751	379	134	87
4	39	38	187	1350	6220	1350	2750	1990	720	365	129	74
5	42	46	182	1820	5110	1190	2660	1830	687	344	120	87
6	43	62	149	1220	4330	1070	2740	1730	657	321	116	89
7	46	60	132	7540	3860	997	3860	1660	629	311	112	85
8	54	54	118	19700	3730	1740	3900	1620	610	301	110	72
9	55	86	106	40500	3370	e24900	3320	1580	596	288	116	73
10	66	113	97	18300	2980	e21200	2910	1550	578	280	114	75
11	83	99	95	10900	2710	14000	2720	1520	562	273	112	69
12	73	81	147	12500	2460	8520	2600	1480	548	274	111	70
13	53	68	183	16400	2420	e82900	2530	1460	520	273	115	70
14	51	60	182	18600	2130	e17700	2430	1440	518	272	112	76
15	47	57	313	9870	1900	16100	2350	1400	658	258	107	81
16	50	64	262	5790	1750	8960	2290	1380	680	243	98	84
17	54	72	297	4040	1630	6850	2220	1350	620	235	92	81
18	56	66	269	3150	1550	6280	2180	1320	634	228	91	71
19	57	65	333	2540	1500	5630	2150	1290	596	220	92	74
20	62	64	328	2150	1450	e9680	2120	1270	564	226	95	73
21	73	62	277	1960	1420	8250	2070	1250	540	225	93	72
22	57	62	245	6160	1380	7550	2020	1230	516	216	94	93
23	53	57	220	15500	1330	7840	2030	1200	476	201	95	97
24	53	54	221	15600	1290	6770	2010	1160	468	203	98	96
25	46	58	262	14000	1250	5720	1970	1110	450	193	93	91
26	47	75	230	8970	1190	5140	1930	1060	439	183	100	83
27	43	95	198	7420	1140	4730	1890	993	447	178	95	88
28	42	94	220	7280	1100	4390	1870	940	446	173	82	77
29	41	91	217	6130	---	4060	1900	895	428	164	78	74
30	38	84	197	11900	---	3740	2130	860	416	160	76	75
31	38	---	177	13200	---	3490	---	842	---	150	85	---
TOTAL	1570	2001	6165	284971	97490	219857	74870	45320	17345	7935	3246	2414
MEAN	50.6	66.7	199	9193	3482	7092	2496	1462	578	256	105	80.5
MAX	83	113	333	40500	18000	24900	3900	2850	810	405	143	97
MIN	32	38	79	154	1100	997	1870	842	416	150	76	69
AC-FT	3110	3970	12230	565200	193400	436100	148500	89890	34400	15740	6440	4790

e Estimated.

SACRAMENTO RIVER BASIN

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11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	131	355	1219	2101	2256	1912	1175	622	297	114	69.4	77.0
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1941 - 1995			
ANNUAL TOTAL	78676				763184							
ANNUAL MEAN	216				2091				854			
HIGHEST ANNUAL MEAN									2714			
LOWEST ANNUAL MEAN									94.4			
HIGHEST DAILY MEAN	2440				Feb 20				54300			
LOWEST DAILY MEAN	25				Aug 8				15			
ANNUAL SEVEN-DAY MINIMUM	29				Aug 6				16			
INSTANTANEOUS PEAK FLOW									86000			
INSTANTANEOUS PEAK STAGE					18.54				21.59			
ANNUAL RUNOFF (AC-FT)	156100				1514000				619000			
10 PERCENT EXCEEDS	536				6180				2000			
50 PERCENT EXCEEDS	111				344				220			
90 PERCENT EXCEEDS	35				59				57			

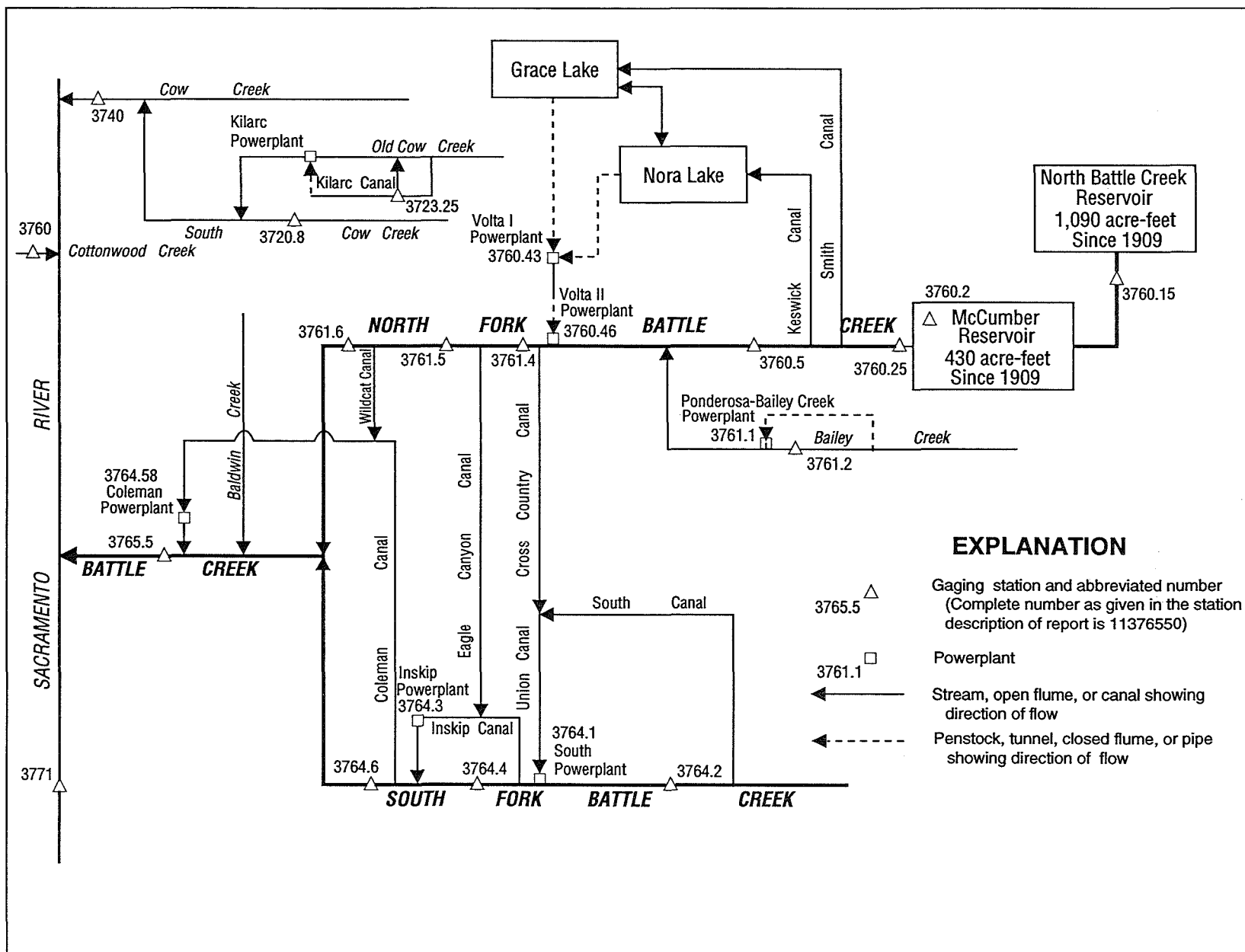


Figure 25. Diversions and storage in Battle Creek basin.

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	---	---	---	---	---	9.9	---	39	9.4	1.4	1.5
2	1.7	---	---	---	---	---	9.5	---	39	8.8	1.4	1.6
3	1.4	---	---	---	---	---	9.3	---	38	8.2	1.4	1.9
4	2.5	---	---	---	---	---	10	23	36	7.5	1.4	2.1
5	3.6	---	---	---	---	---	13	21	35	3.9	1.3	1.9
6	3.5	---	---	---	---	---	33	31	28	1.5	1.3	1.5
7	3.4	---	---	---	---	---	---	30	26	1.5	1.3	1.4
8	3.4	---	---	---	---	---	44	29	24	1.5	1.4	1.4
9	3.4	---	---	---	---	---	29	29	23	3.4	1.4	1.3
10	3.5	---	---	---	---	---	23	27	22	4.7	1.4	1.3
11	3.6	---	---	---	---	---	21	34	21	4.4	1.4	6.1
12	5.6	---	---	---	---	---	21	31	20	3.1	1.4	10
13	7.6	---	---	---	---	---	26	27	18	2.6	1.4	10
14	8.6	---	---	---	---	---	20	25	19	2.8	1.4	10
15	8.2	---	---	---	---	---	18	27	41	2.8	1.5	10
16	7.1	---	---	---	---	---	16	26	41	2.8	1.5	10
17	6.8	---	---	---	---	---	15	27	31	2.8	1.5	10
18	6.5	---	---	---	---	---	16	30	33	3.9	1.5	10
19	7.3	---	---	---	---	---	12	33	30	3.8	1.3	10
20	7.8	---	---	---	---	---	13	34	24	3.7	1.3	9.7
21	8.0	---	---	---	---	---	11	36	19	3.6	1.3	7.4
22	7.8	---	---	---	---	---	10	37	19	3.4	1.3	5.4
23	7.7	---	---	---	---	---	11	38	18	3.4	1.5	5.4
24	7.7	---	---	---	---	---	7.0	38	17	2.5	1.8	5.4
25	9.7	---	---	---	---	---	3.0	37	16	1.8	1.8	5.4
26	11	---	---	---	---	---	3.0	38	15	1.8	1.8	8.6
27	11	---	---	---	---	---	3.2	39	15	1.7	1.7	11
28	11	---	---	---	---	---	3.1	40	15	1.7	1.6	11
29	11	---	---	---	---	---	26	40	12	1.5	1.6	11
30	10	---	---	---	---	---	---	40	11	1.4	1.5	5.1
31	7.3	---	---	---	---	---	---	39	---	1.4	1.5	---
TOTAL	198.8	---	---	---	---	---	---	---	745	107.3	45.3	187.4
MEAN	6.41	---	---	---	---	---	---	---	24.8	3.46	1.46	6.25
MAX	11	---	---	---	---	---	---	---	41	9.4	1.8	11
MIN	1.1	---	---	---	---	---	---	---	11	1.4	1.3	1.3
AC-FT	394	---	---	---	---	---	---	---	1480	213	90	372

NOTE: Discharges above 50 ft³/s Apr. 7 and Apr. 30 to May 3.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	8.6	4.7	5.1	81	21	48	481	75	14	1.4	1.6
2	2.1	6.5	5.4	5.1	73	21	46	382	71	12	1.3	1.8
3	2.0	4.9	5.6	4.1	48	43	43	263	68	11	1.1	2.1
4	2.0	4.9	5.5	3.9	40	58	44	205	63	8.7	1.1	2.0
5	2.0	4.9	5.4	3.7	39	56	53	161	63	7.4	1.3	2.0
6	2.0	5.2	6.2	3.6	38	41	107	157	55	4.6	1.4	2.0
7	2.0	6.7	6.7	3.4	37	33	182	141	49	3.4	1.4	2.0
8	2.0	8.6	6.7	3.4	38	32	151	132	45	2.9	1.4	2.0
9	2.0	9.1	6.7	8.5	37	56	108	125	42	2.3	1.4	2.0
10	2.0	8.9	6.7	12	37	170	88	116	39	2.2	1.4	2.0
11	2.0	8.8	6.0	25	36	179	76	128	37	2.8	1.4	2.0
12	2.0	8.8	5.4	35	36	137	74	122	35	3.4	1.4	2.3
13	6.6	8.3	5.1	84	36	134	99	111	32	3.1	1.4	7.9
14	9.0	7.7	4.9	115	36	177	77	101	45	2.2	1.4	11
15	8.7	5.7	4.2	47	36	194	68	108	93	2.1	1.2	12
16	8.3	6.8	3.7	36	36	131	62	101	98	1.7	1.1	13
17	8.4	8.2	3.7	35	35	108	58	98	69	1.4	1.3	13
18	8.3	8.2	4.3	35	37	139	67	99	69	1.7	1.5	14
19	8.3	8.2	4.9	34	38	129	56	100	64	4.1	1.6	18
20	8.2	6.6	4.9	33	38	199	61	101	51	3.4	1.6	22
21	8.2	4.3	4.9	33	27	160	50	100	42	2.7	1.6	24
22	8.2	3.4	4.9	32	21	133	45	99	36	2.2	1.6	25
23	8.3	3.4	4.9	23	21	109	45	98	33	2.1	1.6	25
24	8.2	3.4	4.9	17	21	88	46	96	30	1.6	1.6	25
25	8.2	3.4	4.9	15	21	75	43	92	27	1.4	1.6	24
26	8.2	3.4	4.9	13	21	66	42	90	23	1.4	1.6	24
27	8.2	3.4	4.9	13	21	61	51	88	21	1.4	1.6	25
28	8.2	3.4	4.9	13	21	56	49	84	20	1.4	1.6	32
29	8.3	3.4	4.9	13	---	54	333	83	18	1.4	1.6	35
30	8.2	3.4	4.9	27	---	51	349	81	16	1.4	1.6	35
31	8.5	---	4.9	37	---	49	---	77	---	1.4	1.6	---
TOTAL	180.7	180.5	160.6	767.8	1006	2960	2621	4220	1429	112.8	44.7	408.7
MEAN	5.83	6.02	5.18	24.8	35.9	95.5	87.4	136	47.6	3.64	1.44	13.6
MAX	9.0	9.1	6.7	115	81	199	349	481	98	14	1.6	35
MIN	2.0	3.4	3.7	3.4	21	21	42	77	16	1.4	1.1	1.6
AC-FT	358	358	319	1520	2000	5870	5200	8370	2830	224	89	811
a	207	166	139	299	247	489	489	454	436	420	411	342

CAL YR 1994 TOTAL 1685.42 MEAN 4.62 MAX 14 MIN .67 AC-FT 3340
WTR YR 1995 TOTAL 14091.8 MEAN 38.6 MAX 481 MIN 1.1 AC-FT 27950

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.

Date	Volta No. 1	Volta No. 2	South	Inskip	Coleman
Oct.	2,270	3,090	5,660	8,270	10,960
Nov.	2,250	3,100	6,650	9,370	11,780
Dec.	2,430	3,300	8,040	12,050	15,890
Jan.	5,410	6,390	10,990	15,180	19,290
Feb.	6,510	6,690	10,760	15,130	18,280
Mar.	7,160	7,410	11,960	16,270	19,760
Apr.	7,140	7,260	11,540	16,200	18,850
May	7,380	7,450	11,980	16,560	8,340
June	6,690	7,120	11,330	16,270	18,300
July	5,850	6,410	11,850	16,880	19,030
Aug.	4,730	5,730	11,850	16,640	16,670
Sept.	4,710	5,720	10,840	13,830	14,840

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.

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.3	3.6	3.4	4.1	3.9	4.7	---	5.4	4.5	3.4	3.4
2	3.4	3.3	3.6	3.4	4.1	3.5	4.7	---	5.3	4.5	3.4	3.3
3	3.4	3.4	3.8	3.4	4.1	3.5	4.7	4.4	5.3	4.0	3.4	3.4
4	3.4	3.4	3.8	3.4	4.1	3.5	4.7	4.4	5.3	3.7	3.4	3.5
5	3.3	3.4	3.7	3.4	4.1	3.5	4.6	4.3	5.4	3.7	3.4	3.5
6	3.3	3.4	3.6	3.5	4.1	3.5	4.5	4.2	5.3	3.7	3.4	3.5
7	3.3	3.4	3.6	3.6	4.1	3.4	4.3	4.2	5.3	3.6	3.4	3.5
8	3.4	3.5	3.6	3.8	4.1	3.9	4.2	4.5	5.3	3.6	3.4	3.4
9	3.3	3.6	3.5	4.1	4.1	4.9	4.6	4.7	5.3	3.5	3.4	3.4
10	3.3	3.6	3.6	4.1	4.1	4.7	5.0	4.9	5.3	3.5	3.4	3.4
11	3.3	3.6	3.5	4.1	4.1	4.3	5.0	5.0	5.3	3.6	3.3	3.5
12	3.3	3.6	3.5	4.1	4.1	4.4	5.0	5.0	5.3	3.6	3.4	3.5
13	3.3	3.6	3.5	3.5	4.1	4.4	5.0	5.0	5.3	3.5	3.4	3.4
14	3.4	3.6	3.5	3.2	4.1	4.4	5.0	5.0	5.3	3.5	3.4	3.3
15	3.4	3.5	3.5	3.8	4.1	4.3	5.1	5.0	5.2	3.4	3.4	3.3
16	3.4	3.5	3.5	3.8	4.2	4.5	4.5	5.0	5.1	3.5	3.4	3.3
17	3.4	3.6	3.4	3.9	4.2	4.8	4.3	5.0	5.0	3.5	3.3	3.3
18	3.3	3.6	3.5	3.9	4.2	4.5	4.2	5.0	5.1	3.5	3.3	3.3
19	3.3	3.6	3.5	4.0	4.2	4.3	4.2	5.0	5.1	3.5	3.3	3.4
20	3.3	3.5	3.5	4.0	4.2	4.3	4.2	5.2	5.1	3.5	3.2	3.4
21	3.3	3.4	3.5	4.0	4.2	4.1	4.2	5.3	5.1	3.5	3.3	3.5
22	3.3	3.4	3.5	4.1	4.2	4.1	4.2	5.3	5.1	3.5	3.5	3.4
23	3.3	3.5	3.5	4.0	4.2	3.9	4.1	5.3	5.1	3.5	3.5	3.4
24	3.3	3.5	3.5	4.0	4.2	3.8	4.1	5.3	5.1	3.5	3.5	3.4
25	3.3	3.6	3.5	3.9	4.2	3.8	4.2	5.3	5.1	3.5	3.5	3.3
26	3.3	3.5	3.4	4.0	4.2	3.8	4.2	5.3	5.2	3.5	3.4	3.3
27	3.3	3.5	3.4	4.1	4.2	3.9	4.1	5.3	4.9	3.5	3.4	3.3
28	3.3	3.5	3.5	4.1	4.2	3.9	4.1	5.3	4.7	3.5	3.4	3.4
29	3.3	3.5	3.4	4.1	---	4.0	---	5.3	4.6	3.4	3.4	3.5
30	3.3	3.5	3.4	4.1	---	4.7	---	5.3	4.5	3.4	3.4	3.5
31	3.3	---	3.4	4.1	---	4.7	---	5.3	---	3.4	3.4	---
TOTAL	103.2	104.9	109.3	118.9	116.1	127.2	---	---	154.4	111.6	105.1	102.0
MEAN	3.33	3.50	3.53	3.84	4.15	4.10	---	---	5.15	3.60	3.39	3.40
MAX	3.4	3.6	3.8	4.1	4.2	4.9	---	---	5.4	4.5	3.5	3.5
MIN	3.3	3.3	3.4	3.2	4.1	3.4	---	---	4.5	3.4	3.2	3.3
AC-FT	205	208	217	236	230	252	---	---	306	221	208	202

NOTE: Discharges above 5.6 ft³/s Apr. 29 to May 2.

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.--No estimated daily discharges. 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 Highland Hydro Constructors, 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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	17	19	---	18	17	---	74	89	20	17
2	16	16	18	18	89	23	17	---	76	83	18	17
3	16	16	21	18	45	22	17	---	78	96	18	17
4	16	16	18	18	19	17	17	107	77	94	17	17
5	16	16	23	18	17	21	19	96	85	89	17	17
6	16	16	20	19	17	17	39	74	57	90	17	17
7	16	16	19	20	17	17	66	59	32	91	24	17
8	16	16	17	17	17	17	51	44	20	93	17	17
9	16	17	17	91	17	---	24	29	17	95	17	17
10	16	16	17	---	17	---	18	19	18	88	21	17
11	16	16	18	37	17	---	17	23	25	61	17	17
12	16	16	18	17	17	---	17	17	29	39	17	17
13	16	16	18	---	17	94	36	17	30	22	17	25
14	16	16	18	---	17	---	21	17	75	26	17	25
15	16	16	18	71	17	---	17	18	---	32	17	25
16	16	16	18	28	17	90	17	22	---	48	17	25
17	16	16	18	17	17	67	17	18	85	57	17	24
18	16	16	19	17	17	90	18	17	78	93	17	23
19	16	16	19	17	17	80	17	17	69	73	17	23
20	16	16	18	19	17	---	17	18	39	56	17	21
21	16	16	18	22	17	80	17	21	29	36	17	21
22	16	16	17	17	17	55	17	29	28	27	17	21
23	16	16	17	17	17	41	17	27	41	21	17	21
24	16	16	18	17	17	29	17	36	70	20	17	20
25	16	19	18	17	17	21	17	35	94	19	17	20
26	16	18	18	17	17	19	17	34	109	17	17	21
27	16	17	18	17	17	19	17	39	---	17	17	21
28	16	17	19	17	17	17	17	47	---	18	17	21
29	16	17	18	17	---	17	79	55	---	28	17	21
30	16	17	17	23	---	17	---	63	106	21	17	20
31	16	---	17	55	---	17	---	68	---	19	17	---
TOTAL	496	490	564	---	---	---	---	---	---	1658	543	602
MEAN	16.0	16.3	18.2	---	---	---	---	---	---	53.5	17.5	20.1
MAX	16	19	23	---	---	---	---	---	---	96	24	25
MIN	16	16	17	---	---	---	---	---	---	17	17	17
AC-FT	984	972	1120	---	---	---	---	---	---	3290	1080	1190
a	0	0	12	2030	1810	2880	3200	3740	3730	3930	2590	216

CAL YR 1994 TOTAL 6638 MEAN 18.2 MAX 30 MIN 16 AC-FT 13170

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

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.9	4.8	4.6	---	---	---	---	---	---	---	---
2	4.8	4.8	4.7	4.5	---	---	---	---	---	---	---	---
3	4.9	4.8	6.7	4.6	---	---	---	---	---	---	---	---
4	4.9	4.8	---	4.6	---	---	---	---	---	---	---	---
5	4.8	4.8	5.4	4.6	---	---	---	---	---	---	---	---
6	4.8	4.9	4.7	4.7	---	---	---	---	---	---	---	---
7	4.8	4.8	4.6	---	---	---	---	---	---	---	---	---
8	4.8	4.8	4.6	---	---	---	---	---	---	---	---	---
9	4.8	4.7	4.6	---	---	---	---	---	---	---	---	---
10	4.8	4.4	4.6	---	---	---	---	---	---	---	---	---
11	4.8	4.4	4.7	---	---	---	---	---	---	---	---	---
12	4.9	4.4	4.7	---	---	---	---	---	---	---	---	---
13	4.8	4.4	4.6	---	---	---	---	---	---	---	---	---
14	4.8	4.4	4.7	---	---	---	---	---	---	---	---	---
15	4.9	4.4	4.6	---	---	---	---	---	---	---	---	---
16	4.9	4.4	4.8	---	---	---	---	---	---	---	---	---
17	4.9	4.4	4.7	---	---	---	---	---	---	---	---	---
18	4.9	4.4	4.7	---	---	---	---	---	---	---	---	6.6
19	4.9	4.4	4.6	---	---	---	---	---	---	---	---	6.3
20	4.9	4.5	4.6	---	---	---	---	---	---	---	---	6.1
21	4.9	4.4	4.6	---	---	---	---	---	---	---	---	5.8
22	4.9	4.4	4.6	---	---	---	---	---	---	---	---	5.6
23	4.9	4.4	4.6	---	---	---	---	---	---	---	---	5.6
24	4.9	4.5	4.6	---	---	---	---	---	---	---	---	5.5
25	4.9	4.4	4.6	---	---	---	---	---	---	---	---	5.6
26	4.9	4.3	4.6	---	---	---	---	---	---	---	---	5.7
27	4.9	4.5	4.6	---	---	---	---	---	---	---	---	5.7
28	4.9	4.3	4.7	---	---	---	---	---	---	---	---	5.7
29	4.9	4.5	4.5	---	---	---	---	---	---	---	---	5.8
30	4.9	4.7	4.6	---	---	---	---	---	---	---	---	5.7
31	4.9	---	4.6	---	---	---	---	---	---	---	---	---
TOTAL	150.8	136.2	---	---	---	---	---	---	---	---	---	---
MEAN	4.86	4.54	---	---	---	---	---	---	---	---	---	---
MAX	4.9	4.9	---	---	---	---	---	---	---	---	---	---
MIN	4.8	4.3	---	---	---	---	---	---	---	---	---	---
AC-FT	299	270	---	---	---	---	---	---	---	---	---	---

NOTE: Discharges above 6.8 ft³/s for many days during the year.

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.--No estimated daily discharges. This station records fishwater release only. The minimum release requirement is 3.0 ft³/s at all times; flow is computed to 7.2 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	4.5	4.7	4.6	---	---	---	---	---	---	---	---
2	4.6	4.5	4.7	4.7	---	---	---	---	---	---	---	---
3	4.6	4.5	6.4	4.7	---	---	---	---	---	---	---	---
4	4.6	4.5	---	4.7	---	---	---	---	---	---	---	---
5	4.6	4.5	4.6	4.7	---	---	---	---	---	---	---	---
6	4.6	4.5	4.7	4.9	---	---	---	---	---	---	---	---
7	4.6	4.5	4.7	---	---	---	---	---	---	---	---	---
8	4.6	4.5	4.7	---	---	---	---	---	---	---	---	---
9	4.6	4.6	4.7	---	---	---	---	---	---	---	---	---
10	---	4.5	4.7	---	---	---	---	---	---	---	---	---
11	---	4.5	4.7	---	---	---	---	---	---	---	---	---
12	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
13	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
14	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
15	4.4	4.5	4.6	---	---	---	---	---	---	---	---	---
16	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
17	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
18	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
19	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
20	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
21	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
22	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
23	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
24	4.4	4.5	4.7	---	---	---	---	---	---	---	---	---
25	4.4	4.5	4.6	---	---	---	---	---	---	---	---	---
26	4.4	4.6	4.7	---	---	---	---	---	---	---	---	---
27	4.4	4.7	4.7	---	---	---	---	---	---	---	---	---
28	4.4	4.6	5.0	---	---	---	---	---	---	---	---	---
29	4.4	4.7	4.6	---	---	---	---	---	---	---	---	---
30	4.4	4.7	4.7	---	---	---	---	---	---	---	---	---
31	4.4	---	4.7	---	---	---	---	---	---	---	---	---
TOTAL	---	135.9	---	---	---	---	---	---	---	---	---	---
MEAN	---	4.53	---	---	---	---	---	---	---	---	---	---
MAX	---	4.7	---	---	---	---	---	---	---	---	---	---
MIN	---	4.5	---	---	---	---	---	---	---	---	---	---
AC-FT	---	270	---	---	---	---	---	---	---	---	---	---

NOTE: Discharges above 7.2 ft³/s for many days during the year.

11376160 NORTH FORK BATTLE CREEK BELOW DIVERSION TO WILDCAT CANAL, NEAR MANTON, CA

LOCATION.--Lat 40°25'14", long 121°57'36", in SE 1/4 SW 1/4 sec.27, T.30 N., R.1 W., Tehama County, Hydrologic Unit 18020118, on left bank at diversion dam to Wildcat Canal and 4.9 mi west of Manton.

DRAINAGE AREA.--189 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 1,080 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. This station records fishwater release only. The minimum release requirement is 3.0 ft³/s at all times; flow is computed to 60 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.8	4.6	5.0	---	---	---	---	---	---	---	34
2	4.7	4.6	4.6	5.1	---	---	---	---	---	---	---	33
3	5.2	4.5	15	5.1	---	---	---	---	---	---	---	32
4	4.8	4.7	33	4.9	---	---	---	---	---	---	59	32
5	4.6	4.7	4.7	5.0	---	---	---	---	---	---	55	32
6	4.8	4.7	4.6	7.8	---	---	---	---	---	---	56	32
7	4.8	4.8	4.6	---	---	---	---	---	---	---	54	31
8	4.8	4.6	4.3	---	---	---	---	---	---	---	48	32
9	4.9	4.7	4.5	---	---	---	---	---	---	---	41	32
10	13	4.6	4.6	---	---	---	---	---	---	---	36	31
11	18	4.8	4.4	---	---	---	---	---	---	---	35	31
12	4.7	4.7	4.5	---	---	---	---	---	---	---	29	31
13	4.7	4.6	6.5	---	---	---	---	---	---	---	25	31
14	4.6	4.6	4.6	---	---	---	---	---	---	---	22	31
15	4.8	4.6	4.5	---	---	---	---	---	---	---	22	31
16	4.9	4.6	4.5	---	---	---	---	---	---	---	26	31
17	4.7	4.7	4.6	---	---	---	---	---	---	---	25	31
18	4.7	4.6	4.6	---	---	---	---	---	---	---	20	31
19	4.7	4.7	4.8	---	---	---	---	---	---	---	15	31
20	4.7	4.7	4.7	---	---	---	---	---	---	---	15	31
21	4.8	4.7	4.5	---	---	---	---	---	---	---	18	30
22	4.6	4.5	4.5	---	---	---	---	---	---	---	23	29
23	4.7	4.5	4.4	---	---	---	---	---	---	---	24	28
24	4.9	4.7	4.6	---	---	---	---	---	---	---	30	28
25	4.8	4.6	4.5	---	---	---	---	---	---	---	32	28
26	4.8	4.7	4.5	---	---	---	---	---	---	---	31	29
27	4.6	4.5	5.4	---	---	---	---	---	---	---	29	29
28	4.8	4.5	8.7	---	---	---	---	---	---	---	28	29
29	4.7	4.6	4.9	---	---	---	---	---	---	---	26	29
30	4.6	4.8	4.9	---	---	---	---	---	---	---	25	29
31	4.7	---	5.1	---	---	---	---	---	---	---	29	---
TOTAL	169.0	139.4	188.2	---	---	---	---	---	---	---	---	919
MEAN	5.45	4.65	6.07	---	---	---	---	---	---	---	---	30.6
MAX	18	4.8	33	---	---	---	---	---	---	---	---	34
MIN	4.6	4.5	4.3	---	---	---	---	---	---	---	---	28
AC-FT	335	276	373	---	---	---	---	---	---	---	---	1820

NOTE: Discharges above 60 ft³/s for many days during the year.

11376420 SOUTH FORK BATTLE CREEK BELOW DIVERSION TO SOUTH BATTLE CREEK CANAL, NEAR MANTON, CA

LOCATION.--Lat 40°22'08", long 121°47'48", in SW 1/4 NW 1/4 sec.18, T.29 N., R.2 E., Tehama County, Hydrologic Unit 18020118, on right bank at diversion dam to South Battle Creek Canal and 5.9 mi southeast of Manton.

DRAINAGE AREA.--66.7 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 1976-77 in files of Pacific Gas & Electric Co.

GAGE.--Water-stage recorder and metal Alaskan fishladder. Elevation of gage is 2,040 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. This station records fishwater release only. The minimum release requirement is 5.0 ft³/s at all times; flow is computed to 8.9 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.

e Estimated.

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	7.4	7.1	7.0	7.0	---	---	---	---	---	---	---	7.1
2	7.4	7.1	7.0	7.0	---	---	---	---	---	---	---	7.1
3	7.3	7.1	---	7.1	---	---	---	---	---	---	---	7.1
4	7.3	7.1	---	7.0	---	---	---	---	---	---	---	7.1
5	7.3	7.1	7.7	7.1	---	---	---	---	---	---	---	7.1
6	7.3	7.1	7.0	7.1	---	---	---	---	---	---	---	7.1
7	7.2	7.1	7.0	---	---	---	---	---	---	---	---	7.1
8	7.3	7.1	7.0	---	---	---	---	---	---	---	---	7.1
9	7.3	7.1	7.0	---	---	---	---	---	---	---	---	7.1
10	---	7.1	7.0	---	---	---	---	---	---	---	---	7.1
11	---	7.1	7.0	---	---	---	---	---	---	---	7.1	7.1
12	---	7.1	7.0	---	---	---	---	---	---	---	7.1	7.1
13	---	7.1	7.0	---	---	---	---	---	---	---	7.1	7.5
14	7.2	7.1	7.0	---	---	---	---	---	---	---	7.0	7.7
15	7.2	7.1	7.1	---	---	---	---	---	---	---	7.1	7.7
16	7.2	7.1	7.1	---	---	---	---	---	---	---	7.1	7.7
17	7.2	7.1	7.1	---	---	---	---	---	---	---	7.0	7.8
18	7.2	7.1	7.0	---	---	---	---	---	---	---	7.1	7.7
19	7.2	7.1	7.0	---	---	---	---	---	---	---	7.1	7.7
20	7.2	7.1	7.1	---	---	---	---	---	---	---	7.1	7.7
21	7.2	7.1	7.0	---	---	---	---	---	---	---	7.1	7.7
22	7.2	7.1	7.1	---	---	---	---	---	---	---	7.1	7.8
23	7.2	7.1	7.1	---	---	---	---	---	---	---	7.1	7.7
24	7.2	7.1	6.5	---	---	---	---	---	---	---	7.1	7.7
25	7.1	7.1	7.0	---	---	---	---	---	---	---	7.1	7.8
26	7.1	6.2	7.1	---	---	---	---	---	---	---	7.1	7.7
27	7.1	7.5	7.1	---	---	---	---	---	---	---	7.1	7.7
28	7.2	7.0	7.0	---	---	---	---	---	---	---	7.1	7.7
29	7.1	7.0	7.0	---	---	---	---	---	---	---	7.0	7.7
30	7.1	7.1	7.0	---	---	---	---	---	---	---	7.1	7.7
31	7.1	---	7.0	---	---	---	---	---	---	---	7.1	---
TOTAL	---	212.3	---	---	---	---	---	---	---	---	---	223.9
MEAN	---	7.08	---	---	---	---	---	---	---	---	---	7.46
MAX	---	7.5	---	---	---	---	---	---	---	---	---	7.8
MIN	---	6.2	---	---	---	---	---	---	---	---	---	7.1
AC-FT	---	421	---	---	---	---	---	---	---	---	---	444

NOTE: Canal was out of service Oct. 10-13 and all flow remained in the natural channel. Discharges above 8.9 ft³/s for many days during the year.

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.6	6.5	6.3	---	---	---	---	---	---	---	---
2	6.8	6.5	6.5	6.4	---	---	---	---	---	---	---	---
3	6.7	6.5	---	6.4	---	---	---	---	---	---	---	---
4	6.6	6.5	---	6.4	---	---	---	---	---	---	---	---
5	6.6	6.5	---	6.4	---	---	---	---	---	---	---	---
6	6.6	6.5	8.4	---	---	---	---	---	---	---	---	---
7	6.5	6.5	6.3	---	---	---	---	---	---	---	---	---
8	6.5	6.5	6.3	---	---	---	---	---	---	---	---	---
9	6.5	9.5	6.3	---	---	---	---	---	---	---	---	---
10	6.4	6.4	6.4	---	---	---	---	---	---	---	---	---
11	6.6	6.6	6.4	---	---	---	---	---	---	---	---	---
12	6.7	6.6	6.4	---	---	---	---	---	---	---	---	---
13	6.5	6.5	6.6	---	---	---	---	---	---	---	---	11
14	6.5	6.6	6.5	---	---	---	---	---	---	---	---	12
15	6.5	6.5	6.4	---	---	---	---	---	---	---	---	12
16	6.5	6.6	6.4	---	---	---	---	---	---	---	---	12
17	6.6	6.5	6.4	---	---	---	---	---	---	---	---	12
18	6.5	6.4	6.5	---	---	---	---	---	---	---	---	11
19	6.6	6.4	6.4	---	---	---	---	---	---	---	---	11
20	6.6	6.5	6.4	---	---	---	---	---	---	---	---	11
21	6.5	6.5	6.4	---	---	---	---	---	---	---	---	11
22	6.5	7.1	6.4	---	---	---	---	---	---	---	---	11
23	6.6	6.5	6.3	---	---	---	---	---	---	---	---	11
24	6.5	6.5	6.5	---	---	---	---	---	---	---	---	11
25	6.5	6.5	6.3	---	---	---	---	---	---	---	---	11
26	6.5	6.4	6.4	---	---	---	---	---	---	---	---	11
27	6.5	6.5	6.6	---	---	---	---	---	---	---	---	11
28	6.6	6.4	---	---	---	---	---	---	---	---	---	11
29	6.5	6.4	6.2	---	---	---	---	---	---	---	---	12
30	6.5	6.4	6.3	---	---	---	---	---	---	---	---	11
31	6.5	---	6.4	---	---	---	---	---	---	---	---	---
TOTAL	203.3	198.4	---	---	---	---	---	---	---	---	---	---
MEAN	6.56	6.61	---	---	---	---	---	---	---	---	---	---
MAX	6.8	9.5	---	---	---	---	---	---	---	---	---	---
MIN	6.4	6.4	---	---	---	---	---	---	---	---	---	---
AC-FT	403	394	---	---	---	---	---	---	---	---	---	---

NOTE: Discharges above 12 ft³/s for many days during the year.

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.--No estimated daily discharges. This station records fishwater release only. The minimum release requirement is 5.0 ft³/s at all times; flow is computed to 10 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	6.5	6.6	7.3	---	---	---	---	---	---	---	---
2	6.7	6.6	6.6	7.3	---	---	---	---	---	---	---	---
3	6.8	6.6	---	7.3	---	---	---	---	---	---	---	---
4	6.8	6.5	---	7.3	---	---	---	---	---	---	---	---
5	6.8	6.5	9.0	7.4	---	---	---	---	---	---	---	---
6	6.8	6.5	7.1	8.7	---	---	---	---	---	---	---	---
7	6.8	6.5	7.2	---	---	---	---	---	---	---	---	---
8	6.8	6.5	7.1	---	---	---	---	---	---	---	---	---
9	6.8	6.5	7.1	---	---	---	---	---	---	---	---	---
10	6.7	6.5	7.2	---	---	---	---	---	---	---	---	---
11	6.8	6.6	7.2	---	---	---	---	---	---	---	---	---
12	6.7	6.6	7.2	---	---	---	---	---	---	---	---	---
13	6.7	6.6	8.4	---	---	---	---	---	---	---	---	---
14	6.8	6.6	7.8	---	---	---	---	---	---	---	---	---
15	6.8	6.5	8.2	---	---	---	---	---	---	---	---	---
16	6.8	6.5	8.2	---	---	---	---	---	---	---	---	---
17	6.7	6.5	8.2	---	---	---	---	---	---	---	---	---
18	6.8	6.6	8.2	---	---	---	---	---	---	---	---	---
19	6.7	6.6	8.2	---	---	---	---	---	---	---	---	---
20	6.8	6.6	8.2	---	---	---	---	---	---	---	---	---
21	6.8	6.6	8.2	---	---	---	---	---	---	---	---	---
22	6.8	6.6	7.6	---	---	---	---	---	---	---	---	---
23	6.7	6.6	7.3	---	---	---	---	---	---	---	---	---
24	6.8	6.5	7.3	---	---	---	---	---	---	---	---	---
25	6.7	6.5	7.2	---	---	---	---	---	---	---	---	---
26	6.6	6.5	7.3	---	---	---	---	---	---	---	---	---
27	6.6	6.5	7.4	---	---	---	---	---	---	---	---	---
28	6.6	6.6	---	---	---	---	---	---	---	---	---	---
29	6.5	6.6	7.2	---	---	---	---	---	---	---	---	---
30	6.5	6.6	7.3	---	---	---	---	---	---	---	---	---
31	6.5	---	7.3	---	---	---	---	---	---	---	---	---
TOTAL	208.4	196.5	---	---	---	---	---	---	---	---	---	---
MEAN	6.72	6.55	---	---	---	---	---	---	---	---	---	---
MAX	6.8	6.6	---	---	---	---	---	---	---	---	---	---
MIN	6.5	6.5	---	---	---	---	---	---	---	---	---	---
AC-FT	413	390	---	---	---	---	---	---	---	---	---	---

NOTE: Discharges above 10.0 ft³/s for many days during the year.

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	2315	11,300	10.26	Feb. 1	0030	4,790	6.46
Jan. 13	1945	5,550	7.01	Mar. 9	1230	10,600	10.13
Jan. 22	1915	3,130	5.11	Apr. 29	1300	*20,600	*13.49

Minimum daily, 182 ft³/s, Oct. 10.

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	188	216	251	293	3630	599	823	4090	1040	751	464	334
2	190	217	245	282	2000	1040	807	2860	1050	733	534	336
3	187	210	1230	298	1410	1290	775	2000	1050	740	539	332
4	194	213	1120	553	1170	1010	773	1690	1010	742	538	328
5	199	232	507	551	1050	797	788	1560	1080	719	530	327
6	199	232	410	657	967	728	1020	1420	994	704	530	324
7	200	235	336	1760	913	674	1570	1300	732	681	526	341
8	198	232	303	3220	975	950	1360	1220	701	677	515	357
9	198	337	285	6350	875	5000	1080	1200	696	668	494	349
10	182	437	272	5280	812	5170	967	1120	718	658	444	348
11	193	261	282	1890	777	3450	903	1160	752	622	432	348
12	201	268	727	1550	754	2190	876	1130	769	596	424	344
13	199	255	908	3720	803	2140	1170	1140	760	577	416	342
14	209	235	503	3740	767	3100	996	1040	883	556	412	344
15	209	258	427	2220	708	2690	893	1070	1330	555	407	346
16	209	251	357	2390	679	1680	852	1060	1250	556	403	340
17	209	257	318	1320	655	1390	805	1010	996	553	401	339
18	206	248	316	1040	649	1490	1130	1020	963	576	411	339
19	197	242	301	901	633	1410	899	1030	946	561	403	331
20	197	245	282	820	621	2040	859	1060	846	520	395	331
21	197	238	273	764	615	1670	805	1060	805	544	389	330
22	198	235	264	1350	601	1570	758	1050	784	506	385	328
23	198	232	258	1770	600	1490	746	1020	789	465	380	329
24	202	242	372	1400	603	1310	749	1020	811	457	373	327
25	202	268	355	1010	598	1130	747	996	834	442	376	329
26	204	272	295	1060	596	1030	755	1020	834	433	370	329
27	204	251	289	1310	586	971	858	1020	831	428	359	329
28	206	251	829	1740	591	927	897	1040	825	446	359	328
29	207	245	427	1140	---	885	6430	1030	807	455	335	333
30	206	242	339	2140	---	850	2700	1030	784	444	341	333
31	207	---	306	2290	---	823	---	1010	---	429	347	---
TOTAL	6195	7557	13387	54809	25638	51494	34791	40476	26670	17794	13232	10075
MEAN	200	252	432	1768	916	1661	1160	1306	889	574	427	336
MAX	209	437	1230	6350	3630	5170	6430	4090	1330	751	539	357
MIN	182	210	245	282	586	599	746	996	696	428	335	324
AC-FT	12290	14990	26550	108700	50850	102100	69010	80280	52900	35290	26250	19980

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	293	415	556	758	700	741	641	600	470	325	261	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1962 - 1995			
ANNUAL TOTAL	112371				302118							
ANNUAL MEAN	308				828				501			
HIGHEST ANNUAL MEAN									869			
LOWEST ANNUAL MEAN									238			
HIGHEST DAILY MEAN	1230				Dec 3				10900			
LOWEST DAILY MEAN	155				Aug 29				102			
ANNUAL SEVEN-DAY MINIMUM	169				Aug 9				110			
INSTANTANEOUS PEAK FLOW					20600				24300			
INSTANTANEOUS PEAK STAGE					13.49				14.75			
ANNUAL RUNOFF (AC-FT)	222900				599300				362600			
10 PERCENT EXCEEDS	443				1490				877			
50 PERCENT EXCEEDS	278				621				364			
90 PERCENT EXCEEDS	181				232				221			

SACRAMENTO RIVER BASIN

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.

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 diagram of upper Sacramento, Pit, and McCloud River 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 127,000 ft³/s, Mar. 15, gage height, 30.65 ft; minimum daily, 4,220 ft³/s, Oct. 13.

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	6460	4690	4830	5310	74000	8390	23700	44600	15400	16300	15200	15300
2	6220	4700	4850	5200	62100	15200	23400	41500	14200	16600	15100	15300
3	5990	4660	8470	5230	58200	21000	21500	36000	14800	16400	15300	15300
4	5850	4690	9090	8580	53100	13300	18900	38000	14600	16500	15000	15300
5	5710	4870	6000	8910	50000	10800	17400	37300	14700	16400	15800	15300
6	5580	4850	5530	8360	48300	9840	18500	37000	15300	14800	15300	15300
7	5440	4810	5450	26000	47100	9300	25400	36000	14800	15500	15200	15300
8	5220	4830	5140	42300	44400	12800	32300	35200	14300	15300	15400	13100
9	5010	5050	5070	94500	39200	69400	34300	33100	13800	15500	15400	12000
10	4710	5840	5010	70800	33500	67400	32900	28300	14000	15700	15200	12100
11	4430	5030	5000	37900	28200	77800	31800	25400	13900	15400	14300	12100
12	4290	4860	7170	40200	24500	85400	40100	23100	14000	15300	13900	12100
13	4220	4790	9260	61300	22400	87100	42600	21500	14100	15400	14800	12200
14	4480	4760	7430	60700	19800	103000	39100	19800	14500	15500	14900	12300
15	4670	4780	8310	40000	16900	107000	33400	18400	15400	15700	14400	12100
16	4620	5020	6970	31700	14600	94500	29100	15900	14700	15900	13000	11700
17	4660	4850	e6500	25800	13300	96000	25400	13600	13600	15600	13200	11700
18	4670	4790	e6080	28200	11700	92500	23400	12400	13500	15700	14000	11300
19	4720	4760	e6100	39600	10600	86700	20100	11400	12500	15800	15100	11100
20	4700	4720	e5750	41800	10000	82100	17900	13100	12800	15500	15200	11200
21	4720	4720	e5470	36800	9690	75200	15400	14700	15600	15500	15400	11400
22	4750	4690	5330	38900	9510	74700	13700	14500	15500	15600	14500	10800
23	4820	4690	5250	64700	9240	71900	12200	15200	15200	15600	14900	10400
24	5020	4730	5600	46700	9030	68400	11100	15200	16300	15700	15300	9970
25	5100	4960	6060	39500	8860	57600	10100	15600	18200	15600	15300	9620
26	4760	5230	5490	34700	8750	47600	10000	15200	16100	15700	15300	9560
27	4690	4950	5350	36700	8670	43700	10600	15200	16800	15700	15300	9560
28	4700	4950	7490	54900	8600	40100	21700	15500	16200	15500	15300	9530
29	4640	5090	6160	46100	---	34400	48300	15700	16000	15500	15300	9330
30	4640	4860	5650	61300	---	30000	44900	15900	16600	15500	15300	8850
31	4650	---	5430	59600	---	25800	---	16300	---	15600	15300	---
TOTAL	154140	146220	191290	1202290	754250	1718930	749200	710600	445400	486300	462900	361120
MEAN	4972	4874	6171	38780	26940	55450	24970	22920	14850	15690	14930	12040
MAX	6460	5840	9260	94500	74000	107000	48300	44600	16800	16600	15800	15300
MIN	4220	4660	4830	5200	8600	8390	10000	11400	12500	14800	13000	8850
AC-FT	305700	290000	379400	2385000	1496000	3409000	1486000	1409000	883500	964600	918200	716300

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	1904
LOWEST ANNUAL MEAN	4096	1924
HIGHEST DAILY MEAN	261000	Feb 28 1940
LOWEST DAILY MEAN	2400	Aug 13 1931
ANNUAL SEVEN-DAY MINIMUM	2470	Aug 7 1931
INSTANTANEOUS PEAK FLOW	291000	Feb 28 1940
INSTANTANEOUS PEAK STAGE	38.9	Feb 28 1940
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	1958
LOWEST ANNUAL MEAN	6690	1947
HIGHEST DAILY MEAN	125000	Feb 19 1958
LOWEST DAILY MEAN	3640	Jan 31 1949
ANNUAL SEVEN-DAY MINIMUM	3830	Feb 27 1948
INSTANTANEOUS PEAK FLOW	139000	Feb 19 1958
INSTANTANEOUS PEAK STAGE	24.98	Feb 19 1958
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6840	9355	14020	18000	18410	17500	12400	12120	11880	12620	11570	8420
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	2796900	7382640	
ANNUAL MEAN	7663	20230	12740
HIGHEST ANNUAL MEAN			25450
LOWEST ANNUAL MEAN			6494
HIGHEST DAILY MEAN	13600	Feb 20	107000
LOWEST DAILY MEAN	4220	Oct 13	4220
ANNUAL SEVEN-DAY MINIMUM	4480	Oct 11	4480
INSTANTANEOUS PEAK FLOW			127000
INSTANTANEOUS PEAK STAGE			30.65
ANNUAL RUNOFF (AC-FT)	5548000	14640000	9231000
10 PERCENT EXCEEDS	11900	45400	19300
50 PERCENT EXCEEDS	7080	15100	9930
90 PERCENT EXCEEDS	4790	4830	5330

SACRAMENTO RIVER BASIN

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 Flournoy, 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	0830	8,700	10.00	Mar. 9	0945	*9,740	*10.30
Jan. 13	1915	5,530	8.77	Mar. 14	2200	5,000	8.50
Jan. 24	1215	5,190	8.60	Mar. 20	2300	2,480	6.72
Feb. 1	0515	2,280	6.54				

Minimum daily, 0.28 ft³/s, Oct. 3.

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	.47	1.7	8.0	14	1770	157	289	634	105	31	11	5.3
2	.40	1.9	9.3	14	1090	163	e280	455	99	30	10	5.0
3	.28	2.0	19	46	786	216	e270	329	94	30	10	4.9
4	.72	2.3	27	428	654	189	e300	285	90	28	9.7	5.0
5	1.1	8.5	15	185	560	160	e450	278	85	27	9.3	5.0
6	.97	7.4	12	307	480	141	e520	249	80	26	9.1	4.8
7	.82	7.5	11	1220	416	128	e670	220	75	26	8.7	4.8
8	.74	5.6	9.4	4630	435	793	e500	203	71	25	8.2	4.7
9	.70	13	8.6	5110	379	4950	e340	192	69	25	8.0	4.7
10	.71	15	8.1	1490	323	3410	e290	183	68	24	8.1	4.7
11	.69	8.3	9.5	825	293	1510	e250	173	66	24	8.4	4.9
12	.73	6.6	31	1010	274	833	226	166	65	25	8.0	4.7
13	.68	5.6	20	2650	253	1110	224	179	64	25	7.7	4.5
14	.63	5.3	44	2150	228	2510	214	178	63	22	7.5	4.3
15	.60	7.3	38	898	208	1750	199	175	99	21	7.3	4.4
16	.64	9.6	23	562	190	930	199	178	106	19	7.3	4.3
17	.74	7.4	21	394	172	693	188	175	89	18	7.4	4.5
18	.77	6.3	21	302	158	648	177	172	e72	18	7.2	4.6
19	.92	5.9	21	249	151	608	165	169	e60	19	6.5	4.2
20	1.1	5.7	17	218	149	909	156	167	e49	19	5.9	4.1
21	1.2	5.6	15	312	157	1090	147	165	46	18	5.7	3.8
22	1.2	5.4	14	2010	164	769	139	163	43	17	5.6	3.9
23	1.1	5.2	13	1650	166	697	133	160	40	16	5.5	4.0
24	1.2	5.6	21	3280	170	611	132	154	38	16	5.3	4.2
25	1.2	20	21	1580	166	518	136	147	36	15	5.3	4.5
26	1.4	16	17	1040	159	442	140	141	35	14	5.4	4.7
27	1.5	11	16	762	155	396	146	135	35	14	5.6	4.9
28	1.5	9.1	21	645	155	364	151	128	33	13	5.8	5.1
29	1.4	8.0	18	592	---	337	199	123	32	12	5.9	5.1
30	1.4	7.4	16	1430	---	320	279	117	31	11	5.8	5.1
31	1.5	---	15	1440	---	303	---	111	---	11	5.6	---
TOTAL	29.01	226.2	559.9	37443	10261	27655	7509	6304	1938	639	226.8	138.7
MEAN	.94	7.54	18.1	1208	366	892	250	203	64.6	20.6	7.32	4.62
MAX	1.5	20	44	5110	1770	4950	670	634	106	31	11	5.3
MIN	.28	1.7	8.0	14	149	128	132	111	31	11	5.3	3.8
AC-FT	58	449	1110	74270	20350	54850	14890	12500	3840	1270	450	275

e Estimated.

11379500 ELDER CREEK NEAR PASKENTA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.55	49.4	131	248	275	233	147	76.9	27.8	8.26	3.21	3.05
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1949 - 1995			
ANNUAL TOTAL	7767.63				92929.61							
ANNUAL MEAN	21.3				255				100			
HIGHEST ANNUAL MEAN									303			
LOWEST ANNUAL MEAN									6.69			
HIGHEST DAILY MEAN	366 Feb 7				5110 Jan 9				7650 Dec 22 1964			
LOWEST DAILY MEAN	.00 Jul 19				.28 Oct 3				.00 Aug 6 1950			
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 27				.67 Oct 10				.00 Aug 14 1950			
INSTANTANEOUS PEAK FLOW					9740 Mar 9				17700 Feb 28 1983			
INSTANTANEOUS PEAK STAGE					10.30 Mar 9				13.90 Feb 24 1958			
ANNUAL RUNOFF (AC-FT)	15410				184300				72560			
10 PERCENT EXCEEDS	55				650				230			
50 PERCENT EXCEEDS	10				31				19			
90 PERCENT EXCEEDS	.02				3.9				1.5			

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. Records good. No storage or large diversion upstream from station. See schematic diagram of upper Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD (water years 1929-95).--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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 3	2330	2,510	7.21	Mar. 9	1045	8,920	11.88
Jan. 10	0530	*11,000	*12.86	Apr. 29	1700	7,230	10.96
Jan. 13	1845	6,380	10.46				

Minimum daily, 76 ft³/s, Oct. 3.

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	79	84	102	159	1960	312	394	3480	688	596	275	152
2	78	92	110	150	1390	382	392	2020	691	570	270	151
3	76	84	972	162	937	591	375	1400	719	595	266	150
4	81	83	1220	311	734	506	381	1100	696	585	257	148
5	90	90	374	247	628	410	412	951	709	548	253	147
6	84	108	257	308	559	355	555	817	601	548	251	145
7	83	99	197	1830	506	318	1390	720	517	535	243	144
8	82	91	164	2970	564	369	1110	657	466	518	232	143
9	81	169	148	5650	474	5180	782	626	468	492	221	143
10	81	142	140	4630	422	4300	628	586	484	481	219	141
11	80	104	135	1870	386	2850	552	589	527	436	214	141
12	81	100	166	1610	362	1920	527	603	549	402	205	140
13	82	98	237	3790	349	1840	757	678	533	377	200	139
14	81	91	247	3310	325	2610	629	587	632	380	197	139
15	82	98	270	1570	288	2100	542	624	1050	398	197	138
16	81	108	196	1010	264	1290	489	574	809	410	198	136
17	81	105	177	713	246	952	441	565	661	417	194	135
18	82	100	192	543	235	968	493	607	657	499	188	135
19	82	94	181	439	229	881	422	632	616	444	182	135
20	81	95	163	368	229	1400	426	671	558	385	179	135
21	81	95	153	320	238	1180	383	661	532	370	177	135
22	81	92	146	389	251	1330	356	650	541	358	177	134
23	81	91	142	882	269	1010	347	656	585	338	174	133
24	81	92	178	722	295	780	363	644	648	324	171	133
25	81	143	189	539	304	646	411	626	695	313	169	133
26	81	118	163	696	302	554	448	647	706	301	166	133
27	81	105	160	744	293	493	507	660	711	293	163	133
28	81	102	481	918	299	455	531	668	674	290	161	132
29	83	99	252	690	---	426	2620	673	646	309	158	131
30	81	98	193	925	---	401	1990	685	627	291	156	131
31	81	---	170	1120	---	389	---	682	---	281	154	---
TOTAL	2521	3070	7875	39585	13338	37198	19653	25739	18996	13084	6267	4165
MEAN	81.3	102	254	1277	476	1200	655	830	633	422	202	139
MAX	90	169	1220	5650	1960	5180	2620	3480	1050	596	275	152
MIN	76	83	102	150	229	312	347	565	466	281	154	131
AC-FT	5000	6090	15620	78520	26460	73780	38980	51050	37680	25950	12430	8260

SACRAMENTO RIVER BASIN

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11381500 MILL CREEK NEAR LOS MOLINOS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	125	200	342	433	465	451	431	439	327	176	116	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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1929 - 1995		
ANNUAL TOTAL	61101			191491					
ANNUAL MEAN	167			525			300		
HIGHEST ANNUAL MEAN							576		
LOWEST ANNUAL MEAN							93.6		
HIGHEST DAILY MEAN	1220			Dec 4			5650		
LOWEST DAILY MEAN	73			Aug 18			76		
ANNUAL SEVEN-DAY MINIMUM	73			Aug 17			81		
INSTANTANEOUS PEAK FLOW							11000		
INSTANTANEOUS PEAK STAGE							12.86		
ANNUAL RUNOFF (AC-FT)	121200			379800			217400		
10 PERCENT EXCEEDS	278			970			575		
50 PERCENT EXCEEDS	140			347			177		
90 PERCENT EXCEEDS	76			91			90		

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	0245	8,310	8.26	Mar. 9	unknown	*20,100	*10.54
Jan. 13	1830	14,500	9.44	Mar. 14	1715	11,000	8.60
Jan. 24	1130	4,620	6.88	Mar. 20	1030	4,620	6.92
Jan. 31	1715	5,840	7.35	May 1	0915	4,160	6.76

No flow Oct. 1 and 2.

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	.00	2.5	66	63	e5400	738	826	2830	438	e107	25	11
2	.00	3.0	99	62	3240	762	804	1760	400	e102	24	11
3	.06	2.8	91	86	2490	937	788	1370	402	e98	24	11
4	.36	3.4	100	369	2240	668	829	1150	390	e96	22	11
5	.91	11	65	194	1950	543	853	961	367	e94	21	10
6	.98	18	50	331	1640	459	1470	842	329	e88	21	9.6
7	1.1	22	41	777	1390	401	2120	738	312	e76	20	9.3
8	1.6	20	34	3900	1340	1140	1670	662	295	70	19	9.1
9	.90	22	29	6410	1200	e11000	1240	643	290	65	19	8.9
10	.95	45	28	3450	1030	4890	1070	629	297	64	17	8.7
11	.78	26	29	1900	941	3380	999	587	302	62	18	8.5
12	.90	18	33	2210	867	2100	968	538	298	65	18	8.6
13	1.1	14	31	7130	783	2370	968	575	294	70	18	8.5
14	1.3	14	39	7630	695	6870	858	569	310	59	17	7.7
15	1.1	14	40	3420	609	4430	796	587	412	52	17	7.5
16	1.1	15	33	1810	596	2490	778	590	351	49	15	7.5
17	1.2	13	86	1110	572	1760	695	598	330	43	15	7.8
18	1.5	14	141	846	599	2130	656	632	337	46	16	7.5
19	1.7	13	136	697	601	1810	607	648	317	49	16	6.6
20	1.8	12	105	636	544	2850	601	673	e301	47	15	6.6
21	1.7	11	88	686	644	2020	562	651	e280	45	14	6.2
22	1.9	14	77	1750	684	1800	539	622	e225	43	14	6.2
23	2.0	15	75	1650	710	1390	545	635	e176	41	14	6.4
24	2.1	14	85	2770	732	1170	594	603	e160	38	13	6.0
25	2.0	131	88	1910	729	1040	663	565	e148	36	12	6.3
26	2.0	90	71	1560	684	965	669	537	e140	35	13	6.5
27	2.2	48	67	1300	678	930	697	522	e131	33	13	5.9
28	2.9	38	85	1550	717	882	647	484	e124	32	12	6.0
29	2.4	35	87	1730	---	867	2010	478	e117	29	12	6.4
30	2.3	32	73	4200	---	845	1720	466	e112	28	12	6.8
31	2.0	---	64	e4820	---	852	---	448	---	27	11	---
TOTAL	42.84	730.7	2136	66957	34305	64489	28242	23593	8385	1789	517	239.1
MEAN	1.38	24.4	68.9	2160	1225	2080	941	761	279	57.7	16.7	7.97
MAX	2.9	131	141	7630	5400	11000	2120	2830	438	107	25	11
MIN	.00	2.5	28	62	544	401	539	448	112	27	11	5.9
AC-FT	85	1450	4240	132800	68040	127900	56020	46800	16630	3550	1030	474

e Estimated.

SACRAMENTO RIVER BASIN

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11382000 THOMES CREEK AT PASKENTA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.9	161	394	581	694	614	550	350	116	23.4	6.27	5.09
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1921 - 1995

ANNUAL TOTAL	28927.78	231425.64	
ANNUAL MEAN	79.3	634	291
HIGHEST ANNUAL MEAN			772
LOWEST ANNUAL MEAN			21.5
HIGHEST DAILY MEAN	712	Mar 5	11000
LOWEST DAILY MEAN	.00	Aug 8	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 8	.49
INSTANTANEOUS PEAK FLOW			20100
INSTANTANEOUS PEAK STAGE			10.54
ANNUAL RUNOFF (AC-FT)	57380	459000	211000
10 PERCENT EXCEEDS	179	1750	755
50 PERCENT EXCEEDS	39	105	73
90 PERCENT EXCEEDS	.00	6.0	2.3

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. Records good. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	0430	*14,200	*13.43	Mar. 9	1030	12,500	12.88
Jan. 13	2245	8,460	11.31	Apr. 29	1830	6,550	10.42
Feb. 1	1530	2,820	7.48				

Minimum daily, 64 ft³/s, Oct. 3.

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	67	70	86	127	2550	403	796	4830	610	302	176	130
2	66	80	95	120	2060	478	783	3620	604	296	175	129
3	64	73	614	128	1440	714	744	2570	590	287	174	128
4	67	72	1140	270	1120	660	738	1960	569	279	170	127
5	79	77	314	233	951	548	745	1670	559	272	170	126
6	72	95	205	258	837	487	937	1440	526	264	169	126
7	69	92	158	2850	743	447	2140	1250	498	258	167	126
8	67	80	131	5260	723	528	1950	1110	473	254	166	125
9	67	143	117	9530	633	7560	1430	1030	450	251	163	124
10	67	147	109	7560	574	7540	1180	959	434	246	162	124
11	66	95	105	3310	533	5650	1050	934	422	239	161	124
12	66	87	131	2980	507	3560	997	950	412	234	158	123
13	67	89	170	4990	494	3220	1400	991	403	231	156	123
14	67	81	178	5990	460	4090	1180	914	429	225	154	123
15	67	87	192	2960	416	3470	1040	925	575	220	153	122
16	67	97	152	1760	390	2350	945	858	566	215	151	122
17	67	90	143	1190	367	1730	850	820	469	212	149	121
18	68	88	149	911	355	1730	832	815	463	218	148	121
19	68	81	145	734	347	1550	755	806	445	214	145	120
20	68	80	131	617	345	2330	741	803	413	208	142	119
21	67	82	121	540	349	2180	678	783	390	205	141	119
22	67	81	115	676	354	2410	630	768	376	200	138	118
23	67	80	111	1390	366	1850	617	745	362	198	138	118
24	67	80	129	1150	381	1430	630	728	354	195	136	118
25	67	135	141	901	389	1220	668	709	348	192	133	118
26	68	118	123	961	389	1080	689	678	342	190	133	118
27	68	97	122	964	382	989	738	679	337	187	133	118
28	68	92	274	1070	387	929	780	719	328	185	132	119
29	69	87	185	913	---	880	3120	659	319	183	131	119
30	68	85	150	1070	---	829	3320	640	311	181	131	119
31	68	---	134	1400	---	798	---	624	---	179	131	---
TOTAL	2100	2741	6070	62813	18842	63640	33103	36987	13377	7020	4686	3667
MEAN	67.7	91.4	196	2026	673	2053	1103	1193	446	226	151	122
MAX	79	147	1140	9530	2550	7560	3320	4830	610	302	176	130
MIN	64	70	86	120	345	403	617	624	311	179	131	118
AC-FT	4170	5440	12040	124600	37370	126200	65660	73360	26530	13920	9290	7270

SACRAMENTO RIVER BASIN

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11383500 DEER CREEK NEAR VINA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113	196	369	526	614	583	534	388	199	117	97.2	94.4
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1912 - 1995			
ANNUAL TOTAL	48376				255046							
ANNUAL MEAN	133				699				318			
HIGHEST ANNUAL MEAN									700			
LOWEST ANNUAL MEAN									86.2			
HIGHEST DAILY MEAN	1140				9530				14300			
LOWEST DAILY MEAN	61				64				52			
ANNUAL SEVEN-DAY MINIMUM	61				67				53			
INSTANTANEOUS PEAK FLOW					14200				23800			
INSTANTANEOUS PEAK STAGE					13.43				19.20			
ANNUAL RUNOFF (AC-FT)	95950				505900				230500			
10 PERCENT EXCEEDS	234				1480				675			
50 PERCENT EXCEEDS	105				274				144			
90 PERCENT EXCEEDS	62				80				78			

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, 51,218 acre-ft, Aug. 13, 14, elevation, 1,199.86 ft; minimum, 7,032 acre-ft, many days in November, elevation, 1,160.28

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, 51,141 acre-ft, May 7, elevation, 841.58 ft; minimum, 8,834 acre-ft, Oct. 1, elevation, 793.14 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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.....	1,162.90	8,447	-7,742	793.10	8,815	-3,082
Oct. 31.....	1,160.36	7,073	-1,374	796.58	10,506	1,691
Nov. 30.....	1,161.95	7,913	840	796.54	10,485	-21
Dec. 31.....	1,168.58	12,114	4,201	800.30	12,533	2,048
CAL YR 1994	--	--	-27,997	--	--	-27,475
Jan. 31.....	1,198.80	49,311	37,197	831.18	38,513	25,980
Feb. 28.....	1,198.36	48,532	-779	829.22	36,355	-2,158
Mar. 31.....	1,198.60	48,957	425	836.26	44,436	8,081
Apr. 30.....	1,198.30	48,426	-531	840.46	49,687	5,251
May 31.....	1,198.32	48,461	35	838.76	47,522	-2,165
June 30.....	1,199.66	50,857	2,396	840.92	50,280	2,758
July 31.....	1,199.28	50,171	-686	839.84	48,891	-1,389
Aug. 31.....	1,198.12	48,107	-2,064	840.10	49,223	332
Sept. 30.....	1,196.28	44,943	-3,164	828.39	35,462	-13,761
WTR YR 1995	--	--	36,496	--	--	26,647

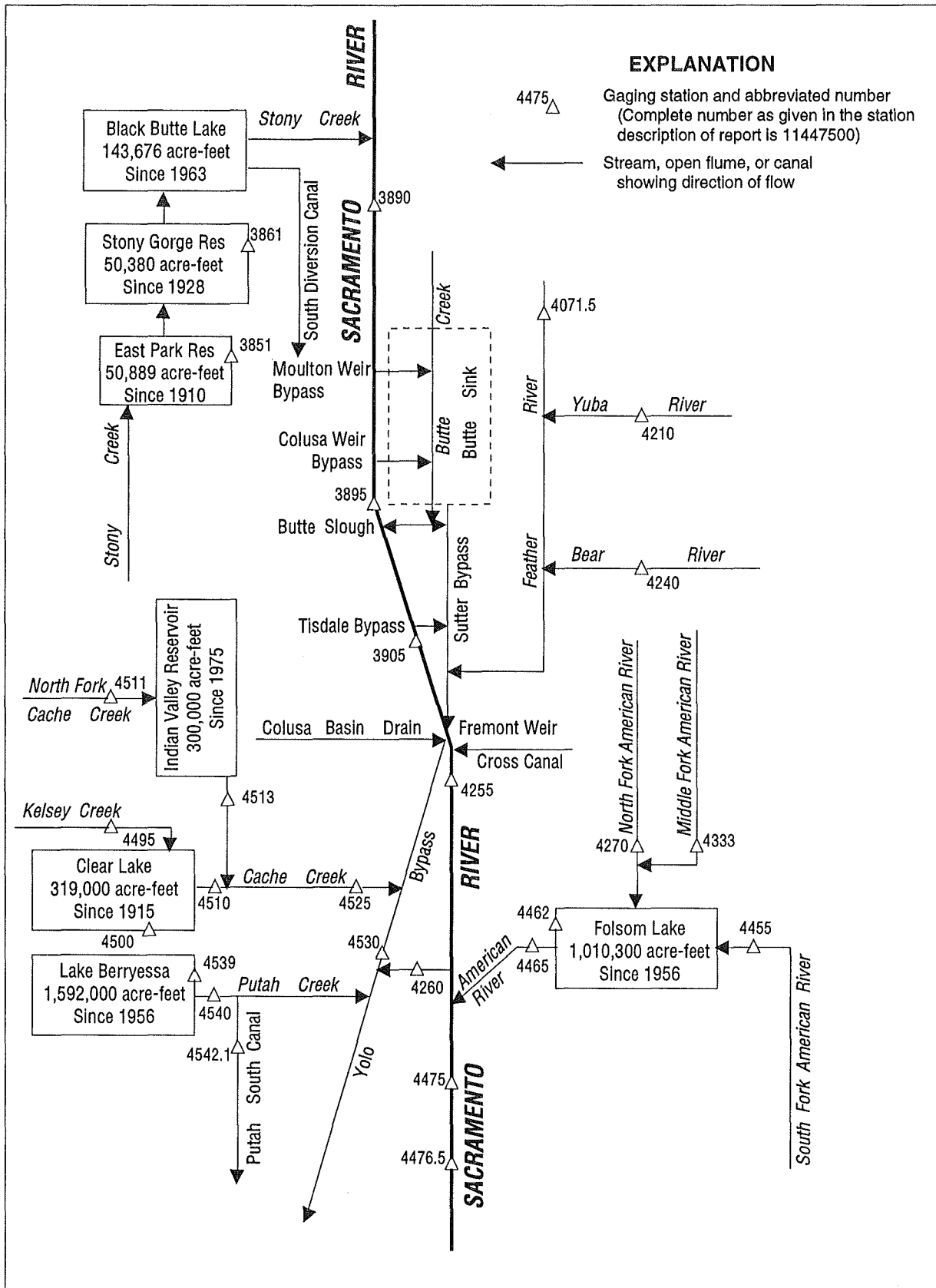


Figure 26. Diversions and storage in lower Sacramento River basin.

SACRAMENTO RIVER BASIN

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 30, 1995 (discharge record discontinued),(prior to October 1938, low-water periods only), July 1 to September 1995 (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.--Records good except for estimated daily discharges, which are fair. Natural flow affected by storage reservoirs, power developments, diversions for irrigation, return flow from irrigated areas, and bypassing for flood control. Statistical period is based on completion of Shasta Dam. 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. Records tabulated below do not include overbank flow into the Butte basin. See schematic diagram showing diversions and storage in the lower Sacramento River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (water years 1941-95), 170,000 ft³/s, Feb. 7, 1942, gage height, 96.87 ft, from rating curve extended above 101,000 ft³/s; minimum daily, 1,350 ft³/s, August 24, 1939.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 143,000 ft³/s, Jan. 10, 11, gage height, 94.73 ft, Jan. 11; minimum daily, 3,530 ft³/s, Oct. 30; maximum elevation recorded (July 1 to Sept. 30), 73.92 ft, Sept. 1; minimum elevation recorded, 71.59 ft, Sept. 2.

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	5990	3640	4700	6030	83800	11700	33000	52100	17500	---	---	---
2	5750	3650	4620	5740	95700	11600	30500	57700	16400	---	---	---
3	5420	3690	4880	5650	87800	18700	29200	51900	15500	---	---	---
4	5350	3680	17800	9860	73700	23200	27100	43400	15700	---	---	---
5	5280	3840	13800	19700	66600	17300	24900	42400	15500	---	---	---
6	5150	4060	7950	13100	60600	14700	23200	41200	15500	---	---	---
7	4970	4080	6580	22100	55900	13200	26600	39900	15500	---	---	---
8	4780	4020	6020	49000	53100	12600	34500	38600	14900	---	---	---
9	4550	4120	5450	71800	50300	35400	38300	37500	14200	---	---	---
10	4320	4750	5230	127000	44800	94400	38500	34600	13600	---	---	---
11	4080	5590	5110	132000	39300	123000	36700	30900	13600	---	---	---
12	3830	4540	5190	92400	34500	115000	36000	28500	13400	---	---	---
13	3670	4240	8840	78900	30900	103000	42400	26800	13500	---	---	---
14	3560	4150	10800	91700	29800	104000	45400	25800	13600	---	---	---
15	3560	4140	10600	107000	26800	116000	42400	23900	14400	---	---	---
16	3690	4160	9880	78900	23700	121000	37400	21100	16300	---	---	---
17	3670	4320	8000	61400	21700	109000	33500	19800	15300	---	---	---
18	3610	4180	7430	49600	19500	102000	30500	18200	14500	---	---	---
19	3580	4100	6850	46200	17700	98600	28900	16900	14400	---	---	---
20	3580	4080	6650	51300	16200	94800	25600	15600	13100	---	---	---
21	3580	4040	6140	50900	15200	93400	22700	17300	13500	---	---	---
22	3590	4010	5800	45300	14300	90600	20300	18100	15000	---	---	---
23	3610	3990	5570	62300	13600	88200	18400	18100	e14000	---	---	---
24	3650	4400	5470	86500	13200	85100	16200	18400	e14000	---	---	---
25	3740	4640	6350	84100	12800	77400	14700	18300	e14000	---	---	---
26	3860	4850	6690	70400	12500	68700	13700	18200	e14100	---	---	---
27	3720	5080	5890	60800	12100	57600	13400	17700	14800	---	---	---
28	3600	4790	6970	63600	12000	51800	15200	17600	15300	---	---	---
29	3590	4690	10200	73900	---	46700	25600	17600	14600	---	---	---
30	3530	4860	7590	70400	---	41200	49400	17400	14700	---	---	---
31	3570	---	6510	76600	---	36800	---	17500	---	---	---	---
TOTAL	128430	128380	229560	1864180	1038100	2076700	874200	863000	440400	---	---	---
MEAN	4143	4279	7405	60130	37070	66990	29140	27840	14680	---	---	---
MAX	5990	5590	17800	132000	95700	123000	49400	57700	17500	---	---	---
MIN	3530	3640	4620	5650	12000	11600	13400	15600	13100	---	---	---
AC-FT	254700	254600	455300	3698000	2059000	4119000	1734000	1712000	873500	---	---	---

CAL YR 1994 TOTAL 2529670 MEAN 6931 MAX 23600 MIN 3530 AC-FT 5018000

e Estimated.

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GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

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.

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

CHEMICAL DATA: Water years 1959-66.

WATER TEMPERATURES: Water years 1977-80.

SEDIMENT DATA: Water years 1973-80.

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 control, 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 1941-95), 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,900 ft³/s, Jan. 11 gage height, 67.56 ft; minimum daily, 3,410 ft³/s, Oct. 20.

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	6240	3460	4710	5670	43000	12200	31900	38000	16300	13600	12400	10300
2	6090	3480	4580	5300	43700	12000	30500	38500	15700	13600	12000	9740
3	5670	3550	4730	5120	44100	14800	28900	38500	14700	13700	11700	9200
4	5450	3480	9340	6610	42500	21300	27000	36200	14500	13600	11700	9840
5	5410	3600	16100	15000	41000	19500	25200	35400	14400	13500	11600	9790
6	5270	3860	9490	15000	39800	15700	23300	35100	14300	13400	11900	9680
7	5120	4010	7030	14300	38700	14000	23700	34800	14600	12600	12000	9590
8	4900	4010	6200	32400	38000	13100	32500	34400	14100	12400	11800	9550
9	4680	4000	5500	39300	37400	19800	33600	34000	13600	12400	11900	9560
10	4530	4340	5060	44700	36200	39700	34100	33300	12900	12400	11900	9690
11	4280	5640	4730	48400	34500	44800	33600	31600	12800	12500	11800	9900
12	3940	5070	4570	46500	32700	45400	33100	29300	12700	12300	11200	10000
13	3750	4540	5940	43300	30800	44300	34800	27300	12700	12200	10800	10000
14	3500	4330	10100	42800	28800	43900	36000	26100	12700	12200	11300	10100
15	3420	4230	9330	44600	27500	44800	35600	24700	13100	12200	11500	10200
16	3560	4220	10200	43300	24200	46100	34200	22500	14400	12300	11400	10700
17	3570	4330	7940	40400	21800	45500	32500	19900	15000	12400	10500	10500
18	3510	4290	7450	37800	20000	44200	30900	18200	14000	12200	10200	10400
19	3450	4200	6540	36300	17800	43700	29400	16600	13700	12400	10500	10300
20	3410	4120	6360	36900	16400	43400	27000	15200	13100	12300	11500	9990
21	3460	4050	5860	37500	15300	43100	23900	15300	12400	12200	11700	10100
22	3460	4040	5450	36400	14500	43200	21300	16800	13600	12100	11900	10200
23	3480	3970	5170	37700	13900	42800	18700	16800	13900	12300	e11800	10000
24	3480	4100	5040	42100	13500	42800	16400	17000	13400	12300	e11400	9620
25	3550	4490	5320	43200	13200	42200	14600	17100	13700	12400	e11300	9330
26	3790	4640	6220	42100	12800	41000	13600	17100	13800	12300	e11100	8980
27	3730	4920	5530	39700	12600	39200	12900	16700	13600	12200	e10900	8830
28	3530	4820	5380	39700	12400	37500	13400	16500	14000	12200	e10700	8810
29	3490	4630	8700	41100	---	36500	19400	16400	13800	e12000	e10400	8760
30	3470	4720	7820	41700	---	34800	32100	16300	13300	e11800	10500	8640
31	3480	---	6360	41400	---	33400	---	16100	---	e12200	10600	---
TOTAL	128670	127140	212750	1046300	767100	1064700	804100	771700	414800	388200	351900	292300
MEAN	4151	4238	6863	33750	27400	34350	26800	24890	13830	12520	11350	9743
MAX	6240	5640	16100	48400	44100	46100	36000	38500	16300	13700	12400	10700
MIN	3410	3460	4570	5120	12400	12000	12900	15200	12400	11800	10200	8640
AC-FT	255200	252200	422000	2075000	1522000	2112000	1595000	1531000	822800	770000	698000	579800

e Estimated.

11389500 SACRAMENTO RIVER AT COLUSA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6587	8873	13510	17270	18920	16840	12550	10460	8658	8428	8154	7114
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1946 - 1995			
ANNUAL TOTAL	2575810				6369660							
ANNUAL MEAN	7057				17450							
HIGHEST ANNUAL MEAN									11410			
LOWEST ANNUAL MEAN									21790			
HIGHEST DAILY MEAN	20900				Feb 21				5671			
LOWEST DAILY MEAN	3410				Oct 20				51300			
ANNUAL SEVEN-DAY MINIMUM	3460				Oct 18				2620			
INSTANTANEOUS PEAK FLOW					48900				2690			
INSTANTANEOUS PEAK STAGE					67.56				51800			
ANNUAL RUNOFF (AC-FT)	5109000				12630000				68.50			
10 PERCENT EXCEEDS	9650				39700				8269000			
50 PERCENT EXCEEDS	6900				12400				23600			
90 PERCENT EXCEEDS	4110				4230				8200			
									5290			

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.

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

[illegible]

SACRAMENTO RIVER BASIN

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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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	24	24	37	---	48	---	---	---	48	43	34
2	23	24	25	35	---	---	---	---	---	48	42	35
3	22	22	---	38	---	---	---	---	---	48	42	34
4	25	22	---	50	---	---	---	---	---	48	42	33
5	24	30	56	47	---	---	---	---	---	48	41	32
6	23	39	50	48	---	---	---	---	---	48	41	38
7	23	26	44	---	---	50	---	---	---	48	41	e35
8	22	24	37	---	---	---	---	---	---	48	41	33
9	22	41	33	---	---	---	---	---	---	48	40	30
10	22	38	31	---	---	---	---	---	60	48	40	30
11	22	28	30	---	---	---	---	---	---	48	40	31
12	22	26	38	---	---	---	---	---	---	48	40	33
13	22	24	44	---	---	---	---	---	58	48	40	35
14	22	23	49	---	---	---	---	---	---	48	47	34
15	22	28	51	---	---	---	---	---	---	48	40	37
16	22	28	46	---	---	---	---	---	---	48	39	36
17	22	28	42	---	60	---	---	---	---	48	39	35
18	22	25	44	---	52	---	---	---	---	50	39	34
19	22	24	43	---	52	---	---	---	---	47	39	34
20	22	23	40	---	48	---	---	---	---	54	39	34
21	22	23	37	---	48	---	---	---	51	56	38	34
22	22	25	35	---	48	---	---	---	48	55	38	34
23	22	22	34	---	50	---	---	---	48	54	38	33
24	22	23	44	---	48	---	---	---	48	52	38	33
25	22	42	46	---	48	---	---	---	48	53	37	35
26	21	31	42	---	48	---	---	---	48	51	40	34
27	21	27	39	---	48	---	---	---	48	49	35	35
28	22	25	50	---	48	---	---	---	48	46	34	36
29	22	24	45	---	---	---	---	---	48	44	35	36
30	22	24	42	---	---	---	---	---	48	44	35	36
31	22	---	39	---	---	---	---	---	---	42	35	---
TOTAL	689	813	---	---	---	---	---	---	---	1513	1218	1023
MEAN	22.2	27.1	---	---	---	---	---	---	---	48.8	39.3	34.1
MAX	25	42	---	---	---	---	---	---	---	56	47	38
MIN	21	22	---	---	---	---	---	---	---	42	34	30
AC-FT	1370	1610	---	---	---	---	---	---	---	3000	2420	2030
a	0	38	934	8780	12950	11890	14860	14420	13470	2510	0	0

e Estimated.

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

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	45	47	15	---	---	---	---	---	---	55	---
2	44	44	47	11	---	---	---	---	---	---	52	---
3	43	44	---	18	---	---	---	---	---	---	54	---
4	51	44	---	40	---	---	---	---	---	---	51	---
5	60	---	---	41	---	---	---	---	---	---	51	---
6	49	49	57	---	---	---	---	---	---	---	48	---
7	46	50	28	---	---	---	---	---	---	---	45	---
8	46	---	34	---	---	---	---	---	---	---	44	---
9	43	---	25	---	---	---	---	---	---	---	47	---
10	41	60	---	---	---	---	---	---	---	---	46	---
11	42	---	---	---	---	---	---	---	---	---	44	---
12	43	53	52	---	---	---	---	---	---	---	43	---
13	43	52	25	---	---	---	---	---	---	---	43	---
14	44	41	28	---	---	---	---	---	---	---	47	---
15	44	49	45	---	---	---	---	---	---	---	43	---
16	44	56	25	---	---	---	---	---	---	---	44	---
17	---	56	25	---	---	---	---	---	---	---	43	---
18	---	55	25	---	---	---	---	---	---	---	45	---
19	---	51	25	---	---	---	---	---	---	---	46	48
20	---	50	25	---	---	---	---	---	---	---	44	44
21	---	51	25	---	---	---	---	---	---	---	43	45
22	---	50	---	---	---	---	---	---	---	---	47	44
23	---	50	---	---	---	---	---	---	---	---	47	44
24	---	47	---	---	---	---	---	---	---	---	45	40
25	47	51	---	---	---	---	---	---	---	---	45	40
26	40	48	45	---	---	---	---	---	---	---	45	47
27	45	47	25	---	---	---	---	---	---	---	45	---
28	45	46	25	---	---	---	---	---	---	---	---	---
29	45	46	25	---	---	---	---	---	---	59	---	---
30	45	46	25	---	---	---	---	---	---	55	---	---
31	46	---	25	---	---	---	---	---	---	52	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---
a	1600	2510	5890	2160	8370	6210	9050	9630	9900	10410	8450	1250

CAL YR 1994 AC-FT a 71940

WTR YR 1995 AC-FT a 75450

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	28	32	36	106	122	118	98	120	122	115	42
2	21	29	35	35	107	108	115	108	120	121	115	41
3	21	25	77	38	110	112	119	121	119	120	117	41
4	26	26	87	47	112	113	122	117	117	121	115	41
5	27	34	82	46	108	114	120	117	118	122	114	41
6	24	48	58	53	114	118	121	115	118	118	112	40
7	23	33	45	79	114	113	126	113	117	118	111	40
8	22	30	40	96	115	107	116	112	120	119	112	40
9	22	46	37	81	119	82	119	112	115	121	117	39
10	22	37	36	65	122	87	119	120	119	120	117	39
11	22	33	35	83	126	84	120	125	122	120	116	39
12	23	33	38	102	127	66	110	122	122	114	115	39
13	25	30	37	90	120	62	104	113	120	110	113	39
14	25	29	36	27	116	88	99	109	121	110	112	38
15	24	31	36	61	105	99	99	109	111	109	111	38
16	24	32	36	70	120	111	109	114	109	106	115	38
17	24	32	37	79	116	104	107	122	111	105	114	37
18	25	29	43	59	118	110	114	122	112	109	113	14
19	24	28	40	75	119	106	119	123	114	112	111	.85
20	24	29	38	101	118	99	118	127	119	108	109	.00
21	24	30	37	104	122	73	119	123	123	107	108	.00
22	24	29	37	106	125	59	115	121	123	114	107	.00
23	24	28	37	99	125	6.4	117	122	123	110	106	.00
24	24	29	43	93	125	10	121	121	123	107	104	.00
25	24	41	40	97	124	10	125	121	124	111	96	.00
26	24	33	39	104	124	9.6	124	121	125	110	54	.00
27	24	31	38	98	124	9.4	111	121	124	115	52	10
28	24	30	44	101	124	7.9	102	121	123	114	51	34
29	24	30	40	102	---	20	113	120	121	111	50	35
30	24	30	38	103	---	80	93	120	122	109	45	35
31	24	---	37	104	---	117	---	118	---	110	43	---
TOTAL	734	953	1335	2434	3305	2407.3	3434	3648	3575	3523	3090	800.85
MEAN	23.7	31.8	43.1	78.5	118	77.7	114	118	119	114	99.7	26.7
MAX	27	48	87	106	127	122	126	127	125	122	117	42
MIN	21	25	32	27	105	6.4	93	98	109	105	43	.00
AC-FT	1460	1890	2650	4830	6560	4770	6810	7240	7090	6990	6130	1590
a	3250	4180	5990	7150	7620	7140	8870	10500	10250	10430	8820	4110

CAL YR 1994 TOTAL 22641.6 MEAN 62.0 MAX 119 MIN 2.7 AC-FT 44910 a 76460
WTR YR 1995 TOTAL 29239.15 MEAN 80.1 MAX 127 MIN .00 AC-FT 58000 a 88310

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 and maximum (*) from rating curve extended above 5,100 ft³/s on basis of step-backwater survey of channel:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	2030	10,500	10.52	Apr. 7	1830	4,550	6.26
Jan. 13	2400	*12,100	*10.58	May 1	0915	6,430	7.54
Mar. 10	2130	9,530	9.31				

Minimum daily, 67 ft³/s, Oct. 25.

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	76	84	109	158	1730	470	1530	4790	784	403	196	e142
2	76	97	117	149	1620	556	1520	3160	795	386	195	e140
3	71	87	548	163	1360	911	1480	2390	792	376	196	e139
4	85	85	1190	e290	1170	783	1490	2050	762	389	194	e137
5	103	118	452	e235	1030	673	1480	1850	765	360	192	e133
6	84	170	276	e280	927	611	1830	1660	710	353	189	e131
7	79	116	203	1530	856	580	3710	1500	656	343	187	129
8	78	100	171	3860	860	766	3100	1350	605	340	186	127
9	75	190	154	7380	777	6280	2330	1250	575	334	189	128
10	76	171	139	6590	725	7110	1880	1170	565	327	191	127
11	77	123	138	2930	689	5960	1580	1130	555	306	191	127
12	79	113	214	3060	664	4150	1410	1110	534	287	185	126
13	77	107	215	6940	712	4200	1720	1160	531	284	172	124
14	79	100	228	7660	695	5220	1420	1040	581	268	169	117
15	80	120	249	3880	607	4690	1240	1040	841	256	168	119
16	81	124	203	2400	594	3250	1130	980	820	240	169	122
17	81	117	181	1620	555	2700	1020	938	691	222	170	121
18	83	108	187	1260	537	2630	1000	933	675	206	169	113
19	80	99	184	1060	522	2360	936	934	653	211	181	91
20	81	103	167	973	510	3290	946	925	603	205	179	82
21	87	101	156	876	501	2980	872	909	572	198	176	82
22	86	96	146	959	500	3350	814	908	544	200	177	82
23	85	100	144	1750	489	2980	784	894	532	195	179	83
24	79	99	168	1790	489	2440	778	883	517	191	173	83
25	67	173	184	1500	486	2090	778	867	473	201	166	79
26	73	142	170	1410	479	1820	778	836	465	196	e162	86
27	78	118	160	1500	475	1670	839	837	462	192	e160	96
28	79	112	203	1610	475	1590	887	837	448	188	e158	117
29	78	107	188	1450	---	1510	3190	816	433	189	e150	119
30	78	106	174	1420	---	1490	2840	808	421	199	e142	119
31	78	---	165	1450	---	1530	---	782	---	193	e146	---
TOTAL	2469	3486	7183	68133	21034	80640	45312	40737	18360	8218	5457	3421
MEAN	79.6	116	232	2198	751	2601	1510	1314	612	265	176	114
MAX	103	190	1190	7660	1730	7110	3710	4790	841	403	196	142
MIN	67	84	109	149	475	470	778	782	421	188	142	79
AC-FT	4900	6910	14250	135100	41720	159900	89880	80800	36420	16300	10820	6790

e Estimated.

SACRAMENTO RIVER BASIN

145

11390000 BUTTE CREEK NEAR CHICO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	138	226	443	661	780	765	684	497	280	163	131	117
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1931 - 1995			
ANNUAL TOTAL	73680				304450							
ANNUAL MEAN	202				834				405			
HIGHEST ANNUAL MEAN									834			
LOWEST ANNUAL MEAN									94.0			
HIGHEST DAILY MEAN	1350				7660				16600			
LOWEST DAILY MEAN	56				67				44			
ANNUAL SEVEN-DAY MINIMUM	57				76				44			
INSTANTANEOUS PEAK FLOW					12100				22000			
INSTANTANEOUS PEAK STAGE					10.58				17.52			
ANNUAL RUNOFF (AC-FT)	146100				603900				293500			
10 PERCENT EXCEEDS	365				1860				839			
50 PERCENT EXCEEDS	156				360				205			
90 PERCENT EXCEEDS	72				86				100			

SACRAMENTO RIVER BASIN

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 1939-95), 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,700 ft³/s, Jan. 12, gage height, 51.68 ft; minimum daily, 3,410 ft³/s, Oct. 15.

