U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data California Water Year 2000

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

By S.W. Anderson, G.L. Rockwell, J.R. Smithson, M.F. Friebel, and M.D. Webster

Water-Data Report CA-00-4

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

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2001

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

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 2001	Annual—Oct. 1, 1999, to Sept. 30, 2000

4. TITLE AND SUBTITLE
Water Resources Data—California, Water Year 2000. Volume 4. Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line

5. FUNDING NUMBERS

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division, California District
Placer Hall, Suite 2012
6000 J Street
Sacramento, CA 95819-6129

8. PERFORMING ORGANIZATION REPORT NUMBER
USGS-WDR-CA-00-4

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division, California District
Placer Hall, Suite 2012
6000 J Street
Sacramento, CA 95819-6129

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
USGS-WDR-CA-00-4

11. SUPPLEMENTARY NOTES
Prepare 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 2000 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 190 gaging stations and 5 partial-record stations, stage and contents for 60 lakes and reservoirs, gage-height records for 1 station, precipitation data for 3 stations, and water quality for 10 stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

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
411

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

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

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

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 USGS Water Data 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

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
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
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
11382000	Thomes Creek at Paskenta	203	1921–97
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
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

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
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
11389000	Sacramento River at Butte City	12,080	1921–95
11389700	Butte Creek at Butte Meadows	44.4	1960–74
11389950	Little Butte Creek at Magalia	11.4	1969–85
11390200	Gold Run Creek Tributary near Nelson	1.31	1961
11390210	Cherokee Canal near Nelson	—	1970–74
11390655	South Fork Willow Creek near Fruto	38.9	1963–78
11390660	Walker Creek at Artois	60.4	1965–81
11390672	Stone Corral Creek near Sites	38.2	1958–64, 1966–85
11390890	Colusa Basin Drain at Road 99E, near Knights Landing	—	1996
11391000	Sacramento River at Knights Landing	14,535	1941–80
11391100	Sacramento Slough near Knights Landing	—	1996
11391400	Little Last Chance Creek below Frenchman Dam, near Chilcoot	81.1	1959–80
11391460	Berry Creek near Sattley	7.54	1973–81
11391500	Big Grizzly Creek at Grizzly Valley Dam, near Portola	44	1926–32, 1951–53, 1955–67, 1969–80
11392100	Middle Fork Feather River near Portola	586	1969–76, 1978–80
11392500	Middle Fork Feather River near Clio	686	1926–79
11393000	Middle Fork Feather River at Sloat	775	1911–27
11393500	Middle Fork Feather River below Sloat	819	1941–62
11394000	Middle Fork Feather River near Nelson Point	883	1924–32
11394500	Middle Fork Feather River near Merrimac	1,062	1952–86
11394620	Fall River near Feather Falls	9.89	1963–79
11394800	South Fork Feather River above Little Grass Valley Reservoir	8.09	1961–79
11395300	Lost Creek above Sly Creek Reservoir, near Strawberry Valley	14.1	1961–70
11396300	South Fork Feather River near Forbestown	105	1958–61
11396350	South Fork Feather River at Ponderosa Dam	108	1962–87, 1990
11396400	Sucker Run near Forbestown	18.7	1965–87
11396500	Palmero Canal at Enterprise	—	1912–65
11397000	South Fork Feather River at Enterprise	132	1912–66
11397500	Feather River at Bidwell Bar	1,341	1912–64
11400000	Butt Creek above Almanor–Butt Creek Tunnel, near Prattville	69.0	1937–64
11401000	Butt Creek at Butt Valley	81.3	1905–21
11401100	Butt Creek near Caribou	85.5	1970, 1976–81
11401125	Indian Creek near Boulder Creek Guard Station, near Taylorsville	68.6	1966–80
11401150	Red Clover Creek near Genesee	122	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

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
11406000	Concow Creek near Yankee Hill	15.1	1928–30, 1932–52
11406500	West Branch Feather River near Yankee Hill	146	1931–63
11407150	Feather River near Gridley	3,676	1965–98
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
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

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
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
11447330	Magpie Creek near Del Paso Heights	2.03	1996–97
11447500	Sacramento River at Sacramento	23,502	1904–05, 1921, 1949–79, 1986–96
11448500	Adobe Creek near Kelseyville	6.36	1955–78
11448900	Highland Creek above Highland Creek Dam	11.9	1963–78
11449000	Highland Creek near Kelseyville	12.6	1955–62
11449010	Highland Creek below Highland Creek Dam, near Kelseyville	14.2	1966–77
11449100	Scotts Creek near Lakeport	55.2	1961–80
11449350	Burns Valley Creek near Clearlake Highlands	4.37	1963–69
11449450	Copsey Creek near Lower Lake	13.2	1961–68
11449460	Seigler Creek at Lower Lake	12.5	1966–73
11450500	Cache Creek at Lower Lake	488	1901–15
11451500	North Fork Cache Creek near Lower Lake	197	1931–81
11451700	Bear Creek Tributary near Wilbur Springs	4.49	1962–63
11451720	Bear Creek near Rumsey	100	1959–80
11451760	Cache Creek above Rumsey	955	1961–62, 1965–73, 1976–82, 1984–86
11451950	Cache Creek near Brooks	1,041	1983–86
11452000	Cache Creek near Capay	1,044	1943–77
11453170	Dry Creek above Appletree Creek, near Middletown	.83	1978
11453200	Dry Creek near Middletown	8.35	1960–72, 1979–80
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 NWIS 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 CONTINUOUS WATER-QUALITY STATIONS

The following continuous-record water-quality stations in California have been discontinued. Daily records were collected and are stored in USGS Water Data for the period of record shown for each location.

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
10356500	Susan River at Susanville	184	WQ,B,S	1952–93
11341400	Sacramento River near Mt. Shasta	135	T	1966–71, 1973–87
11342000	Sacramento River at Delta	425	WQ,T	1951–81
11345500	South Fork Pit River near Likely	247	WQ,T,S	1951–79
11348500	Pit River near Canby	1,431	WQ,T,S	1951–79
11365000	Pit River near Montgomery Creek	4,952	WQ,T	1951, 1953–81
11368000	McCloud River above Shasta Lake	604	T	1957–59
11370000	Shasta Lake near Redding	6,421	WQ	1978–80
11370500	Sacramento River at Keswick	6,468	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 Cottownood 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 Coleman 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	1955–81, 1996-98
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

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11389000	Sacramento River at Butte City	12,080	WQ,T,S	1955–67,1969–80
11389470	Colusa Weir Spill, Butte Basin, near Colusa	—	T,S	1975
11389500	Sacramento River at Colusa	12,090	C,T	1975, 1977–80, 1995–98
11390000	Butte Creek near Chico	147	WQ	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
11390600	Sacramento River at Boyers Bend, near Dunnig	—	T	1960–63
11390890	Colusa Basin Drain at Road 99E, near Knights Landing	—	WQ,C,T,S	1996–98
11391000	Sacramento River at Knights Landing	14,535	T,S	1959–60, 1978–80
11391050	Sutter Bypass near Nicolaus	—	T,S	1980–81
11391100	Sacramento Slough near Knights Landing	—	WQ,C,T,S	1996–98
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	WQ,C,T,S	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,S	1961–66, 1973–76 1996–98
11425100	Feather River near Nicolaus	—	T	1969–72, 1974
11425500	Sacramento River at Verona	21,251	WQ,C,T,S	1952, 1969–70, 1980, 1996–98
11427000	North Fork American River at North Fork Dam	342	T,WQ,S	1959–83
11429350	Loon Lake near Meeks Bay	—	WQ	1996
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
11441001	Union Valley Reservoir near Riverton	—	WQ	1996
11441100	Ice House Reservoir near Kyburz	27.2	WQ	1996
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	1960–62
11447000	American River at Sacramento	1,936	WQ,S	1978, 1996–98
11447030	Strong Ranch Slough at Sacramento	5.02	C	1973–75
11447360	Arcade Creek near Del Paso Heights	31.5	WQ,T,C,S	1996–98
11447500	Sacramento River at Sacramento	23,502	S	1957–79
11447650	Sacramento River at Freeport	—	B,C	1974–81, 1989–98
11447810	Sacramento River at Greens Landing	—	C	1974–81
11449010	Highland Creek below Highland Creek Dam, near Kelseyville	14.2	T,S	1967–77

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
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); P (Precipitation).

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2000
VOLUME 4—NORTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN FROM HONEY LAKE BASIN TO OREGON STATE LINE

By M.D. Webster, S.W. Anderson, G.L. Rockwell, J.R. Smithson, *and* M.F. Friebel

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 190 streamflow-gaging stations and 1 partial-record station; (2) stage and content records for 60 lakes and reservoirs; (3) gage-height records for 1 station; (4) precipitation records for 3 stations; and (5) water-quality records for 10 streamflow-gaging stations and 5 partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of principal cities of the United States, or if not out of print, they may be purchased from U.S. Geological Survey, Information Services, Box 25286, Denver Federal Center, Denver, CO 80225-0046.

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-00-4." 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, 5285 Port Royal Road, Springfield, VA 22161. For further ordering information, the Customer Inquiries telephone number is (703) 487-4650, between 8:30 a.m. and 5:30 p.m. Eastern Standard Time.

Additional information 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 at (916) 278-3100.

COOPERATION

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

California Department of Water Resources, Thomas M. Hannigan, Director.

Georgetown Divide Public Utility District, Marie E. Davis, General Manager.

Hidden Valley Lake Community Services District, Mel Aust, General Manager.

Placer County, Edward McCarthy, Senior Civil Engineer.

Sacramento County Department of Public Works, Warren H. Harada, Administrator.

Shasta Valley Resource Conservation District, Pete Talley, General Manager.

Yolo County Flood Control and Water Conservation District, James F. Eagan, General Manager.

Yuba County Water Agency, Donn Wilson, Engineer-Administrator.

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

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

SPECIAL NETWORKS AND PROGRAMS

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

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

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; (3) provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 and NO_x scheduled to begin in 2000.

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

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

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

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

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

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

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 2000 water year that began October 1, 1999, and ended September 30, 2000. 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).

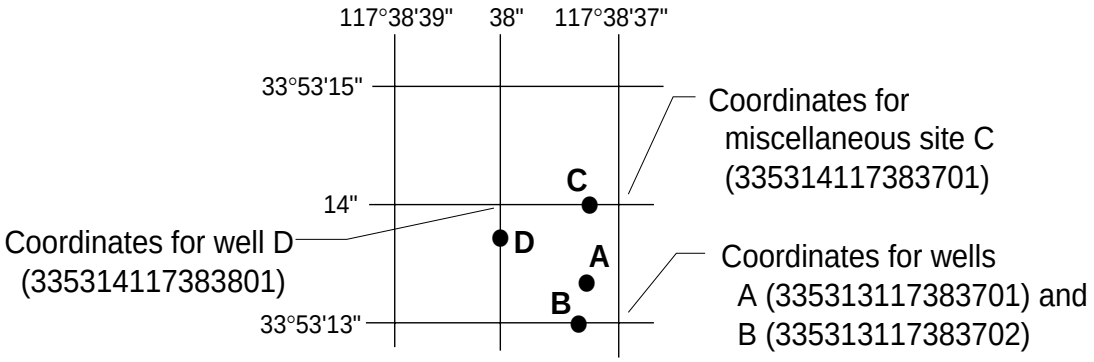

Figure 1. System for numbering miscellaneous sites (latitude and longitude).

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 23.

Data Collection and Computation

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

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

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

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

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

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

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following 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 follow to clarify information presented under the various headings of the station description.

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

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

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, 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.

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-gaging 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 for tables containing complex data for the current water year. 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 follow to 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 equivalent to 43,560 cubic feet, or about 326,000 gallons, or 1,233 cubic meters.

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

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

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape or stored electronically in a data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 through 23.

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 (2000) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter (ng/L). If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter (µg/L) and could reflect contamination introduced during some phase of the procedure.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with the ASTM standards and generally follow ISO standards.

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

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

Estimates of bed-load and total-sediment discharge are included for some stations. Computations of monthly bed-load discharges are based on the relation between instantaneous water discharge and corresponding bed-load discharge for the station. Values of bed-load discharge used in defining this relation are based on samples obtained by use of the Helley-Smith or BL 84 bed-load samplers or by modified-Einstein or Meyer-Peter Muller computation procedures. Application of the bed-load-transport relation at a station was made on a daily basis or subdivided-day basis. The bed-load samplers are designed to collect time-weighted samples for the sediment moving within 0.25 ft of the streambed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers. Calibration of the bed-load samplers has not been completed, and a trap efficiency of 1.0 has been assumed applicable to these devices. Error sources in the theoretical methods, based on analysis of bed-material characteristics, channel geometry, and associated hydraulic factors, are also undefined. In consequence, figures of bed-load discharge must be used with caution. They are estimates, at best, and are subject to revision.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN, NAWQA, and Hydrologic Benchmark 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, biochemical-oxygen-demand (BOD) samples, indicator-bacteria samples, and daily specific-conductance samples are analyzed locally. All other samples are analyzed in the U.S. Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in the Techniques of Water-Resources Investigations, Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental-sample data cannot be interpreted adequately because the errors associated with the sample data are unknown. The various types of QC samples collected by this District are described in the following section. Procedures have been established for the storage of water quality-control data within the U. S. Geological Survey. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure the environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this District are:

Field blank—a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this District are:

Sequential samples—a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

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, National Water Information System (NWIS), 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 USGS WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

http://water.usgs.gov.

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of additional data or products, and user charges, can be obtained locally from each of the Water Resources Division 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 also the table for converting English (inch-pound) units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

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, 325,851 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 measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

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.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is 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, acre-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, 325,851 gallons, or 1,233 cubic meters.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inch (IN., in.) as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it.

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

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, while others perform an essential role in nature in the recycling of materials; for example, by 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. This group includes coliforms that inhabit the intestines of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35°C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL 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. In the laboratory, they are defined as all the organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in the intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41°C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants.

Escherichia coli (E. coli) are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5˚C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample.

Base flow is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

Bed load is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

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

Benthic organisms (invertebrates) are the group of animals inhabiting 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. They are useful as indicators of water quality.

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 microorganisms, 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. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

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

Biomass pigment ratio is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

Bottom material: See Bed material.

Cells/volume (cells per volume) refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.

Cells volume (biovolume) 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 (for example, 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 (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

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

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

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 BOD 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 green pigments in plants.

Colloid is any substance with particles in such a fine state of subdivision dispersed in a medium (for example, water) that they do not settle out; but not in so fine a state of subdivision that they can be said to be truly dissolved.

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.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.

2. Water-quality, sediment, or other hydrologic measurements are recorded at least daily.

Control designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 (CFS, cfs, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Cubic foot per second per day (CFS-DAY, cfs-day, cfs/d, or [(ft^3/s)/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, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

Daily record is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

Daily record station is a site for which daily records of streamflow, sediment, or water-quality values are computed.

Datum, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days in a 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.)

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

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

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.

Dissolved oxygen (DO) content of water in equilibrium with air is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant offset. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During that 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 0.4926 to reflect the change. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n} \quad ,$$

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 site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that is occupied by a drainage system with a common outlet for its surface runoff (see "Drainage area").

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65˚C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue.

Extractable-organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream-bottom sediments. The ethyl-acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream-bottom sediments.

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see "Datum"). This elevation is established by a system of levels from known benchmarks, by approximation from topographic maps, or by geographical positioning system.

Gage height (G.H.) is the water-surface elevation referenced to the 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 site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Ground-water level is the elevation of the water table or another potentiometric surface at a particular location.

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

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site:*

http://www.co-ops.nos.noaa.gov/tideglos.html

Hydrologic benchmark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

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

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

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

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

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site:*

http://www.co-ops.nos.noaa.gov/tideglos.html

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.

Mean high tide is the average of all high tides over a specified period.

Mean lower low water (MLLW) is the average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch. The National Tidal Datum Epoch is the specific 19-year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental 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-adult or egg-nymph-adult.

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

Micrograms per gram (UG/G, µg/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 kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Miscellaneous site, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthicinvertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

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

National Geodetic Vertical Datum of 1929 (NGVD of 1929) 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. *See NOAA web site:*

http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88

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

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), suspended organic carbon (SOC), or total organic carbon (TOC).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area of 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.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either 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 the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024–0.004	Sedimentation
Silt	.004–.062	Sedimentation
Sand	.062–2.0	Sedimentation/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 nativewater 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.

Periodic station is a site where stage, discharge, sediment, chemical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they 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.

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 radioactive nuclide represented by a curie (Ci). A curie is the quantity of any radioactive nuclide that yields 3.7×10^{-10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 0.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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

Blue-green algae (*Cyanophyta*) are a group of 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.

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark.

Fire algae (*Pyrrhophyta*) are a group of algae that are free-swimming unicells characterized by a red pigment spot.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae 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 (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCN's) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCB's) and have been identified in commercial PCB preparations.

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 oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. Carbon method defines 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.

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. Oxygen method defines 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.

Radioisotopes are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

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 and 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.

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the $7Q_{10}$ occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

River mile is the distance of a point on a river measured in miles from the river’s mouth along the low-water channel.

River mileage is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

Runoff in inches (IN., in.) is the depth, in inches, to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

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 the United States and Canada, formerly called Sea Level Datum of 1929. *See*:

http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD

Sediment is solid material that is transported by, suspended in, or deposited from water. It originates mostly from disintegrated rocks; it also includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the 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.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along or very close to the bed. In this report, bed load is considered to consist of particles in transit from the bed to an elevation equal to the top of the bed-load sampler nozzle (usually within 0.25 ft of the streambed).

Bed-load discharge (tons per day) is the quantity of sediment moving as bed load, reported as dry weight, that passes a cross section in a given time.

Suspended sediment is the sediment that 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). The entire sample is used for the analysis.

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

Suspended-sediment discharge (tons/day) is the quantity of sediment moving in suspension, reported as dry weight, that passes a cross section in a given time. It is calculated in units of tons per day as follows:

$$\text{concentration (mg/L)} \times \text{discharge (ft}^3\text{/s)} \times 0.0027.$$

Suspended-sediment load is a term that refers to material in suspension. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration.

Suspended total residue at 105°C concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, reported as dry weight, that passes a cross section in a given time.

Total sediment load or total load is a term that refers to the total sediment (bed load plus suspended-sediment load) that is in transport. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with total sediment discharge.

Seven-day 10-year low flow (7Q10, $7Q_{10}$) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The 7Q10 has a 10-percent chance of occurring in any given year.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Water ranges 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 a 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 content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 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.

Stable isotope ratio (per MILL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage: See "Gage height."

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

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" as 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.

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.

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

Surface area of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on U.S. Geological Survey topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

Surficial bed material is the top 0.1 to 0.2 ft of the bed material that is sampled 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. It is associated with 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 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 and 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 are 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 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. 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.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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

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

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

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

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

Tons per day (T/DAY, tons/d) is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

Total is the total amount of a given constituent in a representative 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 both the dissolved and suspended phases of the sample. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, 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 suspended-sediment mixture and that the analytical method determined all the constituent in the sample.)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total in bottom material.”

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total, recoverable is the amount of a given constituent that is in solution after a representative 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 and 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 are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Turbidity is a measurement of the collective optical properties of a water sample that cause light to be scattered and absorbed rather than transmitted in straight lines; the higher the intensity of scattered light, the higher the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU) or Formazin turbidity units (FTU) depending on the method and equipment used.

Ultraviolet (UV) absorption at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds.

Volatile organic compounds (VOC's) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOC's are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water level is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see "Gage height"), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

Water table is the surface of a ground-water body at which the water is at atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which is found the water table.

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, 2000, is called the "2000 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

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.

Well is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

Wet weight refers to the weight of animal tissue or other substance including its contained water.

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

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

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

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI Book 1, Chapter D1. 1975. 65 p.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI Book 1, Chapter D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI Book 2, Chapter D1. 1974. 116 p.

2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI Book 2, Chapter D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI Book 2, Chapter E1. 1971. 126 p.

2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI Book 2, Chapter E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI Book 2, Chapter F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI Book 3, Chapter A1. 1967. 30 p.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI Book 3, Chapter A2. 1967. 12 p.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI Book 3, Chapter A3. 1968. 60 p.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI Book 3, Chapter A4. 1967. 44 p.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI Book 3. Chapter A5. 1967. 29 p.

3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI Book 3, Chapter A6. 1968. 13 p.

3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI Book 3, Chapter A7. 1968. 28 p.

3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI Book 3, Chapter A8. 1969. 65 p.

3-A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI Book 3, Chapter A9. 1989. 27 p.

3-A10. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI Book 3, Chapter A10. 1984. 59 p.

3-A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI Book 3, Chapter A11. 1969. 22 p.

3-A12. *Fluorometric procedures for dye tracing,* Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI Book 3, Chapter A12. 1986. 34 p.

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

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

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

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

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

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

3-A19. *Levels at streamflow gaging stations,* by E.J. Kennedy: USGS–TWRI Book 3, Chapter A19. 1990. 31 p.

3-A20. *Simulation of soluable waste transport and buildup in surface waters using tracers,* by F.A. Kilpatrick: USGS–TWRI Book 3, Chapter A20. 1993. 38 p.

3-A21 *Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI Book 3, Chapter A21. 1995. 56 p.

Section B. Ground-Water Techniques

3-B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI Book 3, Chapter B1. 1971. 26 p.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G.D. Bennett: USGS–TWRI Book 3, Chapter B2. 1976. 172 p.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J.E. Reed: USGS–TWRI Book 3, Chapter B3. 1980. 106 p.

3-B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI Book 3, Chapter B4. 1990. 232 p.

3-B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI Book 3, Chapter B4. 1993. 8 p.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction,* by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI Book 3, Chapter B5. 1987. 15 p.

3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI Book 3, Chapter B6. 1987. 28 p.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI Book 3, Chapter B7. 1992. 190 p.

Section C. Sedimentation and Erosion Techniques

3-C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI Book 3, Chapter C1. 1970. 55 p.

3-C2. *Field methods for measurement of fluvial sediment,* by T.K. Edwards and G.D. Glysson: USGS–TWRI Book 3, Chapter C2. 1999. 89 p.

3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI Book 3, Chapter C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. *Some statistical tools in hydrology,* by H.C. Riggs: USGS–TWRI Book 4, Chapter A1. 1968. 39 p.

4-A2. *Frequency curves,* by H.C. Riggs: USGS–TWRI Book 4, Chapter A2. 1968. 15 p.

Section B. Surface Water

4-B1. *Low-flow investigations,* by H.C. Riggs: USGS–TWRI Book 4, Chapter B1. 1972. 18 p.

4-B2. *Storage analyses for water supply,* by H.C. Riggs and C.H. Hardison: USGS–TWRI Book 4, Chapter B2. 1973. 20 p.

4-B3. *Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI Book 4, Chapter B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. *Computation of rate and volume of stream depletion by wells,* by C.T. Jenkins: USGS–TWRI Book 4, Chapter D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI Book 5, Chapter A1. 1989. 545 p.

5-A2. *Determination of minor elements in water by emission spectroscopy,* by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI Book 5, Chapter A2. 1971. 31 p.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments,* edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI Book 5, Chapter A3. 1987. 80 p.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI Book 5, Chapter A4. 1989. 363 p.

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 p.

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 p.

Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis,* by H.P. Guy: USGS–TWRI Book 5, Chapter C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

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 p.

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 p.

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 p.

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 p.

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 p.

6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction,* by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI Book 6, Chapter A6. 1996. 125 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI Book 7, Chapter C1. 1976. 116 p.

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 p.

7-C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI Book 7, Chapter C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

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 p.

8-A2. *Installation and service manual for U.S. Geological Survey manometers,* by J.D. Craig: USGS–TWRI Book 8, Chapter A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

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 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling,* by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI Book 9, Chapter A1. 1998. 47 p.

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling,* edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI Book 9, Chapter A2. 1998. 94 p.

9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling,* edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI Book 9, Chapter A3. 1998. 75 p.

9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples,* edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI Book 9, Chapter A4. 1999. 156 p.

9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples,* edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI Book 9, Chapter A5. 1999. 149 p.

9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements,* edited by F.D. Wilde and D.B. Radtke: USGS–TWRI Book 9, Chapter A6. 1998. Variously paginated.

9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators,* edited by D.N. Myers and F.D. Wilde: USGS–TWRI Book 9, Chapter A7. 1997 and 1999. Variously paginated.

9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-Material Samples,* by D.B. Radtke: USGS–TWRI Book 9, Chapter A8. 1998. 48 p.

9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities,* by S.L. Lane and R.G. Fay: USGS–TWRI Book 9, Chapter A9. 1998. 60 p.

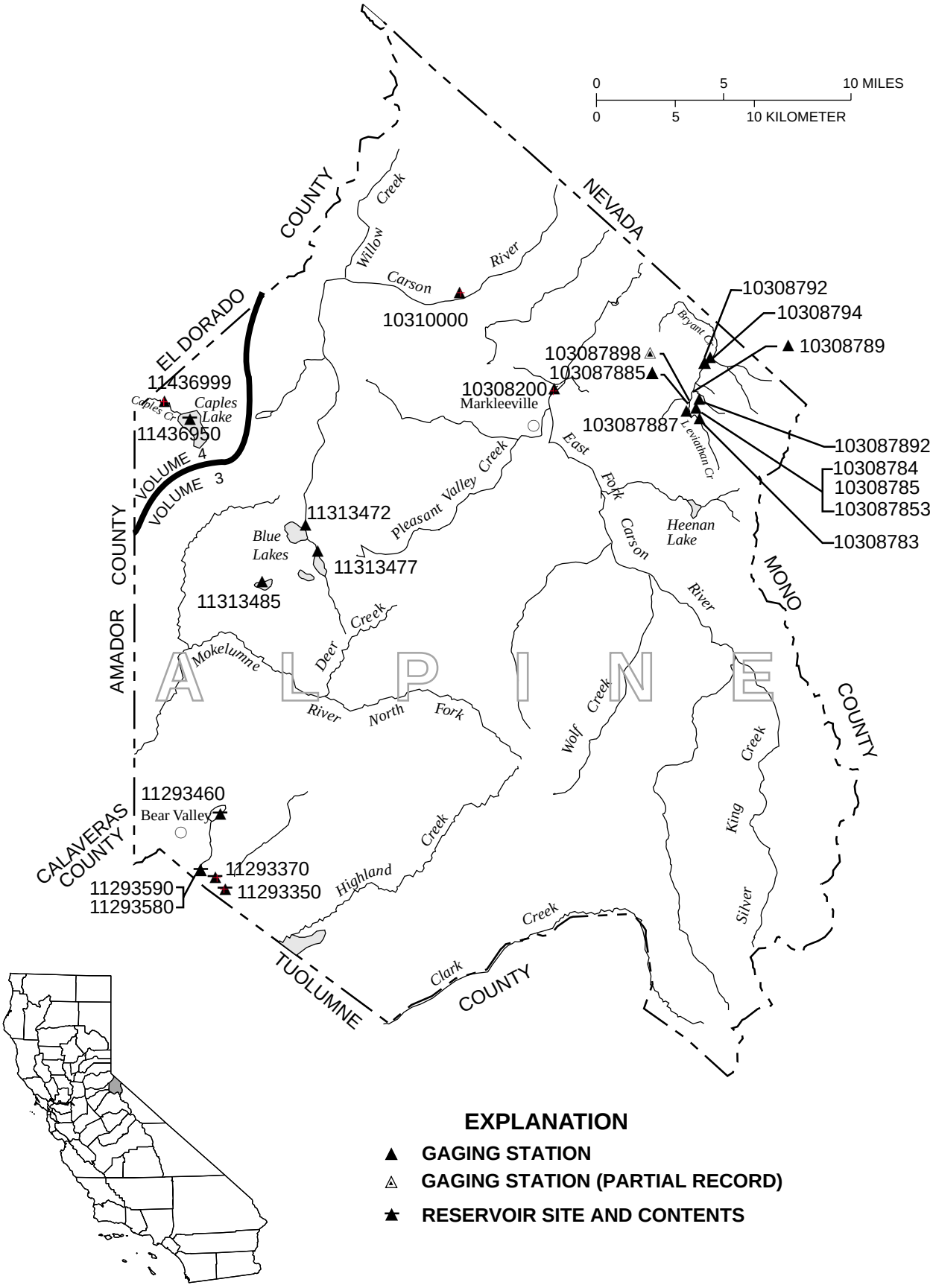

Figure 2. Location of discharge stations in Alpine County.
(NOTE: Records for stations 10308200 through 10310000 and 11293350 through 11313485 published in volume 3.)

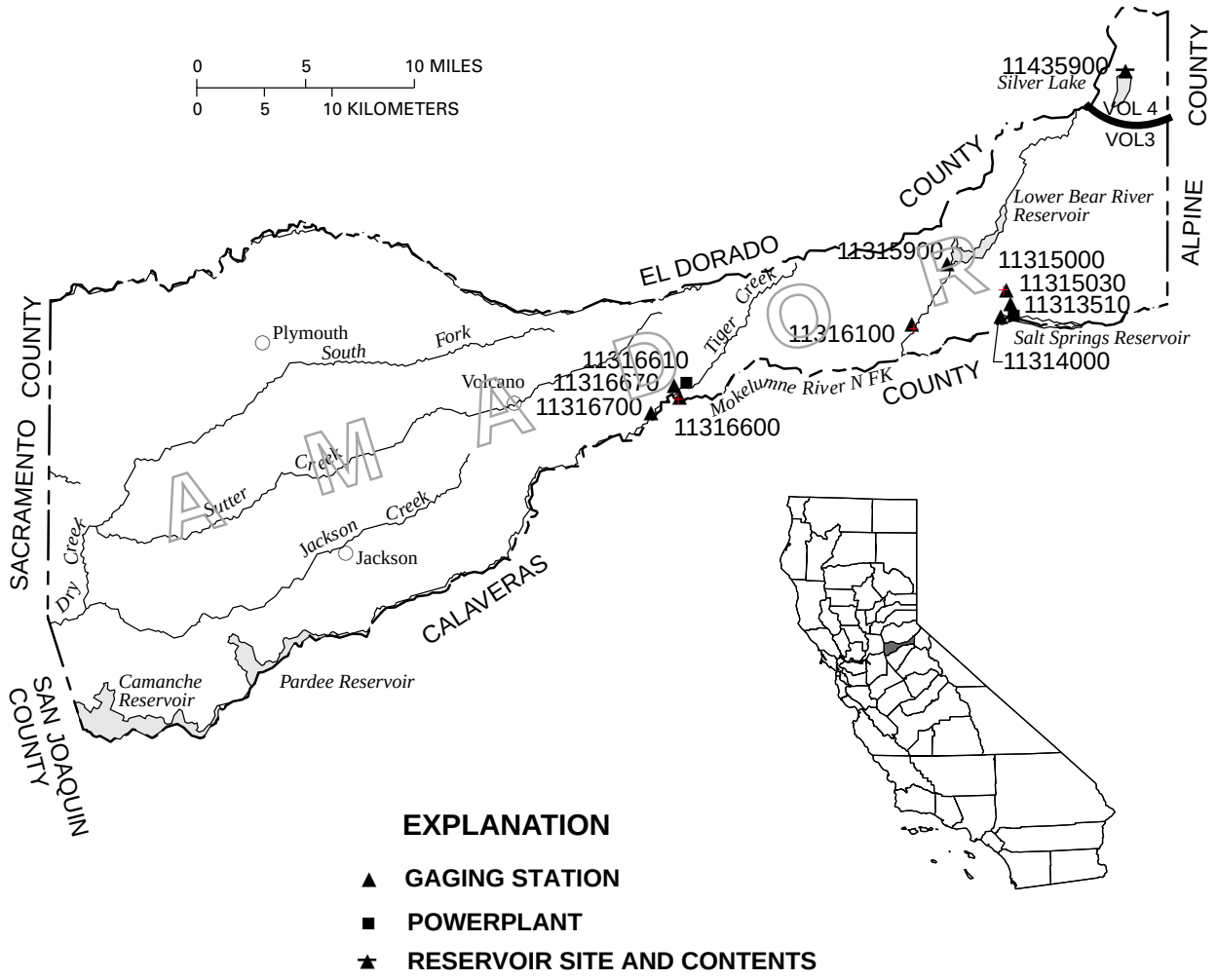

Figure 3. Location of discharge stations in Amador County.
(NOTE: Records for stations 11313510 through 11316700 published in volume 3.)

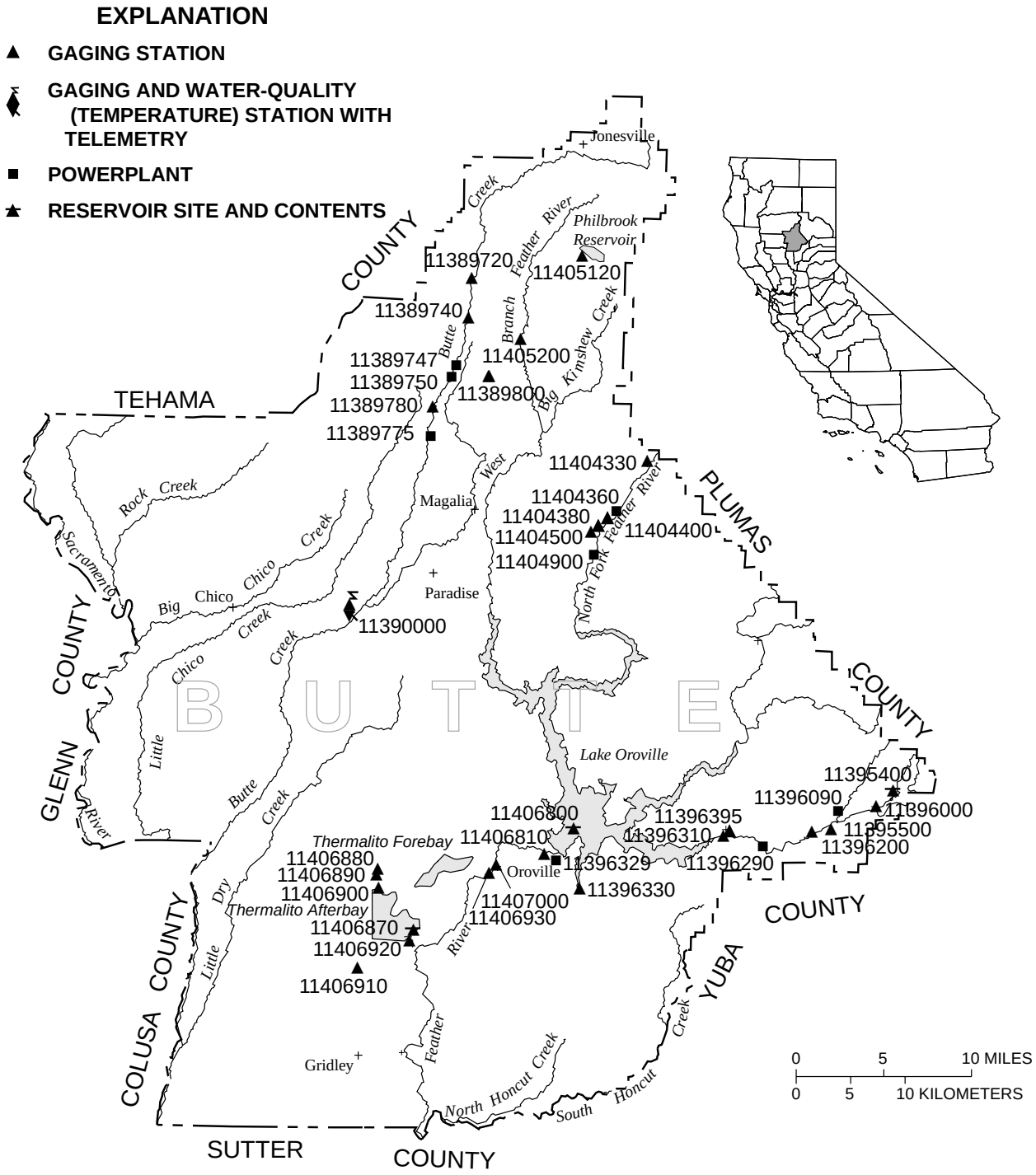

Figure 4. Location of discharge and water-quality stations in Butte County.

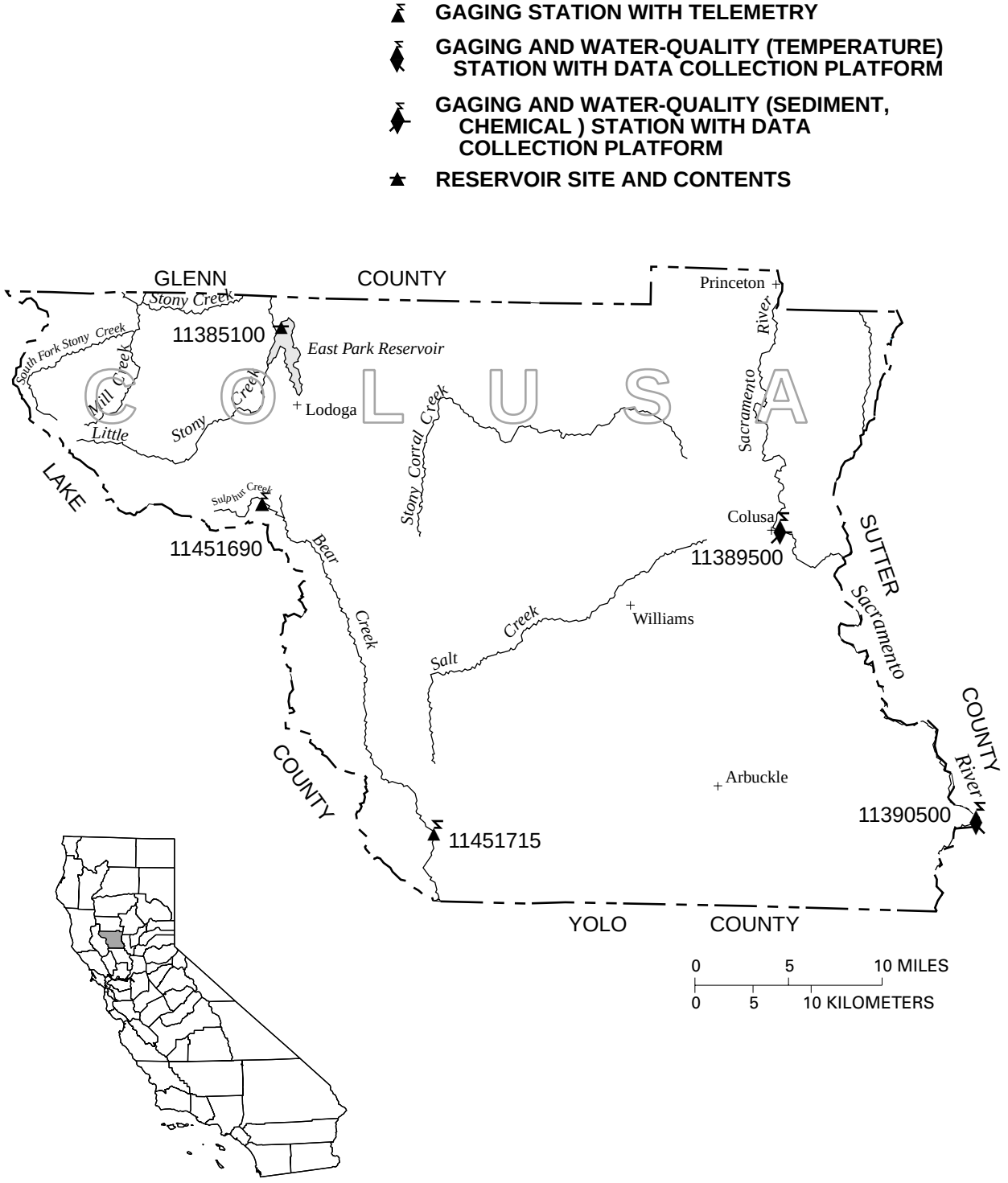

Figure 5. Location of discharge and water-quality stations in Colusa County.

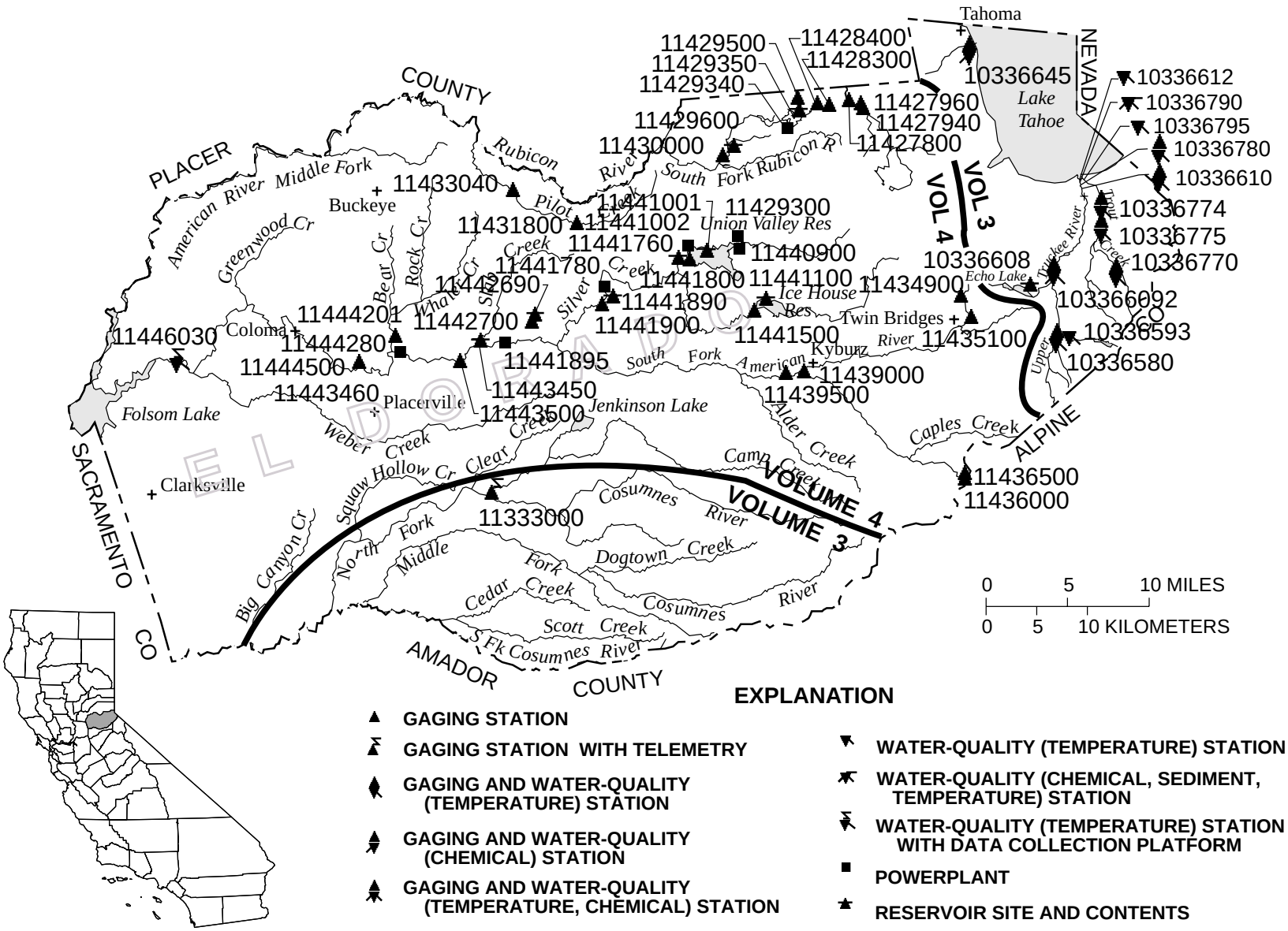

Figure 7. Location of discharge and water-quality stations in El Dorado County.
(NOTE: Records for stations 10336580 and 11333000 published in volume 3.)

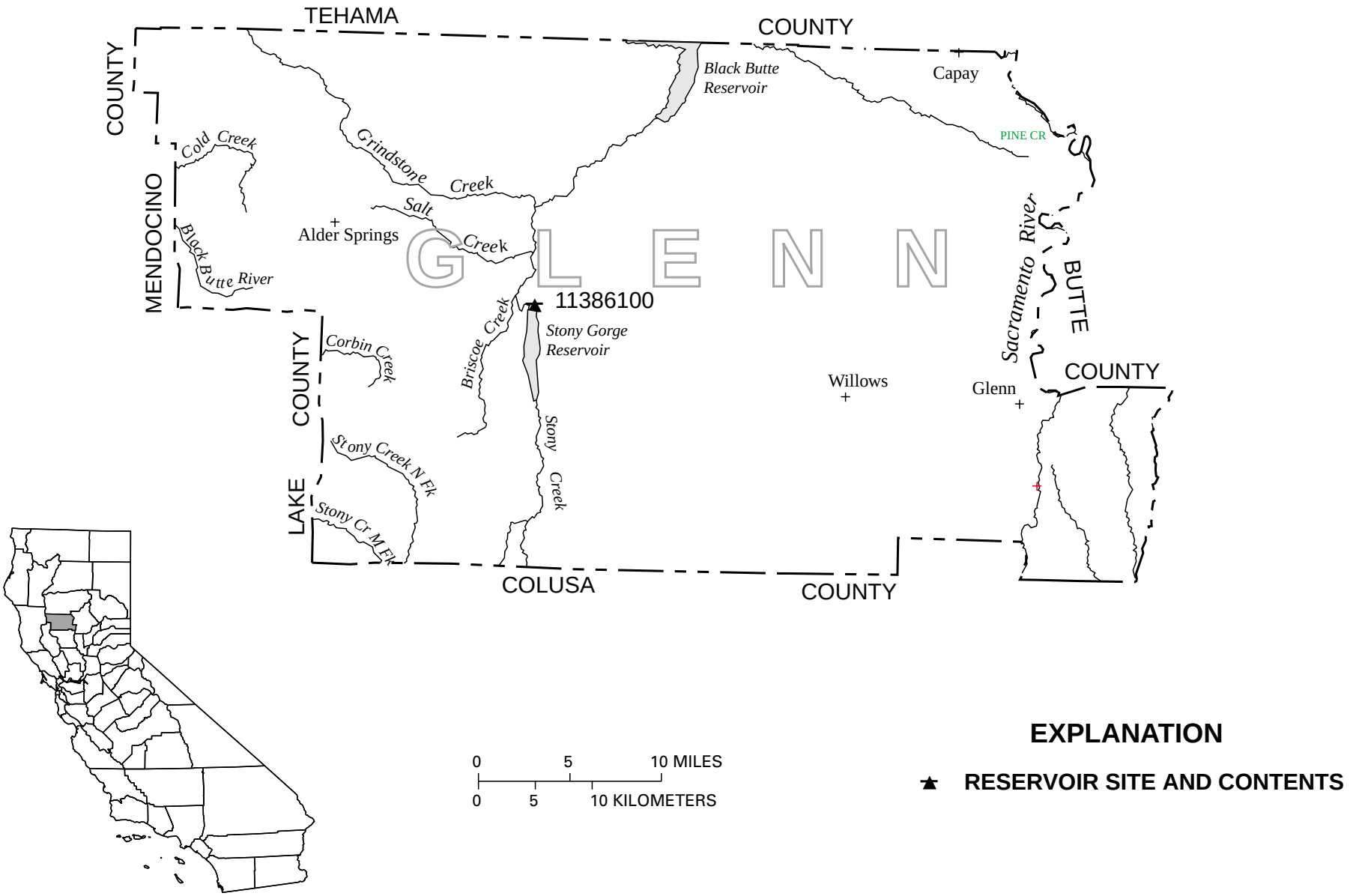

Figure 7. Location of discharge station in Glenn County.

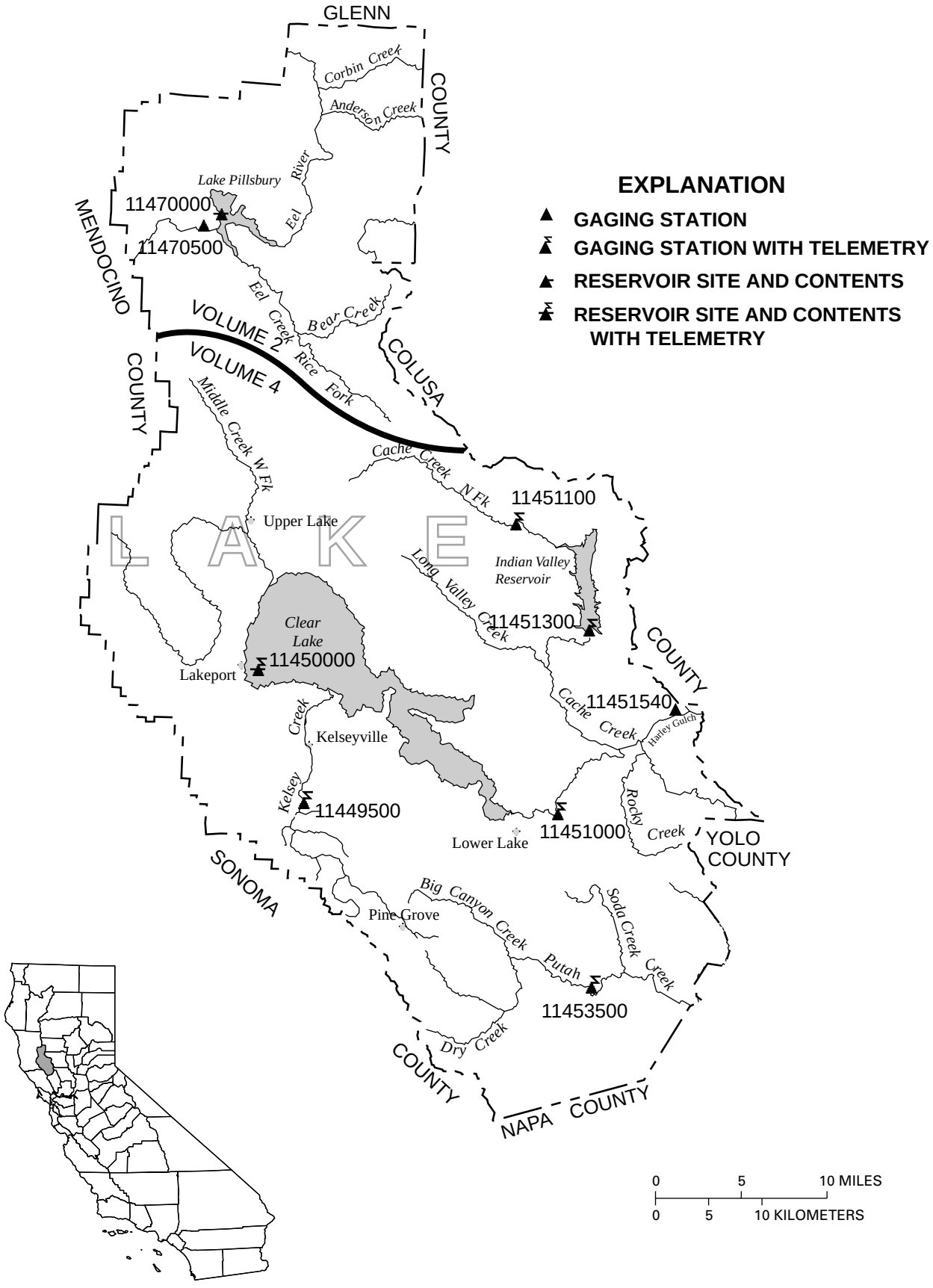

Figure 8. Location of discharge stations in Lake County.
(NOTE: Records for stations 11470000 and 11470500 published in volume 2.)

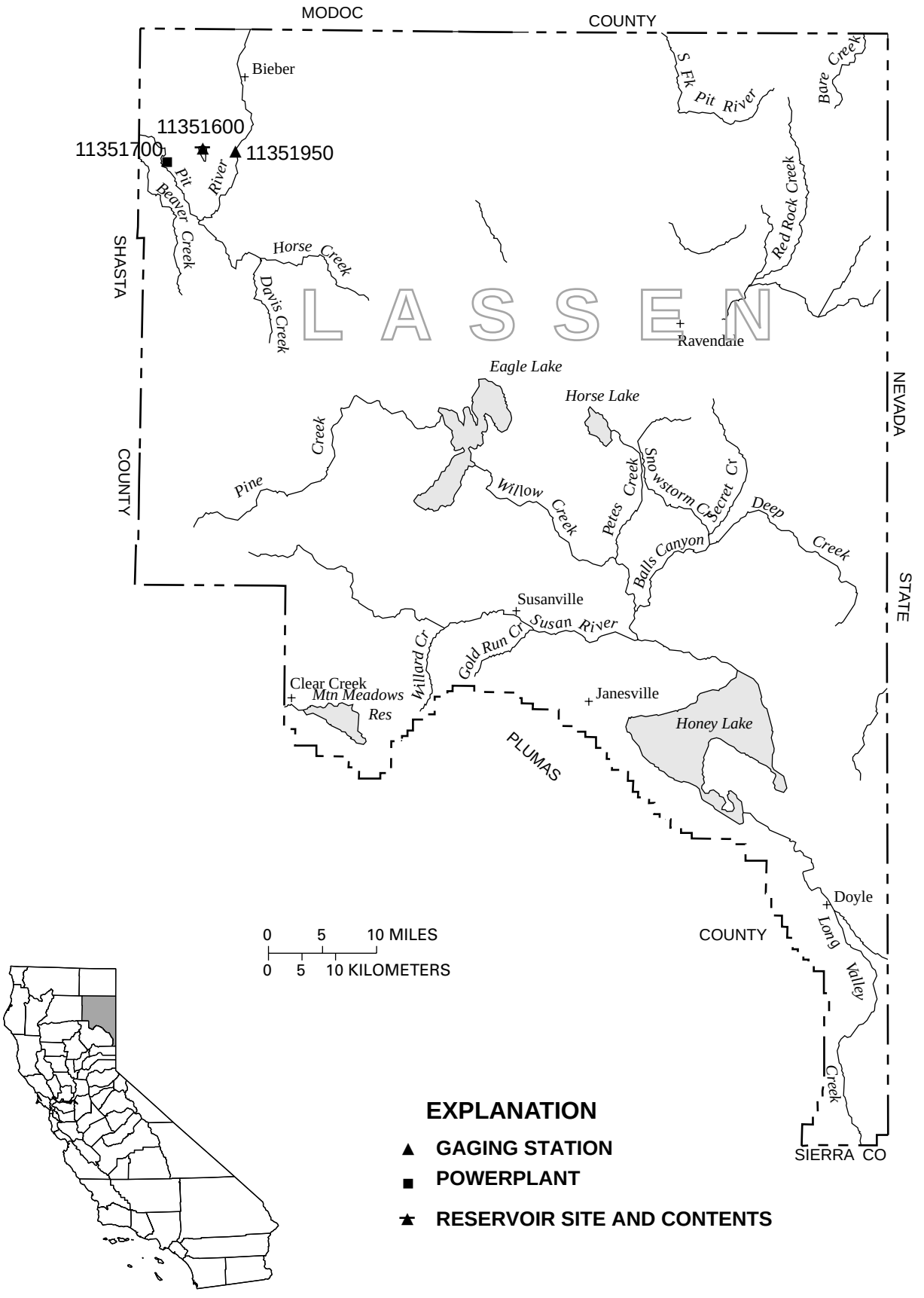

Figure 9. Location of discharge stations in Lassen County.

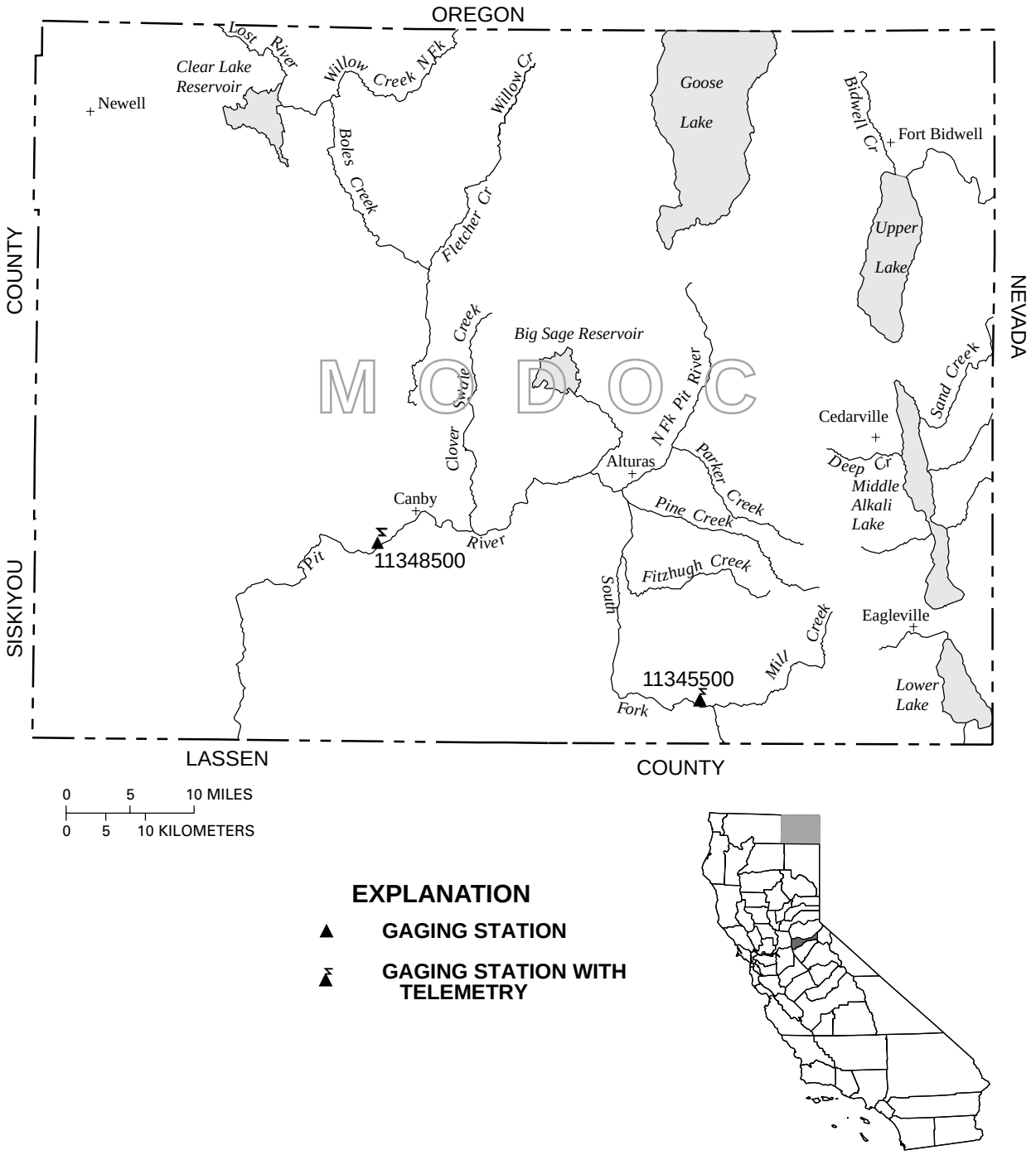

Figure 10. Location of discharge stations in Modoc County.

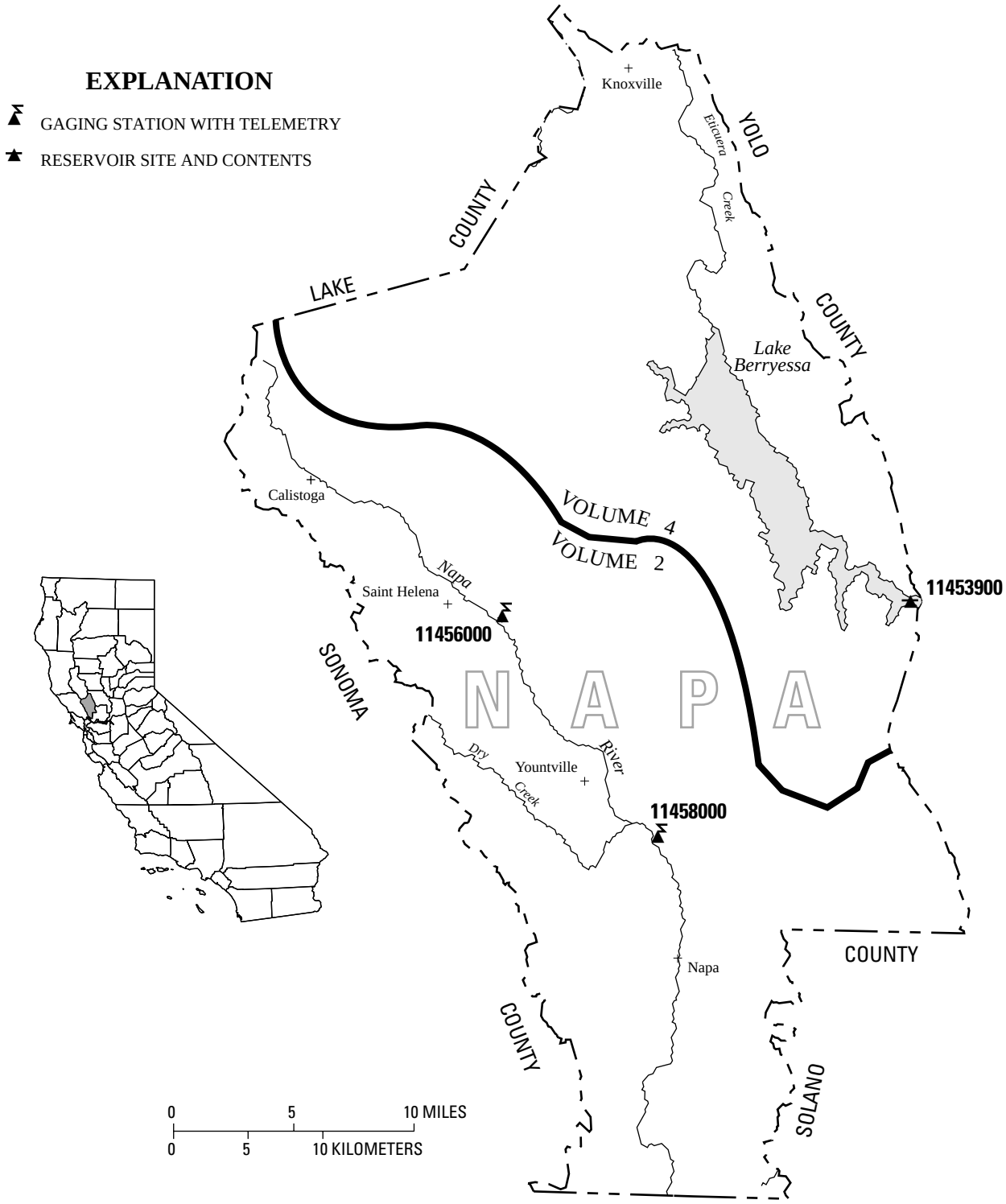

Figure 11. Location of discharge stations in Napa County.
(NOTE: Records for stations 11456000 and 11458000 published in volume 2.)

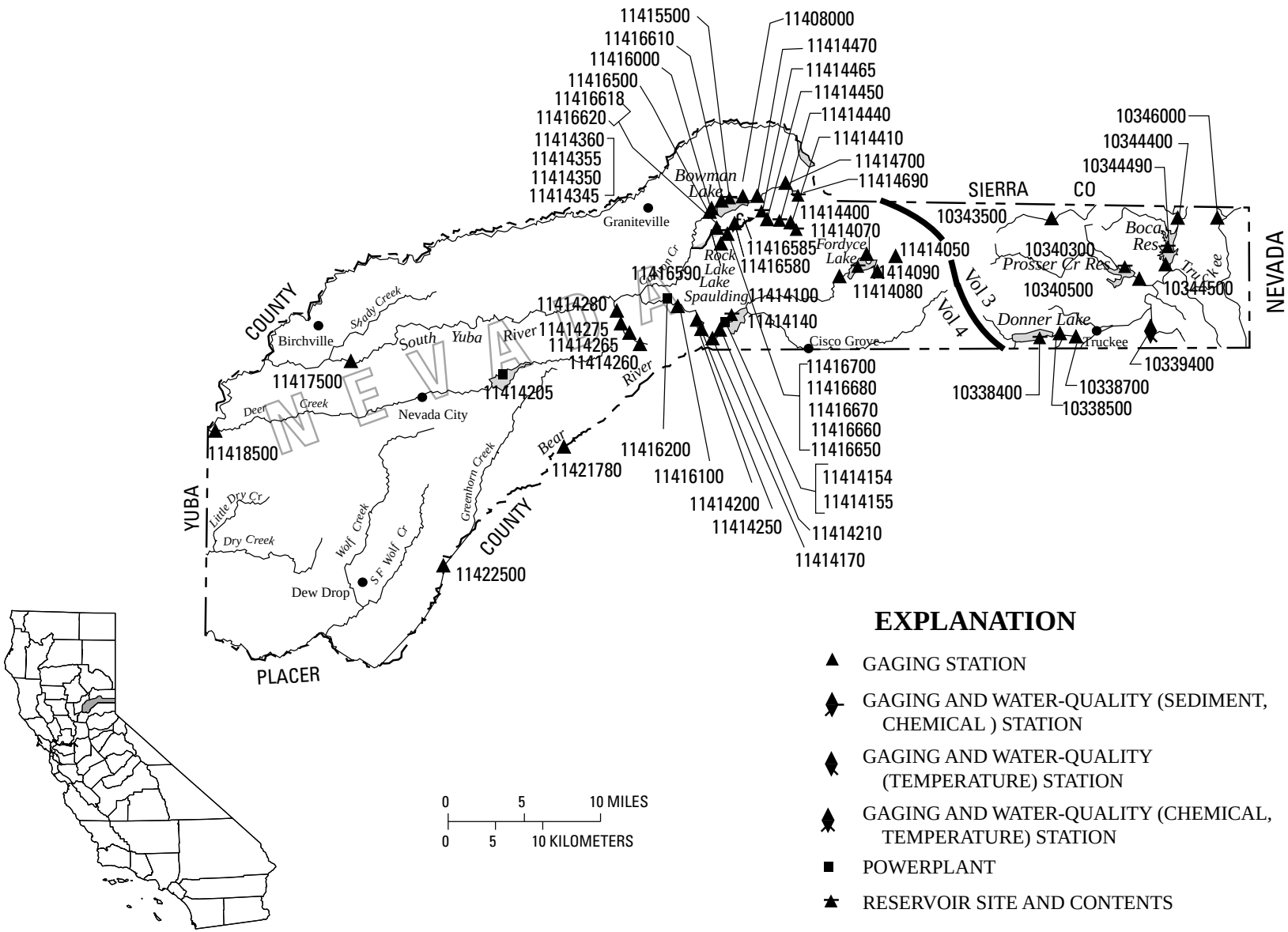

Figure 12. Location of discharge and water-quality stations in Nevada County.
(NOTE: Records for stations 10338400 through 10346000 published in volume 3.)

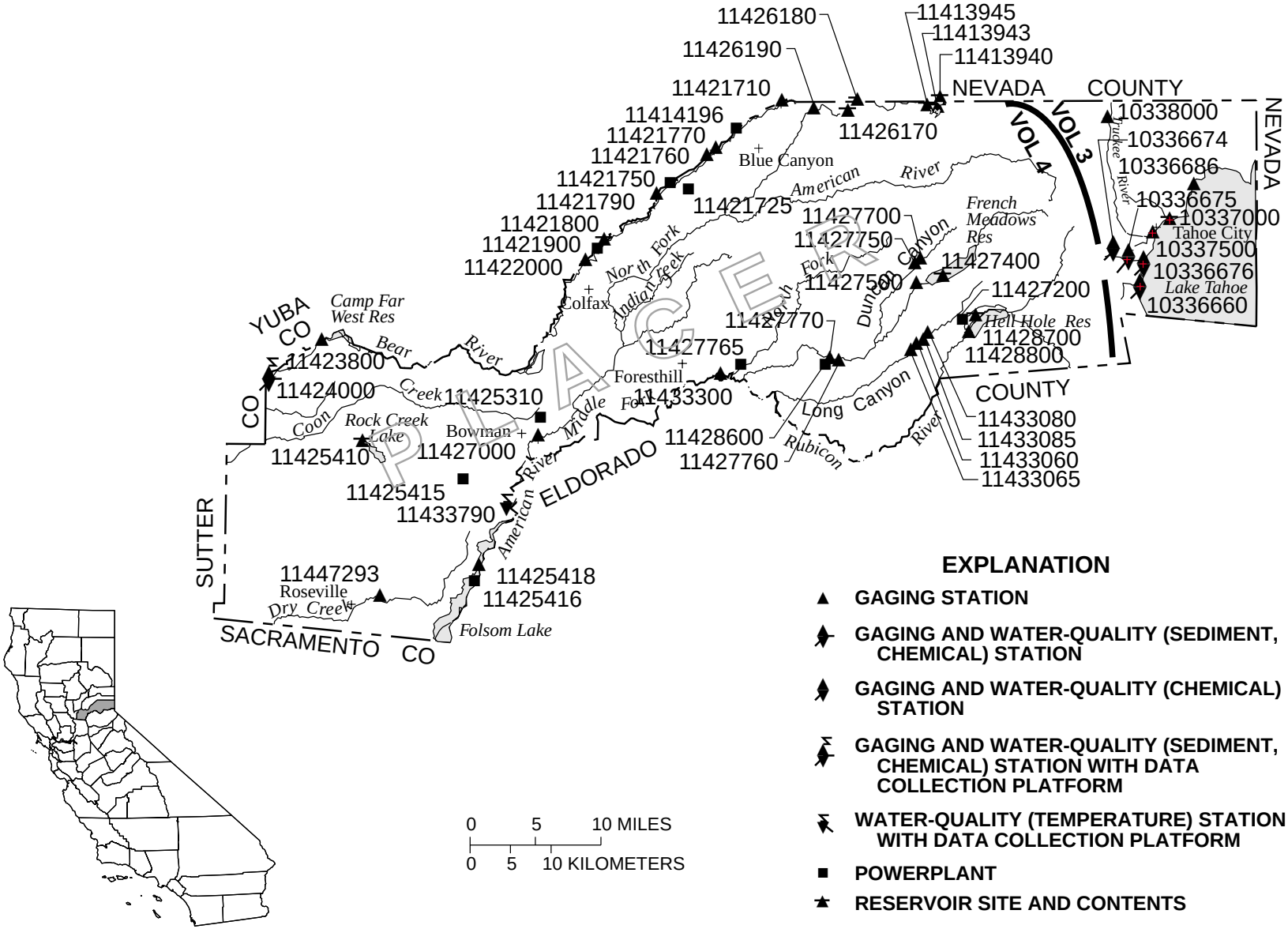

Figure 13. Location of discharge and water-quality stations in Placer County.
(NOTE: Records for stations 10336660 through 10338000 published in volume 3.)

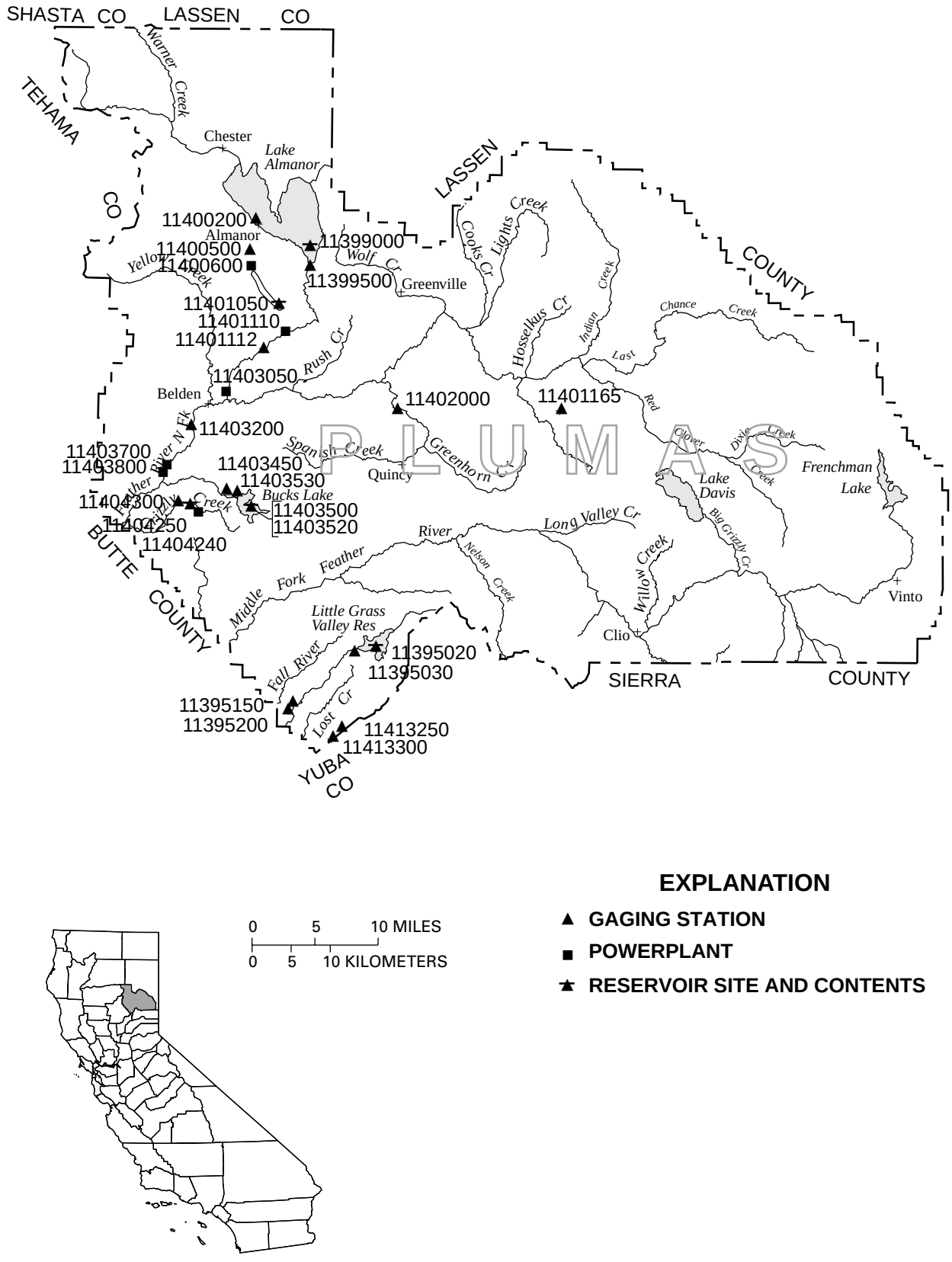

Figure 14. Location of discharge stations in Plumas County.

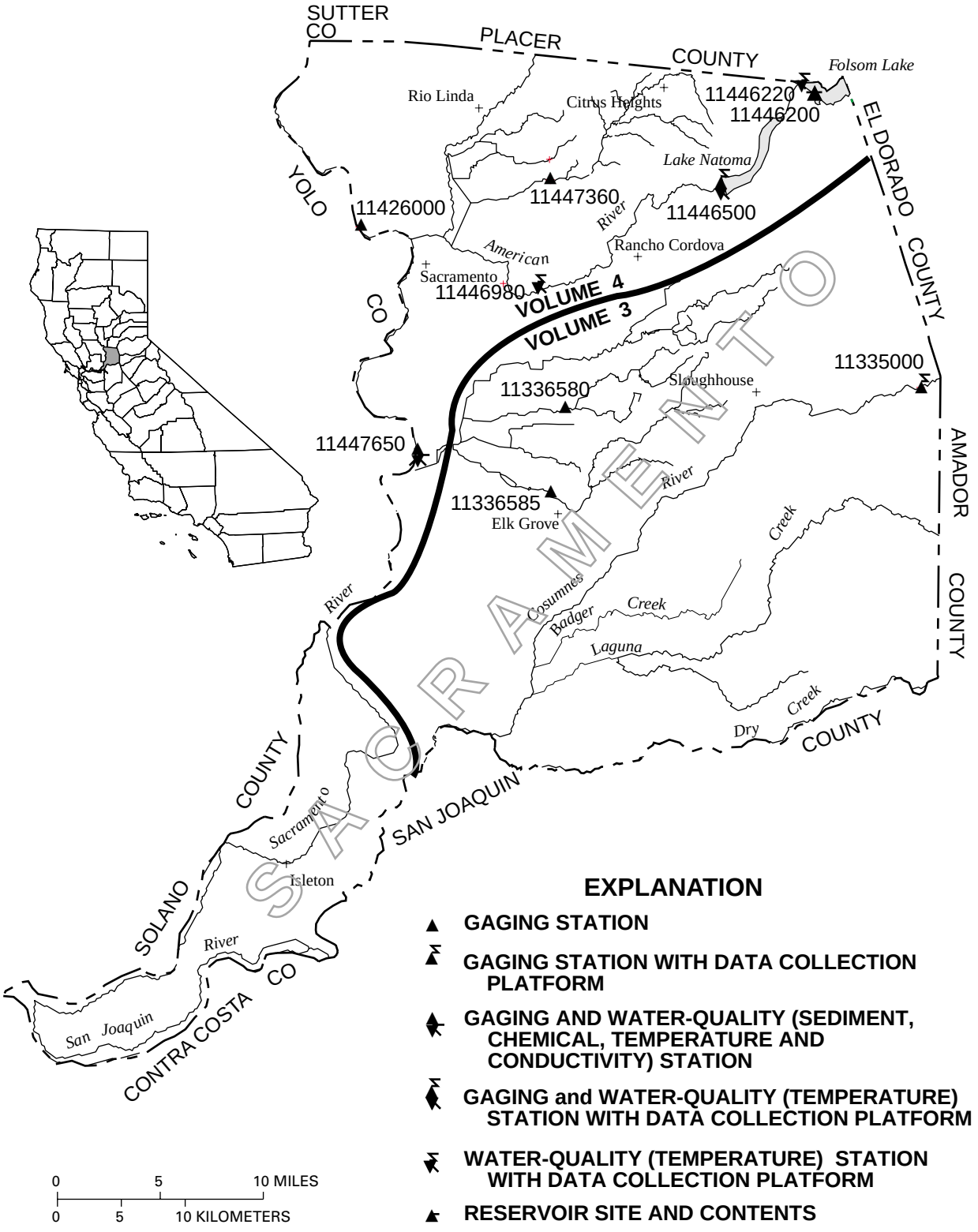

Figure 15. Location of discharge and water-quality stations in Sacramento County.
(NOTE: Records for stations 11335000 through 11336585 published in volume 3.)

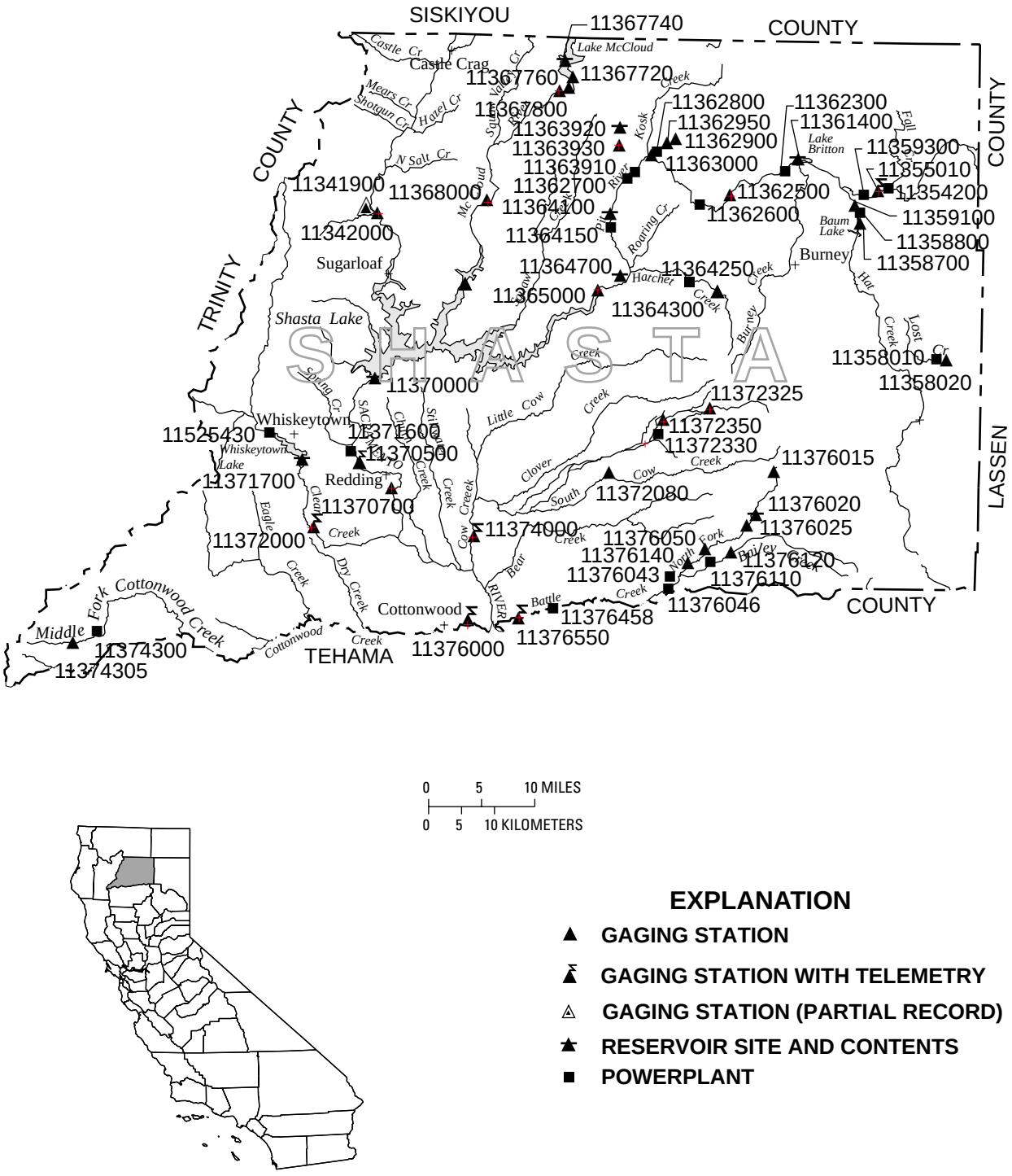

Figure 16. Location of discharge stations in Shasta County.

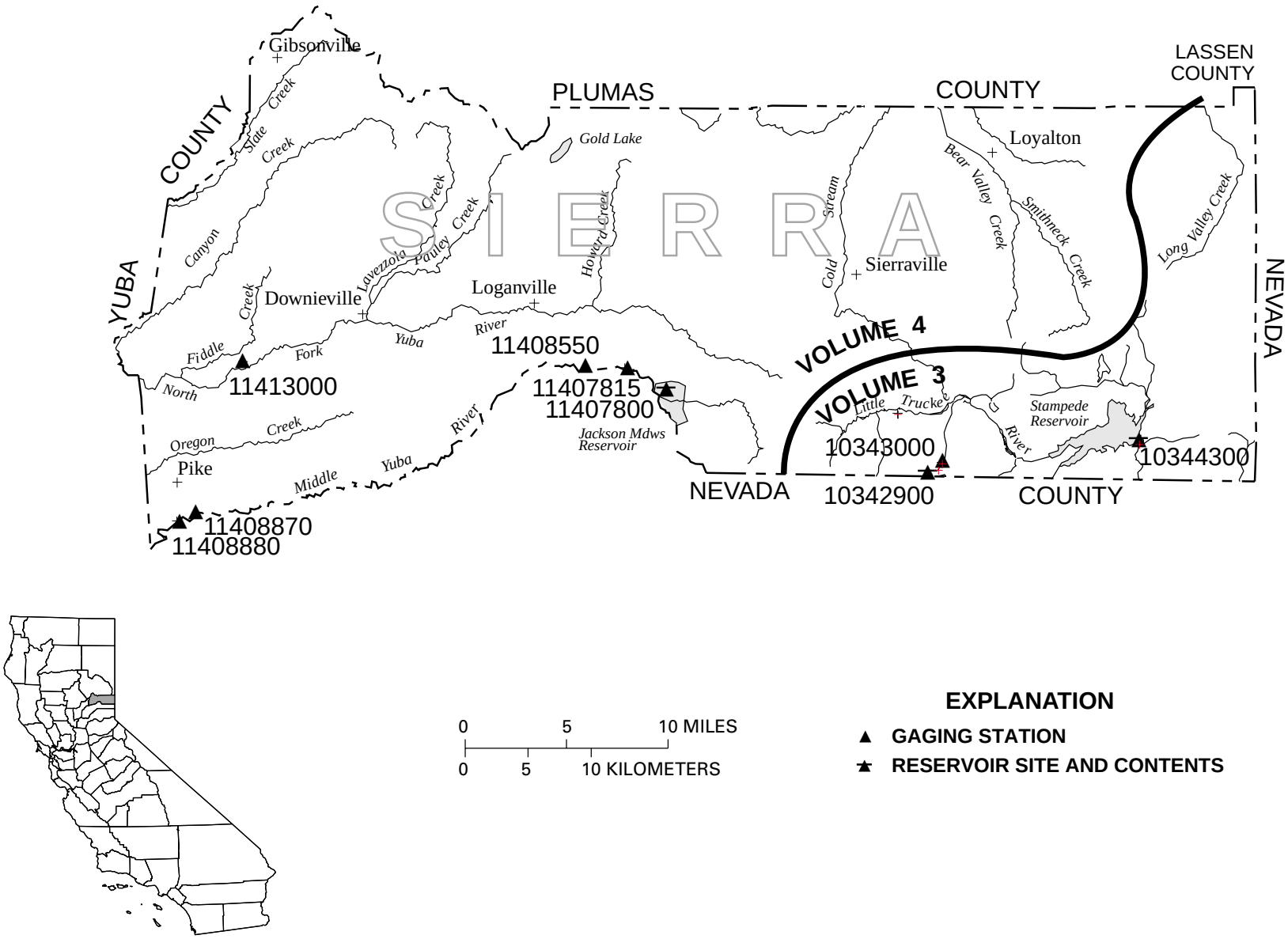

Figure 17. Location of discharge stations in Sierra County.
(NOTE: Records for stations 10342900 through 10344300 published in volume 3.)

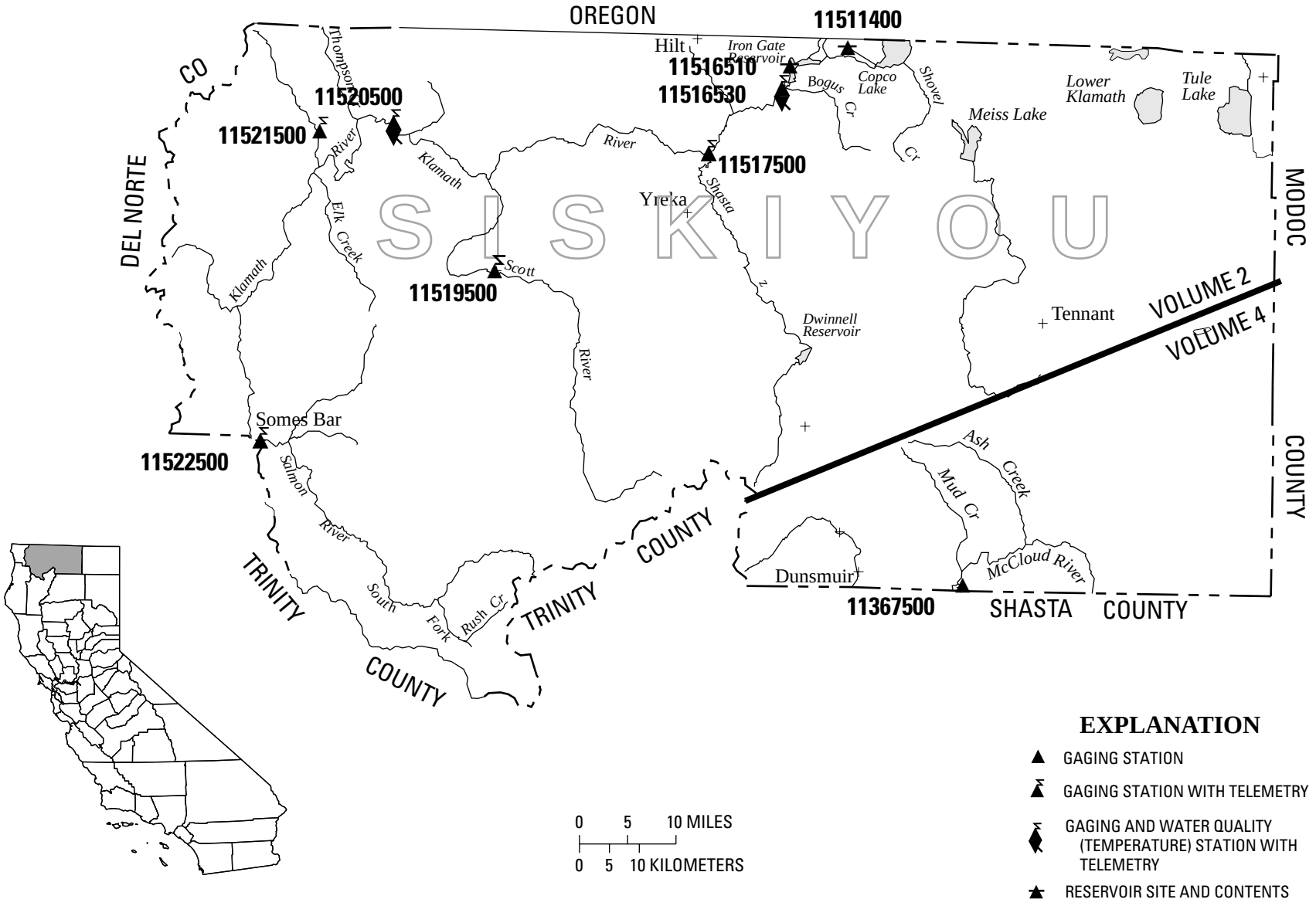

Figure 18. Location of discharge stations in Siskiyou County.
(NOTE: Records for stations 11511400 through 11522500 published in volume 2.)

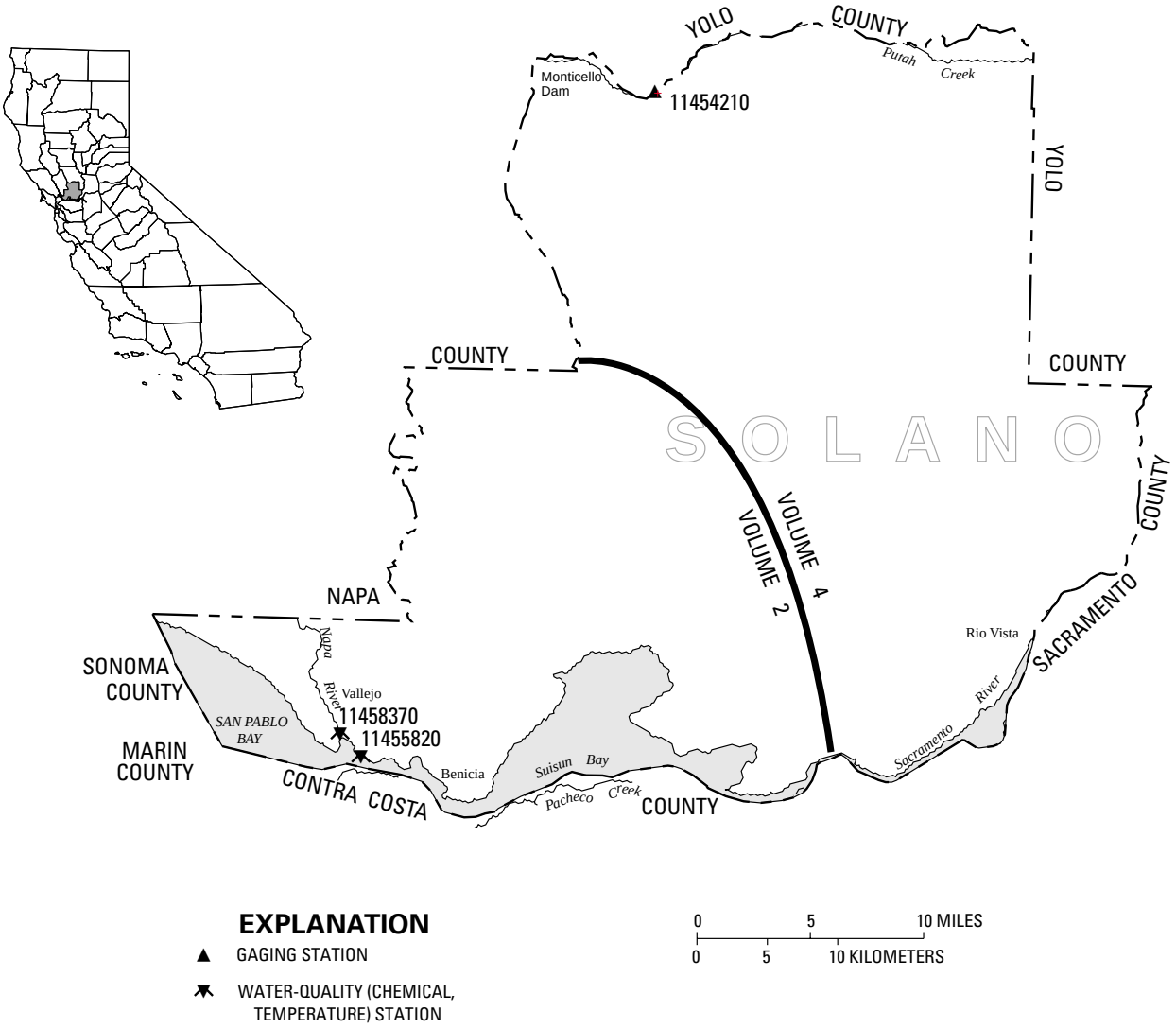

Figure 19. Location of discharge and water-quality stations in Solano County. (NOTE: Records for station 11455820 and 11458370 published in volume 2.)

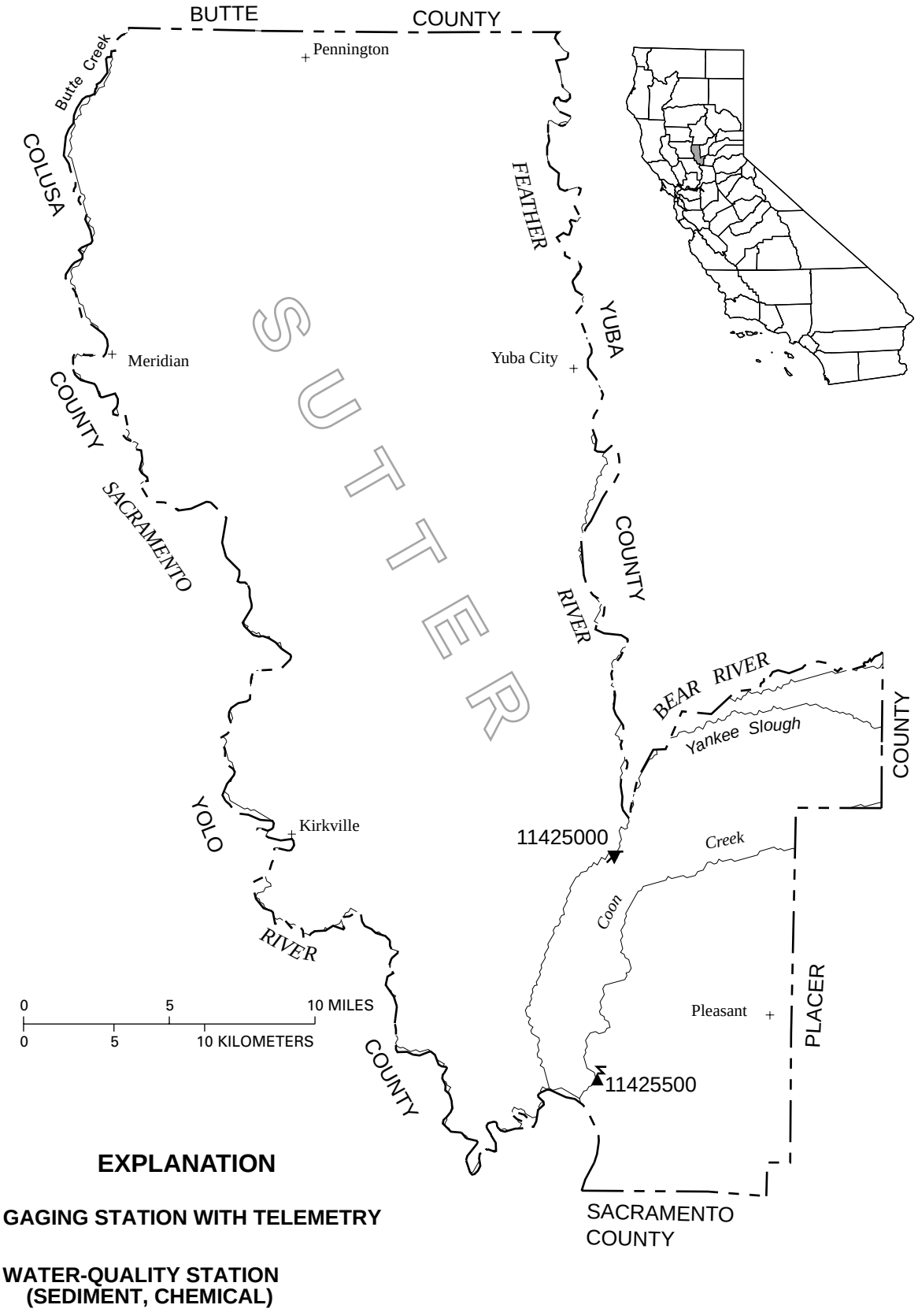

Figure 20. Location of discharge and water-quality stations in Sutter County.

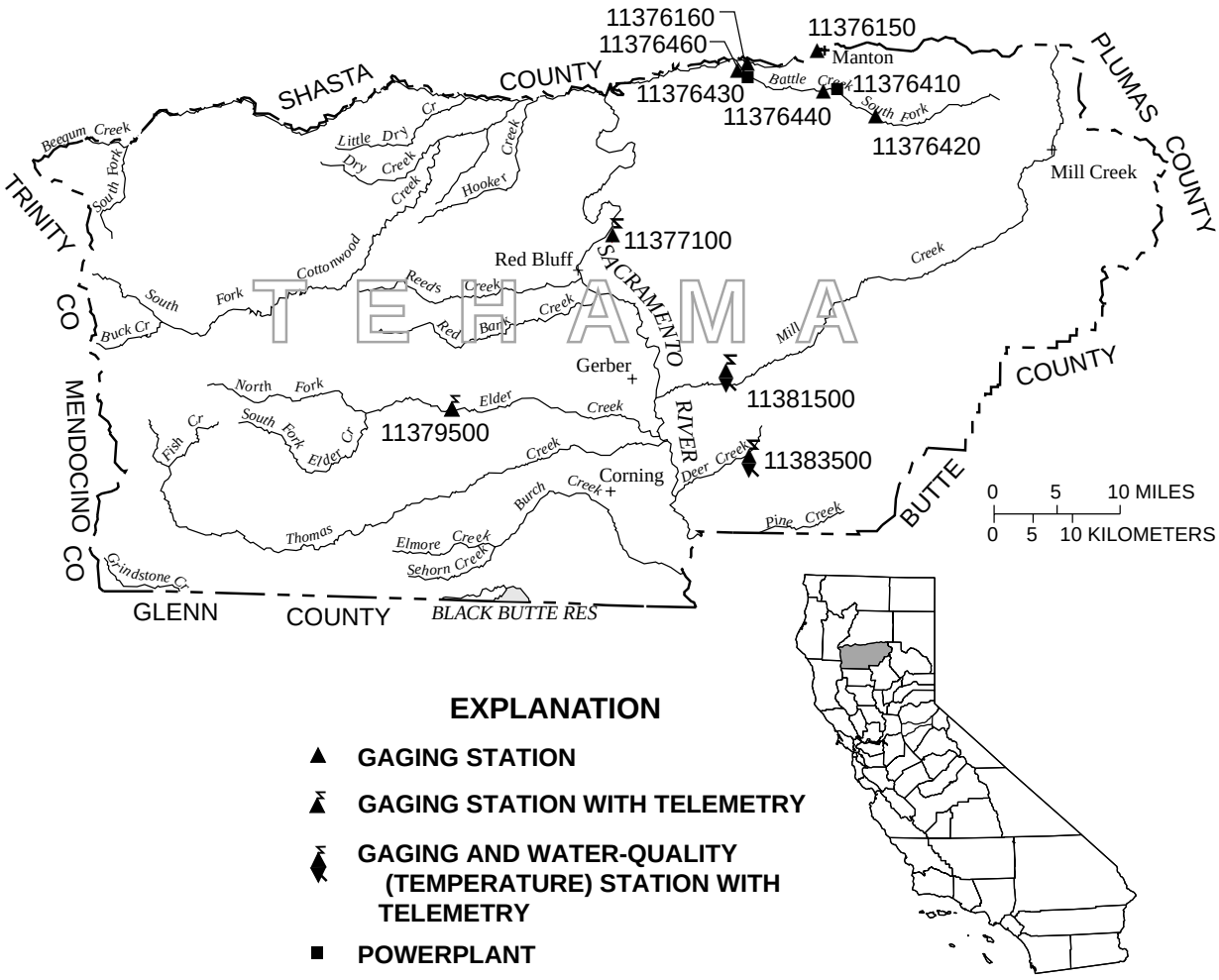

Figure 21. Location of discharge and water-quality stations in Tehama County.

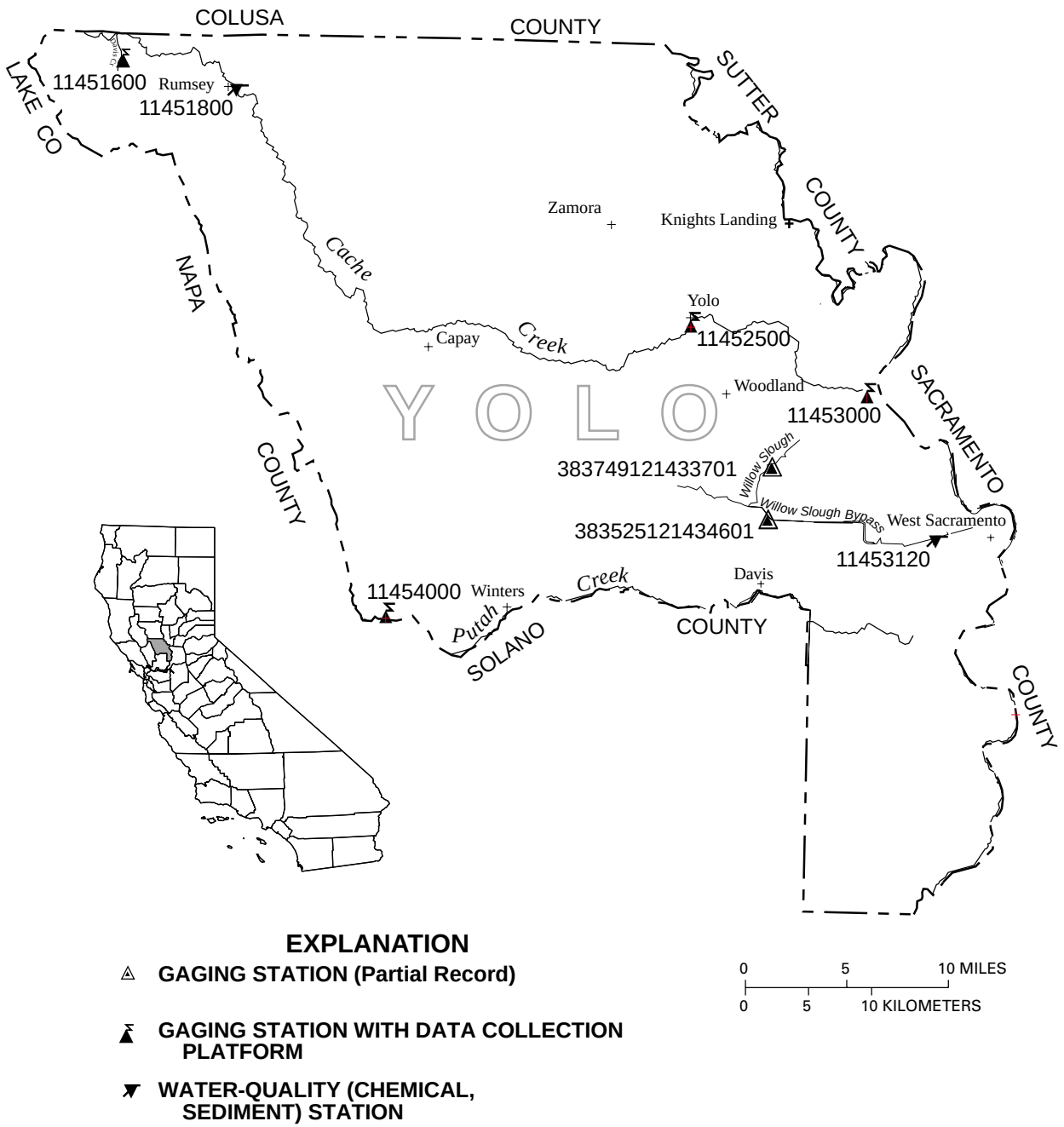

Figure 22. Location of discharge and water-quality stations in Yolo County.