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	6490	3500	4810	7480	27500	12200	24800	25300	15400	12200	10900	9300
2	6250	3460	4720	7040	27600	11900	24500	25600	15100	12300	10900	8890
3	5990	3490	4900	6780	27700	13000	24200	25800	14200	12400	10300	8210
4	5600	3500	6810	7140	27500	18500	23900	25300	13700	12400	10100	8540
5	5490	3590	15600	12500	27100	e19800	23300	25100	13700	12300	10100	8950
6	5410	3870	13300	16400	26800	e16800	22600	25100	13600	12100	10200	8880
7	5240	4430	10600	14600	26400	e14700	22200	25000	13700	11700	10500	8860
8	5090	4480	8590	22900	26100	e13600	23700	24900	13400	10900	10400	8880
9	4910	4500	7890	26200	26000	e15100	24700	24800	12700	11100	10300	8920
10	4690	4730	7300	27600	25700	25400	25000	24700	12000	10900	10400	9070
11	4440	5640	6800	29700	25300	27600	25000	24400	11600	11000	10300	9410
12	4060	5920	6440	30300	24900	28500	24900	23900	11500	10900	9950	9700
13	3760	5240	6640	29300	24500	28600	25100	23400	11400	10700	9290	9820
14	3560	4900	10100	28400	24100	28400	25300	23000	11400	10700	9490	9940
15	3410	4590	11100	28500	23800	28500	25300	22600	11800	10700	9950	10200
16	3420	4670	11600	28400	23000	28800	25100	21700	12800	10700	10000	10500
17	3530	4670	10500	27600	22000	28900	24800	19600	14200	10800	9310	10800
18	3510	4600	9270	26700	20600	28500	24600	18000	13700	10800	8630	10600
19	3480	4460	8530	26100	18500	28100	24200	16100	13200	10800	8690	10600
20	3430	4350	8060	26000	17100	27800	23800	15000	12800	10800	9770	10400
21	3470	4170	7660	26100	15900	27700	22900	14100	11800	10800	10300	10400
22	3510	4120	7130	26000	15100	27600	21600	15200	12200	10500	10500	10500
23	3510	4100	6750	26000	14400	27500	19400	15600	12900	10700	10600	10600
24	3560	4070	6580	27000	13800	27500	17300	15600	12600	10800	9950	10200
25	3600	4490	6630	27600	13500	27400	15300	15800	12400	10900	10200	9890
26	3770	4680	7390	27500	13000	27000	14000	16100	12700	10800	10100	9540
27	3890	4870	7280	27000	12700	26600	13000	15900	12500	10800	9670	9270
28	3720	4970	6870	26800	12400	26000	12900	15700	12700	10700	9090	9210
29	3610	4760	8580	27000	---	25700	15800	15600	12800	10500	9050	9130
30	3590	4740	9780	27300	---	25400	22800	15500	12100	10400	9190	9020
31	3570	---	8320	27200	---	25100	---	15200	---	10600	9370	---
TOTAL	131560	133560	256530	725140	603000	738200	662000	629600	386600	343700	307500	288230
MEAN	4244	4452	8275	23390	21540	23810	22070	20310	12890	11090	9919	9608
MAX	6490	5920	15600	30300	27700	28900	25300	25800	15400	12400	10900	10800
MIN	3410	3460	4720	6780	12400	11900	12900	14100	11400	10400	8630	8210
AC-FT	260900	264900	508800	1438000	1196000	1464000	1313000	1249000	766800	681700	609900	571700

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6617	8616	12210	14730	16250	15210	11390	9257	7548	7201	7176	7136
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1946 - 1995			
ANNUAL TOTAL	2442910				5205620							
ANNUAL MEAN	6693				14260				10250			
HIGHEST ANNUAL MEAN									17980			
LOWEST ANNUAL MEAN									5109			
HIGHEST DAILY MEAN	19600				Feb 9				32600			
LOWEST DAILY MEAN	3230				Apr 16				2720			
ANNUAL SEVEN-DAY MINIMUM	3460				Oct 15				2880			
INSTANTANEOUS PEAK FLOW					30700				Jan 12			
INSTANTANEOUS PEAK STAGE					51.68				Jan 12			
ANNUAL RUNOFF (AC-FT)	4846000				10330000				7426000			
10 PERCENT EXCEEDS	9820				26900				21800			
50 PERCENT EXCEEDS	6250				11600				7880			
90 PERCENT EXCEEDS	3910				4500				5000			

SACRAMENTO RIVER BASIN

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, June 25-28, July 16, 20; minimum recorded, 7.0°C, Jan. 1, 2, Mar. 24.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	17.0	13.5	12.5	9.5	9.5	7.5	7.0	11.0	10.5	12.0	11.0
2	18.0	17.0	13.0	11.5	10.0	9.5	7.5	7.0	11.5	11.0	12.0	11.5
3	17.5	17.0	12.0	10.5	10.0	9.5	8.0	7.5	11.0	11.0	12.0	12.0
4	17.0	15.5	11.0	10.0	10.5	10.0	8.5	8.0	11.0	10.0	12.0	11.0
5	15.5	15.0	10.5	10.0	10.5	9.5	9.0	8.5	10.0	10.0	11.0	11.0
6	15.5	14.5	10.5	10.0	9.5	9.0	8.5	8.0	10.0	10.0	11.5	11.0
7	16.0	15.0	11.0	10.5	9.0	8.0	8.5	8.0	10.0	9.5	11.5	10.5
8	16.5	15.5	11.0	10.5	8.5	8.0	9.0	8.5	9.5	9.5	11.0	10.5
9	16.5	16.0	11.0	10.5	8.0	7.5	10.0	9.0	10.0	9.5	11.0	8.5
10	17.0	16.5	11.0	10.5	7.5	7.5	11.0	10.0	10.0	10.0	10.5	9.0
11	16.5	16.0	11.0	10.5	7.5	7.0	11.0	11.0	10.0	10.0	10.5	9.5
12	16.5	15.5	11.0	10.5	8.0	7.5	11.0	10.5	10.0	10.0	11.0	10.0
13	16.5	15.0	11.0	10.5	8.0	7.5	10.5	10.0	10.0	9.5	11.0	9.0
14	16.0	15.0	11.0	10.0	8.0	8.0	11.0	10.5	9.5	9.5	10.0	8.5
15	15.5	14.0	10.5	10.0	8.0	7.5	11.0	10.5	9.5	8.5	10.5	9.0
16	14.5	13.5	10.5	10.0	---	---	10.5	9.5	8.5	8.0	11.0	10.5
17	14.0	13.0	10.5	10.0	---	---	9.5	9.0	8.5	8.5	11.0	10.5
18	14.5	12.5	10.0	9.0	---	---	9.0	8.5	9.0	8.5	11.0	10.0
19	14.5	13.0	9.0	8.5	---	---	8.5	8.5	10.0	9.0	11.0	10.0
20	15.0	13.0	9.0	8.5	---	---	8.5	8.5	10.5	10.0	10.5	10.0
21	15.0	13.0	9.5	9.0	---	---	9.0	8.5	11.5	10.5	10.5	10.0
22	15.0	13.5	9.5	8.5	8.5	8.5	9.0	9.0	12.0	11.5	10.0	9.0
23	15.0	13.5	9.5	8.5	8.5	8.5	9.5	9.0	12.0	11.0	9.0	7.5
24	15.5	14.0	9.5	9.0	8.5	8.0	9.5	9.0	12.0	11.0	8.0	7.0
25	15.5	14.0	10.0	9.5	8.5	8.0	9.5	9.5	12.0	11.0	8.5	7.5
26	15.5	14.5	10.0	9.5	8.5	8.0	9.5	9.5	12.0	11.5	9.0	8.5
27	15.5	14.5	9.5	9.5	8.5	8.0	9.5	9.5	12.0	11.0	10.0	9.0
28	15.5	14.0	9.5	9.5	8.5	8.0	9.5	9.5	11.5	11.0	10.5	10.0
29	15.0	13.5	9.5	9.0	8.5	8.0	10.0	9.5	---	---	11.0	10.5
30	14.5	13.5	9.5	9.0	8.0	7.5	10.0	10.0	---	---	11.0	10.5
31	14.0	13.0	---	---	7.5	7.5	10.5	10.0	---	---	11.0	10.5
MONTH	18.0	12.5	13.5	8.5	---	---	11.0	7.0	12.0	8.0	12.0	7.0

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

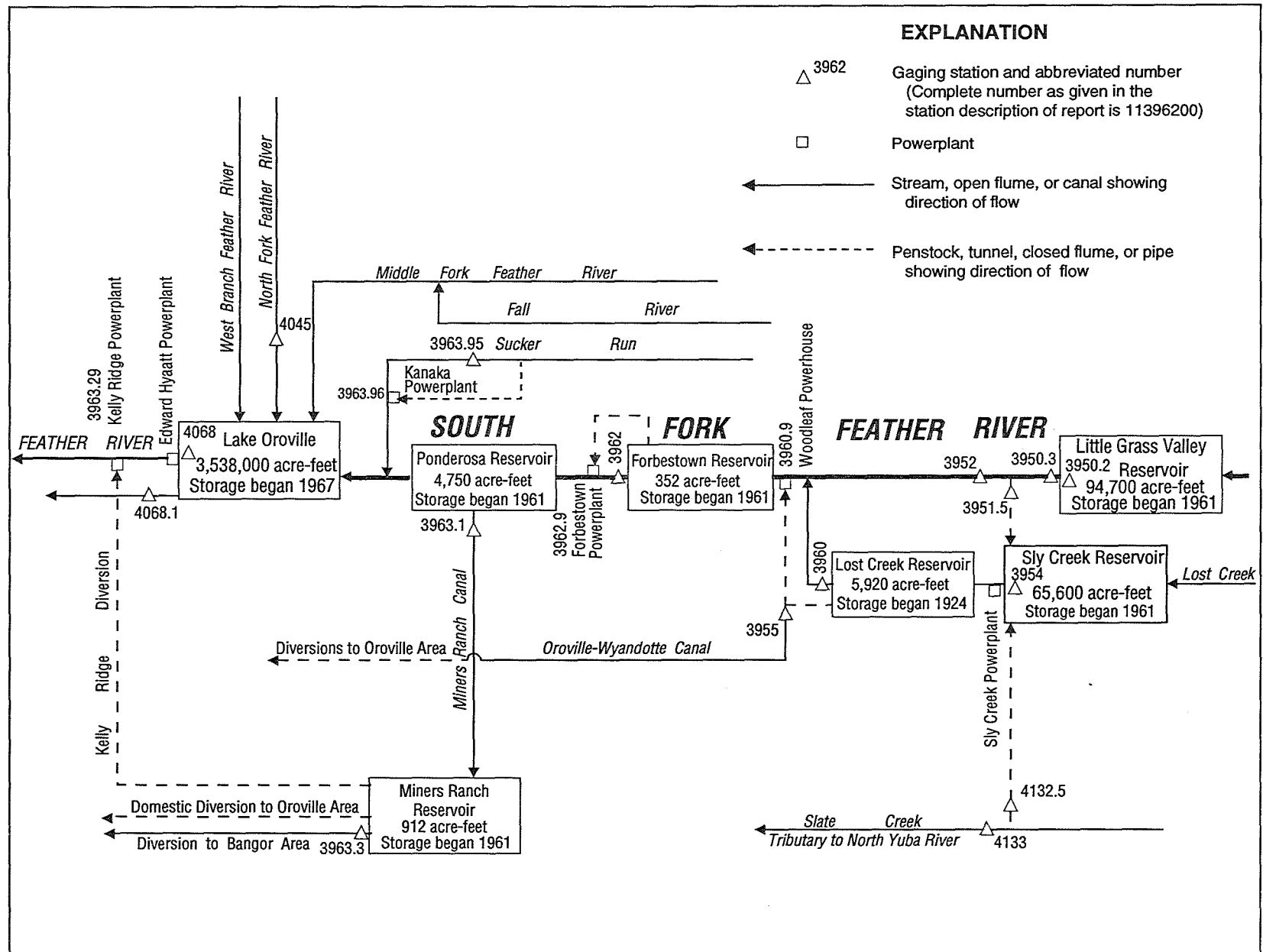


Figure 27. Diversions and storage in South Fork Feather River basin.

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, 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 1, elevation, 5,049.0 ft; minimum, 44,600 acre-ft, Nov. 23, 24, elevation, 5,010.1 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58000	49700	44800	46200	71700	72100	76000	97800	96500	94800	82900	68100
2	57700	49400	44800	46200	72400	72000	76200	94700	96500	94700	82500	67600
3	57400	49100	45200	46200	73000	72100	76500	91100	96500	94500	82000	67200
4	57400	48800	45600	46200	73400	71800	76600	e87600	96500	94300	81600	66700
5	57200	48800	45700	46300	73900	71500	76800	86500	96300	94000	81100	66200
6	56900	48700	45700	46500	74300	71200	77400	87100	96100	93700	80600	65800
7	56700	48400	45800	46800	74700	70800	78800	87400	96000	93500	80100	65200
8	56300	48100	45800	47500	75000	e70300	79800	87900	95800	93200	79700	64900
9	56000	48100	45800	49600	75300	e73600	80600	88200	95600	92800	79200	64300
10	55700	47900	45800	52000	75500	79100	81100	88500	95600	92500	78700	63900
11	55400	47600	45800	52900	75600	78700	81700	88900	95600	92200	78200	63400
12	55200	47400	45900	53800	75500	77600	82500	89300	95600	91900	77800	63000
13	55000	47100	45900	58700	75700	77200	83200	89800	95600	91500	77400	62500
14	54600	46800	45900	63000	75700	77100	83800	90100	95800	91200	76800	62100
15	54300	46600	46000	64600	75600	77100	84300	90300	96100	90700	76300	61700
16	54000	46400	46000	65400	75600	76800	84700	90600	96100	90300	75700	61500
17	53700	46200	46000	65900	75600	76800	e85400	90700	96000	89800	75300	61300
18	53500	45800	46000	66400	75600	77100	e85700	91200	96000	89500	74900	61100
19	53200	45600	46000	66700	75500	76900	e86000	91700	96000	89000	74400	61100
20	52900	45400	46000	67100	75500	77400	e86300	92400	95800	88700	73900	61000
21	52700	45000	46000	67300	75500	77200	86500	92800	95600	88200	73400	60800
22	52300	e44800	46000	67700	75500	77400	86600	93700	95600	87700	73000	60700
23	52100	44600	46000	68100	75500	76900	87000	94300	95500	87300	72400	60600
24	51900	44600	46200	68400	75200	76600	87300	95000	95500	86800	72000	60400
25	51500	44700	46200	68600	74600	76500	87600	95500	95500	86300	71400	60300
26	51300	44800	46200	69200	74000	76200	87900	96000	95500	85800	70900	60300
27	51000	44800	46200	69500	73300	76000	88100	96100	95300	85400	70300	60200
28	50700	44800	46200	69600	72700	76000	88600	96300	95300	84900	69800	60000
29	50500	44800	46200	69900	---	75900	91700	96500	95200	84400	69300	59900
30	50200	44800	46200	70300	---	75900	94000	96500	95000	84000	68900	59800
31	49800	---	46200	70900	---	75900	---	96600	---	83500	68500	---
MAX	58000	49700	46200	70900	75700	79100	94000	97800	96500	94800	82900	68100
MIN	49800	44600	44800	46200	71700	70300	76000	86500	95000	83500	68500	59800
a	5014.7	5010.3	5011.5	5031.4	5032.6	5034.8	5046.6	5048.2	5047.2	5040.0	5029.7	5023.0
b	-8400	-5000	+1400	+24700	+1800	+3200	+18100	+2600	-1600	-11500	-15000	-8700

CAL YR 1994 b -1900
WTR YR 1995 b +1600

e Estimated.

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.--No estimated daily discharges. 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, 1986, gage height, 14.78 ft; minimum, 0.2 ft³/s, Oct. 28-31, Nov. 2, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s, May 2, gage height, 12.25 ft; minimum daily, 12 ft³/s, Nov. 24 to Jan. 7.

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	101	132	12	12	16	448	28	827	511	202	243	240
2	101	132	12	12	15	451	28	2310	509	200	243	240
3	101	131	12	12	14	457	28	2190	506	199	243	240
4	101	131	12	12	14	451	29	2140	488	199	243	240
5	101	131	12	12	13	450	29	944	475	200	243	239
6	101	132	12	12	13	448	30	202	437	199	242	239
7	121	132	12	12	13	448	35	201	393	200	242	239
8	133	132	12	13	20	449	33	201	353	199	242	238
9	133	132	12	22	48	504	31	201	318	199	242	238
10	133	130	12	30	75	1170	30	202	297	199	242	237
11	133	131	12	16	95	1670	30	203	287	199	242	237
12	133	130	12	15	109	1240	31	203	278	199	242	237
13	133	130	12	37	151	1000	32	203	265	227	241	236
14	133	130	12	35	169	933	31	201	280	248	241	236
15	133	130	12	17	147	944	31	201	377	248	241	174
16	133	130	12	15	127	698	31	201	448	248	240	103
17	132	130	12	14	111	490	30	203	414	248	240	103
18	132	130	12	14	103	548	30	204	404	248	240	70
19	132	130	12	13	95	566	30	205	383	248	240	45
20	132	130	12	13	89	659	30	205	351	248	240	45
21	132	130	12	13	84	722	30	205	321	247	240	45
22	132	129	12	13	84	714	30	206	298	247	240	45
23	132	64	12	13	85	642	31	206	283	248	240	45
24	132	12	12	13	259	496	31	208	273	247	240	45
25	132	12	12	13	462	376	31	245	266	246	240	45
26	132	12	12	13	449	295	137	322	258	245	240	45
27	132	12	12	12	448	254	209	404	248	245	240	45
28	132	12	12	13	448	217	212	449	235	245	240	45
29	132	12	12	13	---	185	231	474	220	244	240	45
30	132	12	12	13	---	165	221	495	208	244	240	45
31	132	---	12	15	---	86	---	504	---	244	240	---
TOTAL	3904	3023	372	482	3756	18176	1770	15165	10384	7059	7472	4326
MEAN	126	101	12.0	15.5	134	586	59.0	489	346	228	241	144
MAX	133	132	12	37	462	1670	231	2310	511	248	243	240
MIN	101	12	12	12	13	86	28	201	208	199	240	45
AC-FT	7740	6000	738	956	7450	36050	3510	30080	20600	14000	14820	8580

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	98.4	74.0	70.4	89.5	97.0	104	78.9	134	91.5	115	145	172
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	13748.5	75889	
ANNUAL MEAN	37.7	208	106
HIGHEST ANNUAL MEAN			250
LOWEST ANNUAL MEAN			29.5
HIGHEST DAILY MEAN	133	Oct 8	2310
LOWEST DAILY MEAN	7.4	Apr 26	12
ANNUAL SEVEN-DAY MINIMUM	7.8	Apr 21	12
INSTANTANEOUS PEAK FLOW			2430
INSTANTANEOUS PEAK STAGE			12.25
ANNUAL RUNOFF (AC-FT)	27270	150500	76730
10 PERCENT EXCEEDS	130	449	253
50 PERCENT EXCEEDS	22	133	29
90 PERCENT EXCEEDS	11	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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	124	12	19	244	502	113	538	321	202	239	233
2	88	122	16	18	240	521	113	253	318	199	239	232
3	87	121	85	18	200	542	119	70	313	198	238	231
4	94	121	137	20	170	541	138	310	304	200	237	230
5	90	136	65	21	154	531	147	385	291	199	236	230
6	89	143	41	24	138	503	182	362	279	197	236	230
7	102	126	29	92	132	511	423	338	251	195	236	230
8	119	124	23	220	139	510	426	323	311	194	236	230
9	120	135	21	523	162	540	299	316	340	194	236	230
10	121	126	19	537	187	244	243	309	313	195	236	230
11	121	125	18	504	206	.00	210	310	301	196	235	228
12	120	127	19	383	216	.00	191	311	290	196	234	227
13	120	124	18	514	249	.00	264	305	270	214	235	227
14	119	123	17	475	266	.00	227	296	283	245	236	226
15	120	126	17	410	240	.00	200	297	392	243	235	192
16	120	125	16	331	215	.00	174	286	483	244	208	104
17	120	126	17	224	191	.00	154	285	544	244	239	104
18	120	122	19	162	178	.00	143	287	544	243	234	85
19	121	122	18	125	168	.00	127	289	530	242	234	45
20	120	122	18	102	162	.00	124	291	467	251	234	45
21	120	122	18	87	163	.00	111	291	370	245	239	45
22	119	122	18	88	170	.00	106	286	329	245	238	45
23	119	95	18	110	181	.00	109	274	302	244	237	44
24	119	13	22	124	277	.00	120	264	284	244	236	45
25	118	14	21	121	508	.00	138	271	280	243	235	45
26	118	13	21	114	504	.00	223	287	275	242	235	45
27	118	11	21	105	503	.00	324	317	264	241	235	44
28	118	11	22	124	503	.00	360	330	246	240	234	44
29	116	11	21	137	---	188	548	327	226	240	233	44
30	116	11	20	153	---	258	557	328	212	239	234	44
31	116	---	19	215	---	199	---	324	---	239	233	---
TOTAL	3497	2943	846	6100	6666	5590.00	6613	9460	9933	6953	7282	4234
MEAN	113	98.1	27.3	197	238	180	220	305	331	224	235	141
MAX	121	143	137	537	508	542	557	538	544	251	239	233
MIN	87	11	12	18	132	.00	106	70	212	194	208	44
AC-FT	6940	5840	1680	12100	13220	11090	13120	18760	19700	13790	14440	8400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1995, BY WATER YEAR (WY)

MEAN	82.7	101	103	117	119	168	142	171	104	114	126	153
MAX	176	377	462	381	358	454	429	520	421	363	327	390
(WY)	1975	1982	1982	1974	1983	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1974 - 1995

ANNUAL TOTAL	17068.0	70117.00	
ANNUAL MEAN	46.8	192	125
HIGHEST ANNUAL MEAN			294
LOWEST ANNUAL MEAN			35.0
HIGHEST DAILY MEAN	143	Nov 6	557
LOWEST DAILY MEAN	5.3	Aug 19	.00
ANNUAL SEVEN-DAY MINIMUM	5.4	Aug 31	.00
ANNUAL RUNOFF (AC-FT)	33850	139100	90590
10 PERCENT EXCEEDS	120	339	316
50 PERCENT EXCEEDS	30	195	73
90 PERCENT EXCEEDS	6.1	18	7.7

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,710 ft³/s, May 2, gage height, 10.57 ft; minimum daily, 5.5 ft³/s, many days during November, December and January.

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	12	8.6	5.5	5.5	31	6.5	6.2	1260	278	12	11	10
2	12	5.8	5.5	5.5	5.8	25	6.2	3320	275	12	11	10
3	12	5.8	6.0	5.5	5.8	160	6.2	3080	267	12	11	10
4	12	5.8	6.2	5.5	5.8	48	6.2	2570	252	12	11	10
5	12	5.9	5.7	5.5	5.8	7.3	6.2	1050	235	12	11	10
6	12	5.9	5.6	5.6	28	32	6.2	16	199	11	11	10
7	12	5.8	5.5	6.0	9.1	6.5	6.5	12	176	11	11	10
8	12	5.8	5.5	6.5	7.1	6.6	6.5	12	83	11	11	10
9	12	5.9	5.5	257	5.9	1090	6.3	11	11	12	11	10
10	12	5.8	5.5	684	6.0	2190	6.2	11	12	12	11	10
11	12	5.8	5.5	56	6.0	2860	6.2	11	12	12	11	10
12	12	5.8	5.5	6.2	6.0	2040	6.2	12	12	12	11	10
13	12	5.8	5.5	619	6.1	1600	6.4	12	12	12	11	10
14	12	5.8	5.5	1090	6.1	1500	6.4	11	28	12	11	10
15	12	5.8	5.5	187	6.0	1510	6.4	12	77	12	11	10
16	12	5.8	5.5	8.4	6.0	1090	6.4	12	105	12	41	10
17	13	5.8	5.5	6.1	6.0	788	6.4	13	23	12	11	10
18	13	5.8	5.5	5.9	6.0	843	6.3	17	25	12	10	11
19	13	5.8	5.5	5.8	6.0	832	6.2	21	12	12	10	11
20	13	5.8	5.5	5.8	6.0	1000	6.3	22	12	12	10	11
21	13	5.8	5.5	5.8	6.0	1030	6.3	26	12	11	10	11
22	13	5.8	5.5	5.8	6.0	947	6.3	31	12	11	10	11
23	13	5.8	5.5	5.9	6.0	844	6.4	34	12	11	10	11
24	13	5.5	5.5	5.9	6.1	677	6.4	35	12	11	10	11
25	13	5.5	5.5	5.8	6.5	541	6.4	58	12	11	10	11
26	13	5.5	5.5	5.9	6.5	455	6.3	111	12	11	10	11
27	13	5.5	5.5	5.8	6.5	383	8.9	175	12	11	10	11
28	13	5.5	5.5	5.8	6.5	328	11	216	12	11	10	11
29	13	5.5	5.5	5.8	---	126	208	239	12	11	10	11
30	13	5.5	5.5	5.9	---	6.2	88	257	12	11	10	11
31	13	---	5.5	6.0	---	6.2	---	270	---	11	10	---
TOTAL	387	175.0	172.0	3041.2	220.6	22978.3	479.9	12937	2226	358	357	313
MEAN	12.5	5.83	5.55	98.1	7.88	741	16.0	417	74.2	11.5	11.5	10.4
MAX	13	8.6	6.2	1090	31	2860	208	3320	278	12	41	11
MIN	12	5.5	5.5	5.5	5.8	6.2	6.2	11	11	11	10	10
AC-FT	768	347	341	6030	438	45580	952	25660	4420	710	708	621

SACRAMENTO RIVER BASIN

11395200 SOUTH FORK FEATHER RIVER BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.1	14.2	38.8	66.4	55.0	54.6	27.5	37.5	16.2	9.46	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1964 - 1995			
ANNUAL TOTAL	3135.1				43645.0							
ANNUAL MEAN	8.59				120				29.1			
HIGHEST ANNUAL MEAN									120			
LOWEST ANNUAL MEAN									3.72			
HIGHEST DAILY MEAN	14				3320				7970			
LOWEST DAILY MEAN	5.5				5.5				.70			
ANNUAL SEVEN-DAY MINIMUM	5.5				5.5				1.1			
INSTANTANEOUS PEAK FLOW					3710				8870			
INSTANTANEOUS PEAK STAGE					10.57				14.92			
ANNUAL RUNOFF (AC-FT)	6220				86570				21110			
10 PERCENT EXCEEDS	12				237				12			
50 PERCENT EXCEEDS	10				11				7.8			
90 PERCENT EXCEEDS	5.8				5.5				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, 65,000 acre-ft, May 28, elevation, 3,529.9 ft; minimum, 11,900 acre-ft, Jan. 5, elevation, 3,401.8 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22200	18200	14100	12400	53700	47300	54300	61000	63700	62400	59200	50100
2	22000	18400	14200	12500	54300	47400	53900	62400	63900	62800	59000	49800
3	21600	18700	15000	12200	54800	48000	53600	62700	63900	63000	58700	50100
4	21300	19000	16400	12100	54900	48300	e53300	63000	64000	63400	58600	49300
5	20900	18800	16900	11900	55100	48400	e53300	62800	64000	64000	58000	48900
6	20400	18700	17200	12200	55100	48400	53400	63000	64000	63700	58000	48600
7	20400	18300	17100	13400	55100	48300	55200	61900	63600	63500	57700	48200
8	20700	18100	17200	15900	55100	48200	56800	62000	63300	63100	57500	47900
9	20400	17800	17100	20400	54900	51700	56900	62300	63100	63100	57200	47500
10	20100	17800	17200	e25200	54700	e55600	57000	62600	62800	63100	56800	47400
11	19600	18000	17300	28900	54400	e56800	56900	63000	62500	62800	56500	47100
12	19300	18200	16700	31900	54100	e57300	56400	63300	62200	62800	56400	47100
13	19100	17700	16500	37200	e53800	e57500	56100	63600	62500	62500	56200	46800
14	19100	17100	16300	42700	e53600	e57500	55600	63800	62700	62400	55800	46700
15	18600	16600	15900	45700	e53200	e57400	55000	63900	63000	62300	55600	46500
16	18800	16100	15600	47400	52900	57100	54300	63900	63400	62200	55400	46200
17	19100	15700	15600	48600	52200	57000	53900	64000	63700	62200	54900	46000
18	19200	15200	15500	49200	51600	57000	53800	64100	64200	61800	54600	45300
19	18800	15500	14900	49500	51000	56800	53400	64300	64300	61600	54600	45000
20	19100	15300	14600	49600	50400	57100	53300	64500	64300	61600	54300	44400
21	19000	14900	14500	49600	49800	57000	52900	64600	64100	61500	53800	43800
22	19200	15000	14100	49600	49400	e57100	52500	64700	63800	61300	53800	43400
23	19500	15300	14000	50200	49100	e57200	52300	64700	63500	61100	53400	43500
24	19200	15300	14300	50700	48700	e57400	52100	64800	63100	60900	52900	43600
25	18800	15400	14100	51200	48400	e57600	52100	64800	62800	60900	52700	43700
26	18300	15500	13700	51700	48100	e57200	52300	64800	62800	60500	52500	43800
27	18000	15500	13800	52200	47800	e56200	52800	64900	62900	60000	52300	43900
28	18300	15200	13600	52400	47600	55600	53700	64600	63000	60000	52000	44000
29	18200	14600	13100	52400	---	55200	56100	63900	62800	59800	51200	44100
30	17700	14000	12800	52400	---	55000	57800	63600	62500	59700	51000	44100
31	17900	---	12500	53000	---	54700	---	63600	---	59400	50400	---
MAX	22200	19000	17300	53000	55100	57600	57800	64900	64300	64000	59200	50100
MIN	17700	14000	12500	11900	47600	47300	52100	61000	62200	59400	50400	43400
a	3424.3	3410.2	3404.2	3409.2	3498.8	3512.3	3517.8	3527.6	3525.8	3520.5	3504.3	3491.9
b	-4700	-3900	-1500	+40500	-5400	+7100	+3100	+5800	-1100	-3100	-9000	-6300

CAL YR 1994 b -5500

WTR YR 1995 b +21500

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	7.3	.00	.00	.00	.00	.00	.00	1.7	8.7	11	17
2	22	11	.00	.00	.00	.00	.00	.00	1.7	8.7	11	17
3	22	11	.00	.00	.00	.00	.00	.00	1.6	8.7	11	17
4	22	4.9	.00	.00	.00	.00	.00	.00	1.7	8.7	13	17
5	22	.00	.00	.00	.00	.00	.00	.00	1.7	8.7	14	17
6	22	.00	.00	.00	.00	.00	.00	.00	1.7	8.7	14	17
7	22	.00	.00	.00	.00	.00	.00	.00	1.7	11	14	17
8	22	.00	.00	.00	.00	.00	.00	.00	1.7	12	14	17
9	22	.00	.00	.00	.00	.00	.00	.00	1.7	13	14	17
10	22	.00	.00	.00	.00	.00	.00	.00	1.7	12	14	17
11	22	.00	.00	.00	.00	.00	.00	3.2	1.6	13	14	18
12	22	.00	.00	.00	.00	.00	.00	2.2	1.7	13	14	19
13	22	.00	.00	.00	.00	.00	.00	.00	1.6	13	14	19
14	16	.00	.00	.00	.00	.00	.00	.00	1.7	12	14	19
15	13	.00	.00	.00	.00	.00	.00	.00	1.7	12	14	19
16	13	.00	.00	.00	.00	.00	.00	.00	1.7	12	14	19
17	13	.00	.00	.00	.00	.00	.00	.00	1.7	12	15	19
18	8.1	.00	.00	.00	.00	.00	.00	.00	1.7	13	17	19
19	.54	.00	5.6	.00	.00	.00	.00	.00	1.7	13	17	19
20	.00	.00	11	.00	.00	.00	.00	.84	1.7	13	17	19
21	.00	7.0	3.6	.00	.00	.00	.00	1.3	1.7	13	17	19
22	.00	11	.00	.00	.00	.00	.00	1.2	1.7	13	17	20
23	.00	4.2	.00	.00	4.8	.00	.00	1.6	5.1	13	17	20
24	.00	.00	.00	.00	11	.00	.00	1.8	8.8	13	17	20
25	.00	.00	.00	.00	11	.00	.00	1.8	8.7	13	17	20
26	.00	.00	.00	.00	11	.00	.00	1.8	8.7	13	17	20
27	.00	.00	.00	.00	4.1	.00	.00	1.8	8.6	12	17	20
28	.00	.00	.00	.00	.00	.00	.00	1.8	8.7	11	17	20
29	.00	.00	.00	.00	---	.00	.00	1.7	8.7	11	17	20
30	.00	.00	.00	.00	---	.00	.00	1.7	8.7	11	17	20
31	.00	---	.00	.00	---	.00	---	1.7	---	11	17	---
TOTAL	349.64	56.40	20.20	0.00	41.90	0.00	0.00	24.44	103.1	360.2	467	558
MEAN	11.3	1.88	.65	.000	1.50	.000	.000	.79	3.44	11.6	15.1	18.6
MAX	22	11	11	.00	11	.00	.00	3.2	8.8	13	17	20
MIN	.00	.00	.00	.00	.00	.00	.00	.00	1.6	8.7	11	17
AC-FT	694	112	40	.00	83	.00	.00	48	204	714	926	1110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	MEAN	12.7	5.84	2.35	1.46	.85	.95	1.95	5.58	12.4	17.5	20.5	19.5
	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 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1963 - 1995

ANNUAL TOTAL	3532.04	1980.88	
ANNUAL MEAN	9.68	5.43	8.51
HIGHEST ANNUAL MEAN			16.7
LOWEST ANNUAL MEAN			4.92
HIGHEST DAILY MEAN	29	22	43
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	7010	3930	6170
10 PERCENT EXCEEDS	24	17	22
50 PERCENT EXCEEDS	2.0	.00	5.7
90 PERCENT EXCEEDS	.00	.00	.00

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 1311: 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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1430 ft³/s, May 28, gage height, 8.70 ft; minimum daily, 3.4 ft³/s, several days in October and November.

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	5.4	4.0	3.5	3.5	315	240	321	463	954	8.6	5.9	5.7
2	5.4	3.6	3.6	3.5	308	259	319	390	933	8.1	5.9	5.7
3	4.1	3.5	5.0	3.6	304	259	316	374	917	6.0	6.3	5.9
4	3.7	3.5	5.8	3.7	300	244	312	373	917	6.0	5.6	5.5
5	3.6	3.7	4.1	3.9	299	248	304	389	921	6.0	6.0	5.7
6	4.0	3.7	3.8	4.1	297	239	304	362	919	6.0	6.3	5.8
7	4.0	3.5	3.7	5.8	294	238	376	350	918	6.2	5.9	5.7
8	3.5	3.5	3.6	9.1	291	248	389	344	915	7.1	5.7	5.5
9	3.5	3.8	3.5	11	287	595	572	342	915	7.4	5.6	5.5
10	3.5	3.6	3.5	13	284	673	634	340	912	8.5	6.3	5.6
11	3.6	3.5	3.5	8.7	281	728	586	339	914	8.3	6.7	5.7
12	3.7	3.4	3.5	7.0	280	1020	518	341	910	6.7	6.7	6.2
13	4.0	3.4	3.5	12	296	1100	390	345	585	6.5	5.9	5.9
14	3.6	3.4	3.5	15	280	1150	317	341	736	8.9	6.0	6.0
15	3.5	3.5	3.6	8.6	274	1090	316	344	925	11	5.9	5.9
16	3.5	3.5	3.7	6.2	270	865	322	339	914	8.4	5.8	5.7
17	3.4	3.6	3.6	5.3	268	703	312	338	908	6.9	6.0	5.5
18	3.4	3.5	3.7	4.8	267	658	314	337	912	6.7	6.4	5.5
19	3.4	3.5	3.7	4.5	264	594	307	336	911	8.8	6.3	5.5
20	3.5	3.5	3.7	4.4	261	689	312	335	907	6.9	5.8	5.5
21	4.1	3.5	3.7	4.3	258	767	298	334	906	6.6	5.8	5.6
22	4.4	3.5	3.7	4.5	256	694	294	334	909	6.2	5.7	6.0
23	4.3	3.5	3.7	5.5	249	517	291	365	909	6.0	5.6	6.1
24	4.1	3.5	3.9	5.4	241	45	289	365	902	6.0	5.7	6.0
25	4.0	3.6	3.8	5.2	238	7.9	285	379	843	6.0	5.8	5.7
26	4.5	3.5	3.7	5.5	236	309	284	373	170	6.0	5.7	5.4
27	5.1	3.5	3.7	5.6	239	458	293	367	6.2	6.4	5.6	5.4
28	4.5	3.5	3.7	5.9	242	329	301	853	6.0	6.6	5.6	5.4
29	3.5	3.5	3.7	330	---	324	360	1370	6.0	5.9	5.8	5.4
30	3.5	3.5	3.7	336	---	321	338	1190	6.0	5.8	5.9	5.4
31	4.0	---	3.6	315	---	321	---	1020	---	6.1	5.7	---
TOTAL	122.3	106.3	117.0	1160.6	7679	15932.9	10574	14072	22506.2	216.6	183.9	170.4
MEAN	3.95	3.54	3.77	37.4	274	514	352	454	750	6.99	5.93	5.68
MAX	5.4	4.0	5.8	336	315	1150	634	1370	954	11	6.7	6.2
MIN	3.4	3.4	3.5	3.5	236	7.9	284	334	6.0	5.8	5.6	5.4
AC-FT	243	211	232	2300	15230	31600	20970	27910	44640	430	365	338
a	13070	12930	10620	25280	32080	34700	34110	31570	4920	24930	24530	15840

a Diversion, in acre-feet, through Woodleaf Powerplant (station 11396090), provided by Oroville-Wyandotte Irrigation District.

SACRAMENTO RIVER BASIN

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	6.90	28.0	38.5	47.2	67.1	59.4	36.7	34.2	3.59	2.96	2.53
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1962 - 1995

ANNUAL TOTAL	1764.8	72841.2	
ANNUAL MEAN	4.84	200	28.3
HIGHEST ANNUAL MEAN			200
LOWEST ANNUAL MEAN			.49
HIGHEST DAILY MEAN	11	Apr 12	1370
LOWEST DAILY MEAN	3.4	Oct 17	3.4
ANNUAL SEVEN-DAY MINIMUM	3.5	Oct 14	3.5
INSTANTANEOUS PEAK FLOW			1430
INSTANTANEOUS PEAK STAGE			8.70
ANNUAL RUNOFF (AC-FT)	3500	144500	20480
10 PERCENT EXCEEDS	6.2	698	8.5
50 PERCENT EXCEEDS	5.2	6.2	1.2
90 PERCENT EXCEEDS	3.5	3.5	.12

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,000 ft³/s, Mar. 10, gage height, 12.61 ft; minimum daily, 5.5 ft³/s, Nov. 3-4, 7, 27.

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	11	7.5	5.7	5.6	435	235	391	2090	583	10	10	10
2	11	5.7	5.7	5.7	392	295	388	4160	542	10	10	10
3	11	5.5	6.1	5.7	373	484	385	3670	517	10	10	10
4	11	5.5	6.1	5.7	357	353	386	3060	503	10	10	10
5	11	5.6	5.7	5.8	343	304	383	1750	489	10	10	10
6	11	5.7	5.8	5.7	349	301	393	467	454	10	10	10
7	11	5.5	5.7	6.0	334	272	578	433	426	10	10	10
8	11	5.6	5.7	198	321	284	566	412	380	10	10	10
9	11	5.8	5.7	830	309	2480	692	401	280	10	10	10
10	11	5.6	5.7	1880	302	3950	744	390	278	10	10	10
11	11	5.6	5.7	345	295	4410	684	382	275	10	10	10
12	11	5.7	5.7	46	291	3560	601	381	273	10	10	10
13	11	5.6	5.7	1370	322	3140	527	387	64	10	10	10
14	11	5.6	5.7	2500	305	3120	435	374	182	10	10	10
15	11	5.7	5.7	722	289	3040	412	378	362	10	10	10
16	11	5.7	5.7	288	281	2270	397	367	387	10	10	10
17	11	5.7	5.7	181	276	1550	381	354	297	10	10	10
18	11	5.7	5.7	150	270	1580	381	351	292	10	10	10
19	11	5.7	5.7	141	266	1490	362	348	280	10	10	10
20	11	5.7	5.7	127	261	1850	374	345	273	10	10	10
21	11	5.7	5.7	111	257	2010	354	343	270	10	10	10
22	11	5.7	5.7	126	253	1870	343	342	270	10	10	10
23	11	5.7	5.7	219	247	1510	335	369	270	10	10	10
24	11	5.7	5.7	233	236	913	329	369	264	10	10	11
25	11	5.7	5.7	211	234	649	324	381	285	10	10	168
26	11	5.7	5.7	202	231	787	321	430	163	10	10	36
27	11	5.5	5.6	216	233	888	336	496	11	10	10	36
28	11	5.6	5.7	191	236	701	354	612	11	10	10	36
29	11	5.6	5.7	384	---	566	695	934	11	10	10	36
30	11	5.7	5.7	431	---	393	572	782	11	10	10	31
31	11	---	5.7	415	---	390	---	627	---	10	10	---
TOTAL	341	171.3	177.5	11557.2	8298	45645	13423	26185	8703	310	310	584
MEAN	11.0	5.71	5.73	373	296	1472	447	845	290	10.0	10.0	19.5
MAX	11	7.5	6.1	2500	435	4410	744	4160	583	10	10	168
MIN	11	5.5	5.6	5.6	231	235	321	342	11	10	10	10
AC-FT	676	340	352	22920	16460	90540	26620	51940	17260	615	615	1160
a	12950	13080	12180	31140	36190	39550	38370	40310	38420	26050	25970	16080

a Diversion, in acre-feet, to Forbestown Powerplant (station 11396290), provided by Oroville-Wyandotte Irrigation District.

SACRAMENTO RIVER BASIN

11396200 SOUTH FORK FEATHER RIVER BELOW FORBESTOWN DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.4	22.5	71.5	133	157	161	107	74.8	29.7	12.8	11.1	11.2
MAX	520	240	677	1369	2000	1472	718	845	290	37.1	27.3	22.9
(WY)	1963	1982	1982	1970	1986	1995	1982	1995	1995	1962	1986	1962
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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1962 - 1995	
ANNUAL TOTAL	3035.2		115705.0			
ANNUAL MEAN	8.32		317		67.8	
HIGHEST ANNUAL MEAN					317	
LOWEST ANNUAL MEAN					4.36	
HIGHEST DAILY MEAN	13	Sep 30	4410	Mar 11	13900	Feb 18 1986
LOWEST DAILY MEAN	5.3	Jan 5	5.5	Nov 3	.60	Apr 4 1963
ANNUAL SEVEN-DAY MINIMUM	5.3	Jan 16	5.6	Nov 2	1.7	Mar 25 1980
INSTANTANEOUS PEAK FLOW			6000	Mar 10	15400	Feb 17 1986
INSTANTANEOUS PEAK STAGE			12.61	Mar 10	16.07	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	6020		229500		49140	
10 PERCENT EXCEEDS	11		636		100	
50 PERCENT EXCEEDS	11		11		10	
90 PERCENT EXCEEDS	5.4		5.7		4.9	

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278	53	185	258	255	256	266	266	277	285	271	274
2	278	183	50	259	257	258	273	261	266	282	272	288
3	277	272	87	268	259	255	269	131	286	283	236	30
4	276	142	233	213	259	251	273	272	285	291	283	.00
5	245	175	262	251	259	261	222	272	285	291	282	.00
6	277	272	263	258	258	264	265	272	285	287	280	.00
7	278	273	256	260	258	263	266	270	282	257	278	.00
8	277	204	250	245	256	257	264	268	276	286	277	78
9	275	271	161	243	254	239	262	268	276	280	277	118
10	270	272	211	178	254	196	262	268	278	286	285	12
11	271	272	179	252	254	228	261	268	278	282	285	28
12	274	271	263	253	254	231	262	268	278	251	285	37
13	279	272	189	247	254	245	262	266	278	282	285	25
14	281	272	222	232	254	251	262	264	278	279	285	93
15	279	269	265	231	255	250	262	264	276	284	283	283
16	275	188	263	250	256	247	262	264	271	285	282	281
17	205	268	260	228	258	256	262	265	270	281	282	279
18	191	167	257	256	193	257	262	264	271	282	281	277
19	197	51	243	257	232	247	262	266	271	283	282	277
20	64	51	258	258	255	227	264	268	270	282	283	277
21	63	50	259	259	236	230	267	270	238	282	285	279
22	60	51	262	259	237	233	272	270	278	281	286	281
23	57	50	262	259	268	245	273	270	278	282	286	277
24	194	48	257	259	273	243	273	271	281	283	287	254
25	266	48	238	258	273	255	273	269	289	283	286	211
26	272	49	247	244	266	275	273	267	291	281	284	184
27	225	48	242	253	256	278	273	267	292	278	281	129
28	276	184	252	256	256	269	273	267	292	274	279	97
29	270	268	264	257	---	263	268	266	291	273	279	69
30	270	267	255	256	---	260	265	269	269	272	279	56
31	127	---	258	253	---	260	---	276	---	273	283	---
TOTAL	7127	5261	7153	7710	7099	7750	7953	8167	8336	8681	8689	4494.00
MEAN	230	175	231	249	254	250	265	263	278	280	280	150
MAX	281	273	265	268	273	278	273	276	292	291	287	288
MIN	57	48	50	178	193	196	222	131	238	251	236	.00
AC-FT	14140	10440	14190	15290	14080	15370	15770	16200	16530	17220	17230	8910
a	12860	9210	13760	15360	13980	14840	14990	15400	14990	15300	15360	7530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

MEAN	173	190	193	191	206	207	204	212	230	241	242	186
MAX	263	269	254	257	259	262	276	276	283	284	289	270
(WY)	1980	1992	1981	1986	1968	1992	1987	1992	1992	1992	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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1963 - 1995
ANNUAL TOTAL	67926.51	88420.00	
ANNUAL MEAN	186	242	207
HIGHEST ANNUAL MEAN			242
LOWEST ANNUAL MEAN			52.2
HIGHEST DAILY MEAN	288 Sep 24	292 Jun 27	314 May 13 1984
LOWEST DAILY MEAN	.00 Jan 1	.00 Sep 4	.00 Nov 21 1962
ANNUAL SEVEN-DAY MINIMUM	9.0 Sep 10	30 Sep 4	.00 Dec 6 1976
ANNUAL RUNOFF (AC-FT)	134700	175400	149700
10 PERCENT EXCEEDS	279	283	275
50 PERCENT EXCEEDS	243	264	243
90 PERCENT EXCEEDS	.00	165	44

a Discharge, in acre-ft, through Kelly Ridge Powerplant (station 11396329), provided by Oroville-Wyandotte Irrigation District.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	10	5.0	4.3	3.2	4.3	2.7	7.3	12	20	18	17
2	16	9.1	5.0	4.3	3.2	4.3	2.2	5.0	14	20	19	17
3	16	8.7	5.0	4.3	3.4	4.3	3.3	3.0	14	20	18	17
4	16	8.9	5.0	4.3	3.4	4.3	5.0	3.2	14	20	18	17
5	16	8.7	4.8	4.1	3.4	4.3	5.0	3.2	14	20	18	16
6	14	8.8	4.4	4.3	3.4	4.3	5.0	3.2	14	19	18	17
7	13	8.8	4.3	4.4	3.4	4.4	5.0	3.2	14	18	18	16
8	13	8.5	4.3	4.5	3.2	4.3	4.9	5.3	14	19	16	17
9	13	7.5	4.3	4.6	3.2	2.5	4.8	7.0	14	19	16	17
10	13	7.0	4.3	4.7	3.2	.66	4.8	7.0	14	18	17	17
11	13	7.0	4.1	4.4	3.2	.62	4.8	7.2	14	19	17	16
12	13	7.1	4.2	1.8	3.2	.56	4.8	7.5	14	18	17	17
13	13	7.2	4.3	.49	3.2	.56	4.8	7.5	14	18	17	17
14	13	7.1	4.3	.51	3.2	.56	4.8	7.5	14	19	17	17
15	13	8.3	4.3	.49	3.3	2.0	5.0	7.5	13	19	17	17
16	13	9.2	4.3	.49	3.8	3.0	4.9	7.6	12	19	17	17
17	13	8.8	4.3	.49	4.3	3.1	5.0	7.2	12	19	17	17
18	13	8.8	4.3	1.7	4.4	3.2	5.0	7.0	12	19	17	17
19	12	8.5	4.3	3.5	4.3	3.1	5.0	7.0	12	19	17	17
20	11	8.6	4.3	3.6	4.3	1.4	5.0	6.9	12	19	17	17
21	12	7.6	4.3	3.4	4.3	.64	5.0	6.8	12	19	17	17
22	11	7.7	4.3	3.4	4.2	.69	5.0	6.9	12	19	17	17
23	11	8.5	4.3	3.4	4.1	.65	5.1	6.8	12	19	17	17
24	11	8.5	4.3	3.4	4.3	.64	5.3	6.9	12	18	17	17
25	11	8.3	4.3	3.4	4.3	3.7	5.3	7.0	12	18	17	16
26	11	8.2	4.3	3.2	4.3	4.6	6.4	7.0	15	18	17	16
27	11	8.2	4.3	3.2	4.3	3.6	7.2	7.0	16	18	17	16
28	11	8.1	4.3	3.3	4.3	3.2	7.2	7.0	16	18	17	16
29	11	6.8	4.3	3.4	---	3.0	7.2	7.1	18	18	17	16
30	11	5.0	4.3	3.4	---	2.7	7.2	7.0	20	18	17	16
31	11	---	4.3	3.3	---	2.7	---	8.9	---	19	17	---
TOTAL	395	243.5	136.4	98.07	104.3	81.88	152.7	198.7	412	583	533	501
MEAN	12.7	8.12	4.40	3.16	3.72	2.64	5.09	6.41	13.7	18.8	17.2	16.7
MAX	16	10	5.0	4.7	4.4	4.6	7.2	8.9	20	20	19	17
MIN	11	5.0	4.1	.49	3.2	.56	2.2	3.0	12	18	16	16
AC-FT	783	483	271	195	207	162	303	394	817	1160	1060	994

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	MEAN	17.1	7.78	5.33	4.46	4.02	4.22	8.62	16.5	22.4	25.0	25.1	22.6
	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	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	1966	1983	1995	1993	1982	1992	1993

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1963 - 1995			
ANNUAL TOTAL	3642.2				3439.55				13.4			
ANNUAL MEAN	9.98				9.42				18.0			
HIGHEST ANNUAL MEAN									8.95			
LOWEST ANNUAL MEAN									65			
HIGHEST DAILY MEAN	18				20				Aug 17 1963			
LOWEST DAILY MEAN	2.2				.49				.00			
ANNUAL SEVEN-DAY MINIMUM	2.4				.85				.00			
ANNUAL RUNOFF (AC-FT)	7220				6820				9700			
10 PERCENT EXCEEDS	17				18				28			
50 PERCENT EXCEEDS	9.2				7.3				11			
90 PERCENT EXCEEDS	3.3				3.2				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.

EXTREMES FOR CURRENT YEAR.--Creek only, maximum discharge, 750 ft³/s, Jan. 14, gage height, 3.75 ft; minimum daily, 1.8 ft³/s, Oct. 3.

Combined flow: Maximum discharge, 760 ft³/s, Jan. 14; minimum daily, 1.8 ft³/s, Oct. 3.

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	3.7	5.0	5.1	42	14	53	300	9.4	21	10	8.3
2	2.0	4.1	5.7	5.1	33	20	48	156	9.3	21	8.8	8.0
3	1.8	3.0	25	5.0	28	22	43	107	9.3	21	8.8	7.9
4	2.6	2.9	77	5.0	21	14	39	80	9.3	20	10	7.8
5	3.3	5.1	10	5.1	14	15	34	87	9.2	20	8.5	7.7
6	2.6	13	5.8	5.3	14	14	36	75	9.2	19	8.4	7.6
7	2.6	5.7	5.5	30	14	14	92	65	9.3	18	7.6	7.5
8	2.4	4.1	5.3	195	14	14	64	62	9.3	18	7.3	7.5
9	2.3	5.1	5.3	225	14	42	47	52	9.1	18	7.4	7.4
10	2.3	5.9	5.9	297	14	320	38	62	8.9	18	7.4	7.5
11	2.3	5.7	8.1	134	14	248	32	49	8.8	18	7.4	7.4
12	2.3	4.9	9.8	89	14	158	30	28	8.7	18	7.5	7.4
13	2.3	4.8	11	395	19	183	63	31	8.5	18	7.0	7.3
14	2.3	4.4	12	425	15	170	40	26	9.0	15	7.3	7.1
15	2.3	5.3	13	131	14	152	33	29	11	9.5	8.3	7.0
16	2.3	6.3	5.4	75	14	110	29	23	9.8	9.1	8.1	7.0
17	2.3	6.1	5.4	51	14	91	26	17	8.7	8.9	7.7	7.0
18	2.4	5.8	5.4	36	14	85	31	15	8.5	8.8	7.5	7.1
19	2.4	4.9	5.3	28	14	62	23	13	8.5	9.0	8.1	6.9
20	2.4	4.7	5.3	24	14	134	30	12	8.5	9.4	8.3	6.8
21	2.4	4.7	5.3	e16	14	125	23	11	9.0	9.4	8.2	6.7
22	2.3	4.5	5.3	e25	14	157	17	11	8.7	9.3	8.2	6.5
23	2.3	4.4	5.3	e65	14	146	15	17	8.5	9.3	8.3	6.6
24	2.3	4.4	5.3	e77	14	106	14	16	8.5	9.5	8.1	6.4
25	2.3	5.7	5.4	e60	14	78	15	10	8.5	9.3	8.0	6.5
26	2.4	6.0	5.3	e67	14	68	14	9.7	8.5	9.3	8.2	6.6
27	2.4	5.7	5.1	e78	14	62	22	9.9	8.5	9.3	8.0	6.4
28	2.4	5.4	5.2	e74	14	61	24	9.7	8.5	9.7	8.1	6.5
29	2.5	5.1	5.3	e54	---	58	98	9.7	8.5	11	8.3	6.6
30	2.4	4.9	5.2	48	---	56	52	9.5	8.5	10	8.0	6.3
31	2.4	---	5.1	42	---	54	---	9.5	---	9.8	8.0	---
TOTAL	73.2	156.3	289.0	2771.6	466	2853	1125	1412.0	268.0	423.6	250.8	213.3
MEAN	2.36	5.21	9.32	89.4	16.6	92.0	37.5	45.5	8.93	13.7	8.09	7.11
MAX	3.3	13	77	425	42	320	98	300	11	21	10	8.3
MIN	1.8	2.9	5.0	5.0	14	14	14	9.5	8.5	8.8	7.0	6.3
AC-FT	145	310	573	5500	924	5660	2230	2800	532	840	497	423

e Estimated.

11396395 SUCKER RUN AT KANAKA DIVERSION, NEAR FEATHER FALLS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.77	4.70	6.52	26.5	16.7	29.3	16.0	13.6	7.15	5.71	3.57	3.15
MAX	7.19	7.32	9.32	89.4	31.2	92.0	37.5	45.5	8.93	13.7	8.09	7.11
(WY)	1990	1990	1995	1995	1993	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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1989 - 1995	
ANNUAL TOTAL	2309.7		10301.8			
ANNUAL MEAN	6.33		28.2		11.5	
HIGHEST ANNUAL MEAN					28.2	
LOWEST ANNUAL MEAN					6.29	
HIGHEST DAILY MEAN	77	Dec 4	425	Jan 14	425	Jan 14 1995
LOWEST DAILY MEAN	1.2	Aug 13	1.8	Oct 3	1.2	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 12	2.3	Oct 9	1.3	Aug 21 1992
INSTANTANEOUS PEAK FLOW			750	Jan 14	750	Jan 14 1995
INSTANTANEOUS PEAK STAGE			3.75	Jan 14	3.75	Jan 14 1995
ANNUAL RUNOFF (AC-FT)	4580		20430		8320	
10 PERCENT EXCEEDS	13		70		15	
50 PERCENT EXCEEDS	5.3		9.3		6.0	
90 PERCENT EXCEEDS	1.5		4.3		2.3	

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 1994 TO SEPTEMBER 1995
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.7	5.0	9.3	78	25	87	312	33	21	13	8.3
2	2.0	4.1	5.7	8.2	69	44	83	156	33	21	12	8.0
3	1.8	3.0	4.9	11	64	57	78	113	32	21	12	7.9
4	2.6	2.9	11.4	14	54	39	73	100	31	20	12	7.8
5	3.3	7.6	36	25	40	42	69	107	31	20	11	7.7
6	2.6	14	19	25	38	36	71	95	30	19	11	7.6
7	2.6	5.7	15	64	35	33	127	85	30	18	10	7.5
8	2.4	4.1	11	221	34	37	99	78	29	18	10	7.5
9	2.3	11	9.3	245	33	55	82	72	29	18	10	7.4
10	2.3	9.0	8.3	307	32	333	73	71	28	18	9.9	7.5
11	2.3	5.7	8.1	165	31	263	67	66	28	18	9.6	7.4
12	2.3	4.9	9.8	125	30	168	65	64	28	18	9.6	7.4
13	2.3	4.8	11	412	43	183	99	67	26	18	9.4	7.3
14	2.3	4.4	12	437	43	170	73	62	33	17	9.5	7.1
15	2.3	5.3	16	163	35	152	68	65	45	17	9.2	7.0
16	2.3	6.3	14	112	33	110	64	59	42	16	9.3	7.0
17	2.3	6.1	13	87	32	101	61	53	33	16	9.6	7.0
18	2.4	5.8	14	72	31	121	66	51	32	16	9.4	7.1
19	2.4	4.9	13	64	30	98	58	49	29	15	9.2	6.9
20	2.4	4.7	10	60	29	158	65	47	27	15	9.1	6.8
21	2.4	4.7	9.5	e49	28	144	58	45	27	15	8.8	6.7
22	2.3	4.5	8.9	e59	27	165	52	44	26	15	8.9	6.5
23	2.3	4.4	8.3	e101	26	155	50	42	25	15	9.1	6.6
24	2.3	4.4	15	e113	25	126	48	41	24	15	8.6	6.4
25	2.3	8.8	15	e96	25	111	47	41	23	14	8.5	6.5
26	2.4	6.9	12	e103	24	101	46	40	23	14	8.6	6.6
27	2.4	5.7	11	e115	25	96	54	39	22	14	8.4	6.4
28	2.4	5.4	15	e110	25	95	59	39	22	13	8.4	6.5
29	2.5	5.1	14	e90	---	92	134	37	21	13	8.3	6.6
30	2.4	4.9	11	84	---	90	87	35	20	12	8.0	6.3
31	2.4	---	10	78	---	88	---	34	---	13	8.0	---
TOTAL	73.2	172.8	522.9	3624.5	1019	3488	2163	2209	862	513	298.4	213.3
MEAN	2.36	5.76	16.9	117	36.4	113	72.1	71.3	28.7	16.5	9.63	7.11
MAX	3.3	14	114	437	78	333	134	312	45	21	13	8.3
MIN	1.8	2.9	5.0	8.2	24	25	46	34	20	12	8.0	6.3
AC-FT	145	343	1040	7190	2020	6920	4290	4380	1710	1020	592	423

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.77	4.89	9.58	37.2	27.6	40.7	25.7	19.7	11.0	6.12	3.79	3.15
MAX	7.19	7.32	16.9	117	52.5	113	72.1	71.3	28.7	16.5	9.63	7.11
(WY)	1990	1990	1995	1995	1993	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 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1989 - 1995

ANNUAL TOTAL	2997.1	15159.1	
ANNUAL MEAN	8.21	41.5	16.2
HIGHEST ANNUAL MEAN			41.5
LOWEST ANNUAL MEAN			7.86
HIGHEST DAILY MEAN	114	Dec 4	437
LOWEST DAILY MEAN	1.2	Aug 13	1.8
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 12	2.3
INSTANTANEOUS PEAK FLOW			760
ANNUAL RUNOFF (AC-FT)	5940	30070	11760
10 PERCENT EXCEEDS	16	101	35
50 PERCENT EXCEEDS	5.9	20	6.8
90 PERCENT EXCEEDS	1.5	4.3	2.3

e Estimated.

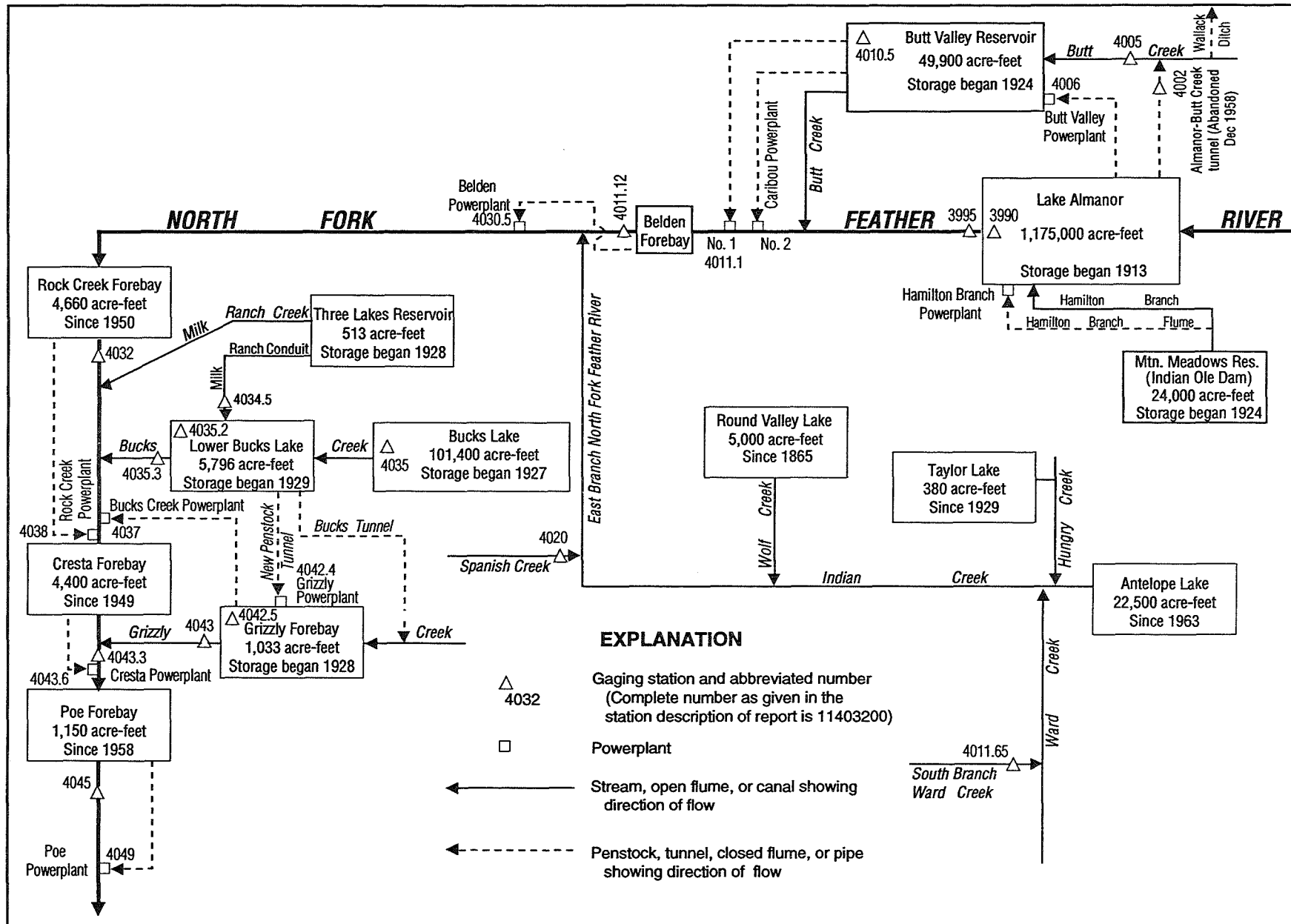


Figure 28. Diversions and storage in North Fork Feather River basin.

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 Canyon Dam.

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 (AT 2400) 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 (AT 2400) FOR CURRENT YEAR.--Maximum contents, 1,137,013 acre-ft, July 9, 10, gage height, 4,493.78 ft; minimum, 695,054 acre-ft, Dec. 31, gage height, 4,476.00 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754983	708165	713844	695730	796768	847086	972000	1014318	1099877	1131606	1103093	1018223
2	752662	708619	713616	696181	801277	850479	971234	1023963	1102557	1132417	1100145	1014578
3	750575	708619	717714	697308	805081	853877	970212	1031285	1105774	1133228	1095597	1011977
4	749648	709299	720907	697534	808414	856793	969191	1036528	1107384	1133498	1093193	1009379
5	748259	711797	719538	699791	811036	858983	969191	1039941	1110067	1134850	1090791	1007042
6	745946	714526	718854	701599	814138	861906	969957	1043621	1111677	1135120	1087592	1003671
7	744328	714754	717714	706805	816767	863612	973023	1045989	1112483	1135931	1085194	1000823
8	741328	714981	715436	713844	819638	867519	976351	1047306	1112751	1136743	1081999	998494
9	739023	719766	713616	722277	821553	883213	978658	1048622	1113825	1137013	1078805	995909
10	737181	718854	712479	728455	824190	902990	980197	1051522	1113825	1137013	1075614	993326
11	735341	719082	713389	732583	826110	913444	980454	1052049	1115168	1136472	1073222	994101
12	733962	719538	712479	735341	827550	920438	980197	1054424	1117318	1135391	1070036	990746
13	732124	719310	711116	741789	831156	926951	982509	1056272	1117318	1134850	1067914	987912
14	730289	718170	708619	748028	833081	933481	982766	1058385	1118931	1134309	1065264	984308
15	727996	717942	707258	752662	835008	938264	983794	1059442	1122969	1133498	1062087	981738
16	726393	717714	706351	755680	836213	942046	984308	1060764	1125395	1135120	1058914	980197
17	724563	716803	704766	757540	836936	945581	984051	1061558	1125126	1134039	1056008	978401
18	723191	714981	705898	760333	836454	950386	983537	1063145	1125935	1133498	1053104	976607
19	721821	713616	704540	762663	835490	953932	983023	1065528	1125395	1132687	1050467	974047
20	719766	714071	703408	764297	834767	961802	981995	1068179	1127824	1130255	1047832	973535
21	717714	713389	702277	766632	834526	966130	980454	1070301	1128094	1127284	1045200	969957
22	716347	712479	701147	769906	836213	974047	981224	1073222	1128094	1125395	1042569	967405
23	715436	711343	698888	772952	836695	980454	980967	1075614	1127824	1123238	1037315	964856
24	714071	712025	699114	775767	838625	981738	979941	1079071	1127554	1121891	1020309	962819
25	713389	714754	699565	777411	840073	981738	979171	1081733	1127824	1119469	1031285	960276
26	711797	714981	698888	779997	841764	979171	978401	1084395	1128364	1117318	1027883	957991
27	708846	715436	697985	781645	843698	977120	979427	1087059	1128904	1114900	1025007	955707
28	707938	715209	697985	783529	844665	976607	980454	1089724	1129715	1112483	1022135	953425
29	707712	713844	697083	785180	---	974814	989973	1092659	1130255	1110335	1020309	952919
30	708619	715664	696181	787304	---	974047	988235	1095330	1130796	1107384	1019787	953932
31	707485	---	695054	791558	---	972767	---	1097736	---	1104970	1019266	---
MAX	754983	719766	720907	791558	844665	981738	998235	1097736	1130796	1137013	1103093	1018223
MIN	707485	708165	695054	695730	796768	847086	969191	1014318	1099877	1104970	1019266	952919
a	4476.55	4476.91	4476.00	4480.18	4482.40	4487.55	4488.54	4492.32	4493.55	4492.59	4489.35	4486.81
b	-49125	-8179	-20610	+96504	+53107	+128102	+25468	+99501	+33060	-25826	-85704	-65334

CAL YR 1994 MAX 887894 MIN 695054 b +1351
WTR YR 1995 MAX 1137013 MIN 695054 b +197322

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

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 735 ft³/s, May 4, gage height, 4.81 ft; minimum daily, 34 ft³/s, Oct. 5-9.

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	35	36	37	36	38	35	36	197	37	37	38	38
2	35	37	37	36	38	35	36	585	37	37	38	38
3	35	37	37	36	38	35	36	597	37	37	38	38
4	35	37	37	36	38	35	36	634	37	37	38	38
5	34	37	37	36	38	35	36	728	37	37	38	37
6	34	37	37	36	38	35	37	730	37	37	38	37
7	34	37	37	37	38	35	38	730	37	37	38	37
8	34	37	37	37	38	35	37	472	37	37	38	37
9	34	37	37	38	38	40	37	40	37	37	38	37
10	35	37	37	38	38	42	37	40	37	37	38	37
11	36	37	37	38	38	41	36	39	37	37	38	37
12	36	37	37	38	38	38	36	37	37	37	38	37
13	36	37	37	39	39	38	37	37	37	37	38	37
14	36	37	37	40	39	38	37	37	37	37	38	37
15	36	37	37	39	37	38	37	37	226	37	38	37
16	36	37	37	38	35	38	37	37	703	37	38	37
17	37	37	37	38	35	37	37	37	703	37	38	37
18	37	37	37	38	35	38	37	37	703	37	38	37
19	37	37	36	38	35	37	37	37	560	37	38	37
20	37	37	36	38	35	39	36	37	354	37	38	37
21	37	37	36	37	35	38	36	37	353	37	38	37
22	37	38	37	37	35	38	36	37	491	37	38	37
23	36	37	36	37	35	37	36	37	698	37	38	37
24	36	37	36	37	35	37	36	37	698	37	38	37
25	36	37	36	37	35	37	36	37	367	36	38	37
26	36	37	36	37	35	36	36	37	37	36	38	37
27	37	37	36	37	35	36	36	37	37	37	38	37
28	37	37	36	37	35	36	36	37	37	38	38	37
29	37	37	36	37	---	36	38	37	37	38	38	37
30	36	37	36	37	---	36	38	37	37	38	38	37
31	36	---	36	37	---	36	---	37	---	38	38	---
TOTAL	1110	1110	1135	1157	1026	1147	1097	5532	6559	1149	1178	1114
MEAN	35.8	37.0	36.6	37.3	36.6	37.0	36.6	178	219	37.1	38.0	37.1
MAX	37	38	37	40	39	42	38	730	703	38	38	38
MIN	34	36	36	36	35	35	36	37	37	36	38	37
AC-FT	2200	2200	2250	2290	2040	2280	2180	10970	13010	2280	2340	2210
a	68080	24350	53950	22	11330	68940	108000	126800	125600	103900	125400	106800

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

SACRAMENTO RIVER BASIN

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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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.3	31.7	32.1	33.1	34.7	33.9	42.5	42.7	54.2	48.1	35.7	35.1
MAX	50.3	40.6	40.4	48.1	64.6	53.7	293	178	516	484	41.8	39.5
(WY)	1982	1969	1979	1974	1978	1978	1983	1995	1984	1984	1984	1986
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	13103	23314	
ANNUAL MEAN	35.9	63.9	38.2
HIGHEST ANNUAL MEAN			112
LOWEST ANNUAL MEAN			22.3
HIGHEST DAILY MEAN	38	Mar 22	730
LOWEST DAILY MEAN	33	Apr 27	34
ANNUAL SEVEN-DAY MINIMUM	34	Oct 3	34
INSTANTANEOUS PEAK FLOW			735
INSTANTANEOUS PEAK STAGE			4.81
ANNUAL RUNOFF (AC-FT)	25990	46240	27700
ANNUAL TOTAL, DIVERSION (AC-FT) a	321600	923100	
10 PERCENT EXCEEDS	37	38	39
50 PERCENT EXCEEDS	36	37	36
90 PERCENT EXCEEDS	35	36	30

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 estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,950 ft³/s, May 1, gage height, 4.23 ft; minimum daily, 34 ft³/s, Oct. 1-3.

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	34	40	40	42	409	154	211	1480	372	139	73	59
2	34	40	41	41	320	184	211	1040	373	133	71	59
3	34	38	41	41	226	243	216	755	363	122	69	59
4	38	38	45	41	187	206	236	620	348	116	69	59
5	41	40	47	41	166	176	260	550	334	112	68	59
6	40	41	42	41	158	160	375	473	290	108	66	60
7	38	40	39	41	152	149	575	421	260	106	65	60
8	36	40	36	58	147	155	490	386	237	103	65	60
9	36	43	38	167	139	1180	357	368	223	101	64	59
10	38	42	40	351	134	1460	314	347	214	99	64	58
11	38	43	43	223	129	1160	320	363	209	95	63	59
12	38	41	42	143	126	714	359	368	205	94	63	58
13	38	38	41	255	125	550	525	354	201	93	63	57
14	38	38	41	605	113	725	372	314	217	92	62	57
15	38	39	41	261	105	710	325	336	272	90	62	57
16	38	41	42	176	100	519	289	301	279	88	62	58
17	38	40	43	133	99	430	269	319	227	88	62	58
18	38	37	43	112	100	591	258	352	223	88	62	58
19	38	36	42	103	99	510	247	371	210	88	61	58
20	38	41	41	99	100	775	254	389	192	87	61	58
21	38	40	41	92	104	597	229	384	181	86	61	57
22	38	36	39	90	111	417	241	384	174	84	61	58
23	37	37	39	88	120	368	264	382	171	83	61	58
24	38	40	43	89	130	314	298	384	171	82	61	56
25	38	38	40	87	136	272	341	377	169	81	61	57
26	38	39	42	85	138	245	356	371	169	80	60	58
27	38	40	41	81	140	225	376	387	165	78	60	58
28	38	38	42	80	146	213	388	386	159	78	60	58
29	38	39	37	86	---	205	1020	379	154	77	60	58
30	38	40	36	107	---	200	969	379	151	76	60	58
31	38	---	40	267	---	199	---	378	---	76	60	---
TOTAL	1166	1183	1268	4126	4159	14006	10945	14098	6913	2923	1960	1746
MEAN	37.6	39.4	40.9	133	149	452	365	455	230	94.3	63.2	58.2
MAX	41	43	47	605	409	1460	1020	1480	373	139	73	60
MIN	34	36	36	41	99	149	211	301	151	76	60	56
AC-FT	2310	2350	2520	8180	8250	27780	21710	27960	13710	5800	3890	3460
a	391	378	397	404	380	474	512	591	587	605	573	530

a Inflow, in acre-feet, from Almanor-Butt Creek Tunnel at Outlet, provided by Pacific Gas & Electric Co.

11400500 BUTT CREEK BELOW ALMANOR-BUTT CREEK TUNNEL, NEAR PRATTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	396	365	375	313	311	346	352	391	388	414	406	402
MAX	995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1937 - 1995			
ANNUAL TOTAL	18345				64493							
ANNUAL MEAN	50.3				177							
HIGHEST ANNUAL MEAN									372			
LOWEST ANNUAL MEAN									974			
HIGHEST DAILY MEAN	113				May 7				40.1			
LOWEST DAILY MEAN	33				Aug 10				2830			
ANNUAL SEVEN-DAY MINIMUM	33				Aug 10				26			
INSTANTANEOUS PEAK FLOW					1950				May 1			
INSTANTANEOUS PEAK STAGE					4.23				May 1			
ANNUAL RUNOFF (AC-FT)	36390				127900				269600			
ANNUAL TOTAL, INFLOW (AC-FT) a	4990				5820							
10 PERCENT EXCEEDS	83				383				994			
50 PERCENT EXCEEDS	42				88				105			
90 PERCENT EXCEEDS	34				38				42			

a Inflow, in acre-feet, from Almanor-Butt Creek Tunnel at Outlet, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

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, 24,457 acre-ft, Sept. 28, 29, 1991, elevation, 4,114.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 47,937 acre-ft, June 12, 15, elevation, 4,130.85 ft; minimum, 33,955 acre-ft, Feb. 12, elevation, 4,121.65 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by Great Western Power Co. in 1923 and 1924)

4,100	8,024	4,130	46,591
4,110	18,395	4,137	57,891
4,120	31,592		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44399	42233	38217	36805	47383	36436	40248	45021	46198	44243	44476	46199
2	44943	41391	37027	36584	47383	37101	39795	46355	47066	44099	44554	46277
3	45335	40705	36805	36584	46513	37844	39795	47066	47145	45884	45335	45492
4	44787	40399	37174	36215	44399	38441	40248	47462	47541	45963	45727	44554
5	44865	40097	36584	35993	42079	38815	40781	47620	47699	45492	45570	44554
6	44477	40399	35701	36215	39946	39191	41696	46749	47620	45649	45649	45727
7	43621	40552	35409	36584	37695	39493	42926	46199	47620	45178	45335	45963
8	42849	39946	35117	37248	35701	39267	42926	46042	47462	44787	45335	45963
9	42541	39871	36289	38442	35044	42310	42233	45806	47383	45413	45570	45885
10	42156	40173	36436	39946	34606	43543	41772	45492	47224	45099	45806	45806
11	42156	39569	36732	40781	34388	44243	42079	45335	47857	45649	45806	43157
12	42541	38965	36805	41345	33955	44632	42618	45099	47937	45963	45885	44243
13	42541	38741	36731	42849	34460	45335	43699	44710	47699	46120	45963	43854
14	42772	39267	36362	44710	34679	44710	44243	44087	47778	45963	46355	46198
15	42772	39342	35847	45178	34898	45100	42926	43234	47937	46828	46591	46120
16	42695	39342	36362	44476	34898	44710	41849	42926	47620	44787	46356	44787
17	42541	39418	37248	43776	34460	44010	41849	42618	47145	45335	46277	43777
18	42079	39795	37322	44088	35190	43388	42156	42618	46670	44943	45727	43003
19	41849	39116	37027	44243	35919	42849	42233	42310	46356	44865	45335	44165
20	41620	38666	36953	44477	36510	43621	42541	42541	46749	45649	45256	42772
21	41239	38068	36584	43932	37101	43621	42541	42849	47383	46356	46120	43776
22	41849	38442	36953	43621	36141	44087	40324	42926	47541	46277	46120	43699
23	41849	38367	37027	43776	35627	44010	39191	43388	47303	46670	45257	43080
24	41696	37919	36953	44010	35481	43776	39040	43699	47145	45884	45649	42541
25	41849	38441	35919	44243	35773	43465	39342	44010	46828	46277	45806	42002
26	41849	38441	36732	44554	36067	43003	39720	44243	47145	45963	45728	43698
27	41925	38591	37620	44787	36141	42541	40097	44632	46670	45806	45649	44788
28	42387	37620	37545	45021	36584	42079	40399	44943	46120	45649	46120	45884
29	42618	38890	37248	45178	---	41696	41544	45571	45178	45021	46198	45570
30	42233	37844	37248	45492	---	41162	42464	45649	44165	45099	45884	44165
31	43157	---	37471	46355	---	40705	---	45885	---	45257	46749	---
MAX	45335	42233	38217	46355	47383	45335	44243	47620	47937	46828	46749	46277
MIN	41239	37620	35117	35993	33955	36436	39040	42310	44165	44099	44476	42002
a	4127.80	4124.30	4124.05	4129.85	4123.45	4126.20	4127.35	4129.55	4128.45	4129.15	4130.10	4128.45
b	-1319	-5313	-373	+8884	-9771	+4121	+1759	+3421	-1720	+1092	+1492	-2584
c	70440	32650	57190	6220	31800	100600	129500	152600	139900	106400	124600	107900

CAL YR 1994 MAX 46513 MIN 30183 b +4165 c 353200

WTR YR 1995 MAX 47937 MIN 33955 b -311 c 1060000

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.

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s, Mar. 10, gage height, 7.86 ft; minimum daily, 60 ft³/s, Oct. 4, Sept. 11.

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	62	64	64	65	65	64	441	853	150	149	152	152
2	62	63	65	64	65	64	434	1570	149	149	150	150
3	61	64	65	66	64	65	227	1320	151	149	150	151
4	60	64	64	66	65	65	64	1290	150	149	151	135
5	61	63	64	66	65	65	101	1420	149	149	152	62
6	61	63	65	65	65	65	132	1410	148	149	150	63
7	62	64	64	66	64	65	158	1380	149	149	151	63
8	62	64	65	67	65	65	158	1200	151	149	150	62
9	62	64	64	66	65	108	158	492	149	149	150	63
10	62	65	64	66	65	964	102	479	149	149	151	61
11	62	65	65	66	65	1280	68	476	151	150	152	60
12	62	65	64	66	65	446	69	477	149	150	150	61
13	61	65	65	66	80	442	69	474	150	149	150	62
14	62	65	65	66	91	680	68	463	150	150	151	62
15	62	64	66	66	78	327	69	464	309	149	151	62
16	62	64	66	66	70	68	68	461	1160	149	151	62
17	63	65	65	66	64	65	68	462	1150	150	150	62
18	63	64	66	65	65	65	68	394	1150	150	153	62
19	63	65	66	65	65	64	68	149	918	151	150	61
20	63	64	65	66	64	64	68	151	152	150	150	62
21	63	64	65	66	64	64	68	150	150	150	150	62
22	63	64	65	66	65	65	67	150	464	151	151	62
23	63	65	65	66	65	64	67	148	955	150	150	62
24	62	64	66	67	65	481	67	148	1090	151	151	62
25	63	65	66	66	65	447	67	148	872	150	150	62
26	63	65	66	66	65	483	67	149	147	151	150	62
27	62	65	65	65	65	454	102	149	148	150	151	62
28	62	64	65	65	65	394	149	150	149	150	152	62
29	63	65	65	64	---	385	149	150	149	152	149	62
30	64	64	65	65	---	427	148	150	149	151	152	62
31	63	---	65	66	---	430	---	150	---	150	152	---
TOTAL	1929	1929	2015	2037	1874	8785	3609	17027	11207	4644	4673	2198
MEAN	62.2	64.3	65.0	65.7	66.9	283	120	549	374	150	151	73.3
MAX	64	65	66	67	91	1280	441	1570	1160	152	153	152
MIN	60	63	64	64	64	64	64	148	147	149	149	60
AC-FT	3830	3830	4000	4040	3720	17430	7160	33770	22230	9210	9270	4360
a	69350	32310	56550	12350	37600	106100	142600	148000	140900	104900	122600	111300

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

SACRAMENTO RIVER BASIN

11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	143	156	131	106	97.7	107	171	174	147	139	135	132
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1970 - 1995			
ANNUAL TOTAL	33689				61927							
ANNUAL MEAN	92.3				170				137			
HIGHEST ANNUAL MEAN									745			
LOWEST ANNUAL MEAN									76.3			
HIGHEST DAILY MEAN	146				1570				2800			
LOWEST DAILY MEAN	60				60				2.3			
ANNUAL SEVEN-DAY MINIMUM	61				61				3.5			
INSTANTANEOUS PEAK FLOW					2160				3230			
INSTANTANEOUS PEAK STAGE					7.86				8.96			
ANNUAL RUNOFF (AC-FT)	66820				122800				99040			
ANNUAL TOTAL, DIVERSION (AC-FT) a	321300				1085000							
10 PERCENT EXCEEDS	141				432				150			
50 PERCENT EXCEEDS	65				66				68			
90 PERCENT EXCEEDS	62				62				60			

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

SACRAMENTO RIVER BASIN

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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 estimated daily discharges. 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.

COOPERATION.--Records were collected by International 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.9	2.9	2.8	---	10	10	---	---	---	3.5	4.8
2	2.8	2.8	3.0	2.7	12	11	10	---	---	---	3.5	4.7
3	2.8	2.7	3.6	2.8	4.7	10	10	---	---	---	3.5	4.7
4	3.0	2.7	3.7	2.8	3.8	11	11	---	---	11	3.5	4.7
5	2.9	3.0	3.1	2.8	3.7	11	11	---	---	9.1	3.5	4.7
6	2.8	3.0	3.0	2.9	3.7	11	11	---	---	7.6	3.5	4.3
7	2.8	2.9	2.9	3.7	3.6	11	---	---	---	5.8	3.4	4.1
8	2.8	2.8	2.8	4.0	3.6	11	12	---	---	4.7	3.4	4.1
9	2.8	2.8	2.8	6.1	3.6	---	11	---	---	4.2	3.4	4.1
10	2.8	2.8	2.8	11	3.5	---	10	---	---	4.2	3.4	4.1
11	2.8	2.8	2.8	3.8	3.5	---	10	---	---	4.2	3.5	4.1
12	2.8	2.8	2.8	3.6	3.4	---	12	---	---	4.2	3.4	4.1
13	2.8	2.7	2.8	---	4.5	---	11	---	---	4.1	3.4	4.1
14	2.8	2.7	2.8	---	3.7	---	11	---	---	4.3	3.4	4.0
15	2.7	2.8	2.8	7.6	3.5	---	11	---	---	3.9	4.0	4.0
16	2.7	2.8	2.8	3.6	3.3	12	10	---	---	3.8	4.9	4.0
17	2.7	2.8	2.9	3.4	3.3	11	10	---	---	3.9	4.9	4.1
18	2.7	2.7	2.9	3.3	3.3	---	10	---	---	4.0	4.8	4.0
19	2.7	2.7	2.8	3.2	3.3	---	10	---	---	3.9	4.8	4.0
20	2.7	2.8	2.8	3.2	3.3	---	10	---	---	3.8	4.7	4.0
21	2.7	2.8	2.8	3.1	3.5	---	10	---	---	3.8	4.4	4.0
22	2.7	2.7	2.8	3.2	3.5	---	10	---	---	3.7	4.7	4.0
23	2.7	2.7	2.8	3.1	3.4	---	10	---	---	3.7	4.8	4.0
24	2.7	2.8	2.9	3.1	3.5	---	11	---	---	3.7	4.9	4.0
25	2.7	2.9	2.8	3.3	3.5	---	11	---	---	3.6	4.8	4.1
26	2.7	2.8	2.8	3.3	3.5	---	11	---	---	3.6	4.8	4.1
27	2.7	2.8	2.8	3.9	3.5	---	11	---	---	3.6	4.8	4.1
28	2.7	2.7	2.8	4.4	4.1	---	11	---	---	3.6	4.7	4.1
29	2.7	2.8	2.8	4.6	---	12	---	---	---	3.6	4.7	4.1
30	2.7	2.8	2.7	4.6	---	10	---	---	---	3.5	4.7	4.1
31	2.7	---	2.8	5.3	---	10	---	---	---	3.5	4.8	---
TOTAL	85.4	83.8	89.6	---	---	---	---	---	---	---	128.5	125.3
MEAN	2.75	2.79	2.89	---	---	---	---	---	---	---	4.15	4.18
MAX	3.0	3.0	3.7	---	---	---	---	---	---	---	4.9	4.8
MIN	2.7	2.7	2.7	---	---	---	---	---	---	---	3.4	4.0
AC-FT	169	166	178	---	---	---	---	---	---	---	255	249

CAL YR 1994 TOTAL 1404.3 MEAN 3.85 MAX 9.5 MIN 2.7 AC-FT 2790

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	0330	11,100	11.50	Mar. 20	1515	4,570	7.59
Jan. 14	0145	8,840	10.35	Apr. 7	1845	2,750	6.05
Feb. 1	2030	2,140	5.68	Apr. 13	0915	2,480	5.81
Mar. 3	1245	1,760	5.29	May 1	1300	8,200	10.00
Mar. 9	1545	*13,700	*12.68				

Minimum daily, 14 ft³/s, Oct. 2.

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	19	28	44	79	1780	407	897	6420	786	301	78	40
2	14	31	47	75	1550	653	910	3970	794	287	78	47
3	17	30	203	74	1010	1420	891	2500	816	266	74	51
4	29	29	840	76	784	987	956	1880	763	251	68	51
5	34	35	409	80	679	706	1030	1600	739	234	66	51
6	31	82	228	94	623	568	1380	1390	608	219	66	50
7	29	74	158	785	571	479	2450	1170	523	213	65	52
8	26	56	122	2670	533	460	2180	1050	469	206	63	53
9	25	87	101	5020	476	8020	1520	978	450	201	60	52
10	23	103	90	8430	440	9490	1190	913	455	195	64	52
11	23	68	86	3530	411	6790	1030	916	473	181	70	52
12	23	59	85	1970	389	3390	1010	921	475	170	69	51
13	24	52	80	4180	437	2590	1930	862	456	170	61	49
14	25	46	74	7360	422	2810	1460	763	494	165	59	48
15	25	46	75	2950	353	2810	1150	861	666	157	61	43
16	26	46	72	1440	318	1830	967	821	822	151	58	40
17	25	45	77	887	305	1410	823	814	627	144	61	39
18	27	44	85	635	295	1570	753	855	565	146	59	42
19	31	40	88	495	296	1370	665	902	504	138	56	41
20	26	42	82	422	310	2710	643	920	457	129	59	41
21	27	42	77	371	334	2450	575	907	429	126	56	40
22	25	41	73	381	364	1790	541	895	411	124	54	44
23	27	39	70	594	386	1440	552	854	408	119	56	44
24	27	40	84	658	415	1150	608	824	419	110	50	48
25	27	67	98	710	420	1010	718	793	424	104	48	44
26	27	60	86	643	406	903	771	787	413	103	50	40
27	25	49	82	601	390	851	798	815	402	94	48	45
28	25	47	97	554	386	832	906	783	375	85	46	44
29	25	44	94	519	---	811	3090	775	343	84	43	45
30	26	44	85	597	---	797	5190	783	326	91	44	44
31	27	---	81	1140	---	815	---	791	---	88	45	---
TOTAL	790	1516	3973	48020	15083	63319	37584	39513	15892	5052	1835	1383
MEAN	25.5	50.5	128	1549	539	2043	1253	1275	530	163	59.2	46.1
MAX	34	103	840	8430	1780	9490	5190	6420	822	301	78	53
MIN	14	28	44	74	295	407	541	763	326	84	43	39
AC-FT	1570	3010	7880	95250	29920	125600	74550	78370	31520	10020	3640	2740

11402000 SPANISH CREEK ABOVE BLACKHAWK CREEK, AT KEDDIE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	59.0	132	277	407	500	565	570	429	170	51.6	28.4	30.2
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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1934 - 1995		
ANNUAL TOTAL	33689.5			233960					
ANNUAL MEAN	92.3			641			267		
HIGHEST ANNUAL MEAN							641		
LOWEST ANNUAL MEAN							34.1		
HIGHEST DAILY MEAN	840			Dec 4			14200		
LOWEST DAILY MEAN	6.0			Aug 11			3.0		
ANNUAL SEVEN-DAY MINIMUM	7.4			Aug 10			4.4		
INSTANTANEOUS PEAK FLOW							19600		
INSTANTANEOUS PEAK STAGE							12.68		
ANNUAL RUNOFF (AC-FT)	66820			464100			193500		
10 PERCENT EXCEEDS	204			1430			644		
50 PERCENT EXCEEDS	65			228			88		
90 PERCENT EXCEEDS	9.8			37			23		

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,800 ft³/s, Mar. 10, gage height, 27.18 ft; minimum daily, 50 ft³/s, Dec. 24.