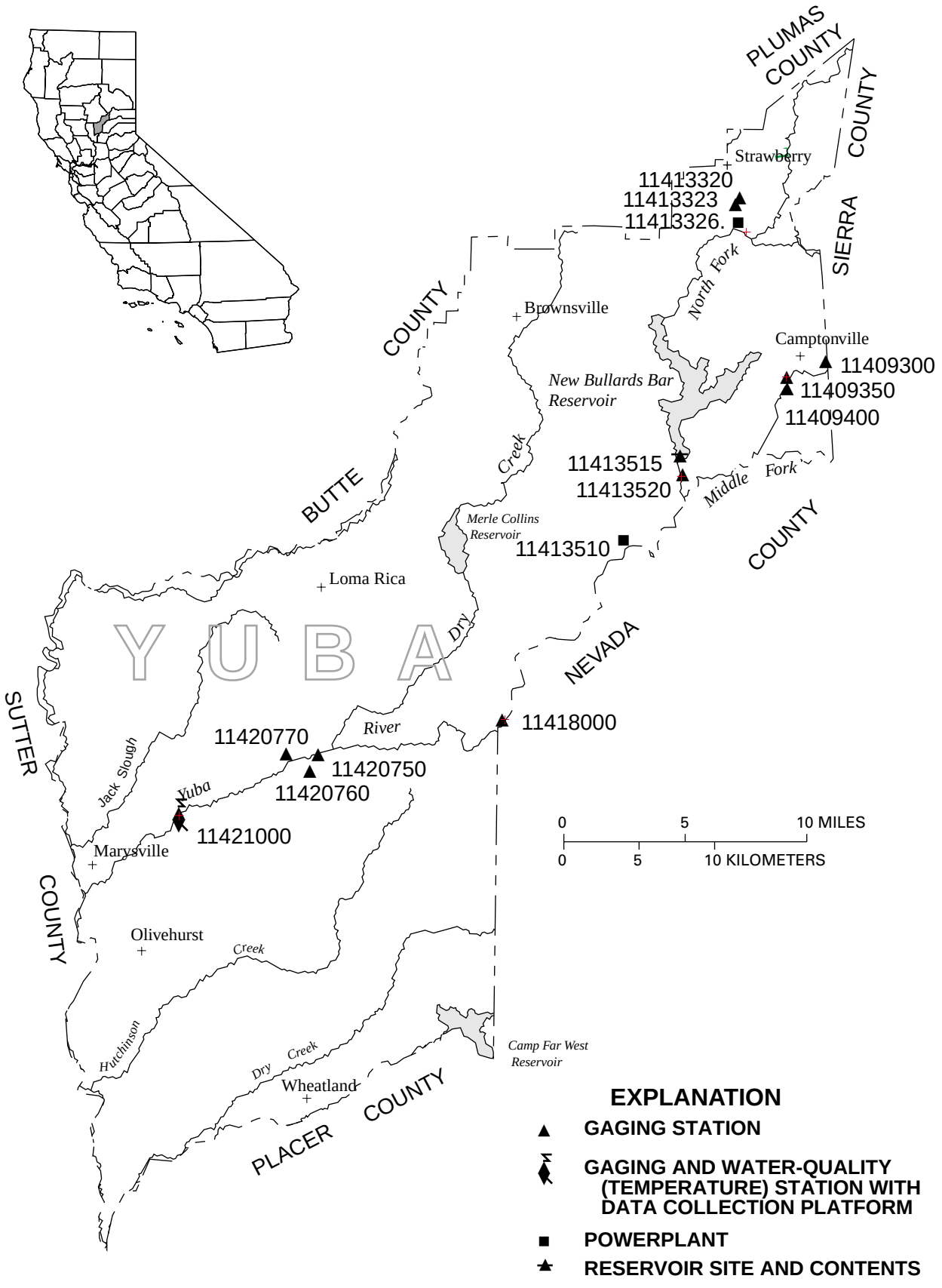

Figure 23. Location of discharge and water-quality stations in Yuba County.

SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

Remark Codes

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

PRINTED OUTPUT	REMARK
e	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptable range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
ND	Not detected.
&	Biological organism estimated as dominant.
*	Instantaneous streamflow at the time of cross-sectional measurements.
**	Partial sampled width.
[1]	Laboratory value.
[2]	Laboratory fixed-end point titration.
A	Samples collected by another agency.
N	Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.
V	Analyte was detected in both the environmental sample and the associated blanks.
†	Sample collected using an automatic sampler.
M	Presence of material verified, but not quantified.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/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 µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

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

Data Precision

NOTE: Precision varies for different analytical methods used to determine the same constituent. The presence of trailing zeroes after the decimal in values printed in this report does not necessarily indicate that the method used for the determination is as precise as the level implied by the rightmost zero.

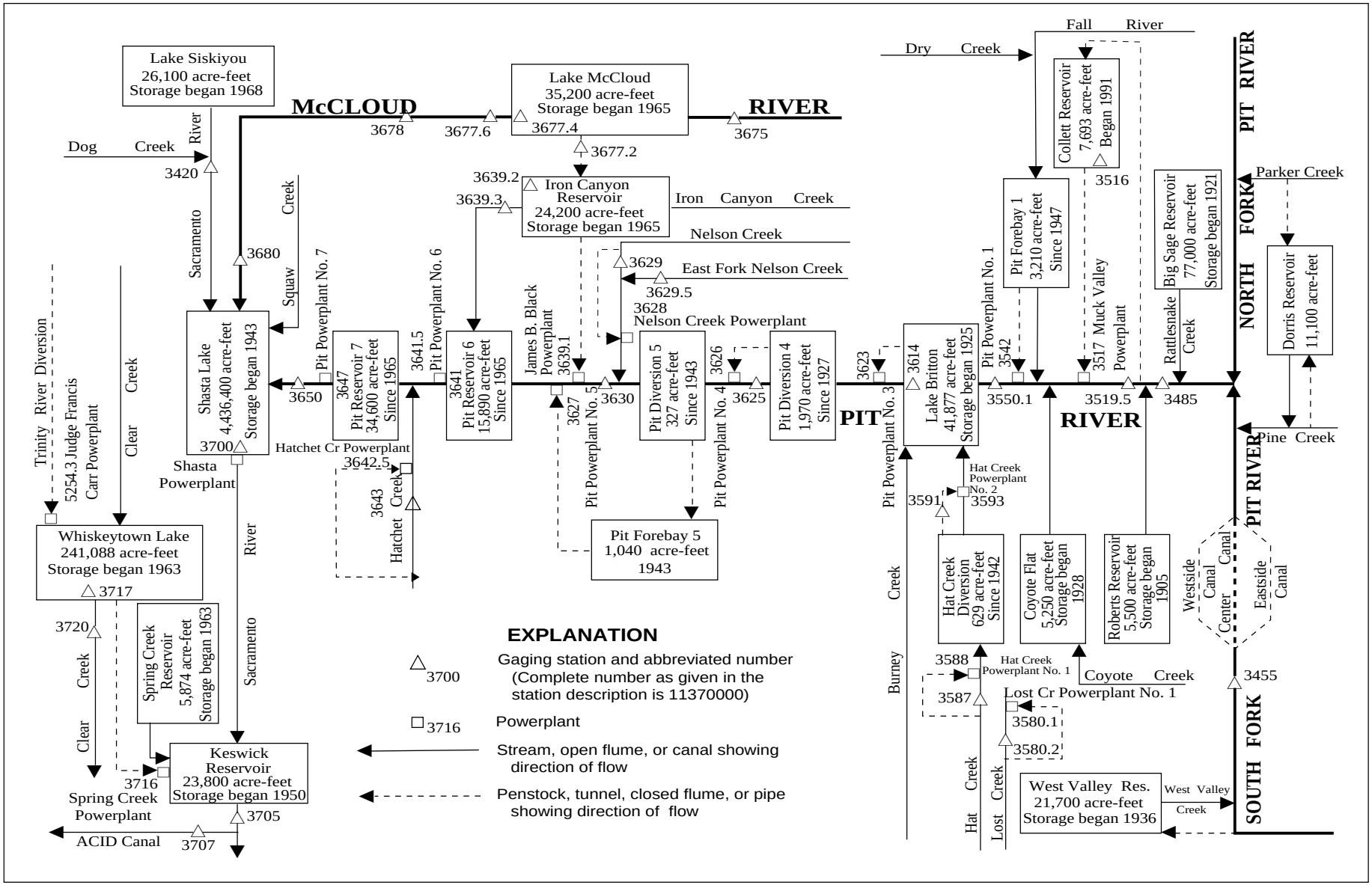

Figure 24. Diversions and storage in Pit and McCloud River Basins.

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 mi^2.

PERIOD OF RECORD.—October 1944 to current year. Monthly discharge only for some periods, published in WSP 1315-A.
CHEMICAL DATA: Water years 1951–81.
WATER TEMPERATURE: Water years 1951, 1954–57, 1963–79.

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

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

REMARKS.—Records 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 ft^3/s, Jan. 16, 1974, gage height, 27.20 ft in gage well, 28.7 ft from floodmarks, from rating curve extended above 19,000 ft^3/s on basis of slope-area measurements at gage height 19.50 ft, and of peak flow; minimum daily, 117 ft^3/s, Aug. 5, 6, 12–15, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 8,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	0445	14,800	12.09	Feb. 22	2100	11,900	11.29
Feb. 5	2230	9,590	10.57	Feb. 27	0915	14,500	12.00
Feb. 14	0730	26,100	15.04	Apr. 17	0930	12,400	11.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	239	1450	346	1950	5750	1740	2130	1220	e475	300	338
2	218	236	895	343	1900	4500	1980	2250	1220	e465	297	335
3	218	233	753	343	1850	3770	2230	2350	1240	e455	286	306
4	218	230	615	332	2280	3560	2610	2420	1260	e470	284	303
5	220	233	562	339	5170	4100	2660	2270	1240	e475	292	299
6	238	234	517	324	6960	3620	2510	2090	1180	e460	292	292
7	233	248	498	322	4150	3530	2340	1900	1150	e450	291	288
8	230	596	472	318	3030	3930	2350	1790	1350	e440	294	285
9	223	414	487	321	2470	3570	2290	1810	1240	e430	294	282
10	222	897	454	360	3130	3240	2170	1790	1080	e418	292	282
11	221	993	436	2110	4520	3460	2150	1650	973	e410	291	280
12	221	660	445	1240	6270	3090	2290	1480	939	402	293	278
13	220	441	512	1590	7340	2740	5620	1520	923	387	290	275
14	219	366	466	9930	16500	2560	4430	1360	962	381	288	275
15	215	541	454	6960	7980	2410	3820	1680	933	373	286	284
16	216	1140	424	10500	5350	2380	5050	1740	885	366	285	283
17	216	1220	419	4910	4090	2480	10300	1620	818	366	282	278
18	217	675	421	3390	3330	2350	6940	1650	769	354	280	276
19	217	780	412	4750	2900	2490	4790	1750	721	350	281	271
20	219	945	424	6960	2740	2340	3730	1940	648	344	281	267
21	213	653	415	4040	3230	2110	3210	2140	651	337	281	267
22	215	516	416	2950	7000	2100	3000	2420	636	333	278	284
23	214	462	400	2790	7440	2160	2740	2650	610	331	276	284
24	215	419	388	3850	4720	2070	2490	2790	582	324	277	276
25	216	400	377	3720	3740	2050	2340	2460	555	324	277	272
26	218	396	375	3090	5660	2050	2320	2180	540	317	276	270
27	287	395	371	2580	12900	2060	2400	2040	517	316	275	269
28	463	382	365	2250	8160	1990	2330	1930	503	313	274	268
29	311	408	358	1870	7460	1860	2140	1670	493	310	273	266
30	265	1740	355	2150	---	1750	2050	1510	e484	307	276	264
31	240	---	351	2190	---	1690	---	1360	---	305	276	---
TOTAL	7276	17092	15287	87168	154220	87760	97020	60340	26322	11788	8818	8497
MEAN	235	570	493	2812	5318	2831	3234	1946	877	380	284	283
MAX	463	1740	1450	10500	16500	5750	10300	2790	1350	475	300	338
MIN	213	230	351	318	1850	1690	1740	1360	484	305	273	264
AC-FT	14430	33900	30320	172900	305900	174100	192400	119700	52210	23380	17490	16850

e Estimated.

11342000 SACRAMENTO RIVER AT DELTA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	353	786	1341	1896	2361	2267	2026	1698	827	345	237	234
MAX	1837	6075	5770	7162	9557	7957	4264	4216	3741	1198	462	514
(WY)	1951	1974	1997	1995	1958	1983	1963	1983	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1945 - 2000	
ANNUAL TOTAL	405665		581588			
ANNUAL MEAN	1111		1589		1192	
HIGHEST ANNUAL MEAN					2715	1983
LOWEST ANNUAL MEAN					228	1977
HIGHEST DAILY MEAN	5820	Mar 25	16500	Feb 14	53900	Jan 16 1974
LOWEST DAILY MEAN	213	Oct 21	213	Oct 21	117	Aug 5 1977
ANNUAL SEVEN-DAY MINIMUM	216	Oct 19	216	Oct 19	117	Aug 11 1977
INSTANTANEOUS PEAK FLOW			26100	Feb 14	69800	Jan 16 1974
INSTANTANEOUS PEAK STAGE			15.04	Feb 14	27.20	Jan 16 1974
ANNUAL RUNOFF (AC-FT)	804600		1154000		863200	
10 PERCENT EXCEEDS	2540		3780		2680	
50 PERCENT EXCEEDS	528		548		532	
90 PERCENT EXCEEDS	223		266		200	

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 mi^2.

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, 1932(M), 1938(M), 1952(M). 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. 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 ft^3/s, June 2, 1971, gage height, 6.05 ft; minimum, 0.2 ft^3/s, Feb. 3, 1941.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	36	30	e19	21	14	20	75	68	156	89	99
2	83	35	30	e18	22	14	25	89	72	153	111	98
3	80	35	e28	e18	20	14	32	122	87	129	144	91
4	79	33	e28	e19	20	13	41	125	85	95	150	73
5	79	27	e27	e20	20	13	45	120	94	97	129	56
6	80	27	e27	e21	18	14	31	122	112	102	111	49
7	84	27	e27	e19	18	16	31	130	110	93	110	41
8	67	27	e28	e20	17	16	36	120	114	86	110	35
9	40	28	e28	e22	18	16	40	94	127	76	120	35
10	38	28	e28	e24	21	16	43	84	108	78	134	34
11	35	23	e28	32	22	15	46	86	101	78	135	36
12	35	24	e28	29	20	14	50	81	100	54	118	42
13	35	25	e28	30	17	13	57	78	100	44	103	41
14	35	25	e28	34	35	16	63	74	101	88	116	41
15	35	27	e29	33	27	17	50	69	98	92	147	44
16	35	28	e28	32	22	18	39	115	104	91	163	50
17	36	30	e28	28	24	21	37	256	101	90	153	51
18	36	28	e28	25	16	17	48	171	103	90	124	47
19	36	30	e27	19	13	19	47	134	108	94	99	36
20	35	30	e27	19	17	19	45	119	131	128	97	31
21	35	30	e25	17	14	16	49	111	159	150	102	31
22	35	27	e23	18	14	16	53	110	159	151	108	31
23	35	27	e21	18	14	20	49	103	172	151	106	31
24	35	28	e20	24	15	21	43	100	179	153	120	31
25	35	31	e19	30	15	20	41	102	179	157	161	31
26	35	32	e19	33	16	22	38	97	190	149	158	31
27	35	33	e19	23	17	26	42	94	198	123	149	34
28	43	32	e19	25	15	25	45	92	200	96	140	40
29	41	30	e19	26	14	22	47	90	193	84	137	40
30	38	30	e19	29	---	20	68	87	166	79	117	41
31	37	---	e19	20	---	19	---	76	---	81	98	---
TOTAL	1462	873	782	744	542	542	1301	3326	3819	3288	3859	1371
MEAN	47.2	29.1	25.2	24.0	18.7	17.5	43.4	107	127	106	124	45.7
MAX	84	36	30	34	35	26	68	256	200	157	163	99
MIN	35	23	19	17	13	13	20	69	68	44	89	31
AC-FT	2900	1730	1550	1480	1080	1080	2580	6600	7570	6520	7650	2720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	32.1	28.1	28.5	31.1	35.1	48.2	109	234	180	93.2	117	58.0
MAX	63.4	57.8	107	98.5	101	219	385	570	643	238	236	159
(WY)	1997	1985	1965	1997	1965	1972	1952	1984	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	38224		21909			
ANNUAL MEAN	105		59.9		83.1	
HIGHEST ANNUAL MEAN					183	1984
LOWEST ANNUAL MEAN					27.3	1931
HIGHEST DAILY MEAN	396	May 27	256	May 17	1220	Jun 2 1971
LOWEST DAILY MEAN	17	Jan 6	13	Feb 19	.80	Mar 19 1940
ANNUAL SEVEN-DAY MINIMUM	17	Jan 6	14	Feb 29	1.1	Feb 3 1941
INSTANTANEOUS PEAK FLOW			299	May 17	1620	Jun 2 1971
INSTANTANEOUS PEAK STAGE			3.50	May 17	6.05	Jun 2 1971
ANNUAL RUNOFF (AC-FT)	75820		43460		60170	
10 PERCENT EXCEEDS	252		129		190	
50 PERCENT EXCEEDS	62		36		43	
90 PERCENT EXCEEDS	25		18		13	

e Estimated.

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, and 3.9 mi southwest of Canby.

DRAINAGE AREA.—1,431 mi^2, excluding Goose Lake Basin.

PERIOD OF RECORD.—January 1904 to December 1905, May 1929 to current year (1929–31 incomplete).
CHEMICAL DATA: Water years 1951–79.
WATER TEMPERATURE: Water years 1965–79.
SEDIMENT DATA: Water years 1957–61, 1967–70.

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 13,000 ft^3/s, Mar. 8, 1904, gage height, 15.0 ft, site and datum then in use; no flow July 18, 19, 2000.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 19	0845	841	4.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	245	115	117	150	314	170	40	57	18	6.8	32
2	173	217	130	102	171	265	165	42	43	19	1.4	64
3	171	152	123	92	186	249	159	50	28	19	1.8	52
4	173	123	112	96	199	241	162	38	16	15	7.4	34
5	175	99	107	99	185	318	183	34	19	9.9	11	27
6	180	127	104	118	177	595	211	34	7.5	12	15	18
7	193	115	108	106	156	730	210	43	8.7	18	14	18
8	212	103	109	159	137	746	136	57	13	21	14	19
9	198	107	110	133	127	726	122	65	11	21	12	18
10	190	98	108	113	124	605	137	90	11	20	6.7	17
11	199	109	111	155	139	546	139	117	19	17	7.5	54
12	201	106	113	211	174	582	130	105	37	15	7.9	108
13	197	96	123	196	211	470	134	87	39	11	9.6	130
14	194	96	116	167	499	376	122	57	28	8.8	18	103
15	177	89	119	202	733	321	132	58	21	7.2	23	82
16	165	86	118	241	518	295	125	56	17	5.0	23	74
17	152	102	133	208	450	282	154	115	16	1.7	26	66
18	149	98	125	170	365	276	170	240	13	.00	22	58
19	147	111	120	202	268	261	254	662	17	.00	25	36
20	144	110	113	214	214	248	266	419	16	5.4	25	20
21	148	118	106	203	186	227	263	254	14	14	27	14
22	204	116	99	162	186	208	273	209	11	14	28	14
23	208	118	108	145	245	207	259	149	12	7.4	21	16
24	211	121	97	192	245	213	228	76	12	7.9	15	10
25	168	102	99	433	242	214	202	31	12	15	17	7.2
26	162	99	95	520	236	210	176	56	13	23	19	9.7
27	208	116	101	403	492	204	150	49	12	66	19	11
28	343	118	113	245	633	208	74	46	14	25	17	12
29	287	137	114	175	408	206	78	36	14	9.8	17	12
30	328	125	114	145	---	195	84	27	18	15	22	11
31	290	---	124	134	---	181	---	30	---	13	24	---
TOTAL	6097	3559	3487	5858	8056	10719	5068	3372	569.2	454.10	503.1	1146.9
MEAN	197	119	112	189	278	346	169	109	19.0	14.6	16.2	38.2
MAX	343	245	133	520	733	746	273	662	57	66	28	130
MIN	144	86	95	92	124	181	74	27	7.5	.00	1.4	7.2
AC-FT	12090	7060	6920	11620	15980	21260	10050	6690	1130	901	998	2270

11348500 PIT RIVER NEAR CANBY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.7	107	194	316	435	555	473	474	280	66.7	44.5	65.9
MAX	1068	418	1225	1684	2249	1749	2774	2176	1746	312	125	201
(WY)	1963	1982	1938	1970	1986	1972	1952	1995	1971	1971	1983	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1904 - 2000	
ANNUAL TOTAL	130549		48889.30			
ANNUAL MEAN	358		134		256	
HIGHEST ANNUAL MEAN					676	1971
LOWEST ANNUAL MEAN					22.4	1934
HIGHEST DAILY MEAN	3000	Mar 2	746	Mar 8	8580	Feb 19 1986
LOWEST DAILY MEAN	15	Jul 22	.00	Jul 18	.00	Jul 18 2000
ANNUAL SEVEN-DAY MINIMUM	27	Jul 17	4.0	Jul 14	.13	Apr 17 1934
INSTANTANEOUS PEAK FLOW			841	May 19	13000	Mar 8 1904
INSTANTANEOUS PEAK STAGE			4.51	May 19	15.00	Mar 8 1904
ANNUAL RUNOFF (AC-FT)	258900		96970		185400	
10 PERCENT EXCEEDS	746		264		653	
50 PERCENT EXCEEDS	175		112		97	
90 PERCENT EXCEEDS	48		12		16	

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 Dec. 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	4,040	1,899
4,032	395	4,050	4,052
4,035	931	4,065	7,693

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	746	3939	2437	5411	2817	4983	6361	7505	6731	5569	2857	295
2	788	3780	2108	5550	2787	4937	6919	7392	6731	5556	2339	287
3	789	3563	1746	5083	2807	4806	6769	7227	6731	5541	1893	279
4	792	3260	2022	4636	2810	4781	7269	7029	6731	5530	1627	272
5	810	2853	2264	4189	2816	4845	7100	6762	6470	5535	1622	263
6	810	3130	2042	3726	2816	4868	6902	6762	6156	5523	1618	256
7	858	3319	1816	3388	2579	4882	6733	6762	6153	5512	1484	248
8	874	3114	1576	3584	2501	4897	7276	6473	6136	5503	1480	240
9	994	2896	1789	3789	2351	5011	7628	6247	6128	5493	1214	233
10	1000	2733	1992	3439	2105	5110	7628	6337	6186	5477	1210	225
11	1137	2916	2199	3216	1847	5403	7628	6292	6186	5462	1088	217
12	1251	3096	2416	3096	1855	5682	7599	6008	6008	5449	1080	209
13	1328	3277	2642	3174	1871	5784	7597	6013	5756	5436	1078	201
14	1390	3432	2884	3132	1952	5888	7581	6230	5756	5424	823	194
15	1403	3592	3094	3893	2741	5867	7572	6367	5725	5411	585	186
16	1634	3755	3352	4551	3720	5829	7566	6134	5686	5398	403	179
17	1843	3909	3583	4525	4631	5786	7566	5889	5653	5387	344	172
18	1817	4079	3827	4298	5041	5742	7271	5720	5653	5374	324	168
19	1805	4256	4074	4042	5004	5702	7131	5889	5697	5394	320	160
20	1840	4460	4307	3795	4974	5660	6962	6261	5690	5101	314	---
21	1741	4685	4522	3527	4961	5622	6775	7153	5682	4811	295	---
22	1797	4372	4716	3533	4753	5580	6762	7401	5663	4800	295	---
23	1847	3945	4890	3540	4598	5565	6816	7486	5653	4787	295	---
24	1965	3493	5046	3323	4468	5540	6862	7286	5649	4493	295	---
25	2081	3721	5198	3347	4339	5847	6823	7007	5644	4199	295	---
26	2186	3265	5323	3378	4312	6537	6762	7015	5619	3904	295	---
27	2333	3449	5454	3525	4480	6640	7008	7015	5605	3893	295	---
28	2482	3628	4908	3500	4958	6442	7298	7038	5599	3887	295	---
29	2784	3170	5048	3493	4978	6225	7646	7038	5592	3873	295	---
30	3405	2733	5170	3506	---	5954	7635	7019	5578	3860	295	---
31	3990	---	5298	3139	---	5698	---	7007	---	3369	295	---
MAX	3990	4685	5454	5550	5041	6640	7646	7505	6731	5569	2857	---
MIN	746	2733	1576	3096	1847	4781	6361	5720	5578	3369	295	---
a	6410	8420	3760	22600	25740	33810	14610	5820	1230	1920	2890	0

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

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

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

DRAINAGE AREA.—2,475 mi^2, excluding Goose Lake Basin.

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Acoustic-velocity meter measures minimum bypass flow; 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 ft^3/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, 16,800 ft^3/s, Jan. 3, 1997; no flow many days during 1995, 1997, and 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	53	53	53	53	1040	53	53	4.0	2.0	.00	.00
2	43	53	53	54	53	767	53	53	8.0	2.0	.00	.00
3	29	53	53	53	53	650	53	53	8.0	2.0	.00	.00
4	37	53	53	54	53	386	53	41	9.0	2.0	.00	.00
5	35	53	53	54	53	560	53	6.0	5.0	2.0	.00	.00
6	32	53	53	53	53	1060	53	13	2.0	2.0	.00	.00
7	38	54	53	54	53	1510	53	17	4.0	2.0	.00	.00
8	35	54	53	54	53	1580	53	32	4.0	2.0	.00	.00
9	53	54	52	54	53	1440	53	53	4.0	2.0	.00	.00
10	53	54	52	53	53	1350	53	54	11	2.0	.00	.00
11	54	53	52	54	53	1130	53	52	2.0	2.0	.00	.00
12	54	53	52	54	53	997	53	11	2.0	2.0	.00	.00
13	54	53	52	54	53	1040	53	30	2.0	2.0	.00	.00
14	54	53	52	53	182	850	53	53	2.0	2.0	.00	.00
15	53	53	52	53	1240	614	53	53	2.0	2.0	.00	.00
16	53	53	52	55	1610	404	53	50	2.0	2.0	.00	.00
17	54	53	52	54	1240	370	53	49	2.0	2.0	.00	.00
18	55	53	52	53	871	250	53	53	2.0	2.0	.00	.00
19	54	53	52	53	472	182	53	53	18	8.0	.00	.00
20	53	53	52	54	215	165	53	53	2.0	2.0	.00	.00
21	53	53	52	53	54	55	53	119	2.0	2.0	.00	.00
22	53	53	52	53	53	54	53	54	2.0	2.0	.00	.00
23	54	53	52	53	54	53	53	54	2.0	2.0	.00	.00
24	54	53	52	53	165	53	53	36	2.0	2.0	.00	.00
25	54	53	52	284	198	53	53	12	2.0	2.0	.00	.00
26	54	53	53	438	102	53	53	47	2.0	2.0	.00	.00
27	53	53	53	668	560	53	53	31	2.0	2.0	.00	.00
28	53	53	53	403	1350	53	53	18	2.0	2.0	.00	.00
29	53	53	53	53	1330	53	53	10	2.0	2.0	.00	.00
30	53	53	53	53	---	53	53	3.0	2.0	2.0	.00	.00
31	53	---	53	53	---	53	---	3.0	---	2.0	.00	---
TOTAL	1516	1594	1626	3237	10385	16931	1590	1219.0	115.0	68.0	0.00	0.00
MEAN	48.9	53.1	52.5	104	358	546	53.0	39.3	3.83	2.19	.000	.000
MAX	55	54	53	668	1610	1580	53	119	18	8.0	.00	.00
MIN	29	53	52	53	53	53	53	3.0	2.0	2.0	.00	.00
AC-FT	3010	3160	3230	6420	20600	33580	3150	2420	228	135	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	41.1	96.8	201	1134	1313	1518	779	1233	429	25.1	8.35	22.6
MAX	53.0	325	475	3344	3089	3316	1677	3679	1903	69.1	31.4	43.0
(WY)	1999	1999	1999	1997	1996	1995	1995	1995	1998	1998	1998	1998
MIN	21.5	46.3	52.5	104	358	366	53.0	39.3	3.83	2.19	.000	.000
(WY)	1995	1998	2000	2000	2000	1997	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	150159.0		38281.00			
ANNUAL MEAN	411		105		564	
HIGHEST ANNUAL MEAN					997	1995
LOWEST ANNUAL MEAN					105	2000
HIGHEST DAILY MEAN	5440	Mar 4	1610	Feb 16	16800	Jan 3 1997
LOWEST DAILY MEAN	2.0	Jul 3	.00	Aug 1	.00	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	2.0	Jul 3	.00	Aug 1	.00	Aug 3 1995
ANNUAL RUNOFF (AC-FT)	297800		75930		408500	
10 PERCENT EXCEEDS	1360		133		1690	
50 PERCENT EXCEEDS	53		53		53	
90 PERCENT EXCEEDS	2.0		.00		2.0	

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

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

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

GAGE.—Discharge computed from powerplant output.

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,490 ft^3/s, Mar. 13, 1995; no flow several days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	1510	1550	1330	1670	1740	1660	1550	1310	1210	1270	1150
2	1200	1260	1340	1330	1620	1330	1540	1440	1330	1180	1210	1320
3	1380	1330	1450	1320	1470	1820	1600	1330	1270	1230	1190	1380
4	1300	1280	1440	1350	849	1760	1630	1520	1310	1180	1210	1240
5	1180	1400	1370	1330	1070	1960	1640	1460	1320	1210	1250	1330
6	1440	1340	1380	830	1550	1130	1680	1520	1310	1250	1230	1360
7	1330	1360	1380	1350	1530	1110	1700	1480	1060	1270	1280	1270
8	1370	1340	1370	1360	1430	1070	1780	1500	1280	1270	1220	1260
9	1270	1410	1380	1330	1520	1360	1850	1600	1480	1230	1280	1300
10	1340	1320	1370	1300	1570	1890	1610	1360	1320	1200	994	1280
11	1370	1390	1430	1430	1540	1890	1700	1580	1330	1230	1180	1240
12	1320	1440	1360	1640	1550	1340	1760	1520	1320	1190	1150	1310
13	1330	1340	1460	1470	1610	1140	1710	1730	1230	1260	1200	1300
14	1300	1370	1320	1420	1590	1320	2110	1520	1410	1190	1240	1290
15	1330	1370	1370	1670	2070	1620	2070	1570	1200	1240	1110	1300
16	1330	1380	1310	1460	2040	1730	1930	1600	1280	1220	1310	1290
17	1320	1060	1340	1780	1880	1730	1930	1530	1240	1210	1240	1300
18	1420	1880	1430	1680	1790	1710	1920	1580	1200	1180	1310	1250
19	1330	1410	1340	1580	1750	1770	1880	1450	1240	1070	1220	1240
20	1270	1410	1370	1600	1710	1740	1780	1520	1210	1200	1230	1230
21	1350	1420	1370	1610	1650	1700	1780	1460	1250	1320	1190	1270
22	1370	1300	1350	1580	1680	1670	1720	1370	1260	1260	1200	1240
23	1320	1390	1330	1680	1750	1700	1730	1260	1230	1220	1200	1250
24	1360	1360	1370	1790	1810	1730	1720	1460	1210	1200	1230	1270
25	1350	1400	1260	1830	1790	1710	1670	1220	1260	1240	1260	1260
26	1340	1350	1410	1740	1740	1710	1720	1330	1240	1180	1230	1290
27	1370	1360	1340	1670	2030	1690	1410	1370	1220	1260	1240	1280
28	1390	1370	1320	1530	2050	1600	1660	1420	1170	1260	1240	1310
29	1520	1330	1380	1550	2000	1700	1690	1380	1240	1350	1180	1250
30	1420	1430	1400	1570	---	1700	1670	1370	1220	1160	1250	1280
31	1430	---	1300	1710	---	1700	---	1370	---	1270	1190	---
TOTAL	41640	41310	42590	46820	48309	49770	52250	45370	37950	37940	37734	38340
MEAN	1343	1377	1374	1510	1666	1605	1742	1464	1265	1224	1217	1278
MAX	1520	1880	1550	1830	2070	1960	2110	1730	1480	1350	1310	1380
MIN	1180	1060	1260	830	849	1070	1410	1220	1060	1070	994	1150
AC-FT	82590	81940	84480	92870	95820	98720	103600	89990	75270	75250	74850	76050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

MEAN	1150	1177	1171	1266	1325	1479	1465	1369	1204	1106	1085	1106
MAX	1394	1527	1533	1720	1871	1972	1927	1939	1698	1412	1379	1278
(WY)	1999	1999	1999	1998	1998	1995	1995	1998	1998	1998	1998	2000
MIN	941	971	987	996	749	1053	1014	947	914	844	835	900
(WY)	1995	1995	1995	1992	1994	1992	1994	1992	1994	1992	1992	1994

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	561382.00		520023			
ANNUAL MEAN	1538		1421		1241	
HIGHEST ANNUAL MEAN					1572	1998
LOWEST ANNUAL MEAN					955	1994
HIGHEST DAILY MEAN	2160	Jan 22	2110	Apr 14	2490	Mar 13 1995
LOWEST DAILY MEAN	.00	Sep 1	830	Jan 6	.00	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	1070	Jul 30	1160	Aug 9	68	Feb 8 1994
ANNUAL RUNOFF (AC-FT)	1114000		1031000		899300	
10 PERCENT EXCEEDS	1950		1730		1680	
50 PERCENT EXCEEDS	1430		1360		1180	
90 PERCENT EXCEEDS	1260		1200		953	

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 mi^2, excluding Goose Lake Basin.

PERIOD OF RECORD.—August 1975 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,000 ft^3/s, Feb. 20, 1986, gage height, 17.03 ft; minimum daily, 535 ft^3/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 ft^3/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 4,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 9	1515	4,670	8.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	1860	2130	1620	2480	3710	2120	1920	1510	e1350	1560	1340
2	1520	1980	1940	1610	2300	3380	1830	1820	1570	e1320	1630	1510
3	1600	1950	2030	1700	2150	3250	2020	1660	1490	e1390	1640	1590
4	1470	1900	1910	1930	1590	3030	2050	1880	1500	e1330	1590	1450
5	1450	2000	1670	1910	1870	3390	2000	1810	1500	e1360	1560	1530
6	1880	1860	1710	1930	2220	3800	2230	1830	1560	e1400	1450	1570
7	1720	1650	1870	1860	2250	4110	2260	1730	1390	e1420	1450	1470
8	1750	1680	1840	1830	2060	4170	2210	1700	1490	1470	1430	1470
9	1640	1870	1820	1630	2140	4080	2070	1940	1700	1420	1460	1510
10	1600	1820	1650	1630	2190	3970	2010	1790	1540	1400	1200	1490
11	1650	1790	1700	2070	2180	3720	2090	1940	1550	1420	1540	1440
12	1720	1720	1640	2280	2180	3400	2150	1890	1530	1390	1490	1510
13	1750	1620	1710	2070	2250	3450	2100	2050	1480	1420	1570	1470
14	1700	1640	1620	2050	2560	3440	2490	1720	1730	1400	1480	1490
15	1710	1640	1650	2120	3540	3090	2480	1950	1420	1420	1320	1460
16	1690	1660	1580	1810	3620	3050	2340	2130	1470	1410	1610	1490
17	1560	1670	1620	2610	3330	2940	2360	1910	1420	1400	e1520	1480
18	1680	1740	1710	2530	3060	2850	2550	1930	1380	1370	e1600	1480
19	1710	1700	1630	2450	2970	2840	2560	1830	1430	1230	e1560	1450
20	1670	1700	1650	2450	2740	2780	2560	1800	1390	1460	e1420	1430
21	1720	1710	1620	2420	2530	2670	2590	1680	1410	1580	e1400	1440
22	1740	1660	1630	2260	2500	2570	2460	1740	1430	1550	1400	1440
23	1670	1980	1610	2270	2610	2530	2400	1670	1400	1460	1410	1460
24	1600	1970	1650	2620	2760	2540	2280	1820	1380	1410	1430	1480
25	1610	1880	1550	3070	2800	2440	2240	1570	1390	1480	1450	1460
26	1730	1760	1670	2900	2700	2140	2340	1650	1410	1510	1430	1490
27	1770	1860	1620	2930	3110	2200	1920	1640	1390	1580	1410	1480
28	1840	1660	1690	2740	3710	2420	2040	1640	e1320	1460	1440	1490
29	1910	1710	1890	2480	4060	2470	1970	1580	e1400	1540	1370	1450
30	1800	2040	1670	2280	---	2460	1950	1590	e1400	1370	1410	1470
31	1680	---	1580	2440	---	2460	---	1560	---	1470	1380	---
TOTAL	52220	53680	53260	68500	76460	95350	66670	55370	43980	44190	45610	44290
MEAN	1685	1789	1718	2210	2637	3076	2222	1786	1466	1425	1471	1476
MAX	1910	2040	2130	3070	4060	4170	2590	2130	1730	1580	1640	1590
MIN	1450	1620	1550	1610	1590	2140	1830	1560	1320	1230	1200	1340
AC-FT	103600	106500	105600	135900	151700	189100	132200	109800	87230	87650	90470	87850

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1403	1639	1831	2340	2938	3299	2605	2345	1701	1327	1284	1322
MAX	1776	3181	3834	6060	8539	6539	5614	6883	4582	1809	1618	1628
(WY)	1999	1982	1984	1997	1986	1993	1982	1995	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1975 - 2000	
ANNUAL TOTAL	907090		699580			
ANNUAL MEAN	2485		1911		1996	
HIGHEST ANNUAL MEAN					2914	1998
LOWEST ANNUAL MEAN					1149	1992
HIGHEST DAILY MEAN	8580	Mar 5	4170	Mar 8	28800	Feb 20 1986
LOWEST DAILY MEAN	1180	Sep 1	1200	Aug 10	535	Sep 11 1994
ANNUAL SEVEN-DAY MINIMUM	1420	Jul 30	1360	Jun 28	663	Sep 7 1994
INSTANTANEOUS PEAK FLOW			4670	Mar 9	30000	Feb 20 1986
INSTANTANEOUS PEAK STAGE			8.60	Mar 9	17.03	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	1799000		1388000		1446000	
10 PERCENT EXCEEDS	4170		2680		3360	
50 PERCENT EXCEEDS	1840		1700		1520	
90 PERCENT EXCEEDS	1490		1410		1170	

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 mi^2.

PERIOD OF RECORD.—October 1989 to September 1997, October 1998 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 ft^3/s; flow is computed to 80 ft^3/s. See schematic diagram of Pit and McCloud River Basins.

COOPERATION.—Records were collected by Snow Mountain Hydro, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	68	16	16	16	17	17	17	17	16	16
2	17	16	68	17	17	17	17	17	16	17	17	17
3	16	25	68	19	22	17	17	17	17	16	17	16
4	17	16	68	16	16	16	16	16	17	17	17	17
5	17	16	22	17	16	17	16	16	16	25	16	16
6	17	16	17	17	16	16	17	16	17	22	17	17
7	17	16	16	17	16	16	16	16	17	16	17	17
8	17	25	17	16	17	16	17	17	17	16	16	16
9	17	16	16	16	16	16	17	16	17	17	16	16
10	21	17	16	22	16	19	17	16	17	16	17	16
11	17	16	16	17	17	16	17	16	17	19	16	23
12	17	16	16	17	20	16	17	17	16	16	17	17
13	16	17	16	16	17	17	17	16	16	20	16	16
14	16	16	17	17	24	17	16	17	17	16	16	16
15	17	16	17	16	16	16	17	17	17	16	16	16
16	17	16	16	16	17	16	16	19	17	21	17	16
17	17	16	17	17	17	16	16	16	16	16	17	16
18	17	17	17	16	16	16	20	16	17	17	16	16
19	16	17	16	17	16	16	16	17	16	17	16	16
20	16	17	17	16	16	17	16	17	17	16	17	18
21	17	17	17	17	17	17	17	17	17	17	16	16
22	17	17	17	16	16	16	16	17	16	16	17	16
23	16	17	17	16	22	16	16	16	17	17	16	17
24	17	16	16	17	17	16	16	17	17	17	16	17
25	16	17	17	16	17	16	16	16	17	16	16	17
26	16	17	17	16	17	16	17	16	16	17	16	17
27	26	17	16	16	25	19	16	16	17	16	17	17
28	17	44	17	16	17	17	17	16	16	17	20	16
29	16	68	16	16	17	16	17	16	17	16	16	16
30	16	68	16	17	---	16	17	16	17	17	16	16
31	20	---	16	17	---	16	---	16	---	16	17	---
TOTAL	532	642	723	518	509	510	500	511	501	535	513	499
MEAN	17.2	21.4	23.3	16.7	17.6	16.5	16.7	16.5	16.7	17.3	16.5	16.6
MAX	26	68	68	22	25	19	20	19	17	25	20	23
MIN	16	16	16	16	16	16	16	16	16	16	16	16
AC-FT	1060	1270	1430	1030	1010	1010	992	1010	994	1060	1020	990
a	3230	2890	2850	3290	3160	3340	3140	3200	2970	2940	2990	3000

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

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, and 6.5 mi northeast of Burney.

DRAINAGE AREA.—347 mi^2.

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 2.0 ft^3/s at all times. Flow is computed to 9.0 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.7	3.0	3.1	2.9	3.1	2.9	3.0	2.9	4.0	3.1	3.2
2	3.0	3.6	3.0	3.1	2.9	3.1	2.8	3.1	2.8	3.9	3.2	3.1
3	3.0	3.2	3.0	3.0	2.9	3.1	2.8	3.2	2.7	3.8	3.2	3.1
4	3.0	3.1	3.0	3.0	2.9	3.1	2.8	3.2	2.7	3.6	3.2	3.1
5	3.0	3.1	3.0	3.1	3.0	3.1	2.8	3.2	3.1	3.3	3.2	3.1
6	3.0	3.1	3.0	3.1	3.0	3.1	2.9	3.2	3.2	2.9	3.2	3.1
7	3.1	3.1	2.9	3.0	3.0	3.1	2.9	3.2	3.2	2.9	3.2	3.0
8	3.1	3.2	2.9	3.0	3.0	3.1	2.9	3.2	3.2	3.3	3.2	3.0
9	3.0	3.2	2.9	3.0	3.1	3.1	2.9	3.2	3.3	3.3	3.2	3.0
10	3.0	3.2	2.9	3.0	3.1	3.0	2.9	3.3	3.3	3.3	3.2	3.2
11	3.0	3.2	2.9	3.0	3.1	3.0	2.9	3.3	3.2	3.2	3.2	3.2
12	3.0	3.2	2.9	3.0	3.1	3.0	2.9	3.3	3.1	3.2	3.2	3.2
13	3.0	3.2	2.9	3.0	3.1	3.0	2.9	3.3	3.0	3.2	3.2	3.2
14	3.0	3.1	2.9	3.0	3.1	3.0	2.9	3.3	3.0	3.2	3.1	3.2
15	3.0	3.1	2.8	3.0	3.1	3.0	2.9	3.3	3.0	3.1	3.1	3.2
16	3.1	3.1	2.8	3.1	3.1	3.0	2.9	3.1	3.0	3.1	3.2	3.2
17	3.1	3.1	2.8	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.2	3.2
18	3.1	3.1	2.8	3.1	3.1	3.0	3.1	3.0	3.0	2.9	3.2	---
19	3.1	3.1	2.8	3.2	3.1	3.0	3.1	3.0	3.0	2.8	3.2	3.1
20	3.1	3.1	2.8	3.2	3.1	3.0	3.0	3.0	2.9	2.8	3.2	3.0
21	3.0	3.1	2.9	3.2	3.1	3.0	3.0	3.0	2.9	2.8	3.2	3.0
22	3.0	3.0	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.8	3.2	3.0
23	3.0	3.0	3.2	3.1	3.1	3.0	3.0	2.8	2.8	2.7	3.2	3.0
24	3.0	3.0	3.2	3.2	3.1	3.0	2.9	2.9	2.9	3.1	3.2	3.0
25	6.4	3.0	3.1	3.1	3.1	3.0	2.9	3.0	2.8	3.3	3.2	3.0
26	7.4	3.0	3.1	3.1	3.0	3.0	2.8	3.0	3.4	3.6	3.2	3.0
27	---	2.9	3.1	3.0	3.1	3.0	2.8	3.0	3.5	3.3	3.3	3.0
28	---	3.1	3.1	3.0	3.1	2.9	2.8	3.0	3.1	3.2	3.2	3.0
29	---	3.1	3.2	3.0	3.1	2.9	2.8	3.0	3.7	3.2	3.3	3.0
30	---	3.0	3.1	3.0	---	2.9	2.8	3.0	4.0	3.2	3.3	3.0
31	---	---	3.1	3.0	---	2.9	---	3.2	---	3.2	3.3	---
TOTAL	---	94.0	92.3	94.9	88.6	93.5	87.0	96.2	92.6	99.2	99.3	---
MEAN	---	3.13	2.98	3.06	3.06	3.02	2.90	3.10	3.09	3.20	3.20	---
MAX	---	3.7	3.2	3.2	3.1	3.1	3.1	3.3	4.0	4.0	3.3	---
MIN	---	2.9	2.8	3.0	2.9	2.9	2.8	2.8	2.7	2.7	3.1	---
AC-FT	---	186	183	188	176	185	173	191	184	197	197	---

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, and 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 available in the files of the Pacific Gas & Electric Co.

GAGE.—Discharge computed from powerplant output.

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 518 ft^3/s, Nov. 2, 1998; no flow several days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324	383	428	410	415	420	347	377	358	337	322	324
2	324	426	427	409	413	419	348	349	348	335	322	323
3	324	426	424	409	415	402	335	342	343	332	282	325
4	331	426	422	410	415	412	331	350	352	334	324	329
5	348	426	421	410	414	428	327	345	358	340	323	328
6	363	425	421	409	413	429	336	355	354	342	323	326
7	393	425	422	409	412	425	334	365	360	344	322	325
8	401	426	420	410	411	425	326	360	367	337	322	321
9	392	426	419	410	411	426	324	374	396	332	328	323
10	391	399	420	411	412	422	326	358	400	332	333	324
11	388	426	418	429	412	419	328	357	380	327	331	327
12	386	426	418	421	413	418	349	355	365	326	328	330
13	386	422	421	419	419	417	364	354	360	310	323	327
14	386	420	417	400	432	417	359	350	363	343	322	328
15	386	420	417	424	432	414	384	349	364	343	322	329
16	386	423	418	434	426	368	369	356	358	340	320	331
17	386	417	417	425	422	414	393	350	358	340	308	326
18	374	282	418	425	419	411	404	336	353	340	314	328
19	391	425	417	425	416	409	408	333	343	340	314	330
20	391	429	416	424	416	410	407	337	336	340	328	329
21	394	427	415	421	418	409	408	340	334	340	327	331
22	385	424	415	419	417	408	405	344	345	340	321	330
23	381	420	414	421	422	408	405	331	336	340	322	331
24	371	419	410	436	414	407	405	359	331	340	321	331
25	77	418	410	437	416	407	402	362	331	340	325	328
26	.00	418	410	425	418	402	390	362	332	333	326	329
27	.00	418	408	417	440	398	375	356	336	326	325	329
28	.00	416	394	413	429	386	374	360	334	324	324	329
29	.00	424	407	409	426	380	388	357	334	324	324	316
30	.00	432	407	418	---	376	382	357	350	324	322	332
31	153	---	409	420	---	361	---	322	---	324	322	---
TOTAL	9212.00	12494	12900	12959	12138	12647	11033	10902	10579	10369	9970	9819
MEAN	297	416	416	418	419	408	368	352	353	334	322	327
MAX	401	432	428	437	440	429	408	377	400	344	333	332
MIN	.00	282	394	400	411	361	324	322	331	310	282	316
AC-FT	18270	24780	25590	25700	24080	25090	21880	21620	20980	20570	19780	19480
a	31870	32370	33980	33220	32170	33810	27190	30340	29170	28620	27760	27160

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

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 8.0 ft^3/s at all times. Flow is computed to 15 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.9	9.5	9.2	9.0	9.8	9.4	9.0	10	9.6	9.7	9.5
2	10	9.9	9.5	9.1	9.1	9.4	9.4	9.1	10	9.3	9.9	9.5
3	10	9.9	9.4	9.1	9.4	9.4	---	9.2	10	9.4	9.9	9.6
4	10	9.8	9.4	9.1	9.4	9.4	9.3	9.3	10	9.8	9.8	9.7
5	9.9	9.8	9.4	9.1	9.3	9.6	9.4	9.9	10	9.9	9.7	9.7
6	9.8	9.8	9.4	9.1	9.3	9.7	9.5	9.8	9.9	10	9.6	9.6
7	9.9	9.8	9.4	9.2	9.3	9.6	9.5	9.9	9.8	10	9.5	9.7
8	9.9	9.8	9.4	9.4	9.5	9.6	9.3	9.8	9.8	10	9.5	9.6
9	10	9.8	9.4	9.4	9.6	9.5	9.1	10	9.9	9.8	9.5	9.7
10	9.9	9.8	9.4	9.4	9.6	9.5	9.0	10	10	9.9	9.5	9.7
11	9.9	9.8	9.4	9.5	9.6	9.4	9.1	10	9.7	9.8	9.7	9.7
12	9.9	9.8	9.3	9.5	9.6	9.4	9.2	9.9	9.9	9.9	9.9	9.7
13	9.8	9.8	9.4	9.4	9.5	9.4	9.4	9.9	10	10	9.9	9.8
14	9.6	9.7	9.3	9.3	9.7	9.5	9.6	9.8	9.7	10	9.6	9.7
15	9.6	9.7	9.3	9.4	9.7	9.7	9.6	9.7	9.4	10	9.4	9.7
16	9.6	9.7	9.3	9.5	9.6	9.7	9.5	9.7	9.4	9.9	9.3	9.8
17	9.6	9.8	9.3	9.4	9.7	9.7	9.6	9.8	9.2	9.5	9.3	9.7
18	9.7	9.7	9.4	9.4	9.9	9.6	9.7	9.8	9.2	9.4	9.3	9.8
19	9.8	9.7	9.4	9.4	9.9	9.5	9.6	9.6	9.0	9.4	9.3	9.7
20	9.8	9.7	9.4	9.4	9.8	9.5	9.5	9.7	9.1	9.4	9.4	9.7
21	9.8	9.7	9.3	9.2	9.8	9.5	9.4	9.4	9.4	9.3	9.4	9.7
22	9.7	9.7	9.3	9.2	9.8	9.5	9.4	9.7	9.5	9.3	9.4	9.7
23	9.6	9.6	9.3	9.1	9.9	9.5	9.3	9.7	9.7	9.3	9.4	9.7
24	9.5	9.5	9.2	9.4	9.8	9.5	9.4	9.7	9.4	9.8	9.4	9.7
25	9.3	9.4	9.2	9.4	9.8	9.5	9.3	9.9	9.0	10	9.5	9.6
26	9.5	9.4	9.2	9.2	9.8	9.4	9.5	10	9.4	10	9.5	9.7
27	9.6	---	9.2	9.1	10	9.5	9.5	10	9.5	10	9.4	9.7
28	9.9	9.6	9.2	8.9	10	9.5	9.2	10	9.6	9.8	9.5	9.6
29	9.9	9.5	9.2	8.8	9.9	9.3	9.1	9.9	9.7	9.8	9.5	9.8
30	9.9	9.6	9.2	8.9	---	9.4	9.1	9.7	9.9	9.7	9.5	9.8
31	9.9	---	9.2	9.1	---	9.5	---	9.8	---	9.5	9.5	---
TOTAL	303.3	---	289.2	286.6	279.3	295.0	---	301.7	289.1	301.5	295.7	290.6
MEAN	9.78	---	9.33	9.25	9.63	9.52	---	9.73	9.64	9.73	9.54	9.69
MAX	10	---	9.5	9.5	10	9.8	---	10	10	10	9.9	9.8
MIN	9.3	---	9.2	8.8	9.0	9.3	---	9.0	9.0	9.3	9.3	9.5
AC-FT	602	---	574	568	554	585	---	598	573	598	587	576

NOTE: Canal out of service Apr. 3 and all flow remained in the natural channel.

RESERVOIRS IN PIT AND McCLOUD RIVER BASINS, CA

11361400 LAKE BRITTON NEAR BURNEY.—Lat 41°1'20", 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 mi^2, excluding Goose Lake Basin.

PERIOD OF RECORD.—October 1965 to current year (monthend contents only). Fragmentary records for water years 1925–65 in files of the Pacific Gas & Electric Co.

GAGE.—Remote telemark read once daily. Datum of gage is 19.53 ft above sea level (levels by Pacific Gas & Electric Co.). Monthend contents based on capacity table dated Dec. 1, 1976, provided by Pacific Gas & Electric Co.

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

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

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

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 40,300 acre-ft, Sept. 3, elevation, 2,756.74 ft; minimum, 31,654 acre-ft, Apr. 5, elevation, 2,749.38 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 mi^2.

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, 17,170 acre-ft, Sept. 4, elevation, 2,649.40 ft; minimum, 3,582 acre-ft, Apr. 16, elevation, 2,596.10 ft.

11367740 LAKE McCLOUD NEAR McCLOUD.—Lat 41°08'06", long 122°04'26", in SE 1/4 SW 1/4 sec.22, T.38 N., R.2 W., Shasta County, Hydrologic Unit 18020004, Shasta National Forest, on McCloud Dam near spillway on McCloud River, 200 ft downstream from Panther Creek, and 8.8 mi southeast of McCloud.

DRAINAGE AREA.—403 mi^2.

PERIOD OF RECORD.—October 1965 to current year (monthend contents only).

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Pacific Gas & Electric Co.). Monthend contents based on capacity table dated June 29, 1965, provided by Pacific Gas & Electric Co.

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

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

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

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 34,901 acre-ft, Feb. 14, elevation, 2,679.40 ft; minimum, 19,018 acre-ft, Dec. 21, elevation, 2,642.70 ft.

RESERVOIRS IN PIT AND McCLOUD RIVER BASINS, CA—Continued

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

	11361400 LAKE BRITTON			11363920 IRON CANYON RESERVOIR			11367740 LAKE McCLOUD		
Date	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)	Elevation (ft)	Contents acre-ft)	Change in contents (acre-ft)
Sept. 30	2,752.50	34,717	—	2,616.40	7,118	—	2,643.60	19,338	—
Oct. 31	2,750.24	32,596	-2,121	2,624.00	8,952	+1,834	2,645.50	20,034	+696
Nov. 30	2,754.62	37,678	+5,082	2,635.30	12,176	+3,224	2,652.60	22,736	+2,702
Dec. 31	2,754.53	37,559	-119	2,621.20	8,239	-3,937	2,643.60	19,338	-3,398
CAL YR 1999			+1,374			+2,004			-2,116
Jan. 31	2,755.53	38,792	+1,233	2,618.30	7,534	-705	2,676.80	33,598	+14,260
Feb. 28	2,756.25	39,681	+889	2,609.70	5,728	-1,806	2,675.60	32,978	-620
Mar. 31	2,753.42	36,232	-3,449	2,608.90	5,570	-158	2,675.90	33,122	+144
Apr. 30	2,749.91	32,231	-4,001	2,617.50	7,347	+1,777	2,675.70	33,033	-89
May 31	2,755.41	38,643	+6,412	2,622.50	8,576	+1,229	2,670.50	30,542	-2,491
June 30	2,751.61	34,130	-4,513	2,630.10	10,616	+2,040	2,666.10	28,460	-2,082
July 31	2,754.38	37,380	+3,250	2,639.60	13,566	+2,950	2,667.80	29,268	+808
Aug. 31	2,754.28	37,261	-119	2,645.40	15,630	+2,064	2,663.30	27,223	-2,045
Sept. 30	2,753.06	35,809	-1,452	2,639.60	13,562	-2,068	2,663.50	27,329	+106
WTR YR 2000			+1,092			+6,444			+7,991

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 mi^2, excluding Goose Lake Basin.

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

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

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

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,700 ft^3/s, Feb. 20, 1986, gage height, 18.70 ft; minimum daily, prior to diversion to Pit No. 4 Powerplant in 1955, 234 ft^3/s, Sept. 13, 1953. Minimum daily, since diversion to Pit No. 4 Powerplant, 22 ft^3/s Dec. 2–4, 1969.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	176	1030	167	1020	3260	722	209	170	212	191	204
2	177	183	1080	168	1000	2480	695	167	165	207	200	202
3	181	182	944	168	865	1860	933	169	167	198	197	203
4	180	184	1010	167	1000	1700	931	161	163	198	197	198
5	174	178	1110	166	1060	1770	621	181	164	195	198	195
6	178	174	768	166	1060	2390	364	174	166	203	194	189
7	178	181	1050	167	476	2560	293	174	162	196	192	195
8	181	177	1060	174	183	2840	185	168	164	201	192	207
9	182	179	1060	175	215	2840	172	166	164	198	194	190
10	179	181	1040	174	331	2820	881	169	161	200	200	193
11	181	181	1040	182	384	2620	2580	168	168	202	197	201
12	184	181	1050	174	1020	2090	2710	374	168	200	202	195
13	183	181	1020	323	1050	1990	2810	310	173	199	200	191
14	180	180	1090	645	1170	2020	2830	345	218	199	192	208
15	184	178	1080	927	1600	1890	2830	164	209	192	196	204
16	179	183	1110	1110	2700	1650	2810	170	200	196	192	191
17	178	176	519	1130	2560	1550	2810	202	219	198	197	198
18	174	647	186	1130	1930	1380	3250	164	216	193	194	202
19	177	1030	178	1130	1840	1250	2810	165	219	194	196	207
20	180	947	172	1130	1490	1260	2740	164	214	191	190	197
21	177	947	564	1130	1430	1220	2880	170	205	193	193	196
22	174	947	1220	1090	1340	1520	2920	214	231	194	197	196
23	177	943	1010	1020	1110	1020	2870	301	206	197	195	203
24	177	941	533	1080	798	965	2900	240	204	191	196	195
25	181	949	176	1120	934	954	2430	238	206	188	200	196
26	184	954	176	1470	1000	957	1170	246	200	199	195	198
27	185	959	173	1400	1990	964	1380	234	197	195	199	214
28	175	967	166	1160	3800	950	949	195	200	201	202	187
29	183	347	180	1080	3290	909	909	267	205	196	195	190
30	171	751	167	1060	---	908	214	169	204	203	190	195
31	179	---	168	1080	---	908	---	180	---	200	187	---
TOTAL	5548	14384	22130	22263	38646	53495	52599	6418	5708	6129	6060	5940
MEAN	179	479	714	718	1333	1726	1753	207	190	198	195	198
MAX	185	1030	1220	1470	3800	3260	3250	374	231	212	202	214
MIN	171	174	166	166	183	908	172	161	161	188	187	187
AC-FT	11000	28530	43890	44160	76650	106100	104300	12730	11320	12160	12020	11780
a	126000	125100	131100	159100	157200	171800	154700	127000	111100	103300	109100	108300
b	140800	123400	120800	150000	143500	155000	103400	136900	119600	112000	120500	120700

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	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	232	233	444	1005	1104	1228	825	552	274	167	164	161
MAX	2189	2436	3791	7250	7657	5545	3416	4770	2788	490	458	268
(WY)	1955	1955	1965	1970	1986	1995	1982	1995	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1955 - 2000	
ANNUAL TOTAL	268182		239320			
ANNUAL MEAN	735		654		530	
HIGHEST ANNUAL MEAN					1868	1955
LOWEST ANNUAL MEAN					98.4	1961
HIGHEST DAILY MEAN	6430	Mar 5	3800	Feb 28	31100	Feb 20 1986
LOWEST DAILY MEAN	156	Apr 27	161	May 4	22	Dec 2 1969
ANNUAL SEVEN-DAY MINIMUM	161	May 16	163	Jun 4	27	Dec 1 1969
INSTANTANEOUS PEAK FLOW			6500	Feb 28	33700	Feb 20 1986
INSTANTANEOUS PEAK STAGE			9.92	Feb 28	18.70	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	531900		474700		383800	
10 PERCENT EXCEEDS	1860		1720		1330	
50 PERCENT EXCEEDS	186		201		158	
90 PERCENT EXCEEDS	165		171		60	

a From rating curve extended above 12,000 ft^3/s on basis of velocity-area studies.

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 mi^2.

PERIOD OF RECORD.—October 1993 to September 1996, October 1996 to current year (operated as a low-flow station only).

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

REMARKS.—Records good. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11362880) and flow over a sharp-crested weir (station 11362890). Water is diverted upstream of weirs through a tunnel to Nelson Creek Powerplant (station 11362800), returning to Nelson Creek at its confluence with the Pit River. Flow is computed to 100 ft^3/s. See schematic diagram of Pit and McCloud River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 623 ft^3/s, Feb. 19, 1996; minimum daily, 7.4 ft^3/s, Sept. 8, 21, 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	16	14	17	---	59	21	17	16	15	43
2	13	13	16	14	20	---	58	19	16	16	15	44
3	13	13	16	13	17	---	58	18	17	17	15	18
4	13	13	18	14	17	---	61	17	17	16	14	22
5	13	13	17	13	21	---	59	17	17	16	14	16
6	14	13	17	13	17	---	57	18	17	16	14	15
7	14	13	17	13	17	---	55	18	17	16	14	14
8	13	16	16	13	16	---	53	17	16	16	14	14
9	13	14	16	13	16	---	52	17	16	17	14	14
10	13	25	16	30	17	87	48	17	16	18	14	14
11	13	25	16	---	42	---	45	17	16	18	14	14
12	13	17	16	26	50	---	44	17	16	17	14	13
13	13	15	17	17	90	---	54	17	16	17	14	13
14	13	15	16	18	---	---	59	17	16	17	14	13
15	13	15	16	71	---	---	61	17	16	17	14	13
16	13	18	16	71	---	---	58	17	16	17	14	13
17	13	17	16	26	---	---	70	17	16	17	14	13
18	13	17	16	26	89	---	87	17	16	17	13	13
19	13	26	16	31	81	---	84	16	16	16	13	13
20	13	38	16	76	75	91	73	16	16	16	13	13
21	12	16	16	54	80	85	66	16	16	16	13	13
22	12	17	16	54	---	84	61	16	16	16	13	14
23	12	16	15	57	---	84	54	16	16	16	13	13
24	12	15	15	90	89	83	48	16	16	16	13	13
25	12	14	15	82	77	79	43	16	16	16	13	13
26	12	14	15	61	---	76	39	16	16	16	13	13
27	14	14	14	39	---	74	36	16	16	15	13	13
28	15	14	14	21	---	75	32	16	16	15	13	13
29	14	14	14	16	---	71	26	16	16	15	13	13
30	13	32	14	17	---	66	23	17	16	15	12	12
31	13	---	14	17	---	61	---	17	---	15	12	---
TOTAL	403	515	488	---	---	---	1623	525	486	504	421	475
MEAN	13.0	17.2	15.7	---	---	---	54.1	16.9	16.2	16.3	13.6	15.8
MAX	15	38	18	---	---	---	87	21	17	18	15	44
MIN	12	13	14	---	---	---	23	16	16	15	12	12
AC-FT	799	1020	968	---	---	---	3220	1040	964	1000	835	942
a	4.2	47	37	1700	2260	2820	2740	1720	434	37	0	0

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

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

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

DRAINAGE AREA.—8.18 mi^2.

PERIOD OF RECORD.—October 1993 to September 1996, October 1996 to current year (operated as a low-flow station only).

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

REMARKS.—Records good. Flow at this station has two components which are combined for publication: flow over a broad-crested weir (station 11362940) and flow over a sharp-crested weir (station 11362945). Water is diverted upstream of weirs through a pipe to Nelson Creek (station 11362900). Flows computed to 50 ft^3/s. See schematic diagram of Pit and McCloud River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 267 ft^3/s, Mar. 15, 1995; minimum daily, 0.07 ft^3/s, Aug. 12 to Sept. 23, 1994, and Oct. 11, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	4.0	5.8	2.9	12	29	22	18	9.1	5.0	2.9	4.6
2	2.9	4.0	5.2	2.9	11	28	22	18	8.9	4.8	2.8	5.5
3	2.9	4.0	4.6	2.9	11	26	22	17	8.6	4.7	2.8	3.3
4	2.9	4.0	4.3	2.9	11	26	23	17	8.4	4.7	2.8	3.4
5	2.9	4.0	4.1	2.9	11	28	23	17	8.3	5.0	2.8	2.8
6	3.5	4.0	4.0	2.9	11	27	23	16	8.2	4.8	2.8	2.6
7	3.1	4.1	3.9	2.9	11	27	22	16	8.1	4.7	2.8	2.4
8	2.9	5.0	3.8	2.9	11	27	22	16	8.2	4.7	2.8	2.4
9	2.9	4.3	4.0	2.9	10	25	22	16	8.2	4.6	2.6	2.4
10	2.9	5.8	3.7	4.1	11	25	22	16	8.1	4.4	2.6	2.3
11	2.9	5.8	3.6	13	13	28	22	16	8.0	4.3	2.6	2.3
12	2.9	4.7	3.8	8.9	15	28	22	16	7.8	4.1	2.6	2.3
13	2.9	4.4	4.0	7.4	18	27	23	16	7.6	4.0	2.6	2.2
14	2.9	4.3	3.6	8.8	31	27	23	16	7.2	4.0	2.5	2.2
15	2.9	4.4	3.6	17	31	27	22	16	6.9	4.0	2.5	2.2
16	2.9	5.1	3.6	18	28	26	23	16	6.8	3.9	2.4	2.2
17	2.9	5.5	3.6	14	26	26	24	15	6.8	3.9	2.4	2.2
18	2.9	4.9	3.6	12	24	26	25	15	6.6	3.8	2.4	2.2
19	2.9	6.3	3.6	14	23	26	24	14	6.5	3.8	2.5	2.2
20	2.9	7.4	3.6	17	22	26	24	14	6.3	3.8	2.4	2.1
21	2.9	5.6	3.6	16	23	25	24	13	6.0	3.8	2.4	2.1
22	2.9	4.9	3.6	16	24	25	23	11	6.0	3.7	2.4	2.3
23	2.9	4.7	3.6	17	25	25	22	11	6.0	3.7	2.4	2.2
24	2.9	4.5	3.6	20	24	25	21	11	5.9	3.6	2.4	2.1
25	2.9	4.2	3.6	20	23	25	21	10	5.9	3.6	2.3	2.1
26	2.9	3.9	3.6	17	25	25	20	10	5.8	3.6	2.2	2.1
27	8.3	3.9	3.5	16	33	25	20	9.9	5.6	3.4	2.2	2.1
28	11	3.6	3.2	14	31	23	20	9.8	5.4	3.4	2.2	2.1
29	4.5	3.7	3.1	13	31	23	19	9.7	5.2	3.2	2.2	2.1
30	4.1	6.7	2.9	13	---	23	18	9.4	5.0	3.0	2.2	2.0
31	4.0	---	2.9	12	---	22	---	9.2	---	2.9	2.3	---
TOTAL	108.1	141.7	117.2	334.3	580	801	663	435.0	211.4	124.9	77.8	75.0
MEAN	3.49	4.72	3.78	10.8	20.0	25.8	22.1	14.0	7.05	4.03	2.51	2.50
MAX	11	7.4	5.8	20	33	29	25	18	9.1	5.0	2.9	5.5
MIN	2.9	3.6	2.9	2.9	10	22	18	9.2	5.0	2.9	2.2	2.0
AC-FT	214	281	232	663	1150	1590	1320	863	419	248	154	149

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 mi^2, 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 ft^3/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 ft^3/s; maximum gage height, 18.70 ft, Feb. 20, 1986, site then in use; minimum daily, 692 ft^3/s, July 9, 1925; since diversion to Pit No. 5 Powerplant, minimum daily, 34 ft^3/s, Mar. 29, 1955.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 6,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	2045	5,780	10.79				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	152	197	170	251	2420	300	238	189	168	172	199
2	145	161	180	177	253	2080	293	244	189	171	180	189
3	143	179	176	177	239	1360	305	235	187	174	181	172
4	143	177	164	178	235	1180	305	234	e187	170	175	181
5	138	174	168	175	242	1220	301	231	e185	168	166	173
6	149	160	188	174	246	1790	290	234	e185	168	168	185
7	135	169	188	175	226	2030	285	232	185	184	169	170
8	143	189	190	178	225	2300	285	238	187	185	170	176
9	141	182	197	184	256	2370	280	221	189	179	175	168
10	145	197	195	210	549	2310	271	219	176	176	175	172
11	138	177	190	375	598	2300	274	217	178	188	178	167
12	134	160	187	219	1430	1630	273	213	183	172	175	170
13	141	155	190	187	1680	1480	300	211	174	169	174	173
14	141	156	182	239	2340	1470	301	220	e174	170	170	172
15	151	160	181	328	2290	1360	304	214	e176	184	174	171
16	141	163	180	339	3320	1020	300	202	e176	171	176	167
17	142	152	170	253	2810	916	511	212	e178	166	171	171
18	140	157	163	240	1320	712	363	212	e180	189	172	169
19	140	204	171	438	1160	595	342	203	e181	175	172	172
20	137	227	173	346	784	590	319	208	e181	169	180	181
21	142	199	172	316	683	524	309	204	181	167	172	167
22	136	186	176	309	711	554	298	205	183	171	174	187
23	143	180	186	316	570	387	286	205	187	176	174	171
24	136	172	183	377	394	357	275	199	185	174	176	171
25	135	168	176	348	371	345	268	199	185	175	180	168
26	140	166	176	499	502	340	418	189	168	179	172	180
27	204	168	161	692	1540	337	581	e189	174	170	175	183
28	186	167	160	260	2500	334	262	e189	176	170	169	176
29	160	163	165	238	2600	327	253	e187	175	168	173	175
30	157	201	166	254	---	319	240	e187	174	173	179	174
31	161	---	169	252	---	305	---	e187	---	165	166	---
TOTAL	4531	5221	5520	8623	30325	35262	9392	6578	5428	5384	5383	5250
MEAN	146	174	178	278	1046	1137	313	212	181	174	174	175
MAX	204	227	197	692	3320	2420	581	244	189	189	181	199
MIN	134	152	160	170	225	305	240	187	168	165	166	167
AC-FT	8990	10360	10950	17100	60150	69940	18630	13050	10770	10680	10680	10410

e Estimated.

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	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	204	218	493	1070	1256	1438	1117	670	286	135	132	126
MAX	2322	2469	3889	8804	9457	6658	8441	5420	3052	203	448	284
(WY)	1944	1944	1965	1970	1986	1995	1952	1995	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1944 - 2000	
ANNUAL TOTAL	285468		126897			
ANNUAL MEAN	782		347		592	
HIGHEST ANNUAL MEAN					1638	1995
LOWEST ANNUAL MEAN					86.5	1977
HIGHEST DAILY MEAN	8150	Feb 9	3320	Feb 16	36500	Feb 21 1986
LOWEST DAILY MEAN	134	Oct 12	134	Oct 12	34	Mar 29 1955
ANNUAL SEVEN-DAY MINIMUM	138	Oct 19	138	Oct 19	40	Dec 7 1978
INSTANTANEOUS PEAK FLOW			5780	Feb 28	49000	Jan 25 1970
INSTANTANEOUS PEAK STAGE			10.79	Feb 28	18.70	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	566200		251700		429100	
10 PERCENT EXCEEDS	2080		584		1630	
50 PERCENT EXCEEDS	177		184		141	
90 PERCENT EXCEEDS	142		160		75	

a From rating extended above 11,000 ft^3/s on basis of velocity-area studies.

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, and 5.8 mi downstream from Big Bend.

PERIOD OF RECORD.—December 1965 to current year.

GAGE.—Discharge computed from powerplant output.

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,420 ft^3/s, July 15, 1966; no flow several days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	853	525	824	610	1740	1650	1360	1430	750	1090	1400	512
2	120	614	1180	691	1600	1710	656	1290	657	1030	1600	437
3	225	752	1090	472	1580	1480	1240	1120	397	1030	1490	585
4	692	613	1270	539	1350	1590	1370	714	665	1010	1370	491
5	824	728	1150	454	848	1630	1560	1030	1090	903	977	821
6	650	723	1010	548	938	1300	1500	1030	1180	821	326	1060
7	232	872	1050	898	1310	1510	1590	1350	1420	624	1050	1140
8	341	707	1110	433	1370	1510	1490	1340	713	1170	655	1190
9	866	826	1070	398	1590	1460	1430	1630	1290	963	905	294
10	822	848	1050	441	1700	1460	1440	1660	871	911	924	226
11	884	691	918	717	1520	1380	1400	1540	692	1030	1020	778
12	932	850	967	812	1350	1410	1630	880	880	910	291	1130
13	889	847	855	1550	1420	1160	1500	1270	831	67	143	1160
14	890	643	957	1360	1550	1580	1310	1270	1430	320	731	1120
15	780	1070	1070	1600	1560	1520	1530	1280	1340	74	811	1070
16	604	934	977	1500	1760	1680	1600	1200	1340	108	1040	651
17	580	688	709	1650	1580	1560	1520	1390	530	490	889	374
18	840	824	905	1170	1300	1620	1470	1260	508	751	774	831
19	1020	809	805	898	1260	1460	1000	1460	1140	1190	732	1140
20	1190	677	832	874	1250	1410	1110	1160	1080	674	819	1330
21	1330	618	848	939	1240	1320	886	836	1110	1210	990	1210
22	730	690	780	888	1560	1520	1100	1000	688	111	755	1010
23	662	733	620	771	1370	1660	1210	1310	851	373	512	127
24	690	680	764	747	1800	1610	1370	1390	978	682	697	712
25	1170	674	892	936	1480	1480	1480	1190	891	1030	674	793
26	818	737	761	926	1680	1240	1440	1330	1270	1030	208	686
27	812	656	626	1330	1210	1290	1260	1420	1270	1040	628	715
28	1170	710	847	1820	1550	1350	1070	1030	1100	1140	560	836
29	884	648	1020	1760	1320	1410	1260	921	1190	1230	675	934
30	847	599	626	1730	---	1400	1180	964	1430	668	702	1170
31	278	---	822	1610	---	1280	---	1200	---	1300	496	---
TOTAL	23625	21986	28405	31072	41786	45640	39962	37895	29582	24980	24844	24533
MEAN	762	733	916	1002	1441	1472	1332	1222	986	806	801	818
MAX	1330	1070	1270	1820	1800	1710	1630	1660	1430	1300	1600	1330
MIN	120	525	620	398	848	1160	656	714	397	67	143	127
AC-FT	46860	43610	56340	61630	82880	90530	79260	75160	58680	49550	49280	48660
a	161000	156800	160900	209600	201800	245200	208900	162500	145100	133600	138100	138100

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

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 mi^2.

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- by 10-ft opening. Datum of gage is 2,461.52 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow is completely regulated by Iron Canyon Reservoir (station 11363920). There is an interbasin diversion from Lake McCloud (station 11367740) to Iron Canyon Reservoir and then through a tunnel to James B. Black Powerplant on the Pit River (station 11363910). This station records fishwater release only. The minimum release requirement is 3.0 ft^3/s at all times. Flow is computed to 12.0 ft^3/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 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.2	4.2	4.2	4.3	5.2	4.5	5.0	5.2	6.0	4.9	5.4
2	3.9	4.3	4.1	4.3	4.2	4.9	4.4	5.0	5.3	6.0	4.7	5.6
3	4.1	4.3	3.9	4.3	4.0	4.5	4.3	5.0	5.6	6.0	4.6	5.6
4	4.2	4.3	3.8	4.5	3.9	4.3	4.4	5.1	5.6	6.0	4.4	5.6
5	4.3	4.3	3.7	4.7	4.2	4.3	4.4	5.3	5.6	6.1	4.3	5.6
6	4.3	4.3	3.7	4.9	4.3	4.3	4.2	5.4	5.6	6.1	4.4	5.6
7	4.3	4.4	3.6	5.1	4.3	4.3	4.0	5.6	5.6	6.0	4.5	5.6
8	4.7	4.9	3.5	5.1	4.3	4.3	4.0	5.6	5.6	6.2	4.7	5.5
9	4.6	4.2	3.5	5.1	4.2	4.3	4.0	5.6	5.6	6.0	4.8	5.3
10	4.5	4.0	3.4	5.7	4.1	4.3	4.2	5.5	5.6	6.0	4.8	5.3
11	4.5	4.0	3.4	6.3	4.2	4.5	4.4	5.1	6.0	6.0	4.8	5.3
12	4.4	3.8	3.4	5.1	4.5	4.3	4.5	5.3	5.6	5.2	4.8	5.3
13	4.3	3.8	3.4	4.8	5.5	4.3	4.5	5.3	5.6	4.8	4.8	5.3
14	4.2	3.8	3.4	4.9	8.2	---	4.5	5.3	5.6	6.0	4.9	5.3
15	4.3	3.8	3.5	5.3	6.4	4.5	4.7	5.3	5.6	6.3	4.9	5.3
16	4.3	3.8	3.7	6.1	5.4	4.4	4.6	5.3	6.2	6.4	4.9	5.3
17	4.3	3.8	3.9	4.9	4.8	4.2	4.8	5.1	6.0	6.6	4.9	5.3
18	4.4	3.8	4.0	4.3	4.3	4.0	4.7	5.0	6.4	5.6	4.9	5.3
19	4.3	3.9	4.0	4.8	4.2	4.0	4.4	4.9	6.4	5.0	4.9	5.3
20	4.2	4.0	4.0	5.2	4.3	4.0	4.2	4.9	6.4	5.0	4.9	5.3
21	4.1	3.9	4.0	5.1	4.3	4.1	4.4	5.0	6.2	5.0	4.9	5.0
22	4.0	3.9	4.0	5.4	4.8	4.6	4.7	5.0	6.4	5.0	4.8	5.0
23	4.1	3.9	4.1	5.4	4.9	4.5	4.8	5.0	6.4	5.0	4.9	5.0
24	4.1	3.9	4.2	5.9	4.5	4.3	4.7	5.0	6.4	5.0	4.9	5.3
25	4.1	3.9	4.2	5.9	4.3	4.2	4.7	5.0	6.4	5.0	4.9	5.3
26	4.1	3.9	4.1	5.6	5.2	4.2	4.5	5.0	6.4	5.0	4.9	5.3
27	4.3	3.9	4.2	5.5	6.4	4.4	4.8	4.9	6.2	5.0	5.0	5.3
28	4.1	3.9	4.2	5.1	5.7	4.4	5.0	5.0	6.1	5.0	5.0	5.4
29	4.0	3.9	4.2	4.8	5.7	4.5	5.1	5.0	6.0	4.9	5.0	5.3
30	4.0	4.4	4.2	4.8	---	4.5	5.0	5.1	6.0	4.9	5.0	5.3
31	4.1	---	4.2	4.6	---	4.5	---	5.2	---	4.9	5.0	---
TOTAL	130.9	121.2	119.7	157.7	139.4	---	135.4	159.8	177.6	172.0	149.1	160.3
MEAN	4.22	4.04	3.86	5.09	4.81	---	4.51	5.15	5.92	5.55	4.81	5.34
MAX	4.7	4.9	4.2	6.3	8.2	---	5.1	5.6	6.4	6.6	5.0	5.6
MIN	3.8	3.8	3.4	4.2	3.9	---	4.0	4.9	5.2	4.8	4.3	5.0
AC-FT	260	240	237	313	276	---	269	317	352	341	296	318

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 mi^2.

PERIOD OF RECORD.—October 1987 to September 1988, October 1990 to September 1996. October 1989 to September 1990, October 1997 to September 1998 and October 1999 to September 2000 (operated as low-flow station only).

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

REMARKS.—During times of powerplant operation the minimum flow requirement is 15 ft^3/s. Flows computed to 70 ft^3/s. See schematic diagram of Pit and McCloud River Basins.

COOPERATION.—Records were collected by Shasta Hydroelectric, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—(Water years 1991–96) Maximum discharge, 1,930 ft^3/s, Oct. 29, 1992, gage height, 7.06 ft, from outside highwater mark, from rating curve extended above 42 ft^3/s on basis of theoretical computation of flow over weir; minimum daily, 3.8 ft^3/s, Aug. 18 to Sept. 8, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	18	18	51	---	18	18	18	21	15	25
2	17	18	17	18	58	---	18	18	18	20	15	17
3	17	19	18	18	62	---	18	18	18	21	15	17
4	17	18	18	18	57	---	21	18	18	21	15	18
5	17	18	18	18	59	---	23	18	18	20	15	17
6	20	18	18	18	63	---	18	18	18	18	14	17
7	18	20	18	18	48	---	18	18	18	18	14	16
8	18	17	18	18	36	---	18	18	18	18	14	15
9	17	18	18	18	30	---	25	18	18	20	14	15
10	17	18	18	18	34	---	18	18	18	20	14	15
11	17	17	18	52	51	---	18	18	18	19	14	15
12	17	17	18	21	---	---	18	18	18	20	14	14
13	16	17	18	18	---	---	38	18	18	21	14	14
14	16	18	18	36	---	---	21	18	18	20	14	14
15	16	18	17	---	---	---	18	18	18	18	13	14
16	16	20	18	---	---	---	18	18	18	20	13	14
17	16	17	18	---	---	---	43	18	18	20	13	14
18	16	18	18	---	---	---	51	18	18	17	13	14
19	16	24	18	---	---	---	34	18	18	18	13	13
20	16	32	18	---	---	60	23	20	18	18	13	13
21	16	18	18	---	---	55	18	18	18	17	13	13
22	16	17	18	---	---	53	18	18	18	17	13	14
23	16	17	18	---	---	53	18	18	18	17	13	15
24	17	17	18	---	---	46	18	18	18	17	13	14
25	16	17	18	---	---	38	18	18	18	17	12	14
26	17	18	18	---	---	34	18	18	18	17	12	14
27	20	17	18	---	---	32	18	18	18	16	12	14
28	31	17	18	70	---	28	18	18	21	16	12	14
29	18	18	18	51	---	21	18	18	21	16	12	14
30	17	32	18	66	---	18	18	18	20	16	12	14
31	18	---	18	54	---	18	---	18	---	16	13	---
TOTAL	539	568	556	---	---	---	657	560	548	570	416	451
MEAN	17.4	18.9	17.9	---	---	---	21.9	18.1	18.3	18.4	13.4	15.0
MAX	31	32	18	---	---	---	51	20	21	21	15	25
MIN	16	17	17	---	---	---	18	18	18	16	12	13
AC-FT	1070	1130	1100	---	---	---	1300	1110	1090	1130	825	895
a	119	964	1480	3410	4710	4940	4320	2230	551	24	0	54

a Discharge, in acre-feet, for Hatchet Creek Powerplant (station 11364250), provided by Shasta Hydroelectric.

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 mi^2, 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 ft^3/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 ft^3/s, July 12, 27, 1975, result of construction work below Pit No. 7 Powerplant.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3440	4190	3130	e2760	7390	11600	7390	e7500	e2810	e3740	4740	2740
2	1770	4090	4570	e4050	7330	10400	7530	e4650	e4070	3330	2650	2600
3	1010	2960	3820	e3650	6990	9100	e4440	e3100	e3190	2770	4600	3520
4	3760	2920	3760	4160	6190	9030	e3680	e3050	e3480	192	3960	3670
5	3430	2320	4550	3100	4760	9020	e3730	e3210	e3580	2670	456	4200
6	4040	1960	4500	e3960	6460	9210	e4050	e3700	e1910	3390	717	4850
7	3830	1590	4440	e4800	6800	9810	e6170	e4800	e5800	3870	4070	4920
8	3530	2020	4330	3170	6470	9630	e5720	e4700	e3160	1960	3870	4000
9	4060	3810	4100	2920	5460	10900	e5240	e4350	e3400	3080	3980	1560
10	3350	4050	3350	3590	5430	9910	e4140	e5630	e3070	3860	3830	1690
11	4110	4010	3680	3690	5810	10800	e5040	e4220	e2400	3260	3970	2350
12	2630	3720	3540	4410	7530	9620	e6080	e5300	e3710	4370	1980	3360
13	2860	4770	3850	5150	10700	9030	e5480	e5460	e3970	4170	1180	4990
14	1880	3700	4290	6180	16300	9510	e6560	e5660	e5040	3210	2930	3760
15	3190	4260	4150	8170	11300	8090	e6670	e4010	e4590	693	2880	3910
16	3980	2540	4200	8060	11600	7970	e7890	e4120	e4810	651	4370	2510
17	6530	3100	4100	7820	9600	8590	e7240	e5890	e2600	3990	3410	1280
18	3730	3930	3960	5840	10100	8040	e5100	e3930	e3710	3830	3400	4010
19	2100	3700	3390	7180	7510	7480	e6170	e7020	e3860	4110	3660	4250
20	2690	3820	2630	6490	8340	7570	e5590	e4400	e3880	3660	2880	3590
21	3540	3430	3410	7930	7340	7390	e4850	e3460	e4010	3580	3910	3490
22	3980	4090	3510	e7450	7650	6990	e5620	e3570	e3080	2160	2980	4050
23	3870	3870	2870	e7140	8640	6730	e4840	e4520	e3320	1510	3130	3290
24	3860	3910	3500	e7260	8500	7130	e5560	e5730	e1810	3160	3740	3590
25	3840	3280	3080	e8820	7790	7190	e6160	e4960	e2930	3650	3750	3450
26	3770	3790	4080	e7390	9750	6700	e6300	e4980	e4880	3770	1350	2740
27	3750	3990	3640	e6680	12600	6140	e5520	e4940	e4660	3240	2540	2850
28	4720	3710	4200	6520	12000	7530	e6370	e4940	e4010	4220	2790	2640
29	6400	3700	3680	7230	12200	6260	e6880	e2430	e3680	4180	2960	3420
30	5750	3570	2880	6880	---	6360	e7240	e3210	e5200	3770	3130	3500
31	4540	---	e3200	7220	---	7140	---	e1400	---	4920	3000	---
TOTAL	113940	104800	116390	179670	248540	260870	173250	138840	110620	98966	96813	100780
MEAN	3675	3493	3755	5796	8570	8415	5775	4479	3687	3192	3123	3359
MAX	6530	4770	4570	8820	16300	11600	7890	7500	5800	4920	4740	4990
MIN	1010	1590	2630	2760	4760	6140	3680	1400	1810	192	456	1280
AC-FT	226000	207900	230900	356400	493000	517400	343600	275400	219400	196300	192000	199900
a	14684	14718	13812	14560	14507	13973	12609	12583	13343	12145	15171	14543
b	214500	191700	230600	317700	337800	330900	321200	256100	215900	193400	198300	201000
c	18619	25773	32435	33504	33467	30833	28243	29050	28013	29341	32079	30995

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 - 2000, BY WATER YEAR (WY)

MEAN	3424	4132	4771	6651	7322	8169	6651	5519	4078	3309	3119	3133
MAX	5865	8683	9814	20890	18670	16030	12920	11900	8911	4633	4187	4257
(WY)	1997	1997	1982	1970	1986	1983	1982	1995	1998	1998	1983	1998
MIN	2286	2533	2408	2632	2784	3241	2626	2404	2268	2291	2049	1428
(WY)	1993	1993	1991	1991	1991	1977	1977	1992	1992	1994	1992	1966

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	2062550		1743479			
ANNUAL MEAN	5651		4764		5012	
HIGHEST ANNUAL MEAN					7693	1974
LOWEST ANNUAL MEAN					2808	1992
HIGHEST DAILY MEAN	20700	Feb 9	16300	Feb 14	53900	Jan 23 1970
LOWEST DAILY MEAN	1010	Oct 3	192	Jul 4	30	Jul 12 1975
ANNUAL SEVEN-DAY MINIMUM	2510	Nov 3	2510	Nov 3	939	Sep 5 1966
INSTANTANEOUS PEAK FLOW			23100	Jan 21	73000	Jan 24 1970
INSTANTANEOUS PEAK STAGE			68.13	Jan 21	74.65	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	4091000		3458000		3631000	
10 PERCENT EXCEEDS	9610		7840		8570	
50 PERCENT EXCEEDS	4540		4010		4060	
90 PERCENT EXCEEDS	2990		2650		2120	

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 mi^2.

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, 15,400 ft^3/s, Jan. 1, 1997, gage height, 11.22 ft, from rating curve extended above 8,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 524 ft^3/s, Nov. 23, 24, 1932.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	1215	1,690	3.00	Feb. 14	1615	2,740	3.94

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	911	875	906	832	940	1450	1150	1200	1010	918	884	896
2	910	874	892	827	940	1360	1160	1210	1010	916	883	883
3	908	872	879	827	942	1300	1190	1210	1000	915	883	877
4	907	871	875	827	942	1280	1230	1210	996	915	882	877
5	908	870	870	827	981	1320	1270	1200	993	919	882	871
6	910	870	865	827	1120	1270	1280	1180	989	923	883	865
7	899	873	865	827	1070	1230	1280	1170	986	918	883	865
8	891	886	863	827	1020	1220	1280	1170	990	915	883	865
9	891	874	864	827	1010	1200	1280	1180	988	914	883	865
10	890	891	858	833	1020	1170	1280	1180	981	912	883	865
11	890	893	853	922	1070	1190	1260	1140	976	909	883	e858
12	890	877	853	958	1120	1190	1270	1110	970	906	877	e858
13	889	870	854	925	1120	1170	1540	1100	965	904	877	e858
14	889	865	852	1000	2150	1170	1690	1090	960	903	877	e858
15	888	868	852	1260	2040	1170	1580	1100	955	902	877	e858
16	887	879	851	1520	1590	1170	1600	1100	953	902	877	e858
17	886	884	846	1230	1410	1160	1700	1080	951	901	877	e858
18	885	874	846	1080	1300	1150	1650	1080	948	900	877	e852
19	885	879	845	1130	1230	1180	1520	1080	944	898	877	846
20	884	880	841	1470	1200	1180	1440	1090	940	897	877	846
21	883	876	840	1240	1200	1160	1400	1090	939	896	877	846
22	881	869	840	1130	1340	1160	1380	1100	935	895	871	850
23	880	865	840	1080	1420	1170	1340	1110	933	892	871	845
24	879	865	840	1100	1290	1170	1300	1110	929	888	865	842
25	878	865	840	1120	1220	1170	1270	1100	928	889	865	841
26	878	864	839	1080	1220	1170	1250	1080	927	890	865	841
27	894	864	835	1030	1910	1180	1260	1070	926	890	865	840
28	894	862	834	996	1690	1180	1260	1060	923	889	865	840
29	880	864	834	972	1570	1170	1220	1050	921	888	865	839
30	877	911	833	969	---	1150	1200	1040	920	887	865	839
31	877	---	833	951	---	1140	---	1020	---	886	865	---
TOTAL	27599	26230	26438	31444	37075	37350	40530	34710	28786	27977	27144	25702
MEAN	890	874	853	1014	1278	1205	1351	1120	960	902	876	857
MAX	911	911	906	1520	2150	1450	1700	1210	1010	923	884	896
MIN	877	862	833	827	940	1140	1150	1020	920	886	865	839
AC-FT	54740	52030	52440	62370	73540	74080	80390	68850	57100	55490	53840	50980

e Estimated.

11367500 McCLOUD RIVER NEAR McCLOUD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	766	792	866	911	982	1054	1132	1128	955	838	799	777
MAX	1030	1569	1879	2348	2155	2220	1896	2182	1574	1219	1101	1059
(WY)	1984	1974	1956	1970	1958	1983	1974	1938	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1931 - 2000	
ANNUAL TOTAL	386763		370985			
ANNUAL MEAN	1060		1014		919	
HIGHEST ANNUAL MEAN					1406	1974
LOWEST ANNUAL MEAN					589	1992
HIGHEST DAILY MEAN	1580	Apr 27	2150	Feb 14	11900	Jan 1 1997
LOWEST DAILY MEAN	833	Dec 30	827	Jan 2	524	Nov 23 1932
ANNUAL SEVEN-DAY MINIMUM	835	Dec 25	827	Jan 2	528	Nov 20 1932
INSTANTANEOUS PEAK FLOW			2740	Feb 14	15400	Jan 1 1997
INSTANTANEOUS PEAK STAGE			3.94	Feb 14	11.22	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	767100		735800		665600	
10 PERCENT EXCEEDS	1370		1270		1260	
50 PERCENT EXCEEDS	985		911		842	
90 PERCENT EXCEEDS	870		849		610	

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, and 8.8 mi southeast of McCloud.

PERIOD OF RECORD.—December 1965 to current year.

REVISED RECORDS.—WDR CA-75-4: 1973.

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

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,890 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	788	660	674	702	1220	1270	1250	1180	1030	921	855	641
2	683	648	734	693	1240	1310	1280	1180	979	914	903	626
3	625	657	771	652	1260	1300	1260	1160	922	903	935	631
4	633	641	822	633	1240	1330	1270	1120	898	893	958	623
5	648	649	846	608	1180	1360	1300	1110	908	870	937	644
6	639	648	847	603	1160	1330	1310	1090	923	846	864	676
7	587	669	855	632	1170	1330	1340	1110	955	809	861	715
8	569	665	870	605	1180	1340	1350	1120	918	829	829	750
9	612	677	871	581	1210	1340	1350	1160	926	824	825	704
10	639	691	875	567	1250	1330	1350	1190	905	839	824	655
11	663	683	858	618	1280	1320	1340	1210	881	843	834	665
12	696	695	857	662	1280	1310	1380	1160	861	839	768	704
13	707	703	835	769	1270	1270	1390	1160	852	754	698	735
14	721	685	834	856	1270	1290	1370	1160	894	709	706	762
15	717	725	847	960	1260	1300	1370	1160	920	646	717	781
16	692	738	847	1050	1290	1320	1390	1160	946	598	746	762
17	670	722	809	1120	1300	1330	1390	1170	895	597	758	714
18	685	717	807	1110	1290	1350	1390	1160	850	628	728	727
19	712	714	797	1090	1270	1340	1320	1180	873	682	739	754
20	773	701	788	1090	1250	1330	1280	1170	877	686	744	794
21	835	682	784	1070	1240	1300	1220	1120	882	732	769	825
22	796	674	775	398	1270	1300	1190	1110	847	676	765	828
23	763	674	741	1020	1280	1330	1180	1110	835	650	739	750
24	743	668	730	1000	1310	1340	1180	1130	841	661	735	735
25	791	660	746	982	1300	1330	1200	1130	831	696	730	727
26	774	661	736	961	1320	1300	1210	1140	859	724	674	714
27	766	652	716	989	1270	1280	1200	1150	884	749	667	706
28	801	651	724	1060	1270	1280	1190	1120	891	781	656	710
29	787	646	750	1110	1250	1280	1190	1090	903	806	659	722
30	780	640	722	1150	---	1270	1170	1070	926	784	662	752
31	696	---	729	1180	---	1260	---	1070	---	818	652	---
TOTAL	21991	20296	24597	26521	36380	40670	38610	35350	26912	23707	23937	21532
MEAN	709	677	793	856	1254	1312	1287	1140	897	765	772	718
MAX	835	738	875	1180	1320	1360	1390	1210	1030	921	958	828
MIN	569	640	674	398	1160	1260	1170	1070	831	597	652	623
AC-FT	43620	40260	48790	52600	72160	80670	76580	70120	53380	47020	47480	42710

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 mi^2.

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 ft^3/s at all times. Prior to water year 1974, flow was computed up to 400 ft^3/s. During water years 1975–81, because of channel changes, flow was computed up to 200 ft^3/s. Currently, because of maximum required release, flow is computed to 220 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	192	175	147	75	189	69	---	170	185	190	202
2	193	193	178	145	72	99	69	216	172	185	190	202
3	193	193	180	145	70	70	69	178	174	184	190	202
4	193	193	182	145	69	56	69	115	174	184	190	202
5	194	193	182	145	70	56	69	114	174	184	190	202
6	194	194	184	145	74	55	69	135	174	184	192	202
7	194	194	184	145	72	---	69	135	174	183	192	203
8	194	195	187	146	70	88	70	136	176	184	192	202
9	195	195	189	146	69	78	70	e135	177	184	192	202
10	195	196	189	145	69	77	70	e169	176	185	192	202
11	196	196	188	88	70	78	70	e206	176	185	191	202
12	196	196	188	94	72	78	73	e165	176	185	192	202
13	196	196	188	112	76	77	---	e118	176	185	191	203
14	196	196	187	88	---	77	---	e117	178	187	191	205
15	196	196	187	67	---	76	---	e122	181	187	191	204
16	196	197	145	81	---	74	---	e151	181	187	191	203
17	196	197	148	73	---	72	---	e160	181	188	191	203
18	196	196	148	69	---	71	---	e158	181	188	191	203
19	196	197	148	73	e67	69	---	e158	181	188	192	203
20	196	197	148	82	e66	67	---	e161	181	189	192	203
21	196	197	149	78	e66	66	---	e165	182	189	191	203
22	195	197	149	78	e72	66	---	e164	182	189	191	203
23	195	196	149	78	---	66	---	166	182	189	192	202
24	195	196	149	---	203	66	---	165	181	189	191	202
25	195	196	151	---	191	66	---	165	182	190	192	202
26	195	197	151	---	123	65	---	167	182	190	192	201
27	195	197	151	---	---	65	---	169	185	190	192	202
28	195	196	152	78	---	65	---	168	185	190	192	202
29	194	198	152	78	---	65	---	169	185	190	192	202
30	194	195	151	78	---	64	---	171	185	190	192	202
31	192	---	151	77	---	65	---	170	---	190	194	---
TOTAL	6039	5867	5160	---	---	---	---	---	5364	5797	5934	6073
MEAN	195	196	166	---	---	---	---	---	179	187	191	202
MAX	196	198	189	---	---	---	---	---	185	190	194	205
MIN	192	192	145	---	---	---	---	---	170	183	190	201
AC-FT	11980	11640	10230	---	---	---	---	---	10640	11500	11770	12050

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 mi^2.

PERIOD OF RECORD.—October 1964 to current year.

REVISED RECORDS.—WDR CA-98-4: 1997 (m).

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

REMARKS.—Low flow completely regulated by Lake McCloud (station 11367740) 3.9 mi upstream since November 1965. Diversion to Iron Canyon Reservoir (station 11363920) through McCloud–Iron Canyon diversion tunnel (station 11367720) started Dec. 1, 1965. This station records fishwater release. The minimum release requirements range from 160 to 210 ft^3/s per schedule outlined in Federal Energy Regulatory Commission License 2106. 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.—Prior to completion of McCloud Dam in 1965, maximum discharge, 9,660 ft^3/s, Dec. 22, 1964, gage height, 9.43 ft, from rating curve extended above 2,500 ft^3/s; minimum daily, 86 ft^3/s, Oct. 1–26, 1964. Since completion of McCloud Dam, maximum discharge, 31,700 ft^3/s, Jan. 1, 1997, gage height, 14.77 ft, from rating curve extended above 8,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 41 ft^3/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 ft^3/s, from rating curve extended above 2,500 ft^3/s.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	1830	4,050	6.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	242	258	190	210	1030	206	340	235	241	245	278
2	239	242	249	186	205	681	206	330	235	241	244	265
3	239	242	244	186	205	536	211	290	238	241	245	258
4	241	242	243	186	209	461	221	216	236	240	244	259
5	242	242	242	186	276	482	221	207	235	242	244	257
6	245	242	242	186	422	459	216	230	235	241	247	257
7	244	246	242	186	337	521	211	229	236	239	247	257
8	245	257	242	186	283	306	207	227	238	240	247	256
9	245	248	245	186	254	283	203	225	236	239	246	255
10	245	269	245	195	247	272	198	262	236	240	245	254
11	245	266	245	254	308	297	192	299	235	239	245	254
12	245	255	245	185	387	293	193	255	236	240	245	254
13	245	251	245	203	484	279	404	196	236	241	245	254
14	245	250	245	288	2600	276	895	192	238	245	245	256
15	245	258	243	387	2720	280	789	200	244	245	243	256
16	245	264	194	608	1780	275	817	231	243	245	242	254
17	245	264	193	368	1300	269	912	238	243	245	242	254
18	245	256	193	275	477	260	878	235	242	245	242	254
19	245	265	193	360	316	259	830	234	241	246	242	254
20	245	271	193	593	293	254	736	236	241	246	242	254
21	245	262	193	392	288	240	681	238	241	245	242	253
22	245	258	193	330	e396	229	603	237	241	246	242	255
23	245	255	193	324	e683	226	562	235	241	246	242	253
24	245	254	194	500	901	223	476	234	240	246	242	251
25	245	254	196	771	823	219	401	233	239	246	242	251
26	245	254	194	702	733	217	369	234	240	246	241	251
27	256	253	193	510	1540	216	362	237	244	246	242	251
28	251	252	193	248	1930	215	355	235	243	246	242	251
29	245	254	193	223	1460	214	349	235	242	246	242	251
30	245	287	193	228	---	213	344	237	242	245	242	251
31	242	---	193	220	---	208	---	235	---	245	243	---
TOTAL	7583	7655	6769	9842	22067	10193	13248	7462	7172	7544	7549	7658
MEAN	245	255	218	317	761	329	442	241	239	243	244	255
MAX	256	287	258	771	2720	1030	912	340	244	246	247	278
MIN	239	242	193	185	205	208	192	192	235	239	241	251
AC-FT	15040	15180	13430	19520	43770	20220	26280	14800	14230	14960	14970	15190

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	250	283	313	461	423	483	363	354	264	227	224	234
MAX	919	1140	1863	2211	1770	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	98437		114742			
ANNUAL MEAN	270		314		323	
HIGHEST ANNUAL MEAN					1326	1965
LOWEST ANNUAL MEAN					168	1977
HIGHEST DAILY MEAN	762	Apr 27	2720	Feb 15	25200	Jan 1 1997
LOWEST DAILY MEAN	174	Feb 4	185	Jan 12	41	Dec 18 1971
ANNUAL SEVEN-DAY MINIMUM	177	Jan 30	186	Jan 2	42	Dec 15 1971
INSTANTANEOUS PEAK FLOW			4050	Feb 14	31700	Jan 1 1997
INSTANTANEOUS PEAK STAGE			6.26	Feb 14	14.77	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	195200		227600		233900	
10 PERCENT EXCEEDS	395		460		509	
50 PERCENT EXCEEDS	242		245		208	
90 PERCENT EXCEEDS	193		205		169	

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 mi^2.

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

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

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

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 51,300 ft^3/s, Jan. 1, 1997, gage height, 29.00 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 109 ft^3/s, Dec. 16–20, 1971. Minimum prior to regulation by Lake McCloud, 825 ft^3/s, Jan. 3, 1950.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 4,500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	0745	5,640	15.26	Feb. 27	2015	8,380	16.96
Feb. 14	0900	12,700	19.23				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	325	771	284	1210	4440	729	841	472	405	333	485
2	321	325	580	278	1150	3250	722	821	467	403	331	423
3	321	326	503	274	1100	2500	726	774	466	404	331	368
4	322	330	463	278	1110	2150	737	681	463	401	330	370
5	324	330	435	275	1660	2340	731	626	460	410	329	360
6	338	329	418	273	2850	2170	714	648	458	412	331	352
7	335	337	410	272	2070	2180	689	649	455	398	332	348
8	333	458	397	271	1590	2090	673	643	476	391	334	346
9	330	360	420	271	1330	2070	660	618	469	386	332	343
10	330	533	400	331	1300	2030	638	624	462	382	330	343
11	330	542	391	1260	1780	2390	619	681	451	375	329	341
12	329	423	392	705	3400	2240	614	644	446	372	328	338
13	329	378	422	677	4720	1930	943	546	444	368	326	336
14	326	364	404	2320	10900	1730	1780	532	440	367	324	340
15	325	410	396	2960	7960	1610	1620	566	437	365	323	339
16	325	481	348	4760	5090	1490	1910	582	433	364	321	335
17	324	536	317	2770	3680	1380	3230	569	430	363	320	334
18	325	425	316	1700	2240	1290	3020	553	429	360	318	333
19	325	493	312	1890	1650	1240	2440	540	426	355	317	330
20	325	602	308	3610	1480	1180	2050	532	421	353	317	329
21	325	481	305	2310	1470	1110	1790	530	419	352	316	327
22	325	429	302	2030	2590	1040	1560	524	417	349	314	347
23	325	406	300	1920	4190	999	1430	518	413	352	314	338
24	325	392	297	2810	3390	961	1270	515	404	348	314	332
25	325	382	296	2950	2780	924	1130	509	404	347	313	330
26	325	378	296	2330	3630	888	1030	504	404	342	314	328
27	397	373	293	1850	7820	867	992	504	410	344	314	327
28	423	368	292	1240	6750	847	947	500	410	344	313	325
29	339	379	290	1060	5740	814	901	490	406	341	312	325
30	334	785	289	1160	---	777	866	485	407	340	314	324
31	327	---	287	1270	---	746	---	478	---	336	316	---
TOTAL	10310	12680	11650	46389	96630	51673	37161	18227	13099	11429	9990	10396
MEAN	333	423	376	1496	3332	1667	1239	588	437	369	322	347
MAX	423	785	771	4760	10900	4440	3230	841	476	412	334	485
MIN	321	325	287	271	1100	746	614	478	404	336	312	324
AC-FT	20450	25150	23110	92010	191700	102500	73710	36150	25980	22670	19820	20620

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	1958
LOWEST ANNUAL MEAN	1213	1950
HIGHEST DAILY MEAN	36100	Dec 21 1955
LOWEST DAILY MEAN	825	Jan 3 1950
ANNUAL SEVEN-DAY MINIMUM	826	Oct 9 1950
INSTANTANEOUS PEAK FLOW	a45200	Dec 22 1955
INSTANTANEOUS PEAK STAGE	28.20	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	1231000	
10 PERCENT EXCEEDS	2670	
50 PERCENT EXCEEDS	1270	
90 PERCENT EXCEEDS	928	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	308	583	852	1488	1555	1649	967	691	440	326	287	292
MAX	468	4068	3681	6043	5118	5825	2794	1930	1379	540	409	366
(WY)	1990	1974	1997	1970	1986	1983	1982	1983	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000	
ANNUAL TOTAL	253501		329634			
ANNUAL MEAN	695		901		783	
HIGHEST ANNUAL MEAN					1720	1974
LOWEST ANNUAL MEAN					230	1977
HIGHEST DAILY MEAN	3520	Feb 7	10900	Feb 14	45000	Jan 1 1997
LOWEST DAILY MEAN	287	Dec 31	271	Jan 8	109	Dec 16 1971
ANNUAL SEVEN-DAY MINIMUM	292	Dec 25	273	Jan 3	113	Dec 15 1971
INSTANTANEOUS PEAK FLOW			12700	Feb 14	51300	Jan 1 1997
INSTANTANEOUS PEAK STAGE			19.23	Feb 14	29.00	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	502800		653800		567300	
10 PERCENT EXCEEDS	1300		2160		1550	
50 PERCENT EXCEEDS	411		420		366	
90 PERCENT EXCEEDS	325		317		251	

a from rating curve extended above 6,400 ft^3/s on basis of slope-area measurement of peak flow.