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	112	83	52	52	3760	53	4350	25600	4130	482	143	122
2	112	54	52	52	4500	104	4620	25400	3850	242	133	122
3	111	54	53	52	3330	1700	4430	16600	4150	186	130	121
4	112	54	55	52	2540	1620	4470	12200	3900	130	130	121
5	112	53	52	52	2070	526	4780	10500	3680	130	128	119
6	111	53	52	53	1610	73	6050	9520	3130	145	127	120
7	111	54	52	54	1400	52	9220	8460	2610	153	128	121
8	111	53	53	1650	1170	54	9120	7320	2340	152	128	121
9	110	54	52	6960	288	15900	7170	6120	2190	151	126	121
10	110	54	52	13100	51	41900	5850	5490	2140	149	127	120
11	109	57	54	7720	51	41100	4860	5480	1760	149	128	120
12	109	56	54	4220	52	21300	4780	5580	2100	148	128	121
13	109	53	53	6690	52	12900	7020	5220	1980	148	128	122
14	109	55	53	14900	52	13500	6720	5190	2350	149	128	122
15	109	56	53	8890	52	12500	5820	5290	3200	148	124	120
16	109	54	52	4730	52	8580	4830	5350	4120	148	122	121
17	109	52	55	2000	52	7100	4060	4940	4100	148	122	121
18	109	52	52	308	52	7230	3660	5150	3710	148	122	121
19	109	52	52	51	52	7540	3250	5230	3270	150	122	121
20	109	52	52	51	52	9780	3020	5220	2130	150	121	121
21	109	52	52	53	52	11100	2810	4940	1850	150	122	120
22	110	52	52	54	52	8940	2480	4990	2080	149	121	121
23	105	52	52	201	53	8950	2510	4980	2570	149	121	121
24	106	53	50	54	53	6310	2780	4530	2520	149	122	122
25	112	54	51	53	53	5540	3290	4310	2490	148	122	122
26	109	52	52	52	53	4690	3950	4280	1770	148	121	121
27	109	52	53	52	53	4180	3960	4340	1900	148	120	122
28	109	52	52	52	53	4100	4460	4100	1720	148	122	123
29	109	52	52	53	---	4020	10600	4020	1490	147	122	124
30	109	52	52	55	---	3790	16800	4060	1300	149	122	123
31	109	---	52	915	---	3850	---	4090	---	147	121	---
TOTAL	3398	1628	1625	73231	21660	266982	161520	228500	80530	5038	3881	3637
MEAN	110	54.3	52.4	2362	774	8612	5384	7371	2684	163	125	121
MAX	112	83	55	14900	4500	41900	16800	25600	4150	482	143	124
MIN	105	52	50	51	51	52	2480	4020	1300	130	120	119
AC-FT	6740	3230	3220	145300	42960	529600	320400	453200	159700	9990	7700	7210
a	78040	52000	88750	151900	162800	179400	191800	197200	191700	167500	147000	126700

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

11403200 NORTH FORK FEATHER RIVER BELOW ROCK CREEK DIVERSION DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	71.0	55.2	343	165	1656	798	960	393	111	104	104
MAX	175	171	61.6	2362	774	8612	5384	7371	2684	163	125	121
(WY)	1987	1989	1987	1995	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1987 - 1995			
ANNUAL TOTAL	30213				851630							
ANNUAL MEAN	82.8				2333				408			
HIGHEST ANNUAL MEAN									2333			
LOWEST ANNUAL MEAN									77.7			
HIGHEST DAILY MEAN	138				May 10				41900			
LOWEST DAILY MEAN	50				Dec 24				50			
ANNUAL SEVEN-DAY MINIMUM	52				Dec 19				51			
INSTANTANEOUS PEAK FLOW					59800				Mar 10			
INSTANTANEOUS PEAK STAGE					27.18				Mar 10			
ANNUAL RUNOFF (AC-FT)	59930				1689000				295800			
ANNUAL TOTAL, DIVERSION (AC-FT) a	687900				1735000							
10 PERCENT EXCEEDS	113				6460				130			
50 PERCENT EXCEEDS	105				127				104			
90 PERCENT EXCEEDS	52				52				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.--No estimated daily discharges. 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; minimum daily, 0.25 ft³/s, Sept. 6, 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	8.9	7.3	2.2	2.1	41	24	32	67	31	67	8.4	1.8
2	8.7	6.7	2.4	2.0	31	27	31	65	29	67	7.9	1.6
3	5.1	6.2	3.5	2.0	26	38	32	61	26	67	7.4	1.3
4	1.2	5.7	5.5	2.3	25	28	36	48	23	65	6.9	4.4
5	1.0	5.3	4.0	2.4	24	25	39	45	21	60	6.6	8.5
6	.74	5.1	3.3	2.6	24	23	58	39	18	54	6.4	4.2
7	.54	4.2	2.9	3.4	23	22	68	35	17	50	6.1	4.6
8	.50	2.4	2.6	5.3	22	23	62	35	16	46	5.8	7.0
9	.46	2.4	2.3	46	22	63	53	35	16	44	5.4	6.8
10	.46	2.9	2.2	62	24	48	48	36	17	39	5.3	6.7
11	3.5	2.4	2.2	27	23	29	47	38	17	35	5.0	6.6
12	9.2	2.1	2.4	19	22	24	51	37	17	29	4.7	6.4
13	9.1	1.8	2.5	50	22	22	60	33	16	24	4.5	6.3
14	9.1	1.6	2.3	55	21	30	52	30	18	25	4.3	6.2
15	8.9	1.6	2.3	27	21	29	47	37	19	25	4.1	6.2
16	8.9	1.8	2.5	21	21	42	44	32	16	24	3.9	5.9
17	8.7	1.9	3.2	19	20	62	41	35	14	22	3.7	5.4
18	8.6	1.8	3.1	17	19	66	39	38	15	22	3.6	5.3
19	8.6	1.7	2.7	17	20	65	37	32	14	20	3.3	5.3
20	8.5	1.6	2.5	16	20	66	36	34	14	19	3.0	5.2
21	8.3	1.5	2.4	16	21	64	34	45	14	17	2.8	5.2
22	8.1	1.5	2.4	15	23	60	34	49	27	16	2.9	5.1
23	8.1	1.4	2.3	15	25	52	38	48	43	15	2.8	5.1
24	7.9	1.4	2.4	15	26	45	44	47	44	14	2.5	5.1
25	7.9	1.6	2.4	15	26	41	52	46	45	13	2.4	5.1
26	7.7	1.5	2.4	14	25	39	54	46	53	12	2.2	5.1
27	7.7	1.6	2.3	14	25	37	54	44	68	12	2.1	5.0
28	7.7	2.2	2.5	16	25	35	58	41	68	11	2.0	5.0
29	7.7	2.1	2.3	18	---	33	71	37	68	11	2.0	5.0
30	7.5	2.0	2.1	22	---	32	68	36	68	10	1.9	5.0
31	7.3	---	2.1	38	---	32	---	33	---	9.0	1.8	---
TOTAL	196.60	83.3	82.2	596.1	667	1226	1420	1284	872	944.0	131.7	156.4
MEAN	6.34	2.78	2.65	19.2	23.8	39.5	47.3	41.4	29.1	30.5	4.25	5.21
MAX	9.2	7.3	5.5	62	41	66	71	67	68	67	8.4	8.5
MIN	.46	1.4	2.1	2.0	19	22	31	30	14	9.0	1.8	1.3
AC-FT	390	165	163	1180	1320	2430	2820	2550	1730	1870	261	310

11403450 MILK RANCH CONDUIT AT OUTLET, NEAR BUCKS LODGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.28	3.63	4.87	6.65	8.57	20.8	33.9	33.7	18.2	8.44	4.17	3.57
MAX	6.96	8.15	8.05	19.2	23.8	42.7	59.6	66.6	57.3	30.5	7.35	6.82
(WY)	1994	1990	1988	1995	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1987 - 1995			
ANNUAL TOTAL	3038.14				7659.30							
ANNUAL MEAN	8.32				21.0				12.5			
HIGHEST ANNUAL MEAN									21.6			
LOWEST ANNUAL MEAN									8.32			
HIGHEST DAILY MEAN	64 May 10				71 Apr 29				71 Apr 29 1995			
LOWEST DAILY MEAN	.25 Sep 6				.46 Oct 9				.25 Sep 6 1994			
ANNUAL SEVEN-DAY MINIMUM	.36 Aug 31				.70 Oct 4				.28 Sep 29 1988			
ANNUAL RUNOFF (AC-FT)	6030				15190				9040			
10 PERCENT EXCEEDS	20				51				36			
50 PERCENT EXCEEDS	4.8				16				6.1			
90 PERCENT EXCEEDS	.71				2.1				1.0			

SACRAMENTO RIVER BASIN

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, 106,720 acre-ft, June 8-10, 1982, elevation, 5,157.6 ft; minimum, 12,330 acre-ft, Feb. 27, 1929, elevation, 5,090.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 105,236 acre-ft, June 15, elevation, 5,156.8 ft; minimum, 44,787 acre-ft, Jan. 3, elevation, 5,119.5 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69875	63857	55781	45335	57876	54302	85647	101016	104682	104682	98478	84448
2	69392	63701	55335	44924	58478	54302	85304	103209	104867	104867	97938	83937
3	68913	63545	55483	44787	58478	54745	85304	104128	104867	104867	97579	83427
4	68753	63545	55483	44924	58478	55040	85304	104497	104682	104682	97041	83087
5	68274	63857	55188	45061	58478	55335	85304	104682	104867	104867	96682	82577
6	67795	64169	54893	45335	58328	55781	85818	104497	104682	105051	96146	82071
7	67320	64013	54597	45750	58177	55781	87023	104497	104497	105051	96146	81733
8	66844	63545	54302	46720	58177	56228	87540	104497	104497	105051	95255	81227
9	66369	63701	53861	47977	58027	60457	87712	104497	104313	104867	94898	80721
10	65895	63233	53568	49671	57726	64637	87885	104497	104128	104682	94366	80219
11	65738	62922	53130	50528	57565	67003	87885	104128	104128	104497	93835	79883
12	65738	62922	52984	51245	57274	68274	88059	104128	104313	104313	93481	79381
13	65581	62922	52545	53422	57565	70036	88405	104128	104313	104128	92950	78880
14	65109	62304	52256	56228	57274	71487	88405	104128	104867	103759	92597	78381
15	64481	62149	51967	57124	57124	73113	88405	103759	105236	103576	92070	78048
16	64169	61839	51389	57876	56824	74098	88405	104497	105051	103209	91543	77548
17	63701	61377	50957	58177	56526	74752	88579	104497	104682	103026	91191	77050
18	63701	60917	50671	58177	56228	76058	88579	104497	104497	102659	90667	76556
19	63701	60457	50243	58027	55930	77050	88405	104497	104497	102476	90318	76058
20	63701	59997	49957	58027	55632	78714	88405	104497	104313	102293	89794	75894
21	63701	59541	49530	57726	55483	79716	88232	104497	104313	101744	89272	75894
22	63701	59238	49105	57726	55188	81058	88059	104867	104128	101380	88925	75404
23	63545	58782	48681	57575	55040	81733	88059	104867	104128	101016	88405	75078
24	63701	58478	48398	57425	55188	82408	87885	104867	104128	100833	87885	74580
25	63701	58177	47977	57124	55040	82747	88059	104867	104128	100651	87540	74098
26	63701	57876	47698	57274	54745	83087	88059	104867	104313	100469	87023	73606
27	63701	57575	47278	56973	54597	83597	88405	105051	104313	100287	86506	73277
28	63545	56973	46999	56824	54450	83937	88925	105051	104128	100105	85989	72785
29	63545	56675	46581	56675	---	84277	92950	105051	104497	99746	85647	72297
30	63545	56228	46304	56675	---	84791	95967	105051	104682	99201	85133	71811
31	63701	---	45611	57274	---	85133	---	104867	---	98839	84619	---
MAX	69875	64169	55781	58177	58478	85133	95967	105051	105236	105051	98478	84448
MIN	63545	56228	45611	44787	54450	54302	85304	101016	104128	98839	84619	71811
a	5132.4	5127.5	5120.1	5128.2	5126.3	5145.5	5151.7	5156.6	5156.5	5153.3	5145.2	5137.5
b	-6656	-7473	-10617	+11663	-2824	+30683	+10834	+8900	-185	-5843	-14220	-12808

CAL YR 1994 MAX 91191 MIN 45611 b -18246

WTR YR 1995 MAX 105236 MIN 44787 b +1454

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

185

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, 6,091 acre-ft, Mar. 8, 1986, elevation, 5,023.8 ft; minimum, 99 acre-ft, Sept. 9, 1993, elevation, 4,956.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,036 acre-ft, May 23, 24, 27, elevation, 5,023.4 ft; minimum, 3,580 acre-ft, Nov. 18, elevation, 5,003.7 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4623	4201	3681	4047	4368	4201	4331	5102	5953	5735	3862	4661
2	5050	4464	3670	4428	4343	4272	4201	4723	5966	5708	4024	4428
3	5218	4575	3692	4574	4331	4636	4095	4747	5966	5695	3978	4201
4	5283	4562	4154	4586	4319	4710	4224	5179	5953	5641	3989	3978
5	5322	4574	4047	4574	4213	4772	4283	5966	5980	5401	4024	4224
6	5256	4586	3966	4574	4307	4368	4331	5966	5966	5011	4118	4476
7	5115	4307	3816	4611	4343	4525	4428	5966	5939	4747	4130	4611
8	5218	4380	3658	4513	4248	4513	4368	5953	5912	4797	4236	4452
9	5309	4319	3613	4611	4272	5036	4236	5939	5898	4785	4248	4165
10	5244	4452	3624	4910	4213	5440	4094	5939	5884	4785	4331	4106
11	5024	4885	3726	5011	4248	5735	3932	5939	5898	4835	4452	3955
12	4513	4476	3658	5063	4154	5843	3794	5912	5912	4822	4464	4416
13	4154	4224	3703	5401	4118	5939	3897	5912	5912	4797	4440	4885
14	4189	4095	4130	5560	4118	5912	4283	5884	5994	4772	4574	4923
15	4106	3955	4501	4948	4071	5884	4283	5857	6022	4760	4343	4747
16	4118	3816	4118	4822	3989	5912	4118	5912	5994	4723	4260	4525
17	4501	3760	4095	4464	3955	5912	3920	5925	5953	4698	4260	4355
18	4561	3580	4095	4331	4001	5939	4095	5939	5939	4537	4154	4489
19	4574	3602	3989	4416	4083	5912	3897	5925	5912	4295	4059	4860
20	4598	3703	3955	4201	4248	5939	3862	5925	5912	4142	4001	5050
21	4598	3897	3805	4130	4260	5695	3978	5925	5884	4047	3851	4797
22	4623	3771	3737	4083	4283	5166	4095	5953	5898	3955	3897	4574
23	4623	3636	3647	4177	4561	5348	4224	6036	5898	3851	4059	4343
24	4636	3794	3658	4428	4343	5493	4368	6036	5898	3771	4036	4416
25	4661	4106	3715	4331	4236	5614	4319	6008	5898	3909	4059	4154
26	4586	4083	3658	4319	4213	5722	4307	6022	5980	4165	4201	4452
27	4661	4024	3670	4331	4130	5830	4177	6036	5925	4106	4368	4648
28	4723	3909	3681	4392	4177	5870	4071	5966	5912	3771	4549	4948
29	4735	3760	3636	4392	---	5870	4611	5953	5843	3647	4698	4797
30	4735	3681	3647	4513	---	5641	4760	5980	5762	3737	4772	4961
31	4513	---	3670	4404	---	4948	---	5966	---	3839	5050	---
MAX	5322	4885	4501	5560	4561	5939	4760	6036	6022	5735	5050	5050
MIN	4106	3580	3613	4047	3955	4201	3794	4723	5762	3647	3851	3955
a	5011.7	5004.6	5004.5	5010.8	5008.9	5015.2	5013.7	5022.9	5021.4	5006.0	5016.0	5015.3
b	+61	-832	-11	+734	-227	+771	-188	+1206	-204	-1923	+1211	-89

CAL YR 1994 MAX 5762 MIN 3580 b -319

WTR YR 1995 MAX 6036 MIN 3580 b +509

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 March 13-21, 27-29, 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.6	---	---	---	---	---	10	312	4.4	4.9	4.2
2	1.5	1.6	---	---	---	---	---	7.4	304	4.3	4.8	4.2
3	1.7	1.6	---	---	---	---	---	6.5	294	4.2	4.8	4.1
4	1.6	1.6	---	---	---	---	---	6.2	276	4.4	4.8	4.2
5	1.6	1.7	---	---	---	---	---	71	277	4.3	4.9	4.1
6	1.6	1.6	---	---	---	---	---	183	220	4.2	5.0	4.0
7	1.6	1.6	---	---	---	---	---	160	152	4.3	4.8	4.0
8	1.6	1.7	---	---	---	---	---	140	107	4.1	4.4	4.1
9	1.6	1.6	---	---	---	---	---	113	87	4.2	4.7	4.2
10	1.6	1.6	---	---	---	---	---	96	81	4.2	5.2	4.1
11	1.5	1.7	---	---	---	---	---	98	86	4.2	5.1	4.0
12	1.5	1.6	---	---	---	---	---	108	95	4.4	4.8	4.1
13	1.5	1.6	---	---	---	8.7	---	101	92	4.2	4.7	4.0
14	1.5	1.6	---	---	---	46	---	73	130	4.2	4.8	4.0
15	1.5	1.6	---	---	---	70	---	79	405	4.2	4.8	4.0
16	1.5	1.5	---	---	---	43	---	74	369	4.1	4.6	4.3
17	1.5	1.5	---	---	---	132	---	70	235	4.2	4.0	4.2
18	1.5	1.5	---	---	---	163	---	83	175	4.4	4.1	4.1
19	1.5	1.5	---	---	---	140	---	153	136	5.1	4.0	4.2
20	1.5	1.5	---	---	---	175	---	140	104	5.2	4.0	4.2
21	1.5	---	---	---	---	70	---	161	85	5.1	3.9	4.2
22	1.5	---	---	---	---	---	---	181	123	5.0	3.8	4.1
23	1.5	---	---	---	---	---	---	305	98	4.8	3.7	4.3
24	1.5	---	---	---	---	---	---	552	105	4.8	3.9	4.0
25	1.5	---	---	---	---	---	---	508	114	5.1	3.9	3.9
26	1.5	---	---	---	---	---	---	543	149	5.0	4.0	4.1
27	1.5	---	---	---	---	---	5.2	555	150	4.7	4.0	4.4
28	1.6	---	---	---	---	16	5.4	363	113	4.6	4.1	4.3
29	1.6	---	---	---	---	30	9.3	237	122	4.5	4.2	4.5
30	1.5	---	---	---	---	22	8.1	270	7.8	4.8	4.2	4.3
31	1.5	---	---	---	---	---	---	341	---	4.8	4.1	---
TOTAL	47.6	---	---	---	---	---	---	5788.1	5003.8	140.0	137.0	124.4
MEAN	1.54	---	---	---	---	---	---	187	167	4.52	4.42	4.15
MAX	1.7	---	---	---	---	---	---	555	405	5.2	5.2	4.5
MIN	1.5	---	---	---	---	---	---	6.2	7.8	4.1	3.7	3.9
AC-FT	94	---	---	---	---	---	---	11480	9930	278	272	247
a	6640	10170	12620	7340	11790	4310	18390	19530	22870	18310	13600	12980

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

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, 1,252 acre-ft, Apr. 29, elevation, 4,319.6 ft; minimum, 703 acre-ft, Nov. 11, elevation, 4,303.9 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	789	1053	950	789	1094	943	1139	1197	1147	1131	739	1038
2	812	999	854	825	974	1049	1135	1181	1147	1131	854	1060
3	953	1024	877	825	971	1071	1120	1166	1147	1128	967	1068
4	904	1046	780	761	898	805	1124	1143	1147	1128	946	1071
5	1006	1079	838	812	953	861	1139	1158	1143	1128	904	932
6	995	1020	844	721	921	971	1162	1158	1139	1128	957	1075
7	918	1016	809	758	925	905	1174	1154	1135	1108	1013	1009
8	861	978	864	712	877	891	1158	1154	1135	1075	925	995
9	894	929	848	1181	867	1193	1147	1154	1139	1082	985	1075
10	964	867	786	1143	921	1228	1147	1154	1139	1053	932	943
11	901	703	802	1016	881	1170	1147	1154	1139	1094	942	908
12	887	963	874	764	953	1166	1150	1150	1139	1057	943	936
13	943	848	821	1236	985	1166	1154	1147	1139	1013	1024	960
14	929	905	709	1166	967	1185	1071	1150	1170	967	844	1060
15	901	921	818	1119	964	1135	1147	1143	1150	918	992	1049
16	815	908	946	1042	967	1112	1147	1158	1147	864	1031	1045
17	831	929	939	1034	932	1024	1147	1162	1147	812	908	992
18	838	929	918	1016	877	1128	1090	1162	1143	871	1027	1024
19	841	864	974	936	918	1071	1147	1162	1139	995	988	946
20	847	815	905	971	898	1139	1124	1158	1139	1031	898	971
21	854	742	898	992	901	1154	1120	1158	1139	1020	1002	1024
22	861	881	925	1016	925	1135	1124	1166	1139	988	1038	1034
23	867	871	848	1002	867	928	1124	1101	1139	967	964	1038
24	796	777	761	936	946	761	1131	1101	1139	838	971	884
25	805	786	815	1027	1016	828	1152	1105	1139	715	936	1064
26	799	950	898	1031	1013	742	1147	1108	1135	709	999	1049
27	815	943	834	960	1045	770	1152	1108	1135	815	1068	1071
28	755	881	834	978	985	867	1177	1158	1131	844	1009	884
29	780	992	773	864	---	786	1252	1154	971	818	1006	1038
30	805	1006	825	874	---	950	1189	1150	1131	887	891	1020
31	936	---	758	1082	---	1139	---	1147	---	802	964	---
MAX	1006	1079	974	1236	1094	1228	1252	1197	1170	1131	1068	1075
MIN	755	703	709	712	867	742	1071	1101	971	709	739	884
a	4311.1	4313.1	4305.7	4315.2	4312.5	4316.7	4318.0	4316.9	4316.5	4307.1	4311.9	4313.5
b	+143	+70	-248	+324	-97	+154	+50	-42	-16	-329	+162	+56
CAL YR 1994	MAX 1120	MIN 694	b -174									
WTR YR 1995	MAX 1252	MIN 703	b +227									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 11404230). 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft³/s, May 1, gage height, 5.01 ft; minimum daily, 2.0 ft³/s, many days in October.

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	2.0	2.1	2.3	2.2	3.4	2.6	132	1430	265	115	4.5	4.8
2	2.0	2.1	2.3	2.2	3.3	2.9	107	611	265	110	4.6	4.8
3	2.0	2.1	2.5	2.2	3.2	4.7	101	440	252	106	4.6	4.8
4	2.1	2.1	2.6	2.2	3.1	2.8	17	352	246	102	4.7	4.8
5	2.0	2.2	2.4	2.2	3.0	2.6	57	117	229	97	4.6	4.8
6	2.1	2.2	2.3	2.3	3.0	2.6	231	307	184	91	4.6	4.8
7	2.0	2.5	2.3	2.8	2.9	2.5	576	279	162	82	4.6	4.8
8	2.0	2.8	2.3	3.8	2.9	2.8	360	262	157	4.7	4.6	4.7
9	2.0	2.4	2.2	161	2.8	1030	231	260	161	4.9	4.6	4.8
10	2.0	2.3	2.2	596	2.7	1360	194	253	171	4.9	4.6	4.7
11	2.0	2.2	2.2	51	2.6	721	184	268	172	4.9	4.6	4.7
12	2.0	2.2	2.3	4.4	2.6	444	198	257	167	4.9	4.6	4.7
13	2.0	2.2	2.3	663	2.8	417	204	218	159	4.9	4.6	4.7
14	2.0	2.2	2.2	970	2.6	367	32	202	267	4.8	4.5	4.8
15	2.0	2.3	2.2	363	2.6	294	94	230	353	4.7	4.7	4.8
16	2.0	2.2	2.2	5.5	2.6	49	164	218	246	4.8	4.8	4.8
17	2.0	2.3	2.3	3.7	2.6	3.6	155	243	190	4.7	4.8	4.7
18	2.0	2.2	2.3	3.3	2.6	6.8	44	261	209	4.7	4.8	4.7
19	2.0	2.2	2.3	3.1	2.6	12	121	234	174	4.7	4.8	4.7
20	2.0	2.2	2.3	3.0	2.6	168	91	285	165	4.8	4.7	4.7
21	2.0	2.2	2.3	2.8	2.6	144	15	283	162	4.8	4.8	4.7
22	2.0	2.2	2.3	3.0	2.6	275	15	287	106	4.8	4.8	4.7
23	2.0	2.2	2.3	3.1	2.6	6.1	24	198	166	4.8	4.8	4.7
24	2.0	2.2	2.3	3.1	2.6	3.1	41	5.0	160	4.7	4.7	4.6
25	2.0	2.2	2.2	3.1	2.6	3.0	140	5.0	167	4.6	4.7	4.7
26	2.0	2.2	2.3	3.1	2.6	2.9	131	5.1	151	4.5	4.7	4.8
27	2.0	2.3	2.2	3.0	2.6	2.9	223	5.5	146	4.5	4.8	4.8
28	2.0	2.2	2.3	3.1	2.6	2.9	293	248	128	4.6	4.8	4.7
29	2.0	2.3	2.2	3.0	---	2.9	1480	282	42	4.5	4.8	4.7
30	2.0	2.3	2.2	3.1	---	2.8	799	283	38	4.6	4.7	4.8
31	2.0	---	2.2	3.3	---	51	---	272	---	4.6	4.7	---
TOTAL	62.2	67.3	70.8	2880.6	77.3	5392.5	6454	8600.6	5460	816.4	145.2	142.3
MEAN	2.01	2.24	2.28	92.9	2.76	174	215	277	182	26.3	4.68	4.74
MAX	2.1	2.8	2.6	970	3.4	1360	1480	1430	353	115	4.8	4.8
MIN	2.0	2.1	2.2	2.2	2.6	2.5	15	5.0	38	4.5	4.5	4.6
AC-FT	123	133	140	5710	153	10700	12800	17060	10830	1620	288	282
a	7310	10850	14160	15810	18100	15720	20650	21340	20740	19320	14340	13240

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.89	3.97	2.90	13.4	42.5	52.0	27.4	31.9	21.4	6.16	3.48	3.31
MAX	8.15	19.2	8.26	92.9	392	174	215	277	182	26.3	5.49	4.96
(WY)	1990	1989	1988	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1986 - 1995			
ANNUAL TOTAL	876.0				30169.2							
ANNUAL MEAN	2.40				82.7				17.5			
HIGHEST ANNUAL MEAN									82.7			
LOWEST ANNUAL MEAN									2.58			
HIGHEST DAILY MEAN	10				1480				3250			
LOWEST DAILY MEAN	2.0				2.0				1.9			
ANNUAL SEVEN-DAY MINIMUM	2.0				2.0				2.0			
INSTANTANEOUS PEAK FLOW					2490				5870			
INSTANTANEOUS PEAK STAGE					5.01				9.54			
ANNUAL RUNOFF (AC-FT)	1740				59840				12700			
ANNUAL TOTAL, DIVERSION (AC-FT) a	78080				191600							
10 PERCENT EXCEEDS	2.3				260				4.9			
50 PERCENT EXCEEDS	2.1				4.7				2.3			
90 PERCENT EXCEEDS	2.0				2.2				2.1			

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

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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, 48 ft³/s, Oct. 1, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,600 ft³/s, Mar. 10, gage height, 23.15 ft; minimum daily, 52 ft³/s, Nov. 18.

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	63	61	56	56	6740	143	4360	37000	5880	1050	147	88
2	63	61	61	56	6940	459	4980	30800	5660	546	144	88
3	60	58	240	60	5100	2970	4820	18900	5990	441	145	88
4	64	59	440	58	3880	2710	4650	14300	5700	336	145	86
5	65	69	149	81	3210	1030	5180	12100	5400	306	143	86
6	62	65	95	91	2550	540	8250	11200	4350	231	143	88
7	63	59	75	505	2270	226	13500	10000	3470	223	142	87
8	63	58	65	3280	1930	251	11000	8810	3070	167	138	88
9	63	94	61	15500	1470	27400	8650	7390	2950	160	136	87
10	60	57	56	26500	560	48200	6830	6760	2960	158	135	87
11	61	54	56	14200	324	45300	6320	6780	2680	159	135	85
12	61	57	64	8010	233	26900	6190	6710	3140	161	135	86
13	61	55	60	16900	273	16700	8900	6700	2770	160	135	87
14	60	55	61	32600	233	18500	7740	6310	3760	159	136	88
15	60	60	62	16300	211	16300	6580	6480	5850	159	129	87
16	61	55	60	8150	207	10900	5710	6500	6030	158	119	87
17	60	56	63	3710	203	8260	4900	6250	5440	158	116	87
18	60	52	72	1440	204	9340	4300	6500	5170	158	116	85
19	60	57	63	528	199	8770	3860	6440	4420	158	117	86
20	60	58	58	360	200	11900	3610	6560	2990	156	118	85
21	60	58	57	328	199	13000	3200	6620	2630	155	116	85
22	60	58	56	342	173	10400	2860	6580	2920	153	114	85
23	61	57	56	648	153	7330	2920	6360	3450	152	115	86
24	61	60	70	440	152	6180	3270	6110	3460	152	106	85
25	60	79	63	398	151	4410	3990	5820	3430	152	83	85
26	57	56	54	396	147	3580	4440	5780	2580	150	81	103
27	59	59	53	387	145	3400	4970	5960	2900	148	80	85
28	60	60	65	403	144	2990	6040	5800	2410	149	81	86
29	59	57	56	374	---	2780	19500	5670	2110	148	91	86
30	60	56	57	387	---	2650	21800	5850	1680	148	90	85
31	59	---	57	2370	---	3340	---	5950	---	146	89	---
TOTAL	1886	1800	2561	154858	38201	316859	203320	288990	115250	6857	3720	2607
MEAN	60.8	60.0	82.6	4995	1364	10220	6777	9322	3842	221	120	86.9
MAX	65	94	440	32600	6940	48200	21800	37000	6030	1050	147	103
MIN	57	52	53	56	144	143	2860	5670	1680	146	80	85
AC-FT	3740	3570	5080	307200	75770	628500	403300	573200	228600	13600	7380	5170
a	85310	64930	107200	169400	184900	184200	207500	201300	208600	186600	156600	136800

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

11404330 NORTH FORK FEATHER RIVER BELOW GRIZZLY CREEK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.6	91.8	103	701	317	2370	1138	1250	503	77.1	65.7	63.0
MAX	182	256	215	4995	1364	10220	6777	9322	3842	221	120	86.9
(WY)	1986	1989	1988	1995	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1986 - 1995			
ANNUAL TOTAL	27225				1136908							
ANNUAL MEAN	74.6				3115				565			
HIGHEST ANNUAL MEAN									3115			
LOWEST ANNUAL MEAN									75.2			
HIGHEST DAILY MEAN	440				Dec 4				48200			
LOWEST DAILY MEAN	37				Jul 25				52			
ANNUAL SEVEN-DAY MINIMUM	54				Jul 19				56			
INSTANTANEOUS PEAK FLOW									60600			
INSTANTANEOUS PEAK STAGE									23.15			
ANNUAL RUNOFF (AC-FT)	54000				2255000				409600			
ANNUAL TOTAL, DIVERSION (AC-FT) a	855900				1894000							
10 PERCENT EXCEEDS	107				8070				346			
50 PERCENT EXCEEDS	62				159				65			
90 PERCENT EXCEEDS	57				59				56			

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

LOCATION.--Lat 39°49'42", long 121°25'19", in SW 1/4 SE 1/4 sec.21, T.23 N., R.5 E., Butte County, Hydrologic Unit 18020121, Plumas National Forest, on left bank at county road bridge, 0.1 mi downstream from diversion dam, 0.4 mi upstream from mouth, and 2.2 mi northeast of Pulga.

COOPERATION.--Records were collected by Western Hydrologic Systems, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

[illegible]

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.--No estimated daily discharges. Flow regulated by Lake Almanor, Bucks Lake, Butte 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,200 ft³/s, Mar. 10, gage height, 31.92 ft; minimum daily, 54 ft³/s, Nov. 17.

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	65	63	64	59	6210	78	5550	41200	5070	1300	58	62
2	66	65	58	58	7020	361	5990	31100	4980	742	57	63
3	64	61	128	61	5250	2930	5190	20900	5510	536	59	64
4	66	60	205	64	4070	3010	5100	15100	5270	318	60	62
5	66	66	93	65	3250	2520	5550	12800	5240	99	60	64
6	66	65	68	69	2640	880	8860	11800	4310	70	59	63
7	64	67	60	181	2340	535	14400	10500	3520	67	59	63
8	63	66	62	3270	2070	510	12400	9200	3150	67	58	63
9	63	78	59	16700	1300	29600	9480	7770	3030	66	58	62
10	62	62	57	29400	714	53200	7750	6970	3030	65	57	61
11	63	64	57	15600	454	50800	6450	6780	2740	65	58	63
12	62	65	58	8920	241	30300	5940	6660	3320	65	57	63
13	64	65	59	20600	146	18800	9020	6500	2700	64	58	64
14	64	65	60	37000	117	20600	8090	6130	3480	63	57	62
15	61	67	63	17700	104	18200	6690	6270	5990	64	57	65
16	62	66	60	9010	100	12500	5780	6350	5730	62	57	64
17	63	54	57	4200	95	9520	4960	6070	5140	63	57	64
18	62	64	59	1890	94	10600	4370	6260	4840	63	57	64
19	63	63	57	881	89	10300	4370	6230	4250	62	57	64
20	63	64	58	290	89	14000	3730	6400	2990	61	56	64
21	64	65	58	142	89	14600	3370	6330	2620	62	56	63
22	61	63	58	167	86	12300	3030	6240	2960	61	55	63
23	60	62	58	325	84	9210	3030	6110	3510	60	55	62
24	63	59	65	587	82	7780	3300	5880	3570	60	57	63
25	62	66	60	714	83	6540	3870	5570	3310	59	55	61
26	62	67	58	590	80	5740	4420	5460	2630	59	61	63
27	63	60	58	503	78	6150	4740	5650	3010	59	61	61
28	64	58	59	506	77	4760	5780	5500	2500	60	61	63
29	66	60	58	519	---	4910	20200	5380	2210	58	61	62
30	65	61	58	453	---	4760	23900	5400	1800	58	61	60
31	59	---	58	2190	---	4830	---	5500	---	58	64	---
TOTAL	1961	1911	2090	172714	37052	370824	215310	294010	112410	4616	1803	1885
MEAN	63.3	63.7	67.4	5571	1323	11960	7177	9484	3747	149	58.2	62.8
MAX	66	78	205	37000	7020	53200	23900	41200	5990	1300	64	65
MIN	59	54	57	58	77	78	3030	5380	1800	58	55	60
AC-FT	3890	3790	4150	342600	73490	735500	427100	583200	223000	9160	3580	3740
a	102000	77450	121600	194000	208200	197300	222300	228200	222100	211300	173500	150800

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	986	1190	1710	2170	2737	2913	3551	3067	1619	996	940	893
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1911 - 1995

ANNUAL TOTAL	23382					1216586						
ANNUAL MEAN	64.1					3333				1868		
HIGHEST ANNUAL MEAN										5320		1952
LOWEST ANNUAL MEAN										42.7		1977
HIGHEST DAILY MEAN				205	Dec 4		53200	Mar 10		81000	Feb 18	1986
LOWEST DAILY MEAN				54	Nov 17		54	Nov 17		5.4	Sep 18	1977
ANNUAL SEVEN-DAY MINIMUM				58	Dec 17		56	Aug 19		12	Aug 10	1977
INSTANTANEOUS PEAK FLOW							65200	Mar 10		87900	Feb 19	1986
INSTANTANEOUS PEAK STAGE							31.92	Mar 10		39.86	Feb 19	1986
ANNUAL RUNOFF (AC-FT)	46380					2413000				1353000		
ANNUAL TOTAL, DIV (AC-FT) a	1013000					2109000						
10 PERCENT EXCEEDS	68					8960				4640		
50 PERCENT EXCEEDS	63					78				1330		
90 PERCENT EXCEEDS	58					58				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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.3	---	---	---	---	3.1	5.1	3.9	4.4	46	3.3
2	3.4	3.2	---	---	---	---	3.1	4.0	3.9	4.4	51	3.3
3	3.4	3.2	---	---	---	---	3.1	3.8	3.9	4.4	55	3.3
4	3.4	3.2	---	---	---	---	3.1	3.8	3.9	4.4	55	3.4
5	3.4	3.2	---	---	---	---	3.1	3.7	3.9	4.4	55	3.4
6	3.4	3.2	---	---	---	---	3.4	3.6	3.8	4.4	55	3.4
7	3.4	3.2	---	---	---	---	3.9	3.6	3.7	4.4	54	3.4
8	3.4	3.2	---	---	---	---	3.5	3.6	3.6	4.4	60	3.4
9	3.4	---	---	---	---	---	3.3	3.6	3.8	4.4	63	3.4
10	3.4	---	---	---	---	---	3.3	3.6	3.8	4.4	63	3.4
11	3.4	---	---	---	---	---	3.3	3.7	3.8	4.3	63	3.3
12	3.4	---	---	---	---	---	3.3	3.6	3.8	4.3	62	3.2
13	3.4	---	---	---	---	---	3.4	3.6	3.8	4.3	62	3.2
14	3.4	---	---	---	---	---	3.3	3.6	3.8	4.3	61	3.2
15	3.4	---	---	---	---	---	3.3	3.6	3.9	4.3	63	3.2
16	3.4	---	---	---	---	---	3.2	3.6	3.9	4.3	66	3.2
17	3.3	---	---	---	---	---	3.2	3.6	3.8	4.3	66	3.2
18	3.3	---	---	---	---	---	3.2	3.6	3.7	4.3	65	3.2
19	3.3	---	---	---	---	---	3.2	3.6	3.6	4.3	65	3.2
20	3.3	---	---	---	---	---	3.2	3.6	3.6	4.3	65	3.2
21	3.3	---	---	---	---	---	3.2	3.6	3.6	4.3	64	3.2
22	3.3	---	---	---	---	---	3.2	3.7	3.6	4.3	63	3.2
23	3.3	---	---	---	---	---	3.2	3.7	3.6	4.3	63	3.2
24	3.3	---	---	---	---	---	3.3	3.8	3.6	15	62	3.2
25	3.3	---	---	---	---	---	3.3	3.8	3.6	22	32	3.2
26	3.3	---	---	---	---	---	3.3	3.8	3.6	28	3.3	3.2
27	3.3	---	---	---	---	---	3.5	3.8	3.6	32	3.4	3.2
28	3.2	---	---	---	---	---	3.5	3.8	3.6	32	3.3	3.2
29	3.2	---	---	---	---	---	5.0	3.8	4.0	32	3.3	3.1
30	3.2	---	---	---	---	3.1	4.1	3.8	4.4	32	3.3	3.0
31	3.2	---	---	---	---	3.1	---	3.8	---	41	3.3	---
TOTAL	103.5	---	---	---	---	---	101.1	115.9	113.1	333.9	1498.9	97.5
MEAN	3.34	---	---	---	---	---	3.37	3.74	3.77	10.8	48.4	3.25
MAX	3.4	---	---	---	---	---	5.0	5.1	4.4	41	66	3.4
MIN	3.2	---	---	---	---	---	3.1	3.6	3.6	4.3	3.3	3.0
AC-FT	205	---	---	---	---	---	201	230	224	662	2970	193

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.

REMARKS.--No estimated daily discharges. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

[illegible]

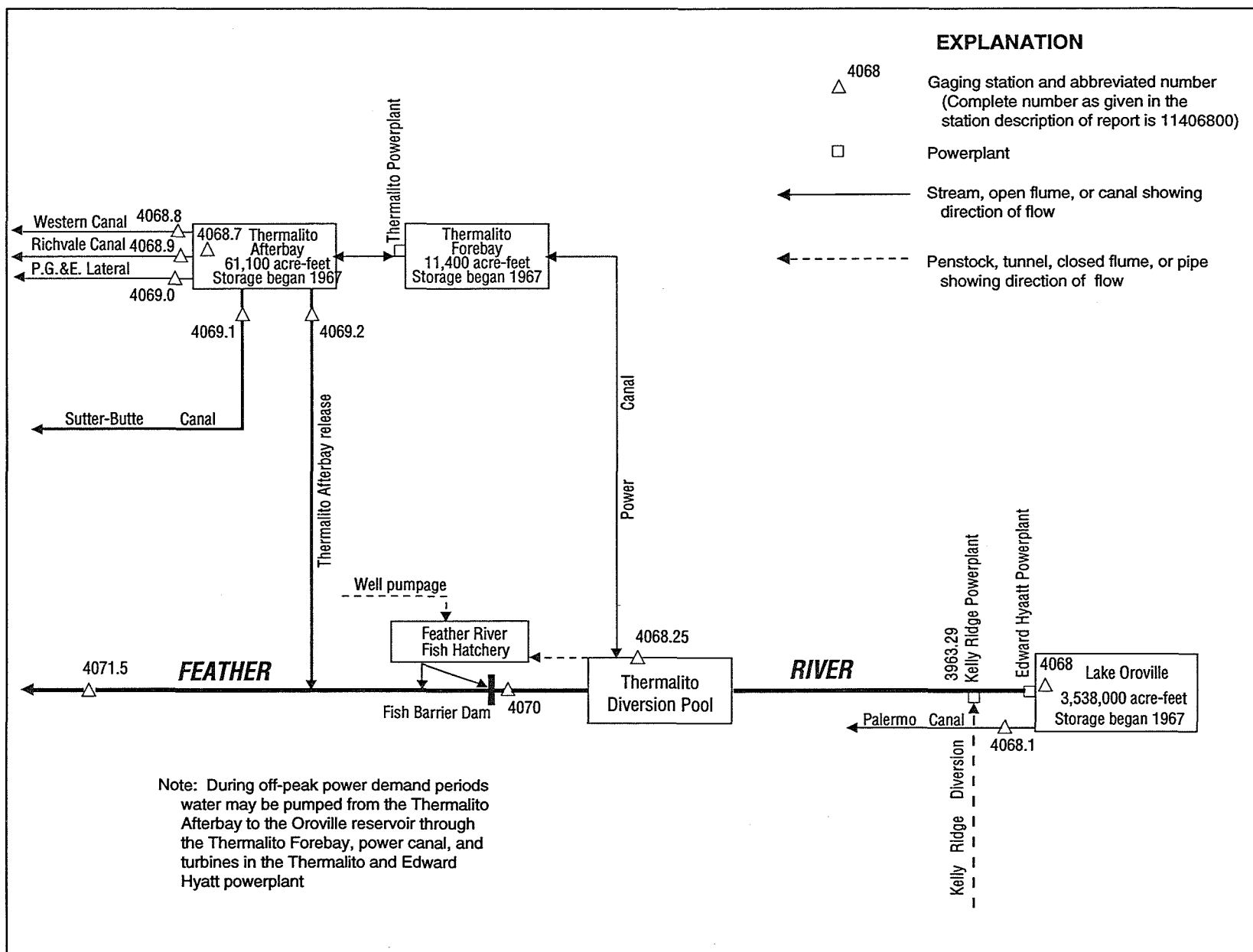


Figure 29. Diversions and storage from Feather River at Lake Oroville.

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, 3,534,575 acre-ft, June 24, gage height, 899.81 ft; minimum, 1,545,303 acre-ft, Nov. 9, gage height, 735.41 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1686994	1579730	1565113	1683812	2725521	2650449	2787211	3243766	3457006	3507011	3423387	3171139
2	1691963	1573836	1562716	1683158	2743293	2663361	2803120	3254324	3459494	3502929	3417678	3162379
3	1685403	1564136	1577495	1676435	2744217	2687096	2815463	3227608	3463073	3498693	3409359	3165297
4	1682690	1555097	1606805	1671126	2740128	2716993	2822725	3183285	3465408	3506383	3402283	3170116
5	1677367	1557486	1615872	1668430	2732489	2742765	2828518	3140846	3473045	3499791	3406435	3156840
6	1673732	1559169	1618235	1667686	2726572	2752011	2842292	3136638	3471486	3489920	3409359	3139830
7	1672150	1552976	1618599	1666713	2721451	2746329	2886630	3132435	3465870	3481475	3402129	3125198
8	1671963	1548034	1619418	1735527	2717779	2738414	2906919	3131856	3462450	3478351	3391076	3112777
9	1675223	1545303	1614419	1838273	2709268	2852992	2908568	3143169	3464941	3481944	3384334	3111767
10	1673267	1549180	1621876	1980427	2700254	2970201	2902935	3158880	3467277	3473669	3372864	3118405
11	1667408	1549445	1627256	2062758	2688527	3008041	2892377	3173916	3465097	3465097	3360202	3107876
12	1663788	1553683	1631368	2114765	2677614	2965599	2880891	3191792	3462606	3457161	3357766	3092775
13	1661100	1563248	1635030	2245442	2667631	2908431	2885946	3212540	3460272	3448618	3355482	3074151
14	1658230	1561829	1627804	2424847	2655738	2850416	2899642	3236642	3465408	3440709	3346816	3057742
15	1656935	1558992	1628900	2516012	2641180	2813851	2912694	3250901	3485852	3442569	3340137	3041678
16	1660266	1559346	1633107	2562799	2627959	2773093	2925789	3263416	3500418	3450325	3330439	3035723
17	1654347	1559258	1641819	2590096	2618234	2737887	2935602	3273870	3506854	3442569	3321516	3033740
18	1648167	1556955	1650471	2607386	2611466	2719222	2941141	3286448	3509524	3437302	3310500	3020165
19	1641635	1561385	1654994	2620663	2609171	2692823	2942388	3309144	3513612	3434361	3302970	3005086
20	1635396	1565202	1657305	2629625	2605093	2701559	2943913	3333922	3516444	3430494	3305981	2988798
21	1630180	1563248	1658600	2638352	2603183	2716731	2943497	3369352	3522270	3426630	3293350	2976763
22	1629357	1562184	1655641	2655867	2605985	2738678	2948491	3390309	3527945	3437302	3280454	2964066
23	1633015	1560676	1652224	2666725	2607386	2741974	2958358	3407204	3532680	3446601	3265057	2959471
24	1623698	1564047	1653147	2678133	2611211	2738151	2964902	3416907	3534575	3443809	3251050	2961141
25	1614964	1567602	1661656	2687877	2620919	2733673	2978161	3424005	3529523	3437302	3238570	2950157
26	1608978	1570093	1662397	2699471	2631934	2724602	2995390	3428948	3525264	3430803	3236790	2935740
27	1598225	1572409	1663232	2707830	2635013	2731831	3017202	3435599	3525580	3425086	3232047	2923856
28	1592462	1571340	1661841	2706653	2641052	2738019	3036999	3440399	3523215	3419838	3223171	2911594
29	1590665	1571340	1660915	2703387	---	2751218	3104995	3445360	3518333	3425858	3209178	2901837
30	1591923	1567602	1659803	2701820	---	2761809	3159172	3449083	3512826	3434980	3196492	2897173
31	1585818	---	1668244	2708222	---	2773891	---	3452965	---	3428021	3181820	---
MAX	1691963	1579730	1668244	2708222	2744217	3008041	3159172	3452965	3534575	3507011	3423387	3171139
MIN	1585818	1545303	1562716	1667686	2603183	2650449	2787211	3131856	3457006	3419838	3181820	2897173
a	739.97	737.93	749.00	842.44	837.26	847.42	875.08	894.60	898.43	892.99	876.63	856.55
b	-97340	-18216	+100642	+1039978	-67170	+132839	+385281	+293793	+59861	-84805	-246201	-284647
c	2956	818	315	498	993	1588	2731	3991	7653	10706	10396	7159

CAL YR 1994 b -761694

WTR YR 1995 b +1214015

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	7.4	2.0	2.0	.00	2.1	2.1	5.1	4.7	15	17	17
2	19	6.1	2.0	2.0	.00	2.1	2.1	2.8	11	15	17	17
3	18	6.1	2.1	2.0	.00	2.1	2.1	1.6	15	16	17	17
4	15	5.6	2.1	.66	.00	2.1	2.2	1.7	15	17	17	17
5	15	5.6	2.1	.00	.00	2.2	2.2	1.7	15	17	17	17
6	15	5.7	2.1	.00	.00	2.2	2.2	1.7	15	17	17	17
7	15	5.5	2.1	.00	1.1	2.2	2.2	1.8	15	17	17	17
8	15	5.1	2.1	.00	2.1	1.2	2.2	1.9	17	17	17	17
9	15	4.0	2.1	.00	2.0	.00	2.2	2.5	18	17	17	17
10	15	1.7	2.1	.00	2.0	.00	1.9	3.0	18	17	17	17
11	15	1.9	2.1	.00	2.1	.00	2.2	3.0	18	17	17	17
12	11	2.0	2.0	.00	2.1	.00	2.2	3.0	18	17	17	17
13	9.9	2.0	2.0	.00	2.1	.00	2.2	3.0	18	17	17	17
14	9.9	2.0	2.0	.00	2.1	.00	2.2	3.0	16	17	17	17
15	9.9	2.0	2.0	.00	2.1	.00	2.2	2.9	14	17	17	17
16	9.9	2.0	2.0	.00	2.1	.00	2.3	4.1	11	17	17	17
17	8.6	2.0	2.0	.00	2.1	.00	2.3	4.7	9.9	15	17	17
18	7.4	2.1	2.0	.00	2.1	.00	2.3	4.8	9.8	15	17	17
19	7.5	2.1	2.0	.00	2.1	.00	2.2	4.1	13	17	17	17
20	7.9	2.1	2.0	.00	2.2	.00	2.0	2.7	15	17	17	17
21	7.9	2.0	2.0	.00	2.2	.00	2.0	2.7	15	17	17	17
22	7.9	2.0	2.0	.00	2.2	.00	2.1	2.7	15	17	17	17
23	7.9	2.1	2.0	.00	2.2	.00	2.0	2.7	15	17	17	17
24	8.0	2.2	2.0	.00	2.2	.00	1.9	2.7	15	17	17	17
25	8.0	2.2	2.0	.00	2.2	.00	1.8	2.7	15	17	17	18
26	8.0	2.2	2.0	.00	2.1	.00	3.4	3.9	15	17	17	19
27	8.0	2.2	2.0	.00	2.1	.00	4.9	4.6	15	17	17	19
28	8.0	2.2	2.0	.00	2.1	.00	5.0	4.6	15	17	17	19
29	8.0	2.0	2.0	.00	---	.00	5.0	4.6	15	17	17	19
30	8.0	2.0	2.0	.00	---	.00	5.1	4.6	15	17	17	19
31	8.0	---	2.0	.00	---	.90	---	4.6	---	17	17	---
TOTAL	345.7	94.1	62.9	6.66	45.60	17.10	76.7	99.5	436.4	518	527	521
MEAN	11.2	3.14	2.03	.21	1.63	.55	2.56	3.21	14.5	16.7	17.0	17.4
MAX	19	7.4	2.1	2.0	2.2	2.2	5.1	5.1	18	17	17	19
MIN	7.4	1.7	2.0	.00	.00	.00	1.8	1.6	4.7	15	17	17
AC-FT	686	187	125	13	90	34	152	197	866	1030	1050	1030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	12.3	5.21	3.29	2.76	2.39	2.65	6.12	14.5	19.1	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	1984	1975	1971	1974	1988	1970	1976	1976	1975	1978	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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1969 - 1995
ANNUAL TOTAL	3681.32	2750.66	
ANNUAL MEAN	10.1	7.54	10.6
HIGHEST ANNUAL MEAN			13.3
LOWEST ANNUAL MEAN			7.54
HIGHEST DAILY MEAN	19 Jun 2	19 Oct 1	26 Jul 2 1975
LOWEST DAILY MEAN	.00 Jan 26	.00 Jan 5	.00 Jan 15 1970
ANNUAL SEVEN-DAY MINIMUM	.13 Feb 7	.00 Jan 5	.00 Jan 15 1970
ANNUAL RUNOFF (AC-FT)	7300	5460	7680
10 PERCENT EXCEEDS	19	17	21
50 PERCENT EXCEEDS	9.6	3.0	8.8
90 PERCENT EXCEEDS	2.0	.00	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, 53,138 acre-ft, Apr. 28, gage height, 135.58 ft; minimum, 16,665 acre-ft, Sept. 11, gage height, 124.63 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37033	36256	27844	22132	38214	39778	35730	50618	36538	45736	35312	48751
2	30122	36856	29577	21717	34243	40850	31424	50086	36538	42842	37532	48190
3	29604	41975	25981	28972	32652	44028	30380	49720	37425	38106	39193	38275
4	32185	45893	22188	35765	32185	38901	32920	49154	38466	24910	39631	26828
5	33528	42160	23458	41036	31622	32585	38938	48270	33833	23745	29131	29004
6	34586	38647	26646	43874	28437	35556	45112	47353	35416	27196	19614	35695
7	35486	41822	29897	40590	26433	37104	47830	46642	36080	31162	21634	40516
8	34038	44873	33088	32218	26676	37962	45893	44580	34243	31886	23287	43070
9	29099	47155	39156	37033	27319	39741	45619	44259	26920	23059	26707	33596
10	27689	44413	34621	39595	27906	38792	45541	38865	23458	27134	30770	17909
11	28406	42994	30025	36679	29897	36080	45972	39412	24704	30510	37282	16665
12	29417	37962	29004	38901	29833	33936	46523	35590	27226	35312	32118	18752
13	28783	29004	28343	40072	31688	33528	45893	32485	29704	40516	27906	31326
14	27844	29801	39083	36962	33936	35800	45345	24763	31129	46050	29801	31227
15	25057	33122	42614	28972	38611	38684	40627	29226	32052	41484	29833	38106
16	19064	34414	38756	29545	42501	42652	33358	36750	35139	33325	30444	34277
17	21414	34931	33528	30705	42576	44801	26920	45034	36185	38322	31589	26433
18	23832	37461	25592	29897	42538	44517	27042	52140	40294	43261	36045	29897
19	26889	34243	24150	29865	39668	44220	30283	49802	42614	46405	35521	34793
20	30283	29993	24005	30058	41559	44607	34552	45424	40257	50086	27319	38684
21	31523	31787	25324	28814	41521	44878	41859	29801	35208	51685	30510	41634
22	28531	33799	29258	21250	38865	45306	43414	28500	30380	42576	34380	45151
23	21717	35625	35905	24412	38647	44956	42010	30316	28062	33426	39668	40553
24	25681	32052	36785	28374	39999	44878	46957	33697	29833	33460	44684	29417
25	30380	28218	31195	32551	37389	44723	48470	35035	36326	36432	48030	31358
26	33731	24441	29481	36115	33867	44878	49761	35035	40998	42539	42085	32987
27	39120	20439	31820	37854	39083	44646	49073	35139	40627	45267	36679	33426
28	41484	22077	35243	37783	40664	45384	53138	35416	42652	48230	36397	34724
29	37568	21938	38829	38575	---	39375	50698	36010	43985	39668	39302	34209
30	32351	23861	41972	40405	---	38142	50698	35416	45384	29577	42311	27349
31	34758	---	36927	39741	---	37211	---	35765	---	32285	45697	---
MAX	41484	47155	42614	43874	42576	45384	53138	52140	45384	51685	48030	48751
MIN	19064	20439	22188	21250	26433	32585	26920	24763	23458	23059	19614	16665
a	130.77	127.33	131.39	132.17	132.42	131.47	134.99	131.06	133.66	130.04	133.74	128.50
b	-8541	-10897	+13066	+2814	+923	-3453	+13487	-14933	+9619	-13099	+13412	-18348
c	1220	548	137	200	283	747	1126	1327	1905	2304	2334	1612

CAL YR 1994 b +11633

WTR YR 1995 b -15950

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

201

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.--No estimated daily discharges. 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; no flow at times each year.

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	104	463	298	51	.00	.00	.00	52	823	823	828	629
2	152	437	299	42	.00	.00	.00	35	823	823	840	606
3	177	419	209	25	.00	.00	.00	45	745	823	825	598
4	188	394	60	.00	.00	.00	.00	50	640	822	818	597
5	189	361	51	.00	.00	.00	.00	58	539	807	805	578
6	188	333	51	.00	.00	.00	.00	74	498	799	793	539
7	188	269	77	.00	.00	.00	.00	85	498	813	788	497
8	203	191	99	.00	.00	.00	.00	148	497	823	788	478
9	234	169	98	.00	.00	.00	.00	203	510	823	789	461
10	312	138	99	.00	.00	.00	.00	233	523	824	778	446
11	347	117	98	.00	.00	.00	.00	278	523	832	769	434
12	330	116	97	.00	.00	.00	.00	360	523	849	776	392
13	388	117	84	.00	.00	.00	.00	352	506	849	789	337
14	517	118	74	.00	.00	.00	.00	308	389	834	789	309
15	547	118	74	.00	.00	.00	.00	261	275	823	770	258
16	543	117	71	.00	.00	.00	.00	177	248	835	759	228
17	567	118	73	.00	.00	.00	.00	158	248	849	763	228
18	562	119	72	.00	.00	.00	.00	202	218	848	769	210
19	548	117	74	.00	.00	.00	.00	244	198	849	768	198
20	537	118	73	.00	.00	.00	.00	284	199	849	768	198
21	520	119	74	.00	.00	.00	.00	297	220	849	769	179
22	498	139	60	.00	.00	.00	.00	276	277	836	769	143
23	497	197	50	.00	.00	.00	.00	244	382	823	769	118
24	480	217	50	.00	.00	.00	53	245	503	824	751	118
25	478	218	50	.00	.00	.00	96	258	578	823	728	99
26	507	217	50	.00	.00	.00	68	259	624	824	705	64
27	539	217	50	.00	.00	.00	50	331	694	837	698	50
28	538	218	50	.00	.00	.00	82	511	736	849	698	50
29	538	229	50	.00	---	.00	82	697	780	832	680	50
30	538	276	50	.00	---	.00	71	833	814	806	668	50
31	510	---	50	.00	---	.00	---	853	---	799	655	---
TOTAL	12464	6396	2715	118.00	0.00	0.00	502.00	8411	15031	25699	23662	9142
MEAN	402	213	87.6	3.81	.000	.000	16.7	271	501	829	763	305
MAX	567	463	299	51	.00	.00	96	853	823	849	840	629
MIN	104	116	50	.00	.00	.00	.00	35	198	799	655	50
AC-FT	24720	12690	5390	234	.00	.00	996	16680	29810	50970	46930	18130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	249	220	109	26.8	.000	.48	152	678	686	763	649	170
MEAN	249	220	109	26.8	.000	.48	152	678	686	763	649	170
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 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1968 - 1995

	112485.00	104140.00	
ANNUAL TOTAL	112485.00	104140.00	
ANNUAL MEAN	308	285	310
HIGHEST ANNUAL MEAN			403
LOWEST ANNUAL MEAN			217
HIGHEST DAILY MEAN	1200 May 3	853 May 31	1200 May 12 1981
LOWEST DAILY MEAN	.00 Jan 7	.00 Jan 4	.00 Dec 4 1967
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 7	.00 Jan 4	.00 Jan 5 1968
ANNUAL RUNOFF (AC-FT)	223100	206600	224800
10 PERCENT EXCEEDS	723	809	817
50 PERCENT EXCEEDS	177	177	206
90 PERCENT EXCEEDS	.00	.00	.00

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	96	154	124	.00	.00	.00	97	366	325	364	320
2	.00	142	153	124	.00	.00	.00	54	365	324	372	315
3	.00	149	153	124	.00	.00	.00	66	366	324	375	304
4	.00	149	154	124	.00	.00	.00	113	366	323	375	294
5	.00	148	153	124	.00	.00	.00	128	332	324	374	285
6	.00	149	154	124	.00	.00	.00	129	310	335	374	282
7	.00	139	154	124	.00	.00	.00	92	268	353	375	282
8	.00	134	154	105	.00	.00	.00	104	259	359	364	268
9	.00	134	154	69	.00	.00	.00	155	304	358	359	232
10	.00	134	154	11	.00	.00	.00	174	345	348	360	213
11	.00	132	154	.00	.00	.00	.00	175	355	344	360	211
12	.00	133	153	.00	.00	.00	.00	181	345	362	359	199
13	13	134	147	.00	.00	.00	.00	184	306	369	360	192
14	33	150	144	.00	.00	.00	.00	165	315	376	359	177
15	40	149	138	.00	.00	.00	.00	140	248	379	367	158
16	40	143	134	.00	.00	.00	.00	130	194	378	370	136
17	49	144	133	.00	.00	.00	.00	114	164	379	370	112
18	60	144	134	.00	.00	.00	.00	115	156	379	370	105
19	73	143	134	.00	.00	.00	.00	136	156	379	355	95
20	74	144	134	.00	.00	.00	.00	213	166	379	349	76
21	30	150	134	.00	.00	.00	.00	319	185	379	350	70
22	12	154	134	.00	.00	.00	.00	346	192	360	350	63
23	20	153	134	.00	.00	.00	.00	340	226	354	350	46
24	24	152	134	.00	.00	.00	.00	332	267	354	350	40
25	30	154	133	.00	.00	.00	13	370	277	354	349	40
26	30	154	134	.00	.00	.00	30	388	277	354	342	33
27	30	153	128	.00	.00	.00	91	390	315	360	339	30
28	30	154	124	.00	.00	.00	149	372	332	364	340	30
29	30	154	123	.00	---	.00	164	325	339	364	340	10
30	30	154	125	.00	---	.00	130	320	331	363	339	.00
31	30	---	124	.00	---	.00	---	354	---	364	325	---
TOTAL	678.00	4322	4369	1053.00	0.00	0.00	577.00	6521	8427	11067	11085	4618.00
MEAN	21.9	144	141	34.0	.000	.000	19.2	210	281	357	358	154
MAX	74	154	154	124	.00	.00	164	390	366	379	375	320
MIN	.00	96	123	.00	.00	.00	.00	54	156	323	325	.00
AC-FT	1340	8570	8670	2090	.00	.00	1140	12930	16710	21950	21990	9160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	14.3	30.1	26.7	5.53	.000	.28	70.1	276	283	305	266	75.3
MEAN	14.3	30.1	26.7	5.53	.000	.28	70.1	276	283	305	266	75.3
MAX	64.3	144	184	67.0	.000	6.32	201	436	400	390	373	154
(WY)	1994	1995	1994	1994	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	1983	1991	1991	1991	1991	1977

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1968 - 1995
ANNUAL TOTAL	47907.50	52717.00	
ANNUAL MEAN	131	144	114
HIGHEST ANNUAL MEAN			146
LOWEST ANNUAL MEAN			66.4
HIGHEST DAILY MEAN	375 May 2	390 May 27	511 May 16 1974
LOWEST DAILY MEAN	.00 Jan 15	.00 Oct 1	.00 Sep 25 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 15	.00 Oct 1	.00 Oct 5 1968
ANNUAL RUNOFF (AC-FT)	95020	104600	82920
10 PERCENT EXCEEDS	293	360	346
50 PERCENT EXCEEDS	134	133	29
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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.9	.84	.00	.00	.00	18	14	16	15	5.5
2	.00	.00	.76	.75	.00	.00	.00	10	11	16	15	4.2
3	.00	.00	.74	.74	.00	.00	.00	4.3	8.9	16	15	5.0
4	.00	.00	.72	.85	.00	.00	.00	3.6	8.2	17	15	5.0
5	.00	.00	.32	.40	.00	.00	.00	6.4	6.8	16	15	4.4
6	.00	.00	.00	.00	.00	.00	.00	7.0	7.6	16	15	4.0
7	.00	.00	.00	.00	.00	.00	.00	4.0	8.8	16	15	4.2
8	.00	.00	.53	.00	.00	.00	.00	1.8	8.8	15	15	4.4
9	.00	.00	.89	.00	.00	.00	.00	13	11	15	15	3.7
10	.00	9.3	.90	.00	.00	.00	.00	19	13	15	15	2.7
11	.00	15	.89	.00	.00	.00	.00	17	12	14	15	2.8
12	.00	15	.86	.00	.00	.00	.00	15	12	14	15	2.8
13	.00	15	.80	.00	.00	.00	.00	9.3	11	14	16	3.1
14	.00	15	.86	.00	.00	.00	.00	2.7	10	14	16	3.3
15	.00	15	.91	.00	.00	.00	.00	1.8	9.5	15	15	2.7
16	.00	7.5	.95	.00	.00	.00	.00	2.0	3.7	16	15	2.9
17	.00	1.2	.91	.00	.00	.00	.00	3.0	.82	15	15	2.7
18	.00	2.0	.89	.00	.00	.00	.00	5.8	4.0	15	15	2.6
19	.00	2.9	.79	.00	.00	.00	.00	7.4	5.4	15	15	.92
20	.00	2.8	.73	.00	.00	.00	.00	8.2	5.2	15	15	.00
21	.00	1.8	.77	.00	.00	.00	.00	15	6.7	15	15	.00
22	.00	1.9	.82	.00	.00	.00	.00	20	7.9	15	15	.00
23	.00	2.9	.89	.00	.00	.00	.00	18	7.7	15	15	.00
24	.00	2.9	.92	.00	.00	.00	.00	14	8.2	14	15	.00
25	5.7	2.8	.90	.00	.00	.00	.00	9.4	10	14	15	.00
26	9.6	2.7	.90	.00	.00	.00	.00	6.4	13	14	12	.00
27	9.9	2.6	.88	.00	.00	.00	.00	5.4	16	14	9.3	.00
28	10	2.6	.89	.00	.00	.00	6.7	6.2	17	15	9.0	.00
29	9.8	2.7	.91	.00	---	.00	13	6.6	17	16	8.6	.00
30	9.7	2.8	.95	.00	---	.00	18	9.6	17	16	8.2	.00
31	4.3	---	.93	.00	---	.00	---	13	---	15	8.3	---
TOTAL	59.00	126.40	25.11	3.58	0.00	0.00	37.70	282.9	292.22	468	432.4	66.92
MEAN	1.90	4.21	.81	.12	.000	.000	1.26	9.13	9.74	15.1	13.9	2.23
MAX	10	15	1.9	.85	.00	.00	18	20	17	17	16	5.5
MIN	.00	.00	.00	.00	.00	.00	.00	1.8	.82	14	8.2	.00
AC-FT	117	251	50	7.1	.00	.00	75	561	580	928	858	133

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	MEAN	1.10	1.36	.66	.048	.000	.000	3.62	13.0	12.4	13.2	10.7	1.32
	MAX	1.90	5.23	3.49	.51	.000	.000	14.8	23.2	18.3	17.1	13.9	2.62
	(WY)	1995	1986	1987	1994	1969	1969	1977	1975	1981	1981	1995	1972
	MIN	.000	.000	.000	.000	.000	.000	.000	6.55	8.60	9.37	7.12	.000
	(WY)	1969	1969	1969	1969	1969	1969	1974	1994	1993	1970	1988	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1968 - 1995
ANNUAL TOTAL	1796.64	1794.23	
ANNUAL MEAN	4.92	4.92	4.78
HIGHEST ANNUAL MEAN			5.93
LOWEST ANNUAL MEAN			3.67
HIGHEST DAILY MEAN	43	20	46
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	3560	3560	3460
10 PERCENT EXCEEDS	14	15	14
50 PERCENT EXCEEDS	.79	.90	.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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	473	360	389	315	.00	.00	.00	398	1380	1570	1490	1320
2	466	333	389	318	.00	.00	.00	433	1420	1590	1470	1320
3	454	318	389	319	.00	.00	.00	529	1380	1560	1440	1300
4	470	320	370	310	.00	.00	.00	646	1330	1540	1440	1300
5	438	339	364	295	.00	.00	.00	791	1300	1560	1430	1300
6	429	338	347	269	.00	.00	.00	867	1260	1570	1430	1240
7	425	326	332	248	.00	.00	.00	831	1190	1570	1420	1190
8	423	316	329	244	.00	.00	.00	807	1190	1580	1390	1160
9	421	308	330	167	.00	.00	.00	874	1260	1560	1410	1150
10	443	282	329	34	.00	.00	.00	954	1310	1550	1450	1140
11	492	275	330	.00	.00	.00	.00	1160	1330	1560	1450	1120
12	502	289	330	.00	.00	.00	.00	1280	1410	1560	1420	1070
13	491	296	329	.00	.00	.00	.00	1240	1500	1580	1430	991
14	549	297	330	.00	.00	.00	.00	1150	1480	1590	1440	953
15	592	298	323	.00	.00	.00	.00	1030	1370	1580	1430	929
16	586	296	318	.00	.00	.00	.00	914	1240	1580	1440	901
17	582	298	309	.00	.00	.00	.00	1040	1140	1570	1440	876
18	581	313	308	.00	.00	.00	.00	1250	1090	1570	1440	863
19	581	317	309	.00	.00	.00	.00	1360	1080	1570	1460	829
20	555	316	309	.00	.00	.00	.00	1400	1090	1560	1450	788
21	548	318	309	.00	.00	.00	.00	1430	1140	1570	1430	710
22	569	332	308	.00	.00	.00	.00	1460	1190	1570	1410	655
23	574	338	309	.00	.00	.00	.00	1530	1350	1570	1390	574
24	576	337	309	.00	.00	.00	.00	1560	1390	1560	1400	550
25	569	350	308	.00	.00	.00	175	1530	1410	1520	1400	533
26	563	355	308	.00	.00	.00	198	1490	1450	1500	1400	495
27	564	357	309	.00	.00	.00	253	1480	1490	1500	1370	469
28	571	358	309	.00	.00	.00	314	1470	1540	1510	1370	404
29	485	376	308	.00	---	.00	321	1470	1560	1520	1360	340
30	442	383	309	.00	---	.00	339	1460	1560	1520	1360	323
31	369	---	315	.00	---	.00	---	1400	---	1510	1350	---
TOTAL	15783	9739	10164	2519.00	0.00	0.00	1600.00	35234	39830	48220	44010	26793
MEAN	509	325	328	81.3	.000	.000	53.3	1137	1328	1555	1420	893
MAX	592	383	389	319	.00	.00	339	1560	1560	1590	1490	1320
MIN	369	275	308	.00	.00	.00	.00	398	1080	1500	1350	323
AC-FT	31310	19320	20160	5000	.00	.00	3170	69890	79000	95640	87290	53140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	MEAN	365	93.0	67.9	12.7	26.9	104	572	1408	1376	1468	1355	725
MAX	661	363	341	129	374	571	1294	1815	1643	1709	1608	893	
(WY)	1975	1994	1994	1994	1977	1976	1968	1975	1975	1981	1982	1995	
MIN	77.2	.000	.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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1968 - 1995
ANNUAL TOTAL	248222.00	233892.00	
ANNUAL MEAN	680	641	632
HIGHEST ANNUAL MEAN			765
LOWEST ANNUAL MEAN			401
HIGHEST DAILY MEAN	1600	1590	2110
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	492300	463900	457800
10 PERCENT EXCEEDS	1430	1500	1560
50 PERCENT EXCEEDS	491	389	400
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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,000 ft³/s, Mar. 10, gage height, 10.22 ft; minimum daily, 595 ft³/s, Nov. 18.

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	2250	1770	612	625	12300	3390	10900	16500	12400	7900	2370	4910
2	2250	1770	614	628	14100	2890	10900	16500	12400	7900	2620	4910
3	2250	1770	623	628	17100	2390	10900	16500	12400	7630	3620	4910
4	2250	1770	623	627	17100	2390	10900	16500	12400	6890	3890	4910
5	2260	1780	626	625	17100	2890	10900	16500	12400	6880	3900	4920
6	2250	1780	627	623	17100	4900	11200	16500	12400	6130	3900	4920
7	2250	1680	622	625	14900	9930	12200	16500	12400	5130	3900	5170
8	2250	1470	620	626	13100	13700	15400	16400	12400	4380	3900	6170
9	2250	1260	621	621	13100	16000	14600	14900	11900	4370	3910	6420
10	2250	1120	622	791	13100	16800	14600	13000	9910	4380	3900	6410
11	2260	1060	622	2160	13100	17300	15300	10900	9410	4380	3900	6410
12	2270	1060	628	3730	13100	17000	16800	9930	9410	3630	3900	6420
13	2260	1060	627	4400	13100	15800	16800	8930	8410	3380	3900	6430
14	1890	1060	631	4390	12600	14700	15900	8390	7410	3120	3900	6430
15	1770	964	627	4400	11500	14600	15900	8160	6400	2370	4400	6420
16	1770	767	625	4400	11500	14600	15600	7160	6900	2370	4400	6420
17	1770	612	627	4410	11200	15800	14500	6390	9420	2120	4400	6420
18	1770	595	627	4410	10200	17100	13100	6380	9420	1870	4400	6420
19	1770	618	626	4400	9190	17100	12100	6380	9420	1870	4400	6420
20	1770	614	625	4400	8180	17100	11100	6380	9410	1870	4400	6420
21	1770	613	627	4400	7420	17100	10200	6370	9410	1880	4400	6420
22	1770	615	628	4400	6660	17100	9160	6380	9160	1870	4890	6420
23	1770	616	628	4410	5660	17100	8120	6880	8200	1870	4910	6420
24	1770	613	626	4410	4650	17100	7100	8890	7900	2130	4910	6420
25	1770	613	623	4400	3650	17100	6100	10900	7900	2380	4910	6420
26	1770	616	615	4400	3390	17100	5100	12400	7900	2370	4910	6420
27	1770	616	625	7140	3390	14600	4370	12400	7900	2380	4910	6420
28	1770	619	624	11400	3390	13900	6460	12400	7900	2380	4910	6420
29	1770	616	619	11400	---	12400	14500	12400	7900	2370	4910	6420
30	1770	615	619	11400	---	10900	16500	12400	7900	2370	4910	6420
31	1770	---	622	11400	---	10900	---	12400	---	2370	4910	---
TOTAL	61280	30732	19331	126679	300880	401680	357210	352620	288690	112940	131390	182060
MEAN	1977	1024	624	4086	10750	12960	11910	11370	9623	3643	4238	6069
MAX	2270	1780	631	11400	17100	17300	16800	16500	12400	7900	4910	6430
MIN	1770	595	612	621	3390	2390	4370	6370	6400	1870	2370	4910
AC-FT	121500	60960	38340	251300	596800	796700	708500	699400	572600	224000	260600	361100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	1949	2541	3980	4276	4451	5513	4548	3476	3006	3473	3333	2927
MEAN	1949	2541	3980	4276	4451	5513	4548	3476	3006	3473	3333	2927
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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1968 - 1995
ANNUAL TOTAL	555869	2365492	
ANNUAL MEAN	1523	6461	3725
HIGHEST ANNUAL MEAN			9352
LOWEST ANNUAL MEAN			970
HIGHEST DAILY MEAN	5600	Jul 9	21200
LOWEST DAILY MEAN	559	May 19	.00
ANNUAL SEVEN-DAY MINIMUM	563	May 18	.00
INSTANTANEOUS PEAK FLOW		21000	21600
INSTANTANEOUS PEAK STAGE		10.22	23.30
ANNUAL RUNOFF (AC-FT)	1103000	4692000	2699000
10 PERCENT EXCEEDS	2250	14900	8630
50 PERCENT EXCEEDS	1130	4910	2180
90 PERCENT EXCEEDS	616	625	436

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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, 70,000 ft³/s, Mar. 12; minimum daily, 512 ft³/s, May 16, 17.

Combined flow: Maximum daily discharge, 70,100 ft³/s, Mar. 12; minimum daily, 612 ft³/s, Oct. 3, 10, Aug. 7, 15, 21.

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	615	617	626	614	620	632	630	28800	621	622	625	623
2	636	631	623	618	635	630	626	43900	626	621	621	630
3	612	619	650	621	617	628	625	44100	627	618	624	625
4	618	620	704	633	618	626	626	43900	625	618	626	634
5	620	621	648	634	620	625	627	37800	653	619	631	628
6	619	621	637	632	624	625	628	13800	667	621	627	630
7	619	625	627	646	621	625	708	11600	661	620	612	628
8	619	622	624	668	620	629	8000	7150	672	619	615	633
9	616	622	619	1060	619	6270	10200	631	666	620	617	640
10	612	621	618	1050	619	41100	10200	617	667	620	615	641
11	615	620	620	648	622	67000	9470	622	667	622	617	638
12	619	623	628	643	621	70100	7880	627	666	620	613	641
13	616	623	631	693	624	69900	5570	630	662	622	616	642
14	618	619	632	651	618	69100	642	631	667	618	613	642
15	616	625	643	621	618	52800	640	636	673	617	612	643
16	615	628	639	616	618	40300	638	613	675	616	614	644
17	616	624	640	618	624	29100	635	613	673	617	617	644
18	615	620	635	625	628	23100	634	618	672	618	617	639
19	619	619	629	616	626	23200	634	621	666	616	618	640
20	618	621	635	614	626	18600	634	620	662	622	615	638
21	619	622	637	617	621	13100	638	623	661	619	612	641
22	618	637	632	617	625	13100	635	622	659	619	619	643
23	619	620	628	621	644	13100	641	626	690	620	615	646
24	618	623	618	617	627	10600	648	625	635	618	613	682
25	619	621	622	622	628	8040	643	626	643	627	618	643
26	620	621	615	623	632	8040	655	626	636	624	618	641
27	620	623	618	629	632	959	654	625	617	623	617	644
28	619	622	622	645	631	635	655	622	620	619	617	646
29	618	622	618	622	---	628	1490	620	622	628	619	647
30	618	623	622	626	---	630	7780	619	623	631	621	646
31	617	---	616	619	---	631	---	623	---	624	622	---
TOTAL	19158	18675	19556	20379	17478	585053	74686	245386	19574	19238	19156	19202
MEAN	618	622	631	657	624	18870	2490	7916	652	621	618	640
MAX	636	637	704	1060	644	70100	10200	44100	690	631	631	682
MIN	612	617	615	614	617	625	625	613	617	616	612	623
AC-FT	38000	37040	38790	40420	34670	1160000	148100	486700	38830	38160	38000	38090
MEAN a	1910	1890	3660	21840	10220	33960	21250	25570	13760	5700	3880	3170
AC-FTa	117300	112300	225000	1343000	567700	2088000	1265000	1572000	819000	350800	238400	188600

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
LOWEST ANNUAL MEAN	1623
HIGHEST DAILY MEAN	187000
LOWEST DAILY MEAN	577
ANNUAL SEVEN-DAY MINIMUM	652
INSTANTANEOUS PEAK FLOW	230000
INSTANTANEOUS PEAK STAGE	167.5
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	488	688	995	2541	2015	2272	1069	745	493	489	473	475
MAX	760	3313	6953	23240	25180	18870	7064	7916	998	775	635	644
(WY)	1978	1982	1984	1970	1986	1995	1982	1995	1989	1992	1988	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

ANNUAL TOTAL	228348	1077541	
ANNUAL MEAN	626	2952	1059
ANNUAL MEAN ADJUSTED a	2340	12280	b5989
HIGHEST ANNUAL MEAN			3014
LOWEST ANNUAL MEAN			404
HIGHEST DAILY MEAN	751	Feb 7	70100
LOWEST DAILY MEAN	605	Jul 18	612
ANNUAL SEVEN-DAY MINIMUM	610	Jul 13	614
INSTANTANEOUS PEAK FLOW			134000
INSTANTANEOUS PEAK STAGE			23.22
ANNUAL RUNOFF (AC-FT)	452900	2137000	767100
ANNUAL RUNOFF (AC-FT) ADJUSTED a	1694000	8887000	b4339000
10 PERCENT EXCEEDS	640	995	639
50 PERCENT EXCEEDS	623	625	417
90 PERCENT EXCEEDS	613	617	400

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 89,400 ft³/s, Mar. 12, gage height, 94.66 ft; minimum daily, 1,170 ft³/s, Nov. 18.

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	2930	2350	1190	1190	13600	4070	11700	33800	12100	8020	2890	5330
2	2950	2340	1190	1190	15500	3620	11600	57100	12100	8030	3080	5330
3	2910	2310	1300	1210	18800	3080	11600	58700	12100	7860	4030	5320
4	2960	2340	1420	1240	18800	2950	11600	59000	12100	7240	4450	5320
5	2940	2390	1300	1250	18600	3380	11600	57600	12100	7190	4440	5310
6	2950	2400	1250	1240	18600	4900	11700	35700	12100	6670	4450	5330
7	2940	2310	1230	1350	16800	9610	12500	30500	12100	5820	4450	5480
8	2930	2100	1200	1430	14100	13700	19400	25000	12100	5080	4420	6280
9	2940	1920	1210	1670	14100	17500	23600	17700	11800	5010	4460	6600
10	2940	1720	1200	2420	14100	49000	24400	14000	10200	5000	4470	6610
11	2930	1630	1200	3350	14100	77800	24900	11700	9530	5000	4450	6610
12	2930	1640	1240	5020	14000	86200	25000	10500	9490	4410	4440	6620
13	2920	1620	1210	6120	14000	84300	24300	9570	8760	4010	4440	6630
14	2570	1630	1230	6060	13500	83300	18000	8960	7910	3860	4450	6640
15	2310	1610	1230	5910	12200	74300	16900	8760	7070	3070	4850	6620
16	2310	1400	1220	5810	12100	59600	16400	7950	7040	2950	4910	6620
17	2330	1240	1210	5730	11900	50400	15300	7220	9360	2780	4890	6600
18	2330	1170	1220	5700	11000	43100	13700	7130	9400	2450	4880	6620
19	2330	1200	1210	5670	10000	42300	12600	7120	9370	2440	4880	6630
20	2330	1200	1200	5640	9050	40400	11700	7100	9360	2430	4890	6640
21	2330	1200	1200	5640	8260	32400	10800	7070	9390	2420	4880	6630
22	2330	1210	1200	5620	7570	32100	9890	7050	9220	2410	5270	6630
23	2340	1200	1190	5640	6600	32300	9000	7380	8520	2410	5350	6630
24	2340	1210	1190	5640	5590	30800	8140	8950	8110	2560	5340	6640
25	2340	1240	1190	5610	4560	26100	7190	10600	8100	2890	5320	6620
26	2340	1210	1190	5610	4090	25600	6320	12000	8100	2890	5310	6620
27	2350	1210	1190	7890	4080	19700	5580	12200	8050	2900	5320	6600
28	2350	1210	1220	12900	4080	15600	5660	12200	8070	2900	5310	6590
29	2340	1200	1190	13100	---	14000	13600	12200	8050	2890	5320	6590
30	2330	1200	1190	13100	---	12200	20500	12200	8050	2880	5320	6620
31	2340	---	1190	13000	---	11900	---	12200	---	2890	5320	---
TOTAL	80410	48610	37800	162950	329680	1006210	426080	589160	289750	129360	146280	189310
MEAN	2594	1620	1219	5256	11770	32460	14200	19010	9658	4173	4719	6310
MAX	2960	2400	1420	13100	18800	86200	25000	59000	12100	8030	5350	6640
MIN	2310	1170	1190	1190	4080	2950	5580	7050	7040	2410	2890	5310
AC-FT	159500	96420	74980	323200	653900	1996000	845100	1169000	574700	256600	290100	375500

11407150 FEATHER RIVER NEAR GRIDLEY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2385	3185	5184	7108	6706	8056	5783	4242	3502	4076	3881	3456
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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1969 - 1995		
ANNUAL TOTAL	782970			3435600					
ANNUAL MEAN	2145			9413			4791		
HIGHEST ANNUAL MEAN							11880		
LOWEST ANNUAL MEAN							1394		
HIGHEST DAILY MEAN	7070	Jul 9		86200	Mar 12		146000	Feb 19	1986
LOWEST DAILY MEAN	1160	Jun 5		1170	Nov 18		602	May 21	1977
ANNUAL SEVEN-DAY MINIMUM	1180	May 31		1190	Dec 21		611	May 18	1977
INSTANTANEOUS PEAK FLOW				89400			150000		
INSTANTANEOUS PEAK STAGE				94.66			100.06		
ANNUAL RUNOFF (AC-FT)	1553000			6815000			3471000		
10 PERCENT EXCEEDS	2960			18600			9720		
50 PERCENT EXCEEDS	1770			5640			2650		
90 PERCENT EXCEEDS	1200			1220			1060		

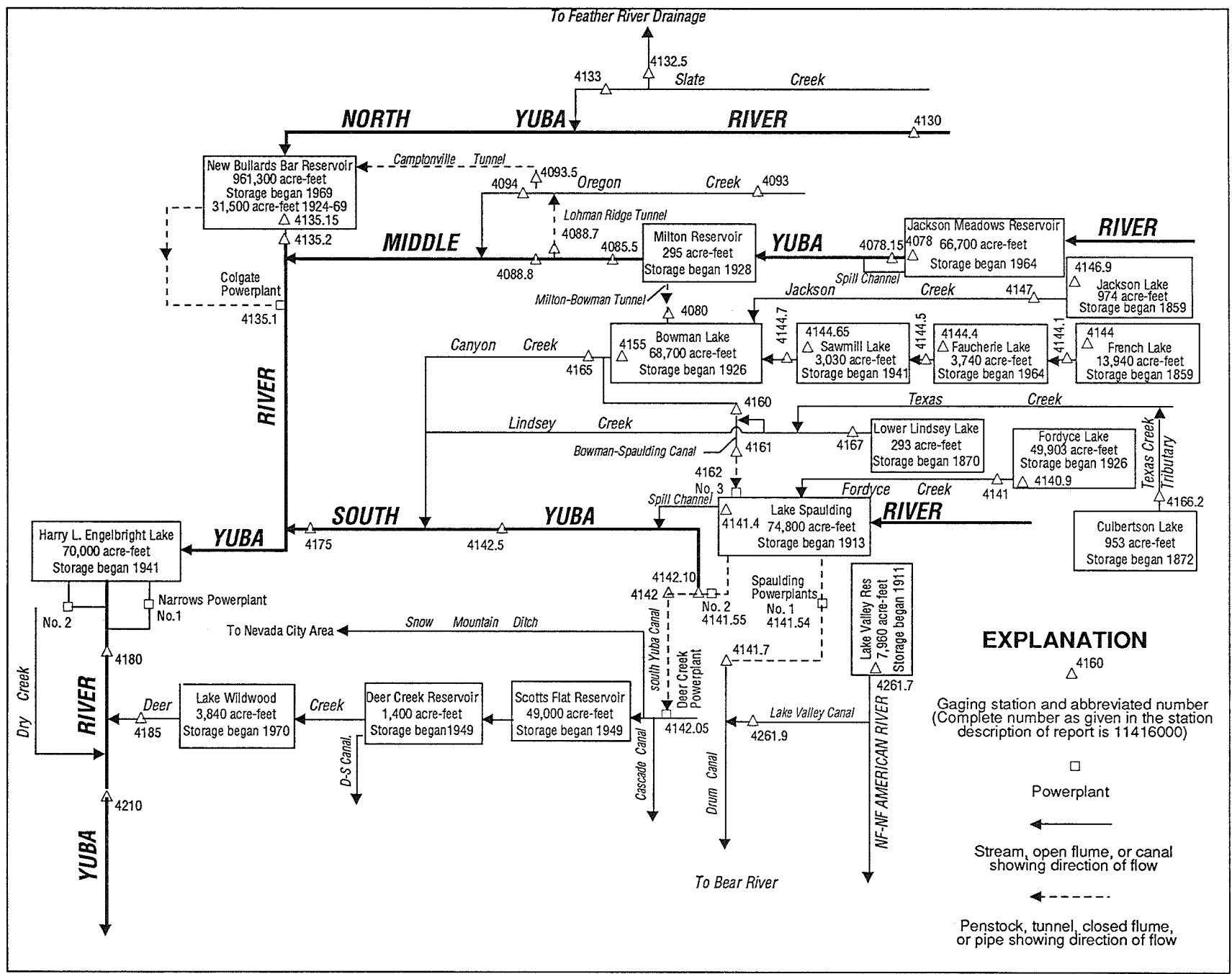


Figure 30. Diversions and storage in Yuba River basin.

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, 69,700 acre-ft, July 10, elevation, 6,036.35 ft; minimum, 19,900 acre-ft, Oct. 27-31, elevation, 5977.92 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23700	e20000	e20700	20700	29000	e34000	51600	57100	56500	67200	67300	60400
2	23500	e20000	e20700	20700	29400	e34200	51600	56400	56500	67500	67200	60100
3	23200	e20000	e20800	20700	29600	e34400	51700	55900	56500	67800	67000	59800
4	22900	e20100	e20900	20700	29900	e34600	51700	55700	56600	68200	66900	59500
5	22600	e20700	e20900	20800	30100	e34800	51900	55500	56300	68600	66700	59100
6	e22400	e21400	e20900	20900	30300	e35000	52100	55300	55900	69000	66500	58400
7	e22100	e21300	e20900	21000	30500	e35200	52500	55200	55600	69200	66300	57800
8	e21800	e21300	e20800	21100	30700	e36500	52800	55200	55500	69400	66100	57200
9	e21500	e21200	e20800	21500	30800	e38600	53000	55100	55500	69600	65900	56500
10	e21300	e21200	e20800	22200	31000	e40700	53100	55200	55800	69700	65600	55900
11	21000	e21100	e20800	22600	31200	e42800	53300	55300	56100	69600	65400	55300
12	20700	e21100	e20800	22800	e31300	e44400	53500	55300	56200	69500	65200	54600
13	20500	e21000	e20700	23700	e31500	e45200	54100	55200	56100	69400	65000	54000
14	20300	e21000	e20700	25300	31700	e46100	54300	55100	56200	69300	64800	53400
15	20100	e21000	e20700	26000	31800	e46900	54400	55000	56300	69200	64600	52800
16	20100	e21000	e20700	26400	32000	47500	54500	55000	55900	69000	64300	e52200
17	20100	e20900	20700	26700	32000	47900	54500	55200	55700	69000	64100	51500
18	20100	e20900	20700	26900	32200	48600	54500	55500	55800	68900	63900	50900
19	20100	e20900	20700	27000	32300	49100	54400	55800	56100	68900	63700	50300
20	20000	e20900	20700	27200	32400	49900	54500	56000	56800	68800	63500	49700
21	20000	e20900	20700	27300	32500	50400	54400	56000	57700	68700	63200	49100
22	20000	e20800	20700	27500	32600	50900	54400	56000	58700	68600	63000	48500
23	20000	e20800	20700	27600	32800	51200	54400	56000	59900	68400	62800	47900
24	20000	e20800	20700	27700	33000	51300	54500	56000	61400	68200	62500	47300
25	20000	e20800	20700	27800	33200	51400	54700	56100	62800	68100	62300	46700
26	20000	e20800	20700	28000	33400	51500	54800	56200	64200	68000	62100	46100
27	19900	e20800	20700	28100	33600	51600	55000	56200	65200	67900	61900	45500
28	19900	e20800	20700	28200	33700	51600	55200	56200	65900	67800	61600	44800
29	19900	e20700	20700	28300	---	51600	55700	56300	66400	67700	61300	44200
30	19900	e20700	20700	28400	---	51600	55900	56500	66800	67600	61000	43600
31	19900	---	20700	28700	---	51600	---	56600	---	67500	60700	---
MAX	23700	21400	20900	28700	33700	51600	55900	57100	66800	69700	67300	60400
MIN	19900	20000	20700	20700	29000	34000	51600	55000	55500	67200	60700	43600
a	5977.92		5979.48	5991.37	5997.92	6018.27	6023.73	6023.47	6033.67	6034.28	6027.65	6009.64
b	-4100	+800	0	+8000	+5000	+17900	+4300	+700	+10200	+700	-6800	-17100

CAL YR 1994 MAX 48800 MIN 19900 b -2400
WTR YR 1995 MAX 69700 MIN 19900 b +19600

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.--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, 408 ft³/s, July 1, 2, 1995; minimum daily, 7.9 ft³/s, several days November 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	132	8.3	8.0	8.0	8.7	9.0	129	132	132	408	122	156
2	132	8.4	8.0	8.0	8.7	9.1	129	132	132	408	122	155
3	131	8.1	8.0	8.0	8.7	9.1	129	131	132	347	121	155
4	131	7.9	8.0	8.0	8.7	9.1	129	131	132	278	121	155
5	131	7.9	8.0	8.0	8.7	9.1	129	131	132	279	121	236
6	131	7.9	8.0	8.0	8.8	9.1	129	131	131	279	121	325
7	131	7.9	8.0	8.0	8.8	9.1	129	131	131	279	121	325
8	131	7.9	8.0	8.0	8.8	9.1	130	131	131	280	121	324
9	131	7.9	8.0	8.1	8.8	9.2	130	131	131	280	121	323
10	130	7.9	8.0	8.1	8.8	9.4	130	131	131	280	121	322
11	129	7.9	8.0	8.1	8.9	9.6	130	131	131	280	121	322
12	129	7.9	8.0	8.2	8.9	9.7	130	131	131	280	121	323
13	129	7.9	8.0	8.2	8.9	9.7	130	131	131	280	121	322
14	128	7.9	8.0	8.3	8.9	17	130	131	131	e280	120	321
15	74	7.9	8.0	8.4	8.9	83	131	131	132	e280	120	321
16	8.4	7.9	8.0	8.5	8.9	127	130	131	131	e280	120	e321
17	8.4	7.9	8.0	8.5	8.9	127	131	131	131	e245	120	e320
18	8.4	7.9	8.0	8.5	8.9	127	131	131	131	e211	120	e319
19	8.4	7.9	8.0	8.5	8.9	128	130	131	152	200	120	e318
20	8.4	7.9	8.0	8.5	8.9	128	131	131	165	189	120	e317
21	8.4	7.9	8.0	8.6	8.9	129	130	132	166	189	120	317
22	8.3	7.9	8.0	8.6	9.0	129	130	131	167	189	120	316
23	8.4	7.9	8.0	8.6	9.0	129	131	131	168	189	119	315
24	8.4	7.9	8.0	8.6	9.0	129	131	131	169	169	119	314
25	8.3	7.9	8.0	8.6	9.0	129	131	132	171	136	119	313
26	8.4	8.0	8.0	8.6	9.0	129	131	132	279	122	119	312
27	8.4	7.9	8.0	8.6	9.0	129	131	132	404	122	119	311
28	8.3	8.0	8.0	8.6	9.0	129	131	132	405	122	139	310
29	8.3	8.0	8.0	8.6	---	129	131	132	407	122	156	309
30	8.4	7.9	8.0	8.6	---	129	131	132	407	122	156	308
31	8.4	---	8.0	8.7	---	129	---	132	---	122	156	---
TOTAL	2034.0	238.4	248.0	258.6	248.4	2276.3	3905	4071	5424	7247	3857	8805
MEAN	65.6	7.95	8.00	8.34	8.87	73.4	130	131	181	234	124	293
MAX	132	8.4	8.0	8.7	9.0	129	131	132	407	408	156	325
MIN	8.3	7.9	8.0	8.0	8.7	9.0	129	131	131	122	119	155
AC-FT	4030	473	492	513	493	4520	7750	8070	10760	14370	7650	17460

WTR YR 1995 TOTAL 38612.7 MEAN 106 MAX 408 MIN 7.9 AC-FT 76590

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 excellent except estimated daily discharges, which are poor. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	e6.0	8.2	e7.6	e27	e16	e16	30	17	9.7	118	147
2	127	e6.0	e10	e7.6	e26	e17	e16	24	16	9.3	118	147
3	126	e6.0	e12	e7.6	e24	e18	e16	20	16	8.9	118	146
4	128	e8.0	e11	e7.6	e23	e16	e16	19	16	8.4	118	146
5	126	e11	e9.5	e7.6	e22	e15	e16	18	15	8.0	117	193
6	126	e11	e9.0	e8.4	e22	e14	e16	16	13	7.6	117	302
7	126	e10	8.8	e13	21	e14	e18	15	12	7.1	117	308
8	126	e10	7.9	e12	21	e14	e18	14	11	6.8	117	307
9	125	e11	7.9	e27	e20	e26	e17	14	11	6.4	117	306
10	125	e11	8.1	e67	e14	e29	e16	14	12	32	117	306
11	125	e10	7.9	e37	e10	e21	16	15	13	66	116	305
12	124	e9.4	7.7	e28	e10	e18	16	14	13	204	116	306
13	124	e9.2	7.3	e77	e10	e18	18	12	13	294	116	305
14	124	e9.2	9.0	e120	e11	e19	17	12	13	278	116	305
15	96	e9.3	9.3	e52	e13	e20	16	11	15	276	115	304
16	11	e9.6	e7.6	e33	e14	e18	16	11	13	275	115	303
17	7.4	e9.5	e7.6	e25	e14	e18	16	12	11	254	115	302
18	7.0	e9.2	e7.6	e22	e14	e19	16	13	13	211	115	302
19	6.7	e8.9	e7.6	e19	e14	e19	15	14	12	201	115	301
20	6.7	e8.8	e7.6	e18	e14	e19	15	15	11	186	115	300
21	6.5	8.7	e7.6	e17	e14	e18	15	15	11	185	115	299
22	6.5	9.1	e7.6	e16	e14	e18	15	15	12	184	115	298
23	6.4	9.1	e7.6	e16	e14	e17	15	15	12	183	114	297
24	6.2	8.3	e7.6	e16	e14	e16	15	15	12	170	114	297
25	6.2	8.7	e7.6	e16	e14	e16	15	16	13	137	114	296
26	6.2	8.2	e7.6	e15	e14	e16	15	16	13	120	114	295
27	6.2	e8.2	e7.6	e14	e14	e16	16	16	12	119	113	295
28	6.0	e8.2	e7.6	e14	e15	e16	17	16	12	119	126	294
29	6.0	e8.2	e7.6	e14	---	e16	23	16	11	119	147	294
30	6.0	e8.2	e7.6	e14	---	e16	22	17	10	118	147	294
31	6.0	---	e7.6	e17	---	e16	---	17	---	118	147	---
TOTAL	1962.0	268.0	255.2	765.4	457	549	494	487	384	3921.2	3694	8300
MEAN	63.3	8.93	8.23	24.7	16.3	17.7	16.5	15.7	12.8	126	119	277
MAX	128	11	12	120	27	29	23	30	17	294	147	308
MIN	6.0	6.0	7.3	7.6	10	14	15	11	10	6.4	113	146
AC-FT	3890	532	506	1520	906	1090	980	966	762	7780	7330	16460

e Estimated.

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	148	133	61.2	38.7	35.5	43.1	40.2	81.2	72.7	65.1	87.3	157
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	17266.3	21536.8	
ANNUAL MEAN	47.3	59.0	80.3
HIGHEST ANNUAL MEAN			133 1973
LOWEST ANNUAL MEAN			14.5 1977
HIGHEST DAILY MEAN	142 Aug 12	308 Sep 7	438 Nov 4 1972
LOWEST DAILY MEAN	6.0 Oct 28	6.0 Oct 28	1.1 Dec 11 1976
ANNUAL SEVEN-DAY MINIMUM	6.0 Oct 28	6.0 Oct 28	1.1 Dec 26 1976
ANNUAL RUNOFF (AC-FT)	34250	42720	58180
10 PERCENT EXCEEDS	132	184	260
50 PERCENT EXCEEDS	18	16	23
90 PERCENT EXCEEDS	7.4	7.6	4.9

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 except estimated daily discharges, which are fair. 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, 1,580 ft³/s, May 1, 1995, gage height, unknown; minimum daily, 0.77 ft³/s, Nov. 3, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft³/s, May 1, gage height, unknown; minimum daily, 3.3 ft³/s, Aug. 10-21.

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	4.2	3.8	3.8	3.8	4.0	e4.0	84	1250	1140	416	3.5	3.6
2	4.2	3.8	3.8	3.8	4.0	e4.0	90	1310	1090	415	3.5	3.6
3	4.2	3.8	3.9	3.8	4.0	e4.0	90	865	1100	365	3.5	3.6
4	4.2	3.8	3.9	3.8	4.0	e4.0	95	646	1120	293	3.5	3.6
5	4.2	4.0	3.8	3.8	e4.0	e4.0	100	602	1120	293	3.4	3.7
6	4.2	4.1	3.8	3.8	e4.0	e4.0	106	528	857	291	3.4	3.8
7	4.2	4.0	3.8	4.0	e4.0	e4.0	136	443	667	290	3.4	3.8
8	4.2	3.9	3.8	4.0	e4.0	e4.0	136	402	551	290	3.4	3.8
9	4.2	3.9	3.8	4.3	e4.0	90	136	493	515	294	3.4	3.8
10	4.2	3.9	3.8	4.6	e4.0	143	136	408	579	280	3.3	3.8
11	4.2	3.8	3.8	4.2	e4.0	48	136	582	712	256	3.3	3.8
12	4.2	3.8	3.8	4.1	e4.0	13	143	504	821	122	3.3	3.8
13	4.1	3.8	3.8	4.6	e4.0	11	165	457	842	4.9	3.3	3.8
14	4.1	3.8	3.8	4.6	e4.0	21	154	396	845	4.6	3.3	3.8
15	4.1	3.8	3.8	4.2	e4.0	84	162	368	984	4.6	3.3	3.8
16	3.8	3.8	3.8	4.0	e4.0	100	175	348	867	4.6	3.3	3.8
17	3.8	3.8	3.8	4.0	e4.0	95	175	365	677	4.2	3.3	3.8
18	3.8	3.8	3.8	4.0	e4.0	118	175	498	650	3.7	3.3	3.8
19	3.8	3.8	3.8	4.0	e4.0	100	175	687	526	3.7	3.3	4.0
20	3.8	3.8	3.8	4.0	e4.0	118	174	828	305	3.6	3.3	3.9
21	3.8	3.8	3.8	4.0	e4.0	100	167	918	195	3.6	3.3	3.9
22	3.8	3.8	3.8	4.0	e4.0	95	159	923	196	3.6	3.4	3.9
23	3.8	3.8	3.8	4.0	e4.0	90	156	882	198	3.6	3.4	3.9
24	3.8	3.8	3.8	4.0	e4.0	84	161	899	198	3.6	3.4	3.9
25	3.8	3.8	3.8	3.9	e4.0	84	188	877	198	3.5	3.4	3.9
26	3.8	3.8	3.8	3.9	e4.0	79	236	885	290	3.5	3.4	3.9
27	3.8	3.8	3.8	3.9	e4.0	79	279	953	424	3.5	3.5	3.9
28	3.8	3.8	3.8	3.9	e4.0	79	341	949	424	3.5	3.5	3.9
29	3.8	3.8	3.8	3.9	---	79	537	993	420	3.5	3.5	3.9
30	3.8	3.8	3.8	3.9	---	79	653	1040	417	3.5	3.5	3.9
31	3.8	---	3.8	4.0	---	79	---	1100	---	3.5	3.5	---
TOTAL	123.5	115.0	118.0	124.8	112.0	1900.0	5620	22399	18928	3677.8	105.1	114.4
MEAN	3.98	3.83	3.81	4.03	4.00	61.3	187	723	631	119	3.39	3.81
MAX	4.2	4.1	3.9	4.6	4.0	143	653	1310	1140	416	3.5	4.0
MIN	3.8	3.8	3.8	3.8	4.0	4.0	84	348	195	3.5	3.3	3.6
AC-FT	245	228	234	248	222	3770	11150	44430	37540	7290	208	227

e Estimated.

SACRAMENTO RIVER BASIN

11408550 MIDDLE YUBA RIVER BELOW MILTON DAM, NEAR SIERRA CITY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.26	3.83	3.59	3.60	27.4	11.0	26.6	103	121	24.6	4.00	3.97
MAX	7.02	4.94	3.92	4.03	195	61.3	187	723	631	119	5.36	4.68
(WY)	1994	1994	1988	1995	1993	1995	1995	1995	1995	1995	1993	1993
MIN	3.55	3.34	3.26	3.30	3.19	3.45	3.09	3.58	3.38	3.37	3.39	3.42
(WY)	1989	1991	1989	1989	1989	1990	1994	1990	1990	1988	1995	1990

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1988 - 1995			
ANNUAL TOTAL	1414.3				53337.6							
ANNUAL MEAN	3.87				146				28.0			
HIGHEST ANNUAL MEAN									146			
LOWEST ANNUAL MEAN									3.53			
HIGHEST DAILY MEAN	4.3 Jan 23				1310 May 2				1310 May 2 1995			
LOWEST DAILY MEAN	1.8 Apr 9				3.3 Aug 10				.77 Nov 3 1990			
ANNUAL SEVEN-DAY MINIMUM	1.8 Apr 9				3.3 Aug 10				1.8 Apr 9 1994			
INSTANTANEOUS PEAK FLOW					1580 May 1				1580 May 1 1995			
INSTANTANEOUS PEAK STAGE					Unknown May 1				Unknown May 1 1995			
ANNUAL RUNOFF (AC-FT)	2810				105800				20290			
10 PERCENT EXCEEDS	4.2				562				6.4			
50 PERCENT EXCEEDS	4.0				4.0				3.8			
90 PERCENT EXCEEDS	3.5				3.5				3.3			

SACRAMENTO RIVER BASIN

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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 1989-88.

GAGE.--Water-stage recorder. Datum of gage is 2,014.77 ft above sea level.

REMARKS.--No estimated daily discharges. 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 each year.

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	.22	.01	36	89	757	343	777	435	21	686	60	20
2	.18	.24	59	80	582	470	752	77	21	662	57	19
3	.17	.20	481	79	324	805	777	26	20	640	55	19
4	.11	.17	737	86	247	771	783	24	20	540	53	18
5	.28	.00	608	169	204	764	787	24	20	524	50	18
6	.27	.72	366	244	378	651	788	24	19	514	48	17
7	.22	.21	220	724	534	573	824	24	20	499	46	17
8	.19	42	161	787	514	520	683	24	18	486	45	17
9	.18	57	122	748	472	683	347	24	18	472	43	17
10	.13	73	102	341	421	281	243	24	18	468	41	16
11	.02	44	90	216	375	144	285	24	19	425	40	16
12	.00	37	97	481	357	123	492	25	19	394	39	16
13	.00	33	90	653	401	120	814	25	12	180	37	15
14	.00	20	86	307	381	115	741	24	5.2	153	36	15
15	.00	21	94	412	323	329	751	24	5.3	145	35	14
16	.00	27	92	545	295	671	772	25	5.1	138	34	14
17	.00	48	94	631	297	713	774	24	6.6	131	33	13
18	.00	45	114	732	299	721	772	24	13	131	32	13
19	.00	24	113	638	298	696	671	24	17	125	31	13
20	.00	19	98	543	307	707	706	24	15	113	29	13
21	.00	19	89	481	329	630	593	23	288	107	28	13
22	.00	18	87	485	337	575	600	23	578	101	28	12
23	.00	14	86	636	353	510	587	22	613	95	27	12
24	.00	13	127	685	363	507	623	24	651	90	25	11
25	.00	80	135	739	369	483	713	22	681	86	24	12
26	.00	64	116	707	364	492	777	19	674	81	24	13
27	.00	40	109	721	360	559	786	18	780	77	23	13
28	.00	33	135	740	344	619	807	17	774	73	22	12
29	.00	28	123	713	---	591	835	20	757	69	22	13
30	.00	29	109	660	---	574	794	20	712	66	22	12
31	.00	---	97	721	---	755	---	21	---	63	21	---
TOTAL	1.97	829.55	5073	15793	10585	16495	20654	1178	6820.2	8334	1110	443
MEAN	.064	27.7	164	509	378	532	688	38.0	227	269	35.8	14.8
MAX	.28	80	737	787	757	805	835	435	780	686	60	20
MIN	.00	.00	36	79	204	115	243	17	5.1	63	21	11
AC-FT	3.9	1650	10060	31330	21000	32720	40970	2340	13530	16530	2200	879

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995
MEAN	12.1	26.5	67.5	181	241	375	423
MAX	51.4	72.1	164	509	485	644	688
(WY)	1989	1989	1995	1995	1993	1993	1995
MIN	.000	1.42	1.36	2.18	16.6	257	182
(WY)	1989	1991	1991	1991	1991	1994	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1989 - 1995
ANNUAL TOTAL	29794.42	87316.72	
ANNUAL MEAN	81.6	239	150
HIGHEST ANNUAL MEAN			280
LOWEST ANNUAL MEAN			73.1
HIGHEST DAILY MEAN	737	835	839
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	59100	173200	108500
10 PERCENT EXCEEDS	223	716	482
50 PERCENT EXCEEDS	31	86	38
90 PERCENT EXCEEDS	.00	.28	.00

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,220 ft³/s, Mar. 10, gage height, 24.05; minimum daily, 25 ft³/s, several days in October.

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	30	26	36	36	285	39	99	5010	2410	48	e32	32
2	28	32	36	36	e130	78	92	4310	2140	47	33	32
3	26	33	118	36	e58	627	104	3230	2070	44	32	32
4	26	30	694	36	e55	224	185	2430	2070	41	32	33
5	31	53	134	38	e53	127	217	1860	2090	40	32	33
6	32	290	43	39	e52	46	230	1390	1510	39	32	32
7	31	153	41	251	51	42	928	1050	1180	38	32	33
8	29	36	35	692	50	40	993	1070	922	38	32	33
9	e27	37	38	1670	49	3260	582	902	828	38	32	33
10	e26	37	37	5230	49	5970	410	859	926	38	32	33
11	25	36	37	2460	47	4590	316	1030	1130	37	32	32
12	e25	36	37	821	46	3390	276	1050	1380	37	32	33
13	25	36	37	2870	46	2900	670	952	1380	45	32	33
14	25	36	37	5180	44	3300	464	831	1420	67	32	33
15	25	36	37	2580	44	2820	351	830	1820	63	32	33
16	25	36	37	843	44	1190	262	811	1530	59	32	33
17	25	36	37	412	42	793	167	848	1100	56	32	33
18	25	36	37	153	41	906	86	985	1080	56	32	33
19	26	35	37	45	41	808	56	1340	984	53	32	33
20	26	36	37	44	41	1490	60	1550	712	46	32	33
21	26	36	36	44	41	1260	58	1740	363	43	32	33
22	25	36	36	44	41	920	60	1790	90	39	32	33
23	25	36	36	45	41	721	59	1670	72	36	32	33
24	25	36	37	60	41	610	58	1700	61	33	32	33
25	25	37	37	124	42	393	59	1680	60	31	32	33
26	25	36	37	83	42	433	101	1720	61	e32	32	33
27	25	36	37	95	40	316	215	1880	177	e32	32	33
28	25	36	37	140	39	251	558	1860	118	e32	32	33
29	25	36	37	61	---	235	1900	1880	72	e32	32	33
30	25	36	37	50	---	238	1790	2050	51	e32	32	33
31	25	---	36	113	---	58	---	2290	---	e32	32	---
TOTAL	814	1447	1985	24331	1595	38075	11406	52598	29807	1304	993	985
MEAN	26.3	48.2	64.0	785	57.0	1228	380	1697	994	42.1	32.0	32.8
MAX	32	290	694	5230	285	5970	1900	5010	2410	67	33	33
MIN	25	26	35	36	39	39	56	811	51	31	32	32
AC-FT	1610	2870	3940	48260	3160	75520	22620	104300	59120	2590	1970	1950

e Estimated.

11408880 MIDDLE YUBA RIVER BELOW OUR HOUSE DAM, NEAR CAMPTONVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.4	82.1	146	300	202	260	167	214	121	32.9	29.3	29.3
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1969 - 1995			
ANNUAL TOTAL	13978				165340							
ANNUAL MEAN	38.3				453							
HIGHEST ANNUAL MEAN									134			
LOWEST ANNUAL MEAN									481			
HIGHEST DAILY MEAN	694				5970				17000			
LOWEST DAILY MEAN	21				25				2.1			
ANNUAL SEVEN-DAY MINIMUM	21				25				3.2			
INSTANTANEOUS PEAK FLOW					8220				20600			
INSTANTANEOUS PEAK STAGE					24.05				27.40			
INSTANTANEOUS LOW FLOW					24				2.1			
ANNUAL RUNOFF (AC-FT)	27730				328000				97380			
10 PERCENT EXCEEDS	54				1670				138			
50 PERCENT EXCEEDS	34				42				34			
90 PERCENT EXCEEDS	22				32				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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1030	522	6.46	Apr. 7	2145	598	6.63
Jan. 10	1115	*2060	*8.83	May 1	1430	1360	7.91
Mar. 10	1945	1490	8.10				

Minimum daily, 0.98 ft³/s, Oct. 3.

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	1.2	2.5	7.0	28	247	65	177	1040	72	21	6.7	3.3
2	1.1	3.7	11	26	233	116	180	704	69	21	6.4	3.2
3	.98	2.6	185	26	200	309	184	426	66	20	6.1	3.2
4	2.1	2.0	434	28	175	232	190	311	61	19	5.8	3.1
5	3.2	9.2	189	64	158	224	193	282	60	19	5.7	3.1
6	2.4	26	98	100	146	197	196	254	55	18	5.7	3.1
7	1.9	18	63	256	136	163	406	221	51	17	5.6	2.9
8	1.7	7.1	43	422	127	147	463	194	47	17	5.5	2.9
9	1.7	12	32	682	116	629	337	173	42	16	5.4	2.9
10	1.6	13	26	1710	107	1090	269	157	40	16	5.3	2.9
11	1.5	8.5	23	841	99	1140	229	148	37	15	5.2	2.9
12	1.5	7.9	24	572	94	810	204	145	35	14	5.1	3.0
13	1.6	7.3	21	1400	99	751	314	157	33	14	4.9	2.8
14	1.6	5.6	21	1580	98	768	267	146	36	13	4.8	2.8
15	1.6	5.9	21	855	88	671	232	142	69	12	4.7	2.8
16	1.6	6.6	21	468	83	444	201	136	71	12	4.5	2.7
17	1.6	14	21	302	79	321	177	127	55	11	4.4	2.6
18	1.6	10	29	233	75	369	167	121	60	11	4.5	2.6
19	1.7	6.3	32	187	73	322	151	117	55	13	4.4	2.6
20	1.7	5.6	27	156	72	489	153	115	50	11	4.2	2.6
21	1.7	5.6	25	135	72	474	143	111	45	10	7.1	2.6
22	1.7	5.4	24	135	72	380	131	108	41	9.8	8.6	2.5
23	1.6	5.0	24	178	72	306	122	103	36	9.5	4.1	2.5
24	1.6	4.9	38	205	72	244	117	99	32	9.1	3.8	2.5
25	1.6	16	44	239	71	208	114	95	30	8.7	3.7	2.6
26	1.6	13	38	239	71	185	112	90	27	8.2	3.6	2.7
27	1.6	8.7	35	248	68	172	117	92	26	7.9	3.6	2.8
28	1.7	7.6	45	275	66	168	158	88	24	7.6	3.6	2.8
29	1.7	6.6	43	250	---	167	332	82	24	7.2	3.5	2.8
30	1.6	6.5	37	233	---	165	320	79	22	7.0	3.5	2.8
31	1.6	---	32	236	---	168	---	76	---	6.9	3.4	---
TOTAL	51.88	253.1	1713.0	12309	3069	11894	6356	6139	1371	401.9	153.4	84.6
MEAN	1.67	8.44	55.3	397	110	384	212	198	45.7	13.0	4.95	2.82
MAX	3.2	26	434	1710	247	1140	463	1040	72	21	8.6	3.3
MIN	.98	2.0	7.0	26	66	65	112	76	22	6.9	3.4	2.5
AC-FT	103	502	3400	24410	6090	23590	12610	12180	2720	797	304	168

SACRAMENTO RIVER BASIN

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11409300 OREGON CREEK AT CAMPTONVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.48	35.6	78.3	148	148	174	112	58.6	17.4	5.59	2.75	2.78
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1968 - 1995			
ANNUAL TOTAL	8081.40				43795.88							
ANNUAL MEAN	22.1				120				65.3			
HIGHEST ANNUAL MEAN									146			
LOWEST ANNUAL MEAN									5.38			
HIGHEST DAILY MEAN	434				1710				3200			
LOWEST DAILY MEAN	.87				.98				.53			
ANNUAL SEVEN-DAY MINIMUM	.90				1.6				.54			
INSTANTANEOUS PEAK FLOW					2060				4550			
INSTANTANEOUS PEAK STAGE					8.83				11.56			
ANNUAL RUNOFF (AC-FT)	16030				86870				47270			
10 PERCENT EXCEEDS	51				304				166			
50 PERCENT EXCEEDS	9.8				33				13			
90 PERCENT EXCEEDS	1.1				2.6				2.0			

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	28	84	880	385	852	816	92	808	63	15
2	.00	.00	43	75	601	536	853	379	99	792	59	13
3	.00	.00	564	72	306	997	854	210	111	778	56	13
4	.00	.00	931	80	298	889	860	207	116	694	54	12
5	.00	.06	771	209	231	869	861	197	115	680	51	11
6	.00	.59	457	351	441	817	861	189	114	674	48	11
7	.00	44	266	874	665	721	1020	188	112	655	46	11
8	.00	35	172	947	640	660	1050	187	120	647	44	9.7
9	.00	45	119	983	586	953	1020	180	109	631	42	9.4
10	.00	59	92	799	542	863	941	173	102	619	40	9.3
11	.00	35	75	792	503	719	889	169	110	556	38	9.3
12	.00	29	82	798	476	661	866	164	158	517	37	8.7
13	.00	27	74	786	511	627	990	153	210	338	36	7.6
14	.00	16	69	811	500	618	942	159	241	283	34	6.7
15	.00	16	79	886	425	740	892	162	263	243	33	6.0
16	.00	23	75	888	390	872	865	168	255	208	31	5.3
17	.00	38	78	859	372	924	844	162	259	181	30	4.8
18	.00	38	109	861	355	933	835	152	262	166	30	4.8
19	.00	20	114	784	356	914	803	147	278	155	28	4.2
20	.00	15	92	690	362	937	800	135	281	136	26	3.5
21	.00	15	80	617	384	930	759	145	468	125	25	3.3
22	.00	13	77	612	390	914	718	141	697	117	24	2.9
23	.00	9.6	75	776	405	840	703	119	731	108	24	2.4
24	.00	8.3	128	818	418	775	719	84	770	102	22	2.1
25	.00	63	150	870	424	731	769	69	805	96	20	2.4
26	.00	53	121	868	417	698	795	86	810	89	20	3.1
27	.00	33	111	888	407	731	802	87	886	83	19	3.0
28	.00	27	146	919	388	771	838	87	870	78	18	2.5
29	.00	23	135	871	---	766	1020	63	854	74	18	2.8
30	.00	23	113	828	---	725	988	83	825	70	16	2.4
31	.00	---	96	854	---	837	---	92	---	67	15	---
TOTAL	0.00	708.55	5522	21550	12673	24353	26009	5353	11123	10770	1047	202.2
MEAN	.000	23.6	178	695	453	786	867	173	371	347	33.8	6.74
MAX	.00	63	931	983	880	997	1050	816	886	808	63	15
MIN	.00	.00	28	72	231	385	703	63	92	67	15	2.1
AC-FT	.00	1410	10950	42740	25140	48300	51590	10620	22060	21360	2080	401

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	13.6	31.9	72.7	239	316	542	506	270	207	71.6	6.37	1.80
MEAN	13.6	31.9	72.7	239	316	542	506	270	207	71.6	6.37	1.80
MAX	54.9	105	178	695	668	793	867	564	542	347	33.8	6.74
(WY)	1990	1989	1995	1995	1993	1993	1995	1993	1993	1995	1995	1995
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1989 - 1995			
ANNUAL TOTAL	31435.75				119310.75							
ANNUAL MEAN	86.1				327				189			
HIGHEST ANNUAL MEAN									335			
LOWEST ANNUAL MEAN									75.7			
HIGHEST DAILY MEAN	931				1050				1090			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	62350				236700				136800			
10 PERCENT EXCEEDS	245				865				627			
50 PERCENT EXCEEDS	29				141				43			
90 PERCENT EXCEEDS	.00				.38				.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 at present datum.

REMARKS.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,270 ft³/s, Jan. 10, gage height, unknown; minimum daily, 2.4 ft³/s, Oct. 3.

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	2.8	3.5	12	13	19	12	17	825	20	15	10	11
2	2.5	4.7	12	13	19	13	17	543	20	15	10	11
3	2.4	4.1	25	13	19	25	17	322	19	14	10	11
4	2.8	3.3	215	13	19	22	17	177	19	14	10	11
5	4.7	6.2	25	15	19	22	17	142	18	13	10	11
6	3.9	22	20	16	18	18	17	103	18	13	10	11
7	3.2	34	17	27	16	15	128	61	17	13	11	11
8	2.8	11	13	216	16	15	189	25	17	13	11	11
9	2.6	12	14	471	16	345	45	22	17	13	11	11
10	2.6	13	14	1690	16	585	19	22	17	13	11	11
11	2.5	12	13	338	15	788	18	22	17	13	11	11
12	2.5	12	13	246	15	488	17	22	20	13	11	11
13	2.5	12	13	1280	15	480	19	24	23	12	12	11
14	2.5	11	13	1100	15	509	18	24	22	11	12	11
15	2.6	11	13	412	15	371	18	23	25	11	12	11
16	2.6	12	13	107	15	243	17	23	25	10	11	10
17	2.7	12	13	28	14	45	17	22	24	10	12	10
18	2.8	12	13	27	13	107	17	22	23	10	12	11
19	2.8	9.9	14	25	13	45	17	21	22	10	12	11
20	2.8	12	14	24	13	227	18	21	22	11	12	10
21	2.8	12	13	24	13	161	22	22	21	12	12	10
22	2.8	12	13	24	12	51	25	22	20	11	12	10
23	2.8	11	13	22	12	22	18	32	20	11	12	10
24	2.8	11	14	20	12	18	20	86	19	11	12	10
25	2.8	13	14	20	12	18	23	72	19	11	12	11
26	2.8	13	14	20	12	17	22	39	18	11	12	11
27	2.8	12	14	20	12	17	22	32	18	11	12	11
28	2.8	12	14	20	12	17	23	34	17	11	12	11
29	2.8	12	14	20	---	17	40	20	16	11	12	11
30	2.8	12	14	20	---	16	25	19	16	11	12	11
31	2.8	---	13	19	---	17	---	20	---	11	11	---
TOTAL	87.4	349.7	649	6303	417	4746	899	2864	589	369	352	323
MEAN	2.82	11.7	20.9	203	14.9	153	30.0	92.4	19.6	11.9	11.4	10.8
MAX	4.7	34	215	1690	19	788	189	825	25	15	12	11
MIN	2.4	3.3	12	13	12	12	17	19	16	10	10	10
AC-FT	173	694	1290	12500	827	9410	1780	5680	1170	732	698	641

SACRAMENTO RIVER BASIN

11409400 OREGON CREEK BELOW LOG CABIN DAM, NEAR CAMPTONVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.23	16.9	47.0	89.2	59.5	48.9	31.5	19.7	11.5	8.28	6.45	5.70
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1968 - 1995			
ANNUAL TOTAL	3456.8				17948.1							
ANNUAL MEAN	9.47				49.2				29.2			
HIGHEST ANNUAL MEAN									128			
LOWEST ANNUAL MEAN									4.20			
HIGHEST DAILY MEAN	215				1690				5340			
LOWEST DAILY MEAN	1.7				2.4				.34			
ANNUAL SEVEN-DAY MINIMUM	1.8				2.5				.74			
INSTANTANEOUS PEAK FLOW					2270				6400			
INSTANTANEOUS PEAK STAGE					unknown				11.24			
ANNUAL RUNOFF (AC-FT)	6860				35600				21120			
10 PERCENT EXCEEDS	14				42				18			
50 PERCENT EXCEEDS	11				14				9.9			
90 PERCENT EXCEEDS	1.9				8.4				3.2			

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0100	12,800	13.82	Apr. 7	2215	4,080	8.66
Mar. 10	1915	*13,500	*14.13	May 1	1445	12,900	13.89

Minimum daily, 96 ft³/s, several days in October, Nov. 1.

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	132	96	149	221	2080	902	1510	11400	4210	2530	527	257
2	130	115	191	213	2010	1180	1500	8120	4080	2430	507	254
3	129	106	695	211	1730	2140	1510	5190	4070	2340	489	251
4	175	101	1390	217	1560	1670	1630	4130	4120	2210	473	248
5	166	166	862	264	1480	1520	1730	3710	3930	2110	458	245
6	156	352	547	321	1440	1390	1820	3160	3030	2050	442	243
7	150	233	366	1230	1380	1240	3200	2850	2520	1910	429	239
8	e143	163	291	1870	1320	1220	3290	2660	2250	1780	415	237
9	e136	192	249	3210	1230	e5290	2490	2540	2270	1660	400	235
10	e130	189	226	7820	1180	e10800	2100	2490	2620	1600	389	234
11	e125	158	212	3740	1170	s8580	1920	2790	3060	1470	377	233
12	e120	162	225	2400	1190	5220	1920	2630	3230	1340	369	228
13	e116	148	208	6790	1110	4240	2680	2350	3160	1210	357	226
14	e112	134	207	10600	943	4630	2290	2140	3090	1160	350	221
15	e108	138	209	4900	862	4990	2040	2090	3960	1130	342	220
16	e105	144	208	2800	818	3730	1830	1990	3150	1100	336	217
17	e103	179	219	1970	765	3070	1670	2130	2530	1090	331	215
18	e101	153	255	1540	753	3430	1570	2500	3020	1120	322	214
19	e99	134	252	1310	753	3180	1460	2970	2900	1020	314	213
20	e97	133	235	1160	761	3970	1440	3290	2670	942	307	208
21	96	137	224	980	806	3650	1330	3430	2580	891	302	208
22	96	133	222	990	853	3050	1300	3430	2710	836	299	205
23	96	129	220	1210	902	2630	1330	3360	2990	782	297	204
24	96	129	274	1260	948	2200	1450	3340	3270	735	290	202
25	96	223	270	1310	966	1940	1680	3270	3480	699	283	203
26	96	177	252	1280	952	1770	1810	3380	3540	665	279	206
27	96	156	248	1250	929	1650	1900	3610	3450	631	276	204
28	96	147	282	1290	897	1570	2320	3550	3130	613	270	204
29	96	141	263	1280	---	1520	5090	3710	2930	604	266	204
30	96	143	245	1270	---	1460	6100	3930	2670	572	263	201
31	96	---	231	1620	---	1460	---	4140	---	549	259	---
TOTAL	3589	4711	9927	66527	31788	95292	63910	110280	94620	39779	11018	6679
MEAN	116	157	320	2146	1135	3074	2130	3557	3154	1283	355	223
MAX	175	352	1390	10600	2080	10800	6100	11400	4210	2530	527	257
MIN	96	96	149	211	753	902	1300	1990	2250	549	259	201
AC-FT	7120	9340	19690	132000	63050	189000	126800	218700	187700	78900	21850	13250

e Estimated.

SACRAMENTO RIVER BASIN

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	187	359	624	821	918	1062	1372	1773	1110	366	185	149
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	1981	1977	1977	1977	1977	1992	1977	1977	1977

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1931 - 1995

ANNUAL TOTAL	117682		538120									
ANNUAL MEAN	322		1474							742		
HIGHEST ANNUAL MEAN										1566		1982
LOWEST ANNUAL MEAN										141		1977
HIGHEST DAILY MEAN	1390					11400		May 1		26500		Jan 13 1980
LOWEST DAILY MEAN	86				Dec 4	96		Oct 21		60		Sep 7 1977
ANNUAL SEVEN-DAY MINIMUM	87				Sep 21	96		Oct 21		60		Sep 7 1977
INSTANTANEOUS PEAK FLOW					Sep 18	13500		Mar 10		40000		Feb 1 1963
INSTANTANEOUS PEAK STAGE						14.13		Mar 10		25.80		Feb 1 1963
INSTANTANEOUS LOW FLOW						86		Sep 21		60		Sep 7 1977
ANNUAL RUNOFF (AC-FT)	233400					1067000				537800		
10 PERCENT EXCEEDS	704					3440				1850		
50 PERCENT EXCEEDS	199					943				323		
90 PERCENT EXCEEDS	92					137				126		

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 Fenev 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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	7.0	29	702	.00	281	844	482	176	24	1.8
2	.00	.00	22	27	830	.00	281	854	480	163	23	.00
3	.00	.00	150	27	738	36	297	485	479	160	21	.00
4	.00	.00	353	30	558	.00	350	239	477	153	20	.00
5	.00	.00	183	33	501	.00	400	.00	475	145	19	.00
6	.00	23	116	44	479	.00	527	.00	431	141	18	.00
7	.00	26	70	332	450	.00	769	.00	348	131	17	.00
8	.00	15	49	605	431	.00	834	280	285	121	16	.00
9	.00	24	38	554	387	.00	802	418	276	114	15	.00
10	.00	19	32	585	353	406	769	433	299	107	14	.00
11	.00	12	29	790	323	763	630	482	329	97	14	.00
12	.00	11	28	781	305	857	276	476	334	88	13	.00
13	.00	7.2	26	707	306	841	.00	461	316	79	12	.00
14	.00	4.9	22	540	266	853	.00	429	354	74	11	.00
15	.00	6.0	22	754	237	852	.00	431	452	71	11	.00
16	.00	7.5	19	761	221	837	.00	419	488	67	10	.00
17	.00	6.7	22	630	206	830	242	435	434	65	10	.00
18	.00	4.0	29	440	197	833	371	466	484	73	9.7	.00
19	.00	2.2	30	351	201	827	341	473	431	67	9.1	.00
20	.00	6.0	28	302	215	826	332	469	384	56	8.4	.00
21	.00	5.6	27	260	240	797	297	466	306	51	7.9	.00
22	.00	3.6	27	267	265	673	294	465	294	47	7.7	.00
23	.00	4.2	28	359	296	545	320	477	305	43	7.6	.00
24	.00	5.1	39	423	179	518	381	492	314	40	6.8	.00
25	.00	6.5	37	402	.00	392	457	492	313	37	6.1	.00
26	.00	4.8	36	377	.00	330	486	491	302	35	5.9	.00
27	.00	6.1	36	324	.00	290	585	490	276	32	5.8	.00
28	.00	5.0	40	391	.00	265	734	489	242	31	5.5	.00
29	.00	4.2	36	430	---	246	779	487	216	31	5.2	.00
30	.00	4.8	33	371	---	263	653	485	188	28	5.1	.00
31	.00	---	32	715	---	282	---	483	---	26	4.8	---
TOTAL	0.00	224.40	1646.0	12641	8886.00	13362.00	12488.00	13211.00	10794	2549	363.6	1.80
MEAN	.000	7.48	53.1	408	317	431	416	426	360	82.2	11.7	.060
MAX	.00	26	353	790	830	857	834	844	488	176	24	1.8
MIN	.00	.00	7.0	27	.00	.00	.00	.00	188	26	4.8	.00
AC-FT	.00	445	3260	25070	17630	26500	24770	26200	21410	5060	721	3.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	MEAN	9.26	66.3	87.3	118	128	207	228	196	105	22.9	3.27	1.71
MAX	43.5	321	302	408	459	588	690	638	360	144	24.2	21.1	
(WY)	1983	1984	1967	1995	1986	1993	1993	1973	1995	1983	1983	1986	
MIN	.000	.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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	22548.70	76166.80	
ANNUAL MEAN	61.8	209	97.6
HIGHEST ANNUAL MEAN			209
LOWEST ANNUAL MEAN			.002
HIGHEST DAILY MEAN	386	Mar 6	863
LOWEST DAILY MEAN	.00	Jul 2	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 2	.00
ANNUAL RUNOFF (AC-FT)	44730	151100	70690
10 PERCENT EXCEEDS	204	556	318
50 PERCENT EXCEEDS	22	47	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.--No estimated daily discharges. 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.
Combined flow: Maximum discharge, 13,900 ft³/s, Dec. 22, 1964; minimum daily, 2.3 ft³/s, Nov. 23, 1961.

EXTREMES FOR CURRENT YEAR.--Creek only: Maximum discharge, 8,150 ft³/s, Mar. 9, gage height, 14.81 ft; minimum daily, 7.1 ft³/s, Oct. 27.
Combined flow: Maximum discharge, 8,150 ft³/s, Mar. 9; minimum daily, 7.1 ft³/s, Oct. 27.

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	7.8	11	11	11	206	263	35	3890	141	36	11	14
2	7.4	15	11	11	121	530	34	1970	126	36	11	16
3	7.2	9.5	12	11	17	1350	35	1060	103	29	10	16
4	15	8.4	12	11	12	912	32	913	86	20	10	16
5	18	24	12	11	12	711	29	1020	69	17	10	15
6	11	55	11	11	12	574	28	858	29	12	10	15
7	9.2	11	11	12	12	462	944	734	26	11	10	15
8	8.5	11	11	128	12	404	838	323	26	11	10	15
9	8.2	11	11	1760	12	5370	260	135	26	11	10	15
10	8.1	11	11	3010	12	5060	85	108	26	11	10	15
11	7.9	11	11	838	12	2730	39	92	26	11	10	15
12	7.9	11	11	309	12	1230	358	105	26	11	10	15
13	7.9	11	11	3070	12	1040	1060	75	26	11	10	14
14	7.7	11	11	4560	12	1350	809	74	30	11	10	14
15	7.7	11	11	1090	12	1380	656	71	209	11	10	14
16	7.7	11	11	243	12	638	532	72	66	11	10	14
17	7.7	11	11	28	12	315	207	72	17	11	10	13
18	7.7	11	11	27	12	514	31	82	36	11	10	13
19	7.5	11	11	19	12	359	21	128	35	11	10	13
20	7.3	11	11	12	12	912	20	173	24	11	10	13
21	7.3	11	11	12	12	671	20	186	39	11	10	13
22	7.3	11	11	12	12	353	20	211	39	11	10	13
23	7.3	11	11	12	12	242	20	192	39	11	10	13
24	7.3	11	11	12	122	68	18	142	39	11	10	13
25	7.3	11	11	25	283	68	18	145	39	11	10	13
26	7.2	11	11	12	281	67	18	144	39	11	10	13
27	7.1	11	11	24	273	67	18	159	38	11	10	13
28	7.4	11	11	12	265	67	94	136	38	11	10	13
29	8.0	11	11	12	---	66	2260	136	37	11	10	13
30	7.5	11	11	84	---	43	1790	141	36	11	10	13
31	7.3	---	11	73	---	21	---	144	---	11	10	---
TOTAL	258.4	386.9	344	15462	1808	27837	10329	13691	1536	425	312	420
MEAN	8.34	12.9	11.1	499	64.6	898	344	442	51.2	13.7	10.1	14.0
MAX	18	55	12	4560	283	5370	2260	3890	209	36	11	16
MIN	7.1	8.4	11	11	12	21	18	71	17	11	10	13
AC-FT	513	767	682	30670	3590	55210	20490	27160	3050	843	619	833
MEAN a	8.34	20.3	64.1	907	382	1330	761	868	411	96.0	21.8	14.1
AC-FT a	513	1210	3940	55740	21220	81710	45260	53360	24460	5900	1340	837

a Adjusted for diversion to Slate Creek Tunnel.

11413300 SLATE CREEK BELOW DIVERSION DAM, NEAR STRAWBERRY VALLEY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.4	58.0	135	237	194	228	188	200	50.3	11.8	10.9	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1963 - 1995			
ANNUAL TOTAL	3969.1				72809.3							
ANNUAL MEAN	10.9				199				112			
ANNUAL MEAN ADJUSTED a	72.7				408				214			
HIGHEST ANNUAL MEAN									352			
LOWEST ANNUAL MEAN									10.4			
HIGHEST DAILY MEAN	55 Nov 6				5370 Mar 9				10600 Dec 22 1964			
LOWEST DAILY MEAN	6.4 Sep 22				7.1 Oct 27				.86 Feb 18 1975			
ANNUAL SEVEN-DAY MINIMUM	6.6 Sep 18				7.3 Oct 21				.95 Feb 21 1975			
INSTANTANEOUS PEAK FLOW					8150 Mar 9				13600 Feb 17 1986			
INSTANTANEOUS PEAK STAGE					14.81 Mar 9				16.89 Feb 17 1986			
ANNUAL RUNOFF (AC-FT)	7870				144400				81290			
ANNUAL RUNOFF (AC-FT) ADJUSTED a	52600				295500				155000			
10 PERCENT EXCEEDS	12				520				323			
50 PERCENT EXCEEDS	11				13				11			
90 PERCENT EXCEEDS	7.3				10				8.1			

SACRAMENTO RIVER BASIN

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439	577	662	698	3440	3430	3480	1330	1750	3120	2450	1700
2	320	550	223	506	3480	3430	3330	1150	692	3110	1590	1810
3	570	576	.00	800	3470	2800	3480	1530	1740	3110	1760	3470
4	214	518	.00	847	3460	3430	3440	1780	2040	3110	2250	2200
5	638	525	.00	128	3460	3440	3480	1750	3050	3110	1970	2030
6	703	11	.00	53	3460	3430	3480	1720	3130	3110	1830	1950
7	1110	.00	.00	77	3460	3440	3490	1710	2690	3110	2130	1630
8	48	260	.00	134	3460	3440	3490	1730	2320	3110	1800	2380
9	82	655	.00	125	3440	3180	3500	1730	3100	3110	1950	1650
10	551	.00	.00	124	3470	2150	3510	1730	3100	3110	1880	475
11	559	384	.00	139	3460	2340	3520	1720	3100	2840	2200	626
12	627	728	.00	1890	3470	1850	3500	1750	3100	3110	2010	574
13	599	621	.00	3360	3430	2680	3510	1760	3100	2960	1790	720
14	671	466	89	3370	3470	2880	3530	1740	3110	3100	1960	576
15	273	660	.00	3410	3460	3050	3530	1740	3110	3110	2140	620
16	234	525	3.5	3450	3450	3330	3530	1070	3110	2970	1770	471
17	880	287	2.0	3430	3450	3450	3540	1740	3110	2880	1780	534
18	671	813	.00	3460	3450	3460	3530	1720	3110	3090	2050	617
19	591	263	.00	3460	3440	3460	3530	1740	3110	3080	2180	609
20	757	289	.00	3460	3440	3460	3540	1710	3100	2960	1840	799
21	744	697	.00	3470	3450	3200	3540	1710	3110	2840	2030	436
22	.00	653	120	3440	3430	3450	3540	1730	3000	2820	2220	349
23	.00	385	476	3460	3410	3450	3530	1700	3080	3020	1510	137
24	956	293	.00	3460	3440	3180	3540	1730	3110	2520	2260	99
25	724	365	.00	3460	3440	3470	3540	1740	3100	2250	1630	245
26	839	407	498	3460	3410	3470	3550	1740	3090	2160	2050	881
27	583	511	228	3450	3450	3460	3540	1730	2760	2520	2080	631
28	553	249	330	3470	3410	3480	3540	1730	3120	1220	1820	803
29	.00	408	474	3450	---	3470	2670	1710	3110	2020	2320	475
30	.00	655	649	3470	---	3480	188	1750	3110	1880	2150	423
31	595	---	326	3490	---	3480	---	1750	---	1840	2080	---
TOTAL	15531.00	13331.00	4080.50	71001	96560	99720	101118	51870	85262	86300	61480	29920
MEAN	501	444	132	2290	3449	3217	3371	1673	2842	2784	1983	997
MAX	1110	813	662	3490	3480	3480	3550	1780	3130	3120	2450	3470
MIN	.00	.00	.00	53	3410	1850	188	1070	692	1220	1510	99
AC-FT	30810	26440	8090	140800	191500	197800	200600	102900	169100	171200	121900	59350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1995, BY WATER YEAR (WY)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	1207	1155	1388	1468	1512	1522	1618	1409	1613	1710	1852	1424													
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1971 - 1995

ANNUAL TOTAL	246837.20	716173.50	
ANNUAL MEAN	676	1962	1490
HIGHEST ANNUAL MEAN			2686
LOWEST ANNUAL MEAN			316
HIGHEST DAILY MEAN	2030	Jul 1	3550
LOWEST DAILY MEAN	.00	Feb 18	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 3	.00
ANNUAL RUNOFF (AC-FT)	489600	1421000	1080000
10 PERCENT EXCEEDS	1150	3470	3360
50 PERCENT EXCEEDS	697	1960	1170
90 PERCENT EXCEEDS	83	127	126

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 Colgate Powerplant 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. 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, 972,224 acre-ft, June 27, elevation, 1,957.27 ft; minimum, 476,519 acre-ft, Dec. 1, elevation, 1,830.10 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	505870	483333	476519	530453	785165	725539	784704	901198	948468	969956	912661	825169
2	505521	482593	476917	530421	784997	726574	785835	897628	951700	969860	910906	822404
3	504667	481731	483240	530029	782028	735332	787009	893567	952987	969763	908968	819387
4	505046	480932	494820	529605	778607	739273	788520	894250	953606	969619	905928	815819
5	504192	480963	500531	531303	775278	741652	790285	894842	953463	969860	903309	812604
6	502834	482531	503876	533891	773535	743228	792516	892792	953511	970101	901015	809526
7	500941	483487	506029	541434	773411	743592	802967	889880	953797	970052	897994	807051
8	501067	483671	507584	561552	772996	744077	813289	886430	954416	969570	895710	803264
9	501382	483671	508886	578914	771877	778232	819258	884980	954035	968655	893065	800802
10	500499	484565	510033	621284	770428	804413	823095	884164	954750	967739	890516	800420
11	499618	484535	511116	641831	768649	817022	825861	886293	956613	966776	887246	799911
12	498644	483733	512521	652445	766627	814875	829154	889698	958811	965045	884391	799360
13	497701	483024	513672	687734	765225	810081	836989	893339	961062	962836	881858	798556
14	496604	482501	514761	739354	763332	806583	842547	895892	962309	960247	878879	798048
15	496228	481885	515980	758037	760784	803009	846676	898496	963844	957472	875682	797498
16	495978	481331	517072	766297	757956	796398	849715	901794	963172	954846	873120	796906
17	494414	481454	518262	770138	754971	791674	851568	905100	962692	952415	870608	796356
18	493351	480502	519679	772084	751789	790159	852806	909890	963316	949703	867386	795807
19	492416	480348	521002	772498	748658	786925	853292	915764	963892	946664	864127	795132
20	491045	480317	522166	769063	745575	789402	854088	922455	963988	943632	861410	794245
21	489739	479305	523298	767782	742662	790496	854133	929461	963892	940607	858343	793950
22	490050	478416	524141	767040	739918	789486	853823	935328	965045	937400	855018	793781
23	490423	478079	524271	768319	737341	784746	853336	938955	966728	933730	852850	794118
24	488776	477987	525958	769931	735171	780775	853203	940134	968992	930887	849406	794498
25	487597	478661	527552	771628	733406	779773	853646	940370	970969	928385	847071	794625
26	486235	478753	527975	774033	731644	778857	854486	940843	972079	925953	843951	793444
27	485277	478324	528822	776484	729765	779398	855948	942071	972224	922874	840750	792643
28	484475	478386	530127	778815	727650	780817	859409	942780	971114	922315	837994	791547
29	484628	478079	530192	780441	---	781902	877752	943679	970535	920082	834198	791084
30	484906	477314	530225	782070	---	782612	881316	945005	970342	918037	830935	790664
31	484042	---	530682	783533	---	783491	---	946712	---	915949	827724	---
MAX	505870	484565	530682	783533	785165	817022	881316	946712	972224	970101	912661	825169
MIN	484042	477314	476519	529605	727650	725539	784704	884164	948468	915949	827724	790664
a	1832.55	1830.36	1847.24	1915.32	1912.64	1915.31	1937.81	1951.94	1956.88	1945.38	1925.70	1917.02
b	-22557	-6728	+53368	+252851	-55883	+55841	+97825	+65396	+23630	-54393	-88225	-37060

CAL YR 1994 b -24628

WTR YR 1995 b +284065

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,000 ft³/s, May 2, gage height, 22.56 ft; minimum daily, 5.8 ft³/s, several days in October, Feb. 24-27.

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	5.8	6.4	6.2	6.2	1530	5.9	6.2	14300	3040	1080	7.0	6.5
2	5.8	6.2	6.2	6.2	1940	7.0	6.2	18500	3060	798	7.0	6.4
3	5.8	6.2	9.3	6.2	2070	6.9	6.2	11400	3070	650	7.0	6.4
4	6.1	6.2	10	6.3	2080	6.3	6.2	5980	3080	380	7.0	6.4
5	5.9	7.0	7.0	6.9	1940	6.4	6.2	5980	2260	7.8	7.0	10
6	5.9	6.9	6.6	6.7	708	6.2	6.2	5930	1070	7.8	7.2	12
7	5.8	6.3	6.4	8.0	6.2	6.2	7.1	5870	684	7.8	7.2	9.2
8	5.8	6.5	6.3	8.9	6.2	6.3	6.6	5080	671	7.8	7.2	8.4
9	5.8	7.0	6.2	9.2	6.2	4300	6.6	3710	276	7.8	7.1	7.2
10	6.6	6.5	6.2	10	6.2	13800	6.6	3220	7.8	7.8	7.0	7.2
11	6.6	6.3	6.2	6.6	6.2	13700	6.6	1770	7.8	7.8	7.0	7.2
12	6.2	6.2	6.5	6.8	6.2	14000	6.6	832	7.8	7.8	7.0	7.2
13	6.2	6.2	6.4	11	6.3	13400	7.2	843	7.9	7.8	7.0	7.2
14	6.2	6.2	6.4	9.9	6.2	13000	6.9	850	645	7.8	7.0	7.0
15	6.4	6.4	6.5	7.0	6.2	12700	7.0	856	2150	7.6	10	6.7
16	6.8	6.3	6.4	6.6	6.2	9850	7.0	863	1930	7.6	9.6	6.7
17	6.2	6.3	6.3	6.4	6.2	6420	7.0	372	861	7.6	6.9	6.8
18	6.2	6.2	6.3	6.4	6.1	5580	7.0	7.6	665	10	6.8	6.8
19	6.2	6.2	6.7	60	6.0	5490	7.0	7.7	656	9.5	6.8	6.8
20	6.2	6.2	7.8	6.2	6.0	5400	7.1	7.8	649	8.4	6.8	6.5
21	6.2	6.2	7.7	6.2	6.0	5600	7.0	7.8	639	8.3	6.8	6.2
22	6.2	6.2	7.8	6.3	6.0	5950	7.0	562	635	9.5	6.8	6.5
23	6.2	6.2	7.0	6.6	5.9	6130	6.8	1530	634	11	6.8	6.9
24	6.2	6.2	6.6	6.8	5.8	4530	6.8	2780	631	8.8	6.8	6.8
25	6.2	7.1	6.3	6.7	5.8	2090	6.8	3000	1080	8.0	6.8	6.7
26	6.2	6.4	6.2	7.3	5.8	1580	6.8	3000	1490	8.2	6.8	e6.7
27	6.2	6.2	6.2	7.7	5.8	486	6.9	3010	2410	7.8	6.8	e6.6
28	6.2	6.2	6.3	8.0	5.9	6.2	7.3	3020	2220	7.4	6.8	6.4
29	6.2	6.2	6.2	8.3	---	6.2	935	3020	1620	8.7	6.7	6.4
30	6.2	6.2	6.2	6.5	---	6.2	12500	3030	1240	7.0	6.6	6.4
31	6.2	---	6.2	649	---	6.2	---	3030	---	7.0	6.5	---
TOTAL	190.7	190.8	208.6	920.9	10401.4	144082.0	13623.9	112368.9	37397.3	3128.4	219.8	214.2
MEAN	6.15	6.36	6.73	29.7	371	4648	454	3625	1247	101	7.09	7.14
MAX	6.8	7.1	10	649	2080	14000	12500	18500	3080	1080	10	12
MIN	5.8	6.2	6.2	6.2	5.8	5.9	6.2	7.6	7.8	7.0	6.5	6.2
AC-FT	378	378	414	1830	20630	285800	27020	222900	74180	6210	436	425

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.1	40.5	234	647	830	738	448	523	257	41.8	7.71	8.30
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1966 - 1995			
ANNUAL TOTAL	2273.1				322946.9							
ANNUAL MEAN	6.23				885				314			
HIGHEST ANNUAL MEAN									1560			
LOWEST ANNUAL MEAN									4.62			
HIGHEST DAILY MEAN	10 Dec 4				18500 May 2				48200 Feb 19 1986			
LOWEST DAILY MEAN	5.8 Oct 1				5.8 Oct 1				.42 Nov 5 1966			
ANNUAL SEVEN-DAY MINIMUM	5.9 Oct 1				5.8 Feb 23				.68 Nov 1 1966			
INSTANTANEOUS PEAK FLOW					19000 May 2				56200 Jan 22 1970			
INSTANTANEOUS PEAK STAGE					22.56 May 2				35.29 Jan 22 1970			
ANNUAL RUNOFF (AC-FT)	4510				640600				227300			
10 PERCENT EXCEEDS	6.5				3000				73			
50 PERCENT EXCEEDS	6.2				6.9				6.7			
90 PERCENT EXCEEDS	5.9				6.2				4.6			

SACRAMENTO RIVER BASIN

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 approximately weekly except during the winter months. Water-stage recorder not operational nearly 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 in natural lake by rock-fill dam completed in 1855. Usable capacity, 1,505 acre-ft between gage 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 recorded, 1,559 acre-ft, June 6, 22, 1995, gage height, 27.9 ft; minimum recorded, no storage Dec. 1, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 1,559 acre-ft, June 6, 22, gage height, 27.9 ft; minimum recorded, no storage Dec. 1.

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 1994 TO SEPTEMBER 1995
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 Nov. 29, 1991, many days in 1992, and Oct. 23-27, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 617 acre-ft, Apr. 29, gage height, 25.89 ft; no storage Oct. 23-27.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	20	81	75	202	183	368	509	499	494	444	352
2	279	19	82	74	204	185	367	498	499	494	442	349
3	275	19	86	72	204	189	366	497	499	493	439	346
4	272	20	88	68	204	188	366	497	500	493	437	344
5	268	65	88	75	204	189	367	496	497	492	434	341
6	260	78	89	78	203	188	369	495	496	492	431	339
7	251	78	88	80	202	187	377	495	494	492	429	337
8	241	78	87	82	201	188	381	495	494	492	427	335
9	231	80	87	89	199	228	382	496	495	491	424	326
10	221	80	86	101	198	279	382	497	498	491	421	325
11	211	80	86	108	196	300	382	497	499	490	418	325
12	201	80	87	115	195	303	385	497	498	489	415	324
13	188	80	87	139	198	307	393	495	498	487	412	324
14	174	80	87	184	196	313	402	494	499	487	409	322
15	161	80	87	199	194	324	418	493	500	486	405	321
16	147	80	86	203	192	330	429	493	495	484	401	319
17	135	82	86	205	190	332	438	494	494	482	398	317
18	123	81	85	205	188	343	445	497	496	480	394	318
19	111	81	84	204	186	350	450	499	495	479	391	326
20	100	81	84	203	184	362	461	499	495	477	389	334
21	88	81	83	202	183	369	467	499	495	474	386	340
22	24	80	82	203	182	377	471	498	496	472	383	346
23	e0	80	81	202	182	380	474	497	497	470	381	352
24	e0	79	82	201	182	381	482	497	497	468	378	357
25	e0	82	81	201	182	379	497	497	497	464	375	359
26	e0	83	80	201	182	378	514	499	497	462	371	357
27	e0	83	79	199	182	376	538	498	497	459	368	355
28	20	83	79	197	182	374	576	499	496	456	365	351
29	19	82	78	196	---	373	617	499	495	453	362	349
30	19	81	77	196	---	371	511	499	495	450	359	346
31	18	---	77	198	---	369	---	500	---	447	355	---
MAX	284	83	89	205	204	381	617	509	500	494	444	359
MIN	0	19	77	68	182	183	366	493	494	447	355	317
a	1.18	5.13	4.86	11.09	10.38	17.81	22.44	22.00	21.84	20.38	17.33	16.99
b	-270	+63	-4	+121	-16	+187	+142	-11	-5	-48	-92	-9

CAL YR 1994 MAX 468 MIN 0 b +2

WTR YR 1995 MAX 617 MIN 0 b +58

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, 47,449 acre-ft, Aug. 9, gage height, 111.37 ft; minimum, 3,390 acre-ft, Oct. 1, gage height, 23.27 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3390	5237	5348	5402	e10350	12656	25036	30940	41584	41906	46501	41382
2	e3450	5237	5365	5399	e10400	12834	25156	32132	41507	41829	46724	40820
3	e3510	5221	5425	5393	e10450	13003	25281	32738	41612	41857	46911	40270
4	e3590	5215	5402	5390	e10500	13096	25487	33159	41801	41738	47075	39689
5	e3655	5280	5473	5425	e10550	13194	25756	33424	41556	41759	47202	38950
6	e3710	5342	5473	5462	e10600	13258	26079	33506	41006	41815	47314	38010
7	e3775	5351	5465	5528	e10640	13318	26508	33519	40620	41738	47396	37015
8	e3840	5348	5462	e5550	10681	13412	26811	33544	40373	41626	47434	36037
9	e3905	5379	5456	e5700	10767	14986	26992	33671	40497	41521	47449	35084
10	e3970	5385	5448	e6000	10851	16858	27138	33842	41034	41368	47441	34135
11	e4035	5373	5442	e6600	10931	17978	27320	34180	41500	41159	47411	33197
12	e4100	5382	5465	e7300	11012	18753	27614	34339	41717	40896	47366	32263
13	4169	5373	5465	e8000	11136	19304	28124	34326	41682	40675	47336	31346
14	4245	5368	5462	e8500	11205	19786	28427	34237	41570	40634	47202	30426
15	4327	5371	5459	e9000	11260	20402	28653	34116	41661	40737	46993	29523
16	4398	5376	5453	e9160	11302	20879	28832	33988	41110	40737	46784	28623
17	4473	5393	5448	e9330	11345	21281	28802	34084	40703	40703	46538	27733
18	4546	5393	5448	e9500	11384	21831	28534	34646	40903	40689	46301	26846
19	4614	5379	5448	e9570	11439	22343	28255	35446	40965	40889	46051	26461
20	4687	5376	5433	e9640	11498	22872	28017	36430	40986	41584	45801	26438
21	4756	5373	5430	e9710	11588	23317	27715	37498	41076	42236	45573	26421
22	4817	5368	5425	e9780	11690	23732	27420	38411	41444	42800	45332	26409
23	4880	5359	5419	e9850	11813	24005	27179	39213	41808	43261	45084	26392
24	4942	5351	5436	e9920	11958	24212	27079	39969	42165	43718	44843	26374
25	4995	5390	5425	e10000	12112	24364	27167	40332	42426	44106	44582	26363
26	5048	5393	5425	e10050	12270	24493	27320	40710	42644	44488	44322	26281
27	5105	5388	5422	e10100	12413	24583	27502	40931	42609	44829	44055	26125
28	5147	5379	5428	e10150	12536	24674	27679	41034	42383	45295	43646	25946
29	5198	5365	5422	e10200	---	24758	28284	41194	42144	45705	43097	25791
30	5178	5353	5416	e10250	---	24832	28880	41402	42004	45985	42524	25624
31	5206	---	5413	e10300	---	24917	---	41598	---	46257	41962	---
MAX	5206	5393	5473	10300	12536	24917	28880	41598	42644	46257	47449	41382
MIN	3390	5215	5348	5390	10350	12656	25036	30940	40373	40634	41962	25624
a	30.13	30.65	30.86		51.82	76.78	83.57	103.28	103.86	109.77	103.80	78.02
b	+1881	+147	+60	+4887	+2236	+12381	+3963	+12718	+406	+4253	-4295	-16338

CAL YR 1994 MAX 33753 MIN 2647 b -198

WTR YR 1995 MAX 47449 MIN 3390 b +22299

e Estimated.

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

b Change in contents, in acre-feet.

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft³/s, June 27, gage height, 5.24 ft; minimum daily, 7.4 ft³/s, Oct. 14-16.

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	15	9.1	8.4	7.7	15	17	33	251	1090	1130	61	323
2	14	9.0	8.4	7.9	14	17	33	249	1050	1100	61	321
3	14	9.1	8.5	7.9	14	17	33	252	1060	1090	61	320
4	14	9.0	8.6	7.9	14	17	33	252	1100	1070	62	318
5	14	9.1	8.4	7.9	14	17	34	252	1150	1040	63	410
6	15	9.8	8.2	8.0	14	17	34	253	867	1070	63	540
7	17	9.1	8.2	8.9	14	17	35	253	656	1070	64	538
8	17	9.0	8.2	8.2	15	18	35	254	511	1030	65	533
9	17	9.0	8.2	12	14	33	35	254	480	938	65	529
10	16	9.0	8.2	14	15	27	34	255	622	905	65	525
11	16	9.0	8.2	9.9	15	25	35	255	860	831	66	521
12	16	9.0	8.2	9.8	15	25	36	255	1040	748	67	517
13	11	9.0	8.2	16	15	26	37	255	1060	632	67	513
14	7.4	9.0	8.2	17	15	28	36	255	1040	580	104	508
15	7.4	9.0	8.1	13	15	30	36	255	1050	592	159	503
16	7.4	8.8	7.9	12	15	28	36	254	878	622	157	498
17	7.5	8.7	7.9	12	15	29	170	255	655	625	157	493
18	7.7	8.7	7.9	12	15	31	246	256	597	619	157	487
19	7.8	8.7	7.9	12	15	31	244	257	692	337	157	219
20	7.9	8.7	7.9	12	16	32	245	259	702	79	155	69
21	8.0	8.7	7.9	13	16	32	243	261	710	70	155	68
22	8.2	8.7	7.9	13	16	32	241	263	744	64	155	68
23	8.2	8.7	7.9	13	16	32	240	266	983	65	155	67
24	8.2	8.7	7.9	13	17	32	240	347	1140	66	153	67
25	8.3	8.7	7.9	13	17	32	240	461	1320	67	152	66
26	8.4	8.4	7.7	13	17	33	240	627	1360	69	152	106
27	8.4	8.4	7.7	13	17	33	240	766	1460	66	152	157
28	8.6	8.4	7.9	13	17	33	240	789	1370	57	249	156
29	8.7	8.4	7.9	12	---	33	244	864	1280	59	326	155
30	8.7	8.4	7.9	13	---	33	244	963	1170	61	324	154
31	8.7	---	7.7	15	---	33	---	1040	---	61	324	---
TOTAL	341.5	265.3	250.0	360.1	427	840	3872	11728	28697	16813	4173	9749
MEAN	11.0	8.84	8.06	11.6	15.2	27.1	129	378	957	542	135	325
MAX	17	9.8	8.6	17	17	33	246	1040	1460	1130	326	540
MIN	7.4	8.4	7.7	7.7	14	17	33	249	480	57	61	66
AC-FT	677	526	496	714	847	1670	7680	23260	56920	33350	8280	19340

11414100 FORDYCE CREEK BELOW FORDYCE DAM, NEAR CISCO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.9	35.5	26.1	29.3	58.1	64.8	61.3	165	358	288	213	145
MAX	428	236	173	105	328	353	315	627	957	542	403	497
(WY)	1976	1977	1982	1982	1984	1984	1986	1982	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	20442.1		77515.9									
ANNUAL MEAN	56.0		212							128		
HIGHEST ANNUAL MEAN										288		1982
LOWEST ANNUAL MEAN										49.3		1981
HIGHEST DAILY MEAN	230	Aug 5		1460	Jun 27				1790		Jun 12	1974
LOWEST DAILY MEAN	5.8	Sep 24		7.4	Oct 14				3.5		Jan 2	1979
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 1		7.6	Oct 14				3.5		Jan 2	1979
INSTANTANEOUS PEAK FLOW				1540	Jun 27				4660		Jul 9	1974
INSTANTANEOUS PEAK STAGE				5.24	Jun 27				7.90		Jul 9	1974
ANNUAL RUNOFF (AC-FT)	40550		153800						92480			
10 PERCENT EXCEEDS	202		755						407			
50 PERCENT EXCEEDS	15		33						28			
90 PERCENT EXCEEDS	7.9		8.2						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, 73,912 acre-ft, July 19, gage height, 203.76 ft; minimum, 15,673 acre-ft, Jan. 6, gage height, 89.04 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38559	31625	20956	17113	37749	24930	56427	69057	68253	68758	66067	43328
2	38870	30885	21581	17342	38195	25051	56032	67086	68213	68758	65372	42712
3	38624	30207	22431	17324	38146	25787	55763	66321	68246	68525	64706	42148
4	38171	29813	23311	16699	37947	25418	55846	66106	68538	68359	63950	41576
5	37754	30131	23701	16156	37650	24930	56181	65995	67783	68346	63204	41111
6	37330	30881	23433	15673	37305	24286	56691	65670	67099	69344	62437	40829
7	37109	30554	22924	16378	36913	23571	57579	65592	66687	70068	61649	40629
8	37163	29967	22431	17328	36522	22943	59430	65644	66412	70822	61599	40444
9	37222	29316	22215	20753	35796	33798	59430	65781	66634	70869	60768	40245
10	37001	28698	22200	27595	35459	43428	59307	66034	67388	70660	59924	40031
11	36585	28155	22655	28872	34695	46818	58570	66165	67988	70256	59079	39808
12	36216	28056	22439	29378	33939	47754	59006	66028	68074	70323	58204	39590
13	35791	27941	21847	35401	33331	48363	60351	65644	67968	70660	57325	39358
14	35589	27595	20994	43693	32544	49706	60569	65463	67691	71045	56469	39126
15	35627	27184	20019	44856	31811	51870	60389	65430	68306	71452	55685	38910
16	35685	26693	19160	44893	30952	52678	60017	65411	67244	72196	54914	38674
17	35459	26267	17611	44411	30016	53026	59701	65804	66752	73207	54160	39615
18	35028	25754	18963	43587	29181	54548	59535	66406	67237	73898	53399	40911
19	34628	25528	18634	42733	28491	55554	59313	66759	67185	73912	52637	41908
20	34217	25320	18004	42064	27885	56812	59110	66922	67106	73842	51864	42335
21	34052	24881	17430	41276	27459	57500	58785	66850	67191	73697	50959	42975
22	34066	24510	16876	40629	26995	57839	58540	66608	68041	73428	50181	43560
23	34141	24130	16928	40128	26743	58815	58687	66831	69051	73062	49414	43995
24	33925	24078	17300	39681	26576	59615	59350	66955	69672	72258	48631	44422
25	33513	24078	17600	39181	26325	60357	60575	67191	69914	71234	47848	45049
26	33099	23927	17919	38624	26076	60109	61875	67599	70102	70169	47059	45680
27	32705	23911	17810	37927	25746	59553	63477	67744	70041	69231	46256	46436
28	32502	23414	17331	37295	25295	58815	65683	67816	69645	68551	45551	47186
29	32567	22803	16789	36776	---	58210	67447	68021	69304	67994	45028	47942
30	32636	22246	16564	36328	---	57567	67047	68253	68997	67415	44449	48686
31	32287	---	16858	37626	---	56818	---	68492	---	66674	43863	---
MAX	38870	31625	23701	44893	38195	60357	67447	69057	70102	73912	66067	48686
MIN	32287	22246	16564	15673	25295	22943	55763	65411	66412	66674	43863	38674
a	131.04	107.20	92.49	142.25	114.90	177.31	193.58	195.77	196.53	193.01	154.42	163.28
b	-6217	-10041	-5388	+20768	-12331	+31523	+10229	+1445	+505	-2323	-22811	+4823
c	8840	14540	11920	24910	24080	30640	39580	43900	38990	42970	40210	17640
d	2960	615	1630	5340	7960	8780	9710	10300	10170	7480	3370	3400

CAL YR 1994 MAX 65385 MIN 15385 b +1679 c 199400 d 30530

WTR YR 1995 MAX 73912 MIN 15673 b +10182 c 338200 d 71720

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	386	376	25	760	770	826	808	824	820	784	788
2	5.6	383	245	24	785	808	821	797	823	823	784	788
3	150	381	11	185	790	827	825	822	824	822	784	789
4	278	222	11	434	800	828	830	823	823	822	783	787
5	273	12	242	428	818	825	830	822	823	822	785	786
6	254	151	388	422	822	824	830	825	819	824	786	787
7	149	388	384	323	829	827	767	825	819	825	788	787
8	5.7	451	382	199	824	823	779	826	823	824	383	784
9	5.7	472	224	67	824	712	800	826	824	823	787	784
10	156	468	4.5	63	826	651	813	827	826	824	786	794
11	254	419	4.5	496	820	733	812	827	824	826	788	795
12	253	202	238	614	816	814	808	826	823	825	788	793
13	252	199	384	512	815	815	772	825	793	823	789	794
14	146	319	557	385	813	823	795	824	817	824	791	795
15	7.5	373	638	647	824	829	795	824	819	820	790	792
16	7.6	370	568	727	828	832	794	826	823	819	789	794
17	170	368	214	774	823	833	792	827	820	803	791	e215
18	251	362	211	776	823	812	797	825	820	793	790	e3.0
19	250	214	346	761	826	819	810	820	820	806	791	e3.0
20	249	214	453	726	822	798	817	823	819	810	791	e3.0
21	138	319	447	743	827	827	816	825	823	806	791	e3.0
22	6.0	264	422	737	822	550	818	824	824	805	794	e26
23	6.1	269	142	715	820	332	816	824	826	787	794	93
24	160	109	4.7	715	825	158	819	825	806	779	793	114
25	249	109	4.7	725	824	120	823	825	821	777	793	e3.0
26	248	154	4.7	726	826	643	824	826	825	779	792	e2.0
27	249	106	223	721	827	809	825	828	824	782	791	.00
28	143	320	413	717	825	828	825	828	822	781	791	.00
29	7.1	384	426	726	---	828	803	824	821	783	790	.00
30	7.3	380	255	751	---	826	817	824	820	780	791	.00
31	230	---	18	754	---	824	---	826	---	780	789	---
TOTAL	4566.3	8768	8241.1	16618	22884	22748	24299	25527	24618	25017	24057	13102.00
MEAN	147	292	266	536	817	734	810	823	821	807	776	437
MAX	278	472	638	776	829	833	830	828	826	826	794	795
MIN	5.6	12	4.5	24	760	120	767	797	793	777	383	.00
AC-FT	9060	17390	16350	32960	45390	45120	48200	50630	48830	49620	47720	25990
a	8210	17280	16940	35790	45380	43700	48170	48550	46570	47280	46320	24490
b	1340	659	621	1200	680	918	940	581	432	1140	1120	466

e Estimated.

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	405	425	449	461	471	511	593	624	616	602	566	367
MAX	817	824	835	837	833	838	837	842	844	820	804	661
(WY)	1983	1984	1984	1984	1984	1984	1984	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1965 - 1995			
ANNUAL TOTAL	111394.6				220445.40							
ANNUAL MEAN	305				604				508			
HIGHEST ANNUAL MEAN									796			
LOWEST ANNUAL MEAN									101			
HIGHEST DAILY MEAN	730				833				860			
LOWEST DAILY MEAN	1.2				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	1.2				17				.00			
ANNUAL RUNOFF (AC-FT)	221000				437300				368000			
ANNUAL DISCHARGE (AC-FT) a	213300				428700							
ANNUAL DISCHARGE (AC-FT) b	10550				10100							
10 PERCENT EXCEEDS	606				825				824			
50 PERCENT EXCEEDS	289				789				557			
90 PERCENT EXCEEDS	4.2				108				31			

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	42	19	38	137	144	144	3.4	156	152	68	64
2	62	41	19	39	143	144	141	2.7	157	152	70	63
3	61	43	22	38	144	142	141	39	157	152	70	63
4	60	44	21	38	143	138	142	149	157	152	69	63
5	59	40	18	37	142	137	142	160	157	152	69	65
6	59	17	38	37	142	137	142	160	154	152	69	65
7	59	2.0	50	36	142	136	134	160	153	153	69	63
8	60	2.0	38	33	142	138	123	160	151	153	69	65
9	60	1.9	36	21	143	116	123	160	151	153	68	66
10	60	1.9	37	24	144	134	134	159	151	153	68	64
11	55	1.9	38	26	143	116	144	159	151	153	68	66
12	49	1.9	38	34	143	138	144	159	152	153	68	67
13	49	1.9	38	28	142	139	142	159	152	153	68	65
14	48	1.9	40	28	142	139	142	158	152	152	68	62
15	48	1.9	40	25	140	138	144	159	153	152	68	62
16	48	1.8	39	33	141	140	145	134	153	152	67	62
17	48	1.8	40	73	139	140	144	134	153	118	66	62
18	47	.77	41	126	138	141	143	156	153	100	66	63
19	47	.00	39	134	127	140	142	157	152	114	65	65
20	47	.00	37	133	139	139	142	156	151	76	65	65
21	47	.00	37	133	142	133	144	156	151	70	64	65
22	47	1.4	37	132	142	134	144	156	151	70	64	65
23	48	27	37	132	142	68	144	155	151	83	61	65
24	48	28	39	132	142	101	144	155	152	84	64	66
25	45	24	39	132	141	102	144	155	152	70	63	67
26	43	24	39	132	141	107	144	155	152	70	63	65
27	43	25	39	131	142	115	144	155	152	69	64	65
28	43	24	38	131	144	119	144	156	152	70	64	65
29	43	21	38	131	---	135	144	155	152	70	63	64
30	43	19	37	130	---	145	51	155	152	69	64	64
31	43	---	38	130	---	142	---	155	---	70	65	---
TOTAL	1581	442.07	1106	2427	3952	4037	4145	4392.1	4583	3642	2057	1931
MEAN	51.0	14.7	35.7	78.3	141	130	138	142	153	117	66.4	64.4
MAX	62	44	50	134	144	145	145	160	157	153	70	67
MIN	43	.00	18	21	127	68	51	2.7	151	69	61	62
AC-FT	3140	877	2190	4810	7840	8010	8220	8710	9090	7220	4080	3830
a	3120	458	1870	3410	3620	3630	4240	2130	5330	5060	3840	3610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	81.0	69.4	70.6	77.5	78.8	80.4	72.1	105	109	96.6	92.7	90.1																			
MAX	158	157	157	155	151	147	146	156	163	160	155	152																			
(WY)	1966	1966	1966	1984	1984	1980	1967	1980	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																			
(WY)	1978	1995	1978	1991	1988	1977	1979	1977	1977	1977	1977	1977																			

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1965 - 1995

ANNUAL TOTAL	17301.07	34295.17	
ANNUAL MEAN	47.4	94.0	85.4
HIGHEST ANNUAL MEAN			124
LOWEST ANNUAL MEAN			47.2
HIGHEST DAILY MEAN	73	160	165
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.82	.82	.00
ANNUAL RUNOFF (AC-FT)	34320	68020	61830
ANNUAL DISCHARGE (AC-FT) a	31650	40330	
10 PERCENT EXCEEDS	69	153	142
50 PERCENT EXCEEDS	45	70	79
90 PERCENT EXCEEDS	33	28	40

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 178 ft³/s, May 1, gage height, 2.93 ft; minimum daily, 1.4 ft³/s, July 20.

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	5.0	5.1	7.2	2.6	25	3.4	30	158	33	35	2.1	3.8
2	5.0	5.3	7.4	2.6	20	8.1	31	156	33	35	2.2	3.8
3	5.0	5.3	9.9	2.6	19	10	32	126	33	35	2.2	3.8
4	5.0	5.2	8.4	2.7	19	8.4	32	38	33	35	2.1	3.8
5	5.0	6.4	8.0	2.5	19	8.7	32	30	33	35	2.1	3.8
6	5.0	5.8	8.8	2.8	19	8.5	32	30	33	35	2.1	3.9
7	5.0	4.5	10	4.4	19	8.3	38	30	33	35	2.2	4.0
8	5.0	6.1	9.5	5.1	19	8.3	43	30	33	35	2.3	4.0
9	5.0	5.7	6.4	7.6	17	19	46	30	33	35	2.4	4.0
10	5.1	5.9	3.2	8.1	16	34	37	30	33	35	2.4	4.0
11	5.3	5.9	2.9	2.9	16	30	30	30	33	35	2.9	4.0
12	5.3	5.9	3.0	4.7	16	35	30	30	33	35	3.5	4.0
13	5.3	5.6	3.0	10	16	36	30	30	33	35	3.5	4.0
14	5.3	5.6	3.0	14	16	35	30	30	33	35	3.5	4.0
15	5.1	5.6	3.0	15	16	35	31	30	34	35	3.6	4.0
16	5.0	5.6	3.0	2.5	16	35	31	26	34	35	3.6	4.0
17	5.0	5.6	3.0	16	16	35	31	28	33	18	3.6	4.0
18	5.0	5.6	3.1	36	15	36	31	34	33	21	3.6	4.0
19	5.0	5.6	2.9	32	14	35	31	33	34	22	3.6	4.0
20	5.0	5.6	2.9	32	13	39	31	33	35	1.4	3.6	4.0
21	5.0	5.6	2.9	32	12	38	31	33	35	1.5	3.6	4.0
22	5.0	6.6	2.9	32	12	33	31	33	35	1.6	3.6	4.0
23	5.0	9.4	2.7	32	12	19	31	33	35	1.6	3.6	4.0
24	5.0	7.7	2.8	32	10	26	31	33	35	1.5	3.5	4.0
25	5.0	7.6	2.8	31	9.2	26	31	33	35	1.5	3.5	3.9
26	5.0	7.6	2.7	31	9.2	27	31	33	35	1.5	3.5	3.8
27	5.0	7.7	2.9	30	6.6	28	33	33	35	1.8	3.5	3.8
28	5.0	7.9	3.1	31	3.4	34	36	33	35	2.1	3.5	3.8
29	5.0	7.8	3.0	31	---	36	37	33	35	2.1	3.5	3.8
30	5.0	7.2	2.8	30	---	31	114	33	35	2.1	3.5	3.9
31	5.0	---	2.6	31	---	30	---	33	---	2.1	3.7	---
TOTAL	156.4	187.0	139.8	549.1	420.4	795.7	1065	1325	1015	641.8	96.1	117.9
MEAN	5.05	6.23	4.51	17.7	15.0	25.7	35.5	42.7	33.8	20.7	3.10	3.93
MAX	5.3	9.4	10	36	25	39	114	158	35	35	3.7	4.0
MIN	5.0	4.5	2.6	2.5	3.4	3.4	30	26	33	1.4	2.1	3.8
AC-FT	310	371	277	1090	834	1580	2110	2630	2010	1270	191	234

SACRAMENTO RIVER BASIN

11414210 SOUTH YUBA RIVER BELOW SPAULDING NO. 2 POWERPLANT, NEAR EMIGRANT GAP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.98	3.91	3.24	4.26	10.1	18.5	22.5	22.7	25.2	5.47	4.11	4.02
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1986 - 1995

ANNUAL TOTAL	1574.4	6509.2	
ANNUAL MEAN	4.31	17.8	10.6
HIGHEST ANNUAL MEAN			41.3
LOWEST ANNUAL MEAN			2.05
HIGHEST DAILY MEAN	10	Dec 7	158
LOWEST DAILY MEAN	1.6	Mar 26	1.4
ANNUAL SEVEN-DAY MINIMUM	1.9	May 8	1.5
INSTANTANEOUS PEAK FLOW			178
INSTANTANEOUS PEAK STAGE			2.93
ANNUAL RUNOFF (AC-FT)	3120	12910	7700
10 PERCENT EXCEEDS	6.5	35	31
50 PERCENT EXCEEDS	4.5	8.8	3.5
90 PERCENT EXCEEDS	2.3	2.9	1.6

SACRAMENTO RIVER BASIN

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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, 20,400 ft³/s, Feb. 18, 1986, gage height, 19.95 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,440 ft³/s, May 1, gage height, 13.36 ft; minimum daily, 5.6 ft³/s, Sept. 29, 30.

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	6.6	7.0	e12	9.2	54	12	49	5030	2650	1810	6.1	6.4
2	6.2	6.1	e50	8.7	42	41	51	3420	2290	1680	6.5	6.2
3	6.2	6.0	e51	8.6	38	84	54	1560	2370	1600	6.5	6.2
4	6.3	6.0	e49	8.8	36	36	57	926	2490	1560	6.4	6.2
5	6.6	20	e48	8.8	35	42	57	826	2590	1450	6.2	6.2
6	6.3	36	e33	12	33	29	57	619	1650	992	5.9	6.1
7	6.2	19	e24	e36	34	23	113	444	1140	840	5.8	6.1
8	5.9	13	e21	e59	35	21	93	425	833	1040	5.7	6.1
9	5.9	12	e20	e52	30	234	77	471	735	1080	5.9	6.1
10	5.9	12	e12	e100	27	189	62	573	1070	1100	5.8	6.2
11	5.9	11	e10	e45	26	121	51	825	1750	1010	6.0	6.2
12	5.8	12	e10	e45	25	79	52	722	2160	577	6.9	6.2
13	5.8	10	e10	e45	e26	84	72	489	2130	258	6.8	6.1
14	5.8	9.9	e9.4	e46	26	79	57	317	2020	264	6.7	5.9
15	5.7	9.8	e8.8	e39	23	77	54	258	2360	272	6.6	6.0
16	5.7	9.7	e9.0	e32	23	57	51	230	1970	170	6.7	6.0
17	5.7	10	e9.5	e22	31	51	49	342	1180	33	6.5	6.1
18	5.8	9.3	e10	45	28	64	46	743	1080	153	6.3	6.0
19	5.8	9.0	e10	46	26	62	44	1250	1380	243	6.2	5.9
20	5.8	9.4	e11	44	27	169	46	1610	1270	12	6.1	5.9
21	5.7	10	11	43	26	70	46	1680	1230	9.7	6.1	5.9
22	5.7	11	11	49	22	57	46	1520	1130	9.2	6.1	5.9
23	5.7	e12	10	58	21	34	44	1150	1590	8.5	6.3	5.8
24	5.7	12	12	59	20	37	46	1240	2140	8.2	6.6	5.7
25	5.8	13	12	58	18	36	51	1260	2530	8.3	6.7	5.8
26	5.8	13	12	53	18	36	47	1590	2620	7.1	6.7	6.0
27	5.8	13	12	50	15	37	50	1910	2760	7.0	6.7	6.4
28	5.8	13	13	52	12	46	117	1910	2570	7.2	6.7	5.8
29	5.7	13	12	53	---	51	1660	2070	2290	6.6	6.7	5.6
30	5.7	12	11	54	---	47	2080	2280	2000	6.2	6.7	5.6
31	5.8	---	9.7	62	---	47	---	2510	---	5.9	6.7	---
TOTAL	183.1	359.2	543.4	1303.1	777	2052	5379	40200	55978	16227.9	197.6	180.6
MEAN	5.91	12.0	17.5	42.0	27.7	66.2	179	1297	1866	523	6.37	6.02
MAX	6.6	36	51	100	54	234	2080	5030	2760	1810	6.9	6.4
MIN	5.7	6.0	8.8	8.6	12	12	44	230	735	5.9	5.7	5.6
AC-FT	363	712	1080	2580	1540	4070	10670	79740	111000	32190	392	358

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.22	46.8	47.6	54.9	81.1	67.5	72.8	282	427	71.9	6.08	6.27
MAX	18.8	683	685	583	1626	1304	620	1593	2613	822	9.44	10.3
(WY)	1972	1984	1982	1970	1986	1986	1982	1982	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1966 - 1995			
ANNUAL TOTAL	3138.5				123380.9							
ANNUAL MEAN	8.60				338				100			
HIGHEST ANNUAL MEAN									369			
LOWEST ANNUAL MEAN									4.35			
HIGHEST DAILY MEAN	51				Dec 3				18000			
LOWEST DAILY MEAN	5.3				Apr 22				2.1			
ANNUAL SEVEN-DAY MINIMUM	5.5				Apr 16				2.1			
INSTANTANEOUS PEAK FLOW					6440				May 1			
INSTANTANEOUS PEAK STAGE					13.36				May 1			
ANNUAL RUNOFF (AC-FT)	6230				244700				72600			
10 PERCENT EXCEEDS	12				1560				62			
50 PERCENT EXCEEDS	6.6				26				7.4			
90 PERCENT EXCEEDS	5.7				5.9				5.2			

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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.

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.

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.

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 1994 TO SEPTEMBER 1995
DAILY INSTANTANEOUS VALUES[illegible]

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 estimated daily discharges. 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]

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[illegible]

SACRAMENTO RIVER BASIN

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.0	---	---	---	3.0	2.9	3.0	2.9	2.9	2.9	2.9
2	2.8	3.1	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
3	2.8	3.0	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
4	2.8	3.0	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
5	2.8	3.0	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
6	2.8	3.1	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
7	2.8	3.2	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
8	2.8	3.2	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
9	2.8	3.2	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
10	2.8	3.2	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
11	2.8	3.2	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9
12	2.8	3.2	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
13	2.8	---	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
14	2.8	---	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
15	2.8	---	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
16	2.8	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
17	2.8	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
18	2.8	---	---	---	2.9	3.0	2.9	2.9	2.9	2.9	2.9	2.9
19	2.8	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
20	2.8	---	---	---	2.9	3.0	2.9	2.9	2.9	2.9	2.9	2.9
21	2.8	---	---	---	2.9	2.9	3.0	2.9	2.9	2.9	2.9	2.9
22	2.8	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
23	2.8	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
24	2.8	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
25	2.8	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
26	2.8	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9	3.0
27	2.8	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9	3.0
28	2.8	---	---	---	3.0	2.9	2.9	2.9	2.9	2.9	2.9	3.0
29	2.8	---	---	---	---	2.9	3.0	2.9	2.9	2.9	2.9	3.0
30	2.8	---	---	---	---	2.9	3.0	2.9	2.9	2.9	2.9	3.0
31	2.8	---	---	---	---	2.9	---	2.9	---	2.9	2.9	---
TOTAL	86.8	---	---	---	---	91.0	87.3	90.0	87.0	89.9	89.9	87.5
MEAN	2.80	---	---	---	---	2.94	2.91	2.90	2.90	2.90	2.90	2.92
MAX	2.8	---	---	---	---	3.0	3.0	3.0	2.9	2.9	2.9	3.0
MIN	2.8	---	---	---	---	2.9	2.9	2.9	2.9	2.9	2.9	2.9
AC-FT	172	---	---	---	---	180	173	179	173	178	178	174

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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.

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1966-86 available in files of the U.S. Geological Survey.

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.

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 1994 TO SEPTEMBER 1995
DAILY INSTANTANEOUS VALUES[illegible]

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s, Jan. 16, gage height, 1.35 ft; minimum daily, 3.5 ft³/s, Oct. 6, 8.

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	4.2	4.6	4.7	6.5	14	9.5	8.8	13	8.2	6.1	6.1	5.2
2	4.2	4.5	4.8	6.5	14	9.5	8.8	8.8	7.6	6.1	6.1	5.2
3	4.1	4.5	4.8	7.0	14	9.5	8.8	8.8	7.6	6.1	6.1	5.2
4	3.8	4.4	4.8	7.1	14	8.8	8.8	8.8	7.6	6.1	6.1	5.2
5	4.0	4.5	4.8	7.1	14	8.8	8.8	8.2	7.6	6.1	6.1	5.2
6	3.5	4.5	4.8	7.1	14	8.8	8.8	8.2	7.6	6.1	6.1	5.2
7	3.6	4.5	5.0	7.1	14	8.8	8.8	8.2	7.6	6.1	6.1	5.2
8	3.5	4.5	5.2	7.1	15	8.8	8.8	8.2	7.6	6.1	6.1	5.2
9	3.6	4.4	5.2	8.2	15	8.8	8.8	8.2	7.6	6.1	6.1	5.2
10	3.6	4.5	5.2	12	15	10	8.8	8.2	7.6	6.1	5.6	5.2
11	3.6	4.5	5.2	13	15	8.8	8.8	8.2	7.6	6.1	5.6	5.2
12	3.9	4.5	5.2	13	15	8.8	8.8	8.2	7.6	6.1	5.6	5.2
13	4.2	4.5	5.2	14	15	8.8	7.6	8.2	7.6	6.1	5.6	4.5
14	4.2	4.5	5.2	14	15	8.2	7.6	8.2	7.0	6.1	5.6	4.1
15	4.2	4.5	5.7	13	12	8.2	7.6	8.2	7.0	6.1	5.2	4.1
16	4.3	4.5	6.1	14	9.5	8.2	7.6	8.2	7.0	6.1	5.2	4.0
17	4.3	4.1	6.1	15	9.4	8.2	7.6	8.2	7.0	6.1	5.2	4.0
18	4.2	4.1	6.1	15	9.5	7.6	7.6	8.2	7.0	6.1	5.2	4.0
19	4.2	4.2	6.1	14	9.5	7.6	7.6	8.2	6.5	6.1	5.2	4.0
20	4.1	4.2	6.1	14	9.5	7.6	7.6	8.2	6.1	6.1	5.2	4.0
21	4.2	4.3	6.1	14	9.5	8.2	7.6	8.2	6.1	6.1	5.2	4.0
22	4.3	4.4	6.1	14	9.5	8.2	7.6	8.2	6.1	6.1	5.2	4.0
23	4.4	4.4	6.1	14	9.7	7.6	7.6	8.2	6.1	6.1	5.2	4.0
24	4.4	4.4	6.5	14	10	8.2	7.6	8.2	6.1	6.1	5.2	4.0
25	4.5	4.4	6.5	14	10	8.2	7.6	8.2	6.1	5.6	5.2	4.0
26	4.5	4.4	6.5	14	10	8.8	7.6	8.2	6.1	5.6	5.2	4.0
27	4.5	4.5	6.6	14	10	8.8	7.6	8.2	6.1	5.6	5.2	4.0
28	4.5	4.5	6.5	14	10	8.8	7.6	8.2	6.1	5.6	5.2	4.0
29	4.5	4.5	6.5	14	---	8.8	7.6	8.2	6.1	5.6	5.2	4.0
30	4.6	4.6	6.5	14	---	8.8	7.6	8.2	6.1	5.6	5.3	4.0
31	4.6	---	6.5	14	---	8.8	---	8.2	---	6.1	5.4	---
TOTAL	128.3	132.9	176.7	368.7	341.1	266.5	242.4	260.8	208.0	186.1	171.6	135.1
MEAN	4.14	4.43	5.70	11.9	12.2	8.60	8.08	8.41	6.93	6.00	5.54	4.50
MAX	4.6	4.6	6.6	15	15	10	8.8	13	8.2	6.1	6.1	5.2
MIN	3.5	4.1	4.7	6.5	9.4	7.6	7.6	8.2	6.1	5.6	5.2	4.0
AC-FT	254	264	350	731	677	529	481	517	413	369	340	268

11414470 CANYON CREEK BELOW SAWMILL LAKE, NEAR GRANITEVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.7	15.3	18.8	15.1	8.77	20.5	20.3	16.7	5.30	4.81	8.24	16.4
MAX	33.6	37.1	61.4	56.7	17.6	95.1	96.0	88.6	7.62	6.50	23.0	51.2
(WY)	1992	1991	1990	1990	1990	1993	1993	1993	1993	1993	1994	1992
MIN	3.72	3.14	3.83	3.73	4.20	4.23	3.40	2.68	3.42	3.10	3.78	4.17
(WY)	1991	1993	1992	1992	1992	1994	1990	1989	1992	1990	1992	1990

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1989 - 1995

ANNUAL TOTAL	2805.7	2618.2	
ANNUAL MEAN	7.69	7.17	13.6
HIGHEST ANNUAL MEAN			28.8
LOWEST ANNUAL MEAN			7.17
HIGHEST DAILY MEAN	34	Aug 31	15
LOWEST DAILY MEAN	2.9	May 19	3.5
ANNUAL SEVEN-DAY MINIMUM	2.9	May 18	3.6
INSTANTANEOUS PEAK FLOW			17
INSTANTANEOUS PEAK STAGE			1.35
ANNUAL RUNOFF (AC-FT)	5570	5190	9880
10 PERCENT EXCEEDS	28	12	54
50 PERCENT EXCEEDS	4.4	6.1	4.8
90 PERCENT EXCEEDS	3.8	4.2	3.4

11414690 JACKSON LAKE NEAR SIERRA CITY, CA

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.

DRAINAGE AREA.--0.65 mi².

PERIOD OF RECORD.--October 1986 to current year. Unpublished records for water years 1965-86 available in files of U.S. Geological Survey.

GAGE.--Staff gage, observed approximately weekly except during the winter months. Datum of gage is 6,570 ft above sea level (levels by Nevada Irrigation District).

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 1994 TO SEPTEMBER 1995
DAILY INSTANTANEOUS VALUES[illegible]

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.4	1.3	1.1	2.1	2.0	---	1.9	2.0	1.8	.92	.99
2	1.8	1.4	1.3	1.1	2.2	2.0	---	1.9	2.0	1.8	.92	.98
3	1.8	1.4	1.3	1.1	2.2	2.0	---	1.9	2.0	1.8	.92	.96
4	1.8	1.4	1.3	1.1	2.2	2.0	---	1.9	2.0	1.8	.92	.96
5	1.8	1.4	1.3	1.1	2.2	2.0	---	1.9	2.0	1.8	.92	.99
6	1.8	1.5	1.3	1.1	2.2	2.0	---	2.0	2.0	1.8	.92	.99
7	1.8	1.5	1.3	1.1	2.1	2.0	---	2.0	2.0	1.8	.92	.99
8	1.8	1.4	1.3	1.1	2.1	2.1	---	2.0	2.0	1.8	.92	.99
9	1.8	1.4	1.3	1.2	2.1	2.5	---	2.0	1.9	1.8	.92	.99
10	1.8	1.4	1.3	1.4	2.1	2.7	---	2.0	2.0	1.8	.92	.99
11	1.8	1.4	1.3	1.5	2.1	2.9	---	2.0	2.0	1.8	.95	.99
12	1.7	1.4	1.3	1.5	2.1	2.9	2.1	2.0	2.0	1.8	.98	.99
13	1.7	1.4	1.3	1.6	2.1	2.9	1.6	2.0	2.0	1.8	.99	.99
14	1.7	1.4	1.3	1.9	2.1	2.9	1.6	2.0	2.0	1.8	.97	.99
15	1.7	1.3	1.3	2.1	2.1	2.9	1.6	2.0	2.0	1.8	.96	.99
16	1.7	1.3	1.3	2.1	2.1	2.9	1.6	2.0	2.0	1.8	.96	.99
17	1.7	1.3	1.3	2.1	2.1	2.9	1.6	2.0	1.9	1.8	.99	.99
18	1.6	1.3	1.3	2.1	2.1	---	1.7	2.0	1.9	1.7	.99	.99
19	1.6	1.3	1.3	2.1	2.1	---	1.7	2.1	1.9	1.7	.99	.97
20	1.6	1.3	1.3	2.1	2.1	---	1.7	2.1	1.9	1.7	.99	.96
21	1.6	1.3	1.3	2.1	2.1	---	1.7	2.1	1.9	1.7	.99	.96
22	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	1.7	.99	.96
23	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	1.7	.99	.96
24	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	1.7	.99	.96
25	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	1.2	.99	.96
26	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	.91	.99	.96
27	1.5	1.3	1.2	2.1	2.0	---	1.7	2.1	1.9	.92	.99	.96
28	1.5	1.3	1.1	2.1	2.0	---	1.7	2.0	1.9	.92	.99	.96
29	1.4	1.3	1.1	2.1	---	---	1.7	2.1	1.9	.92	.99	.96
30	1.4	1.3	1.1	2.1	---	---	1.7	2.1	1.9	.92	.99	.96
31	1.4	---	1.1	2.1	---	---	---	2.1	---	.92	.99	---
TOTAL	51.2	40.6	38.9	53.6	58.6	---	---	62.7	58.5	49.21	29.86	29.28
MEAN	1.65	1.35	1.25	1.73	2.09	---	---	2.02	1.95	1.59	.96	.98
MAX	1.9	1.5	1.3	2.1	2.2	---	---	2.1	2.0	1.8	.99	.99
MIN	1.4	1.3	1.1	1.1	2.0	---	---	1.9	1.9	.91	.92	.96
AC-FT	102	81	77	106	116	---	---	124	116	98	59	58

CAL YR 1994 TOTAL 588.5 MEAN 1.61 MAX 2.2 MIN 1.1 AC-FT 1170

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 Sierra 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, 56,700 acre-ft, July 27, elevation, 5,548.70 ft; minimum, 22,600 acre-ft, Mar. 8, elevation, 5,497.38 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35000	34300	32200	29300	e32600	23200	31400	e30300	38200	49900	55700	46800
2	35100	34200	32200	29100	e32400	23200	31000	e31900	39000	50100	55400	46500
3	35200	34100	32400	29000	e32200	23400	30700	32100	39700	50300	55200	46300
4	35300	34000	32500	28900	e31900	23400	30400	32200	40500	50400	54900	46000
5	35500	34200	32400	28800	e31600	23400	30200	32300	41000	50500	54600	45800
6	35600	34300	32300	28700	31400	23100	30100	32200	40900	50600	54300	45900
7	35700	34300	32200	28600	31000	22900	30400	32000	40700	50700	53900	46000
8	35800	34200	32100	28600	30700	22600	30500	31800	40300	50700	53600	46000
9	35900	34200	32100	28900	30300	26600	e30300	31700	40100	50600	53300	46100
10	35900	34000	32000	e29600	29900	30100	30000	31600	40200	50900	53200	46100
11	36000	33900	31900	e30300	29500	31200	29700	31700	40500	51300	53000	46200
12	36100	33700	31900	e32400	29100	31300	29600	31600	40900	51800	52800	46200
13	36200	33600	31800	e34900	28800	31400	29800	31400	41200	52400	52700	46300
14	36300	33400	31700	e35900	28300	31700	29600	31000	41700	52800	52500	46300
15	36300	33300	31600	e36700	27800	32300	29200	30700	43100	53200	52400	46400
16	36200	33200	31500	e37300	27300	32300	28800	30400	43500	53700	52100	46400
17	36100	33100	31300	e37600	26900	32300	28300	30200	43700	54100	51800	46400
18	36000	33000	31200	e37500	26400	32600	27800	30400	44100	54500	51400	46400
19	35900	33000	31100	e37000	25900	32800	27200	30700	44500	54700	51100	46500
20	35700	32900	30900	e36400	25400	33200	e27200	31100	44700	54900	50700	46700
21	35600	32800	30800	e35900	25100	33500	e26700	31500	44900	55000	50300	46700
22	35500	32700	30700	e35600	24800	33900	e26000	31800	45200	55100	49900	46800
23	35300	32700	30500	e35400	24600	34200	e25400	32100	45700	55100	49600	46800
24	35200	32600	30400	e35200	24400	34300	e25100	32600	46400	55500	49200	46900
25	35100	32700	30300	e35000	24200	34100	e25000	33100	47100	56000	48800	46900
26	34900	32600	30100	e34800	23900	33700	e25000	33700	47800	56400	48500	46900
27	34800	32600	30000	e34400	23700	33300	e25000	34400	48500	56700	48100	47000
28	34700	32500	29900	e34000	23500	33000	e25500	35000	49000	56600	47800	47000
29	34600	32400	29700	e33600	---	32500	e26600	35700	49400	56400	47500	47100
30	34500	32300	29600	e33100	---	32100	e27700	36500	49700	56200	47300	47100
31	34300	---	29400	e32800	---	31700	---	37400	---	56000	47000	---
MAX	36300	34300	32500	37600	32600	34300	31400	37400	49700	56700	55700	47100
MIN	34300	32300	29400	28600	23500	22600	25000	30200	38200	49900	47000	45800
a	5517.34	5513.97	5509.10		5498.99	5512.99		5522.08	5539.83	5547.77	5536.12	5536.22
b	-800	-2000	-2900	+3400	-9300	+8200	-4000	+9700	+12300	+6300	-9000	+100

CAL YR 1994 MAX 53900 MIN 29400 b -13400

WTR YR 1995 MAX 56700 MIN 22600 b +12000

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	56	60	95	185	229	222	17	62	179	289	278
2	68	50	60	95	206	201	228	4.1	75	189	289	277
3	69	51	63	95	210	63	232	2.8	84	197	288	278
4	69	52	68	95	219	147	232	47	94	202	288	279
5	68	55	87	95	224	168	225	99	136	205	287	279
6	72	55	105	120	230	213	206	99	205	213	286	248
7	75	53	84	149	233	223	77	110	281	219	290	280
8	75	51	49	148	233	220	63	155	306	225	287	281
9	75	84	59	152	235	35	141	174	308	229	287	281
10	76	96	59	36	237	8.9	189	163	307	163	287	281
11	76	96	59	35	240	5.5	223	158	282	170	289	280
12	76	96	61	60	243	3.9	193	145	240	176	293	280
13	76	96	65	42	237	5.5	150	147	248	202	293	280
14	76	96	88	8.4	237	7.1	173	172	202	259	293	280
15	76	96	99	3.3	247	5.2	191	180	85	242	271	280
16	76	96	90	61	256	63	209	179	92	244	294	280
17	76	75	96	131	261	150	227	180	122	241	295	280
18	75	52	96	140	261	177	228	168	112	232	295	280
19	75	52	96	204	261	167	229	140	106	238	294	278
20	76	52	96	223	261	76	228	106	129	249	293	176
21	76	52	96	223	233	86	229	92	137	257	293	271
22	75	52	101	226	228	83	230	92	147	254	297	271
23	75	53	103	229	229	99	229	107	146	250	300	271
24	75	52	101	229	230	109	230	124	146	66	300	269
25	87	53	101	229	230	173	182	93	146	e.50	299	266
26	76	53	101	234	229	204	162	67	146	e.50	298	266
27	72	54	99	238	229	210	175	105	148	53	297	265
28	72	57	95	238	229	225	128	112	157	237	297	265
29	72	59	93	238	---	252	10	108	165	279	283	265
30	72	59	95	238	---	237	23	62	170	290	259	265
31	72	---	95	210	---	221	---	62	---	289	278	---
TOTAL	2382	1954	2620	4519.7	6553	4067.1	5464	3469.9	4984	6250.00	8989	8130
MEAN	76.8	65.1	84.5	146	234	131	182	112	166	202	290	271
MAX	153	96	105	238	261	252	232	180	308	290	300	281
MIN	68	50	49	3.3	185	3.9	10	2.8	62	.50	259	176
AC-FT	4720	3880	5200	8960	13000	8070	10840	6880	9890	12400	17830	16130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1995, BY WATER YEAR (WY)

	199	193	169	150	133	132	89.7	74.0	98.3	212	232	235
MEAN	199	193	169	150	133	132	89.7	74.0	98.3	212	232	235
MAX	304	302	299	261	253	257	246	239	282	303	307	308
(WY)	1975	1975	1975	1985	1974	1980	1970	1970	1970	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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1928 - 1995
ANNUAL TOTAL	46353.25	59382.70	
ANNUAL MEAN	127	163	160
HIGHEST ANNUAL MEAN			236
LOWEST ANNUAL MEAN			64.4
HIGHEST DAILY MEAN	287	308	345
LOWEST DAILY MEAN	.05	.50	.00
ANNUAL SEVEN-DAY MINIMUM	.05	10	.00
ANNUAL RUNOFF (AC-FT)	91940	117800	116300
10 PERCENT EXCEEDS	268	281	271
50 PERCENT EXCEEDS	97	163	199
90 PERCENT EXCEEDS	56	54	2.0

e Estimated.