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 mi^2, 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 HOURS) 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 HOURS) FOR CURRENT YEAR.—Maximum contents, 4,172,990 acre-ft, May 19, elevation, 1,053.93 ft; minimum, 2,985,131 acre-ft, Sept. 30, elevation, 1,007.07 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3325561	3275377	3272248	3226056	3693157	3831829	3768484	4161445	4104266	3811384	3307412	3047865
2	3319505	3274896	3273933	3226532	3697073	3791001	3786232	4161445	4099244	3796031	3294158	3047865
3	3312238	3272490	3272008	3226294	3704120	3734499	3800266	4156939	4091711	3781199	3282116	3050150
4	3309099	3268156	3268638	3227009	3707775	3680922	3811913	4151307	4085876	3759775	3268879	3050607
5	3305002	3264065	3267676	3225579	3726631	3645417	3828903	4144840	4081989	3742116	3247539	3051293
6	3305966	3257834	3265029	3225579	3758720	3620678	3844067	4140075	4072548	3726631	3227247	3052439
7	3304761	3253284	3264306	3227485	3777491	3594008	3857957	4141757	4074492	3712212	3215097	3054507
8	3302352	3251131	3263103	3227009	3787027	3574097	3870786	4143439	4071993	3692896	3205856	3052439
9	3301148	3249934	3263103	3226056	3783054	3563147	3874270	4142317	4069494	3676247	3196851	3046265
10	3298737	3258313	3260229	3229153	3785968	3540827	3873196	4145961	4064774	3662221	3188335	3040780
11	3297291	3260468	3258073	3244427	3802119	3533478	3875344	4147365	4057581	3646451	3179611	3036666
12	3292954	3260468	3255200	3252328	3839012	3526670	3879373	4149336	4048185	3633024	3167820	3034380
13	3289098	3261426	3253046	3262862	3907073	3523645	3895756	4152997	4037407	3617334	3154216	3035294
14	3283079	3259750	3252807	3295363	4021446	3522888	3910851	4157221	4027222	3602453	3143198	3033009
15	3279950	3261186	3252328	3351075	4033548	3526166	3923264	4158910	4015945	3579190	3132931	3033466
16	3277062	3260229	3251130	3415575	4022546	3532217	3944399	4161726	4003042	3556791	3128264	3029352
17	3281153	3259510	3251370	3447281	3997293	3546908	3990723	4166795	3987985	3541840	3121963	3022302
18	3278506	3257834	3250412	3470941	3963973	3561619	4021171	4169048	3977597	3527175	3117084	3019347
19	3273452	3260706	3248018	3503748	3915438	3575116	4048738	4172990	3966426	3513055	3111745	3015710
20	3269602	3264547	3245145	3549189	3877224	3586586	4064219	4167358	3954437	3497726	3103388	3008663
21	3267194	3265029	3243469	3582755	3840342	3597335	4078935	4159192	3942230	3482674	3098281	3004127
22	3266712	3265750	3241314	3606292	3835022	3609363	4088097	4153560	3928944	3462953	3091582	3002544
23	3265509	3265991	3238444	3633024	3837416	3623764	4097291	4149618	3916248	3442561	3086270	2999152
24	3263824	3266232	3236299	3669753	3818531	3641282	4105939	4146522	3900058	3425215	3082344	2994855
25	3260946	3265268	3233202	3697073	3785173	3658857	4115146	4145401	3885550	3410385	3079804	2990558
26	3260229	3264788	3232488	3709341	3799737	3675727	4121015	4142878	3874001	3395129	3072426	2987166
27	3260229	3263344	3230820	3712473	3845663	3691591	4130265	4140355	3864105	3379413	3065534	2987619
28	3266232	3261186	3232011	3713517	3854216	3708819	4138954	4136992	3851008	3362531	3057264	2987845
29	3268397	3262622	3230582	3701771	3857423	3722959	4145120	4128583	3837150	3350101	3051750	2987166
30	3272729	3268397	3228200	3698117	---	3737384	4153279	4122697	3825179	3334040	3047179	2985131
31	3275136	---	3227485	3697073	---	3751868	---	4111519	---	3321201	3043522	---
a	1019.51	1019.23	1017.52	1036.37	1042.44	1038.46	1053.23	1051.74	1041.23	1021.42	1009.64	1007.07
b	-52363	-6739	-40912	+469588	+160350	-105555	+401411	-41760	-286340	-503978	-277679	-58391
MAX	3325561	3275377	3273933	3713517	4033548	3831829	4153279	4172990	4104266	3811384	3307412	3054507
MIN	3260229	3249934	3227485	3225579	3693157	3522888	3768484	4111519	3825179	3321201	3043522	2985131

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

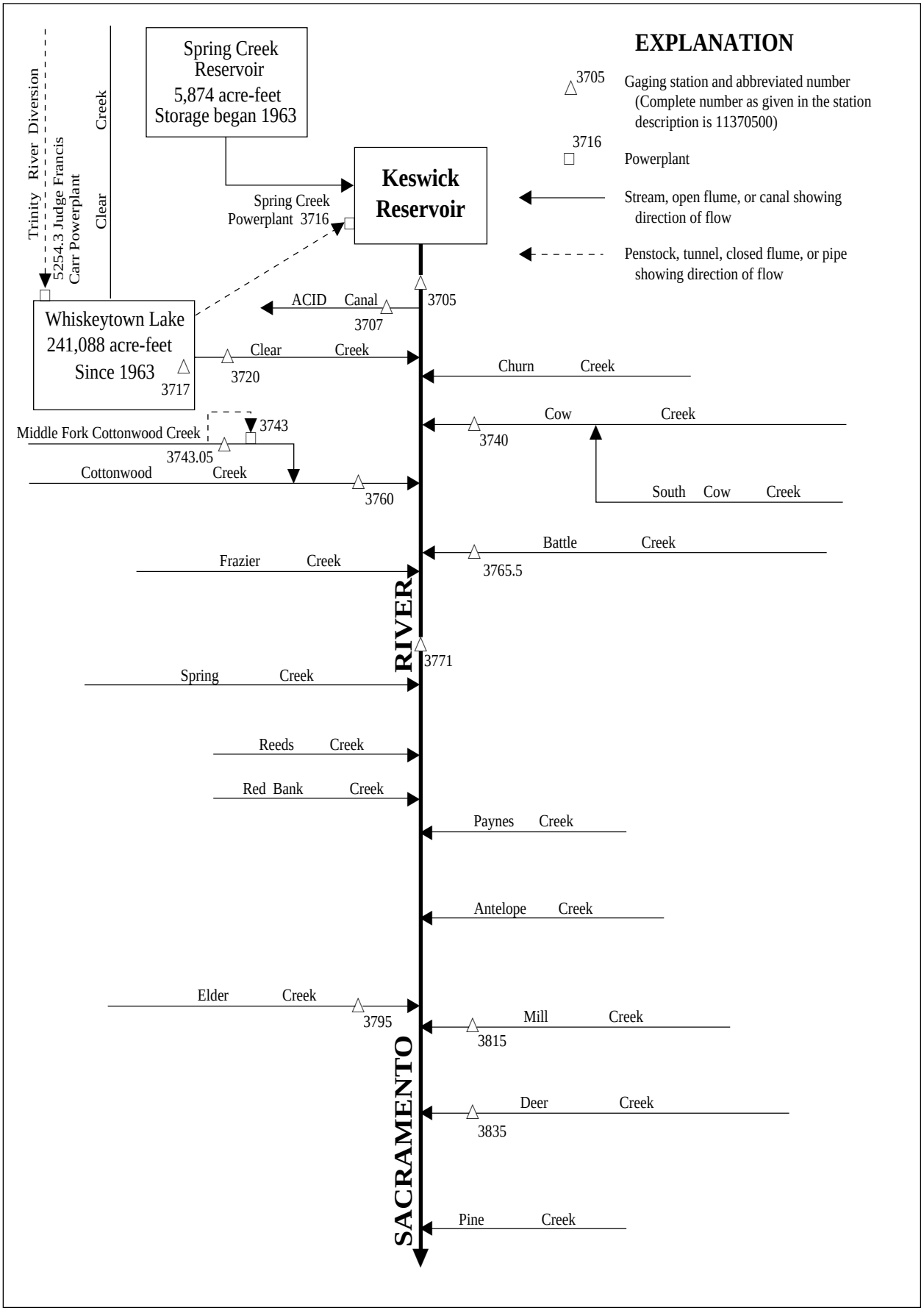

Figure 25. Diversions and storage in upper Sacramento River Basin.

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 mi^2, 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 excellent. Flow completely regulated by Shasta Lake (station 11370000) beginning Dec. 30, 1943. Minor regulation by Keswick Reservoir since 1950, total capacity, 23,800 acre-ft, operational capacity, 4,170 acre-ft, between normal operating elevations of 579.0 ft and 586.0 ft. No diversion between Shasta Dam and station at Keswick. Since December 1963, water is released from Whiskeytown Lake (station 11371700), through a tunnel to Spring Creek Powerplant (station 11371600), and then into Keswick Reservoir. See schematic diagrams of upper Sacramento River Basin and Pit and McCloud River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 186,000 ft^3/s, Feb. 23, 1940, gage height, 47.2 ft, site and datum then in use, from rating curve extended above 75,000 ft^3/s on basis of peak discharge at Kennet, plus 4,000 ft^3/s estimated inflow; minimum observed, 2,730 ft^3/s, Aug. 22, 1939. Since regulation by Shasta Dam in 1943, maximum discharge, 81,400 ft^3/s, Apr. 1, 1974, gage height, 31.92 ft; maximum gage height, 32.71 ft, Jan. 4, 1997; minimum discharge, 154 ft^3/s, May 15, 1948.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6770	6210	7430	5350	17400	52100	5700	10700	11300	14500	15300	8140
2	6640	6100	8470	5330	15500	52400	5600	12500	11300	14600	15200	7920
3	6630	6030	8430	5330	13000	52700	5400	12500	11500	14600	15200	7490
4	6630	6000	8470	5320	13000	52500	5300	12500	11200	15300	14500	7560
5	6580	6060	8490	5150	13000	45000	e5310	13400	10500	15000	14100	7690
6	6240	6280	8680	4900	11400	37900	e5320	12700	10600	15000	14100	7500
7	6080	6290	8930	4870	11300	38000	e5560	11800	10400	15000	14200	7150
8	6090	6290	8410	4830	11200	38300	6560	10500	10500	14900	13100	7110
9	6060	6300	7910	4800	15800	38300	8040	9130	10600	15000	12200	7010
10	6060	6340	7950	4770	16300	37500	8210	9070	10500	15200	12200	7070
11	6110	6320	7910	4990	18300	31700	8240	8300	10500	15200	12300	7100
12	6100	6300	7880	4710	21800	27100	8210	8150	12800	15200	12200	7030
13	6100	6280	7890	4480	20700	23000	8290	8150	13900	15200	12000	7110
14	6100	6270	7490	4350	22900	19600	8350	8810	14100	15000	12000	7110
15	6110	6250	6960	4470	40000	16400	8260	9410	14100	15100	11500	7100
16	6150	6300	6500	4530	41700	14200	8220	8280	14000	15300	11100	7040
17	6180	6340	6190	4460	42500	11700	8400	7620	14000	15200	10700	7100
18	6180	6330	6000	4450	42600	9800	8380	8220	13600	15100	10100	8270
19	6190	6370	5890	4560	42300	10100	8350	10700	13300	15100	10000	8700
20	6210	6350	5930	4610	38000	10200	8230	12400	13900	15000	10000	9080
21	6380	6300	5890	4770	37500	10100	8320	12600	14100	15000	10000	8960
22	6390	6350	5880	6980	35200	8870	8730	12600	13600	15000	10200	8130
23	6390	6420	5850	7130	37900	7590	8740	12700	13800	15000	9720	8000
24	6320	6270	5850	8900	39300	6650	8730	13700	14000	15000	9550	8110
25	6360	6160	5860	13000	42700	6570	8740	11500	13900	15000	9550	8070
26	6420	6130	5880	14700	36000	6260	8700	11800	14000	15200	9480	7110
27	6520	7510	5880	14100	38000	6480	8810	11900	14200	15600	10000	6610
28	6420	7420	5780	16500	42000	6280	9520	12100	14500	15400	10100	6550
29	6280	7480	5670	20400	45700	6220	10500	11500	14600	15200	10200	6470
30	6310	7390	5650	20200	---	6020	10500	11700	14500	15100	9560	6500
31	6240	---	5570	17500	---	5940	---	11800	---	15100	8580	---
TOTAL	195240	192440	215570	240440	823000	695480	235220	338740	383800	467100	358940	224790
MEAN	6298	6415	6954	7756	28380	22430	7841	10930	12790	15070	11580	7493
MAX	6770	7510	8930	20400	45700	52700	10500	13700	14600	15600	15300	9080
MIN	6060	6000	5570	4350	11200	5940	5300	7620	10400	14500	8580	6470
AC-FT	387300	381700	427600	476900	1632000	1379000	466600	671900	761300	926500	712000	445900

e Estimated.

11370500 SACRAMENTO RIVER AT KESWICK, CA—Continued

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

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

SUMMARY STATISTICS	WATER YEARS 1946 - 1962	
ANNUAL MEAN	8141	
HIGHEST ANNUAL MEAN	13910	1958
LOWEST ANNUAL MEAN	5364	1950
HIGHEST DAILY MEAN	75800	Feb 21 1958
LOWEST DAILY MEAN	2360	Mar 15 1950
ANNUAL SEVEN-DAY MINIMUM	2440	Mar 9 1950
INSTANTANEOUS PEAK FLOW	78800	Feb 21 1958
INSTANTANEOUS PEAK STAGE	31.55	Feb 21 1958
INSTANTANEOUS LOW FLOW	154	May 15 1948
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 - 2000, BY WATER YEAR (WY)

MEAN	6195	7259	9928	11620	14090	11870	8978	10600	11500	12700	11640	8265
MAX	10290	23430	27340	41600	40420	47170	26840	17410	15590	15070	14700	11800
(WY)	1984	1974	1974	1997	1998	1983	1974	1995	1998	2000	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	3842150		4370760			
ANNUAL MEAN	10530		11940		10370	
HIGHEST ANNUAL MEAN					18230	1974
LOWEST ANNUAL MEAN					5390	1992
HIGHEST DAILY MEAN	30300	Mar 9	52700	Mar 3	79700	Mar 31 1974
LOWEST DAILY MEAN	5410	Jan 8	4350	Jan 14	2360	Mar 17 1989
ANNUAL SEVEN-DAY MINIMUM	5520	Jan 3	4470	Jan 13	2460	Mar 12 1989
INSTANTANEOUS PEAK FLOW			55000	Mar 2	81400	Apr 1 1974
INSTANTANEOUS PEAK STAGE			28.28	Mar 2	32.71	Jan 4 1997
INSTANTANEOUS LOW FLOW					154	May 15 1948
ANNUAL RUNOFF (AC-FT)	7621000		8669000		7515000	
10 PERCENT EXCEEDS	15700		17400		15000	
50 PERCENT EXCEEDS	9560		8740		8610	
90 PERCENT EXCEEDS	5780		5880		4080	

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 370 ft^3/s, June 9, 1989; no flow at times each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	---	---	---	---	---	---	264	305	272	259	270
2	247	---	---	---	---	---	---	267	299	273	258	263
3	249	---	---	---	---	---	---	269	300	276	256	257
4	252	---	---	---	---	---	---	267	300	271	255	257
5	254	---	---	---	---	---	---	264	302	248	258	258
6	252	---	---	---	---	---	---	250	302	247	256	263
7	249	---	---	---	---	---	e33	245	297	248	259	258
8	248	---	---	---	---	---	88	243	293	249	258	250
9	250	---	---	---	---	---	109	236	289	261	256	263
10	252	---	---	---	---	---	147	232	286	270	257	266
11	252	---	---	---	---	---	194	223	284	273	253	271
12	250	---	---	---	---	---	196	224	284	271	254	267
13	248	---	---	---	---	---	211	236	272	265	255	272
14	246	---	---	---	---	---	259	242	267	261	256	269
15	245	---	---	---	---	---	301	258	263	261	253	272
16	247	---	---	---	---	---	300	246	259	263	254	269
17	250	---	---	---	---	---	281	234	258	264	254	270
18	250	---	---	---	---	---	242	238	257	264	256	278
19	250	---	---	---	---	---	238	253	258	263	257	288
20	241	---	---	---	---	---	235	253	256	261	257	273
21	205	---	---	---	---	---	235	254	256	262	265	272
22	116	---	---	---	---	---	237	250	256	263	265	269
23	51	---	---	---	---	---	238	236	253	264	258	265
24	---	---	---	---	---	---	237	243	246	267	253	248
25	---	---	---	---	---	---	247	236	243	264	250	272
26	---	---	---	---	---	---	265	255	190	263	250	270
27	---	---	---	---	---	---	262	304	118	260	257	261
28	---	---	---	---	---	---	280	307	233	259	272	257
29	---	---	---	---	---	---	283	307	253	257	275	254
30	---	---	---	---	---	---	273	306	256	258	269	253
31	---	---	---	---	---	---	---	308	---	259	266	---
TOTAL	---	---	---	---	---	---	---	7950	7935	8137	8001	7955
MEAN	---	---	---	---	---	---	---	256	264	262	258	265
MAX	---	---	---	---	---	---	---	308	305	276	275	288
MIN	---	---	---	---	---	---	---	223	118	247	250	248
AC-FT	---	---	---	---	---	---	---	15770	15740	16140	15870	15780

e Estimated.

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

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

PERIOD OF RECORD.—April 1963 to current year.

GAGE.—Recorded powerplant output.

REMARKS.—Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of upper Sacramento 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, 4,000 ft^3/s, Oct. 18, 1987; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1746	122	1511	260	1309	0	2820	3024	2467	3024	3277	3027
2	1478	93	1456	241	1884	0	2651	2957	2264	3067	3298	3037
3	1096	110	1484	597	2042	0	2831	2799	2258	3114	3305	3070
4	842	69	1465	214	2052	0	2937	2904	2876	3022	3339	3051
5	925	110	1531	4	909	0	3111	2731	2391	3070	3286	3045
6	816	112	1517	0	473	0	2884	2831	2461	3068	3290	1918
7	655	111	1512	170	1263	0	2951	2826	2594	3141	3255	1346
8	529	88	1492	0	1052	0	2844	2825	2616	3088	3038	1195
9	227	162	1460	0	873	0	262	919	2600	3178	3084	1186
10	439	111	1508	0	1045	15	382	1201	2593	3238	3094	1579
11	277	117	962	73	1429	14	533	2067	2602	3146	3068	1534
12	308	117	1039	369	2636	14	508	1372	2572	3143	3060	1318
13	408	113	975	0	2692	2	530	1372	2536	3233	3061	1202
14	475	113	942	0	0	18	840	1362	2550	3236	3050	1265
15	448	101	979	0	0	784	0	1599	1761	3111	3013	1378
16	528	209	588	0	0	766	0	1671	1875	3162	3095	1285
17	496	0	209	0	14	1443	0	1700	2564	3188	3093	1177
18	376	113	0	0	0	1888	14	1343	2568	3360	3065	1362
19	630	588	0	1436	0	2054	0	1655	2715	3310	2544	703
20	587	1090	605	1430	0	2123	14	2291	2708	3254	2808	876
21	0	993	0	538	0	2278	866	2071	2580	3263	2569	1947
22	103	704	1	1782	0	2546	864	2164	2618	2970	2538	14
23	101	989	552	1655	17	2779	906	1935	2637	2896	3111	14
24	111	923	448	2100	196	2828	1076	2162	2590	2937	2990	14
25	126	977	0	1183	2300	2749	858	2485	2744	3280	3087	14
26	109	1142	0	2570	26	2756	959	2302	2688	3026	3038	497
27	114	1463	0	2334	0	2752	2827	2202	2378	3311	2932	1834
28	110	1560	432	2546	0	2698	2827	2384	2942	3304	3022	2039
29	114	1477	0	2418	0	2701	2763	2566	2811	3294	3034	38
30	109	1512	1067	1217	---	2793	2806	2584	2575	3304	3054	14
31	178	---	235	2743	---	2820	---	2281	---	3334	3024	---
TOTAL	14461	15389	23970	25880	22212	38821	42864	66585	76134	98072	94522	40979
MEAN	466	513	773	835	766	1252	1429	2148	2538	3164	3049	1366
MAX	1746	1560	1531	2743	2692	2828	3111	3024	2942	3360	3339	3070
MIN	0	0	0	0	0	0	0	919	1761	2896	2538	14
AC-FT	28680	30520	47540	51330	44060	77000	85020	132100	151000	194500	187500	81280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	1297	833	675	613	797	875	1198	1362	1858	2392	2251	2055
MAX	3363	2158	2891	2755	3223	3111	3220	3513	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	415
(WY)	1994	1992	1993	1986	1988	1988	1978	1991	1993	1978	1992	1997

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	469922		559889			
ANNUAL MEAN	1287		1530		1365	
HIGHEST ANNUAL MEAN					2485	1974
LOWEST ANNUAL MEAN					301	1978
HIGHEST DAILY MEAN	3327	Jan 3	3360	Jul 18	4000	Oct 18 1987
LOWEST DAILY MEAN	0	Feb 3	0	Oct 21	0	May 6 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 13	.00	Feb 27	.00	Oct 14 1969
ANNUAL RUNOFF (AC-FT)	932100		1111000		988500	
10 PERCENT EXCEEDS	2290		3070		3130	
50 PERCENT EXCEEDS	1320		1460		1130	
90 PERCENT EXCEEDS	110		.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.—Water is released from Whiskeytown Lake (station 11371700) through a tunnel to powerplant and then into Keswick Reservoir. Spring Creek Reservoir releases into Keswick Reservoir at Spring Creek Powerplant. See schematic diagrams of upper Sacramento River and Pit and McCloud River Basins.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,800 ft^3/s, May 2, 1983; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1325	605	1761	459	2569	4201	3215	3263	2463	2930	3488	3332
2	1105	447	1700	236	2872	2022	3573	3327	2504	2954	3795	3420
3	857	674	1566	240	2898	1248	3368	3596	2305	3262	3569	3524
4	647	395	1539	7	2965	1796	2495	3238	3445	3219	3526	3418
5	477	155	1351	0	2533	1784	3469	3246	2750	3049	2823	3092
6	596	165	1323	0	4187	2193	2929	3495	2315	2935	2999	1944
7	264	751	1760	0	2984	1598	2450	3762	3193	3063	3272	2008
8	333	743	1428	0	1625	2935	3451	3663	3036	2805	3450	1431
9	208	1110	1449	0	1637	3249	260	1096	3429	3355	3394	1502
10	256	1056	1435	0	2400	1732	260	1088	3034	3372	3432	1775
11	245	547	742	273	2432	1577	270	2425	2650	2990	3664	1289
12	265	530	757	212	4111	1602	253	1683	2725	3068	3480	1550
13	353	493	742	119	4159	1512	644	1633	2759	3224	3345	1554
14	244	698	977	1927	4152	1008	262	1614	3138	3020	3112	1717
15	466	447	915	2192	4276	1322	245	2612	2038	3141	3168	1736
16	327	1000	57	1976	4226	2072	248	2488	1975	3160	3724	1510
17	341	14	31	839	3794	2683	3835	1712	2750	3264	3271	1486
18	221	1	1	524	3438	2697	4291	2023	2834	3281	3458	1397
19	290	135	22	2108	534	3130	4183	1946	2990	3341	2748	1449
20	245	1156	2	2180	908	2452	1363	2374	2969	3388	2753	1340
21	485	1044	0	1671	1318	2503	1270	2850	2897	3278	2829	1919
22	1012	1062	0	2466	1441	2890	1474	2784	2834	2719	3155	1551
23	579	1211	0	2665	4397	2616	1480	2340	2882	2701	2953	1711
24	605	1100	0	2702	3591	3562	1235	2494	2886	2662	3335	1637
25	248	990	0	2711	4186	3288	634	2326	2896	3566	3634	1464
26	874	789	0	3088	3670	3353	955	2725	2813	3682	3642	1549
27	545	1295	0	2640	4103	3414	3580	2704	2834	3335	2811	3131
28	498	1612	101	2966	4218	2720	2823	2757	3102	3331	3581	3152
29	742	1248	148	2399	4198	3009	3703	2831	3371	3419	3498	1581
30	610	1635	136	2951	---	2797	3444	3171	2692	2602	3357	1058
31	730	---	139	2454	---	2090	---	2766	---	3566	3279	---
TOTAL	15993	23108	20082	42005	89822	75055	61662	80032	84509	97682	102545	59227
MEAN	516	770	648	1355	3097	2421	2055	2582	2817	3151	3308	1974
MAX	1325	1635	1761	3088	4397	4201	4291	3762	3445	3682	3795	3524
MIN	208	1	0	0	534	1008	245	1088	1975	2602	2748	1058
AC-FT	31720	45830	39830	83320	178200	148900	122300	158700	167600	193800	203400	117500
a	34	389	202	1520	10050	4680	1750	732	298	254	173	147

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1571	1269	1089	1373	1674	1669	1428	1598	2023	2453	2337	2201
MAX	3691	3174	4032	4532	4498	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	548810		751722			
ANNUAL MEAN	1504		2054		1724	
HIGHEST ANNUAL MEAN					3389	1974
LOWEST ANNUAL MEAN					748	1992
HIGHEST DAILY MEAN	3999	Mar 4	4397	Feb 23	4800	May 2 1983
LOWEST DAILY MEAN	0	Dec 21	0	Dec 21	0	Mar 30 1974
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 21	.00	Dec 21	.00	Mar 26 1976
ANNUAL RUNOFF (AC-FT)	1089000		1491000		1249000	
10 PERCENT EXCEEDS	2380		3520		3500	
50 PERCENT EXCEEDS	1560		2320		1600	
90 PERCENT EXCEEDS	328		245		40	

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

11371700 WHISKEYTOWN LAKE NEAR IGO, CA

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

DRAINAGE AREA.—200 mi^2.

PERIOD OF RECORD.—May 1963 to current year. Prior to October 1964 published as Whiskeytown Reservoir near Igo.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by U.S. Bureau of Reclamation). Contents based on capacity table dated April 1962 provided by U.S. Bureau of Reclamation.

REMARKS.—Lake is formed by earth and rockfill dam. Storage began in May 1963. Usable capacity, 241,088 acre-ft between elevations 972.0 ft, invert of sluice pipe, and 1,210.00 ft, crest of glory hole spillway. Dead storage 8 acre-ft. Normal operating pool is from elevation 1,197.0 ft, capacity, 201,288 acre-ft, to 1,210.0 ft, capacity, 241,096 acre-ft. Transbasin water enters the reservoir through Judge Francis Carr Powerplant (station 11525430) and is released through Spring Creek Tunnel to Spring Creek Powerplant (station 11371600) and Keswick Reservoir. Figures given represent total contents at 2400 hours. Lake is used for power generation and recreation. See schematic diagrams of upper Sacramento River Basin 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 HOURS) 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 HOURS) FOR CURRENT YEAR.—Maximum contents, 239,592 acre-ft, Sept. 6, elevation, 1,209.53 ft; minimum, 204,386 acre-ft, Jan. 23, elevation, 1,198.06 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236941	221840	206065	205653	205358	204769	213964	237895	238023	237927	238311	238375
2	237323	220798	205623	205417	205152	205004	213632	238311	238183	238087	237355	238471
3	237418	219420	205417	206006	205152	205800	213722	237927	238631	237609	236942	238407
4	237386	218385	205240	206183	205417	205594	215683	238407	238215	237228	236528	238407
5	237991	217868	205358	205918	207304	205800	215925	238407	237991	237164	237482	239079
6	238151	217291	205711	205623	204975	205505	216865	238151	238791	237291	238119	239592
7	238535	215895	205181	205682	204857	206330	219084	237387	238503	237450	238023	238791
8	238567	214688	205417	205387	205711	206094	218901	236846	238503	237895	237991	238567
9	238375	212640	205270	205152	205711	207096	219512	237101	237609	237514	238183	238119
10	238471	211083	205122	204916	205181	204621	220216	237959	237450	237291	238215	238055
11	238215	210155	205152	205122	208165	204946	221227	237895	237959	237514	237704	238919
12	237895	209145	205270	205387	210664	204739	222454	237704	238375	237577	237577	238695
13	237641	208046	205446	205888	214899	204592	224212	237800	238503	237545	237704	238279
14	237831	206654	205063	206330	219941	205034	226535	238087	237863	237991	238119	238119
15	237450	205770	204916	204975	218111	206271	227281	237800	237736	237863	238439	237768
16	237514	204415	205535	204946	213964	205770	229464	237228	237895	237704	237831	237704
17	237450	204562	205387	204975	209412	205181	233739	237959	237959	237482	238055	237355
18	237418	204592	205093	205063	204946	205240	232225	237387	237991	237831	237959	237482
19	237768	206212	204680	205623	205505	204769	228307	237450	237991	237863	237831	236211
20	238087	206301	205417	206065	205594	205387	228838	238119	238023	237609	238471	235607
21	236783	206418	205063	205093	205800	206419	230466	237418	237895	237704	238215	235925
22	234654	205476	204798	205004	211412	207214	231374	237037	237895	238055	237387	233076
23	233423	205211	205564	204386	211712	208967	232035	236973	237863	238407	238183	229965
24	232098	204916	206242	205299	209620	208729	233203	237069	237641	238919	238343	226939
25	231594	205034	206006	205358	206919	208878	235067	238183	237927	238343	237895	224151
26	229996	205535	205711	205211	206713	208848	236306	238087	238119	237863	237450	222146
27	228775	205800	205417	205682	209442	208492	236338	237863	237673	237831	238535	219971
28	227654	205623	205711	206036	208670	209531	237736	237863	237927	237831	238087	218385
29	226069	206360	204975	206890	207868	209977	237291	238055	237387	237609	237800	215412
30	224737	206507	206389	204828	---	211053	237291	237482	237736	239079	237895	213210
31	223256	---	206094	206654	---	213572	---	237291	---	238727	238055	---
a	1204.33	1198.78	1198.64	1198.83	1199.24	1201.15	1208.81	1208.81	1208.95	1209.26	1209.05	1201.03
b	-13177	-16749	-413	+560	+1214	+5704	+23719	0	+445	+991	-672	-24845
MAX	238567	221840	206389	206890	219941	213572	237736	238407	238791	239079	238535	239592
MIN	223256	204415	204680	204386	204857	204592	213632	236846	237387	237164	236528	213210

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

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 mi^2.

PERIOD OF RECORD.—October 1940 to current year.
CHEMICAL DATA: Water years 1958–79.
WATER TEMPERATURE: Water years 1965–79.

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,500 ft^3/s, Dec. 21, 1955, gage height, 13.75 ft; minimum daily, 9.0 ft^3/s, Sept. 4–7, 1950. Since completion of Whiskeytown Dam in 1963, maximum discharge, 19,200 ft^3/s, Mar. 3, 1983, gage height, 12.73 ft, from rating curve extended above 12,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 30 ft^3/s, Oct. 10, 11, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	200	236	208	309	714	261	251	115	56	56	61
2	201	200	226	208	288	567	258	251	114	56	56	59
3	202	201	219	208	281	480	254	249	114	58	56	56
4	202	201	216	209	304	466	253	246	113	59	55	56
5	202	200	214	208	502	608	252	245	113	59	55	56
6	203	200	214	208	465	556	250	246	113	60	55	55
7	202	201	212	208	343	548	242	250	116	59	55	55
8	202	205	211	208	303	754	244	247	123	59	55	54
9	201	201	215	208	282	710	243	245	118	59	55	55
10	201	245	214	208	415	593	241	243	116	59	55	54
11	201	214	212	275	923	620	240	241	115	59	55	54
12	201	214	211	226	1090	518	241	240	114	59	54	54
13	201	211	213	230	1600	438	264	239	114	58	54	54
14	201	210	211	289	1340	381	262	243	113	59	54	55
15	201	212	211	379	643	349	260	315	112	58	55	55
16	201	223	211	368	482	327	285	272	111	58	55	55
17	201	220	211	294	401	309	597	259	110	58	55	54
18	202	213	210	282	355	297	416	247	110	58	56	54
19	202	301	209	337	327	288	343	207	110	58	54	54
20	203	241	208	356	319	278	314	182	109	58	54	54
21	202	220	208	277	375	269	296	156	109	58	54	54
22	202	215	208	255	822	263	286	126	109	58	54	56
23	202	213	208	274	857	259	277	123	109	58	54	56
24	201	211	208	436	529	259	271	121	108	58	54	55
25	200	211	208	439	470	278	269	119	107	60	54	54
26	201	210	208	323	1400	275	265	118	96	58	54	54
27	212	210	208	279	1070	273	263	118	87	56	54	54
28	211	210	208	258	693	271	260	118	76	56	54	54
29	203	224	208	247	1250	266	256	118	58	56	55	82
30	201	262	208	302	---	263	253	123	57	56	54	101
31	200	---	208	303	---	261	---	116	---	56	54	---
TOTAL	6290	6499	6572	8510	18438	12738	8416	6274	3189	1797	1694	1724
MEAN	203	217	212	275	636	411	281	202	106	58.0	54.6	57.5
MAX	225	301	236	439	1600	754	597	315	123	60	56	101
MIN	200	200	208	208	281	259	240	116	57	56	54	54
AC-FT	12480	12890	13040	16880	36570	25270	16690	12440	6330	3560	3360	3420

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.8	147	203	303	314	341	167	105	73.0	59.6	57.3	57.0
MAX	317	299	625	1358	1612	3437	668	419	249	150	151	225
(WY)	1993	1974	1965	1970	1998	1983	1974	1982	1993	1999	1999	1999
MIN	38.8	70.7	94.2	54.3	49.8	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	91025		82141			
ANNUAL MEAN	249		224		159	
HIGHEST ANNUAL MEAN					570	1983
LOWEST ANNUAL MEAN					57.9	1977
HIGHEST DAILY MEAN	1500	Feb 7	1600	Feb 13	15000	Mar 3 1983
LOWEST DAILY MEAN	148	Jul 29	54	Aug 12	30	Oct 10 1977
ANNUAL SEVEN-DAY MINIMUM	148	Jul 29	54	Aug 19	31	Oct 5 1977
INSTANTANEOUS PEAK FLOW			2520	Feb 29	19200	Mar 3 1983
INSTANTANEOUS PEAK STAGE			6.80	Feb 29	12.73	Mar 3 1983
ANNUAL RUNOFF (AC-FT)	180500		162900		115500	
10 PERCENT EXCEEDS	367		380		262	
50 PERCENT EXCEEDS	216		208		74	
90 PERCENT EXCEEDS	152		55		49	

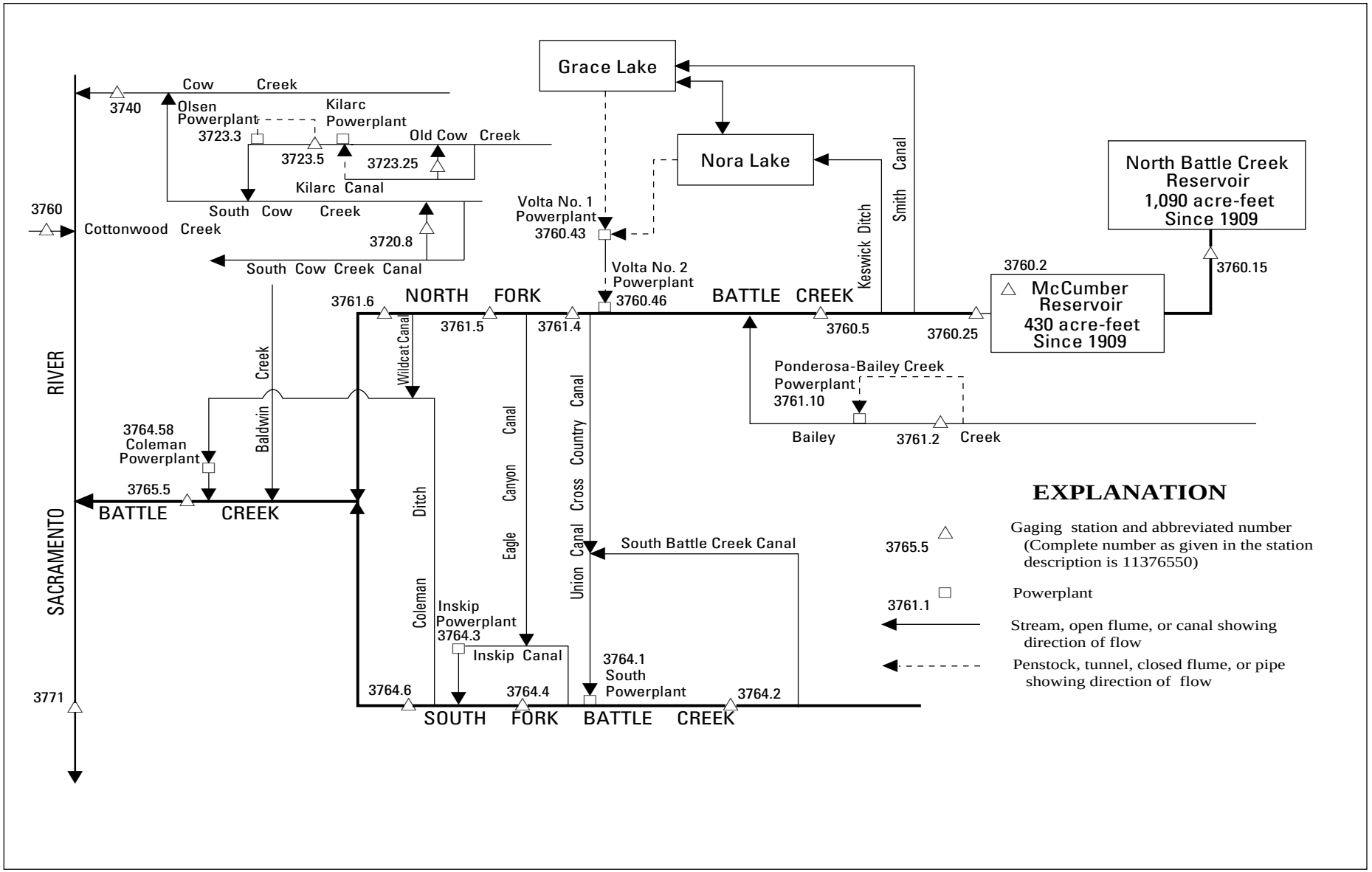

Figure 26. Diversions and storage in Battle Creek and Cow Creek Basins.

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 ft^3/s during dry years and 4.0 ft^3/s during normal years. Flow is computed to 7.8 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	5.4	5.5	5.4	6.7	5.8	5.9	6.3	5.5	5.3	5.3	6.4
2	5.4	5.4	5.5	5.4	6.8	5.6	5.9	6.4	5.4	5.3	5.3	5.3
3	5.4	5.4	5.5	5.4	7.0	5.6	6.0	6.4	5.4	5.3	5.3	5.2
4	5.4	5.4	5.5	5.4	7.0	6.1	6.1	6.4	5.4	5.3	5.3	5.2
5	5.4	5.4	5.5	5.4	6.9	7.4	6.1	6.4	5.4	5.3	5.3	5.2
6	5.4	5.4	---	5.4	6.8	6.3	6.1	6.1	5.4	5.3	5.3	5.2
7	5.5	5.4	---	5.4	6.6	5.8	6.1	6.0	5.4	5.3	5.3	5.2
8	5.4	5.4	---	5.4	6.4	6.0	6.1	6.0	5.6	5.3	5.3	5.2
9	5.5	5.4	5.6	5.4	6.4	6.4	6.2	6.2	5.6	5.3	5.3	5.3
10	5.4	5.6	5.4	5.4	6.5	6.1	6.1	6.5	5.4	5.3	5.3	5.2
11	5.4	5.6	5.4	5.6	7.0	6.2	6.0	6.2	5.4	5.4	5.2	5.3
12	5.4	5.4	5.4	5.4	7.8	6.0	6.1	6.1	5.4	5.3	5.2	5.3
13	5.4	5.4	5.4	5.8	7.6	5.9	6.6	6.1	5.4	5.3	5.2	5.3
14	5.4	5.4	5.4	6.5	6.2	6.3	6.5	6.1	5.4	5.3	5.2	5.3
15	5.4	5.4	5.4	7.5	6.1	6.6	6.4	6.3	5.4	5.3	5.2	5.3
16	5.4	5.7	5.4	6.3	5.6	6.5	6.4	6.3	6.4	5.3	5.2	5.3
17	5.4	5.7	5.4	5.6	6.2	6.4	6.7	6.2	6.8	5.3	5.3	5.3
18	5.4	5.4	5.4	6.0	6.4	6.3	6.8	6.1	5.9	5.3	5.2	5.2
19	5.4	5.6	5.4	7.3	6.2	6.4	6.5	6.0	5.3	5.3	5.2	5.2
20	5.4	6.1	5.4	6.8	6.4	6.4	6.4	6.0	5.3	5.3	5.2	5.2
21	5.4	5.4	5.4	6.2	6.5	6.3	6.3	6.0	5.4	5.3	5.2	5.2
22	5.4	5.4	5.3	6.0	7.1	6.3	6.4	6.0	5.4	5.3	5.2	5.2
23	5.4	5.4	5.4	6.6	6.7	6.3	6.3	6.0	5.4	5.3	5.2	5.2
24	5.4	5.5	5.3	---	5.8	6.2	6.2	6.0	5.4	5.3	5.2	5.3
25	5.4	5.5	5.3	7.1	5.7	6.2	6.1	6.1	5.4	5.3	5.2	5.3
26	5.4	5.5	5.4	6.5	6.5	6.2	6.3	6.4	5.4	5.3	5.2	5.3
27	5.5	5.5	5.3	6.4	7.2	6.2	6.4	6.3	5.4	5.3	5.2	5.3
28	6.2	5.5	5.3	6.4	6.1	6.1	6.4	6.4	5.4	5.3	5.2	5.3
29	5.4	5.5	5.4	6.2	6.1	6.0	6.3	6.2	5.3	5.3	5.2	5.3
30	5.5	6.8	5.3	7.5	---	6.0	6.3	6.1	5.3	5.3	5.2	5.3
31	5.4	---	5.4	7.1	---	6.0	---	5.7	---	5.3	5.2	---
TOTAL	168.6	165.9	---	---	190.3	191.9	188.0	191.3	165.0	164.4	162.3	158.8
MEAN	5.44	5.53	---	---	6.56	6.19	6.27	6.17	5.50	5.30	5.24	5.29
MAX	6.2	6.8	---	---	7.8	7.4	6.8	6.5	6.8	5.4	5.3	6.4
MIN	5.4	5.4	---	---	5.6	5.6	5.9	5.7	5.3	5.3	5.2	5.2
AC-FT	334	329	---	---	377	381	373	379	327	326	322	315

NOTE: Canal was out of service Dec. 6–8 and all flow remained in the natural channel.

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

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

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 2.0 ft^3/s during dry or normal years. Flow is computed to 5.0 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.0	3.0	3.0	3.3	4.1	4.1	4.1	3.3	3.1	3.0	3.1
2	3.1	3.0	3.0	3.0	3.4	4.1	4.1	4.1	3.3	3.1	3.0	3.0
3	3.2	3.0	3.1	3.0	3.3	4.1	4.1	4.1	3.2	3.1	3.0	3.1
4	3.1	3.0	4.0	3.0	3.1	4.1	4.1	4.2	3.1	3.1	3.0	3.1
5	3.1	3.0	3.8	3.0	3.4	4.1	4.1	4.1	3.1	3.1	3.0	3.0
6	3.3	3.0	3.7	3.0	3.8	4.1	4.1	4.0	3.1	3.1	3.0	3.0
7	3.2	3.0	3.5	3.0	3.4	4.1	4.1	3.7	3.1	3.1	3.0	3.0
8	3.0	3.1	3.3	3.0	3.1	4.0	4.1	3.6	3.4	3.1	3.0	3.0
9	3.0	3.1	3.4	3.0	3.3	4.0	4.2	3.5	3.9	3.1	3.1	3.0
10	3.1	3.4	3.0	3.0	3.9	4.0	4.1	3.5	3.3	3.1	3.0	3.0
11	3.1	3.2	3.0	3.1	4.0	4.1	4.1	3.6	3.1	3.1	3.0	3.0
12	3.1	3.0	3.0	3.0	4.0	4.0	4.1	3.8	3.1	3.1	3.0	3.0
13	3.1	3.1	3.0	3.0	4.0	4.0	4.2	3.7	3.1	3.1	3.0	3.0
14	3.1	3.1	3.0	3.1	4.2	4.0	4.1	3.7	3.1	3.1	3.0	3.0
15	3.2	3.1	3.0	3.3	3.9	4.0	4.1	3.8	3.1	3.1	3.1	3.0
16	3.1	3.3	3.0	3.1	3.7	4.1	4.1	3.7	3.1	3.1	3.1	3.0
17	3.1	3.3	3.0	3.0	3.9	4.0	4.1	3.5	3.1	3.1	3.1	3.0
18	3.1	3.1	3.0	3.6	3.9	4.0	4.1	3.4	3.1	3.1	3.0	3.0
19	3.1	3.4	3.0	3.9	3.8	4.1	4.2	3.4	3.1	3.1	3.1	3.0
20	3.1	4.0	3.0	3.9	3.8	4.0	4.1	3.5	3.1	3.1	3.0	3.0
21	3.1	3.4	3.0	3.7	3.8	4.0	4.1	3.5	3.1	3.1	3.0	3.1
22	3.1	3.1	3.0	3.4	3.8	4.0	4.1	3.5	3.1	3.1	3.0	3.1
23	3.1	3.1	3.0	3.4	3.8	4.1	4.1	3.5	3.1	2.8	3.0	3.0
24	3.1	3.1	3.0	3.8	3.8	4.0	4.1	3.5	3.1	2.8	3.0	3.1
25	3.1	3.1	3.0	3.8	3.7	4.1	4.1	3.4	3.1	3.4	3.0	3.1
26	3.0	3.1	3.0	3.8	3.8	4.1	4.1	3.4	3.1	3.4	3.0	3.1
27	3.4	3.1	3.0	3.7	3.6	4.1	4.1	3.4	3.1	3.0	2.7	3.1
28	3.5	3.1	3.0	3.5	3.2	4.1	4.1	3.4	3.1	3.0	3.0	3.1
29	3.0	3.1	3.0	3.1	3.6	4.1	4.1	3.4	3.1	3.0	3.0	3.1
30	3.0	3.4	3.0	3.3	---	4.1	4.1	3.4	3.1	3.0	3.0	3.1
31	3.0	---	3.0	3.0	---	4.1	---	3.4	---	3.0	3.0	---
TOTAL	96.7	94.8	96.8	101.5	106.3	125.8	123.3	112.8	94.8	95.6	93.2	91.2
MEAN	3.12	3.16	3.12	3.27	3.67	4.06	4.11	3.64	3.16	3.08	3.01	3.04
MAX	3.5	4.0	4.0	3.9	4.2	4.1	4.2	4.2	3.9	3.4	3.1	3.1
MIN	3.0	3.0	3.0	3.0	3.1	4.0	4.1	3.4	3.1	2.8	2.7	3.0
AC-FT	192	188	192	201	211	250	245	224	188	190	185	181

11372350 OLD COW CREEK BELOW DIVERSION TO OLSEN POWERPLANT, NEAR WHITMORE, CA

LOCATION.—Lat 40°40'10", long 121°53'27", in NW 1/4 SW 1/4 sec.32, T.33 N., R.1 E., Shasta County, Hydrologic Unit 18020118, on right bank, 1.2 mi downstream from Kilarc Powerhouse, 2.2 mi upstream from Glendenning Creek, and 3.0 mi north of Whitmore.

DRAINAGE AREA.—32.6 mi^2.

PERIOD OF RECORD.—January 1990 to September 1992 (operated as low-flow station only); October 1996 to September 1997; October 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,340 ft above sea level, from topographic map.

REMARKS.—This station records regulated bypass flow or natural flow only. During times of powerplant operation the minimum release requirement is 30 ft^3/s. See schematic diagram of Battle Creek and Cow Creek Basins.

COOPERATION.—Records were collected by Synergics Incorporated, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,280 ft^3/s, Jan. 1, 1997, gage height, 7.29 ft; minimum daily, 6.9 ft^3/s, Aug. 7, 9, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	34	40	31	37	38	36	35	35	37	30	50
2	34	34	41	31	37	39	35	35	35	37	30	39
3	34	34	37	31	36	36	35	34	35	37	29	36
4	35	33	36	31	37	38	35	35	35	39	31	34
5	35	33	36	31	37	59	35	35	35	38	33	34
6	39	33	35	30	37	39	34	35	35	38	33	34
7	38	34	36	30	37	39	83	35	35	37	33	33
8	36	44	34	30	37	40	35	35	35	38	33	33
9	31	39	36	30	37	42	39	35	35	36	33	32
10	36	41	35	34	36	39	34	34	35	38	33	32
11	36	38	35	43	35	46	34	34	35	39	32	32
12	34	36	36	40	37	38	34	34	34	40	31	31
13	34	33	40	51	41	37	59	34	33	38	31	30
14	34	32	36	63	125	37	40	34	33	36	32	31
15	34	33	35	72	79	37	38	34	33	33	31	32
16	33	36	34	41	40	37	37	34	33	33	31	32
17	34	40	34	36	36	38	54	34	33	34	30	32
18	35	38	34	41	36	36	58	36	33	33	32	31
19	34	41	34	43	54	39	39	35	33	33	31	31
20	34	43	36	40	67	39	38	35	33	33	31	32
21	34	39	36	39	38	34	37	35	33	33	31	33
22	34	38	34	36	41	78	37	35	34	31	31	36
23	33	37	33	37	40	36	37	37	33	31	30	33
24	34	36	32	46	38	36	36	36	33	32	30	32
25	34	34	32	39	38	36	36	35	33	31	30	27
26	34	33	32	38	41	35	41	35	37	31	30	29
27	41	34	32	66	104	36	37	35	37	31	31	29
28	56	34	31	37	79	36	35	35	36	31	31	29
29	39	34	32	37	45	36	35	34	36	30	30	29
30	34	48	31	37	---	36	35	34	37	30	31	29
31	36	---	31	37	---	36	---	34	---	31	31	---
TOTAL	1103	1096	1076	1228	1382	1228	1198	1077	1032	1069	966	977
MEAN	35.6	36.5	34.7	39.6	47.7	39.6	39.9	34.7	34.4	34.5	31.2	32.6
MAX	56	48	41	72	125	78	83	37	37	40	33	50
MIN	31	32	31	30	35	34	34	34	33	30	29	27
AC-FT	2190	2170	2130	2440	2740	2440	2380	2140	2050	2120	1920	1940
a	0	121	4.0	1620	3730	5250	5490	2940	623	18	0	0

a Discharge, in acre-feet, for Olsen Powerplant (station 11372330), provided by Synergics Incorporated.

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 mi^2.

PERIOD OF RECORD.—October 1949 to current year.
CHEMICAL DATA: Water years 1959–66.
WATER TEMPERATURE: Water years 1966–71, 1973–76, 1978–79.
SEDIMENT DATA: Water year 1978.

REVISED RECORDS.—WSP 1931: Drainage area.

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

REMARKS.—Records good. Numerous small diversions upstream from station for irrigation. See schematic diagrams of upper Sacramento River Basin and Battle Creek and Cow Creek Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 48,700 ft^3/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 ft^3/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 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 13	0945	18,700	15.65				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	110	1450	140	2190	2630	476	429	171	76	33	79
2	60	111	520	144	1340	2250	500	433	159	77	33	183
3	60	111	429	140	1160	1830	527	425	145	77	33	126
4	66	114	296	141	1710	1880	540	422	146	77	32	118
5	67	116	247	143	1760	6370	535	405	141	97	32	92
6	78	119	218	137	1430	3010	522	379	139	96	34	78
7	98	124	206	135	996	2240	502	405	134	88	34	75
8	93	180	196	135	806	2680	523	453	199	85	32	70
9	79	180	255	134	695	5680	574	404	214	79	29	65
10	76	269	411	139	1290	3760	527	380	202	71	32	61
11	77	471	284	593	2100	3220	494	349	177	66	34	64
12	72	227	249	513	5870	2190	484	320	162	61	33	55
13	78	172	328	491	12700	1680	649	338	146	62	28	53
14	79	150	285	801	9560	1410	768	334	127	64	29	50
15	74	152	232	8140	3900	1210	617	371	114	64	28	58
16	64	175	210	3270	2500	1050	649	439	102	63	26	58
17	67	502	198	1320	1870	994	1740	369	102	61	26	53
18	69	263	190	1160	1460	895	1890	317	105	60	26	48
19	74	381	181	3860	1180	837	1260	297	105	56	31	42
20	70	1380	175	4980	1130	790	865	293	94	61	30	37
21	67	596	171	1540	1810	772	719	274	89	51	33	36
22	79	337	164	1200	2230	749	647	264	94	49	30	42
23	86	268	160	2750	4240	714	597	246	90	44	28	72
24	78	232	157	6510	1990	694	547	240	92	45	29	67
25	83	202	153	3780	1780	671	512	239	91	42	31	59
26	87	199	150	2000	5570	640	502	247	97	40	32	52
27	102	188	147	1230	5070	626	498	234	86	45	27	57
28	295	182	144	919	3310	612	502	214	78	40	26	57
29	178	181	142	746	3750	589	465	209	75	36	29	57
30	133	1840	141	2660	---	555	438	191	70	33	31	52
31	117	---	140	2490	---	506	---	181	---	32	33	---
TOTAL	2763	9532	8229	52341	85397	53734	20069	10101	3746	1898	944	2016
MEAN	89.1	318	265	1688	2945	1733	669	326	125	61.2	30.5	67.2
MAX	295	1840	1450	8140	12700	6370	1890	453	214	97	34	183
MIN	57	110	140	134	695	506	438	181	70	32	26	36
AC-FT	5480	18910	16320	103800	169400	106600	39810	20040	7430	3760	1870	4000

11374000 COW CREEK NEAR MILLVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	486	1121	1759	1706	1392	861	555	236	65.4	38.8	48.9
MAX	1057	2539	3929	5593	5636	5275	3012	2375	1386	324	148	130
(WY)	1963	1982	1984	1970	1998	1983	1963	1998	1998	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	231129		250770			
ANNUAL MEAN	633		685		695	
HIGHEST ANNUAL MEAN					1634	1998
LOWEST ANNUAL MEAN					66.8	1977
HIGHEST DAILY MEAN	14800	Feb 9	12700	Feb 13	32500	Dec 27 1951
LOWEST DAILY MEAN	45	Aug 22	26	Aug 16	.02	Jul 29 1977
ANNUAL SEVEN-DAY MINIMUM	49	Aug 21	28	Aug 13	.09	Jul 23 1977
INSTANTANEOUS PEAK FLOW			18700	Feb 13	48700	Nov 16 1981
INSTANTANEOUS PEAK STAGE			15.65	Feb 13	24.55	Dec 27 1951
ANNUAL RUNOFF (AC-FT)	458400		497400		503700	
10 PERCENT EXCEEDS	1600		1870		1660	
50 PERCENT EXCEEDS	243		180		191	
90 PERCENT EXCEEDS	60		39		26	

11374305 MIDDLE FORK COTTONWOOD CREEK BELOW DIVERSION TO ARBUCKLE MOUNTAIN POWERPLANT, NEAR PLATINA, CA

LOCATION.—Lat 40°24'35", long 122°52'52", in NW 1/4 SE 1/4 sec.4, T.29 N., R.9 W., Shasta County, Hydrologic Unit 18020113, on left bank, 1.2 mi downstream from Cow Gulch, 1.0 mi upstream from Knob Gulch , and 2.4 mi northeast of the town of Platina.

DRAINAGE AREA.—46.0 mi^2.

PERIOD OF RECORD.—October 1997 to current year (low-flow records only, collected only seasonally during period of upstream diversion for power generation).

GAGE.—Water-stage recorder and V-notched weir. Elevation of gage is 2,050 ft above sea level, from topographic map.

REMARKS.—No records computed above 32 ft^3/s. Record is only collected during the part of the year when flow is generally high enough to allow for upstream diversion of water to Arbuckle Mountain Powerplant (station 11374300). This year, record was collected Jan. 16, 2000, to June 5, 2000. Flow was above 32 ft^3/s for many days during this period. During times of powerplant operation, the minimum release requirement is 5.0 ft^3/s. See schematic diagram of upper Sacramento River Basin.

COOPERATION.—Records were collected by Arbuckle Mountain Hydro, LLC, 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	23	---	9.2	5.9	6.2	---	---	---
2	---	---	---	---	9.0	---	17	5.5	6.6	---	---	---
3	---	---	---	---	11	---	12	5.5	6.1	---	---	---
4	---	---	---	---	10	---	7.9	5.9	5.9	---	---	---
5	---	---	---	---	31	---	7.0	5.7	6.1	---	---	---
6	---	---	---	---	---	---	6.1	6.6	---	---	---	---
7	---	---	---	---	17	---	5.8	6.7	---	---	---	---
8	---	---	---	---	10	---	14	5.7	---	---	---	---
9	---	---	---	---	11	---	14	5.9	---	---	---	---
10	---	---	---	---	11	---	19	5.9	---	---	---	---
11	---	---	---	---	13	---	7.9	5.8	---	---	---	---
12	---	---	---	---	31	10	---	6.6	---	---	---	---
13	---	---	---	---	---	11	9.8	6.7	---	---	---	---
14	---	---	---	---	---	24	6.7	7.9	---	---	---	---
15	---	---	---	---	5.8	32	6.4	7.7	---	---	---	---
16	---	---	---	24	14	29	12	7.5	---	---	---	---
17	---	---	---	17	---	19	---	7.9	---	---	---	---
18	---	---	---	19	---	13	---	5.8	---	---	---	---
19	---	---	---	18	---	6.6	---	15	---	---	---	---
20	---	---	---	18	---	6.7	24	6.7	---	---	---	---
21	---	---	---	18	---	6.4	8.2	5.8	---	---	---	---
22	---	---	---	17	---	6.6	6.4	6.1	---	---	---	---
23	---	---	---	13	---	6.4	6.9	5.8	---	---	---	---
24	---	---	---	11	---	6.1	6.1	5.8	---	---	---	---
25	---	---	---	11	---	8.2	6.7	5.7	---	---	---	---
26	---	---	---	19	---	6.9	5.8	6.7	---	---	---	---
27	---	---	---	---	---	6.2	5.9	6.2	---	---	---	---
28	---	---	---	29	---	6.7	6.4	7.7	---	---	---	---
29	---	---	---	26	---	6.4	6.6	6.4	---	---	---	---
30	---	---	---	25	---	7.7	6.4	6.2	---	---	---	---
31	---	---	---	29	---	6.9	---	7.5	---	---	---	---
TOTAL	---	---	---	---	---	---	---	206.8	---	---	---	---
MEAN	---	---	---	---	---	---	---	6.67	---	---	---	---
MAX	---	---	---	---	---	---	---	15	---	---	---	---
MIN	---	---	---	---	---	---	---	5.5	---	---	---	---
AC-FT	---	---	---	---	---	---	---	410	---	---	---	---
a	---	---	---	1150	3910	5050	2550	1760	137	---	---	---

a Discharge, in acre-feet, for Arbuckle Mountain Powerplant (station 11374300), provided by Arbuckle Mountain Hydro, LLC.

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 mi^2.

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 diagrams of upper Sacramento River Basin and Battle Creek and Cow Creek Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 86,000 ft^3/s, Mar. 1, 1983, gage height, 21.59 ft from rating curve extended above 34,000 ft^3/s on basis of runoff comparisons with upstream stations then in use; minimum, 15 ft^3/s several days during September 1945.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 11,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 13	1400	16,700	11.72	Feb. 23	0130	17,300	11.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	82	455	135	2390	5620	1030	903	473	138	80	83
2	64	76	417	134	1630	5050	1010	888	447	136	92	97
3	69	73	388	132	1400	4280	1020	862	419	139	80	101
4	70	72	348	130	2020	3850	1050	829	405	225	64	103
5	67	72	300	130	2910	9800	1060	813	399	287	59	147
6	77	73	266	126	3990	5940	1020	783	401	194	57	145
7	67	76	241	115	2480	4580	976	852	394	193	57	123
8	66	87	229	114	1810	5380	947	868	454	184	71	90
9	66	113	222	112	1470	5540	956	846	437	178	64	78
10	63	138	225	115	2800	4920	930	798	401	165	60	82
11	62	298	212	144	4040	4400	916	763	383	161	64	80
12	65	310	199	486	5660	3840	911	712	365	146	62	77
13	63	219	200	387	10800	3440	1070	701	343	133	68	85
14	61	171	242	401	13600	3160	1150	710	325	126	61	73
15	59	145	237	1090	8650	2910	1050	1050	301	122	59	71
16	59	158	220	1720	5130	2660	1090	1220	280	120	58	72
17	58	278	206	1500	3900	2560	4400	1010	267	125	46	71
18	59	302	196	1180	3180	2330	5310	886	259	123	45	61
19	71	254	190	1880	2670	2230	3060	790	258	120	54	64
20	105	620	184	2890	2380	2160	2260	733	249	120	50	68
21	96	471	178	1660	5590	1920	1880	720	231	110	55	58
22	98	325	172	1250	5580	1770	1640	719	216	99	61	74
23	99	258	166	1130	9480	1680	1480	707	200	93	54	83
24	71	220	161	2190	5000	1620	1340	710	193	87	57	73
25	60	194	156	2610	5010	1560	1240	675	193	86	52	75
26	57	176	151	2100	7030	1480	1160	632	190	84	53	76
27	60	165	148	1460	9730	1420	1090	606	181	85	55	79
28	76	155	145	1100	7050	1380	1050	591	165	89	51	69
29	160	153	141	897	6750	1320	994	561	155	84	60	59
30	123	236	139	1690	---	1160	942	513	143	78	58	59
31	94	---	137	1970	---	1090	---	487	---	85	66	---
TOTAL	2329	5970	6871	30978	144130	101050	44032	23938	9127	4115	1873	2476
MEAN	75.1	199	222	999	4970	3260	1468	772	304	133	60.4	82.5
MAX	160	620	455	2890	13600	9800	5310	1220	473	287	92	147
MIN	57	72	137	112	1400	1090	911	487	143	78	45	58
AC-FT	4620	11840	13630	61440	285900	200400	87340	47480	18100	8160	3720	4910

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	357	1201	2162	2500	1978	1197	655	327	121	71.0	77.4
MAX	805	1828	5428	9193	12430	10770	4270	2447	2082	495	178	164
(WY)	1958	1985	1984	1995	1998	1983	1941	1983	1998	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1941 - 2000	
ANNUAL TOTAL	306557		376889			
ANNUAL MEAN	840		1030		890	
HIGHEST ANNUAL MEAN					2714	1983
LOWEST ANNUAL MEAN					94.4	1977
HIGHEST DAILY MEAN	9220	Mar 25	13600	Feb 14	54300	Jan 16 1974
LOWEST DAILY MEAN	53	Sep 28	45	Aug 18	15	Sep 7 1945
ANNUAL SEVEN-DAY MINIMUM	55	Sep 24	52	Aug 17	16	Sep 4 1945
INSTANTANEOUS PEAK FLOW			17300	Feb 23	86000	Mar 1 1983
INSTANTANEOUS PEAK STAGE			11.87	Feb 23	21.59	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	608100		747600		645000	
10 PERCENT EXCEEDS	2520		2910		2110	
50 PERCENT EXCEEDS	252		227		228	
90 PERCENT EXCEEDS	62		63		58	

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 mi^2.

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 0.30 ft^3/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 60 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	---	---	---	---	---	6.5	16	1.3	.77	.64	.71
2	21	---	---	---	---	---	8.0	17	1.3	.73	.70	.70
3	18	---	---	---	---	---	9.6	17	1.1	.81	.65	.68
4	15	---	---	---	---	---	12	17	1.1	.74	.56	.66
5	15	---	---	---	---	---	14	16	.95	.67	.49	.61
6	15	---	---	---	---	---	14	15	.90	.64	.46	.60
7	15	---	---	---	---	---	14	15	1.0	.60	.48	.58
8	15	---	---	---	---	---	15	15	.94	.73	.58	.60
9	14	---	---	---	---	---	16	15	1.0	.68	.57	.63
10	14	---	---	---	---	---	16	14	1.1	.65	.62	.60
11	14	---	---	---	---	---	16	12	.96	.63	.62	2.8
12	14	---	---	---	---	---	18	11	1.1	.71	.58	6.9
13	14	---	---	---	---	---	28	11	1.0	.70	.56	8.7
14	13	---	---	---	---	---	25	11	1.0	.66	.55	8.6
15	13	---	---	---	---	---	21	7.9	.99	.67	.58	8.6
16	13	---	---	---	---	---	19	4.8	.99	.61	.60	8.6
17	13	---	---	---	---	---	18	4.6	.93	.73	.60	8.5
18	6.9	---	---	---	---	---	18	4.6	.93	.56	.55	11
19	1.5	---	---	---	---	---	14	4.4	.97	.51	.51	14
20	1.8	---	---	---	---	---	13	4.2	.98	.66	.51	15
21	2.3	---	---	---	---	---	14	2.8	1.0	.60	.47	15
22	2.1	---	---	---	---	---	15	1.6	1.1	.56	.45	14
23	2.1	---	---	---	---	---	16	1.3	1.0	.56	1.0	14
24	2.1	---	---	---	---	---	15	1.2	.81	.57	1.2	14
25	2.7	---	---	---	---	---	14	1.1	.80	.54	.94	14
26	3.3	---	---	---	---	---	15	1.1	.81	.49	.80	14
27	3.3	---	---	---	---	---	16	1.1	.87	.61	.92	14
28	3.3	---	---	---	---	---	18	1.3	.97	.56	.92	9.3
29	3.1	---	---	---	---	---	16	1.4	.89	.53	.86	6.8
30	3.1	---	---	---	---	---	15	1.6	.73	.48	.80	6.6
31	5.2	---	---	---	---	---	---	1.3	---	.40	.75	---
TOTAL	299.8	---	---	---	---	---	469.1	248.3	29.52	19.36	20.52	220.77
MEAN	9.67	---	---	---	---	---	15.6	8.01	.98	.62	.66	7.36
MAX	21	---	---	---	---	---	28	17	1.3	.81	1.2	15
MIN	1.5	---	---	---	---	---	6.5	1.1	.73	.40	.45	.58
AC-FT	595	---	---	---	---	---	930	493	59	38	41	438

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 mi^2.

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

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

REMARKS.—This station records fishwater release only. Prior to water year 1995 flow computed to 211 ft^3/s. The minimum release requirement is 0.30 ft^3/s at all times; flow is computed to 800 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	48	40	35	57	92	72	61	35	29	22	23
2	58	48	40	35	55	87	77	62	35	29	21	22
3	54	47	40	35	55	80	84	61	34	29	20	20
4	52	47	40	35	55	79	89	57	34	29	20	21
5	51	47	40	35	54	108	92	59	34	31	19	21
6	50	47	40	34	52	96	88	56	34	30	19	19
7	50	46	40	33	46	89	86	57	34	30	19	18
8	50	45	40	28	44	85	85	59	39	29	19	18
9	50	45	40	27	46	83	85	58	42	28	18	18
10	54	45	40	30	49	79	85	57	37	28	19	20
11	55	45	39	42	51	87	84	54	36	27	19	29
12	53	45	39	50	52	84	85	50	35	27	19	40
13	53	44	39	50	52	80	107	50	34	27	18	43
14	51	38	39	49	64	82	102	50	32	26	18	43
15	48	30	37	49	74	82	94	55	32	26	18	42
16	48	35	35	54	80	80	91	48	31	27	18	41
17	48	35	35	57	85	73	89	42	30	27	18	41
18	46	46	35	56	77	68	94	37	31	27	18	40
19	40	47	35	56	75	71	86	47	30	27	18	39
20	38	45	35	56	75	71	81	46	31	26	18	35
21	39	45	35	57	75	67	80	44	31	25	18	32
22	40	45	35	57	74	64	82	40	31	25	18	32
23	40	39	35	56	74	71	82	32	31	24	18	32
24	40	38	35	57	74	77	79	30	30	23	19	31
25	40	39	35	58	72	73	76	40	30	23	19	32
26	40	40	35	59	72	74	74	38	29	23	19	32
27	40	40	35	60	88	77	75	38	29	23	20	32
28	45	40	35	58	110	73	77	38	30	22	20	28
29	50	39	35	57	107	78	72	37	30	22	20	24
30	49	40	35	57	---	74	64	36	29	22	19	24
31	48	---	35	57	---	71	---	35	---	23	19	---
TOTAL	1475	1280	1153	1479	1944	2455	2517	1474	980	814	587	892
MEAN	47.6	42.7	37.2	47.7	67.0	79.2	83.9	47.5	32.7	26.3	18.9	29.7
MAX	58	48	40	60	110	108	107	62	42	31	22	43
MIN	38	30	35	27	44	64	64	30	29	22	18	18
AC-FT	2930	2540	2290	2930	3860	4870	4990	2920	1940	1610	1160	1770
a	181	108	107	166	436	436	436	436	436	436	436	186

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

POWERPLANTS IN BATTLE CREEK AND COW CREEK BASINS

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 and Cow Creek Basins.

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 and Cow Creek Basins.

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 and Cow Creek Basins.

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 and Cow Creek Basins.

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 and Cow Creek Basins.

MONTHLY DISCHARGE, IN ACRE-FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Volta No. 1	Volta No. 2	South	Inskip	Coleman
Oct.	5,360	5,900	12,140	14,270	14,780
Nov.	5,170	5,650	12,300	14,470	16,030
Dec.	4,980	5,470	12,670	15,220	15,930
Jan.	5,730	6,110	12,800	16,000	16,840
Feb.	6,340	6,360	12,280	15,920	17,780
Mar.	6,950	6,830	13,140	15,240	6,420
Apr.	5,800	5,700	11,090	16,530	18,080
May	6,410	6,540	13,180	17,070	18,750
June	5,270	5,820	12,780	16,500	8,000
July	4,540	5,230	12,710	14,210	11,950
Aug.	3,980	4,600	11,120	11,620	11,760
Sept.	4,270	4,920	11,060	11,420	11,430

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.—This station records fishwater release only. The minimum release requirement is 3.0 ft^3/s at all times; flow is computed to 5.6 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.7	3.6	3.6	4.0	3.9	3.5	3.8	3.5	3.4	3.5	3.5
2	3.6	3.6	3.6	3.6	4.0	4.0	3.5	3.8	3.5	3.4	3.5	3.4
3	3.5	3.6	3.6	3.6	4.1	3.9	3.6	3.8	3.5	3.4	3.6	3.4
4	3.5	3.6	3.5	3.6	4.1	3.9	3.6	3.9	3.5	3.5	3.6	3.4
5	3.5	3.6	3.5	3.6	4.1	3.9	3.6	3.8	3.4	3.5	3.6	3.4
6	3.5	3.6	3.5	3.6	4.1	3.9	3.6	3.8	3.4	3.4	3.6	3.4
7	3.5	3.6	3.5	3.6	4.0	3.9	3.6	3.8	3.4	3.5	3.6	3.4
8	3.5	3.6	3.5	3.5	4.0	3.8	3.6	3.8	3.6	3.6	3.6	3.3
9	3.5	3.6	3.5	3.5	4.0	3.8	3.7	3.8	3.6	3.5	3.6	3.4
10	3.5	3.6	3.5	3.5	4.1	3.8	---	3.8	3.5	3.7	3.6	3.4
11	3.5	3.5	3.6	3.9	4.1	3.8	---	3.8	3.5	3.7	3.6	3.5
12	3.5	3.5	3.6	3.9	4.1	3.7	---	3.8	3.4	3.7	3.6	3.6
13	3.5	3.5	3.6	3.7	4.1	3.7	---	3.8	3.4	3.7	3.6	3.5
14	3.5	3.4	3.5	3.7	3.3	3.7	3.9	3.8	3.5	3.7	3.5	3.5
15	3.6	3.5	3.5	3.7	3.3	3.7	3.9	3.8	3.5	3.7	3.5	3.5
16	3.7	3.7	3.4	3.9	3.7	3.7	3.9	3.8	3.3	3.7	3.5	3.5
17	3.7	3.7	3.4	3.9	3.6	3.7	4.0	3.8	3.3	3.6	3.5	3.5
18	3.6	3.7	3.4	3.9	3.6	3.7	4.0	3.8	3.4	3.6	3.5	3.5
19	3.6	3.7	3.5	3.9	3.7	3.8	4.0	3.8	3.5	3.6	3.5	3.5
20	3.5	3.8	3.4	4.1	3.6	3.7	4.0	3.5	3.5	3.5	3.5	3.5
21	3.5	3.7	3.5	4.1	3.6	3.7	4.0	3.4	3.4	3.5	3.5	3.5
22	3.6	3.7	3.5	4.1	3.6	3.6	4.0	3.5	3.5	3.5	3.4	3.6
23	3.5	3.6	3.5	4.0	3.6	3.6	3.9	3.6	3.5	3.5	3.4	3.5
24	3.5	3.6	3.5	4.0	3.6	3.6	3.9	3.5	3.5	3.5	3.4	3.5
25	3.4	3.6	3.5	4.0	3.6	3.6	3.8	3.5	3.5	3.5	3.4	3.5
26	3.4	3.6	3.5	4.0	3.6	3.6	3.8	3.5	3.5	3.4	3.3	3.6
27	3.6	3.6	3.6	4.0	3.4	3.6	3.9	3.5	3.5	3.5	3.3	3.6
28	3.6	3.6	3.6	4.1	3.4	3.6	3.8	3.5	3.4	3.4	3.5	3.5
29	3.6	3.6	3.6	4.1	3.7	3.4	3.8	3.5	3.3	3.5	3.6	3.4
30	3.7	3.7	3.6	4.1	---	3.3	3.8	3.5	3.2	3.6	3.5	3.4
31	3.7	---	3.6	4.0	---	3.5	---	3.5	---	3.5	3.5	---
TOTAL	109.9	108.4	109.2	118.8	109.7	115.1	---	114.3	103.5	109.8	108.9	104.2
MEAN	3.55	3.61	3.52	3.83	3.78	3.71	---	3.69	3.45	3.54	3.51	3.47
MAX	3.7	3.8	3.6	4.1	4.1	4.0	---	3.9	3.6	3.7	3.6	3.6
MIN	3.4	3.4	3.4	3.5	3.3	3.3	---	3.4	3.2	3.4	3.3	3.3
AC-FT	218	215	217	236	218	228	---	227	205	218	216	207

NOTE: Canal was out of service Apr. 10–13 and all flow remained in the natural channel.

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

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

DRAINAGE AREA.—29.6 mi^2.

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

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

REMARKS.—During times of powerplant operation the minimum release requirement is 17 ft^3/s; flow is computed to 109 ft^3/s. See schematic diagram of Battle Creek and Cow Creek Basins.

COOPERATION.—Records were collected by Snow Mountain Hydro, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e18	e16	20	20	19	19	19	19	20	20	20	19
2	e18	e16	20	20	19	19	20	19	20	20	20	19
3	e17	e16	20	21	19	19	19	19	20	20	19	19
4	e17	e16	22	21	19	21	19	19	20	21	19	20
5	e17	e16	22	21	19	27	19	19	20	20	19	19
6	e17	e16	22	20	19	19	19	19	20	20	19	19
7	e17	e16	23	21	20	19	19	19	20	20	19	19
8	e17	e16	21	21	25	19	19	18	20	20	19	19
9	e17	e17	23	20	26	19	19	18	20	20	19	19
10	e17	19	22	21	21	19	19	18	20	23	19	19
11	e17	23	22	20	19	19	19	18	20	25	19	19
12	e17	22	22	22	19	19	19	18	20	23	19	19
13	e17	20	23	22	19	19	19	18	20	27	19	19
14	e17	19	22	23	20	19	19	18	20	25	19	19
15	e17	19	22	19	19	19	19	18	23	24	19	18
16	e17	21	21	30	19	19	19	18	29	24	19	19
17	e17	21	21	19	19	19	19	18	20	26	19	18
18	e17	20	21	19	19	19	19	18	28	26	19	18
19	e17	19	21	19	19	19	19	18	20	25	19	17
20	e17	20	23	19	19	19	19	18	20	24	19	18
21	e17	22	22	19	19	19	19	18	20	24	19	18
22	e17	20	22	19	19	19	19	18	20	23	19	18
23	e17	20	21	19	19	19	19	20	20	22	19	18
24	e17	19	21	19	19	19	19	32	20	21	19	17
25	e17	19	21	19	19	19	19	31	20	21	19	17
26	e17	18	21	19	19	19	19	23	20	23	19	16
27	e16	19	21	19	20	19	19	23	20	23	19	16
28	e16	18	21	19	19	19	19	28	20	23	19	17
29	e16	18	20	22	19	19	19	20	20	22	19	17
30	e16	21	20	19	---	19	19	20	20	21	19	17
31	e16	---	20	19	---	19	---	20	---	20	19	---
TOTAL	524	562	663	630	569	599	571	620	620	696	591	546
MEAN	16.9	18.7	21.4	20.3	19.6	19.3	19.0	20.0	20.7	22.5	19.1	18.2
MAX	18	23	23	30	26	27	20	32	29	27	20	20
MIN	16	16	20	19	19	19	19	18	20	20	19	16
AC-FT	1040	1110	1320	1250	1130	1190	1130	1230	1230	1380	1170	1080
a	0	14	0	345	1260	1310	893	2080	2730	284	0	0

e Estimated.

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

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

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

DRAINAGE AREA.—133 mi^2.

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 3.0 ft^3/s at all times; flow is computed to 6.8 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	---	---	---	---	---	---	---	---	---	4.6	4.8
2	5.4	---	6.8	---	---	---	---	---	---	---	4.6	4.7
3	5.1	---	---	6.4	---	---	---	---	---	---	4.6	4.7
4	4.9	---	---	5.3	---	---	---	---	---	---	4.6	4.8
5	5.0	---	---	5.1	---	---	---	---	---	---	4.6	4.7
6	5.8	---	---	5.1	---	---	---	---	---	---	4.6	4.8
7	5.5	6.8	---	5.1	---	---	---	---	---	---	4.6	4.8
8	5.7	---	6.8	4.9	---	---	---	---	---	---	4.6	4.8
9	6.5	6.8	---	5.0	---	---	---	---	---	---	4.6	4.7
10	6.4	---	---	5.1	---	---	---	---	---	---	4.6	4.8
11	6.5	---	---	---	---	---	---	---	---	---	4.6	4.7
12	6.6	---	---	---	---	---	---	---	---	---	4.6	4.7
13	6.5	---	---	---	---	---	---	---	---	---	4.6	4.7
14	6.5	---	---	---	---	---	---	---	---	6.2	4.6	4.8
15	---	---	---	---	---	---	---	---	---	5.9	4.5	4.7
16	6.7	---	---	---	---	---	---	---	---	5.8	4.5	4.6
17	6.7	---	---	---	---	---	---	---	---	6.7	4.6	4.7
18	6.6	---	---	---	---	---	---	---	---	6.5	4.7	4.7
19	5.5	---	---	---	---	---	---	---	---	5.4	4.8	4.7
20	5.2	---	---	---	---	---	---	---	---	4.9	4.7	4.7
21	5.1	---	---	---	---	---	---	---	---	4.7	4.7	4.7
22	5.3	---	---	---	---	---	---	---	---	4.6	4.8	4.8
23	5.6	6.6	---	---	---	---	---	---	---	4.6	4.7	4.6
24	5.5	6.4	---	---	---	---	---	---	---	4.6	4.8	4.7
25	5.3	6.3	---	---	---	---	---	---	---	4.6	4.8	4.7
26	5.5	---	---	---	---	---	---	---	---	4.6	4.7	4.7
27	6.4	---	---	---	---	---	---	---	---	4.6	4.8	4.7
28	---	---	---	---	---	---	---	---	---	4.6	4.8	4.6
29	---	6.7	---	---	---	---	---	---	---	4.6	4.8	4.7
30	---	---	---	---	---	---	---	---	---	4.6	4.7	4.7
31	---	---	---	---	---	---	---	---	---	4.6	4.8	---
TOTAL	---	---	---	---	---	---	---	---	---	---	144.6	141.5
MEAN	---	---	---	---	---	---	---	---	---	---	4.66	4.72
MAX	---	---	---	---	---	---	---	---	---	---	4.8	4.8
MIN	---	---	---	---	---	---	---	---	---	---	4.5	4.6
AC-FT	---	---	---	---	---	---	---	---	---	---	287	281

NOTE: Canal was out of service Apr. 24–26 and all flow remained in the natural channel.

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

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

DRAINAGE AREA.—186 mi^2.

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

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

REMARKS.—This station records fishwater release only. Prior to water year 1996 flow computed to 7.2 ft^3/s. The minimum release requirement is 3.0 ft^3/s at all times; flow is computed to 50 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e34	e40	e32	e27	---	---	---	---	---	e40	e39	e38
2	e37	e40	e31	e27	---	---	---	---	---	e40	e38	e37
3	e38	e35	e30	e27	---	---	---	---	---	e40	e38	e36
4	e34	e32	e30	e27	---	---	---	---	---	e45	e37	e37
5	e35	e32	e29	e27	---	---	---	---	---	e34	e37	e37
6	e34	e32	e30	e28	---	---	---	---	---	e32	e37	e36
7	e32	e33	e30	e29	---	---	---	---	---	e31	e37	e36
8	e32	e36	e29	e29	e44	---	---	---	---	e31	e36	e36
9	e32	e33	e31	e29	e45	---	---	---	---	e31	e37	e36
10	e33	e37	e30	e29	---	---	---	---	---	e31	e36	e36
11	e33	e37	e29	e40	---	---	---	---	---	e31	e36	e36
12	e34	e34	e29	e34	---	---	---	---	---	e32	e36	e37
13	e32	e32	e29	e31	---	---	---	---	---	e33	e36	e42
14	e33	e32	e29	e31	---	---	---	---	---	e33	e36	e42
15	e36	e32	e29	e39	---	---	---	---	---	e33	e37	e42
16	e36	e39	e29	---	---	---	---	---	---	e33	e38	e42
17	e36	---	e29	---	---	---	---	---	---	e33	e37	e41
18	e35	e28	e29	---	---	---	---	---	---	e32	e37	e40
19	e34	e30	e29	---	---	---	---	---	---	e32	e36	e39
20	e34	e48	e28	---	---	---	---	---	---	e32	e37	e38
21	e34	e49	e36	---	---	---	---	---	---	e32	e36	e36
22	e38	e32	e31	---	---	---	---	---	---	e33	e36	e38
23	e38	e29	e26	---	---	---	---	---	e48	e33	e36	e38
24	e38	e29	e26	---	---	---	---	---	e47	e33	e36	e37
25	e38	e30	e27	---	---	---	---	---	e45	e33	e36	e36
26	e35	e29	e27	---	---	---	---	---	e41	e33	e35	e37
27	e34	e29	e27	---	---	---	---	---	e39	e34	e35	e37
28	---	e29	e31	---	---	---	---	---	e38	e37	e36	e37
29	e41	e30	e31	e50	---	---	---	---	e37	e40	e37	e36
30	e41	e44	e27	---	---	---	---	---	e35	e39	e37	e36
31	e40	---	e27	---	---	---	---	---	---	e39	e37	---
TOTAL	---	---	907	---	---	---	---	---	---	1065	1135	1132
MEAN	---	---	29.3	---	---	---	---	---	---	34.4	36.6	37.7
MAX	---	---	36	---	---	---	---	---	---	45	39	42
MIN	---	---	26	---	---	---	---	---	---	31	35	36
AC-FT	---	---	1800	---	---	---	---	---	---	2110	2250	2250

e Estimated.

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 mi^2.

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.—This station records fishwater release only. The minimum release requirement is 3.0 ft^3/s at all times; flow is computed to 60 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	43	35	30	---	---	---	---	---	43	42	41
2	40	43	34	30	---	---	---	---	---	43	41	40
3	41	38	33	30	---	---	---	---	---	43	41	39
4	37	35	33	30	---	---	---	---	---	48	40	40
5	38	35	32	30	---	---	---	---	---	37	40	40
6	37	35	33	31	---	---	---	---	---	35	40	39
7	35	36	33	32	---	---	---	---	---	34	40	39
8	35	39	32	32	47	---	---	---	---	34	39	39
9	35	36	34	32	48	---	---	---	---	34	40	39
10	36	40	33	32	58	---	---	---	---	34	39	39
11	36	40	32	43	---	---	---	---	---	34	39	39
12	37	37	32	37	---	---	---	---	---	35	39	40
13	35	35	32	34	---	---	---	---	---	36	39	45
14	36	35	32	34	---	---	---	---	---	36	39	45
15	39	35	32	42	---	---	---	---	---	36	40	45
16	39	42	32	---	---	---	---	---	---	36	41	45
17	39	58	32	56	---	---	---	---	---	36	40	44
18	38	31	32	59	---	---	---	---	---	35	40	43
19	37	33	32	---	---	---	---	---	---	35	39	42
20	37	51	31	---	---	---	---	---	---	35	40	41
21	37	52	39	---	---	---	---	---	57	35	39	39
22	41	35	34	58	---	---	---	---	54	36	39	41
23	41	32	29	---	---	---	---	---	51	36	39	41
24	41	32	29	---	---	---	---	---	50	36	39	40
25	41	33	30	---	---	---	---	---	48	36	39	39
26	38	32	30	---	---	---	---	---	44	36	38	40
27	37	32	30	---	---	---	---	---	42	37	38	40
28	---	32	34	58	---	---	---	---	41	40	39	40
29	44	33	34	53	---	---	---	---	40	43	40	39
30	44	47	30	---	---	---	---	---	38	42	40	39
31	43	---	30	---	---	---	---	---	---	42	40	---
TOTAL	---	1137	1000	---	---	---	---	---	---	1158	1228	1222
MEAN	---	37.9	32.3	---	---	---	---	---	---	37.4	39.6	40.7
MAX	---	58	39	---	---	---	---	---	---	48	42	45
MIN	---	31	29	---	---	---	---	---	---	34	38	39
AC-FT	---	2260	1980	---	---	---	---	---	---	2300	2440	2420

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 mi^2.

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.—This station records fishwater release only. The minimum release requirement is 5.0 ft^3/s at all times; flow is computed to 8.9 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.5	---	6.5	---	---	---	---	---	6.2	6.3	6.3
2	6.5	6.5	6.5	6.5	---	---	---	---	---	6.1	6.4	6.2
3	6.5	6.5	6.5	6.5	---	---	---	---	---	6.1	6.3	6.2
4	6.5	6.5	6.5	6.5	---	---	---	---	---	6.0	6.3	6.2
5	6.4	6.5	6.5	6.5	---	---	---	---	---	6.0	6.3	6.2
6	6.5	6.5	6.5	6.5	---	---	---	---	---	6.2	6.4	6.3
7	6.4	6.5	6.5	6.5	---	---	---	---	---	6.3	6.4	6.3
8	6.5	---	6.5	6.5	---	---	---	---	---	6.2	8.1	6.3
9	6.5	6.4	6.5	6.5	---	---	---	---	---	6.3	6.3	6.2
10	6.1	---	6.5	6.5	---	---	---	---	---	6.3	6.3	6.2
11	5.8	---	6.5	---	---	---	---	---	---	6.2	7.1	6.2
12	6.3	6.4	6.5	---	---	---	---	---	---	6.2	8.0	6.2
13	6.5	6.5	6.5	---	---	---	---	---	---	6.2	6.6	6.2
14	6.6	6.5	6.5	---	---	---	---	---	---	6.3	6.6	6.2
15	6.5	6.5	6.5	---	---	---	---	---	---	6.3	7.3	6.2
16	6.5	7.9	6.5	---	---	---	---	---	7.2	6.3	8.0	6.1
17	6.6	---	6.5	---	---	---	---	---	6.5	6.2	7.0	6.2
18	6.5	6.5	6.5	---	---	---	---	---	6.5	6.2	6.5	6.1
19	6.5	---	6.5	---	---	---	---	---	6.4	6.3	6.5	6.2
20	6.6	---	6.5	---	---	---	---	---	6.5	6.2	7.1	6.2
21	6.6	---	6.5	---	---	---	---	---	6.7	6.2	7.1	6.2
22	6.5	6.4	6.5	---	---	---	---	---	6.7	6.2	6.5	6.1
23	6.5	6.4	6.5	---	---	---	---	---	6.7	6.3	6.7	6.1
24	6.5	6.5	6.5	---	---	---	---	---	6.7	6.3	6.9	6.1
25	6.5	6.5	6.5	---	---	---	---	---	6.7	6.3	6.8	6.1
26	6.5	6.5	6.5	---	---	---	---	---	6.7	6.3	6.4	6.2
27	7.7	6.5	6.5	---	---	---	---	---	6.7	6.3	6.4	6.2
28	---	6.4	6.5	---	---	---	---	---	6.4	6.4	6.3	6.2
29	6.6	6.4	6.5	---	---	---	---	---	6.2	6.3	6.5	6.1
30	6.5	---	6.5	---	---	---	---	---	6.2	6.4	6.3	6.1
31	6.4	---	6.5	---	---	---	---	---	---	6.3	6.3	---
TOTAL	---	---	---	---	---	---	---	---	---	193.4	208.0	185.6
MEAN	---	---	---	---	---	---	---	---	---	6.24	6.71	6.19
MAX	---	---	---	---	---	---	---	---	---	6.4	8.1	6.3
MIN	---	---	---	---	---	---	---	---	---	6.0	6.3	6.1
AC-FT	---	---	---	---	---	---	---	---	---	384	413	368

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 mi^2.

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

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

REMARKS.—This station records fishwater release only. The minimum release requirement is 5.0 ft^3/s at all times. Prior to Feb. 6, 1998, flow computed to 12 ft^3/s; flow computed to 60 ft^3/s. See schematic diagram of Battle Creek and Cow Creek 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	12	21	9.4	---	---	---	---	---	12	8.5	8.5
2	7.2	11	15	8.9	---	---	---	---	---	11	8.5	8.4
3	7.0	11	12	9.6	---	---	---	---	---	11	8.6	8.4
4	6.9	11	11	9.7	---	---	---	---	57	11	8.5	8.5
5	7.0	10	11	9.4	---	---	---	---	57	12	8.4	8.4
6	7.7	11	11	9.2	---	---	---	---	51	12	8.3	8.4
7	7.9	11	11	9.6	---	---	---	---	48	12	8.3	8.5
8	7.4	39	11	9.4	51	---	---	---	54	11	8.9	8.5
9	8.1	17	12	9.4	59	---	---	---	---	11	8.3	8.4
10	7.9	54	11	10	---	---	---	---	55	11	8.4	8.4
11	7.7	35	11	53	---	---	---	---	47	11	8.4	8.5
12	7.6	16	11	34	---	---	---	---	44	11	8.4	8.5
13	7.6	13	12	23	---	---	---	---	43	10	8.3	8.5
14	7.6	12	11	51	---	---	---	---	34	9.8	8.3	8.5
15	7.3	16	10	---	---	---	---	---	31	9.6	8.3	8.5
16	7.1	24	10	---	---	---	---	---	28	9.3	8.3	8.5
17	7.3	---	10	---	---	---	---	---	26	9.4	8.4	8.5
18	7.2	17	10	---	---	---	---	---	26	9.3	8.3	8.5
19	6.3	21	10	---	---	---	---	---	24	9.0	8.3	8.4
20	7.3	---	12	---	---	---	---	---	23	9.0	8.3	8.4
21	8.2	31	8.6	---	---	---	---	---	21	8.8	8.3	8.4
22	8.5	15	8.6	---	---	---	---	---	19	8.6	8.3	8.5
23	8.5	12	10	---	---	---	---	---	19	8.5	8.3	8.5
24	8.5	11	10	---	---	---	---	---	18	8.0	8.3	8.4
25	8.5	11	9.9	---	---	---	13	---	17	7.8	8.3	8.5
26	8.6	11	9.8	---	---	---	52	---	15	7.7	8.4	8.4
27	11	11	9.7	---	---	---	---	---	14	8.2	8.4	8.3
28	---	11	8.6	44	---	---	---	---	13	8.8	8.3	8.1
29	19	11	9.2	33	---	---	---	---	13	8.7	8.3	8.1
30	13	35	9.5	---	---	---	---	---	12	8.6	8.4	8.1
31	12	---	9.4	---	---	---	---	---	---	8.5	8.4	---
TOTAL	---	---	336.3	---	---	---	---	---	---	303.6	259.7	252.5
MEAN	---	---	10.8	---	---	---	---	---	---	9.79	8.38	8.42
MAX	---	---	21	---	---	---	---	---	---	12	8.9	8.5
MIN	---	---	8.6	---	---	---	---	---	---	7.7	8.3	8.1
AC-FT	---	---	667	---	---	---	---	---	---	602	515	501

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 mi^2.

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

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

REMARKS.—This station records fishwater release only. Prior to water year 1996 flow computed to 10 ft^3/s. The minimum release requirement is 5.0 ft^3/s at all times; flow is computed to 45 ft^3/s. See schematic diagram of Battle Creek and Cow Creek Basins.

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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	44	36	35	---	---	---	---	---	---	31	31
2	35	44	35	35	---	---	---	---	---	---	31	31
3	35	45	35	35	---	---	---	---	---	---	33	31
4	35	38	35	35	---	---	---	---	---	---	33	31
5	35	31	35	35	---	---	---	---	---	---	33	32
6	35	31	35	35	---	---	---	---	---	---	31	33
7	35	31	37	35	---	---	---	---	---	---	38	32
8	35	32	36	35	---	---	---	---	---	---	38	32
9	35	33	39	35	---	---	---	---	---	---	32	32
10	35	34	38	35	---	---	---	---	---	---	31	33
11	35	32	37	---	---	---	---	---	---	---	31	33
12	36	32	37	45	---	---	---	---	---	---	31	33
13	36	32	37	36	---	---	---	---	---	---	32	33
14	36	32	36	---	---	---	---	---	---	---	33	33
15	35	32	36	---	---	---	---	---	---	---	33	33
16	35	32	36	---	---	---	---	---	---	---	33	34
17	35	---	36	---	---	---	---	---	---	---	33	34
18	35	33	36	---	---	---	---	---	---	---	33	34
19	35	32	38	---	---	---	---	---	---	---	32	34
20	35	---	37	---	---	---	---	---	---	---	32	34
21	35	40	35	---	---	---	---	---	---	---	32	34
22	34	36	35	---	---	---	---	---	---	43	32	34
23	34	39	35	---	---	---	---	---	---	42	32	34
24	34	34	34	---	---	---	---	---	---	40	32	34
25	34	34	35	---	---	---	33	---	---	40	32	34
26	34	35	35	---	---	---	---	---	---	39	32	35
27	35	36	35	---	---	---	---	---	---	41	32	36
28	---	35	35	---	---	---	---	---	---	36	34	36
29	44	35	35	40	---	---	---	---	---	34	32	36
30	44	41	35	---	---	---	---	---	---	34	33	36
31	44	---	35	---	---	---	---	---	---	34	32	---
TOTAL	---	---	1111	---	---	---	---	---	---	---	1009	1002
MEAN	---	---	35.8	---	---	---	---	---	---	---	32.5	33.4
MAX	---	---	39	---	---	---	---	---	---	---	38	36
MIN	---	---	34	---	---	---	---	---	---	---	31	31
AC-FT	---	---	2200	---	---	---	---	---	---	---	2000	1990

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 mi^2.

PERIOD OF RECORD.—October 1940 to September 1996, October 1996 to September 1997 (operated as a low-flow station only), October 1997 to current year.
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. Prior to Oct. 1, 1961, water-stage recorder at site 0.6 mi upstream at different datum published as "11376500 Battle Creek near Cottonwood"; low-flow records not equivalent owing to Coleman Fish Hatchery diversion, maximum flows considered equivalent.

REMARKS.—Records excellent. Some regulation at low flows by five small powerplants, several small reservoirs, and Coleman Fish Hatchery. Coleman Fish Hatchery diverts from 50 to 90 ft^3/s and pumps ground water for temperature control, which is returned above the station. At times, 10 ft^3/s diverted upstream from station for irrigation. See schematic diagrams of Battle Creek and Cow Creek Basins and upper Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,300 ft^3/s, Jan. 24, 1970, gage height, 14.75 ft, from rating curve extended above 4,200 ft^3/s on basis of slope-area measurement of peak flow; minimum, 52 ft^3/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 ft^3/s by slope-area measurement.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0300	3,240	5.06				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	371	443	331	784	963	543	550	459	354	268	275
2	332	371	405	341	620	874	559	562	442	351	263	273
3	335	366	388	335	679	803	582	576	434	345	265	272
4	332	370	367	333	869	822	613	572	431	346	265	273
5	328	372	356	333	711	1950	626	573	435	358	265	270
6	336	364	354	331	677	1330	612	563	437	343	264	267
7	334	365	359	335	580	1030	602	553	428	338	265	252
8	326	417	355	331	538	1070	605	572	461	334	271	261
9	321	411	374	330	521	1180	594	563	489	328	262	259
10	319	409	396	340	644	905	584	554	448	323	264	255
11	327	451	369	419	780	867	576	523	422	320	262	254
12	322	397	366	457	1000	830	587	492	416	322	260	245
13	324	382	373	412	1590	765	787	482	419	318	259	265
14	326	374	366	473	1940	736	770	479	429	313	259	269
15	343	373	360	623	1380	710	666	521	442	309	260	271
16	333	412	359	889	937	701	657	560	433	306	257	274
17	339	515	361	579	812	695	771	514	426	306	258	272
18	337	427	362	605	711	665	761	476	417	305	258	269
19	339	430	369	1470	645	703	675	476	407	302	257	269
20	336	507	376	963	629	654	611	487	397	299	257	266
21	338	505	370	641	814	632	591	507	395	292	254	265
22	329	428	357	584	884	629	585	538	387	284	260	270
23	341	396	352	663	1790	637	598	549	386	282	248	273
24	337	382	345	1400	879	632	590	577	387	281	255	271
25	336	376	343	931	771	622	555	583	380	279	259	269
26	334	371	352	685	1020	604	537	559	377	279	259	270
27	350	372	346	568	2020	610	550	540	372	276	257	269
28	522	375	343	521	1420	604	571	553	367	275	257	273
29	423	378	343	489	1180	605	550	524	364	270	258	271
30	384	605	349	950	---	574	534	506	359	272	256	264
31	375	---	341	907	---	549	---	481	---	271	261	---
TOTAL	10683	12272	11299	18569	27825	24951	18442	16565	12446	9581	8063	8006
MEAN	345	409	364	599	959	805	615	534	415	309	260	267
MAX	522	605	443	1470	2020	1950	787	583	489	358	271	275
MIN	319	364	341	330	521	549	534	476	359	270	248	245
AC-FT	21190	24340	22410	36830	55190	49490	36580	32860	24690	19000	15990	15880

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	299	415	551	766	756	756	655	630	499	338	270	264
MAX	589	1058	1602	2434	1919	1802	1160	1578	1453	817	540	449
(WY)	1963	1982	1984	1970	1986	1983	1995	1998	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	199579		178702			
ANNUAL MEAN	547		488		516	
HIGHEST ANNUAL MEAN					926	1998
LOWEST ANNUAL MEAN					238	1977
HIGHEST DAILY MEAN	3200	Feb 9	2020	Feb 27	10900	Jan 16 1974
LOWEST DAILY MEAN	296	Sep 6	245	Sep 12	102	Oct 27 1992
ANNUAL SEVEN-DAY MINIMUM	298	Sep 4	256	Aug 18	110	Oct 22 1992
INSTANTANEOUS PEAK FLOW			3240	Feb 23	24300	Jan 24 1970
INSTANTANEOUS PEAK STAGE			5.06	Feb 23	14.75	Jan 24 1970
ANNUAL RUNOFF (AC-FT)	395900		354500		374000	
10 PERCENT EXCEEDS	817		781		898	
50 PERCENT EXCEEDS	441		388		373	
90 PERCENT EXCEEDS	319		265		225	

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 mi^2, 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 1955–81, 1996–98.
SPECIFIC CONDUCTANCE: Water years 1955–63.
WATER TEMPERATURE: Water years 1955–80.
SEDIMENT DATA: Water year 1958–70, 1996–98 .

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 291,000 ft^3/s, Feb. 28, 1940, gage height, 38.9 ft, site and datum then in use, from rating curve extended above 170,000 ft^3/s on basis of velocity-area studies; minimum (water years 1892–2000), 2,000 ft^3/s, Mar. 29, 1944. Since regulation by Shasta Lake in 1943, maximum discharge, 170,000 ft^3/s, Dec. 22, 1964, gage height, 28.15 ft, site and datum then in use; maximum gage height, 36.60 ft, Jan. 24, 1970.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7310	7200	10800	6540	26300	64000	8770	12300	12300	14900	15200	8800
2	7300	7230	9990	6410	21600	63200	8600	13800	12300	14800	15500	8610
3	7250	7180	9800	6410	17800	61700	8520	14300	12200	15100	15300	8410
4	7240	7100	9600	6410	19600	61400	8330	14200	12100	15400	14900	8210
5	7240	7110	9460	6330	20700	72600	8360	14800	11500	15900	14100	8270
6	7060	7260	9430	6150	20500	58000	8280	14700	11300	15500	14100	8220
7	6940	7360	9460	6030	16400	52000	8150	13900	11300	15400	14200	7940
8	6850	7520	9100	6010	14900	53000	8650	13200	11500	15400	13500	7660
9	6810	7530	8810	5950	17300	58200	9820	11500	11600	15400	12500	7530
10	6770	7960	8900	5930	22800	54800	10300	10800	11600	15500	12100	7480
11	6790	8340	8740	6820	26100	48300	10300	10300	11300	15600	12200	7510
12	6770	7890	8640	7090	45400	41500	10300	9790	12700	15600	12100	7350
13	6770	7640	8670	6390	58300	35200	10800	9690	14400	15400	12000	7430
14	6770	7520	8510	6720	60400	30200	11300	9820	14800	15400	11900	7330
15	6720	7490	8120	17600	58500	25800	10800	11300	14800	15300	11600	7470
16	6720	7590	7730	13000	53800	22000	10800	11100	14700	15500	11100	7320
17	6740	8200	7330	9610	51300	18700	15500	9890	14700	15500	10700	7430
18	6800	7920	7140	8380	49900	16000	17700	9610	14300	15300	10200	7810
19	6780	8080	7000	13000	48900	15100	14300	11100	14000	15300	9950	8490
20	6800	9740	6990	19400	46200	15100	12600	13800	14400	15200	9900	8870
21	6880	8650	6990	9900	48900	14700	11800	13800	14700	15300	9940	8870
22	7100	8050	6920	9970	45700	13500	11900	14000	14300	15100	10100	8480
23	7090	7870	6900	11200	61800	12100	11700	14000	14300	15200	9770	8250
24	7070	7790	6870	23600	50600	11000	11400	14900	14600	15200	9500	8160
25	7040	7520	6870	22200	52700	10500	11100	13800	14600	15100	9480	8240
26	7060	7450	6870	21800	59800	10100	10900	12700	14600	15200	9480	7770
27	7160	8090	6850	18100	59200	10000	10900	13200	14700	15700	9700	7180
28	7740	8420	6810	17600	59800	9920	11200	13200	14800	15700	9920	6990
29	7320	8410	6710	22900	59900	9600	12100	13000	14900	15300	10000	6940
30	7190	11000	6660	27900	---	9330	12400	12500	14900	15200	9790	6920
31	7100	---	6630	27300	---	9020	---	13000	---	15200	9060	---
TOTAL	217180	237110	249300	382650	1195100	986570	327580	388000	404200	475600	359790	235940
MEAN	7006	7904	8042	12340	41210	31820	10920	12520	13470	15340	11610	7865
MAX	7740	11000	10800	27900	61800	72600	17700	14900	14900	15900	15500	8870
MIN	6720	7100	6630	5930	14900	9020	8150	9610	11300	14800	9060	6920
AC-FT	430800	470300	494500	759000	2370000	1957000	649800	769600	801700	943400	713600	468000

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)

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 - 2000, BY WATER YEAR (WY)

MEAN	6833	9224	14020	18970	21200	18440	12330	12370	12330	12960	11720	8524
MAX	10600	29690	43350	61060	68400	75830	35110	22920	21150	16760	15790	11900
(WY)	1984	1974	1984	1970	1998	1983	1974	1995	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	4778910		5459020			
ANNUAL MEAN	13090		14920		13210	
HIGHEST ANNUAL MEAN					25450	1983
LOWEST ANNUAL MEAN					6494	1991
HIGHEST DAILY MEAN	48200	Feb 9	72600	Mar 5	127000	Jan 27 1970
LOWEST DAILY MEAN	6630	Dec 31	5930	Jan 10	3200	Oct 11 1977
ANNUAL SEVEN-DAY MINIMUM	6750	Oct 11	6120	Jan 4	3210	Oct 10 1977
INSTANTANEOUS PEAK FLOW			76900	Mar 5	170000	Dec 22 1964
INSTANTANEOUS PEAK STAGE			22.90	Mar 5	36.60	Jan 24 1970
ANNUAL RUNOFF (AC-FT)	9479000		10830000		9572000	
10 PERCENT EXCEEDS	24700		25900		20900	
50 PERCENT EXCEEDS	11200		10800		10100	
90 PERCENT EXCEEDS	7110		6910		5550	

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 mi^2.