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	62	61	102	307	302	299	320	313	314	307	276
2	70	45	65	100	314	310	295	289	299	315	309	278
3	69	51	87	99	309	294	303	307	302	316	310	278
4	70	53	113	100	306	263	312	275	301	316	307	278
5	70	59	102	100	310	249	321	300	311	313	305	277
6	70	103	98	119	313	276	318	296	288	314	303	270
7	70	71	92	181	317	292	316	272	295	316	303	271
8	69	57	76	188	318	292	273	276	310	317	306	281
9	70	84	68	249	316	308	252	307	306	317	307	283
10	70	107	62	307	315	284	262	319	310	296	306	285
11	71	105	64	181	314	241	297	312	319	247	304	286
12	71	104	65	175	315	249	318	319	316	244	304	287
13	70	101	58	265	317	218	317	295	304	240	304	287
14	71	100	87	319	311	237	298	291	310	290	304	289
15	71	89	107	182	309	284	299	303	319	311	292	295
16	71	80	105	182	309	257	292	306	277	305	286	291
17	71	85	102	204	315	278	303	308	302	307	300	301
18	71	67	102	233	320	316	306	321	315	303	304	300
19	71	36	102	243	320	299	305	324	309	301	305	300
20	71	40	102	279	320	272	304	322	300	304	304	261
21	70	43	101	288	313	289	298	314	302	311	304	295
22	71	49	100	290	300	255	294	308	313	314	303	294
23	69	49	104	302	295	246	298	301	321	310	305	293
24	71	56	105	306	304	324	314	315	323	120	306	293
25	72	56	106	306	309	310	317	316	322	30	305	288
26	73	54	104	304	307	268	289	291	321	22	e298	284
27	73	53	105	308	301	281	291	304	314	113	e297	283
28	73	54	106	308	298	276	320	315	317	194	e297	282
29	72	63	103	311	---	304	322	320	318	262	e283	282
30	70	63	101	311	---	318	295	307	315	296	e259	281
31	70	---	101	319	---	307	---	306	---	306	e278	---
TOTAL	2306	2039	2854	7161	8702	8699	9028	9459	9272	8264	9305	8549
MEAN	74.4	68.0	92.1	231	311	281	301	305	309	267	300	285
MAX	185	107	113	319	320	324	322	324	323	317	310	301
MIN	69	36	58	99	295	218	252	272	277	22	259	261
AC-FT	4570	4040	5660	14200	17260	17250	17910	18760	18390	16390	18460	16960
a	4690	4180	5450	13430	11850	16230	16670	17410	17710	15460	17640	16530

e Estimated.

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	189	200	200	194	180	203	214	226	227	214	247	259
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1965 - 1995			
ANNUAL TOTAL	52127.00				85638							
ANNUAL MEAN	143				235							
HIGHEST ANNUAL MEAN									213			
LOWEST ANNUAL MEAN									304			1983
HIGHEST DAILY MEAN	293				324				77.9			1977
LOWEST DAILY MEAN	.00				22				335			Dec 25 1983
ANNUAL SEVEN-DAY MINIMUM	.00				47				.00			Oct 29 1964
ANNUAL RUNOFF (AC-FT)	103400				169900				154300			Oct 29 1964
ANNUAL TOTAL (AC-FT) a	102600				157200							
10 PERCENT EXCEEDS	274				316				306			
50 PERCENT EXCEEDS	111				292				249			
90 PERCENT EXCEEDS	64				70				60			

a Discharge, in acre-feet, through Spaulding No. 3 Powerplant, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

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 except for estimated daily discharges, which are poor. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 456 ft³/s, May 1, gage height, 5.21 ft; minimum daily, 2.1 ft³/s, Nov. 4.

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	4.0	4.7	4.5	3.8	131	8.2	88	425	363	175	5.2	5.0
2	3.5	4.3	7.1	3.8	99	13	81	e350	354	163	5.2	5.0
3	3.2	3.1	14	3.6	93	104	77	e295	347	154	5.2	5.0
4	4.1	2.1	11	3.7	82	8.7	71	e270	339	147	5.2	5.0
5	5.8	11	11	3.9	74	8.8	86	e264	345	144	5.2	4.9
6	5.8	13	6.4	4.8	67	7.6	111	e261	291	133	5.2	4.8
7	5.6	7.8	4.8	12	62	6.9	258	e255	197	125	5.2	4.9
8	5.5	4.2	4.2	11	61	8.0	263	e231	165	117	5.2	4.9
9	5.5	4.1	3.9	40	57	302	180	216	164	111	5.2	4.9
10	5.4	3.9	3.8	72	53	339	126	231	163	51	5.2	4.9
11	5.2	3.7	3.8	36	48	316	89	240	186	13	5.2	4.8
12	5.3	3.8	3.8	13	43	309	116	255	239	5.0	5.2	4.9
13	5.3	3.4	3.7	75	44	317	208	254	232	4.2	5.2	4.9
14	5.2	3.2	3.7	46	50	319	198	224	188	3.9	5.1	4.7
15	5.4	3.2	3.8	18	36	317	175	215	281	3.6	5.0	4.5
16	5.5	3.2	3.8	6.3	25	257	152	213	275	3.3	5.2	4.4
17	5.5	3.3	4.1	62	19	166	129	211	238	3.6	5.2	4.6
18	5.5	3.0	4.6	138	18	148	129	224	253	5.4	5.1	4.5
19	5.5	3.1	4.2	108	18	148	128	258	257	5.4	5.2	4.5
20	5.5	3.3	4.1	83	18	255	128	302	230	5.4	5.2	4.2
21	5.5	3.4	4.1	82	17	138	128	322	219	5.4	5.2	4.5
22	5.8	3.2	3.9	79	7.2	62	127	322	206	5.4	5.2	4.4
23	6.0	3.2	3.9	76	7.5	45	128	303	207	5.3	5.2	4.5
24	6.1	3.2	4.2	75	7.6	6.1	130	276	207	5.0	5.2	4.6
25	5.1	3.6	4.1	74	7.6	42	180	316	209	6.5	5.2	4.6
26	4.3	3.4	4.1	67	7.3	110	203	348	211	7.7	5.2	4.8
27	4.4	3.4	4.1	61	7.1	101	182	310	210	10	5.2	4.7
28	4.5	3.4	4.1	60	7.1	76	258	304	200	5.0	5.2	4.6
29	4.4	3.5	3.9	60	---	50	387	309	192	5.2	5.2	4.7
30	4.3	4.0	3.8	62	---	68	368	358	186	5.2	5.0	4.6
31	4.1	---	3.8	99	---	89	---	361	---	5.2	5.0	---
TOTAL	156.8	125.7	154.3	1538.9	1166.4	4145.3	4884	8723	7154	1438.7	160.4	141.3
MEAN	5.06	4.19	4.98	49.6	41.7	134	163	281	238	46.4	5.17	4.71
MAX	6.1	13	14	138	131	339	387	425	363	175	5.2	5.0
MIN	3.2	2.1	3.7	3.6	7.1	6.1	71	211	163	3.3	5.0	4.2
AC-FT	311	249	306	3050	2310	8220	9690	17300	14190	2850	318	280

e Estimated.

11416500 CANYON CREEK BELOW BOWMAN LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.93	6.28	16.6	17.6	15.5	25.5	40.3	123	145	13.9	2.54	2.31
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1927 - 1995			
ANNUAL TOTAL	1569.4				29788.8							
ANNUAL MEAN	4.30				81.6				33.8			
HIGHEST ANNUAL MEAN									165			
LOWEST ANNUAL MEAN									.81			
HIGHEST DAILY MEAN	23				Mar 5				3120			
LOWEST DAILY MEAN	1.8				Apr 17				.00			
ANNUAL SEVEN-DAY MINIMUM	2.1				Apr 13				.00			
INSTANTANEOUS PEAK FLOW					456				May 1			
INSTANTANEOUS PEAK STAGE					5.21				May 1			
ANNUAL RUNOFF (AC-FT)	3110				59090				24510			
10 PERCENT EXCEEDS	5.8				259				43			
50 PERCENT EXCEEDS	3.9				7.7				2.9			
90 PERCENT EXCEEDS	2.5				3.8				.30			

[illegible]

11416700 LINDSEY CREEK BELOW LOWER LINDSEY LAKE, NEAR GRANITEVILLE, CA

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.

DRAINAGE AREA.--0.91 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 6,225 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.--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.

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	e .54	---	---	---	---	---	---	---	---	---	.68	.51
2	.54	---	---	---	---	---	---	---	---	---	.65	.51
3	.54	---	---	---	---	---	---	---	---	---	.64	.51
4	.54	---	---	---	---	---	---	---	---	---	.99	.51
5	.54	---	---	---	---	---	---	---	---	---	---	.51
6	.54	---	---	---	---	---	---	---	---	---	---	.51
7	.54	---	---	---	---	---	---	---	---	---	---	.51
8	.54	---	---	---	---	---	---	---	---	---	---	.51
9	.54	---	---	---	---	---	---	---	---	---	---	.48
10	.53	---	---	---	---	---	---	---	---	---	---	.46
11	.52	---	---	---	---	---	---	---	---	---	.95	.54
12	.53	---	---	---	---	---	---	---	---	.73	.50	.64
13	.53	---	---	---	---	---	---	---	---	.67	.44	.63
14	.51	---	---	---	---	---	---	---	---	.58	.54	.62
15	.51	---	---	---	---	---	---	---	---	.68	.63	1.0
16	.47	---	---	---	---	---	---	---	---	.68	.61	---
17	.46	---	---	---	---	---	---	---	---	.65	.74	---
18	.46	---	---	---	---	---	---	---	---	.48	.73	---
19	.53	---	---	---	---	---	---	---	---	.35	.77	---
20	.56	---	---	---	---	---	---	---	---	.37	.82	---
21	.56	---	---	---	---	---	---	---	---	.47	.64	---
22	.56	---	---	---	---	---	---	---	---	.55	.51	---
23	.57	---	---	---	---	---	---	---	---	.58	.51	---
24	.56	---	---	---	---	---	---	---	---	.71	.51	---
25	.57	---	---	---	---	---	---	---	---	.78	.52	---
26	.56	---	---	---	---	---	---	---	---	.93	.55	---
27	.57	---	---	---	---	---	---	---	---	.91	.54	---
28	.57	---	---	---	---	---	---	---	---	.67	.53	---
29	.58	---	---	---	---	---	---	---	---	.34	.50	---
30	.57	---	---	---	---	---	---	---	---	.26	.47	---
31	.56	---	---	---	---	---	---	---	---	.54	.46	---
TOTAL	16.70	---	---	---	---	---	---	---	---	---	---	---
MEAN	.54	---	---	---	---	---	---	---	---	---	---	---
MAX	.58	---	---	---	---	---	---	---	---	---	---	---
MIN	.46	---	---	---	---	---	---	---	---	---	---	---
AC-FT	33	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s, May 1, gage height, 14.08 ft; minimum daily, 29 ft³/s, Oct. 28-31.

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	33	32	90	174	1250	383	1220	9100	4000	2400	85	54
2	31	40	107	161	1090	650	1190	7220	3610	2220	82	52
3	30	40	748	160	954	2460	1150	4260	3600	2100	80	52
4	32	33	2650	178	870	1220	1170	2990	3660	2050	78	53
5	43	64	1240	372	804	1090	1190	2770	3910	1930	78	53
6	42	437	621	447	765	929	1190	2450	2910	1660	77	54
7	35	327	421	1880	721	757	2320	2020	2180	1140	75	53
8	33	133	312	3380	693	682	2530	1810	1800	1410	73	51
9	32	154	249	4390	645	5730	1780	1710	1600	1490	72	50
10	31	188	207	8730	601	8570	1470	1770	1800	1470	71	52
11	30	112	177	4110	572	6880	1260	2020	2470	1310	70	52
12	30	92	194	2000	545	4310	1180	2010	3090	1070	70	52
13	30	95	198	4780	601	3880	2030	1860	3130	441	69	51
14	30	75	190	7750	652	3990	1630	1500	2960	436	69	52
15	30	74	236	4120	543	3600	1370	1400	3370	443	68	51
16	30	88	201	2140	496	2520	1240	1310	3350	443	66	49
17	30	90	196	1480	461	1970	1090	1280	2090	211	65	49
18	30	109	217	1320	447	2180	1050	1690	1830	148	66	49
19	30	79	222	1100	438	1950	967	2260	2140	493	65	48
20	31	70	191	923	434	3250	1000	2790	2000	194	64	47
21	30	69	174	828	446	3020	923	2950	1900	123	62	47
22	30	69	165	905	424	3430	870	2800	1810	114	62	46
23	30	65	158	1450	418	2450	844	2440	2020	110	63	46
24	30	64	232	1490	418	1810	854	2320	2700	106	60	46
25	30	146	301	1590	413	1530	896	2370	3180	131	58	47
26	30	150	228	1620	404	1450	953	2690	3320	129	57	48
27	30	106	205	1650	392	1350	941	3070	3490	119	57	49
28	29	96	268	1490	379	1290	1190	3100	3310	113	56	51
29	29	106	252	1280	---	1210	3860	3240	2960	126	56	52
30	29	111	214	1150	---	1120	4560	3520	2650	89	55	50
31	29	---	190	1150	---	1160	---	3780	---	88	55	---
TOTAL	969	3314	11054	64198	16876	76821	43918	86500	82840	24307	2084	1506
MEAN	31.3	110	357	2071	603	2478	1464	2790	2761	784	67.2	50.2
MAX	43	437	2650	8730	1250	8570	4560	9100	4000	2400	85	54
MIN	29	32	90	160	379	383	844	1280	1600	88	55	46
AC-FT	1920	6570	21930	127300	33470	152400	87110	171600	164300	48210	4130	2990

SACRAMENTO RIVER BASIN

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11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.5	210	466	705	738	759	685	865	668	122	37.9	38.0
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1941 - 1995			
ANNUAL TOTAL	48505				414387							
ANNUAL MEAN	133				1135				453			
HIGHEST ANNUAL MEAN									1135			
LOWEST ANNUAL MEAN									42.6			
HIGHEST DAILY MEAN	2650				Dec 4				22800			
LOWEST DAILY MEAN	24				Aug 8				1.0			
ANNUAL SEVEN-DAY MINIMUM	24				Aug 15				1.0			
INSTANTANEOUS PEAK FLOW					11200				53600			
INSTANTANEOUS PEAK STAGE					14.08				25.00			
ANNUAL RUNOFF (AC-FT)	96210				821900				328300			
10 PERCENT EXCEEDS	310				3110				1110			
50 PERCENT EXCEEDS	80				446				121			
90 PERCENT EXCEEDS	25				46				26			

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 spillway of dam at gage heights 544.72 and 546.14 ft; no flow at times in 1942, 1949, 1956, 1958-61, 1968-69.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,400 ft³/s, May 1, gage height, 23.37 ft; minimum daily, 679 ft³/s, Oct. 8.

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	701	695	690	994	6360	3890	4830	33100	11000	6370	2060	1990
2	700	695	683	996	6740	3880	4810	34600	9460	5800	2060	2040
3	700	695	684	995	7160	3920	4740	23300	10400	5580	2060	2040
4	699	698	1430	994	6890	5060	4710	14600	10700	5340	2060	2040
5	698	700	2780	996	6680	4920	4780	13800	11600	4830	2060	2030
6	698	701	1080	995	5710	4730	4790	13100	8920	4670	2060	2030
7	692	701	736	1010	4350	4420	6210	12100	6870	4160	2060	2010
8	679	685	696	1680	4230	4300	7680	10800	5480	4200	2060	1960
9	701	687	693	7780	4190	15200	6160	8690	5770	4350	2060	1670
10	704	697	690	22500	4140	36100	5440	7860	5470	4370	2060	813
11	703	695	689	10600	4110	32700	5070	7100	6240	4160	2060	703
12	703	696	688	5720	3940	25800	4890	5780	7090	3940	2060	703
13	703	696	686	15200	3940	25200	6070	5800	7280	3930	2060	704
14	704	697	693	22900	3930	25600	5770	5290	7600	3870	2060	704
15	703	697	697	13400	3930	24300	5240	5070	9850	3070	2060	704
16	701	697	696	7480	3940	19700	5020	4520	10800	3080	2060	704
17	701	697	695	6550	3940	14800	4780	4530	7400	3080	2060	704
18	702	697	694	5210	3930	14100	4700	4370	6540	3090	2060	704
19	702	698	692	4840	3940	13600	4600	5030	6830	3070	2060	704
20	702	696	690	4570	3930	15300	4630	5770	6410	3080	2060	704
21	703	696	689	4410	3920	16100	4580	6120	5950	3080	2060	704
22	702	697	687	4360	3910	18600	4480	6440	5280	3080	2060	704
23	700	698	715	5110	3900	17100	4440	7080	5310	3080	2050	702
24	699	697	716	5240	3900	13000	4420	8310	5960	2750	2050	700
25	700	697	716	5460	3890	8510	4440	8870	6710	2270	2050	698
26	700	696	716	5690	3890	7660	4500	9070	7580	2030	2050	698
27	701	697	715	6520	3890	6310	4520	9570	8130	2030	2050	698
28	701	697	715	6110	3890	5230	4880	9720	8680	2030	2040	699
29	700	697	715	5340	---	5080	8450	9790	7550	2040	2050	972
30	697	697	715	5040	---	5010	18700	10200	6710	2030	2050	1280
31	695	---	727	5200	---	4820	---	10600	---	2030	2050	---
TOTAL	21694	20889	24908	193890	127170	404940	168330	320980	229570	110490	63760	33516
MEAN	700	696	803	6255	4542	13060	5611	10350	7652	3564	2057	1117
MAX	704	701	2780	22900	7160	36100	18700	34600	11600	6370	2060	2040
MIN	679	685	683	994	3890	3880	4420	4370	5280	2030	2040	698
AC-FT	43030	41430	49410	384600	252200	803200	333900	636700	455400	219200	126500	66480
a	15870	10590	12250	4310	0	331	5010	27810	39520	52080	45110	17540

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	941	1227	2655	3284	3745	3552	3785	3983	2659	1302	1196	991
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1942 - 1995			
ANNUAL TOTAL	323222				1720137							
ANNUAL MEAN	886				4713				2437			
HIGHEST ANNUAL MEAN									5251			
LOWEST ANNUAL MEAN									414			
HIGHEST DAILY MEAN	2780				Dec 5				36100			
LOWEST DAILY MEAN	487				Sep 19				Mar 10			
ANNUAL SEVEN-DAY MINIMUM	500				Sep 16				Oct 8			
INSTANTANEOUS PEAK FLOW									679			
INSTANTANEOUS PEAK STAGE									691			
ANNUAL RUNOFF (AC-FT)	641100				23.37				May 1			
ANNUAL DISCHARGE (AC-FT) a					3412000				May 1			
10 PERCENT EXCEEDS	1100				230200				171000			
50 PERCENT EXCEEDS	915				10300				546.14			
90 PERCENT EXCEEDS	688				3890				1765000			
					697				5260			
									1200			
									432			

a Combined flow, in acre-feet, from Browns Valley Irrigation Ditch (11420750), Brophy South Canal (11420760) and Hallwood-Cordua Irrigation District Canal (11420770).

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 except for estimated daily discharges which are fair. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,410 ft³/s, Jan. 10, gage height, 12.50 ft; minimum daily, 3.9 ft³/s, Oct. 2, 3, 12.

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	5.0	5.5	9.1	39	463	154	324	1600	101	47	8.1	9.9
2	3.9	8.3	9.2	36	417	526	340	842	94	43	8.3	11
3	3.9	8.0	500	46	384	995	372	568	95	42	6.7	9.9
4	7.2	7.5	2290	131	341	502	375	457	85	43	6.0	8.4
5	23	23	544	420	312	584	391	439	81	42	6.0	6.2
6	12	145	172	249	293	415	395	382	79	42	6.2	6.8
7	9.6	85	94	653	309	329	631	323	78	38	5.1	6.6
8	8.1	43	56	1440	273	308	765	284	74	38	6.2	6.9
9	6.9	98	44	1830	262	2000	644	251	72	39	6.1	7.6
10	5.2	67	37	4580	248	2940	537	231	67	29	6.3	7.2
11	4.1	17	33	885	231	2280	483	206	68	e19	6.7	6.6
12	3.9	13	52	414	199	1640	443	195	65	e17	8.9	7.7
13	4.2	11	62	2040	198	1950	750	362	59	e17	7.7	7.3
14	4.1	8.6	80	1720	228	1680	521	271	80	e17	6.9	8.2
15	4.4	9.9	207	643	196	1540	444	274	147	e16	7.0	7.7
16	7.3	15	87	428	176	941	421	238	170	e14	7.0	8.6
17	146	11	54	318	164	742	386	198	99	e12	5.6	8.3
18	301	9.6	50	302	156	964	377	177	93	e13	6.4	6.6
19	294	8.7	42	269	150	710	346	164	87	e11	8.0	7.5
20	264	8.3	36	248	147	1320	380	164	78	e9.0	7.8	8.2
21	225	8.1	31	229	146	1280	347	182	72	8.6	6.5	7.6
22	139	7.8	29	266	145	3290	300	193	71	9.9	7.1	8.3
23	50	7.5	27	563	141	1610	275	195	67	9.4	7.0	8.7
24	5.8	7.4	55	632	138	850	256	180	58	8.4	6.5	7.2
25	5.5	42	118	538	153	597	242	170	55	9.4	6.3	7.0
26	5.8	22	53	754	152	492	225	150	53	9.4	7.1	7.6
27	5.2	14	40	1130	151	432	232	146	55	8.8	6.6	7.8
28	5.0	12	101	887	151	392	271	142	55	8.8	6.7	7.6
29	4.8	10	78	621	---	392	403	132	51	8.5	6.8	6.8
30	4.7	9.5	53	564	---	345	383	116	45	8.8	7.0	6.4
31	4.7	---	44	517	---	322	---	96	---	7.0	8.5	---
TOTAL	1573.3	742.7	5087.3	23392	6324	32522	12259	9328	2354	645.0	213.1	232.2
MEAN	50.8	24.8	164	755	226	1049	409	301	78.5	20.8	6.87	7.74
MAX	301	145	2290	4580	463	3290	765	1600	170	47	8.9	11
MIN	3.9	5.5	9.1	36	138	154	225	96	45	7.0	5.1	6.2
AC-FT	3120	1470	10090	46400	12540	64510	24320	18500	4670	1280	423	461

e Estimated.

SACRAMENTO RIVER BASIN

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11418500 DEER CREEK NEAR SMARTVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.0	64.6	164	288	356	329	186	67.4	19.1	6.48	4.93	5.86
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	1974	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1936 - 1995			
ANNUAL TOTAL	14533.3				94672.6							
ANNUAL MEAN	39.8				259				125			
HIGHEST ANNUAL MEAN									327			
LOWEST ANNUAL MEAN									5.48			
HIGHEST DAILY MEAN	2290				Dec 4				10200			
LOWEST DAILY MEAN	2.2				Jul 12				.06			
ANNUAL SEVEN-DAY MINIMUM	2.5				Jul 10				.16			
INSTANTANEOUS PEAK FLOW					9410				12100			
INSTANTANEOUS PEAK STAGE					12.50				14.05			
ANNUAL RUNOFF (AC-FT)	28830				187800				90820			
10 PERCENT EXCEEDS	81				625				307			
50 PERCENT EXCEEDS	10				74				18			
90 PERCENT EXCEEDS	3.2				6.7				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 except for estimated daily discharges which are fair. 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, 1947-95), 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,900 ft³/s, Mar. 11, gage height, 75.59 ft; minimum daily, 344 ft³/s, Oct. 24.

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	399	402	403	778	7620	4450	5540	24500	e9300	5890	1230	1510
2	393	419	400	853	7860	4680	5500	32800	8710	5400	1240	1590
3	391	422	1210	891	8310	5950	5410	23600	9060	5180	1230	1590
4	418	426	3910	1050	8010	6170	5320	14300	9260	4910	1230	1610
5	441	486	4000	1500	7820	6310	5390	13000	10200	4420	1250	1630
6	449	673	1860	1300	7140	6000	5400	12300	8550	4160	1250	1630
7	491	626	1140	1830	5440	5400	6470	11200	6700	3600	1250	1630
8	541	566	847	2990	5070	5150	8810	10300	5140	3500	1250	1700
9	564	575	729	e10000	4920	13100	7450	8680	5560	3650	1250	1650
10	563	754	642	e25300	4810	34200	6470	7650	5100	3660	1260	822
11	557	611	579	e14300	4750	34600	5820	7170	5670	3470	1260	528
12	531	587	637	7270	4650	28300	5440	5770	6420	3390	1280	508
13	471	572	667	e14600	4660	26200	6620	6100	6680	3370	1280	497
14	430	566	641	e24400	4720	28500	6840	5690	6830	3340	1280	492
15	418	586	822	e16300	4690	26100	6020	5330	8380	2450	1280	492
16	416	590	701	9960	4650	20700	5680	4940	10400	2300	1270	486
17	437	570	645	8650	4620	15700	5360	4720	7400	2280	1270	488
18	627	554	632	6980	4600	14400	5180	4440	6250	2270	1280	485
19	581	542	615	6220	4580	13900	5070	4890	6510	2260	1300	490
20	556	539	597	5790	4570	14700	5040	5600	6210	2250	1320	493
21	487	541	586	5470	4560	16700	5030	6020	5820	2250	1350	493
22	410	536	588	5390	4560	19000	4790	6230	5150	2260	1370	494
23	366	497	582	6830	4540	20000	4660	6800	4930	2260	1390	489
24	344	485	591	7300	4540	14900	4610	7780	5440	2120	1420	481
25	372	514	678	7550	4530	10400	4450	8370	5980	1600	1440	496
26	383	505	621	7260	4540	9130	4370	8430	6900	1320	1430	522
27	386	481	597	9970	4520	7810	4280	8710	7060	1330	1430	527
28	393	464	654	9340	4500	6500	4520	8870	8080	1260	1450	518
29	387	449	664	7650	---	6160	7270	8850	7010	1210	1490	509
30	369	421	631	6880	---	5870	14500	9070	6180	1230	1520	1010
31	374	---	636	6630	---	5630	---	e9230	---	1230	1540	---
TOTAL	13945	15959	28505	241232	149780	436610	177310	301340	210880	89820	41090	25860
MEAN	450	532	920	7782	5349	14080	5910	9721	7029	2897	1325	862
MAX	627	754	4000	25300	8310	34600	14500	32800	10400	5890	1540	1700
MIN	344	402	400	778	4500	4450	4280	4440	4930	1210	1230	481
AC-FT	27660	31650	56540	478500	297100	866000	351700	597700	418300	178200	81500	51290

e Estimated

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1167	1504	2380	3717	4017	4405	2867	2078	1857	1240	1396	1393
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1970 - 1995

ANNUAL TOTAL	228153	1732331	
ANNUAL MEAN	625	4746	2327
HIGHEST ANNUAL MEAN			5818
LOWEST ANNUAL MEAN			229
HIGHEST DAILY MEAN	4000	Dec 5	34600
LOWEST DAILY MEAN	83	Jul 19	344
ANNUAL SEVEN-DAY MINIMUM	98	Jul 13	376
INSTANTANEOUS PEAK FLOW			38900
INSTANTANEOUS PEAK STAGE			75.59
ANNUAL RUNOFF (AC-FT)	452500	3436000	1686000
10 PERCENT EXCEEDS	1190	9590	4890
50 PERCENT EXCEEDS	497	3650	1260
90 PERCENT EXCEEDS	263	487	297

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. Published as Yuba River at Marysville (station 11421500) during water years 1966, 1973-76.
 WATER TEMPERATURE: Water years 1973-78, 1990 to current year.

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. Interruption in record was due to malfunction of the recording instrument.

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, Oct. 2; minimum recorded, 7.0°C, Dec. 30.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	15.5	13.5	12.5	10.0	9.0	9.0	7.5	---	---	10.0	8.5
2	19.5	15.5	14.0	11.5	10.5	10.0	8.5	7.5	---	---	9.5	9.0
3	18.5	15.0	13.5	10.5	10.0	9.5	8.5	8.0	---	---	10.5	9.0
4	16.5	15.0	12.5	11.0	10.0	9.5	8.5	8.0	---	---	10.0	8.5
5	18.0	14.0	12.0	11.5	9.5	9.0	9.5	8.0	---	---	9.5	8.5
6	18.5	14.5	12.5	12.0	10.0	9.0	8.5	8.0	---	---	10.5	8.0
7	18.5	14.5	14.0	11.5	10.0	8.5	9.0	8.5	---	---	10.0	8.5
8	18.5	14.5	13.5	11.0	9.5	8.0	9.5	9.0	---	---	9.5	9.0
9	18.0	14.5	12.5	11.0	9.5	8.0	10.0	8.5	---	---	10.0	9.0
10	18.0	14.5	12.5	11.0	9.5	8.0	10.0	9.0	---	---	9.5	9.0
11	17.5	14.0	13.0	10.5	9.5	8.5	10.0	9.5	---	---	9.5	9.5
12	17.5	14.0	12.5	11.0	9.5	8.5	10.0	9.5	---	---	10.0	9.5
13	17.0	13.5	12.5	10.0	9.5	8.5	10.0	9.5	---	---	10.0	9.5
14	16.5	14.0	12.5	10.0	9.0	8.5	10.0	9.5	---	---	10.0	9.5
15	16.0	13.0	11.0	10.5	9.5	8.5	10.0	9.0	---	---	11.0	9.5
16	16.5	12.5	12.5	10.5	10.0	9.0	9.0	8.5	9.5	---	11.0	9.5
17	16.0	13.0	12.0	10.0	9.5	9.0	9.0	8.0	10.0	8.0	11.0	9.5
18	16.5	13.0	11.0	9.0	10.5	9.0	9.5	8.5	10.5	8.0	10.5	10.0
19	16.5	13.0	11.5	9.0	9.5	9.0	9.0	8.0	10.5	8.0	10.5	9.5
20	16.5	13.0	11.5	10.0	9.5	9.0	9.0	8.0	10.5	8.5	10.0	9.5
21	16.5	13.0	12.0	10.0	9.0	8.5	---	8.0	10.5	8.5	10.0	9.0
22	17.0	13.0	11.5	9.0	9.0	8.5	---	---	10.5	8.5	9.0	9.0
23	17.0	13.5	11.5	9.0	8.5	8.0	---	---	10.5	8.5	9.0	8.0
24	17.0	14.0	11.0	9.5	8.5	8.0	---	---	10.5	8.5	9.5	8.0
25	16.5	13.5	11.5	10.0	9.5	7.5	---	---	10.5	9.0	10.0	8.0
26	16.0	13.5	11.0	9.5	9.5	8.0	---	---	10.5	9.0	10.0	8.0
27	17.0	13.5	10.0	9.0	9.0	8.0	---	---	10.0	9.0	10.5	8.0
28	16.5	13.5	11.5	9.5	10.0	8.0	---	---	10.0	9.0	10.5	8.0
29	15.5	12.5	11.0	8.5	9.5	7.5	---	---	---	---	11.0	8.5
30	15.5	12.0	11.5	8.5	9.5	7.0	---	---	---	---	11.0	8.0
31	15.5	12.0	---	---	8.5	7.5	---	---	---	---	11.0	8.5
MONTH	19.5	12.0	14.0	8.5	10.5	7.0	---	---	---	---	11.0	8.0

11421000 YUBA RIVER NEAR MARYSVILLE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

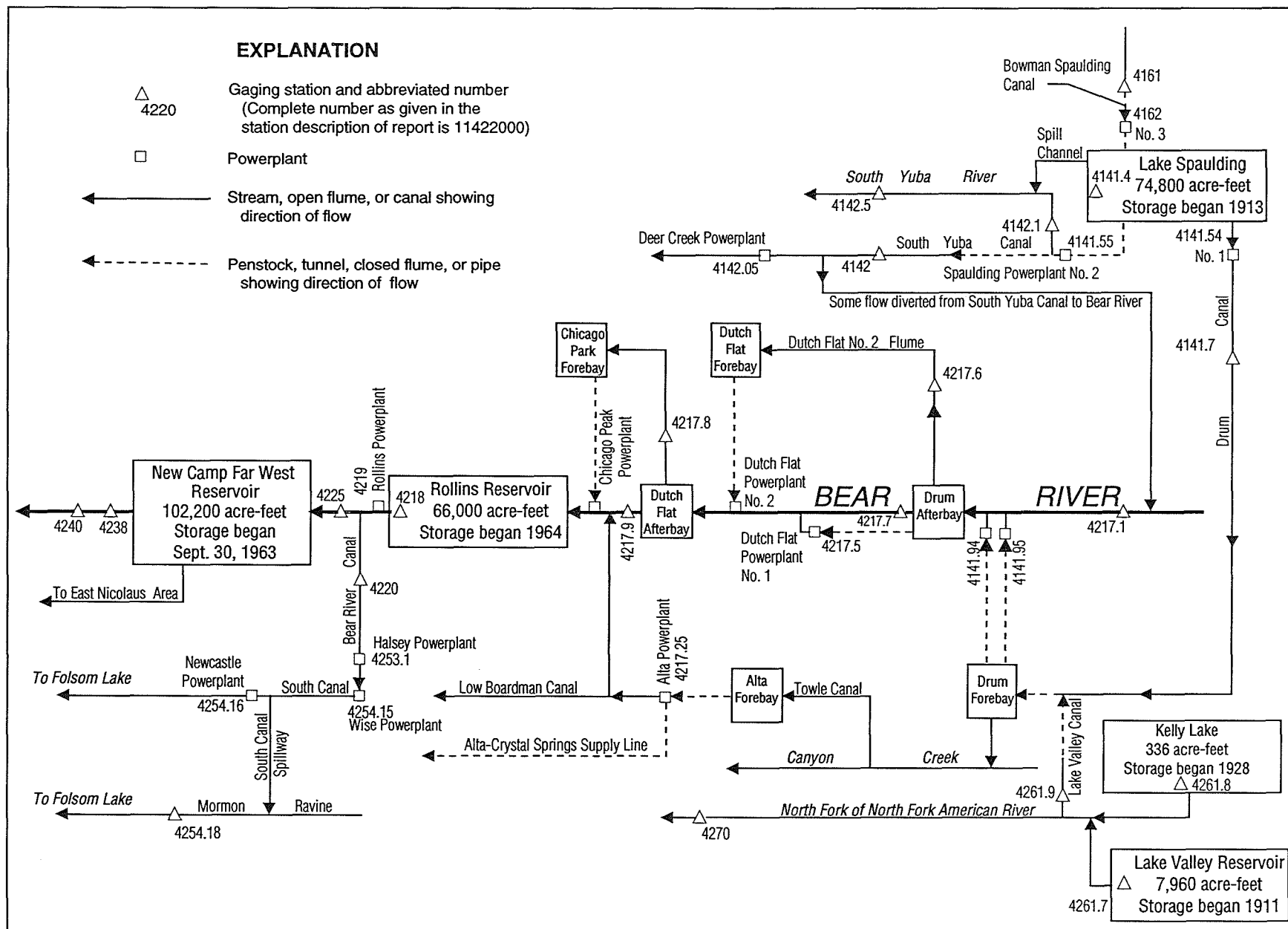


Figure 31. Diversions and storage in Bear River basin.

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	6.0	6.6	6.5	68	92	145	---	143	102	7.7	6.7
2	5.5	5.5	8.3	6.2	66	146	128	---	149	101	7.5	6.6
3	5.8	5.3	25	6.8	68	---	125	---	141	101	7.3	6.6
4	6.6	5.8	32	7.4	76	---	122	---	138	101	7.3	6.6
5	5.9	11	24	6.9	81	---	120	---	139	101	7.1	6.9
6	5.5	16	14	8.7	89	151	121	---	136	101	6.9	6.9
7	5.0	8.1	9.6	30	98	132	---	---	124	101	6.7	6.9
8	5.4	6.6	7.7	48	94	137	133	---	116	101	6.6	6.9
9	5.5	6.6	6.4	74	92	---	119	---	108	101	8.2	6.7
10	5.7	5.8	6.3	141	121	---	116	---	106	90	8.1	6.5
11	6.4	5.3	7.1	43	160	---	117	---	105	69	7.8	6.6
12	6.2	5.6	8.1	42	158	---	122	---	102	57	7.3	6.5
13	5.7	6.4	8.6	---	---	---	---	---	94	62	7.1	6.6
14	6.2	6.8	9.0	---	---	---	160	---	145	72	7.1	6.8
15	6.2	6.7	9.0	42	---	---	110	---	145	67	6.9	7.0
16	5.4	6.5	8.9	26	159	---	108	---	142	71	6.9	7.0
17	5.7	6.8	7.4	54	157	153	107	---	103	42	6.9	6.8
18	5.7	5.6	8.2	112	156	---	112	157	103	64	6.7	6.8
19	5.7	5.0	7.3	116	148	154	108	130	96	76	6.5	8.0
20	6.0	5.2	6.5	114	155	---	103	114	94	39	6.5	7.7
21	6.0	5.4	6.5	112	131	---	103	113	98	36	6.4	7.7
22	5.3	13	6.5	84	99	---	102	114	102	31	6.4	7.7
23	5.3	16	6.7	71	96	146	102	129	106	30	8.6	7.6
24	5.4	5.4	8.8	73	93	155	101	138	105	23	7.5	7.3
25	5.3	5.5	8.1	71	90	135	108	138	105	7.4	6.6	7.3
26	5.3	5.3	6.6	68	89	---	112	137	105	7.7	6.7	7.3
27	5.3	5.3	7.3	66	89	---	131	137	105	7.3	6.6	7.0
28	6.0	6.4	8.1	66	90	---	---	136	104	7.3	6.5	6.8
29	5.7	6.6	7.4	65	---	---	---	136	104	7.4	6.5	6.7
30	5.0	6.5	7.1	65	---	---	---	136	103	7.9	6.4	7.0
31	5.2	---	6.6	66	---	---	---	137	---	7.7	6.5	---
TOTAL	176.2	212.0	299.7	---	---	---	---	---	3466	1791.7	217.8	209.5
MEAN	5.68	7.07	9.67	---	---	---	---	---	116	57.8	7.03	6.98
MAX	6.6	16	32	---	---	---	---	---	149	102	8.6	8.0
MIN	5.0	5.0	6.3	---	---	---	---	---	94	7.3	6.4	6.5
AC-FT	349	421	594	---	---	---	---	---	6870	3550	432	416

CAL YR 1994 TOTAL 2613.1 MEAN 7.16 MAX 32 MIN 5.0 AC-FT 5180

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	212	396	.00	370	306	480	520	355	306	333	318
2	.00	420	176	.00	385	368	373	396	343	305	386	376
3	132	347	.00	167	368	494	414	395	335	340	418	417
4	231	153	.00	313	363	402	455	426	347	321	421	370
5	144	45	44	110	365	510	420	539	346	310	384	401
6	211	71	147	154	378	439	433	487	342	301	321	394
7	61	139	235	154	336	449	481	516	343	308	327	423
8	.00	118	110	178	373	374	389	429	322	294	374	375
9	.00	142	198	133	387	496	403	472	330	271	391	509
10	176	131	.00	522	390	555	481	480	277	319	397	430
11	242	60	63	410	402	560	388	487	316	305	450	391
12	228	154	154	325	425	553	408	469	339	255	427	405
13	238	176	142	434	418	483	390	457	281	328	440	270
14	74	120	184	555	389	507	437	476	297	385	430	272
15	.00	59	267	396	418	529	426	531	348	379	400	372
16	.00	166	108	310	396	492	381	318	374	422	366	357
17	189	97	189	395	417	477	363	438	310	413	495	48
18	208	127	193	395	370	526	416	383	326	330	394	.00
19	221	139	227	305	396	462	383	332	344	344	426	.00
20	242	206	271	377	369	438	374	382	297	263	413	.00
21	114	216	250	350	374	517	363	453	313	293	398	.00
22	.00	92	184	360	330	368	348	310	372	254	359	.00
23	.00	233	110	399	343	135	340	363	315	218	387	.00
24	86	89	22	281	296	90	361	363	270	297	383	.00
25	277	107	.00	426	374	26	326	400	348	383	395	.00
26	233	157	.00	471	346	286	365	381	321	366	329	.00
27	161	110	220	286	397	443	367	334	343	340	328	.00
28	91	276	201	317	402	420	396	377	374	323	354	.00
29	.00	408	366	308	---	414	436	376	321	370	349	.00
30	.00	352	336	363	---	537	418	329	340	342	346	.00
31	66	---	.00	352	---	397	---	343	---	361	342	---
TOTAL	3625.00	5122	4793.00	9546.00	10577	13053	12015	12962	9889	10046	11963	6128.00
MEAN	117	171	155	308	378	421	400	418	330	324	386	204
MAX	277	420	396	555	425	560	481	539	374	422	495	509
MIN	.00	45	.00	.00	296	26	326	310	270	218	321	.00
AC-FT	7190	10160	9510	18930	20980	25890	23830	25710	19610	19930	23730	12150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	153	198	210	241	219	253	282	295	275	237	205	141																			
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1965 - 1995

ANNUAL TOTAL	55630.00	109719.00	
ANNUAL MEAN	152	301	226
HIGHEST ANNUAL MEAN			384
LOWEST ANNUAL MEAN			67.6
HIGHEST DAILY MEAN	511	Mar 9	571
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 5	.00
ANNUAL RUNOFF (AC-FT)	110300	217600	163500
10 PERCENT EXCEEDS	286	451	435
50 PERCENT EXCEEDS	161	343	223
90 PERCENT EXCEEDS	.00	55	.00

11421760 DUTCH FLAT NO. 2 FLUME NEAR BLUE CANYON, CA

LOCATION.--Lat 39°15'16", long 120°46'28", in SE 1/4 NE 1/4 sec.18, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020126, on left bank 600 ft downstream from Drum Afterbay and 3.6 mi west of Blue Canyon.

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

GAGE.--Water-stage recorder. Datum of gage is 3,348.09 ft above sea level (levels by Nevada Irrigation District).

REMARKS.--Records good except discharges less than 5 ft³/s, which are fair. Water is diverted from Drum Afterbay through the flume to Dutch Flat No. 2 Powerplant and then to Dutch Flat Afterbay. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 626 ft³/s, Sept. 29, 1983; no flow at times in most years.

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	e1.1	52	e1.1	e1.1	573	561	559	581	568	536	385	395
2	e1.1	2.6	e1.1	e1.1	566	561	559	582	561	523	384	367
3	e1.1	e1.1	216	e1.1	575	561	559	580	567	504	340	360
4	e1.1	e1.1	484	284	572	560	560	566	567	531	315	303
5	e1.1	e1.1	275	354	573	558	560	571	568	534	373	283
6	e1.1	193	287	313	571	559	549	582	568	525	387	330
7	e1.1	309	207	449	572	559	565	579	567	538	390	345
8	e1.1	331	299	477	569	564	572	579	566	536	36	324
9	e1.1	336	24	574	569	565	571	579	566	563	364	277
10	e1.1	349	e1.1	588	571	569	577	573	568	537	291	316
11	e1.1	315	e1.1	583	564	567	581	570	566	529	311	357
12	e1.1	3.4	135	550	564	566	581	565	558	531	288	337
13	e1.1	2.0	271	575	565	567	580	565	530	485	320	388
14	e1.1	222	346	577	564	569	581	565	565	447	296	486
15	e1.1	274	419	567	567	567	580	573	567	419	344	427
16	e1.1	204	399	569	572	569	580	565	566	393	301	336
17	e1.1	227	18	568	567	569	580	566	543	398	309	28
18	e1.1	249	e1.1	566	570	569	489	565	517	402	328	4.5
19	e1.1	19	238	564	569	563	575	567	532	463	336	4.5
20	e1.1	e1.1	196	566	569	566	581	532	568	542	299	4.4
21	e1.1	90	193	566	568	568	581	563	568	478	355	4.2
22	e1.1	162	291	564	568	532	581	567	539	467	357	4.2
23	e1.1	9.9	10	565	568	346	581	561	526	531	336	4.2
24	e1.1	e1.1	4.4	563	567	227	582	537	558	479	357	4.2
25	4.7	e1.1	e1.1	568	563	246	577	566	523	392	359	4.2
26	3.2	45	e1.1	572	562	511	567	566	529	363	377	4.2
27	e1.1	e1.1	e1.1	533	561	559	567	568	540	419	381	4.2
28	1.6	e1.1	318	574	559	557	567	566	522	400	369	4.2
29	1.8	e1.1	27	576	---	558	572	567	521	395	375	4.2
30	2.0	e1.1	49	573	---	559	581	568	527	373	373	4.2
31	161	---	e1.1	575	---	559	---	567	---	376	367	---
TOTAL	201.8	3405.9	4716.3	14956.3	15898	16511	17095	17601	16531	14609	10403	5714.4
MEAN	6.51	114	152	482	568	533	570	568	551	471	336	190
MAX	161	349	484	588	575	569	582	582	568	563	390	486
MIN	1.1	1.1	1.1	1.1	559	227	489	532	517	363	36	4.2
AC-FT	400	6760	9350	29670	31530	32750	33910	34910	32790	28980	20630	11330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

MEAN	266	250	283	294	314	336	363	366	350	354	351	215
MAX	554	553	581	569	596	589	587	597	578	543	559	514
(WY)	1975	1984	1984	1984	1984	1984	1979	1984	1984	1984	1970	1967
MIN	3.53	6.40	11.4	1.98	1.98	.43	.000	.000	26.5	14.7	19.6	3.60
(WY)	1992	1987	1977	1994	1977	1986	1986	1986	1986	1977	1977	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1966 - 1995
ANNUAL TOTAL	50356.6	137642.7	
ANNUAL MEAN	138	377	315
HIGHEST ANNUAL MEAN			544
LOWEST ANNUAL MEAN			23.8
HIGHEST DAILY MEAN	582	Jun 21	626
LOWEST DAILY MEAN	1.1	Jan 5	.00
ANNUAL SEVEN-DAY MINIMUM	1.1	Jan 5	.00
ANNUAL RUNOFF (AC-FT)	99880	273000	228500
10 PERCENT EXCEEDS	346	573	563
50 PERCENT EXCEEDS	45	504	369
90 PERCENT EXCEEDS	1.1	1.1	2.5

e Estimated.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,830 ft³/s, Jan. 13, gage height, 3.30 ft; minimum daily, 5.4 ft³/s, Jan. 11.

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	6.1	5.9	5.7	5.7	5.5	5.6	11	145	11	11	12	12
2	6.1	5.9	5.7	5.7	5.6	5.6	11	11	11	11	12	12
3	6	5.9	5.8	5.6	5.6	102	11	11	11	11	12	12
4	6	5.9	5.7	5.6	5.5	6.1	12	11	11	11	12	12
5	6	5.9	5.7	5.7	5.6	29	11	73	11	11	12	12
6	6.1	5.9	5.8	5.7	20	5.6	11	28	11	11	12	12
7	6	5.9	5.8	5.6	5.7	9.2	180	16	11	11	12	12
8	6	5.9	5.8	5.6	5.6	11	47	31	11	11	11	12
9	6	5.9	5.8	5.6	5.6	377	11	11	11	11	12	12
10	6	5.9	5.8	5.7	5.6	444	11	11	11	11	12	12
11	6	5.9	5.8	5.4	5.6	268	11	11	11	11	12	12
12	6	5.9	5.7	54	5.6	82	11	11	11	11	12	12
13	6	6	5.7	486	5.6	92	95	11	11	11	12	12
14	6	5.8	5.7	356	5.6	80	11	11	11	11	12	12
15	6.1	5.8	5.6	74	5.6	49	11	11	11	11	12	12
16	6	5.8	5.6	11	5.6	15	10	11	11	11	12	12
17	6	5.8	5.7	8.1	5.6	12	11	11	11	12	12	12
18	6.1	5.8	5.7	5.5	5.6	12	10	11	11	12	12	12
19	6.1	5.8	5.7	5.6	5.6	12	11	11	11	12	12	12
20	6	5.7	5.6	5.6	5.6	103	11	11	11	12	12	12
21	6	5.8	5.6	5.6	5.6	17	11	11	11	12	12	12
22	5.9	5.7	5.7	5.5	5.6	11	11	11	11	12	12	12
23	6	5.8	5.6	5.5	5.6	12	11	11	11	12	12	12
24	6	5.8	5.6	5.5	5.6	12	11	11	11	12	12	12
25	5.9	5.8	5.7	5.6	5.6	11	11	11	11	12	12	12
26	5.9	5.8	5.7	5.5	5.6	11	11	11	11	12	12	12
27	5.9	5.8	5.6	5.5	5.6	11	11	11	11	12	12	12
28	5.9	5.8	5.6	5.6	5.6	11	38	11	11	12	12	12
29	5.9	5.7	5.6	5.5	---	11	101	11	11	12	12	12
30	5.8	5.7	5.7	5.5	---	11	11	11	11	12	12	12
31	5.9	---	5.7	5.5	---	11	---	11	---	12	12	---
TOTAL	185.7	175.0	176.5	1128.5	171.1	1849.1	735	579	330	356	371	360
MEAN	5.99	5.83	5.69	36.4	6.11	59.6	24.5	18.7	11.0	11.5	12.0	12.0
MAX	6.1	6.0	5.8	486	20	444	180	145	11	12	12	12
MIN	5.8	5.7	5.6	5.4	5.5	5.6	10	11	11	11	11	12
AC-FT	368	347	350	2240	339	3670	1460	1150	655	706	736	714

SACRAMENTO RIVER BASIN

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11421770 BEAR RIVER BELOW DRUM AFTERBAY, NEAR BLUE CANYON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.03	8.01	11.2	16.6	32.4	37.2	44.7	26.7	12.0	10.1	9.77	9.70
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1966 - 1995			
ANNUAL TOTAL	2165.2				6416.9							
ANNUAL MEAN	5.93				17.6				18.7			
HIGHEST ANNUAL MEAN									122			
LOWEST ANNUAL MEAN									3.54			
HIGHEST DAILY MEAN	6.4 Sep 1				486 Jan 13				1930 Feb 17 1986			
LOWEST DAILY MEAN	5.6 Jan 3				5.4 Jan 11				1.0 Dec 9 1967			
ANNUAL SEVEN-DAY MINIMUM	5.6 Dec 23				5.5 Jan 26				2.3 Aug 25 1977			
INSTANTANEOUS PEAK FLOW					1830 Jan 13				7530 Apr 11 1982			
INSTANTANEOUS PEAK STAGE					3.30 Jan 13				4.64 Apr 11 1982			
ANNUAL RUNOFF (AC-FT)	4290				12730				13510			
10 PERCENT EXCEEDS	6.2				12				12			
50 PERCENT EXCEEDS	5.9				11				6.9			
90 PERCENT EXCEEDS	5.7				5.6				5.1			

SACRAMENTO RIVER BASIN

11421780 CHICAGO PARK FLUME NEAR DUTCH FLAT, CA

LOCATION.--Lat 39°12'55", long 120°50'23", in NW 1/4 NE 1/4 sec.34, T.16 N., R.10 E., Nevada County, Hydrologic Unit 18020126, on left bank 670 ft downstream from Dutch Flat Afterbay and 0.6 mi north of Dutch Flat.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,600 ft above sea level, from topographic map. Prior to Sept. 8, 1968, at site 420 ft upstream at same datum.

REMARKS.--Records excellent except for discharges below 70 ft³/s, which are poor. Water is diverted from Dutch Flat Afterbay through the flume to Chicago Park Powerplant and then to Bear River. See schematic diagram of Bear River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,130 ft³/s, Nov. 19, 1983; no flow for several days in most years.

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	e1.9	400	413	39	1060	1010	1030	1030	997	857	767	732
2	e1.9	416	273	83	1050	1020	1030	1030	999	821	768	745
3	185	417	376	162	1040	1040	1030	1030	997	930	768	854
4	264	221	844	485	1030	1030	1040	1030	959	880	767	738
5	251	e1.9	350	550	1030	1030	1030	1030	922	881	767	723
6	251	394	418	576	1030	1030	1030	1030	970	881	767	763
7	142	482	555	867	1030	1030	1030	1030	866	880	760	705
8	e1.9	472	437	949	1040	1040	1030	1030	998	880	376	770
9	12	533	292	1030	1060	1040	1030	1030	985	879	719	772
10	106	510	e1.9	1040	1040	1030	1030	1030	892	880	721	716
11	250	440	37	1030	1030	1030	1030	1030	867	868	775	769
12	250	211	331	1040	1050	1030	1030	1040	923	849	775	763
13	252	211	401	1070	1050	1030	1030	1030	933	724	754	624
14	152	281	553	1060	1050	1030	1030	1030	884	904	727	794
15	e1.9	444	740	1070	1060	1030	1030	1030	913	866	806	844
16	e1.9	398	593	1060	1050	1040	1030	1030	984	857	673	803
17	134	342	209	1060	1050	1040	1030	1030	941	786	785	318
18	251	425	175	918	1050	1030	1030	1030	911	726	742	e1.9
19	188	249	460	1040	1040	1040	1030	1030	926	916	742	e1.9
20	198	206	545	1040	1020	1030	1040	1030	936	805	742	e1.9
21	163	314	432	1040	1020	1030	1030	1030	897	807	774	e1.9
22	e1.9	310	429	1040	1020	1020	1030	1000	915	750	771	e1.9
23	e1.9	307	239	1040	1010	703	1030	1000	907	750	764	e1.9
24	70	100	76	1040	972	521	1030	1000	863	812	759	e1.9
25	278	120	73	1060	876	333	1030	1000	906	797	744	e1.9
26	275	249	e1.9	1070	971	812	1030	1000	904	748	732	e1.9
27	168	146	188	1070	1010	1030	1030	1000	905	750	713	e1.9
28	92	284	495	1070	1010	1030	1030	1000	904	769	716	e1.9
29	e1.9	515	542	1060	---	1030	1030	1000	904	770	723	e1.9
30	e1.9	391	299	1060	---	1030	1030	998	905	769	722	e1.9
31	150	---	e1.9	1060	---	1030	---	999	---	767	722	---
TOTAL	4099.1	9789.9	10780.7	27779	28749	30199	30920	31637	27813	25559	22841	12457.7
MEAN	132	326	348	896	1027	974	1031	1021	927	824	737	415
MAX	278	533	844	1070	1060	1040	1040	1040	999	930	806	854
MIN	1.9	1.9	1.9	39	876	333	1030	998	863	724	376	1.9
AC-FT	8130	19420	21380	55100	57020	59900	61330	62750	55170	50700	45310	24710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

MEAN	419	473	512	582	590	655	700	727	669	632	605	386
MAX	877	1033	1084	1082	1084	1081	1063	1069	982	964	889	683
(WY)	1984	1984	1984	1984	1984	1983	1978	1983	1983	1983	1983	1967
MIN	.000	.000	36.5	30.5	15.8	67.8	52.1	25.9	177	205	114	72.5
(WY)	1987	1987	1977	1991	1991	1977	1976	1976	1977	1977	1977	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	119449.30	262624.4	
ANNUAL MEAN	327	720	584
HIGHEST ANNUAL MEAN			949
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	844	Dec 4	1070
LOWEST DAILY MEAN	.00	Sep 4	1.9
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 4	1.9
ANNUAL RUNOFF (AC-FT)	236900	520900	423300
10 PERCENT EXCEEDS	619	1040	1030
50 PERCENT EXCEEDS	305	863	614
90 PERCENT EXCEEDS	1.9	114	20

e Estimated.

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,090 ft³/s, Mar. 10; minimum daily, 5.9 ft³/s, many days.

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	11	8.3	6.6	6.5	5.9	5.9	198	598	12	12	13	12
2	11	6.7	6.6	6.5	5.9	5.9	102	208	12	12	13	12
3	11	6.7	6.7	6.5	5.9	421	92	97	12	12	13	12
4	11	6.7	6.6	6.5	5.9	111	164	131	12	12	13	11
5	11	6.7	6.5	6.5	5.9	268	110	305	12	12	13	11
6	11	6.7	6.6	6.5	6.5	142	133	184	12	12	13	11
7	11	6.7	6.6	6.5	19	109	557	180	12	12	12	11
8	11	6.7	6.6	6.5	5.9	36	341	122	12	12	12	11
9	11	6.7	6.6	6.5	5.9	781	180	183	12	12	12	11
10	11	6.7	6.7	480	5.9	1090	219	96	12	12	12	11
11	11	6.7	6.7	321	5.9	1040	123	158	12	12	12	11
12	11	6.7	6.6	82	11	538	133	136	12	13	12	11
13	11	6.7	6.6	936	36	482	282	148	12	13	12	11
14	11	6.7	6.6	1040	25	514	190	140	12	13	12	12
15	11	6.7	6.6	356	6.3	422	132	216	12	13	12	12
16	11	6.7	6.5	71	5.9	267	71	110	12	13	12	12
17	11	6.7	6.5	70	5.9	211	55	109	12	13	12	11
18	11	6.7	6.6	222	5.9	228	72	40	12	13	12	11
19	11	6.6	6.6	22	5.9	186	23	34	12	13	12	11
20	11	6.6	6.5	6.7	5.9	456	41	12	12	13	12	11
21	11	6.7	6.5	6.6	5.9	411	56	12	12	13	12	11
22	11	6.6	6.6	6.7	5.9	169	23	12	12	13	12	11
23	11	6.6	6.5	61	5.9	5.9	21	12	12	13	12	11
24	11	6.7	6.5	59	5.9	5.9	15	12	12	13	12	11
25	11	6.7	6.5	87	5.9	5.9	6.8	12	12	13	12	11
26	11	6.7	6.5	264	5.9	6.6	6.1	12	12	13	12	11
27	11	6.7	6.5	7.1	5.9	137	6.0	12	12	13	12	11
28	11	6.7	6.5	5.9	5.9	132	77	12	12	13	12	11
29	11	6.7	6.5	5.9	---	150	337	12	12	13	12	11
30	11	6.5	6.5	5.9	---	210	166	12	12	13	12	11
31	11	---	6.5	5.9	---	117	---	12	---	13	12	---
TOTAL	341	202.0	203.5	4180.2	233.6	8664.1	3931.9	3339	360	392	378	336
MEAN	11.0	6.73	6.56	135	8.34	279	131	108	12.0	12.6	12.2	11.2
MAX	11	8.3	6.7	1040	36	1090	557	598	12	13	13	12
MIN	11	6.5	6.5	5.9	5.9	5.9	6.0	12	12	12	12	11
AC-FT	676	401	404	8290	463	17190	7800	6620	714	778	750	666

SACRAMENTO RIVER BASIN

11421790 BEAR RIVER BELOW DUTCH FLAT AFTERBAY, NEAR DUTCH FLAT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.6	11.5	37.2	40.7	53.0	62.3	62.8	20.3	11.3	10.8	10.4	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 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	22561.3		
ANNUAL MEAN	61.8		28.1
HIGHEST ANNUAL MEAN			80.1
LOWEST ANNUAL MEAN			5.53
HIGHEST DAILY MEAN	1090	Mar 10	3400
LOWEST DAILY MEAN	5.9	Jan 28	.08
ANNUAL SEVEN-DAY MINIMUM	5.9	Jan 28	.08
INSTANTANEOUS PEAK FLOW	2090	Mar 10	4240
ANNUAL RUNOFF (AC-FT)	44750		20330
10 PERCENT EXCEEDS	181		18
50 PERCENT EXCEEDS	12		9.0
90 PERCENT EXCEEDS	6.5		5.0

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, 68,800 acre-ft, Mar. 10, elevation, 2,174.33 ft; minimum, 32,200 acre-ft, Oct. 16, elevation, 2,118.83 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34800	34400	37300	43000	66900	66700	67000	67900	66600	66300	65800	62700
2	34300	35100	37200	42400	66900	67100	66900	67300	66600	66300	65700	62600
3	34100	35800	38300	41900	66900	67400	66900	67100	66600	66400	65900	62700
4	34100	36100	42900	42200	66800	66900	66900	67000	66500	66300	65800	62600
5	34200	36100	44100	43200	66800	67100	66900	67100	66500	66300	65700	62500
6	34200	37300	44800	44300	66800	66900	66900	67000	66500	66300	65700	62400
7	34100	38100	45500	47600	66800	66900	67500	66900	66400	66300	65600	62300
8	33600	38500	45800	52100	66800	66800	67200	66900	66500	66300	64800	62200
9	33100	39000	45800	57100	66800	68700	67000	66900	66500	66300	64700	62200
10	32700	39500	45000	67100	66800	68800	67000	66800	66500	66300	64500	62000
11	32800	39800	44200	67300	66700	68100	66900	66800	66400	66300	64500	62000
12	32800	39500	44200	67200	66700	67700	66900	66800	66500	66200	64500	61900
13	32900	39200	44300	68700	66900	68000	67200	66900	66500	66200	64400	61600
14	32800	39000	44500	68500	66800	67700	66900	66800	66500	66300	64300	61600
15	32300	39300	45100	67600	66800	67500	66900	66900	66600	66300	64300	61700
16	32200	39500	45700	67100	66800	67300	66800	66800	66600	66300	64000	61600
17	32300	39500	45400	66900	66800	67100	66800	66800	66500	66200	64000	60900
18	32700	39900	45100	66900	66800	67200	66800	66700	66500	66100	63900	59200
19	33000	40400	45300	66800	66700	67100	66800	66700	66500	66300	63900	57600
20	33300	40100	45700	66700	66700	67900	66800	66700	66500	66200	63800	55900
21	33500	39800	45800	66700	66700	67400	66800	66700	66400	66200	63700	54200
22	33400	39600	45900	66800	66700	68000	66700	66600	66500	66100	63700	52600
23	33300	39400	45700	66800	66700	67100	66700	66600	66400	66000	63700	50900
24	33200	38700	45200	67000	66600	66800	66700	66600	66400	66100	63600	49300
25	33700	38200	44800	67100	66500	66600	66700	66600	66400	66100	63500	47700
26	34100	38000	44100	67300	66600	66900	66700	66600	66400	66000	63400	46400
27	34400	37500	43600	67100	66700	67000	66700	66600	66400	66000	63300	45200
28	34500	37200	44000	67000	66700	67000	66800	66600	66400	65900	63200	44000
29	34300	37400	44500	67000	---	67000	67200	66600	66400	65900	63000	42400
30	34000	37300	44500	67000	---	67000	67000	66600	66400	65900	62900	40800
31	33800	---	43700	66900	---	66900	---	66600	---	65800	62800	---
MAX	34800	40400	45900	68700	66900	68800	67500	67900	66600	66400	65900	62700
MIN	32200	34400	37200	41900	66500	66600	66700	66600	66400	65800	62800	40800
a	2122.08	2128.83	2139.91	2172.14	2171.83	2172.12	2172.24	2171.71	2171.47	2170.80	2167.05	2134.98
b	-1600	+3500	+6400	+23200	-200	+200	+100	-400	-200	-600	-3000	-22000
c	6660	17850	28550	47870	54710	58060	57210	59370	57580	59420	59160	53030

CAL YR 1994 MAX 63000 MIN 29500 b +7800 c 261400

WTR YR 1995 MAX 68800 MIN 32200 b +5400 c 559500

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	103	443	449	379	443	450	260	390	409	427	432
2	204	83	444	448	386	404	451	329	389	411	429	433
3	203	92	447	449	386	342	448	385	388	411	407	433
4	204	96	350	448	384	355	450	418	386	411	427	431
5	199	95	310	452	393	430	450	438	378	411	422	434
6	186	87	373	429	398	437	450	436	377	411	418	435
7	183	190	420	401	398	444	402	434	376	416	418	436
8	183	329	410	396	397	384	439	434	380	422	418	436
9	179	366	454	336	397	224	450	424	394	422	419	437
10	178	360	441	117	396	184	449	412	401	422	419	438
11	177	361	445	162	396	301	449	412	403	423	420	438
12	178	359	447	336	395	373	449	411	402	424	421	439
13	178	357	448	252	379	358	411	410	403	408	421	439
14	172	372	449	110	360	185	425	400	403	421	422	440
15	181	322	445	190	367	394	440	392	387	422	422	440
16	2.0	347	439	291	367	412	439	391	402	423	423	441
17	2.0	396	441	324	366	428	439	394	402	423	424	442
18	2.0	237	440	341	366	410	439	397	402	430	424	442
19	2.1	50	442	345	392	396	438	396	400	437	425	443
20	2.1	401	450	363	428	318	439	396	253	437	425	443
21	2.2	400	450	378	441	324	438	395	396	433	426	443
22	2.3	414	450	383	446	257	438	395	396	430	427	443
23	2.3	438	450	365	445	185	437	395	403	431	427	443
24	2.4	440	449	356	445	351	436	394	403	431	428	443
25	2.5	443	448	355	445	395	396	393	411	432	428	443
26	2.6	409	449	346	444	421	290	392	411	432	429	441
27	2.7	443	449	303	443	442	290	392	411	433	430	439
28	2.7	443	450	303	440	448	380	391	411	433	430	440
29	2.9	443	451	332	---	444	421	391	412	432	430	442
30	87	443	452	364	---	247	422	390	412	431	431	441
31	135	---	451	376	---	446	---	390	---	430	431	---
TOTAL	3066.8	9319	13487	10500	11279	11182	12755	12287	11782	13142	13148	13170
MEAN	98.9	311	435	339	403	361	425	396	393	424	424	439
MAX	207	443	454	452	446	448	451	438	412	437	431	443
MIN	2.0	50	310	110	360	184	290	260	253	408	407	431
AC-FT	6080	18480	26750	20830	22370	22180	25300	24370	23370	26070	26080	26120
a	4840	16070	23780	19070	21070	20710	23880	21830	19970	22460	23940	23480
b	4580	12580	21050	20690	17920	21790	22340	19200	18810	22980	24660	24540

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	190	162	167	93.7
(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
LOWEST ANNUAL MEAN	121
HIGHEST DAILY MEAN	345
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	338	320	373	357	350	321	312	386	400	408	408	393
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	69.8	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1932 - 1995

ANNUAL TOTAL	112204.8	135117.8	
ANNUAL MEAN	307	370	364
HIGHEST ANNUAL MEAN			462
LOWEST ANNUAL MEAN			118
HIGHEST DAILY MEAN	462	Mar 3	531
LOWEST DAILY MEAN	2.0	Oct 16	.00
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 16	.00
ANNUAL RUNOFF (AC-FT)	222600	268000	263600
ANNUAL TOTAL (AC-FT) a	193600	241100	
ANNUAL TOTAL (AC-FT) b	165600	231100	
10 PERCENT EXCEEDS	447	445	476
50 PERCENT EXCEEDS	327	411	425
90 PERCENT EXCEEDS	119	185	138

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 poor. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, Mar. 11, gage height, unknown; minimum daily, 21 ft³/s, Nov. 19.

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	77	56	26	25	1330	724	1590	2830	833	601	428	416
2	76	25	26	25	1260	853	1550	2330	831	553	426	415
3	77	27	35	25	1200	1990	1430	1720	838	586	361	415
4	76	27	48	26	1140	1650	1470	1530	814	607	426	415
5	76	28	26	34	1080	1480	1460	1530	777	587	429	415
6	78	31	25	30	1040	1360	1430	1470	781	580	432	414
7	80	29	25	38	1030	1190	2070	1370	736	575	431	414
8	79	29	26	44	1000	1160	2210	1290	773	570	423	414
9	80	30	25	137	994	2570	1840	1280	802	569	428	414
10	80	28	25	604	958	e4760	1670	1190	739	564	426	414
11	80	27	25	2680	921	e6050	1540	1170	673	556	425	414
12	80	27	26	1970	908	e3360	1460	1160	675	534	424	414
13	80	26	26	3460	975	e3000	1820	1240	713	458	424	414
14	74	26	154	4120	1060	3560	1640	1190	679	505	423	412
15	78	25	150	e3620	981	3110	1350	1230	788	568	422	411
16	79	25	25	e2320	943	e2200	1270	1180	884	544	421	410
17	80	27	25	e1680	923	e2000	1180	1100	799	517	418	410
18	80	25	25	e1460	904	2080	1190	1080	738	459	418	405
19	81	21	25	1360	859	1960	1120	996	712	477	419	400
20	81	25	25	1200	802	2560	1170	963	865	496	419	395
21	82	25	25	1120	771	2990	1150	935	689	493	418	388
22	82	26	24	1140	755	3100	1080	913	681	462	419	382
23	80	28	24	1430	745	2940	1030	894	664	445	419	377
24	81	27	27	1590	734	1780	1000	891	621	444	419	371
25	81	27	26	1730	644	1340	1020	903	629	450	418	363
26	81	26	25	1990	640	1340	1110	889	633	438	419	229
27	82	27	25	2090	694	1640	1130	874	632	433	418	125
28	81	27	26	1810	716	1660	1090	860	624	432	418	178
29	81	27	25	1610	---	1630	1570	848	617	430	416	342
30	85	26	25	1470	---	1850	1520	839	614	428	411	336
31	86	---	25	1380	---	1550	---	837	---	428	417	---
TOTAL	2474	830	1070	42218	26007	69437	42160	37532	21854	15789	13015	11322
MEAN	79.8	27.7	34.5	1362	929	2240	1405	1211	728	509	420	377
MAX	86	56	154	4120	1330	6050	2210	2830	884	607	432	416
MIN	74	21	24	25	640	724	1000	837	614	428	361	125
AC-FT	4910	1650	2120	83740	51580	137700	83620	74440	43350	31320	25820	22460

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	103	185	318	571	625	723	616	463	326	236	195	151
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	.000	.000	.000	.000	.000	.000	.000	21.8	15.2	22.8	34.3	34.4
(WY)	1994	1994	1994	1994	1994	1994	1994	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	20880.00	283708	
ANNUAL MEAN	57.2	777	375
HIGHEST ANNUAL MEAN			972
LOWEST ANNUAL MEAN			19.0
HIGHEST DAILY MEAN	235	Aug 12	6050
LOWEST DAILY MEAN	.00	Jan 1	21
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	25
INSTANTANEOUS PEAK FLOW			Unknown
INSTANTANEOUS PEAK STAGE			Unknown
ANNUAL RUNOFF (AC-FT)	41420	562700	271400
10 PERCENT EXCEEDS	117	1670	913
50 PERCENT EXCEEDS	74	556	118
90 PERCENT EXCEEDS	.00	26	21

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.--No estimated daily discharges. The gage measures required fish-release flow and is entirely regulated by New Camp Far West Reservoir. See schematic diagram of Bear 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	12	11	20	18	35	32	30	17	13	13
2	11	12	12	11	20	18	36	32	29	8	13	13
3	11	12	21	12	20	19	36	31	29	9	13	13
4	11	12	43	17	20	20	36	30	29	13	13	13
5	11	13	39	22	19	19	36	30	29	14	13	13
6	11	16	23	17	19	19	34	30	30	14	13	13
7	11	14	18	18	19	18	32	30	30	13	13	13
8	11	13	12	23	19	18	33	29	30	13	13	13
9	11	13	11	19	19	19	33	29	30	13	13	13
10	11	13	11	28	19	23	33	33	30	13	13	13
11	11	13	11	32	19	22	32	31	30	13	13	13
12	11	12	13	31	19	22	32	31	30	13	13	13
13	11	12	12	32	19	21	32	31	30	13	13	13
14	11	12	13	33	19	22	32	31	30	13	13	13
15	11	13	17	33	19	21	31	31	30	13	13	13
16	12	13	15	24	19	20	31	31	31	13	13	12
17	12	12	12	21	18	20	31	31	31	13	13	13
18	12	12	12	21	18	20	31	31	31	13	13	13
19	12	12	12	20	18	20	30	30	31	13	13	13
20	12	12	11	20	18	21	31	30	30	13	13	13
21	12	12	11	20	18	21	31	30	30	13	13	13
22	15	13	11	20	18	25	30	30	30	13	13	13
23	16	13	11	20	18	28	30	31	30	13	13	13
24	20	12	11	21	18	21	30	31	30	13	13	13
25	25	13	11	21	18	20	30	31	30	13	13	13
26	21	13	11	21	18	19	30	30	30	13	13	14
27	15	12	11	22	18	19	30	30	30	13	13	14
28	13	12	12	22	18	19	31	30	30	13	13	13
29	13	12	11	21	---	29	31	30	31	13	13	13
30	13	12	11	21	---	35	31	30	31	13	13	13
31	12	---	11	20	---	36	---	30	---	13	13	---
TOTAL	400	377	452	674	524	672	961	947	902	400	403	391
MEAN	12.9	12.6	14.6	21.7	18.7	21.7	32.0	30.5	30.1	12.9	13.0	13.0
MAX	25	16	43	33	20	36	36	33	31	17	13	14
MIN	11	12	11	11	18	18	30	29	29	8.0	13	12
AC-FT	793	748	897	1340	1040	1330	1910	1880	1790	793	799	776

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	12.2	11.9	12.0	13.2	13.1	14.0	27.9	27.9	27.6	11.4	11.3	11.3
MAX	13.0	12.6	14.6	21.7	18.7	21.7	32.0	30.5	30.1	12.9	13.0	13.0
(WY)	1992	1992	1995	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	5785	7103	
ANNUAL MEAN	15.8	19.5	16.1
HIGHEST ANNUAL MEAN			19.5
LOWEST ANNUAL MEAN			15.0
HIGHEST DAILY MEAN	43	43	43
LOWEST DAILY MEAN	10	8.0	8.0
ANNUAL SEVEN-DAY MINIMUM	11	11	10
ANNUAL RUNOFF (AC-FT)	11470	14090	11690
10 PERCENT EXCEEDS	27	31	28
50 PERCENT EXCEEDS	12	18	12
90 PERCENT EXCEEDS	11	12	11

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 poor. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,500 ft³/s, Mar. 23, gage height, 15.54 ft; minimum daily, 11 ft³/s, Dec. 21-23, Aug. 19.

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	12	14	14	12	1670	719	1200	2500	399	127	34	21
2	13	17	14	12	1540	775	1220	3490	389	124	33	21
3	13	12	28	13	1430	2320	1220	2240	386	127	29	22
4	16	14	70	28	1340	3130	1170	1700	394	132	21	24
5	17	15	38	44	1260	2220	1170	1510	388	133	15	25
6	16	18	28	31	1190	1980	1160	1440	e126	131	20	25
7	16	13	22	34	1140	1610	1290	1310	386	128	22	24
8	15	12	18	46	1120	1390	1770	1340	378	122	23	24
9	14	14	16	51	1090	2350	1660	1140	357	118	24	26
10	15	16	15	1240	1070	11200	1410	772	334	116	22	27
11	13	14	16	7460	1030	11700	1440	864	325	93	21	24
12	13	15	20	4380	998	7490	1380	856	320	38	21	30
13	14	16	22	5040	979	5010	1470	1030	214	42	22	21
14	14	17	20	10500	1050	6310	1710	1100	121	45	20	22
15	14	20	24	8560	1090	5310	1550	1030	242	48	20	21
16	15	15	23	4620	1050	3610	1410	1070	416	48	19	21
17	15	12	19	3060	1010	2600	1310	972	520	48	19	23
18	16	12	18	2340	986	2380	1250	867	509	53	17	22
19	18	13	16	1940	958	2500	1110	767	455	43	11	22
20	15	13	13	1740	920	2890	1330	651	442	44	14	21
21	14	13	11	1560	876	5200	1300	573	448	47	17	21
22	13	13	11	1470	839	8090	1240	540	391	51	20	20
23	18	12	11	1840	814	11500	1160	504	346	53	21	18
24	17	12	12	2180	796	4170	1070	502	327	48	23	19
25	18	15	12	2590	780	2290	1020	488	317	42	e21	18
26	19	13	12	2670	746	1640	994	489	314	47	e20	19
27	17	13	12	3910	723	1430	1000	482	215	48	e20	20
28	14	13	13	3520	716	1450	1030	465	128	41	e19	20
29	12	13	12	2640	---	1390	1170	446	128	38	e18	20
30	14	14	12	2120	---	1360	1450	431	130	40	18	19
31	15	---	12	1860	---	1380	---	412	---	36	21	---
TOTAL	465	423	584	77511	29211	117394	38664	31981	9845	2251	645	660
MEAN	15.0	14.1	18.8	2500	1043	3787	1289	1032	328	72.6	20.8	22.0
MAX	19	20	70	10500	1670	11700	1770	3490	520	133	34	30
MIN	12	12	11	12	716	719	994	412	121	36	11	18
AC-FT	922	839	1160	153700	57940	232900	76690	63430	19530	4460	1280	1310

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.8	140	424	880	1100	1169	701	214	58.9	18.8	15.2	14.1
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	16350	309634	
ANNUAL MEAN	44.8	848	392
HIGHEST ANNUAL MEAN			1191
LOWEST ANNUAL MEAN			3.42
HIGHEST DAILY MEAN	543	Feb 9	11700
LOWEST DAILY MEAN	11	Jul 9	11
ANNUAL SEVEN-DAY MINIMUM	12	Dec 21	12
INSTANTANEOUS PEAK FLOW			17500
INSTANTANEOUS PEAK STAGE			15.54
ANNUAL RUNOFF (AC-FT)	32430	614200	284200
10 PERCENT EXCEEDS	34	2200	1130
50 PERCENT EXCEEDS	15	93	22
90 PERCENT EXCEEDS	12	13	7.1

SACRAMENTO RIVER BASIN

291

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.6	7.7	---	---	---	---	---	---	---	---	---
2	---	---	7.7	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	7.6
7	---	---	---	---	---	---	---	---	---	---	---	7.3
8	---	---	---	---	---	---	---	---	---	---	---	7.0
9	---	---	---	---	---	---	---	---	---	---	---	6.8
10	---	---	---	---	---	---	---	---	---	---	---	6.8
11	---	---	---	---	---	---	---	---	---	---	---	6.7
12	---	---	---	---	---	---	---	---	---	---	---	6.9
13	---	---	---	---	---	---	---	---	8.4	---	---	7.5
14	---	8.3	---	---	---	---	---	---	---	---	---	7.4
15	---	---	---	---	---	---	---	---	---	---	---	7.1
16	---	---	---	---	---	---	---	---	---	---	---	6.8
17	3.8	8.0	---	---	---	---	---	---	---	7.8	---	7.0
18	1.8	---	---	---	---	---	---	---	---	---	---	7.0
19	1.5	---	---	---	---	---	---	---	---	---	---	7.3
20	1.1	---	---	---	---	---	---	---	---	---	---	7.4
21	.97	7.0	---	---	---	---	---	---	---	---	---	7.9
22	1.8	7.0	---	---	6.0	---	---	---	---	---	---	7.8
23	1.2	---	---	---	---	---	---	---	8.2	---	---	7.1
24	1.3	7.2	---	---	---	---	---	---	8.0	---	---	7.5
25	1.3	---	---	---	---	---	---	---	8.0	---	---	7.8
26	1.6	---	---	---	---	---	---	---	---	---	---	8.0
27	1.9	8.4	---	---	---	---	---	---	---	---	---	8.4
28	1.3	8.0	---	---	---	---	---	---	---	---	---	8.2
29	1.5	7.9	---	---	---	---	---	---	---	---	---	8.0
30	1.3	7.7	---	---	---	---	---	8.5	---	---	---	7.8
31	1.3	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---
a	0	12310	19640	17540	14510	18970	14990	10820	2350	0	0	8660

CAL YR 1994 a 73320

WTR YR 1995 a 119800

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

SACRAMENTO RIVER BASIN

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.

PERIOD OF RECORD.--May 1926 to September 1929 (low-water periods only), October 1929 to current year.

CHEMICAL DATA: Water years 1952, 1969-70.

WATER TEMPERATURE: Water year 1980.

SEDIMENT DATA: Water year 1980.

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.--No estimated daily discharges. Records good. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 81,000 ft³/s, Mar. 13, gage height, 37.95 ft; minimum daily, 5,850 ft³/s, Oct. 23.

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	9920	6480	7180	13000	65600	26300	61000	56700	39400	27200	15600	18100
2	9630	6850	7250	12400	66000	26000	60100	66300	39500	26600	15700	18200
3	9480	6550	7610	12200	66700	27900	59100	69500	38500	26200	15600	17900
4	9250	6410	13000	13000	67300	34000	57900	69600	37900	25600	15800	17600
5	9270	6780	28700	19000	66800	38400	56200	68900	38000	24600	15900	17800
6	9120	7680	30900	27100	66100	37800	53900	68400	38000	23900	15900	18300
7	8870	8860	23800	27600	65100	35800	51700	66500	36700	22700	16000	18700
8	8630	9420	18400	31600	64000	36300	52500	65300	35000	20500	16100	19000
9	8510	9060	15400	42300	63300	40500	57800	64300	33100	19400	16100	20100
10	8340	9170	13400	57700	62800	60100	61300	62800	31400	19300	16300	20100
11	8100	9570	12500	71600	62200	73500	62000	61700	28900	19400	16300	19700
12	7760	10000	12200	75100	61500	79600	62200	60400	28000	19200	16100	20200
13	7330	9670	12400	73300	60700	80700	62400	59100	28000	18500	15700	20600
14	6970	8780	13500	72700	60000	80200	62600	57400	27300	17900	15500	20600
15	6430	8350	16700	72300	58900	79700	62100	54700	27300	17200	16100	20600
16	5920	8210	18300	70700	57200	78800	62000	51500	30200	16000	16500	20900
17	5970	8080	18100	68600	54600	77400	61400	46800	33300	15800	16500	21200
18	6050	7630	16300	66500	51300	75500	60700	41500	34200	15400	16100	21200
19	6150	7240	14900	64500	47200	74100	59600	37300	33700	15700	15900	21100
20	6090	7060	13800	63100	43000	73000	58300	34600	32900	16300	16200	21100
21	5960	6750	13300	62200	39700	73100	56200	32700	31400	16200	16700	20900
22	5920	6360	12400	61800	37200	72700	52300	32100	29800	16000	17200	21000
23	5850	6330	11600	62200	34900	74300	47300	32400	28900	15900	17600	21200
24	5910	6370	11400	62700	32600	73700	41600	33100	27600	15900	17600	20700
25	6030	6780	11300	64000	30500	71800	36800	35200	26900	15900	17600	20100
26	6220	7280	11700	64900	28700	70100	32700	37100	27500	15800	17700	19400
27	6370	7340	12100	66200	27500	68600	29200	38600	28000	15800	17600	19700
28	6340	7440	11800	67700	26800	66000	26800	39100	28500	15800	17300	19200
29	6230	7320	12100	66700	---	64200	30000	39200	29100	15700	17300	18800
30	6160	7070	14400	65700	---	63000	43900	39300	28200	15400	17600	18800
31	6120	---	14100	65700	---	61900	---	39300	---	15400	17900	---
TOTAL	224900	230890	450540	1664100	1468200	1895000	1581600	1561400	957200	581200	512000	592800
MEAN	7255	7696	14530	53680	52440	61130	52720	50370	31910	18750	16520	19760
MAX	9920	10000	30900	75100	67300	80700	62600	69600	39500	27200	17900	21200
MIN	5850	6330	7180	12200	26800	26000	26800	32100	26900	15400	15500	17600
AC-FT	446100	458000	893600	3301000	2912000	3759000	3137000	3097000	1899000	1153000	1016000	1176000

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	1938
LOWEST ANNUAL MEAN	6286	1931
HIGHEST DAILY MEAN	76900	Feb 8 1942
LOWEST DAILY MEAN	304	Jul 23 1931
ANNUAL SEVEN-DAY MINIMUM	313	Jul 18 1931
INSTANTANEOUS PEAK FLOW	79200	Mar 1 1940
INSTANTANEOUS PEAK STAGE	41.20	Mar 1 1940
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10620	14090	22220	29040	33050	31370	24960	20050	13980	11120	11660	12610
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1946 - 1995

ANNUAL TOTAL	3828070	11719830	
ANNUAL MEAN	10490	32110	19500
HIGHEST ANNUAL MEAN			39150
LOWEST ANNUAL MEAN			7178
HIGHEST DAILY MEAN	30900	Dec 6	80700
LOWEST DAILY MEAN	5000	Jun 6	5850
ANNUAL SEVEN-DAY MINIMUM	5360	Jun 5	5990
INSTANTANEOUS PEAK FLOW			81000
INSTANTANEOUS PEAK STAGE			37.95
ANNUAL RUNOFF (AC-FT)	7593000	23250000	14120000
10 PERCENT EXCEEDS	15200	66200	45200
50 PERCENT EXCEEDS	9500	24600	13200
90 PERCENT EXCEEDS	6350	7340	7360

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,500 ft³/s, Mar. 13, gage height, 27.40 ft; maximum gage height, 28.44 ft, Mar. 11; no flow most of year.

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	.00	.00	.00	.00	192	.00	62	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	202	.00	32	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	240	.00	1	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	235	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	226	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	206	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	182	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	149	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	130	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	62	110	278	23	.00	.00	.00	.00	.00
11	.00	.00	.00	466	67	5550	67	.00	.00	.00	.00	.00
12	.00	.00	.00	1880	31	15600	101	.00	.00	.00	.00	.00
13	.00	.00	.00	528	3	28300	110	.00	.00	.00	.00	.00
14	.00	.00	.00	461	.00	21100	120	.00	.00	.00	.00	.00
15	.00	.00	.00	403	.00	20300	110	.00	.00	.00	.00	.00
16	.00	.00	.00	355	.00	18800	106	.00	.00	.00	.00	.00
17	.00	.00	.00	307	.00	17600	91	.00	.00	.00	.00	.00
18	.00	.00	.00	259	.00	13000	77	.00	.00	.00	.00	.00
19	.00	.00	.00	202	.00	9970	53	.00	.00	.00	.00	.00
20	.00	.00	.00	149	.00	9610	16	.00	.00	.00	.00	.00
21	.00	.00	.00	101	.00	11600	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	86	.00	12500	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	110	.00	14000	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	115	.00	12900	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	144	.00	7050	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	178	.00	1280	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	278	.00	798	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	528	.00	235	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	355	---	163	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	211	---	130	.00	.00	.00	.00	.00	.00
31	.00	---	.00	196	---	91	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	7374.00	1973.00	220855.00	969.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	238	70.5	7124	32.3	.000	.000	.000	.000	.000
MAX	.00	.00	.00	1880	240	28300	120	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	14630	3910	438100	1920	.00	.00	.00	.00	.00

11426000 SACRAMENTO WEIR SPILL TO YOLO BYPASS NEAR SACRAMENTO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.40	139	591	504	761		585	95.5	1.77	.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 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1943 - 1995

ANNUAL TOTAL							231171.00					
ANNUAL MEAN							633			217		
HIGHEST ANNUAL MEAN										2075		1986
LOWEST ANNUAL MEAN												1944
HIGHEST DAILY MEAN							28300	Mar 13	123000		Feb 20	1986
LOWEST DAILY MEAN							.00	Oct 1	.00		Jan 1	1943
ANNUAL SEVEN-DAY MINIMUM				.00	Jan 1		.00	Oct 1	.00		Jan 1	1943
INSTANTANEOUS PEAK FLOW							30500	Mar 13	128000		Feb 20	1986
INSTANTANEOUS PEAK STAGE							27.40	Mar 13	33.01		Dec 23	1955
ANNUAL RUNOFF (AC-FT)							458500		157500			
10 PERCENT EXCEEDS				.00			202		.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.--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, 8,009 acre-ft, June 26, gage height, 57.65 ft; minimum, 2,391 acre-ft, Jan. 4, gage height, 33.79 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4014	2942	2677	2423	5352	5799	7158	7623	7450	7901	7776	7345
2	3978	2907	2671	2411	5401	5900	7149	7438	7450	7877	7701	7334
3	3921	2880	2709	2395	5432	6027	7140	7354	7450	7857	7692	7304
4	3900	2859	2739	2391	5462	6066	7140	7319	7462	7860	7683	7289
5	3891	2915	2740	2397	5491	6102	7155	7298	7417	7874	7671	7277
6	3861	2966	2735	2412	5518	6113	7185	7268	7369	7868	7659	7262
7	3824	2973	2726	2455	5538	6130	7342	7253	7345	7866	7647	7250
8	3785	2974	2714	2511	5562	6151	7336	7253	7328	7845	7647	7236
9	3742	2984	2703	2717	5573	6993	7307	7256	7339	7815	7635	7224
10	3703	2976	2689	3172	5589	7683	7286	7274	7378	7803	7635	7212
11	3664	2963	2683	3316	5595	7549	7277	7280	7411	7806	7620	7194
12	3620	2952	2683	3473	5606	7399	7292	7280	7429	7812	7608	7182
13	3576	2942	2664	4137	5658	7423	7322	7250	7474	7833	7596	7170
14	3535	2931	2664	e4053	5658	7435	7298	7218	7534	7839	7587	7155
15	3496	2926	2648	e4017	5661	7441	7277	7188	7608	7851	7575	7143
16	3455	2913	2635	e3962	5663	7384	7256	7191	e7608	7854	7558	7128
17	3411	2912	2624	e3923	5663	7348	7245	7253	e7642	7854	7543	7116
18	3380	2880	2609	e3985	5661	7399	7236	7325	7659	7857	7534	7104
19	3343	2858	2594	e3980	5663	7369	7221	7393	7686	7857	7519	7092
20	3298	2833	2581	e3989	5663	7402	7230	7423	7701	7860	7507	7077
21	3259	2810	2568	e4005	5674	7363	7227	7426	7728	7851	7495	7068
22	3230	2791	2553	e4019	5691	7375	7218	7420	7785	7845	7483	7056
23	3201	2776	2542	e4065	5702	7328	7215	7414	7871	7842	7471	7044
24	3161	2760	2536	e4344	5721	7283	7239	7363	7985	7836	7456	7029
25	3136	2768	2525	e4624	5738	7253	7295	7372	8006	7827	7444	7017
26	3105	2754	2505	e4904	5752	7245	7339	7387	8009	7824	7429	7005
27	3071	2737	2494	5183	5768	7224	7390	7393	7952	7821	7414	6993
28	3041	2722	2485	5193	5777	7209	7456	7405	7892	7809	7399	6981
29	3010	2708	2465	5202	---	7203	7507	7420	7877	7800	7384	6966
30	2982	2691	2448	5227	---	7185	7480	7435	7886	7791	7372	6955
31	2958	---	2439	5287	---	7170	---	7450	---	7785	7360	---
MAX	4014	2984	2740	5287	5777	7683	7507	7623	8009	7901	7776	7345
MIN	2958	2691	2439	2391	5352	5799	7140	7188	7328	7785	7360	6955
a	37.47	35.76	34.11	47.98	49.88	54.84	55.88	55.78	57.24	56.90	55.48	54.12
b	-1063	-267	-252	+2848	+490	+1393	+310	-30	+436	-101	-425	-405

CAL YR 1994 MAX 5468 MIN 1400 b -91
WTR YR 1995 MAX 8009 MIN 2391 b +2934

e Estimated.