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

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 ft^3/s, Feb. 28, 1983, gage height, 12.10 ft, from rating curve extended above 5,200 ft^3/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 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	0545	2,850	6.61	Apr. 17	0930	4,200	7.66
Feb. 22	2045	3,400	7.08				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	6.1	35	13	133	457	137	130	46	15	7.2	9.5
2	2.2	6.0	29	13	115	412	142	127	44	15	6.8	8.5
3	2.1	5.8	28	12	109	353	155	122	42	16	6.6	7.9
4	2.5	6.0	24	12	132	359	169	117	40	17	6.4	7.9
5	2.4	6.1	21	12	420	572	164	113	39	20	6.4	8.5
6	2.8	6.1	19	12	299	434	155	112	39	21	6.4	7.7
7	3.6	6.7	18	12	173	452	146	119	38	18	5.9	6.7
8	3.4	19	17	12	131	581	144	117	45	17	6.2	6.3
9	3.3	12	17	12	112	440	141	105	43	16	6.4	6.0
10	3.0	18	17	12	359	369	133	99	40	15	6.4	5.9
11	2.9	32	16	51	713	363	127	94	38	14	6.4	5.7
12	2.9	16	15	48	524	320	129	89	36	14	6.2	5.3
13	2.9	12	17	31	892	296	154	86	33	13	5.9	5.0
14	2.6	10	18	37	1840	288	144	94	30	13	5.7	5.0
15	2.4	10	17	142	667	273	138	175	28	13	5.3	5.2
16	2.1	14	16	182	378	262	191	162	26	12	5.1	5.3
17	2.1	32	15	94	279	250	2730	119	25	12	4.7	5.1
18	2.5	18	15	201	223	235	986	103	25	12	4.6	4.3
19	2.6	62	15	246	188	247	479	94	25	12	4.8	3.6
20	2.6	61	14	217	218	228	345	88	23	11	5.1	3.2
21	2.6	31	14	129	897	206	285	82	22	10	5.2	3.2
22	2.8	23	14	94	1100	193	253	79	21	9.7	4.8	4.2
23	2.8	19	14	117	810	191	226	74	20	9.5	4.6	5.9
24	2.5	17	14	172	446	185	203	70	19	9.3	4.8	5.5
25	3.1	16	14	187	422	179	186	66	19	8.7	4.7	5.1
26	3.3	15	13	143	874	173	172	63	18	8.3	4.5	4.9
27	4.9	15	13	103	1090	173	165	60	17	8.3	4.4	4.6
28	21	14	13	81	552	168	156	57	16	8.1	4.1	4.4
29	9.6	15	13	67	761	160	145	54	15	7.9	4.1	4.4
30	7.2	29	13	151	---	150	135	50	15	7.6	5.1	3.7
31	6.4	---	13	140	---	142	---	48	---	7.6	5.5	---
TOTAL	119.1	552.8	531	2755	14857	9111	8835	2968	887	391.0	170.3	168.5
MEAN	3.84	18.4	17.1	88.9	512	294	294	95.7	29.6	12.6	5.49	5.62
MAX	21	62	35	246	1840	581	2730	175	46	21	7.2	9.5
MIN	2.0	5.8	13	12	109	142	127	48	15	7.6	4.1	3.2
AC-FT	236	1100	1050	5460	29470	18070	17520	5890	1760	776	338	334

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)

MEAN	9.19	47.7	131	252	299	240	153	84.0	32.0	9.05	3.51	3.18
MAX	102	310	649	1208	1636	1176	497	463	262	49.6	17.5	11.3
(WY)	1958	1974	1984	1995	1958	1983	1958	1998	1998	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	30207.5		41345.7			
ANNUAL MEAN	82.8		113		104	
HIGHEST ANNUAL MEAN					303	1983
LOWEST ANNUAL MEAN					6.69	1977
HIGHEST DAILY MEAN	1270	Mar 25	2730	Apr 17	7650	Dec 22 1964
LOWEST DAILY MEAN	1.5	Sep 28	2.0	Oct 1	.00	Aug 6 1950
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 25	2.4	Oct 14	.00	Aug 14 1950
INSTANTANEOUS PEAK FLOW			4200	Apr 17	17700	Feb 28 1983
INSTANTANEOUS PEAK STAGE			7.66	Apr 17	13.90	Feb 24 1958
ANNUAL RUNOFF (AC-FT)	59920		82010		75580	
10 PERCENT EXCEEDS	236		286		243	
50 PERCENT EXCEEDS	19		19		19	
90 PERCENT EXCEEDS	2.8		4.4		1.6	

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 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.—Records good. No storage or large diversion upstream from station. See schematic diagram of upper Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD (water years 1929–2000).—Maximum discharge, 36,400 ft^3/s, Dec. 11, 1937, gage height, 23.4 ft, from floodmarks, from rating curve extended above 14,000 ft^3/s on basis of step-backwater computation and slope-area measurement of peak flow; minimum, 49 ft^3/s, Dec. 13, 1932.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,400 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	1000	3,260	7.27	Feb. 27	0230	4,030	8.03
Feb. 23	0200	3,160	7.17				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	136	241	142	391	821	340	399	341	213	130	119
2	128	134	199	141	337	670	366	413	341	206	129	129
3	129	133	187	139	407	570	410	439	337	200	128	129
4	126	131	177	139	536	521	453	439	336	195	126	127
5	126	132	172	141	441	1340	469	423	343	190	126	129
6	132	131	168	139	430	1060	450	414	336	189	126	126
7	142	135	161	138	351	790	439	371	328	185	126	122
8	132	215	157	137	309	934	449	388	331	183	126	120
9	129	182	158	136	307	888	425	391	322	180	126	119
10	128	178	159	142	596	625	399	372	298	177	126	119
11	126	231	153	280	882	558	404	339	295	175	126	119
12	126	188	153	274	1180	517	415	315	291	172	125	117
13	126	171	165	208	1570	477	568	301	304	170	124	116
14	126	162	162	247	2450	460	550	295	337	168	124	116
15	126	160	157	247	1320	448	466	319	339	165	124	116
16	124	183	155	609	850	435	444	330	335	164	124	116
17	122	298	154	392	676	429	544	301	316	162	122	116
18	124	196	148	423	545	402	514	303	297	162	121	116
19	124	218	147	684	468	431	458	331	296	160	121	114
20	124	316	154	657	441	438	412	373	283	156	121	114
21	124	262	152	440	575	389	398	418	275	150	121	113
22	124	195	147	389	1070	371	410	472	273	149	121	112
23	124	180	144	491	1620	382	404	495	270	147	121	118
24	124	172	144	995	742	385	385	549	259	145	121	119
25	124	167	142	700	592	382	367	527	243	144	119	116
26	126	167	142	477	1170	376	371	488	238	142	119	114
27	136	167	140	365	2480	384	398	458	237	140	119	114
28	382	166	142	301	1250	375	413	476	233	139	119	114
29	174	163	143	267	1120	365	379	414	226	135	119	114
30	148	305	142	492	---	351	370	404	220	133	119	114
31	139	---	142	467	---	338	---	366	---	131	119	---
TOTAL	4272	5574	4907	10799	25106	16912	12870	12323	8880	5127	3818	3547
MEAN	138	186	158	348	866	546	429	398	296	165	123	118
MAX	382	316	241	995	2480	1340	568	549	343	213	130	129
MIN	122	131	140	136	307	338	340	295	220	131	119	112
AC-FT	8470	11060	9730	21420	49800	33540	25530	24440	17610	10170	7570	7040

11381500 MILL CREEK NEAR LOS MOLINOS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	125	200	349	453	486	454	433	444	332	181	119	107
MAX	684	1039	1365	1837	1744	1278	862	923	790	510	230	168
(WY)	1963	1974	1965	1970	1986	1983	1982	1938	1998	1998	1983	1983
MIN	76.0	75.1	87.4	96.8	98.6	107	112	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	114851		114135			
ANNUAL MEAN	315		312		306	
HIGHEST ANNUAL MEAN					576	1974
LOWEST ANNUAL MEAN					93.6	1977
HIGHEST DAILY MEAN	2720	Feb 9	2480	Feb 27	14400	Jan 1 1997
LOWEST DAILY MEAN	122	Sep 12	112	Sep 22	52	Dec 12 1932
ANNUAL SEVEN-DAY MINIMUM	123	Sep 9	114	Sep 16	60	Jul 28 1931
INSTANTANEOUS PEAK FLOW			4030	Feb 27	36400	Dec 11 1937
INSTANTANEOUS PEAK STAGE			8.03	Feb 27	23.40	Dec 11 1937
ANNUAL RUNOFF (AC-FT)	227800		226400		221800	
10 PERCENT EXCEEDS	563		544		586	
50 PERCENT EXCEEDS	218		203		180	
90 PERCENT EXCEEDS	126		121		91	

11381500 MILL CREEK NEAR LOS MOLINOS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1999 to current year.
WATER TEMPERATURE: Water year 1999 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: October 1998 to current year.

INSTRUMENTATION.—Temperature recorder since Oct. 5, 1998.

REMARKS.—Interruption in record due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 25.5°C, Aug. 2, 2000; minimum recorded, 0.5°C, Dec. 23, 1998.

EXTREME FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 25.5°C, Aug. 2; minimum recorded, 4.0°C, Jan. 3.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11381500 MILL CREEK NEAR LOS MOLINOS, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	10.0	15.0	13.0	17.0	13.0	22.0	20.5	24.5	21.5	18.0	16.0
2	14.0	11.5	16.0	12.5	18.0	14.5	21.0	19.5	25.5	22.5	17.0	15.0
3	14.5	12.0	15.5	13.5	18.0	15.0	20.0	18.5	25.0	22.5	16.5	14.5
4	13.5	12.0	15.5	13.5	18.5	15.0	20.5	18.5	24.5	22.0	17.0	14.5
5	13.0	11.0	15.0	12.0	18.0	15.0	20.0	18.0	25.0	21.5	16.5	14.0
6	12.5	10.5	14.5	11.0	18.0	15.0	19.5	18.0	25.0	22.0	17.5	14.0
7	13.5	11.0	11.0	10.0	17.5	15.5	19.5	18.0	24.0	21.5	18.5	15.0
8	13.5	11.5	14.0	10.5	17.0	14.5	20.0	17.0	24.0	21.0	18.5	15.5
9	13.0	11.0	15.0	12.5	16.0	13.5	21.0	18.0	23.5	20.5	19.0	16.0
10	13.0	11.0	14.0	11.0	16.5	13.5	22.0	19.0	22.5	20.0	19.0	16.0
11	14.0	11.5	11.5	9.0	17.0	15.0	23.0	20.0	22.5	19.0	19.5	16.5
12	14.0	12.0	12.0	10.0	18.5	15.5	23.0	20.0	23.0	19.5	19.5	16.5
13	13.5	11.0	12.5	10.5	19.5	16.0	22.5	20.0	23.0	19.5	19.0	17.0
14	11.5	10.0	12.5	11.0	21.5	17.5	22.5	20.0	22.5	19.5	19.5	17.0
15	11.5	10.5	12.0	11.0	22.0	18.5	22.5	19.5	22.5	19.0	21.0	18.0
16	11.0	9.5	11.0	10.0	21.0	18.0	22.5	20.0	22.5	19.0	20.0	18.0
17	11.0	10.0	15.0	10.0	20.0	17.0	22.5	20.0	22.5	19.5	20.0	17.0
18	10.0	9.0	17.0	13.5	20.5	17.5	22.5	19.5	22.0	19.0	21.0	18.0
19	11.5	9.0	18.0	14.5	21.0	18.5	23.0	19.5	21.5	19.0	21.5	18.5
20	13.5	9.5	18.5	15.0	21.0	18.0	24.0	20.0	21.0	18.5	22.0	19.0
21	15.0	11.5	18.5	15.5	21.5	18.5	24.0	21.0	21.0	18.0	21.0	19.5
22	14.5	13.0	18.0	16.0	22.0	19.5	23.5	20.5	21.5	18.0	19.5	17.5
23	13.5	11.5	18.0	15.5	22.0	19.5	23.0	20.0	21.5	18.5	17.5	15.5
24	12.5	11.0	18.0	17.0	21.5	19.5	23.5	19.5	21.5	18.5	16.5	14.5
25	14.0	11.0	17.0	16.0	22.0	19.5	23.5	20.5	21.0	18.0	17.0	14.0
26	15.0	12.0	16.5	14.5	23.0	20.5	24.0	20.5	21.0	18.0	17.5	14.5
27	14.5	13.0	18.0	15.0	23.5	21.5	23.5	20.5	21.5	18.0	17.5	15.0
28	13.0	11.0	17.5	15.0	23.5	22.0	23.5	20.0	21.5	18.0	18.0	15.5
29	13.0	10.0	16.5	13.5	24.0	22.0	24.0	20.5	20.0	18.5	18.0	15.5
30	15.0	11.5	16.0	13.5	23.0	21.5	23.5	21.0	19.5	17.5	18.5	16.0
31	---	---	15.5	12.5	---	---	24.5	21.0	19.0	17.5	---	---
MONTH	15.0	9.0	18.5	9.0	24.0	13.0	24.5	17.0	25.5	17.5	22.0	14.0

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 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,000 ft^3/s, Jan. 1, 1997, gage height, 15.56 ft, from rating curve extended above 9,200 ft^3/s; maximum gage height, 19.20 ft, Dec. 10, 1937; minimum, 43 ft^3/s, Dec. 13, 1932.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	0915	5,270	8.45	Feb. 27	0230	4,580	7.96
Feb. 23	0115	4,140	7.66				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	117	253	107	439	1130	363	297	188	134	109	103
2	116	114	201	108	374	896	372	291	183	134	109	111
3	118	112	179	105	410	730	389	286	179	134	108	114
4	116	111	155	106	580	660	405	282	175	136	106	109
5	116	111	144	108	511	1190	413	279	173	137	105	118
6	119	111	139	104	502	1090	404	273	171	137	105	109
7	129	114	137	104	405	894	394	278	168	137	104	104
8	120	202	133	104	349	1090	392	316	188	137	104	102
9	118	176	133	105	350	1130	383	285	185	135	104	101
10	116	144	135	110	674	866	370	276	176	133	103	100
11	115	172	127	246	1140	761	363	276	170	132	103	100
12	112	146	127	297	1630	700	359	258	167	131	102	98
13	111	126	142	202	2240	640	477	248	164	129	102	98
14	111	120	146	238	3800	604	494	243	158	128	101	98
15	111	122	131	223	2010	574	431	259	153	127	100	99
16	108	138	127	793	1210	553	429	285	150	127	100	98
17	105	314	124	458	883	536	611	256	146	126	98	98
18	108	202	122	444	687	501	553	240	146	125	98	96
19	109	232	120	650	573	514	484	231	148	124	99	94
20	109	365	124	657	529	514	438	226	145	122	99	94
21	109	275	129	468	702	468	413	223	142	121	100	95
22	108	189	122	430	1360	443	399	222	141	119	100	98
23	107	157	118	491	2140	444	387	220	139	118	99	111
24	107	142	115	1050	1030	442	369	220	139	117	98	102
25	107	134	113	862	754	432	353	219	138	116	98	99
26	108	131	112	553	1220	419	343	216	137	115	97	98
27	117	131	111	416	3560	420	335	210	137	115	97	97
28	290	133	110	336	1850	413	330	204	136	114	97	97
29	161	124	109	288	1600	401	316	199	135	113	97	97
30	127	255	109	686	---	386	303	192	134	111	99	96
31	119	---	107	588	---	368	---	189	---	110	101	---
TOTAL	3742	4920	4154	11437	33512	20209	12072	7699	4711	3894	3142	3034
MEAN	121	164	134	369	1156	652	402	248	157	126	101	101
MAX	290	365	253	1050	3800	1190	611	316	188	137	109	118
MIN	105	111	107	104	349	368	303	189	134	110	97	94
AC-FT	7420	9760	8240	22690	66470	40080	23940	15270	9340	7720	6230	6020

11383500 DEER CREEK NEAR VINA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	114	196	377	550	648	589	534	394	204	119	98.7	95.7
MAX	775	984	1825	2458	2600	2105	1494	1193	674	267	194	174
(WY)	1963	1974	1956	1970	1986	1983	1982	1995	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1912 - 2000	
ANNUAL TOTAL	125712		112526			
ANNUAL MEAN	344		307		325	
HIGHEST ANNUAL MEAN					700	1983
LOWEST ANNUAL MEAN					86.2	1977
HIGHEST DAILY MEAN	4480	Feb 9	3800	Feb 14	20100	Jan 1 1997
LOWEST DAILY MEAN	105	Oct 17	94	Sep 19	52	Aug 25 1931
ANNUAL SEVEN-DAY MINIMUM	108	Oct 17	96	Sep 16	53	Aug 21 1931
INSTANTANEOUS PEAK FLOW			5270	Feb 14	24000	Jan 1 1997
INSTANTANEOUS PEAK STAGE			8.45	Feb 14	19.20	Dec 10 1937
ANNUAL RUNOFF (AC-FT)	249300		223200		235700	
10 PERCENT EXCEEDS	696		643		690	
50 PERCENT EXCEEDS	159		143		146	
90 PERCENT EXCEEDS	116		101		80	

11383500 DEER CREEK NEAR VINA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1999 to current year.
WATER TEMPERATURE: Water year 1999 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: October 1998 to current year.

INSTRUMENTATION.—Temperature recorder since Oct. 5, 1998.

REMARKS.—Interruption in record due to malfunction of the recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 27.0°C, June 28, 29, 2000; minimum recorded, 0.5°C, Dec. 23, 24, 1998.

EXTREME FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 27.0°C, June 28, 29; minimum recorded, 4.0°C, Jan. 2, 3, 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	16.0	12.0	11.0	9.0	8.5	5.0	4.5	9.0	7.5	8.5	7.0
2	17.0	15.5	12.0	11.0	8.5	7.5	5.0	4.0	9.0	8.0	8.5	8.0
3	17.0	15.5	12.0	11.0	7.5	6.0	5.0	4.0	8.5	8.0	9.5	7.5
4	16.5	15.0	12.0	11.0	6.5	5.5	5.5	5.0	8.5	8.0	9.5	8.0
5	16.0	15.0	12.0	11.0	6.0	5.5	5.5	4.5	9.5	8.5	9.5	8.5
6	16.0	15.0	12.0	11.0	6.5	5.5	5.5	4.0	9.0	8.5	8.5	8.0
7	15.5	13.5	11.5	11.0	7.5	6.5	6.0	5.0	9.0	8.0	8.5	8.0
8	15.5	14.0	11.5	11.0	6.5	6.0	6.0	5.5	9.0	8.5	8.5	7.5
9	16.0	14.5	11.0	10.0	6.5	6.0	6.5	5.5	10.0	9.0	9.0	7.5
10	16.0	14.5	11.0	10.5	6.0	5.0	8.5	6.5	10.0	9.5	8.5	7.0
11	16.0	14.5	11.5	10.5	5.5	4.5	9.0	8.0	9.5	9.0	10.0	8.5
12	16.0	14.5	11.5	10.5	6.5	5.0	8.0	6.5	9.0	8.0	10.0	8.0
13	15.5	14.0	11.0	10.5	6.5	6.0	8.0	6.5	9.5	8.0	10.5	8.5
14	15.0	13.5	11.0	10.5	6.0	5.0	8.5	7.5	9.5	8.0	11.0	9.5
15	14.5	13.5	12.5	11.0	5.5	5.0	9.0	8.5	8.5	7.5	10.5	8.5
16	14.0	12.0	12.0	11.5	5.0	4.5	9.5	7.5	8.5	8.0	11.5	9.5
17	13.0	11.5	11.5	9.5	6.0	4.5	7.5	6.5	8.5	8.0	10.0	8.0
18	12.5	11.0	9.5	8.5	6.5	5.5	9.0	7.5	8.0	7.0	11.0	8.5
19	12.5	11.0	9.5	8.0	6.5	6.0	10.0	8.5	8.0	7.0	11.5	10.0
20	12.5	11.0	10.0	9.5	7.0	6.5	10.0	8.5	9.5	8.0	10.0	8.0
21	13.0	11.5	10.0	8.0	7.0	6.5	8.5	7.5	9.5	8.5	10.0	7.0
22	12.5	11.5	8.0	6.5	7.0	6.5	8.0	7.5	9.0	8.0	11.0	8.5
23	13.0	11.5	6.5	6.0	6.5	6.0	9.0	7.5	8.5	7.5	11.5	9.5
24	12.5	11.0	6.5	6.0	6.0	5.5	9.0	8.5	7.5	7.0	11.5	9.5
25	12.0	11.0	7.0	6.5	6.5	6.0	8.5	8.0	8.0	7.0	11.5	9.0
26	11.5	10.5	8.0	6.5	6.5	6.0	8.5	7.5	9.5	8.0	11.5	9.0
27	12.5	11.0	9.0	8.0	6.5	5.5	7.5	6.5	9.5	8.5	11.5	9.5
28	13.0	12.5	9.5	8.5	6.5	6.0	6.5	6.0	9.0	8.0	11.5	9.5
29	12.5	11.0	9.5	9.0	6.0	5.5	6.0	5.5	9.0	8.0	11.0	9.0
30	12.0	10.5	10.0	9.5	5.5	5.0	8.0	6.0	---	---	11.5	9.0
31	12.0	10.5	---	---	5.0	4.5	7.5	7.5	---	---	11.5	9.0
MONTH	17.5	10.5	12.5	6.0	9.0	4.5	10.0	4.0	10.0	7.0	11.5	7.0

11383500 DEER CREEK NEAR VINA, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	9.5	16.0	13.5	---	---	25.0	22.5	25.5	23.0	19.0	16.5
2	14.0	11.0	17.0	14.0	---	---	24.0	21.5	26.0	23.5	17.5	16.0
3	14.5	11.5	17.5	14.5	20.5	17.5	22.5	20.5	26.0	24.0	17.0	15.5
4	14.0	12.0	17.0	15.5	21.0	18.0	22.5	20.0	25.5	23.0	17.5	15.0
5	13.5	11.0	17.0	14.5	20.5	18.0	22.0	20.0	25.5	23.0	17.0	14.5
6	13.5	10.5	15.5	13.0	21.0	18.0	21.5	19.5	25.5	23.0	17.5	14.5
7	13.5	11.0	13.0	12.0	20.0	18.0	21.5	19.0	25.0	22.5	18.0	15.5
8	14.0	11.5	14.5	12.0	19.5	17.5	21.5	19.0	24.5	22.0	18.0	15.5
9	13.5	11.0	16.0	13.0	19.0	16.0	22.5	19.5	24.0	21.5	18.5	16.0
10	13.5	11.0	15.5	12.0	19.0	16.5	23.5	20.5	23.0	21.0	19.0	16.5
11	14.0	11.5	13.0	10.5	19.0	17.0	24.0	21.0	23.0	20.5	19.0	16.5
12	14.0	12.5	12.5	10.5	21.0	18.0	24.0	21.0	23.5	20.5	19.5	17.0
13	13.5	12.0	13.0	11.0	22.0	18.5	24.0	21.5	23.5	20.5	18.5	17.5
14	12.0	10.5	12.5	11.5	23.5	20.0	23.5	21.0	23.0	20.5	---	---
15	12.0	10.5	12.5	11.5	25.0	21.5	23.5	21.0	23.0	20.0	---	---
16	11.5	10.0	12.0	10.5	24.5	22.0	23.5	21.0	23.0	20.0	20.0	18.0
17	11.5	10.0	15.0	10.5	24.0	21.0	23.5	21.0	23.0	20.5	20.5	17.5
18	10.0	9.0	17.0	13.5	24.0	21.5	23.5	20.5	22.5	20.0	21.0	18.5
19	11.5	9.0	19.0	15.0	24.0	21.5	23.5	20.5	22.0	19.5	21.5	19.0
20	13.0	9.5	20.0	16.5	24.0	21.5	24.5	21.0	21.0	19.0	22.0	19.5
21	14.5	11.0	21.0	17.5	24.5	21.5	24.5	22.0	21.0	18.5	21.0	19.5
22	14.0	12.5	21.5	18.5	25.5	22.5	24.0	21.5	21.5	19.0	19.5	18.0
23	14.0	11.5	22.0	19.0	25.0	22.5	23.5	21.0	21.5	19.0	18.0	16.5
24	13.0	11.0	22.5	20.0	24.5	22.0	24.0	21.0	21.5	19.0	17.0	15.0
25	14.0	11.5	22.0	19.5	25.0	22.0	24.5	21.5	21.5	19.0	17.0	15.0
26	15.0	12.5	21.0	18.5	26.0	22.5	24.5	22.0	21.0	18.5	17.5	15.0
27	15.0	13.5	21.5	18.5	26.5	23.5	24.0	21.5	21.5	19.0	17.5	15.5
28	14.0	12.0	21.0	19.0	27.0	24.0	24.0	21.0	21.5	19.0	17.5	15.5
29	14.0	11.0	20.0	17.5	27.0	24.5	24.5	21.5	20.5	19.0	18.0	15.5
30	15.0	12.0	19.5	17.0	26.0	24.0	24.5	21.5	20.0	18.0	18.5	16.0
31	---	---	---	---	---	---	25.0	22.0	20.0	18.0	---	---
MONTH	15.0	9.0	---	---	---	---	25.0	19.0	26.0	18.0	---	---

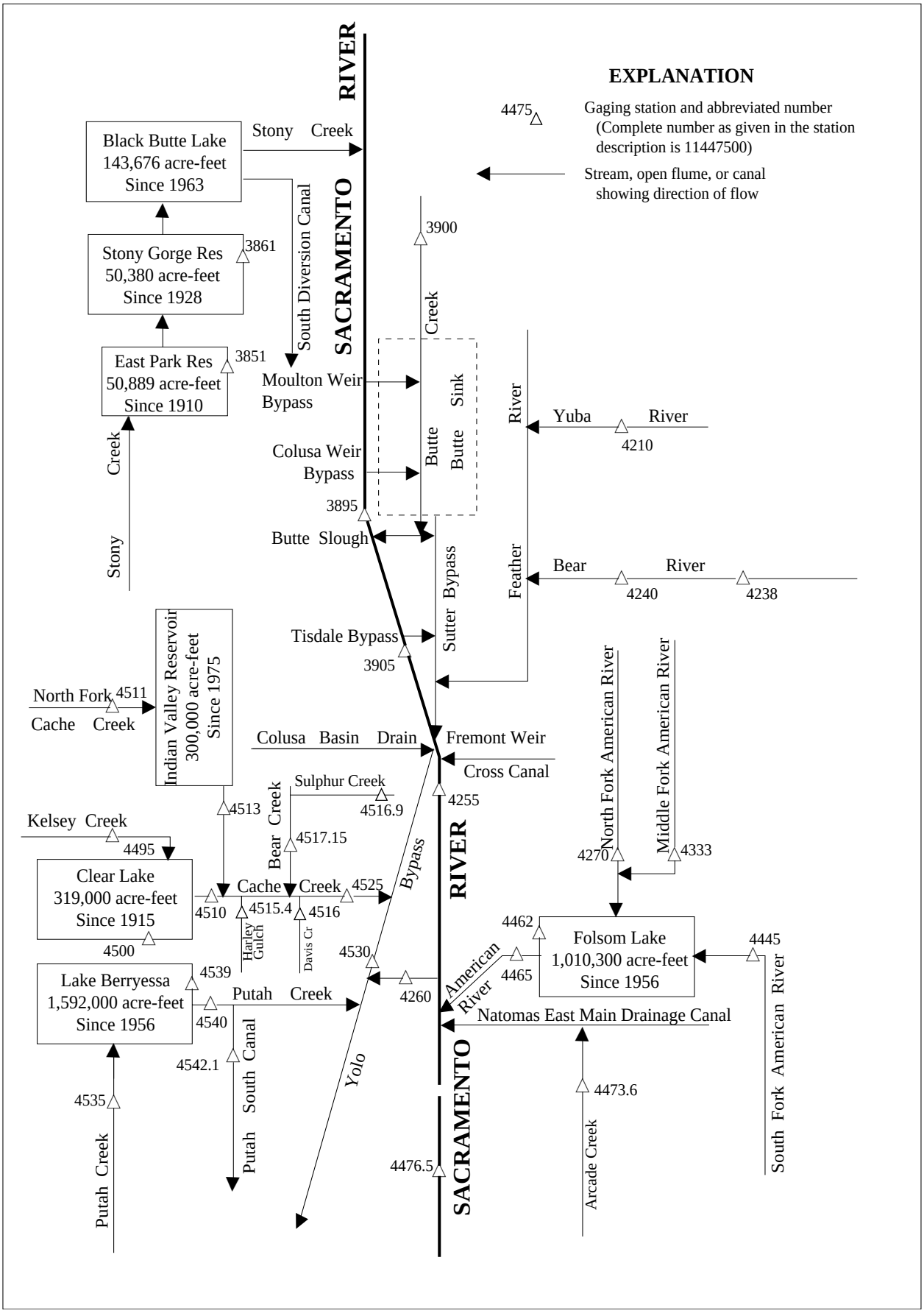

Figure 27. Diversions and storage in lower Sacramento River Basin.

RESERVOIRS IN STONY CREEK BASIN, CA

11385100 EAST PARK RESERVOIR NEAR STONYFORD

LOCATION.—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 mi^2.

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, 50,008 acre-ft, Feb. 14, elevation, 1,199.19 ft; minimum, 41,238 acre-ft, Nov. 19, elevation, 1,194.03 ft.

11386100 STONY GORGE RESERVOIR NEAR ELK CREEK

LOCATION.—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 mi^2.

PERIOD OF RECORD.—October 1969 to current year.

GAGE.—Nonrecording gage read once daily. Datum of gage is sea level (levels by U.S. Bureau of Reclamation).

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 50,190 acre-ft, May 3, elevation, 840.85 ft; minimum, 35,087 acre-ft, Oct. 1, elevation, 828.04 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)	Elevation (ft)	Contents (acre-ft)	Change in contents (acre-ft)
	11385100 EAST PARK RESERVOIR			11386100 STONY GORGE RESERVOIR		
Sept. 30	1,194.92	42,680	–1,556	828.03	35,076	–12,121
Oct. 31	1,194.19	41,497	–1,183	828.29	35,355	279
Nov. 30	1,194.09	41,335	–162	830.42	37,669	2,314
Dec. 31	1,194.40	41,837	502	831.68	39,076	1,407
CAL YR 1999	—	—	–6,447	—	—	–715
Jan. 31	1,196.96	46,095	4,258	831.88	39,301	225
Feb. 29	1,198.70	49,134	3,039	832.00	39,436	135
Mar. 31	1,198.34	48,497	–637	840.42	49,635	10,199
Apr. 30	1,198.27	48,373	–124	839.91	48,980	–655
May 31	1,198.14	48,143	–230	839.40	48,331	–649
June 30	1,197.79	47,531	–612	839.70	48,713	382
July 31	1,196.93	46,044	–1,487	840.20	49,352	639
Aug. 31	1,195.82	44,170	–1,874	832.00	39,436	–9,916
Sept. 30	1,194.94	42,713	–1,457	830.00	37,204	–2,232
WTR YR 2000	—	—	33	—	—	2,128

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 mi^2.

PERIOD OF RECORD.—April 1921 to current year (prior to October 1940, low-water periods only).
CHEMICAL DATA: Water years 1959–66, 1996–99.
SPECIFIC CONDUCTANCE: Water years 1995–98.
WATER TEMPERATURE: Water years 1975, 1977–80, 1995–98.
SEDIMENT: Water years 1973–80, 1996–99.

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 except estimated daily discharges, which are fair. 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 ft^3/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 1941–2000), 51,800 ft^3/s, Mar. 4, 1983, gage height, 68.50 ft, maximum gage height, 69.20 ft, Feb. 18, 1942; minimum recorded, 820 ft^3/s, July 25, 26, 1931, gage height, 34.79 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6030	5300	10500	6620	30800	40900	12000	11000	10000	9950	10900	7530
2	6000	5250	11400	6590	28700	41100	11600	10900	9720	9910	10800	7340
3	6010	5400	10500	6460	25500	40700	11300	11300	9330	9950	11000	7390
4	5980	5340	10500	6360	22800	40200	11000	11900	9090	10200	10900	7290
5	5940	5220	10200	6310	24000	40100	10900	11800	9040	10400	10700	7160
6	5920	5210	10100	6170	24400	42200	10800	12000	8630	11100	10200	7060
7	5950	5300	9910	6050	25900	42600	10600	12200	8190	11000	10100	6770
8	5730	5580	9870	5880	21900	40200	10400	12000	8300	10900	10200	6540
9	5520	5920	9770	5790	19300	39600	10300	11900	8590	11000	10000	6370
10	5450	6120	9470	5740	19100	40200	10900	11100	8970	11100	9270	6270
11	5350	6440	9390	5790	25100	39800	11400	10300	9080	11100	8650	6260
12	5260	7130	9290	6380	33100	38200	11400	9850	8930	11100	8730	6280
13	5190	7000	9170	8030	37300	36300	11400	9090	9270	10900	8730	6150
14	4930	6640	9060	7350	39300	34600	11700	8770	10400	10800	8770	6110
15	4930	6430	9120	7450	41900	33000	12200	8820	10700	11200	8640	6130
16	4770	6380	8720	12300	41700	31000	11800	8950	10500	10700	8440	6810
17	4740	6490	8310	15300	40000	27700	11800	10500	10200	11000	8160	6770
18	4810	7240	7920	13200	38800	24800	16300	9960	9880	11100	7790	6630
19	4840	7340	7670	11300	37900	22000	19900	9270	9590	10900	e7480	6750
20	4760	7470	7380	15100	37200	20300	17900	9700	9330	10900	e7140	7290
21	4620	9160	7120	21100	36600	19700	15500	11300	9340	10800	e7140	7550
22	4640	9060	7080	15800	37300	18800	14100	11800	9460	10800	e6930	7780
23	4840	7930	7150	13500	38200	17700	13500	11800	9240	10700	6810	7630
24	4960	7440	7060	15800	41300	16400	13100	11500	9030	10800	7010	7160
25	5030	7180	7080	24900	40200	15300	12400	11500	9190	10800	6780	7140
26	4990	6950	6990	26200	38600	14500	11700	11300	9410	10800	6910	7150
27	5000	6720	6860	24900	39400	14100	11000	10200	9450	10700	7000	6930
28	5070	6820	6860	22300	41500	13700	10600	10500	9630	11300	7160	6330
29	5750	7550	6850	20400	41500	13400	10500	10600	9790	11400	7540	5950
30	5790	8190	6700	21900	---	12900	10800	10500	9930	11200	7690	5740
31	5420	---	6640	27900	---	12400	---	9950	---	11100	7830	---
TOTAL	164220	200200	264640	398870	969300	884400	368800	332260	282210	335610	265400	204260
MEAN	5297	6673	8537	12870	33420	28530	12290	10720	9407	10830	8561	6809
MAX	6030	9160	11400	27900	41900	42600	19900	12200	10700	11400	11000	7780
MIN	4620	5210	6640	5740	19100	12400	10300	8770	8190	9910	6780	5740
AC-FT	325700	397100	524900	791200	1923000	1754000	731500	659000	559800	665700	526400	405100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	6527	8787	13700	17770	20140	17550	12710	10680	9061	8682	8294	7231
MAX	12040	27000	38000	39720	45500	44450	31490	26680	24590	13890	12320	10850
(WY)	1958	1974	1984	1997	1998	1983	1982	1983	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	4566720		4670170			
ANNUAL MEAN	12510		12760		11720	
HIGHEST ANNUAL MEAN					21790	1983
LOWEST ANNUAL MEAN					5671	1977
HIGHEST DAILY MEAN	39700	Feb 10	42600	Mar 7	51300	Mar 4 1983
LOWEST DAILY MEAN	4620	Oct 21	4620	Oct 21	2620	Oct 16 1977
ANNUAL SEVEN-DAY MINIMUM	4740	Oct 16	4740	Oct 16	2690	Oct 12 1977
INSTANTANEOUS PEAK FLOW			43200	Mar 7	51800	Mar 4 1983
INSTANTANEOUS PEAK STAGE			65.63	Mar 7	68.83	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	9058000		9263000		8492000	
10 PERCENT EXCEEDS	29900		28100		24900	
50 PERCENT EXCEEDS	9290		9900		8370	
90 PERCENT EXCEEDS	5970		5850		5350	

e Estimated.

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

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

DRAINAGE AREA.—61.3 mi^2.

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.—Flow regulated by diversion dam 400 ft upstream. Flows computed to 100 ft^3/s. 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	22	---	21	---	---	---	---	---	21	19	18
2	22	22	43	21	---	---	---	---	---	21	19	19
3	22	22	34	21	---	---	---	---	---	21	19	19
4	22	22	29	22	---	---	---	---	---	21	19	18
5	22	22	25	22	---	---	---	---	---	21	19	25
6	22	22	23	21	---	---	---	---	59	21	19	55
7	22	27	23	22	---	---	---	---	56	21	19	41
8	22	---	22	21	---	---	---	---	---	21	19	18
9	22	28	23	21	---	---	---	---	60	21	19	18
10	22	25	22	22	---	---	---	---	54	21	19	18
11	22	24	22	---	---	---	---	---	50	20	19	18
12	22	22	22	---	---	---	---	---	47	20	19	19
13	22	22	23	---	---	---	---	---	44	20	19	19
14	22	22	22	---	---	---	---	---	35	20	19	19
15	22	24	22	---	---	---	---	---	29	20	19	19
16	22	30	22	---	---	---	---	---	27	20	19	18
17	22	---	22	---	---	---	---	---	25	20	19	18
18	22	45	22	---	---	---	---	---	24	20	19	18
19	22	---	22	---	---	---	---	---	23	20	19	18
20	22	---	22	---	---	---	---	---	21	19	19	18
21	22	---	22	---	---	---	---	---	20	19	19	18
22	22	53	22	---	---	---	---	---	21	19	19	19
23	22	43	22	---	---	---	---	---	21	19	19	19
24	22	35	22	---	---	---	---	---	20	19	19	18
25	22	29	22	---	---	---	---	---	20	19	19	18
26	22	28	22	---	---	---	---	---	20	20	19	18
27	43	29	22	---	---	---	---	---	21	20	19	18
28	---	27	22	---	---	---	---	---	21	19	19	18
29	23	27	22	---	---	---	---	---	21	19	18	18
30	22	---	22	---	---	---	---	---	21	19	18	18
31	22	---	22	---	---	---	---	---	---	19	18	---
TOTAL	---	---	---	---	---	---	---	---	---	620	586	615
MEAN	---	---	---	---	---	---	---	---	---	20.0	18.9	20.5
MAX	---	---	---	---	---	---	---	---	---	21	19	55
MIN	---	---	---	---	---	---	---	---	---	19	18	18
AC-FT	---	---	---	---	---	---	---	---	---	1230	1160	1220

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 mi^2.

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 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	48	41	48	---	---	---	48	48	39	39
2	37	36	48	41	48	---	---	---	48	47	39	42
3	37	36	48	45	48	---	---	---	48	47	39	40
4	37	36	55	40	48	---	---	---	48	48	38	39
5	37	36	55	40	53	---	---	---	48	47	38	43
6	38	36	50	40	57	---	---	---	48	48	38	53
7	39	40	49	40	48	---	---	---	48	47	38	46
8	38	49	47	40	48	---	---	---	48	46	38	36
9	37	51	52	40	48	---	---	---	48	46	38	36
10	37	49	50	40	---	---	---	---	48	45	39	35
11	36	49	48	---	---	---	---	---	48	45	39	35
12	36	41	47	48	---	---	---	50	48	45	39	35
13	36	40	48	48	---	---	---	48	48	44	38	36
14	36	40	46	48	---	---	---	48	48	44	38	36
15	36	e43	45	48	---	---	---	---	48	43	38	36
16	35	46	45	---	---	---	---	58	55	43	38	36
17	35	48	44	48	---	---	---	49	60	43	37	35
18	35	48	44	---	---	---	---	49	58	43	38	35
19	35	48	43	---	---	---	---	49	57	43	38	35
20	36	48	43	---	---	---	---	48	54	42	38	34
21	35	48	43	49	---	---	---	48	52	41	38	35
22	35	48	42	48	---	---	---	48	52	41	38	36
23	35	48	42	---	---	---	---	48	51	41	38	36
24	35	50	42	---	---	---	---	48	50	41	37	36
25	35	54	42	---	---	---	---	48	49	41	37	35
26	35	51	42	---	---	---	---	48	49	41	37	35
27	---	52	41	48	---	---	---	48	49	40	37	35
28	---	50	41	49	---	---	---	48	49	40	37	35
29	56	47	41	48	---	---	---	48	49	40	37	35
30	44	49	41	---	---	---	---	48	48	39	37	34
31	37	---	41	56	---	---	---	48	---	39	37	---
TOTAL	---	1353	1413	---	---	---	---	---	1502	1348	1175	1114
MEAN	---	45.1	45.6	---	---	---	---	---	50.1	43.5	37.9	37.1
MAX	---	54	55	---	---	---	---	---	60	48	39	53
MIN	---	36	41	---	---	---	---	---	48	39	37	34
AC-FT	---	2680	2800	---	---	---	---	---	2980	2670	2330	2210
a	2	1450	294	7710	13100	15210	14890	11940	1530	0	0	81

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 mi^2.

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.—Flow regulated by several reservoirs and diversions upstream. Flows computed to 60 ft^3/s. 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	45	---	---	---	---	---	---	---	43	47	45
2	45	45	---	---	---	---	---	---	---	43	47	45
3	45	45	51	---	---	---	---	---	---	43	47	45
4	45	45	45	---	---	---	---	---	---	43	47	45
5	45	45	45	---	---	---	---	---	---	43	47	45
6	45	45	45	---	---	---	---	---	---	43	47	45
7	45	53	45	---	---	---	---	---	---	43	47	45
8	45	---	45	---	---	---	---	---	---	43	47	45
9	45	57	45	---	---	---	---	---	---	43	47	45
10	45	45	45	---	---	---	---	---	---	43	47	45
11	45	45	46	---	---	---	---	---	---	45	47	45
12	45	45	45	---	---	---	---	---	---	47	47	45
13	45	45	46	---	---	---	---	---	---	47	47	45
14	45	---	46	---	---	---	---	---	---	48	47	45
15	45	---	45	---	---	---	---	---	---	47	48	45
16	45	---	45	---	---	---	---	---	57	47	46	45
17	45	---	46	---	---	---	---	---	49	47	45	45
18	45	---	46	---	---	---	---	---	45	47	45	45
19	45	---	45	---	---	---	---	---	44	47	45	45
20	45	---	---	---	---	---	---	---	49	47	45	45
21	45	---	---	---	---	---	---	---	45	47	---	45
22	46	---	---	---	---	---	---	---	44	47	---	45
23	45	---	45	---	---	---	---	---	44	47	---	45
24	45	45	---	---	---	---	---	---	43	47	45	45
25	45	45	---	---	---	---	---	---	43	47	45	45
26	45	45	---	---	---	---	---	---	43	47	45	45
27	---	45	---	---	---	---	---	---	43	47	45	45
28	---	45	---	---	---	---	---	---	43	47	45	45
29	48	45	---	---	---	---	---	---	43	47	45	45
30	45	---	---	---	---	---	---	---	44	47	45	45
31	45	---	---	---	---	---	---	---	---	47	45	---
TOTAL	---	---	---	---	---	---	---	---	---	1416	---	1350
MEAN	---	---	---	---	---	---	---	---	---	45.7	---	45.0
MAX	---	---	---	---	---	---	---	---	---	48	---	45
MIN	---	---	---	---	---	---	---	---	---	43	---	45
AC-FT	---	---	---	---	---	---	---	---	---	2810	---	2680
a	3380	5120	5630	6150	6300	8600	8450	6230	5640	6200	4870	4110

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

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

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

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

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

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

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 127 ft^3/s, Feb. 12, May 20, 1995, no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	35	69	38	73	76	112	3.8	114	72	63	69
2	33	36	60	37	80	89	113	3.3	114	72	62	74
3	33	34	53	38	91	97	113	2.9	114	70	62	70
4	32	33	50	38	85	97	114	1.6	113	53	62	68
5	33	33	48	37	77	77	114	3.1	113	52	63	68
6	36	33	43	37	76	73	113	3.3	113	51	63	66
7	35	35	47	37	75	74	113	4.5	113	52	63	65
8	30	74	45	37	85	74	113	5.7	115	51	63	64
9	28	57	48	36	95	78	113	.07	114	50	65	64
10	28	48	45	38	99	74	113	26	114	49	65	63
11	27	55	44	75	91	74	113	93	114	53	63	62
12	27	45	45	80	84	73	109	91	114	52	64	61
13	26	42	47	80	81	86	103	90	113	50	62	61
14	25	40	44	86	74	106	101	90	99	50	63	63
15	25	46	43	81	73	109	101	90	92	50	62	62
16	25	51	42	79	93	109	101	89	87	64	62	62
17	25	76	42	76	92	112	37	98	83	63	61	61
18	25	55	42	77	90	114	.55	110	81	64	60	39
19	24	61	42	77	90	114	.39	112	80	61	62	28
20	24	77	45	76	87	113	.31	113	89	55	61	28
21	24	75	45	83	80	113	.32	113	88	58	61	28
22	24	59	43	89	84	113	.30	113	87	52	60	30
23	24	51	42	87	83	112	.24	113	86	50	60	30
24	24	47	42	80	74	106	.24	113	83	50	60	29
25	24	46	41	78	61	102	.22	112	81	51	65	28
26	27	45	41	95	67	101	.17	112	78	64	64	29
27	44	46	40	98	66	106	1.1	112	76	64	64	28
28	75	46	40	97	68	112	4.3	113	72	63	64	28
29	44	45	39	97	67	113	4.2	113	71	61	65	28
30	38	76	39	87	---	113	4.1	114	73	56	65	28
31	36	---	39	74	---	113	---	114	---	58	65	---
TOTAL	958	1502	1395	2125	2341	3023	1812.44	2272.27	2884	1761	1944	1484
MEAN	30.9	50.1	45.0	68.5	80.7	97.5	60.4	73.3	96.1	56.8	62.7	49.5
MAX	75	77	69	98	99	114	114	114	115	72	65	74
MIN	24	33	39	36	61	73	.17	.07	71	49	60	28
AC-FT	1900	2980	2770	4210	4640	6000	3590	4510	5720	3490	3860	2940
a	4450	5840	6020	7150	6860	8960	6100	6070	9290	6630	6250	5100

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 mi^2.

WATER-DISCHARGE RECORDS

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

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, 35,600 ft^3/s, Jan. 1, 1997, gage height, 15.06 ft, in gage well, 15.7 ft from floodmarks, on basis of slope-area measurement of peak flow; maximum gage height, 17.52 ft, Feb. 17, 1986, present datum; minimum discharge, 10 ft^3/s, Nov. 29, 1952.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,700 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	1015	7,510	6.61	Feb. 27	0445	5,390	5.53
Feb. 23	0245	3,410	4.29				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	133	334	154	495	1890	622	392	334	208	156	173
2	122	132	263	154	463	1590	623	383	322	205	159	198
3	123	131	238	153	464	1400	640	382	318	202	161	196
4	119	127	212	154	564	1290	665	379	314	199	168	183
5	116	129	201	154	528	1980	682	370	310	192	173	183
6	123	129	187	149	610	1720	675	362	300	192	166	180
7	135	134	190	149	512	1490	653	352	295	189	157	176
8	128	335	183	148	454	1650	640	396	321	187	155	170
9	119	227	205	147	453	1720	632	363	311	183	153	167
10	118	181	220	149	797	1500	604	363	301	178	152	165
11	118	195	194	497	1250	1390	598	427	295	175	153	164
12	117	167	189	393	1630	1270	595	404	288	170	150	161
13	116	154	193	303	2710	1130	900	386	283	167	150	160
14	113	146	183	318	5090	1080	881	378	270	165	149	163
15	114	163	179	319	2400	1030	742	428	256	162	148	164
16	114	176	175	736	1590	953	716	428	251	161	147	163
17	114	302	172	494	1230	880	1140	386	241	160	147	161
18	113	238	172	524	1010	841	938	394	238	154	146	142
19	114	263	169	579	856	872	756	390	236	150	147	113
20	114	439	170	661	796	863	662	393	241	149	147	110
21	114	333	175	544	992	796	591	395	238	150	144	109
22	116	243	174	518	1430	742	547	411	235	149	149	118
23	117	214	165	585	2260	731	517	404	233	148	159	121
24	117	189	160	1320	1450	717	485	416	231	145	153	116
25	118	180	163	1050	1170	701	455	414	228	145	160	114
26	119	175	161	685	1740	687	439	399	224	157	160	113
27	148	174	158	514	4330	696	436	383	219	162	162	112
28	366	175	157	414	2540	692	439	375	215	161	164	111
29	181	171	157	358	2350	676	415	364	209	157	166	113
30	145	322	156	568	---	659	396	353	213	149	166	111
31	137	---	155	598	---	632	---	340	---	147	166	---
TOTAL	4046	6077	5810	13489	42164	34268	19084	12010	7970	5218	4833	4430
MEAN	131	203	187	435	1454	1105	636	387	266	168	156	148
MAX	366	439	334	1320	5090	1980	1140	428	334	208	173	198
MIN	113	127	155	147	453	632	396	340	209	145	144	109
AC-FT	8030	12050	11520	26760	83630	67970	37850	23820	15810	10350	9590	8790

11390000 BUTTE CREEK NEAR CHICO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	138	227	457	695	826	771	681	504	287	166	133	119
MAX	775	1269	2061	2847	2925	2601	1848	1314	773	356	223	183
(WY)	1963	1974	1956	1997	1986	1995	1982	1995	1998	1998	1975	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1931 - 2000	
ANNUAL TOTAL	159043		159399			
ANNUAL MEAN	436		436		415	
HIGHEST ANNUAL MEAN					834	1995
LOWEST ANNUAL MEAN					94.0	1977
HIGHEST DAILY MEAN	4960	Feb 9	5090	Feb 14	26600	Jan 1 1997
LOWEST DAILY MEAN	113	Oct 14	109	Sep 21	44	Aug 23 1931
ANNUAL SEVEN-DAY MINIMUM	114	Oct 14	113	Sep 24	44	Aug 23 1931
INSTANTANEOUS PEAK FLOW			7510	Feb 14	35600	Jan 1 1997
INSTANTANEOUS PEAK STAGE			6.61	Feb 14	17.52	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	315500		316200		300700	
10 PERCENT EXCEEDS	898		942		863	
50 PERCENT EXCEEDS	242		217		210	
90 PERCENT EXCEEDS	129		126		102	

11390000 BUTTE CREEK NEAR CHICO, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1953–79, 1999 to current year.
CHEMICAL DATA: Water years 1953–79.
WATER TEMPERATURE: Water years 1962–79, 1999 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: November 1961 to January 1979, October 1998 to current year.

INSTRUMENTATION.—Temperature recorder since October 1998.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 26.0°C, July 21, 22, 1966, and on several days in 1977; minimum recorded, 0.5°C, Dec. 8, 31, 1978, Jan. 1, 1979.

EXTREME FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 25.5°C, Jun. 28, 29, Aug. 2, 5; minimum recorded, 3.0°C, Jan. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11390000 BUTTE CREEK NEAR CHICO, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	8.5	15.5	11.0	18.5	12.5	23.5	19.0	24.5	19.5	18.0	16.0
2	13.5	9.5	16.0	11.5	19.0	13.5	23.0	18.5	25.5	20.0	17.5	15.0
3	13.5	10.0	16.5	12.0	19.5	14.0	22.0	17.5	25.0	20.5	17.5	14.0
4	13.5	10.5	15.5	12.5	20.0	14.0	22.5	17.0	25.0	20.0	18.0	13.5
5	13.0	9.5	16.0	12.0	19.5	14.5	22.0	17.0	25.5	20.0	18.0	13.0
6	13.0	9.5	13.5	11.0	20.0	14.5	21.0	16.5	25.0	20.0	18.5	13.0
7	13.0	9.5	11.0	10.5	19.5	14.5	21.0	16.5	24.5	19.5	19.0	13.5
8	13.0	10.0	14.0	10.5	17.0	15.0	22.0	16.0	24.0	19.0	19.0	14.0
9	12.5	9.5	15.5	11.5	17.5	13.5	22.5	16.0	24.0	18.5	19.0	14.5
10	13.0	9.0	13.0	10.5	18.0	13.0	23.0	17.0	23.0	18.0	19.5	14.0
11	13.0	10.0	12.5	8.5	17.5	13.5	23.5	17.5	23.0	17.5	19.5	14.5
12	13.0	10.5	12.0	8.5	19.5	14.5	23.5	18.0	23.0	17.5	19.5	15.0
13	12.0	10.5	11.0	9.0	20.5	15.0	23.5	18.0	23.0	17.5	18.5	15.5
14	11.0	9.0	12.0	9.5	22.5	16.0	23.5	18.0	23.0	17.5	20.0	15.5
15	10.0	9.0	11.0	9.5	23.0	17.5	23.5	18.0	23.0	17.5	20.5	16.5
16	10.5	9.0	10.0	9.0	23.0	18.0	23.5	18.5	23.0	17.0	20.5	16.0
17	9.5	9.0	14.0	8.5	23.0	18.0	23.5	18.0	22.5	17.0	20.5	15.5
18	10.0	8.5	16.0	10.5	22.5	18.0	23.5	17.5	22.5	17.0	21.5	16.5
19	11.0	8.5	17.0	12.0	23.0	18.0	24.0	17.5	22.0	17.0	22.0	17.0
20	13.0	9.0	18.0	13.0	23.0	17.5	24.5	18.0	21.5	16.5	22.0	17.5
21	14.0	10.0	19.0	14.0	23.5	18.0	24.0	18.5	21.0	16.5	21.5	18.0
22	12.5	11.0	20.0	15.0	23.5	18.5	23.5	18.0	22.0	17.0	19.0	17.0
23	13.5	10.0	20.0	15.0	23.5	18.5	24.0	17.5	21.5	17.0	19.0	15.0
24	13.0	9.0	20.5	16.0	23.5	18.0	24.0	18.0	22.0	16.5	18.5	14.0
25	13.5	9.5	19.5	16.0	24.0	18.0	24.0	18.5	21.5	16.0	18.5	14.0
26	15.0	10.5	19.0	15.0	24.5	19.0	24.0	18.5	21.5	16.5	19.0	14.5
27	14.5	11.5	19.5	15.0	25.0	19.5	23.5	18.0	21.5	16.5	18.5	14.5
28	14.0	10.5	19.5	15.0	25.5	20.0	24.0	18.0	21.5	16.5	18.5	14.5
29	13.5	9.0	19.0	14.0	25.5	20.5	24.0	18.0	19.0	17.0	19.0	14.5
30	15.0	10.0	18.5	14.0	25.0	20.0	24.0	18.5	19.0	16.5	19.5	15.0
31	---	---	18.0	12.5	---	---	25.0	18.5	20.5	16.5	---	---
MONTH	15.0	8.5	20.5	8.5	25.5	12.5	25.0	16.0	25.5	16.0	22.0	13.0

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 mi^2.

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 ft^3/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 1939–2000), 32,700 ft^3/s, Feb. 20, 1986, gage height, 52.50 ft, maximum gage height, 52.75 ft, Mar. 1, 1940; minimum daily, 645 ft^3/s, Aug. 9, 1939.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6100	5320	9530	7020	25300	28800	12300	10100	9200	8760	9840	7350
2	6050	5100	11400	7030	24600	28800	11700	9900	8960	8700	9670	7170
3	6040	5140	11000	6940	23600	28700	11300	10100	8410	8700	9740	7360
4	6030	5200	10700	6850	22400	28500	11000	10800	8070	8930	9750	7440
5	5990	5140	10500	6820	22700	28500	10800	10800	7960	9080	9710	7390
6	5950	5080	10300	6700	22700	28900	10700	10700	7730	9660	9260	7360
7	6010	5110	10100	6580	23600	29200	10500	11100	7280	9770	8970	7360
8	5840	5350	10000	6430	22000	28700	10200	11200	e7400	9730	8940	7220
9	5630	5710	9960	6290	19700	28400	9990	11200	e7700	9800	8980	7030
10	5510	6080	9770	6290	18600	28500	10500	10900	e7900	9860	8550	6930
11	5430	6470	9540	6350	21300	28500	11100	9790	e8000	9940	7860	6820
12	5340	7060	9510	6600	25400	28100	11200	8970	e8000	9940	7740	6830
13	5280	7290	9380	8000	27200	27500	11200	8180	8030	9810	7830	6780
14	5010	6990	9240	8140	27900	26900	11300	7700	8980	9680	7820	6620
15	4960	6790	9250	8000	29000	26400	11900	7880	9490	9870	7760	6600
16	4800	6730	9040	10300	29200	25800	11700	8180	9360	9780	7670	6850
17	4740	6750	8660	15000	28700	24700	11600	9700	9050	9740	7520	7350
18	4730	7140	8330	14500	28300	23600	13900	9900	8560	9970	7220	7130
19	4790	7680	7990	12400	28000	22400	18900	9030	8300	9930	7000	7140
20	4790	7650	7780	13400	27700	20600	18400	8840	8050	9830	6620	7440
21	4670	8660	7560	19100	27500	19800	16300	9740	7830	9800	6480	7750
22	4600	9470	7380	17500	27600	19000	14700	10700	8070	9740	6410	8030
23	4760	8620	7350	14500	27800	18100	13800	10800	7970	9700	6470	8050
24	4940	8010	7390	14700	28700	17000	13300	10600	7690	9660	6590	7700
25	5020	7670	7420	20800	28700	16000	12600	10300	7710	9720	6350	7550
26	4970	7430	7420	23600	28200	15100	11900	10600	7930	9690	6360	7520
27	4860	7220	7340	23300	28200	14500	11000	9690	8130	9660	6510	7450
28	4890	7100	7310	22100	28800	14000	10300	9460	8200	9880	6640	7060
29	5260	7590	7270	20300	29000	13700	9880	9550	8410	10200	6970	6560
30	5850	8090	7140	20400	---	13300	9870	9550	8580	10100	7190	6260
31	5550	---	7040	23300	---	12700	---	9300	---	9980	7420	---
TOTAL	164390	203640	272600	389240	752400	714700	363840	305260	246950	299610	241840	216100
MEAN	5303	6788	8794	12560	25940	23050	12130	9847	8232	9665	7801	7203
MAX	6100	9470	11400	23600	29200	29200	18900	11200	9490	10200	9840	8050
MIN	4600	5080	7040	6290	18600	12700	9870	7700	7280	8700	6350	6260
AC-FT	326100	403900	540700	772100	1492000	1418000	721700	605500	489800	594300	479700	428600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	6540	8516	12380	15040	17020	15600	11560	9455	7895	7437	7309	7237
MAX	11800	20510	27430	27310	29090	29490	24920	23110	20670	12500	10940	10620
(WY)	1958	1974	1984	1997	1998	1983	1982	1983	1998	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	4061640		4170570			
ANNUAL MEAN	11130		11400		10470	
HIGHEST ANNUAL MEAN					17980	1983
LOWEST ANNUAL MEAN					5109	1977
HIGHEST DAILY MEAN	28200	Feb 11	29200	Feb 16	32600	Feb 20 1986
LOWEST DAILY MEAN	4600	Oct 22	4600	Oct 22	2720	May 7 1992
ANNUAL SEVEN-DAY MINIMUM	4730	Oct 17	4730	Oct 17	2880	Oct 12 1977
INSTANTANEOUS PEAK FLOW			29400	Feb 16	32700	Feb 20 1986
INSTANTANEOUS PEAK STAGE			49.86	Feb 16	52.68	Jan 4 1997
ANNUAL RUNOFF (AC-FT)	8056000		8272000		7584000	
10 PERCENT EXCEEDS	24800		24600		22300	
50 PERCENT EXCEEDS	8130		9040		8030	
90 PERCENT EXCEEDS	5570		6020		5040	

e Estimated.

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1966 to current year.
WATER TEMPERATURE: October 1966 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: October 1966 to current year.

INSTRUMENTATION.—Water-temperature recorder since October 1966.

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, 21.5°C, several days during June; minimum recorded, 8.5°C, Dec. 4, 11, 15, Jan. 3.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

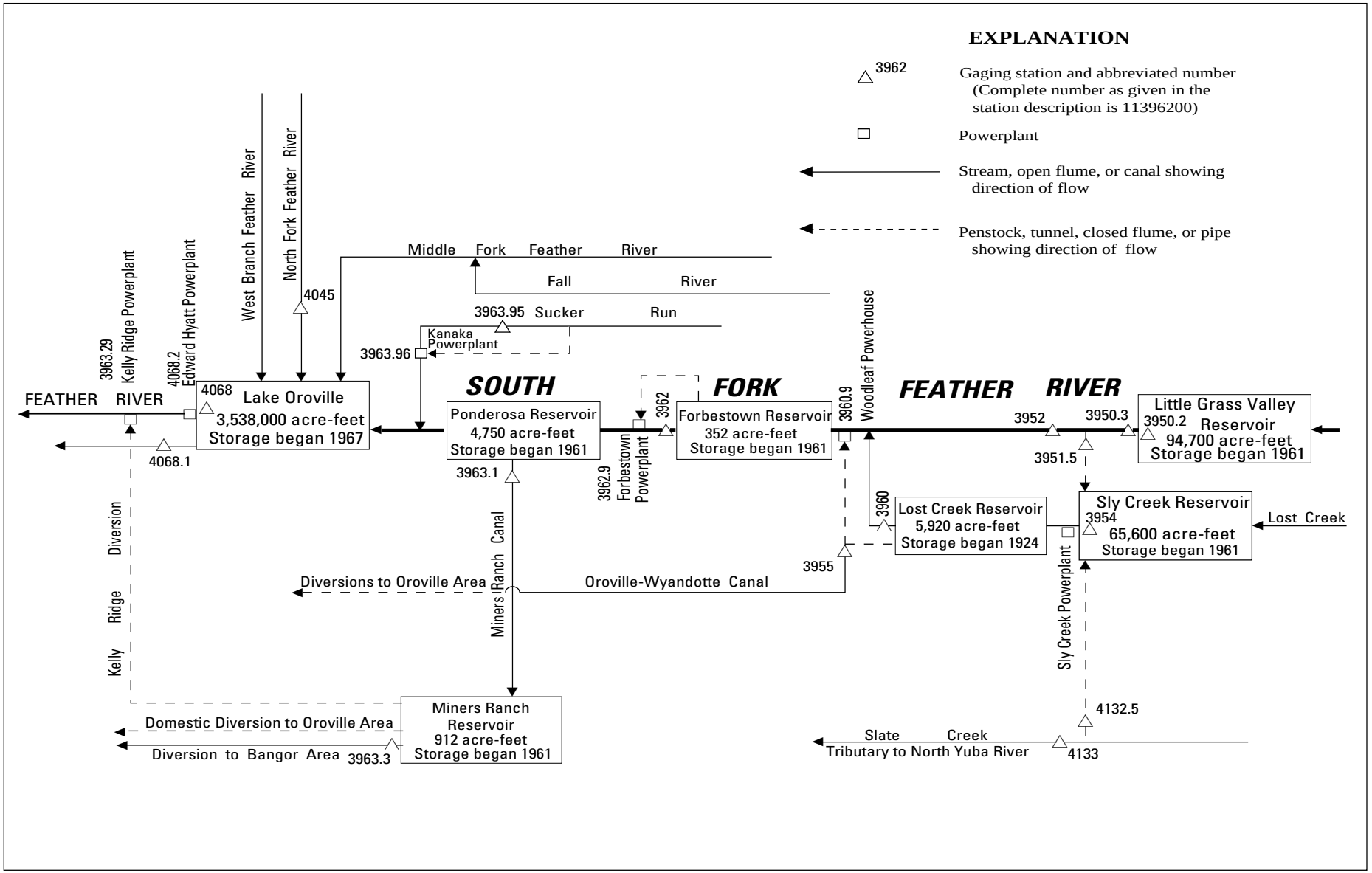

Figure 28. Diversions and storage in South Fork Feather River Basin.

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, and 3.3 mi northwest of La Porte.

DRAINAGE AREA.—25.8 mi^2.

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. Records represent total contents at 2400 hours. 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, 98,000 acre-ft, May 1, 1995, and May 17, 1996, elevation, 5,049.0 ft; minimum since reservoir first filled, 30,300 acre-ft, many days during 1977, elevation, 4,994.8 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 94,700 acre-ft, May 7–9, elevation, 5,047.0 ft; minimum, 44,000 acre-ft, several days in January, elevation, 5,009.6 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62000	49900	48600	e44100	55200	71500	80100	94200	90600	80100	73100	65800
2	61900	49500	48600	e44000	55300	71800	80400	94200	90400	79800	73000	65500
3	61600	49000	48600	e44000	55500	72100	80900	94300	90100	79700	72800	65400
4	61300	48600	48600	e44000	55800	72200	81400	94300	89600	79400	72400	65100
5	61100	48100	48600	44000	56100	72700	82000	94300	89300	79100	72100	64900
6	61000	47600	48600	44000	56400	73000	82600	94500	89000	79000	72000	64700
7	60700	47300	48400	44000	56700	73300	83200	94700	88700	78800	71700	64500
8	60600	47400	48100	44000	56900	73700	84000	94700	88400	78500	71500	64200
9	60600	47400	47800	44000	57200	74100	84400	94700	88100	78200	71100	64100
10	60600	47400	47300	44000	57700	74300	85100	94500	87700	78100	70800	63800
11	60400	47400	46800	44400	58400	74600	85700	94300	87300	77900	70600	63600
12	60300	47400	46500	44400	58900	74700	86200	94200	87000	77600	70300	63300
13	59900	47400	46000	44600	59900	74900	87600	93800	86500	77500	70100	63200
14	59400	47400	45700	44700	62600	75000	88500	93500	86200	77200	69900	62900
15	58700	47400	e45200	45000	63900	75300	89300	93300	85800	77100	69600	62800
16	58200	47600	e44900	45500	64900	75500	90300	93200	85400	76800	69500	62500
17	57600	47600	e44600	45700	65500	75700	91400	93000	84900	76500	69000	62400
18	57100	47600	e44400	46500	66000	75900	92400	92800	84400	76300	68900	62100
19	56400	47900	e44400	47600	66400	76200	92800	92800	84100	76000	68600	61900
20	55900	48000	e44300	48300	66800	76500	93000	92700	83600	75900	68400	61600
21	55400	48100	e44300	48900	67200	76600	93200	92700	83200	75600	68100	61300
22	54800	48100	e44300	49200	67800	76900	93300	92700	82900	75300	68000	61100
23	54400	48100	e44300	49900	68200	77200	93300	92700	82500	75200	67700	60800
24	53800	48100	e44200	51300	68400	77500	93500	92500	82000	74900	67500	60700
25	53400	48200	e44200	52400	68600	77800	93500	92500	81700	74700	67300	60400
26	52800	48200	e44200	53100	69300	78100	93700	92400	81300	74400	67100	60200
27	52700	48300	e44200	53600	70200	78400	93700	92000	81100	74100	66800	59900
28	52100	48300	e44100	53900	70600	78800	93800	91900	80900	74000	66700	59800
29	51600	48300	e44100	54300	71200	79100	94000	91500	80600	73700	66400	59500
30	51100	48600	e44100	54600	---	79400	94000	91200	80400	73600	66200	59300
31	50600	---	e44100	54800	---	79800	---	90900	---	73400	65900	---
MAX	62000	49900	48600	54800	71200	79800	94000	94700	90600	80100	73100	65800
MIN	50600	47300	44100	44000	55200	71500	80100	90900	80400	73400	65900	59300
a	5015.4	5013.6	5009.7	5019.1	5031.6	5037.5	5046.6	5044.7	5037.9	5033.1	5027.7	5022.6
b	-11700	-2000	-4500	+10700	+16400	+8600	+14200	-3100	-10500	-7000	-7500	-6600

CAL YR 1999 b -17000
WTR YR 2000 b -3000

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 mi^2.

PERIOD OF RECORD.—October 1927 to September 1933 (published as "near La Porte"), October 1960 to current year.

REVISED RECORDS.—WSP 1931: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 4,809.0 ft above sea level. Prior to Oct. 1, 1960, at site 0.4 mi upstream at different datum. Oct. 1, 1960, to Oct. 30, 1962, at present site and datum. Nov. 1, 1962, to May 31, 1966, at site on outlet works at base of Little Grass Valley Dam 0.1 mi upstream at datum 4,850.00 ft above sea level.

REMARKS.—Flow regulated by Little Grass Valley Reservoir (station 11395020) beginning in October 1961. No diversion upstream from station. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,370 ft^3/s, Jan. 1, 1997, gage height, 14.80 ft; minimum daily, 0.2 ft^3/s, Oct. 28–31, Nov. 2, 1961.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	284	10	15	17	18	20	231	230	119	116	115
2	111	259	9.9	15	17	18	21	231	229	119	117	115
3	111	241	9.9	15	17	18	21	231	230	119	117	115
4	111	240	9.9	15	17	18	22	231	230	119	117	115
5	111	240	9.9	15	18	19	22	230	229	119	117	115
6	111	240	9.9	15	18	18	21	230	229	119	117	115
7	111	240	140	15	17	18	21	231	229	119	117	115
8	59	137	221	15	17	18	22	302	229	119	117	115
9	15	10	221	15	17	18	21	339	229	119	117	115
10	15	10	220	15	20	18	21	336	229	119	117	115
11	15	10	221	17	19	18	22	334	229	119	117	115
12	81	10	221	16	18	19	22	333	228	119	117	115
13	203	10	220	16	20	30	28	333	229	119	117	115
14	282	10	221	16	38	28	24	333	228	119	117	116
15	295	10	220	19	21	18	22	334	229	119	117	116
16	293	10	220	18	20	19	22	333	228	119	117	116
17	292	10	100	18	19	19	27	281	227	119	117	116
18	291	9.7	16	23	19	19	22	233	228	119	117	116
19	290	10	16	25	18	19	137	233	228	119	117	116
20	289	12	16	23	18	19	231	233	227	119	117	116
21	289	10	16	19	19	19	231	233	227	118	117	116
22	289	9.9	16	18	18	19	231	232	227	118	117	116
23	288	9.9	16	21	18	19	230	232	227	118	117	116
24	287	9.7	16	28	18	19	230	232	227	118	117	116
25	286	9.6	16	23	18	19	230	232	227	118	116	117
26	286	9.6	16	19	18	19	231	232	227	118	115	117
27	286	9.9	15	18	21	20	232	231	181	118	115	117
28	286	9.9	15	18	19	20	231	231	127	119	115	116
29	285	9.9	15	17	18	20	231	230	119	118	115	116
30	284	10	15	17	---	20	231	230	119	118	115	117
31	284	---	15	17	---	19	---	230	---	118	115	---
TOTAL	6347	2101.1	2503.5	556	552	602	3077	8117	6482	3679	3613	3471
MEAN	205	70.0	80.8	17.9	19.0	19.4	103	262	216	119	117	116
MAX	295	284	221	28	38	30	232	339	230	119	117	117
MIN	15	9.6	9.9	15	17	18	20	230	119	118	115	115
AC-FT	12590	4170	4970	1100	1090	1190	6100	16100	12860	7300	7170	6880

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	103	73.9	72.3	101	108	107	84.7	141	104	117	145	165
MAX	305	404	420	725	694	586	317	489	403	350	344	389
(WY)	1970	1982	1982	1997	1986	1995	1989	1995	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	47679.1		41100.6			
ANNUAL MEAN	131		112		110	
HIGHEST ANNUAL MEAN					250	1982
LOWEST ANNUAL MEAN					29.5	1981
HIGHEST DAILY MEAN	295	Oct 15	339	May 9	5420	Jan 1 1997
LOWEST DAILY MEAN	9.6	Nov 25	9.6	Nov 25	1.4	Jan 27 1964
ANNUAL SEVEN-DAY MINIMUM	9.8	Nov 22	9.8	Nov 22	1.4	Jan 27 1964
INSTANTANEOUS PEAK FLOW			354	May 8	7370	Jan 1 1997
INSTANTANEOUS PEAK STAGE			9.31	May 8	14.80	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	94570		81520		79920	
10 PERCENT EXCEEDS	261		233		253	
50 PERCENT EXCEEDS	113		116		54	
90 PERCENT EXCEEDS	11		15		5.4	

11395150 SOUTH FORK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.—Lat 39°38'55", long 120°07'00", in NW 1/4 SW 1/4 sec.29, T.21 N., R.8 E., Plumas County, Hydrologic Unit 18020123, Plumas National Forest, 3.2 mi upstream from Rock Creek, and 5.8 mi north of Strawberry Valley.

PERIOD OF RECORD.—October 1973 to current year. Records of daily discharge for November 1961 to September 1973 are in files of the U.S. Geological Survey. Monthly diversion used to adjust South Fork Feather River below diversion dam near Strawberry Valley (station 11395200) since October 1961.

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

REMARKS.—Tunnel diverts water from South Fork Feather River to Sly Creek Reservoir (station 11395400) for power development. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 570 ft^3/s, Mar. 13, May 25–29, June 3, 1983; no flow many days in 1980–82, Mar. 11–28, 1995, and Jan. 1–9, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	270	24	16	84	149	132	266	239	116	113	114
2	103	258	20	16	86	136	146	231	238	116	114	113
3	103	228	17	16	86	127	166	262	237	116	113	111
4	102	225	14	16	87	123	182	262	235	116	113	111
5	102	226	13	16	96	169	181	260	233	116	113	110
6	103	223	12	15	114	148	169	260	233	116	113	110
7	103	227	90	15	101	133	160	267	234	116	113	110
8	88	183	222	15	93	124	157	330	241	116	113	109
9	9.6	16	224	15	88	113	147	358	235	116	113	109
10	7.3	10	222	16	124	100	135	352	233	116	112	109
11	7.1	9.7	222	106	138	107	132	346	234	115	112	109
12	31	8.7	222	62	134	108	129	341	233	115	112	109
13	163	7.8	224	46	166	121	201	339	230	115	113	109
14	255	7.3	223	45	510	138	193	338	229	115	112	109
15	273	8.5	222	83	422	133	162	362	228	115	112	109
16	270	9.0	221	132	287	141	154	358	229	115	112	110
17	272	23	150	96	212	140	250	317	229	114	112	110
18	271	12	20	193	170	141	218	258	229	114	112	110
19	270	18	18	211	143	156	257	257	229	113	112	109
20	272	58	20	229	135	154	350	256	229	114	112	110
21	272	37	20	148	144	141	336	252	228	114	112	110
22	271	20	19	117	157	134	323	250	227	114	112	110
23	270	15	18	148	143	137	314	247	226	116	111	109
24	270	12	18	366	121	141	308	246	225	116	112	109
25	270	11	17	352	108	147	302	248	225	115	111	108
26	269	10	17	217	115	150	298	247	225	115	110	107
27	286	10	17	155	302	156	293	245	199	114	110	107
28	296	9.7	16	120	211	154	279	243	130	114	110	108
29	269	9.4	16	97	179	148	271	242	116	113	111	108
30	269	23	16	97	---	141	268	240	116	113	111	108
31	268	---	16	86	---	134	---	239	---	114	111	---
TOTAL	5918.0	2185.1	2590	3262	4756	4244	6613	8719	6574	3563	3472	3284
MEAN	191	72.8	83.5	105	164	137	220	281	219	115	112	109
MAX	296	270	224	366	510	169	350	362	241	116	114	114
MIN	7.1	7.3	12	15	84	100	129	231	116	113	110	107
AC-FT	11740	4330	5140	6470	9430	8420	13120	17290	13040	7070	6890	6510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2000, BY WATER YEAR (WY)

MEAN	91.6	98.9	106	128	153	180	155	172	117	117	130	147
MAX	202	377	462	381	406	454	429	520	421	363	327	390
(WY)	1999	1982	1982	1974	1996	1983	1989	1993	1983	1983	1983	1978
MIN	6.21	4.14	3.36	5.99	8.49	9.71	8.68	16.4	7.22	4.43	4.03	.000
(WY)	1986	1977	1977	1977	1977	1977	1977	1977	1977	1977	1981	1981

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1974 - 2000	
ANNUAL TOTAL	61669.1		55180.1			
ANNUAL MEAN	169		151		133	
HIGHEST ANNUAL MEAN					294	1983
LOWEST ANNUAL MEAN					35.0	1977
HIGHEST DAILY MEAN	544	Jan 20	510	Feb 14	570	Mar 13 1983
LOWEST DAILY MEAN	7.1	Oct 11	7.1	Oct 11	.00	Jan 16 1980
ANNUAL SEVEN-DAY MINIMUM	8.7	Nov 10	8.7	Nov 10	.00	Jan 16 1980
ANNUAL RUNOFF (AC-FT)	122300		109400		96180	
10 PERCENT EXCEEDS	349		270		323	
50 PERCENT EXCEEDS	110		116		94	
90 PERCENT EXCEEDS	20		17		8.7	

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 mi^2.

PERIOD OF RECORD.—October 1960 to current year.

REVISED RECORDS.—WDR CA-80-4: 1976(M).

GAGE.—Water-stage recorder and since May 8, 1987, sharp-crested rectangular weir. Datum of gage is 3,535.02 ft above sea level (levels by Oroville–Wyandotte Irrigation District).

REMARKS.—Flow regulated by Little Grass Valley Reservoir (station 11395020) since October 1961. South Fork Diversion Tunnel, maximum capacity, about 600 ft^3/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, 11,300 ft^3/s, Jan. 1, 1997, gage height unknown, from computation of peak flow over diversion dam; minimum daily, 0.3 ft^3/s, Dec. 25, 1962, to Jan. 2, 1963, Mar. 1–3, 1963.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.7	6.1	5.9	6.3	6.4	6.2	11	11	10	11	11
2	11	5.8	6.0	6.0	6.2	6.4	6.2	56	11	10	11	11
3	11	5.5	5.9	5.9	6.3	6.3	5.9	11	11	10	11	11
4	11	5.6	5.8	5.8	6.4	6.3	5.8	11	11	10	11	11
5	11	5.6	5.8	5.8	6.5	6.6	5.8	11	11	11	11	11
6	11	5.6	5.8	5.8	6.5	6.7	5.8	11	11	11	11	11
7	11	5.7	6.0	5.8	6.4	6.7	5.8	11	11	11	11	11
8	11	5.7	6.4	5.8	6.4	6.7	5.8	11	11	11	11	11
9	10	5.6	6.4	5.8	6.3	6.7	5.8	11	11	11	11	11
10	10	5.8	6.4	5.9	6.4	6.7	5.8	11	11	11	11	11
11	10	5.8	6.4	6.5	6.5	6.7	5.8	11	11	11	11	11
12	14	5.8	6.4	6.2	6.5	6.6	5.8	11	11	11	11	11
13	18	5.8	6.4	6.2	6.8	6.4	6.2	11	11	11	11	11
14	14	5.8	6.4	6.2	308	6.4	6.2	11	11	11	11	11
15	11	5.8	6.4	6.4	29	6.4	6.2	11	11	11	11	11
16	11	5.9	6.4	6.6	6.8	6.4	6.2	11	11	11	11	11
17	11	5.9	6.4	6.4	6.7	6.4	6.2	11	11	11	11	11
18	11	5.8	6.1	6.6	6.7	6.3	6.2	11	11	11	11	11
19	11	6.0	6.0	6.7	6.5	6.2	6.1	11	11	11	11	11
20	11	6.2	6.0	6.7	6.4	6.2	6.1	11	11	11	11	11
21	11	6.2	6.0	6.7	6.6	6.2	6.2	11	11	11	11	11
22	11	5.9	6.0	6.5	6.6	6.2	6.2	11	11	11	11	11
23	11	5.8	6.0	6.6	6.5	6.2	6.2	11	11	11	11	11
24	11	5.8	6.0	6.9	6.4	6.2	6.2	11	11	11	11	11
25	11	5.8	6.0	6.8	6.4	6.2	6.2	11	11	11	11	11
26	11	5.8	6.0	6.7	6.5	6.2	6.2	11	11	11	11	11
27	11	5.8	6.0	6.6	7.0	6.2	6.2	11	11	11	11	11
28	11	5.8	6.0	6.4	6.6	6.3	9.2	11	11	11	11	11
29	11	5.8	5.9	6.4	6.4	6.3	11	11	11	11	11	11
30	11	6.1	5.8	6.5	---	6.2	11	11	10	11	11	11
31	11	---	5.8	6.4	---	6.2	---	11	---	11	11	---
TOTAL	351	177.2	189.0	195.5	512.6	197.9	194.5	386	329	337	341	330
MEAN	11.3	5.91	6.10	6.31	17.7	6.38	6.48	12.5	11.0	10.9	11.0	11.0
MAX	18	8.7	6.4	6.9	308	6.7	11	56	11	11	11	11
MIN	10	5.5	5.8	5.8	6.2	6.2	5.8	11	10	10	11	11
AC-FT	696	351	375	388	1020	393	386	766	653	668	676	655

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	10.3	13.2	42.4	82.2	54.7	48.6	24.8	45.2	21.4	9.66	10.2	10.5
MAX	16.1	226	808	885	1113	741	317	417	230	13.3	18.5	18.8
(WY)	1982	1982	1965	1970	1986	1995	1982	1995	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	3429.7		3540.7			
ANNUAL MEAN	9.40		9.67		31.1	
HIGHEST ANNUAL MEAN					120	1995
LOWEST ANNUAL MEAN					3.72	1977
HIGHEST DAILY MEAN	226	Feb 9	308	Feb 14	9020	Jan 1 1997
LOWEST DAILY MEAN	5.1	Feb 11	5.5	Nov 3	.70	Jan 18 1968
ANNUAL SEVEN-DAY MINIMUM	5.6	Nov 3	5.6	Nov 3	1.1	Jan 18 1968
INSTANTANEOUS PEAK FLOW			880	May 2	11300	Jan 1 1997
INSTANTANEOUS PEAK STAGE			8.50	May 2	14.92	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	6800		7020		22510	
10 PERCENT EXCEEDS	11		11		12	
50 PERCENT EXCEEDS	11		10		8.2	
90 PERCENT EXCEEDS	5.8		5.8		4.5	

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, and 1.4 mi northwest of Strawberry Valley.

DRAINAGE AREA.—24.0 mi^2.

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). Records represent total contents at 2400 hours. 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, 64,200 acre-ft, May 18–20, 23, 24, elevation, 3528.5 ft; minimum, 15,100 acre-ft, Oct. 13, elevation, 3,414.6 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21800	18800	15700	18100	37600	54300	58800	63000	62300	e56000	e48500	29800
2	21400	18800	15700	18000	37300	53800	59100	62900	62400	e56800	e47700	29700
3	20900	18600	15600	17900	37300	53600	59500	62800	62400	e57400	e47100	29900
4	20300	18000	15500	17900	37100	53200	59500	62800	62200	e57400	e46700	30100
5	19800	18000	15400	17800	37500	53300	59100	62800	61900	e57200	e46000	29600
6	19300	18300	15300	17800	38200	53300	58800	62900	61500	e57000	e45600	29000
7	18900	18700	15300	17700	38500	53100	58400	63100	61000	e56800	e45500	28300
8	18400	19200	15700	17800	39000	52800	57900	63400	60900	e56800	e44700	27500
9	18100	19300	16000	17900	39900	52300	57400	63400	60800	e56700	43800	27700
10	17700	19200	16300	17900	41100	51800	57400	63500	60700	e56600	43300	27900
11	16800	18900	16800	18800	42400	51200	57800	63600	60600	e56300	42800	27300
12	15800	18600	17200	19200	43800	51000	58100	63600	60600	e56200	42500	26800
13	15100	18400	17600	19600	45500	51200	59000	63600	60400	e56000	42700	26400
14	15400	18200	17900	19900	49800	51300	59900	63600	60100	e55700	42000	26000
15	15700	18000	18200	20600	51900	51700	60500	63900	59900	e55300	41100	25500
16	e16000	18000	18600	21900	52800	52300	61100	64000	59500	e55800	40300	25700
17	16500	17600	18700	22700	52900	53000	61800	64100	59700	e55200	e39500	25900
18	16500	16700	18800	24500	52800	53100	61700	64200	59800	e55100	e38900	25400
19	16600	16800	18900	26300	52500	54400	61600	64200	59700	e54700	e37900	24800
20	16500	17200	18900	28300	52200	55600	61700	64200	59600	e54300	e36800	24200
21	16800	17200	18800	29500	52000	55500	61500	64100	59500	e53800	e35800	23500
22	16800	16900	18800	30300	52300	55200	61300	64100	59500	e53200	34700	23100
23	16800	16800	18800	31300	e52400	55500	61100	64200	59400	e52800	34200	23300
24	16500	16600	18600	33500	e52100	55800	61100	64200	59700	e52400	33500	23500
25	16900	16200	18700	36000	51800	56200	61500	64000	59600	e52200	32700	23700
26	17500	16100	18800	37800	51800	56600	61800	63900	59700	e51300	32500	23500
27	18200	15900	18700	38900	53400	57000	62100	63700	e59300	e50900	32100	23200
28	18500	15800	18600	39000	54300	e57500	62500	63400	e58600	e50400	31500	22700
29	18300	15600	18500	38600	54700	e57900	62800	63100	e57800	e49900	30400	22500
30	18600	15600	18300	38300	---	58300	63000	62700	e56700	e49600	30400	22200
31	18900	---	18200	38000	---	58500	---	62400	---	e49200	29800	---
MAX	21800	19300	18900	39000	54700	58500	63000	64200	62400	57400	48500	30100
MIN	15100	15600	15300	17700	37100	51000	57400	62400	56700	49200	29800	22200
a	3427.8	3416.3	3425.4	3478.9	3512.2	3519.0	3526.5	3525.6	3515.8	3502.0	3459.3	3438.1
b	-3100	-3300	+2600	+19800	+16700	+3800	+4500	-600	-5700	-7500	-19400	-7600

CAL YR 1999 b +3800
WTR YR 2000 b +200

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

11395500 OROVILLE–WYANDOTTE CANAL NEAR CLIPPER MILLS, CA

LOCATION.—Lat 39°33'15", long 121°11'31", in NW 1/4 NE 1/4 sec.33, T.20 N., R.7 E., Butte County, Hydrologic Unit 18020123, in concrete valve house at head of canal, and 2.5 mi north of Clipper Mills.

PERIOD OF RECORD.—October 1927 to September 1941 (published as Forbestown Ditch), October 1953 to current year. Monthly discharge only for October 1953 to September 1961, published with records for Lost Creek near Clipper Mills.

GAGE.—Water-stage recorder and Parshall flume. Datum of gage is 3,166.0 ft above sea level (levels by Oroville–Wyandotte Irrigation District). Prior to Sept. 30, 1941, nonrecording gages and Oct. 1, 1941, to Nov. 16, 1962, water-stage recorder at sites at different datums 4 mi upstream in abandoned part of canal, 0.3 mi downstream from Lost Creek Dam.

REMARKS.—Water is discharged to canal through valve in Woodleaf Penstock. Prior to Nov. 16, 1962, canal diverted from Lost Creek Dam. Water is used for irrigation and domestic supply. Demand for water reduced when a large lumber mill closed at Woodleaf in 1962. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 43 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	.00	.00	.00	.00	.00	.00	5.2	9.7	18	23	23
2	24	.00	.00	.00	.00	.00	.00	9.4	9.7	18	24	23
3	24	.00	.00	.00	.00	.00	.00	11	9.7	18	24	23
4	24	.00	.00	.00	.00	.00	.00	11	9.7	19	24	23
5	23	.00	.00	.00	.00	.00	.00	11	9.7	19	24	23
6	19	.00	7.2	.00	.00	.00	.00	11	9.7	18	24	23
7	16	.00	11	.00	.00	.00	.00	11	9.7	18	23	23
8	16	.00	11	.00	.00	.00	.00	10	9.7	18	24	22
9	15	7.1	5.3	.00	.00	.00	.00	9.4	9.7	18	23	21
10	15	12	.00	.00	.00	.00	.00	11	9.8	18	23	21
11	15	11	.00	.00	.00	.00	.00	8.9	9.7	18	23	21
12	15	11	.00	.00	.00	.00	.00	7.6	9.7	20	24	21
13	15	4.5	.00	.00	.00	.00	.00	7.6	9.6	21	24	21
14	15	.00	.00	.00	.00	.00	.00	7.6	9.6	23	24	21
15	4.8	.00	.00	.00	.00	.00	.00	7.6	11	21	24	21
16	6.5	.00	.00	.00	.00	.00	.00	7.7	11	20	24	21
17	15	.00	.00	.00	.00	.00	.00	7.6	11	21	23	21
18	15	.00	.00	.00	.00	.00	.00	7.6	11	20	23	21
19	14	.00	.00	.00	.00	.00	.00	7.5	11	20	23	21
20	12	.00	.00	.00	.00	.00	.00	7.5	13	21	23	21
21	12	.00	.00	.00	.00	.00	.00	7.5	14	22	23	21
22	12	.00	.00	.00	.00	.00	.00	7.5	16	22	23	21
23	12	.00	.00	.00	.00	.00	.00	7.4	16	22	23	21
24	12	.00	.00	.00	.00	.00	.00	7.7	17	22	23	21
25	6.0	.00	.00	.00	.00	.00	.00	7.9	17	22	23	21
26	.00	.00	.00	.00	.00	.00	.00	7.9	17	22	24	21
27	.00	.00	.00	.00	.00	.00	.00	8.0	17	22	24	21
28	.00	.00	6.8	4.5	.00	.00	.00	8.0	16	22	24	21
29	.00	.00	11	6.7	.00	.00	.00	8.0	17	22	24	21
30	.00	.00	11	4.1	---	.00	.00	9.2	17	22	24	21
31	.00	---	3.6	.00	---	.00	---	9.7	---	22	23	---
TOTAL	381.30	45.60	66.90	15.30	0.00	0.00	0.00	266.0	367.7	629	729	645
MEAN	12.3	1.52	2.16	.49	.000	.000	.000	8.58	12.3	20.3	23.5	21.5
MAX	24	12	11	6.7	.00	.00	.00	11	17	23	24	23
MIN	.00	.00	.00	.00	.00	.00	.00	5.2	9.6	18	23	21
AC-FT	756	90	133	30	.00	.00	.00	528	729	1250	1450	1280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	12.5	5.47	2.25	1.30	.74	.94	1.72	5.65	12.0	17.3	20.6	19.8
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	.88	7.60	9.47	9.29
(WY)	1990	1992	1982	1980	1963	1963	1963	1975	1998	1998	1965	1965

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	2808.20		3145.80			
ANNUAL MEAN	7.69		8.60		8.40	
HIGHEST ANNUAL MEAN					16.7	1977
LOWEST ANNUAL MEAN					4.33	1998
HIGHEST DAILY MEAN	24	Aug 18	24	Oct 1	43	Aug 13 1977
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 26	.00	Dec 12 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 26	.00	Dec 15 1962
ANNUAL RUNOFF (AC-FT)	5570		6240		6080	
10 PERCENT EXCEEDS	23		23		22	
50 PERCENT EXCEEDS	1.5		6.9		5.4	
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 mi^2.

PERIOD OF RECORD.—October 1927 to September 1941, October 1948 to current year. Records for Woodleaf Powerplant from February 1963 to September 1966 in files of the U.S. Geological Survey.

REVISED RECORDS.—WSP 1395: 1954. WSP 1931: Drainage area.

GAGE.—Water-stage recorder. Sharp-crested weir for low-water control since June 20, 1987. Elevation of gage is 3,170 ft above sea level, from topographic map. Prior to June 20, 1987, at site 100 ft downstream at same datum.

REMARKS.—Flow regulated by Sly Creek Reservoir (station 11395400) 1.5 mi upstream and Lost Creek Reservoir 0.3 mi upstream, usable capacity, 5,920 acre-ft with flashboards. Water is diverted into Sly Creek Reservoir through South Fork Diversion Tunnel from South Fork Feather River and through Slate Creek Tunnel (station 11413250) from North Yuba River Basin. Woodleaf Tunnel diverts from Lost Creek Reservoir to Woodleaf Powerplant. Oroville–Wyandotte Canal (station 11395500) diverts from Woodleaf Penstock for irrigation and domestic use. Records represent seepage, release, and spill from Lost Creek Reservoir to Lost Creek. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,760 ft^3/s, Jan. 1, 1997, gage height, 13.50 ft; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	8.4	5.9	5.7	5.9	572	8.4	8.4	8.4	11	8.9	8.9
2	8.2	6.5	5.8	5.7	5.9	700	8.4	12	8.4	10	9.2	9.2
3	8.2	5.3	5.7	5.7	6.0	399	8.4	23	8.4	10	9.8	9.5
4	8.2	5.5	5.7	5.7	5.9	283	8.6	25	8.2	10	9.3	9.2
5	8.4	5.5	5.7	5.7	6.0	336	8.6	19	8.3	10	9.1	9.0
6	8.6	5.5	5.7	5.7	5.9	308	8.6	12	8.6	10	9.1	8.9
7	8.6	5.6	5.7	5.7	5.9	298	8.5	12	8.8	10	9.1	8.8
8	8.6	5.8	5.5	5.7	5.9	301	8.6	12	10	9.9	8.9	9.4
9	8.6	5.5	5.7	5.7	5.9	302	8.5	12	10	9.8	9.4	9.6
10	8.6	5.5	5.6	5.7	6.5	294	8.4	12	9.1	9.8	9.1	9.5
11	8.6	5.5	5.6	6.5	53	301	8.4	12	9.0	9.7	9.1	9.9
12	8.6	5.5	5.6	5.9	68	127	8.4	12	9.3	9.5	9.1	11
13	8.6	5.5	5.7	5.8	121	10	8.8	12	9.3	9.5	9.0	11
14	8.6	5.5	5.7	5.6	256	7.0	8.6	12	9.1	9.5	8.8	11
15	8.3	5.5	5.6	5.9	115	7.0	8.6	12	9.1	9.4	9.3	10
16	8.2	5.6	5.7	6.2	171	6.8	8.6	12	9.1	9.2	9.1	10
17	17	5.5	5.7	5.9	451	6.5	9.2	12	9.0	9.1	9.0	9.8
18	8.2	5.5	5.7	6.5	511	6.4	8.7	12	8.8	9.1	9.1	9.5
19	8.5	5.8	5.7	6.2	522	6.3	8.6	12	8.8	8.9	8.9	9.5
20	9.3	5.6	5.7	6.2	543	6.2	8.6	11	8.8	9.0	9.0	9.6
21	11	5.5	5.7	5.9	479	6.3	8.6	11	8.7	9.1	9.1	9.7
22	9.8	5.5	5.6	5.8	444	6.4	8.6	11	8.6	9.4	9.1	10
23	9.4	5.5	5.5	6.0	375	6.5	8.4	10	8.5	10	9.1	9.9
24	10	5.5	5.5	7.4	472	6.5	8.4	10	8.4	10	9.1	9.8
25	15	5.5	5.5	6.6	515	6.4	8.5	10	8.3	9.6	9.0	9.5
26	8.6	5.5	5.5	6.0	488	6.3	8.4	9.7	8.5	9.9	8.9	8.8
27	8.9	5.6	5.5	5.9	248	6.2	8.4	9.3	8.6	10	8.8	8.7
28	8.5	5.5	5.5	5.9	234	6.1	8.5	9.0	8.8	9.8	8.8	9.5
29	8.6	5.5	5.5	5.7	372	6.1	8.4	8.6	9.0	9.4	9.2	9.2
30	8.5	6.0	5.6	6.1	---	6.1	8.4	8.6	10	9.0	11	9.0
31	8.4	---	5.7	6.0	---	7.4	---	8.7	---	8.8	8.9	---
TOTAL	284.8	170.2	174.8	185.0	6497.8	4347.5	256.1	372.3	265.9	298.4	283.3	287.4
MEAN	9.19	5.67	5.64	5.97	224	140	8.54	12.0	8.86	9.63	9.14	9.58
MAX	17	8.4	5.9	7.4	543	700	9.2	25	10	11	11	11
MIN	8.2	5.3	5.5	5.6	5.9	6.1	8.4	8.4	8.2	8.8	8.8	8.7
AC-FT	565	338	347	367	12890	8620	508	738	527	592	562	570
a	15290	9770	4940	8130	6830	29570	34030	36860	23020	15730	25870	13270

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

11396000 LOST CREEK NEAR CLIPPER MILLS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1961, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.78	8.61	66.0	93.4	170	175	191	129	29.9	6.42	4.23	5.13
MAX	13.4	121	544	485	562	467	423	441	153	34.7	10.2	15.3
(WY)	1928	1951	1956	1956	1958	1938	1938	1952	1952	1952	1961	1960
MIN	.20	.000	.000	.15	.50	25.7	4.68	1.21	1.33	.20	.10	.10
(WY)	1935	1960	1960	1960	1937	1933	1931	1931	1934	1939	1934	1934

SUMMARY STATISTICS	WATER YEARS 1928 - 1961	
ANNUAL MEAN	73.0	
HIGHEST ANNUAL MEAN	167	1938
LOWEST ANNUAL MEAN	6.78	1931
HIGHEST DAILY MEAN	3840	Dec 22 1955
LOWEST DAILY MEAN	.00	Jul 30 1940
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 1 1959
INSTANTANEOUS PEAK FLOW	5000	Dec 22 1955
INSTANTANEOUS PEAK STAGE	a6.90	Dec 22 1955
ANNUAL RUNOFF (AC-FT)	52890	
10 PERCENT EXCEEDS	212	
50 PERCENT EXCEEDS	8.4	
90 PERCENT EXCEEDS	.30	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.0	6.85	42.9	55.9	77.5	84.2	55.3	47.1	40.6	4.13	3.65	3.95
MAX	392	179	417	674	512	573	410	454	750	16.0	22.2	34.4
(WY)	1963	1963	1998	1997	1986	1983	1993	1995	1995	1962	1966	1997
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	14740.4		13423.5			
ANNUAL MEAN	40.4		36.7		36.1	
HIGHEST ANNUAL MEAN					200	1995
LOWEST ANNUAL MEAN					.49	1964
HIGHEST DAILY MEAN	895	Mar 3	700	Mar 2	4490	Jan 1 1997
LOWEST DAILY MEAN	5.3	Nov 3	5.3	Nov 3	.00	Oct 21 1961
ANNUAL SEVEN-DAY MINIMUM	5.5	Jan 1	5.5	Nov 9	.00	Oct 21 1961
INSTANTANEOUS PEAK FLOW			888	Mar 1	5760	Jan 1 1997
INSTANTANEOUS PEAK STAGE			8.22	Mar 1	13.50	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	29240		26630		26120	
TOTAL DIVERSION (AC-FT)b	251900		223300			
10 PERCENT EXCEEDS	14		13		17	
50 PERCENT EXCEEDS	8.5		8.6		1.7	
90 PERCENT EXCEEDS	5.5		5.6		.16	

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

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 mi^2.

PERIOD OF RECORD.—July 1962 to current year. Records for Forbestown Powerplant from February 1963 to September 1966 in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Elevation of gage is 1,690 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Little Grass Valley Reservoir (station 11395020), Sly Creek Reservoir (station 11395400), and smaller reservoirs. Water from North Yuba River Basin is imported through Slate Creek Tunnel (station 11413250) to Sly Creek Reservoir. Oroville–Wyandotte Canal (station 11395500) diverts upstream from station. Tunnel 600 ft upstream from station diverts most flow through Forbestown Powerplant (station 11396290) except fishwater releases and uncontrolled spill over Forbestown Dam. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,800 ft^3/s, Jan. 1, 1997, gage height, 17.64 ft, from rating curve extended above 5,400 ft^3/s on basis of flow-over-dam measurement of peak flow; minimum daily, 0.6 ft^3/s, Apr. 4, 1963.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.7	5.7	5.7	5.9	111	38	33	11	11	11	11
2	10	5.5	5.7	5.7	5.8	509	42	33	11	11	11	13
3	10	5.5	5.7	5.7	5.9	395	42	33	11	11	11	11
4	10	5.5	5.7	5.7	5.8	378	43	33	11	11	11	11
5	10	5.5	5.7	5.7	5.8	537	43	34	11	11	11	11
6	10	5.5	5.7	5.7	5.7	471	41	33	11	11	11	10
7	10	5.6	5.7	5.7	5.7	434	39	34	11	11	11	10
8	10	29	5.7	5.7	5.8	432	37	39	11	11	11	10
9	10	34	5.7	5.7	5.8	450	36	38	11	11	11	10
10	10	19	5.7	5.7	5.9	429	35	33	11	11	11	10
11	10	5.6	5.7	50	6.1	420	33	32	11	11	11	10
12	10	5.5	5.7	33	6.2	236	26	27	11	11	11	10
13	10	5.4	5.7	5.7	6.6	132	5.7	20	11	11	11	10
14	10	5.5	5.7	5.7	673	101	16	20	11	11	11	10
15	10	5.5	5.7	5.8	27	94	16	29	11	11	11	11
16	10	5.5	5.7	5.9	5.9	116	15	24	11	11	11	10
17	12	5.6	5.7	5.7	5.7	83	65	11	11	11	11	10
18	13	5.6	5.7	5.9	5.8	80	49	11	11	11	11	10
19	13	5.7	5.7	5.8	5.8	10	35	11	11	11	11	10
20	13	5.7	5.7	5.7	5.8	34	16	11	11	11	10	10
21	13	5.6	5.7	5.7	5.9	21	13	11	11	11	10	10
22	12	5.5	5.7	5.7	6.1	37	8.8	11	11	11	10	10
23	11	5.6	5.7	5.8	6.4	5.9	6.3	11	11	11	11	10
24	11	5.7	5.7	6.1	6.1	5.9	5.7	11	11	11	10	10
25	11	5.5	5.7	5.8	5.9	5.9	14	11	11	11	11	10
26	11	5.6	5.7	5.7	7.4	5.9	29	11	11	11	10	10
27	11	5.7	5.7	5.7	209	5.9	33	11	11	11	11	10
28	11	5.7	5.7	5.8	8.5	5.9	33	11	11	11	11	10
29	11	5.7	5.7	5.7	6.1	5.9	33	11	11	11	11	10
30	11	5.8	5.7	5.8	---	5.9	33	11	11	11	11	10
31	11	---	5.7	5.8	---	5.9	---	11	---	11	10	---
TOTAL	335	234.8	176.7	249.8	1067.4	5563.1	881.5	660	330	341	335	308
MEAN	10.8	7.83	5.70	8.06	36.8	179	29.4	21.3	11.0	11.0	10.8	10.3
MAX	13	34	5.7	50	673	537	65	39	11	11	11	13
MIN	10	5.4	5.7	5.7	5.7	5.9	5.7	11	11	11	10	10
AC-FT	664	466	350	495	2120	11030	1750	1310	655	676	664	611
a	15820	9190	3860	9810	27170	37080	38540	39700	23670	15200	25920	12850

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

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.6	22.5	96.1	172	185	169	101	104	45.2	12.6	11.1	14.1
MAX	520	240	1262	2059	2000	1472	718	990	617	37.1	27.3	120
(WY)	1963	1982	1997	1997	1986	1995	1982	1996	1998	1962	1986	1996
MIN	4.21	3.68	3.37	4.06	4.46	4.47	4.06	4.02	2.90	4.04	3.37	3.84
(WY)	1978	1976	1976	1976	1972	1972	1964	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	21013.1		10482.3			
ANNUAL MEAN	57.6		28.6		79.6	
HIGHEST ANNUAL MEAN					325	1997
LOWEST ANNUAL MEAN					4.36	1977
HIGHEST DAILY MEAN	1150	Mar 3	673	Feb 14	17300	Jan 1 1997
LOWEST DAILY MEAN	5.4	Nov 13	5.4	Nov 13	.60	Apr 4 1963
ANNUAL SEVEN-DAY MINIMUM	5.5	Nov 11	5.5	Nov 11	1.7	Mar 25 1980
INSTANTANEOUS PEAK FLOW			1660	Feb 14	21800	Jan 1 1997
INSTANTANEOUS PEAK STAGE			9.26	Feb 14	17.64	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	41680		20790		57630	
TOTAL DIVERSION (AC-FT)a	278600		258800			
10 PERCENT EXCEEDS	143		35		136	
50 PERCENT EXCEEDS	10		11		10	
90 PERCENT EXCEEDS	5.7		5.7		5.0	

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

11396310 MINERS RANCH CANAL BELOW PONDEROSA DAM, NEAR FORBESTOWN, CA

LOCATION.—Lat 39°33'00", long 121°18'20", in SE 1/4 NW 1/4 sec.33, T.20 N., R.6 E., Butte County, Hydrologic Unit 18020123, on right bank, 800 ft downstream from Ponderosa Dam, and 3 mi northwest of Forbestown.

PERIOD OF RECORD.—October 1962 to current year.

REVISED RECORDS.—WDR CA-88-4: diversion only.