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

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

297

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 Dec. 1 to June 7 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, 340 acre-ft, June 5-7, 1993, May 18, 19, 1994, gage height, 17.2 ft; minimum, 0 acre-ft, Oct. 1-24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 319 acre-ft, June 14-16, 25, 26, gage height, 16.4 ft; minimum recorded, 9 acre-ft, Nov. 29, gage height, 0.56 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	251	---	---	---	---	---	---	---	312	211	198
2	258	246	---	---	---	---	---	---	---	309	211	197
3	257	236	---	---	---	---	---	---	---	307	211	197
4	259	227	---	---	---	---	---	---	---	304	210	196
5	259	228	---	---	---	---	---	---	---	301	210	196
6	259	229	---	---	---	---	---	---	---	298	209	196
7	259	221	---	---	---	---	---	---	---	294	209	195
8	258	211	---	---	---	---	---	---	315	291	208	195
9	258	207	---	---	---	---	---	---	315	287	207	194
10	258	198	---	---	---	---	---	---	317	284	207	194
11	258	190	---	---	---	---	---	---	317	280	207	194
12	258	182	---	---	---	---	---	---	317	276	206	194
13	255	174	---	---	---	---	---	---	316	272	206	193
14	255	166	---	---	---	---	---	---	319	268	205	193
15	255	160	---	---	---	---	---	---	319	263	205	192
16	253	154	---	---	---	---	---	---	319	259	205	193
17	252	148	---	---	---	---	---	---	317	255	204	192
18	252	141	---	---	---	---	---	---	317	252	204	192
19	252	128	---	---	---	---	---	---	316	248	203	191
20	252	109	---	---	---	---	---	---	316	244	202	191
21	251	94	---	---	---	---	---	---	316	240	203	190
22	251	78	---	---	---	---	---	---	317	235	202	190
23	251	64	---	---	---	---	---	---	318	231	202	189
24	250	51	---	---	---	---	---	---	318	227	201	188
25	250	43	---	---	---	---	---	---	319	223	201	188
26	250	34	---	---	---	---	---	---	319	219	201	187
27	250	25	---	---	---	---	---	---	318	215	200	187
28	250	11	---	---	---	---	---	---	317	213	200	186
29	250	9	---	---	---	---	---	---	316	213	199	186
30	249	9	---	---	---	---	---	---	314	212	199	185
31	249	---	---	---	---	---	---	---	---	212	198	---
MAX	259	251	---	---	---	---	---	---	---	312	211	198
MIN	249	9	---	---	---	---	---	---	---	212	198	185
a	13.61	.57							16.22	11.94	11.32	10.72
b	-9	-240								-102	-116	-13

WTR YR 95 b -73

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

SACRAMENTO RIVER BASIN

11426190 LAKE VALLEY CANAL NEAR EMIGRANT GAP, CA

LOCATION.--Lat 39°17'56", long 120°38'31", in SE 1/4 NE 1/4 sec.32, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, on right bank 0.8 mi upstream from inlet to Carpenter Flat Siphon and 1.5 mi east of Emigrant Gap.

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

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,410 ft above sea level, from topographic map. Prior to Oct. 1, 1979, on right bank 0.7 mi downstream at different datum.

REMARKS.--Canal diverts from right bank of the North Fork of North Fork American River, 2.0 mi downstream from Lake Valley Reservoir (station 11426170) to the Drum Canal in Bear River basin. 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 daily discharge, 75 ft³/s, Jan. 13, 1980; no flow for many days in most years.

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	15	16	14	14	31	37	33	18	36	35	1.2	e.35
2	16	15	16	14	31	39	33	12	36	35	1.2	e.34
3	16	15	24	14	30	40	33	10	35	35	1.1	e.33
4	18	16	25	14	30	35	33	21	35	33	e.89	e.32
5	17	27	25	15	30	34	34	36	36	30	e.69	e.31
6	16	33	24	16	30	35	34	35	35	31	e.48	e.30
7	16	15	20	25	33	35	39	34	35	33	e.36	e.24
8	16	8.2	19	25	37	35	35	35	34	32	e.36	e.18
9	16	9.6	18	39	36	42	33	36	34	34	e.36	e.12
10	16	13	16	57	36	35	32	36	34	18	e.36	e.05
11	16	13	16	32	34	26	32	36	34	9.5	e.36	.00
12	16	13	17	32	34	27	32	36	34	5.3	e.36	.00
13	19	12	16	45	33	31	35	36	34	4.7	e.35	.00
14	15	12	16	42	32	33	33	35	35	4.2	e.34	.00
15	14	12	16	31	30	34	32	35	37	3.9	e.33	.00
16	14	12	15	27	28	33	32	35	36	3.8	e.32	.00
17	14	15	16	26	28	32	32	35	34	3.7	e.31	.00
18	15	21	16	26	27	33	32	36	34	3.7	e.31	.00
19	15	24	15	26	28	31	33	37	35	3.6	e.32	.00
20	15	24	15	26	30	33	33	38	35	3.4	e.33	.00
21	15	23	15	26	33	31	33	37	35	3.3	e.34	.00
22	15	19	15	26	36	30	34	36	35	3.2	e.35	.00
23	15	19	15	27	37	34	34	35	35	3.1	e.36	.00
24	15	18	15	27	37	13	35	35	36	3.0	e.37	.00
25	15	19	15	26	37	20	36	35	36	2.3	e.38	.00
26	15	19	15	26	37	28	36	35	37	1.2	e.38	.00
27	15	19	15	26	37	30	37	36	37	1.2	e.38	.00
28	15	17	15	28	36	32	40	36	37	1.2	e.38	.00
29	15	15	15	29	---	33	28	36	36	1.2	e.38	.00
30	15	14	14	30	---	32	15	36	35	1.2	e.37	.00
31	15	---	14	31	---	32	---	36	---	1.2	e.36	---
TOTAL	480	507.8	522	848	918	995	993	1025	1057	383.9	14.38	2.54
MEAN	15.5	16.9	16.8	27.4	32.8	32.1	33.1	33.1	35.2	12.4	.46	.085
MAX	19	33	25	57	37	42	40	38	37	35	1.2	.35
MIN	14	8.2	14	14	27	13	15	10	34	1.2	.31	.00
AC-FT	952	1010	1040	1680	1820	1970	1970	2030	2100	761	29	5.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	19.8	16.6	12.6	12.8	13.8	18.6	20.7	20.4	13.7	15.5	16.4	11.6																			
MAX	38.9	35.3	35.7	39.6	39.3	39.0	40.5	39.9	36.4	37.1	38.8	36.1																			
(WY)	1964	1976	1984	1984	1984	1984	1989	1983	1980	1983	1983	1982																			
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000																			
(WY)	1978	1977	1965	1965	1965	1965	1965	1965	1967	1992	1965	1965																			

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1965 - 1995
ANNUAL TOTAL	4251.44	7746.62	
ANNUAL MEAN	11.6	21.2	16.1
HIGHEST ANNUAL MEAN			32.2
LOWEST ANNUAL MEAN			3.86
HIGHEST DAILY MEAN	40 Mar 9	57 Jan 10	75 Jan 13 1980
LOWEST DAILY MEAN	.00 Jun 1	.00 Sep 11	.00 Nov 11 1964
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 1	.00 Sep 11	.00 Nov 11 1964
ANNUAL RUNOFF (AC-FT)	8430	15370	11640
10 PERCENT EXCEEDS	24	36	36
50 PERCENT EXCEEDS	14	24	15
90 PERCENT EXCEEDS	.00	.34	.00

e Estimated.

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.--No estimated daily discharges. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1115	4,540	3.63	Mar. 10	2215	22,400	6.96
Jan. 10	1100	*26,600	*7.52	Apr. 8	0215	5,700	3.95
Mar. 3	1515	7,030	4.29	May 1	1045	16,500	6.11

Minimum daily, 27 ft³/s, Oct. 3, 13.

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	34	36	132	310	2780	957	2110	12700	3470	1670	250	86
2	29	46	148	285	2590	1230	2080	9610	3030	1530	244	83
3	27	48	778	272	2090	5370	2030	5900	3110	1470	234	79
4	34	40	3640	308	1860	3540	2150	4540	3110	1410	226	78
5	49	62	2120	876	1730	2740	2270	4120	3200	1320	221	76
6	48	831	1210	1080	1640	2310	2330	3430	2300	1300	213	78
7	36	608	791	2620	1530	1870	3640	2940	1900	1230	203	78
8	30	231	568	3750	1460	1650	4590	2730	1650	1140	192	77
9	28	173	446	6340	1330	10200	3180	2630	1550	1040	180	75
10	29	315	373	18200	1220	16500	2640	2630	1800	987	165	74
11	28	187	326	9320	1130	14600	2400	2750	2250	866	163	74
12	28	144	349	4510	1080	8400	2390	2550	2480	771	155	74
13	27	137	385	8880	1110	6530	3460	2400	2400	654	146	73
14	30	120	357	16500	1220	7430	3020	2150	2280	605	142	73
15	31	111	398	9160	1010	7450	2560	2120	2990	594	137	71
16	31	131	365	5180	920	5690	2240	2040	2740	600	130	68
17	33	136	340	3390	845	4330	1980	2010	1900	593	127	66
18	34	202	350	2580	803	4400	1840	2260	1810	568	130	66
19	32	146	360	2100	802	4470	1700	2650	1950	547	130	67
20	32	122	322	1740	824	5920	1740	3050	1820	486	123	66
21	32	112	298	1520	900	7050	1640	3200	1740	451	117	66
22	32	112	289	1470	951	7080	1550	3060	1810	417	116	67
23	32	104	283	2150	1010	7470	1540	2900	2050	376	115	66
24	32	98	360	2380	1040	5040	1680	2860	2300	348	112	66
25	32	150	495	2990	1070	3870	1980	2630	2460	324	109	68
26	33	223	397	3020	1060	3140	2090	2800	2420	308	103	67
27	31	179	355	3490	1000	2740	2120	2990	2420	300	99	66
28	31	162	412	3060	937	2410	2820	2860	2200	288	95	65
29	31	143	419	2670	---	2240	5560	3050	1980	300	91	64
30	31	132	377	2380	---	2110	5800	3190	1830	292	90	64
31	31	---	338	2450	---	2060	---	3370	---	259	88	---
TOTAL	998	5241	17781	124981	35942	160797	77130	108120	68950	23044	4646	2141
MEAN	32.2	175	574	4032	1284	5187	2571	3488	2298	743	150	71.4
MAX	49	831	3640	18200	2780	16500	5800	12700	3470	1670	250	86
MIN	27	36	132	272	802	957	1540	2010	1550	259	88	64
AC-FT	1980	10400	35270	247900	71290	318900	153000	214500	136800	45710	9220	4250

SACRAMENTO RIVER BASIN

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	107	384	871	1268	1365	1493	1570	1599	784	192	65.3	49.2
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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1942 - 1995		
ANNUAL TOTAL	102817			629771					
ANNUAL MEAN	282			1725			809		
HIGHEST ANNUAL MEAN							1843		
LOWEST ANNUAL MEAN							88.5		
HIGHEST DAILY MEAN	3640			Dec 4			18200		
LOWEST DAILY MEAN	20			Aug 21			Jan 10		
ANNUAL SEVEN-DAY MINIMUM	20			Aug 25			Oct 3		
INSTANTANEOUS PEAK FLOW							27		
ANNUAL RUNOFF (AC-FT)	203900			1249000			29		
10 PERCENT EXCEEDS	700			3640			Oct 8		
50 PERCENT EXCEEDS	136			937			Jan 10		
90 PERCENT EXCEEDS	24			63			7.52		
							Jan 10		
							65400		
							11.87		
							586300		
							2030		
							270		
							40		

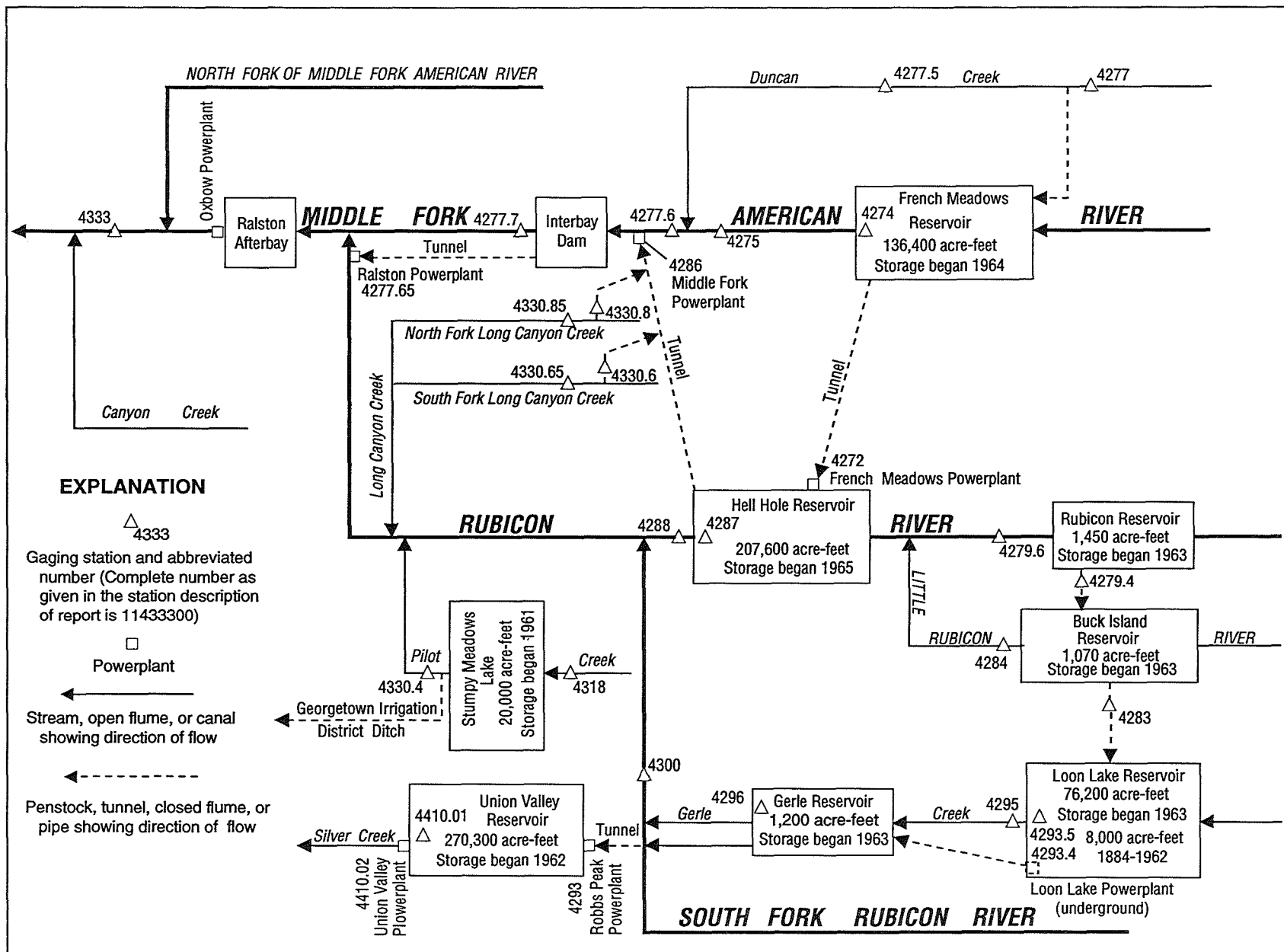


Figure 33. Diversions and storage in South Fork American River basin.

SACRAMENTO RIVER BASIN

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, 136,500 acre-ft, June 26, elevation, 5,263.1 ft; minimum, 40,000 acre-ft, Oct. 29 to Nov. 5.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45800	40000	41800	42200	61800	57100	84200	99000	121800	135700	129600	111100
2	45800	40000	41900	42200	62000	57300	83800	101500	122900	135300	129000	110300
3	45800	40000	42200	42200	62000	57900	83600	103000	124100	135600	128500	109700
4	45900	40000	42600	42300	62000	58000	83500	104200	125300	135700	127900	109100
5	45900	40000	42700	42400	62000	58000	83500	105300	126300	135800	127200	108500
6	45900	40900	42900	42600	61900	57900	83500	105900	126700	136100	126700	107700
7	45800	41000	42900	42900	61900	57600	84400	106500	126800	136300	126000	107000
8	45800	41000	43000	43400	61800	57500	84800	106900	126700	136300	125500	106400
9	45800	41100	43000	44400	61600	63700	84900	107500	126700	136300	124900	105800
10	45800	41200	43100	47600	61400	69300	84800	108100	127400	136100	124900	105100
11	45800	41200	43100	48800	61100	72300	84800	109000	128500	135800	124400	104400
12	45700	41200	43200	49800	60900	74100	85000	109600	129400	135700	123700	103800
13	45700	41200	43300	53500	60700	75800	85800	110000	130700	135400	123200	103100
14	45700	41200	42900	57900	60500	77500	85900	110200	131600	135100	122600	102400
15	45700	41200	42200	59500	60100	79200	86000	110500	133200	135000	122000	101700
16	45600	41300	41500	60500	59700	80100	85800	110600	133300	135000	121300	101000
17	45200	41400	41500	61200	59300	80700	85700	111000	133300	134900	120800	100400
18	44500	41400	41500	61700	58900	81700	85400	111700	133200	134900	120100	99700
19	43800	41400	41600	62200	58500	82600	85000	112700	133200	134700	119500	99000
20	43100	41500	41600	62500	58100	83700	84800	114000	133200	134400	118900	98300
21	42600	41500	41600	62900	58000	84700	84500	115300	133400	134200	118200	97700
22	42600	41500	41600	63400	57800	85400	84200	116500	134200	133900	117500	97000
23	42600	41500	41700	63400	57700	85800	83900	117100	135100	133600	117000	96300
24	42000	41500	41800	63200	57600	85900	83900	117200	136000	133200	116300	95600
25	41300	41600	41800	62900	57500	85900	84300	117400	136100	132800	115700	94900
26	40600	41700	41900	62600	57500	85900	84600	117600	136500	132500	115000	94200
27	40100	41700	41900	62300	57300	85800	85300	118000	136300	131900	114400	93400
28	40100	41700	42000	61900	57200	85600	86600	118500	136000	131500	113600	92700
29	40000	41700	42000	61500	---	85100	89800	119100	135700	131100	113000	92000
30	40000	41700	42100	61200	---	84800	92200	119900	135700	130500	112400	91300
31	40000	---	42100	61600	---	84500	---	120800	---	130100	111700	---
MAX	45900	41700	43300	63400	62000	85900	92200	120800	136500	136300	129600	111100
MIN	40000	40000	41500	42200	57200	57100	83500	99000	121800	130100	111700	91300
a	5173.9	5176.1	5176.6	5199.1	5194.4	5221.5	5228.4	5251.6	5262.5	5258.5	5244.6	5227.6
b	-5800	+1700	+400	+19500	-4400	+27300	+7700	+28600	+14900	-5600	-18400	-20400

CAL YR 1994 b -13700
WTR YR 1995 b +45500

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

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.--No estimated daily discharges. 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, 2,870 ft³/s, Mar. 8, 1966, gage height, 10.4 ft, from floodmarks, from flow over spillway of French Meadows Reservoir; minimum daily, 0.8 ft³/s, Oct. 22-25, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s, June 27, gage height, 8.68 ft; minimum daily, 4.7 ft³/s, Feb. 17.

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	5.2	5.8	5.8	6.2	13	9.1	10	54	397	244	9.1	9.8
2	5.2	5.6	6.0	6.2	10	12	10	27	242	313	9.5	9.8
3	5.2	5.5	8.2	6.2	8.0	25	11	19	227	242	10	9.8
4	5.5	5.5	11	6.2	7.6	15	12	18	223	153	10	9.8
5	5.4	7.3	9.4	6.3	7.5	15	12	18	215	110	10	9.6
6	5.2	7.3	7.4	6.4	7.3	12	13	16	218	65	10	9.4
7	5.2	6.0	6.7	8.6	7.0	11	21	15	220	37	10	9.4
8	5.2	5.8	6.4	11	6.7	11	19	14	220	95	10	9.4
9	5.2	5.8	6.2	21	6.2	41	14	14	220	100	10	9.4
10	5.2	5.8	6.2	46	6.0	55	13	14	91	96	10	9.4
11	5.2	5.8	6.2	19	6.0	34	13	14	11	93	10	9.4
12	5.2	5.8	6.2	16	5.9	20	14	13	11	48	10	9.4
13	5.2	5.8	6.2	44	5.8	22	17	13	11	15	10	9.4
14	5.2	5.6	6.2	43	5.4	22	14	13	102	13	10	9.4
15	5.2	5.6	6.0	19	5.1	26	13	14	284	10	10	9.4
16	5.2	5.8	6.0	13	4.8	19	12	13	402	10	10	9.4
17	5.2	5.8	6.0	11	4.7	16	11	13	402	10	10	9.4
18	5.3	5.8	6.2	10	6.3	20	11	13	400	10	10	9.4
19	5.5	5.8	6.2	9.6	7.7	18	10	39	365	9.4	10	9.4
20	5.5	5.8	6.2	9.2	7.8	19	10	116	307	9.4	10	9.4
21	5.5	5.8	6.1	8.9	8.2	16	10	161	121	9.4	9.8	9.4
22	5.5	5.6	6.0	9.6	8.4	14	10	234	11	9.4	9.8	9.4
23	5.5	5.5	6.0	12	8.5	13	11	378	11	9.4	9.7	9.2
24	5.5	5.5	6.2	11	8.7	12	12	562	204	9.4	9.6	9.1
25	5.5	5.9	6.2	11	8.9	11	13	570	474	9.3	9.6	9.1
26	5.5	5.8	6.2	11	8.9	11	13	577	508	9.1	9.8	9.1
27	5.5	5.8	6.2	9.9	8.9	10	14	570	681	9.1	9.8	9.1
28	5.5	5.8	6.2	10	8.9	10	19	551	672	9.1	9.8	9.1
29	5.5	5.8	6.2	10	---	9.7	33	536	562	9.1	9.8	9.1
30	5.5	5.8	6.2	11	---	9.7	25	549	340	9.1	9.8	8.9
31	5.5	---	6.2	12	---	9.9	---	558	---	9.1	9.8	---
TOTAL	165.7	175.3	202.4	434.3	208.2	548.4	420	5716	8152	1784.3	305.9	281.3
MEAN	5.35	5.84	6.53	14.0	7.44	17.7	14.0	184	272	57.6	9.87	9.38
MAX	5.5	7.3	11	46	13	55	33	577	681	313	10	9.8
MIN	5.2	5.5	5.8	6.2	4.7	9.1	10	13	11	9.1	9.1	8.9
AC-FT	329	348	401	861	413	1090	833	11340	16170	3540	607	558
a	5040	0	1820	5400	19350	13660	24180	25350	24420	23180	21480	20870

a Diversion, in acre-feet, from French Meadows Reservoir to Hell Hole Reservoir through French Meadows Powerplant, provided by Placer County Water Agency.

SACRAMENTO RIVER BASIN

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
LOWEST ANNUAL MEAN	68.7
HIGHEST DAILY MEAN	11300
LOWEST DAILY MEAN	.30
ANNUAL SEVEN-DAY MINIMUM	.34
INSTANTANEOUS PEAK FLOW	21500
INSTANTANEOUS PEAK STAGE	14.20
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.9	10.3	12.8	13.2	18.6	24.0	25.0	43.4	43.8	16.3	8.31	12.1
MAX	266	42.7	83.3	53.6	200	375	248	518	272	136	15.0	136
(WY)	1966	1966	1965	1984	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1965 - 1995

ANNUAL TOTAL	2656.3	18393.8	
ANNUAL MEAN	7.28	50.4	20.3
HIGHEST ANNUAL MEAN			97.3
LOWEST ANNUAL MEAN			3.90
HIGHEST DAILY MEAN	13	Mar 5	2380
LOWEST DAILY MEAN	4.4	Jul 11	.80
ANNUAL SEVEN-DAY MINIMUM	4.4	Jul 11	.84
INSTANTANEOUS PEAK FLOW			1290
INSTANTANEOUS PEAK STAGE			8.68
ANNUAL RUNOFF (AC-FT)	5270	36480	14700
10 PERCENT EXCEEDS	10	156	15
50 PERCENT EXCEEDS	6.0	9.8	9.4
90 PERCENT EXCEEDS	4.8	5.5	5.5

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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0200	810	8.20	May 30	2000	396	7.55
Mar. 9	1630	960	8.41	June 15	1000	448	7.65
May 1	0530	*1,100	*8.58				

Minimum daily, 0.66 ft³/s, Oct. 3.

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	.77	1.6	5.6	6.3	73	51	44	920	343	111	5.8	1.8
2	.73	1.9	13	6.1	72	60	43	529	334	95	5.4	1.8
3	.66	.99	e23	6.0	65	91	47	320	328	84	5.1	1.7
4	1.8	.90	e24	6.1	64	70	57	245	345	73	4.8	1.7
5	2.3	25	e17	6.1	63	63	64	206	292	67	4.6	1.7
6	1.4	67	11	6.5	61	55	71	164	215	61	4.4	1.6
7	.99	11	8.1	33	60	50	119	142	173	54	4.2	1.6
8	.87	6.9	7.0	17	58	48	123	131	147	49	4.2	1.6
9	.83	5.4	e6.7	87	51	608	93	132	146	43	4.0	1.6
10	.74	5.5	6.3	407	48	626	79	146	182	38	3.9	1.6
11	.74	4.7	6.0	157	45	367	80	156	217	34	3.7	1.5
12	.74	4.6	6.2	133	42	218	90	142	236	29	3.6	1.5
13	.74	e3.7	5.7	589	39	178	120	120	236	25	3.4	1.4
14	.77	e3.7	5.5	656	34	226	95	102	222	23	3.3	1.4
15	.85	e3.8	5.4	251	31	317	81	93	350	21	3.2	1.4
16	.81	e3.8	5.4	132	29	232	69	94	252	19	3.1	1.4
17	.79	e3.8	6.4	87	28	174	61	105	191	18	3.0	1.4
18	.81	e3.8	7.2	65	27	193	55	136	183	19	2.9	1.3
19	.75	e3.9	6.5	53	29	186	49	191	171	17	2.8	1.3
20	.74	3.9	6.5	44	32	171	47	238	158	15	2.7	1.3
21	.74	3.8	7.0	38	37	144	43	259	156	14	2.6	1.3
22	.74	3.7	7.3	35	41	117	44	263	172	12	2.6	1.3
23	.74	3.8	7.5	33	45	95	51	258	198	11	2.3	1.3
24	.74	3.8	7.6	31	49	78	71	242	222	10	2.3	1.3
25	.74	e3.9	6.9	29	53	65	93	234	226	9.6	2.2	1.3
26	.74	e3.9	7.0	26	53	58	101	259	225	8.9	2.1	1.3
27	.74	e3.9	7.0	24	51	52	118	276	206	8.2	2.1	1.3
28	.69	3.9	6.9	24	50	47	192	285	175	7.7	2.0	1.3
29	.69	4.0	6.6	29	---	44	468	303	150	7.3	2.0	1.4
30	.69	4.7	6.5	37	---	42	408	329	131	6.8	1.9	1.4
31	.69	---	6.4	59	---	43	---	354	---	6.3	1.9	---
TOTAL	26.77	205.29	259.2	3113.1	1330	4769	3076	7374	6582	996.8	102.1	43.8
MEAN	.86	6.84	8.36	100	47.5	154	103	238	219	32.2	3.29	1.46
MAX	2.3	67	24	656	73	626	468	920	350	111	5.8	1.8
MIN	.66	.90	5.4	6.0	27	42	43	93	131	6.3	1.9	1.3
AC-FT	53	407	514	6170	2640	9460	6100	14630	13060	1980	203	87

e Estimated.

SACRAMENTO RIVER BASIN

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.33	18.4	31.1	38.4	38.7	50.7	74.3	117	59.1	9.14	1.59	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	5128.80	27878.06	
ANNUAL MEAN	14.1	76.4	36.9
HIGHEST ANNUAL MEAN			86.8
LOWEST ANNUAL MEAN			4.27
HIGHEST DAILY MEAN	102	Apr 19	2300
LOWEST DAILY MEAN	.30	Aug 31	.10
ANNUAL SEVEN-DAY MINIMUM	.31	Sep 3	.11
INSTANTANEOUS PEAK FLOW			3650
INSTANTANEOUS PEAK STAGE			10.60
ANNUAL RUNOFF (AC-FT)	10170	55300	26760
10 PERCENT EXCEEDS	42	228	102
50 PERCENT EXCEEDS	5.1	28	8.9
90 PERCENT EXCEEDS	.39	1.3	.72

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 864 ft³/s, May 1, gage height, 4.99; minimum daily, 0.65 ft³/s, Oct. 3.

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	.73	1.4	5.7	7.5	14	10	8.1	721	154	12	6.3	1.9
2	.69	2.3	10	7.3	11	11	8.4	402	145	12	5.9	1.8
3	.65	1.0	e11	7.0	10	14	8.8	122	141	12	5.5	1.8
4	1.6	.93	e12	7.1	10	11	9.6	18	157	12	5.2	1.7
5	2.7	7.2	e12	7.3	9.9	11	10	14	112	12	4.9	1.7
6	1.5	12	12	7.4	9.8	9.8	11	12	48	12	4.7	1.7
7	1.1	9.6	9.0	14	9.2	9.1	15	11	19	12	4.5	1.6
8	.89	7.3	7.8	13	8.8	8.9	14	11	14	12	4.3	1.6
9	.85	5.8	7.2	20	7.9	400	11	11	13	12	4.1	1.6
10	.81	5.5	7.0	299	7.6	408	10	11	13	12	3.9	1.6
11	.75	4.7	6.8	95	7.5	131	11	12	13	12	3.8	1.5
12	.75	4.7	6.9	31	7.2	21	12	11	16	12	3.6	1.5
13	.75	3.8	6.5	459	6.9	16	14	10	17	11	3.5	1.4
14	.78	3.8	6.3	591	6.3	27	12	9.4	13	11	3.3	1.4
15	.87	e3.8	6.3	137	5.8	109	11	9.3	138	11	3.2	1.4
16	.87	e3.8	6.2	20	5.6	33	9.6	9.4	56	11	3.1	1.4
17	.82	e3.8	7.1	17	5.3	15	8.9	10	16	11	3.0	1.4
18	.81	e3.8	8.0	15	6.6	16	8.4	11	14	11	3.0	1.4
19	.81	e3.9	7.4	14	7.8	15	8.1	17	14	11	2.9	1.4
20	.81	3.9	7.3	13	9.0	14	7.9	29	13	11	2.7	1.3
21	.81	3.9	7.9	13	10	13	7.7	47	13	11	2.6	1.3
22	.81	3.8	8.4	13	11	11	7.8	58	15	11	2.6	1.3
23	.81	3.9	8.5	13	11	10	8.5	60	31	11	2.6	1.3
24	.76	3.9	8.8	13	11	9.1	11	49	63	11	2.4	1.2
25	.75	e3.9	8.1	13	12	8.5	13	43	77	10	2.3	1.3
26	.75	e3.9	8.0	13	11	8.0	13	65	82	9.6	2.2	1.4
27	.75	e3.9	8.0	13	11	7.8	14	82	66	8.8	2.2	1.4
28	.75	e3.9	8.2	13	10	7.5	18	94	33	8.3	2.1	1.4
29	.73	4.2	7.8	13	---	7.5	212	112	14	7.7	2.0	1.4
30	.69	4.8	7.7	14	---	7.5	199	137	13	7.3	2.0	1.4
31	.69	---	7.5	16	---	7.7	---	163	---	6.8	1.9	---
TOTAL	27.84	133.13	251.4	1928.6	253.2	1387.4	712.8	2371.1	1533	334.5	106.3	44.5
MEAN	.90	4.44	8.11	62.2	9.04	44.8	23.8	76.5	51.1	10.8	3.43	1.48
MAX	2.7	12	12	591	14	408	212	721	157	12	6.3	1.9
MIN	.65	.93	5.7	7.0	5.3	7.5	7.7	9.3	13	6.8	1.9	1.2
AC-FT	55	264	499	3830	502	2750	1410	4700	3040	663	211	88

e Estimated.

SACRAMENTO RIVER BASIN

11427750 DUNCAN CREEK BELOW DIVERSION DAM, NEAR FRENCH MEADOWS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.19	9.04	20.0	25.6	21.3	19.3	15.7	28.1	11.1	3.83	1.39	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1965 - 1995			
ANNUAL TOTAL	1877.42				9083.77							
ANNUAL MEAN	5.14				24.9				13.2			
HIGHEST ANNUAL MEAN									43.1			
LOWEST ANNUAL MEAN									2.16			
HIGHEST DAILY MEAN	16				721				2160			
LOWEST DAILY MEAN	.32				.65				.00			
ANNUAL SEVEN-DAY MINIMUM	.32				.73				.00			
INSTANTANEOUS PEAK FLOW					864				3640			
INSTANTANEOUS PEAK STAGE					4.99				8.74			
ANNUAL RUNOFF (AC-FT)	3720				18020				9570			
10 PERCENT EXCEEDS	10				45				15			
50 PERCENT EXCEEDS	4.7				8.8				5.2			
90 PERCENT EXCEEDS	.40				1.4				.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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s, May 1, gage height, 9.42 ft; minimum daily, 11 ft³/s, many days during October.

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	11	12	24	45	323	170	247	1590	764	359	35	23
2	11	15	35	43	311	211	252	1180	568	438	34	23
3	11	13	137	42	286	523	259	766	535	356	33	23
4	14	12	258	46	271	389	285	568	542	266	33	23
5	18	54	181	61	260	354	307	517	495	180	32	22
6	13	97	120	62	253	317	321	452	431	147	31	22
7	12	38	84	191	244	277	489	405	393	91	31	22
8	12	27	64	223	233	255	534	380	378	142	31	21
9	11	25	54	418	214	1020	438	354	370	164	30	21
10	11	28	49	1160	198	1480	387	337	268	156	29	21
11	11	22	45	723	185	1320	364	329	123	152	29	21
12	11	21	48	433	178	857	357	317	119	125	29	21
13	11	20	44	1160	180	753	427	309	117	69	28	21
14	11	18	40	1620	166	748	371	298	178	63	28	21
15	11	19	39	917	150	828	335	293	522	59	27	21
16	11	20	37	541	142	652	305	279	623	56	28	21
17	11	26	38	399	134	535	280	270	569	56	27	21
18	11	21	44	312	130	541	260	269	556	57	27	21
19	11	19	45	267	134	500	241	290	518	58	26	20
20	11	19	42	231	141	547	242	407	453	53	26	20
21	11	19	41	204	152	536	221	453	292	51	26	20
22	11	19	42	205	159	479	215	541	104	50	25	20
23	11	18	42	244	166	436	217	666	105	48	25	20
24	11	18	54	259	171	372	235	873	269	47	25	20
25	11	29	52	296	178	326	256	854	655	46	25	20
26	11	25	49	291	176	296	262	868	688	45	24	20
27	11	23	48	286	170	273	277	869	823	43	24	21
28	11	22	56	289	169	259	354	852	835	41	24	21
29	11	21	52	275	---	247	760	847	731	40	24	21
30	11	22	49	268	---	237	766	868	503	38	23	21
31	11	---	47	293	---	236	---	892	---	37	23	---
TOTAL	355	742	1960	11804	5474	15974	10264	18193	13527	3533	862	633
MEAN	11.5	24.7	63.2	381	195	515	342	587	451	114	27.8	21.1
MAX	18	97	258	1620	323	1480	766	1590	835	438	35	23
MIN	11	12	24	42	130	170	215	269	104	37	23	20
AC-FT	704	1470	3890	23410	10860	31680	20360	36090	26830	7010	1710	1260

SACRAMENTO RIVER BASIN

11427760 MIDDLE FORK AMERICAN RIVER ABOVE MIDDLE FORK POWERPLANT, NEAR FORESTHILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.6	48.9	82.3	162	158	211	179	165	96.0	36.1	19.1	17.1
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	6.59
(WY)	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	12739.2		83321		100	
ANNUAL MEAN	34.9		228		271	
HIGHEST ANNUAL MEAN					14.3	
LOWEST ANNUAL MEAN					1982	
HIGHEST DAILY MEAN	258	Dec 4	1620	Jan 14	5290	Jan 13 1980
LOWEST DAILY MEAN	9.2	Aug 15	11	Oct 1	5.3	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	9.2	Aug 15	11	Oct 9	5.5	Sep 8 1977
INSTANTANEOUS PEAK FLOW			2010	May 1	9860	Jan 13 1980
INSTANTANEOUS PEAK STAGE			9.42	May 1	8.47	Jan 13 1980
ANNUAL RUNOFF (AC-FT)	25270		165300		72430	
10 PERCENT EXCEEDS	69		568		243	
50 PERCENT EXCEEDS	25		130		37	
90 PERCENT EXCEEDS	9.7		18		15	

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 right bank 500 ft downstream from Interbay Dam, 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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Minimum daily, 12 ft³/s, on many days.

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	12	12	12	12	13	12	---	---	---	---	24	24
2	12	12	12	12	12	12	---	---	---	---	24	24
3	12	12	12	12	12	12	---	---	---	---	24	24
4	12	12	12	12	12	12	---	---	---	---	24	24
5	13	12	12	12	12	12	---	---	---	---	23	23
6	13	12	12	12	12	12	---	---	---	---	24	24
7	12	12	12	12	12	12	---	---	---	---	24	23
8	12	12	12	13	12	12	---	---	---	---	24	23
9	13	12	12	13	12	---	---	---	---	---	23	24
10	12	12	12	---	12	---	---	---	---	---	23	23
11	12	12	12	---	12	---	---	---	---	---	23	23
12	13	12	12	12	12	---	---	---	---	---	24	23
13	12	12	12	---	12	---	---	---	---	---	23	23
14	12	12	12	---	12	---	---	---	---	---	23	23
15	12	12	12	---	12	---	---	---	---	---	24	23
16	12	12	12	---	12	---	---	---	---	---	24	23
17	12	12	12	---	12	---	---	---	---	24	24	23
18	12	12	12	---	12	---	---	---	---	24	24	22
19	12	12	12	---	12	---	---	---	---	24	24	20
20	12	12	12	12	12	---	---	---	---	24	24	20
21	12	12	12	12	12	---	---	---	---	24	24	20
22	12	12	12	12	12	---	---	---	---	24	24	20
23	12	12	12	---	12	---	---	---	---	24	24	20
24	12	12	12	12	12	---	---	---	---	24	24	20
25	12	12	12	12	12	---	---	---	---	24	24	20
26	12	12	12	12	12	---	---	---	---	23	24	20
27	12	12	12	12	12	---	---	---	---	23	24	21
28	12	12	13	12	12	---	---	---	---	24	24	21
29	12	12	12	12	---	---	---	---	---	24	24	21
30	12	12	12	12	---	---	---	---	---	24	24	21
31	12	---	12	12	---	---	---	---	---	24	23	---
TOTAL	376	360	373	---	337	---	---	---	---	---	737	663
MEAN	12.1	12.0	12.0	---	12.0	---	---	---	---	---	23.8	22.1
MAX	13	12	13	---	13	---	---	---	---	---	24	24
MIN	12	12	12	---	12	---	---	---	---	---	23	20
AC-FT	746	714	740	---	668	---	---	---	---	---	1460	1320
a	11100	15400	13660	38830	51990	52950	55050	56830	55480	56670	53900	24150

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

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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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	12	10	170	52	58	910	852	795	248	39
2	.00	.00	15	9.8	164	48	63	816	754	758	240	40
3	.00	.00	18	9.7	109	54	63	441	800	766	229	43
4	.00	.00	23	9.6	78	46	87	289	855	753	226	48
5	.00	9.5	22	10	65	39	112	223	832	719	221	43
6	13	292	20	11	59	33	133	171	562	816	212	35
7	9.8	115	17	51	52	30	146	147	317	858	211	29
8	.77	47	15	52	48	30	125	164	249	839	209	27
9	.01	24	14	79	42	518	84	206	279	826	169	25
10	.00	16	13	236	37	879	65	235	488	790	166	23
11	.00	15	13	141	35	471	76	275	801	695	162	13
12	.00	14	13	79	33	224	110	232	859	535	138	.28
13	.00	12	13	180	31	146	155	173	826	380	124	.27
14	.00	10	13	464	31	168	119	135	861	358	116	.27
15	.00	9.1	12	221	28	226	88	109	837	418	114	.27
16	.00	8.7	12	109	25	192	69	110	503	495	118	.27
17	.00	8.8	13	72	23	136	56	160	325	511	126	.27
18	.00	9.5	15	54	23	167	49	245	429	425	119	.25
19	.00	11	15	39	29	264	44	327	558	416	90	.19
20	.00	12	13	33	38	204	43	443	497	413	84	.19
21	.00	12	14	29	50	161	40	547	481	390	94	.29
22	.00	11	14	26	54	103	42	539	589	346	102	3.5
23	.00	10	14	25	59	85	61	458	763	300	103	8.0
24	.00	9.4	14	24	64	71	101	433	873	281	102	9.4
25	.00	10	13	23	71	58	172	392	892	279	91	9.4
26	.00	11	12	22	72	50	207	480	892	279	76	9.2
27	.00	12	12	22	64	46	217	623	889	276	62	8.5
28	.00	12	12	22	57	42	250	660	870	332	53	7.4
29	.00	11	12	24	---	40	399	699	848	417	47	6.5
30	.00	11	11	31	---	39	633	759	834	339	42	5.7
31	.00	---	11	95	---	45	---	825	---	259	40	---
TOTAL	23.58	723.00	440	2213.1	1611	4667	3867	12226	20415	16064	4134	435.15
MEAN	.76	24.1	14.2	71.4	57.5	151	129	394	680	518	133	14.5
MAX	13	292	23	464	170	879	633	910	892	858	248	48
MIN	.00	.00	11	9.6	23	30	40	109	249	259	40	.19
AC-FT	47	1430	873	4390	3200	9260	7670	24250	40490	31860	8200	863

SACRAMENTO RIVER BASIN

11427940 RUBICON-ROCKBOUND TUNNEL NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.6	49.9	41.5	45.5	40.4	65.0	152	354	313	113	19.4	11.3
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 1994 CALENDAR YEAR					FOR 1995 WATER YEAR				WATER YEARS 1964 - 1995		
ANNUAL TOTAL	16261.64					66818.83						
ANNUAL MEAN	44.6					183				102		
HIGHEST ANNUAL MEAN										197		
LOWEST ANNUAL MEAN										30.5		
HIGHEST DAILY MEAN	424					910				1120		
LOWEST DAILY MEAN	.00					.00				.00		
ANNUAL SEVEN-DAY MINIMUM	.00					.00				.00		
ANNUAL RUNOFF (AC-FT)	32250					132500				73900		
10 PERCENT EXCEEDS	158					644				330		
50 PERCENT EXCEEDS	9.1					58				26		
90 PERCENT EXCEEDS	.01					.27				.00		

SACRAMENTO RIVER BASIN

315

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	16	15	212	70	68	1080	1060	1010	313	44
2	.00	.00	20	14	245	66	81	1050	986	963	303	43
3	.00	.00	29	14	174	79	83	705	1010	940	288	45
4	.00	.00	40	14	119	67	98	430	1050	950	281	49
5	.00	.00	38	18	90	55	129	328	1040	874	273	51
6	.00	102	33	20	78	46	161	252	821	952	264	47
7	.00	206	28	47	69	40	202	204	495	1040	254	39
8	.00	240	24	78	63	38	199	213	351	1030	261	26
9	.00	85	21	103	56	408	139	264	349	1010	222	.91
10	.00	38	19	302	50	1090	101	316	523	990	198	1.1
11	.00	25	18	271	46	782	95	378	878	876	200	1.2
12	.00	21	21	142	43	361	127	351	1040	706	178	1.3
13	.00	19	22	210	43	218	197	266	1030	520	156	1.3
14	.00	16	20	582	45	228	185	203	1040	452	142	1.3
15	.00	14	19	460	39	306	136	159	1060	488	135	1.3
16	.00	14	18	208	34	286	106	144	793	572	135	1.3
17	.00	16	17	120	31	205	85	181	479	617	141	1.3
18	.00	18	19	80	29	196	73	296	485	549	145	1.3
19	.00	16	20	61	31	346	64	421	682	507	123	1.3
20	.00	15	19	48	38	301	62	559	645	502	104	1.3
21	.00	15	18	42	49	257	59	695	609	486	105	1.3
22	.00	15	18	37	60	178	57	741	687	446	115	1.3
23	.00	14	18	36	67	135	69	633	883	391	119	1.3
24	.00	13	19	34	73	109	106	589	1050	356	120	1.3
25	.00	19	20	35	80	88	190	525	1070	346	114	1.3
26	.00	24	18	33	86	75	262	593	1070	347	98	1.4
27	.00	20	17	33	82	66	289	763	1070	342	82	1.4
28	.00	18	18	31	74	61	364	839	1060	375	68	1.5
29	.00	16	18	30	---	57	499	899	1050	472	58	1.5
30	.00	16	16	35	---	54	857	941	1040	458	52	1.5
31	.00	---	16	83	---	57	---	988	---	351	47	---
TOTAL	0.00	1015.00	657	3236	2106	6325	5143	16006	25406	19918	5094	372.71
MEAN	.000	33.8	21.2	104	75.2	204	171	516	847	643	164	12.4
MAX	.00	240	40	582	245	1090	857	1080	1070	1040	313	51
MIN	.00	.00	16	14	29	38	57	144	349	342	47	.91
AC-FT	.00	2010	1300	6420	4180	12550	10200	31750	50390	39510	10100	739

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	22.9	68.0	57.2	63.4	54.7	85.9	194	453	392	134	21.4	14.0
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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1964 - 1995
ANNUAL TOTAL	21477.51	85278.71	
ANNUAL MEAN	58.8	234	130
HIGHEST ANNUAL MEAN			245
LOWEST ANNUAL MEAN			39.2
HIGHEST DAILY MEAN	543	1090	1240
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	42600	169200	94300
10 PERCENT EXCEEDS	200	846	412
50 PERCENT EXCEEDS	14	79	34
90 PERCENT EXCEEDS	.00	.55	.03

SACRAMENTO RIVER BASIN

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 estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.03	1.1	1.1	1.3	1.2	1.1	---	---	---	1.2	1.2
2	1.1	.03	1.1	1.1	1.3	1.2	1.1	---	---	1.5	1.2	1.2
3	1.1	.03	1.1	1.1	1.3	1.2	1.1	1.5	---	1.5	1.2	1.2
4	1.1	.08	1.1	1.1	1.2	1.2	1.1	1.3	---	1.5	1.2	1.2
5	1.1	.43	1.1	1.1	1.2	1.1	1.1	1.3	---	1.5	1.1	1.2
6	1.1	.62	1.1	1.1	1.2	1.1	1.2	1.3	1.6	1.5	1.1	1.2
7	1.0	.60	1.0	1.2	1.2	1.1	1.2	1.2	1.4	---	1.1	1.2
8	.71	1.2	1.1	1.2	1.2	1.1	1.2	1.2	1.3	---	1.2	1.2
9	.59	1.4	1.1	1.2	1.1	1.5	1.2	1.3	1.3	---	1.3	1.1
10	.52	1.3	1.1	1.2	1.1	---	1.1	1.3	1.4	---	1.4	1.2
11	.74	1.2	1.1	1.2	1.1	---	1.1	1.3	---	1.5	1.3	1.2
12	1.2	1.2	1.1	1.2	1.1	1.3	1.2	1.3	---	1.4	1.3	1.2
13	1.2	1.1	1.1	1.2	1.1	1.2	1.3	1.3	---	1.4	1.2	1.2
14	1.1	1.1	1.1	1.2	1.1	1.2	1.2	1.2	---	1.3	1.2	1.2
15	1.0	1.1	1.1	1.2	1.1	1.3	1.2	1.2	---	1.3	1.1	1.1
16	.91	1.1	1.1	1.2	1.1	1.3	1.2	1.2	1.5	1.4	1.1	1.1
17	.87	1.1	1.1	1.2	1.1	1.3	1.1	1.2	1.4	1.4	1.1	1.1
18	.84	1.1	1.1	1.2	1.1	1.2	1.1	1.3	1.4	1.4	1.2	1.2
19	.65	1.1	1.1	1.2	1.1	1.3	1.1	1.4	1.5	1.3	1.2	1.3
20	.46	1.1	1.1	1.1	1.1	1.3	1.1	1.5	1.5	1.3	1.1	1.3
21	.38	1.1	1.1	1.1	1.1	1.3	1.1	1.5	1.5	1.3	1.2	1.3
22	.32	1.1	1.1	1.1	1.2	1.3	1.1	1.6	1.5	1.2	1.3	1.3
23	.26	1.1	1.1	1.1	1.2	1.2	1.1	1.5	1.6	1.2	1.3	1.3
24	.22	1.1	1.1	1.1	1.2	1.2	1.2	1.5	---	1.2	1.3	1.3
25	.18	1.1	1.1	1.1	1.2	1.1	1.2	1.5	---	1.2	1.3	1.3
26	.15	1.1	1.1	1.1	1.2	1.1	1.3	1.5	---	1.2	1.3	1.3
27	.14	1.1	1.1	1.1	1.2	1.1	1.3	1.6	---	1.2	1.3	1.3
28	.12	1.1	1.1	1.1	1.2	1.1	1.3	1.6	---	1.2	1.3	1.3
29	.09	1.1	1.1	1.1	---	1.1	1.4	1.6	---	1.2	1.2	1.2
30	.06	1.1	1.1	1.1	---	1.1	1.6	1.6	---	1.3	1.2	1.2
31	.02	---	1.1	1.2	---	1.1	---	---	---	1.2	1.2	---
TOTAL	20.33	27.92	34.0	35.5	32.6	---	35.6	---	---	---	37.7	36.6
MEAN	.66	.93	1.10	1.15	1.16	---	1.19	---	---	---	1.22	1.22
MAX	1.2	1.4	1.1	1.2	1.3	---	1.6	---	---	---	1.4	1.3
MIN	.02	.03	1.0	1.1	1.1	---	1.1	---	---	---	1.1	1.1
AC-FT	40	55	67	70	65	---	71	---	---	---	75	73

CAL YR 1994 TOTAL 407.35 MEAN 1.12 MAX 1.5 MIN .02 AC-FT 808

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, 211,050 acre-ft, Dec. 20, 1981, elevation, 4,632.75 ft; minimum since reservoir first filled, 37,499 acre-ft, Mar. 23, 1973, elevation, 4,428.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 209,300 acre-ft, June 27, elevation, 4,631.4 ft; minimum, 76,300 acre-ft, Dec. 30, elevation, 4,490.7 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94200	86400	77200	76600	99800	98900	136700	164300	206700	209000	198900	168200
2	94100	85600	77600	76700	100600	99300	136600	168200	208700	208700	198200	167000
3	94000	85500	78400	76800	101100	101100	136600	169800	209100	208500	197500	165800
4	93900	85500	78900	77000	101400	101600	136800	171200	209200	208300	196700	164600
5	93900	86400	79200	77200	101700	102100	137200	172200	208800	208500	195900	163400
6	93800	87700	79400	77400	102000	102200	137600	172800	208500	208500	195000	162200
7	93700	87600	79500	78200	102100	102200	139200	173200	208200	208300	194100	160900
8	93600	87000	79700	79100	102300	102300	140100	173700	208100	208300	193300	159700
9	93600	86400	79700	81000	102300	110400	140300	174300	208200	208200	192400	158400
10	93500	86000	79900	85800	102100	117600	140300	175100	208600	208100	191300	157900
11	93300	86000	80000	87000	102000	121200	140400	176200	208800	208000	190300	157700
12	93200	85900	79800	88200	101800	123300	140800	176900	209000	207800	190700	157400
13	93200	85800	79300	93000	101700	125400	141900	177300	208800	207600	190100	157200
14	93100	85200	78700	98400	101400	127900	142200	177400	208800	207500	189400	157000
15	92300	84900	78900	99500	101000	131000	142300	177500	209100	207300	188400	156600
16	91600	84800	79600	100100	100600	132700	142200	177700	208500	207500	187200	156300
17	91000	84200	79600	100300	100100	133700	141900	178000	208300	207300	186200	156400
18	90700	83500	79700	100400	99600	135700	141600	178900	208500	207100	185000	157100
19	90900	83300	79400	100200	99200	137200	141200	180300	208500	206800	183800	157700
20	90400	83300	79200	99400	99000	139000	141000	182200	208300	206600	182500	158300
21	90100	82200	78600	98400	98800	139500	140600	184300	208500	206200	181400	158900
22	90100	81000	78000	97600	98800	140000	140200	186200	208600	205700	180200	159500
23	90100	80300	77500	97400	98800	140000	140000	187800	208800	205100	179000	160000
24	89600	80400	77400	97600	98800	139800	140200	189100	209100	204500	177900	160700
25	89500	80200	77600	97700	98800	139400	141000	190400	209200	203800	176600	161300
26	89400	80200	77400	97800	98900	139000	141600	192200	209200	203100	175500	162000
27	89000	80000	77500	97700	98900	138400	142900	194100	209100	202500	174200	162500
28	88400	79200	77100	97700	98900	137900	145400	196100	209000	201700	173100	163100
29	88200	78700	76800	97700	---	137600	150400	198300	208800	201100	171900	163800
30	88200	77700	76300	98000	---	137200	153700	200900	209000	200400	170600	164300
31	87400	---	76400	98500	---	136900	---	203700	---	199800	169400	---
MAX	94200	87700	80000	100400	102300	140000	153700	203700	209200	209000	198900	168200
MIN	87400	77700	76300	76600	98800	98900	136600	164300	206700	199800	169400	156300
a	4505.9	4492.7	4490.9	4520.4	4520.9	4566.0	4583.2	4626.9	4631.1	4623.7	4597.8	4593.2
b	-6800	-9700	-1300	+22100	+400	+38000	+16800	+50000	+5300	-9200	-30400	-5100

CAL YR 1994 b -9100

WTR YR 1995 b +70100

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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, 10,700 ft³/s, Mar. 8, 1986, including flow over spillway; no flow Aug. 25 to Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,030 ft³/s, June 27, including flow over spillway; minimum daily, 7.1 ft³/s, Jan. 6.

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	51	7.3	7.8	7.3	13	9.0	38	75	86	1350	24	23
2	51	7.5	8.7	7.2	13	11	38	52	373	1190	24	23
3	51	7.4	14	7.2	12	20	37	44	1310	826	24	23
4	51	7.2	20	7.2	11	12	38	44	1550	651	24	23
5	51	9.1	16	9.1	11	12	38	45	1630	624	24	23
6	51	11	14	7.1	11	11	37	43	894	651	24	23
7	51	7.9	13	15	11	10	43	41	535	678	24	23
8	49	7.5	13	15	10	9.8	42	41	364	664	24	23
9	47	7.5	13	21	9.9	44	39	40	353	467	24	23
10	47	7.5	12	37	9.7	56	37	40	589	428	24	23
11	47	7.5	12	15	9.6	44	37	40	972	314	24	23
12	47	7.5	9.7	14	9.3	34	37	40	1560	188	24	23
13	47	7.4	7.3	34	11	36	39	40	1250	66	24	26
14	43	7.2	7.2	44	9.8	32	38	40	1170	26	24	29
15	21	7.2	7.2	31	9.7	31	37	39	1470	23	24	30
16	7.5	7.2	7.3	27	9.5	33	36	38	1100	23	24	30
17	7.5	8.2	7.7	25	9.3	23	35	38	656	23	24	30
18	7.5	7.5	8.1	24	9.3	22	35	37	615	23	24	30
19	7.5	7.5	8.3	23	9.2	20	35	38	697	23	24	30
20	7.5	7.5	8.0	16	9.0	22	35	40	654	23	23	30
21	7.5	7.5	8.1	9.5	9.3	25	35	40	640	23	23	30
22	7.8	7.5	7.9	11	9.3	24	34	40	741	23	23	30
23	9.2	7.5	7.9	12	9.3	20	34	42	986	28	23	30
24	7.5	7.5	8.1	12	9.3	20	34	73	1300	31	23	30
25	7.2	7.8	8.1	13	9.3	19	35	82	1600	30	23	30
26	7.2	7.5	7.9	11	9.3	19	35	74	1620	27	23	30
27	7.4	7.5	7.9	10	9.3	19	37	69	1740	24	23	30
28	7.3	7.5	8.1	11	9.1	25	43	84	1450	24	23	30
29	7.2	7.5	7.9	11	---	35	55	85	1190	24	23	30
30	7.2	7.6	7.7	11	---	37	51	85	1120	24	23	30
31	7.2	---	7.5	12	---	37	---	86	---	24	23	---
TOTAL	825.2	230.0	301.4	509.6	281.5	771.8	1144	1615	30215	8543	732	811
MEAN	26.6	7.67	9.72	16.4	10.1	24.9	38.1	52.1	1007	276	23.6	27.0
MAX	51	11	20	44	13	56	55	86	1740	1350	24	30
MIN	7.2	7.2	7.2	7.1	9.0	9.0	34	37	86	23	23	23
AC-FT	1640	456	598	1010	558	1530	2270	3200	59930	16950	1450	1610
a	10830	14160	10270	23270	43000	44530	56560	59490	57230	56070	54570	24320

a Diversion, in acre-feet, from Hell Hole Reservoir through Middle Fork Powerplant, provided by Placer County Water Agency.

SACRAMENTO RIVER BASIN

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11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.3	16.7	25.7	16.3	22.3	33.5	23.2	40.6	108	41.7	14.4	15.9
MAX	40.6	25.8	318	30.8	172	478	129	544	1007	303	23.6	36.7
(WY)	1989	1984	1982	1969	1982	1986	1982	1982	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1966 - 1995			
ANNUAL TOTAL	5852.6				45979.5							
ANNUAL MEAN	16.0				126				31.7			
HIGHEST ANNUAL MEAN									126			
LOWEST ANNUAL MEAN									7.11			
HIGHEST DAILY MEAN	57				Sep 15				1740			
LOWEST DAILY MEAN	7.2				Oct 25				Jun 27			
ANNUAL SEVEN-DAY MINIMUM	7.2				Oct 25				7.1			
INSTANTANEOUS PEAK FLOW									7.2			
ANNUAL RUNOFF (AC-FT)	11610				2030				Jun 27			
10 PERCENT EXCEEDS	22				91200				10700			
50 PERCENT EXCEEDS	13				395				22970			
90 PERCENT EXCEEDS	7.5				24				26			
					7.5				17			
									8.5			

SACRAMENTO RIVER BASIN

11429300 ROBBS PEAK POWERPLANT NEAR KYBURZ, CA

LOCATION.--Lat 38°53'50", long 120°22'38", in SE 1/4 SW 1/4 sec.11, T.12 N., R.14 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerplant on shore of Union Valley Reservoir, and 9.5 mi northwest of Kyburz.

PERIOD OF RECORD.--October 1962 to current year. Prior to October 1965, published as Robbs Peak Tunnel near Riverton.

GAGE.--Discharge computed from powerplant output. Elevation of gage is 4,880 ft above sea level, from topographic map. Prior to October 1965, water-stage recorder and concrete control in abandoned section of canal 0.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Water is imported from Loon Lake (station 11429350) via Loon Lake Powerplant or Gerle Creek (stations 11429340 and 11429500) to tunnel intake. Tunnel diverts at South Fork Rubicon River Diversion Dam in NE 1/4 sec.27, T.13 N., R.14 E., and discharges into Union Valley Reservoir (station 11441001). 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.

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	.50	50	58	86	755	788	400	1080	1010	1150	347	482
2	.50	3.0	8.6	.50	698	596	501	915	796	1130	245	422
3	42	.50	78	55	627	735	657	884	944	1130	249	461
4	2.5	.50	101	16	578	555	708	924	909	1110	277	393
5	45	155	101	84	558	582	816	751	788	1050	382	668
6	5.6	182	94	1.0	562	646	923	712	675	1090	385	547
7	1.0	39	59	141	563	650	1140	592	755	1100	574	566
8	.50	13	48	150	608	482	1030	722	929	1060	434	482
9	.50	16	1.5	372	684	1020	915	760	1110	1070	72	487
10	.50	51	36	1040	566	1220	822	846	1160	1030	288	510
11	.50	66	58	730	513	1120	947	822	1180	1000	418	632
12	.50	39	45	433	261	653	915	871	1170	977	470	595
13	.50	1.5	43	914	385	718	908	890	1170	932	508	411
14	.50	1.5	369	1180	530	975	662	740	1170	359	425	410
15	.50	1.5	96	916	541	1020	625	781	1170	561	465	599
16	.50	45	.00	417	571	710	493	861	1170	439	491	511
17	.50	1.5	.00	275	564	525	587	1000	1170	788	238	510
18	.50	1.5	.00	316	520	652	495	836	1170	789	531	326
19	.50	31	54	537	608	662	420	1020	1170	703	473	440
20	.50	1.5	.50	441	567	634	495	1040	1170	419	540	556
21	.50	50	77	414	553	503	494	927	1170	523	456	598
22	15	6.1	27	475	553	320	563	1020	1080	433	245	323
23	.50	1.5	79	563	616	294	701	1050	695	473	459	461
24	.50	23	1.5	537	631	274	735	1040	822	448	398	480
25	.50	32	95	600	706	251	720	976	793	439	357	16
26	.50	1.5	2.0	436	700	224	789	942	800	370	415	1.0
27	2.5	1.5	58	500	615	312	898	978	662	468	438	1.0
28	1.0	46	23	475	501	315	1070	1070	913	615	504	1.0
29	1.0	1.5	51	544	---	225	1140	1030	1120	324	543	1.5
30	.50	.50	37	518	---	151	1180	962	1080	520	472	1.0
31	.50	---	18	643	---	246	---	971	---	492	406	---
TOTAL	126.60	863.60	1719.10	13809.50	16134	18058	22749	28013	29921	22992	12505	11891.5
MEAN	4.08	28.8	55.5	445	576	583	758	904	997	742	403	396
MAX	45	182	369	1180	755	1220	1180	1080	1180	1150	574	668
MIN	.50	.50	.00	.50	261	151	400	592	662	324	72	1.0
AC-FT	251	1710	3410	27390	32000	35820	45120	55560	59350	45600	24800	23590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	MEAN	144	189	208	244	328	413	419	399	234	167	89.9
MAX	278	490	616	650	576	749	809	904	997	742	403	430
(WY)	1983	1984	1982	1982	1995	1986	1993	1995	1995	1995	1995	1971
MIN	.000	4.17	15.6	9.16	14.6	25.0	48.7	44.1	33.7	6.61	.62	.000
(WY)	1971	1967	1992	1977	1977	1977	1977	1992	1994	1963	1963	1970

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	42904.90	178782.30	
ANNUAL MEAN	118	490	243
HIGHEST ANNUAL MEAN			490
LOWEST ANNUAL MEAN			50.2
HIGHEST DAILY MEAN	542	Mar 24	1220
LOWEST DAILY MEAN	.00	Dec 16	.00
ANNUAL SEVEN-DAY MINIMUM	.50	Oct 8	.50
ANNUAL RUNOFF (AC-FT)	85100	354600	175700
10 PERCENT EXCEEDS	307	1040	590
50 PERCENT EXCEEDS	69	495	176
90 PERCENT EXCEEDS	.50	1.0	.00

SACRAMENTO RIVER BASIN

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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 Gerle Creek, and 10 mi southwest of Meeks Bay.

DRAINAGE AREA.--7.96 mi².

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, 76,182 acre-ft, July 10, 16, elevation, 6,410.01 ft; minimum, 19,761 acre-ft, Mar. 8, elevation, 6,360.24 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32543	31676	34797	36219	39079	22924	37935	39112	61272	76112	75428	58774
2	32492	31666	34902	36251	39123	22590	37579	41611	63110	76126	75511	57945
3	32452	31616	35195	36272	38926	22692	37095	43129	64742	76112	75581	56993
4	32553	31586	35468	36379	38576	22317	36645	43815	66548	76112	75595	56198
5	32533	31967	35542	36549	38163	21734	36155	44529	68331	76126	75372	54957
6	32492	32391	35679	36720	37708	20970	35574	44714	69465	76112	75094	53838
7	32452	32950	35764	36987	37213	20090	35880	45004	69696	76098	74468	52677
8	32411	33390	35785	37449	36570	19761	35764	45201	69316	76154	74302	51636
9	32361	33698	35827	37968	35626	22249	34996	45608	68466	76140	74441	50578
10	32320	33780	35869	39420	34996	25587	34080	46040	68062	76182	74191	49479
11	32300	33719	35922	40226	34391	27735	33021	46768	68129	76168	73748	48164
12	32280	33760	36092	40783	34526	28763	32442	46956	68668	75972	73086	46980
13	32239	33760	36134	42039	34111	29119	32523	46721	69154	75511	72384	45993
14	32229	33780	35384	44460	33441	29515	32462	46474	69696	76014	71767	45038
15	32199	33863	35426	45713	32594	30592	32128	45993	70810	75972	71083	43666
16	32159	33915	35458	46251	31726	31486	31897	45352	70988	76182	70388	42549
17	32118	34090	35500	46544	30879	32088	31336	44737	70470	76014	70157	41420
18	32088	34121	35574	46392	30012	32919	30829	44957	69750	75734	69289	40671
19	32068	34121	35605	45865	29061	33966	30582	45538	69519	75665	68560	39828
20	32038	34142	35647	45364	28456	35090	30199	46568	69141	75902	67672	38467
21	32008	34194	35690	44876	27830	35996	29749	48093	68735	75846	67096	37105
22	31977	34194	35721	44379	27237	36698	28993	49275	68668	76014	66602	36421
23	31947	34204	35753	43632	26642	37202	28380	50058	69818	75944	65869	35395
24	31917	34235	35912	43004	26135	37535	28114	50675	71056	75916	65324	34537
25	31897	34495	35954	42333	25451	37762	28390	51404	72302	75707	64742	34505
26	31867	34610	35975	41848	24722	37957	28619	52358	73596	75762	64082	34474
27	31837	34672	36018	41263	24189	37838	29206	53615	75038	75553	63215	34443
28	31806	34693	36124	40649	23767	37708	30592	54895	75511	75330	62378	34401
29	31756	34714	36155	39972	---	37827	32817	56274	75679	75511	61428	34370
30	31726	34745	36177	39475	---	37968	35279	57932	76014	75651	60560	34308
31	31696	---	36187	39112	---	38011	---	59645	---	75358	59581	---
MAX	32553	34745	36187	46544	39123	38011	37935	59645	76014	76182	75595	58774
MIN	31696	31586	34797	36219	23767	19761	28114	39112	61272	75330	59581	34308
a	6373.45	6376.43	6377.80	6380.51	6365.02	6379.50	6376.04	6397.69	6409.89	6409.30	6397.64	6376.01
b	-878	+3049	+1442	+2925	-15345	+14244	-2732	+24366	+16369	-656	-15777	-25273

CAL YR 1994 MAX 66255 MIN 27924 b -5537

WTR YR 1995 MAX 76182 MIN 19761 b +1734

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--Record good including estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67 ft³/s, July 11, gage height, 3.09 ft; minimum daily, 8.0 ft³/s, Apr. 21.

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	9.8	9.6	9.9	9.8	11	8.6	10	21	11	11	9.8	8.8
2	9.8	9.5	11	9.8	11	8.8	10	12	10	14	9.6	8.6
3	9.8	9.5	10	9.9	10	8.8	10	11	10	14	9.5	8.6
4	10	9.5	10	10	10	9.1	10	10	10	12	9.3	9.2
5	9.8	14	10	10	10	9.7	9.9	9.5	9.4	11	9.2	9.5
6	9.3	12	10	10	10	9.5	9.7	9.2	9.2	20	9.2	9.5
7	9.2	10	10	11	10	9.5	11	9.4	9.0	19	9.2	9.5
8	9.4	9.8	9.8	10	9.8	9.4	10	9.9	8.9	24	9.2	9.5
9	9.5	9.8	9.8	12	9.5	22	9.3	10	8.9	38	9.2	9.5
10	9.5	9.8	9.8	16	9.5	15	9.2	11	9.3	46	9.2	9.4
11	9.5	9.8	9.8	11	9.5	12	9.2	10	9.3	50	9.2	9.2
12	9.5	9.8	9.8	11	9.4	11	9.0	9.6	9.1	24	9.1	9.2
13	9.5	9.8	9.8	17	9.2	11	9.5	9.1	9.0	9.8	9.1	9.2
14	9.5	9.8	9.8	18	9.2	12	8.7	8.9	9.2	9.8	9.0	9.1
15	9.5	9.7	9.8	12	9.2	13	8.6	9.0	11	10	9.2	8.9
16	9.5	9.8	9.9	11	8.9	11	8.3	9.3	9.3	18	9.2	8.9
17	9.5	9.8	10	11	8.9	11	8.3	9.6	8.8	15	9.1	8.9
18	9.5	9.7	10	11	8.9	12	8.3	11	8.7	9.9	8.9	9.0
19	9.5	9.7	10	11	8.9	11	8.3	11	8.7	9.8	8.9	9.2
20	9.5	9.8	10	10	8.9	11	8.2	12	9.2	9.9	8.9	9.3
21	9.5	9.8	10	10	8.9	11	8.0	12	9.2	11	8.9	9.5
22	9.5	9.8	10	10	8.9	10	8.2	11	9.3	10	8.9	9.3
23	9.5	9.8	10	10	8.9	10	8.6	10	9.5	10	9.0	9.2
24	9.5	9.8	10	10	8.9	10	9.2	10	9.5	10	9.2	9.2
25	9.5	9.8	10	10	8.9	10	9.3	10	9.5	10	9.2	9.2
26	9.5	9.7	10	10	8.9	10	9.2	11	9.5	10	9.2	9.2
27	9.5	9.8	9.8	10	8.6	10	10	11	9.5	9.8	9.2	9.2
28	9.5	9.8	9.8	10	8.6	10	12	11	9.3	9.8	9.0	9.2
29	9.5	9.8	9.8	10	---	9.8	17	11	8.9	11	8.9	9.2
30	9.5	9.8	9.8	11	---	9.8	13	11	9.6	9.8	8.9	9.2
31	9.5	---	9.8	11	---	9.9	---	12	---	9.8	8.9	---
TOTAL	295.6	299.1	308.2	343.5	262.4	335.9	290.0	332.5	281.8	486.4	283.3	275.4
MEAN	9.54	9.97	9.94	11.1	9.37	10.8	9.67	10.7	9.39	15.7	9.14	9.18
MAX	10	14	11	18	11	22	17	21	11	50	9.8	9.5
MIN	9.2	9.5	9.8	9.8	8.6	8.6	8.0	8.9	8.7	9.8	8.9	8.6
AC-FT	586	593	611	681	520	666	575	660	559	965	562	546
a	4.0	122	785	9160	19890	6800	18290	18380	38290	39710	24740	23730

e Estimated.

a Diversion, in acre-feet, to Loon Lake Powerplant, provided by Sacramento Municipal Utility District.

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.70	8.60	9.20	8.78	8.76	8.90	8.78	9.32	8.79	8.85	8.42	8.42
MAX	13.3	9.97	23.9	11.1	11.3	11.6	10.2	16.0	12.0	15.7	10.2	11.2
(WY)	1993	1995	1984	1995	1986	1989	1989	1982	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1972 - 1995

ANNUAL TOTAL	3483.0	3794.1	
ANNUAL MEAN	9.54	10.4	8.80
HIGHEST ANNUAL MEAN			10.4
LOWEST ANNUAL MEAN			6.06
HIGHEST DAILY MEAN	14	Nov 5	50
LOWEST DAILY MEAN	8.3	Jan 27	8.0
ANNUAL SEVEN-DAY MINIMUM	8.4	Jan 24	8.2
INSTANTANEOUS PEAK FLOW			67
INSTANTANEOUS PEAK STAGE			3.09
ANNUAL RUNOFF (AC-FT)	6910	7530	6370
ANNUAL DIVERSION (AC-FT) a	50590	199900	
10 PERCENT EXCEEDS	10	11	9.9
50 PERCENT EXCEEDS	9.5	9.8	8.6
90 PERCENT EXCEEDS	9.2	8.9	7.8

a Diversion, in acre-feet, to Loon Lake Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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, 1,344 acre-ft, May 1, 1995, elevation, 5,233.02 ft; minimum, 845 acre-ft, Dec. 15, 1994, elevation, 5,222.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,344 acre-ft, May 1, elevation, 5,233.02 ft; minimum, 845 acre-ft, Dec. 15, elevation, 5,222.15 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1088	1129	893	861	1101	1059	1000	1344	1081	1195	1045	1050
2	1092	1133	936	926	1086	1092	1043	1090	1078	1185	1100	1044
3	1105	1145	931	901	1072	1020	1030	1093	1078	1186	1099	1092
4	1127	1158	919	932	1058	1029	1071	1053	1115	1188	1109	1115
5	1033	945	933	858	1059	1083	1091	1058	1035	1160	1102	1088
6	1077	884	898	926	1043	1063	1143	1046	1072	1185	1129	1100
7	1089	887	882	923	1039	1063	1147	1054	1087	1172	1093	1097
8	1101	912	875	947	1075	970	1149	1090	1163	1183	961	1117
9	1112	924	942	965	1073	1311	1100	1060	1208	1183	1073	1177
10	1123	868	945	1147	1058	1290	1133	1090	1225	1158	1100	1156
11	1133	874	909	977	1068	1099	1157	1066	1231	1165	1075	1144
12	1144	852	899	967	931	992	1117	1112	1218	1157	1141	1030
13	1154	877	885	1249	1083	1090	1097	1108	1200	1109	1118	1080
14	1162	900	958	1258	1048	1110	1065	1096	1200	971	1125	1096
15	1171	925	845	980	1067	1080	1041	1109	1196	1073	1110	1115
16	1179	875	907	925	1049	1009	1029	1137	1213	1054	1087	1106
17	1187	902	885	903	1042	962	1031	1153	1227	1135	1089	1093
18	1195	924	911	1019	1063	1068	1055	1157	1210	1115	1106	1106
19	1204	898	885	979	1079	1021	1002	1162	1201	987	1088	1123
20	1212	922	951	991	1014	1013	1045	1128	1200	1055	1056	1120
21	1220	875	894	990	1049	963	993	1080	1192	1145	968	1146
22	1180	880	925	1011	1083	979	1047	1131	1054	1116	1107	1097
23	1185	905	864	1054	1104	966	1067	1131	1089	1130	1102	1115
24	1195	904	946	1080	1065	943	1072	1149	1068	1088	1063	983
25	1183	871	855	1027	1061	949	1073	1104	1092	1145	1111	951
26	1192	895	922	1082	1082	925	1082	1140	1008	1136	1084	949
27	1182	924	894	1055	1053	969	1125	1141	1026	1157	1142	949
28	1189	928	930	1066	1084	980	1152	1118	1209	1018	1077	946
29	1199	903	912	1067	---	907	1307	1154	1194	1173	1068	946
30	1210	934	915	1044	---	970	1162	1184	1180	1044	1084	915
31	1205	---	949	1103	---	1010	---	1153	---	1109	1137	---
MAX	1220	1158	958	1258	1104	1311	1307	1344	1231	1195	1142	1177
MIN	1033	852	845	858	931	907	993	1046	1008	971	961	915
a	5230.24	5224.29	5224.64	5228.10	5227.67	5226.05	5229.35	5229.16	5229.73	5228.22	5228.82	5223.85
b	+122	-271	+15	+154	-19	-74	+152	-9	+27	-71	+28	-222

CAL YR 1994 MAX 1220 MIN 845 b +42

WTR YR 1995 MAX 1344 MIN 845 b -168

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s, May 1, gage height, 8.50 ft; minimum daily, 5.7 ft³/s, several days in October.

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	6.4	6.6	6.5	7.0	11	7.9	7.8	2090	51	12	12	12
2	6.4	6.3	7.1	6.7	10	11	8.3	542	10	14	12	12
3	6.2	6.1	14	6.7	9.1	25	9.3	14	11	12	12	12
4	6.8	6.1	20	6.9	8.6	13	10	12	13	12	13	13
5	6.5	11	14	7.1	8.4	12	11	15	13	12	13	12
6	6.8	12	11	7.1	8.4	10	11	13	11	12	13	12
7	6.1	7.6	9.1	13	8.3	8.7	89	12	11	12	13	12
8	6.1	6.8	8.5	19	8.2	8.8	26	12	17	12	12	12
9	5.9	6.8	8.3	27	8.0	1240	13	11	15	12	11	12
10	5.9	6.8	8.4	243	7.7	1260	11	11	86	11	12	12
11	6.3	6.5	8.3	30	7.6	185	11	10	170	11	12	12
12	5.7	6.4	8.3	20	7.1	19	11	11	166	12	12	12
13	6.1	6.2	7.8	415	7.2	22	14	12	114	11	13	11
14	6.7	6.1	7.9	1230	7.1	20	11	13	77	11	13	11
15	6.7	6.3	7.4	41	6.9	22	9.3	13	203	12	12	12
16	6.7	6.3	7.0	15	6.9	15	8.0	12	83	11	12	12
17	6.7	6.6	7.1	13	6.7	13	7.6	11	64	12	12	12
18	6.7	6.3	7.2	12	6.4	17	7.4	33	114	15	12	11
19	6.5	6.3	7.0	11	6.7	19	7.2	26	35	11	12	12
20	6.5	6.3	7.0	10	6.9	19	7.3	36	28	11	12	12
21	7.2	6.3	7.5	9.8	7.0	15	6.9	15	20	12	12	12
22	7.6	6.1	7.1	12	7.0	16	7.0	11	31	12	11	11
23	6.5	6.1	6.9	14	7.2	12	7.7	12	12	13	12	12
24	5.7	6.1	7.3	14	7.3	9.2	8.4	11	12	12	12	12
25	5.7	6.7	7.3	14	7.4	7.9	8.6	11	28	12	12	11
26	5.7	6.5	7.1	12	7.4	7.4	8.5	13	11	11	13	11
27	5.7	6.3	7.2	9.6	7.0	7.1	12	19	11	12	13	11
28	5.7	6.3	7.4	9.9	6.5	6.7	61	17	40	12	12	11
29	5.7	6.3	7.3	9.2	---	6.4	846	14	83	12	12	11
30	5.7	6.3	6.9	9.4	---	6.4	361	24	45	12	12	11
31	5.8	---	6.8	10	---	7.3	---	69	---	12	12	---
TOTAL	194.7	202.4	260.7	2264.4	214.0	3048.8	1617.3	3125	1585	370	378	351
MEAN	6.28	6.75	8.41	73.0	7.64	98.3	53.9	101	52.8	11.9	12.2	11.7
MAX	7.6	12	20	1230	11	1260	846	2090	203	15	13	13
MIN	5.7	6.1	6.5	6.7	6.4	6.4	6.9	10	10	11	11	11
AC-FT	386	401	517	4490	424	6050	3210	6200	3140	734	750	696

SACRAMENTO RIVER BASIN

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.7	20.9	35.3	49.7	35.8	20.5	13.6	20.6	21.6	13.2	8.96	9.10
MAX	52.2	268	396	484	524	130	141	125	249	92.5	12.5	22.3
(WY)	1963	1984	1965	1980	1986	1986	1982	1983	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	2404.1			13611.3			21.6		
ANNUAL MEAN	6.59			37.3			63.8		
HIGHEST ANNUAL MEAN							3.59		
LOWEST ANNUAL MEAN									
HIGHEST DAILY MEAN	20	Dec	4	2090	May	1	5990	Jan	13
LOWEST DAILY MEAN	5.1	Apr	5	5.7	Oct	12	1.3	Sep	29
ANNUAL SEVEN-DAY MINIMUM	5.4	Apr	1	5.7	Oct	24	1.5	Sep	28
INSTANTANEOUS PEAK FLOW				3340	May	1	11500	Jan	31
INSTANTANEOUS PEAK STAGE				8.50	May	1	12.32	Jan	31
ANNUAL RUNOFF (AC-FT)	4770			27000			15660		
10 PERCENT EXCEEDS	7.6			26			12		
50 PERCENT EXCEEDS	6.3			11			7.9		
90 PERCENT EXCEEDS	5.6			6.4			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 except for estimated daily discharges, which are fair. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	1215	713	4.50	Mar. 10	2100	*976	*4.91
Jan. 14	1345	913	4.82	Apr. 7	2130	275	3.49
Mar. 3	1230	221	3.15	Apr. 29	1900	272	3.47

Minimum daily, 3.0 ft³/s, Oct. 2, 3.

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	3.1	4.1	5.9	11	76	38	66	482	42	20	12	8.0
2	3.0	4.9	7.2	11	74	51	68	310	41	19	11	7.9
3	3.0	4.1	45	11	68	173	71	223	39	19	11	7.8
4	5.6	4.0	91	12	63	109	78	192	38	18	11	7.8
5	9.5	16	56	16	60	94	84	169	36	18	11	7.8
6	4.9	32	34	15	57	81	90	140	36	18	11	7.6
7	4.1	12	24	54	56	71	199	120	35	17	11	7.6
8	3.8	8.6	19	83	53	68	222	109	33	18	11	7.5
9	3.6	7.6	16	168	50	323	169	100	32	17	10	7.5
10	3.5	7.6	15	543	47	517	136	93	31	17	10	7.5
11	3.5	6.5	14	252	45	489	123	88	30	17	10	7.5
12	3.4	6.4	14	170	44	264	117	84	29	17	10	7.3
13	3.5	6.0	13	396	44	241	138	90	28	16	10	7.2
14	3.5	5.6	12	675	43	234	114	88	30	16	9.9	7.1
15	3.6	5.8	11	290	39	231	103	83	44	15	9.7	6.9
16	3.6	5.9	11	181	37	200	95	79	37	15	9.7	7.1
17	3.6	6.6	11	116	35	159	87	76	32	15	9.6	7.5
18	3.6	8.1	11	88	34	165	82	73	31	15	9.6	7.5
19	3.6	6.4	11	72	34	138	77	71	29	15	9.3	7.3
20	3.6	6.0	11	60	34	165	76	69	27	14	9.1	7.3
21	3.5	5.7	10	52	34	149	71	67	26	14	9.1	7.3
22	3.4	e5.2	10	63	35	129	68	64	25	14	9.0	7.3
23	3.4	e5.1	10	76	36	114	68	61	24	14	8.8	7.3
24	3.4	5.3	12	80	36	99	71	59	23	13	8.8	7.3
25	3.4	7.2	12	95	37	89	73	57	23	13	8.7	7.5
26	3.4	14	12	88	37	81	72	54	22	13	8.6	7.8
27	3.4	11	12	83	36	74	93	52	21	13	8.5	7.6
28	3.4	6.9	13	81	36	69	137	50	21	12	8.4	7.7
29	3.4	6.2	12	74	---	66	230	47	20	12	8.3	8.0
30	3.4	6.1	12	72	---	64	219	45	20	12	8.2	7.5
31	3.4	---	12	76	---	64	---	43	---	12	8.2	---
TOTAL	117.1	236.9	559.1	4064	1280	4809	3297	3338	905	478	300.5	225.0
MEAN	3.78	7.90	18.0	131	45.7	155	110	108	30.2	15.4	9.69	7.50
MAX	9.5	32	91	675	76	517	230	482	44	20	12	8.0
MIN	3.0	4.0	5.9	11	34	38	66	43	20	12	8.2	6.9
AC-FT	232	470	1110	8060	2540	9540	6540	6620	1800	948	596	446

e Estimated.

11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.50	13.0	24.9	42.6	45.0	52.9	47.6	35.8	14.8	8.07	5.19	4.69
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1961 - 1995

ANNUAL TOTAL	3275.2		19609.6									
ANNUAL MEAN	8.97		53.7							25.0		
HIGHEST ANNUAL MEAN										64.8		1983
LOWEST ANNUAL MEAN										2.96		1977
HIGHEST DAILY MEAN	91	Dec 4		675	Jan 14				2840		Feb 17	1986
LOWEST DAILY MEAN	2.1	Aug 17		3.0	Oct 2				.14		Aug 16	1977
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 15		3.4	Oct 22				.15		Aug 12	1977
INSTANTANEOUS PEAK FLOW				976	Mar 10				3510		Feb 17	1986
INSTANTANEOUS PEAK STAGE				4.91	Mar 10				8.05		Jan 31	1963
ANNUAL RUNOFF (AC-FT)	6500			38900					18100			
10 PERCENT EXCEEDS	17			132					57			
50 PERCENT EXCEEDS	7.6			19					9.9			
90 PERCENT EXCEEDS	2.4			5.5					3.3			

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.--No estimated daily discharges. Records good. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s, Mar. 11, gage height, 7.49 ft; minimum daily, 1.5 ft³/s, Oct. 6.