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

REMARKS.—Canal diverts from South Fork Feather River at Ponderosa Dam. Water is used for power development and irrigation. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 314 ft^3/s, May 13, 1984; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261	276	202	101	259	261	272	280	288	276	286	285
2	285	276	201	101	261	261	272	282	285	259	286	284
3	285	276	151	101	263	261	274	281	286	244	285	277
4	285	274	127	101	264	264	277	279	288	283	286	205
5	285	272	127	101	265	266	278	278	287	281	285	219
6	285	278	127	101	266	265	278	279	286	287	286	285
7	285	286	144	101	267	266	278	279	286	286	286	285
8	285	277	152	101	269	265	278	279	287	286	286	285
9	285	225	152	101	268	263	277	279	288	280	286	285
10	285	165	152	101	252	262	278	211	288	266	286	284
11	285	144	123	185	242	262	278	280	287	259	286	278
12	285	209	101	247	271	262	277	279	287	258	286	286
13	285	192	140	221	269	264	273	278	287	260	286	286
14	285	191	152	194	259	266	273	279	253	261	286	286
15	285	195	152	170	229	267	271	279	286	260	286	286
16	84	213	151	173	262	267	269	279	285	260	286	286
17	.00	184	128	157	246	267	270	278	284	261	286	286
18	202	242	101	177	271	268	237	279	286	262	286	280
19	280	252	101	210	271	262	271	279	286	262	287	286
20	226	254	101	218	271	252	272	279	286	273	286	286
21	135	248	101	197	271	273	272	279	286	286	286	285
22	101	223	90	205	272	279	273	280	286	286	286	286
23	197	253	101	255	267	278	272	284	286	286	286	286
24	279	147	101	262	263	245	273	285	285	286	286	206
25	270	102	101	261	263	279	276	285	285	286	247	8.9
26	273	102	101	261	264	279	277	286	285	286	286	21
27	273	102	101	264	262	279	277	287	285	286	286	23
28	273	101	101	266	261	279	278	287	284	254	286	153
29	241	146	101	265	261	279	278	287	285	286	286	4.6
30	276	202	101	263	---	276	277	287	285	286	286	.00
31	276	---	101	259	---	273	---	287	---	286	286	---
TOTAL	7637.00	6307	3885	5720	7609	8290	8206	8650	8548	8478	8826	6813.50
MEAN	246	210	125	185	262	267	274	279	285	273	285	227
MAX	285	286	202	266	272	279	278	287	288	287	287	286
MIN	.00	101	90	101	229	245	237	211	253	244	247	.00
AC-FT	15150	12510	7710	11350	15090	16440	16280	17160	16950	16820	17510	13510
a	12720	11470	6460	9990	14640	15660	15130	15600	14930	14450	15180	11950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	172	188	195	198	213	215	212	218	236	246	246	187
MAX	263	269	264	264	262	269	276	280	285	284	289	270
(WY)	1980	1992	1999	1999	2000	1998	1987	1999	2000	1996	1986	1980
MIN	26.6	20.9	18.1	16.6	10.5	16.8	14.5	22.2	51.9	49.3	43.0	25.0
(WY)	1987	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	89570.00		88969.50			
ANNUAL MEAN	245		243		211	
HIGHEST ANNUAL MEAN					257	1999
LOWEST ANNUAL MEAN					52.2	1977
HIGHEST DAILY MEAN	286	May 18	288	Jun 1	314	May 13 1984
LOWEST DAILY MEAN	.00	Sep 25	.00	Oct 17	.00	Nov 21 1962
ANNUAL SEVEN-DAY MINIMUM	22	Sep 23	60	Sep 24	.00	Dec 6 1976
ANNUAL RUNOFF (AC-FT)	177700		176500		152900	
TOTAL DIVERSION (AC-FT)a	160400		158200			
10 PERCENT EXCEEDS	285		286		278	
50 PERCENT EXCEEDS	271		273		247	
90 PERCENT EXCEEDS	127		102		49	

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

11396330 BANGOR CANAL BELOW MINERS RANCH RESERVOIR, NEAR OROVILLE, CA

LOCATION.—Lat 39°30'15", long 121°27'16", in NE 1/4 SW 1/4 sec.18, T.19 N., R.5 E., Butte County, Hydrologic Unit 18020124, on left bank, 400 ft downstream from outlet at Miners Ranch Dam, and 5 mi east of Oroville.

PERIOD OF RECORD.—January 1963 to current year.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 815 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Miners Ranch Reservoir, capacity, 912 acre-ft. Canal completed in November 1962. Water is used for irrigation. See schematic diagram of South Fork Feather River Basin.

COOPERATION.—Records provided by Oroville–Wyandotte Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 65 ft^3/s, Aug. 17–20, 1963; no flow for several days in 1965, 1969.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	12	7.0	7.2	5.7	6.2	12	9.7	15	19	18	18
2	17	12	7.0	7.2	5.5	6.2	12	9.7	16	18	18	19
3	17	12	6.8	7.1	6.1	6.2	12	11	16	18	18	19
4	17	11	6.7	7.1	6.7	6.0	11	12	16	18	18	18
5	17	9.8	6.7	7.2	6.7	6.0	10	12	16	18	18	18
6	17	10	6.4	7.2	6.1	6.3	10	12	16	18	18	18
7	17	10	8.7	7.2	5.5	6.9	10	12	16	18	18	17
8	17	10	8.8	7.2	5.9	7.0	10	12	16	18	18	17
9	17	10	7.5	7.4	6.2	7.0	10	12	16	18	18	17
10	17	10	7.5	7.6	6.4	7.0	10	12	16	18	18	17
11	17	10	7.5	7.7	6.2	7.0	10	12	16	18	18	16
12	17	10	7.5	7.7	6.2	7.1	10	12	16	19	18	16
13	17	10	7.5	7.6	6.3	6.7	10	12	16	18	18	16
14	17	10	7.4	6.5	6.2	6.2	11	12	17	18	18	17
15	17	8.6	7.2	5.8	5.7	6.2	11	12	17	18	18	17
16	17	7.9	7.1	5.8	5.5	6.4	9.8	12	18	18	18	17
17	17	8.1	7.0	5.8	5.5	6.5	9.7	12	18	18	18	17
18	17	7.4	7.2	5.8	5.5	6.5	9.9	12	18	19	18	17
19	17	7.2	7.2	5.8	5.5	6.5	10	12	18	19	18	17
20	17	7.2	7.1	5.8	5.3	6.3	10	12	18	19	18	17
21	17	7.0	6.8	5.8	5.3	6.2	10	12	18	19	18	17
22	17	6.9	7.0	5.8	5.7	6.4	10	13	18	18	18	17
23	17	6.7	7.2	5.8	5.8	7.3	10	14	18	18	18	17
24	17	6.9	7.2	6.0	6.0	7.8	10	14	18	19	18	17
25	17	6.8	7.2	6.0	6.0	7.7	10	14	18	19	18	17
26	15	6.7	7.0	6.0	6.0	7.7	10	15	18	19	18	16
27	13	6.6	7.0	5.9	6.2	7.8	10	15	18	19	18	15
28	13	6.5	7.0	5.8	6.2	8.0	10	15	18	18	18	15
29	12	6.3	7.0	5.8	6.2	8.0	9.7	15	18	18	18	15
30	12	6.7	7.0	5.8	---	7.8	9.7	15	18	18	18	15
31	14	---	7.2	5.8	---	9.7	---	15	---	18	18	---
TOTAL	504	260.3	223.4	201.2	172.1	214.6	307.8	391.4	511	568	558	506
MEAN	16.3	8.68	7.21	6.49	5.93	6.92	10.3	12.6	17.0	18.3	18.0	16.9
MAX	17	12	8.8	7.7	6.7	9.7	12	15	18	19	18	19
MIN	12	6.3	6.4	5.8	5.3	6.0	9.7	9.7	15	18	18	15
AC-FT	1000	516	443	399	341	426	611	776	1010	1130	1110	1000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	16.8	7.94	5.62	4.65	4.25	4.65	8.73	16.0	21.6	24.1	24.2	22.0
MAX	29.7	14.3	11.2	12.0	7.68	8.27	20.3	27.8	42.0	56.4	53.4	36.2
(WY)	1965	1972	1975	1963	1980	1988	1970	1970	1963	1963	1963	1963
MIN	5.42	1.47	.035	.30	.25	.20	2.65	6.41	11.0	16.0	17.1	14.4
(WY)	1985	1969	1966	1966	1966	1966	1983	1995	1998	1982	1992	1993

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	4414.9		4417.8			
ANNUAL MEAN	12.1		12.1		13.2	
HIGHEST ANNUAL MEAN					18.0	1977
LOWEST ANNUAL MEAN					8.95	1993
HIGHEST DAILY MEAN	20	Jun 18	19	Jul 1	65	Aug 17 1963
LOWEST DAILY MEAN	6.3	Nov 29	5.3	Feb 20	.00	Jan 7 1965
ANNUAL SEVEN-DAY MINIMUM	6.6	Nov 23	5.5	Feb 15	.00	Jan 7 1965
ANNUAL RUNOFF (AC-FT)	8760		8760		9570	
10 PERCENT EXCEEDS	18		18		27	
50 PERCENT EXCEEDS	11		12		11	
90 PERCENT EXCEEDS	7.1		6.1		3.0	

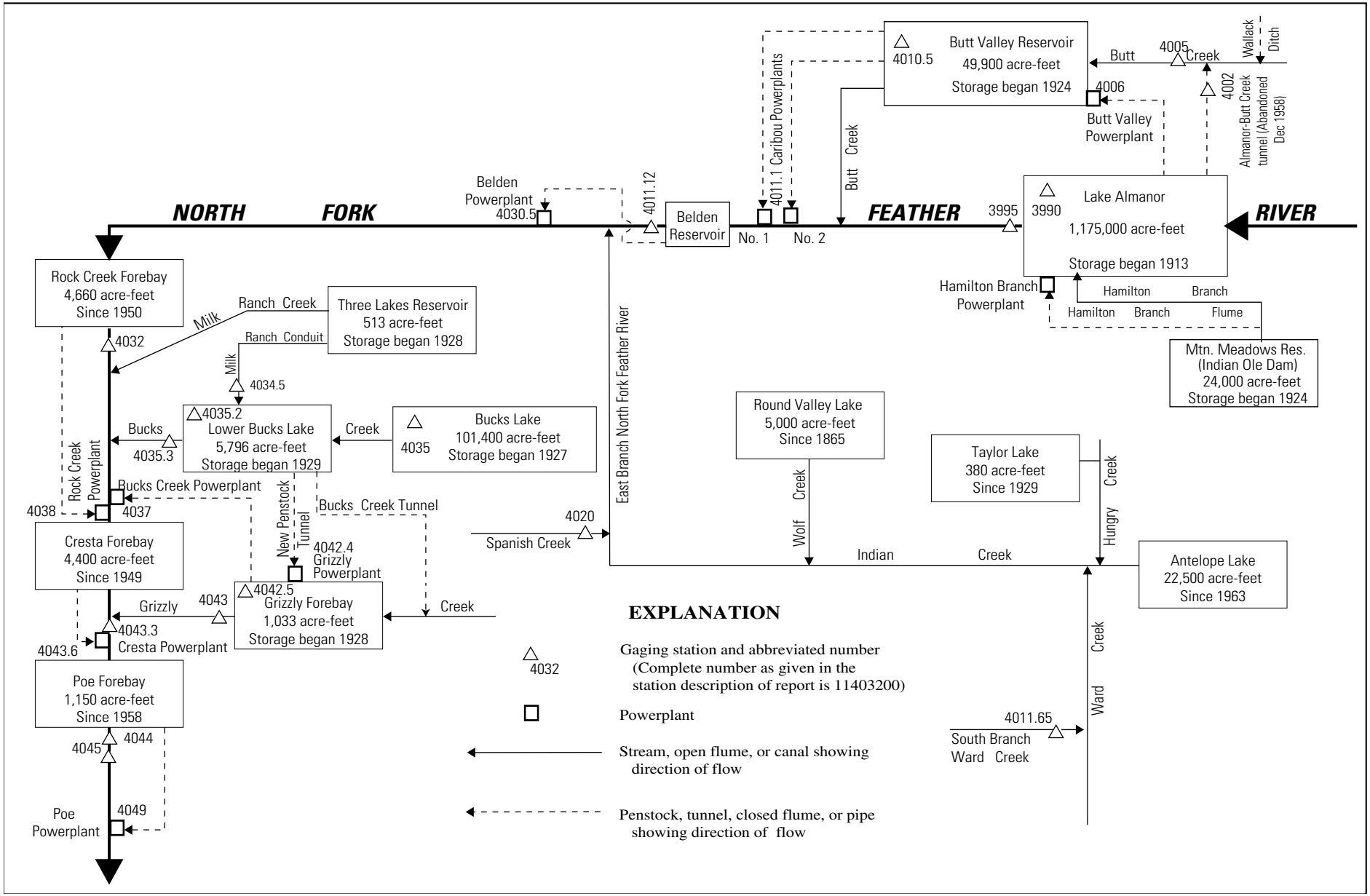

Figure 29. Diversions and storage in North Fork Feather River Basin.

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 mi^2.

PERIOD OF RECORD.—March 1989 to September 1998, October 1999 to September 2000.

GAGE.—Water-stage recorder and 120° 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 station 11396397 for records of combined discharge of creek and powerplant. See schematic diagram of South Fork Feather River Basin.

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, 1,500 ft^3/s, Jan. 1, 1997, gage height, 4.40 ft; minimum daily, 1.2 ft^3/s, Aug. 21, 22, 27, 1992, Aug. 13, 1994.
Combined flow: Maximum discharge, 1,510 ft^3/s, Jan. 1, 1997; minimum daily, 1.2 ft^3/s, Aug 21, 22, 27, 1992, Aug. 13, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.8	e5.2	5.2	14	57	13	10	8.2	9.3	6.1	5.4
2	2.6	4.8	e6.1	5.3	14	35	13	8.2	8.2	9.3	6.2	5.9
3	2.7	4.8	e7.5	5.3	13	25	13	8.2	8.2	9.3	6.1	5.4
4	2.8	4.8	e8.4	5.4	13	60	13	8.2	8.2	9.4	5.9	5.3
5	2.9	4.8	e6.6	5.4	13	65	13	8.2	8.2	9.3	5.6	5.0
6	3.1	4.8	6.3	5.3	13	43	13	8.2	8.2	9.3	5.7	4.9
7	3.1	5.5	6.2	5.2	13	43	13	8.2	8.2	9.2	5.7	4.9
8	2.7	16	6.1	5.1	14	64	13	12	8.2	9.1	5.5	5.1
9	2.5	8.9	6.9	5.2	16	80	13	8.2	8.0	8.8	5.5	5.0
10	2.4	7.7	6.7	5.3	20	58	13	8.2	8.0	8.6	5.5	5.0
11	2.3	7.2	6.5	10	31	48	13	8.2	8.2	8.3	5.5	4.9
12	2.3	6.8	6.4	5.4	70	36	13	8.2	8.2	8.1	5.3	4.8
13	2.3	6.6	6.4	5.9	154	28	13	8.2	8.6	8.1	5.2	4.8
14	2.2	6.6	6.1	7.6	311	24	13	8.2	8.2	8.0	5.1	4.8
15	2.1	6.7	5.9	6.4	73	18	13	8.2	9.2	7.9	5.0	4.8
16	1.9	6.6	5.9	7.5	34	17	13	8.2	9.8	7.9	4.9	4.8
17	1.9	5.5	5.9	5.8	19	16	14	8.4	11	8.0	4.9	4.8
18	2.2	7.1	5.8	17	14	14	15	8.5	12	7.7	4.8	4.3
19	2.4	6.7	5.7	8.1	14	14	13	12	12	7.5	4.8	4.2
20	2.2	5.4	5.6	6.4	14	14	13	8.3	11	7.3	4.8	4.1
21	2.2	5.3	5.5	5.5	14	14	13	8.3	11	7.2	4.8	4.2
22	2.2	e5.2	5.4	5.5	52	14	13	8.3	11	7.1	4.8	5.3
23	2.2	e5.4	5.3	5.5	100	14	13	8.3	11	7.0	4.7	5.0
24	2.3	e7.7	5.3	61	42	14	13	8.3	11	6.8	4.7	4.6
25	2.4	e7.7	5.3	21	22	14	13	8.3	11	6.7	4.6	4.4
26	2.4	e7.7	5.2	6.3	55	14	13	8.3	10	6.6	4.5	4.2
27	4.8	e7.7	5.2	8.0	e238	14	13	8.3	10	6.6	4.4	4.1
28	22	e7.0	5.2	5.8	86	14	13	8.3	9.9	6.4	4.3	4.2
29	5.6	e7.0	5.2	5.8	78	13	13	8.2	9.7	6.3	4.4	4.1
30	5.1	e5.2	5.3	6.1	---	13	13	8.2	9.5	6.1	4.6	3.8
31	4.8	---	5.2	6.3	---	13	---	8.2	---	6.1	4.6	---
TOTAL	105.1	198.0	184.3	269.6	1564	910	393	265.0	283.9	243.3	158.5	142.1
MEAN	3.39	6.60	5.95	8.70	53.9	29.4	13.1	8.55	9.46	7.85	5.11	4.74
MAX	22	16	8.4	61	311	80	15	12	12	9.4	6.2	5.9
MIN	1.9	4.8	5.2	5.1	13	13	13	8.2	8.0	6.1	4.3	3.8
AC-FT	208	393	366	535	3100	1800	780	526	563	483	314	282

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	4.43	5.45	11.4	34.7	31.1	26.7	17.0	13.5	7.97	6.71	4.57	4.17
MAX	7.19	7.32	51.7	128	91.7	92.0	37.5	45.5	10.4	13.7	8.09	7.58
(WY)	1990	1990	1997	1997	1998	1995	1995	1995	1998	1995	1995	1998
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 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	4716.8			
ANNUAL MEAN	12.9		14.0	
HIGHEST ANNUAL MEAN			28.2	1995
LOWEST ANNUAL MEAN			6.29	1992
HIGHEST DAILY MEAN	311	Feb 14	1100	Jan 1 1997
LOWEST DAILY MEAN	1.9	Oct 16	1.2	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 12	1.3	Aug 21 1992
INSTANTANEOUS PEAK FLOW	760	Feb 14	1500	Jan 1 1997
INSTANTANEOUS PEAK STAGE	3.76	Feb 14	4.40	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	9360		10140	
10 PERCENT EXCEEDS	16		20	
50 PERCENT EXCEEDS	7.7		7.2	
90 PERCENT EXCEEDS	4.4		2.8	

e Estimated.

11396397 SUCKER RUN AT KANAKA DIVERSION, NEAR FEATHER FALLS, CA—Continued

SUCKER RUN AND KANAKA HYDROELECTRIC PROJECT POWERPLANT, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.8	e14	5.2	24	94	28	20	14	9.3	6.1	5.4
2	2.6	4.8	e9.8	5.3	19	72	27	19	14	9.3	6.2	5.9
3	2.7	4.8	e9.1	5.3	20	62	27	19	14	9.3	6.1	5.4
4	2.8	4.8	e8.4	5.4	26	97	25	19	13	9.4	5.9	5.3
5	2.9	4.8	e6.6	5.4	21	102	25	19	13	9.3	5.6	5.0
6	3.1	4.8	6.3	5.3	20	80	25	19	13	9.3	5.7	4.9
7	3.1	6.0	6.2	5.2	16	79	24	21	13	9.2	5.7	4.9
8	2.7	19	6.1	5.1	16	99	24	28	18	9.1	5.5	5.1
9	2.5	8.9	6.9	5.2	16	117	23	21	16	8.8	5.5	5.0
10	2.4	7.7	7.1	5.3	40	95	23	20	14	8.6	5.5	5.0
11	2.3	7.2	6.5	29	61	85	23	20	14	8.3	5.5	4.9
12	2.3	6.8	6.4	15	107	73	23	19	14	8.1	5.3	4.8
13	2.3	6.6	6.4	8.5	185	65	28	19	13	8.1	5.2	4.8
14	2.2	6.6	6.1	7.6	325	60	24	19	12	8.0	5.1	4.8
15	2.1	6.7	5.9	16	110	54	23	26	12	7.9	5.0	4.8
16	1.9	8.0	5.9	28	71	53	25	25	12	7.9	4.9	4.8
17	1.9	11	5.9	17	55	48	43	22	11	8.0	4.9	4.8
18	2.2	8.4	5.8	43	44	46	33	20	12	7.7	4.8	4.3
19	2.4	15	5.7	32	38	45	26	20	12	7.5	4.8	4.2
20	2.2	17	5.6	30	36	42	25	18	11	7.3	4.8	4.1
21	2.2	14	5.5	20	42	40	24	18	11	7.2	4.8	4.2
22	2.2	e9.2	5.4	18	83	38	24	18	11	7.1	4.8	5.3
23	2.2	e7.7	5.3	22	137	37	25	17	11	7.0	4.7	5.0
24	2.3	e7.7	5.3	97	79	35	22	17	11	6.8	4.7	4.6
25	2.4	e7.7	5.3	57	58	34	21	17	11	6.7	4.6	4.4
26	2.4	e7.7	5.2	31	92	33	20	16	10	6.6	4.5	4.2
27	4.8	e7.7	5.2	24	e257	32	20	16	10	6.6	4.4	4.1
28	22	e7.0	5.2	21	123	32	20	16	9.9	6.4	4.3	4.2
29	5.6	e7.0	5.2	18	115	30	19	15	9.7	6.3	4.4	4.1
30	5.1	e12	5.3	27	---	29	18	15	9.5	6.1	4.6	3.8
31	4.8	---	5.2	27	---	28	---	15	---	6.1	4.6	---
TOTAL	105.1	251.4	198.8	640.8	2236	1836	737	593	369.1	243.3	158.5	142.1
MEAN	3.39	8.38	6.41	20.7	77.1	59.2	24.6	19.1	12.3	7.85	5.11	4.74
MAX	22	19	14	97	325	117	43	28	18	9.4	6.2	5.9
MIN	1.9	4.8	5.2	5.1	16	28	18	15	9.5	6.1	4.3	3.8
AC-FT	208	499	394	1270	4440	3640	1460	1180	732	483	314	282

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	4.43	6.86	17.3	49.9	49.1	44.5	30.5	24.3	14.8	8.41	5.26	4.34
MAX	7.19	12.9	75.5	156	125	113	72.1	71.3	39.6	22.4	13.0	9.52
(WY)	1990	1998	1997	1997	1998	1995	1995	1995	1998	1998	1998	1998
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 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	7511.1			
ANNUAL MEAN	20.5		21.8	
HIGHEST ANNUAL MEAN			41.5	1995
LOWEST ANNUAL MEAN			7.86	1994
HIGHEST DAILY MEAN	325	Feb 14	1110	Jan 1 1997
LOWEST DAILY MEAN	1.9	Oct 16	1.2	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 12	1.3	Aug 21 1992
INSTANTANEOUS PEAK FLOW			1510	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	14900		15770	
10 PERCENT EXCEEDS	44		51	
50 PERCENT EXCEEDS	9.3		9.0	
90 PERCENT EXCEEDS	4.4		2.8	

e Estimated.

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 Canyondam.

DRAINAGE AREA.—491 mi^2.

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, 1,175,000 acre-ft, between gage heights 4,422 ft, invert of outlet, and 4,495.5 ft, maximum storage limit. Dead storage, 8,948 acre-ft. Water is diverted by tunnel and penstock to Butt Valley Powerplant (station 11400600) and then is used for power development in the North Fork Feather River. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather River Basin.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 1,142,960 acre-ft, June 8, 1982, gage height, 4,494.00 ft; minimum, 5,230 acre-ft, Feb. 5, 1918, gage height, 4,416.1 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,090,522 acre-ft, June 8, 11, 13, gage height, 4,492.05 ft; minimum, 823,457 acre-ft, Jan. 7, gage height, 4,481.52 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	94,531		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	954173	933208	880507	828743	869209	934717	974269	1042296	1085716	1058111	982219	903480
2	955438	930195	878293	827545	870188	936983	975549	1045448	1086517	1056259	979394	901745
3	956198	926937	875586	827066	872149	936479	975549	1048079	1087052	1054145	976317	896538
4	955185	924185	872640	825630	872640	935723	977599	1050978	1087052	1051241	972735	894308
5	955438	920688	870188	824664	873867	934968	979908	1053088	1087586	1048869	970691	892824
6	956957	917933	867496	824905	874112	935723	981705	1055995	1088121	1047290	967629	889859
7	957717	915182	865053	823457	874358	937738	984020	1058376	1087854	1045448	965082	887639
8	958985	913683	862858	824664	872885	939756	986337	1062085	1090522	1043609	962031	885422
9	959746	911438	860665	825888	872640	943798	988142	1064200	1090255	1040460	958731	884192
10	960761	909196	858476	826587	875095	945317	990206	1066843	1089989	1038101	955691	883946
11	959239	906708	856048	829462	877554	947090	993049	1068961	1090522	1036269	952910	881734
12	959746	904721	853866	829462	879525	948611	995379	1069755	1090255	1033376	949880	881243
13	960507	901993	852655	829223	884192	950889	999268	1070815	1090522	1031537	946583	879525
14	961523	901250	850236	830662	888378	952152	1002627	1072406	1089989	1028652	944810	878293
15	961777	898771	849508	831623	891835	953921	1005471	1073733	1088923	1025509	941271	875832
16	959492	898026	849021	835953	895299	955185	1008839	1074795	1085983	1022110	937234	873867
17	958985	897034	847564	837882	898026	956704	1012732	1075061	1084647	1020544	934968	873130
18	958985	895051	845622	840296	899764	958985	1015072	1076124	1083580	1016894	934465	871413
19	956198	894556	843925	842957	902489	961015	1018457	1076389	1081447	1015072	933208	869698
20	953921	893813	842957	844895	904969	963047	1021588	1076655	1079848	1013252	932454	868964
21	952657	891094	840296	846835	907703	964573	1024724	1076389	1077985	1010135	932706	865053
22	952152	888625	838605	848049	912186	966101	1027603	1076921	1076655	1008061	932957	861639
23	950637	886407	837882	850719	914932	966610	1030225	1076655	1075061	1005730	930446	858233
24	949372	883700	837640	855078	916682	967374	1032325	1076389	1073733	1003919	927688	855563
25	947597	884930	836676	856776	918934	967629	1033113	1078783	1072937	1001335	923935	852655
26	945823	885176	834749	858476	923435	968649	1034427	1080381	1071080	997452	920688	849994
27	948357	885914	833305	859935	927939	968904	1034427	1080381	1069490	995120	918684	846835
28	944557	883454	832103	860909	930446	969925	1036792	1081713	1067373	992273	915931	844168
29	941776	880998	829942	862370	932957	970946	1039149	1083046	1064729	990465	912186	844410
30	938747	882471	829942	866274	---	971457	1039935	1084114	1062085	987884	908698	842714
31	936227	---	828743	867741	---	972735	---	1084647	---	984792	906957	---
MAX	961777	933208	880507	867741	932957	972735	1039935	1084647	1090522	1058111	982219	903480
MIN	936227	880998	828743	823457	869209	934717	974269	1042296	1062085	984792	906957	842714
a	4486.11	4483.95	4481.74	4483.35	4485.98	4487.55	4490.14	4491.83	4490.98	4488.02	4484.94	4482.32
b	-20984	-53756	-53728	+38998	+65216	+39778	+67200	+44712	-22562	-77293	-77835	-64243

CAL YR 1999 MAX 1109782 MIN 821074 b -10364
WTR YR 2000 MAX 1090522 MIN 823457 b -114497

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

11399500 NORTH FORK FEATHER RIVER NEAR PRATTVILLE, CA

LOCATION.—Lat 40°10'06", long 121°05'31", in NE 1/4 SW 1/4 sec.28, T.27 N., R.8 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank, 0.4 mi downstream from Almanor Dam, 4.5 mi southeast of Prattville, and 9 mi upstream from Butt Creek.

DRAINAGE AREA.—493 mi^2.

PERIOD OF RECORD.—June 1905 to current year. Published as "below Prattville" prior to 1911. No record for January, February, or March 1911. Estimated mean discharge for water year 1911 published in WSP 1315-A.

REVISED RECORDS.—WSP 1245: 1951 (yearly summaries). WSP 1285: 1952 (yearly summaries). WDR CA-88-4: 1987 (monthly and yearly totals for Butt Valley Powerplant).

GAGE.—Water-stage recorder and broad-crested weir. Datum of gage is 4,379.86 ft above sea level. Prior to Oct. 1, 1936, nonrecording gages or water-stage recorders at several sites within 0.5 mi of present site at various datums.

REMARKS.—Flow regulated since 1913 by Lake Almanor (station 11399000) 0.5 mi upstream and since 1924 by Mountain Meadows Reservoir, capacity, 24,000 acre-ft, 12 mi upstream on Hamilton Branch. Water diverted from Lake Almanor to Butt Valley Reservoir (station 11401050) through old Almanor–Butt Creek Tunnel from May 1921 to December 1958, for use at Caribou Powerplant. Old tunnel closed Dec. 30, 1958, and diversion began Dec. 31, 1958, to Butt Valley Powerplant (station 11400600) at upstream end of Butt Valley Reservoir. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft^3/s, Mar. 19, 1907, before construction of dam, gage height, 16.2 ft, at former site, from rating curve extended above 3,700 ft^3/s; no flow at times during 1914, 1919, 1923.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	37	36	37	37	36	37	37	39	38	37
2	36	35	37	36	37	37	36	37	37	39	38	37
3	36	35	37	36	37	37	36	37	37	39	38	37
4	36	35	37	36	37	37	36	37	38	39	38	37
5	36	35	37	36	37	37	36	37	38	39	38	37
6	36	35	37	36	37	37	36	37	38	38	38	37
7	36	35	37	36	37	37	36	37	38	38	38	37
8	36	35	37	36	37	37	36	37	38	38	38	37
9	36	35	37	36	37	37	36	37	38	38	38	37
10	36	35	37	36	37	37	36	37	38	38	38	37
11	36	35	37	37	37	37	36	37	38	38	38	37
12	36	35	37	36	37	37	36	37	38	38	38	37
13	36	35	37	36	37	37	36	37	38	38	38	37
14	36	35	37	36	38	37	36	37	38	38	38	37
15	36	35	37	36	38	37	36	37	38	38	38	37
16	36	35	37	37	38	37	36	37	38	38	38	37
17	36	35	37	36	38	37	36	37	38	38	38	37
18	36	36	37	36	37	37	36	37	38	38	37	37
19	36	37	37	36	37	37	36	37	38	38	37	37
20	36	37	36	36	37	37	36	37	38	38	37	36
21	36	37	36	36	37	37	36	38	38	38	37	36
22	36	37	36	36	38	37	36	38	38	39	37	36
23	36	37	36	37	38	37	36	38	38	39	37	36
24	36	37	36	37	38	37	36	38	38	38	37	36
25	36	37	36	37	37	37	36	37	38	38	37	36
26	36	37	36	37	37	37	36	37	38	38	37	36
27	36	37	36	37	38	37	36	37	38	38	37	36
28	36	37	36	37	38	36	36	37	38	38	37	36
29	36	37	36	37	38	36	36	37	38	38	37	36
30	36	37	36	37	---	36	36	37	38	38	37	36
31	36	---	36	37	---	36	---	38	---	38	37	---
TOTAL	1116	1076	1135	1127	1083	1143	1080	1152	1137	1185	1164	1099
MEAN	36.0	35.9	36.6	36.4	37.3	36.9	36.0	37.2	37.9	38.2	37.5	36.6
MAX	36	37	37	37	38	37	36	38	38	39	38	37
MIN	36	35	36	36	37	36	36	37	37	38	37	36
AC-FT	2210	2130	2250	2240	2150	2270	2140	2280	2260	2350	2310	2180
a	51900	97610	93360	24700	14140	19620	15460	31710	67900	109100	101000	91210

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

11399500 NORTH FORK FEATHER RIVER NEAR PRATTVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1958, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	498	393	371	282	349	272	318	327	349	479	602	569
MAX	1607	1414	1418	1489	2124	1609	1852	2206	1065	1280	1755	1762
(WY)	1931	1931	1938	1946	1938	1929	1938	1938	1935	1929	1929	1929
MIN	3.80	3.32	3.41	3.20	3.20	3.61	2.63	2.02	2.11	8.02	3.72	3.16
(WY)	1942	1940	1937	1944	1944	1944	1939	1939	1939	1943	1937	1937

SUMMARY STATISTICS	WATER YEARS 1925 - 1958	
ANNUAL TOTAL		
ANNUAL MEAN	401	
HIGHEST ANNUAL MEAN	1061	1929
LOWEST ANNUAL MEAN	27.1	1937
HIGHEST DAILY MEAN	2670	May 17 1942
LOWEST DAILY MEAN	.50	Apr 28 1949
ANNUAL SEVEN-DAY MINIMUM	.87	Apr 25 1949
INSTANTANEOUS PEAK FLOW	2710	May 22 1941
INSTANTANEOUS PEAK STAGE	6.95	May 22 1941
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 - 2000, BY WATER YEAR (WY)

MEAN	47.0	44.7	33.2	79.1	77.7	37.4	41.9	49.6	67.4	62.6	59.1	44.6
MAX	510	546	59.6	1901	1800	163	293	352	660	688	596	415
(WY)	1997	1997	1997	1997	1997	1997	1983	1996	1996	1996	1996	1996
MIN	17.3	8.65	7.47	8.67	10.0	9.90	10.1	15.7	16.0	15.4	14.9	15.0
(WY)	1978	1960	1960	1960	1962	1964	1964	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1960 - 2000	
ANNUAL TOTAL	13631		13497			
ANNUAL MEAN	37.3		36.9		53.6	
HIGHEST ANNUAL MEAN					459	1997
LOWEST ANNUAL MEAN					22.3	1962
HIGHEST DAILY MEAN	41	Apr 23	39	Jul 1	2140	Jan 5 1997
LOWEST DAILY MEAN	34	Apr 30	35	Nov 2	2.9	Jan 9 1960
ANNUAL SEVEN-DAY MINIMUM	35	Nov 2	35	Nov 2	4.7	Oct 26 1966
INSTANTANEOUS PEAK FLOW			39	Feb 14	10000	Mar 19 1907
INSTANTANEOUS PEAK STAGE			2.50	Feb 14	16.20	Mar 19 1907
ANNUAL RUNOFF (AC-FT)	27040		26770		38800	
ANNUAL DIVERSION (AC-FT)a	652500		717700			
10 PERCENT EXCEEDS	40		38		40	
50 PERCENT EXCEEDS	37		37		36	
90 PERCENT EXCEEDS	36		36		33	

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 mi^2.

PERIOD OF RECORD.—October 1936 to September 1959, October 1964 to current year. Published as "below tunnel No. 1" 1938–40. Records for water years 1937–38 published in WSP 1515. Records prior to 1964 not equivalent owing to inflow from Almanor–Butt Creek Tunnel.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,300 ft above sea level, from topographic map. Prior to Oct. 5, 1937, at site 200 ft downstream at datum 4 ft lower.

REMARKS.—No regulation upstream from station. Howell–Bunger valve in conduit from Lake Almanor (station 11399000) to Butt Valley Powerplant (station 11400600) is opened for short periods several times a year, causing sharp peaks. Wallack Ditch upstream from station diverts about 3 ft^3/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, 4,080 ft^3/s, Jan. 1, 1997, gage height, 6.22 ft, from rating curve extended above 1,400 ft^3/s; minimum daily, 26 ft^3/s, several days during May and June 1976.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	57	71	54	71	125	188	164	92	60	53	49
2	51	57	68	55	72	119	209	165	88	60	52	51
3	50	57	64	55	72	114	228	165	86	60	52	50
4	50	57	62	54	74	117	243	167	84	60	52	51
5	51	57	63	54	74	131	237	164	82	60	52	52
6	53	57	63	55	81	124	228	156	80	60	52	50
7	53	59	63	55	77	114	225	157	79	60	52	49
8	52	89	59	56	75	109	226	176	82	59	52	48
9	51	66	62	56	90	109	219	156	82	59	52	49
10	51	64	59	62	102	103	209	156	80	58	51	48
11	50	64	61	104	102	111	206	144	78	58	51	48
12	50	62	62	71	95	115	193	133	77	58	51	48
13	50	59	70	72	96	118	350	126	75	58	51	48
14	51	59	62	78	370	127	250	123	74	58	50	48
15	53	63	61	92	215	133	221	149	72	58	49	47
16	53	64	60	155	159	145	234	136	71	58	49	47
17	53	77	60	89	131	150	302	124	70	57	49	46
18	54	68	59	91	118	152	237	121	70	57	49	46
19	54	71	59	114	110	183	206	122	69	57	49	45
20	54	88	59	134	121	178	194	125	67	56	49	46
21	55	75	59	95	147	159	191	129	67	56	49	46
22	55	67	57	84	137	164	190	133	66	56	50	46
23	55	64	56	82	125	188	184	133	65	55	50	47
24	55	62	56	83	116	189	176	135	64	55	49	47
25	55	62	56	82	107	192	171	133	64	55	49	46
26	55	63	55	79	112	191	172	125	64	55	49	46
27	62	66	55	75	196	199	179	119	64	54	48	46
28	91	65	55	72	156	190	182	113	63	54	48	45
29	61	63	55	72	140	184	165	107	61	54	48	45
30	58	78	55	69	---	178	162	103	60	54	48	45
31	57	---	55	72	---	176	---	97	---	53	48	---
TOTAL	1693	1960	1861	2421	3541	4587	6377	4256	2196	1772	1553	1425
MEAN	54.6	65.3	60.0	78.1	122	148	213	137	73.2	57.2	50.1	47.5
MAX	91	89	71	155	370	199	350	176	92	60	53	52
MIN	50	57	55	54	71	103	162	97	60	53	48	45
AC-FT	3360	3890	3690	4800	7020	9100	12650	8440	4360	3510	3080	2830
a	518	488	499	517	483	524	518	553	536	534	515	482

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	367	340	352	299	297	331	339	374	366	385	377	373
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1937 - 2000	
ANNUAL TOTAL	35935		33642			
ANNUAL MEAN	98.5		91.9		350	
HIGHEST ANNUAL MEAN					974	1953
LOWEST ANNUAL MEAN					40.1	1977
HIGHEST DAILY MEAN	320	Apr 26	370	Feb 14	2830	Feb 17 1986
LOWEST DAILY MEAN	50	Sep 12	45	Sep 19	26	May 26 1976
ANNUAL SEVEN-DAY MINIMUM	50	Sep 12	46	Sep 24	26	May 30 1976
INSTANTANEOUS PEAK FLOW			578	Feb 14	4080	Jan 1 1997
INSTANTANEOUS PEAK STAGE			2.25	Feb 14	6.22	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	71280		66730		253800	
ANNUAL INFLOW (AC-FT)a	6130		6170			
10 PERCENT EXCEEDS	183		178		989	
50 PERCENT EXCEEDS	70		64		100	
90 PERCENT EXCEEDS	53		49		43	

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

11401050 BUTT VALLEY RESERVOIR NEAR CARIBOU, CA

LOCATION.—Lat 40°06'59", long 121°08'42", in SE 1/4 SW 1/4 sec.12, T.26 N., R.7 E., Plumas County, Hydrologic Unit 18020121, on center intake tower in Butt Valley Reservoir, 2.5 mi north of Caribou, and 5.4 mi southwest of Canyon Dam.

DRAINAGE AREA.—83.5 mi^2.

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, 49,900 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.

REVISED RECORDS.—WDR CA-00-4 (discharge through Caribou Powerplants).

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 52,667 acre-ft, Feb. 18, 19, 1986, elevation, 4,133.80 ft; minimum, 4,284 acre-ft, Mar. 3, 1997, elevation, 4,094.95 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 49,047 acre-ft, Oct. 14, elevation, 4,131.55 ft; minimum, 24,991 acre-ft, Mar. 22, elevation, 4,115.21 ft.

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

4,090	1,754	4,120	31,592
4,100	8,024	4,130	46,591
4,110	18,395	4,137	57,891

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAILY OBSERVATION AT 2400 HOURS (REVISED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45178	44710	41620	42233	37919	26330	32519	29891	46544	43173	40949	49529
2	45021	44632	41544	41544	40248	27036	32162	29557	46560	42418	40491	48876
3	44710	45492	42772	40324	37919	27828	31877	29139	46371	41650	39841	48126
4	44476	46120	43080	39358	35394	28447	31451	28861	46765	41376	39841	46293
5	44165	47066	43157	38516	32176	28958	31522	28861	46765	41696	39826	45209
6	44554	45806	43080	38666	29515	29417	31451	29209	46702	41727	40248	43142
7	44710	46041	42772	39358	28420	29849	31169	30634	46860	41833	40476	42757
8	44710	45335	42541	39267	26466	30465	31169	31550	46876	42803	40128	42495
9	45021	45413	43157	39191	27966	30887	31028	31820	46908	43342	39629	42541
10	46120	45649	43157	38741	28255	31254	30887	32775	47414	43419	40037	42341
11	46120	45884	43003	38591	28516	31592	30817	33912	46876	43590	40082	41849
12	46434	45413	43157	38965	28722	31948	30747	36141	46277	43808	39795	42094
13	47224	45099	43932	39418	27828	32290	30592	38696	45932	42880	39478	42464
14	47303	43854	44554	39569	27691	32633	30394	40399	46010	43127	40644	42772
15	47699	43311	44477	39493	27457	32975	30338	41772	45947	42957	41513	43327
16	48016	42772	44399	39946	27622	33263	30507	43204	45822	42418	41987	44181
17	48413	42695	44943	38591	27650	33522	30507	44025	45869	42849	42880	44725
18	45492	42772	45099	39071	26873	33811	31550	43745	45994	42865	43388	44492
19	46670	43003	45413	39403	26262	34186	32219	43265	46230	42295	44337	45492
20	46434	42926	45492	40188	25791	33897	33090	42680	46465	41330	44072	46293
21	46434	43080	44865	40022	25724	33782	32875	42772	46860	41544	44445	47240
22	46434	43080	44865	40399	26262	33594	31806	44134	46971	40598	44928	46923
23	46512	43621	45696	41162	26466	33594	31240	44508	46908	40537	46497	48349
24	46591	43699	45492	41544	25590	33450	31169	45194	47240	41681	46214	47129
25	46670	41620	45649	41849	25804	33378	30887	46246	46955	41528	45256	46828
26	46749	38889	46041	42618	24536	33450	31042	46591	46340	40857	44368	46844
27	46749	39342	46120	43080	24908	33306	30831	46797	46246	40689	43917	46828
28	46591	39418	46355	42387	25590	33017	30239	46987	45476	41112	43652	45900
29	46277	39493	46670	42156	---	32889	30408	47003	44399	39811	45775	46387
30	44943	40248	46670	42079	---	32832	30352	46844	43435	39539	47905	46512
31	45256	---	45413	42002	---	32690	---	46860	---	40445	48142	---
MAX	48413	47066	46670	43080	40248	34186	33090	47003	47414	43808	48142	49529
MIN	44165	38889	41544	38516	24536	26330	30239	28861	43435	39539	39478	41849
a	4129.15	4125.90	4129.25	4127.05	4115.65	4120.77	4119.12	4130.17	4127.98	4126.03	4130.98	4129.95
b	+78	-5008	+5165	-3411	-16412	+7100	-2338	+16508	-3425	-2990	+7697	-1630
c	65510	106275	120324	60460	72754	6741	27993	32804	50828	86214	102853	50075

CAL YR 1998 MAX 49370 MIN 33811 b +5618 c 855179
WTR YR 1999 MAX 49529 MIN 24536 b +1334 c 782832

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.

11401050 BUTT VALLEY RESERVOIR NEAR CARIBOU, CA—Continued

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48379	29431	25771	30858	29772	43249	35238	46653	43357	43480	41259	40967
2	46700	29164	26243	30414	28940	41445	36280	46904	42459	43000	40936	41741
3	45144	28898	26903	31391	27506	40951	38619	46826	42229	42306	41151	43295
4	46590	28856	27154	31053	27506	41105	39392	46700	42244	42352	41601	43557
5	46575	28884	27360	30941	28510	43202	40007	46022	42076	42061	41848	44708
6	46747	29815	27587	31137	28968	43541	40828	45347	41368	41894	41445	44865
7	46590	30746	27654	31377	29743	42721	41492	44645	40997	41182	41523	44849
8	46465	31462	27923	31490	31504	41848	42244	44052	40264	40767	41678	45191
9	46481	31547	28414	31053	31618	39932	42922	43464	40007	40660	41894	44661
10	46543	31675	28593	31335	33882	38619	43495	43062	40874	40447	41818	44036
11	46528	32597	28455	31661	35178	37353	44394	42336	40660	40967	41507	43062
12	48935	33227	28607	32104	35475	35990	44238	41663	40920	41725	42306	41585
13	49015	33596	28018	32903	37293	34532	43990	41848	40189	41878	42628	41090
14	49047	32408	29360	32743	39021	33839	43388	41244	39229	42168	42613	41120
15	46747	32018	29915	33354	39917	32670	42798	41445	39572	42107	42644	41059
16	44911	30746	30566	33710	39482	31434	42290	41368	39857	42290	43031	39977
17	44488	30997	31377	33354	39602	30181	42000	41120	39706	42306	44472	39125
18	44488	29958	31632	32641	39721	29276	41476	41059	39036	42690	43649	37368
19	39602	29701	32539	32278	39857	27964	40890	41461	39572	42845	43495	36894
20	38087	29459	32987	32959	40279	26834	40295	41710	39482	42413	44989	36454
21	37323	30126	32917	34184	40523	25758	39557	42767	40431	42521	44771	36077
22	35060	31152	33057	34664	41554	24991	38947	43388	40629	42922	43866	36207
23	33382	31476	32408	36091	41954	25161	38193	44834	40859	42290	42413	37517
24	32162	31803	30538	37071	42214	25973	39110	46133	41321	42092	42260	38329
25	30691	30469	30167	37368	41818	27140	39512	45175	41151	41569	41772	39214
26	29024	29093	30455	37487	42076	28483	40508	44849	41554	41414	42321	39796
27	27667	27815	30318	37027	42984	30153	41538	45222	42382	41337	41229	41383
28	27721	27734	31152	35164	43295	31889	42444	45253	43603	41105	41259	41970
29	27627	27042	31646	33425	43649	33043	44176	43958	44129	41445	41523	39602
30	28510	26393	31590	31689	---	33910	46228	43449	43850	41213	41725	39437
31	29629	---	30997	30816	---	34591	---	43388	---	41167	41074	---
MAX	49047	33596	33057	37487	43649	43541	46228	46904	44129	43480	44989	45191
MIN	27627	26393	25771	30414	27506	24991	35238	41059	39036	40447	40936	36077
a	4118.61	4116.26	4119.59	4119.46	4128.12	4122.10	4129.77	4127.95	4128.25	4126.51	4126.45	4125.37
b	-16883	-3236	+4604	-181	+12833	-9058	+11637	-2840	+462	-2683	-93	-1637
c	70900	111100	86340	31700	13830	37790	20290	42610	64420	106100	96080	92840

CAL YR 1999 MAX 49529 MIN 24536 b -14416 c 375200
WTR YR 2000 MAX 49047 MIN 24991 b -7075 c 774000

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 mi^2.

PERIOD OF RECORD.—October 1969 to current year. July 1959 to September 1969 in files of Pacific Gas & Electric Co.

REVISED RECORDS.—WDR CA-78-4: 1977 (monthly and yearly summaries).

GAGE.—Water-stage recorder. Datum of gage is 2,800.77 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow regulated by Butt Valley Reservoir (station 11401050), Lake Almanor (station 11399000), Belden Reservoir, and Mountain Meadows Reservoir, combined capacity, 1,267,000 acre-ft. Diversion to Belden Powerplant (station 11403050) began on Aug. 27, 1969. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,460 ft^3/s, Jan. 1, 1997, gage height, 9.17 ft; minimum daily, 2.3 ft^3/s, Oct. 25, 1981.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	62	62	63	63	63	136	145	142	141	144	143
2	63	62	62	63	64	63	140	144	142	142	145	142
3	63	61	62	63	63	62	148	142	142	141	144	142
4	114	62	62	63	63	63	171	142	142	141	144	117
5	151	62	62	62	63	63	172	142	142	141	143	62
6	150	62	62	63	63	63	163	142	142	142	144	61
7	152	62	63	63	64	63	160	142	141	143	143	61
8	154	62	62	63	63	63	156	142	141	143	144	62
9	154	62	62	63	63	63	157	142	141	143	143	61
10	153	62	61	63	63	63	157	142	141	143	143	61
11	153	62	62	63	63	63	152	142	141	143	143	61
12	153	62	62	63	63	63	493	142	142	143	143	61
13	153	62	62	63	62	63	756	142	142	143	143	61
14	154	62	62	63	65	63	775	141	142	143	143	61
15	93	62	62	63	65	63	763	141	142	143	142	61
16	61	62	63	62	64	63	780	141	142	144	143	61
17	61	62	62	64	63	63	772	142	142	144	144	61
18	64	62	62	63	63	63	772	142	142	143	141	61
19	60	62	62	63	63	63	766	142	142	143	143	61
20	63	62	62	63	63	63	790	142	142	144	145	61
21	64	62	62	64	63	63	779	142	142	143	141	61
22	64	62	63	63	62	63	756	143	142	143	143	60
23	64	62	63	63	63	63	772	142	142	142	145	59
24	63	62	63	64	62	63	773	142	142	143	142	59
25	65	62	63	64	62	68	774	142	142	143	142	59
26	62	62	63	64	63	107	803	141	142	144	142	59
27	62	62	63	63	63	105	767	142	142	143	142	59
28	62	62	63	63	62	106	320	142	142	144	144	59
29	62	62	63	63	63	153	145	142	142	143	143	58
30	62	62	63	64	---	186	144	141	142	144	143	289
31	62	---	63	63	---	136	---	141	---	144	142	---
TOTAL	2924	1859	1933	1957	1829	2372	14412	4402	4255	4429	4436	2344
MEAN	94.3	62.0	62.4	63.1	63.1	76.5	480	142	142	143	143	78.1
MAX	154	62	63	64	65	186	803	145	142	144	145	289
MIN	60	61	61	62	62	62	136	141	141	141	141	58
AC-FT	5800	3690	3830	3880	3630	4700	28590	8730	8440	8780	8800	4650
a	61320	101400	86840	31970	16030	42800	0	37990	62350	104000	93010	89110

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

11401112 NORTH FORK FEATHER RIVER BELOW BELDEN DAM, CA Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	132	141	120	136	111	108	177	169	147	139	136	123
MAX	1414	2487	1664	1200	616	591	743	549	374	199	173	1134
(WY)	1975	1975	1975	1997	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1970 - 2000	
ANNUAL TOTAL	48242		47152			
ANNUAL MEAN	132		129		137	
HIGHEST ANNUAL MEAN					745	1975
LOWEST ANNUAL MEAN					76.3	1977
HIGHEST DAILY MEAN	417	Apr 4	803	Apr 26	2800	Nov 20 1974
LOWEST DAILY MEAN	60	Oct 19	58	Sep 29	2.3	Oct 25 1981
ANNUAL SEVEN-DAY MINIMUM	62	Oct 28	59	Sep 23	3.5	Oct 25 1981
INSTANTANEOUS PEAK FLOW			907	Apr 26	3460	Jan 1 1997
INSTANTANEOUS PEAK STAGE			6.03	Apr 26	9.17	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	95690		93530		99060	
ANNUAL DIVERSION (AC-FT) a	713100		726800			
10 PERCENT EXCEEDS	202		151		150	
50 PERCENT EXCEEDS	143		64		68	
90 PERCENT EXCEEDS	62		62		60	

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

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 mi^2.

PERIOD OF RECORD.—October 1990 to current year (low-flow records only).

GAGE.—Water-stage recorder and V-notch sharp-crested weir in concrete control. Elevation of gage is 5,300 ft above sea level, from topographic map.

REMARKS.—No records computed above 12 ft^3/s. Flow regulated at diversion dam 20 ft upstream. Some water is diverted to Five Bears Powerplant and bypasses this gage. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Five Bears Hydro, 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	4.4	3.4	3.3	3.6	6.0	10	10	10	3.2	4.1	3.0
2	4.6	4.3	3.5	3.3	3.6	6.7	10	10	10	3.4	4.0	3.0
3	4.2	4.3	3.4	3.4	3.6	6.8	10	11	10	3.3	4.1	3.0
4	4.2	4.4	3.4	3.4	3.5	6.8	10	11	10	3.2	4.0	3.1
5	4.2	4.7	3.4	3.5	3.5	11	10	11	10	3.2	3.6	3.0
6	4.2	4.6	3.4	3.4	3.5	11	10	10	10	3.2	3.8	3.1
7	3.9	4.7	3.4	3.4	4.1	11	10	11	9.7	3.2	3.7	3.1
8	3.6	4.3	3.4	3.4	3.5	10	11	10	9.8	3.2	3.7	3.2
9	4.1	3.2	3.6	3.4	3.5	10	10	11	9.6	3.2	3.7	3.1
10	4.0	3.2	3.4	3.4	3.5	10	11	10	9.0	3.2	3.7	3.1
11	4.0	3.2	3.4	3.8	3.6	10	11	10	8.3	3.6	3.6	3.1
12	3.9	3.2	3.4	3.4	3.6	11	11	10	8.2	4.1	3.6	3.2
13	3.9	3.2	3.5	3.4	4.6	10	10	10	8.0	4.1	3.7	3.1
14	3.9	3.2	3.4	3.4	5.3	11	10	10	7.8	4.1	3.6	3.0
15	3.9	3.2	3.4	3.5	5.3	11	10	10	7.6	4.2	3.5	3.0
16	3.9	3.2	3.4	3.5	4.2	11	10	10	7.2	4.1	3.5	3.2
17	3.9	4.2	3.4	3.5	3.7	10	10	11	4.6	4.1	3.4	3.2
18	3.9	3.5	3.4	3.6	3.5	11	10	11	3.3	4.1	3.5	3.1
19	3.9	3.4	3.4	3.6	3.5	11	10	10	3.3	4.1	3.2	3.2
20	3.9	3.4	3.4	3.6	3.5	10	10	10	3.3	4.3	3.4	3.1
21	3.9	3.4	3.4	3.5	3.6	10	11	10	3.4	4.3	3.2	3.1
22	3.9	3.6	3.4	3.5	3.6	10	11	11	3.8	4.3	3.2	3.1
23	3.9	3.4	3.4	3.5	3.6	10	11	11	4.7	4.3	3.2	3.0
24	3.9	3.4	3.4	4.0	3.5	10	11	11	3.8	4.3	3.2	3.0
25	3.9	3.4	3.4	3.8	3.5	10	11	10	3.2	4.2	3.2	2.9
26	3.9	3.4	3.4	3.5	3.5	10	11	10	3.2	4.4	3.2	2.9
27	4.5	3.4	3.4	3.5	3.9	11	10	10	3.2	4.2	3.1	2.9
28	6.8	3.4	3.4	3.4	3.5	10	10	10	3.3	4.2	3.2	2.8
29	4.7	3.4	3.4	3.5	3.5	11	11	10	3.4	4.1	3.2	2.9
30	4.5	3.9	3.3	3.5	---	11	10	10	3.2	4.1	3.1	3.0
31	4.4	---	3.3	3.5	---	11	---	10	---	4.0	3.0	---
TOTAL	129.0	110.5	105.6	108.4	108.9	309.3	311	320	194.9	119.5	108.2	91.5
MEAN	4.16	3.68	3.41	3.50	3.76	9.98	10.4	10.3	6.50	3.85	3.49	3.05
MAX	6.8	4.7	3.6	4.0	5.3	11	11	11	10	4.4	4.1	3.2
MIN	3.6	3.2	3.3	3.3	3.5	6.0	10	10	3.2	3.2	3.0	2.8
AC-FT	256	219	209	215	216	613	617	635	387	237	215	181

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 Keddie.

DRAINAGE AREA.—184 mi^2.

PERIOD OF RECORD.—October 1933 to current year.

REVISED RECORDS.—WSP 1041: 1938(M).

GAGE.—Water-stage recorder. Datum of gage is 3,129.86 ft above sea level.

REMARKS.—Records good. Low flow regulated by five small reservoirs having a combined capacity of 800 acre-ft. Approximately 4,600 acres irrigated upstream from station (from information provided by U.S. Forest Service). City of Quincy diverts about 450 acre-ft annually for municipal supply. See schematic diagram of North Fork Feather River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,100 ft^3/s, Jan. 2, 1997, gage height, 15.68 ft, from rating curve extended above 5,200 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 3.0 ft^3/s, Sept. 4, 5, 1988.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,700 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	2015	2,470	5.77	Feb. 27	0545	5,230	8.10
Feb. 14	1145	6,770	9.17				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	54	132	61	316	946	362	351	170	52	38	27
2	35	55	108	63	307	769	393	350	160	45	37	46
3	39	53	96	62	301	644	464	360	148	54	33	47
4	38	56	84	64	371	575	545	368	136	52	28	41
5	34	53	79	63	343	727	582	356	132	54	24	35
6	39	52	76	60	395	744	513	337	129	46	32	40
7	46	52	76	63	347	611	481	316	123	50	35	37
8	44	117	72	61	312	586	493	353	135	49	34	37
9	43	84	73	61	295	607	468	341	150	44	28	38
10	41	68	75	63	414	564	433	327	134	43	37	36
11	41	65	70	211	516	561	430	292	124	41	26	34
12	38	61	69	227	707	575	441	260	113	41	30	26
13	37	60	80	155	1100	561	763	240	104	41	24	25
14	37	59	77	161	4850	589	669	231	115	45	33	30
15	38	63	73	312	2190	618	522	249	99	39	33	30
16	39	63	72	779	1290	601	502	256	94	39	29	26
17	41	114	70	360	906	578	806	230	90	36	34	36
18	41	88	70	698	683	519	707	220	87	37	25	32
19	42	90	68	651	532	579	526	230	79	36	25	24
20	40	179	68	706	516	604	453	249	79	37	26	31
21	41	136	68	418	587	487	440	265	71	33	35	32
22	42	98	67	358	699	431	448	279	73	39	34	31
23	43	83	65	399	1040	436	416	279	68	38	33	36
24	44	77	64	1500	751	449	379	292	62	28	33	37
25	44	73	63	1500	568	457	357	294	70	32	25	39
26	43	71	63	848	717	461	364	268	67	35	24	31
27	47	70	62	515	3610	481	385	249	67	49	22	33
28	143	68	61	374	1800	474	409	231	64	44	24	34
29	70	67	62	303	1250	439	362	206	53	37	30	27
30	58	99	62	358	---	405	342	196	53	43	25	35
31	55	---	62	393	---	372	---	183	---	35	24	---
TOTAL	1421	2328	2287	11847	27713	17450	14455	8658	3049	1294	920	1013
MEAN	45.8	77.6	73.8	382	956	563	482	279	102	41.7	29.7	33.8
MAX	143	179	132	1500	4850	946	806	368	170	54	38	47
MIN	34	52	61	60	295	372	342	183	53	28	22	24
AC-FT	2820	4620	4540	23500	54970	34610	28670	17170	6050	2570	1820	2010

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.6	131	285	446	534	568	565	430	175	53.1	29.3	31.0
MAX	702	1015	1498	2657	2843	2043	1715	1301	755	187	74.6	63.8
(WY)	1963	1982	1956	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1934 - 2000	
ANNUAL TOTAL	101523		92435			
ANNUAL MEAN	278		253		274	
HIGHEST ANNUAL MEAN					641	1995
LOWEST ANNUAL MEAN					34.1	1977
HIGHEST DAILY MEAN	5390	Feb 9	4850	Feb 14	18000	Jan 2 1997
LOWEST DAILY MEAN	30	Aug 18	22	Aug 27	3.0	Sep 4 1988
ANNUAL SEVEN-DAY MINIMUM	34	Sep 8	25	Aug 25	4.4	Aug 18 1934
INSTANTANEOUS PEAK FLOW			6770	Feb 14	22100	Jan 2 1997
INSTANTANEOUS PEAK STAGE			9.17	Feb 14	15.68	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	201400		183300		198600	
10 PERCENT EXCEEDS	633		588		655	
50 PERCENT EXCEEDS	104		76		90	
90 PERCENT EXCEEDS	38		33		24	

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

LOCATION.—Lat 39°58'49", long 121°16'33", in SW 1/4 NW 1/4 sec.35, T.25 N., R.6 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank, 0.7 mi downstream from Rock Creek Diversion Dam, and 5.0 mi northeast of Storrie.

DRAINAGE AREA.—1,773 mi^2.

PERIOD OF RECORD.—October 1985 to February 1986, October 1986 to current year. Unpublished records for water years 1982–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Elevation of gage is 2,120 ft above sea level, from topographic map.

REMARKS.—Low and medium flow regulated by Rock Creek Forebay 0.7 mi upstream. Most of the flow is diverted to Rock Creek Powerplant (station 11403800). Diversion to Rock Creek Powerplant began Feb. 28, 1950. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 91,600 ft^3/s, Jan. 2, 1997, gage height, 31.85 ft; minimum daily, 50 ft^3/s, Feb. 7, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	109	76	67	62	1080	54	122	119	170	161	116
2	198	106	74	68	60	1180	55	122	119	172	120	116
3	196	93	74	68	59	1000	55	122	118	170	126	116
4	249	98	74	68	58	787	56	122	118	171	125	116
5	294	75	72	64	58	759	55	122	118	171	126	116
6	306	71	74	60	58	829	55	122	118	168	126	113
7	314	73	70	59	57	415	54	123	118	171	126	109
8	325	75	72	59	57	212	55	125	118	173	120	110
9	322	72	69	59	57	220	54	122	118	163	114	109
10	315	70	69	58	59	165	54	122	118	167	114	110
11	337	70	70	60	60	67	54	121	118	150	115	109
12	341	70	69	57	64	155	55	121	117	167	114	109
13	306	70	68	57	151	223	714	121	117	167	114	109
14	326	69	67	57	11500	303	629	122	159	169	114	109
15	185	68	72	59	7320	627	159	123	173	172	113	109
16	155	69	68	1050	3340	630	77	122	165	167	114	109
17	145	71	68	371	1050	637	644	122	162	166	112	109
18	145	61	69	695	168	462	779	122	134	171	114	513
19	152	63	69	1160	68	645	262	122	156	165	112	577
20	143	63	68	885	65	989	56	122	178	172	109	207
21	142	60	68	239	65	480	55	122	172	173	114	655
22	145	57	69	65	72	74	54	121	171	164	188	599
23	147	90	68	66	488	62	54	122	174	171	117	121
24	143	76	68	1310	92	61	53	121	170	168	115	115
25	145	77	68	1640	70	61	53	121	171	170	112	115
26	148	77	68	67	73	61	53	121	174	172	114	115
27	149	76	68	64	6930	59	54	120	176	166	113	114
28	137	76	68	63	4670	55	54	119	170	170	112	115
29	142	74	68	62	1680	55	53	119	166	171	113	114
30	146	75	68	64	---	55	93	119	174	167	113	114
31	140	---	68	63	---	54	---	119	---	174	129	---
TOTAL	6537	2254	2161	8784	38511	12462	4552	3766	4379	5228	3729	5368
MEAN	211	75.1	69.7	283	1328	402	152	121	146	169	120	179
MAX	341	109	76	1640	11500	1180	779	125	178	174	188	655
MIN	137	57	67	57	57	54	53	119	117	150	109	109
AC-FT	12970	4470	4290	17420	76390	24720	9030	7470	8690	10370	7400	10650
a	73700	123600	116400	105600	146100	183900	163400	137800	105800	122800	110500	105300

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	92.1	323	1231	863	1447	856	887	452	122	118	134
MAX	211	226	3012	12700	3378	8612	5384	7371	2684	169	178	313
(WY)	2000	1999	1997	1997	1996	1995	1995	1995	1995	2000	1997	1997
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	159454		97731			
ANNUAL MEAN	437		267		554	
HIGHEST ANNUAL MEAN					2333	1995
LOWEST ANNUAL MEAN					77.7	1988
HIGHEST DAILY MEAN	15400	Feb 9	11500	Feb 14	74400	Jan 2 1997
LOWEST DAILY MEAN	57	Nov 22	53	Apr 24	50	Feb 7 1989
ANNUAL SEVEN-DAY MINIMUM	63	Nov 16	53	Apr 23	51	Dec 22 1993
INSTANTANEOUS PEAK FLOW			19500	Feb 14	91600	Jan 2 1997
INSTANTANEOUS PEAK STAGE			17.95	Feb 14	31.85	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	316300		193800		401000	
ANNUAL DIVERSION (AC-FT)a	1514000		1495000			
10 PERCENT EXCEEDS	1090		384		832	
50 PERCENT EXCEEDS	141		117		108	
90 PERCENT EXCEEDS	71		58		53	

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

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

LOCATION.—Lat 39°54'09", long 121°13'36", in SW 1/4 SW 1/4 sec.29, T.24 N., R.7 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on left bank, 150 ft upstream from right abutment of Lower Bucks Lake Dam, 200 ft upstream from outlet, and 3.4 mi northwest of Bucks Lodge.

PERIOD OF RECORD.—October 1986 to current year. Unpublished records for water years 1981–84 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder in 3-ft steel pipe. Elevation of gage is 5,050 ft above sea level.

REMARKS.—Conduit diverts from channel below Three Lakes Reservoir, capacity, 513 acre-ft, and from 12 additional diversions along the conduit. Water is used for power at Bucks Creek Powerplant (station 11403700) and Grizzly Powerplant (station 11404240). See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 71 ft^3/s, Apr. 29, 1995, May 17, 1996; minimum daily, no flow for many days in the 1997 to 2000 water years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.8	4.5	2.1	7.3	4.8	16	21	.00	2.8	1.1	1.0
2	.00	7.6	3.9	2.1	7.7	4.7	23	18	.00	2.7	1.1	1.6
3	.00	7.3	3.4	2.1	7.3	4.8	30	18	.00	2.6	1.1	1.2
4	.00	7.0	3.2	2.0	6.5	6.7	37	23	.00	2.5	1.1	1.0
5	6.8	6.6	3.1	2.0	7.1	9.0	32	30	.00	2.5	1.1	5.3
6	13	5.9	2.9	1.9	7.9	7.8	30	27	.00	2.4	1.0	11
7	13	5.4	2.9	1.4	6.7	6.9	32	24	.00	2.3	1.0	11
8	13	5.6	2.8	1.4	6.5	7.6	33	37	.00	2.2	1.1	11
9	12	4.6	2.9	1.4	7.9	8.6	29	34	.00	2.0	1.0	11
10	12	4.0	3.2	1.9	9.1	6.9	30	15	.00	1.8	1.0	11
11	12	3.5	2.9	5.6	7.3	7.0	34	.38	.00	1.7	.97	11
12	12	2.7	2.8	2.8	6.7	7.4	39	.16	.00	2.2	.95	11
13	12	2.1	3.0	4.4	8.7	7.5	48	.28	.00	2.6	.93	10
14	12	1.8	2.8	4.4	24	8.2	32	.60	.00	2.5	.93	10
15	11	2.7	2.7	11	9.1	8.5	27	.58	.00	2.3	.91	10
16	11	3.6	2.7	11	7.9	9.1	25	.53	.00	2.2	.89	10
17	11	5.0	2.7	6.7	6.8	9.2	31	.52	.00	2.1	.87	9.8
18	11	4.0	2.8	21	6.1	9.4	23	.44	.00	2.1	.85	9.6
19	11	4.8	2.7	24	5.7	13	20	.29	.00	2.0	.84	9.5
20	10	8.0	3.1	17	5.7	12	20	.16	.00	1.9	.83	9.2
21	10	5.5	3.0	11	5.9	9.8	23	.04	.00	1.8	.82	9.0
22	9.9	4.2	2.7	9.2	5.1	10	24	.03	.00	1.7	.80	8.9
23	9.7	3.5	2.7	9.4	5.6	13	24	.03	.00	1.6	.81	8.8
24	9.5	3.1	2.6	14	5.5	14	22	.02	.00	1.6	.82	8.5
25	9.3	2.9	2.5	12	5.0	15	23	.01	.00	1.5	.78	8.3
26	9.1	2.9	2.5	9.0	5.4	16	26	.00	2.1	1.5	.78	8.0
27	11	3.4	2.4	7.9	7.8	17	28	.00	4.0	1.5	.74	7.8
28	9.5	3.6	2.4	7.2	5.5	16	29	.00	3.7	1.4	.74	7.6
29	8.6	3.5	2.3	6.9	5.1	16	25	.00	3.4	1.3	.75	7.4
30	8.3	4.6	2.3	6.5	---	15	26	.00	3.1	1.2	.74	7.2
31	8.0	---	2.2	6.2	---	14	---	.00	---	1.2	.74	---
TOTAL	285.70	137.2	88.6	225.5	212.9	314.9	841	251.07	16.30	61.7	28.09	246.7
MEAN	9.22	4.57	2.86	7.27	7.34	10.2	28.0	8.10	.54	1.99	.91	8.22
MAX	13	8.0	4.5	24	24	17	48	37	4.0	2.8	1.1	11
MIN	.00	1.8	2.2	1.4	5.0	4.7	16	.00	.00	1.2	.74	1.0
AC-FT	567	272	176	447	422	625	1670	498	32	122	56	489

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

MEAN	3.52	4.05	5.96	5.87	8.87	16.0	26.9	26.7	13.3	5.84	2.82	3.33
MAX	9.22	8.15	27.5	19.2	38.7	42.7	59.6	66.6	57.3	30.5	7.35	8.22
(WY)	2000	1990	1997	1995	1996	1989	1989	1993	1993	1995	1992	2000
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1998	1998	1998	1998	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	511.50		2709.66			
ANNUAL MEAN	1.40		7.40		10.3	
HIGHEST ANNUAL MEAN					21.6	1993
LOWEST ANNUAL MEAN					.000	1998
HIGHEST DAILY MEAN	13	Oct 6	48	Apr 13	71	Apr 29 1995
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jan 2 1997
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	May 26	.00	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	1010		5370		7430	
10 PERCENT EXCEEDS	5.4		21		32	
50 PERCENT EXCEEDS	.00		4.6		4.5	
90 PERCENT EXCEEDS	.00		.02		.00	

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 mi^2.

PERIOD OF RECORD.—Water years 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 or Grizzly Powerplant (station 11304240), which discharges into Grizzly Creek. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather River Basin.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 107,278 acre-ft, May 17, 1996, elevation, 5,157.9 ft; minimum, 12,330 acre-ft, Feb. 27, 1929, elevation, 5,090.7 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 100,329 acre-ft, June 13, elevation, 5,154.13 ft; minimum, 48,115 acre-ft, Dec. 30, elevation, 5,121.90 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74723	63572	53314	48186	56272	67129	72682	89048	97810	96486	87211	77563
2	74494	63133	52925	48229	56007	67365	72992	89637	97936	96343	86728	77431
3	74494	62712	52524	48243	56110	67555	73156	90037	98025	96361	86158	76952
4	74233	62246	52184	48271	56022	67808	73616	90596	98314	96414	85642	76502
5	73908	61814	51875	48341	56286	68141	74103	91227	98350	96307	85247	75956
6	73940	61368	51875	48382	56478	68396	74559	91579	98603	95810	84735	75807
7	73534	61093	51875	48410	56626	68651	74984	91878	98892	95739	84275	75708
8	73288	60925	51713	48438	56685	69068	75477	92533	99309	95279	83800	75198
9	73091	60498	51537	48480	56699	68587	75972	92941	99563	95297	83306	74739
10	72568	60165	50926	48620	57129	67318	76453	93440	99800	95350	82812	74576
11	72096	59782	50551	49140	57532	65606	76969	93422	99982	95385	82336	74070
12	71658	59370	50522	49253	57936	64697	77530	93351	100237	95173	81828	73616
13	71190	58975	50307	49522	58688	70197	78742	93440	100329	94662	81339	73353
14	70725	58552	49949	49607	60757	70420	79428	93440	100036	94152	80836	72911
15	70148	58191	49835	50106	61353	70612	80000	93565	99709	93672	80635	72551
16	69873	57936	49792	50551	61829	70821	80618	93851	99309	93422	80184	72063
17	69437	57621	49409	50767	62123	70885	81626	93958	98964	92923	80068	71869
18	68971	57219	49423	51406	62417	70901	82251	93958	98585	92497	79781	71384
19	68971	57115	49366	52110	62665	71158	82709	94240	98458	92196	79496	70933
20	68046	56951	48957	52569	63008	71287	83187	94398	98548	92143	79412	70917
21	67634	56581	48564	52970	63384	71029	83682	94539	98260	91878	79160	70789
22	67176	56198	48494	53104	63981	71078	84224	94944	97864	91614	79160	70644
23	66684	55817	48452	53614	64323	71303	84718	95385	97810	91367	79143	70644
24	66223	55409	48200	54483	64572	71545	85213	95651	97900	91051	79143	70628
25	65780	55031	48229	54901	64775	71820	85659	96112	97846	90543	79143	70628
26	65355	54641	48257	55147	65481	71804	86227	96396	97666	90090	79143	70500
27	65559	54282	48299	55336	66191	72047	86746	96735	97522	89620	78675	70165
28	65323	54182	48341	55481	66525	72291	87364	96789	97487	89135	78542	69970
29	64885	53765	48172	55613	66955	72649	87877	96967	97039	88668	78043	69889
30	64432	53644	48115	56007	---	72633	88410	97039	96985	88152	77662	69421
31	63997	---	48143	56125	---	72617	---	97433	---	87689	77497	---
MAX	74723	63572	53314	56125	66955	72649	88410	97433	100329	96486	87211	77563
MIN	63997	53644	48115	48186	56007	64697	72682	89048	96985	87689	77497	69421
a	5132.59	5125.72	5121.92	5127.42	5134.47	5138.00	5147.41	5152.53	5152.28	5146.99	5140.97	5136.02
b	-10912	-10353	-5501	+7982	+10830	+5662	+15793	+9023	-448	-9296	-10192	-8076

CAL YR 1999 MAX 100833 MIN 48115 b -6307
WTR YR 2000 MAX 100329 MIN 48115 b -5488

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

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 mi^2.

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 or Grizzly Powerplant (station 11404240) and discharges into Grizzly Creek for power development downstream. Figures given, including extremes, represent total contents at 2400 hours. See schematic diagram of North Fork Feather River Basin.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 6,203 acre-ft, May 18, 1996, elevation, 5,024.6 ft; minimum, 99 acre-ft, Sept. 9, 1993, elevation, 4,956.1 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 5,748 acre-ft, Mar. 5, elevation, 5,021.30 ft; minimum, 3,960 acre-ft, July 24, elevation, 5,007.07 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Feather River Power Co. in 1928)

4,950	24	5,000	3,175
4,960	194	5,010	4,307
4,970	624	5,020	5,573
4,980	1,314	5,030	6,981
4,990	2,171		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4963	4619	4954	5067	4598	5661	4721	4680	4570	5332	4108	5199
2	5001	4487	4920	5051	4706	5678	4559	4554	4625	5380	4089	5172
3	4976	4337	4984	5035	4576	5690	4753	4710	4717	5261	4127	5264
4	4904	4262	5026	5020	4798	5713	4837	4653	4587	5243	4162	5174
5	5175	4216	5037	5003	4814	5748	4910	4563	4803	5166	4045	5288
6	4939	4353	5036	4987	4826	5601	4977	4629	4811	5402	4045	5329
7	4997	4359	5036	4969	4831	5597	5048	4635	4818	5196	4227	5097
8	5056	4421	4897	4689	4618	5367	5036	4613	4836	5439	4284	5169
9	5040	4240	5074	4674	4806	5399	5048	4714	4844	5354	4416	5300
10	4949	4254	4934	4665	4833	5174	5074	4515	4851	5337	4575	5143
11	4928	4286	5115	4706	4872	5008	5121	4548	4858	5197	4646	5212
12	4942	4384	4969	4699	4897	4927	5213	4624	4865	5179	4823	5284
13	4874	4399	4927	4701	4954	4939	5357	4514	4918	5187	5132	5148
14	4910	4542	5130	4697	5133	4932	5449	4630	4906	5271	5286	5227
15	5039	4358	5007	4736	5201	4630	5332	4674	5049	5284	5205	5212
16	4906	4392	4910	4748	5250	4650	5262	4550	5139	5139	5396	5334
17	4908	4386	5170	4609	5274	4596	5351	4554	5137	5217	5217	5183
18	4892	4369	5027	4580	5294	4665	5423	4685	5227	5237	5236	5249
19	4892	4234	4887	4651	5312	4640	5479	4514	5433	5002	5213	5437
20	4756	4505	5064	4690	5337	4531	5535	4576	5228	4600	5231	5218
21	4722	4709	5063	4712	5361	4671	5598	4641	5011	4475	5424	5280
22	4559	4749	5046	4722	5415	4702	5667	4635	5338	4358	5395	5245
23	4535	4724	4920	4761	5439	4585	5703	4505	5332	4110	5367	5235
24	4546	4682	5173	4840	5455	4608	5520	4645	5236	3960	5341	5222
25	4525	4845	5123	4876	5467	4531	5487	4559	5294	4005	5325	5212
26	4560	5013	5006	4892	5526	4816	5077	4618	5258	5104	5325	5218
27	4645	5175	4987	4902	5593	4750	4865	4493	5271	4474	5295	5206
28	4686	4897	4927	4910	5616	4770	4795	4633	5169	4189	5139	5347
29	4612	4897	5118	4917	5647	4538	4720	4531	5421	4347	5129	5196
30	4634	4952	5164	4890	---	4635	4756	4793	5197	4290	5317	5374
31	4601	---	5129	4608	---	4601	---	4778	---	4109	5325	---
MAX	5175	5175	5173	5067	5647	5748	5703	4793	5433	5439	5424	5437
MIN	4525	4216	4887	4580	4576	4531	4559	4493	4570	3960	4045	5097
a	5012.44	5015.23	5016.63	5012.50	5020.55	5012.44	5013.69	5013.86	5017.16	5008.35	5018.14	5018.51
b	-539	+351	+177	-521	+1039	-1046	+155	+22	+419	-1088	+1216	+49

CAL YR 1999 MAX 5414 MIN 3524 b +762
WTR YR 2000 MAX 5748 MIN 3960 b +234

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

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 mi^2.

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 Sept. 19, 1990, to Sept. 24, 1998. Ultrasonic-velocity meter since Sept. 24, 1998. Elevation of gage is 4,850 ft above sea level, from topographic map.

REMARKS.—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 or Grizzly Powerplant (station 11404240). 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.8	3.9	1.5	1.5	1.6	3.8	3.8	3.8	4.0	3.7	4.0
2	3.9	3.8	2.5	1.5	1.5	1.6	3.8	3.8	3.8	4.0	3.7	3.9
3	3.9	3.8	1.5	1.5	1.5	1.6	3.8	3.8	3.8	3.9	3.7	4.0
4	3.9	3.8	1.5	1.5	1.5	1.6	3.8	3.8	3.8	3.9	3.7	4.0
5	3.9	3.7	1.5	1.5	1.5	1.6	3.9	3.8	3.8	3.9	3.7	4.0
6	3.9	3.7	1.5	1.5	1.5	1.6	3.9	3.8	3.8	4.0	3.7	4.0
7	3.9	3.8	1.5	1.5	1.5	1.6	3.9	3.8	3.8	4.0	3.7	3.9
8	3.9	3.8	1.5	1.5	1.5	1.6	3.9	3.8	3.9	4.0	3.7	3.9
9	3.9	3.8	1.5	1.5	1.5	1.6	3.9	3.8	3.9	4.0	3.8	4.0
10	3.9	3.7	1.5	1.5	1.5	1.5	3.9	3.8	3.9	4.0	3.8	4.0
11	3.9	3.7	1.5	1.5	1.5	1.5	3.9	3.8	3.9	3.9	3.8	3.9
12	3.9	3.8	1.5	1.5	1.5	1.5	3.9	3.8	3.9	3.9	3.8	4.0
13	3.9	3.8	1.5	1.5	1.5	1.5	4.0	3.8	3.9	3.9	3.9	4.0
14	3.9	3.8	1.5	1.5	1.5	1.5	4.0	3.8	3.9	4.0	3.9	4.0
15	3.9	3.8	1.5	1.5	1.5	1.5	4.0	3.8	3.9	4.0	4.0	3.9
16	3.9	3.8	1.5	1.5	1.5	1.5	4.0	3.8	3.9	3.9	4.0	4.0
17	3.9	3.8	1.5	1.5	1.5	1.5	4.0	3.8	3.9	3.9	4.0	4.0
18	3.9	3.7	1.5	1.5	1.5	1.5	4.0	3.8	3.9	4.0	3.9	4.0
19	3.9	3.7	1.5	1.5	1.6	1.5	4.0	3.8	4.0	3.9	4.0	4.0
20	3.9	3.8	1.5	1.5	1.6	1.5	4.0	3.8	4.0	3.8	3.9	4.0
21	3.8	3.8	1.5	1.5	1.6	1.5	4.0	3.8	3.9	3.8	4.0	3.9
22	3.8	3.9	1.5	1.5	1.6	1.5	4.0	3.8	3.9	3.8	4.0	4.0
23	3.8	3.8	1.5	1.5	1.6	1.5	4.0	3.8	4.0	3.7	4.0	3.9
24	3.8	3.8	1.5	1.5	1.6	1.5	4.0	3.8	3.9	3.7	4.0	3.9
25	3.8	3.9	1.5	1.5	1.6	1.5	4.0	3.8	3.9	3.7	4.0	3.9
26	3.8	3.9	1.5	1.5	1.6	1.5	4.0	3.8	4.0	3.7	3.9	3.9
27	3.8	3.9	1.5	1.5	1.6	1.5	3.9	3.8	4.0	3.7	4.0	3.9
28	3.8	3.9	1.5	1.5	1.6	1.5	3.9	3.8	3.9	3.7	3.9	4.0
29	3.8	3.9	1.5	1.5	1.6	1.5	3.8	3.8	4.0	3.7	3.9	3.9
30	3.8	3.9	1.5	1.5	---	2.6	3.8	3.8	4.0	3.7	4.0	4.0
31	3.8	---	1.5	1.5	---	3.8	---	3.8	---	3.7	4.0	---
TOTAL	119.8	114.1	49.9	46.5	44.6	50.8	117.8	117.8	117.0	119.8	120.1	118.8
MEAN	3.86	3.80	1.61	1.50	1.54	1.64	3.93	3.80	3.90	3.86	3.87	3.96
MAX	3.9	3.9	3.9	1.5	1.6	3.8	4.0	3.8	4.0	4.0	4.0	4.0
MIN	3.8	3.7	1.5	1.5	1.5	1.5	3.8	3.8	3.8	3.7	3.7	3.9
AC-FT	238	226	99	92	88	101	234	234	232	238	238	236
a	11730	12100	5230	956	1110	3690	2560	9380	4720	10610	7440	7870

CAL YR 1999 a 80750
WTR YR 2000 a 77400

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 mi^2.

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 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, 1,329 acre-ft, Dec. 30, 1996, elevation, 4,321.5 ft; minimum, 216 acre-ft, Sept. 20, 1991, elevation, 4,282.8 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,135 acre-ft, Feb. 14, elevation, 4,316.60 ft; minimum, 744 acre-ft, Feb. 25, elevation, 4,305.26 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1055	991	1024	893	890	813	912	1033	903	955	1003	941
2	1029	1049	1056	814	929	751	1046	1075	884	987	1032	1009
3	1028	1060	1028	785	944	808	1034	962	852	984	935	976
4	1020	1032	1025	791	924	773	997	865	834	955	921	1018
5	1029	1022	1008	779	897	769	953	858	837	977	1000	1028
6	958	920	1008	797	859	857	1020	894	846	1053	979	933
7	1067	988	893	812	756	828	925	965	820	1049	929	932
8	1011	983	932	1078	972	985	1007	1060	801	1035	998	988
9	877	1075	932	1042	935	821	975	977	795	1013	973	1000
10	928	986	1073	1043	1042	899	976	1038	793	838	991	1017
11	960	1060	999	1008	1027	985	1059	1049	758	903	1018	1015
12	956	1000	1023	962	910	998	1050	1008	764	1008	1053	1014
13	1074	1045	1073	886	882	825	1111	956	795	1065	937	960
14	1087	930	1064	880	1135	837	931	940	960	997	941	882
15	1023	1028	1076	965	1056	964	836	1060	910	1058	1048	875
16	1001	1007	1043	931	946	874	848	971	915	1015	1072	958
17	955	996	1058	976	849	963	1059	989	1012	1015	903	983
18	928	944	1020	1067	815	924	1112	941	1038	1028	1000	1000
19	928	1035	1017	1127	870	831	994	927	877	1067	1020	960
20	963	975	992	981	863	880	952	924	852	1035	1082	966
21	936	935	1080	952	871	1012	973	926	903	1001	1084	854
22	1019	872	976	789	914	993	1009	791	889	1024	1076	948
23	1020	910	1018	911	892	975	1045	941	894	995	1068	971
24	1068	949	932	1109	851	841	1034	859	871	985	1059	996
25	1049	925	881	965	744	874	957	862	847	992	1055	1018
26	1024	900	842	928	895	902	1079	815	984	1006	1055	1046
27	1050	962	874	883	924	955	1042	848	981	915	896	1051
28	1067	918	939	868	831	949	877	845	983	964	872	905
29	1055	926	916	887	906	986	942	856	965	944	1040	938
30	1039	976	910	909	---	926	882	833	966	991	1010	905
31	1072	---	880	900	---	1041	---	947	---	976	1045	---
MAX	1087	1075	1080	1127	1135	1041	1112	1075	1038	1067	1084	1051
MIN	877	872	842	779	744	751	836	791	758	838	872	854
a	4314.92	4312.25	4309.50	4310.10	4310.29	4314.08	4309.57	4311.42	4311.97	4312.25	4314.18	4310.24
b	+15	-96	-96	+20	+6	+135	-159	+65	+19	+10	+69	-140

CAL YR 1999 MAX 1120 MIN 721 b -101
WTR YR 2000 MAX 1135 MIN 744 b -152

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

11404300 GRIZZLY CREEK BELOW DIVERSION DAM, NEAR STORRIE, CA

LOCATION.—Lat 39°53'29", long 121°17'35", in SW 1/4 NE 1/4 sec.34, T.24 N., R.6 E., Plumas County, Hydrologic Unit 18020121, Plumas National Forest, on right bank, 0.2 mi downstream from diversion dam, and 2.4 mi southeast of Storrie.

DRAINAGE AREA.—14.4 mi^2.

PERIOD OF RECORD.—October 1985 to current year. Unpublished records for water years 1976–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and concrete control with V-notch sharp-crested weir, since Oct. 8, 1987. Elevation of gage is 4,320 ft above sea level, from topographic map. Prior to Oct. 8, 1987, at datum 1.79 ft higher.

REMARKS.—Flow regulated by diversion dam 0.2 mi upstream. There is considerable inflow upstream from the diversion dam from Bucks Creek Tunnel outlet and Grizzly Powerplant (station 11404240). Most of the flow is diverted to Bucks Creek Powerplant (station 11403700) on North Fork Feather River. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,300 ft^3/s, Jan. 1, 1997, gage height, 7.33 ft, from rating curve extended above 260 ft^3/s on basis of computation of peak flow over dam; maximum gage height, 9.54 ft, Feb. 17, 1986, datum then in use; minimum daily, 1.9 ft^3/s, June 14, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.7	4.7	2.3	2.5	3.1	5.0	4.8	4.7	4.6	4.5	4.6
2	4.8	4.7	3.7	2.3	2.5	3.0	5.0	4.9	4.6	4.6	4.6	4.6
3	4.8	4.7	2.6	2.2	2.5	2.9	5.1	4.9	4.6	4.6	4.6	4.6
4	4.8	4.7	2.5	2.2	2.5	2.9	5.1	4.8	4.6	4.6	4.5	4.6
5	4.7	4.7	2.5	2.2	2.6	3.0	5.0	4.7	4.6	4.6	4.5	4.6
6	4.8	4.7	2.4	2.2	2.6	3.0	5.1	4.8	4.5	4.6	4.6	4.5
7	4.8	4.7	2.4	2.2	2.5	2.9	5.0	4.8	4.5	4.7	4.6	4.4
8	4.8	4.7	2.3	2.2	2.5	2.9	4.9	4.9	4.6	4.6	4.6	4.4
9	4.7	4.7	2.3	2.3	2.5	2.9	5.0	4.9	4.5	4.6	4.5	4.5
10	4.6	4.7	2.3	2.4	2.7	2.8	5.0	4.8	4.4	4.5	4.5	4.4
11	4.6	4.7	2.3	2.5	2.7	2.8	5.0	4.9	4.4	4.4	4.6	4.4
12	4.7	4.7	2.3	2.4	2.7	2.9	5.0	4.8	4.4	4.6	4.6	4.5
13	4.7	4.7	2.4	2.4	2.8	2.8	49	4.7	4.4	4.6	4.6	4.5
14	4.8	4.7	2.4	2.3	478	2.8	5.0	4.8	4.5	4.6	4.5	4.5
15	4.7	4.7	2.4	2.4	25	2.8	4.9	4.9	4.6	4.6	4.5	4.4
16	4.7	4.8	2.4	2.7	3.5	2.8	4.8	4.8	4.5	4.6	4.6	4.5
17	4.6	4.7	2.4	2.5	3.2	2.8	5.9	4.8	4.6	4.6	4.6	4.5
18	4.6	4.7	2.4	2.7	2.9	2.8	5.7	4.7	4.6	4.6	4.5	4.5
19	4.6	4.8	2.3	11	2.9	2.9	21	4.7	4.6	4.6	4.5	4.5
20	4.6	4.8	2.3	18	2.9	2.8	5.1	4.6	4.5	4.6	4.6	4.5
21	4.7	4.7	2.3	2.6	2.9	2.9	5.0	4.6	4.5	4.6	4.6	4.5
22	4.7	4.6	2.3	2.5	3.0	3.0	5.1	4.6	4.5	4.6	4.6	4.4
23	4.7	4.6	2.3	2.5	2.9	2.9	5.1	4.6	4.5	4.6	4.6	4.5
24	4.7	4.6	2.3	3.0	2.8	2.9	5.0	4.6	4.5	4.6	4.6	4.5
25	4.7	4.6	2.3	3.0	2.8	2.8	4.9	4.7	4.5	4.6	4.6	4.5
26	4.7	4.6	2.3	2.8	2.9	2.8	4.9	4.6	4.6	4.6	4.6	4.5
27	5.0	4.6	2.3	2.6	3.7	2.8	5.0	4.6	4.6	4.6	4.5	4.6
28	4.7	4.6	2.3	2.5	3.3	2.8	4.9	4.6	4.6	4.5	4.5	4.6
29	4.7	4.6	2.3	2.5	3.2	2.8	4.8	4.6	4.6	4.5	4.5	4.5
30	4.7	4.7	2.3	2.6	---	3.6	4.8	4.6	4.6	4.5	4.6	4.5
31	4.7	---	2.3	2.5	---	5.0	---	4.6	---	4.5	4.6	---
TOTAL	146.2	140.5	76.6	100.5	579.5	91.9	211.1	146.7	136.2	142.0	141.4	135.1
MEAN	4.72	4.68	2.47	3.24	20.0	2.96	7.04	4.73	4.54	4.58	4.56	4.50
MAX	5.0	4.8	4.7	18	478	5.0	49	4.9	4.7	4.7	4.6	4.6
MIN	4.6	4.6	2.3	2.2	2.5	2.8	4.8	4.6	4.4	4.4	4.5	4.4
AC-FT	290	279	152	199	1150	182	419	291	270	282	280	268
a	12310	13630	6650	7320	9350	10030	13790	16130	6670	10670	7120	8280

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.63	5.02	23.6	54.7	64.5	46.4	20.4	34.5	34.6	9.42	3.88	3.81
MAX	11.8	19.7	284	650	396	174	215	277	286	61.0	5.49	5.57
(WY)	1996	1999	1997	1997	1997	1995	1995	1995	1998	1998	1991	1999
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	1785.4		2047.7			
ANNUAL MEAN	4.89		5.59		25.3	
HIGHEST ANNUAL MEAN					125	1997
LOWEST ANNUAL MEAN					2.58	1994
HIGHEST DAILY MEAN	198	Jan 18	478	Feb 14	4810	Jan 1 1997
LOWEST DAILY MEAN	2.3	Dec 8	2.2	Jan 3	1.9	Jun 14 1988
ANNUAL SEVEN-DAY MINIMUM	2.3	Dec 19	2.2	Jan 2	2.0	May 2 1987
INSTANTANEOUS PEAK FLOW			1320	Feb 14	6300	Jan 1 1997
INSTANTANEOUS PEAK STAGE			3.86	Feb 14	9.54	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	3540		4060		18310	
ANNUAL DIVERSION (AC-FT)a	127500		121900			
10 PERCENT EXCEEDS	4.8		4.9		5.4	
50 PERCENT EXCEEDS	4.6		4.6		2.8	
90 PERCENT EXCEEDS	2.4		2.4		2.1	

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

11404330 NORTH FORK FEATHER RIVER BELOW GRIZZLY CREEK, CA

LOCATION.—Lat 39°51'09", long 121°23'29", in NE 1/4 NW 1/4 sec.14, T.23 N., R.5 E., Butte County, Hydrologic Unit 18020121, Lassen National Forest, on left bank, 0.7 mi upstream from Bear Ranch Creek, 1.6 mi downstream from Grizzly Creek, and 2.1 mi downstream from Cresta Dam.

DRAINAGE AREA.—1,914 mi^2.

PERIOD OF RECORD.—October 1985 to February 1986, October 1986 to current year. Unpublished records for water years 1982–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Elevation of gage is 1,480 ft above sea level, from topographic map.

REMARKS.—Flow regulated by numerous reservoirs upstream, combined capacity, 1,386,000 acre-ft. Most of the flow bypasses this station through Cresta Powerplant (station 11404360). Diversion through Cresta Powerplant began in 1949. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 115,000 ft^3/s, Jan. 1, 1997, gage height, 29.97 ft; minimum daily, 37 ft^3/s, July 25, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	135	143	55	168	1860	175	234	86	102	119	60
2	361	125	122	55	157	1800	184	232	85	95	75	65
3	277	129	105	54	167	1490	196	225	84	96	68	61
4	408	132	99	55	166	1250	208	222	82	98	67	60
5	427	120	95	55	185	1550	206	218	81	96	67	59
6	520	127	90	56	188	1300	198	211	80	96	67	59
7	566	126	88	56	170	923	195	219	79	110	67	59
8	543	251	84	55	161	626	195	241	86	143	63	58
9	574	148	83	55	169	689	189	212	82	139	60	58
10	652	125	78	56	236	608	185	210	80	129	59	57
11	601	128	77	215	280	454	184	197	78	137	59	58
12	610	124	75	102	312	483	186	194	77	125	59	57
13	592	122	77	95	759	583	1650	189	75	134	59	57
14	582	117	67	85	15200	482	1460	194	74	141	58	58
15	476	116	69	126	9530	986	791	216	72	137	58	58
16	124	124	64	259	4870	973	565	199	71	136	57	58
17	123	173	64	148	2180	985	1820	193	71	127	57	57
18	117	127	65	240	982	794	1480	188	70	128	57	56
19	118	170	63	435	306	1010	814	182	104	128	56	57
20	110	224	63	328	254	1420	422	161	117	127	56	56
21	92	158	63	182	277	836	306	108	121	132	57	56
22	95	131	62	172	460	369	321	105	113	133	57	57
23	96	125	61	260	1080	205	294	103	109	128	57	57
24	91	119	60	1190	661	194	267	101	113	129	56	57
25	85	115	59	1920	343	194	263	103	113	127	56	56
26	82	111	59	329	460	194	267	98	112	118	56	56
27	153	110	59	191	8110	197	264	95	110	117	56	56
28	158	104	59	167	5430	194	265	93	106	118	56	56
29	135	101	59	151	2820	189	249	91	112	113	56	56
30	130	156	56	213	---	179	238	90	105	127	56	56
31	134	---	55	181	---	173	---	88	---	139	77	---
TOTAL	9377	4073	2323	7541	56081	23190	14037	5212	2748	3805	1928	1731
MEAN	302	136	74.9	243	1934	748	468	168	91.6	123	62.2	57.7
MAX	652	251	143	1920	15200	1860	1820	241	121	143	119	65
MIN	82	101	55	54	157	173	175	88	70	95	56	56
AC-FT	18600	8080	4610	14960	111200	46000	27840	10340	5450	7550	3820	3430
a	88010	143100	108600	140000	180900	217200	202400	184700	125700	138700	121400	117500

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	99.2	137	515	1723	1463	2184	1201	1250	607	98.0	78.5	76.9
MAX	302	588	5071	16310	6576	10220	6777	9322	3842	221	205	235
(WY)	2000	1999	1997	1997	1997	1995	1995	1995	1995	1995	1997	1999
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	188940		132046			
ANNUAL MEAN	518		361		792	
HIGHEST ANNUAL MEAN					3115	1995
LOWEST ANNUAL MEAN					75.2	1994
HIGHEST DAILY MEAN	15500	Feb 9	15200	Feb 14	96900	Jan 1 1997
LOWEST DAILY MEAN	55	Dec 31	54	Jan 3	37	Jul 25 1994
ANNUAL SEVEN-DAY MINIMUM	58	Dec 25	55	Dec 30	52	Dec 10 1989
INSTANTANEOUS PEAK FLOW			22000	Feb 14	115000	Jan 1 1997
INSTANTANEOUS PEAK STAGE			17.74	Feb 14	29.97	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	374800		261900		574000	
ANNUAL DIVERSION (AC-FT)a	1788000		1768000			
10 PERCENT EXCEEDS	1470		615		1720	
50 PERCENT EXCEEDS	139		126		86	
90 PERCENT EXCEEDS	67		57		56	

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

11404400 NORTH FORK FEATHER RIVER BELOW POE DAM, CA

LOCATION.—Lat 39°48'32", long 121°26'04", in SW 1/4 NE 1/4 sec.32, T.23 N., R.5 E., Butte County, Hydrologic Unit 18020121, Plumas National Forest, on right bank, 900 ft downstream from Poe Dam, 0.4 mi upstream from Mill Creek, and 0.8 mi northeast of Pulga.

DRAINAGE AREA.—1,942 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000 (low-flow records only). Records for water years 1980–99 available in the files of the U.S. Geological Survey.

GAGE.—Non-recording gage read daily. Elevation of gage is 1,350 ft above sea level, from topographic map.

REMARKS.—Records not computed above 137 ft^3/s. 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	89	95	75	105	---	95	92	99	92	105	102
2	86	89	89	75	105	---	99	105	99	92	102	105
3	89	89	89	75	116	---	92	92	105	99	95	99
4	86	95	80	75	116	---	99	92	102	99	99	105
5	89	89	83	75	113	---	95	92	99	99	105	109
6	95	89	80	75	120	---	92	92	99	95	102	113
7	89	89	86	80	113	---	99	99	95	102	105	105
8	95	89	86	80	113	---	92	92	99	109	102	105
9	92	89	86	80	109	---	92	99	102	102	105	102
10	95	89	80	86	109	---	92	99	95	92	105	---
11	95	92	83	89	109	---	92	105	95	99	102	105
12	95	86	83	89	109	---	92	105	92	99	105	102
13	89	86	80	89	124	---	---	99	99	105	105	105
14	92	92	86	89	---	---	---	105	99	99	105	105
15	86	89	78	89	---	---	---	99	102	105	105	116
16	102	105	78	89	---	---	---	105	102	102	105	116
17	---	89	86	89	---	---	---	99	102	102	105	105
18	---	95	86	89	---	---	---	105	99	95	109	102
19	---	95	86	86	---	---	---	---	92	105	105	102
20	---	86	80	89	---	---	---	---	102	92	105	102
21	---	89	80	99	---	---	113	---	92	99	105	99
22	102	86	80	102	---	---	113	99	102	102	102	99
23	95	89	80	105	---	116	113	99	99	109	102	102
24	89	92	80	113	---	113	99	95	92	99	102	105
25	89	99	80	---	---	116	105	99	102	105	102	105
26	83	92	80	128	---	99	95	95	92	102	102	102
27	86	92	80	109	---	113	113	99	92	105	102	102
28	86	89	80	95	---	99	102	95	99	105	102	105
29	86	92	78	109	---	99	102	105	102	105	102	105
30	86	95	78	109	---	92	102	95	105	105	102	105
31	89	---	75	105	---	92	---	102	---	105	99	---
TOTAL	---	2726	2551	---	---	---	---	---	2955	3125	3198	---
MEAN	---	90.9	82.3	---	---	---	---	---	98.5	101	103	---
MAX	---	105	95	---	---	---	---	---	105	109	109	---
MIN	---	86	75	---	---	---	---	---	92	92	95	---
AC-FT	---	5410	5060	---	---	---	---	---	5860	6200	6340	---

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 mi^2.

PERIOD OF RECORD.—October 1910 to current year. Monthly discharge only for some periods and yearly estimates for water years 1911 and 1938, published in WSP 1315-A. Prior to October 1960, published as "at Big Bar."
CHEMICAL DATA: Water years 1963–66, 1972, 1977.
WATER TEMPERATURE: Water years 1963–83.

REVISED RECORDS.—WSP 931: 1938(M), 1940. WSP 1515: 1935. WDR CA-77-4: 1976 (yearly summaries).

GAGE.—Water-stage recorder. Datum of gage is 1,305.62 ft above sea level. Prior to Oct. 1, 1937, at site 1.1 mi upstream at different datum. Oct. 1, 1937, to Sept. 30, 1958, at present site at datum 5.00 ft higher.

REMARKS.—Flow regulated by Lake Almanor, Bucks Lake, Butt Valley Reservoir (stations 11399000, 11403500, 11401050), Mountain Meadows Reservoir, and five forebays, combined capacity, 1,386,000 acre-ft. Diversion through Poe Powerplant (station 11404900) began on May 29, 1958. See schematic diagram of North Fork Feather River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 105,400 ft^3/s, Jan. 1, 1997, gage height, 41.65 ft, from rating curve extended above 32,000 ft^3/s on basis of slope area measurement of peak discharge; minimum daily, 5.4 ft^3/s, Sept. 18, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	95	110	89	143	3780	126	121	110	107	110	106
2	95	95	106	87	142	2030	128	122	114	108	106	108
3	94	94	102	90	149	1680	128	119	111	110	105	105
4	97	98	98	87	151	1370	129	122	110	108	104	106
5	97	95	97	84	151	1970	127	123	111	108	107	106
6	102	99	96	87	153	1510	121	127	108	107	103	105
7	99	98	95	88	145	1190	124	128	111	108	103	103
8	104	117	94	92	142	830	123	131	115	109	103	442
9	101	104	97	91	138	920	122	120	113	108	102	460
10	102	100	93	92	168	842	120	123	110	106	105	236
11	100	98	92	143	224	630	126	124	111	107	104	103
12	103	95	92	106	294	615	122	121	111	107	102	103
13	98	95	91	98	864	712	1260	123	110	109	105	105
14	100	97	89	98	17700	549	1340	123	111	108	104	106
15	96	101	89	102	10600	1070	632	128	110	109	106	107
16	473	114	89	150	5290	1010	410	126	109	110	110	108
17	918	118	90	141	2370	1580	1710	122	109	109	110	107
18	802	108	90	132	1060	919	1420	120	109	106	106	106
19	752	113	87	252	262	936	708	282	112	106	102	101
20	839	113	87	287	188	1740	269	423	108	105	99	103
21	830	102	85	127	199	801	173	633	109	109	101	103
22	547	97	87	123	1000	309	143	118	109	106	97	104
23	98	97	89	143	1530	175	139	116	107	110	100	106
24	95	101	88	872	891	157	129	116	105	105	100	105
25	94	101	88	2380	393	155	127	115	106	106	103	106
26	95	98	86	416	375	148	119	116	102	107	106	109
27	110	99	86	148	9940	148	130	116	103	108	103	110
28	106	99	86	143	8110	144	129	114	106	106	103	105
29	97	100	86	137	5870	141	125	114	110	103	103	105
30	95	114	86	152	---	133	124	111	107	107	99	105
31	96	---	85	146	---	124	---	113	---	106	101	---
TOTAL	7531	3055	2836	7183	68642	28318	10583	4710	3277	3328	3212	3984
MEAN	243	102	91.5	232	2367	913	353	152	109	107	104	133
MAX	918	118	110	2380	17700	3780	1710	633	115	110	110	460
MIN	94	94	85	84	138	124	119	111	102	103	97	101
AC-FT	14940	6060	5630	14250	136200	56170	20990	9340	6500	6600	6370	7900
a	90840	131900	117600	134800	174400	220100	201900	173700	113300	128000	117100	101100

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

11404500 NORTH FORK FEATHER RIVER AT PULGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	942	1139	1686	2242	2775	2888	3479	3014	1602	952	893	851
MAX	2943	4594	10690	14120	14320	11960	13580	12460	7689	2771	2441	2430
(WY)	1963	1951	1956	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1911 - 2000	
ANNUAL TOTAL	413453		146659			
ANNUAL MEAN	1133		401		1842	
HIGHEST ANNUAL MEAN					5320	1952
LOWEST ANNUAL MEAN					42.7	1977
HIGHEST DAILY MEAN	19300	Feb 9	17700	Feb 14	101000	Jan 1 1997
LOWEST DAILY MEAN	85	Dec 21	84	Jan 5	5.4	Sep 18 1977
ANNUAL SEVEN-DAY MINIMUM	86	Dec 25	86	Dec 25	12	Aug 10 1977
INSTANTANEOUS PEAK FLOW			27500	Feb 14	105000	Jan 1 1997
INSTANTANEOUS PEAK STAGE			21.17	Feb 14	41.65	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	820100		290900		1335000	
ANNUAL DIVERSION (AC-FT)a	1438000		1705000			
10 PERCENT EXCEEDS	3420		830		4610	
50 PERCENT EXCEEDS	114		109		1300	
90 PERCENT EXCEEDS	90		95		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 mi^2.

PERIOD OF RECORD.—July 1989 to current year (no winter records). Unpublished records for water years 1986–89 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder, Parshall flume, and V-notch sharp-crested weir. Elevation of gage is 5,490 ft above sea level, from topographic map. October 1985 to July 1989, nonrecording gage at same site and datum. In June 1989, V-notch sharp-crested weir installed in flume to be used at low flows.

REMARKS.—Records not computed for winter months. Flow completely regulated by Philbrook Reservoir, usable capacity, 5,370 acre-ft, 500 ft upstream. Spillwater from Philbrook Reservoir bypasses this station.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.9	---	---	---	---	---	4.0	5.3	9.7	36	41
2	4.0	3.8	---	---	---	---	---	4.0	5.3	9.7	36	41
3	4.0	3.8	---	---	---	---	---	4.0	5.3	5.8	35	40
4	4.0	3.8	---	---	---	---	---	4.0	5.3	3.6	35	40
5	3.9	3.7	---	---	---	---	---	4.0	5.3	3.6	35	40
6	3.9	3.6	---	---	---	---	---	4.0	5.3	3.6	35	39
7	3.9	3.7	---	---	---	---	---	4.0	5.3	3.6	35	39
8	3.9	3.9	---	---	---	---	---	4.2	5.3	3.6	36	39
9	3.9	3.8	---	---	---	---	---	4.2	5.3	3.6	37	38
10	3.9	3.8	---	---	---	---	---	4.4	5.3	3.6	37	38
11	3.9	3.8	---	---	---	---	4.5	4.6	5.3	3.6	37	37
12	3.9	3.8	---	---	---	---	4.5	5.0	5.3	3.4	37	37
13	3.9	3.8	---	---	---	---	4.6	5.0	4.3	3.2	36	38
14	3.9	3.4	---	---	---	---	4.5	5.0	3.1	3.2	36	39
15	3.9	---	---	---	---	---	4.4	5.0	3.1	3.2	36	39
16	3.9	---	---	---	---	---	4.2	5.0	3.2	3.2	36	38
17	3.9	---	---	---	---	---	4.5	5.0	3.2	3.2	36	35
18	3.9	---	---	---	---	---	4.2	5.0	3.2	3.2	36	3.2
19	3.9	---	---	---	---	---	4.2	5.0	3.2	3.2	36	3.3
20	3.9	---	---	---	---	---	4.0	5.0	3.2	6.1	36	3.4
21	3.9	---	---	---	---	---	4.0	5.0	3.2	9.5	35	3.4
22	3.9	---	---	---	---	---	4.0	5.1	3.2	9.5	35	3.4
23	3.9	---	---	---	---	---	4.0	5.2	3.2	9.5	35	3.4
24	3.9	---	---	---	---	---	4.0	5.2	3.2	10	39	3.4
25	3.9	---	---	---	---	---	4.0	5.2	3.2	16	42	3.4
26	3.8	---	---	---	---	---	4.0	5.2	3.2	23	42	3.4
27	3.8	---	---	---	---	---	4.0	5.2	6.6	24	42	3.4
28	3.9	---	---	---	---	---	4.0	5.2	9.7	24	41	3.4
29	3.9	---	---	---	---	---	4.0	5.2	9.7	24	41	3.4
30	3.9	---	---	---	---	---	4.0	5.2	9.7	24	41	3.4
31	3.9	---	---	---	---	---	---	5.3	---	31	41	---
TOTAL	121.1	---	---	---	---	---	---	147.4	145.0	290.4	1153	701.9
MEAN	3.91	---	---	---	---	---	---	4.75	4.83	9.37	37.2	23.4
MAX	4.0	---	---	---	---	---	---	5.3	9.7	31	42	41
MIN	3.8	---	---	---	---	---	---	4.0	3.1	3.2	35	3.2
AC-FT	240	---	---	---	---	---	---	292	288	576	2290	1390

11405200 WEST BRANCH FEATHER RIVER BELOW HENDRICKS DIVERSION DAM, NEAR STIRLING CITY, CA

LOCATION.—Lat 39°56'03", long 121°31'43", in NW 1/4 SE 1/4 sec.16, T.24 N., R.4 E., Butte County, Hydrologic Unit 18020121, on right bank, 200 ft upstream from road bridge, 1,800 ft downstream from Hendricks Diversion Dam, and 1.9 mi north of Stirling City.

DRAINAGE AREA.—46.1 mi^2.

PERIOD OF RECORD.—August 1986 to current year (low-flow records only).

GAGE.—Water-stage recorder. Elevation of gage is 3,210 ft above sea level, from topographic map.

REMARKS.—Flows computed to 100 ft^3/s. Most of the water is diverted at Hendricks Diversion Dam to the Hendricks Canal and Toadtown Canal (station 11389800) and then to De Sabla Powerplant (station 11389750) on Butte Creek.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	18	16	86	---	---	---	---	20	20	16
2	21	15	17	16	86	---	---	---	100	20	20	16
3	21	17	16	16	76	---	---	---	90	20	20	16
4	21	18	16	16	72	---	---	---	82	20	19	16
5	21	17	16	16	100	---	---	---	76	20	17	16
6	21	17	16	16	---	---	---	---	66	20	17	16
7	21	17	16	16	---	---	---	---	61	20	17	16
8	21	43	16	16	87	---	---	---	67	20	17	16
9	20	17	16	16	---	---	---	---	55	20	17	16
10	20	16	16	16	---	---	---	---	44	20	17	16
11	20	16	16	---	---	---	---	---	35	20	17	16
12	20	16	16	31	---	---	---	---	29	20	17	16
13	20	16	16	27	---	---	---	---	25	20	17	17
14	20	15	16	30	---	---	---	---	21	20	17	17
15	20	16	16	50	---	---	---	---	21	20	17	17
16	21	17	16	---	---	---	---	---	20	20	17	17
17	21	22	16	98	---	---	---	---	20	20	17	17
18	21	17	16	---	---	---	---	---	20	20	17	17
19	21	30	16	---	---	---	---	---	20	20	17	17
20	21	74	16	---	---	---	---	---	20	20	17	17
21	21	24	16	---	---	---	---	---	20	20	16	17
22	21	17	16	92	---	---	---	---	20	20	16	17
23	21	16	16	---	---	---	---	---	20	20	16	17
24	21	16	16	---	---	---	---	---	20	20	16	17
25	21	16	16	---	---	---	---	---	20	20	16	17
26	21	16	16	---	---	---	---	---	20	19	16	17
27	34	16	16	---	---	---	---	---	20	18	16	17
28	36	16	16	---	---	---	---	---	20	19	16	17
29	16	16	16	68	---	---	---	---	20	21	16	17
30	16	25	16	94	---	---	---	---	20	21	16	17
31	16	---	16	86	---	---	---	---	---	21	16	---
TOTAL	657	609	499	---	---	---	---	---	---	619	527	498
MEAN	21.2	20.3	16.1	---	---	---	---	---	---	20.0	17.0	16.6
MAX	36	74	18	---	---	---	---	---	---	21	20	17
MIN	16	15	16	---	---	---	---	---	---	18	16	16
AC-FT	1300	1210	990	---	---	---	---	---	---	1230	1050	988

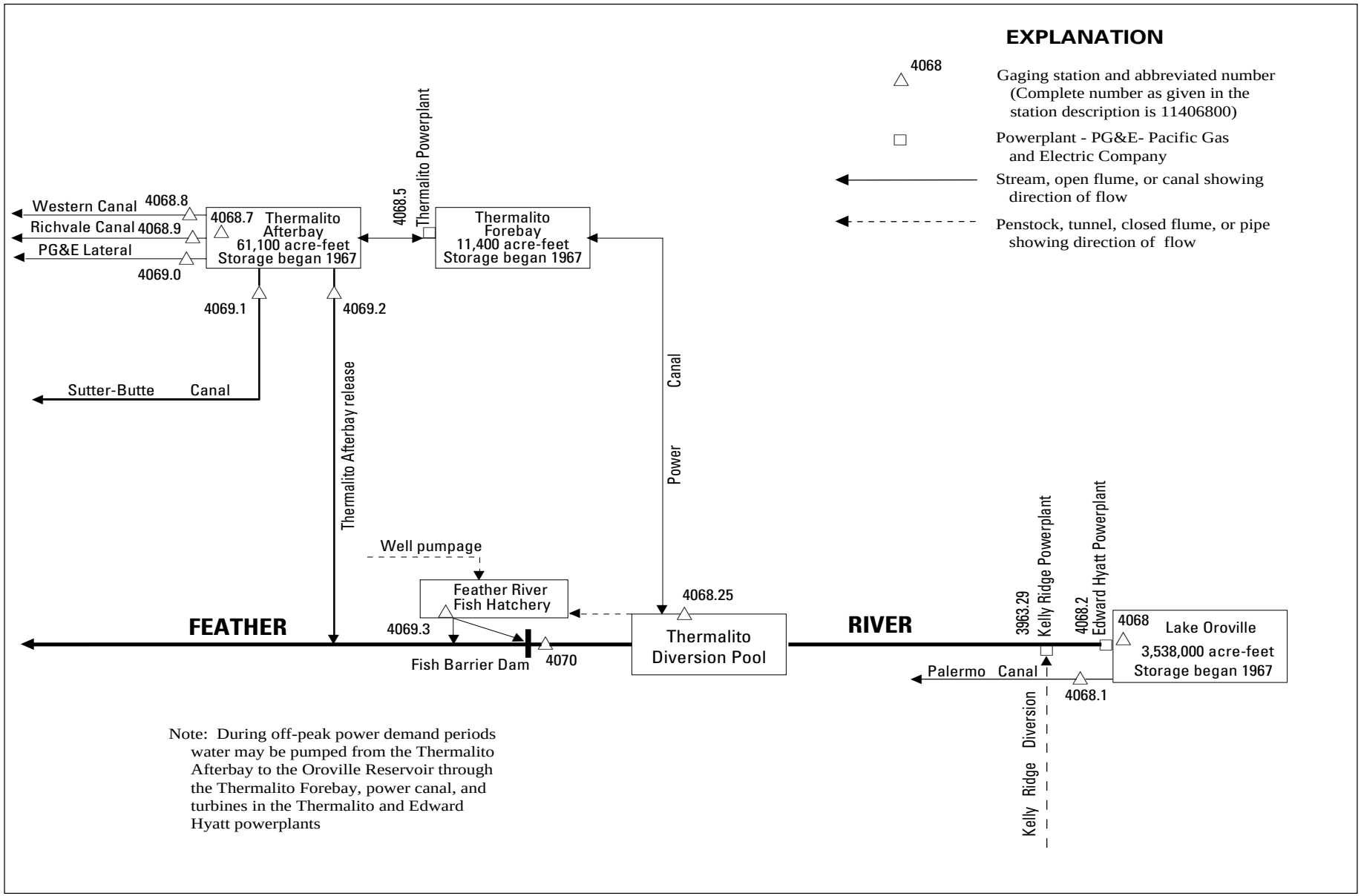

Figure 30. Diversions and storage from Feather River at Lake Oroville.

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 mi^2.

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 (station 11406820) 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. Maximum inflow of 266,000 ft^3/s during a 2-hour period Feb. 17, 1986. 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, 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, 3,131,132 acre-ft, May 29, gage height, 873.15 ft; minimum, 1,919,403 acre-ft, Sept. 29, gage height, 774.71 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2421943	2293528	2285736	2182056	2352031	2766982	2853399	3102549	3125487	2858013	2396880	2023796
2	2419647	2294460	2283645	2187346	2359504	2761544	2868754	3098953	3120283	2846758	2378440	2024329
3	2417955	2297024	2278541	2181493	2367828	2755186	2874477	3087896	3123029	2828653	2361049	2026996
4	2413006	2297140	2279236	2175316	2378082	2750292	2886766	3079729	3123751	2816806	2346939	2024542
5	2406017	2296441	2284574	2163780	2387888	2771498	2899778	3069578	3113209	2802450	2332651	2014643
6	2397481	2293412	2281440	2158976	2408185	2777616	2911731	3067722	3101829	2783876	2318072	2000547
7	2389085	2308116	2279236	2156410	2418559	2770435	2924960	3070721	3091914	2768310	2305310	1991364
8	2374263	2307649	2276339	2156187	2424363	2763135	2941695	3075008	3084456	2752672	2297023	1979482
9	2370567	2303091	2276339	2157303	2428119	2757702	2960028	3071578	3076867	2741446	2284690	1975289
10	2364139	2297840	2275876	2145278	2436251	2750292	2965320	3065867	3075866	2728148	2272518	1980637
11	2355469	2286781	2275413	2147613	2449765	2743161	2966296	3058739	3082163	2710838	2261430	1973717
12	2349543	2276802	2283993	2144834	2473387	2743821	2965041	3056033	3072578	2691520	2249920	1964519
13	2344928	2271593	2278193	2139728	2523976	2742765	2971736	3067294	3064012	2673851	2247048	1955248
14	2334066	2271940	2272403	2137510	2633986	2734068	2979559	3076725	3056317	2655221	2236047	1942591
15	2330296	2268702	2270668	2138951	2685406	2727755	2992724	3074866	3050058	2646713	2222576	1936697
16	2327942	2267316	2267893	2152732	2710053	2721451	3009449	3074866	3040969	2642080	2207461	1932157
17	2329590	2270205	2268356	2156299	2720402	2720140	3018613	3074294	3040544	2627190	2192080	1939591
18	2329119	2272519	2264083	2165457	2719615	2730121	3024403	3075724	3045227	2611849	2173857	1935871
19	2325942	2274139	2267547	2169710	2719090	2743293	3030484	3080589	3038983	2597205	2160986	1932982
20	2322651	2276223	2261084	2182280	2709791	2749896	3038416	3091483	3027937	2580848	2161768	1926698
21	2315962	2283877	2258779	2185881	2707437	2755980	3046505	3101829	3014099	2561918	2150616	1926595
22	2312798	2279236	2249805	2194902	2708222	2759026	3060448	3104132	3003258	2546216	2132748	1934220
23	2307649	2291324	2240397	2208368	2710969	2761942	3075438	3108164	2987958	2533080	2116635	1942487
24	2309871	2279004	2231474	2234675	2704823	2766054	3075867	3109172	2972573	2514769	2103347	1947667
25	2305544	2284690	2230446	2261315	2694255	2781078	3079730	3109461	2962394	2496057	2088919	1942280
26	2301106	2279352	2233989	2277498	2695428	2796160	3081877	3109893	2948907	2481625	2079665	1938247
27	2295858	2283645	2223830	2290735	2737755	2801379	3085172	3116817	2930485	2467129	2075320	1931126
28	2295159	2290851	2216544	2302974	2753863	2806470	3096222	3126210	2911594	2453181	2063190	1923716
29	2288641	2288060	2203496	2314673	2765788	2816404	3103412	3131132	2893199	2435157	2051326	1919403
30	2292946	2287827	2190840	2335245	---	2828113	3107588	3130118	2874068	2420734	2038974	1919813
31	2294809	---	2186332	2345401	---	2838641	---	3127657	---	2413006	2033621	---
MAX	2421943	2308116	2285736	2345401	2765788	2838641	3107588	3131132	3125487	2858013	2396880	2026996
MIN	2288641	2267316	2186332	2137510	2352031	2720140	2853399	3056033	2874068	2413006	2033621	1919403
a	808.99	808.39	799.52	813.30	846.81	852.25	871.52	872.91	854.86	818.96	785.61	774.75
b	-132462	-6982	-101495	+159069	+420387	+72853	+268947	+20069	-253589	-461062	-379385	-113808
c	6701	1810	1641	729	936	3388	5080	6556	9790	9613	8869	6548
d	262100	209600	272300	186500	405500	595700	268600	384900	445900	628100	523900	247100

CAL YR 1999 b -501544
WTR YR 2000 b -507458
ANNUAL DIVERSION (AC-FT) CAL YR 1999 d 4722000
ANNUAL DIVERSION (AC-FT) WTR YR 2000 d 4430000

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.
c Total evaporation, in acre-feet, provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.
d Diversion, in acre-feet, to Edward Hyatt Powerplant, provided by California Department of Water Resources.

11406810 PALERMO CANAL NEAR OROVILLE, CA

LOCATION.—Lat 39°31'59", long 121°28'54", in SW 1/4 SW 1/4 sec.1, T.19 N., R.4 E., Butte County, Hydrologic Unit 18020106, on right bank, 50 ft downstream from Oroville Dam, and 4.4 mi east of Oroville.

PERIOD OF RECORD.—April 1965 to current year. Daily discharge records of diversion from Kelly Ridge Penstock for period April 1965 to October 1968, when Kelly Ridge Penstock supplied the entire flow of Palermo Canal, are in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and Parshall flume. Datum of gage is 547.67 ft above sea level (levels by California Department of Water Resources). April 1965 to October 1968, water-stage recorder and Parshall flume at site of diversion from Kelly Ridge Penstock, 0.4 mi downstream at different datum.

REMARKS.—Canal diverts from left end of Oroville Dam. Water is used for irrigation near Oroville. During period of construction of Oroville Dam, water was released from Kelly Ridge Penstock to meet irrigation requirements. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.—Records were provided by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 28 ft^3/s, several days during July to September 1967; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	9.9	3.1	3.0	3.0	.00	3.0	6.8	18	17	18	18
2	18	9.9	3.2	3.0	3.1	.00	3.0	8.9	18	17	18	17
3	18	9.9	3.2	3.0	3.0	.00	3.9	11	18	17	18	17
4	18	9.9	3.2	3.0	3.0	.00	4.9	12	18	17	18	17
5	18	9.9	3.1	3.0	3.1	.00	4.9	12	18	17	18	17
6	18	10	3.1	3.0	3.1	.00	4.9	12	18	17	18	17
7	18	10	3.1	3.0	3.1	.00	4.9	12	18	17	18	17
8	18	6.8	3.2	3.0	3.1	.00	4.9	9.3	18	17	18	17
9	18	4.9	3.2	3.0	3.1	.00	4.9	8.0	18	17	18	17
10	18	4.9	3.2	3.0	2.2	.00	4.9	8.1	18	17	18	17
11	18	4.9	3.2	3.0	.78	.00	4.9	8.0	18	17	18	18
12	18	4.9	3.2	3.0	.00	.00	4.9	8.1	18	17	18	18
13	18	4.9	3.2	3.0	.00	.00	4.9	8.1	18	17	18	18
14	18	4.9	3.2	2.9	.00	.00	4.9	8.2	18	17	18	18
15	18	3.7	3.2	2.9	.00	.00	4.9	8.2	18	17	18	18
16	18	3.1	3.2	3.0	.00	.00	4.9	8.3	18	17	19	18
17	18	3.0	3.3	3.0	.00	1.3	4.9	8.4	18	17	19	18
18	16	3.1	3.3	3.0	.00	2.0	4.9	10	18	17	19	18
19	15	3.1	3.3	3.0	.00	2.0	4.9	12	18	17	19	19
20	15	3.1	3.2	3.0	.00	2.0	4.9	12	18	17	19	19
21	15	3.1	3.1	3.0	.00	2.0	5.0	12	18	17	19	19
22	14	3.1	3.1	3.0	.00	2.0	5.0	14	18	17	19	19
23	14	3.1	3.1	3.0	.00	4.9	5.1	15	17	17	19	18
24	14	3.1	3.1	3.0	.00	6.3	5.0	17	17	17	19	18
25	14	3.1	3.1	3.0	.00	6.3	4.9	18	17	17	19	18
26	13	3.1	3.2	3.0	.00	6.3	4.9	18	17	18	19	18
27	12	3.1	3.2	3.0	.00	3.9	4.9	18	17	18	19	18
28	10	3.1	3.1	3.0	.00	3.0	4.9	18	17	18	19	18
29	9.8	3.1	3.1	3.0	.00	3.0	4.9	18	17	18	19	18
30	9.8	3.1	3.1	3.0	---	3.0	4.9	18	17	18	19	18
31	9.8	---	3.1	3.0	---	3.0	---	18	---	18	19	---
TOTAL	487.4	155.8	98.2	92.8	30.58	51.00	142.7	375.4	532	533	574	535
MEAN	15.7	5.19	3.17	2.99	1.05	1.65	4.76	12.1	17.7	17.2	18.5	17.8
MAX	18	10	3.3	3.0	3.1	6.3	5.1	18	18	18	19	19
MIN	9.8	3.0	3.1	2.9	.00	.00	3.0	6.8	17	17	18	17
AC-FT	967	309	195	184	61	101	283	745	1060	1060	1140	1060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2000, BY WATER YEAR (WY)

MEAN	12.5	5.18	3.26	2.69	2.26	2.71	6.02	14.2	18.7	19.4	19.8	18.8
MAX	18.0	8.56	5.94	5.12	5.33	6.22	19.1	22.3	24.5	24.5	24.5	22.8
(WY)	1979	1994	1975	1971	1974	1988	1970	1976	1976	1975	1978	1975
MIN	6.85	2.04	.000	.21	.000	.000	.000	3.21	11.3	16.0	16.2	13.8
(WY)	1973	1983	1982	1995	1975	1979	1991	1995	1998	1991	1991	1985

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1969 - 2000	
ANNUAL TOTAL	3853.10		3607.88			
ANNUAL MEAN	10.6		9.86		10.5	
HIGHEST ANNUAL MEAN					13.3	1970
LOWEST ANNUAL MEAN					7.54	1995
HIGHEST DAILY MEAN	20	Jun 30	19	Aug 16	26	Jul 2 1975
LOWEST DAILY MEAN	.00	Mar 25	.00	Feb 12	.00	Jan 15 1970
ANNUAL SEVEN-DAY MINIMUM	2.0	Mar 23	.00	Feb 12	.00	Jan 15 1970
ANNUAL RUNOFF (AC-FT)	7640		7160		7610	
10 PERCENT EXCEEDS	19		18		20	
50 PERCENT EXCEEDS	9.9		8.2		8.4	
90 PERCENT EXCEEDS	2.8		1.8		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 from 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 ft^3/s. Water is pumped, at times, from Thermalito Afterbay back into Thermalito Forebay (station 11406840) during off-peak periods to be re-released through Thermalito Powerplant (station 11406850) 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, 54,652 acre-ft, Sept. 16, gage height, 135.94 ft; minimum, 18,623 acre-ft, May 8, gage height, 125.41 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26767	41334	39925	45034	32285	38250	42123	20547	40405	37069	25413	43414
2	22608	39229	43414	37033	34483	40331	37282	19325	43452	32351	29131	36714
3	19906	36326	47472	36998	35765	42538	43720	25413	36150	31195	33190	26676
4	19853	35035	46444	38720	35660	41334	46286	30900	29641	27781	34175	19826
5	19773	34072	42236	44646	34621	30122	46760	33088	32719	25532	36927	22216
6	20816	32052	45073	43682	24324	28688	48952	28846	36962	27164	38829	27813
7	22021	19404	47353	40257	24208	35000	47195	20789	40331	28093	39193	34072
8	27627	20843	48952	33088	25324	43874	41110	18623	41859	30218	37675	39083
9	21717	25057	48470	26222	29163	45815	31985	22523	44336	26372	39156	38829
10	19747	29704	45306	32418	35695	46129	30575	30219	39522	25502	40257	30348
11	19720	37711	43490	34038	41110	43644	30900	40961	28594	26615	39705	34004
12	19299	46721	32318	34793	41596	32786	35382	46129	31359	31886	38575	38430
13	19641	47234	35277	38250	32987	22805	40553	36714	36361	34862	30542	42842
14	23947	46286	35940	38503	39920	22974	42766	26889	38503	37962	30122	51561
15	22495	49761	33970	37747	34175	30998	34517	31886	41484	32451	32385	54314
16	23544	51726	32251	32085	34346	39888	24034	35173	43070	23659	36045	54652
17	20816	48751	28000	31853	35590	46800	28500	39485	36326	24675	37532	45034
18	20012	46878	26676	32418	40405	43720	35208	41110	25831	27012	43720	47870
19	21827	47512	20039	38938	42918	33731	40701	42311	24324	27689	43605	48912
20	23230	50086	21114	40220	44607	35695	43032	36432	27968	29290	28846	50617
21	28062	44066	22216	43720	40775	35590	42842	31227	32719	32285	24998	49113
22	30966	46484	25891	42804	39595	39193	36998	33325	34038	31622	28972	40590
23	33663	45463	31589	40257	41222	42720	30575	35765	35208	29258	35416	31655
24	28846	46365	36256	40961	42425	47037	36150	37747	35416	32152	39412	24063
25	30122	40738	33156	40257	42766	40850	39741	41859	30478	35347	44529	25801
26	32987	43644	27073	40627	42918	34931	43414	45384	29321	34175	42501	25771
27	39999	38178	30510	39705	41972	39741	44723	42880	31622	32987	34966	30187
28	42690	30316	34209	39302	40738	46326	36927	37069	34209	33122	38141	34621
29	49154	33021	41372	37389	39815	47353	28000	35451	35451	33156	40368	35139
30	44375	36221	48671	29036	---	47353	20306	36927	38938	31096	42956	31655
31	39047	---	49315	30025	---	45658	---	39485	---	25621	40961	---
MAX	49154	51726	49315	45034	44607	47353	48952	46129	44336	37962	44529	54652
MIN	19299	19404	20039	26222	24208	22805	20306	18623	24324	23659	24998	19826
a	131.98	131.19	134.65	129.35	132.19	133.73	126.05	132.10	131.95	127.93	132.50	129.85
b	+12035	-2826	+13094	-19290	+9790	+5843	-25352	+19179	-547	-13317	+15340	-9306
c	1223	552	468	290	1868	945	1302	1665	2149	2024	2246	1774
d	239400	189000	245700	161800	404100	580000	252100	367100	424400	613600	506800	227400

CAL YR 1999 b +20184
WTR YR 2000 b +4643
ANNUAL DIVERISON (AC-FT) CAL YR 1999 d 4969000
ANNUAL DIVERSION (AC-FT) WTR YR 2000 d 4211000

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.
c Total evaporation, in acre-feet, provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey.
d Diversion, in acre-feet, to Thermalito Powerplant, provided by California Department of Water Resources.

11406880 WESTERN CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.—Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank, 500 ft downstream from Thermalito Afterbay Dam, and 7.3 mi west of Oroville.

PERIOD OF RECORD.—October 1967 to current year.

GAGE.—Water-stage recorder. Datum of gage is 100.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.—Water is diverted from Thermalito Afterbay (station 11406870) 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, 1,210 ft^3/s, May 18, 1999; no flow at times each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	698	424	378	.00	.00	.00	454	693	977	910	300
2	217	684	424	377	.00	.00	.00	534	769	977	891	244
3	217	673	438	378	.00	.00	.00	637	830	977	882	222
4	222	673	448	378	.00	.00	.00	733	847	977	882	208
5	234	687	448	379	.00	.00	.00	832	825	986	882	165
6	271	698	449	378	.00	.00	.00	887	798	1010	882	148
7	314	697	430	378	.00	.00	.00	885	781	1010	879	148
8	384	731	419	378	.00	.00	.00	791	690	1010	863	162
9	413	726	419	377	.00	.00	.00	690	565	1020	845	173
10	413	687	410	124	.00	.00	63	718	523	1030	827	155
11	444	669	398	.00	.00	.00	82	857	533	1050	790	143
12	463	638	398	.00	.00	.00	45	1060	560	1030	772	131
13	488	619	399	.00	.00	.00	77	1180	609	1020	765	123
14	514	618	399	.00	.00	.00	115	1190	721	1010	757	110
15	532	618	398	.00	.00	.00	154	1150	815	983	749	98
16	544	606	398	.00	.00	.00	184	1100	888	971	727	98
17	543	588	398	.00	.00	.00	165	991	955	988	705	98
18	580	532	398	.00	.00	.00	130	904	1020	997	697	97
19	645	450	397	.00	.00	.00	118	885	1090	997	689	98
20	690	418	398	.00	.00	.00	118	969	1120	997	682	98
21	741	418	398	.00	.00	.00	118	970	1120	987	672	131
22	773	392	399	.00	.00	.00	135	995	1120	977	647	180
23	773	338	386	.00	.00	.00	146	1040	1120	977	607	198
24	773	319	378	.00	.00	.00	148	996	1060	977	569	197
25	773	319	378	.00	.00	.00	181	876	997	967	525	197
26	788	318	377	.00	.00	.00	198	740	972	946	483	197
27	799	318	378	.00	.00	.00	231	683	957	937	473	214
28	787	318	378	.00	.00	.00	309	672	957	937	459	238
29	733	351	378	.00	.00	.00	363	659	957	937	448	259
30	698	407	378	.00	---	.00	399	647	970	937	440	273
31	698	---	378	.00	---	.00	---	647	---	929	366	---
TOTAL	16682	16208	12496	3525.00	0.00	0.00	3479.00	26372	25862	30525	21765	5103
MEAN	538	540	403	114	.000	.000	116	851	862	985	702	170
MAX	799	731	449	379	.00	.00	399	1190	1120	1050	910	300
MIN	217	318	377	.00	.00	.00	.00	454	523	929	366	97
AC-FT	33090	32150	24790	6990	.00	.00	6900	52310	51300	60550	43170	10120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	271	248	120	29.8	.000	.40	143	692	695	792	659	168
MAX	539	607	403	155	.000	12.4	566	947	959	1032	890	305
(WY)	1975	1975	2000	1977	1968	1972	1977	1999	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	162400.00		162017.00			
ANNUAL MEAN	445		443		320	
HIGHEST ANNUAL MEAN					443	2000
LOWEST ANNUAL MEAN					217	1983
HIGHEST DAILY MEAN	1210	May 18	1190	May 14	1210	May 18 1999
LOWEST DAILY MEAN	.00	Jan 12	.00	Jan 11	.00	Dec 4 1967
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00	Jan 11	.00	Jan 5 1968
ANNUAL RUNOFF (AC-FT)	322100		321400		232100	
10 PERCENT EXCEEDS	987		977		842	
50 PERCENT EXCEEDS	399		398		209	
90 PERCENT EXCEEDS	.00		.00		.00	

11406890 RICHVALE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.—Lat 39°30'19", long 121°41'06", in SW 1/4 NW 1/4 sec.18, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020105, on right bank, 500 ft downstream from axis of Thermalito Afterbay Dam, and 7.3 mi west of Oroville.

PERIOD OF RECORD.—April 1968 to current year.

REVISED RECORDS.—WDR CA-91-4: 1990.

GAGE.—Water-stage recorder. Datum of gage is 100.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.—Canal diverts from Thermalito Afterbay (station 11406870); 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 ft^3/s, May 16, 1974; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	194	310	268	.00	.00	.00	304	307	454	429	217
2	22	244	309	268	.00	.00	.00	379	324	454	429	179
3	21	319	320	269	.00	.00	.00	405	363	454	429	155
4	20	344	324	269	.00	.00	.00	415	389	453	423	138
5	20	360	324	270	.00	.00	.00	433	401	454	419	134
6	35	369	324	269	.00	.00	.00	439	404	454	419	124
7	44	368	324	275	.00	.00	.00	380	404	454	419	102
8	87	369	324	278	.00	.00	.00	279	377	454	419	94
9	103	370	297	279	.00	.00	.00	225	320	453	409	95
10	104	379	284	286	.00	.00	.00	246	279	454	404	73
11	104	372	284	290	.00	.00	.00	287	263	444	404	67
12	135	364	283	290	.00	.00	.00	398	264	439	397	71
13	177	364	285	290	.00	.00	18	453	264	439	394	56
14	199	363	258	290	.00	.00	39	453	285	440	384	50
15	204	364	243	291	.00	.00	75	441	294	438	372	47
16	204	337	243	291	.00	.00	121	365	318	438	369	48
17	205	324	246	290	.00	.00	108	285	369	439	359	48
18	203	324	245	291	.00	.00	70	238	411	432	354	49
19	214	325	244	285	.00	.00	50	224	424	429	354	43
20	219	324	245	290	.00	.00	37	247	424	422	353	39
21	237	324	256	117	.00	.00	30	285	431	419	354	39
22	245	324	268	.00	.00	.00	29	310	434	419	341	33
23	245	308	270	.00	.00	.00	33	362	435	419	317	25
24	243	299	270	.00	.00	.00	34	337	434	419	309	27
25	244	299	269	.00	.00	.00	33	299	434	419	309	15
26	244	299	269	.00	.00	.00	48	311	434	426	300	18
27	228	299	271	.00	.00	.00	68	323	434	429	294	38
28	202	298	270	.00	.00	.00	82	309	441	429	294	45
29	195	299	269	.00	.00	.00	128	304	444	429	277	42
30	192	307	270	.00	---	.00	219	304	451	429	252	42
31	193	---	269	.00	---	.00	---	295	---	429	244	---
TOTAL	4810	9833	8667	5746.00	0.00	0.00	1222.00	10335	11256	13564	11230	2153
MEAN	155	328	280	185	.000	.000	40.7	333	375	438	362	71.8
MAX	245	379	324	291	.00	.00	219	453	451	454	429	217
MIN	20	194	243	.00	.00	.00	.00	224	263	419	244	15
AC-FT	9540	19500	17190	11400	.00	.00	2420	20500	22330	26900	22270	4270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	35.2	66.7	58.0	20.1	.000	.24	68.3	283	291	321	278	75.4
MAX	196	328	280	185	.000	6.32	201	436	400	444	397	154
(WY)	1998	2000	2000	2000	1969	1972	1972	1974	1979	1999	1999	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	79904.00		78816.00			
ANNUAL MEAN	219		215		127	
HIGHEST ANNUAL MEAN					215	2000
LOWEST ANNUAL MEAN					66.4	1991
HIGHEST DAILY MEAN	474	May 14	454	Jul 1	511	May 16 1974
LOWEST DAILY MEAN	.00	Jan 16	.00	Jan 22	.00	Sep 25 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 16	.00	Jan 22	.00	Oct 5 1968
ANNUAL RUNOFF (AC-FT)	158500		156300		91690	
10 PERCENT EXCEEDS	438		429		359	
50 PERCENT EXCEEDS	243		268		52	
90 PERCENT EXCEEDS	.00		.00		.00	

11406900 PACIFIC GAS & ELECTRIC CO. LATERAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.—Lat 39°29'22", long 121°41'12", in SE 1/4 NW 1/4 sec.19, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on right bank, 82 ft downstream from axis of Thermalito Afterbay Dam, and 7.2 mi west of Oroville.

PERIOD OF RECORD.—April 1968 to current year.

GAGE.—Water-stage recorder. Datum of gage is 113.47 ft above sea level (levels by California Department of Water Resources).

REMARKS.—Flow regulated at outlet works from Thermalito Afterbay (station 11406870); 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 ft^3/s, Apr. 24, 1977, May 16, 1978; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	19	5.4	.00	.00	.00	22	11	15	14	2.3
2	.00	.00	13	5.3	.00	.00	.00	28	13	15	14	2.3
3	.00	.00	5.2	5.0	.00	.00	.00	30	12	15	14	2.1
4	.00	.00	5.2	3.3	.00	.00	.00	27	9.6	15	14	2.0
5	.00	.00	5.2	2.3	.00	.00	.00	26	9.0	15	14	1.9
6	.00	.00	5.1	2.3	.00	.00	.00	22	5.6	15	14	2.0
7	.00	.00	5.1	2.3	.00	.00	.00	18	2.1	16	14	2.0
8	.00	.00	5.1	2.3	.00	.00	.00	13	2.1	16	14	2.1
9	.00	.00	5.2	2.1	.00	.00	.00	4.9	2.3	16	14	2.0
10	.00	.00	3.9	.59	.00	.00	.00	5.2	2.3	16	14	1.8
11	.00	.00	3.1	.00	.00	.00	.00	4.8	2.2	16	14	2.0
12	.00	.00	3.0	.00	.00	.00	.00	5.1	3.5	16	14	1.6
13	.00	.00	2.8	.00	.00	.00	.00	6.2	5.6	16	14	.58
14	.00	.00	6.3	.00	.00	.00	.00	6.7	11	16	14	.00
15	.00	2.4	7.9	.00	.00	.00	.00	7.2	16	16	14	.00
16	.00	3.9	6.2	.00	.00	.00	.00	6.8	17	16	14	.00
17	.00	3.9	4.9	.00	.00	.00	.00	4.8	17	16	14	.00
18	.00	1.8	4.7	.00	.00	.00	.00	1.7	18	15	14	.00
19	.00	.00	4.9	.00	.00	.00	.00	8.4	20	14	13	.00
20	.00	.00	4.9	.00	.00	.00	.00	13	23	14	13	.00
21	.00	.00	5.0	.00	.00	.00	.00	13	25	14	13	.00
22	.00	9.2	5.1	.00	.00	.00	.00	13	24	14	13	.00
23	.00	19	5.4	.00	.00	.00	.00	9.9	23	14	13	.00
24	.00	20	5.2	.00	.00	.00	.00	6.6	23	14	11	.00
25	.00	17	5.3	.00	.00	.00	.00	5.9	19	14	10	.00
26	.00	17	5.1	.00	.00	.00	.00	5.1	17	14	8.2	.00
27	.00	17	5.0	.00	.00	.00	.00	5.1	16	14	5.7	.00
28	.00	17	5.1	.00	.00	.00	11	6.0	15	14	5.6	.00
29	.00	17	5.3	.00	.00	.00	19	8.0	15	14	4.8	.00
30	.00	18	5.3	.00	---	.00	20	9.1	16	14	4.2	.00
31	.00	---	5.4	.00	---	.00	---	8.9	---	14	3.1	---
TOTAL	0.00	163.20	177.9	30.89	0.00	0.00	50.00	351.4	395.3	463	369.6	24.68
MEAN	.000	5.44	5.74	1.00	.000	.000	1.67	11.3	13.2	14.9	11.9	.82
MAX	.00	20	19	5.4	.00	.00	20	30	25	16	14	2.3
MIN	.00	.00	2.8	.00	.00	.00	.00	1.7	2.1	14	3.1	.00
AC-FT	.00	324	353	61	.00	.00	99	697	784	918	733	49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	.31	1.91	.84	.11	.000	.000	3.53	12.6	12.5	13.5	10.9	1.25
MAX	3.47	6.58	5.74	1.00	.000	.000	14.8	23.2	18.3	17.1	15.1	2.62
(WY)	1997	1996	2000	2000	1969	1969	1977	1975	1981	1981	1999	1972
MIN	.000	.000	.000	.000	.000	.000	.000	6.55	8.40	9.37	7.12	.000
(WY)	1969	1969	1969	1969	1969	1969	1974	1994	1998	1970	1988	1994

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	2263.43		2025.97			
ANNUAL MEAN	6.20		5.54		4.86	
HIGHEST ANNUAL MEAN					5.94	1999
LOWEST ANNUAL MEAN					3.67	1983
HIGHEST DAILY MEAN	38	May 2	30	May 3	46	Apr 24 1977
LOWEST DAILY MEAN	.00	Jan 12	.00	Oct 1	.00	Sep 9 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00	Oct 1	.00	Sep 9 1968
ANNUAL RUNOFF (AC-FT)	4490		4020		3520	
10 PERCENT EXCEEDS	17		16		15	
50 PERCENT EXCEEDS	1.3		2.0		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11406910 SUTTER-BUTTE CANAL AT INTAKE, NEAR OROVILLE, CA

LOCATION.—Lat 39°27'01", long 121°39'27", in NW corner of Boga Fernandez Grant, T.18 N., R.3 E., Butte County, Hydrologic Unit 18020105, on left bank, 675 ft downstream from Thermalito Afterbay Dam, and 6.8 mi southwest of Oroville.

PERIOD OF RECORD.—November 1967 to current year.

GAGE.—Water-stage recorder. Datum of gage is 109.97 ft above sea level (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 109.50 ft lower.

REMARKS.—Water is diverted from Thermalito Afterbay and is used for irrigation. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.—Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,110 ft^3/s, Apr. 22–24, 1968; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538	596	518	479	.00	.00	.00	1240	1420	1590	1550	1150
2	511	662	519	477	.00	.00	.00	1410	1450	1590	1550	1110
3	487	682	518	475	.00	.00	.00	1590	1460	1600	1540	1040
4	487	711	516	494	.00	.00	.00	1680	1460	1590	1530	996
5	488	710	517	506	.00	.00	.00	1690	1470	1590	1520	960
6	468	693	519	503	.00	.00	.00	1690	1460	1590	1470	927
7	449	686	518	503	.00	.00	221	1640	1460	1590	1460	917
8	426	690	519	502	.00	.00	195	1560	1470	1580	1460	920
9	415	683	505	502	.00	.00	216	1440	1460	1550	1450	922
10	416	646	499	505	.00	.00	300	1390	1410	1550	1440	876
11	469	630	498	505	.00	.00	363	1450	1380	1570	1440	833
12	532	616	497	506	.00	.00	447	1500	1370	1560	1450	828
13	545	607	501	505	.00	.00	499	1550	1370	1550	1420	817
14	573	610	485	491	.00	.00	513	1590	1390	1530	1430	732
15	584	606	478	483	.00	.00	456	1560	1420	1530	1430	657
16	599	579	478	482	.00	.00	428	1470	1450	1560	1420	664
17	591	553	478	484	.00	.00	388	1370	1480	1570	1400	642
18	589	541	480	307	.00	.00	335	1340	1510	1580	1400	624
19	596	539	476	211	.00	.00	343	1360	1520	1580	1390	634
20	598	540	479	211	.00	.00	352	1410	1530	1570	1380	637
21	599	534	480	210	.00	.00	368	1450	1540	1570	1370	630
22	598	538	479	210	.00	.00	355	1480	1540	1560	1350	611
23	615	537	480	208	.00	.00	377	1530	1560	1540	1350	607
24	627	534	480	206	.00	.00	380	1510	1550	1530	1350	605
25	651	515	479	207	.00	.00	426	1490	1540	1530	1330	627
26	659	518	476	209	.00	.00	532	1480	1540	1530	1330	631
27	693	515	480	209	.00	.00	635	1470	1570	1530	1310	602
28	690	516	481	87	.00	.00	801	1430	1570	1520	1310	596
29	673	518	481	.00	.00	.00	1020	1400	1580	1520	1270	584
30	662	518	482	.00	---	.00	1130	1400	1590	1530	1240	573
31	664	---	479	.00	---	.00	---	1410	---	1530	1190	---
TOTAL	17492	17823	15275	10677.00	0.00	0.00	11080.00	45980	44520	48310	43530	22952
MEAN	564	594	493	344	.000	.000	369	1483	1484	1558	1404	765
MAX	693	711	519	506	.00	.00	1130	1690	1590	1600	1550	1150
MIN	415	515	476	.00	.00	.00	.00	1240	1370	1520	1190	573
AC-FT	34700	35350	30300	21180	.00	.00	21980	91200	88310	95820	86340	45530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	389	160	122	39.5	22.8	92.1	533	1399	1383	1480	1360	729
MAX	661	594	493	344	374	571	1294	1815	1643	1709	1608	893
(WY)	1975	2000	2000	2000	1977	1976	1968	1975	1975	1981	1982	1995
MIN	77.2	.000	.000	.000	.000	.000	.000	519	826	834	776	283
(WY)	1978	1975	1971	1969	1969	1978	1983	1977	1992	1991	1991	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	278505.00		277639.00			
ANNUAL MEAN	763		759		644	
HIGHEST ANNUAL MEAN					765	1976
LOWEST ANNUAL MEAN					401	1992
HIGHEST DAILY MEAN	1820	May 13	1690	May 5	2110	Apr 22 1968
LOWEST DAILY MEAN	.00	Jan 16	.00	Jan 29	.00	Jan 8 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 16	.00	Jan 29	.00	Jan 8 1968
ANNUAL RUNOFF (AC-FT)	552400		550700		466400	
10 PERCENT EXCEEDS	1570		1550		1560	
50 PERCENT EXCEEDS	598		596		438	
90 PERCENT EXCEEDS	.00		.00		.00	

11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER, NEAR OROVILLE, CA

LOCATION.—Lat 39°27'23", long 121°38'10", in NW 1/4 SE 1/4 sec.33, T.19 N., R.3 E., Butte County, Hydrologic Unit 18020106, on left bank of outlet channel, 955 ft downstream from centerline of Thermalito Afterbay Dam, and 5.7 mi southwest of Oroville.

PERIOD OF RECORD.—November 1967 to current year.
WATER TEMPERATURE: Water years 1969–92.

GAGE.—Water-stage recorder. Datum of gage is 113.47 ft above sea level (levels by California Department of Water Resources). Prior to May 1, 1970, at datum 13.00 ft lower.

REMARKS.—Flow regulated by gates of Thermalito Afterbay outlet 955 ft upstream. See schematic diagram showing diversions and storage from Feather River at Lake Oroville.

COOPERATION.—Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,600 ft^3/s, Jan. 28, 1970, gage height, 23.30 ft, datum then in use, 21,600 ft^3/s, Jan. 2, 1997, gage height, 11.45 ft; no flow for many days during 1968.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2840	1690	1480	2850	1010	15500	1740	6680	1740	7950	6940	4420
2	2840	1700	1480	2840	1000	15500	1740	6940	2260	7950	6940	4420
3	2840	1700	1490	2850	1000	15500	1750	6950	2840	7950	6690	4420
4	2840	1690	1480	2840	1010	15200	1750	6940	3400	7950	6180	4410
5	2850	1690	1480	2850	1000	12500	1740	6940	3410	7700	5440	4420
6	3410	1690	1480	2850	1000	12500	1750	6940	3410	7440	5430	3910
7	3910	1690	1490	2840	1010	12500	2290	6180	3410	6940	5430	3420
8	3910	1690	1610	2840	1000	12800	2840	5180	3410	6940	4920	2850
9	3910	1690	1980	2840	1010	16400	3650	4170	3410	6940	4920	2840
10	3910	1690	2850	2850	1010	16500	4680	3130	3400	6680	4920	2840
11	3900	1700	2840	2840	1010	16500	5890	2290	3410	6440	5430	2840
12	3100	1690	2840	2850	1000	16500	5930	1760	3410	6440	5430	2840
13	2280	1690	2850	2850	1010	16000	5930	1740	3410	6450	5430	2840
14	1740	1690	2850	2840	1350	13900	5930	1740	3410	6440	5430	2840
15	1530	1690	2840	2840	3840	10100	5930	1750	3410	6440	5430	2840
16	1530	1690	2850	2840	7330	8210	5930	1750	3410	6440	5430	2840
17	1530	1690	2840	2850	8470	7190	5670	1540	3410	6440	5430	2280
18	1530	1700	2850	2840	8470	6440	4660	1330	3410	6450	5430	2280
19	1690	1700	2850	2790	8460	6430	3920	1230	3410	6450	5430	2280
20	1690	1700	2840	2240	11900	6440	3910	1230	3410	6450	5420	2280
21	1700	1700	2840	1730	12500	6190	3910	1230	3660	7180	5420	2280
22	1700	1700	2840	1510	12800	5190	3910	1230	4660	7450	5430	2280
23	1690	1700	2840	1310	13500	4420	3900	1230	5680	7440	5430	2280
24	1690	1700	2850	1130	13800	4410	3910	1230	6670	7450	5430	2280
25	1690	1700	2840	1000	14600	3660	3910	1230	6940	7450	5430	2280
26	1690	1690	2840	1000	15000	3400	3910	1230	6940	7450	5430	2280
27	1700	1690	2850	1000	15500	3120	4100	1230	7200	7450	5430	2280
28	1690	1690	2840	1000	15500	2290	5170	1230	7950	7450	5180	2280
29	1690	1690	2850	1000	15500	1750	6160	1230	7950	7450	4920	2280
30	1690	1570	2840	1000	---	1740	6420	1230	7950	7450	4420	2280
31	1690	---	2840	1010	---	1740	---	1230	---	7440	4410	---
TOTAL	72400	50690	76540	68920	191590	290520	122930	89940	130390	220540	169030	86910
MEAN	2335	1690	2469	2223	6607	9372	4098	2901	4346	7114	5453	2897
MAX	3910	1700	2850	2850	15500	16500	6420	6950	7950	7950	6940	4420
MIN	1530	1570	1480	1000	1000	1740	1740	1230	1740	6440	4410	2280
AC-FT	143600	100500	151800	136700	380000	576200	243800	178400	258600	437400	335300	172400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	1963	2334	4187	4632	5529	5879	4630	3583	3203	3958	3537	2916
MAX	5867	11020	15120	14700	14600	16890	15410	12340	9717	8232	7043	7085
(WY)	1975	1974	1984	1997	1983	1983	1983	1983	1983	1999	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	1749690		1570400			
ANNUAL MEAN	4794		4291		3953	
HIGHEST ANNUAL MEAN					9352	1983
LOWEST ANNUAL MEAN					970	1991
HIGHEST DAILY MEAN	17100	Feb 11	16500	Mar 10	21200	Jan 28 1970
LOWEST DAILY MEAN	1250	Jun 20	1000	Jan 25	.00	Nov 16 1967
ANNUAL SEVEN-DAY MINIMUM	1260	Jun 14	1000	Jan 25	.00	Nov 16 1967
INSTANTANEOUS PEAK FLOW			16600	Mar 09	21600	Jan 28 1970
INSTANTANEOUS PEAK STAGE			8.76	Mar 09	23.30	Jan 28 1970
ANNUAL RUNOFF (AC-FT)	3471000		3115000		2864000	
10 PERCENT EXCEEDS	13500		7780		9450	
50 PERCENT EXCEEDS	2890		2850		2360	
90 PERCENT EXCEEDS	1260		1340		563	

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 mi^2.

PERIOD OF RECORD.—October 1901 to current year. Monthly discharge only for some periods, published in WSP 1315-A. October 1934 to September 1961 published as "near Oroville."
CHEMICAL DATA: Water years 1906–07, 1951–77.
SPECIFIC CONDUCTANCE: Water years 1972–78.
WATER TEMPERATURE: Water years 1954–92.
SEDIMENT DATA: Water years 1957–79.

REVISED RECORDS.—WSP 843: 1907(M), 1909(M), 1914–15(M), 1919(M), 1927–28(M). WSP 881: 1913–28 (yearly summaries). WSP 1515: 1906–8. WSP 1931: Drainage area. WDR CA-74-2: 1968–70, adjusted monthly discharge.

GAGE.—Water-stage recorder. Datum of gage is 148.97 ft above sea level (levels by California Department of Water Resources). See WSP 1931 for history of changes prior to Oct. 1, 1964.

REMARKS.—Flow completely regulated by Lake Oroville (station 11406800), beginning November 1967, and Thermalito Diversion Pool (station 11406825), capacity 13,500 acre-ft. Diversions upstream from station for power and irrigation. Feather River Fish Hatchery (station 11406930) diverts up to 120 ft^3/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 ft^3/s Mar. 19, 1907, elevation, 167.5 ft above sea level, site and datum then in use, maximum discharge (since completion of Oroville Dam), 161,000 ft^3/s, Jan. 2, 1997, gage height, 25.45 ft; minimum, 300 ft^3/s, estimated, Nov. 9, 1931.
Combined flow (since completion of Oroville Dam): Maximum daily discharge, 132,000 ft^3/s, Feb. 18, 1986; minimum daily, 222 ft^3/s, Sept. 19, 1972.

EXTREMES FOR CURRENT YEAR.—River only: Maximum discharge, 1,270 ft^3/s, June 15, gage height, 1.38 ft; minimum daily, 501 ft^3/s, Apr. 21.
Combined flow: Maximum daily discharge, 694 ft^3/s, Oct. 15; minimum daily, 605 ft^3/s, Apr. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	634	636	618	614	645	613	623	638	617	615	627
2	633	627	627	623	615	644	611	628	618	618	616	626
3	645	631	623	624	659	646	611	628	614	626	616	626
4	647	629	623	621	615	641	612	629	617	626	615	620
5	642	629	616	621	614	659	613	632	620	626	616	627
6	641	634	621	619	616	644	612	635	625	622	615	627
7	640	637	627	619	626	643	612	628	625	626	615	627
8	640	637	619	619	631	649	614	627	619	626	615	627
9	636	637	623	619	630	648	614	629	625	626	615	626
10	678	637	616	614	647	645	611	629	621	626	615	627
11	618	636	617	620	641	641	612	628	623	623	620	632
12	622	636	615	616	636	638	611	624	631	628	626	631
13	624	634	620	616	661	637	617	617	620	628	627	629
14	633	637	617	614	640	638	616	619	629	628	627	647
15	694	636	619	614	635	639	617	623	683	627	627	636
16	631	636	630	614	640	639	618	633	621	628	627	640
17	636	639	619	618	643	636	621	632	621	628	627	631
18	631	642	621	614	644	632	619	627	622	627	627	624
19	639	643	614	614	642	636	611	618	614	627	627	629
20	635	639	613	614	641	629	607	623	624	627	627	638
21	637	640	618	615	641	618	605	617	620	628	627	637
22	644	643	614	615	649	629	611	650	623	628	658	640
23	641	643	614	618	651	624	610	663	631	628	615	634
24	642	644	618	624	647	635	610	660	628	623	624	641
25	643	643	615	617	645	636	610	667	625	623	629	641
26	641	641	616	616	650	615	622	664	623	627	621	641
27	645	640	618	617	660	634	625	662	616	628	623	641
28	647	641	618	618	645	628	627	670	616	629	621	640
29	644	639	621	615	647	625	626	666	621	623	627	635
30	641	640	620	625	---	615	624	662	618	623	629	631
31	641	---	618	615	---	611	---	668	---	621	627	---
TOTAL	19857	19124	19206	19146	18525	19699	18442	19781	18731	19391	19316	18978
MEAN	641	637	620	618	639	635	615	638	624	626	623	633
MAX	694	644	636	625	661	659	627	670	683	629	658	647
MIN	618	627	613	614	614	611	605	617	614	617	615	620
AC-FT	39390	37930	38100	37980	36740	39070	36580	39240	37150	38460	38310	37640
MEAN a	2463	3667	2857	5817	14766	11409	9453	7027	3681	3252	2875	2674
AC-FTa	151500	218200	175700	357700	849400	701500	562500	432100	219100	199900	176800	159100

a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870).

11407000 FEATHER RIVER AT OROVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1967, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2085	3069	5296	6790	9463	10080	12120	9930	5176	2505	1980	1792
MAX	12370	19710	28410	39860	28030	39760	30100	25150	15650	5999	3265	2883
(WY)	1963	1904	1956	1909	1904	1904	1911	1938	1911	1907	1967	1967
MIN	745	853	1102	1350	1714	1564	2146	1246	924	852	956	992
(WY)	1933	1933	1950	1947	1933	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1902 - 1967	
ANNUAL MEAN	5834	
HIGHEST ANNUAL MEAN	12860	1907
LOWEST ANNUAL MEAN	1623	1924
HIGHEST DAILY MEAN	187000	Mar 19 1907
LOWEST DAILY MEAN	577	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	652	Sep 30 1932
INSTANTANEOUS PEAK FLOW	230000	Mar 19 1907
INSTANTANEOUS PEAK STAGE	167.5	Mar 19 1907
ANNUAL RUNOFF (AC-FT)	4226000	
10 PERCENT EXCEEDS	13300	
50 PERCENT EXCEEDS	2870	
90 PERCENT EXCEEDS	1470	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	562	750	1199	3083	2311	2082	999	766	514	510	498	500
MAX	1580	3313	7728	26750	25180	18870	7064	7916	998	775	640	659
(WY)	1996	1982	1997	1997	1986	1995	1982	1995	1989	1992	1997	1999
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1969 - 2000	
ANNUAL TOTAL	275629		230196			
ANNUAL MEAN	755		629		1144	
ANNUAL MEAN ADJUSTED a	6457		5790		b 6284	
HIGHEST ANNUAL MEAN					3936	1997
LOWEST ANNUAL MEAN					404	1976
HIGHEST DAILY MEAN	8080	Feb 19	694	Oct 15	132000	Feb 18 1986
LOWEST DAILY MEAN	559	Jun 14	605	Apr 21	222	Sep 19 1972
ANNUAL SEVEN-DAY MINIMUM	573	Jun 10	609	Apr 19	337	Sep 13 1972
INSTANTANEOUS PEAK FLOW					161000	Jan 2 1997
INSTANTANEOUS PEAK STAGE					25.45	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	546700		456600		828800	
ANNUAL RUNOFF (AC-FT) ADJUSTED a	4674800		4203000		b 4553000	
10 PERCENT EXCEEDS	663		644		650	
50 PERCENT EXCEEDS	626		627		428	
90 PERCENT EXCEEDS	615		615		401	

a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870).
b Includes water year 1968.

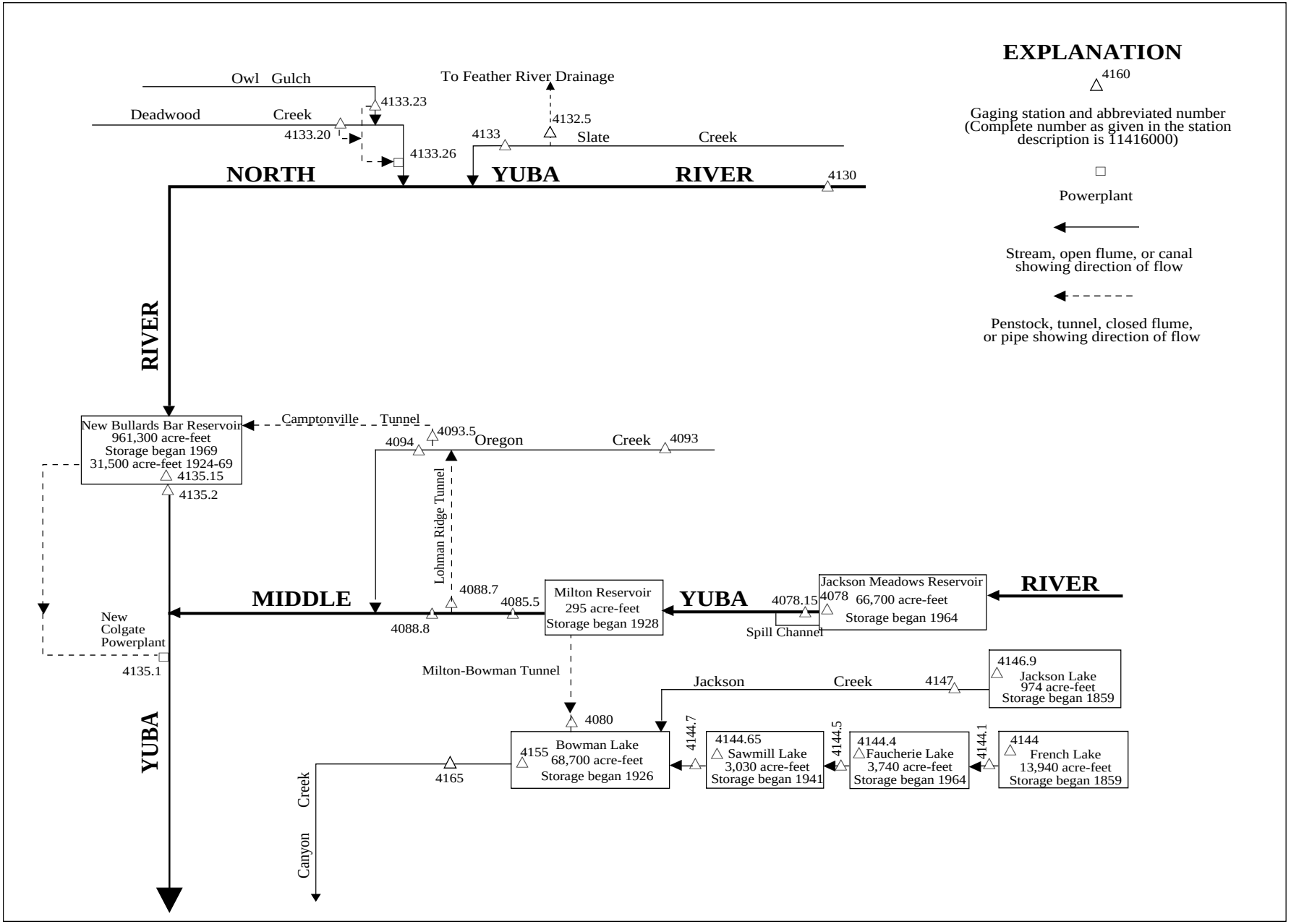

Figure 31. Diversions and storage in North Yuba River Basin.

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 mi^2.

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 North 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 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, 69,900 acre-ft, May 31 to June 5, maximum elevation, 6,036.68 ft, June 2; minimum, 36,200 acre-ft, Mar. 24 to Apr. 2, minimum elevation, 6001.01 ft, Apr. 1.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50300	40900	39100	38900	41900	40200	36200	51300	69900	67700	61300	51500
2	50000	40600	39100	38900	41900	40000	36200	52200	69900	67500	61000	51200
3	49700	40300	39100	38900	42000	39800	36400	53000	69900	67300	60700	50900
4	49300	40000	39100	38900	42100	39600	36900	53900	69900	67200	60400	50600
5	49000	39700	39100	38800	42200	39400	37400	54700	69900	67000	60100	50300
6	48700	39500	39000	38800	42200	39200	37800	e55300	69800	66800	59700	50000
7	48400	39300	39100	38800	42300	39000	38200	e56200	69800	66700	59400	49700
8	48100	39100	39000	38800	42200	38800	38700	e57000	69800	66500	59100	49400
9	47800	39000	39100	38800	41900	38600	39200	e57900	69700	66300	58800	49000
10	47500	38900	39100	38800	41700	38400	39700	e58700	69700	66200	58500	48700
11	47100	38900	39100	38900	41500	38200	40200	e59500	69600	66000	58100	48400
12	46800	38900	39100	38900	41300	38000	40900	e60000	69500	65800	57800	48100
13	46500	38900	39100	38900	41400	37700	42100	e60600	69500	65700	57500	47800
14	46200	38900	39100	38900	42100	37600	42800	e61100	69500	65500	57200	47500
15	45900	38900	39100	39100	42200	37400	43300	e61700	69500	65300	56800	47100
16	45600	39000	39100	39100	42200	37200	43700	e62200	69400	65100	56500	46800
17	45300	39000	39000	39200	42100	37000	44200	e62800	69400	65000	56200	46500
18	44900	39000	39000	39500	41900	36900	44500	e63300	69300	64800	55900	46200
19	44600	39000	39000	39700	41700	36800	44800	e63900	69200	64600	55500	45900
20	44300	39100	39000	40000	41600	36700	45100	e64400	69100	64400	55200	45600
21	44000	39100	39000	40200	41400	36600	45400	e65000	69000	64300	54900	45300
22	43700	39100	39000	40300	41300	36400	45800	e65500	68900	64100	54600	45000
23	43400	39100	39000	40500	41100	36300	46200	e66100	68800	63900	54300	44700
24	43100	39100	39000	40900	40900	36200	46600	e66900	68700	63700	54000	44300
25	42700	39100	38900	41200	40700	36200	47100	e67600	68600	63500	53600	44000
26	42400	39000	38900	41300	40600	36200	47700	e68100	68400	63300	53300	43700
27	42300	39000	38900	41400	40700	36200	48500	e68600	68300	63000	53000	43400
28	42100	39000	38900	41500	40500	36200	49200	e69000	68200	62700	52700	43100
29	41800	39000	38900	41600	40400	36200	49800	e69500	68000	62300	52400	42700
30	41500	39100	38900	41700	---	36200	50500	e69800	67900	62000	52100	42400
31	41200	---	38900	41800	---	36200	---	e69900	---	61700	51700	---
MAX	50300	40900	39100	41800	42300	40200	50500	69900	69900	67700	61300	51500
MIN	41200	38900	38900	38800	40400	36200	36200	51300	67900	61700	51700	42400
a	6006.89	6004.50	6004.25	6007.63	6006.00	6001.05	6017.22		6034.71	6028.68	6018.49	6008.32
b	-9300	-2100	-200	+2900	-1400	-4200	+14300	+19400	-2000	-6200	-10000	-9300

CAL YR 1999 MAX 68300 MIN 35100
WTR YR 2000 MAX 69900 MIN 36200

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

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 mi^2.

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 North 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 daily discharge, 415 ft^3/s, May 23, 28, 1996; minimum daily, 7.9 ft^3/s, several days November 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	154	11	11	11	e179	e179	e84	e86	85	149	145
2	162	153	11	11	11	e179	e179	e84	e86	85	149	145
3	162	153	11	11	11	e179	e179	e84	e86	85	149	145
4	162	139	11	11	11	e179	e147	e84	e86	85	149	145
5	161	124	11	11	11	e179	e114	e84	e86	85	149	145
6	161	124	11	11	11	e179	e114	e84	e86	85	149	146
7	161	124	11	11	11	e179	e114	e84	e86	85	148	149
8	161	97	11	11	e95	e179	e114	e84	e86	85	148	148
9	161	64	11	11	e179	e179	e114	e84	e86	85	148	148
10	160	34	11	11	e179	e179	e114	e84	e86	85	149	148
11	160	11	11	11	e179	e179	e99	e84	e86	84	150	148
12	160	11	11	11	e179	e179	e82	e84	e86	84	150	147
13	160	11	11	11	e179	e179	e82	e84	e86	84	150	147
14	159	11	11	11	e179	e179	e82	e84	e86	84	150	147
15	159	11	11	11	e179	e179	e82	e85	e86	84	149	147
16	159	11	11	11	e179	e179	e82	e85	e86	84	149	147
17	159	11	11	11	e179	e179	e83	e85	e86	84	149	146
18	158	11	11	11	e179	e179	e83	e85	e86	84	149	147
19	158	11	11	11	e179	e179	e83	e85	e86	84	149	149
20	158	11	11	11	e179	e179	e83	e85	e86	84	149	148
21	158	11	11	11	e179	e179	e83	e85	e86	84	149	148
22	157	11	11	11	e179	e179	e83	e85	e86	84	149	148
23	156	11	11	11	e179	e179	e83	e85	e86	84	148	148
24	156	11	11	11	e179	e179	e83	e85	e86	84	148	e147
25	155	11	11	11	e179	e179	e83	e85	e86	84	148	e147
26	155	11	11	11	e179	e179	e83	e85	e86	113	147	e147
27	155	11	11	11	e179	e179	e83	e85	87	150	146	e147
28	155	11	11	11	e179	e179	e83	e85	85	150	146	e146
29	155	11	11	11	e179	e179	e83	e85	85	149	146	e146
30	155	11	11	11	---	e179	e83	e85	85	149	146	e146
31	154	---	11	11	---	e179	---	e85	---	149	146	---
TOTAL	4912	1386	341	341	3931	5549	3039	2621	2578	2970	4600	4407
MEAN	158	46.2	11.0	11.0	136	179	101	84.5	85.9	95.8	148	147
MAX	162	154	11	11	179	179	179	85	87	150	150	149
MIN	154	11	11	11	11	179	82	84	85	84	146	145
AC-FT	9740	2750	676	676	7800	11010	6030	5200	5110	5890	9120	8740

CAL YR 1999 TOTAL 36029.5 MEAN 98.7 MAX 223 MIN 9.1 AC-FT 71460
WTR YR 2000 TOTAL 36675 MEAN 100 MAX 179 MIN 11 AC-FT 72740

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.—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 North 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 daily discharge, 492 ft^3/s, Feb. 11, 1941; minimum daily, 0.4 ft^3/s, Oct. 7, 1944.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	148	11	8.6	17	179	184	116	203	90	154	154
2	154	147	9.7	8.6	18	178	188	117	200	90	153	156
3	153	147	9.2	8.6	17	177	194	117	193	90	153	152
4	153	139	8.9	8.7	18	177	184	117	187	90	153	152
5	153	121	8.9	8.6	18	177	155	117	181	90	153	151
6	154	120	8.8	8.5	18	175	153	114	179	90	153	152
7	153	121	9.1	8.5	17	174	153	118	169	90	153	155
8	153	112	8.8	8.5	62	175	154	142	171	89	152	154
9	152	64	9.1	8.5	173	175	154	124	168	89	152	154
10	152	49	9.3	9.0	180	172	156	118	153	88	153	154
11	152	12	8.8	12	179	174	140	112	139	88	155	153
12	151	8.8	8.8	11	177	173	118	109	128	88	154	153
13	150	8.4	9.7	9.7	190	174	142	106	120	88	154	153
14	151	8.2	8.8	9.5	295	174	127	106	116	88	154	153
15	151	10	8.8	16	217	175	116	110	113	88	153	153
16	149	9.7	8.8	19	201	176	113	109	109	88	153	152
17	150	11	9.0	15	192	176	122	106	102	88	153	152
18	150	9.6	9.1	32	187	177	116	107	97	88	153	152
19	149	11	9.1	35	185	182	108	109	95	88	153	154
20	150	15	9.1	43	184	181	108	110	94	88	153	154
21	149	12	9.1	30	183	178	111	112	93	87	153	153
22	149	10	8.8	22	184	178	113	112	94	87	153	154
23	149	9.6	8.9	21	182	180	111	112	93	87	153	153
24	149	9.3	8.8	42	178	181	110	115	92	87	152	153
25	148	9.2	8.8	49	177	183	110	111	92	87	152	153
26	149	9.1	8.8	31	180	185	113	109	92	103	152	153
27	152	9.1	8.7	25	200	187	117	107	92	154	152	152
28	161	8.9	8.7	22	184	187	117	106	92	154	152	152
29	149	8.8	8.7	20	182	186	113	128	91	154	152	152
30	149	10	8.7	20	---	185	113	176	90	154	152	151
31	148	---	8.7	19	---	183	---	206	---	154	151	---
TOTAL	4682	1367.7	279.5	589.3	4195	5534	4013	3678	3838	3084	4738	4589
MEAN	151	45.6	9.02	19.0	145	179	134	119	128	99.5	153	153
MAX	161	148	11	49	295	187	194	206	203	154	155	156
MIN	148	8.2	8.7	8.5	17	172	108	106	90	87	151	151
AC-FT	9290	2710	554	1170	8320	10980	7960	7300	7610	6120	9400	9100

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 - 2000, BY WATER YEAR (WY)

MEAN	152	127	57.6	37.0	39.8	59.0	59.3	99.2	82.8	65.7	90.2	154
MAX	310	368	357	211	197	265	225	333	280	174	253	300
(WY)	1981	1973	1973	1985	1985	1986	1999	1969	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	40643.2		40587.5			
ANNUAL MEAN	111		111		85.4	
HIGHEST ANNUAL MEAN					133	1998
LOWEST ANNUAL MEAN					14.5	1977
HIGHEST DAILY MEAN	425	May 26	295	Feb 14	438	Nov 4 1972
LOWEST DAILY MEAN	8.2	Nov 14	8.2	Nov 14	1.1	Dec 11 1976
ANNUAL SEVEN-DAY MINIMUM	8.7	Dec 25	8.6	Jan 3	1.1	Dec 26 1976
ANNUAL RUNOFF (AC-FT)	80620		80510		61860	
10 PERCENT EXCEEDS	244		180		255	
50 PERCENT EXCEEDS	99		123		27	
90 PERCENT EXCEEDS	9.3		9.1		5.4	

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 mi^2.

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.—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 North 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, 8,610 ft^3/s, Jan. 2, 1997, gage height, 17.1 ft, from floodmarks; minimum daily, 0.77 ft^3/s, Nov. 3, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.8	3.5	3.2	3.3	3.6	4.1	3.2	3.4	3.6	3.5	3.6
2	3.7	3.8	3.5	3.2	3.3	3.5	4.1	3.2	3.7	3.6	3.5	3.6
3	3.7	3.8	3.5	3.2	3.3	3.6	4.1	3.2	3.6	3.6	3.5	3.5
4	3.7	3.8	3.5	3.2	3.3	3.7	4.1	3.2	3.6	3.6	3.5	3.5
5	3.7	3.8	3.5	3.2	3.3	4.1	4.1	3.2	3.6	3.6	3.5	3.5
6	3.7	3.8	3.5	3.2	3.3	4.0	4.0	3.2	3.6	3.6	3.5	3.5
7	3.7	3.8	3.5	3.3	3.3	4.0	4.0	3.2	3.6	3.6	3.5	3.5
8	3.7	3.8	3.5	3.3	3.4	4.1	4.0	3.2	3.6	3.6	3.5	3.5
9	3.7	3.7	3.5	3.3	3.5	4.1	4.0	3.1	3.6	3.6	3.5	3.4
10	3.7	3.6	3.5	3.3	3.6	4.0	4.0	3.2	3.5	3.5	3.5	3.4
11	3.7	3.5	3.5	3.3	3.6	4.0	3.6	3.1	3.6	3.5	3.5	3.4
12	3.7	3.5	3.5	3.3	3.6	4.1	3.2	3.1	3.6	3.5	3.5	3.4
13	4.7	3.5	3.5	3.3	3.8	4.0	3.3	3.1	3.9	3.5	3.5	3.4
14	3.8	3.5	3.5	3.3	4.1	4.0	3.1	3.2	3.5	3.4	3.5	3.4
15	3.8	3.5	3.5	3.4	3.6	4.0	3.2	3.2	3.6	3.4	3.5	3.4
16	3.8	3.5	3.3	3.4	3.6	4.1	3.2	3.2	3.5	3.4	3.5	3.4
17	3.8	3.5	3.2	3.3	3.6	4.1	3.3	3.2	3.5	3.4	3.5	3.4
18	3.8	3.4	3.2	3.5	3.6	4.1	3.2	3.1	3.5	3.4	3.5	3.5
19	3.8	3.5	3.2	3.5	3.6	4.1	3.2	3.2	3.5	3.4	3.5	3.7
20	3.8	3.5	3.2	3.5	3.6	4.1	3.2	3.2	3.5	3.4	3.5	3.7
21	3.8	3.5	3.2	3.4	3.6	4.1	3.3	3.2	3.5	3.4	3.5	3.7
22	3.8	3.5	3.2	3.3	3.6	4.1	3.2	3.1	3.5	3.4	3.5	3.7
23	3.8	3.4	3.2	3.4	3.6	4.1	3.2	3.2	3.5	3.4	3.5	3.7
24	3.8	3.5	3.2	3.6	3.5	4.1	3.2	3.2	3.5	3.4	3.5	3.7
25	3.8	3.5	3.2	3.4	3.5	4.1	3.2	3.2	3.5	3.4	3.5	3.7
26	3.8	3.5	3.2	3.4	3.6	4.1	3.3	3.1	3.4	3.4	3.5	3.6
27	3.9	3.4	3.2	3.3	3.7	4.1	3.2	3.0	3.5	3.5	3.5	3.6
28	3.9	3.5	3.2	3.3	3.6	4.1	3.2	3.1	3.5	3.5	3.5	3.6
29	3.8	3.5	3.2	3.3	3.6	4.1	3.2	3.1	3.6	3.5	3.5	3.5
30	3.8	3.5	3.2	3.3	---	4.1	3.2	3.2	3.6	3.5	3.5	3.5
31	3.8	---	3.2	3.3	---	4.0	---	3.2	---	3.5	3.5	---
TOTAL	117.7	107.4	103.8	103.2	102.6	124.3	105.2	98.1	106.6	108.1	108.5	106.0
MEAN	3.80	3.58	3.35	3.33	3.54	4.01	3.51	3.16	3.55	3.49	3.50	3.53
MAX	4.7	3.8	3.5	3.6	4.1	4.1	4.1	3.2	3.9	3.6	3.5	3.7
MIN	3.7	3.4	3.2	3.2	3.3	3.5	3.1	3.0	3.4	3.4	3.5	3.4
AC-FT	233	213	206	205	204	247	209	195	211	214	215	210

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.09	3.76	3.56	51.3	25.0	10.1	39.0	118	98.7	20.1	3.90	3.88
MAX	7.02	4.94	3.98	620	195	61.3	213	723	631	119	5.36	4.68
(WY)	1994	1994	1997	1997	1993	1995	1996	1995	1995	1995	1993	1993
MIN	3.55	3.21	3.26	3.24	3.19	3.45	3.09	3.16	3.38	3.37	3.39	3.42
(WY)	1989	1996	1989	1996	1989	1990	1994	2000	1990	1988	1995	1990

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	6292.3		1291.5			
ANNUAL MEAN	17.2		3.53		31.8	
HIGHEST ANNUAL MEAN					146	1995
LOWEST ANNUAL MEAN					3.53	1990
HIGHEST DAILY MEAN	674	May 26	4.7	Oct 13	6860	Jan 2 1997
LOWEST DAILY MEAN	3.2	Dec 17	3.0	May 27	.77	Nov 3 1990
ANNUAL SEVEN-DAY MINIMUM	3.2	Dec 17	3.1	May 22	1.8	Apr 9 1994
INSTANTANEOUS PEAK FLOW			84	Oct 13	8610	Jan 2 1997
INSTANTANEOUS PEAK STAGE			6.08	Oct 13	17.10	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	12480		2560		23020	
10 PERCENT EXCEEDS	3.9		4.0		7.3	
50 PERCENT EXCEEDS	3.6		3.5		3.8	
90 PERCENT EXCEEDS	3.5		3.2		3.3	

11408870 LOHMAN RIDGE TUNNEL AT INTAKE, NEAR CAMPTONVILLE, CA

LOCATION.—Lat 39°24'25", long 120°59'43", in SW 1/4 NE 1/4 sec.20, T.18 N., R.8 E., Sierra County, Hydrologic Unit 18020125, Tahoe National Forest, at tunnel intake at Our House Dam, and 4.0 mi southeast of Camptonville.

PERIOD OF RECORD.—October 1988 to current year. Records of monthly diversion published with Middle Yuba River below Our House Dam, near Camptonville (station 11408880), for water years 1969–88.

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

REMARKS.—Records good. Tunnel diverts water from Middle Yuba River to New Bullards Bar Reservoir (station 11413515) for power development. See schematic diagram of North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 839 ft^3/s, Mar. 25, 1989; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	3.9	119	15	315	657	425	378	153	34	8.6	6.1
2	.25	1.5	76	17	309	623	443	389	142	34	7.7	30
3	.25	.16	63	14	297	562	490	392	133	34	6.9	18
4	.24	.06	44	15	357	530	540	393	126	33	6.4	8.3
5	.24	.01	35	15	374	587	567	399	122	32	6.2	4.9
6	1.2	.00	30	13	371	587	536	373	116	32	5.5	4.2
7	4.1	.59	28	12	323	531	505	382	109	31	4.7	2.4
8	2.1	8.7	27	12	288	542	504	667	133	30	4.3	1.6
9	.88	22	29	11	266	588	486	541	125	28	3.9	1.2
10	.35	18	37	12	347	558	473	446	107	27	4.0	1.0
11	.23	14	30	120	441	556	476	369	97	26	3.5	.75
12	.20	11	31	128	577	551	476	315	89	25	3.0	.74
13	.19	8.9	52	64	759	541	672	276	84	24	2.4	.70
14	.18	7.1	48	52	422	555	618	245	78	23	1.9	.52
15	.18	13	37	142	442	561	499	295	73	22	1.9	.49
16	.09	25	32	365	666	558	461	326	76	21	1.3	.35
17	.00	76	28	227	614	536	573	302	77	20	1.0	.22
18	.00	41	27	e550	571	518	542	279	74	20	.83	.19
19	.00	41	26	622	539	560	456	286	70	18	.86	.18
20	.00	130	27	730	506	563	417	310	66	17	.78	.14
21	.00	90	28	514	514	506	396	333	62	16	.86	.05
22	.00	53	24	375	537	473	403	348	58	16	.96	.09
23	.00	35	23	329	649	475	382	347	55	15	.92	.39
24	.00	27	21	765	589	479	364	362	52	14	.57	.23
25	.00	23	20	709	492	487	347	335	48	13	.41	.16
26	.00	21	18	693	585	494	354	285	46	12	.31	.15
27	4.3	20	18	514	711	513	383	250	45	12	.25	.10
28	125	18	17	402	667	514	426	223	43	12	.19	.02
29	32	17	16	318	695	485	377	201	39	11	.15	.00
30	10	71	16	334	---	463	355	185	37	9.7	.33	.15
31	5.3	---	15	356	---	438	---	169	---	8.9	.54	---
TOTAL	187.54	796.92	1042	8445	14223	16591	13946	10401	2535	670.6	81.16	83.32
MEAN	6.05	26.6	33.6	272	490	535	465	336	84.5	21.6	2.62	2.78
MAX	125	130	119	765	759	657	672	667	153	34	8.6	30
MIN	.00	.00	15	11	266	438	347	169	37	8.9	.15	.00
AC-FT	372	1580	2070	16750	28210	32910	27660	20630	5030	1330	161	165

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	10.9	39.9	121	219	332	402	447	333	191	64.4	11.5	5.71
MAX	51.4	112	486	509	649	644	688	701	503	269	41.4	23.6
(WY)	1990	1997	1997	1995	1998	1993	1995	1996	1993	1995	1998	1998
MIN	.000	1.42	1.36	.66	16.6	206	182	38.0	10.6	.86	.000	.000
(WY)	1989	1991	1991	1997	1991	1997	1994	1995	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	79536.80		69002.54			
ANNUAL MEAN	218		189		181	
HIGHEST ANNUAL MEAN					305	1998
LOWEST ANNUAL MEAN					73.1	1994
HIGHEST DAILY MEAN	809	Feb 8	765	Jan 24	839	Mar 25 1989
LOWEST DAILY MEAN	.00	Oct 17	.00	Oct 17	.00	Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 17	.00	Oct 17	.00	Oct 1 1988
ANNUAL RUNOFF (AC-FT)	157800		136900		130800	
10 PERCENT EXCEEDS	608		544		568	
50 PERCENT EXCEEDS	70		41		54	
90 PERCENT EXCEEDS	1.1		.24		.00	

e Estimated.

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 mi^2.

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 except for periods of spill, which are fair. 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 North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,500 ft^3/s, Jan. 2, 1997, gage height, 30.7 ft, from floodmark, present datum, from rating curve extended above 8,600 ft^3/s on basis of theoretical rating of Our House Dam spillway; minimum daily, 2.1 ft^3/s, Jan. 10, 1982.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	36	38	36	39	151	37	56	55	37	37	37
2	37	39	37	36	39	72	37	56	55	37	37	37
3	37	40	37	36	39	48	38	56	54	37	37	37
4	37	39	37	36	40	48	39	56	54	37	37	37
5	38	39	37	36	40	53	40	56	54	37	37	37
6	37	39	37	36	40	49	39	55	54	37	37	37
7	36	39	37	36	39	45	39	56	54	37	37	37
8	36	59	36	36	39	43	39	71	54	37	37	37
9	36	55	37	36	39	41	38	59	54	37	37	37
10	35	37	37	36	40	39	38	57	54	37	37	37
11	35	36	37	38	41	39	38	56	54	37	37	37
12	35	36	37	38	43	39	38	55	54	37	37	37
13	35	36	37	36	310	39	49	54	53	37	37	37
14	34	36	37	36	5200	39	49	54	53	37	37	36
15	35	36	37	38	1370	39	52	54	53	37	37	36
16	33	36	37	41	460	39	53	55	45	37	37	36
17	33	37	37	39	243	39	57	55	38	37	37	36
18	33	36	37	191	134	38	56	54	38	37	37	35
19	35	36	37	66	66	39	55	54	38	37	37	35
20	34	37	37	88	48	39	55	54	38	37	37	34
21	34	37	37	43	52	38	55	55	38	37	37	34
22	34	36	36	41	112	38	55	55	38	37	37	34
23	34	36	36	40	178	38	55	55	37	37	37	36
24	34	36	36	788	50	38	55	55	37	37	36	36
25	34	36	36	712	47	38	55	55	37	37	36	35
26	34	36	36	122	64	38	55	54	37	37	36	35
27	35	36	36	46	1480	38	56	54	37	37	36	34
28	39	36	36	42	540	39	57	53	37	37	36	34
29	37	36	36	39	283	38	56	54	37	37	36	33
30	36	36	36	40	---	38	55	55	37	37	36	33
31	36	---	36	40	---	37	---	55	---	37	37	---
TOTAL	1095	1145	1137	2924	11115	1396	1440	1723	1378	1147	1140	1073
MEAN	35.3	38.2	36.7	94.3	383	45.0	48.0	55.6	45.9	37.0	36.8	35.8
MAX	39	59	38	788	5200	151	57	71	55	37	37	37
MIN	33	36	36	36	39	37	37	53	37	37	36	33
AC-FT	2170	2270	2260	5800	22050	2770	2860	3420	2730	2280	2260	2130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2000, BY WATER YEAR (WY)

MEAN	31.1	75.7	162	374	244	239	157	219	119	33.7	30.3	30.1
MAX	52.7	462	1040	2973	1521	1228	1368	1697	994	49.6	42.1	39.6
(WY)	1983	1982	1982	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1969 - 2000	
ANNUAL TOTAL	34781		26713			
ANNUAL MEAN	95.3		73.0		143	
HIGHEST ANNUAL MEAN					481	1969
LOWEST ANNUAL MEAN					26.3	1977
HIGHEST DAILY MEAN	3400	Feb 9	5200	Feb 14	21000	Jan 2 1997
LOWEST DAILY MEAN	33	Jan 3	33	Oct 16	2.1	Jan 10 1982
ANNUAL SEVEN-DAY MINIMUM	33	Jan 5	34	Oct 16	3.2	Oct 21 1970
INSTANTANEOUS PEAK FLOW			10500	Feb 14	27500	Jan 2 1997
INSTANTANEOUS PEAK STAGE			24.10	Feb 14	30.70	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	68990		52990		103300	
10 PERCENT EXCEEDS	58		56		167	
50 PERCENT EXCEEDS	37		37		35	
90 PERCENT EXCEEDS	36		36		26	

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 mi^2.

PERIOD OF RECORD.—August 1967 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,230 ft above sea level, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,170 ft^3/s, Jan. 1, 1997, gage height, 11.31 ft, from rating curve extended above 4,000 ft^3/s, maximum gage height, 11.56 ft, Feb. 17, 1986; minimum daily, 0.53 ft^3/s, Aug. 14–16, 1977, Sept. 6, 1988.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	1830	849	7.08	Feb. 27	0500	1,200	7.68
Feb. 14	0945	1,720	8.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.4	35	5.6	97	309	104	44	22	6.8	e3.2	3.2
2	2.1	3.2	23	5.7	93	261	100	41	21	6.7	e3.1	6.3
3	2.1	3.2	22	5.7	91	230	101	39	20	6.6	3.0	4.4
4	2.2	3.2	16	5.6	100	213	106	38	20	e6.7	2.9	3.5
5	2.2	3.2	12	5.5	109	253	108	35	19	e6.6	2.9	3.2
6	2.4	3.2	10	4.9	117	256	104	33	18	6.5	2.8	3.0
7	2.7	3.5	9.3	4.9	103	227	97	42	18	6.4	2.8	2.8
8	2.7	21	8.6	4.9	92	216	92	93	21	6.3	2.7	2.7
9	2.5	10	9.1	4.9	84	217	88	77	20	6.1	2.7	2.6
10	2.4	6.1	9.9	5.2	99	209	84	67	19	5.8	2.7	2.6
11	2.4	5.3	8.4	70	126	218	78	61	18	5.6	2.7	2.5
12	2.3	4.6	8.5	51	178	217	75	55	17	5.5	2.6	2.5
13	2.3	4.2	12	26	438	207	94	49	16	5.3	2.5	2.4
14	2.2	3.9	13	20	1320	205	95	45	15	5.2	2.5	2.4
15	2.2	4.5	11	44	651	206	89	56	14	5.0	2.4	2.4
16	2.0	5.2	10	102	416	203	87	72	13	5.0	2.4	2.4
17	2.0	17	9.3	77	315	193	109	71	12	e4.8	2.3	2.3
18	2.1	9.3	9.1	207	255	181	120	63	12	e4.8	2.3	2.3
19	2.2	12	9.2	164	214	183	109	56	11	4.6	2.3	2.1
20	2.2	27	10	187	194	180	99	50	e11	4.4	e2.3	e2.1
21	2.2	21	9.9	128	197	165	90	45	e11	4.3	e2.3	e2.3
22	2.2	13	9.2	111	237	150	83	41	e10	e4.2	2.3	e2.6
23	2.2	9.4	8.5	104	274	144	77	37	9.3	e4.1	2.3	2.9
24	2.2	7.6	7.8	513	218	140	71	34	9.0	3.4	2.2	2.5
25	2.2	6.5	7.3	481	182	137	65	31	8.7	3.7	2.2	2.4
26	2.3	5.9	6.9	245	257	134	61	29	e8.3	3.6	2.2	2.3
27	3.8	5.7	6.6	159	886	134	57	27	e8.1	e3.6	2.2	2.2
28	25	5.4	6.3	118	511	133	56	26	7.8	e3.6	2.1	2.2
29	6.4	5.1	6.0	95	382	127	53	25	7.4	e3.5	2.2	2.2
30	4.3	19	5.8	96	---	119	48	24	7.2	e3.4	2.3	2.1
31	3.6	---	5.8	101	---	110	---	23	---	e3.3	2.3	---
TOTAL	101.7	251.6	335.5	3151.9	8236	5877	2600	1429	423.8	155.4	77.7	81.4
MEAN	3.28	8.39	10.8	102	284	190	86.7	46.1	14.1	5.01	2.51	2.71
MAX	25	27	35	513	1320	309	120	93	22	6.8	3.2	6.3
MIN	2.0	3.2	5.8	4.9	84	110	48	23	7.2	3.3	2.1	2.1
AC-FT	202	499	665	6250	16340	11660	5160	2830	841	308	154	161

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

MEAN	5.18	32.5	82.6	165	167	171	111	63.5	19.7	6.01	2.88	2.80
MAX	16.9	214	407	555	664	453	391	198	92.3	17.9	6.16	9.12
(WY)	1982	1974	1984	1997	1986	1989	1982	1995	1998	1998	1998	1983
MIN	.84	3.03	2.30	3.88	6.28	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	25259.6		22721.0			
ANNUAL MEAN	69.2		62.1		68.7	
HIGHEST ANNUAL MEAN					146	1982
LOWEST ANNUAL MEAN					5.38	1977
HIGHEST DAILY MEAN	1320	Feb 9	1320	Feb 14	3730	Jan 1 1997
LOWEST DAILY MEAN	2.0	Sep 28	2.0	Oct 16	.53	Aug 14 1977
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 27	2.1	Oct 14	.54	Aug 11 1977
INSTANTANEOUS PEAK FLOW			1720	Feb 14	5170	Jan 1 1997
INSTANTANEOUS PEAK STAGE			8.37	Feb 14	11.56	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	50100		45070		49740	
10 PERCENT EXCEEDS	191		193		176	
50 PERCENT EXCEEDS	12		10		14	
90 PERCENT EXCEEDS	2.3		2.3		2.1	

e Estimated.

11409350 CAMPTONVILLE TUNNEL AT INTAKE, NEAR CAMPTONVILLE, CA

LOCATION.—Lat 39°26'25", long 121°03'30", in NW 1/4 SW 1/4 sec.11, T.18 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Tahoe National Forest, at tunnel intake, at Log Cabin Dam, 1.0 mi southwest of town of Camptonville.

PERIOD OF RECORD.—October 1988 to current year. Records of monthly diversion published with Oregon Creek below Log Cabin Dam near Camptonville (station 11409400) for water years 1969–88.

GAGE.—Water-stage recorder. Datum of gage is 1,952.00 ft above sea level (from contractor's drawings).

REMARKS.—Records good. 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 North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,090 ft^3/s, Mar. 25, 1989, and Feb. 3, 1998; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.8	151	11	439	881	537	439	162	32	3.2	2.0
2	.00	.67	93	13	429	822	553	448	150	32	2.6	28
3	.00	.00	81	10	409	761	606	448	137	32	1.6	17
4	.00	.00	52	11	486	723	650	446	129	31	1.0	5.7
5	.00	.00	37	11	510	791	676	452	124	30	.92	1.7
6	.00	.00	30	8.6	513	803	646	426	116	30	.51	.70
7	.46	.00	28	8.7	454	744	613	441	108	29	.00	.03
8	.37	22	26	8.1	408	743	608	722	137	28	.00	.00
9	.00	44	26	7.6	373	784	588	636	131	26	.00	.00
10	.00	18	39	8.0	463	754	569	534	108	25	.00	.00
11	.00	12	29	186	576	754	567	455	97	23	.00	.00
12	.00	9.6	30	185	752	747	564	398	89	22	.00	.00
13	.00	7.0	52	84	964	727	725	356	83	21	.00	.00
14	.00	5.0	54	63	860	736	711	324	77	20	.00	.00
15	.00	9.5	38	177	903	741	603	380	72	18	.00	.00
16	.00	19	32	485	909	734	564	414	75	17	.00	.00
17	.00	83	28	341	846	709	675	391	77	17	.00	.00
18	.00	44	26	711	775	686	665	366	74	16	.00	.00
19	.00	41	25	756	716	721	576	360	70	15	.00	.00
20	.00	150	27	833	677	724	522	377	66	14	.00	.00
21	.00	106	28	658	686	668	494	396	60	13	.00	.00
22	.00	62	24	511	740	632	492	410	57	12	.00	.00
23	.00	37	21	448	847	626	469	406	53	10	.00	.00
24	.00	27	19	963	769	625	447	419	50	7.9	.00	.00
25	.00	21	17	962	664	628	427	391	47	7.5	.00	.00
26	.00	19	16	849	776	633	430	337	45	6.8	.00	.00
27	.55	17	14	679	887	648	455	299	44	6.3	.00	.00
28	148	16	13	543	893	650	496	271	41	6.0	.00	.00
29	38	14	12	440	961	622	447	240	37	5.1	.00	.00
30	9.4	75	12	443	---	594	421	204	35	4.2	.00	.00
31	3.7	---	11	488	---	557	---	179	---	3.4	.00	---
TOTAL	200.48	860.57	1091	10902.0	19685	21968	16796	12365	2551	560.2	9.83	55.13
MEAN	6.47	28.7	35.2	352	679	709	560	399	85.0	18.1	.32	1.84
MAX	148	150	151	963	964	881	725	722	162	32	3.2	28
MIN	.00	.00	11	7.6	373	557	421	179	35	3.4	.00	.00
AC-FT	398	1710	2160	21620	39050	43570	33310	24530	5060	1110	19	109

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	10.5	46.8	145	304	447	561	541	389	207	72.5	8.95	3.58
MAX	54.9	127	628	695	865	793	867	820	542	347	37.8	19.8
(WY)	1990	1999	1997	1995	1998	1993	1995	1996	1993	1995	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	99304.44		87044.21			
ANNUAL MEAN	272		238		227	
HIGHEST ANNUAL MEAN					364	1998
LOWEST ANNUAL MEAN					75.7	1994
HIGHEST DAILY MEAN	1070	Feb 9	964	Feb 13	1090	Mar 25 1989
LOWEST DAILY MEAN	.00	Sep 8	.00	Oct 1	.00	Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 12	.00	Oct 9	.00	Oct 1 1988
ANNUAL RUNOFF (AC-FT)	197000		172700		164200	
10 PERCENT EXCEEDS	764		723		735	
50 PERCENT EXCEEDS	79		42		63	
90 PERCENT EXCEEDS	.00		.00		.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 mi^2.

PERIOD OF RECORD.—August 1968 to current year.
WATER TEMPERATURE: Water years 1972–79.

REVISED RECORDS.—WDR CA-81-4: 1980(M).

GAGE.—Water-stage recorder, sharp-crested weir since Nov. 13, 1990, and crest-stage gage. Datum of gage is 1,912.73 ft above sea level (levels by Yuba County Water Agency). Prior to July 24, 1973, at site 470 ft downstream at datum 8.40 ft lower. July 24, 1973, to Sept. 30, 1986, at site on right bank. Oct. 1, 1986, to Nov. 13, 1990, a sharp-crested weir was put in at same location and gage house located on left bank. The weir was deemed too shallow so a new sharp-crested weir was put in 70 ft downstream at a datum 7.24 ft lower.

REMARKS.—Records good. Lohman Ridge Tunnel (station 11408870) diverts water into the basin from the Middle Yuba River. Camptonville Tunnel (station 11409350), maximum capacity, about 1,000 ft^3/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 North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,400 ft^3/s, Feb. 17, 1986, gage height, 11.24 ft, datum then in use, from rating curve extended above 50 ft^3/s based on flow-over-dam computation, maximum gage height 15.70 ft (from floodmark), Jan. 1, 1997; minimum daily, 0.34 ft^3/s, Sept. 18, 1972.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.0	8.5	12	10	14	21	10	15	14	9.5	9.9	5.8
2	4.0	8.0	11	11	14	21	10	15	14	9.5	9.7	11
3	4.1	5.8	11	10	15	20	11	15	14	9.6	9.7	11
4	4.1	5.4	10	10	15	20	11	15	14	9.6	9.6	10
5	4.2	5.4	10	10	15	21	11	15	14	9.6	9.6	9.7
6	4.3	5.3	11	10	14	21	11	15	14	9.5	9.5	9.5
7	6.7	5.4	11	10	14	16	11	16	14	9.4	9.2	8.6
8	7.3	40	11	10	14	12	11	19	15	9.4	8.8	7.4
9	6.2	11	11	10	14	11	11	17	15	9.3	8.4	6.2
10	5.1	10	11	10	15	11	11	16	15	9.2	8.2	5.8
11	4.4	9.7	10	13	16	11	11	15	14	9.1	8.1	5.4
12	4.2	9.3	10	13	18	11	11	15	14	9.0	7.4	5.1
13	e4.2	8.9	11	11	213	11	12	14	14	9.0	6.9	5.1
14	e4.2	8.8	11	11	1060	11	13	15	14	9.0	6.2	4.9
15	4.1	9.0	11	13	140	11	14	16	14	9.1	6.1	4.5
16	e4.0	9.3	11	14	50	11	14	16	12	9.1	5.9	4.5
17	e4.0	10	10	18	21	11	15	16	9.9	9.1	5.2	4.2
18	4.1	9.8	10	18	20	10	15	15	9.9	9.1	4.9	4.0
19	e4.1	9.9	10	19	20	11	14	15	9.9	9.0	4.8	3.8
20	4.3	11	10	17	20	11	14	15	9.9	9.0	4.8	3.7
21	4.2	11	10	15	20	10	14	16	10	9.1	4.9	3.7
22	4.1	10	10	15	20	10	14	16	9.9	9.0	5.0	4.1
23	4.1	9.8	10	233	21	10	14	16	9.9	9.9	5.1	5.0
24	4.1	9.5	10	138	20	11	14	16	9.8	10	4.6	4.8
25	4.2	9.4	10	20	20	11	14	16	9.7	10	4.2	4.3
26	4.2	9.3	11	18	29	11	14	15	9.6	10	4.0	4.2
27	4.8	9.3	11	16	795	11	15	15	9.6	10	3.9	4.1
28	12	9.2	11	15	261	11	15	15	9.5	10	3.8	4.0
29	9.8	9.2	11	15	45	11	15	14	9.5	10	3.8	4.0
30	9.0	11	11	15	---	11	15	14	9.4	10	4.1	3.9
31	8.7	---	11	14	---	10	---	14	---	10	4.5	---
TOTAL	160.8	298.2	329	762	2953	400	385	477	361.5	293.1	200.8	172.3
MEAN	5.19	9.94	10.6	24.6	102	12.9	12.8	15.4	12.1	9.45	6.48	5.74
MAX	12	40	12	233	1060	21	15	19	15	10	9.9	11
MIN	4.0	5.3	10	10	14	10	10	14	9.4	9.0	3.8	3.7
AC-FT	319	591	653	1510	5860	793	764	946	717	581	398	342

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.58	16.2	48.7	100	65.2	45.6	28.9	19.3	23.5	8.49	6.65	5.92
MAX	12.8	72.5	273	604	617	189	268	111	394	15.2	13.1	14.3
(WY)	1972	1982	1982	1969	1986	1969	1969	1969	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	9219.1		6792.7			
ANNUAL MEAN	25.3		18.6		31.2	
HIGHEST ANNUAL MEAN					128	1969
LOWEST ANNUAL MEAN					4.20	1977
HIGHEST DAILY MEAN	1060	Feb 9	1060	Feb 14	5340	Feb 17 1986
LOWEST DAILY MEAN	3.9	Sep 28	3.7	Sep 20	.34	Sep 18 1972
ANNUAL SEVEN-DAY MINIMUM	4.0	Sep 28	4.0	Sep 16	.74	Sep 18 1972
INSTANTANEOUS PEAK FLOW			1840	Feb 14	6400	Feb 17 1986
INSTANTANEOUS PEAK STAGE			11.66	Feb 14	15.70	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	18290		13470		22570	
10 PERCENT EXCEEDS	21		16		19	
50 PERCENT EXCEEDS	11		10		10	
90 PERCENT EXCEEDS	5.4		4.3		3.6	

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 mi^2.

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 North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 45,500 ft^3/s, Jan. 2, 1997, gage height, 25.65 ft, from rating curve extended above 11,900 ft^3/s on basis of one float measurement at 17,900 ft^3/s and slope-area measurements at gage heights 19.15 and 23.8 ft; minimum daily, 60 ft^3/s, Sept. 7–14, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 3,200 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	2130	5,350	9.68	Feb. 27	0445	4,700	9.18
Feb. 14	1015	10,100	12.52				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	177	309	179	703	1450	1140	1840	1070	323	197	175
2	168	175	259	179	709	1290	1260	1910	1030	317	195	256
3	167	171	235	179	702	1160	1490	1960	982	311	193	205
4	167	171	218	178	764	1110	1800	2060	957	307	192	185
5	167	170	213	176	808	1180	1930	2070	948	302	190	177
6	170	169	206	172	867	1150	1790	1820	890	300	188	174
7	182	173	207	174	780	1070	1700	1670	856	296	187	170
8	175	307	197	172	727	1060	1750	2740	951	290	185	166
9	172	220	208	171	695	1100	1690	2230	849	283	184	164
10	168	198	209	175	856	1040	1610	1880	764	276	183	161
11	167	197	197	519	915	1050	1680	1530	710	270	180	160
12	165	198	199	380	1040	1060	1740	1350	677	264	178	159
13	164	188	230	278	1630	1070	2550	1250	674	259	176	157
14	163	183	212	267	7160	1120	2110	1210	676	255	174	156
15	162	211	203	516	3510	1160	1710	1340	650	250	173	156
16	157	226	198	910	2240	1160	1540	1280	612	247	171	155
17	157	310	197	629	1720	1130	1770	1170	570	246	169	154
18	157	228	200	1520	1410	1110	1630	1250	544	241	168	151
19	157	261	198	1550	1230	1250	1390	1450	516	236	167	149
20	157	413	205	1990	1160	1290	1310	1640	486	232	167	148
21	157	320	206	1280	1150	1160	1370	1850	461	228	167	148
22	157	245	199	971	1200	1090	1430	2010	443	224	166	150
23	157	220	194	917	1330	1110	1370	2150	423	221	165	157
24	157	207	191	2800	1140	1130	1360	2410	404	218	162	152
25	157	203	190	2900	1020	1190	1370	2160	388	214	161	150
26	157	202	187	1550	1190	1260	1490	1870	376	212	159	149
27	179	201	185	1120	3490	1350	1730	1720	389	210	158	148
28	596	201	183	903	2100	1350	1870	1630	361	208	158	147
29	226	196	182	775	1710	1280	1610	1470	346	204	158	147
30	191	288	180	775	---	1230	1600	1290	334	202	160	145
31	181	---	180	744	---	1160	---	1160	---	199	160	---
TOTAL	5625	6629	6377	25049	43956	36320	48790	53370	19337	7845	5391	4871
MEAN	181	221	206	808	1516	1172	1626	1722	645	253	174	162
MAX	596	413	309	2900	7160	1450	2550	2740	1070	323	197	256
MIN	157	169	180	171	695	1040	1140	1160	334	199	158	145
AC-FT	11160	13150	12650	49680	87190	72040	96770	105900	38350	15560	10690	9660

11413000 NORTH YUBA RIVER BELOW GOODYEARS BAR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	187	355	649	891	974	1079	1385	1806	1129	373	188	152
MAX	1407	2380	3830	4526	4367	3074	2822	3894	3627	1384	417	256
(WY)	1963	1951	1965	1997	1986	1995	1982	1952	1983	1983	1983	1983
MIN	71.8	107	97.3	117	138	151	241	335	170	82.7	66.8	71.0
(WY)	1978	1978	1977	1991	1977	1977	1977	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1931 - 2000	
ANNUAL TOTAL	320537		263560			
ANNUAL MEAN	878		720		763	
HIGHEST ANNUAL MEAN					1566	1982
LOWEST ANNUAL MEAN					141	1977
HIGHEST DAILY MEAN	5870	Feb 9	7160	Feb 14	29600	Jan 2 1997
LOWEST DAILY MEAN	157	Oct 16	145	Sep 30	60	Sep 7 1977
ANNUAL SEVEN-DAY MINIMUM	157	Oct 16	148	Sep 24	60	Sep 7 1977
INSTANTANEOUS PEAK FLOW			10100	Feb 14	45500	Jan 2 1997
INSTANTANEOUS PEAK STAGE			12.52	Feb 14	25.65	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	635800		522800		552400	
10 PERCENT EXCEEDS	2060		1710		1880	
50 PERCENT EXCEEDS	394		293		334	
90 PERCENT EXCEEDS	175		160		128	

11413250 SLATE CREEK TUNNEL NEAR STRAWBERRY VALLEY, CA

LOCATION.—Lat 39°36'57", long 121°03'03", in SE 1/4 SW 1/4 sec.2, T.20 N., R.8 E., Plumas County, Hydrologic Unit 18020125, Plumas National Forest, on right bank, 30 ft upstream from diversion dam on Slate Creek, 0.3 mi upstream from Feney Ravine, and 4.5 mi northeast of town of Strawberry Valley.

PERIOD OF RECORD.—February 1962 to current year. Monthly discharge only published as adjustment to Slate Creek below diversion dam near Strawberry Valley (station 11413300) February 1962 to September 1966; records of daily discharge are in files of the U.S. Geological Survey.