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	1.7	2.3	2.2	2.8	146	48	115	609	52	9.0	3.6	3.9
2	1.6	2.4	2.5	2.7	137	70	117	577	49	8.4	3.6	3.9
3	1.7	2.1	12	2.7	124	252	121	388	47	7.7	3.6	3.9
4	2.5	2.1	17	3.3	112	194	129	313	44	7.0	3.8	3.8
5	2.3	5.5	11	5.9	104	159	139	288	42	6.4	3.8	4.0
6	1.5	7.7	7.1	5.5	99	133	149	245	40	5.6	3.8	4.3
7	1.6	3.3	5.2	14	94	115	309	208	39	4.9	3.8	4.4
8	1.7	2.7	4.3	19	93	110	405	186	37	5.5	3.8	4.2
9	1.6	2.7	3.8	32	85	304	312	169	35	5.4	3.8	3.9
10	1.6	2.8	3.5	120	78	627	259	155	34	4.6	4.0	3.9
11	1.7	2.7	3.3	71	72	911	229	145	32	4.2	3.9	3.8
12	2.0	2.7	3.3	65	68	551	213	142	30	4.2	3.9	4.0
13	2.1	2.6	3.1	138	86	456	267	169	28	4.2	3.7	4.2
14	2.1	2.4	3.0	206	91	425	219	156	32	4.3	3.7	4.2
15	2.1	2.4	2.9	563	67	406	193	141	81	4.5	3.7	4.2
16	2.1	2.4	2.9	387	59	331	179	130	60	4.3	3.7	4.1
17	2.1	2.4	2.9	265	55	269	165	122	40	4.3	3.8	4.1
18	2.1	2.4	3.1	195	49	273	157	116	35	4.3	4.2	4.1
19	2.1	2.4	2.9	153	48	241	145	111	31	4.3	4.2	4.1
20	2.1	2.3	2.8	126	48	303	153	107	28	4.1	4.1	4.1
21	2.0	2.3	2.8	107	47	309	133	103	26	4.1	4.1	4.1
22	2.0	2.2	2.7	130	47	278	124	99	24	4.0	4.0	4.1
23	2.0	2.1	2.6	163	50	258	119	95	23	4.0	4.0	4.1
24	2.0	2.1	3.8	169	52	202	124	90	21	4.0	4.0	4.1
25	2.0	2.5	3.5	196	50	169	131	82	20	4.0	4.0	4.0
26	2.0	2.4	3.1	193	48	152	129	76	19	3.8	4.0	4.0
27	2.0	2.3	2.9	194	47	139	147	72	16	3.8	4.0	4.0
28	2.0	2.3	3.7	178	47	129	191	68	12	3.8	3.9	4.1
29	2.0	2.3	3.3	158	---	121	296	63	11	3.8	3.9	4.1
30	2.0	2.2	3.0	153	---	115	325	60	9.6	3.8	3.9	4.0
31	2.0	---	2.8	150	---	113	---	56	---	3.6	3.9	---
TOTAL	60.3	81.0	133.0	4167.9	2103	8163	5694	5341	997.6	149.9	120.2	121.7
MEAN	1.95	2.70	4.29	134	75.1	263	190	172	33.3	4.84	3.88	4.06
MAX	2.5	7.7	17	563	146	911	405	609	81	9.0	4.2	4.4
MIN	1.5	2.1	2.2	2.7	47	48	115	56	9.6	3.6	3.6	3.8
AC-FT	120	161	264	8270	4170	16190	11290	10590	1980	297	238	241

SACRAMENTO RIVER BASIN

11433040 PILOT CREEK BELOW MUTTON CANYON, NEAR GEORGETOWN, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.68	5.84	28.8	49.4	67.0	72.9	67.8	37.3	8.61	4.05	3.15	2.68
MAX	7.19	28.6	340	279	585	370	289	172	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1961 - 1995			
ANNUAL TOTAL	1343.2				27132.6							
ANNUAL MEAN	3.68				74.3				29.0			
HIGHEST ANNUAL MEAN									109			
LOWEST ANNUAL MEAN									.84			
HIGHEST DAILY MEAN	19				911				4350			
LOWEST DAILY MEAN	1.5				1.5				.20			
ANNUAL SEVEN-DAY MINIMUM	1.7				1.7				.23			
INSTANTANEOUS PEAK FLOW					1200				6330			
INSTANTANEOUS PEAK STAGE					7.49				10.86			
ANNUAL RUNOFF (AC-FT)	2660				53820				21010			
10 PERCENT EXCEEDS	5.5				207				80			
50 PERCENT EXCEEDS	3.8				7.1				3.7			
90 PERCENT EXCEEDS	1.9				2.3				1.0			

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	74	42	45	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	67	54	47	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	60	126	52	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	57	68	61	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	56	63	66	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	55	55	67	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	54	48	108	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	52	47	105	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	47	31	77	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	44	.00	63	.00	.00	.00	.00	.00
11	.00	.00	.00	54	42	70	63	.00	.00	.00	.00	.00
12	.00	.00	.00	67	40	95	69	.00	.00	.00	.00	.00
13	.00	.00	.00	66	38	105	94	.00	.00	.00	.00	.00
14	.00	.00	.00	6.1	34	117	70	.00	.00	.00	.00	.00
15	.00	.00	.00	36	31	123	60	.00	.00	.00	.00	.00
16	.00	.00	.00	75	29	97	54	.00	.00	.00	.00	.00
17	.00	.00	.00	54	27	75	50	.00	.00	.00	.00	.00
18	.00	.00	.00	45	27	80	47	.00	.00	.00	.00	.00
19	.00	.00	.00	40	30	74	44	.00	.00	.00	.00	.00
20	.00	.00	.00	36	34	85	44	.00	.00	.00	.00	.00
21	.00	.00	.00	33	36	68	42	.00	.00	.00	.00	.00
22	.00	.00	.00	36	40	51	43	.00	.00	.00	.00	.00
23	.00	.00	.00	45	42	45	49	.00	.00	.00	.00	.00
24	.00	.00	.00	45	42	41	59	.00	.00	.00	.00	.00
25	.00	.00	.00	50	42	39	63	.00	.00	.00	.00	.00
26	.00	.00	.00	45	40	41	63	.00	.00	.00	.00	.00
27	.00	.00	.00	39	39	40	74	.00	.00	.00	.00	.00
28	.00	.00	.00	41	40	38	111	.00	.00	.00	.00	.00
29	.00	.00	.00	42	---	37	97	.00	.00	.00	.00	.00
30	.00	.00	.00	47	---	40	8.7	.00	.00	.00	.00	.00
31	.00	---	.00	63	---	42	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	965.10	1219	1937.00	1895.7	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	31.1	43.5	62.5	63.2	.000	.000	.000	.000	.000
MAX	.00	.00	.00	75	74	126	111	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	27	.00	8.7	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1910	2420	3840	3760	.00	.00	.00	.00	.00

SACRAMENTO RIVER BASIN

11433060 SOUTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.002	3.78	5.57	9.99	10.1	20.2	26.4	24.0	7.93	.32	.002	.000
MAX	.034	37.2	38.6	42.1	43.5	77.7	67.8	80.6	47.5	4.54	.067	.001
(WY)	1980	1974	1984	1974	1995	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 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1966 - 1995
ANNUAL TOTAL	861.78	6016.80	
ANNUAL MEAN	2.36	16.5	9.01
HIGHEST ANNUAL MEAN			20.6
LOWEST ANNUAL MEAN			.43
HIGHEST DAILY MEAN	19 Mar 15	126 Mar 3	251 Nov 12
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1
ANNUAL RUNOFF (AC-FT)	1710	11930	6530
10 PERCENT EXCEEDS	10	60	30
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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	3.9	3.5	4.2	---	---	---	---	---
2	---	---	---	---	3.9	3.7	4.2	---	---	---	---	---
3	---	---	---	---	3.8	4.0	4.2	---	---	---	---	---
4	---	---	---	---	3.7	3.8	4.2	---	---	---	---	---
5	---	---	---	---	3.7	3.9	4.2	---	---	---	---	---
6	---	---	---	---	3.7	3.8	4.3	---	---	---	---	---
7	---	---	---	---	3.7	3.7	4.8	---	---	---	---	---
8	---	---	---	---	3.7	3.8	5.1	---	---	---	---	---
9	---	---	---	---	3.7	25	4.6	---	---	---	---	---
10	---	---	---	---	3.7	---	4.2	---	---	---	---	---
11	---	---	---	12	3.7	15	4.2	---	---	---	---	---
12	---	---	---	5.9	3.7	6.5	4.2	---	---	---	---	---
13	---	---	---	15	3.7	5.8	4.3	---	---	---	---	---
14	---	---	---	29	3.5	5.3	4.2	---	---	---	---	---
15	---	---	---	16	3.5	6.3	4.0	---	---	---	---	---
16	---	---	---	9.2	3.4	4.7	3.9	---	---	---	---	---
17	---	---	---	8.3	3.3	4.6	3.9	---	---	---	---	---
18	---	---	---	7.4	3.3	6.3	3.9	---	---	---	---	---
19	---	---	---	6.0	3.3	5.2	3.8	---	---	---	---	---
20	---	---	---	4.0	3.4	5.0	3.8	---	---	---	---	---
21	---	---	---	4.0	3.4	5.0	3.8	---	---	---	---	---
22	---	---	---	4.2	3.4	5.0	3.8	---	---	---	---	---
23	---	---	---	4.2	3.4	5.0	3.9	---	---	---	---	---
24	---	---	---	4.2	3.4	4.8	4.0	---	---	---	---	---
25	---	---	---	4.2	3.4	4.8	4.0	---	---	---	---	---
26	---	---	---	4.0	3.5	4.8	4.0	---	---	---	---	---
27	---	---	---	4.0	3.5	4.7	4.2	---	---	---	---	---
28	---	---	---	4.0	3.4	4.7	4.6	---	---	---	---	---
29	---	---	---	4.0	---	4.3	15	---	---	---	---	---
30	---	---	---	4.0	---	3.9	18	---	---	---	---	---
31	---	---	---	3.9	---	4.0	---	---	---	---	---	---
TOTAL	---	---	---	---	99.7	---	149.5	---	---	---	---	---
MEAN	---	---	---	---	3.56	---	4.98	---	---	---	---	---
MAX	---	---	---	---	3.9	---	18	---	---	---	---	---
MIN	---	---	---	---	3.3	---	3.8	---	---	---	---	---
AC-FT	---	---	---	---	198	---	297	---	---	---	---	---

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	39	19	22	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	34	25	24	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	30	46	27	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	29	33	32	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	28	31	34	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	27	26	35	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	26	23	50	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	24	21	46	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	21	15	35	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	20	.00	31	.00	.00	.00	.00	.00
11	.00	.00	.00	27	18	19	32	.00	.00	.00	.00	.00
12	.00	.00	.00	42	17	44	39	.00	.00	.00	.00	.00
13	.00	.00	.00	42	15	47	53	.00	.00	.00	.00	.00
14	.00	.00	.00	9.3	13	49	37	.00	.00	.00	.00	.00
15	.00	.00	.00	19	12	45	31	.00	.00	.00	.00	.00
16	.00	.00	.00	39	11	44	26	.00	.00	.00	.00	.00
17	.00	.00	.00	28	10	42	23	.00	.00	.00	.00	.00
18	.00	.00	.00	22	11	44	21	.00	.00	.00	.00	.00
19	.00	.00	.00	19	14	39	20	.00	.00	.00	.00	.00
20	.00	.00	.00	16	16	40	19	.00	.00	.00	.00	.00
21	.00	.00	.00	14	18	36	18	.00	.00	.00	.00	.00
22	.00	.00	.00	14	20	31	20	.00	.00	.00	.00	.00
23	.00	.00	.00	18	21	25	24	.00	.00	.00	.00	.00
24	.00	.00	.00	18	22	22	32	.00	.00	.00	.00	.00
25	.00	.00	.00	19	22	19	36	.00	.00	.00	.00	.00
26	.00	.00	.00	17	20	17	36	.00	.00	.00	.00	.00
27	.00	.00	.00	14	19	15	39	.00	.00	.00	.00	.00
28	.00	.00	.00	16	19	14	58	.00	.00	.00	.00	.00
29	.00	.00	.00	18	---	14	41	.00	.00	.00	.00	.00
30	.00	.00	.00	25	---	16	11	.00	.00	.00	.00	.00
31	.00	---	.00	35	---	20	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	471.30	576	881.00	952	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	15.2	20.6	28.4	31.7	.000	.000	.000	.000	.000
MAX	.00	.00	.00	42	39	49	58	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	10	.00	11	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	935	1140	1750	1890	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	.052	.91	1.71	3.23	4.65	9.74	12.2	10.1	2.23	.020	.003	.005
MAX	.74	13.2	12.1	15.2	20.6	35.5	33.0	34.6	21.5	.20	.093	.077	
(WY)	1980	1982	1984	1995	1995	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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1966 - 1995		
ANNUAL TOTAL	544.71			2880.30					
ANNUAL MEAN	1.49			7.89			3.73		
HIGHEST ANNUAL MEAN							9.85		
LOWEST ANNUAL MEAN							.007		
HIGHEST DAILY MEAN	14	Mar	5	58	Apr	28	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)	1080			5710			2700		
10 PERCENT EXCEEDS	6.6			31			13		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	3.5	2.7	3.1	---	---	---	---	---
2	---	---	---	---	3.1	2.8	3.1	---	---	---	---	---
3	---	---	---	---	2.8	3.5	3.1	---	---	---	---	---
4	---	---	---	---	2.8	2.8	3.2	---	---	---	---	---
5	---	---	---	---	2.8	2.8	3.2	---	---	---	---	---
6	---	---	---	---	2.8	2.8	3.3	---	---	---	---	---
7	---	---	---	---	2.8	2.7	3.9	---	---	---	---	---
8	---	---	---	---	2.8	2.7	3.7	---	---	---	---	---
9	---	---	---	---	2.8	e7.7	3.2	---	---	---	---	---
10	---	---	---	---	2.8	---	3.4	---	---	---	---	---
11	---	---	---	4.5	2.8	e7.3	3.6	---	---	---	---	---
12	---	---	---	3.4	2.7	5.5	3.4	---	---	---	---	---
13	---	---	---	e7.4	2.6	5.3	3.4	---	---	---	---	---
14	---	---	---	e8.5	2.5	5.5	3.1	---	---	---	---	---
15	---	---	---	6.5	2.4	6.0	2.9	---	---	---	---	---
16	---	---	---	3.7	2.4	5.1	2.9	---	---	---	---	---
17	---	---	---	3.2	2.4	4.7	3.0	---	---	---	---	---
18	---	---	---	3.1	2.4	5.6	3.2	---	---	---	---	---
19	---	---	---	3.0	2.5	5.1	3.1	---	---	---	---	---
20	---	---	---	3.0	2.5	5.0	3.1	---	---	---	---	---
21	---	---	---	3.0	2.5	4.7	3.1	---	---	---	---	---
22	---	---	---	3.0	2.6	4.6	3.1	---	---	---	---	---
23	---	---	---	3.0	2.6	4.8	3.2	---	---	---	---	---
24	---	---	---	3.0	2.6	4.7	3.3	---	---	---	---	---
25	---	---	---	3.0	2.6	4.6	3.3	---	---	---	---	---
26	---	---	---	3.0	2.7	4.5	3.2	---	---	---	---	---
27	---	---	---	2.9	2.7	4.4	3.2	---	---	---	---	---
28	---	---	---	3.0	2.7	4.4	3.9	---	---	---	---	---
29	---	---	---	3.0	---	4.4	e7.0	---	---	---	---	---
30	---	---	---	3.1	---	3.8	e6.9	---	---	---	---	---
31	---	---	---	3.3	---	3.1	---	---	---	---	---	---
TOTAL	---	---	---	---	75.2	---	105.1	---	---	---	---	---
MEAN	---	---	---	---	2.69	---	3.50	---	---	---	---	---
MAX	---	---	---	---	3.5	---	7.0	---	---	---	---	---
MIN	---	---	---	---	2.4	---	2.9	---	---	---	---	---
AC-FT	---	---	---	---	149	---	208	---	---	---	---	---

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,800 ft³/s, May 1, gage height, 22.15 ft; minimum daily, 82 ft³/s, Nov. 4.

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	109	545	482	286	2920	1760	3020	14400	2930	2350	1150	1110
2	110	498	119	279	2860	1940	3050	9410	2590	2400	1150	1110
3	104	95	1180	278	2630	4510	3070	5570	3360	2430	1130	1100
4	101	82	2590	335	2510	3370	3200	4610	3710	2150	1040	1100
5	164	205	1800	508	2410	2940	3310	4330	3900	1970	1140	1100
6	134	745	1060	623	2340	2710	3310	3920	3120	1940	1150	1100
7	109	499	717	1900	2270	2450	4860	3560	2620	1880	1140	1080
8	108	489	507	2560	2210	2250	5510	3370	2360	1900	1020	1100
9	105	525	381	4420	2120	8020	4300	3200	2240	1830	1060	1100
10	130	459	336	12800	2050	14200	3800	3080	2340	1670	906	863
11	96	195	252	6600	1970	14400	3570	3030	2620	1640	1090	511
12	95	208	784	3580	1920	7100	3440	2930	3040	1510	407	641
13	95	194	906	9120	1940	5870	3960	2980	2970	1380	763	503
14	95	471	657	15900	1910	5920	3650	2920	2850	1310	915	653
15	98	283	448	7700	1860	5900	3370	2890	3630	1280	1020	539
16	100	204	785	4460	1810	5070	3180	2800	3620	1190	1120	698
17	594	564	358	3200	1750	4310	2990	2730	2850	1170	1110	458
18	531	559	316	2630	1740	4360	2880	2680	2640	1180	1120	459
19	343	219	321	2340	1740	4180	2780	2760	2690	1190	1120	305
20	597	178	154	2410	1750	5100	2750	2890	2530	1180	1110	202
21	453	619	643	2200	1760	5570	2670	2890	2340	1180	1110	142
22	87	726	635	2260	1780	5070	2570	2900	2200	1180	1110	139
23	88	497	599	2680	1780	5050	2560	2980	2350	1180	1120	139
24	494	96	500	2880	1780	4250	2610	3210	2690	1180	1110	139
25	450	379	366	3340	1800	3730	2690	3130	3430	1170	1110	139
26	487	302	472	3260	1780	3400	2580	3100	3500	1170	1110	140
27	487	326	288	3350	1740	3200	2860	3090	3750	1170	1110	140
28	353	552	716	3310	1740	3080	3310	3020	3550	1170	1110	139
29	94	452	578	3080	---	2980	5760	2990	3260	1160	1100	140
30	88	645	617	2910	---	2930	6160	3010	2760	1160	1100	140
31	451	---	315	2930	---	2940	---	3050	---	1050	1110	---
TOTAL	7350	11811	19882	114129	56870	148560	103770	117430	88440	46320	32861	17129
MEAN	237	394	641	3682	2031	4792	3459	3788	2948	1494	1060	571
MAX	597	745	2590	15900	2920	14400	6160	14400	3900	2430	1150	1110
MIN	87	82	119	278	1740	1760	2560	2680	2200	1050	407	139
AC-FT	14580	23430	39440	226400	112800	294700	205800	232900	175400	91880	65180	33980

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	442	649	1098	1504	1762	1822	1764	1499	998	634	589	506
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1959 - 1995			
ANNUAL TOTAL	148183				764552							
ANNUAL MEAN	406				2095				1102			
HIGHEST ANNUAL MEAN									2723			
LOWEST ANNUAL MEAN									179			
HIGHEST DAILY MEAN	2590				Dec 4				15900			
LOWEST DAILY MEAN	78				Sep 8				Jan 14			
ANNUAL SEVEN-DAY MINIMUM	82				Sep 7				82			
INSTANTANEOUS PEAK FLOW									101			
INSTANTANEOUS PEAK STAGE									Oct 10			
ANNUAL RUNOFF (AC-FT)	293900				22.15				May 1			
10 PERCENT EXCEEDS	675				3910				310000			
50 PERCENT EXCEEDS	379				1740				69.00			
90 PERCENT EXCEEDS	109				188				798400			
									2350			
									714			
									92			

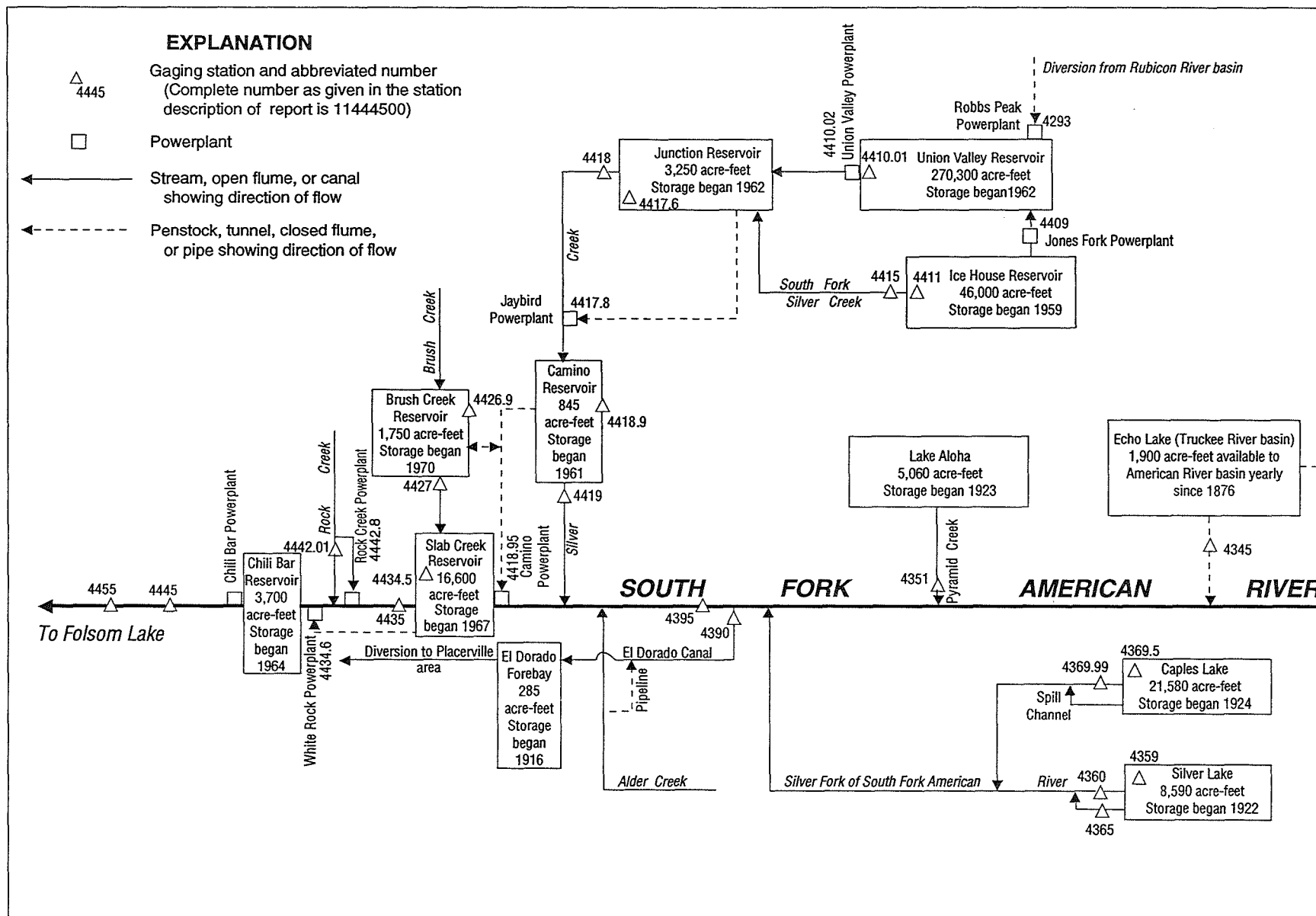


Figure 32. Diversions and storage in Middle Fork American and Rubicon River basins.

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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.

REVISED RECORDS.--WSP 1315-A: July 1933.

REMARKS.--No estimated daily discharges. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 33 ft³/s, Sept. 10, 11, 1980; no flow most of each year.

[illegible]

SACRAMENTO RIVER BASIN

11434500 ECHO LAKE CONDUIT NEAR PHILLIPS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.75	3.75	.50	.14	.14	.22	.15	.000	.11	.25	.98	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1923 - 1995			
ANNUAL TOTAL	595.58				111.76							
ANNUAL MEAN	1.63				.31				2.30			
HIGHEST ANNUAL MEAN									4.92			
LOWEST ANNUAL MEAN									.19			
HIGHEST DAILY MEAN	28				8.8				33			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
ANNUAL RUNOFF (AC-FT)	1180				222				1670			
10 PERCENT EXCEEDS	4.6				.00				10			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

SACRAMENTO RIVER BASIN

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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 Bridges, 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, 858 ft³/s, June 26, 1971, gage height, 5.62 ft, present datum, from rating curve extended above 300 ft³/s; minimum daily, 0.03 ft³/s, Oct. 26-28, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 364 ft³/s, June 26, gage height, 4.07 ft; minimum daily, 3.0 ft³/s, Oct. 31, Nov. 4.

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	3.6	3.3	10	8.5	57	20	23	234	228	239	127	67
2	3.4	4.2	12	8.3	44	19	23	123	212	235	121	67
3	3.3	3.4	13	8.2	30	21	25	79	210	251	116	68
4	5.9	3.0	14	8.2	26	19	32	71	235	237	116	68
5	13	18	14	12	25	17	39	57	214	237	118	66
6	12	42	13	14	23	16	41	45	165	272	118	64
7	9.9	21	12	17	21	16	38	38	125	295	118	63
8	6.9	15	11	16	20	15	31	41	103	284	110	62
9	5.7	13	9.6	20	18	93	26	48	120	284	92	62
10	5.0	15	9.2	32	17	96	24	59	178	268	92	61
11	4.5	12	8.8	22	17	51	29	70	231	239	85	61
12	4.2	11	e8.8	19	16	34	37	52	237	190	72	61
13	4.0	e10	e8.9	34	15	30	40	44	225	163	65	60
14	4.1	e9.9	e9.0	51	16	31	30	39	203	162	61	59
15	4.0	e9.6	e9.0	29	15	41	25	33	172	178	60	59
16	3.8	e9.3	e9.2	20	14	41	23	37	130	191	61	59
17	3.7	e9.0	e9.4	16	14	34	21	53	114	189	64	59
18	3.8	e8.8	e9.6	14	14	64	20	71	166	180	59	58
19	3.8	e8.7	10	13	17	56	19	93	167	178	48	57
20	3.6	e8.5	10	13	20	44	19	123	160	181	45	57
21	3.6	e8.5	e10	12	22	36	19	143	163	174	50	56
22	3.5	e8.5	10	12	23	27	19	130	187	159	55	55
23	3.5	8.5	10	13	24	32	24	127	213	147	57	55
24	3.4	8.5	10	13	26	25	36	131	250	142	58	54
25	3.4	e8.8	e10	13	26	22	55	128	275	142	52	54
26	3.3	e8.8	9.8	13	25	20	58	152	287	140	44	53
27	3.2	e9.0	9.4	15	22	19	58	172	293	142	37	52
28	3.1	e9.1	e9.2	15	21	18	53	182	279	168	34	57
29	3.2	9.1	e9.0	15	---	18	91	186	257	184	70	96
30	3.2	9.4	9.0	22	---	18	113	197	256	155	68	96
31	3.0	---	8.7	52	---	20	---	213	---	133	67	---
TOTAL	144.6	322.9	315.6	570.2	628	1013	1091	3171	6055	6139	2340	1866
MEAN	4.66	10.8	10.2	18.4	22.4	32.7	36.4	102	202	198	75.5	62.2
MAX	13	42	14	52	57	96	113	234	293	295	127	96
MIN	3.0	3.0	8.7	8.2	14	15	19	33	103	133	34	52
AC-FT	287	640	626	1130	1250	2010	2160	6290	12010	12180	4640	3700

e Estimated.

SACRAMENTO RIVER BASIN

11435100 PYRAMID CREEK AT TWIN BRIDGES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.2	17.8	14.5	15.9	16.2	23.7	39.1	93.5	94.2	70.2	44.2	16.5
MAX	35.3	53.8	52.5	56.4	55.6	63.2	66.9	160	213	198	90.2	77.4
(WY)	1984	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1971 - 1995			
ANNUAL TOTAL	7818.5				23656.3							
ANNUAL MEAN	21.4				64.8				38.2			
HIGHEST ANNUAL MEAN									65.1			
LOWEST ANNUAL MEAN									15.3			
HIGHEST DAILY MEAN	88				May 11				551			
LOWEST DAILY MEAN	3.0				Oct 31				.03			
ANNUAL SEVEN-DAY MINIMUM	3.2				Oct 26				.04			
INSTANTANEOUS PEAK FLOW					364				858			
INSTANTANEOUS PEAK STAGE					4.07				5.62			
ANNUAL RUNOFF (AC-FT)	15510				46920				27690			
10 PERCENT EXCEEDS	48				185				95			
50 PERCENT EXCEEDS	14				32				19			
90 PERCENT EXCEEDS	3.8				8.5				2.9			

SACRAMENTO RIVER BASIN

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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 observed, 8,741 acre-ft, May 15, 29, 1990, gage height, 23.0 ft; minimum observed, 0 acre-ft, Feb. 13, 15, 20, 22, 27, 1991, gage height, 0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,585 acre-ft, July 29, gage height, 22.69 ft; minimum, 1,501 acre-ft, Jan. 3, gage height, 5.27 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3725	2411	1956	1525	2325	2712	3912	5044	4998	7307	8475	7859
2	3668	2373	1943	1510	2383	2705	3927	4753	4966	7173	8450	7814
3	3630	2329	1960	1501	2422	2927	3942	4512	4938	7090	8445	7775
4	3630	2301	1943	1519	2453	2931	3995	4399	5027	7002	8480	7735
5	3592	2356	1927	1528	2481	2942	4048	4305	4913	7044	8495	7679
6	3539	2436	1911	1543	2512	2956	4083	4224	4701	7238	8505	7579
7	3494	2436	1892	1558	2530	2949	4128	4170	4504	7349	8505	7481
8	3438	2415	1873	1573	2537	2949	4098	4140	4403	7467	8510	7387
9	3382	2397	1847	1612	2551	3441	4052	4163	4438	7556	8510	7289
10	3345	2373	1828	1708	2554	4071	4022	4216	4666	7556	8500	7196
11	3304	2346	1812	1733	2558	4301	4010	4278	4897	7570	8470	7104
12	3256	2325	1825	1768	2561	4391	4048	4263	4982	7523	8460	7012
13	3211	2288	1806	1857	2586	4329	4117	4228	5002	7499	8440	6920
14	3149	2260	1790	2070	2589	4212	4090	4182	4942	7532	8395	6828
15	3123	2240	1771	2162	2582	4182	4048	4121	4922	7655	8385	6727
16	3068	2209	1755	2206	2575	4147	4010	4094	4841	7790	8365	6639
17	3021	2240	1733	2226	2558	4105	3984	4113	4817	7939	8345	6552
18	2981	2199	1711	2240	2551	4151	3969	4189	5078	8069	8335	6469
19	2934	2175	1690	2247	2547	4151	3938	4344	5418	8245	8300	6373
20	2891	2148	1672	2250	2572	4182	3938	4500	5677	8410	8275	6280
21	2844	2121	1660	2247	2600	4147	3912	4586	5949	8530	8250	6183
22	2801	2094	1648	2264	2624	4144	3900	4610	6304	8565	8225	6073
23	2755	2067	1630	2267	2659	4094	3923	4598	6708	8555	8205	5968
24	2712	2047	1642	2281	2702	4033	3995	4535	7081	8545	8175	5858
25	2677	2074	1627	2281	2741	3995	4098	4461	7335	8520	8139	5754
26	2638	2070	1609	2288	2734	3957	4170	4528	7481	8490	8099	5650
27	2596	2053	1594	2291	2726	3942	4247	4622	7523	8495	8064	5543
28	2558	2030	1591	2288	2719	3919	4274	4713	7509	8550	8019	5431
29	2516	2008	1576	2267	---	3900	4477	4805	7481	8585	7979	5327
30	2474	1992	1555	2270	---	3900	4571	4853	7396	8545	7944	5228
31	2436	---	1537	2284	---	3893	---	4974	---	8505	7899	---
MAX	3725	2436	1960	2291	2741	4391	4571	5044	7523	8585	8510	7859
MIN	2436	1992	1537	1501	2325	2705	3900	4094	4403	7002	7899	5228
a	8.16	6.85	5.39	7.72	8.97	12.14	13.90	14.91	20.27	22.53	21.32	15.51
b	-1347	-444	-455	+747	+435	+1174	+678	+403	+2422	+1109	-606	-2671

CAL YR 1994 MAX 8410 MIN 472 b +135

WTR YR 1995 MAX 8585 MIN 1501 b +1445

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

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 513 ft³/s, May 1, gage height, 5.14 ft; minimum daily, 5.7 ft³/s, Sept. 4.

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	22	18	17	14	17	18	26	390	444	411	78	6.0
2	22	18	17	14	17	18	27	402	428	392	66	6.0
3	22	18	17	14	17	18	28	255	412	365	51	5.8
4	22	18	17	14	17	18	33	191	416	349	28	5.7
5	23	18	17	14	18	18	47	154	446	285	29	18
6	22	19	17	14	18	18	58	118	341	255	30	35
7	22	18	17	14	18	18	67	97	243	285	29	35
8	22	18	16	14	18	19	67	85	188	288	24	35
9	22	18	16	15	18	21	60	83	169	284	20	35
10	16	18	16	15	18	21	50	87	219	274	20	35
11	16	18	16	15	18	22	45	109	323	231	20	35
12	20	18	16	15	18	32	52	118	410	203	20	35
13	19	18	16	15	18	80	69	106	430	178	20	34
14	19	18	16	16	18	106	70	96	438	149	15	34
15	20	18	16	16	18	90	63	82	301	126	8.2	34
16	20	18	16	16	18	85	54	71	214	125	8.2	34
17	19	18	16	16	18	75	43	72	161	101	8.2	34
18	19	18	16	17	18	72	37	83	124	88	8.3	34
19	19	18	15	17	18	83	34	120	132	66	8.4	34
20	19	18	15	17	18	85	33	181	138	62	8.4	34
21	19	17	15	17	18	85	30	227	148	72	8.2	38
22	19	17	15	17	18	79	28	246	174	88	6.3	44
23	19	17	15	17	18	71	28	243	223	102	6.2	43
24	19	17	15	17	18	59	35	233	287	97	6.1	43
25	19	17	15	17	18	46	51	197	354	97	6.2	43
26	19	17	15	17	18	35	53	197	412	95	6.1	43
27	19	17	15	17	18	31	80	242	440	86	5.9	42
28	18	17	15	17	18	28	121	270	446	87	5.9	42
29	19	17	15	17	---	26	153	311	444	94	5.8	42
30	19	17	15	17	---	25	226	352	429	94	5.8	41
31	18	---	15	17	---	25	---	385	---	88	5.9	---
TOTAL	612	531	490	489	500	1427	1768	5803	9334	5517	568.1	979.5
MEAN	19.7	17.7	15.8	15.8	17.9	46.0	58.9	187	311	178	18.3	32.6
MAX	23	19	17	17	18	106	226	402	446	411	78	44
MIN	16	17	15	14	17	18	26	71	124	62	5.8	5.7
AC-FT	1210	1050	972	970	992	2830	3510	11510	18510	10940	1130	1940
a	0	0	0	0	0	0	2.0	27	139	578	755	295

a Leakage, in acre-feet, from Silver Lake, provided by Pacific Gas & Electric Co.

SACRAMENTO RIVER BASIN

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11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.7	18.6	16.0	12.9	12.8	15.0	41.5	126	86.6	19.2	8.65	38.1
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1923 - 1995			
ANNUAL TOTAL	4772.6				28018.6							
ANNUAL MEAN	13.1				76.8				35.0			
HIGHEST ANNUAL MEAN									85.4			
LOWEST ANNUAL MEAN									8.76			
HIGHEST DAILY MEAN	79				446				606			
LOWEST DAILY MEAN	3.3				5.7				.00			
ANNUAL SEVEN-DAY MINIMUM	3.6				5.9				.00			
INSTANTANEOUS PEAK FLOW					513				1160			
INSTANTANEOUS PEAK STAGE					5.14				6.22			
ANNUAL RUNOFF (AC-FT)	9470				55570				25380			
TOTAL LEAKAGE (AC-FT) a	1590				1800							
10 PERCENT EXCEEDS	22				244				94			
50 PERCENT EXCEEDS	12				22				11			
90 PERCENT EXCEEDS	4.1				15				.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 observed contents, 21,581 acre-ft, many days in 1986 and 1989, gage height, 62.0 ft; minimum, 2,427 acre-ft, Mar. 30, 31, 1987, gage height, 20.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,569 acre-ft, Aug. 20, 21, gage height, 61.98 ft; minimum, 10,205 acre-ft, Apr. 26, gage height 41.20 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14791	14152	14273	13685	13936	13353	13199	10740	15448	20429	21457	21174
2	14748	14152	14273	13643	13915	13364	12980	10878	15951	20599	21433	21137
3	14700	14089	14305	13643	13915	13415	12797	10878	16466	20727	21371	21082
4	14711	14089	14305	13622	13873	13395	12625	10821	16982	20745	21427	21058
5	14716	14194	14305	13638	13868	13379	12505	10773	17505	20831	21451	20984
6	14705	14247	14305	13648	13836	13353	12380	10702	17494	20954	21501	20880
7	14679	14247	14295	13674	13800	13312	12310	10559	17430	21027	21525	20807
8	14641	14247	14263	13737	13794	13281	12176	10445	17194	21039	21525	20715
9	14630	14252	14258	13794	13737	13519	12032	10408	16971	21046	21482	20654
10	14598	14252	14226	13904	13732	13784	11918	10445	16919	20948	21464	20563
11	14593	14252	14205	13920	13701	13857	11785	10502	17143	20837	21445	20447
12	14555	14252	14215	13931	13654	13915	11643	10578	17436	20666	21371	20374
13	14529	14226	14210	13994	13664	13941	11618	10635	17714	20526	21328	20259
14	14518	14226	14183	14052	13638	13946	11501	10673	17982	20447	21266	20143
15	14491	14226	14152	14052	13633	13957	11379	10683	18034	20532	21291	20052
16	14465	14215	14152	14052	13581	13967	11273	10678	17882	20678	21414	19950
17	14427	14279	14115	14078	13550	13978	11143	10659	17662	20868	21488	19847
18	14417	14268	14110	14046	13545	14010	11013	10706	17609	21101	21538	19775
19	14380	14263	14078	14010	13508	14046	10888	10864	17575	21309	21538	19649
20	14369	14231	14041	14015	13467	14152	10763	11066	17540	21402	21569	19522
21	14353	14231	14036	13983	13462	14210	10640	11355	17500	21457	21569	19438
22	14364	14231	13999	13973	13420	14311	10502	11628	17575	21464	21550	19343
23	14326	14199	13962	13978	13420	14364	10389	11839	17772	21396	21525	19235
24	14289	14205	13936	13973	13410	14353	10294	12057	18151	21365	21519	19134
25	14284	14252	13910	13978	13405	14220	10233	12190	18593	21371	21494	19015
26	14252	14284	13899	13962	13369	14099	10205	12425	19015	21353	21457	18955
27	14236	14305	13836	13967	13359	14004	10233	12701	19409	21371	21433	18836
28	14236	14305	13831	13973	13359	13883	10210	13056	19787	21488	21414	18700
29	14210	14311	13789	13941	---	13774	10271	13477	20004	21562	21340	18588
30	14173	14279	13753	13946	---	13617	10332	14311	20198	21532	21285	18475
31	14173	---	13727	13931	---	13405	---	14877	---	21501	21236	---
MAX	14791	14311	14305	14078	13936	14364	13199	14877	20198	21562	21569	21174
MIN	14173	14089	13727	13622	13359	13281	10205	10408	15448	20429	21236	18475
a	49.18	49.38	48.33	48.72	47.66	47.71	41.47	50.50	59.74	61.87	61.44	56.86
b	-629	+106	-552	+204	-572	+46	-3073	+4545	+5321	+1303	-265	-2761

CAL YR 1994 MAX 18505 MIN 10379 b -1388

WTR YR 1995 MAX 21569 MIN 10205 b +3673

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

b Change in contents, in acre-feet.

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.--No estimated daily discharges. 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, 6.3 ft³/s, Oct. 18, 1992.

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 254 ft³/s, July 2, gage height, 3.09 ft; minimum daily, 8.2 ft³/s, Oct. 20.

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	13	9.0	9.1	18	19	19	103	81	62	249	152	42
2	13	9.1	9.2	18	19	19	102	80	64	250	146	42
3	13	9.0	9.2	18	19	19	102	93	65	251	119	42
4	13	9.0	9.1	18	19	19	93	104	66	251	92	42
5	13	9.3	8.9	18	19	19	82	104	66	251	93	50
6	11	9.3	9.0	18	19	19	82	104	112	252	93	59
7	9.0	9.2	8.9	18	19	19	82	104	193	252	93	58
8	9.0	9.1	11	18	19	19	83	104	233	252	93	58
9	9.0	9.1	14	19	19	20	83	74	232	251	93	58
10	9.0	9.0	14	19	19	19	82	53	231	250	93	58
11	9.1	9.0	14	18	19	19	82	53	232	250	93	58
12	9.2	9.0	14	18	19	19	82	53	234	250	93	58
13	9.2	8.8	14	19	19	19	82	53	236	249	93	58
14	9.3	8.8	14	19	19	19	82	54	238	223	72	58
15	9.4	8.8	14	19	19	19	82	54	239	189	35	58
16	9.4	8.8	14	18	19	19	81	55	238	164	21	58
17	9.4	8.8	14	18	19	19	81	55	236	119	21	58
18	9.4	8.8	14	18	19	19	81	55	236	95	21	57
19	9.4	9.0	14	18	19	19	81	55	237	94	21	58
20	8.2	9.0	14	18	19	19	81	55	236	95	21	58
21	9.1	9.0	16	18	19	19	80	56	235	95	26	58
22	9.0	9.0	19	18	19	19	80	56	234	105	37	58
23	9.0	9.0	19	18	19	19	79	57	235	120	42	57
24	8.9	9.0	19	18	19	36	80	57	235	120	42	57
25	8.8	9.0	19	18	19	55	80	57	238	120	42	57
26	9.1	9.0	19	18	19	55	79	58	240	130	42	57
27	9.4	9.0	19	18	19	55	79	58	242	145	42	57
28	9.6	9.1	19	18	19	55	79	59	244	145	42	57
29	9.4	9.2	18	18	---	54	79	59	246	146	42	57
30	9.3	9.1	18	18	---	80	80	60	248	145	42	57
31	9.2	---	18	18	---	103	---	61	---	151	42	---
TOTAL	304.8	270.3	445.4	563	532	931	2504	2081	6083	5659	1999	1660
MEAN	9.83	9.01	14.4	18.2	19.0	30.0	83.5	67.1	203	183	64.5	55.3
MAX	13	9.3	19	19	19	103	103	104	248	252	152	59
MIN	8.2	8.8	8.9	18	19	19	79	53	62	94	21	42
AC-FT	605	536	883	1120	1060	1850	4970	4130	12070	11220	3970	3290

SACRAMENTO RIVER BASIN

11436999 CAPLES CREEK RELEASE BELOW CAPLES DAM, NEAR KIRKWOOD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.3	13.9	18.4	21.8	25.8	21.0	36.0	34.5	109	89.5	36.6	30.7
MAX	24.7	23.0	27.8	33.4	44.4	30.0	83.5	67.1	203	183	64.5	55.3
(WY)	1994	1994	1994	1994	1994	1995	1995	1995	1995	1995	1995	1995
MIN	8.42	9.01	12.9	14.0	14.0	14.1	9.37	8.63	9.34	11.6	22.5	17.0
(WY)	1993	1995	1993	1993	1993	1993	1994	1994	1994	1994	1994	1994
SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR					FOR 1995 WATER YEAR				WATER YEARS 1993 - 1995		
ANNUAL TOTAL	6280.4					23032.5						
ANNUAL MEAN	17.2					63.1				37.6		
HIGHEST ANNUAL MEAN										63.1		
LOWEST ANNUAL MEAN										20.8		
HIGHEST DAILY MEAN	48					252				252		
LOWEST DAILY MEAN	7.5					8.2				6.3		
ANNUAL SEVEN-DAY MINIMUM	7.8					8.8				6.5		
INSTANTANEOUS PEAK FLOW						254				254		
INSTANTANEOUS PEAK STAGE						3.09				3.09		
ANNUAL RUNOFF (AC-FT)	12460					45680				27260		
10 PERCENT EXCEEDS	40					226				93		
50 PERCENT EXCEEDS	11					37				18		
90 PERCENT EXCEEDS	8.2					9.1				8.8		

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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 7,550 ft³/s, May 1, gage height, 8.73 ft; minimum daily, 23 ft³/s, several days.
Combined flow: Maximum discharge, 7,550 ft³/s, May 1; minimum daily, 41 ft³/s, several days.

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	33	23	56	54	599	409	733	6330	3690	2820	658	122
2	30	28	63	44	572	418	739	4030	3480	2680	591	120
3	26	25	85	47	463	659	782	2690	3440	2670	544	119
4	37	23	109	46	450	508	931	2390	3640	2570	445	118
5	72	105	101	51	452	443	1030	2100	3510	2500	433	115
6	63	358	89	56	444	399	1110	1760	2710	2610	425	154
7	51	126	70	135	425	368	1360	1580	2150	2730	412	153
8	43	90	58	145	414	349	1380	1530	1900	2680	395	155
9	38	66	60	310	354	2700	1100	1560	1920	2600	338	169
10	36	64	70	1460	333	4170	956	1560	2460	2420	321	167
11	32	58	71	752	319	2400	988	1710	3120	2130	305	165
12	30	58	70	445	309	1460	1110	1570	3390	1810	279	162
13	27	48	60	865	300	1300	1350	1370	3350	1520	263	159
14	27	47	41	1870	285	1460	1110	1280	3220	1440	251	157
15	27	52	41	940	261	1500	986	1190	2900	1390	194	154
16	26	49	40	557	251	1360	882	1190	2160	1420	174	153
17	25	51	44	421	238	1150	807	1330	1890	1290	169	153
18	25	46	47	360	235	1360	768	1520	2070	1150	164	150
19	25	48	44	319	251	1450	727	1830	2210	1060	146	148
20	25	59	42	271	291	1440	719	2190	2140	1050	137	147
21	24	52	45	227	347	1280	672	2450	2140	1060	142	161
22	24	46	49	222	367	1040	672	2490	2370	1010	156	164
23	24	47	51	232	388	935	758	2420	2700	975	163	153
24	24	48	58	236	417	823	957	2300	3120	911	161	152
25	24	52	55	245	439	777	1230	2100	3370	870	149	150
26	24	50	52	229	436	716	1350	2380	3420	859	134	149
27	24	56	52	232	410	678	1570	2630	3380	822	126	147
28	23	53	57	241	395	647	2110	2720	3280	876	112	146
29	23	51	53	274	---	623	2900	2970	3150	948	126	174
30	23	53	39	296	---	627	3670	3210	3020	874	129	187
31	23	---	49	477	---	687	---	3480	---	737	125	---
TOTAL	958	1932	1821	12059	10445	34136	35457	69860	85300	50482	8167	4523
MEAN	30.9	64.4	58.7	389	373	1101	1182	2254	2843	1628	263	151
MAX	72	358	109	1870	599	4170	3670	6330	3690	2820	658	187
MIN	23	23	39	44	235	349	672	1190	1890	737	112	115
AC-FT	1900	3830	3610	23920	20720	67710	70330	138600	169200	100100	16200	8970

SACRAMENTO RIVER BASIN

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.5	76.9	124	128	156	257	619	1179	822	173	22.4	21.0
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1923 - 1995

ANNUAL TOTAL	43454	315140	
ANNUAL MEAN	119	863	301
HIGHEST ANNUAL MEAN			907
LOWEST ANNUAL MEAN			19.4
HIGHEST DAILY MEAN	679	Apr 19	6330
LOWEST DAILY MEAN	20	Aug 20	23
ANNUAL SEVEN-DAY MINIMUM	23	Aug 18	23
INSTANTANEOUS PEAK FLOW			7550
INSTANTANEOUS PEAK STAGE			8.73
ANNUAL RUNOFF (AC-FT)	86190	625100	218200
10 PERCENT EXCEEDS	316	2620	997
50 PERCENT EXCEEDS	63	368	42
90 PERCENT EXCEEDS	25	43	2.6

SACRAMENTO RIVER BASIN

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11439501 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA--Continued

SOUTH FORK AMERICAN RIVER AND EL DORADO CANAL NEAR KYBURZ, CA
 COMBINED 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	59	41	70	96	622	446	770	6330	3740	2820	722	181
2	57	47	77	86	612	455	776	4050	3480	2680	654	179
3	56	43	99	89	502	697	819	2720	3440	2670	607	178
4	66	41	123	88	475	546	969	2410	3640	2570	507	177
5	91	124	115	93	468	480	1070	2100	3510	2500	495	173
6	78	374	103	98	460	436	1130	1760	2710	2610	487	213
7	66	140	84	177	441	405	1360	1580	2150	2730	472	212
8	59	104	72	187	438	386	1380	1530	1900	2680	455	209
9	54	80	74	353	393	2730	1100	1590	1920	2600	397	207
10	52	78	84	1490	372	4170	958	1610	2460	2420	380	204
11	43	72	85	761	358	2400	989	1780	3120	2130	364	202
12	46	71	84	447	347	1460	1110	1640	3390	1810	337	199
13	47	62	85	867	338	1300	1350	1440	3350	1520	321	196
14	47	61	77	1870	323	1480	1110	1350	3220	1440	309	194
15	47	66	83	941	299	1540	988	1260	2900	1390	250	191
16	46	63	81	558	289	1400	884	1260	2160	1420	222	190
17	45	65	85	422	276	1190	809	1400	1890	1290	221	190
18	46	60	88	361	273	1400	770	1590	2070	1160	220	187
19	45	63	85	319	289	1490	729	1900	2210	1090	204	185
20	45	74	83	296	329	1460	721	2260	2140	1090	195	182
21	43	66	86	269	385	1280	674	2520	2140	1090	200	178
22	42	60	90	264	405	1040	674	2560	2370	1040	214	190
23	42	61	92	274	426	937	760	2490	2700	1000	221	188
24	42	62	99	278	455	824	959	2370	3120	942	219	187
25	42	66	96	287	477	778	1230	2170	3370	889	207	185
26	42	64	94	271	474	717	1350	2450	3420	860	191	184
27	42	70	93	274	447	679	1570	2700	3380	823	174	182
28	41	67	98	273	432	648	2110	2790	3280	877	162	181
29	41	65	94	290	---	624	2900	3040	3150	949	185	209
30	41	67	80	312	---	628	3670	3280	3020	875	188	214
31	41	---	90	491	---	709	---	3550	---	773	184	---
TOTAL	1554	2377	2749	12882	11405	34735	35689	71480	85350	50738	9964	5747
MEAN	50.1	79.2	88.7	416	407	1120	1190	2306	2845	1637	321	192
MAX	91	374	123	1870	622	4170	3670	6330	3740	2820	722	214
MIN	41	41	70	86	273	386	674	1260	1890	773	162	173
AC-FT	3080	4710	5450	25550	22620	68900	70790	141800	169300	100600	19760	11400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1995, BY WATER YEAR (WY)

MEAN	110	164	219	219	258	363	725	1296	951	302	150	134
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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1923 - 1995	
ANNUAL TOTAL	53318		324670			
ANNUAL MEAN	146		890		408	
HIGHEST ANNUAL MEAN					980	
LOWEST ANNUAL MEAN					104	
HIGHEST DAILY MEAN	703		6330		12400	
LOWEST DAILY MEAN	41		41		10	
ANNUAL SEVEN-DAY MINIMUM	41		41		13	
INSTANTANEOUS PEAK FLOW			7550		17500	
ANNUAL RUNOFF (AC-FT)	105800		644000		295500	
10 PERCENT EXCEEDS	354		2630		1100	
50 PERCENT EXCEEDS	84		405		166	
90 PERCENT EXCEEDS	60		62		75	

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.

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, 18,300 acre-ft, Jan. 13, 1977, elevation, 4,683.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 276,685 acre-ft, July 22, 23, elevation, 4,869.75 ft; minimum, 109,044 acre-ft, Oct. 31, elevation, 4,793.67 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121569	109526	113615	120347	172273	177704	230259	268155	266052	275190	274356	248186
2	120770	109889	113864	119845	173720	178400	230469	265034	266547	275160	273048	247826
3	120591	109602	114659	119780	174555	181357	231810	260991	267423	275160	271952	246722
4	120250	109662	115538	119797	175155	183304	232893	259844	268448	275071	270918	245950
5	119813	110709	115884	120039	175478	184150	234670	259472	268888	274862	269945	245620
6	119312	112162	116453	119797	176124	184284	236617	258501	268243	275160	269651	244632
7	118926	112779	116817	120510	176491	184752	241387	257192	267277	275907	269152	243347
8	118444	113258	117087	121520	177053	185155	245675	256794	266664	276086	268565	241821
9	118028	113895	117246	123312	177704	190811	248630	257050	266489	276027	267628	240628
10	118220	113553	117135	128638	177986	199768	250270	257988	267160	275758	267452	239276
11	117597	114019	117453	131616	178052	206037	252394	258901	268448	275668	266722	238253
12	117469	113739	117613	133765	177660	209493	253517	259787	269739	274624	266052	237367
13	116833	113103	117437	139118	177921	212719	254785	260675	270800	273582	265732	236724
14	116992	113274	117724	146446	178182	217211	254813	261164	271627	272159	264947	235122
15	116627	113057	118108	150764	177943	220625	254643	261480	272189	273761	264657	234271
16	116485	113042	117996	152792	177812	222871	254080	261940	271095	275758	263961	233581
17	116405	113150	118204	154254	177335	224566	253601	262805	270977	275997	262517	232206
18	116231	113212	118076	155254	176729	227153	252786	263643	271242	276086	262632	230942
19	116026	112872	118060	156495	176405	229394	251610	265121	271242	276027	261336	229735
20	115853	112949	118252	157208	176383	232285	250716	265994	270947	275429	261135	228532
21	115837	112902	118316	157327	176361	233767	249685	265936	270623	275071	259816	227933
22	116121	112671	118380	157784	176448	234510	248824	265936	271361	276685	257960	226919
23	115522	112470	118685	158262	176297	234882	248325	265877	271981	276685	257334	226193
24	115333	112655	119054	159722	176405	235016	248186	265499	273167	276505	256794	225185
25	114503	113134	119425	161860	176923	234377	248380	264715	274356	276176	255293	223127
26	113755	113336	119635	163610	177357	233899	248768	264338	275489	275549	254333	220447
27	113057	113243	119797	165333	177292	233634	250019	264193	275608	275160	253348	218774
28	112101	113460	120120	166986	176923	233104	252899	264251	274922	275698	252590	216608
29	111166	113460	120185	168672	---	232021	257903	264570	274892	274862	251470	214882
30	110329	113584	120250	169971	---	231073	262286	264686	275071	274981	250493	212571
31	109044	---	120445	170813	---	230495	---	265238	---	274922	249101	---
MAX	121569	114019	120445	170813	178182	235016	262286	268155	275608	276685	274356	248186
MIN	109044	109526	113615	119780	172273	177704	230259	256794	266052	272159	249101	212571
a	4793.67	4796.64	4800.96	4828.03	4830.89	4853.30	4864.85	4865.87	4869.21	4869.16	4860.19	4846.27
b	-13214	+4540	+6861	+50368	+6110	+53572	+31791	+2952	+9833	-149	-25821	-36530
c	21720	5530	4490	12750	51540	38080	72330	93840	89300	70690	61510	70110

CAL YR 1994 MAX 179382 MIN 109044 b -10236 c 189900

WTR YR 1995 MAX 276685 MIN 109044 b +90313 c 591900

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.

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.

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, 45,992 acre-ft, July 6, elevation, 5,450.01 ft; minimum, 17,258 acre-ft, Mar. 8, elevation, 5,399.08 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32663	24675	22300	21207	21064	17874	24573	26397	38650	45277	44923	37978
2	32651	24300	22271	21150	21017	17834	24594	27662	39381	45327	44817	37622
3	32366	23944	22319	21107	20969	17843	24422	28433	40148	45448	44682	37294
4	32442	23763	22353	21083	20898	17754	24235	29115	40980	45648	44563	36948
5	32192	24009	22343	21117	20818	17647	24099	29766	41709	45827	44556	36599
6	31979	23979	22334	21112	20719	17518	23994	30274	42047	45992	44506	36276
7	31829	23758	22280	21112	20610	17382	24094	30746	42088	45856	44485	35911
8	31628	23474	22251	21159	20502	17258	24089	31205	42115	45634	44233	35561
9	31262	23202	22203	21217	20366	17501	23933	31674	42190	45356	43932	35207
10	30961	22955	22159	21489	20235	18191	23708	31875	42585	45185	43681	34855
11	30938	22661	22115	21623	20104	18543	23494	32117	43321	45284	43535	34523
12	30622	22680	22120	21772	19955	18710	23296	32221	44135	45284	43369	34163
13	30319	22690	22081	22072	19862	18851	23256	32186	44866	45171	43176	33817
14	29955	22382	21960	22602	19617	18969	23113	32163	45164	45199	42969	33456
15	29456	22417	21902	22980	19451	19349	22886	31950	45135	45455	42729	33084
16	28978	22431	21873	23157	19281	19774	22612	31783	44774	45569	42489	32739
17	28530	22534	21830	23212	19106	20155	22334	31697	44373	45548	42264	32372
18	28060	22548	21792	23177	18933	20690	22144	31634	44177	45455	42033	32013
19	27582	22563	21748	23034	18742	21264	22033	31737	44352	45455	41776	31656
20	27092	22582	21705	22911	18597	21792	21956	32042	44661	45391	41513	31291
21	26612	22602	21657	22778	18457	22237	21830	32453	45064	45284	41432	30933
22	26125	22602	21614	22646	18340	22602	21700	32891	45270	45377	41298	30560
23	25602	22568	21566	22475	18232	22862	21609	33284	45277	45413	40990	30201
24	25113	22514	21562	22314	18142	23069	21590	33598	45363	45370	40691	29839
25	24945	22543	21518	22043	18057	23276	21657	33913	45541	45128	40372	29478
26	24940	22519	21475	21782	17981	23474	21777	34265	45455	44972	40049	29104
27	24934	22480	21422	21734	17990	23669	22052	34807	45334	44951	39708	28743
28	24924	22436	21398	21561	18003	23833	22631	35408	45086	44880	39362	28373
29	24914	22387	21360	21388	---	24014	23445	36127	44986	45107	39018	28027
30	24899	22339	21302	21245	---	24180	24195	36873	45192	45036	38669	27651
31	24889	---	21255	21121	---	24366	---	37781	---	44901	38329	---
MAX	32663	24675	22353	23212	21064	24366	24594	37781	45541	45992	44923	37978
MIN	24889	22339	21255	21083	17981	17258	21590	26397	38650	44880	38329	27651
a	5415.23	5410.05	5407.80	5407.42	5400.54	5414.13	5413.80	5436.40	5445.67	5440.46	5438.70	5420.46
b	-7786	-2550	-1084	-134	-3118	+6363	-171	+13586	+7411	-291	-6572	-10678

CAL YR 1994 MAX 36642 MIN 20422 b -5547

WTR YR 1995 MAX 45992 MIN 17258 b -5024

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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.--No estimated daily discharges. 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, 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 Ice House Dam in 1959, 1,930 ft³/s, May 26, 1982, gage height, 5.74 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft³/s, June 26, gage height, 4.42 ft; minimum daily, 3.6 ft³/s, several days in April.

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	6.2	5.7	5.8	6.0	6.6	6.6	7.6	13	8.8	159	16	16
2	6.2	5.5	5.9	6.2	6.5	7.0	7.8	10	9.3	159	16	16
3	6.1	5.4	6.7	6.2	6.4	9.0	7.4	9.6	9.4	114	16	16
4	6.3	5.4	7.2	5.9	6.4	7.0	6.8	9.7	9.4	56	17	16
5	6.1	7.3	6.7	6.0	6.5	7.0	6.6	10	9.4	56	17	16
6	5.9	6.7	6.1	6.2	6.5	6.8	6.5	9.5	9.4	123	17	16
7	5.9	5.9	5.9	7.1	6.4	6.7	9.5	9.5	9.4	226	16	16
8	5.9	5.6	5.9	6.8	6.5	6.6	7.6	9.4	9.4	250	16	16
9	5.9	5.7	5.9	8.1	6.3	9.2	6.9	9.4	9.4	250	16	15
10	5.8	5.7	5.6	11	6.2	11	6.0	9.2	9.4	166	16	15
11	5.7	5.6	5.7	8.0	6.2	9.3	4.6	9.0	9.4	34	16	15
12	5.6	5.6	5.9	7.8	6.2	8.2	4.5	9.2	9.5	16	17	15
13	5.6	5.6	5.8	9.7	6.2	9.3	4.6	9.5	9.4	16	16	15
14	5.6	5.6	5.9	10	6.1	8.6	4.3	10	120	16	16	16
15	5.6	5.6	5.9	7.5	6.0	8.5	4.0	10	231	16	17	15
16	5.6	5.6	5.9	6.8	5.9	7.7	3.7	9.5	231	16	17	15
17	5.6	5.7	5.9	6.8	6.0	7.6	3.6	9.4	231	16	17	15
18	5.6	5.6	6.1	6.8	6.0	8.8	3.6	9.2	228	17	16	16
19	5.6	5.6	6.0	6.5	6.1	7.9	3.6	9.0	229	17	16	17
20	5.6	5.6	6.2	6.4	6.2	8.2	3.8	9.0	230	16	16	17
21	5.6	5.6	6.3	6.2	6.2	7.7	3.7	9.2	231	16	16	16
22	5.6	5.6	6.4	6.4	6.2	7.3	3.6	9.6	231	16	16	16
23	5.6	5.6	5.9	6.5	6.1	7.3	3.6	9.7	310	16	16	16
24	5.6	5.6	5.9	6.5	6.1	7.3	3.7	9.7	376	16	16	16
25	5.6	5.7	5.9	6.5	6.5	7.2	3.7	9.5	409	16	16	16
26	5.5	5.6	5.9	6.2	6.4	7.1	3.6	9.4	451	17	16	16
27	5.5	5.6	5.9	6.4	6.4	7.1	5.0	9.3	450	17	16	16
28	5.6	5.6	5.9	6.5	6.5	7.2	6.1	8.8	450	17	16	16
29	5.6	5.6	6.0	6.2	---	7.3	6.3	8.7	346	17	16	16
30	5.6	5.6	5.9	6.5	---	7.3	7.5	8.7	159	16	16	16
31	5.6	---	5.9	6.7	---	7.5	---	8.7	---	16	16	---
TOTAL	177.8	171.1	186.9	216.4	175.6	241.3	159.8	294.4	5034.6	1919	503	474
MEAN	5.74	5.70	6.03	6.98	6.27	7.78	5.33	9.50	168	61.9	16.2	15.8
MAX	6.3	7.3	7.2	11	6.6	11	9.5	13	451	250	17	17
MIN	5.5	5.4	5.6	5.9	5.9	6.6	3.6	8.7	8.8	16	16	15
AC-FT	353	339	371	429	348	479	317	584	9990	3810	998	940
a	7980	3960	2220	5180	7480	4500	12050	12180	14340	12630	8850	10530

a Diversion, in acre-feet, to Jones Fork Powerplant, provided by Sacramento Municipal Utility District.

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 1956
LOWEST ANNUAL MEAN	25.3 1931
HIGHEST DAILY MEAN	2780 Dec 23 1955
LOWEST DAILY MEAN	.00 Oct 31 1958
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 31 1958
INSTANTANEOUS PEAK FLOW	3940 Dec 23 1955
INSTANTANEOUS PEAK STAGE	6.71 Dec 23 1955
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 1983
LOWEST ANNUAL MEAN	24.8 1977
HIGHEST DAILY MEAN	1560 Jan 22 1970
LOWEST DAILY MEAN	1.3 Jan 26 1984
ANNUAL SEVEN-DAY MINIMUM	1.4 Jan 24 1984
INSTANTANEOUS PEAK FLOW	1930 May 26 1982
INSTANTANEOUS PEAK STAGE	5.74 May 26 1982
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.56	6.83	5.39	5.29	5.64	10.8	5.28	7.55	23.0	14.4	9.89	9.88
MAX	13.9	8.51	6.12	6.98	7.02	55.0	6.13	9.72	168	61.9	16.2	16.4
(WY)	1990	1987	1993	1995	1986	1986	1990	1989	1995	1995	1995	1986
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1986 - 1995

ANNUAL TOTAL	1957.2	9553.9	
ANNUAL MEAN	5.36	26.2	9.39
HIGHEST ANNUAL MEAN			26.2 1995
LOWEST ANNUAL MEAN			5.68 1988
HIGHEST DAILY MEAN	7.3 Nov 5	451 Jun 26	649 Mar 8 1986
LOWEST DAILY MEAN	3.1 Jan 22	3.6 Apr 17	2.8 Jan 3 1986
ANNUAL SEVEN-DAY MINIMUM	3.2 Jan 17	3.6 Apr 17	3.0 Apr 11 1989
INSTANTANEOUS PEAK FLOW		460 Jun 26	1000 Mar 8 1986
INSTANTANEOUS PEAK STAGE		4.42 Jun 26	5.07 Mar 8 1986
ANNUAL RUNOFF (AC-FT)	3880	18950	6810
ANNUAL DIVERSION (AC-FT) a	26570	101900	
10 PERCENT EXCEEDS	6.2	17	16
50 PERCENT EXCEEDS	5.6	7.3	5.9
90 PERCENT EXCEEDS	4.0	5.6	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, 3,527 acre-ft, May 1, elevation, 4,455.34 ft; minimum, 2,197 acre-ft, Mar. 4, elevation, 4,430.46 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2977	3059	3063	2853	2767	2733	2712	3527	3341	3355	2772	2957
2	3042	2705	3000	3056	2710	2730	2879	3499	3342	3353	2945	2760
3	2969	3013	2992	2906	2721	2877	2677	3456	3338	3340	2972	2976
4	2869	3026	2940	2770	2695	2187	2636	3360	3342	3340	2955	2876
5	2943	2951	3121	2741	2766	2269	2750	3358	3342	3340	2957	2766
6	3089	2939	3022	2943	2658	2408	2699	3351	3342	3321	2852	2815
7	3059	2846	3066	2943	2682	2687	3123	3393	3341	3328	2814	2691
8	3050	2811	2957	2888	2709	2512	3067	3307	3340	3360	2942	2900
9	3082	2667	2879	2888	2688	2560	2735	3307	3339	3350	2881	3039
10	2883	3036	3014	3209	2812	3173	2998	3300	3338	3344	2777	2972
11	3046	2868	2839	3052	2667	2798	2990	3301	3338	3338	2936	2977
12	2860	2903	2893	2728	2746	2768	3257	3302	3339	3345	2986	2979
13	3113	3125	3056	3083	2730	3122	3320	3302	3338	3303	2990	2818
14	2662	2979	3009	3183	2596	3135	3316	3304	3358	3270	3082	2929
15	2969	3065	2885	2690	2740	3262	3311	3304	3423	3222	2938	2880
16	3029	2941	2983	2560	2760	3186	3310	3302	3360	2969	3074	2685
17	2814	2923	2877	2697	2634	3066	3313	3298	3360	3072	3075	2727
18	2932	2775	3004	2787	2664	3055	3311	3298	3359	3122	2879	2955
19	2989	3055	3090	2641	2754	3016	3309	3297	3359	2965	2820	2840
20	2966	3006	2955	2647	2741	2806	3311	3376	3358	2785	2701	3022
21	2939	2775	3003	2643	2743	2695	3314	3376	3358	2609	2962	2974
22	2734	2835	2989	2567	2748	3119	3311	3375	3305	2671	3113	2916
23	3060	2966	2882	2709	2692	3160	3313	3376	3336	3123	2870	2898
24	3009	2969	2793	2569	2723	2996	3322	3384	3339	2986	2991	2905
25	3082	2978	2796	2626	2742	3080	3324	3381	3342	3057	3031	2946
26	3067	2963	2846	2720	2660	3009	3321	3380	3376	2905	2927	3077
27	2757	3024	2921	2670	2704	2772	3334	3380	3408	3090	2879	2999
28	2854	2954	2928	2687	2681	2599	3336	3378	3402	2839	2890	2934
29	2912	3008	2978	2717	---	2765	3351	3378	3355	3004	2983	3028
30	2894	2833	3032	2730	---	2756	3338	3380	3355	2990	2790	2923
31	3147	---	2896	2799	---	2657	---	3380	---	3010	2951	---
MAX	3147	3125	3121	3209	2812	3262	3351	3527	3423	3360	3113	3077
MIN	2662	2667	2793	2560	2596	2197	2636	3297	3305	2609	2701	2685
a	4448.49	4442.73	4443.89	4442.10	4439.88	4439.43	4451.95	4452.70	4452.25	4445.99	4444.90	4444.40
b	+256	-314	+63	-97	-118	-24	+681	+42	-25	-345	-59	-28
CAL YR 1994	MAX 3165	MIN 1414	b -62									
WTR YR 1995	MAX 3527	MIN 2197	b +32									

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	5.8	8.4	5.7	5.8	5.9	12	22	22	22	e23	22
2	5.8	5.8	8.5	5.8	5.8	5.8	12	22	22	22	e23	21
3	5.8	5.7	8.4	5.8	5.8	5.8	12	22	22	22	23	21
4	5.7	5.8	8.4	5.8	5.8	5.8	12	22	22	22	24	22
5	5.8	5.8	7.0	5.7	5.9	5.8	12	22	22	22	24	21
6	5.8	5.7	5.8	5.7	5.9	5.7	12	22	22	22	24	21
7	5.8	5.7	5.8	5.8	5.8	5.8	12	22	22	22	24	21
8	5.8	5.7	5.8	5.7	6.5	5.8	12	22	22	22	24	21
9	5.8	5.7	5.8	5.8	5.8	5.7	12	22	22	22	24	22
10	5.8	5.8	5.7	5.8	5.7	5.8	12	22	22	22	24	22
11	5.8	5.8	5.8	5.8	5.7	5.8	12	22	22	22	24	22
12	5.8	5.7	5.8	5.8	5.6	5.7	12	22	22	22	25	22
13	5.7	5.7	5.8	5.9	5.6	5.7	12	22	22	22	24	22
14	5.6	5.8	5.8	5.9	5.7	5.8	12	22	22	22	24	21
15	5.7	5.8	5.8	9.6	5.8	5.8	12	22	22	22	24	21
16	5.7	5.8	5.8	7.2	5.9	5.9	12	22	22	22	22	21
17	5.7	5.8	5.7	6.2	5.9	5.8	12	22	22	22	21	21
18	5.6	10	5.8	6.0	5.9	5.6	12	22	22	22	21	21
19	5.7	7.0	5.8	5.7	5.9	5.6	12	22	22	22	21	21
20	5.7	7.2	5.8	5.4	5.8	5.6	12	22	22	22	21	21
21	5.7	7.2	5.8	5.7	5.8	5.8	12	22	22	22	21	22
22	5.6	7.1	5.8	5.7	5.8	5.8	12	22	22	22	22	22
23	5.7	7.1	5.8	5.7	5.8	5.7	12	22	22	22	22	21
24	5.7	7.2	5.7	5.7	5.8	5.7	12	22	22	e23	22	22
25	5.8	7.3	5.7	5.7	5.7	5.7	12	22	22	e23	22	21
26	5.8	7.2	5.7	5.7	5.9	5.7	12	22	22	e23	22	22
27	5.8	7.2	5.7	5.7	5.8	5.6	12	22	22	e23	22	22
28	5.8	7.2	5.8	5.8	5.9	5.8	12	22	22	e23	22	22
29	5.7	7.3	5.7	5.7	---	5.8	12	22	22	e23	21	22
30	5.8	7.2	5.8	5.8	---	5.9	14	22	22	e23	21	21
31	5.8	---	5.8	5.8	---	7.9	---	22	---	e23	22	---
TOTAL	178.0	194.1	190.8	184.1	163.1	180.6	362	682	660	690	703	644
MEAN	5.74	6.47	6.15	5.94	5.82	5.83	12.1	22.0	22.0	22.3	22.7	21.5
MAX	5.8	10	8.5	9.6	6.5	7.9	14	22	22	23	25	22
MIN	5.6	5.7	5.7	5.4	5.6	5.6	12	22	22	22	21	21
AC-FT	353	385	378	365	324	358	718	1350	1310	1370	1390	1280
a	22260	7560	8080	31540	60520	62720	76090	84740	82300	69850	63270	71490

CAL YR 1994 TOTAL 2856.3 MEAN 7.83 MAX 12 MIN 5.6 AC-FT 5670 a 212000
WTR YR 1995 TOTAL 4831.7 MEAN 13.2 MAX 25 MIN 5.4 AC-FT 9580 a 640400

e Estimated.

a Diversion, in acre-feet, to Jaybird Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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, 754 acre-ft, July 16, elevation, 2,911.71 ft; minimum, 278 acre-ft, Oct. 21, elevation, 2,876.17 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629	285	609	632	576	509	591	674	660	649	598	609
2	644	297	593	598	574	601	660	650	712	714	554	651
3	654	296	640	608	585	547	476	495	694	669	682	636
4	650	286	630	630	528	422	613	606	672	597	628	596
5	636	304	693	639	589	311	571	617	681	637	646	663
6	652	293	639	602	540	506	610	625	712	575	605	642
7	644	288	598	628	538	497	743	598	713	750	627	667
8	652	289	615	577	466	622	559	482	686	690	631	616
9	651	301	634	543	535	324	539	486	699	624	622	611
10	599	559	627	712	572	717	586	625	667	690	584	608
11	624	579	554	643	597	701	572	657	687	730	611	663
12	657	654	598	564	603	673	645	627	697	742	621	567
13	631	631	622	689	521	696	698	628	700	741	621	606
14	637	605	579	620	576	616	629	629	699	688	561	548
15	600	687	660	659	555	619	613	612	737	370	548	571
16	658	666	646	535	565	662	659	656	663	754	626	710
17	641	644	603	621	557	599	690	549	701	740	685	693
18	634	498	630	604	593	548	651	633	699	735	645	598
19	632	693	664	524	557	598	680	592	714	750	658	627
20	615	574	629	551	573	647	623	687	694	749	622	461
21	278	666	635	533	639	645	649	666	709	735	569	688
22	307	627	580	563	530	675	660	662	675	316	582	612
23	311	661	570	541	619	694	627	659	659	709	626	644
24	303	658	633	596	547	584	618	595	699	611	588	570
25	308	601	598	626	597	718	612	651	729	679	566	560
26	314	660	648	580	552	666	672	710	607	611	589	610
27	317	616	587	557	507	635	716	677	751	628	622	606
28	318	624	619	616	546	603	723	666	674	553	631	570
29	308	639	600	581	---	621	712	684	558	591	645	569
30	314	597	617	570	---	635	580	665	652	564	672	633
31	310	---	623	564	---	569	---	661	---	634	640	---
MAX	658	693	693	712	639	718	743	710	751	754	685	710
MIN	278	285	554	524	466	311	476	482	558	316	548	461
a	2879.48	2902.17	2903.87	2899.97	2898.75	2900.33	2901.08	2906.24	2905.69	2904.56	2904.95	2904.53
b	-294	+287	+26	-59	-18	+23	+11	+81	-9	-18	+6	-7

CAL YR 1994 MAX 715 MIN 278 b -24
WTR YR 1995 MAX 754 MIN 278 b +29

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

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.--No estimated daily discharges. 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; minimum daily, 1.0 ft³/s, Nov. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,700 ft³/s, May 1, gage height, 9.78 ft; minimum daily, 5.3 ft³/s, Oct. 5, Nov. 24, 26, 29, 30.

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	5.5	161	5.4	9.0	36	8.9	30	3940	1310	1010	24	24
2	5.4	213	5.5	8.2	32	11	31	7280	799	1110	24	24
3	5.5	152	16	7.7	27	41	33	5650	839	1040	24	24
4	5.6	116	26	8.6	23	35	35	2570	814	867	24	24
5	5.3	182	20	13	20	28	38	1340	812	827	23	24
6	5.4	200	17	14	19	23	39	1220	830	759	24	24
7	5.4	115	14	32	17	20	125	1100	826	703	24	24
8	5.4	67	11	32	16	18	105	880	812	1210	24	23
9	5.4	119	9.6	49	15	43	69	524	820	1370	23	24
10	5.4	135	8.6	1090	14	309	54	548	805	1070	23	24
11	5.4	6.8	7.6	436	13	1490	45	575	787	1180	23	24
12	5.4	6.7	7.8	74	13	109	103	536	837	1210	23	23
13	5.6	6.8	7.3	323	13	95	653	536	905	1200	24	24
14	5.5	6.6	6.5	1660	13	85	673	535	880	775	23	24
15	5.4	6.5	6.4	433	12	167	583	525	1420	451	24	24
16	5.4	6.3	6.1	72	12	175	499	480	2050	163	24	24
17	5.5	6.4	6.0	48	11	45	537	475	1020	31	24	24
18	5.5	6.3	6.4	36	11	42	581	534	1030	28	24	24
19	5.5	6.4	6.6	27	11	37	523	465	1040	23	24	23
20	5.6	6.4	6.8	22	11	46	584	802	1090	23	24	23
21	5.7	6.4	6.7	19	11	49	489	1420	1030	23	23	24
22	187	6.2	6.8	19	10	89	487	1400	929	36	24	23
23	422	5.8	6.7	22	9.9	41	472	1390	564	302	24	24
24	405	5.3	9.0	28	9.5	35	465	1600	785	23	24	24
25	421	5.5	9.4	41	9.3	30	477	1560	816	24	24	24
26	413	5.3	9.7	41	9.0	27	452	1510	1030	24	24	24
27	535	5.4	9.7	44	8.7	25	541	1480	1140	24	23	23
28	442	5.4	11	47	8.5	25	789	1430	1890	24	24	24
29	439	5.3	11	43	---	24	1240	1410	1730	24	24	24
30	450	5.3	10	40	---	25	1320	1470	942	24	24	24
31	442	---	9.6	39	---	27	---	1460	---	24	24	---
TOTAL	4270.8	1581.1	300.2	4777.5	414.9	3224.9	12072	46645	30582	15602	736	714
MEAN	138	52.7	9.68	154	14.8	104	402	1505	1019	503	23.7	23.8
MAX	535	213	26	1660	36	1490	1320	7280	2050	1370	24	24
MIN	5.3	5.3	5.4	7.7	8.5	8.9	30	465	564	23	23	23
AC-FT	8470	3140	595	9480	823	6400	23940	92520	60660	30950	1460	1420
a	14720	5150	11230	44880	67640	79430	84500	88540	85690	63460	65500	73440

a Diversion, in acre-feet, to Camino Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

11441900 SILVER CREEK BELOW CAMINO DIVERSION DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.2	48.5	67.8	108	114	109	127	182	132	66.7	33.2	26.3
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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1961 - 1995	
ANNUAL TOTAL	8400.6		120920.4			
ANNUAL MEAN	23.0		331		86.8	
HIGHEST ANNUAL MEAN					331	1995
LOWEST ANNUAL MEAN					4.16	1977
HIGHEST DAILY MEAN	535	Oct 27	7280	May 2	9810	Feb 17 1986
LOWEST DAILY MEAN	5.3	Jun 24	5.3	Oct 5	1.0	Nov 1 1980
ANNUAL SEVEN-DAY MINIMUM	5.3	Jul 27	5.4	Nov 24	2.7	Mar 2 1977
INSTANTANEOUS PEAK FLOW			10700	May 1	22800	Feb 17 1986
INSTANTANEOUS PEAK STAGE			9.78	May 1	11.70	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	16660		239800		62860	
ANNUAL DIVERSION (AC-FT) a	217500		684200			
10 PERCENT EXCEEDS	14		1080		135	
50 PERCENT EXCEEDS	6.4		24		18	
90 PERCENT EXCEEDS	5.4		6.4		6.7	

a Diversion, in acre-feet, to Camino Powerplant, provided by Sacramento Municipal Utility District.

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, 2,917.07 ft; minimum, 541 acre-ft, June 29, 1995, elevation, 2,853.64 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,512 acre-ft, Jan. 10, elevation, 2,917.07 ft; minimum, 541 acre-ft, June 29, elevation, 2,853.64 ft.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1259	980	1305	1322	1294	989	1409	919	840	678	1155	1213
2	1253	975	1303	1319	1170	927	1396	1023	860	873	1158	1213
3	1249	968	1338	1317	1094	1004	1396	1038	880	795	1161	1213
4	1241	960	1397	1319	1043	1055	1420	1079	899	739	1164	1213
5	1233	980	1424	1343	1028	1086	1328	1149	916	679	1168	1230
6	1233	993	1439	1297	1039	1108	1342	1219	901	640	1171	1227
7	1285	992	1334	1317	1055	1125	1418	1208	908	773	1175	1226
8	1267	988	1304	1355	1071	1139	1456	1340	924	966	1179	1225
9	1258	988	1287	1429	1086	1212	1343	1389	841	968	1181	1224
10	1251	986	1282	1512	1099	1332	1347	1272	819	929	1184	1224
11	1249	1150	1266	1327	1110	1380	1378	1126	781	1083	1186	1224
12	1244	1227	1263	1242	1121	1395	1428	1089	666	1066	1189	1223
13	1240	1236	1263	1274	1138	1429	1331	1111	763	1072	1191	1222
14	1235	1257	1210	1330	1153	1392	1339	1168	722	1079	1193	1222
15	1232	1326	1331	1334	1165	1385	1374	1226	719	1087	1195	1221
16	1228	1317	1301	1320	1177	1383	1424	1276	744	1095	1196	1220
17	1224	1298	1281	1256	1187	1275	1381	1230	767	1102	1198	1165
18	1221	1282	1277	1238	1197	1231	1321	1167	788	1109	1200	1158
19	1219	1273	1279	1208	1206	1226	1259	1161	781	1117	1202	1156
20	1153	1274	1287	1202	1215	1314	1166	1193	712	1124	1203	1155
21	1108	1267	1285	1214	1160	1426	1113	1228	689	1131	1204	1153
22	1046	1263	1285	1238	1089	1434	1100	1259	663	1137	1206	1152
23	1019	1258	1284	1276	1056	1447	1121	1294	659	1173	1207	1151
24	1011	1315	1292	1325	1051	1473	1156	1191	600	1150	1208	1149
25	1007	1324	1299	1317	1055	1350	1190	1118	563	1154	1209	1148
26	1004	1323	1303	1343	1059	1291	1221	1048	607	1160	1192	1147
27	1001	1317	1306	1390	1064	1254	1157	1065	650	1120	1211	1146
28	997	1317	1315	1281	906	1245	1045	1090	589	1118	1211	1145
29	994	1314	1319	1292	---	1263	955	1034	541	1198	1212	1144
30	990	1308	1322	1303	---	1303	850	975	607	1238	1212	1143
31	985	---	1323	1308	---	1353	---	951	---	1171	1213	---
MAX	1285	1326	1439	1512	1294	1473	1456	1389	924	1238	1213	1230
MIN	985	960	1210	1202	906	927	850	919	541	640	1155	1143
a	2885.33	2903.71	2904.50	2903.74	2880.38	2906.07	2876.72	2883.27	2859.06	2896.28	2898.58	2894.68
b	-278	+323	+15	-15	-402	+447	-503	+101	-344	+564	+42	-70

CAL YR 1994 MAX 1439 MIN 960 b +84

WTR YR 1995 MAX 1512 MIN 541 b -120

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

SACRAMENTO RIVER BASIN

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 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.8	4.9	4.9	4.8	4.8	6.9	6.9	6.8	4.0	4.1	3.6
2	2.6	4.8	4.9	4.8	4.8	4.8	6.9	6.8	6.9	4.1	4.0	3.6
3	2.6	4.7	4.9	4.8	4.8	4.8	6.9	6.9	6.9	4.1	4.0	3.6
4	2.6	4.7	4.9	4.8	4.8	4.9	6.9	6.9	7.0	4.2	4.0	3.6
5	2.6	4.7	4.9	4.9	4.8	4.9	6.9	6.9	6.9	4.1	4.0	3.6
6	2.6	4.8	4.9	4.8	4.8	6.2	6.8	6.9	4.8	4.2	4.0	3.6
7	2.6	4.8	4.8	4.8	4.8	6.9	6.9	6.9	3.9	4.2	4.0	3.6
8	2.6	4.8	4.8	4.8	4.8	6.9	6.9	6.9	3.9	4.2	4.0	3.5
9	2.6	4.8	4.8	4.9	4.8	6.9	6.9	6.9	3.9	4.2	4.0	3.5
10	2.6	4.8	4.8	e6.4	4.8	6.9	6.8	6.9	3.9	4.3	3.9	3.5
11	2.6	4.8	4.8	4.8	4.8	6.9	6.9	6.9	3.9	4.3	3.9	3.5
12	2.6	4.8	4.8	4.8	4.8	6.9	6.9	6.9	3.9	4.4	3.9	3.5
13	2.6	4.9	4.8	4.7	4.9	7.0	6.9	6.9	3.9	4.4	3.9	3.5
14	2.6	4.9	4.8	4.8	4.8	6.9	7.0	6.9	3.9	4.4	3.9	3.5
15	2.6	4.9	4.9	4.8	4.9	6.9	6.9	6.9	3.8	4.4	3.9	3.4
16	2.6	4.9	4.9	4.8	4.9	6.9	6.9	7.0	4.0	4.4	3.9	3.4
17	2.6	4.9	4.8	4.8	4.9	6.9	6.9	6.9	4.0	4.4	3.9	3.4
18	2.6	4.8	4.8	4.9	4.9	6.9	6.9	6.9	4.0	4.4	3.9	3.4
19	2.6	4.8	4.8	4.8	4.9	6.9	6.9	6.9	3.9	4.4	3.8	3.4
20	2.6	4.8	4.8	4.8	4.9	6.9	6.9	6.9	3.9	4.3	3.8	3.4
21	2.5	4.8	4.8	4.8	4.9	6.9	6.9	6.9	3.9	4.3	3.8	3.4
22	2.6	4.8	4.8	4.8	4.8	6.9	6.8	6.9	3.8	4.3	3.8	3.4
23	2.6	4.8	4.8	4.9	4.8	7.0	6.9	6.9	3.8	4.3	3.8	3.4
24	2.6	4.9	4.8	4.9	4.8	7.0	6.9	6.9	3.9	4.3	3.8	3.4
25	2.6	4.9	4.8	4.9	4.8	6.9	6.9	6.9	3.9	4.3	3.7	3.4
26	2.6	4.9	4.8	4.9	4.8	6.9	6.9	6.9	3.9	4.3	3.7	3.4
27	2.6	4.9	4.9	4.9	4.8	6.9	6.9	6.9	3.8	4.2	3.7	3.4
28	2.6	4.9	4.9	4.8	4.8	6.9	6.8	6.9	3.9	4.2	3.7	3.4
29	2.6	4.9	4.9	4.8	---	6.9	6.9	6.9	3.9	4.2	3.7	3.4
30	2.5	4.9	4.9	4.8	---	6.9	6.9	6.8	3.9	4.2	3.7	3.4
31	3.5	---	4.8	4.8	---	6.9	---	6.9	---	4.2	3.7	---
TOTAL	81.3	144.9	150.0	151.2	135.2	203.2	206.7	213.8	132.8	132.2	119.9	104.1
MEAN	2.62	4.83	4.84	4.88	4.83	6.55	6.89	6.90	4.43	4.26	3.87	3.47
MAX	3.5	4.9	4.9	6.4	4.9	7.0	7.0	7.0	7.0	4.4	4.1	3.6
MIN	2.5	4.7	4.8	4.7	4.8	4.8	6.8	6.8	3.8	4.0	3.7	3.4
AC-FT	161	287	298	300	268	403	410	424	263	262	238	206

e Estimated.

SACRAMENTO RIVER BASIN

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11442700 BRUSH CREEK BELOW BRUSH CREEK DAM, NEAR POLLOCK PINES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.80	5.18	5.14	5.04	5.05	5.24	5.33	5.25	3.02	2.95	2.88	2.86
MAX	3.86	8.06	7.81	6.92	6.79	6.55	7.05	6.90	4.43	4.26	3.87	3.81
(WY)	1994	1990	1990	1990	1990	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1988 - 1995			
ANNUAL TOTAL	1560.7				1775.3							
ANNUAL MEAN	4.28				4.86				4.22			
HIGHEST ANNUAL MEAN									4.86			
LOWEST ANNUAL MEAN									3.39			
HIGHEST DAILY MEAN	6.9 Jan 23				7.0 Mar 13				8.4 Nov 27 1989			
LOWEST DAILY MEAN	2.5 Jun 16				2.5 Oct 21				2.1 Jul 4 1988			
ANNUAL SEVEN-DAY MINIMUM	2.5 Jun 14				2.6 Oct 15				2.1 Aug 15 1988			
ANNUAL RUNOFF (AC-FT)	3100				3520				3060			
10 PERCENT EXCEEDS	6.8				6.9				6.8			
50 PERCENT EXCEEDS	4.8				4.8				4.3			
90 PERCENT EXCEEDS	2.6				3.4				2.4			

SACRAMENTO RIVER BASIN

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, 17,735 acre-ft, May 1, elevation, 1,855.56 ft, minimum, 11,944 acre-ft, Dec. 14, elevation, 1,825.28.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15719	15979	13252	15445	14355	14352	13469	17735	17080	16821	15546	15798
2	15554	15999	12949	15431	14491	14579	13514	17390	16992	16929	14703	15850
3	15518	15993	13061	15469	14556	14338	14102	17160	17036	16884	14720	15961
4	15477	15905	12915	15451	14250	12824	13940	17021	17072	16982	15180	15219
5	15693	15794	12766	15500	14102	12374	13719	16952	16934	16982	16289	15081
6	15486	16207	12505	14420	13887	13047	13637	16890	16948	17059	16076	15176
7	15208	15890	12627	15247	14227	13877	14201	16880	16767	16828	15683	15132
8	15124	15417	12592	15398	14286	13758	15038	16701	16823	16871	15368	14791
9	14880	15124	12488	14478	14972	16767	14442	16707	16811	16998	14947	14741
10	14357	15003	12892	17128	14197	17490	13038	16728	16950	17036	15404	14711
11	13769	14454	13261	16056	14115	17038	13209	16751	17053	16855	15011	15093
12	13953	14316	13511	14344	14301	16780	14029	16790	17067	16828	15693	15643
13	14182	14699	13743	15500	14226	16786	16738	16703	17026	16707	15292	15165
14	14286	14963	11944	17093	14531	16720	16641	16722	17003	16193	14442	14524
15	14403	14693	11946	16590	14399	16865	16604	16722	17078	15221	14728	14361
16	14376	14747	12559	15021	14011	16641	16647	16707	16863	14418	15607	15145
17	14780	15013	13188	13996	14336	16023	16003	16774	16836	14528	15184	15587
18	14680	15001	13839	13818	14711	16340	15907	16740	16911	15413	14353	14967
19	15093	14801	14143	14046	14772	16242	15251	16774	16873	16561	14739	14569
20	15852	14793	14306	13793	14271	16489	14891	16950	16884	16512	15483	15040
21	16479	15176	14471	14074	14289	16637	14638	16955	16919	16383	15615	14501
22	15673	15307	14759	13948	13835	16747	14450	16927	16857	14564	15095	15075
23	16138	15149	14976	14524	14235	16693	14427	16986	16986	14333	15406	15254
24	15895	14930	15307	14594	14623	15929	14713	16936	17046	15870	15882	15001
25	16011	14922	15372	15358	14465	15253	15147	16925	17013	15685	15731	14760
26	15788	14429	15089	15619	14241	14166	15079	16957	17198	16003	15463	14934
27	15991	14418	15186	15475	14412	13670	15564	16948	17200	15419	14994	14893
28	16088	14126	15382	15386	14093	13638	16821	17023	17242	15484	15303	14604
29	16366	13782	15494	14955	---	13073	17240	17040	17200	15161	14999	14355
30	16336	13580	15575	14726	---	12776	17049	17080	17049	15410	14634	15098
31	16106	---	15577	14988	---	13197	---	17078	---	15396	15075	---
MAX	16479	16207	15577	17128	14972	17490	17240	17735	17242	17059	16289	15961
MIN	13769	13580	11944	13793	13835	12374	13038	16701	16767	14333	14353	14355
a	1847.74	1834.60	1845.10	1842.09	1837.38	1832.48	1852.32	1852.46	1852.32	1844.18	1842.54	1842.66
b	+445	-2526	+1997	-589	-895	-896	+3852	+29	-29	-1653	-321	+23

CAL YR 1994 MAX 16479 MIN 11944 b +201

WTR YR 1995 MAX 17735 MIN 11944 b -563

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft³/s, May 1; minimum daily, 10 ft³/s, many days.

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	36	36	10	10	10	10	36	8870	3850	2800	37	36
2	36	36	10	10	10	10	36	9270	3220	2350	37	36
3	36	36	10	10	10	10	36	6180	2850	2530	36	36
4	36	36	10	10	10	10	36	3950	3160	2340	36	36
5	36	36	10	10	10	10	36	2660	3120	2470	36	36
6	36	36	10	10	10	20	36	2000	2460	2540	36	36
7	36	36	10	10	10	36	36	1860	1610	1850	36	36
8	36	36	10	10	10	36	36	1360	1310	e1750	36	36
9	36	36	10	10	10	59	36	651	1250	e2010	36	36
10	36	36	10	2200	10	4320	36	449	1730	e2300	36	36
11	36	36	10	1190	10	5360	36	1000	2350	e2360	36	36
12	36	36	10	10	10	1630	36	911	2670	e1710	36	36
13	36	36	10	10	10	694	82	963	2800	e1150	36	36
14	36	36	10	2760	10	858	540	696	3070	e111	36	36
15	36	36	10	1410	10	817	94	436	3010	e161	36	36
16	36	23	10	14	10	951	50	610	3070	37	36	36
17	36	10	10	10	10	54	82	451	1570	37	36	36
18	36	10	10	10	10	36	36	1010	1860	37	36	36
19	36	10	10	10	10	36	36	1040	1970	39	36	36
20	36	10	10	10	10	36	36	1570	1950	39	36	36
21	36	10	10	10	10	401	36	2550	1660	39	36	36
22	36	10	10	10	10	103	36	2340	1610	37	36	36
23	36	10	10	10	10	961	36	2400	1540	37	36	36
24	36	10	10	10	10	112	36	2600	2500	37	36	36
25	36	10	10	10	10	36	36	2260	2860	37	36	36
26	36	10	10	10	10	36	36	2750	3660	37	36	36
27	36	10	10	10	10	36	36	2530	4070	37	36	36
28	36	10	10	10	10	36	1020	2580	4180	37	36	36
29	36	10	10	10	---	36	2830	2660	4260	37	36	36
30	36	10	10	10	---	36	4150	3330	3350	37	36	36
31	36	---	10	10	---	36	---	3520	---	37	36	---
TOTAL	1116	703	310	7834	280	16822	9640	75457	78570	29030	1118	1080
MEAN	36.0	23.4	10.0	253	10.0	543	321	2434	2619	936	36.1	36.0
MAX	36	36	10	2760	10	5360	4150	9270	4260	2800	37	36
MIN	36	10	10	10	10	10	36	436	1250	37	36	36
AC-FT	2210	1390	615	15540	555	33370	19120	149700	155800	57580	2220	2140
a	24410	17670	21500	117600	108800	192600	199200	215100	182100	151000	86200	84660

e Estimated.

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.1	94.9	120	217	199	121	142	309	274	86.3	34.5	34.2
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1968 - 1995

ANNUAL TOTAL	9958	221960	
ANNUAL MEAN	27.3	608	140
HIGHEST ANNUAL MEAN			608
LOWEST ANNUAL MEAN			13.3
HIGHEST DAILY MEAN	41	Jun 30	20200
LOWEST DAILY MEAN	10	Mar 16	2.4
ANNUAL SEVEN-DAY MINIMUM	10	Mar 16	2.6
INSTANTANEOUS PEAK FLOW			49800
INSTANTANEOUS PEAK STAGE			32.60
ANNUAL RUNOFF (AC-FT)	19750	440300	101300
ANNUAL DIVERSION (AC-FT) a	345800	1401000	
10 PERCENT EXCEEDS	36	2530	74
50 PERCENT EXCEEDS	36	36	36
90 PERCENT EXCEEDS	10	10	10

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

SACRAMENTO RIVER BASIN

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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.--No estimated daily discharges. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,540 ft³/s, Mar. 10; minimum daily, 3.6 ft³/s, Oct. 8.

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	4.8	15	24	38	123	20	124	798	25	19	30	20
2	4.2	17	26	35	98	61	86	511	24	19	26	20
3	4.2	9.0	259	34	86	606	49	294	23	21	30	20
4	5.7	7.8	503	45	63	287	79	225	28	19	28	20
5	16	35	200	317	62	170	69	189	28	19	26	20
6	6.3	87	118	222	40	86	18	202	24	19	25	18
7	4.1	36	75	379	37	65	204	124	24	19	25	18
8	3.6	19	32	438	35	56	194	97	24	20	25	20
9	4.3	16	35	515	42	305	211	85	23	19	26	22
10	5.2	38	39	1080	30	1050	107	68	24	39	24	23
11	5.8	26	34	657	30	1370	64	68	26	44	27	23
12	5.8	17	37	318	19	827	109	73	26	20	26	23
13	6.0	13	30	678	31	619	209	108	26	19	26	22
14	6.0	11	31	748	112	568	156	120	21	19	28	22
15	6.9	12	31	632	27	516	119	71	142	25	28	22
16	8.8	23	31	386	19	373	41	70	111	33	27	21
17	8.9	74	40	261	19	296	65	138	51	18	27	21
18	8.5	60	37	180	19	278	106	35	44	18	27	21
19	8.2	30	36	125	22	205	91	31	27	19	25	21
20	8.8	21	32	125	19	696	96	144	20	19	23	21
21	8.8	19	30	102	20	845	51	69	22	19	23	21
22	8.9	17	27	122	19	960	40	22	21	19	23	21
23	8.9	15	26	214	19	993	98	27	21	20	22	22
24	9.2	15	63	282	23	653	66	35	20	19	23	22
25	10	46	68	425	19	531	32	36	20	19	22	22
26	12	55	46	407	18	367	26	51	20	25	22	22
27	13	47	28	684	18	264	74	61	20	33	21	22
28	13	41	38	441	19	279	118	56	20	38	21	22
29	15	33	32	300	---	251	129	53	20	32	21	22
30	15	27	35	226	---	254	158	49	20	20	21	22
31	14	---	40	176	---	213	---	36	---	22	20	---
TOTAL	259.9	881.8	2083	10592	1088	14064	2989	3946	945	713	768	636
MEAN	8.38	29.4	67.2	342	38.9	454	99.6	127	31.5	23.0	24.8	21.2
MAX	16	87	503	1080	123	1370	211	798	142	44	30	23
MIN	3.6	7.8	24	34	18	20	18	22	20	18	20	18
AC-FT	516	1750	4130	21010	2160	27900	5930	7830	1870	1410	1520	1260
a	0	182	585	517	2310	1200	4310	5140	3380	1710	76	0

a Discharge, in acre-feet, through Rock Creek Powerplant, provided by Sithe Energies U.S.A., Inc.

SACRAMENTO RIVER BASIN

11444201 ROCK CREEK NEAR PLACERVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.02	16.4	28.5	85.5	57.0	121	37.6	31.7	15.5	8.13	6.10	6.45
MAX	18.9	29.4	67.2	342	191	454	99.6	127	31.5	23.0	24.8	21.2
(WY)	1987	1995	1995	1995	1993	1995	1995	1995	1995	1995	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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1987 - 1995			
ANNUAL TOTAL	7789.1				38965.7							
ANNUAL MEAN	21.3				107				35.2			
ANNUAL MEAN b	22.1				134				39.9			
HIGHEST ANNUAL MEAN									107			1995
LOWEST ANNUAL MEAN									14.3			1988
HIGHEST DAILY MEAN	503			Dec 4	1370		Mar 11		1370		Mar 11	1995
LOWEST DAILY MEAN	1.2			Aug 29	3.6		Oct 8		.00		Sep 29	1987
ANNUAL SEVEN-DAY MINIMUM	1.4			Aug 28	5.0		Oct 7		.35		Sep 28	1987
INSTANTANEOUS PEAK FLOW					2540		Mar 5		3220		Jan 20	1993
ANNUAL RUNOFF (AC-FT)	15450				77290				25510			
ANNUAL RUNOFF (AC-FT) b	16020				96700				28910			
10 PERCENT EXCEEDS	38				295				63			
50 PERCENT EXCEEDS	14				28				15			
90 PERCENT EXCEEDS	2.3				15				3.9			

b Adjusted for Rock Creek Powerplant.

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.--No estimated daily discharges. Flow regulated by Chili Bar Reservoir, capacity, 3,700 acre-ft, Chili Bar Powerplant, and other storage and powerplants (see station 11443500). See schematic diagram of South Fork American River basin.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,300 ft³/s, May 1, gage height, 13.27 ft; minimum daily, 156 ft³/s, Dec. 28.