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

REMARKS.—Tunnel diverts water from Slate Creek to Sly Creek Reservoir (station 11395400) for power development. See schematic diagrams of South Fork Feather River and North 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 ft^3/s, Apr. 6, 1963; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	47	6.3	191	.00	375	344	103	16	.00	.00
2	.00	.00	39	5.7	210	206	438	342	96	16	.00	.00
3	.00	.00	31	7.6	214	296	513	334	90	15	.00	.00
4	.00	.00	24	6.6	224	284	186	334	85	15	.00	.00
5	.00	.00	20	5.4	278	421	.00	315	82	14	.00	.00
6	.00	.00	17	4.7	385	393	.00	283	76	13	.00	.00
7	.00	.00	16	5.8	301	320	.00	306	72	13	.00	.00
8	.00	.00	13	4.8	260	285	.00	355	92	12	.00	.00
9	.00	.00	14	4.5	236	251	.00	162	80	11	.00	.00
10	.00	.00	12	7.7	355	218	308	193	70	11	.00	.00
11	.00	.00	11	213	378	232	482	188	63	10	.00	.00
12	.00	.00	12	119	352	244	488	201	60	9.4	.00	.00
13	.00	.00	19	82	423	258	553	205	57	8.7	.00	.00
14	.00	.00	16	83	686	287	555	196	56	8.1	.00	.00
15	.00	.00	14	224	186	315	553	257	53	7.5	.00	.00
16	.00	.00	12	404	.00	331	549	257	50	7.2	.00	.00
17	.00	.00	12	247	.00	326	281	236	45	6.9	.00	.00
18	.00	7.6	12	589	.00	330	.00	232	42	6.3	.00	.00
19	.00	37	12	648	.00	395	.00	241	40	5.8	.00	.00
20	.00	138	26	697	.00	390	.00	250	37	5.4	.00	.00
21	.00	82	25	429	.00	335	.00	263	34	4.9	.00	.00
22	.00	42	20	291	.00	316	.00	267	32	4.5	.00	.00
23	.00	28	17	360	.00	340	.00	269	30	4.2	.00	.00
24	.00	19	15	777	.00	364	181	271	28	1.6	.00	.00
25	.00	14	13	779	.00	386	350	238	26	.00	.00	.00
26	.00	11	12	649	.00	403	354	201	25	.00	.00	.00
27	.00	10	11	397	.00	428	380	181	26	.00	.00	.00
28	31	10	9.4	289	.00	434	409	166	23	.00	.00	.00
29	4.2	8.8	8.5	226	.00	423	335	144	20	.00	.00	.00
30	.00	47	7.3	223	---	398	322	128	18	.00	.00	.00
31	.00	---	8.2	199	---	368	---	114	---	.00	.00	---
TOTAL	35.20	454.40	525.4	7984.1	4679.00	9977.00	7612.00	7473	1611	226.50	0.00	0.00
MEAN	1.14	15.1	16.9	258	161	322	254	241	53.7	7.31	.000	.000
MAX	31	138	47	779	686	434	555	355	103	16	.00	.00
MIN	.00	.00	7.3	4.5	.00	.00	.00	114	18	.00	.00	.00
AC-FT	70	901	1040	15840	9280	19790	15100	14820	3200	449	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	8.14	63.5	92.0	132	152	214	223	210	111	23.5	3.13	1.49
MAX	43.5	321	302	408	595	588	690	638	470	144	24.2	21.1
(WY)	1983	1984	1967	1995	1996	1993	1993	1973	1998	1983	1983	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.028	.000	.000	.000
(WY)	1963	1963	1974	1965	1965	1969	1969	1977	1977	1966	1963	1963

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	48247.50		40577.60			
ANNUAL MEAN	132		111		103	
HIGHEST ANNUAL MEAN					209	1995
LOWEST ANNUAL MEAN					.002	1977
HIGHEST DAILY MEAN	831	Mar 1	779	Jan 25	863	Apr 6 1963
LOWEST DAILY MEAN	.00	Jul 24	.00	Oct 1	.00	Oct 1 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 24	.00	Oct 1	.00	Oct 1 1962
ANNUAL RUNOFF (AC-FT)	95700		80490		74260	
10 PERCENT EXCEEDS	437		361		340	
50 PERCENT EXCEEDS	12		12		16	
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 mi^2.

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder and 130° V-notch weir since October 1982. Elevation of gage is 3,570 ft above sea level, from topographic map.

REMARKS.—Slate Creek Tunnel (station 11413250) diverts up to 900 ft^3/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 River and North 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, 17,300 ft^3/s, Jan. 1, 1997, gage height, 17.20 ft, from rating curve extended above 5,500 ft^3/s on basis of computed flow over dam at gage heights 12.75, 15.90, 16.89 and 17.20 ft; minimum, 0.3 ft^3/s, Mar. 4, 5, 1962.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	11	11	11	12	421	12	12	11	11	14	14
2	9.1	11	11	11	12	173	12	12	12	11	14	24
3	9.1	11	11	11	12	34	15	11	12	11	14	19
4	9.1	11	11	11	11	34	432	10	12	11	14	15
5	9.1	10	11	11	11	36	654	10	12	11	14	14
6	9.7	10	11	11	11	35	589	10	12	11	14	14
7	10	12	11	11	11	34	545	10	12	11	14	13
8	9.8	72	11	11	11	33	549	120	11	11	14	13
9	9.5	36	11	11	11	33	511	184	10	11	14	13
10	9.3	23	11	11	11	32	191	122	10	11	14	12
11	9.2	23	11	11	11	32	11	83	10	11	14	12
12	9.1	19	11	13	11	32	11	39	10	11	14	12
13	9.1	17	11	12	47	32	276	11	10	11	14	12
14	8.9	15	11	11	2260	33	174	11	10	11	13	12
15	8.9	19	11	11	1250	33	51	11	11	11	13	12
16	8.7	25	11	11	907	33	26	11	11	11	13	12
17	8.7	90	11	12	657	33	634	11	11	11	13	11
18	8.8	36	11	155	501	33	756	11	11	11	13	11
19	8.7	12	11	144	412	34	589	10	11	11	13	11
20	8.6	10	11	234	382	34	500	10	11	11	13	11
21	8.6	10	11	11	403	33	474	10	11	11	13	10
22	8.6	10	11	11	434	33	456	10	11	11	13	11
23	8.5	10	11	11	400	33	416	10	11	11	12	12
24	8.5	11	11	524	318	33	206	10	11	14	12	12
25	8.6	11	11	463	271	34	12	10	11	15	12	11
26	8.6	11	11	21	312	34	12	10	11	15	12	11
27	18	11	11	16	1190	34	12	10	11	15	12	11
28	72	11	11	11	714	24	12	10	11	15	12	10
29	14	11	11	11	541	12	12	10	11	14	12	10
30	14	11	11	11	---	12	12	10	11	14	12	10
31	12	---	11	11	---	12	---	10	---	14	12	---
TOTAL	363.9	580	341	1825	11134	1488	8162	819	330	369	407	375
MEAN	11.7	19.3	11.0	58.9	384	48.0	272	26.4	11.0	11.9	13.1	12.5
MAX	72	90	11	524	2260	421	756	184	12	15	14	24
MIN	8.5	10	11	11	11	12	11	10	10	11	12	10
AC-FT	722	1150	676	3620	22080	2950	16190	1620	655	732	807	744

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	24.6	54.8	149	252	205	217	192	190	48.6	12.1	11.2	10.5
MAX	437	545	1303	1334	1415	901	753	795	481	21.3	19.3	17.7
(WY)	1963	1974	1965	1970	1986	1983	1982	1983	1983	1998	1965	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	24519.9		26193.9			
ANNUAL MEAN	67.2		71.6		114	
HIGHEST ANNUAL MEAN					352	1982
LOWEST ANNUAL MEAN					10.4	1976
HIGHEST DAILY MEAN	1860	Feb 9	2260	Feb 14	12100	Jan 1 1997
LOWEST DAILY MEAN	8.5	Oct 23	8.5	Oct 23	.86	Feb 18 1975
ANNUAL SEVEN-DAY MINIMUM	8.6	Oct 20	8.6	Oct 20	.95	Feb 21 1975
INSTANTANEOUS PEAK FLOW			4820	Feb 14	17300	Jan 1 1997
INSTANTANEOUS PEAK STAGE			11.87	Feb 14	17.20	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	48640		51960		82290	
10 PERCENT EXCEEDS	218		186		318	
50 PERCENT EXCEEDS	11		11		11	
90 PERCENT EXCEEDS	9.7		10		8.3	

11413320 DEADWOOD CREEK NEAR STRAWBERRY VALLEY, CA

LOCATION.—Lat 39°33'00", long 121°05'36", in SW 1/4 SW 1/4 sec.33, T.20 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank, 250 ft upstream of confluence with Owl Gulch, and 1.3 mi southeast of Strawberry Valley.

DRAINAGE AREA.—3.16 mi^2.

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Water-stage recorder and 120° V-notch weir. Elevation of gage is 3,275 ft above sea level, from topographic map.

REMARKS.—Water from creek is diverted at gage to Deadwood Creek Powerplant (station 11413326). See schematic diagram of North Yuba River Basin.

COOPERATION.—Records provided by Yuba County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 400 ft^3/s, Jan. 1, 1997; minimum daily, 1.7 ft^3/s, several days in February and March 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.6	2.4	3.6	2.6	8.9	2.6	2.8	2.6	2.8	4.7	4.7
2	3.5	3.6	2.4	3.7	2.6	5.0	2.6	2.7	2.6	2.8	4.6	4.9
3	3.5	3.6	2.4	3.6	2.9	3.7	2.5	2.7	2.6	2.8	4.6	4.4
4	3.5	3.6	2.4	3.7	2.6	3.5	2.5	2.7	2.6	2.8	4.5	4.2
5	3.6	3.6	3.1	3.7	2.9	18	2.5	2.7	2.6	2.8	4.5	4.0
6	3.7	3.6	4.5	3.6	2.6	10	4.8	2.7	2.6	2.8	4.4	4.0
7	3.7	4.1	4.5	3.6	2.6	5.8	2.7	2.9	3.3	2.8	4.4	3.9
8	3.6	5.2	4.3	3.6	2.6	5.0	2.7	3.1	2.8	2.8	4.3	3.9
9	3.6	5.0	4.4	3.6	2.6	4.9	2.7	3.1	2.8	2.8	4.3	3.8
10	3.5	4.4	4.4	3.6	2.6	4.5	2.7	3.2	2.8	2.8	4.3	3.8
11	3.5	4.1	4.3	6.0	3.5	3.8	2.7	2.8	2.8	2.8	4.3	3.7
12	3.5	3.9	4.3	2.5	3.9	3.5	2.7	2.6	2.8	2.8	4.2	3.7
13	3.5	3.8	4.5	2.5	22	3.4	2.8	2.7	2.8	2.8	4.2	3.7
14	3.4	3.7	4.3	3.5	68	3.2	2.8	2.6	2.8	2.8	4.2	3.7
15	3.4	4.1	4.1	2.8	22	3.2	2.8	2.7	2.8	2.7	4.1	3.7
16	3.3	4.8	4.1	2.5	8.4	3.1	2.8	2.7	2.9	2.8	4.1	3.6
17	3.4	4.7	4.0	2.5	3.9	3.0	3.0	2.7	2.8	2.8	4.0	3.6
18	3.4	4.1	4.0	3.2	3.5	2.9	2.8	2.7	2.8	2.8	4.0	3.5
19	3.4	4.2	4.0	2.6	3.4	2.9	2.8	2.7	2.8	2.8	4.0	3.5
20	3.4	3.0	4.0	2.6	3.4	2.8	2.8	2.7	2.8	2.8	4.0	3.5
21	3.4	3.1	3.9	4.3	3.5	2.5	2.8	2.7	2.8	2.8	4.0	3.3
22	3.3	3.7	3.8	2.4	9.2	2.8	2.8	2.7	2.8	2.8	3.9	3.3
23	3.3	3.0	3.8	2.8	4.3	2.6	2.8	2.6	2.8	3.1	3.9	3.3
24	3.3	3.2	3.7	8.4	3.6	2.6	2.8	2.6	2.8	4.9	3.8	3.2
25	3.3	4.1	3.7	3.1	3.5	2.6	2.8	2.7	2.8	4.9	3.8	3.4
26	3.3	4.0	3.7	2.9	8.6	2.6	2.8	2.8	2.8	4.9	3.8	3.5
27	6.5	4.0	3.7	2.6	52	2.6	2.8	2.8	2.8	4.8	3.8	3.5
28	8.7	3.9	3.6	2.5	24	3.1	2.8	2.9	2.8	4.8	3.7	3.5
29	4.1	3.8	3.6	2.5	14	2.8	2.8	2.9	2.8	4.7	3.8	3.5
30	3.8	3.6	3.6	2.5	---	2.5	2.8	2.8	2.8	4.7	3.9	3.4
31	3.7	---	3.6	2.6	---	2.6	---	2.6	---	4.7	3.8	---
TOTAL	116.6	117.1	117.1	103.6	291.3	130.4	84.3	85.6	83.4	103.0	127.9	111.7
MEAN	3.76	3.90	3.78	3.34	10.0	4.21	2.81	2.76	2.78	3.32	4.13	3.72
MAX	8.7	5.2	4.5	8.4	68	18	4.8	3.2	3.3	4.9	4.7	4.9
MIN	3.3	3.0	2.4	2.4	2.6	2.5	2.5	2.6	2.6	2.7	3.7	3.2
AC-FT	231	232	232	205	578	259	167	170	165	204	254	222
a	.00	56	26	398	1370	1870	932	638	327	112	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	3.87	3.88	5.98	13.8	11.9	7.71	4.37	4.32	2.92	3.18	3.43	3.67
MAX	4.75	4.73	17.7	42.4	20.3	22.8	10.7	10.7	3.44	4.16	4.13	4.35
(WY)	1999	1997	1997	1997	1998	1995	1995	1995	1995	1997	1997	1996
MIN	2.04	3.09	2.75	3.34	4.64	3.53	2.73	2.63	2.54	2.57	2.87	3.02
(WY)	1995	1995	1998	2000	1997	1997	1999	1999	1999	1999	1998	1998

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	1723.3		1472.0			
ANNUAL MEAN	4.72		4.02		5.72	
HIGHEST ANNUAL MEAN					8.23	1997
LOWEST ANNUAL MEAN					4.02	2000
HIGHEST DAILY MEAN	46	Feb 9	68	Feb 14	400	Jan 1 1997
LOWEST DAILY MEAN	2.3	Jun 2	2.4	Dec 1	1.7	Feb 24 1997
ANNUAL SEVEN-DAY MINIMUM	2.4	Jun 4	2.5	Mar 30	1.7	Feb 23 1997
ANNUAL RUNOFF (AC-FT)	3420		2920		4150	
ANNUAL RUNOFF (AC-FT) a	6430		5740		9930	
10 PERCENT EXCEEDS	5.7		4.6		7.6	
50 PERCENT EXCEEDS	3.0		3.4		3.0	
90 PERCENT EXCEEDS	2.5		2.6		2.6	

a Diversion, in acre-feet, to Deadwood Creek Powerplant, provided by Yuba County Water Agency.

11413323 OWL GULCH NEAR STRAWBERRY VALLEY, CA

LOCATION.—Lat 39°32'44", long 121°05'39", in SW 1/4 SW 1/4 sec.33, T.20 N., R.8 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on left bank, 250 ft upstream from Deadwood Creek, and 1.3 mi southeast of Strawberry Valley.

DRAINAGE AREA.—2.07 mi^2.

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Water-stage recorder and 120° V-notch weir. Elevation of gage is 3,050 ft above sea level, from topographic map.

REMARKS.—Water from creek is diverted at gage to Deadwood Creek Powerplant (station 11413326). See schematic diagram of North Yuba River Basin.

COOPERATION.—Records provided by Yuba County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 346 ft^3/s, Jan. 1, 1997; minimum daily, 0.58 ft^3/s, Sept. 17–22, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.4	1.8	1.5	1.9	18	1.8	2.1	1.8	1.8	1.9	1.7
2	1.3	1.4	1.8	1.5	1.9	15	1.8	2.3	1.8	1.8	1.9	1.7
3	1.3	1.3	1.8	1.5	2.1	12	1.8	2.2	1.8	1.8	1.9	1.6
4	1.3	1.3	1.8	1.5	1.8	9.0	1.8	2.3	1.8	1.8	1.8	1.5
5	1.3	1.3	1.8	1.5	1.9	18	1.8	2.2	1.7	1.8	1.8	1.5
6	1.4	1.3	1.8	1.5	1.7	17	4.0	2.4	1.7	1.8	1.8	1.4
7	1.4	1.4	1.8	1.5	1.7	15	2.0	2.3	2.0	1.8	1.8	1.4
8	1.3	2.9	1.8	1.5	1.7	14	2.0	2.0	1.8	1.8	1.8	1.4
9	1.3	2.0	1.8	1.5	1.7	14	2.0	2.0	1.8	1.8	1.8	1.4
10	1.3	1.7	1.8	1.5	1.8	13	2.0	1.9	1.8	1.8	1.8	1.4
11	1.3	1.6	1.8	2.7	3.8	13	2.1	1.9	1.8	1.8	1.8	1.3
12	1.3	1.5	1.8	1.8	3.5	12	2.2	1.9	1.8	1.8	1.7	1.3
13	1.2	1.5	1.8	1.8	16	11	2.4	1.8	1.8	1.8	1.7	1.3
14	1.2	1.5	1.8	1.8	46	10	2.1	1.9	1.8	1.8	1.7	1.3
15	1.2	1.6	1.8	2.1	14	9.5	2.0	1.9	1.8	1.8	1.7	1.3
16	1.2	1.9	1.7	2.2	9.2	8.7	2.1	1.9	1.8	1.8	1.7	1.3
17	1.2	2.5	1.7	1.9	5.8	7.0	2.8	2.0	1.8	1.8	1.6	1.3
18	1.2	1.9	1.7	2.5	2.8	5.7	2.2	2.0	1.8	1.8	1.6	1.3
19	1.2	2.4	1.7	1.9	1.8	5.1	2.0	1.9	1.8	1.8	1.6	1.2
20	1.2	2.6	1.7	1.9	1.6	4.5	1.9	1.8	1.8	1.8	1.6	1.2
21	1.2	2.2	1.7	2.5	1.7	3.2	1.9	1.8	1.8	1.8	1.6	1.2
22	1.2	2.0	1.7	1.8	5.9	1.9	1.9	1.8	1.8	1.7	1.6	1.3
23	1.2	1.8	1.6	2.2	5.4	1.9	1.9	1.8	1.8	1.8	1.5	1.3
24	1.2	1.8	1.6	5.1	3.9	1.9	1.8	1.8	1.8	2.2	1.4	1.3
25	1.2	1.8	1.6	2.4	3.0	1.9	2.0	1.8	1.8	2.1	1.4	1.2
26	1.2	1.7	1.6	2.4	3.0	1.9	2.2	1.8	1.8	2.1	1.4	1.2
27	1.7	1.7	1.5	1.9	3.0	1.9	2.3	1.8	1.8	2.1	1.3	1.2
28	2.7	1.7	1.5	1.9	14	1.9	2.2	1.8	1.8	2.1	1.3	1.2
29	1.5	1.6	1.5	1.9	20	1.9	2.1	1.8	1.8	2.0	1.4	1.2
30	1.4	2.2	1.5	2.0	---	1.9	2.1	1.8	1.8	2.0	1.4	1.2
31	1.4	---	1.5	1.9	---	1.9	---	1.8	---	2.0	1.4	---
TOTAL	41.3	53.5	52.8	61.6	182.6	253.7	63.2	60.5	54.0	57.9	50.7	40.1
MEAN	1.33	1.78	1.70	1.99	6.30	8.18	2.11	1.95	1.80	1.87	1.64	1.34
MAX	2.7	2.9	1.8	5.1	46	18	4.0	2.4	2.0	2.2	1.9	1.7
MIN	1.2	1.3	1.5	1.5	1.6	1.9	1.8	1.8	1.7	1.7	1.3	1.2
AC-FT	82	106	105	122	362	503	125	120	107	115	101	80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	1.72	1.84	3.95	11.6	10.8	7.19	3.71	3.84	2.11	1.88	1.58	1.52
MAX	2.85	2.17	14.2	35.3	23.7	16.3	8.74	10.6	2.87	2.06	1.90	2.09
(WY)	1999	1999	1997	1997	1998	1995	1995	1995	1998	1997	1998	1998
MIN	.99	1.56	1.70	1.99	3.97	2.46	2.11	1.95	1.79	1.69	.77	.79
(WY)	1995	1995	2000	2000	1995	1997	2000	2000	1996	1999	1997	1997

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	1062.8		971.9			
ANNUAL MEAN	2.91		2.66		4.29	
HIGHEST ANNUAL MEAN					6.02	1997
LOWEST ANNUAL MEAN					2.66	2000
HIGHEST DAILY MEAN	36	Feb 9	46	Feb 14	346	Jan 1 1997
LOWEST DAILY MEAN	1.0	Mar 17	1.2	Oct 13	.58	Sep 17 1997
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 13	1.2	Oct 13	.58	Sep 16 1997
ANNUAL RUNOFF (AC-FT)	2110		1930		3110	
10 PERCENT EXCEEDS	6.5		3.0		9.5	
50 PERCENT EXCEEDS	1.7		1.8		1.9	
90 PERCENT EXCEEDS	1.3		1.3		1.4	

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 ft^3/s at times from the head of the penstock for use in irrigation. See schematic diagram of North 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	1340	754	1150	2080	3270	2530	2100	982	565	2180	1700
2	805	1290	774	1010	2090	3220	2630	2400	1090	993	2210	655
3	739	906	827	1040	1380	3410	2510	1810	1280	2050	2230	650
4	1100	466	818	1260	1350	3510	2530	1450	1810	2020	2390	649
5	1180	796	855	827	9.6	3500	2540	1410	1850	1770	394	1760
6	1240	1030	715	882	6.1	3480	3000	1460	1530	1660	801	1610
7	1300	1040	839	871	1730	3440	2900	1190	842	1230	2230	1570
8	1260	547	808	946	1200	3480	1960	1660	783	452	2300	1420
9	801	633	1010	942	700	3520	2070	914	1700	410	1930	.00
10	806	823	941	991	875	3570	2360	.00	67	1630	1590	.00
11	1460	797	962	667	1020	3530	2470	522	722	1930	1530	1280
12	1100	674	925	278	.00	3450	2870	1310	1240	1870	721	1150
13	1090	743	814	425	.00	3180	2430	1650	2110	2210	795	1130
14	1180	1290	872	774	146	.00	1820	1180	2290	1860	1810	1360
15	1240	1030	839	834	395	.00	1710	1430	2080	563	1630	1740
16	650	803	987	344	761	1160	1810	1460	2330	607	1890	.00
17	1190	819	773	341	1350	3540	2630	1450	543	1860	1940	.00
18	1340	1120	791	174	1970	3540	2150	1600	792	1800	1980	1370
19	1270	1240	872	.00	2370	3540	2000	1550	1890	1540	1300	1470
20	884	1020	857	.00	2010	3540	2220	1490	1750	1910	1500	1480
21	913	562	1000	.00	2350	3540	3200	1490	1960	2180	2130	1490
22	1010	644	958	.00	2640	3540	3300	2270	1530	428	1920	1190
23	1110	704	877	.00	2720	3540	2080	1290	2180	876	1950	.00
24	1090	1010	942	.00	3420	3540	3300	556	639	2030	1980	.00
25	1140	1300	902	.00	3530	3540	3360	872	670	2230	2090	738
26	1050	1240	866	.00	3470	3540	3410	.00	2250	1820	476	935
27	1050	1030	911	.00	3200	3540	2180	.00	2350	1820	549	835
28	969	881	897	.00	3470	3540	2120	569	1960	1970	2200	1010
29	816	422	918	260	3420	2730	2160	336	1830	1240	1720	1050
30	798	430	647	2430	---	2920	2160	1760	2450	402	1930	1780
31	802	---	1200	1530	---	2650	---	769	---	2200	1470	---
TOTAL	32533	26630	27151	17976.00	49662.70	96500.00	74410	37948.00	45500	46126	51766	30022.00
MEAN	1049	888	876	580	1713	3113	2480	1224	1517	1488	1670	1001
MAX	1460	1340	1200	2430	3530	3570	3410	2400	2450	2230	2390	1780
MIN	650	422	647	.00	.00	.00	1710	.00	67	402	394	.00
AC-FT	64530	52820	53850	35660	98510	191400	147600	75270	90250	91490	102700	59550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2000, BY WATER YEAR (WY)

MEAN	1208	1134	1396	1543	1739	1762	1751	1529	1674	1769	1943	1376
MAX	2497	2433	3262	3496	3525	3519	3508	3565	3629	3057	3130	2995
(WY)	1976	1976	1975	1984	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1971 - 2000	
ANNUAL TOTAL	739265		536224.70			
ANNUAL MEAN	2025		1465		1568	
HIGHEST ANNUAL MEAN					2686	1983
LOWEST ANNUAL MEAN					316	1977
HIGHEST DAILY MEAN	3580	Feb 26	3570	Mar 10	4200	Jun 2 1971
LOWEST DAILY MEAN	176	May 28	.00	Jan 19	.00	Mar 14 1971
ANNUAL SEVEN-DAY MINIMUM	687	May 26	.00	Jan 19	.00	Feb 29 1972
ANNUAL RUNOFF (AC-FT)	1466000		1064000		1136000	
10 PERCENT EXCEEDS	3300		3050		3400	
50 PERCENT EXCEEDS	2150		1260		1300	
90 PERCENT EXCEEDS	817		408		164	

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 mi^2.

PERIOD OF RECORD.—January 1969 to current year.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Yuba County Water Agency).

REMARKS.—Reservoir is formed by concrete-arch dam with a concrete-sidehill spillway. Spill controlled by three 30-ft by 53-ft radial gates. Storage began in January 1969. Usable capacity, 727,380 acre-ft between elevations 1,732.0 ft, minimum power pool and 1,955.0 ft, normal gross pool. Dead storage, 233,920 acre-ft. Total capacity at normal gross pool, 961,300 acre-ft, elevation 1,955.0 ft. Water is released to New Colgate Powerplant (station 11413510) through a tunnel at the dam. Water is diverted into the reservoir from Middle Yuba River via Lohman Ridge Tunnel to Oregon Creek then via Camptonville Tunnel (stations 11408870 and 11409350). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of North 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, 936,929 acre-ft, June 11, elevation, 1,949.87 ft; minimum, 496,667 acre-ft, Jan. 10, elevation, 1,836.61 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	611738	564027	540277	508346	604302	783909	786380	845444	934670	900373	829979	745616
2	610524	562060	540013	507043	603806	784327	786464	846763	935422	899504	826294	745089
3	609562	560773	539352	505617	604833	782821	787764	849186	935704	896394	822534	744522
4	607853	560266	538561	503845	606076	780817	790622	852496	934717	893339	818440	743835
5	606040	559218	537637	502802	610132	782445	794413	855860	933824	890744	818010	741006
6	604125	557667	536814	501602	614671	783951	796779	858832	933307	888290	817022	738346
7	602071	556481	535861	500531	615281	784830	798598	862033	933730	886657	813332	735814
8	600128	557057	534875	499304	616463	785793	802415	868012	935187	886430	809355	733526
9	598965	556800	533858	498016	618475	787722	805689	873839	934435	886475	806114	733887
10	597767	555916	532743	496667	621429	788436	807734	880232	936222	884255	803477	734288
11	595411	555109	531467	499210	625621	789108	809184	884345	936929	881226	801014	732365
12	593657	554403	530290	500909	630014	789612	809996	886248	936599	878383	800039	730644
13	591871	553564	529507	501413	647106	790454	815304	887019	934341	874872	798980	728887
14	589914	551519	528529	501098	685390	792601	820292	888789	931852	871909	796018	726613
15	587822	550382	527552	502170	704442	792643	823613	890607	929696	871639	793317	723749
16	586708	549713	526413	506599	716895	792938	826251	892063	926935	871012	790201	724067
17	584797	549680	525471	509332	724942	792769	830240	893931	927496	868281	786925	724465
18	582578	548478	524660	517522	729885	792263	834503	894979	927589	865510	783407	722320
19	580537	547511	523460	526088	732805	792179	837514	896486	925440	863191	781359	719941
20	579190	547644	522554	536518	736135	792221	839611	898542	923527	860253	778899	717527
21	577845	548012	521389	542825	738548	791589	839918	901106	921105	856746	775154	715040
22	576223	547811	520228	547545	742945	790412	839962	902574	919477	856391	771918	713188
23	574509	547278	519196	552256	747683	789360	841977	906066	916551	855461	768567	713503
24	572794	545946	518005	567258	748982	788352	841101	911368	916274	852187	765225	713897
25	570979	544119	516847	582681	748292	787470	839568	915856	916088	848525	761646	712951
26	569304	542428	515434	590997	751016	786715	838169	921105	912893	845664	761154	711574
27	568689	541104	514665	596782	768732	786254	839480	925907	909475	842766	760456	710199
28	569338	540046	513577	601187	776900	785710	841670	929368	906802	839568	756728	708590
29	568587	539583	512361	604338	781986	786254	842810	932791	904273	837732	753787	705967
30	567564	540244	511754	603806	---	786087	843819	933119	900694	837382	750568	702880
31	566066	---	510033	604763	---	786129	---	933495	---	833632	748130	---
MAX	611738	564027	540277	604763	781986	792938	843819	933495	936929	900373	829979	745616
MIN	566066	539583	510033	496667	603806	780817	786380	845444	900694	833632	748130	702880
a	1857.85	1850.15	1840.84	1868.99	1914.95	1915.94	1929.39	1949.14	1942.07	1927.06	1906.73	1895.36
b	-47459	-25822	-30211	+94730	+177223	+4143	+57690	+89676	-32801	-67062	-85502	-45250

CAL YR 1999 b -124392
WTR YR 2000 b +89355

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

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CA

LOCATION.—Lat 39°23'26", long 121°08'36", in SE 1/4 NW 1/4 sec.25, T.18 N., R.7 E., Yuba County, Hydrologic Unit 18020125, Plumas National Forest, on right bank, at old Colgate Dam, 0.2 mi downstream from New Bullards Bar Dam, and 2.5 mi northwest of North San Juan.

DRAINAGE AREA.—490 mi^2.

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 North Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 56,200 ft^3/s, Jan. 22, 1970, gage height, 35.29 ft, at auxiliary gage, from rating curve extended above 40,000 ft^3/s on basis of computation of flow over old Colgate Dam; minimum daily, 0.42 ft^3/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 ft^3/s, at auxiliary gage, from computation of flow over old Colgate Dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.8	7.3	6.8	7.0	1120	7.0	7.6	8.3	8.0	7.6	7.4
2	6.8	6.9	7.2	6.8	7.0	1150	7.0	7.5	8.3	8.0	7.6	7.3
3	6.8	7.0	7.2	6.8	7.3	1170	7.0	7.6	8.2	8.0	7.6	7.2
4	6.8	7.0	7.2	6.8	7.2	1180	7.0	7.6	8.2	8.0	7.6	7.2
5	6.8	6.8	7.0	6.6	7.2	432	7.0	7.6	8.2	8.0	7.6	7.2
6	6.8	7.0	7.0	6.6	7.1	7.5	7.0	7.7	8.2	8.0	7.6	7.3
7	6.8	7.2	6.9	6.8	7.0	7.3	7.0	7.8	8.3	8.0	7.6	7.2
8	6.8	7.8	6.8	6.8	7.0	7.8	7.1	8.1	8.6	8.0	7.5	7.2
9	6.8	7.2	7.0	6.9	7.0	7.9	7.2	7.8	8.3	8.0	7.4	7.4
10	6.8	7.1	7.0	7.0	7.5	7.1	7.2	8.0	8.2	8.0	7.4	7.2
11	6.8	7.1	7.0	8.2	7.8	6.9	7.2	8.0	8.3	8.0	7.4	7.2
12	6.8	7.3	7.0	7.2	8.8	6.8	7.2	8.0	8.5	8.0	7.4	7.2
13	7.0	7.4	7.0	7.2	11	6.8	7.6	8.0	8.3	7.9	7.4	7.2
14	7.0	7.4	7.0	7.2	10	2240	7.4	8.0	8.1	7.9	7.4	7.2
15	7.0	7.4	7.0	7.5	7.0	3300	7.4	8.3	8.0	7.8	7.4	7.2
16	7.0	7.6	7.0	7.7	6.7	2060	7.5	8.2	8.0	7.8	7.4	7.2
17	6.4	7.3	7.0	7.3	6.6	7.1	7.9	8.2	8.0	7.8	7.4	7.2
18	7.0	7.2	7.0	8.4	6.6	7.4	7.6	8.1	8.0	7.8	7.4	7.2
19	7.0	7.6	7.0	7.7	6.5	7.4	7.6	8.3	8.0	7.8	7.4	7.5
20	7.0	7.2	7.0	7.5	6.4	7.4	7.6	8.0	8.1	7.8	7.4	7.2
21	7.0	7.1	7.0	7.3	22	7.3	7.6	8.0	8.2	7.8	7.4	7.2
22	7.0	7.2	7.0	7.0	23	59	7.6	8.0	8.1	7.7	7.4	7.2
23	7.2	7.2	7.0	7.3	8.5	7.0	7.6	8.0	8.0	7.6	7.4	7.2
24	7.2	7.2	7.0	9.2	7.0	6.8	7.6	8.2	8.0	7.6	7.4	7.2
25	7.2	7.2	7.0	8.1	6.9	6.8	7.6	8.2	8.0	7.6	7.4	7.2
26	7.0	7.2	7.0	7.4	7.9	6.9	7.6	8.2	8.0	7.6	7.4	7.2
27	7.5	7.2	7.0	7.1	9.8	7.0	7.6	8.4	8.0	7.6	7.4	7.2
28	7.3	7.2	7.0	7.0	7.3	7.0	7.6	8.4	8.0	7.6	7.3	7.2
29	6.8	7.2	6.9	7.0	584	7.0	7.6	8.4	8.0	7.6	7.2	7.2
30	6.8	7.6	6.8	7.4	---	7.0	7.6	8.4	8.0	7.6	7.2	7.2
31	6.8	---	6.8	7.2	---	7.0	---	8.3	---	7.6	7.2	---
TOTAL	214.8	216.6	217.1	225.8	825.1	12868.2	221.5	248.9	244.4	242.5	230.2	216.9
MEAN	6.93	7.22	7.00	7.28	28.5	415	7.38	8.03	8.15	7.82	7.43	7.23
MAX	7.5	7.8	7.3	9.2	584	3300	7.9	8.4	8.6	8.0	7.6	7.5
MIN	6.4	6.8	6.8	6.6	6.4	6.8	7.0	7.5	8.0	7.6	7.2	7.2
AC-FT	426	430	431	448	1640	25520	439	494	485	481	457	430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

MEAN	18.1	35.5	283	799	874	689	383	503	261	36.8	7.59	8.05
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	29570.0		15972.0			
ANNUAL MEAN	81.0		43.6		322	
HIGHEST ANNUAL MEAN					1560	1967
LOWEST ANNUAL MEAN					4.62	1977
HIGHEST DAILY MEAN	4510	Mar 2	3300	Mar 15	48200	Feb 19 1986
LOWEST DAILY MEAN	5.6	Feb 26	6.4	Oct 17	.42	Nov 5 1966
ANNUAL SEVEN-DAY MINIMUM	6.6	Jan 1	6.7	Dec 31	.68	Nov 1 1966
INSTANTANEOUS PEAK FLOW			3430	Mar 14	56200	Jan 22 1970
INSTANTANEOUS PEAK STAGE			11.77	Mar 14	35.29	Jan 22 1970
ANNUAL RUNOFF (AC-FT)	58650		31680		233600	
10 PERCENT EXCEEDS	8.1		8.2		49	
50 PERCENT EXCEEDS	7.1		7.4		6.7	
90 PERCENT EXCEEDS	6.8		6.8		4.9	

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 mi^2.

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.—Water-stage recorder. 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.—Records not collected during winter months. Reservoir is formed on 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 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.

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	1,568

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	924	e342	---	---	---	---	---	1090	1420	1350	1090	672
2	922	e319	---	---	---	---	---	1110	1420	1340	1080	666
3	921	e297	---	---	---	---	---	1130	1420	1340	1070	655
4	919	e276	---	---	---	---	---	1150	1420	1330	1050	644
5	907	e255	---	---	---	---	718	1170	1410	1330	1040	627
6	885	e234	---	---	---	---	732	1180	1410	1330	1030	613
7	863	e213	---	---	---	---	745	1210	1410	1330	1010	598
8	838	e194	---	---	---	---	759	1250	1410	1320	996	585
9	817	e176	---	---	---	---	772	1270	1420	1320	983	---
10	799	e158	---	---	---	---	788	1290	1410	1320	970	e576
11	780	e141	---	---	---	---	804	1290	1410	1310	957	e562
12	762	e124	---	---	---	---	822	1300	1410	1310	944	e549
13	745	---	---	---	---	---	858	1300	1400	1310	929	e536
14	720	---	---	---	---	---	873	1310	1400	1310	913	e523
15	693	---	---	---	---	---	885	1320	1400	1300	897	e511
16	666	---	---	---	---	---	896	1330	1400	1300	881	e499
17	e635	---	---	---	---	---	909	1340	1390	1300	864	e487
18	e614	---	---	---	---	---	920	1350	1390	1290	847	e464
19	e596	---	---	---	---	---	926	1360	1390	1280	830	e442
20	e577	---	---	---	---	---	935	1370	1390	1260	814	e420
21	e560	---	---	---	---	---	947	1380	1380	1250	801	e400
22	e545	---	---	---	---	---	959	1390	1370	1230	787	e380
23	e520	---	---	---	---	---	969	1400	1370	1220	773	e360
24	e498	---	---	---	---	---	980	1410	1370	1200	761	e337
25	e477	---	---	---	---	---	994	1420	1370	1190	748	e342
26	e456	---	---	---	---	---	1010	1420	1360	1180	735	e344
27	e435	---	---	---	---	---	1030	1420	1360	1160	723	e347
28	e416	---	---	---	---	---	1050	1420	1360	1150	711	e329
29	e397	---	---	---	---	---	1060	1420	1360	1130	699	e325
30	e378	---	---	---	---	---	1080	1420	1350	1120	687	e321
31	e360	---	---	---	---	---	---	1420	---	1110	675	---
MAX	924	---	---	---	---	---	---	1420	1420	1350	1090	---
MIN	360	---	---	---	---	---	---	1090	1350	1110	675	---
a							22.13	26.34	25.55	22.50	16.35	
b	-564							+340	-70	-240	-435	-354

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

11413943 UPPER CASCADE LAKE NEAR SODA SPRINGS, CA

LOCATION.—Lat 39°18'02", long 120°26'02", in NW 1/4 NW 1/4 sec.32, T.17 N., R.14 E., Placer County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Upper Cascade Lake Dam, and 3.4 mi southwest of Soda Springs.

DRAINAGE AREA.—0.62 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in files of the U.S. Geological Survey.

GAGE.—Non-recording gage observed intermittently during the summer months. Datum of gage is 6,607 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by an earthfill dam completed in 1850. Usable capacity, 1,740 acre-ft, between gage heights 0.0 ft, invert of outlet, and 34.9 ft, crest of spillway. Water is used for power development downstream.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co., dated April 1965)

0	0	24	971
8	246	32	1,507
16	557	35	1,744

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	166	---	---	---	---	---	---	1740	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	1540
3	971	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	1710	---	---	---
5	883	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	1610	1560
7	---	133	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	753	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	1710	---	---	1540
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	112	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	1590	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	411	---	---	---	---	---	---	---	---	---	---	1460
18	---	0	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	1660	1580	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	1720	---	---	---
23	245	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	1260
25	---	---	---	---	---	---	---	---	1710	---	1550	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	1130
28	---	---	---	---	---	---	---	---	---	---	1550	1060
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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 mi^2.

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.—No records computed during the winter months. 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.

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.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	338	---	---	---	---	---	491	489	414	283	198
2	253	339	---	---	---	---	---	492	489	409	280	200
3	260	340	---	---	---	---	---	492	488	404	277	200
4	271	339	---	---	---	---	---	492	488	399	274	200
5	274	338	---	---	---	---	366	492	488	394	271	200
6	267	336	---	---	---	---	374	491	487	389	268	203
7	261	336	---	---	---	---	381	495	486	385	265	210
8	253	335	---	---	---	---	389	493	488	380	262	216
9	259	332	---	---	---	---	396	493	488	376	259	222
10	270	329	---	---	---	---	406	493	487	371	257	231
11	277	326	---	---	---	---	414	492	486	367	254	242
12	279	311	---	---	---	---	424	491	485	362	252	252
13	280	290	---	---	---	---	446	491	484	358	249	261
14	279	259	---	---	---	---	454	493	483	354	247	271
15	277	223	---	---	---	---	459	494	481	349	244	280
16	274	192	---	---	---	---	463	493	480	345	242	289
17	273	159	---	---	---	---	470	492	479	341	239	298
18	277	---	---	---	---	---	475	494	476	336	236	308
19	277	---	---	---	---	---	477	495	472	332	232	316
20	282	---	---	---	---	---	480	496	467	328	229	325
21	291	---	---	---	---	---	487	496	462	323	226	341
22	298	---	---	---	---	---	489	495	457	319	223	360
23	301	---	---	---	---	---	489	500	451	315	219	376
24	298	---	---	---	---	---	489	496	446	311	216	387
25	294	---	---	---	---	---	490	494	441	307	212	393
26	295	---	---	---	---	---	491	493	436	303	209	398
27	311	---	---	---	---	---	492	492	431	300	206	402
28	321	---	---	---	---	---	490	491	427	296	203	401
29	328	---	---	---	---	---	490	490	422	293	200	393
30	332	---	---	---	---	---	491	490	418	289	197	385
31	336	---	---	---	---	---	---	490	---	286	195	---
MAX	336	---	---	---	---	---	---	500	489	414	283	402
MIN	248	---	---	---	---	---	---	490	418	286	195	198
a	16.63						21.73	21.68	19.45	14.77	10.95	18.36
b								-1	-72	-132	-91	+190

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

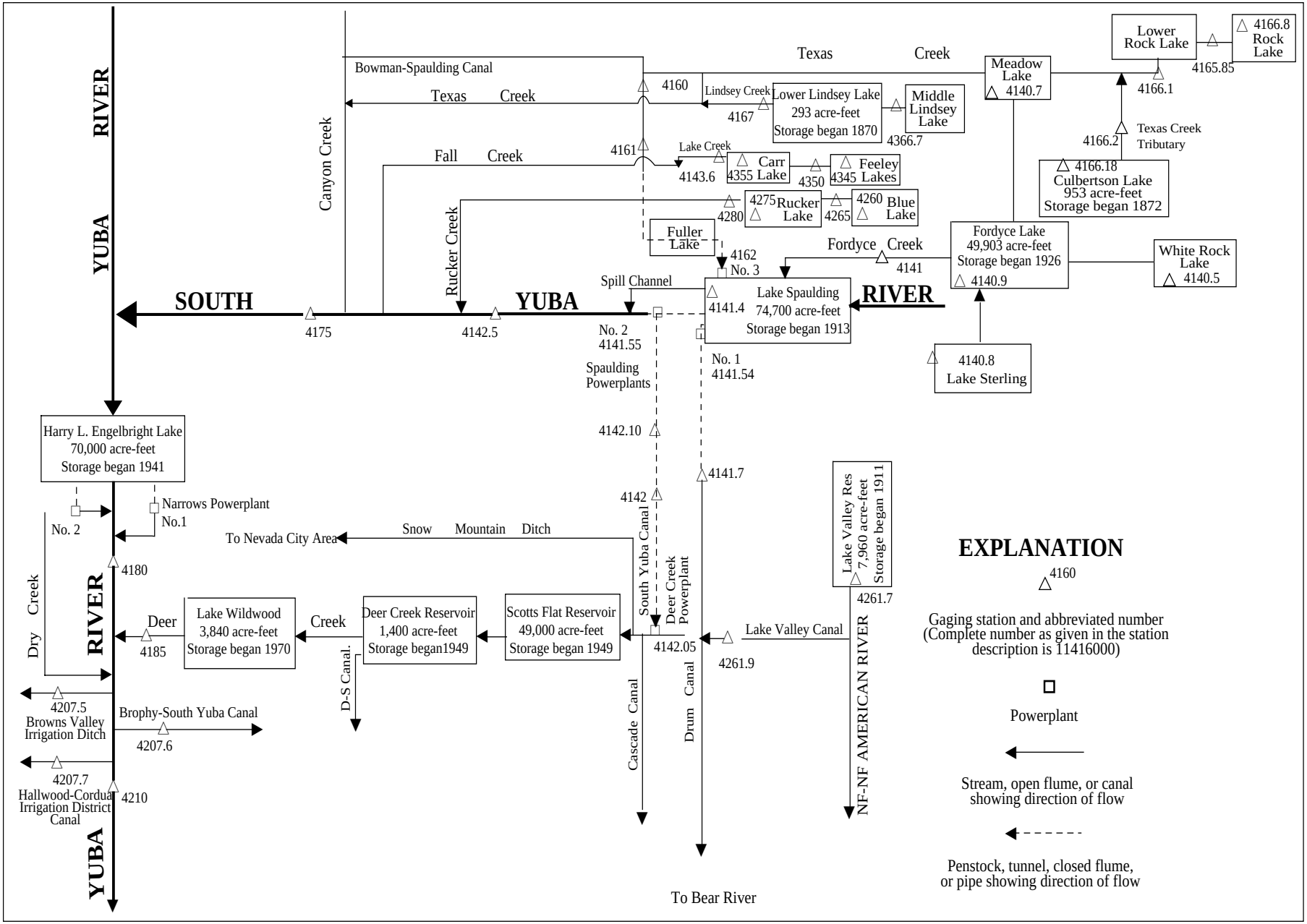

Figure 32. Diversions and storage in South Yuba River Basin.

11414050 WHITE ROCK LAKE NEAR SODA SPRINGS, CA

LOCATION.—Lat 39°25'05", long 120°23'16", in NW 1/4 NE 1/4 sec.22, T.18 N., R.14 E., Nevada County, Hydrologic Unit 18020125, on outlet structure on White Rock Lake Dam, and 6.5 mi north of Soda Springs.

DRAINAGE AREA.—1.18 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1965–99 available in the files of the U.S. Geological Survey.

GAGE.—Staff gage read occasionally. Elevation of gage is 7,818 ft above sea level (from topographic map).

REMARKS.—Lake is formed by an earth fill dam; storage began in 1850. The dam was rebuilt by PG&E in 1984. Capacity, 570 acre-ft, between elevation 7,810.5 ft, invert of outlet, and 7,820.0 ft, spillway crest. Released water is used downstream in a power and irrigation system. See schematic diagram of South 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated 1965)

3.1	0	6.0	223	9.0	472
4.0	68	7.0	304	10.0	561
5.0	145	8.0	387	11.0	654

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	455
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	570	---	.00
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414070 MEADOW LAKE NEAR CISCO, CA

LOCATION.—Lat 39°24'12", long 120°29'48", in NW 1/4 NE 1/4 sec.27, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Meadow Lake Dam, 1.4 mi upstream from Fordyce Lake, and 7.5 mi northeast of Cisco.

DRAINAGE AREA.—1.98 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Staff gage read intermittently during the summer months. Elevation of gage is 7,287 ft above sea level (from topographic map).

REMARKS.—Lake is formed by an earth-fill dam; storage began in 1864. The dam was rebuilt by PG&E in 1973. Capacity, 4,841 acre-ft, between gage height 2.19 ft, invert of outlet valve, and 31.3 ft, spillway crest. Released water is used downstream in a power and irrigation system. See schematic diagram of South 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated December 1978)

2.2	1.0	10.0	774	18.0	2,017	26.0	3,611
4.0	133	12.0	1,045	20.0	2,384	28.0	4,059
6.0	317	14.0	1,345	22.0	2,772	30.0	4,527
8.0	531	16.0	1,671	24.0	3,181	31.3	4,841

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	4743	---	4479
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414080 LAKE STERLING NEAR CISCO, CA

LOCATION.—Lat 39°21'27", long 120°29'30", in NE 1/4 NE 1/4 sec.10, T.17 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Lake Sterling Dam, 0.3 mi upstream from Fordyce Lake, and 4.7 mi northeast of Cisco.

DRAINAGE AREA.—1.02 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Staff gage read occasionally. Elevation of gage is 6,987 ft above sea level (from topographic map).

REMARKS.—Lake is formed by an earth fill dam; storage began in 1877. Capacity, 1,764 acre-ft, between elevation 6,965.97 ft, invert of outlet valve, and 6,987.9 ft, spillway crest. Released water is used downstream in a power and irrigation system. See schematic diagram of South 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated December 1978)

0.0	0	7.0	469	13.0	934	19.0	1,474
2.5	159	9.0	619	15.0	1,104	21.0	1,674
4.5	293	11.0	772	17.0	1,282	23.0	1,874

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	1590	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	1120	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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 mi^2.

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 South 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 contents, 50,100 acre-ft, June 4, 2000, gage height, 114.88 ft; minimum, 250 acre-ft, Oct. 31 to Nov. 7, 1979.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 50,100 acre-ft, June 4, gage height, 114.88 ft; minimum, 682 acre-ft, Nov. 5, gage height, 9.26 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	770	832	2450	5070	7220	9510	13400	31600	49500	46500	43300	38400
2	792	802	2540	5050	7250	9530	13900	32700	49700	46400	43000	38300
3	812	750	2620	5020	7310	9550	14400	33800	49900	46300	42600	38200
4	828	701	2700	5000	7350	9590	15200	34900	50100	46200	42100	38000
5	827	682	2790	4970	7370	9640	15900	36100	49900	46100	41900	37900
6	815	712	2860	4950	7390	9690	16500	36800	49700	46000	41800	37700
7	805	761	2940	4920	7410	9730	17100	37600	49700	45900	41800	37600
8	804	816	3040	4900	7430	9780	17800	39700	49600	45900	41700	37500
9	802	860	3160	4870	7460	9820	18300	40700	49500	45800	41600	37400
10	800	884	3280	4850	7500	9840	19000	41300	49300	45700	41500	37200
11	799	897	3390	4860	7540	9870	19700	41700	49200	45600	41500	37100
12	797	933	3510	4840	7590	9900	20600	42000	49100	45500	41400	37000
13	824	989	3630	4820	7710	10000	21600	42400	49200	45400	41300	36800
14	817	1020	3740	4800	8240	10200	22100	42800	49300	45300	41300	36400
15	800	1080	3850	4840	8480	10300	22400	43400	49300	45200	41200	35600
16	791	1150	3960	4870	8640	10500	22700	43800	49200	45100	41100	34700
17	784	1240	4060	4890	8730	10700	23100	43900	49000	44900	40900	33800
18	782	1320	4160	5150	8800	10800	23300	44200	48900	44800	40700	33000
19	772	1430	4250	5500	8860	11000	23500	44900	48700	44700	40400	32200
20	765	1540	4360	5960	8910	11200	23800	45800	48500	44600	40200	31700
21	736	1620	4470	6170	8960	11300	24200	46900	48300	44500	40000	31600
22	718	1700	4560	6270	9050	11500	24700	48000	48100	44400	39900	31500
23	714	1780	4670	6370	9100	11700	25100	49000	47800	44300	39800	31300
24	702	1860	4760	6660	9130	11800	25600	49800	47600	44200	39700	31200
25	685	1940	4860	6880	9160	12000	26200	49700	47300	44100	39500	31100
26	685	2020	4950	6970	9230	12200	26900	49600	47000	44000	39400	30900
27	710	2100	5040	7030	9390	12400	28000	49600	46800	43900	39200	30800
28	806	2170	5130	7070	9430	12500	28900	49600	46700	43700	39100	30700
29	842	2250	5150	7100	9480	12800	29700	49400	46600	43600	38900	30500
30	826	2350	5120	7170	---	13000	30500	49300	46500	43500	38700	30400
31	829	---	5090	7190	---	13200	---	49300	---	43400	38600	---
MAX	842	2350	5150	7190	9480	13200	30500	49800	50100	46500	43300	38400
MIN	685	682	2450	4800	7220	9510	13400	31600	46500	43400	38600	30400
a	10.40	18.86	29.73	36.86	43.84	53.36	86.31	113.83	110.16	105.89	98.85	86.07
b	+83	+1521	+2740	+2100	+2290	+3720	+17300	+18800	-2800	-3100	-4800	-8200

CAL YR 1999 MAX 50025 MIN 682 b -5887
WTR YR 2000 MAX 50100 MIN 682 b +29654

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 mi^2.

PERIOD OF RECORD.—June 1966 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,250 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Fordyce Lake (station 11414090). See schematic diagram of South 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 ft^3/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 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 3.5 ft^3/s, Jan. 2–9, 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	12	11	14	22	23	29	28	236	55	52	100
2	5.3	11	11	14	23	23	30	28	241	55	82	101
3	5.2	11	11	14	22	23	31	29	247	55	102	100
4	5.1	11	11	14	22	22	32	30	307	55	102	100
5	5.0	11	11	15	22	22	24	30	472	55	102	100
6	5.0	9.0	11	14	22	22	16	31	396	55	102	100
7	5.0	5.3	11	19	23	22	17	33	340	55	102	100
8	5.0	5.8	12	18	22	22	17	35	356	54	100	100
9	4.9	6.8	13	16	22	23	17	33	330	54	106	100
10	4.9	8.1	13	16	22	23	18	33	291	54	106	100
11	4.9	9.2	13	20	23	23	18	33	273	54	106	100
12	4.8	11	13	18	24	24	19	33	264	54	106	100
13	4.7	19	13	18	32	24	23	33	263	54	106	100
14	5.0	30	13	18	24	25	20	33	266	54	106	242
15	7.4	30	10	18	24	25	20	34	272	53	106	475
16	6.1	21	16	18	24	24	20	36	270	53	69	473
17	4.0	12	17	18	24	24	22	82	258	53	42	464
18	4.7	12	16	18	24	25	21	189	246	53	42	459
19	3.9	12	15	18	24	26	21	208	236	53	42	456
20	6.5	11	15	18	25	25	22	213	227	53	42	250
21	11	11	15	18	24	25	22	217	217	53	78	102
22	11	10	15	18	24	26	23	261	201	53	101	102
23	8.5	10	15	18	24	26	23	358	198	53	101	102
24	4.7	11	15	23	24	27	23	661	196	53	101	102
25	10	12	15	22	25	27	24	819	194	53	101	102
26	12	12	15	20	26	27	25	739	193	52	101	102
27	12	12	15	21	23	28	26	680	193	52	101	101
28	13	12	15	21	24	28	26	655	121	52	101	101
29	13	11	14	21	24	28	26	626	56	52	100	101
30	12	11	14	22	---	29	27	454	56	52	100	101
31	12	---	14	22	---	29	---	309	---	52	100	---
TOTAL	221.9	370.2	418	562	688	770	682	6983	7416	1658	2808	5136
MEAN	7.16	12.3	13.5	18.1	23.7	24.8	22.7	225	247	53.5	90.6	171
MAX	13	30	17	23	32	29	32	819	472	55	106	475
MIN	3.9	5.3	10	14	22	22	16	28	56	52	42	100
AC-FT	440	734	829	1110	1360	1530	1350	13850	14710	3290	5570	10190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

MEAN	81.5	42.2	28.2	36.7	56.0	72.0	68.1	191	364	288	213	142
MAX	428	236	173	278	328	353	315	727	957	542	403	497
(WY)	1976	1977	1982	1997	1984	1984	1986	1996	1995	1995	1983	1980
MIN	4.35	3.90	3.75	4.76	4.78	5.07	9.21	17.0	36.4	21.7	11.4	4.84
(WY)	1978	1979	1979	1981	1977	1977	1977	1977	1976	1981	1987	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	52475.8		27713.1			
ANNUAL MEAN	144		75.7		133	
HIGHEST ANNUAL MEAN					288	1982
LOWEST ANNUAL MEAN					49.3	1981
HIGHEST DAILY MEAN	918	May 28	819	May 25	3750	May 17 1996
LOWEST DAILY MEAN	3.9	Oct 19	3.9	Oct 19	3.5	Jan 2 1979
ANNUAL SEVEN-DAY MINIMUM	4.9	Oct 7	4.9	Oct 7	3.5	Jan 2 1979
INSTANTANEOUS PEAK FLOW			902	May 25	4660	Jul 9 1974
INSTANTANEOUS PEAK STAGE			4.44	May 25	7.90	Jul 9 1974
ANNUAL RUNOFF (AC-FT)	104100		54970		96050	
10 PERCENT EXCEEDS	461		230		408	
50 PERCENT EXCEEDS	46		25		34	
90 PERCENT EXCEEDS	6.7		11		6.9	

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 mi^2.

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, 74,700 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 South Yuba and Bear River Basins.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 75,100 acre-ft, July 13, 1967, gage height, 205.5 ft; minimum, 914 acre-ft, Feb. 28, 1976, gage height, 25.5 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 74,900 acre-ft, June 8, gage height, 205.19 ft; minimum, 11,100 acre-ft, Sept. 14, gage height, 74.79 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54000	38100	29800	22500	42000	50800	41000	65400	74500	64600	33500	15000
2	53900	37700	29500	22400	42000	50300	41600	66900	74500	63800	32500	15300
3	53700	37200	29100	22300	41900	49400	42700	68500	74400	63000	31600	15500
4	53500	36700	28800	22000	42000	48600	44400	70000	74400	62100	30900	15500
5	52500	36300	28500	21800	42000	48000	45700	71300	74800	61200	30800	15400
6	51700	36200	28200	21600	41900	47300	46600	71600	74800	60300	30700	15300
7	50800	36100	27800	21300	41800	46500	47500	72200	74800	59600	29900	14600
8	49900	35700	27500	21100	41600	45700	48400	74400	74900	59100	29500	14000
9	49900	35300	27200	20900	41400	44800	49100	74500	74800	58400	28800	13700
10	49800	34900	26900	20700	41800	43900	50000	74400	74600	56900	28100	13400
11	48900	34600	26800	20700	41900	43100	51000	73900	74300	55500	27400	12700
12	48000	34200	26800	20800	41900	42500	52100	73100	74100	54200	27500	12000
13	47200	34100	26400	20800	43700	41900	55100	72300	74000	52800	27600	11500
14	46300	34100	26000	20900	50100	41600	56000	71600	73900	51600	26900	11100
15	45400	33900	25600	21300	51600	41300	56300	71500	73700	50900	26200	11200
16	45400	33500	25200	21900	52200	41100	56600	71400	73400	50100	25400	11900
17	45200	33300	24900	22500	51900	40800	57500	71400	73000	48800	24600	12500
18	44600	32900	24900	25600	51400	40600	57800	72000	72500	47500	23800	12200
19	44000	32700	24900	28100	51000	40800	57500	73000	72000	46100	23900	11900
20	43400	32900	24500	31000	51000	40700	57300	74000	71500	44700	23900	11300
21	42700	33000	24200	32500	50900	40200	57500	74500	71100	43200	23000	11600
22	42100	32600	23900	33300	50800	39800	58000	74600	70700	42400	22200	12100
23	41900	32200	23600	34300	50600	39700	58200	74700	70300	41600	21500	12700
24	41800	31700	23200	37900	50400	39700	58400	74700	69800	40100	20700	13200
25	41100	31300	23200	40400	50000	39900	58800	74400	69200	38700	20000	13800
26	40400	30900	23100	41400	50100	40300	59600	74300	68700	37600	20000	14300
27	39900	30900	23000	42100	51100	40800	61000	74300	68100	36800	20000	14900
28	39500	30800	22900	42200	51200	41100	62300	74200	67400	35900	18900	15400
29	38800	30400	22800	42100	51200	41200	62900	74300	66500	35700	17500	16000
30	38700	30100	22700	42000	---	41200	63900	74100	65500	35500	16300	16500
31	38600	---	22500	41900	---	41000	---	74300	---	34500	15500	---
MAX	54000	38100	29800	42200	52200	50800	63900	74700	74900	64600	33500	16500
MIN	38600	30100	22500	20700	41400	39700	41000	65400	65500	34500	15500	11100
a	144.15	126.18	107.97	150.65	167.75	149.03	188.71	204.27	191.20	135.81	88.67	90.64
b	-15073	-8500	-7600	+19400	+9300	-10200	+22900	+10400	-8800	-31000	-19000	+1000
c	26500	19880	18010	13470	28580	33620	36280	42930	41400	34650	19580	4040
d	4570	2880	2690	2370	1590	7380	7890	6550	6230	4950	4920	4020

CAL YR 1999 MAX 74836 MIN 8648 b -8718 c 305800 d 62630
WTR YR 2000 MAX 74900 MIN 11100 b -37173 c 319000 d 56030

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.

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 Powerplants (station 11414196) at Drum Afterbay. Some of the water is diverted out of Drum Forebay to Alta Powerplant (station 11421725). See schematic diagrams of South 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, 864 ft^3/s, May 1, 1998; no flow for several days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	414	403	227	375	644	804	809	679	773	835	688
2	140	413	401	223	485	693	813	809	837	772	826	242
3	277	412	401	224	494	809	805	802	841	767	827	250
4	333	418	237	224	499	807	802	806	839	776	825	400
5	662	416	225	222	499	809	806	808	841	781	560	399
6	659	232	432	221	499	804	812	812	841	782	402	417
7	654	238	423	221	498	799	806	840	842	743	395	673
8	651	420	420	220	497	796	810	827	842	374	381	632
9	250	408	418	220	497	798	809	839	846	413	605	393
10	255	405	400	224	498	808	736	840	845	765	711	416
11	661	403	223	219	498	806	738	839	843	757	406	635
12	654	392	224	212	498	802	813	840	844	753	262	653
13	645	247	430	219	381	808	776	838	843	745	619	528
14	658	229	419	220	246	808	788	835	843	681	698	526
15	623	403	416	222	333	808	761	832	843	393	721	534
16	250	408	413	224	460	764	657	836	841	429	725	288
17	273	409	401	228	704	767	683	841	841	741	723	311
18	511	407	220	222	769	810	737	840	842	721	728	752
19	509	399	229	220	750	811	812	843	841	751	290	777
20	507	215	408	222	578	800	810	844	832	743	254	751
21	509	230	405	224	594	804	809	841	752	727	610	107
22	493	419	402	226	593	805	809	844	758	423	765	.00
23	247	417	399	227	592	808	807	845	789	419	749	.00
24	261	415	396	208	580	808	814	844	794	776	738	.00
25	517	412	248	206	603	808	815	844	791	771	730	.00
26	514	403	247	208	616	808	818	843	790	766	490	.00
27	511	220	246	209	560	803	810	843	789	775	274	.00
28	518	232	245	368	557	804	807	840	814	768	499	.00
29	513	411	244	492	557	804	803	842	836	418	748	.00
30	249	406	244	494	---	803	808	842	822	411	754	.00
31	270	---	244	451	---	802	---	688	---	819	729	---
TOTAL	13774.00	10853	10463	7747	15310	24608	23678	25696	24601	20733	18879	10372.00
MEAN	444	362	338	250	528	794	789	829	820	669	609	346
MAX	662	420	432	494	769	811	818	845	846	819	835	777
MIN	.00	215	220	206	246	644	657	688	679	374	254	.00
AC-FT	27320	21530	20750	15370	30370	48810	46970	50970	48800	41120	37450	20570
a	26960	21540	20530	15770	31900	46560	47000	48640	45600	37040	35600	19220
b	1160	962	627	584	757	1030	246	248	481	1320	1270	1100

a Discharge, in acre-feet, to Drum No. 1 and 2 Powerplants, 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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	406	422	465	446	476	531	615	653	643	619	581	369
MAX	817	824	835	837	833	838	839	855	851	820	820	661
(WY)	1983	1984	1984	1984	1984	1984	1996	1998	1999	1983	1998	1986
MIN	.000	29.5	31.1	30.2	.000	22.6	22.9	5.77	166	178	.000	.000
(WY)	1966	1987	1977	1997	1991	1988	1988	1976	1977	1977	1965	1965

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	230439.00		206714.00			
ANNUAL MEAN	631		565		519	
HIGHEST ANNUAL MEAN					796	1984
LOWEST ANNUAL MEAN					101	1977
HIGHEST DAILY MEAN	858	Jun 21	846	Jun 9	864	May 1 1998
LOWEST DAILY MEAN	.00	Sep 19	.00	Oct 1	.00	Jul 31 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 19	.00	Sep 22	.00	Jul 31 1965
ANNUAL RUNOFF (AC-FT)	457100		410000		376200	
ANNUAL DISCHARGE (AC-FT) a	441200		396400			
ANNUAL DISCHARGE (AC-FT) b	10030		9780			
10 PERCENT EXCEEDS	853		838		828	
50 PERCENT EXCEEDS	720		618		580	
90 PERCENT EXCEEDS	247		224		37	

a Discharge, in acre-feet, to Drum No. 1 and 2 Powerplants, provided by Pacific Gas & Electric Co.
b Discharge, in acre-feet, to Alta Powerplant, provided by Pacific Gas & Electric Co.

11414200 SOUTH YUBA CANAL NEAR EMIGRANT GAP, CA

LOCATION.—Lat 39°18'49", long 120°39'43", in SE 1/4 NE 1/4 sec.30, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on left bank of concrete flume, 400 ft downstream from Bowman Lake Road, and 2.5 mi northeast of Emigrant Gap.

PERIOD OF RECORD.—October 1964 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,590 ft above sea level, from topographic map.

REMARKS.—Canal diverts from Spaulding No. 2 Powerplant (station 11414155) at Lake Spaulding Dam. Downstream from the gage, some flow is diverted to Bear River. The remainder of the water enters Deer Creek at Deer Creek Powerplant (station 11414205). See schematic diagrams of South 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 ft^3/s, Aug. 3, 1965; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	52	44	42	36	32	128	1.0	138	82	79	63
2	138	50	43	42	37	64	129	.00	141	83	78	61
3	99	49	42	43	37	129	130	.00	143	84	78	63
4	69	47	42	43	36	128	131	.00	143	84	79	63
5	66	45	42	43	37	130	133	.00	143	85	80	63
6	66	47	41	42	38	129	134	.00	142	88	80	63
7	65	47	42	42	37	127	134	.00	138	88	81	63
8	65	44	42	42	38	127	135	2.0	138	86	81	62
9	68	43	42	44	38	112	139	3.0	139	92	81	63
10	68	45	41	42	36	125	140	2.9	137	90	81	63
11	67	45	39	35	39	126	141	49	93	94	80	64
12	66	45	41	41	39	125	142	126	66	95	80	65
13	66	45	42	42	38	128	140	132	70	94	81	64
14	65	45	42	43	26	128	141	138	70	93	81	63
15	64	45	42	39	33	127	141	138	79	91	80	63
16	64	43	42	36	20	127	142	138	80	90	81	62
17	65	43	42	36	18	126	142	138	80	91	80	63
18	67	43	42	31	16	128	141	138	81	90	83	66
19	68	41	40	39	26	129	142	138	79	90	83	65
20	68	41	41	38	32	129	143	139	78	90	80	65
21	68	44	41	37	30	128	143	140	78	88	80	67
22	67	43	44	33	30	128	141	140	77	87	82	60
23	67	43	42	34	30	127	141	140	77	85	80	60
24	67	44	43	28	30	127	140	141	77	81	80	60
25	67	44	42	32	32	127	139	141	77	80	80	61
26	62	44	42	39	31	127	139	142	79	83	75	58
27	62	45	42	39	25	134	140	142	83	82	76	60
28	59	44	42	38	28	142	141	142	82	81	82	62
29	59	44	42	36	27	142	141	142	82	82	85	63
30	57	45	42	37	---	133	68	108	82	80	68	60
31	57	---	42	38	---	126	---	140	---	82	63	---
TOTAL	2193	1345	1298	1196	920	3817	4081	2800.90	2972	2691	2458	1878
MEAN	70.7	44.8	41.9	38.6	31.7	123	136	90.4	99.1	86.8	79.3	62.6
MAX	138	52	44	44	39	142	143	142	143	95	85	67
MIN	57	41	39	28	16	32	68	.00	66	80	63	58
AC-FT	4350	2670	2570	2370	1820	7570	8090	5560	5890	5340	4880	3730
a	3430	2180	2240	2310	1910	1950	0	0	3630	4150	4120	1990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	78.2	67.1	70.5	73.3	77.4	84.6	77.1	109	111	96.9	91.4	87.8
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	18.2	11.4	15.6	11.3	27.2	46.9	46.1	41.7	38.0
(WY)	1978	1995	1978	1997	1997	1997	1979	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	30635.3		27649.90			
ANNUAL MEAN	83.9		75.5		85.4	
HIGHEST ANNUAL MEAN					124	1967
LOWEST ANNUAL MEAN					47.2	1977
HIGHEST DAILY MEAN	145	Mar 15	143	Apr 20	165	Aug 3 1965
LOWEST DAILY MEAN	8.3	Apr 12	.00	May 2	.00	Apr 20 1966
ANNUAL SEVEN-DAY MINIMUM	15	Apr 6	.14	May 1	.00	Apr 5 1986
ANNUAL RUNOFF (AC-FT)	60770		54840		61850	
ANNUAL DISCHARGE (AC-FT) a	33850		27900			
10 PERCENT EXCEEDS	137		139		142	
50 PERCENT EXCEEDS	68		67		78	
90 PERCENT EXCEEDS	40		36		39	

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 mi^2.

PERIOD OF RECORD.—October 1985 to current year. Unpublished records for water years 1965–85 in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir and steel-lipped rectangular weir. Elevation of gage is 4,670 ft above sea level, from topographic map. Prior to June 1988, at same site and different datum.

REMARKS.—Flow regulated by Lake Spaulding (station 11414140) 0.2 mi upstream. Water is released at the intake to South Yuba Canal (station 11414200) 100 ft upstream. See schematic diagrams of South 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 ft^3/s, Apr. 14, June 8, 1986, gage height, 3.37 ft, from rating curve extended above 45 ft^3/s, on basis of weir formula; minimum daily, 0.09 ft^3/s, Nov. 5–7, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	7.6	5.5	6.2	2.0	1.6	3.2	6.0	36	3.0	6.3	6.2
2	6.6	7.6	5.3	6.1	1.6	2.1	3.2	7.2	37	3.5	6.5	6.2
3	6.5	7.6	4.9	5.9	1.5	3.2	3.2	7.2	37	3.5	6.5	6.0
4	6.8	7.6	4.8	5.9	2.3	3.3	3.2	7.2	37	3.5	6.5	5.9
5	6.8	7.6	4.8	5.9	1.8	3.4	2.5	7.5	37	3.5	6.5	5.9
6	6.8	7.6	4.8	5.7	1.7	3.1	2.1	7.7	38	3.6	6.5	5.9
7	6.8	7.6	4.8	5.6	1.7	2.9	2.1	8.4	41	4.0	6.5	5.9
8	6.8	7.6	4.8	5.6	1.7	2.9	2.0	9.6	42	4.0	6.5	5.9
9	6.8	7.6	4.8	5.9	1.7	2.6	2.1	8.0	42	3.8	6.5	5.9
10	6.8	7.6	4.7	6.4	2.6	2.9	2.1	7.9	43	3.8	6.5	5.9
11	6.8	7.6	4.6	5.2	2.1	3.3	2.0	21	18	4.3	6.5	5.9
12	6.8	7.6	5.3	1.7	1.9	3.2	2.0	45	1.8	4.8	6.5	5.9
13	7.1	7.6	5.5	2.9	4.8	3.3	2.4	41	1.7	4.8	6.4	5.9
14	7.7	7.6	5.6	4.0	6.9	3.7	2.2	37	1.7	5.0	3.7	5.9
15	7.9	7.6	5.6	3.8	2.0	3.2	2.0	37	1.7	5.3	4.8	5.9
16	7.9	7.6	5.6	2.2	1.9	3.2	2.2	37	1.7	5.3	6.2	5.9
17	8.1	7.6	5.6	3.3	1.9	2.9	2.6	37	1.7	5.3	6.2	5.9
18	8.4	6.5	5.6	5.1	1.8	3.1	2.0	37	1.7	5.3	6.2	5.9
19	8.2	5.6	4.9	2.9	1.7	3.5	16	37	1.7	5.3	6.2	5.9
20	7.9	5.5	4.5	2.2	2.0	2.7	28	37	1.7	5.3	6.2	5.9
21	7.9	5.1	4.5	1.6	1.9	2.5	28	37	1.7	5.3	6.2	5.0
22	7.9	4.8	5.0	1.5	1.9	2.5	28	37	1.9	5.3	6.2	4.4
23	7.9	4.8	5.3	2.8	1.7	2.7	30	37	2.3	5.8	6.2	5.3
24	7.9	4.5	5.3	6.6	1.6	2.7	32	37	2.3	6.2	6.2	5.3
25	7.9	4.5	5.3	2.0	1.5	2.7	32	37	2.3	6.2	6.2	5.3
26	7.9	4.7	5.3	2.0	2.8	2.7	32	37	2.5	6.2	6.2	5.3
27	8.0	5.0	5.3	1.9	3.4	8.5	32	37	2.8	6.2	6.2	5.4
28	8.6	5.0	5.3	1.8	1.7	15	32	37	2.8	6.2	6.2	5.6
29	8.0	5.0	5.7	1.8	1.6	15	33	37	2.8	6.2	6.2	5.6
30	7.6	5.5	6.2	2.0	---	10	18	27	2.8	6.2	6.2	6.8
31	7.6	---	6.2	1.8	---	3.2	---	37	---	6.2	6.2	---
TOTAL	231.0	195.7	161.4	118.3	63.7	127.6	384.1	839.7	447.6	152.9	191.9	172.7
MEAN	7.45	6.52	5.21	3.82	2.20	4.12	12.8	27.1	14.9	4.93	6.19	5.76
MAX	8.6	7.6	6.2	6.6	6.9	15	33	45	43	6.2	6.5	6.8
MIN	6.3	4.5	4.5	1.5	1.5	1.6	2.0	6.0	1.7	3.0	3.7	4.4
AC-FT	458	388	320	235	126	253	762	1670	888	303	381	343

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2000, BY WATER YEAR (WY)

MEAN	4.58	4.40	4.44	4.24	9.92	16.1	23.0	25.4	25.1	6.76	4.78	4.82
MAX	7.45	6.63	21.2	17.7	61.4	111	118	85.8	111	29.1	8.84	8.22
(WY)	2000	1999	1997	1995	1986	1986	1986	1986	1986	1998	1997	1997
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	3622.35		3086.6			
ANNUAL MEAN	9.92		8.43		11.1	
HIGHEST ANNUAL MEAN					41.3	1986
LOWEST ANNUAL MEAN					2.05	1988
HIGHEST DAILY MEAN	51	May 26	45	May 12	166	Jun 14 1986
LOWEST DAILY MEAN	.67	Jan 28	1.5	Jan 22	.09	Nov 5 1985
ANNUAL SEVEN-DAY MINIMUM	.74	Jan 24	1.7	Jun 13	.64	Nov 4 1985
INSTANTANEOUS PEAK FLOW			45	May 11	194	Apr 14 1986
INSTANTANEOUS PEAK STAGE			1.89	May 11	3.37	Apr 14 1986
ANNUAL RUNOFF (AC-FT)	7180		6120		8040	
10 PERCENT EXCEEDS	29		29		33	
50 PERCENT EXCEEDS	5.9		5.6		4.8	
90 PERCENT EXCEEDS	1.9		1.9		1.7	

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 mi^2.

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 South 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, about 34,200 ft^3/s, Jan. 1, 1997, gage height, 23.60 ft, from rating curve extended above 8,800 ft^3/s on basis of spillway rating at Spaulding Dam; minimum daily, 2.1 ft^3/s, on several days during July and September 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	7.9	8.4	6.7	e17	16	10	9.4	98	5.9	7.8	8.3
2	6.0	7.7	8.0	6.5	14	15	10	11	95	6.4	8.3	9.0
3	5.5	7.6	7.6	6.0	13	17	13	11	95	6.3	8.3	7.9
4	6.2	7.4	6.9	5.9	22	18	14	43	88	6.1	8.1	7.8
5	6.2	7.3	6.5	5.8	19	22	11	178	110	6.0	8.0	7.6
6	6.4	7.3	6.4	5.7	16	19	8.4	273	182	6.0	7.9	7.4
7	6.1	7.9	6.3	5.8	13	16	7.8	278	91	6.1	7.7	7.4
8	6.1	12	6.2	5.8	12	15	8.0	1330	119	5.9	7.6	7.3
9	5.8	9.0	6.2	6.2	11	14	7.4	818	171	5.8	7.4	7.3
10	5.6	8.7	5.5	6.8	18	13	6.8	411	87	5.7	7.4	7.2
11	5.7	8.3	6.7	16	17	16	6.4	283	30	5.7	7.5	7.1
12	5.6	8.1	7.7	8.6	17	17	7.3	296	8.1	5.9	7.4	7.1
13	5.8	7.8	7.6	7.0	46	18	23	280	7.3	5.8	6.9	6.9
14	6.9	7.7	7.1	7.8	165	21	18	265	7.1	6.0	5.0	6.8
15	7.3	8.3	6.9	15	46	21	9.1	261	7.0	6.5	6.4	6.8
16	7.1	8.6	6.8	18	27	20	9.6	162	6.6	6.4	7.5	6.7
17	7.4	10	6.6	25	21	18	15	88	6.3	6.3	7.3	6.5
18	7.7	8.2	6.3	60	17	18	14	84	6.6	6.1	7.3	6.6
19	7.7	11	5.6	36	15	21	21	122	7.3	6.0	7.2	6.6
20	7.6	12	5.3	31	17	17	30	282	6.6	5.9	6.9	6.6
21	7.5	9.5	5.5	19	17	14	29	609	6.0	5.9	6.9	7.2
22	7.5	7.6	5.5	15	18	14	28	875	5.7	5.8	7.1	5.5
23	7.5	6.5	5.4	24	17	14	30	1120	6.1	6.4	7.1	6.2
24	7.5	5.9	5.5	e178	14	14	32	1650	6.0	7.2	7.1	6.1
25	7.5	5.5	5.5	e114	13	14	32	1550	6.1	7.2	7.2	5.8
26	7.4	5.4	5.4	e43	22	13	32	1120	6.1	7.4	7.0	5.6
27	9.4	5.6	5.3	e15	59	17	32	869	6.6	7.3	7.1	5.9
28	14	5.3	5.2	e12	25	21	34	867	6.3	7.4	7.1	6.5
29	9.5	5.3	5.9	e10	20	20	35	652	6.1	7.5	7.1	6.2
30	8.6	9.3	6.7	e9.5	---	17	22	470	5.8	7.5	6.9	7.7
31	8.2	---	6.7	e12	---	11	---	264	---	7.6	6.9	---
TOTAL	223.7	238.7	197.2	737.1	748	521	555.8	15531.4	1289.7	198.0	225.4	207.6
MEAN	7.22	7.96	6.36	23.8	25.8	16.8	18.5	501	43.0	6.39	7.27	6.92
MAX	14	12	8.4	178	165	22	35	1650	182	7.6	8.3	9.0
MIN	5.5	5.3	5.2	5.7	11	11	6.4	9.4	5.7	5.7	5.0	5.5
AC-FT	444	473	391	1460	1480	1030	1100	30810	2560	393	447	412

e Estimated.

11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.14	41.4	48.4	120	93.4	88.9	85.2	333	430	69.5	6.15	6.42
MAX	18.8	683	685	2465	1626	1304	620	1734	2613	822	9.44	10.3
(WY)	1972	1984	1982	1997	1986	1986	1982	1996	1983	1983	1971	1986
MIN	2.68	4.51	5.44	4.51	5.58	5.10	3.41	5.29	3.05	2.34	2.43	2.73
(WY)	1978	1978	1977	1976	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	22535.1		20673.6			
ANNUAL MEAN	61.7		56.5		113	
HIGHEST ANNUAL MEAN					448	1997
LOWEST ANNUAL MEAN					4.35	1977
HIGHEST DAILY MEAN	1710	May 31	1650	May 24	25400	Jan 1 1997
LOWEST DAILY MEAN	5.1	Jul 23	5.0	Aug 14	2.1	Jul 15 1977
ANNUAL SEVEN-DAY MINIMUM	5.4	Jan 2	5.4	Dec 22	2.1	Sep 22 1977
INSTANTANEOUS PEAK FLOW			2580	May 25	34200	Jan 1 1997
INSTANTANEOUS PEAK STAGE			9.09	May 25	23.60	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	44700		41010		82210	
10 PERCENT EXCEEDS	71		89		95	
50 PERCENT EXCEEDS	8.7		7.7		7.6	
90 PERCENT EXCEEDS	5.6		5.8		5.3	

11414260 BLUE LAKE NEAR EMIGRANT GAP, CA

LOCATION.—Lat 39°21'31", long 120°38'07", in NE 1/4 NW 1/4 sec.9, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Blue Lake Dam, 0.7 mi upstream from Rucker Lake, and 4.6 mi northeast of Emigrant Gap.

DRAINAGE AREA.—0.27 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Datum of gage is 5,932 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by an earthfill dam completed in 1870. Usable capacity, 1,163 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 20.8 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream.

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.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1965)

0	0	12	631
4	199	16	865
8	410	20	1,112

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	293	---	---	---	---	---	---	---	---	---	0
2	---	---	---	---	---	---	---	---	---	---	0	---
3	442	---	---	---	---	---	---	---	---	---	---	---
4	---	308	---	---	---	---	---	---	---	88	---	---
5	---	308	---	---	---	---	---	---	---	---	---	---
6	432	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	442	83	---	0
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	308	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	73	0	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	388	25	---	---
13	388	---	---	---	---	---	---	---	---	0	---	0
14	---	---	---	---	---	---	---	---	---	---	---	---
15	378	308	---	---	---	---	---	---	361	---	0	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	308	---	---	---	---	---	---	---	---	---	0
18	---	---	---	---	---	---	---	---	---	0	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	345	---	---	---	---	---	---	---	251	---	---	0
21	345	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	199	---	0	---
25	---	308	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	0
27	303	---	---	---	---	---	---	---	---	---	---	---
28	---	308	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	148	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	459	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414265 RUCKER CREEK BELOW BLUE LAKE, NEAR EMIGRANT GAP, CA

LOCATION.—Lat 39°21'32", long 120°38'09", in NE 1/4 NW 1/4 sec.9, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank, 300 ft downstream from outlet structure on Blue Lake Dam, and 4.6 mi northeast of Emigrant Gap.

DRAINAGE AREA.—0.27 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1965–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Datum of gage is 5,910 ft above sea level (from topographic map).

REMARKS.—Flow regulated by Blue Lake (station 11414260) 300 ft upstream. There are no diversions upstream of 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.6	---	---	---	---	---	---	---	---	---	.23
2	---	---	---	---	---	---	---	---	---	---	---	---
3	1.6	---	---	---	---	---	---	---	---	---	---	---
4	---	.73	---	---	---	---	---	---	---	1.7	.26	---
5	---	.69	---	---	---	---	---	---	---	---	---	---
6	2.4	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	5.0	.86	---	.23
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	.69	---	---	---	---	---	---	---	---	.29	---
10	---	---	---	---	---	---	---	---	---	13	.29	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	4.3	13	---	---
13	2.3	---	---	---	---	---	---	---	---	13	---	.23
14	---	---	---	---	---	---	---	---	---	---	---	---
15	2.3	.73	---	---	---	---	---	---	---	---	.23	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	.73	---	---	---	---	---	---	---	---	---	.23
18	---	---	---	---	---	---	---	---	---	13	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	2.1	---	---	---	---	---	---	---	---	---	---	.23
21	2.0	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	13	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	.23	---
25	---	.73	---	---	---	---	---	---	---	---	---	.23
26	---	---	---	---	---	---	---	---	---	13	---	.23
27	.77	---	---	---	---	---	---	---	---	---	.23	---
28	---	.73	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	4.8	13	---	.23
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	.82	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11414275 RUCKER LAKE NEAR EMIGRANT GAP, CA

LOCATION.—Lat 39°21'23", long 120°39'26", in SW 1/4 NW 1/4 sec.8, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Rucker Lake Dam, and 4.3 mi north of Emigrant Gap.

DRAINAGE AREA.—1.83 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Datum of gage is 5,464 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by an earth fill dam completed in 1871. Usable capacity, 648 acre-ft between gage heights 0.0 ft, invert of outlet valve, and 17.0 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream.

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.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1965)

0	0	10	233
3	22	13	384
6	90	17	648

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	568	---	---	---	---	---	---	---	---	---	582
2	---	---	---	---	---	---	---	---	---	---	662	---
3	611	---	---	---	---	---	---	---	---	---	---	---
4	---	575	---	---	---	---	---	---	---	633	648	589
5	---	565	---	---	---	---	---	---	---	---	---	---
6	604	---	---	---	---	---	---	---	---	---	641	---
7	---	---	---	---	---	---	---	---	641	637	---	582
8	---	---	---	---	---	---	---	---	---	---	641	---
9	---	514	---	---	---	---	---	---	---	---	633	---
10	---	456	---	---	---	---	---	---	---	626	633	---
11	---	---	---	---	---	---	---	---	---	---	641	---
12	---	399	---	---	---	---	---	---	655	---	---	---
13	596	---	---	---	---	---	---	---	---	---	---	579
14	---	---	---	---	---	---	---	---	---	---	---	---
15	589	294	---	---	---	---	---	---	655	626	618	---
16	---	---	---	---	---	---	---	---	---	---	615	---
17	---	304	---	---	---	---	---	---	---	---	---	575
18	---	---	---	---	---	---	---	---	---	655	---	---
19	---	---	---	---	---	---	---	---	---	---	611	---
20	582	---	---	---	---	---	---	---	655	---	---	568
21	582	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	655	604	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	655	---	596	---
25	---	325	---	---	---	---	---	---	---	---	---	561
26	---	---	---	---	---	---	---	---	---	655	---	558
27	575	---	---	---	---	---	---	---	---	---	589	---
28	---	325	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	655	655	---	554
30	---	---	---	---	---	---	---	---	---	---	582	---
31	---	---	---	---	---	---	---	648	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414280 RUCKER CREEK BELOW RUCKER LAKE, NEAR EMIGRANT GAP, CA

LOCATION.—Lat 39°21'23", long 120°39'27", in SW 1/4 NW 1/4 sec.9, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on left bank 75 ft downstream from outlet structure on Rucker Lake Dam, and 4.3 mi north of Emigrant Gap.

DRAINAGE AREA.—1.83 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1965–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Datum of gage is 5,447 ft above sea level (from topographic map).

REMARKS.—Flow regulated by Rucker Lake (station 11414275) 75 ft upstream. There are no diversions upstream of 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2.2	---	---	---	---	---	---	---	---	---	.21
2	---	---	---	---	---	---	---	---	---	---	.72	---
3	2.2	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	.68	.72	.27
5	---	---	---	---	---	---	---	---	---	---	---	---
6	2.2	---	---	---	---	---	---	---	---	---	.53	---
7	---	---	---	---	---	---	---	---	.64	.58	---	.25
8	---	---	---	---	---	---	---	---	---	---	.24	---
9	---	---	---	---	---	---	---	---	---	---	.25	---
10	---	---	---	---	---	---	---	---	---	.72	.24	---
11	---	---	---	---	---	---	---	---	---	---	.24	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	2.2	---	---	---	---	---	---	---	---	---	---	.22
14	---	---	---	---	---	---	---	---	---	---	---	---
15	2.2	.64	---	---	---	---	---	---	---	.72	.25	---
16	---	---	---	---	---	---	---	---	---	---	.22	---
17	---	.64	---	---	---	---	---	---	---	---	---	.22
18	---	---	---	---	---	---	---	---	---	.72	---	---
19	---	---	---	---	---	---	---	---	---	---	.22	---
20	2.2	---	---	---	---	---	---	---	---	---	---	.21
21	2.2	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	.72	.22	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	.22	---
25	---	.49	---	---	---	---	---	---	---	---	---	.28
26	---	---	---	---	---	---	---	---	---	.72	---	.24
27	2.2	---	---	---	---	---	---	---	---	---	.22	---
28	---	.49	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	.72	---	.24
30	---	---	---	---	---	---	---	---	---	---	.21	---
31	---	---	---	---	---	---	---	.64	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11414345 FEELEY LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°24'01", long 120°38'14", in SW 1/4 NW 1/4 sec.28, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Feeley Lake Dam on Canyon Creek, and 6.0 mi southeast of Graniteville.

DRAINAGE AREA.—0.40 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,724 ft above sea level (from topographic map).

REMARKS.—Reservoir is formed on natural lake by rock-filled dam completed in 1870. Usable capacity, 739 acre-ft, between gage heights 0.0 ft, invert of outlet gate, and 16.8 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

0	0	10	404
4	145	14	596
7	270	17	749

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	270	---	---	---	---	---	---	739	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	596	527
4	---	261	---	---	---	---	---	---	---	672	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	409	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	739	---	591	518
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	662	---	---
10	---	219	---	---	---	---	---	---	---	662	586	---
11	---	---	---	---	---	---	---	---	---	---	586	---
12	---	---	---	---	---	---	---	---	---	656	---	---
13	369	202	---	---	---	---	---	---	---	---	---	508
14	---	---	---	---	---	---	---	---	---	646	---	---
15	---	---	---	---	---	---	---	---	729	---	569	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	631	---	503
18	---	153	---	---	---	---	---	---	---	631	---	---
19	---	---	---	---	---	---	---	---	---	---	567	498
20	327	---	---	---	---	---	---	---	---	---	---	496
21	---	---	---	---	---	---	---	---	703	---	---	---
22	---	---	---	---	---	---	---	---	---	---	547	489
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	616	547	446
27	283	145	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	693	---	---	423
29	---	145	---	---	---	---	---	---	---	601	---	---
30	---	---	---	---	---	---	---	---	---	---	532	399
31	---	---	---	---	---	---	---	739	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414350 LAKE CREEK BELOW FEELEY LAKE, NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°24'01", long 120°38'14", in SW 1/4 NW 1/4 sec.28, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, 8 ft downstream from outlet structure on Feeley Lake Dam, and 6.0 mi southeast of Graniteville.

DRAINAGE AREA.—0.40 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1965–99 available in files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently in the summer months. Elevation of gage is 6,707 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow regulated by Feeley Lake. No diversions upstream of 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	.99	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	.71	.89
4	---	---	---	---	---	---	---	---	---	.86	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	.50	---	.44	.61
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	.83	---	---
10	---	---	---	---	---	---	---	---	---	.78	.54	---
11	---	---	---	---	---	---	---	---	---	---	.54	---
12	---	---	---	---	---	---	---	---	---	.71	---	---
13	---	---	---	---	---	---	---	---	---	---	---	.73
14	---	---	---	---	---	---	---	---	---	.71	---	---
15	---	---	---	---	---	---	---	---	.50	---	1.1	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	.71	---	.71
18	---	---	---	---	---	---	---	---	---	.71	---	---
19	---	---	---	---	---	---	---	---	---	---	.43	.48
20	---	---	---	---	---	---	---	---	---	---	---	.57
21	---	---	---	---	---	---	---	---	.89	---	---	---
22	---	---	---	---	---	---	---	---	---	---	.41	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	.64	.99	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	.59	---	---	---
29	---	---	---	---	---	---	---	---	---	.61	---	---
30	---	---	---	---	---	---	---	---	---	---	.94	---
31	---	---	---	---	---	---	---	1.2	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11414355 CARR LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°23'57", long 120°38'30", in SE 1/4 NE 1/4 sec.29, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Carr Lake Dam, and 5.8 mi southeast of Graniteville.

DRAINAGE AREA.—0.48 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,664 ft above sea level (from topographic map).

REMARKS.—Reservoir is formed by an earth-fill dam completed in 1870. Usable capacity, 150 acre-ft, between gage heights 0.0 ft, invert of outlet gate, and 11.6 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of South 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

0	0	8	96
3	31	10	126
5	55	12	156

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	82	---	---	---	---	---	---	152	---	---	---
2	---	---	---	---	---	---	---	---	---	---	147	---
3	---	---	---	---	---	---	---	---	---	---	---	140
4	---	76	---	---	---	---	---	---	---	151	145	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	120	---	---	---	---	---	---	---	---	151	---	140
7	---	---	---	---	---	---	---	---	152	---	145	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	151	---	---
10	---	58	---	---	---	---	---	---	---	151	144	---
11	---	---	---	---	---	---	---	---	---	---	144	---
12	---	---	---	---	---	---	---	---	---	151	---	---
13	79	56	---	---	---	---	---	---	---	---	---	134
14	---	---	---	---	---	---	---	---	---	151	---	---
15	---	---	---	---	---	---	---	---	152	---	141	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	151	---	131
18	---	75	---	---	---	---	---	---	---	151	---	---
19	---	---	---	---	---	---	---	---	---	---	140	131
20	92	---	---	---	---	---	---	---	---	---	---	131
21	---	---	---	---	---	---	---	---	152	---	---	---
22	---	---	---	---	---	---	---	---	---	150	138	131
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	150	137	140
27	90	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	150	148	---	142
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	135	147
31	---	---	---	---	---	---	---	152	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11414360 LAKE CREEK BELOW CARR LAKE, NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°23'57", long 120°38'31", in SE 1/4 NE 1/4 sec.29, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank, 65 ft downstream from Carr Lake, 2.0 mi upstream from Fall Creek, and 5.8 mi southeast of Graniteville.

DRAINAGE AREA.—0.48 mi^2.

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1965–95 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and compound rectangular weir. Elevation of gage is 6,650 ft above sea level (levels by Pacific Gas & Electric Co.). August 1965 to November 1975, nonrecording gage at site 65 ft upstream at different datum. November 1975 to July 1984, nonrecording gage at same site but different datum. July 1984 to September 1995, nonrecording gage at same site and datum.

REMARKS.—Records not computed for winter months. Flow regulated by Carr Lake. See schematic diagram of South 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.1	---	---	---	---	---	---	---	.56	.73	e.55
2	4.1	4.0	---	---	---	---	---	---	3.0	.58	.73	e.48
3	4.1	4.0	---	---	---	---	---	---	2.9	.64	.73	e.60
4	4.2	4.8	---	---	---	---	---	---	2.8	.86	e.54	.73
5	4.3	5.4	---	---	---	---	---	---	2.7	1.1	e.35	.73
6	6.1	5.4	---	---	---	---	---	---	2.8	.82	e.35	.82
7	7.1	5.2	---	---	---	---	---	---	2.3	.67	e.35	1.1
8	6.8	5.0	---	---	---	---	---	---	4.0	.79	e.35	1.1
9	6.6	5.0	---	---	---	---	---	---	3.9	.83	e.35	1.1
10	6.6	4.5	---	---	---	---	---	---	2.5	.83	e.54	1.1
11	6.4	3.7	---	---	---	---	---	---	1.9	.83	e.73	1.1
12	6.2	3.7	---	---	---	---	---	---	1.7	.94	e.78	.95
13	4.4	3.7	---	---	---	---	---	---	3.1	.90	e.83	.83
14	1.8	3.7	---	---	---	---	---	---	1.4	.83	e.89	.64
15	1.6	3.7	---	---	---	---	---	---	1.3	.79	e.91	.64
16	1.3	3.7	---	---	---	---	---	---	1.5	.73	e.73	.57
17	1.3	3.7	---	---	---	---	---	---	1.3	.73	e.83	.58
18	1.3	---	---	---	---	---	---	---	1.3	.73	e.59	.56
19	1.3	---	---	---	---	---	---	---	1.3	.56	e.59	.56
20	2.0	---	---	---	---	---	---	---	1.2	.32	e.83	.64
21	2.9	---	---	---	---	---	---	---	1.5	.29	e.62	.73
22	2.9	---	---	---	---	---	---	---	1.5	.59	e.64	3.2
23	2.9	---	---	---	---	---	---	---	1.2	.94	e.57	5.0
24	2.9	---	---	---	---	---	---	---	1.2	.94	e.50	5.0
25	2.9	---	---	---	---	---	---	---	.97	.85	e.41	4.7
26	2.9	---	---	---	---	---	---	---	.94	.77	e.73	5.0
27	3.5	---	---	---	---	---	---	---	.94	.69	e1.0	5.0
28	4.3	---	---	---	---	---	---	---	.77	.69	e.95	5.0
29	4.3	---	---	---	---	---	---	---	.56	.73	e.90	5.0
30	4.3	---	---	---	---	---	---	---	.56	.73	e.83	4.9
31	4.3	---	---	---	---	---	---	---	---	.73	e.65	---
TOTAL	119.6	---	---	---	---	---	---	---	---	22.99	20.53	58.91
MEAN	3.86	---	---	---	---	---	---	---	---	.74	.66	1.96
MAX	7.1	---	---	---	---	---	---	---	---	1.1	1.0	5.0
MIN	1.3	---	---	---	---	---	---	---	---	.29	.35	.48
AC-FT	237	---	---	---	---	---	---	---	---	46	41	117

e Estimated.

11414400 FRENCH LAKE NEAR CISCO, CA

LOCATION.—Lat 39°25'16", long 120°32'28", in SE 1/4 SW 1/4 sec.17, T.18 N., R.13 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank, near French Lake Dam on Canyon Creek, 0.5 mi upstream from Weil Lake, and 8.2 mi north of Cisco.

DRAINAGE AREA.—4.60 mi^2.

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.—Reservoir is formed on natural lake by rock-filled dam completed in 1859. Usable capacity, 13,940 acre-ft between elevations 6,594.90 ft, invert of outlet gate, and 6,660.28 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of North 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 contents, 14,300 acre-ft, June 19, 1998, May 8, 23, 24, 2000, maximum elevation, 6661.34 ft, May 8, 2000; minimum, 6140 acre-ft, Nov. 16, 1998, elevation, 6632.07 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 14,300 acre-ft, May 8, 23, 24, maximum elevation, 6661.34, May 8; minimum, 7,240 acre-ft, Sept. 30, elevation, 6636.81 ft.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7680	7500	7570	7520	8770	9830	10600	13700	14100	13900	13400	10300
2	7670	7490	7570	7520	8780	9830	10700	13800	14100	13900	13300	10200
3	7660	7480	7580	7510	8810	9830	10800	14000	14100	13800	13300	10000
4	7650	7470	7570	7510	8830	9840	10900	14100	14100	13800	13300	9930
5	7630	7460	7570	7510	8840	9860	11000	14200	14100	13800	13300	9820
6	7640	7440	7560	7500	8840	9870	11100	14100	14100	13800	13300	9710
7	7620	7450	7560	7500	8850	9890	11200	14200	14100	13800	13300	9590
8	7610	7470	7560	7490	8850	9910	11300	14300	14100	13800	13200	9460
9	7600	7460	7570	7490	8870	9940	11400	14200	14100	13700	13100	9320
10	7590	7460	7560	7490	8890	9950	11500	14100	14000	13700	12900	9190
11	7580	7450	7560	7520	8920	9960	11600	14100	14000	13700	12800	9070
12	7570	7450	7560	7520	8960	9960	11800	14100	14000	13700	12700	8940
13	7560	7440	7560	7520	9090	9980	12000	14100	14000	13700	12500	8820
14	7550	7430	7570	7510	9370	10000	12100	14100	14000	13700	12400	8690
15	7540	7460	7570	7570	9450	10000	12100	14100	14000	13700	12200	8570
16	7520	7480	7560	7590	9490	10000	12200	14100	14000	13600	12100	8440
17	7520	7490	7560	7620	9510	10100	12200	14100	14000	13600	12000	8320
18	7510	7490	7560	7800	9520	10100	12300	14100	14000	13600	11900	8190
19	7500	7520	7530	8000	9530	10100	12300	14200	14000	13600	11700	8070
20	7490	7550	7550	8190	9540	10100	12300	14200	14000	13600	11600	7950
21	7480	7550	7550	8260	9550	10200	12400	14200	14000	13600	11500	7830
22	7470	7540	7550	8290	9600	10200	12500	14200	14000	13500	11400	7720
23	7460	7540	7550	8340	9620	10200	12600	14300	14000	13500	11300	7610
24	7450	7540	7550	8550	9630	10200	12700	14300	14000	13500	11100	7490
25	7440	7540	7540	8640	9630	10300	12800	14200	13900	13500	11000	7370
26	7430	7540	7530	8660	9690	10300	12900	14200	13900	13500	10900	7310
27	7470	7540	7530	8680	9790	10400	13100	14200	13900	13400	10800	7290
28	7530	7540	7530	8690	9800	10400	13200	14200	13900	13400	10700	7280
29	7530	7530	7530	8700	9820	10500	13300	14100	13900	13400	10600	7260
30	7510	7560	7530	8740	---	10500	13500	14100	13900	13400	10400	7240
31	7500	---	7520	8760	---	10600	---	14100	---	13400	10300	---
MAX	7680	7560	7580	8760	9820	10600	13500	14300	14100	13900	13400	10300
MIN	7430	7430	7520	7490	8770	9830	10600	13700	13900	13400	10300	7240
a	6637.91	6638.15	6637.93	6642.83	6646.75	6649.47	6658.95	6660.76	6660.16	6658.58	6648.67	6636.81
b	-190	+60	-40	+1240	+1060	+780	+2900	+600	-200	-500	-3100	-3060

CAL YR 1999 MAX 14200 MIN 7100 b +400
WTR YR 2000 MAX 14300 MIN 7240 b -450

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

11414410 CANYON CREEK BELOW FRENCH LAKE, NEAR CISCO, CA

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.

DRAINAGE AREA.—4.60 mi^2.

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.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,590 ft above sea level, from topographic map. Prior to January 1989, nonrecording gages at three sites and datums.

REMARKS.—No records computed above 3.2 ft^3/s. Flow regulated by French Lake (station 11414400). Flow over the spillway bypasses this station. See schematic diagram of North 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 CURRENT YEAR.—No flow below 3.2 ft^3/s.

11414440 FAUCHERIE LAKE NEAR CISCO, CA

LOCATION.—Lat 39°25'45", long 120°34'04", in SE 1/4 NE 1/4 sec.13, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, near right bank end of Faucherie Dam, on Canyon Creek, 8.5 mi north of Cisco.

DRAINAGE AREA.—8.97 mi^2.

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

GAGE.—Water-stage recorder installed Dec. 8, 1999. Records prior to Dec. 8 are instantaneous values. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.—Reservoir is formed on natural lake by earth-filled dam initially constructed prior to 1880 and enlarged in 1964. Usable capacity, 3,740 acre-ft between elevations 6,090.00 ft, invert of outlet gate, and 6,123.00 ft, crest of spillway. Dead storage, below elevation 6,090 ft, 240 acre-ft. Figures given represent total contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of North 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 contents recorded, 4,110 acre-ft, May 8, 2000, elevation, 6,123.85 ft; minimum recorded, 2,500 acre-ft, Dec. 8, 1999, elevation, 6112.24 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Nevada Irrigation District in 1964)

6,090	240	6,110	2,216
6,095	628	6,115	2,854
6,100	1,095	6,120	3,540
6,105	1,629	6,125	4,280

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	2740	3990	3990	4010	4040	4030	3980	3970	4020
2	---	---	---	2750	3990	3990	4020	4040	4030	3980	3970	4010
3	---	---	---	2750	4000	3990	4030	4040	4030	3980	3970	4010
4	---	---	---	2760	3990	3990	4040	4060	4040	3980	3970	4010
5	---	---	---	2760	3990	3990	4020	4060	4030	3980	3970	4010
6	---	---	---	2770	3990	3990	4020	4040	4030	3980	3970	4010
7	---	---	---	2770	3990	3990	4020	4090	4020	3980	3970	4020
8	---	---	2500	2780	3990	3990	4020	4110	4030	3980	4000	4020
9	---	---	2510	2780	3990	3990	4020	4060	4020	3980	4010	4020
10	---	---	2520	2790	4000	3990	4020	4040	4010	3980	4010	4020
11	---	---	2530	2830	4000	3990	4030	4020	4010	3980	4010	4020
12	---	---	2540	2830	3990	3990	4030	4020	4010	3980	4010	4020
13	---	---	2560	2840	4050	4000	4030	4020	4020	3980	4010	4020
14	---	---	2570	2840	4040	4000	4010	4020	4020	3980	4010	4020
15	---	---	2580	2930	4010	4000	4010	4030	4010	3980	4010	4020
16	---	---	2590	3010	4000	4000	4010	4020	4010	3980	4010	4020
17	---	---	2600	3080	3990	4000	4020	4030	4000	3980	4010	4020
18	---	---	2610	3510	3990	4000	4000	4050	4000	3980	4010	4020
19	---	---	2620	3880	3990	4010	4000	4060	4000	3980	4010	4020
20	---	---	2640	4030	3990	3990	4010	4070	3990	3980	4010	4020
21	---	---	2650	4000	3990	4000	4020	4080	3990	3980	4010	4020
22	---	---	2660	3990	4000	4000	4020	4080	3990	3970	4010	4020
23	---	---	2670	4000	3990	4000	4020	4090	3990	3980	4010	4020
24	---	---	2690	4070	3990	4000	4010	4090	3990	3970	4010	4020
25	---	---	2690	4010	3990	4010	4030	4070	3980	3970	4010	4020
26	---	---	2700	3990	4010	4010	4030	4060	3990	3970	4010	3990
27	---	---	2710	3990	4010	4010	4040	4060	3990	3970	4010	3990
28	---	---	2710	3990	4000	4010	4020	4060	3990	3970	4010	3980
29	---	---	2720	3990	3990	4000	4020	4040	3980	3980	4010	3980
30	---	---	2730	3990	---	4000	4040	4030	3980	3970	4010	3980
31	---	---	2730	3990	---	4000	---	4030	---	3970	4010	---
MAX	---	---	---	4070	4050	4010	4040	4110	4040	3980	4010	4020
MIN	---	---	---	2740	3990	3990	4000	4020	3980	3970	3970	3980
a			6114.09	6123.05	6123.10	6123.11	6123.38	6123.32	6123.02	6122.96	6123.22	6123.03
b				+1260	0	+10	+40	-10	-50	-10	+40	-30

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

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 mi^2.

PERIOD OF RECORD.—January 1989 to current year (low-flow records only). Unpublished records for water years 1965–88 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,080 ft above sea level, from topographic map. October 1964 to July 1988, nonrecording gage at site 10 ft downstream at different datum. July 1988 to January 1989, nonrecording gage at same site and datum.

REMARKS.—No records computed above 2.8 ft^3/s. Flow regulated by Faucherie Lake (station 11414440). Flow over the spillway bypasses this station. See schematic diagram of North 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 CURRENT YEAR.—No flow below 2.8 ft^3/s.