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	532	413	499	697	2730	1900	2820	13600	7000	5490	1720	1060
2	498	283	465	542	2380	1690	2970	14800	6330	4980	1990	1100
3	670	180	658	428	2200	3750	2650	10800	6120	5250	1760	1260
4	492	263	1760	471	2360	3680	3280	8110	6230	4820	1520	1490
5	465	479	1240	1110	2250	2610	3390	6630	6460	4770	1020	1370
6	586	765	902	1640	2210	1840	3400	6060	5460	4820	1570	1330
7	728	587	386	1160	1800	1770	3870	5460	5000	4830	1590	1570
8	421	581	568	1580	2100	1950	4100	5140	4450	4790	1720	1610
9	450	399	451	3140	1570	3520	4190	4520	4400	5020	1700	1580
10	640	318	376	7570	1950	10100	4120	4390	4710	4710	833	1480
11	432	576	162	7290	1910	13300	3200	4560	5380	4380	1400	1370
12	485	691	270	4230	1780	7340	2890	4410	5900	4050	1000	1240
13	190	162	294	4110	1810	5450	2980	4500	5880	3870	1480	1420
14	409	162	1800	8440	1760	5540	4320	4360	5890	3620	1650	1680
15	504	162	427	7420	1850	5030	4050	4180	6200	2610	1320	1500
16	386	165	162	4520	1890	4960	3700	4000	6340	2360	648	1050
17	167	264	162	2840	1800	4220	3860	4050	4730	2320	1510	1190
18	396	488	159	1900	1730	3820	3550	4240	4610	2110	1550	1610
19	184	444	162	1890	1790	4110	3730	4360	5020	1840	1110	1720
20	168	167	162	1750	1890	4890	3700	4900	4890	2450	1130	1270
21	166	167	163	1650	1860	5640	3460	6080	4780	2510	1100	1580
22	412	167	159	1790	2070	5460	3290	6130	4940	2380	1600	1140
23	524	355	159	1800	1830	5900	3220	5960	4580	1690	1210	1120
24	368	366	338	1880	1770	4930	3180	6100	5300	1370	963	1560
25	500	170	304	1890	1910	4370	3350	5750	5750	1820	1330	1640
26	434	612	437	1820	2060	4230	3810	5820	5490	1990	1490	1420
27	532	308	533	2690	1840	3560	3860	6190	5770	2110	1640	1420
28	441	502	156	2400	2110	3200	4340	6070	6670	1840	1270	1610
29	478	349	414	2140	---	3340	6450	6380	6490	2060	1460	1560
30	388	417	271	2020	---	3170	8420	6530	5650	1670	1480	1090
31	695	---	437	2250	---	2770	---	6860	---	1920	1240	---
TOTAL	13741	10962	14436	85058	55210	138040	114150	190940	166420	100450	43004	42040
MEAN	443	365	466	2744	1972	4453	3805	6159	5547	3240	1387	1401
MAX	728	765	1800	8440	2730	13300	8420	14800	7000	5490	1990	1720
MIN	166	162	156	428	1570	1690	2650	4000	4400	1370	648	1050
AC-FT	27260	21740	28630	168700	109500	273800	226400	378700	330100	199200	85300	83390

11444500 SOUTH FORK AMERICAN RIVER NEAR PLACERVILLE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	492	777	1270	1661	1664	1843	1989	2438	1931	1163	935	800
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 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1965 - 1995	
ANNUAL TOTAL	194249		974451		1412	
ANNUAL MEAN	532		2670		3275	
HIGHEST ANNUAL MEAN					1983	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	1800	Dec 14	14800	May 2	42000	Dec 23 1964
LOWEST DAILY MEAN	156	Dec 28	156	Dec 28	.20	Nov 12 1964
ANNUAL SEVEN-DAY MINIMUM	161	Dec 17	161	Dec 17	20	Feb 11 1977
INSTANTANEOUS PEAK FLOW			21300	May 1	47300	Dec 23 1964
INSTANTANEOUS PEAK STAGE			13.27	May 1	17.40	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	385300		1933000		1023000	
10 PERCENT EXCEEDS	778		5880		3180	
50 PERCENT EXCEEDS	495		1840		974	
90 PERCENT EXCEEDS	300		362		327	

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA

LOCATION.--Lat 38°49'07", long 120°56'45", in NW 1/4 SW 1/4 sec.11, T.11 N., R.9 E., El Dorado County, Hydrologic Unit 18020129, on left bank 0.4 mi downstream from Greenwood Creek, 2.4 mi northwest of Lotus, and 3.3 mi northwest of Coloma.

DRAINAGE AREA.--673 mi².

PERIOD OF RECORD.--May 1951 to September 1995 (discontinued).

CHEMICAL DATA: Water years 1958-66, 1978 to November 1980, 1984-94.

BIOLOGICAL DATA: Water years 1979-80.

WATER TEMPERATURE: Water years 1960-68, 1970-94.

SEDIMENT DATA: Water years 1957-62.

REVISED RECORDS.--WSP 1931: Drainage area. WDR CA-75-4: 1964, 1966, 1970.

GAGE.--Water-stage recorder. Elevation of gage is 635 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by storage, diversions, and powerplants. See schematic diagrams of South Fork American River and lower Sacramento River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft³/s, Dec. 23, 1955, gage height, 21.37 ft; minimum daily, 14 ft³/s, several days during July 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1862 and prior to beginning of record, 20.4 ft from floodmarks, Nov. 21, 1950, discharge, 64,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,600 ft³/s, Mar. 11, gage height, 13.77 ft; minimum daily, 142 ft³/s, Oct. 21.

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	514	505	483	691	3070	2120	3100	13400	7140	5660	1840	1270
2	458	259	373	571	2730	1970	3360	15700	6530	5230	2010	1170
3	554	159	977	494	2500	5170	2950	10900	6340	5460	1950	1160
4	423	238	3090	462	2620	4520	3580	8330	6340	5080	1750	1440
5	395	475	1760	1900	2560	3160	3680	6970	6620	4980	1140	1470
6	480	759	1070	1950	2370	2250	3740	6460	5750	5150	1510	1390
7	701	691	532	1970	1990	2100	4180	5840	5230	5020	1650	1640
8	443	581	618	2340	2300	2160	4490	5480	4750	4950	1830	1670
9	397	408	479	3990	1770	4360	4530	4880	4630	5240	1800	1640
10	641	375	393	9210	1950	11300	4430	4690	4960	5010	1110	1500
11	423	588	183	8550	2090	16000	3650	4810	5580	4640	1280	1510
12	483	675	304	4810	1940	8740	3220	4730	6070	4260	957	1330
13	186	163	277	4810	1960	6550	3370	4860	6140	4060	1610	1590
14	381	148	1830	8520	1960	6600	4530	4720	6010	3960	1620	1520
15	471	152	513	8360	1980	6050	4490	4610	6370	2860	1650	1670
16	357	161	201	5170	2010	5570	4040	4340	6610	2680	641	1280
17	147	254	186	3550	1980	4750	4140	4360	5030	2480	1440	1020
18	362	490	181	2210	1860	4370	3890	4490	4860	2310	1580	1640
19	165	431	174	2240	1910	4570	4040	4690	5320	1990	1280	1870
20	146	162	174	1990	2010	6150	4070	5060	5170	2620	1130	1300
21	142	158	173	1890	2010	6880	3840	6300	5090	2670	1170	1710
22	370	154	164	1990	2150	7170	3600	6330	5260	2610	1490	1150
23	492	332	163	2200	2040	8160	3560	6180	4840	1850	1410	1140
24	360	346	429	2400	1900	6240	3530	6260	5560	1440	1140	1540
25	434	185	445	2800	1950	5220	3590	6060	6000	1860	1190	1890
26	380	471	465	2680	2260	4880	4110	5970	5790	2150	1570	1390
27	579	421	596	4170	2060	4070	4120	6410	6080	2230	1690	1350
28	429	476	242	3400	2250	3690	4460	6320	6840	2020	1420	1710
29	446	477	396	2750	---	3700	6370	6550	6650	2190	1470	1600
30	362	405	364	2460	---	3570	8590	6580	5920	1800	1510	1140
31	549	---	493	2620	---	3180	---	7030	---	2010	1290	---
TOTAL	12670	11099	17728	103148	60180	165220	123250	199310	173480	106470	45128	43700
MEAN	409	370	572	3327	2149	5330	4108	6429	5783	3435	1456	1457
MAX	701	759	3090	9210	3070	16000	8590	15700	7140	5660	2010	1890
MIN	142	148	163	462	1770	1970	2950	4340	4630	1440	641	1020
AC-FT	25130	22010	35160	204600	119400	327700	244500	395300	344100	211200	89510	86680

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	205	261	939	1078	1326	1470	2286	2892	1851	569	252	211
MAX	315	455	5869	4488	2839	2401	4263	6329	4095	1474	531	330
(WY)	1957	1952	1956	1956	1958	1958	1952	1952	1952	1952	1962	1962
MIN	138	105	116	175	452	583	940	1055	454	134	105	127
(WY)	1961	1960	1960	1961	1961	1961	1961	1959	1959	1959	1959	1960

SUMMARY STATISTICS

WATER YEARS 1952 - 1962

ANNUAL MEAN	1110	
HIGHEST ANNUAL MEAN	2166	1952
LOWEST ANNUAL MEAN	445	1961
HIGHEST DAILY MEAN	62400	Dec 23 1955
LOWEST DAILY MEAN	80	Jan 2 1960
ANNUAL SEVEN-DAY MINIMUM	95	Nov 27 1959
INSTANTANEOUS PEAK FLOW	71800	Dec 23 1955
INSTANTANEOUS PEAK STAGE	21.37	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	803800	
10 PERCENT EXCEEDS	2930	
50 PERCENT EXCEEDS	424	
90 PERCENT EXCEEDS	152	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	520	802	1333	1827	1880	1955	2061	2433	1901	1125	899	773
MAX	1108	3826	5512	5410	8347	6149	5956	6429	6397	3560	1456	1457
(WY)	1964	1984	1965	1970	1986	1983	1982	1995	1983	1983	1995	1995
MIN	201	117	350	206	133	136	250	285	217	86.8	137	225
(WY)	1988	1988	1977	1977	1977	1977	1977	1977	1977	1977	1977	1963

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1963 - 1995

ANNUAL TOTAL	194395	1061383	
ANNUAL MEAN	533	2908	1457
HIGHEST ANNUAL MEAN			3398
LOWEST ANNUAL MEAN			229
HIGHEST DAILY MEAN	3090	Dec 4	16000
LOWEST DAILY MEAN	142	Oct 21	142
ANNUAL SEVEN-DAY MINIMUM	174	Dec 17	174
INSTANTANEOUS PEAK FLOW			22600
INSTANTANEOUS PEAK STAGE			13.77
ANNUAL RUNOFF (AC-FT)	385600	2105000	1055000
10 PERCENT EXCEEDS	805	6280	3250
50 PERCENT EXCEEDS	483	2010	971
90 PERCENT EXCEEDS	327	368	328

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, 970,500 acre-ft, July 9, elevation, 465.42 ft; minimum, 189,200 acre-ft, Dec. 2, elevation, 364.30 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216500	205100	189600	252700	562300	572500	590200	790000	758700	952500	601000	573000
2	215700	205100	189200	252800	562600	572700	597700	824600	769900	954500	598000	569900
3	215300	203300	192700	252900	560100	590900	605600	832300	783300	956900	595600	566400
4	215400	200600	217600	255100	559400	584000	614900	826900	796600	960800	592800	563800
5	215300	198800	230300	265000	557600	572400	624700	814700	811300	964100	589400	560900
6	215500	201300	236000	273200	555000	565600	634400	799700	821200	965800	587100	558000
7	215600	203500	239200	286400	551600	559600	649300	781300	828700	966800	585400	555200
8	215600	202700	240800	306600	549000	553100	672000	762700	833800	968500	584600	552700
9	215200	203300	241300	343500	544600	565400	688400	745200	838400	970500	585000	550600
10	215300	203600	241400	432900	541400	586700	702100	727400	843900	969400	583800	548000
11	215100	203500	241100	461900	541900	625100	709100	711900	852200	965700	582900	544500
12	215000	203300	241300	441900	543200	605100	712400	697600	862500	962000	581200	540600
13	214700	202000	242700	454800	546800	572900	720100	687000	872700	958400	580200	536400
14	214500	200300	246600	518700	550400	571000	727800	675200	882400	955200	580400	531800
15	214000	199800	248000	563600	552700	567900	733900	664000	896000	950700	581200	528100
16	212900	198300	248700	582000	555200	560700	738100	654000	909300	946400	579300	524200
17	211100	196700	248600	588100	557100	548700	741200	645700	909400	898100	579200	518600
18	211400	196700	248200	585800	558900	548000	743500	639900	907700	839200	579600	514400
19	210900	196000	247800	581200	560300	547800	745400	636100	907700	791900	579200	511600
20	210300	194300	246500	577700	561900	556300	747500	634900	908200	755900	578800	507500
21	209300	192700	245800	574900	563700	561000	748800	638300	908900	727600	577600	503900
22	208800	192000	245700	572200	565200	569000	748900	643900	910400	704700	577300	499400
23	208200	191700	245400	574500	568300	584700	748800	650600	913600	685000	577500	495200
24	207100	191100	246100	577600	570900	580200	748600	660000	919700	667700	576600	491100
25	207000	190200	247900	585500	573100	571800	748800	668800	931000	654000	575500	488000
26	206700	190300	248300	590900	573700	563400	750900	679000	940100	643500	575500	483800
27	206900	190300	249200	586700	574100	561800	753200	691100	945800	633500	575900	480200
28	206800	189800	249800	557500	574200	567200	753000	703700	949900	624200	575500	476400
29	206500	190200	250700	554700	---	573300	752600	716800	952500	617100	575500	472500
30	205600	189500	251500	557000	---	579400	756700	730100	953100	609700	575500	466100
31	204800	---	252300	559100	---	584700	---	743900	---	604600	574500	---
MAX	216500	205100	252300	590900	574200	625100	756700	832300	953100	970500	601000	573000
MIN	204800	189500	189200	252700	541400	547800	590200	634900	758700	604600	574500	466100
a	368.11	364.37	378.28	423.73	425.50	426.71	445.16	443.86	463.85	428.98	425.53	412.17
b	-12100	-15300	+62800	+306800	+15100	+10500	+172000	-12800	+209200	-348500	-30100	-108400
c	1580	580	290	780	1590	2360	2740	3130	5600	6510	5500	3370

CAL YR 1994 b -140800

WTR YR 1995 b +249200

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

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,300 ft³/s, Mar. 12, gage height, 18.70 ft; minimum daily, 455 ft³/s, Oct. 11, 12.

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	756	684	1440	1390	7840	5680	6200	20200	6090	9380	4700	3010
2	748	693	1440	1430	8920	5780	5590	20200	6080	8020	4710	3590
3	652	1340	1440	1450	9160	9130	5320	20100	6060	7640	4610	3890
4	475	1390	1440	1450	7930	17200	4990	21500	6130	6350	4300	3910
5	467	1380	1440	1450	7940	15900	4960	22600	6120	6330	3870	3900
6	466	1370	1420	1440	7990	11700	5010	22500	6090	7130	3450	3900
7	463	1380	1430	1440	7970	10000	4880	22400	6080	7100	2990	3890
8	464	1390	1420	1430	7930	9940	4890	21200	6080	6680	3030	3920
9	463	1390	1430	1630	7900	15700	4950	20100	6110	6840	2870	3940
10	459	1400	1430	8640	6740	36000	5140	19600	6060	7940	2670	3940
11	455	1400	1440	18100	5200	35900	6920	18500	6030	8220	2390	3910
12	455	1400	1440	26700	4240	41800	7960	17800	6020	8250	2430	3870
13	457	1400	1460	16100	3880	39400	8260	16900	6040	7870	2430	4160
14	458	1400	1470	10800	3940	25100	8170	16400	6040	7330	2230	4170
15	675	1400	1470	8930	3990	24000	8190	15600	6190	6730	2260	4170
16	679	1410	1450	8590	3870	22500	8160	14700	7730	6700	2250	4150
17	678	1400	1450	9320	3710	21200	8130	13700	10100	22500	2260	4150
18	683	1410	1440	10200	3730	15000	8150	12700	10100	32900	2260	4190
19	678	1390	1440	10200	3730	15000	8100	12100	9830	26600	2490	3940
20	679	1380	1450	9030	3760	16100	8140	11800	9150	21100	2490	3640
21	682	1380	1450	7920	3790	22500	8120	10700	8740	17700	2480	3650
22	687	1380	1450	7920	3750	22600	8110	e9640	8470	15000	2450	3660
23	680	1390	1450	7750	3520	22700	8230	e8620	7650	12900	2460	3690
24	676	1390	1470	7750	3370	22500	8250	e7810	6980	11100	2460	3700
25	679	1400	1470	7890	3570	20000	8260	e7310	6110	9840	2460	3730
26	677	1410	1460	9350	4660	17700	8250	6890	6680	8640	2470	3450
27	679	1400	1460	18200	4690	12500	8220	6320	9130	8080	2470	3590
28	680	1400	1470	28400	4860	7940	11200	6050	10300	8050	2470	4010
29	683	1410	1440	11800	---	7280	17400	6120	10200	7410	2500	4020
30	682	1440	1420	7870	---	6970	20100	6150	10000	6240	2780	4610
31	679	---	1420	7890	---	6630	---	6210	---	5520	2790	---
TOTAL	18794	40407	44800	272460	152580	562350	238250	442420	222390	332090	88480	116350
MEAN	606	1347	1445	8789	5449	18140	7942	14270	7413	10710	2854	3878
MAX	756	1440	1470	28400	9160	41800	20100	22600	10300	32900	4710	4610
MIN	455	684	1420	1390	3370	5680	4880	6050	6020	5520	2230	3010
AC-FT	37280	80150	88860	540400	302600	1115000	472600	877500	441100	658700	175500	230800

e Estimated.

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	1998	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	1907
LOWEST ANNUAL MEAN	731	1924
HIGHEST DAILY MEAN	132000	Nov 21 1950
LOWEST DAILY MEAN	4.6	Jul 29 1924
ANNUAL SEVEN-DAY MINIMUM	4.8	Jul 29 1924
INSTANTANEOUS PEAK FLOW	180000	Nov 21 1950
INSTANTANEOUS PEAK STAGE	31.85	Nov 21 1950
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1867	2397	3809	5005	5215	5200	4224	4158	3727	3692	2787	2270
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1956 - 1995

ANNUAL TOTAL	538249	2531371	
ANNUAL MEAN	1475	6935	3690
HIGHEST ANNUAL MEAN			8854
LOWEST ANNUAL MEAN			778
HIGHEST DAILY MEAN	4090	Jul 8	41800
LOWEST DAILY MEAN	455	Oct 11	455
ANNUAL SEVEN-DAY MINIMUM	459	Oct 8	459
INSTANTANEOUS PEAK FLOW			51300
INSTANTANEOUS PEAK STAGE			18.70
ANNUAL RUNOFF (AC-FT)	1068000	5021000	2674000
10 PERCENT EXCEEDS	2100	17500	7580
50 PERCENT EXCEEDS	1450	4960	2490
90 PERCENT EXCEEDS	996	1380	835

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 current year (elevation only). 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, 27.22 ft, Mar. 11; minimum, 1.39 ft, Oct. 16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.24	2.78	4.03	1.69	4.44	2.08	5.11	3.78	21.28	21.22	9.48	9.06
2	4.08	2.67	3.86	2.11	4.66	2.36	4.97	3.53	21.64	21.23	10.17	9.15
3	4.34	2.85	3.93	1.87	5.36	2.50	5.23	3.52	21.83	21.64	11.56	10.13
4	4.48	2.89	4.15	1.96	6.45	3.89	5.77	3.73	21.68	21.62	14.73	11.80
5	4.41	2.94	4.60	2.08	9.62	6.39	7.57	5.15	21.64	21.47	15.66	14.80
6	4.38	2.73	4.67	2.89	9.62	8.81	8.78	7.50	21.55	21.38	15.26	13.90
7	4.31	2.58	4.58	2.83	8.81	6.79	9.23	8.57	21.37	21.10	13.83	13.04
8	4.22	2.42	4.36	2.94	6.79	5.33	10.97	8.68	21.09	20.69	13.35	13.02
9	4.33	2.30	4.40	2.79	5.48	4.35	14.70	10.97	20.68	20.52	17.34	13.43
10	4.49	2.36	4.39	2.97	4.73	3.73	22.58	14.70	20.52	20.10	25.81	17.98
11	4.50	2.38	4.13	2.75	4.83	3.53	25.31	22.58	20.08	19.68	27.22	25.95
12	4.09	2.21	4.59	3.06	5.15	3.62	26.58	25.31	19.67	19.32	26.94	26.48
13	3.87	1.99	4.20	2.85	5.03	3.73	25.92	24.40	19.30	19.14	26.51	25.44
14	3.70	1.94	3.93	2.56	5.36	3.58	24.41	23.48	19.13	18.89	25.30	24.70
15	3.63	1.77	4.37	2.40	5.80	4.25	23.48	23.09	18.88	18.56	24.72	24.48
16	3.13	1.39	4.21	2.71	6.26	4.95	23.09	22.58	18.53	17.91	24.46	24.28
17	3.29	1.54	4.45	2.61	6.17	5.31	22.58	22.17	17.88	17.02	24.27	23.92
18	3.49	1.63	3.61	2.35	5.83	4.99	22.17	21.67	16.97	16.02	23.82	23.21
19	3.76	1.75	3.71	1.92	5.21	4.52	21.67	21.20	15.97	15.01	23.40	23.26
20	3.64	1.87	3.74	1.88	4.79	3.78	21.20	20.56	14.67	13.44	23.43	23.18
21	3.67	1.70	3.64	1.87	4.53	3.62	20.56	20.24	13.39	12.50	24.17	23.52
22	3.77	1.66	3.29	1.70	4.23	3.30	20.37	20.17	12.47	11.74	24.74	24.04
23	3.86	1.67	3.25	1.49	4.02	3.03	20.50	20.37	11.72	10.96	24.75	24.67
24	3.89	1.79	3.35	1.58	4.30	2.99	20.60	20.42	10.93	10.17	24.67	24.18
25	3.88	1.81	3.77	2.02	4.05	2.87	20.93	20.60	10.12	9.60	24.34	24.05
26	3.78	1.83	3.53	2.17	4.13	2.77	21.67	20.93	9.94	9.53	24.30	23.95
27	3.39	1.56	3.36	1.81	4.47	2.98	23.91	21.67	9.59	9.28	23.96	22.36
28	3.35	1.60	3.31	1.71	4.68	3.17	25.81	23.91	9.38	9.04	22.36	21.30
29	3.00	1.44	3.57	1.87	4.83	3.13	24.58	21.93	---	---	21.30	20.84
30	3.04	1.49	3.93	1.93	5.40	3.44	21.93	21.33	---	---	20.84	20.44
31	3.30	1.51	---	---	5.38	4.03	21.33	21.28	---	---	20.44	20.12
MONTH	4.50	1.39	4.67	1.49	9.62	2.08	26.58	3.52	21.83	9.04	27.22	9.06

SACRAMENTO RIVER BASIN

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11447500 SACRAMENTO RIVER AT SACRAMENTO, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.12	19.82	22.15	19.05	13.58	13.48	11.41	10.88	6.26	5.55	6.68	6.07
2	19.82	19.45	23.74	22.15	13.69	13.51	10.92	10.32	6.34	5.69	6.83	6.23
3	19.45	19.14	24.26	23.74	13.51	13.16	10.43	10.07	6.48	5.61	6.99	6.27
4	19.14	18.73	24.51	24.26	13.18	13.02	10.25	9.47	6.50	5.71	6.91	6.13
5	18.73	18.26	24.56	24.20	13.09	13.00	9.65	9.15	6.72	5.79	6.81	6.02
6	18.26	17.57	24.44	24.10	13.14	12.91	9.60	9.16	6.76	5.69	6.75	5.99
7	17.57	17.05	24.11	23.65	12.91	12.48	9.49	8.76	6.69	5.63	6.97	6.23
8	17.38	17.02	23.65	23.18	12.53	12.02	9.05	8.02	6.56	5.54	7.08	6.37
9	18.87	17.38	23.18	22.86	12.04	11.55	8.58	7.89	6.55	5.51	7.49	6.67
10	19.66	18.87	22.88	22.45	11.66	10.97	8.69	7.89	6.77	5.67	7.51	7.01
11	20.20	19.66	22.45	22.04	11.02	10.29	8.90	8.24	6.63	5.59	7.29	6.80
12	20.40	20.20	22.04	21.61	10.54	10.21	9.03	8.35	6.24	5.31	7.34	6.84
13	20.56	20.38	21.61	21.27	10.65	10.21	8.68	7.89	5.90	5.05	7.62	6.98
14	20.61	20.53	21.27	20.68	10.63	10.11	8.29	7.56	5.72	4.86	7.63	7.15
15	20.53	20.43	20.68	19.87	10.53	10.03	7.95	7.17	6.30	5.22	7.58	7.14
16	20.44	20.39	19.87	18.88	11.78	10.53	7.50	6.91	6.46	5.67	7.64	7.23
17	20.39	20.23	18.88	17.38	13.04	11.78	13.54	7.14	6.58	5.32	7.68	7.23
18	20.23	20.10	17.38	15.74	13.27	13.04	14.62	13.54	6.09	5.09	7.66	7.21
19	20.10	19.76	15.74	14.42	13.19	12.86	14.30	13.06	5.90	5.05	7.66	7.19
20	19.76	19.47	14.42	13.62	12.87	12.38	13.06	11.55	5.96	5.13	7.77	7.33
21	19.47	18.78	13.62	12.72	12.39	11.79	11.55	10.40	6.49	5.61	7.83	7.35
22	18.78	17.70	12.72	12.23	11.84	11.28	10.42	9.28	6.64	5.81	7.88	7.37
23	17.70	16.35	12.31	12.11	11.38	10.75	9.43	8.51	6.75	5.92	7.78	7.35
24	16.35	14.79	12.23	12.10	10.83	10.23	8.79	8.01	6.82	6.03	7.65	7.23
25	14.79	13.44	12.63	12.16	10.37	9.89	8.35	7.65	6.68	5.94	7.52	7.11
26	13.44	12.34	13.09	12.63	10.47	9.85	8.01	7.21	6.63	5.91	7.39	6.72
27	12.34	11.31	13.38	13.09	11.21	10.47	7.57	6.84	6.55	5.88	7.50	6.88
28	11.66	10.83	13.46	13.33	11.64	11.21	7.57	6.77	6.34	5.70	7.49	6.91
29	14.67	11.66	13.56	13.41	11.95	11.64	7.38	6.51	6.25	5.56	7.43	6.63
30	19.05	14.67	13.59	13.45	11.80	11.41	6.70	5.86	6.35	5.66	7.27	6.68
31	---	---	13.57	13.45	---	---	6.42	5.69	6.54	5.82	---	---
MONTH	20.61	10.83	24.56	12.10	13.69	9.85	14.62	5.69	6.82	4.86	7.88	5.99

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA
(National Stream-Quality Accounting Network Station)

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).

GAGE.--Water-stage recorder and acoustic-velocity system. Datum of gage is sea level.

REMARKS.--No estimated daily discharges. 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, 102,000 ft³/s, Mar. 11, elevation, 21.77 ft; minimum daily, 6,740 ft³/s, Oct. 23.

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	10900	7460	8350	14300	70600	31900	67300	65900	44900	36700	19000	20800
2	10300	7720	8550	13500	69400	32000	65900	78100	45300	35000	19900	21500
3	9550	7180	9710	13400	75300	34800	65300	84100	45000	34000	19100	21700
4	9980	7780	15400	14700	75200	46700	62500	85400	43800	32600	19200	21500
5	10600	8180	28300	19900	74900	53300	60300	87900	43700	31100	19800	21500
6	9790	10500	34600	28600	73400	51200	60500	88600	44300	31000	18600	21500
7	9550	10700	28500	30300	71900	46700	58200	85400	43100	30300	17300	21900
8	9280	11300	22300	33100	72200	45400	58400	84000	41200	28200	17400	21900
9	9000	11100	18700	44200	71400	49400	62400	82100	39400	25800	18600	22800
10	8810	11900	16000	66100	70600	80100	65100	79500	38500	26900	17500	23600
11	9410	11600	14600	87900	68800	99500	69600	77100	36000	28000	18900	23200
12	8850	12000	13900	95700	67200	99500	71500	76600	34600	28100	18600	23400
13	8690	11800	14300	91100	65800	96100	72000	74100	34300	26000	17900	23900
14	8020	10900	14500	85700	65200	88100	71300	72800	33800	25200	16000	24500
15	7830	9890	17700	82400	64200	85700	71000	70600	34300	24000	16800	24500
16	7060	9980	20000	80200	62700	84400	70500	67200	35600	22200	16700	24500
17	6960	9310	20400	78100	60100	84600	70700	62300	40700	28200	19600	25100
18	6940	9830	18600	76700	56200	80700	70000	56600	43900	44500	18200	25100
19	6930	8910	17300	74400	51600	80000	69300	51900	42700	43300	18000	24800
20	7210	8730	15500	72600	47800	80300	67700	47700	41700	39100	19000	24500
21	6970	8440	15100	70500	44200	83800	65800	46500	40500	36300	18000	24200
22	6850	8260	14100	69900	41700	85400	62000	43300	38100	33200	18800	24300
23	6740	8020	13200	70600	38300	87500	58300	42900	37200	30300	18700	24600
24	6820	8020	12800	70900	36700	86700	54000	41600	34200	28700	19900	24300
25	6970	8630	13000	71900	34900	85400	48900	39900	33300	25800	19600	23900
26	7730	9790	13300	73400	33800	85500	44100	41600	32900	24800	19800	22900
27	7780	9700	13300	76600	32900	82200	40700	44200	34300	23200	19800	22800
28	8080	9350	12700	91200	32100	71700	38600	44600	36900	22200	19100	23100
29	7580	9090	12700	82600	---	70800	43300	45500	37600	21200	19800	22800
30	7640	8600	14700	74300	---	70900	57900	45600	36900	20800	20100	23000
31	7090	---	15400	73700	---	69300	---	45000	---	19500	20500	---
TOTAL	255910	284670	507510	1928500	1629100	2229600	1843100	1958600	1168700	906200	580200	698100
MEAN	8255	9489	16370	62210	58180	71920	61440	63180	38960	29230	18720	23270
MAX	10900	12000	34600	95700	75300	99500	72000	88600	45300	44500	20500	25100
MIN	6740	7180	8350	13400	32100	31900	38600	39900	32900	19500	16000	20800
AC-FT	507600	564600	1007000	3825000	3231000	4422000	3656000	3885000	2318000	1797000	1151000	1385000

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12380	16520	25930	34010	38990	37130	29800	24590	17640	14320	13970	14640
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 1994 CALENDAR YEAR			FOR 1995 WATER YEAR			WATER YEARS 1949 - 1995		
ANNUAL TOTAL	4417510			13990190					
ANNUAL MEAN	12100			38330			23250		
HIGHEST ANNUAL MEAN							46900		
LOWEST ANNUAL MEAN							7608		
HIGHEST DAILY MEAN	34600	Dec	6	99500	Mar	11	115000	Feb	19 1986
LOWEST DAILY MEAN	6120	Jun	6	6740	Oct	23	3970	Oct	15 1977
ANNUAL SEVEN-DAY MINIMUM	6760	Jun	5	6920	Oct	18	4060	Oct	13 1977
INSTANTANEOUS PEAK FLOW				102000	Mar	11	117000	Feb	19 1986
INSTANTANEOUS PEAK STAGE				21.77	Mar	11	25.00	Feb	19 1986
ANNUAL RUNOFF (AC-FT)	8762000			27750000			16840000		
10 PERCENT EXCEEDS	17200			77500			54300		
50 PERCENT EXCEEDS	11000			32000			15700		
90 PERCENT EXCEEDS	7660			8960			8750		

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER-QUALITY RECORDS

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

CHEMICAL DATA: Water year 1959 to current year.

BIOLOGICAL DATA: Water years 1974-81.

SPECIFIC CONDUCTANCE: Water years 1974-75, November 1988 to September 1994.

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: February 1974 to July 1975, November 1988 to September 1994.

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.--

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.--

WATER TEMPERATURE: Maximum recorded, 23.0°C, Aug. 2-4; minimum recorded, 7.5°C, several days in December, Jan. 1-4.

SEDIMENT CONCENTRATION: Maximum daily mean, 573 mg/L, Jan. 10, minimum daily mean, 5 mg/L, several days in November.

SEDIMENT LOAD: Maximum daily, 102,000 tons, Jan. 10; minimum daily, 101 tons, Nov. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)
DEC												
13...	1100	12500	193	7.9	8.0	7.9	764	9.0	76	93	280	71
MAR												
16...	1200	85800	75	6.8	11.0	28	760	11.1	101	310	250	30
JUN												
14...	1350	34600	86	7.7	17.0	5.6	761	9.5	98	K16	38	34
SEP												
13...	1225	24500	140	7.6	20.0	14	761	8.4	93	31	64	49

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
DEC 13...	15	8.2	12	26	0.6	2.2	93	76	8.9	11	<0.10	21
MAR 16...	6.9	3.1	2.9	17	0.2	0.90	38	32	2.4	1.8	<0.10	13
JUN 14...	8.0	3.5	3.7	18	0.3	0.90	43	35	3.0	1.9	<0.10	14
SEP 13...	10	5.7	8.3	27	0.5	0.90	68	56	5.8	4.3	<0.10	16

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS 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)	BARIUM, DIS- SOLVED (UG/L AS BA)
DEC												
13...	131	126	0.18	<0.010	0.330	0.030	0.30	0.070	0.050	0.060	100	28
MAR												
16...	58	51	0.08	<0.010	0.110	0.020	<0.20	0.070	0.020	0.020	80	15
JUN												
14...	58	57	0.08	<0.010	0.080	0.020	<0.20	0.030	<0.010	0.010	70	15
SEP												
13...	88	85	0.12	<0.010	0.090	<0.015	0.20	0.040	0.050	0.020	20	21

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 13...	<3	130	<4	4	<10	<1	<1	<1.0	100	<6	0.14	0.25
MAR 16...	<3	160	<4	10	10	1	<1	<1.0	43	<6	--	--
JUN 14...	<3	51	4	3	<10	4	<1	<1.0	55	<6	<0.02	0.06
SEP 13...	<3	50	<4	2	<10	1	<1	<1.0	83	<6	--	--

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	SEDIMENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 13...*	1052	20.0	172	194	7.7	8.0	764	8.8	74	29	94
13...*	1055	20.8	294	193	7.9	8.0	764	8.9	75	28	98
13...*	1059	21.5	377	192	7.9	8.0	764	8.9	75	26	100
13...*	1103	22.0	462	193	7.9	8.0	764	9.0	76	25	100
13...*	1108	23.8	547	194	7.9	8.0	764	8.9	75	24	100
JUN 14...*	1340	29.0	547	88	--	16.5	761	9.6	99	68	70
14...*	1345	26.9	462	86	--	17.0	761	9.6	99	48	79
14...*	1351	26.4	377	88	--	17.0	761	9.5	98	46	73
14...*	1356	25.4	274	90	--	17.0	761	9.5	98	46	74
14...*	1400	27.4	172	86	--	17.0	761	9.6	99	34	85

*Instantaneous streamflow at the time of cross-sectional measurements: Dec. 13, 12,500 ft³/s;
June 14, 34,600 ft³/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 13...	0950	15900	11.0	26	877	99
FEB 07...	1005	73300	10.0	93	18400	--
MAR 16...	1040	79900	10.5	110	23700	60
MAY 02...	0940	76900	12.0	146	30300	61
15...	1115	71100	--	92	17600	46
JUN 14...	1250	35600	17.0	44	4110	73
AUG 22...	1110	23700	20.5	49	2490	81
SEP 13...	1035	23600	19.0	49	3240	82

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
JAN												
	17...	1328	1	77600	10.0	--	--	2	39	94	100	--
	17...	1329	1	77600	10.0	--	--	5	66	98	99	100
	17...	1330	1	77600	10.0	--	--	4	41	91	98	99
	17...	1331	1	77600	10.0	--	--	10	73	98	99	100
	17...	1332	1	77600	10.0	--	2	48	96	100	--	--
FEB												
	07...	0835	1	73200	10.0	--	--	2	33	83	94	96
	07...	0840	1	73200	10.0	--	--	10	71	98	99	100
	07...	0850	1	73200	10.0	--	--	8	72	98	99	100
	07...	0900	1	73200	10.0	--	--	18	93	99	99	100
	07...	0910	1	73200	10.0	--	1	46	99	100	--	--
MAR												
	16...	0943	1	67700	10.5	--	--	4	49	95	99	99
	16...	0944	1	67700	10.5	--	--	4	50	92	98	100
	16...	0945	1	67700	10.5	--	--	14	93	100	--	--
	16...	0946	1	67700	10.5	--	--	15	80	99	100	--
	16...	0947	1	67700	10.5	--	1	56	99	100	--	--
SEP												
	13...	1058	1	22700	19.0	--	9	14	28	88	98	100
	13...	1059	1	22700	19.0	--	1	16	55	95	99	100
	13...	1100	1	22700	19.0	1	6	20	52	78	86	94
	13...	1101	1	22700	19.0	--	1	16	50	90	99	100
	13...	1102	1	22700	19.0	--	1	39	96	100	--	--

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	19.5	19.0	15.5	14.5	10.0	9.0	7.5	7.5	10.5	10.0	11.5	11.5
2	19.5	19.0	15.0	13.5	10.0	9.0	7.5	7.5	11.0	10.5	11.5	11.5
3	19.5	19.0	13.5	12.5	10.0	9.5	7.5	7.5	11.0	10.5	12.0	11.5
4	19.0	18.5	13.0	12.0	10.0	9.5	8.0	7.5	10.5	10.5	11.5	11.0
5	18.5	18.0	12.5	11.5	10.0	9.5	8.5	8.0	10.5	10.5	11.0	10.5
6	18.0	17.0	12.0	11.5	10.0	9.5	9.0	8.5	10.5	10.0	11.0	10.5
7	18.0	17.0	12.0	11.5	9.5	9.0	9.0	8.5	10.0	10.0	11.0	10.5
8	18.0	17.0	12.0	11.5	9.0	8.5	9.5	9.0	10.0	9.5	11.0	10.5
9	18.5	17.0	12.0	11.5	8.5	8.0	10.0	9.5	10.0	9.5	10.5	10.5
10	18.5	17.5	11.5	11.0	8.0	7.5	11.0	10.0	10.0	10.0	10.5	10.5
11	18.5	17.5	11.5	11.0	7.5	7.5	11.0	10.5	10.0	10.0	10.5	10.5
12	18.0	17.5	11.5	11.0	8.0	7.5	10.5	10.5	10.0	10.0	10.5	10.5
13	18.0	17.0	11.5	11.0	8.0	7.5	11.0	10.5	10.0	9.5	10.5	10.0
14	18.0	17.0	11.5	10.5	8.0	7.5	11.0	11.0	9.5	9.0	10.0	10.0
15	17.5	16.5	11.0	10.5	8.5	8.0	11.0	10.5	9.5	9.0	10.5	10.0
16	16.5	15.5	11.0	10.5	8.5	8.5	10.5	10.0	9.0	9.0	10.5	10.5
17	16.0	15.0	10.5	10.0	8.5	8.5	10.5	10.0	9.0	9.0	11.0	10.5
18	16.5	15.0	10.5	9.5	8.5	8.5	10.0	9.5	9.5	9.0	11.0	10.5
19	16.5	15.0	10.0	9.0	8.5	8.5	9.5	9.0	10.0	9.5	11.0	10.5
20	16.0	15.0	9.5	9.0	8.5	8.5	9.0	8.5	10.5	10.0	11.0	10.5
21	16.5	15.0	9.5	9.0	9.0	8.5	8.5	8.5	11.0	10.0	10.5	10.5
22	16.5	15.0	9.5	9.0	8.5	8.5	9.0	8.5	11.0	11.0	10.5	10.0
23	16.5	15.0	9.5	9.0	8.5	8.5	9.0	9.0	11.5	11.0	10.0	9.0
24	16.5	15.5	10.0	9.0	8.5	8.0	9.5	9.0	11.5	11.5	9.0	9.0
25	16.5	15.5	9.5	9.5	8.0	8.0	9.5	9.5	11.5	11.5	9.5	9.0
26	17.0	15.5	10.0	9.5	8.0	8.0	10.0	9.5	11.5	11.5	10.0	9.5
27	17.0	16.0	10.0	9.5	8.0	8.0	9.5	9.0	11.5	11.5	10.0	10.0
28	16.5	16.0	10.0	9.5	8.5	8.0	9.5	9.0	11.5	11.5	11.0	10.0
29	16.5	15.5	10.0	9.0	8.5	8.0	9.5	9.5	---	---	11.5	10.5
30	16.0	15.5	10.0	9.0	8.0	8.0	10.0	9.5	---	---	12.0	11.5
31	16.0	15.0	---	---	8.0	7.5	10.0	10.0	---	---	12.5	12.0
MONTH	19.5	15.0	15.5	9.0	10.0	7.5	11.0	7.5	11.5	9.0	12.5	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	13.0	12.5	17.0	16.5	18.5	18.0	22.0	21.5	20.5	19.5
2	13.0	13.0	12.5	12.0	16.5	16.0	18.5	18.5	23.0	22.0	20.0	19.5
3	13.0	13.0	12.5	12.5	16.0	15.5	18.5	18.5	23.0	22.5	20.0	19.0
4	13.5	13.0	12.5	12.5	16.0	16.0	19.0	18.5	23.0	22.0	19.5	19.0
5	13.5	13.5	12.5	12.0	16.0	16.0	19.5	19.0	22.5	22.0	19.5	19.0
6	14.0	13.5	12.0	11.5	16.0	15.5	19.5	19.5	22.5	21.5	20.0	19.0
7	13.5	13.0	12.5	12.0	16.0	15.5	19.5	19.5	22.0	21.5	20.5	19.5
8	13.0	12.5	13.0	12.5	16.0	15.5	20.0	19.5	22.0	21.0	20.5	19.5
9	12.5	11.5	13.0	13.0	16.0	15.5	20.0	19.5	22.0	21.0	20.0	19.5
10	12.0	11.5	13.5	13.0	16.0	16.0	19.5	19.0	21.5	21.0	19.5	19.0
11	12.5	11.5	14.0	13.5	17.0	16.0	19.0	18.5	21.0	20.5	19.5	19.0
12	12.5	12.0	13.5	13.0	17.0	16.5	18.5	18.5	21.0	20.0	20.0	19.0
13	12.5	12.5	13.0	13.0	17.0	16.5	18.5	18.5	21.0	20.0	20.0	19.0
14	13.0	12.0	13.0	12.5	16.5	16.0	19.0	18.5	21.5	20.5	19.5	19.0
15	12.5	12.0	13.0	12.5	16.0	15.5	19.5	19.0	21.5	20.5	19.5	19.0
16	12.0	11.5	13.5	12.5	15.5	15.0	20.5	19.5	21.5	20.5	19.5	18.5
17	12.0	11.5	14.0	13.5	15.0	14.5	20.5	16.5	21.0	20.0	19.5	18.5
18	11.5	11.5	15.0	14.0	15.5	15.0	19.0	16.5	21.0	20.0	19.5	18.5
19	11.5	11.5	16.0	15.0	15.5	15.0	19.5	18.5	21.0	20.0	19.5	18.5
20	12.0	11.5	16.5	16.0	16.0	15.5	19.5	19.0	21.5	20.5	20.0	19.0
21	12.0	12.0	16.5	16.0	16.5	16.0	20.0	19.0	21.5	20.5	20.0	19.0
22	12.5	12.0	16.0	15.5	17.0	16.5	20.0	19.5	21.0	20.5	20.0	19.0
23	13.0	12.5	16.5	16.0	18.0	17.0	20.0	20.0	21.0	20.5	19.5	19.0
24	14.0	13.0	16.5	16.0	18.5	18.0	20.5	20.0	21.0	20.5	19.5	18.5
25	14.5	14.0	16.5	16.0	19.0	18.5	20.5	20.0	20.5	20.0	19.0	18.5
26	15.0	14.5	16.0	15.5	19.5	19.0	21.0	20.0	20.0	19.5	19.0	18.0
27	15.0	14.5	16.0	15.5	19.0	18.5	21.5	21.0	20.0	19.5	18.5	18.0
28	14.5	14.5	16.5	16.0	18.5	18.0	22.0	21.5	20.0	19.0	18.5	18.0
29	14.5	13.5	16.5	16.0	18.5	18.0	21.5	21.5	20.0	19.0	18.5	18.0
30	13.5	13.0	17.0	16.5	18.5	18.0	21.5	21.0	20.0	19.0	18.0	17.5
31	---	---	17.0	16.5	---	---	22.0	21.0	20.5	19.5	---	---
MONTH	15.0	11.5	17.0	11.5	19.5	14.5	22.0	16.5	23.0	19.0	20.5	17.5

SACRAMENTO RIVER BASIN

11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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	10900	22	647	7460	5	101	8350	58	1310
2	10300	18	501	7720	5	104	8550	98	2260
3	9550	14	361	7180	7	136	9710	146	3830
4	9980	11	296	7780	9	189	15400	189	7860
5	10600	9	258	8180	11	243	28300	167	12800
6	9790	8	211	10500	15	425	34600	125	11700
7	9550	8	206	10700	19	549	28500	85	6540
8	9280	8	200	11300	16	488	22300	62	3730
9	9000	8	194	11100	12	360	18700	46	2320
10	8810	7	167	11900	9	289	16000	38	1640
11	9410	7	178	11600	8	251	14600	34	1340
12	8850	6	143	12000	8	259	13900	30	1130
13	8690	7	164	11800	8	255	14300	26	1000
14	8020	9	195	10900	7	206	14500	22	861
15	7830	11	233	9890	7	187	17700	19	908
16	7060	11	210	9980	10	269	20000	21	1130
17	6960	10	188	9310	15	377	20400	26	1430
18	6940	9	169	9830	20	531	18600	31	1560
19	6930	7	131	8910	11	265	17300	36	1680
20	7210	6	117	8730	6	141	15500	50	2090
21	6970	6	113	8440	5	114	15100	66	2690
22	6850	6	111	8260	5	112	14100	83	3160
23	6740	7	127	8020	5	108	13200	104	3710
24	6820	7	129	8020	5	108	12800	107	3700
25	6970	7	132	8630	5	117	13000	103	3620
26	7730	9	188	9790	5	132	13300	100	3590
27	7780	13	273	9700	5	131	13300	99	3560
28	8080	18	393	9350	5	126	12700	99	3390
29	7580	14	287	9090	6	147	12700	107	3670
30	7640	10	206	8600	18	418	14700	118	4680
31	7090	7	134	---	---	---	15400	129	5360
TOTAL	255910	---	6862	284670	---	7138	507510	---	108249
JANUARY			FEBRUARY			MARCH			
1	14300	135	5210	70600	106	20200	31900	66	5680
2	13500	141	5140	69400	91	17100	32000	73	6310
3	13400	149	5390	75300	91	18500	34800	75	7050
4	14700	155	6150	75200	94	19100	46700	80	10100
5	19900	161	8650	74900	87	17600	53300	92	13200
6	28600	173	13400	73400	92	18200	51200	58	8020
7	30300	201	16400	71900	103	20000	46700	54	6810
8	33100	266	23800	72200	105	20500	45400	55	6740
9	44200	425	50700	71400	71	13700	49400	73	9740
10	66100	573	102000	70600	73	13900	80100	117	25300
11	87900	414	98300	68800	71	13200	99500	102	27400
12	95700	272	70300	67200	66	12000	99500	128	34400
13	91100	215	52900	65800	66	11700	96100	101	26200
14	85700	212	49100	65200	63	11100	88100	89	21200
15	82400	175	38900	64200	74	12800	85700	84	19400
16	80200	131	28400	62700	85	14400	84400	80	18200
17	78100	138	29100	60100	87	14100	84600	64	14600
18	76700	148	30600	56200	95	14400	80700	76	16600
19	74400	156	31300	51600	146	20300	80000	66	14300
20	72600	132	25900	47800	145	18700	80300	67	14500
21	70500	117	22300	44200	98	11700	83800	70	15800
22	69900	106	20000	41700	65	7320	85400	56	12900
23	70600	101	19300	38300	62	6410	87500	76	18000
24	70900	97	18600	36700	48	4760	86700	68	15900
25	71900	96	18600	34900	47	4430	85400	41	9450
26	73400	109	21600	33800	48	4380	85500	43	9930
27	76600	126	26100	32900	48	4260	82200	44	9770
28	91200	132	32500	32100	49	4250	71700	44	8520
29	82600	137	30600	---	---	---	70800	45	8600
30	74300	140	28100	---	---	---	70900	45	8610
31	73700	124	24700	---	---	---	69300	46	8610
TOTAL	1928500	---	954040	1629100	---	369010	2229600	---	431840

SACRAMENTO RIVER BASIN

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11447650 SACRAMENTO RIVER AT FREEPORT, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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	67300	38	6900	65900	174	31000	44900	52	6300
2	65900	32	5690	78100	146	30800	45300	51	6240
3	65300	34	5990	84100	145	32900	45000	51	6200
4	62500	36	6070	85400	140	32300	43800	50	5910
5	60300	36	5860	87900	135	32000	43700	50	5900
6	60500	36	5880	88600	130	31100	44300	49	5860
7	58200	37	5810	85400	125	28800	43100	49	5700
8	58400	49	7730	84000	120	27200	41200	48	5340
9	62400	66	11100	82100	115	25500	39400	47	5000
10	65100	67	11800	79500	110	23600	38500	46	4780
11	69600	66	12400	77100	105	21900	36000	46	4470
12	71500	64	12400	76600	100	20700	34600	45	4200
13	72000	62	12100	74100	98	19600	34300	45	4170
14	71300	60	11600	72800	95	18700	33800	44	4020
15	71000	58	11100	70600	92	17500	34300	44	4070
16	70500	56	10700	67200	88	16000	35600	44	4230
17	70700	54	10300	62300	84	14100	40700	43	4730
18	70000	52	9830	56600	80	12200	43900	43	5100
19	69300	49	9170	51900	76	10600	42700	42	4840
20	67700	47	8590	47700	72	9270	41700	42	4730
21	65800	45	7990	46500	68	8540	40500	41	4480
22	62000	44	7370	43300	64	7480	38100	41	4220
23	58300	42	6610	42900	60	6950	37200	40	4020
24	54000	40	5830	41600	55	6180	34200	40	3690
25	48900	39	5150	39900	52	5600	33300	39	3510
26	44100	38	4520	41600	52	5840	32900	39	3460
27	40700	36	3960	44200	52	6210	34300	38	3520
28	38600	39	4060	44600	52	6260	36900	38	3790
29	43300	52	6080	45500	52	6390	37600	37	3760
30	57900	102	15900	45600	52	6400	36900	37	3690
31	---	---	---	45000	52	6320	---	---	---
TOTAL	1843100	---	248490	1958600	---	527940	1168700	---	139930
JULY			AUGUST			SEPTEMBER			
1	36700	36	3570	19000	36	1850	20800	40	2250
2	35000	36	3400	19900	35	1880	21500	43	2500
3	34000	35	3210	19100	35	1800	21700	43	2520
4	32600	35	3080	19200	34	1760	21500	41	2380
5	31100	34	2850	19800	34	1820	21500	40	2320
6	31000	34	2850	18600	34	1710	21500	38	2210
7	30300	33	2700	17300	33	1540	21900	39	2310
8	28200	33	2510	17400	33	1550	21900	39	2310
9	25800	32	2230	18600	32	1610	22800	40	2460
10	26900	32	2320	17500	32	1510	23600	42	2680
11	28000	31	2340	18900	33	1680	23200	45	2820
12	28100	31	2350	18600	33	1660	23400	48	3030
13	26000	31	2180	17900	34	1640	23900	49	3160
14	25200	30	2040	16000	33	1430	24500	35	2320
15	24000	28	1810	16800	33	1500	24500	31	2050
16	22200	27	1620	16700	32	1440	24500	28	1850
17	28200	48	3650	19600	31	1640	25100	26	1760
18	44500	49	5890	18200	30	1470	25100	26	1760
19	43300	42	4910	18000	29	1410	24800	26	1740
20	39100	41	4330	19000	34	1740	24500	27	1790
21	36300	41	4020	18000	43	2090	24200	28	1830
22	33200	40	3590	18800	47	2390	24300	29	1900
23	30300	40	3270	18700	44	2220	24600	29	1930
24	28700	39	3020	19900	42	2260	24300	30	1970
25	25800	39	2720	19600	39	2060	23900	31	2000
26	24800	38	2540	19800	36	1920	22900	28	1730
27	23200	38	2380	19800	33	1760	22800	26	1600
28	22200	37	2220	19100	31	1600	23100	24	1500
29	21200	37	2120	19800	32	1710	22800	22	1350
30	20800	36	2020	20100	34	1850	23000	22	1370
31	19500	36	1900	20500	37	2050	---	---	---
TOTAL	906200	---	89640	580200	---	54550	698100	---	63400
YEAR	13990190		3001089						

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.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.73 ft, Mar. 24; minimum daily, 0.39 ft, Nov. 2, 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	.40	.68	1.18	8.84	7.21	9.72	7.63	7.48	6.88	5.61	4.41
2	.77	.39	.68	1.21	8.81	7.27	9.59	7.63	7.46	6.83	5.57	4.37
3	.76	.39	.78	1.24	8.74	7.32	9.44	7.59	7.42	6.77	5.53	4.32
4	.76	.40	.83	1.37	8.65	7.35	9.29	7.53	7.37	6.74	5.50	4.29
5	.75	.51	.83	1.45	8.56	7.36	9.13	7.45	7.30	6.71	5.45	4.27
6	.74	.53	.84	1.63	8.46	7.38	9.01	7.48	7.31	6.64	5.41	4.26
7	.73	.53	.84	2.01	8.35	7.39	8.91	7.49	7.30	6.60	5.36	4.23
8	.73	.52	.84	2.95	8.25	7.41	8.80	7.50	7.29	6.56	5.33	4.20
9	.72	.59	.84	4.60	8.13	8.23	8.73	7.51	7.29	6.51	5.28	4.17
10	.70	.62	.84	5.75	8.03	9.07	8.60	7.50	7.27	6.45	5.20	4.14
11	.68	.61	.85	6.36	7.92	9.71	8.49	7.47	7.26	6.40	5.18	4.11
12	.62	.60	.87	6.80	7.79	10.02	8.37	7.50	7.25	6.36	5.14	4.08
13	.63	.60	.90	7.19	7.68	10.20	8.27	7.58	7.23	6.33	5.12	4.05
14	.55	.60	.94	7.71	7.58	10.42	8.16	7.59	7.24	6.30	5.08	4.02
15	.56	.62	.97	8.01	7.48	10.61	8.04	7.63	7.22	6.27	5.04	3.98
16	.57	.59	.99	8.12	7.37	10.66	7.96	7.64	7.24	6.23	4.97	3.94
17	.55	.56	1.01	8.13	7.27	10.61	7.84	7.65	7.22	6.21	4.93	3.91
18	.54	.60	1.02	8.09	7.18	10.51	7.71	7.64	7.17	6.16	4.90	3.89
19	.53	.59	1.03	8.02	7.13	10.40	7.61	7.64	7.17	6.11	4.86	3.87
20	.52	.60	1.03	7.94	7.14	10.38	7.54	7.62	7.17	6.07	4.84	3.84
21	.52	.59	1.03	7.88	7.16	10.42	7.58	7.60	7.16	6.03	4.80	3.82
22	.52	.59	1.04	7.89	7.16	10.54	7.58	7.59	7.14	5.99	4.77	3.78
23	.51	.58	1.06	8.06	7.18	10.68	7.57	7.57	7.13	5.95	4.73	3.75
24	.50	.59	1.06	8.25	7.18	10.71	7.55	7.56	7.10	5.92	4.68	3.72
25	.49	.63	1.08	8.34	7.19	10.66	7.52	7.56	7.09	5.88	4.65	3.66
26	.49	.65	1.09	8.40	7.20	10.57	7.52	7.55	7.07	5.85	4.61	3.63
27	.47	.69	1.10	8.53	7.20	10.45	7.52	7.53	7.03	5.82	4.57	3.59
28	.47	.68	1.12	8.61	7.21	10.32	7.54	7.53	7.00	5.77	4.51	3.53
29	.46	.68	1.14	8.65	---	10.19	7.57	7.52	6.96	5.73	4.49	3.52
30	.45	.68	1.15	8.75	---	10.02	7.59	7.51	6.91	5.69	4.46	3.49
31	.44	---	1.16	8.83	---	9.87	---	7.51	---	5.65	4.44	---
MEAN	.60	.57	.96	6.19	7.74	9.48	8.22	7.56	7.21	6.24	5.00	3.96
MAX	.79	.69	1.16	8.83	8.84	10.71	9.72	7.65	7.48	6.88	5.61	4.41
MIN	.44	.39	.68	1.18	7.13	7.21	7.52	7.45	6.91	5.65	4.44	3.49

CAL YR 1994 MEAN 2.49 MAX 4.41 MIN .39
WTR YR 1995 MEAN 5.29 MAX 10.71 MIN .39

SACRAMENTO RIVER BASIN

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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 fair. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,620 ft³/s, Mar. 9, gage height, 10.54 ft; minimum daily, 0.78 ft³/s, Nov. 24.

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	2.1	1.3	.95	.97	e3540	e53	3720	2170	464	584	522	e292
2	2.1	1.4	.92	.96	e3310	e53	3670	2210	457	569	482	e294
3	2.0	1.3	.99	1.0	e3240	53	3580	2200	521	542	e438	e255
4	2.0	1.1	.98	1.3	e3240	56	3540	2170	535	541	e487	e217
5	1.8	1.1	.93	1.2	e3160	61	3470	826	290	526	e471	e198
6	1.8	1.1	.90	1.4	e3090	63	3410	419	49	479	e398	e237
7	1.7	1.1	.90	2.3	e3090	478	3370	375	41	480	e370	e261
8	1.7	1.2	.92	1170	e3020	1440	3330	375	40	482	e330	e411
9	1.7	1.2	.89	2290	e2950	4680	3240	376	40	451	e324	405
10	1.8	1.4	.94	2530	e2950	4330	3180	219	39	410	e380	395
11	1.7	1.0	.93	2760	e2820	4250	3130	200	38	423	e445	388
12	1.7	.98	.88	2630	e2820	4100	3080	165	38	458	e457	389
13	1.7	.95	.82	2970	e2820	4230	3110	276	38	497	e409	400
14	1.7	.96	.86	3030	e2690	4410	2990	482	37	520	e401	409
15	1.7	.97	.84	2820	e2570	4410	2990	514	37	496	e367	367
16	1.5	.97	.85	2810	e2220	4370	2930	516	52	481	e401	317
17	1.5	.96	.87	2770	e2330	4280	2890	515	129	503	e385	308
18	1.5	.98	.87	2820	e2300	4140	2850	520	176	493	e393	318
19	1.5	.95	.86	2830	e58	4110	1970	549	154	464	e396	317
20	1.6	.90	.86	2700	e57	4310	754	566	190	458	e352	306
21	1.7	.87	.88	2700	e49	4200	421	561	286	445	e294	332
22	1.7	.82	.93	3570	e63	4570	526	558	337	389	e330	349
23	1.7	.81	.98	3260	e56	4450	683	556	368	386	e340	331
24	1.7	.78	1.0	3150	e56	4400	837	363	419	413	e340	296
25	1.7	.81	1.0	3100	e54	4330	452	159	438	437	e308	304
26	1.7	.84	1.0	e3220	e52	4290	458	306	443	469	e279	328
27	1.7	.90	1.0	e3280	e52	4170	454	306	452	476	e273	339
28	1.6	.86	1.0	e3260	e54	4030	316	304	467	486	e257	325
29	1.5	.89	1.0	e3320	---	3920	542	280	482	524	e271	322
30	1.4	.92	.96	e3510	---	3860	1270	108	556	546	e273	336
31	1.3	---	.96	e3540	---	3790	---	215	---	537	e273	---
TOTAL	52.5	30.32	28.67	70049.13	52711	99887	67163	19359	7613	14965	11446	9746
MEAN	1.69	1.01	.92	2260	1883	3222	2239	624	254	483	369	325
MAX	2.1	1.4	1.0	3570	3540	4680	3720	2210	556	584	522	411
MIN	1.3	.78	.82	.96	49	53	316	108	37	386	257	198
AC-FT	104	60	57	138900	104600	198100	133200	38400	15100	29680	22700	19330
a	0.83	4.94	3.66	28.39	0.82	15.02	2.27	1.63	0.20	0	0	0

e Estimated.

a Precipitation, in inches.

SACRAMENTO RIVER BASIN

11451000 CACHE CREEK NEAR LOWER LAKE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.5	17.1	112	590	723	759	547	308	361	387	312	163
MAX	73.3	683	2584	2915	3604	4919	3538	951	642	609	500	325
(WY)	1972	1984	1984	1965	1958	1983	1958	1983	1946	1946	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1945 - 1995

ANNUAL TOTAL	18285.25	353050.62	
ANNUAL MEAN	50.1	967	
HIGHEST ANNUAL MEAN			357 1983
LOWEST ANNUAL MEAN			1342
HIGHEST DAILY MEAN	405 Apr 4	4680 Mar 9	.67 1990
LOWEST DAILY MEAN	.78 Nov 24	.78 Nov 24	5280 Feb 24 1958
ANNUAL SEVEN-DAY MINIMUM	.83 Nov 22	.83 Nov 22	.00 Nov 8 1977
INSTANTANEOUS PEAK FLOW		7620 Mar 9	.00 Nov 8 1977
INSTANTANEOUS PEAK STAGE		10.54 Mar 9	8000 Feb 24 1958
ANNUAL RUNOFF (AC-FT)	36270	700300	10.54 Mar 9 1995
10 PERCENT EXCEEDS	175	3310	258500
50 PERCENT EXCEEDS	5.3	367	586
90 PERCENT EXCEEDS	.96	.96	45
			.97

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 except for periods of estimated record, which are poor. 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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 8	2330	*8940	*12.37	Mar. 15	1330	3200	8.64
Jan. 13	2030	5910	10.89	Mar. 21	1315	2340	7.80
Jan. 22	1950	2850	8.44	May 1	0845	1970	7.38
Mar. 9	unknown	4950	10.32				

No flow Oct. 1-3.

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	e.00	.50	e19	29	1440	e58	432	1280	65	19	4.9	1.7
2	e.00	.54	e18	33	1290	e91	375	815	62	19	4.6	1.6
3	e.00	.54	e70	88	1160	e175	319	605	59	18	4.3	1.4
4	e.20	.82	e100	425	e750	e100	273	440	56	17	4.2	1.4
5	e.37	7.1	e75	407	e648	e91	242	332	53	16	4.0	1.4
6	e.28	6.5	e60	366	e580	e75	221	278	51	15	3.8	1.4
7	.20	3.7	e50	2200	e490	e63	510	247	50	14	3.8	1.4
8	.17	2.8	e45	6140	e430	e1700	683	214	47	14	3.6	1.3
9	.20	33	e38	5720	e390	e4000	515	195	43	14	3.4	1.3
10	.24	19	e30	3090	e320	e3300	387	174	41	14	3.3	1.2
11	.24	7.1	e28	1870	e290	e2700	305	161	39	13	3.2	1.2
12	.25	4.8	e24	1900	e462	e2250	254	167	37	14	3.2	1.3
13	.29	e4.0	e47	3370	e375	e2000	261	240	36	13	3.0	1.2
14	.33	e3.8	e85	3270	e300	e1800	260	179	39	12	2.9	1.2
15	.32	e23	e60	1770	e260	e2680	217	262	56	11	2.7	1.2
16	.31	e28	e61	1120	e235	2010	212	214	50	11	2.6	1.1
17	.34	e18	e60	786	e190	1470	188	185	42	10	2.6	1.1
18	.40	e15	e56	548	e160	1150	161	167	38	10	2.7	.94
19	.39	e13	e50	480	e140	968	144	151	36	10	2.5	.61
20	.38	e12	e46	515	e129	759	139	139	34	9.4	2.4	.62
21	.38	e12	e42	580	e118	1740	121	127	32	9.0	2.3	.58
22	.41	e10	e38	1480	e100	1310	109	121	30	8.7	2.1	.59
23	.45	e9.0	e36	2460	e95	1690	100	113	28	8.4	2.0	.61
24	.44	e21	e40	2350	e87	1320	92	105	27	8.0	1.9	.64
25	.39	e50	e46	1930	e80	1120	84	101	25	7.7	1.9	.65
26	.40	e58	e38	1980	e76	999	79	91	24	7.3	1.9	.69
27	.41	e41	e30	1950	e71	888	94	88	22	6.9	1.9	.77
28	.45	e39	e41	1920	e65	799	89	87	21	6.4	1.8	.82
29	.45	e30	e38	1680	---	659	268	78	20	5.9	1.9	.82
30	.42	e28	e31	2030	---	552	253	72	19	5.6	1.8	.85
31	.45	---	25	1760	---	472	---	68	---	5.2	1.8	---
TOTAL	9.56	501.20	1427	54247	10731	38989	7387	7496	1182	352.5	89.0	31.59
MEAN	.31	16.7	46.0	1750	383	1258	246	242	39.4	11.4	2.87	1.05
MAX	.45	58	100	6140	1440	4000	683	1280	65	19	4.9	1.7
MIN	.00	.50	18	29	65	58	79	68	19	5.2	1.8	.58
AC-FT	19	994	2830	107600	21280	77330	14650	14870	2340	699	177	63
a	.35	7.85	6.42	37.14	0.61	19.54	6.06	3.13	0.63	0	0	0

e Estimated.

a Precipitation, in inches.

SACRAMENTO RIVER BASIN

11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.82	57.2	118	284	289	287	117	43.6	12.7	3.55	1.08	.84
MAX	12.4	405	698	1750	1287	1258	631	242	39.4	12.7	5.87	4.09
(WY)	1980	1982	1984	1985	1986	1985	1982	1985	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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1972 - 1995

ANNUAL TOTAL	8535.46		122442.85									
ANNUAL MEAN	23.4		335							101		
HIGHEST ANNUAL MEAN										335		1995
LOWEST ANNUAL MEAN										3.67		1977
HIGHEST DAILY MEAN	569	Feb 7		6140	Jan 8					8340	Feb 17	1986
LOWEST DAILY MEAN	.00	Jul 14		.00	Oct 1					.00	Aug 27	1972
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 14		.15	Oct 1					.00	Aug 27	1972
INSTANTANEOUS PEAK FLOW				8940	Jan 8					10800	Feb 17	1986
INSTANTANEOUS PEAK STAGE				12.37	Jan 8					12.84	Feb 17	1986
ANNUAL RUNOFF (AC-FT)	16930			242900						72900		
10 PERCENT EXCEEDS	60			1210						242		
50 PERCENT EXCEEDS	10			40						9.8		
90 PERCENT EXCEEDS	.00			.60						.40		

SACRAMENTO RIVER BASIN

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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. 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, 1995.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 709 ft³/s, Jun. 10, gage height, 4.67 ft; minimum daily, 0.37 ft³/s, Oct. 15.

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	212	7.7	e9.4	4.9	9.2	8.9	151	67	e130	e150	154	161
2	75	7.7	e9.6	5.0	8.9	9.3	151	119	e128	e152	154	167
3	14	7.7	e9.8	4.9	8.9	9.3	152	181	e132	e153	157	172
4	6.3	7.7	e10	4.8	8.9	9.3	165	219	e128	e148	158	168
5	6.0	7.6	e9.7	4.8	8.9	9.3	164	349	e483	e146	160	137
6	5.9	6.8	e9.7	5.0	8.9	9.3	164	367	e575	e148	160	6.6
7	5.8	6.3	e9.9	5.3	8.9	9.3	166	e364	e522	e146	160	27
8	5.4	6.3	e10	7.1	8.9	10	163	e367	471	e152	149	13
9	5.2	6.6	e9.7	7.5	8.9	16	162	e360	553	e151	125	9.3
10	5.5	6.4	e9.7	7.0	8.9	11	162	e400	652	e150	150	15
11	5.7	6.3	e9.9	6.5	8.9	19	201	e280	618	e147	150	8.5
12	5.9	6.3	e10	6.3	9.1	22	236	e244	565	e148	150	8.6
13	6.1	6.0	e10	7.0	9.3	24	237	e248	568	e153	150	8.6
14	6.1	5.5	1.4	8.2	9.3	27	240	e252	589	e154	159	8.6
15	.37	5.6	.40	7.7	9.3	30	236	e250	576	e155	158	8.6
16	23	5.9	.40	7.7	9.3	24	237	e254	503	e155	130	8.6
17	30	e6.0	61	7.7	9.3	11	236	e250	286	e156	157	8.6
18	8.3	e6.2	56	7.8	4.9	11	235	e246	178	e158	166	8.6
19	8.9	e6.6	17	7.9	.44	11	230	e244	170	e152	164	9.4
20	8.9	e6.2	17	7.5	6.3	13	160	e248	165	e150	166	10
21	8.6	e6.6	17	7.4	8.3	13	13	e252	167	e148	159	9.9
22	8.6	e6.8	17	9.6	8.3	16	13	e244	163	e144	164	9.9
23	8.6	e7.2	16	9.5	8.3	15	12	e246	166	e143	175	9.9
24	8.6	e7.6	4.7	9.1	8.3	14	12	e248	e165	e140	158	9.9
25	8.4	e7.2	4.4	6.5	8.3	12	12	e325	e163	145	156	9.7
26	8.3	e7.6	4.4	9.6	8.5	10	13	e132	e160	150	156	9.7
27	8.3	e8.0	4.4	9.6	8.6	9.7	74	e128	e158	150	156	10
28	8.2	e8.6	4.4	9.5	8.6	9.3	67	e130	e156	151	156	10
29	8.0	e8.8	4.4	9.3	---	100	66	e180	e154	152	155	10
30	7.8	e9.1	4.7	9.9	---	150	64	e338	e152	152	154	9.9
31	7.7	---	4.8	9.3	---	152	---	e380	---	153	159	---
TOTAL	535.47	208.9	366.80	229.9	232.64	794.7	4194	7912	9596	4652	4825	1062.9
MEAN	17.3	6.96	11.8	7.42	8.31	25.6	140	255	320	150	156	35.4
MAX	212	9.1	61	9.9	9.3	152	240	400	652	351	175	172
MIN	.37	5.5	.40	4.8	.44	8.9	12	67	128	145	125	6.6
AC-FT	1060	414	728	456	461	1580	8320	15690	19030	9230	9570	2110
a	0.40	3.51	2.88	13.94	0.18	10.66	0.79	2.25	0.56	0	0	0

e Estimated.

a Precipitation, in inches.

SACRAMENTO RIVER BASIN

11451300 NORTH FORK CACHE CREEK NEAR CLEARLAKE OAKS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.2	9.51	12.0	9.49	77.0	125	188	225	233	187	106	42.6
MAX	17.3	12.0	28.3	11.7	659	849	557	717	576	370	302	189
(WY)	1995	1987	1987	1986	1986	1986	1987	1987	1987	1988	1987	1994
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 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1986 - 1995			
ANNUAL TOTAL	52087.87				34610.31							
ANNUAL MEAN	143				94.8				102			
HIGHEST ANNUAL MEAN									222			
LOWEST ANNUAL MEAN									8.54			
HIGHEST DAILY MEAN	533				652				4970			
LOWEST DAILY MEAN	.37				.37				.37			
ANNUAL SEVEN-DAY MINIMUM	1.8				4.5				1.8			
INSTANTANEOUS PEAK FLOW	1.8				709				5390			
INSTANTANEOUS PEAK STAGE					4.67				9.80			
ANNUAL RUNOFF (AC-FT)	103300				68650				74440			
10 PERCENT EXCEEDS	397				242				357			
50 PERCENT EXCEEDS	17				13				11			
90 PERCENT EXCEEDS	2.1				6.2				7.0			

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 except for period of estimated record which is fair. 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, 88.44 ft, present datum, Mar. 10, 1904; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,400 ft³/s, Mar. 9, gage height, 85.37 ft; no flow for many days.

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	.00	.00	.00	.02	5470	333	5300	1900	81	25	35	17
2	.00	.00	.00	.16	5010	343	5120	2640	92	40	30	16
3	.00	.00	.00	4.6	4730	362	4950	2560	69	41	23	18
4	.00	.00	.00	35	4490	378	4770	2540	66	47	24	43
5	.00	.00	.45	1370	4280	345	4670	2320	63	44	24	38
6	.00	.00	43	510	4120	324	4500	1070	85	56	33	30
7	.00	.00	19	2940	3980	313	4480	817	110	57	26	27
8	.00	.00	6.0	10300	3870	829	4390	721	92	40	21	18
9	.00	.00	.90	27800	3760	19100	4250	713	92	35	18	23
10	.00	.00	.02	23400	3640	20500	4070	704	72	53	18	21
11	.00	.00	.00	9540	3550	17500	4000	615	63	39	19	19
12	.00	.00	.00	8580	3420	10700	3910	479	46	33	19	16
13	.00	.00	.00	6080	3370	7440	3860	454	37	32	21	20
14	.00	.00	.00	11900	3360	8430	3780	704	38	24	21	25
15	.00	.00	.00	7840	3230	8360	3660	805	41	21	21	22
16	.00	.00	17	5760	3160	7230	3630	870	64	21	20	21
17	.00	.00	43	5040	3050	6730	3520	750	78	20	18	27
18	.00	.00	19	4570	2900	6350	3480	673	67	26	18	31
19	.00	.00	7.6	4230	2300	6070	3400	609	54	25	31	25
20	.00	.00	5.7	4170	970	6900	2120	570	63	26	34	27
21	.00	.00	5.6	4200	551	7620	1170	550	41	21	32	34
22	.00	.00	1.5	4710	481	11000	755	528	39	18	22	24
23	.00	.00	.69	10300	454	11600	724	512	41	21	19	27
24	.00	.00	1.0	7500	413	9430	821	497	53	17	18	43
25	.00	.00	.74	6480	389	7560	831	e405	53	20	14	51
26	.00	.00	.00	5600	373	6870	465	e274	47	22	14	46
27	.00	.00	.02	7990	357	6380	397	e215	26	23	14	48
28	.00	.00	.18	6930	343	6090	502	e171	22	28	14	50
29	.00	.00	.00	6140	---	5830	428	e134	21	27	14	57
30	.00	.00	.00	6270	---	5750	730	e105	24	25	16	61
31	.00	---	.00	6670	---	5470	---	e84	---	25	15	---
TOTAL	0.00	0.00	171.40	206859.78	76021	212137	88683	25989	1740	952	666	925
MEAN	.000	.000	5.53	6673	2715	6843	2956	838	58.0	30.7	21.5	30.8
MAX	.00	.00	43	27800	5470	20500	5300	2640	110	57	35	61
MIN	.00	.00	.00	.02	343	313	397	84	21	17	14	16
AC-FT	.00	.00	340	410300	150800	420800	175900	51550	3450	1890	1320	1830

e Estimated.

SACRAMENTO RIVER BASIN

11452500 CACHE CREEK AT YOLO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.7	62.1	433	1348	1873	1478	878	198	59.6	25.4	10.1	5.13
MAX	335	1593	5644	7446	9262	10930	6353	1655	784	421	189	69.4
(WY)	1963	1984	1984	1914	1958	1983	1958	1904	1906	1907	1907	1906
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1903 - 1995

ANNUAL TOTAL	8933.79	614144.18	
ANNUAL MEAN	24.5	1683	
HIGHEST ANNUAL MEAN			524
LOWEST ANNUAL MEAN			2449
HIGHEST DAILY MEAN	1220	Feb 8	1983
LOWEST DAILY MEAN	.00	Mar 25	1977
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 25	.000
INSTANTANEOUS PEAK FLOW			29300
INSTANTANEOUS PEAK STAGE			Feb 25 1958
ANNUAL RUNOFF (AC-FT)	17720		.00
10 PERCENT EXCEEDS	65		Aug 7 1903
50 PERCENT EXCEEDS	.00		Aug 7 1903
90 PERCENT EXCEEDS	.00		Aug 7 1903
			Feb 25 1958
			Mar 10 1904
			88.44
			379400
			1340
			.06
			.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.

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, 241,000 ft³/s, Mar. 13, gage height, 30.94 ft.

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	---	---	---	---	35800	---	21000	1150	---	---	---	---
2	---	---	---	---	37800	---	17400	23000	---	---	---	---
3	---	---	---	---	41900	---	11900	58500	---	---	---	---
4	---	---	---	---	46200	---	8340	65500	---	---	---	---
5	---	---	---	---	43300	---	7020	56700	---	---	---	---
6	---	---	---	---	36700	---	6310	51600	---	---	---	---
7	---	---	---	1790	30100	---	5910	39600	---	---	---	---
8	---	---	---	2750	24500	---	5780	30900	---	---	---	---
9	---	---	---	14100	20600	2070	5620	26100	---	---	---	---
10	---	---	---	25100	18400	16000	8190	19900	---	---	---	---
11	---	---	---	83500	16100	89400	15100	12700	---	---	---	---
12	---	---	---	141000	13300	195000	18500	6660	---	---	---	---
13	---	---	---	129000	10700	238000	19600	3170	---	---	---	---
14	---	---	---	123000	8060	236000	21000	1430	---	---	---	---
15	---	---	---	119000	5620	232000	18900	1590	---	---	---	---
16	---	---	---	103000	4590	222000	19800	1850	---	---	---	---
17	---	---	---	79900	4250	204000	17200	1980	---	---	---	---
18	---	---	---	54000	4030	179000	13400	1810	1040	---	---	---
19	---	---	---	36200	3810	157000	8100	1480	1180	---	---	---
20	---	---	---	26000	3270	142000	4930	1200	1050	---	---	---
21	---	---	---	20700	2580	141000	3140	---	---	---	---	---
22	---	---	---	18500	2130	137000	1780	---	---	---	---	---
23	---	---	---	19700	1850	151000	1420	---	---	---	---	---
24	---	---	---	21000	1730	144000	1280	---	---	---	---	---
25	---	---	---	26400	1530	121000	1180	---	---	---	---	---
26	---	---	---	32400	1230	97100	1160	---	---	---	---	---
27	---	---	---	39000	1000	76300	1140	---	---	---	---	---
28	---	---	---	42600	---	52700	1020	---	---	---	---	---
29	---	---	---	39400	---	39300	---	---	---	---	---	---
30	---	---	---	35600	---	31400	1030	---	---	---	---	---
31	---	---	---	37100	---	25400	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

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	13420	10890	48790	86470	92890	27910	37310	4546	1420	107	84.9	155
MAX	1963	1951	1956	1970	1958	1958	1958	1952	1967	1958	1958	1954
(WY)	1.01	2.19	.92	2.43	.88	3.55	.083	.55	.53	.000	.000	.63
MIN	1977	1960	1977	1977	1977	1977	1976	1977	1977	1966	1966	1977
(WY)												

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	

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 178,100 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, 1,492,200 acre-ft, May 17, 18, 20, 21, elevation, 434.21 ft; minimum, 548,230 acre-ft, Nov. 4, elevation, 373.14 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567790	549650	549410	560470	1026100	1065200	1439600	1478000	1486000	1451200	1403700	1353700
2	566950	549180	549410	561070	1029800	1067500	1441200	1480800	1484300	1449700	1402100	1352100
3	566110	548700	550960	562030	1032300	1068900	1442900	1482600	1483200	1448600	1400500	1350500
4	565630	548230	554520	569470	1034600	1069800	1444500	1484100	1482600	1446900	1398600	1348900
5	565270	550130	555350	573100	1037100	1070400	1446400	1485100	1481000	1445500	1396800	1347400
6	564910	550960	555350	579530	1040500	1070900	1448100	1485800	1479500	1444200	1395000	1346200
7	564430	550720	555590	594940	1041500	1071500	1452300	1486400	1478200	1442500	1393500	1345100
8	563950	550360	555940	665590	1043900	1079000	1455700	1486400	1477000	1441000	1391700	1344000
9	563350	550720	556060	742470	1046300	1167200	1458100	1488100	1475900	1439600	1390100	1342400
10	562750	550720	556060	785250	1047300	1238000	1459200	1488600	1474400	1437500	1388300	1342400
11	562150	550720	556060	797440	1048200	1265900	1460900	1488200	1473700	1436400	1387000	1341300
12	561430	550720	556420	811430	1049700	1278700	1462300	1488200	1472800	1434800	1385700	1338600
13	560710	550600	556420	841520	1051600	1300900	1463500	1490100	1470900	1433100	1383700	1337400
14	559990	550600	557250	882810	1053200	1307600	1464800	1490500	1469800	1431400	1382100	1336100
15	559270	550600	558550	894930	1054500	1318800	1465900	1491300	1469200	1429800	1380400	1334900
16	558430	550720	559030	902160	1055700	1325800	1466400	1491800	1468700	1428100	1378800	1333800
17	557720	550720	559390	906830	1056500	1331500	1467500	1492200	1468100	1426700	1376600	1332700
18	557010	550360	559630	910000	1057600	1335400	1468700	1492200	1467500	1424800	1375000	1331100
19	556300	549890	559630	912570	1058400	1339200	1468800	1492000	1466600	1423700	1373400	1330100
20	555590	549410	561430	916370	1059200	1350300	1469400	1492200	1465900	1422100	1371800	1329500
21	554990	549180	561430	920010	1060000	1357100	1469800	1492200	1465100	1420400	1370100	1327900
22	554400	549060	561430	932810	1060800	1384800	1470000	1492000	1464000	1418800	1369000	1326800
23	554040	548940	559630	950620	1061300	1401400	1470100	1491800	1463100	1417500	1366700	1325800
24	553570	549180	559630	960980	1062000	1410300	1470300	1491400	1461400	1415800	1365100	1324700
25	552970	549530	559750	967810	1062800	1416700	1470500	1491100	1459600	1414200	1364300	1323800
26	552500	549650	559870	977940	1063300	1421900	1470300	1490300	1458600	1413100	1362400	1322700
27	552030	549650	559870	990310	1063800	1425900	1470000	1489900	1457500	1411400	1360700	1321800
28	551430	549650	559870	997710	1064700	1429200	1470300	1489400	1455800	1409800	1359600	1321000
29	551080	549530	560110	1006900	---	1432000	1470500	1488800	1454700	1408100	1358000	1319900
30	550600	549530	560230	1013800	---	1434800	1472900	1488100	1453100	1406500	1356400	1319000
31	550130	---	560350	1021300	---	1437300	---	1487100	---	1405400	1354800	---
MAX	567790	550960	561430	1021300	1064700	1437300	1472900	1492200	1486000	1451200	1403700	1353700
MIN	550130	548230	549410	560470	1026100	1065200	1439600	1478000	1453100	1405400	1354800	1319000
a	373.30	373.25	374.16	407.09	409.79	431.26	433.18	433.94	432.11	429.52	426.73	424.73
b	-18260	-600	+10820	+460950	+43400	+372600	+35600	+14200	-34000	-47700	-50600	-35800
c	3351	1037	625	639	1379	2489	4357	6041	9232	9750	9930	7110

CAL YR 1994 b -199260

WTR YR 1995 b +750610

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.--No estimated daily discharges. Records good. 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,770 ft³/s, Jan. 9, gage height, 12.91 ft; minimum daily, 25 ft³/s, Apr. 7.

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	283	151	84	41	60	58	54	320	586	649	612	614
2	283	134	84	41	58	60	53	199	592	631	642	574
3	283	127	84	44	51	56	50	196	604	617	658	551
4	272	120	59	130	46	48	40	199	559	632	670	525
5	226	99	38	57	43	53	28	199	574	634	669	514
6	203	71	58	44	40	58	27	202	583	617	665	497
7	202	78	86	75	38	58	25	226	626	617	632	494
8	202	78	62	324	37	71	33	257	589	617	610	533
9	202	66	51	768	225	609	67	306	544	617	559	555
10	202	65	86	334	255	682	74	371	563	599	638	510
11	224	65	87	133	114	465	57	382	598	579	681	491
12	258	65	87	77	74	238	43	388	630	611	679	495
13	257	65	96	75	128	139	114	314	614	656	655	513
14	243	65	82	145	94	109	147	223	593	692	634	520
15	238	65	43	86	91	91	147	210	575	722	636	496
16	245	75	57	62	91	71	147	230	451	703	662	456
17	252	86	70	50	81	60	118	254	346	669	670	440
18	250	86	86	47	65	55	110	257	342	637	668	460
19	238	86	86	38	62	51	116	248	368	627	670	474
20	218	86	121	37	61	62	142	300	400	594	648	469
21	237	85	86	40	61	58	205	335	447	577	637	449
22	254	55	86	72	60	209	287	384	539	610	660	419
23	233	35	86	126	60	171	289	400	598	635	665	377
24	215	65	117	110	59	128	289	402	598	649	644	348
25	213	85	85	87	59	99	349	388	606	657	607	340
26	199	85	86	81	59	85	388	437	629	631	550	356
27	179	85	71	96	58	73	430	468	661	623	512	340
28	191	84	41	86	58	67	455	236	667	629	536	318
29	202	84	41	73	---	63	427	268	649	641	548	297
30	202	84	42	82	---	59	412	545	644	631	565	292
31	182	---	95	67	---	55	---	568	---	616	626	---
TOTAL	7088	2480	2343	3528	2188	4161	5123	9712	16775	19619	19508	13717
MEAN	229	82.7	75.6	114	78.1	134	171	313	559	633	629	457
MAX	283	151	121	768	255	682	455	568	667	722	681	614
MIN	179	35	38	37	37	48	25	196	342	577	512	292
AC-FT	14060	4920	4650	7000	4340	8250	10160	19260	33270	38910	38690	27210

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
LOWEST ANNUAL MEAN	48.1
HIGHEST DAILY MEAN	54500
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	81000
INSTANTANEOUS PEAK STAGE	30.5
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 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	89.1	113	434	549	711	627	548	588	620	541	398
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 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1960 - 1995

ANNUAL TOTAL	112216	106242	
ANNUAL MEAN	307	291	453
HIGHEST ANNUAL MEAN			1580
LOWEST ANNUAL MEAN			132
HIGHEST DAILY MEAN	682	Jun 24	768
LOWEST DAILY MEAN	35	Nov 23	25
ANNUAL SEVEN-DAY MINIMUM	57	Feb 12	37
INSTANTANEOUS PEAK FLOW			2770
INSTANTANEOUS PEAK STAGE			12.91
ANNUAL RUNOFF (AC-FT)	222600	210700	328100
10 PERCENT EXCEEDS	601	634	701
50 PERCENT EXCEEDS	283	218	341
90 PERCENT EXCEEDS	62	55	50

11454210 PUTAH SOUTH CANAL NEAR WINTERS, CA

LOCATION.--Lat 38°29'34", long 122°00'07", in Rio De Los Putos Grant, T.8 N., R.1 W., Solano County, Hydrologic Unit 18020109, on left bank, 500 ft downstream from diversion headgate structure on Lake Solano, and 2.7 mi southwest of Winters.

PERIOD OF RECORD.--Oct. 1, 1994, to Sept. 30, 1995. Monthly and yearly totals were published during water years 1972-93.

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

REMARKS.--No estimated daily discharges. Water from canal is diverted for irrigation, municipal, and industrial use.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 652 ft³/s, July 15; no flow on some days during most years.

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	250	124	35	30	35	45	58	268	526	602	558	558
2	254	98	35	25	35	45	48	205	538	585	583	533
3	244	81	35	20	45	45	45	194	525	591	603	513
4	225	73	10	20	50	55	45	174	518	589	616	477
5	191	61	.00	22	53	58	45	177	515	581	607	457
6	173	60	54	29	9	48	52	190	536	576	610	455
7	177	60	46	38	.00	45	64	205	549	578	578	469
8	180	44	.00	33	13	45	70	229	531	572	537	490
9	180	35	79	21	67	6	70	276	540	564	522	474
10	187	35	65	.00	79	22	76	285	541	559	591	448
11	211	35	15	47	67	34	89	317	558	548	615	452
12	225	35	23	43	63	45	112	319	584	571	605	457
13	209	35	75	38	10	45	120	256	584	594	583	459
14	207	41	51	35	28	45	123	199	581	641	579	464
15	214	36	23	35	60	43	135	197	539	652	595	435
16	211	43	40	35	60	40	140	204	431	634	611	418
17	205	50	40	42	60	40	140	200	344	605	614	409
18	214	50	40	48	53	43	136	193	319	576	610	412
19	208	50	28	50	50	45	138	239	341	572	612	413
20	205	50	40	50	50	45	161	275	358	537	587	406
21	205	50	40	50	47	43	210	288	410	527	588	398
22	205	18	40	50	45	40	240	316	485	556	610	361
23	196	.00	40	50	45	40	252	322	535	573	608	329
24	181	28	40	47	45	40	269	328	564	591	582	308
25	171	60	40	36	45	40	308	336	567	586	559	300
26	170	59	40	35	45	40	351	372	582	572	502	300
27	170	55	36	30	45	40	392	387	611	570	462	284
28	170	55	20	25	45	42	400	390	623	572	505	275
29	173	55	20	25	---	45	383	412	608	579	488	282
30	165	41	20	25	---	50	359	467	603	573	529	258
31	147	---	25	34	---	55	---	506	---	557	574	---
TOTAL	6123	1517.00	1095.00	1068.00	1249.00	1314	5031	8726	15546	17983	17823	12294
MEAN	198	50.6	35.3	34.5	44.6	42.4	168	281	518	580	575	410
MAX	254	124	79	50	79	58	400	506	623	652	616	558
MIN	147	.00	.00	.00	.00	6.0	45	174	319	527	462	258
AC-FT	12140	3010	2170	2120	2480	2610	9980	17310	30840	35670	35350	24390

WTR YR 1995 TOTAL 89769.00 MEAN 246 MAX 652 MIN .00 AC-FT 178100

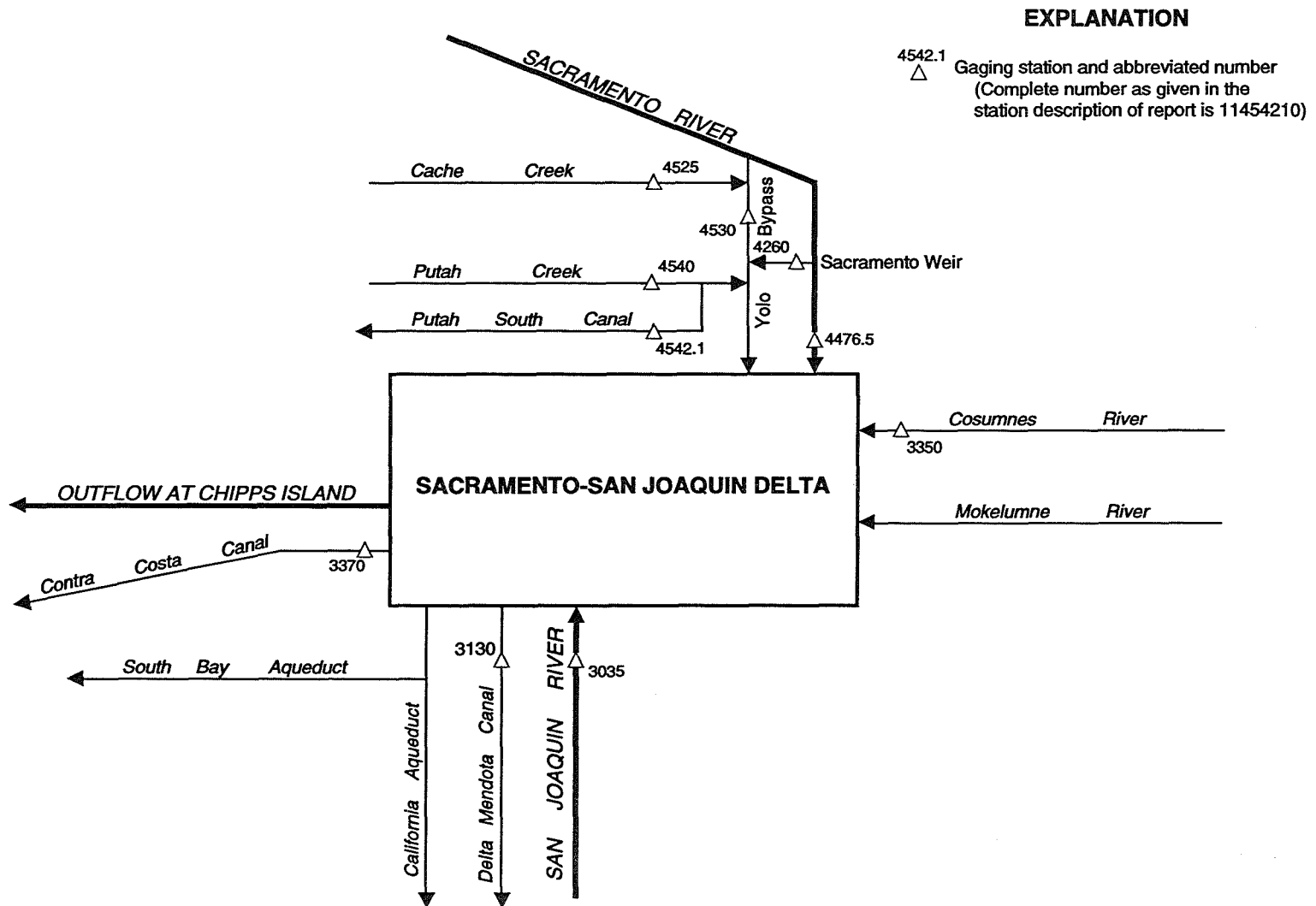


Figure 34. Principal inflows and diversions, Sacramento-San Joaquin Delta.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

Discharge measurements made at miscellaneous sites during water year 1995

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,	01-10-95	1340
				1976-84,	01-17-95	375
				1986-95	02-02-95	618
					03-06-95	70.4

a Published as a miscellaneous measurement.

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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