11414465 SAWMILL LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°26'44", long 120°36'02", in NW 1/4 NW 1/4 sec.11, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, near right bank end of Sawmill Lake Dam, on Canyon Creek, 0.8 mi upstream from Bowman Lake, and 7.2 mi east of Graniteville.

DRAINAGE AREA.—16.4 mi^2.

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

GAGE.—Water-stage recorder, installed Nov. 22, 1999. Records prior to Nov. 22 are instantaneous values. Datum of gage is sea level (levels by Nevada Irrigation District).

REMARKS.—Reservoir is formed by a rock-filled dam initially constructed prior to 1880 and enlarged in 1941. Usable capacity, 3,030 acre-ft between elevations 5,805 ft, base of dam, and 5,860 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of North 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 storage recorded, 3,180 acre-ft, May 8, 2000, elevation, 5,861.31 ft; minimum recorded, 1,400 acre-ft, Nov. 22, 1999, elevation, 5,843.15 ft.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1490	1760	3060	3060	3080	3130	3100	3060	3050	3080
2	---	---	1500	1770	3060	3060	3100	3130	3100	3060	3050	3080
3	---	---	1510	1770	3070	3060	3110	3120	3100	3060	3050	3080
4	---	---	1520	1780	3070	3060	3120	3140	3100	3060	3050	3080
5	---	---	1530	1780	3060	3060	3100	3140	3100	3060	3050	3080
6	---	---	1540	1790	3060	3060	3100	3110	3090	3060	3050	3080
7	---	---	1540	1790	3060	3060	3100	3170	3090	3060	3050	3080
8	---	---	1550	1800	3060	3060	3100	3180	3110	3060	3060	3080
9	---	---	1560	1800	3060	3060	3090	3130	3090	3060	3080	3080
10	---	---	1570	1810	3070	3060	3100	3110	3080	3060	3080	3080
11	---	---	1580	1830	3070	3060	3100	3100	3080	3060	3080	3080
12	---	---	1580	1840	3070	3060	3110	3090	3080	3060	3080	3080
13	---	---	1590	1850	3110	3060	3120	3090	3080	3060	3080	3080
14	---	---	1600	1860	3130	3070	3090	3100	3090	3060	3070	3080
15	---	---	1610	1930	3090	3070	3080	3110	3080	3060	3080	3080
16	---	---	1620	2000	3070	3070	3080	3100	3080	3060	3080	3080
17	---	---	1620	2090	3070	3070	3100	3100	3080	3060	3070	3080
18	---	---	1630	2560	3070	3070	3080	3130	3070	3050	3070	3080
19	---	---	1640	3050	3060	3080	3070	3140	3070	3050	3080	3080
20	---	---	1650	3130	3070	3070	3080	3150	3070	3050	3080	3080
21	---	---	1670	3090	3060	3070	3100	3160	3070	3050	3080	3080
22	---	1400	1680	3070	3070	3070	3090	3150	3070	3050	3080	3080
23	---	1410	1690	3080	3060	3070	3090	3160	3070	3050	3080	3080
24	---	1420	1700	3170	3060	3070	3090	3160	3060	3050	3080	3080
25	---	1430	1710	3090	3060	3080	3100	3140	3060	3050	3070	3080
26	---	1430	1720	3070	3080	3080	3110	3130	3070	3050	3080	3070
27	---	1440	1720	3070	3080	3080	3130	3130	3060	3050	3070	3020
28	---	1450	1730	3060	3070	3080	3100	3130	3060	3050	3080	2930
29	---	1450	1740	3060	3070	3080	3100	3110	3060	3050	3070	2840
30	---	1470	1750	3070	---	3070	3120	3100	3060	3050	3080	2750
31	---	---	1750	3060	---	3070	---	3100	---	3050	3080	---
MAX	---	---	1750	3170	3130	3080	3130	3180	3110	3060	3080	3080
MIN	---	---	1490	1760	3060	3060	3070	3090	3060	3050	3050	2750
a		5843.96	5847.16	5860.28	5860.31	5860.38	5860.78	5860.60	5860.26	5860.20	5860.40	5857.27
b			+280	+1310	+10	0	+50	-20	-40	-10	+30	-330

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

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 mi^2.

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 records computed above 2.6 ft^3/s. Flow completely regulated by Sawmill Lake (station 11414465). Flow over the spillway bypasses this station. See schematic diagram of North 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 CURRENT YEAR.—No flow below 2.6 ft^3/s.

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 mi^2.

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

GAGE.—Water-stage recorder. 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 North 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 contents recorded, 1,370 acre-ft, May 21–25, 2000, maximum elevation, 6,593.33 ft, May 24, 2000; minimum recorded, 428 acre-ft, Nov. 21, 22, 1998, elevation, 6571.80 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,370 acre-ft, May 21–25, maximum elevation, 6,593.33 ft, May 24; minimum, 829 acre-ft, Jan. 10, elevation, 6582.17 ft.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	999	936	904	849	934	1030	1050	1330	1350	1320	1200	1110
2	997	931	903	847	933	1030	1050	1350	1350	1320	1190	1110
3	995	929	901	845	936	1030	1060	1360	1350	1310	1190	1110
4	992	926	900	844	938	1030	1070	1360	1350	1310	1190	1100
5	990	924	898	841	938	1030	1080	1360	1350	1310	1180	1100
6	989	922	895	839	936	1030	1090	1350	1350	1300	1180	1100
7	985	921	895	837	936	1030	1100	1360	1350	1300	1180	1090
8	983	920	892	834	935	1030	1110	1360	1350	1300	1170	1090
9	981	918	893	833	935	1030	1120	1350	1350	1290	1170	1090
10	978	916	890	829	937	1030	1120	1350	1350	1290	1170	1090
11	976	913	889	835	941	1030	1130	1350	1350	1290	1160	1090
12	974	911	885	836	944	1030	1140	1350	1350	1280	1160	1080
13	971	909	888	834	960	1030	1170	1350	1350	1280	1160	1080
14	968	907	886	830	988	1030	1180	1350	1350	1270	1160	1080
15	966	909	884	836	991	1030	1180	1350	1350	1270	1150	1080
16	961	912	882	842	995	1030	1190	1350	1340	1270	1150	1070
17	958	912	879	845	996	1030	1190	1350	1340	1260	1150	1070
18	955	912	877	861	996	1030	1200	1350	1340	1260	1140	1070
19	951	915	877	879	995	1030	1200	1360	1340	1250	1140	1060
20	948	918	874	896	997	1040	1200	1360	1340	1250	1140	1060
21	945	916	871	901	997	1030	1210	1370	1340	1240	1130	1060
22	942	915	869	903	1000	1030	1220	1370	1340	1240	1130	1060
23	939	913	867	908	1010	1040	1230	1370	1340	1240	1130	1050
24	935	912	865	924	1010	1040	1230	1370	1330	1230	1130	1050
25	933	910	862	929	1010	1040	1240	1370	1330	1230	1130	1050
26	931	908	861	929	1010	1040	1260	1360	1330	1220	1120	1050
27	936	907	859	929	1030	1040	1280	1360	1330	1220	1120	1040
28	947	904	857	929	1030	1050	1290	1360	1330	1210	1120	1040
29	944	906	855	928	1030	1050	1300	1360	1320	1210	1120	1040
30	941	909	852	933	---	1050	1310	1350	1320	1200	1110	1040
31	937	---	850	934	---	1050	---	1350	---	1200	1110	---
MAX	999	936	904	934	1030	1050	1310	1370	1350	1320	1200	1110
MIN	931	904	850	829	933	1030	1050	1330	1320	1200	1110	1040
a	6584.58	6583.82	6582.62	6584.46	6586.55	6586.93	6592.31	6592.97	6592.46	6590.27	6588.36	6586.75
b	-63	-28	-59	+84	+96	+20	+260	+40	-30	-120	-90	-70

CAL YR 2000 b +380
WTR YR 2000 MAX 1370 MIN 829 b +40

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

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 mi^2.

PERIOD OF RECORD.—January 1989 to September 1992, April 1993 to current year (low-flow records only). Unpublished records for water years 1965–88 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,570 ft above sea level, from topographic map. October 1964 to October 1986, nonrecording gage at site 25 ft downstream at different datum. October 1986 to January 1989, nonrecording gage at same site and datum.

REMARKS.—No records computed above 2.9 ft^3/s. Flow regulated by Jackson Lake (station 11414690). Flow over the spillway bypasses this station. See schematic diagram of North 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.6	1.3	1.2	1.4	1.5	1.6	1.7	1.6	1.2	1.7	1.4
2	1.0	1.6	1.3	1.2	1.4	1.5	1.6	1.7	1.6	1.1	1.6	1.5
3	1.0	1.6	1.3	1.2	1.4	1.5	1.6	1.7	1.6	1.2	1.4	1.5
4	1.0	1.3	1.3	1.2	1.4	1.5	1.6	1.7	1.6	1.2	1.4	1.5
5	1.0	1.3	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.3	1.4	1.5
6	1.0	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.3	1.4	1.3
7	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.3	1.4	1.2
8	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.8	1.6	1.4	1.3	1.2
9	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.4	1.1	1.2
10	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.4	1.1	1.2
11	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.5	1.2	1.1
12	1.1	1.4	1.3	1.2	1.4	1.6	1.6	1.7	1.6	1.6	1.2	1.1
13	1.1	1.4	1.3	1.2	1.4	1.6	1.7	1.7	e1.5	1.6	1.2	1.1
14	1.4	1.3	1.3	1.1	1.5	1.6	1.7	1.7	e1.4	1.6	1.1	1.1
15	1.4	1.2	1.3	1.1	1.5	1.6	1.7	1.7	1.6	1.6	1.1	1.1
16	1.5	.95	1.3	1.1	1.5	1.6	1.7	1.7	1.5	1.5	1.1	1.1
17	1.5	.94	1.3	1.1	1.5	1.6	1.7	1.7	1.5	1.5	1.2	1.1
18	1.5	.94	1.3	1.2	1.5	1.6	1.7	1.7	1.5	1.5	1.2	1.1
19	1.5	.94	1.3	1.2	1.5	1.6	1.7	1.7	1.5	1.7	1.2	1.1
20	1.5	.94	1.3	1.3	1.5	1.6	1.7	1.7	1.5	1.7	1.2	1.1
21	1.5	.95	1.3	1.3	1.4	1.7	1.7	1.7	1.5	1.7	1.2	1.1
22	1.5	.94	1.2	1.3	1.5	1.8	1.7	1.7	1.5	1.7	1.0	1.1
23	1.5	.93	1.2	1.3	1.5	1.8	1.7	1.7	1.5	1.7	.84	1.1
24	1.5	1.1	1.2	1.4	1.5	1.8	1.7	1.7	1.4	1.7	.82	1.1
25	1.5	1.3	1.2	1.4	1.5	1.7	1.7	1.7	1.4	1.7	.80	1.1
26	1.5	1.3	1.2	1.4	1.5	1.7	1.6	1.7	1.2	1.7	.78	1.1
27	1.5	1.3	1.2	1.4	1.5	1.8	1.6	1.7	1.1	1.7	.76	1.1
28	1.6	1.3	1.2	1.4	1.5	1.7	1.6	1.8	1.1	1.7	.87	1.1
29	1.6	1.3	1.2	1.4	1.5	1.7	1.6	1.7	1.1	1.7	1.2	1.1
30	1.6	1.3	1.2	1.4	---	1.7	1.6	1.6	1.1	1.7	1.3	1.1
31	1.6	---	1.2	1.4	---	1.7	---	1.6	---	1.7	1.3	---
TOTAL	40.9	37.53	39.3	38.8	42.1	50.7	49.3	52.7	44.1	47.3	36.37	35.5
MEAN	1.32	1.25	1.27	1.25	1.45	1.64	1.64	1.70	1.47	1.53	1.17	1.18
MAX	1.6	1.6	1.3	1.4	1.5	1.8	1.7	1.8	1.6	1.7	1.7	1.5
MIN	1.0	.93	1.2	1.1	1.4	1.5	1.6	1.6	1.1	1.1	.76	1.1
AC-FT	81	74	78	77	84	101	98	105	87	94	72	70

WTR YR 2000 TOTAL 514.60 MEAN 1.41 MAX 1.8 MIN .76 AC-FT 1020

e Estimated.

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 mi^2.

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 North 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 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, 68,000 acre-ft, June 9, 10, elevation, 5562.99 ft; minimum, 23,900 acre-ft, Jan. 17, elevation, 5509.74 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49600	46000	38400	27400	26600	37200	43600	56500	67400	62100	60700	56800
2	49600	46000	38000	27100	26500	37400	44000	56700	67400	61700	60400	56700
3	49600	45900	37700	26800	26400	37600	44600	56900	67500	61300	60200	56600
4	49500	45800	37400	26600	26300	37700	45400	57100	67400	60900	59900	56400
5	49300	45700	37000	26400	26200	37900	46200	57500	67500	60500	59600	56200
6	49200	45600	36600	26200	26100	38100	46800	57800	67600	60100	59400	56100
7	49000	45600	36300	26100	26000	38200	47300	58200	67600	59800	59100	56000
8	48900	45500	36000	25900	25900	38300	47800	60000	67900	59700	58800	56000
9	48700	45200	35600	25700	26200	38500	48300	61000	68000	59900	58600	56000
10	48600	45000	35300	25600	26500	38600	48900	61500	68000	60100	58500	56100
11	48400	44700	35000	25500	26900	38700	49400	61800	67900	60300	58300	56100
12	47100	44400	34600	25100	27200	38800	49900	62000	67800	60400	58200	56100
13	48100	44000	34300	24800	27700	38900	51200	62100	67600	60600	58000	56100
14	48000	43700	33900	24500	30700	39000	51800	62200	67500	60800	57800	56200
15	47800	43400	33400	24300	31700	39200	52200	62500	67300	60900	57700	56200
16	47700	43100	33100	24100	32300	39400	52500	62700	67100	61100	57500	56200
17	47500	42800	32700	23900	32800	39500	53100	62900	66900	61300	57400	56200
18	47300	42500	32400	24000	33100	39700	53500	63100	66600	61400	57200	56200
19	47200	42200	32000	24200	33400	40000	53700	63500	66300	61600	57000	56300
20	47000	42000	31600	24800	33800	40300	53800	64000	66000	61700	56900	56300
21	46900	41700	31200	25100	34100	40500	54000	64600	65600	61900	56800	56300
22	46800	41300	30900	25100	34500	40700	54300	65100	65300	62000	56600	56300
23	46700	41000	30500	25100	34800	40900	54600	65600	65000	62200	56400	56300
24	46600	40700	30100	26100	35000	41200	54700	66200	64600	62300	56300	56300
25	46500	40300	29700	26900	35100	41400	54900	66600	64200	62400	56300	56400
26	46400	40000	29400	27100	35500	41700	55100	66900	63900	62200	56200	56400
27	46400	39700	29100	27100	36300	42100	55500	67000	63500	61900	56100	56300
28	46400	39300	28800	27000	36600	42500	55900	67100	63200	61600	56400	56300
29	46300	39000	28400	26900	36900	42800	56100	67200	62800	61400	56800	56300
30	46200	38700	28100	26900	---	43100	56300	67300	62400	61100	57000	56300
31	46100	---	27800	26800	---	43400	---	67400	---	60900	56900	---
MAX	49600	46000	38400	27400	36900	43400	56300	67400	68000	62400	60700	56800
MIN	46100	38700	27800	23900	25900	37200	43600	56500	62400	59700	56100	56000
a	5534.64	5523.89	5506.56	5504.83	5521.24	5530.86	5548.41	5562.22	5556.28	5554.29	5549.20	5548.38
b	-3600	-7400	-10900	-1000	+10100	+6500	+12900	+11100	-5000	-1500	-4000	-600

CAL YR 1999 MAX 64600 MIN 27800 b -6900
WTR YR 2000 MAX 68000 MIN 23900 b +6600

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

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 diagrams of South 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, 335 ft^3/s, Dec. 25, 1983; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	287	212	194	185	188	228	289	312	303	304	297	289
2	260	197	191	184	189	222	306	312	299	303	294	303
3	245	192	189	140	188	217	319	311	296	302	284	299
4	240	188	189	104	195	219	319	310	292	301	281	295
5	240	193	188	108	199	242	307	309	303	293	278	293
6	240	193	186	106	197	247	297	305	301	286	283	289
7	236	185	189	102	191	248	311	308	304	291	287	276
8	239	209	191	99	178	250	313	322	301	154	287	222
9	243	193	192	98	188	244	308	319	302	6.7	287	209
10	240	215	189	98	206	247	302	310	295	.00	287	207
11	238	216	191	145	213	253	307	300	294	.00	287	206
12	239	211	191	186	198	252	308	294	294	18	286	207
13	237	210	192	202	227	251	320	287	301	26	286	206
14	236	211	209	189	317	253	321	280	302	.00	286	205
15	232	212	217	191	293	261	297	290	299	.00	286	207
16	233	188	201	201	223	266	287	312	299	.00	285	207
17	233	214	212	202	199	266	310	311	306	.00	281	205
18	232	190	191	237	197	265	300	305	309	.00	282	206
19	232	191	186	235	205	276	279	303	312	.00	284	204
20	230	202	195	260	206	277	287	304	306	.00	284	202
21	216	189	192	234	212	248	302	306	299	.00	282	204
22	211	183	192	210	212	260	306	308	298	.00	283	205
23	211	183	191	201	218	268	305	306	302	.00	285	206
24	213	190	190	245	215	276	302	307	303	.00	e261	218
25	210	192	189	281	213	287	305	306	303	52	e247	214
26	211	191	189	223	210	294	304	302	303	203	e247	215
27	210	191	188	196	285	293	313	294	302	304	e247	215
28	233	190	187	195	274	295	318	287	301	302	e75	206
29	221	187	187	191	246	298	314	282	299	297	e.00	225
30	213	194	186	190	---	284	311	281	302	297	62	216
31	216	---	185	191	---	273	---	298	---	297	234	---
TOTAL	7177	5912	5959	5629	6282	8060	9167	9381	9030	4036.70	7935.00	6861
MEAN	232	197	192	182	217	260	306	303	301	130	256	229
MAX	287	216	217	281	317	298	321	322	312	304	297	303
MIN	210	183	185	98	178	217	279	280	292	.00	.00	202
AC-FT	14240	11730	11820	11170	12460	15990	18180	18610	17910	8010	15740	13610
a	14050	12110	12180	11560	12730	16410	17590	18730	18130	7690	14510	13390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	196	201	202	198	189	214	226	237	237	207	253	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	90671.00		85429.70			
ANNUAL MEAN	248		233		218	
HIGHEST ANNUAL MEAN					304	1983
LOWEST ANNUAL MEAN					77.9	1977
HIGHEST DAILY MEAN	321	May 24	322	May 8	335	Dec 25 1983
LOWEST DAILY MEAN	.00	Jul 12	.00	Jul 10	.00	Oct 29 1964
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 12	.00	Jul 14	.00	Oct 29 1964
ANNUAL RUNOFF (AC-FT)	179800		169400		158100	
ANNUAL DISCHARGE (AC-FT) a	180200		169100			
10 PERCENT EXCEEDS	308		306		306	
50 PERCENT EXCEEDS	263		238		253	
90 PERCENT EXCEEDS	188		185		67	

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

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 mi^2.

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.—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.

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, about 5,500 ft^3/s, Jan. 2, 1997, gage height, 13.01 ft, from floodmarks (backwater from debris), from rating curve extended above 1,500 ft^3/s, on basis of computation of flow over Bowman Dam; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	2.6	3.7	3.3	6.3	5.5	7.4	95	78	3.9	4.2	4.4
2	4.4	2.6	3.5	3.3	6.5	5.5	8.4	140	77	3.8	4.2	4.6
3	4.2	2.7	3.3	3.2	6.5	5.5	8.6	137	77	3.8	4.2	4.2
4	4.2	2.7	3.2	3.1	7.6	6.4	8.6	138	77	3.8	4.2	4.1
5	4.3	2.3	3.2	4.1	8.1	6.6	7.5	139	42	3.7	4.2	4.1
6	4.4	2.3	3.1	4.8	7.9	6.1	7.0	141	8.8	3.8	4.2	4.1
7	4.2	2.5	3.3	4.5	6.8	5.7	6.7	144	8.4	3.7	4.2	3.9
8	3.9	3.2	3.2	4.5	6.4	5.6	6.6	99	4.4	3.4	4.2	3.7
9	4.0	2.9	3.3	4.5	6.5	5.6	6.4	27	5.1	2.9	4.2	3.9
10	4.1	2.6	3.2	4.6	10	5.4	6.3	27	5.0	2.3	4.2	3.9
11	4.1	2.5	3.2	7.7	7.7	12	6.3	27	5.0	3.2	4.2	3.9
12	4.0	2.6	3.3	8.1	6.7	6.7	6.1	20	4.9	5.3	4.1	3.9
13	4.0	2.6	3.5	5.7	22	7.0	9.8	16	6.5	6.1	4.1	3.7
14	4.1	2.6	3.5	5.7	112	7.5	7.0	16	5.8	5.9	4.1	3.6
15	4.0	2.9	3.5	12	37	7.5	6.2	13	4.9	6.4	4.0	3.6
16	3.9	3.1	3.3	9.4	37	7.4	7.0	10	4.7	6.5	4.0	3.6
17	3.8	3.4	3.3	11	22	7.1	10	9.9	4.9	5.5	4.0	3.6
18	3.9	3.1	3.3	22	6.3	7.5	7.2	9.1	4.8	5.9	4.0	4.7
19	3.6	3.9	3.4	12	6.1	9.2	6.5	8.9	4.7	5.7	4.1	5.7
20	2.6	5.0	3.8	11	6.6	7.4	6.1	8.7	4.5	5.9	4.1	5.7
21	2.4	3.6	3.7	7.3	7.0	6.3	6.0	8.7	4.5	5.7	4.0	5.7
22	2.5	3.1	3.5	6.6	7.5	6.7	6.0	69	4.5	5.9	4.1	5.7
23	2.6	3.0	3.5	8.1	6.3	7.6	5.9	119	4.4	5.7	4.1	5.8
24	2.6	3.0	3.4	28	6.0	7.9	16	128	4.3	5.8	4.0	5.7
25	2.7	3.0	3.4	13	7.0	15	46	136	4.2	6.3	4.1	5.3
26	2.7	2.9	3.3	8.2	7.0	12	48	135	4.1	6.0	4.1	5.3
27	3.3	2.9	3.3	6.8	14	8.4	42	132	4.0	6.1	4.2	5.3
28	4.4	2.9	3.3	6.2	7.0	7.8	43	132	3.9	6.1	6.5	5.3
29	2.9	2.9	3.3	5.9	6.2	7.3	42	132	3.9	6.1	7.5	5.3
30	2.7	3.7	3.3	6.1	---	7.0	42	113	3.8	6.1	5.8	5.4
31	2.7	---	3.2	5.9	---	6.9	---	87	---	5.7	4.1	---
TOTAL	111.8	89.1	104.3	246.6	404.0	230.1	442.6	2417.3	475.0	157.0	135.2	137.7
MEAN	3.61	2.97	3.36	7.95	13.9	7.42	14.8	78.0	15.8	5.06	4.36	4.59
MAX	4.6	5.0	3.8	28	112	15	48	144	78	6.5	7.5	5.8
MIN	2.4	2.3	3.1	3.1	6.0	5.4	5.9	8.7	3.8	2.3	4.0	3.6
AC-FT	222	177	207	489	801	456	878	4790	942	311	268	273
a	13650	10830	11710	9070	8000	11740	10920	13820	17100	7650	15900	13240

a Diversion, in acre-feet, to Bowman–Spaulding Canal, provided by Nevada Irrigation District.

11416500 CANYON CREEK BELOW BOWMAN LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.05	6.21	17.1	23.1	18.0	27.9	43.5	125	144	14.0	2.69	2.56
MAX	24.1	195	360	453	198	629	325	773	542	314	37.3	17.0
(WY)	1973	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1927 - 2000	
ANNUAL TOTAL	11413.5		4950.7			
ANNUAL MEAN	31.3		13.5		35.2	
HIGHEST ANNUAL MEAN					165	1965
LOWEST ANNUAL MEAN					.81	1931
HIGHEST DAILY MEAN	200	May 25	144	May 7	5520	Jan 2 1997
LOWEST DAILY MEAN	2.3	Nov 5	2.3	Nov 5	.00	Apr 16 1934
ANNUAL SEVEN-DAY MINIMUM	2.5	Nov 1	2.5	Nov 1	.00	Apr 16 1934
INSTANTANEOUS PEAK FLOW			333	Feb 14	5500	Jan 2 1997
INSTANTANEOUS PEAK STAGE			5.56	Feb 14	13.01	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	22640		9820		25530	
ANNUAL DIVERSION (AC-FT)a	151100		143600			
10 PERCENT EXCEEDS	124		24		66	
50 PERCENT EXCEEDS	5.5		5.3		3.2	
90 PERCENT EXCEEDS	3.2		3.1		.30	

a Diversion, in acre-feet, to Bowman–Spaulding Canal, provided by Nevada Irrigation District.

11416580 ROCK LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°25'49", long 120°37'02", in NE 1/4 NW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Rock Lake Dam on Texas Creek, and 6.6 mi east of Graniteville.

DRAINAGE AREA.—0.23 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,710 ft above sea level, from topographic map.

REMARKS.—Lake is formed by an earth fill dam completed in 1855. Usable capacity, 207 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 14.2 ft, crest of spillway. Figures given represent usable contents.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0	0	9	112
3	30	12	165
6	67	14.5	213

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	209	---	---	112
2	---	---	---	---	---	---	---	---	---	---	163	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	203	157	---
6	78	---	---	---	---	---	---	---	---	---	---	107
7	78	---	---	---	---	---	---	---	207	---	---	---
8	---	---	---	---	---	---	---	---	---	198	---	---
9	---	---	---	---	---	---	---	---	---	---	154	---
10	---	---	---	---	---	---	---	---	---	195	152	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	195	---	---
13	70	---	---	---	---	---	---	---	---	---	148	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	207	193	---	94
16	---	---	---	---	---	---	---	---	---	---	144	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	91
19	---	---	---	---	---	---	---	---	---	190	137	89
20	59	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	87
22	---	---	---	---	---	---	---	---	---	178	131	---
23	---	---	---	---	---	---	---	---	---	---	---	84
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	174	122	70
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	64
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	167	117	57
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11416585 TEXAS CREEK BELOW ROCK LAKE, CA

LOCATION.—Lat 39°25'49", long 120°37'04", in NE 1/4 NW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, 100 ft downstream from outlet structure on Rock Lake Dam, and 6.6 mi east of Graniteville.

DRAINAGE AREA.—0.23 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6.690 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Rock Lake (station 11416580). No diversions upstream of station. See schematic diagram of South 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	.21	---	---	.62
2	---	---	---	---	---	---	---	---	---	---	.42	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	.47	.39	---
6	.67	---	---	---	---	---	---	---	---	---	---	.62
7	.67	---	---	---	---	---	---	---	.21	---	---	---
8	---	---	---	---	---	---	---	---	---	.54	---	---
9	---	---	---	---	---	---	---	---	---	---	.47	---
10	---	---	---	---	---	---	---	---	---	.50	.52	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	.54	---	---
13	.75	---	---	---	---	---	---	---	---	---	.45	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	.21	.56	---	.32
16	---	---	---	---	---	---	---	---	---	---	.87	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	.62
19	---	---	---	---	---	---	---	---	---	.52	.97	.62
20	1.2	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	.52	.97	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	.47	.54	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	.47	.52	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11416590 LOWER ROCK LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°25'43", long 120°37'18", in SW 1/4 NW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Lower Rock Lake Dam on Texas Creek, and 6.4 mi east of Graniteville.

DRAINAGE AREA.—0.36 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,622 ft above sea level, from topographic map.

REMARKS.—Lake is formed by earthfill dam completed in 1855. Usable capacity, 48 acre-ft, between elevation 6,617.3 ft, invert of outlet valve, and 6,625.8 ft, crest of spillway. Figures given represent usable contents.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0.1	0	6	31
2	9	8	44
4	19	9	51

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21	---	---	---	---	---	---	48	---	---	---
2	---	---	---	---	---	---	---	---	---	---	48	48
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	47	48	---
6	11	---	---	---	---	---	---	---	---	---	---	48
7	11	---	---	---	---	---	---	---	48	---	---	48
8	---	---	---	---	---	---	---	---	---	48	---	---
9	---	---	---	---	---	---	---	---	---	---	48	---
10	---	1.7	---	---	---	---	---	---	---	48	48	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	9.8	---	---	---	---	---	---	---	---	48	---	---
13	9.8	---	---	---	---	---	---	---	---	---	48	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	48	48	---	48
16	---	---	---	---	---	---	---	---	---	---	48	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	48
19	---	---	---	---	---	---	---	---	---	48	48	48
20	21	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	48
22	---	---	---	---	---	---	---	---	---	48	48	---
23	---	---	---	---	---	---	---	---	---	---	---	48
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	48	48	48
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	48
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	48	48	48
31	---	---	---	---	---	---	---	48	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11416610 TEXAS CREEK BELOW LOWER ROCK LAKE, NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°25'42", long 120°37'19", in SW 1/4 NW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank, 200 ft downstream from outlet structure on Lower Rock Lake Dam, and 6.4 mi east of Graniteville.

DRAINAGE AREA.—0.36 mi^2.

PERIOD OF RECORD.—October 1995 to current year (low-flow records only). Unpublished records for water years 1974 and 1979–95 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 6,615 ft above sea level, from topographic map. August 1965 to August 1995, nonrecording gage at same site and datum.

REMARKS.—Records not computed for winter months or above 1.2 ft^3/s. Flow regulated by Lower Rock Lake. See schematic diagram of South 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	.47	e.90
2	---	---	---	---	---	---	---	---	---	---	.39	e1.2
3	---	---	---	---	---	---	---	---	---	---	.33	e.90
4	1.0	---	---	---	---	---	---	---	---	---	.31	e.70
5	.75	---	---	---	---	---	---	---	---	---	.30	e.60
6	.38	---	---	---	---	---	---	---	---	.50	.29	e.56
7	.64	---	---	---	---	---	---	---	---	.82	.28	e.58
8	.80	---	---	---	---	---	---	---	---	.76	.27	e.58
9	.76	---	---	---	---	---	---	---	---	.53	.27	e.58
10	.78	---	---	---	---	---	---	---	---	.50	.34	e.58
11	.78	---	---	---	---	---	---	---	---	.50	.39	e.58
12	.78	---	---	---	---	---	---	---	---	.46	.39	e.58
13	.78	---	---	---	---	---	---	---	---	.52	.34	e.58
14	.85	---	---	---	---	---	---	---	---	.49	.30	e.58
15	.92	---	---	---	---	---	---	---	---	.49	.28	e.58
16	1.0	---	---	---	---	---	---	---	---	.49	.33	e.58
17	.96	---	---	---	---	---	---	---	---	.45	.86	e.58
18	1.0	---	---	---	---	---	---	---	---	.43	.92	e.54
19	1.2	---	---	---	---	---	---	---	---	.43	.89	e.54
20	1.1	---	---	---	---	---	---	---	---	.42	.90	---
21	1.2	---	---	---	---	---	---	---	---	.41	.90	---
22	1.2	---	---	---	---	---	---	---	---	.39	.90	---
23	1.2	---	---	---	---	---	---	---	---	.44	.87	---
24	1.2	---	---	---	---	---	---	---	---	.46	.86	---
25	1.2	---	---	---	---	---	---	---	---	.45	.85	---
26	1.2	---	---	---	---	---	---	---	---	.44	e.85	---
27	1.1	---	---	---	---	---	---	---	---	.46	e.85	---
28	1.2	---	---	---	---	---	---	---	---	.44	e.84	---
29	1.1	---	---	---	---	---	---	---	---	.51	e.84	---
30	1.1	---	---	---	---	---	---	---	---	.50	e.84	---
31	1.1	---	---	---	---	---	---	---	---	.47	e.86	---
TOTAL	---	---	---	---	---	---	---	---	---	---	18.31	---
MEAN	---	---	---	---	---	---	---	---	---	---	.59	---
MAX	---	---	---	---	---	---	---	---	---	---	.92	---
MIN	---	---	---	---	---	---	---	---	---	---	.27	---
AC-FT	---	---	---	---	---	---	---	---	---	---	36	---

e Estimated.

11416618 CULBERTSON LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°25'16", long 120°37'20", in SW 1/4 SW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Culbertson Lake Dam on Texas Creek, and 6.4 mi east of Graniteville.

DRAINAGE AREA.—0.44 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,442 ft above sea level, from topographic map.

REMARKS.—Lake is formed by earth-fill dam completed in 1872. Usable capacity, 953 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 14.7 ft, crest of spillway. Figures given represent usable contents. See schematic of South 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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0	0	9	562
3	180	12	764
6	367	15	974

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	355	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	791	702
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	896	784	---
6	477	---	---	---	---	---	---	---	---	---	---	695
7	---	---	---	---	---	---	---	---	946	---	---	---
8	---	---	---	---	---	---	---	---	---	882	---	---
9	---	---	---	---	---	---	---	---	---	---	771	---
10	---	323	---	---	---	---	---	---	---	882	771	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	868	---	---
13	451	282	---	---	---	---	---	---	---	---	764	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	946	865	757	682
16	---	---	---	---	---	---	---	---	---	---	757	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	230	---	---	---	---	---	---	---	---	---	655
19	---	---	---	---	---	---	---	---	---	847	743	655
20	399	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	942	---	---	648
22	---	---	---	---	---	---	---	---	---	833	729	---
23	---	---	---	---	---	---	---	---	---	---	---	628
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	826	719	595
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	602
29	---	---	---	---	---	---	---	---	910	---	---	---
30	---	---	---	---	---	---	---	---	---	812	702	522
31	---	---	---	---	---	---	---	953	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11416620 TEXAS CREEK TRIBUTARY BELOW CULBERTSON LAKE, NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°25'17", long 120°37'21", in SW 1/4 SW 1/4 sec.15, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank, 150 ft downstream from outlet structure, on Culbertson Lake Dam, 0.15 mi upstream from Texas Creek, and 6.4 mi east of Graniteville.

DRAINAGE AREA.—0.44 mi^2.

PERIOD OF RECORD.—October 1988 to current year (low-flow records only). Unpublished records for water years 1965–88 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,420 ft above sea level. October 1965 to August 1988, nonrecording gage at site 10 ft downstream at different datum. August to September 1988, nonrecording gage at same site and datum.

REMARKS.—Records not computed for winter months or above 1.2 ft^3/s. Low and medium flow regulated by Culbertson Lake (capacity, 953 acre-ft). See schematic diagram of South 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e.79	e.92	.84
2	---	---	---	---	---	---	---	---	---	e.77	.90	.86
3	---	---	---	---	---	---	---	---	---	e.75	.98	.85
4	---	---	---	---	---	---	---	---	---	e.70	---	.85
5	---	---	---	---	---	---	---	---	---	e.81	.95	.85
6	---	---	---	---	---	---	---	---	---	e.83	.92	.83
7	---	---	---	---	---	---	---	---	---	e.86	.92	.82
8	---	---	---	---	---	---	---	---	.75	e.89	.91	.82
9	---	---	---	---	---	---	---	---	.73	e.86	.89	.82
10	---	---	---	---	---	---	---	---	.73	e.83	.89	.82
11	---	---	---	---	---	---	---	---	.74	e.80	.85	.82
12	---	---	---	---	---	---	---	---	.73	e.79	.85	.82
13	---	---	---	---	---	---	---	---	.73	e.80	.82	.81
14	---	---	---	---	---	---	---	---	.72	e.81	.82	.79
15	---	---	---	---	---	---	---	---	.77	e.82	.81	.78
16	---	---	---	---	---	---	---	---	.81	e.82	.79	.76
17	---	---	---	---	---	---	---	---	.79	e.81	.79	.74
18	---	---	---	---	---	---	---	---	.77	e.80	.78	.84
19	---	---	---	---	---	---	---	---	.74	e.79	.76	.99
20	---	---	---	---	---	---	---	---	.70	e.78	.76	.96
21	---	---	---	---	---	---	---	---	.79	e.76	.76	---
22	---	---	---	---	---	---	---	---	.87	e.79	.74	---
23	---	---	---	---	---	---	---	---	.85	e.82	.73	---
24	---	---	---	---	---	---	---	---	.85	e.88	.73	---
25	---	---	---	---	---	---	---	---	.88	e.95	.71	---
26	---	---	---	---	---	---	---	---	.85	e1.0	.82	---
27	---	---	---	---	---	---	---	---	.85	e.99	.89	---
28	---	---	---	---	---	---	---	---	.84	e.98	.89	---
29	---	---	---	---	---	---	---	---	.82	e.97	.88	---
30	---	---	---	---	---	---	---	---	e.81	e.96	.85	---
31	---	---	---	---	---	---	---	---	---	e.94	.84	---
TOTAL	---	---	---	---	---	---	---	---	---	26.15	---	---
MEAN	---	---	---	---	---	---	---	---	---	.84	---	---
MAX	---	---	---	---	---	---	---	---	---	1.0	---	---
MIN	---	---	---	---	---	---	---	---	---	.70	---	---
AC-FT	---	---	---	---	---	---	---	---	---	52	---	---

e Estimated.

11416650 UPPER LINDSEY LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°24'45", long 120°37'33", in SE 1/4 NE 1/4 sec.21, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Upper Lindsay Lake Dam, and 6.3 mi southeast of Graniteville.

DRAINAGE AREA.—0.06 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,483 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Lake is formed by an earthfill dam. Usable capacity, 18 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 5.3 ft, crest of spillway. Figures given represent usable contents.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0	0	4	13.0
2	6.0	6	21.0

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	14	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	8.6
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11416660 MIDDLE LINDSEY LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°24'58", long 120°37'55", in NE 1/4 NW 1/4 sec.21, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Middle Lindsay Lake Dam, and 5.8 mi southeast of Graniteville.

DRAINAGE AREA.—0.41 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,436 ft above sea level, from topographic map.

REMARKS.—Lake is formed by an earth-fill dam completed in 1870. Usable capacity, 110 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 6.0 ft, crest of spillway. Figures given represent usable contents.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0	0	4	69
2	32	6	110

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	71	48
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	98	67	---
6	46	---	---	---	---	---	---	---	---	---	---	43
7	46	---	---	---	---	---	---	---	112	---	---	---
8	---	---	---	---	---	---	---	---	---	96	---	---
9	---	---	---	---	---	---	---	---	---	---	64	---
10	---	---	---	---	---	---	---	---	---	96	65	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	96	---	---
13	39	---	---	---	---	---	---	---	---	---	60	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	112	91	---	40
16	---	---	---	---	---	---	---	---	---	---	58	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	37
19	---	---	---	---	---	---	---	---	---	87	56	37
20	34	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	112	---	---	36
22	---	---	---	---	---	---	---	---	---	75	52	---
23	---	---	---	---	---	---	---	---	---	---	---	34
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	79	48	29
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	26
29	---	---	---	---	---	---	---	---	106	---	---	---
30	---	---	---	---	---	---	---	---	---	75	45	25
31	---	---	---	---	---	---	---	112	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11416670 LINDSEY CREEK BELOW MIDDLE LINDSEY LAKE, CA

LOCATION.—Lat 39°24'58", long 120°37'55", in NE 1/4 NW 1/4 sec.21, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on right bank 15 ft downstream from outlet structure on Middle Lindsey Lake Dam, and 5.8 mi southeast of Graniteville.

DRAINAGE AREA.—0.41 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6.430 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Middle Lindsey Lake (station 11416660). No diversions upstream of 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	.34	.31
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	.34	.34	---
6	.42	---	---	---	---	---	---	---	---	---	---	.28
7	.42	---	---	---	---	---	---	---	.33	---	---	---
8	---	---	---	---	---	---	---	---	---	.35	---	---
9	---	---	---	---	---	---	---	---	---	---	.32	---
10	---	---	---	---	---	---	---	---	---	.27	.29	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	.34	---	---
13	.37	---	---	---	---	---	---	---	---	---	.29	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	.33	.34	---	.29
16	---	---	---	---	---	---	---	---	---	---	.29	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	.29
19	---	---	---	---	---	---	---	---	---	.33	.29	.24
20	.59	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	.33	---	---	.48
22	---	---	---	---	---	---	---	---	---	.33	.28	---
23	---	---	---	---	---	---	---	---	---	---	---	.52
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	.34	.29	.52
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	.57
29	---	---	---	---	---	---	---	---	.25	---	---	---
30	---	---	---	---	---	---	---	---	---	.33	.29	.57
31	---	---	---	---	---	---	---	.33	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11416680 LOWER LINDSEY LAKE NEAR GRANITEVILLE, CA

LOCATION.—Lat 39°24'43", long 120°38'34", in NE 1/4 SE 1/4 sec.20, T.18 N., R.12 E., Nevada County, Hydrologic Unit 18020125, Tahoe National Forest, on outlet structure on Lower Lindsay Lake Dam, and 5.5 mi southeast of Graniteville.

DRAINAGE AREA.—0.91 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1966–99 available in the files of the U.S. Geological Survey.

GAGE.—Nonrecording gage observed intermittently during the summer months. Elevation of gage is 6,236 ft above sea level, from topographic map.

REMARKS.—Lake is formed by earth fill dam completed in 1870. Usable capacity, 293 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 11.6 ft, crest of spillway. Figures given represent usable contents.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table dated April 1965)

0	0	9	218
3	65	12	304
6	138		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	138	---	---	---	---	---	---	278	---	235	---
2	---	---	---	---	---	---	---	---	---	---	---	210
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	263	232	---
6	177	---	---	---	---	---	---	---	---	---	---	207
7	---	---	---	---	---	---	---	---	278	---	---	---
8	---	---	---	---	---	---	---	---	---	257	---	---
9	---	---	---	---	---	---	---	---	---	---	226	---
10	---	135	---	---	---	---	---	---	---	260	226	---
11	---	---	---	---	---	---	---	---	---	---	226	---
12	---	---	---	---	---	---	---	---	---	257	---	---
13	135	108	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	278	257	---	---
15	---	---	---	---	---	---	---	---	---	---	221	197
16	---	---	---	---	---	---	---	---	---	---	221	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	65	---	---	---	---	---	---	---	---	---	194
19	---	---	---	---	---	---	---	---	---	240	215	193
20	141	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	278	---	---	191
22	---	---	---	---	---	---	---	---	---	249	210	---
23	---	---	---	---	---	---	---	---	---	---	---	190
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	243	210	182
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	272	240	---	180
29	---	---	---	---	---	---	---	---	269	---	---	---
30	---	---	---	---	---	---	---	---	---	---	204	174
31	---	---	---	---	---	---	---	278	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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 mi^2.

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 ft^3/s. Low and medium flow regulated by Lower Lindsey Lake, capacity, 293 acre-ft. Spillway flows bypass this station. See schematic diagram of South 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.2	---	---	---	---	---	---	.82	.65	.70	.59
2	---	1.2	---	---	---	---	---	---	.77	.65	.70	.59
3	---	1.1	---	---	---	---	---	---	.70	.65	.70	.61
4	---	1.1	---	---	---	---	---	---	.67	.64	.69	.64
5	---	1.1	---	---	---	---	---	---	.67	.64	.67	.64
6	---	1.1	---	---	---	---	---	---	.67	.64	.67	.64
7	---	1.1	---	---	---	---	---	---	.66	.62	.67	.64
8	---	1.1	---	---	---	---	---	---	.44	.61	.67	.64
9	---	1.1	---	---	---	---	---	---	.44	.60	.67	.64
10	---	---	---	---	---	---	---	---	.46	.60	.67	.64
11	---	---	---	---	---	---	---	---	.49	.60	.65	.64
12	---	---	---	---	---	---	---	---	.54	.59	.61	.63
13	---	---	---	---	---	---	---	---	.59	.59	.61	.61
14	.88	---	---	---	---	---	---	---	.58	.58	.62	.61
15	.85	---	---	---	---	---	---	---	.57	.64	.63	.59
16	.44	---	---	---	---	---	---	---	.48	.68	.62	.56
17	.38	---	---	---	---	---	---	---	.50	.70	.61	.56
18	.38	---	---	---	---	---	---	---	.50	.79	.61	.54
19	.38	---	---	---	---	---	---	---	.49	.78	.61	.54
20	---	---	---	---	---	---	---	---	.48	.67	.61	.54
21	---	---	---	---	---	---	---	---	.59	.73	.60	---
22	---	---	---	---	---	---	---	---	.68	.72	.59	---
23	---	---	---	---	---	---	---	---	.68	.70	.59	---
24	---	---	---	---	---	---	---	---	.67	.70	.59	---
25	---	---	---	---	---	---	---	---	.70	.71	.59	---
26	---	---	---	---	---	---	---	---	.76	.73	.60	---
27	---	---	---	---	---	---	---	---	.79	.72	.60	---
28	---	---	---	---	---	---	---	---	.81	.72	.59	---
29	---	---	---	---	---	---	---	---	.79	.73	.59	---
30	---	---	---	---	---	---	---	---	.77	.73	.59	---
31	1.2	---	---	---	---	---	---	---	---	.72	.59	---
TOTAL	---	---	---	---	---	---	---	---	18.76	20.83	19.51	---
MEAN	---	---	---	---	---	---	---	---	.63	.67	.63	---
MAX	---	---	---	---	---	---	---	---	.82	.79	.70	---
MIN	---	---	---	---	---	---	---	---	.44	.58	.59	---
AC-FT	---	---	---	---	---	---	---	---	37	41	39	---

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 mi^2.

PERIOD OF RECORD.—October 1940 to September 1948, April 1959 to current year. Published as South Fork Yuba River at Jones Bar 1940–48, and as South Yuba River at Jones Bar 1959–63. Yearly discharge for the 1947 water year published in WSP 1315-A.
SEDIMENT DATA: Water years 1966–74.
WATER TEMPERATURE: Water years 1965–79 (daily records).

REVISED RECORDS.—WSP 1315-A: 1942–43(M), drainage area at former site. WSP 1931: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,060 ft above sea level, from river-profile map. Oct. 1, 1940, to Sept. 30, 1948, at site 150 ft upstream at datum 2.00 ft higher.

REMARKS.—Records fair. 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 South Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 53,600 ft^3/s, Dec. 22, 1964, gage height, 25.0 ft, from floodmarks, from rating curve extended above 23,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 1.0 ft^3/s, Sept. 10–13, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1955, reached a stage of 30.7 ft, from floodmarks, present datum, at site 100 ft upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	56	190	67	427	1350	414	334	311	68	52	47
2	53	55	137	70	404	1130	423	413	293	68	52	70
3	53	55	120	68	387	979	466	413	284	68	50	76
4	50	54	101	67	561	892	490	405	278	69	50	57
5	49	54	89	68	547	1070	513	493	255	68	49	52
6	49	54	83	66	466	1040	469	710	281	69	48	50
7	51	55	80	67	388	900	438	800	249	68	47	48
8	52	142	79	67	339	1060	427	1760	222	67	47	47
9	48	122	82	66	304	1250	411	1740	310	69	47	45
10	47	78	102	66	467	1060	390	937	248	72	46	45
11	46	69	87	119	847	984	387	637	190	74	47	44
12	46	65	82	254	1380	929	383	622	140	69	45	44
13	46	62	89	133	2520	853	597	585	112	69	46	44
14	46	60	94	105	6380	825	606	541	106	72	44	44
15	46	107	86	175	2600	814	439	605	102	70	43	43
16	46	79	83	547	1640	774	406	628	97	69	42	43
17	45	127	80	342	1260	727	652	445	91	70	42	43
18	46	103	77	1220	969	668	620	384	88	69	43	42
19	47	97	76	856	810	688	470	349	87	68	42	41
20	47	204	75	849	733	686	431	419	86	66	42	41
21	47	156	77	529	774	600	407	674	83	65	43	42
22	46	111	74	438	1250	553	394	1250	81	63	42	42
23	45	90	71	383	1870	545	380	1310	79	75	42	48
24	46	80	70	3020	1120	544	362	1910	77	67	42	46
25	46	75	69	2410	867	542	364	1990	76	61	42	44
26	46	73	69	978	960	530	386	1630	75	61	41	44
27	50	71	68	599	4020	539	382	1250	74	57	41	43
28	187	70	67	437	2140	543	401	1240	73	55	41	42
29	105	68	67	352	1740	508	377	1140	72	54	41	43
30	66	111	66	428	---	488	358	802	70	54	46	43
31	59	---	67	573	---	442	---	727	---	53	48	---
TOTAL	1708	2603	2657	15419	38170	24513	13243	27143	4590	2047	1393	1403
MEAN	55.1	86.8	85.7	497	1316	791	441	876	153	66.0	44.9	46.8
MAX	187	204	190	3020	6380	1350	652	1990	311	75	52	76
MIN	45	54	66	66	304	442	358	334	70	53	41	41
AC-FT	3390	5160	5270	30580	75710	48620	26270	53840	9100	4060	2760	2780

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.4	202	477	788	813	775	691	902	683	125	39.6	39.5
MAX	1197	1350	3756	4865	4078	3029	2804	3323	3618	996	84.9	132
(WY)	1963	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1941 - 2000	
ANNUAL TOTAL	165756		134889			
ANNUAL MEAN	454		369		472	
HIGHEST ANNUAL MEAN					1135	1995
LOWEST ANNUAL MEAN					42.6	1977
HIGHEST DAILY MEAN	6750	Feb 9	6380	Feb 14	30300	Jan 1 1997
LOWEST DAILY MEAN	45	Oct 17	41	Aug 26	1.0	Sep 10 1944
ANNUAL SEVEN-DAY MINIMUM	46	Oct 11	41	Aug 23	1.0	Sep 9 1944
INSTANTANEOUS PEAK FLOW			8640	Feb 14	53600	Dec 22 1964
INSTANTANEOUS PEAK STAGE			13.23	Feb 14	25.00	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	328800		267600		342300	
10 PERCENT EXCEEDS	1090		963		1160	
50 PERCENT EXCEEDS	112		86		124	
90 PERCENT EXCEEDS	53		45		30	

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 mi^2.

PERIOD OF RECORD.—October 1941 to current year. Prior to October 1953, published as "at Narrows Dam." October 1953 to September 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. WDR CA-97-4: 1999(M).

GAGE.—Water-stage recorder and acoustic-velocity meters. Datum of gage is 278.68 ft above sea level (levels by International Engineering Co.). Prior to Sept. 19, 1958, at site 2,000 ft upstream at datum 248.31 ft higher, and Sept. 19, 1958, to Sept. 30, 1969, at datum 278.68 ft lower. Supplementary gage 2,000 ft upstream since Oct. 1, 1969, at Englebright Dam at datum 248.31 ft higher.

REMARKS.—Diversions up to 1,800 ft^3/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. Flow is determined by adding the discharges provided by Narrows Powerplant No. 1 (11417970), Narrows Powerplant No. 2 (11417980), and spill over Englebright Dam (11417950). See schematic diagram of South 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, 171,000 ft^3/s, Dec. 22, 1964, gage height, 546.14 ft, site and datum then in use, from rating curve extended above 25,000 ft^3/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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	904	1020	1020	2100	6940	3480	2500	2010	1610	2010	1510
2	1160	1110	1020	1030	1600	6210	3490	2520	1930	1590	2010	1480
3	1150	1110	1020	1020	1380	5950	3460	2400	1820	1590	1690	1370
4	1150	1110	1020	1020	1300	6020	3440	2240	1720	1590	2000	1270
5	1090	1100	1020	1030	1300	7210	3260	2480	1620	1600	1750	1170
6	1160	1100	1020	1010	1300	5570	3120	2460	1630	1600	1560	1080
7	1160	1100	1020	1030	1290	5030	2940	2460	1630	1600	1550	869
8	1180	1110	1020	1020	1300	5590	2970	2440	1630	1600	1530	1050
9	1230	1080	1020	1030	1300	5880	2980	2380	1600	1590	1480	1030
10	1230	1010	1020	1030	1360	5600	3000	2370	1620	1570	1480	1030
11	1230	1050	1020	1030	1520	5210	2620	2220	1600	1580	1480	1020
12	1180	1050	1020	1020	3720	4990	2830	2090	1600	1600	1490	1000
13	1210	1050	1020	997	4810	4780	2780	2080	1730	1510	1480	1030
14	1230	1040	1020	1020	15700	3820	2640	2090	1830	1610	1720	1030
15	1210	1040	1020	996	6770	3960	2860	2080	1840	1620	1800	1040
16	1220	1050	1020	1020	4220	3910	2750	2090	1820	1600	1800	1040
17	1200	1050	1020	1020	4040	4600	2850	2090	1780	1580	1810	1030
18	1150	892	1020	1020	3970	4540	2880	2090	1640	1590	1770	1030
19	1160	1040	1020	957	3900	4510	2860	2130	1600	1600	1470	1030
20	1170	1050	1020	1020	3780	4470	2780	2280	1590	1600	1470	1040
21	1160	1030	1020	1080	3800	4400	2760	2270	1590	1600	1470	1040
22	1160	1020	1020	1050	3700	4390	2730	2250	1600	1610	1720	1040
23	1160	1010	1020	1040	3940	4350	2750	2160	1590	1590	1800	1050
24	1160	1020	1030	3090	5140	4330	2690	2230	1610	1740	1800	1040
25	1160	1020	1030	6340	4900	4310	2670	2210	1630	1790	1760	1030
26	1160	1030	1020	2850	5050	4300	2660	2130	1800	1790	1480	1020
27	1160	1030	1020	1100	13400	4280	2570	2090	1810	1780	1430	1030
28	1140	1030	1000	1740	8680	4280	2580	2020	1810	1750	1490	1020
29	1120	1030	1020	2480	7300	3830	2570	2010	1820	1580	1500	997
30	1080	983	1020	2890	---	3510	2500	2000	1790	1580	1500	1030
31	1100	---	1020	2920	---	3450	---	2010	---	1920	1510	---
TOTAL	36210	31249	31620	46920	122570	150220	86470	68870	51290	50560	50810	32446
MEAN	1168	1042	1020	1514	4227	4846	2882	2222	1710	1631	1639	1082
MAX	1230	1110	1030	6340	15700	7210	3490	2520	2010	1920	2010	1510
MIN	1080	892	1000	957	1290	3450	2500	2000	1590	1510	1430	869
AC-FT	71820	61980	62720	93070	243100	298000	171500	136600	101700	100300	100800	64360
a	24850	23740	18470	11260	1500	659	14740	38300	49070	54170	41570	14380

a Combined flow, in acre-feet, from Browns Valley Irrigation Ditch (11420750), Brophy-South Yuba 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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	968	1232	2679	3577	3981	3645	3747	3990	2695	1378	1295	1009
MAX	5206	8964	18100	22350	17330	13060	11950	13330	9017	4034	3140	3144
(WY)	1963	1951	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000	
ANNUAL TOTAL	976369		759235			
ANNUAL MEAN	2675		2074		2509	
HIGHEST ANNUAL MEAN					5251	1982
LOWEST ANNUAL MEAN					414	1977
HIGHEST DAILY MEAN	18600	Feb 9	15700	Feb 14	134000	Jan 2 1997
LOWEST DAILY MEAN	892	Nov 18	869	Sep 7	.00	Nov 8 1941
ANNUAL SEVEN-DAY MINIMUM	1010	Nov 18	1000	Sep 7	.00	Nov 8 1941
INSTANTANEOUS PEAK FLOW			20800	Feb 14	171000	Dec 22 1964
INSTANTANEOUS PEAK STAGE			19.19	Feb 14	546.14	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	1937000		1506000		1818000	
ANNUAL DISCHARGE (AC-FT) a	1807000		292700			
10 PERCENT EXCEEDS	4420		4090		5260	
50 PERCENT EXCEEDS	2480		1590		1320	
90 PERCENT EXCEEDS	1020		1020		447	

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

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 mi^2.

PERIOD OF RECORD.—June 1935 to current year.
WATER TEMPERATURE: Water years 1974–79.
SEDIMENT DATA: Water years 1974–79.

REVISED RECORDS.—WSP 1395: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 630 ft above sea level, from river-profile map. June 21, 1935, to Nov. 30, 1938, nonrecording gage at same site and datum.

REMARKS.—Records good. Natural flow of stream is affected by Scotts Flat Reservoir beginning in 1949, usable capacity, 26,300 acre-ft, increased to 49,000 acre-ft in July 1964; Deer Creek Reservoir, capacity, 1,400 acre-ft beginning 1949; Lake Wildwood, capacity, 3,840 acre-ft beginning in 1970, power developments, and diversion for irrigation. At times water from South Yuba River is diverted to Deer Creek and water from Deer Creek is diverted to Bear River. See schematic diagram of South Yuba River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,100 ft^3/s, Feb. 17, 1986, gage height, 14.05 ft, from rating curve extended above 5,200 ft^3/s; minimum daily, 0.06 ft^3/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 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	12	28	3.6	115	674	126	20	11	7.9	5.6	18
2	3.7	9.5	12	3.3	77	519	120	19	12	7.7	6.1	32
3	4.5	8.1	11	3.6	122	443	86	18	13	7.0	6.8	22
4	3.7	6.9	7.2	3.6	293	388	71	17	12	8.4	5.6	16
5	4.3	6.6	6.5	4.3	115	1070	57	14	9.0	6.1	6.8	12
6	5.1	6.2	4.8	3.4	85	580	46	16	9.8	6.4	6.4	8.8
7	6.8	7.4	3.5	2.3	63	442	37	36	11	6.7	5.0	7.6
8	6.7	41	3.2	2.2	52	820	32	86	24	6.8	5.0	5.4
9	7.2	39	4.0	2.2	47	893	28	46	26	6.5	5.5	4.7
10	6.2	29	26	2.3	440	602	27	32	21	5.3	6.8	5.2
11	5.2	22	9.8	24	691	472	25	27	18	5.4	6.2	4.3
12	5.2	19	6.1	25	1700	399	24	26	16	5.7	6.7	4.3
13	5.0	16	5.8	9.2	2850	353	61	24	15	4.7	5.7	4.8
14	4.8	14	5.5	6.1	2570	322	48	23	12	4.7	4.9	4.5
15	6.0	13	4.7	18	554	301	39	50	11	5.8	4.8	5.4
16	7.0	15	4.6	133	445	287	43	62	10	5.9	5.9	6.5
17	55	24	4.1	35	340	271	148	40	10	5.7	5.5	6.0
18	294	5.7	3.9	532	265	259	130	30	9.1	5.6	5.4	4.6
19	271	12	4.4	214	232	249	67	23	7.8	5.2	7.1	4.9
20	242	21	3.8	227	215	243	49	20	8.0	4.8	7.4	5.6
21	214	12	3.3	92	261	229	41	16	8.2	4.9	6.4	5.1
22	181	6.8	3.9	66	985	216	38	12	7.9	5.0	5.7	5.5
23	78	5.4	4.3	81	1820	209	35	11	8.0	4.9	6.8	12
24	35	4.1	4.9	2520	428	203	32	8.8	10	4.0	7.0	10
25	19	3.6	4.4	699	300	194	29	9.8	10	3.9	7.3	7.0
26	12	3.9	4.3	207	431	178	27	12	8.3	4.3	7.6	6.5
27	12	4.5	3.3	107	3010	175	24	14	8.4	4.3	7.2	4.6
28	54	4.6	3.0	72	1050	159	21	14	8.3	4.8	5.3	4.1
29	36	4.0	2.8	56	978	148	21	12	7.9	7.0	6.7	4.5
30	22	23	3.6	208	---	141	21	9.8	7.8	6.7	8.8	5.9
31	15	---	3.5	250	---	140	---	11	---	5.2	12	---
TOTAL	1624.8	399.3	200.2	5612.1	20534	11579	1553	759.4	350.5	177.3	200.0	247.8
MEAN	52.4	13.3	6.46	181	708	374	51.8	24.5	11.7	5.72	6.45	8.26
MAX	294	41	28	2520	3010	1070	148	86	26	8.4	12	32
MIN	3.4	3.6	2.8	2.2	47	140	21	8.8	7.8	3.9	4.8	4.1
AC-FT	3220	792	397	11130	40730	22970	3080	1510	695	352	397	492

11418500 DEER CREEK NEAR SMARTVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.9	61.2	165	306	383	327	184	71.8	21.0	6.62	5.04	5.97
MAX	373	388	960	1418	1399	1162	888	301	129	23.2	14.2	19.1
(WY)	1963	1951	1956	1997	1986	1938	1982	1995	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1936 - 2000	
ANNUAL TOTAL	48416.5		43237.4			
ANNUAL MEAN	133		118		129	
HIGHEST ANNUAL MEAN					327	1983
LOWEST ANNUAL MEAN					5.48	1977
HIGHEST DAILY MEAN	3880	Feb 9	3010	Feb 27	10200	Feb 17 1986
LOWEST DAILY MEAN	2.8	Dec 29	2.2	Jan 8	.06	Aug 5 1977
ANNUAL SEVEN-DAY MINIMUM	3.6	Dec 25	2.9	Jan 4	.16	Aug 3 1940
INSTANTANEOUS PEAK FLOW			5770	Feb 13	12100	Feb 17 1986
INSTANTANEOUS PEAK STAGE			10.31	Feb 13	14.05	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	96030		85760		93630	
10 PERCENT EXCEEDS	372		289		319	
50 PERCENT EXCEEDS	12		12		18	
90 PERCENT EXCEEDS	4.6		4.3		2.7	

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 mi^2.

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 water year 1945 published in WSP 1315-A.

REVISED RECORDS.—WSP 1715: 1956(M). WSP 1931: Drainage area. WDR CA-99-4: 1997(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2.95 ft below sea level. Prior to August 1954, and Oct. 1, 1956, to Sept. 30, 1957, at Simpson Lane Bridge in Marysville 4.2 mi downstream at same datum. Sept. 3, 1963, to Sept. 23, 1968, auxiliary water-stage recorder at Simpson Lane Bridge at same datum.

REMARKS.—Records good. Flow regulated by New Bullards Bar Reservoir since January 1969, and several other reservoirs. Many diversions upstream from station for power and for irrigation. See schematic diagrams of South Yuba and lower Sacramento River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (water years 1944, 1947–99), 180,000 ft^3/s, Dec. 22, 1964, gage height, 90.15 ft, from floodmarks, from rating curve extended above 91,000 ft^3/s on basis of U.S. Army Corps of Engineers flood-routing study, maximum gage height 91.64 ft, from floodmarks, Jan. 2, 1997; minimum recorded, 10 ft^3/s, July 2, 1959.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	706	835	753	2520	9030	3780	1910	1350	816	1200	1230
2	1050	697	795	753	1890	7320	3780	1890	1280	761	1230	1280
3	1010	687	759	758	1650	6800	3710	2040	1190	759	1250	1190
4	982	699	735	773	1870	6580	3640	1830	1090	766	1250	1130
5	985	675	733	787	1600	11100	3550	1750	937	759	1100	1080
6	971	668	734	791	1520	7990	3320	1750	907	e760	929	985
7	968	672	741	788	1470	6250	3050	1780	897	e774	885	951
8	961	731	741	784	1450	7510	3000	1910	885	797	878	931
9	900	749	757	778	1440	8310	2980	1910	898	793	817	892
10	859	739	774	781	2100	7730	2980	1880	918	784	813	872
11	856	736	766	797	2570	6580	2900	1770	951	801	818	888
12	826	725	766	862	6270	6030	2830	1640	973	823	822	979
13	797	709	763	842	8270	5600	2750	1570	1020	833	831	960
14	794	705	756	835	21500	4950	2670	1540	1130	842	960	943
15	834	716	740	844	10500	4770	2700	1590	1130	839	1110	913
16	836	733	742	958	5570	4740	2690	1670	1100	817	1120	907
17	808	747	754	910	4870	5010	2870	1710	1080	813	1140	899
18	1010	705	760	1370	4530	4900	2960	1750	933	822	1140	910
19	994	710	766	1350	4400	4830	2900	1730	878	821	930	908
20	933	751	766	1270	4320	4840	2810	1840	828	820	887	907
21	884	731	766	1140	4360	4700	2810	1810	787	818	895	911
22	868	714	766	1150	4870	4610	2760	1800	765	822	1080	914
23	792	709	776	1210	10200	4570	2730	1690	756	836	1270	930
24	729	698	784	4580	6250	4510	2660	1680	747	899	1290	924
25	719	709	784	8850	5390	4480	2640	1680	747	985	1290	906
26	709	722	784	3890	5330	4450	2530	1580	868	997	1080	891
27	709	742	784	1570	19900	4410	2430	1540	920	1010	1090	883
28	796	753	778	1740	12500	4380	2260	1460	928	1020	1100	880
29	771	753	766	2610	9650	4250	2110	1440	935	907	1130	867
30	739	823	763	3080	---	3990	1920	1420	938	868	1150	875
31	708	---	753	3570	---	3780	---	1390	---	1040	1170	---
TOTAL	26878	21614	23687	51174	168760	179000	86720	52950	28766	26202	32655	28736
MEAN	867	720	764	1651	5819	5774	2891	1708	959	845	1053	958
MAX	1080	823	835	8850	21500	11100	3780	2040	1350	1040	1290	1280
MIN	708	668	733	753	1440	3780	1920	1390	747	759	813	867
AC-FT	53310	42870	46980	101500	334700	355000	172000	105000	57060	51970	64770	57000

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 - 2000, BY WATER YEAR (WY)

MEAN	1134	1427	2474	4416	4689	4569	2989	2347	1972	1273	1463	1335
MAX	2731	4475	11430	26180	20970	15100	14280	9721	8633	3735	2829	2900
(WY)	1976	1984	1984	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1970 - 2000	
ANNUAL TOTAL	985549		727142			
ANNUAL MEAN	2700		1987		2497	
HIGHEST ANNUAL MEAN					5818	1982
LOWEST ANNUAL MEAN					229	1977
HIGHEST DAILY MEAN	28000	Feb 9	21500	Feb 14	140000	Jan 2 1997
LOWEST DAILY MEAN	668	Nov 6	668	Nov 6	62	Jul 19 1977
ANNUAL SEVEN-DAY MINIMUM	686	Nov 1	686	Nov 1	65	Jul 31 1977
INSTANTANEOUS PEAK FLOW			26200	Feb 14	161000	Jan 2 1997
INSTANTANEOUS PEAK STAGE			72.03	Feb 14	91.64	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	1955000		1442000		1809000	
10 PERCENT EXCEEDS	5430		4640		5200	
50 PERCENT EXCEEDS	1950		972		1340	
90 PERCENT EXCEEDS	742		742		326	

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) 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.—Water-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, 21.0°C, several days in June; minimum recorded, 7.5°C, Jan. 3, 5, 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11421000 YUBA RIVER NEAR MARYSVILLE, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	9.5	15.0	10.5	19.5	14.5	20.0	14.5	18.5	14.5	15.0	13.5
2	13.3	9.9	15.0	10.5	19.5	14.5	20.0	14.5	19.5	14.5	16.5	13.5
3	13.0	10.0	17.0	11.0	20.0	14.5	19.5	14.0	19.0	14.0	17.5	13.5
4	13.0	10.0	15.0	11.5	20.0	14.5	20.0	14.5	18.5	14.0	17.5	13.0
5	13.5	10.0	15.0	10.5	19.5	14.0	20.0	14.0	19.5	14.0	17.5	13.0
6	13.5	10.0	13.0	11.0	20.0	14.5	19.5	14.0	20.0	14.5	18.0	13.0
7	13.5	10.0	12.5	11.0	19.0	14.0	19.5	14.0	20.0	14.5	18.0	13.5
8	13.5	10.0	15.0	11.5	18.5	15.0	20.0	14.0	20.0	14.5	18.0	14.0
9	13.5	10.0	15.0	11.5	19.5	14.5	20.5	14.0	20.0	14.5	---	14.0
10	14.0	10.0	14.0	11.0	19.5	14.5	20.5	14.5	19.5	14.0	---	---
11	13.5	10.5	15.5	11.0	19.0	14.5	20.5	14.5	20.0	14.0	---	---
12	12.5	11.0	15.0	11.0	20.0	15.0	20.5	14.5	20.0	14.5	---	---
13	13.5	10.5	14.5	11.5	21.0	15.0	20.0	14.5	20.0	14.5	---	---
14	13.5	10.5	14.0	11.5	21.0	15.0	20.0	14.5	19.5	14.5	---	---
15	12.0	10.5	13.0	11.5	20.5	15.0	20.0	14.5	19.5	14.0	---	---
16	12.5	10.5	12.5	11.5	20.0	15.0	19.5	14.5	19.5	14.0	---	---
17	11.0	10.5	16.0	11.5	20.0	14.5	20.0	14.0	19.0	14.0	---	---
18	12.0	10.5	16.5	11.5	20.0	15.0	20.5	14.5	19.0	14.0	---	---
19	13.0	10.0	17.0	11.5	20.5	14.5	20.5	14.5	19.5	14.0	---	---
20	14.0	10.0	17.0	12.0	21.0	15.0	20.5	14.5	19.0	14.0	---	---
21	14.0	10.0	17.5	12.0	21.0	15.0	20.5	14.5	19.0	14.0	---	---
22	13.5	10.0	17.5	12.5	21.0	15.5	20.5	14.5	18.5	14.0	---	---
23	13.5	9.5	18.5	13.0	20.5	15.0	20.5	14.5	18.5	13.5	---	---
24	14.0	9.5	18.0	13.5	21.0	15.0	20.0	14.5	18.5	13.0	---	---
25	14.0	10.0	18.0	13.5	21.0	15.0	20.0	14.5	18.5	13.0	---	---
26	14.5	10.0	18.5	13.5	20.5	15.0	20.0	14.5	18.5	13.5	---	---
27	14.0	10.0	19.0	14.0	20.5	15.0	19.5	14.0	18.5	13.5	17.5	---
28	14.0	9.5	19.5	14.5	20.5	15.0	19.5	14.0	18.5	13.5	17.5	13.5
29	14.5	9.5	19.5	14.5	20.5	15.0	20.0	14.5	16.0	14.0	17.5	13.5
30	15.0	10.0	19.5	14.5	20.0	14.5	20.0	14.5	15.5	13.5	17.5	13.5
31	---	---	19.0	14.5	---	---	19.5	14.5	18.0	13.5	---	---
MONTH	15.0	9.5	19.5	10.5	21.0	14.0	20.5	14.0	20.0	13.0	---	---

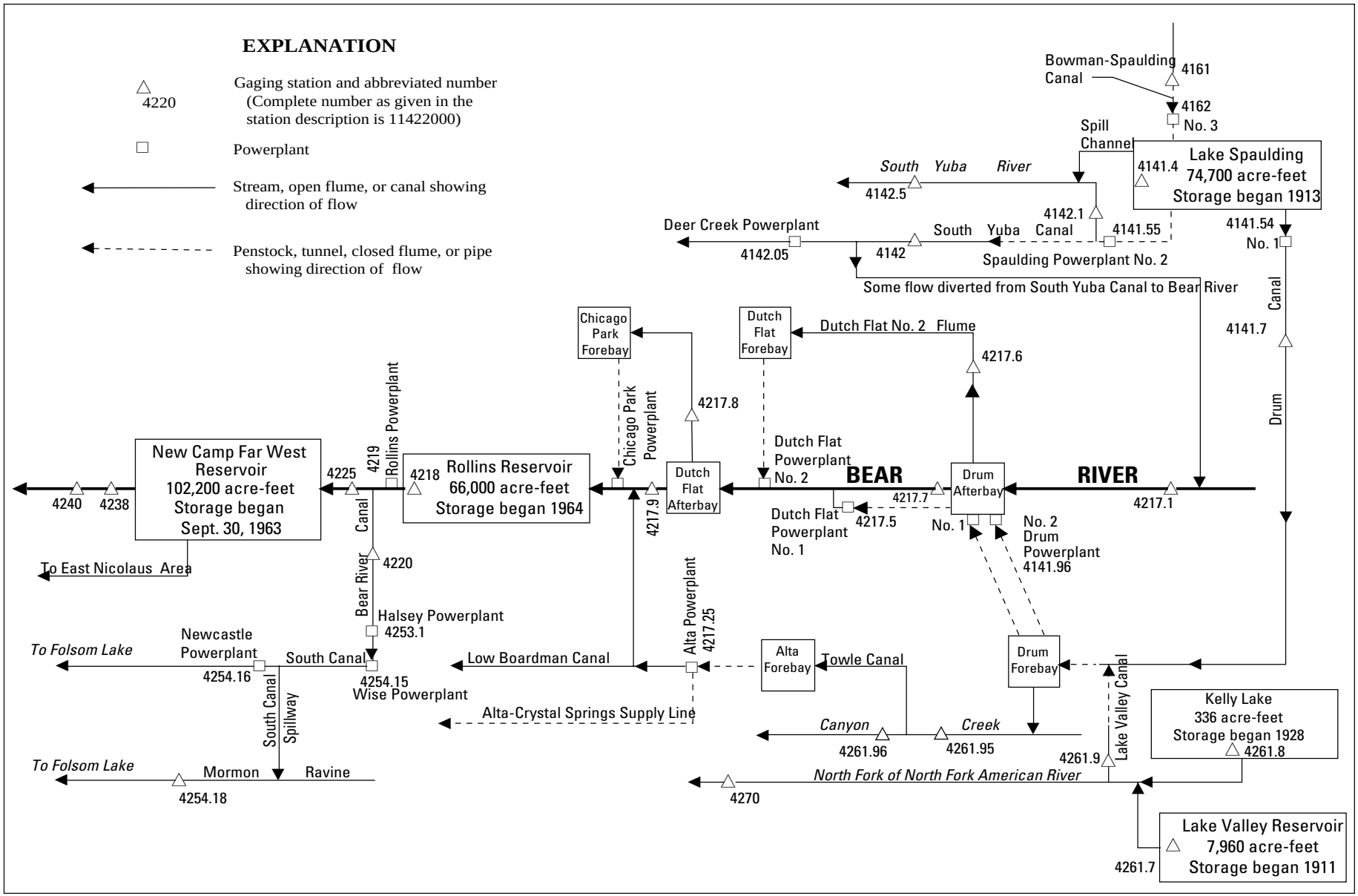

Figure 33. Diversions and storage in Bear River Basin.

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 mi^2.

PERIOD OF RECORD.—October 1987 to current year (low-flow records only). Unpublished records for water years 1981–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and concrete culvert. Elevation of gage is 4,550 ft above sea level, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.—No records computed above 160 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	6.9	8.2	6.8	11	16	144	7.9	79	7.7	7.2	7.0
2	73	6.9	7.8	6.9	12	---	144	6.5	99	7.7	7.6	7.2
3	40	6.7	7.6	6.6	11	---	144	6.5	94	7.7	7.7	6.3
4	6.6	6.5	7.4	6.7	15	---	146	6.3	82	7.7	7.4	6.1
5	7.3	6.6	7.2	6.9	16	---	147	6.1	82	7.7	7.2	6.1
6	7.3	7.1	7.0	6.9	14	---	148	24	81	7.7	7.8	5.9
7	7.0	7.9	6.9	6.9	11	---	148	---	78	7.5	7.7	6.1
8	6.9	10	6.7	6.7	10	---	149	---	---	8.0	8.2	6.4
9	6.4	8.1	6.6	6.5	10	---	151	53	90	7.8	9.0	6.3
10	6.7	7.9	6.5	6.5	19	---	152	49	88	7.8	9.9	6.1
11	6.5	8.1	6.8	13	17	---	152	---	45	7.7	9.9	6.7
12	6.0	7.9	7.3	11	15	---	153	---	11	7.6	8.9	6.9
13	5.3	7.4	7.3	8.1	---	---	---	---	8.6	7.1	10	6.7
14	5.8	7.3	7.1	7.7	---	129	154	---	7.8	6.8	7.6	6.5
15	6.7	8.2	6.9	10	35	114	154	---	8.1	6.3	8.3	6.5
16	7.2	8.6	6.6	11	25	115	156	---	7.5	6.8	7.7	6.5
17	6.9	9.1	5.7	9.9	21	119	---	---	7.3	8.6	7.2	6.5
18	7.2	8.2	6.4	29	18	132	157	---	7.1	18	7.0	6.8
19	7.3	12	6.3	39	17	127	156	---	6.7	7.3	6.5	6.9
20	7.3	11	6.3	26	17	115	155	---	6.5	7.3	7.8	6.9
21	7.3	8.1	5.3	17	18	108	154	---	6.9	7.3	9.4	7.7
22	7.3	6.1	5.4	11	19	108	153	---	6.9	6.8	7.7	7.2
23	7.0	6.5	6.4	9.2	16	107	152	---	6.9	7.5	6.8	6.7
24	6.9	6.9	7.3	36	13	106	152	---	6.7	7.8	5.9	6.0
25	7.2	6.9	7.2	102	12	106	151	---	7.0	7.7	6.8	5.3
26	7.3	6.9	6.8	29	20	106	151	---	8.4	7.7	6.8	5.3
27	9.2	6.6	6.7	15	55	113	151	---	8.4	7.7	7.3	5.5
28	11	6.5	6.7	11	22	122	151	---	8.1	7.5	8.0	6.1
29	7.4	6.5	6.7	9.5	19	118	151	---	8.1	7.0	8.0	5.7
30	6.9	9.2	6.7	8.8	---	135	79	---	7.9	7.0	7.5	5.3
31	6.9	---	6.7	12	---	143	---	109	---	7.6	6.6	---
TOTAL	373.8	232.6	210.5	492.6	---	---	---	---	---	242.4	241.4	191.2
MEAN	12.1	7.75	6.79	15.9	---	---	---	---	---	7.82	7.79	6.37
MAX	73	12	8.2	102	---	---	---	---	---	18	10	7.7
MIN	5.3	6.1	5.3	6.5	---	---	---	---	---	6.3	5.9	5.3
AC-FT	741	461	418	977	---	---	---	---	---	481	479	379

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 mi^2.

PERIOD OF RECORD.—April 1966 to current year, low flows only April to September 1966 and since October 1998.

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.—Records not computed above 13.5 ft^3/s. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	5.8	6.1	6.2	11	11	11	---	11	11	11
2	11	11	5.9	6.1	6.1	11	11	11	11	11	11	11
3	11	11	6.1	6.1	6.1	11	11	11	11	11	11	11
4	11	11	6.1	6.1	6.1	11	11	11	11	11	11	11
5	11	9.3	6.1	6.1	6.1	11	11	11	---	11	11	11
6	11	5.7	6.1	6.1	6.1	11	11	11	---	11	11	11
7	11	5.7	6.1	6.0	6.1	11	11	11	---	11	11	11
8	11	5.7	6.1	6.1	6.1	11	11	11	---	11	11	11
9	11	5.7	6.1	6.1	6.1	11	11	11	11	11	11	11
10	11	5.7	6.1	6.1	6.1	11	11	11	11	11	11	11
11	11	5.7	6.1	6.1	6.1	11	11	11	11	11	11	11
12	11	5.7	6.1	6.1	6.0	11	11	11	11	11	11	11
13	11	5.7	6.1	6.1	---	11	11	---	11	11	11	11
14	11	5.7	6.1	6.1	---	11	11	11	11	11	11	11
15	11	5.7	6.1	6.1	6.2	11	11	11	11	11	11	11
16	11	5.7	6.1	6.1	5.9	11	11	---	11	11	11	11
17	11	5.7	6.1	6.1	---	11	11	---	11	11	11	11
18	11	5.8	6.1	6.1	10	11	11	11	11	11	11	11
19	11	5.7	6.0	6.1	11	11	11	11	11	11	11	11
20	11	5.7	6.1	6.1	11	11	11	11	11	11	11	11
21	11	5.7	6.1	6.1	12	11	11	11	11	11	11	11
22	11	5.8	6.1	6.1	12	11	11	11	11	11	11	11
23	11	5.7	6.1	6.1	10	11	11	11	11	11	11	11
24	11	5.7	6.1	---	7.1	11	11	11	11	11	11	11
25	11	5.8	6.1	6.1	6.0	11	11	11	11	11	11	11
26	11	5.8	6.1	---	6.0	11	11	11	11	11	11	11
27	11	5.8	6.1	6.1	---	11	11	11	11	11	11	11
28	11	5.8	6.1	6.1	6.1	11	11	11	11	11	11	11
29	11	5.7	6.1	6.1	11	11	11	11	11	11	11	11
30	11	5.7	6.1	6.1	---	11	11	11	11	11	11	11
31	11	---	6.1	6.1	---	11	---	---	---	11	11	---
TOTAL	341	196.4	188.5	---	---	341	330	---	---	341	341	330
MEAN	11.0	6.55	6.08	---	---	11.0	11.0	---	---	11.0	11.0	11.0
MAX	11	11	6.1	---	---	11	11	---	---	11	11	11
MIN	11	5.7	5.8	---	---	11	11	---	---	11	11	11
AC-FT	676	390	374	---	---	676	655	---	---	676	676	655
a	13560	7790	7890	3230	21280	33850	32820	32900	26230	16050	17130	8230
b	11840	12670	11530	15550	16480	25600	40030	22830	19490	20270	16710	9770

CAL YR 1999 a 229100 b 239500
WTR YR 2000 a 221000 b 222800

a Diversion, in acre-feet, to Dutch Flat No. 2 Flume, provided by Nevada Irrigation District.
b Diversion, in acre-feet, to Dutch Flat No. 1 Powerplant, provided by Pacific Gas & Electric Co.

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

LOCATION (REVISED).—Lat 39°12'49", long 120°50'39", in NE 1/4 NW 1/4 sec.34, T.16 N., R.10 E., Placer County, Hydrologic Unit 18020126, at the left bank downstream end of spillway, on Dutch Flat Afterbay Dam, and 0.6 mi north of Dutch Flat.

DRAINAGE AREA.—21.5 mi^2.

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.—Water is imported from South Yuba River Basin via Drum Canal above forebay. 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.

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, 4,240 ft^3/s, Feb. 17, 1986; minimum daily, 0.08 ft^3/s, Mar. 8–19, 1968.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	e8.1	8.2	56	7.6	e150	11	11	11	11	11
2	13	10	e8.1	8.3	1.6	7.5	e60	11	11	11	11	11
3	13	8.4	e8.1	8.1	4.2	12	e95	11	11	11	11	11
4	13	8.2	e8.1	8.1	7.6	20	e67	11	11	11	11	11
5	13	8.2	e8.1	9.2	7.3	114	e92	11	18	11	11	11
6	13	8.2	e8.1	8.1	7.3	126	e121	11	440	11	11	11
7	13	8.2	e8.0	8.2	7.5	81	e182	11	459	11	11	11
8	13	8.2	e8.0	8.1	7.6	56	60	11	286	11	11	11
9	13	8.2	e8.0	7.9	7.6	149	59	11	11	11	11	11
10	13	e8.2	e8.0	7.9	7.6	69	61	11	11	11	11	11
11	13	e8.2	e8.0	7.8	7.6	73	8.9	162	11	11	11	11
12	13	e8.2	e8.0	7.8	7.6	14	86	11	21	11	11	11
13	13	e8.2	e8.0	7.8	30	173	67	14	11	11	11	11
14	13	e8.2	8.0	7.8	853	99	68	30	11	11	11	11
15	13	e8.2	8.0	8.0	12	57	55	50	11	11	11	11
16	12	e8.2	8.0	8.2	7.5	168	7.8	68	11	11	11	11
17	12	e8.2	8.0	8.2	7.6	81	7.8	54	11	11	11	11
18	12	e8.2	8.0	8.0	7.6	116	7.8	68	11	11	11	11
19	12	e8.2	8.0	8.0	7.4	151	7.8	334	11	11	11	11
20	12	e8.2	8.0	8.0	7.6	141	7.8	44	11	11	11	11
21	12	e8.2	7.9	8.0	7.6	139	70	26	11	11	11	47
22	12	e8.2	7.9	8.0	22	144	34	26	11	11	11	71
23	12	e8.1	8.0	8.0	7.6	134	39	28	11	11	11	69
24	12	e8.1	8.2	29	7.5	119	27	27	11	11	11	49
25	12	e8.1	8.0	43	7.4	100	41	19	11	11	11	16
26	12	e8.1	8.0	7.9	7.5	116	36	24	11	11	11	12
27	12	e8.1	8.0	7.8	394	e195	31	27	11	11	11	12
28	12	e8.1	8.1	7.7	7.6	e118	27	12	11	11	11	12
29	12	e8.1	8.1	7.7	7.6	e153	15	11	11	11	11	12
30	12	e8.1	8.1	7.8	---	e99	9.6	11	11	11	11	12
31	12	---	8.0	7.8	---	e118	---	11	---	11	11	---
TOTAL	387	251.0	248.9	304.4	1531.0	3150.1	1600.5	1167	1499	341	341	532
MEAN	12.5	8.37	8.03	9.82	52.8	102	53.3	37.6	50.0	11.0	11.0	17.7
MAX	13	12	8.2	43	853	195	182	334	459	11	11	71
MIN	12	8.1	7.9	7.7	1.6	7.5	7.8	11	11	11	11	11
AC-FT	768	498	494	604	3040	6250	3170	2310	2970	676	676	1060
a	27950	23830	22530	22470	41420	57470	56610	57310	47240	38170	34980	18860

e Estimated.
a Diversion, in acre-feet, to Chicago Park Flume.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.7	11.8	42.9	51.8	58.2	64.7	61.1	25.5	14.0	10.9	10.6	14.4
MAX	266	71.1	350	531	380	395	602	142	63.5	22.0	13.1	21.3
(WY)	1968	1984	1997	1997	1986	1966	1969	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	8552.2		11352.9			
ANNUAL MEAN	23.4		31.0		28.9	
HIGHEST ANNUAL MEAN					80.1	1982
LOWEST ANNUAL MEAN					5.53	1977
HIGHEST DAILY MEAN	763	Feb 9	853	Feb 14	3400	Feb 17 1986
LOWEST DAILY MEAN	7.8	Jan 3	1.6	Feb 2	.08	Mar 8 1968
ANNUAL SEVEN-DAY MINIMUM	7.8	Jan 2	6.2	Feb 2	.08	Mar 8 1968
INSTANTANEOUS PEAK FLOW			1540	Feb 14	4240	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	16960		22520		20940	
ANNUAL DIVERSION (AC-FT) a	521400		448800			
10 PERCENT EXCEEDS	50		72		31	
50 PERCENT EXCEEDS	11		11		9.6	
90 PERCENT EXCEEDS	8.0		7.8		5.0	

a Diversion, in acre-feet, to Chicago Park Flume.

11421800 ROLLINS RESERVOIR NEAR COLFAX, CA

LOCATION.—Lat 39°08'08", long 120°56'57", in NE 1/4 SE 1/4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on left bank, 300 ft upstream from Rollins Dam on Bear River, and 2.3 mi north of Colfax.

DRAINAGE AREA.—104 mi^2.

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.

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 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, 68,200 acre-ft, Feb. 13, elevation, 2,173.81 ft; minimum, 42,200 acre-ft, Sept. 30, elevation, 2,137.33 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	2,050	8,940	2,100	23,900	2,160	57,300
2,030	5,320	2,060	11,200	2,120	32,700	2,178	72,000
2,040	6,990	2,080	16,800	2,140	43,800		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49100	54800	58400	57100	e64800	66900	66600	66600	66300	64600	65200	64300
2	47500	55700	58600	57200	e64500	66900	66600	66500	66400	64300	65200	64000
3	46000	56600	58700	57200	64400	66800	66700	66200	66400	64400	65000	63300
4	45000	57400	58300	57200	64500	66800	66600	66400	66500	64300	64800	62800
5	45100	58300	58000	57300	64700	67000	66600	66400	65800	64700	64400	62600
6	45000	58900	58100	57400	64700	66900	66600	66400	66200	65100	63800	62200
7	44900	59300	58000	57400	64700	66900	66700	66500	66300	65400	64100	62200
8	44800	60400	58000	57400	64500	66900	66600	66700	66600	65100	64100	62500
9	44100	61300	58100	57600	64300	67100	66600	66600	66600	64700	64100	62100
10	43600	61800	58000	57900	65100	67000	66600	66600	66500	64800	64300	61800
11	43800	62100	57500	58100	65600	66900	66400	66400	66500	65200	64600	61900
12	44000	62400	57000	58500	66800	66800	66600	66500	65900	65400	63800	61900
13	44300	62300	57100	58700	68200	66900	66700	66600	66300	65600	63100	61500
14	44400	62200	57100	58600	68100	66800	66600	66600	66300	65700	63400	61100
15	44900	62400	57100	58600	67100	66700	66600	66700	66300	65400	63800	60700
16	44400	62700	57000	59300	66900	66800	66600	66800	66200	65000	64000	59600
17	44700	63100	57000	59700	66900	66700	66700	66700	66200	65300	64300	58600
18	45600	63200	56700	61900	66800	66700	66600	66700	66200	65400	64500	58100
19	46400	62800	56100	63000	66700	66800	66600	66600	66100	65800	63800	57900
20	47100	62300	55900	63800	66700	66700	66600	66600	66100	66000	63000	57700
21	48100	61300	56200	63700	66600	66700	66600	66600	66100	66200	63300	56600
22	48800	60800	56000	63200	67200	66700	66600	66600	65800	65900	63500	55100
23	49000	60100	56200	62700	67100	66700	66600	66600	65500	65500	63800	53600
24	49100	59700	56600	66000	66800	66700	66600	66700	65400	65600	64400	52000
25	49800	59000	56800	66900	66700	66700	66600	66600	65400	65900	64400	50300
26	50500	58600	56900	66400	66800	66700	66600	66600	65200	66100	64000	48700
27	51300	58300	56900	65800	67900	66700	66600	66600	65100	66300	63300	47100
28	52500	58000	57000	65300	67200	66700	66600	66600	64900	66400	63400	45500
29	53400	58000	57000	65100	67100	66700	66600	66600	64900	65800	63600	43800
30	53600	58300	57000	64900	---	66700	66600	66600	64700	65300	63800	42200
31	54100	---	57000	65300	---	66600	---	66300	---	65200	64100	---
MAX	54100	63200	58700	66900	68200	67100	66700	66800	66600	66400	65200	64300
MIN	43600	54800	55900	57100	64300	66600	66400	66200	64700	64300	63000	42200
a	2155.55	2161.23	2159.59	2170.22	2172.28	2171.73	2171.66	2171.38	2169.47	2170.01	2168.68	2137.33
b	+3500	+4200	-1300	+8300	+1800	-500	0	-300	-1600	+500	-1100	-21900
c	24190	21580	25450	29960	59760	66800	61900	63850	61170	41520	40910	46400

CAL YR 1999 MAX 68200 MIN 43600 b -6700 c 585500
WTR YR 2000 MAX 68200 MIN 42200 b -8400 c 543500

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Discharge, in acre-feet, through Rollins Powerplant, provided by Pacific Gas & Electric Co.

11422000 BEAR RIVER CANAL INTAKE NEAR COLFAX, CA

LOCATION.—Lat 39°07'58", long 120°57'12", in SW 1/4 SE 1/4 sec.22, T.15 N., R.9 E., Placer County, Hydrologic Unit 18020126, on right bank, 400 ft downstream from canal inlet, 0.2 mi downstream from Rollins Dam, and 2.2 mi north of Colfax.

PERIOD OF RECORD.—January 1912 to September 1953, October 1964 to current year. Monthly discharge only for some periods published in WSP 1315-A. Prior to October 1912, published as Pacific Gas & Electric Co.'s Canal near Colfax; October 1912 to September 1953, published as Bear River Canal near Colfax.

GAGE.—Water-stage recorder. Elevation of gage is 1,950 ft above sea level, from topographic map. Prior to Mar. 25, 1946, water-stage recorder at site 1.5 mi downstream at different datum.

REMARKS.—Canal diverts from left bank of Bear River. Water is used to develop power at Halsey and Wise Powerplants (stations 11425310 and 11425415). Part of the water is distributed for irrigation, and the remainder is eventually spilled into North Fork American River. Capacity of canal is believed to have been increased in 1917 and 1931. See schematic diagram of Bear River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 531 ft^3/s, Oct. 5, 6, 1980; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	2.5	421	213	291	298	413	392	405	447	436	464
2	440	2.5	426	214	291	298	412	391	405	447	436	465
3	441	2.6	433	211	291	299	411	391	405	447	437	466
4	441	2.6	440	202	291	299	410	390	405	447	437	467
5	442	2.7	441	202	291	299	406	390	405	446	436	468
6	442	2.8	441	202	291	299	405	389	404	444	436	470
7	443	2.8	442	202	290	299	405	389	403	444	436	470
8	443	2.9	442	202	291	299	420	393	403	444	437	471
9	441	3.0	427	202	291	300	424	397	402	444	439	472
10	442	3.0	443	202	289	300	424	396	401	444	439	472
11	442	3.1	446	202	291	300	423	406	400	444	440	473
12	443	10	445	203	291	300	423	411	400	444	441	474
13	443	214	445	203	255	300	432	411	399	444	443	473
14	444	279	445	203	194	300	437	411	398	444	444	472
15	442	279	446	203	50	299	436	411	397	444	445	473
16	442	279	446	203	262	298	411	410	396	444	446	474
17	41	277	447	201	297	298	398	410	406	444	446	475
18	37	291	447	201	297	297	397	410	419	444	447	475
19	41	299	447	201	298	296	413	409	420	444	448	476
20	41	347	447	259	298	295	434	409	419	444	449	476
21	42	394	448	294	298	295	420	409	419	445	450	476
22	40	394	448	294	299	294	393	409	430	445	451	476
23	82	411	217	294	298	293	408	409	434	445	453	476
24	98	423	208	294	298	293	407	408	433	445	454	476
25	121	423	209	293	298	292	407	408	432	445	455	476
26	130	422	210	293	298	292	406	408	431	445	457	476
27	131	421	210	293	299	323	401	408	430	446	457	476
28	120	420	211	293	298	390	394	407	432	447	459	476
29	114	420	211	292	298	402	393	407	435	442	460	476
30	84	421	212	292	---	414	392	406	440	433	461	476
31	10	---	212	292	---	413	---	406	---	434	463	---
TOTAL	8203	6454.5	11613	7355	8124	9674	12355	12501	12408	13766	13838	14186
MEAN	265	215	375	237	280	312	412	403	414	444	446	473
MAX	444	423	448	294	299	414	437	411	440	447	463	476
MIN	10	2.5	208	201	50	292	392	389	396	433	436	464
AC-FT	16270	12800	23030	14590	16110	19190	24510	24800	24610	27300	27450	28140
a	11940	9540	20040	3210	0	2840	21290	21180	20790	24260	23610	23620
b	11470	10170	17730	13210	16410	16700	18160	17910	17550	20960	20110	20100

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	1929
LOWEST ANNUAL MEAN	121	1931
HIGHEST DAILY MEAN	345	Aug 2 1931
LOWEST DAILY MEAN	.00	Nov 12 1917
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 17 1918
ANNUAL RUNOFF (AC-FT)	142400	
10 PERCENT EXCEEDS	300	
50 PERCENT EXCEEDS	232	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	332	311	373	355	346	321	314	389	402	410	410	397
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1932 - 2000	
ANNUAL TOTAL	141955.5		130477.5			
ANNUAL MEAN	389		356		364	
HIGHEST ANNUAL MEAN					462	1980
LOWEST ANNUAL MEAN					118	1977
HIGHEST DAILY MEAN	448	Dec 21	476	Sep 19	531	Oct 5 1980
LOWEST DAILY MEAN	2.5	Nov 1	2.5	Nov 1	.00	Mar 12 1932
ANNUAL SEVEN-DAY MINIMUM	2.6	Nov 1	2.6	Nov 1	.00	Mar 12 1932
ANNUAL RUNOFF (AC-FT)	281600		258800		263400	
ANNUAL DISCHARGE (AC-FT) a	245200		182300			
ANNUAL DISCHARGE (AC-FT) b	226100		200500			
10 PERCENT EXCEEDS	442		456		475	
50 PERCENT EXCEEDS	429		408		424	
90 PERCENT EXCEEDS	216		202		140	

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 mi^2.

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.—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.

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 (prior to construction of Rollins Dam in 1964), 9,620 ft^3/s, Nov. 20, 1950, gage height, 21.40 ft, site and datum then in use, from rating curve extended above 3,600 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1912, 1952. Maximum discharge since construction of Rollins Dam, 34,300 ft^3/s, Jan. 2, 1997, gage height, 18.01 ft, maximum gage height, 20.62 ft, Feb. 17, 1986, site and datum then in use, from rating curve extended above 11,600 ft^3/s; minimum daily, 0.5 ft^3/s, Nov. 17, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	79	28	27	569	1970	e872	735	528	431	407	140
2	303	26	27	27	561	1720	e808	638	550	429	407	139
3	301	25	28	27	561	1660	e821	577	561	369	407	137
4	297	25	28	24	566	1550	e853	587	639	309	364	135
5	304	25	27	24	572	1650	e845	577	609	249	179	134
6	311	30	26	24	558	1720	e831	545	514	134	178	133
7	305	30	26	24	569	1570	e822	588	555	133	176	133
8	281	32	27	24	563	1630	e792	805	642	134	177	133
9	130	31	27	24	557	1800	e768	816	742	132	177	134
10	124	192	27	24	146	1830	e755	778	662	136	153	134
11	122	314	26	25	566	1560	e710	582	649	141	133	134
12	127	256	26	25	745	1450	e739	669	537	140	133	134
13	129	95	26	25	e2910	1370	e813	734	520	137	131	280
14	128	28	26	25	e6260	1370	e795	756	538	134	132	283
15	97	29	27	26	4010	1290	e759	854	539	133	134	318
16	81	29	26	27	2230	1250	e771	877	520	131	134	384
17	74	29	26	26	1980	1160	e848	889	505	131	134	380
18	79	29	26	35	1970	1130	833	850	484	129	133	376
19	80	322	26	28	1950	1210	774	810	475	131	131	376
20	81	330	26	125	1920	1160	739	817	476	135	129	375
21	80	333	26	286	1210	1140	759	803	476	141	130	374
22	81	343	26	469	1560	1110	827	761	459	140	133	372
23	84	339	26	565	2880	1100	785	755	452	137	133	372
24	80	342	27	592	1830	1050	797	766	455	139	135	366
25	81	343	27	1430	1640	1020	767	744	455	138	134	360
26	81	292	27	853	1060	991	768	747	455	139	136	353
27	80	40	27	579	4560	1000	770	758	455	175	136	348
28	79	27	27	573	3070	925	785	756	450	231	135	343
29	78	26	27	566	2260	897	783	733	445	215	136	335
30	77	28	27	565	---	850	757	727	439	199	136	330
31	66	---	27	565	---	876	---	686	---	298	138	---
TOTAL	4525	4069	826	7659	49833	41009	23746	22720	15786	5750	5431	7945
MEAN	146	136	26.6	247	1718	1323	792	733	526	185	175	265
MAX	311	343	28	1430	6260	1970	872	889	742	431	407	384
MIN	66	25	26	24	146	850	710	545	439	129	129	133
AC-FT	8980	8070	1640	15190	98840	81340	47100	45070	31310	11410	10770	15760

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)

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 - 2000, BY WATER YEAR (WY)

MEAN	116	195	359	638	745	762	658	514	359	254	202	160
MAX	330	1267	1957	2973	2889	2324	2516	1211	757	538	420	383
(WY)	1999	1984	1997	1997	1986	1983	1982	1995	1998	1983	1995	1983
MIN	21.3	10.3	6.53	6.67	5.14	4.56	16.6	21.8	15.2	22.8	34.3	34.4
(WY)	1978	1978	1978	1977	1977	1977	1976	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	203985		189299			
ANNUAL MEAN	559		517		412	
HIGHEST ANNUAL MEAN					972	1983
LOWEST ANNUAL MEAN					19.0	1977
HIGHEST DAILY MEAN	7330	Feb 9	6260	Feb 14	22800	Jan 2 1997
LOWEST DAILY MEAN	25	Nov 3	24	Jan 4	3.6	Dec 26 1977
ANNUAL SEVEN-DAY MINIMUM	26	Dec 16	24	Jan 4	4.4	Mar 23 1977
INSTANTANEOUS PEAK FLOW			e7600	Feb 14	34300	Jan 2 1997
INSTANTANEOUS PEAK STAGE			Unknown	Feb 14	20.62	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	404600		375500		298200	
10 PERCENT EXCEEDS	1130		1150		976	
50 PERCENT EXCEEDS	420		340		201	
90 PERCENT EXCEEDS	28		27		22	

11423800 BEAR RIVER FISH RELEASE BELOW NEW CAMP FAR WEST RESERVOIR, NEAR WHEATLAND, CA

LOCATION.—Lat 39°02'30", long 121°19'52", in NE 1/4 NW 1/4 sec.29, T.14 N., R.6 E., Placer County, Hydrologic Unit 18020108, on left bank, 5.4 mi northeast of Wheatland, and 1.2 mi downstream from New Camp Far West Reservoir.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 120 ft above sea level, from topographic map.

REMARKS.—The gage measures required fish-release flow and is entirely regulated by New Camp Far West Reservoir. See schematic diagrams of lower Sacramento River and Bear River Basins.

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 ft^3/s, Dec. 4, 1994; minimum daily, 8.0 ft^3/s, July 2, 1995.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	14	14	14	16	27	28	28	16	11	11
2	14	14	14	14	13	16	27	29	28	12	11	11
3	14	14	14	14	14	15	27	29	28	12	11	11
4	14	14	13	14	14	15	27	28	28	12	11	11
5	14	14	13	14	14	15	27	28	28	12	11	11
6	14	14	13	14	14	16	27	28	28	12	11	11
7	14	13	14	14	14	15	27	28	28	11	11	11
8	14	13	14	14	14	15	27	28	28	12	11	11
9	14	13	14	14	14	16	27	28	28	11	11	11
10	14	13	14	14	14	16	27	28	28	11	11	11
11	14	13	14	14	15	16	27	28	28	11	11	11
12	14	13	14	13	16	15	27	28	27	11	11	11
13	14	14	14	12	17	15	27	28	28	11	11	11
14	14	14	14	12	20	15	28	28	28	11	11	11
15	13	14	14	12	18	15	27	28	28	11	11	11
16	13	15	14	12	16	15	27	28	28	11	11	11
17	13	15	14	12	16	15	28	28	27	11	11	11
18	13	14	14	12	15	15	28	28	27	11	11	11
19	13	14	14	13	15	15	27	28	27	11	11	11
20	13	14	14	14	15	13	28	28	28	12	11	11
21	14	14	14	14	15	12	28	28	28	12	11	11
22	14	14	14	14	15	12	28	29	28	11	11	11
23	14	14	14	14	17	14	27	29	28	11	11	11
24	15	14	14	14	16	14	27	28	28	11	11	11
25	15	14	14	14	15	14	27	28	28	11	11	11
26	15	14	14	14	15	14	27	28	28	11	11	11
27	15	14	13	13	17	14	28	28	28	11	11	12
28	14	14	13	13	17	14	28	28	28	11	11	13
29	14	14	14	13	16	14	28	28	28	11	11	12
30	14	14	14	13	---	14	28	28	28	11	11	11
31	14	---	14	14	---	22	---	28	---	11	11	---
TOTAL	432	416	429	416	445	462	820	872	836	354	341	334
MEAN	13.9	13.9	13.8	13.4	15.3	14.9	27.3	28.1	27.9	11.4	11.0	11.1
MAX	15	15	14	14	20	22	28	29	28	16	11	13
MIN	13	13	13	12	13	12	27	28	27	11	11	11
AC-FT	857	825	851	825	883	916	1630	1730	1660	702	676	662

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

MEAN	12.7	13.0	13.0	13.5	13.7	14.1	27.5	28.0	27.7	11.3	11.3	11.4
MAX	14.5	18.0	16.4	21.7	18.7	21.7	32.0	30.5	30.1	12.9	13.0	13.0
(WY)	1998	1996	1996	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	11.0	11.0	11.0	10.9	11.0	11.2	23.7	25.9	25.8	11.0	10.8	10.8
(WY)	1991	1991	1991	1991	1991	1991	1999	1990	1990	1997	1990	1990

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1990 - 2000	
ANNUAL TOTAL	5898		6157			
ANNUAL MEAN	16.2		16.8		16.4	
HIGHEST ANNUAL MEAN					19.5	1995
LOWEST ANNUAL MEAN					15.0	1991
HIGHEST DAILY MEAN	28	Apr 10	29	May 2	43	Dec 4 1994
LOWEST DAILY MEAN	10	Jul 14	11	Jul 7	8.0	Jul 2 1995
ANNUAL SEVEN-DAY MINIMUM	11	Jul 9	11	Jul 9	10	Sep 1 1990
ANNUAL RUNOFF (AC-FT)	11700		12210		11900	
10 PERCENT EXCEEDS	27		28		28	
50 PERCENT EXCEEDS	14		14		13	
90 PERCENT EXCEEDS	11		11		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 mi^2.

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 fair. Natural flow of stream affected by inflow from Yuba and American River Basins. Flow regulated by Lake Combie, usable capacity, 7,840 acre-ft, since 1928; Rollins Reservoir (station 11421800), since December 1964; and New Camp Far West Reservoir, usable capacity, 102,200 acre-ft, since October 1963. Many diversions for irrigation and power. See schematic diagrams of Bear River and lower Sacramento River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 48,000 ft^3/s, Feb. 17, 1986, gage height, 21.60 ft, maximum gage height, 23.72 ft, Jan. 2, 1997; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	16	19	1070	3240	947	417	154	25	15	21
2	17	19	15	19	733	2690	924	351	148	16	16	18
3	16	19	17	20	946	2380	886	285	111	16	15	18
4	12	22	15	20	1130	2180	871	205	66	18	15	17
5	15	18	16	18	1070	2650	872	97	49	18	16	17
6	16	15	16	18	934	2720	858	45	35	16	17	12
7	18	17	15	18	846	2390	847	48	35	15	17	14
8	17	e17	15	18	781	2540	842	48	37	15	21	16
9	18	e15	15	19	759	2730	821	210	39	16	21	15
10	18	15	16	18	924	2710	741	338	36	17	21	15
11	18	15	16	20	1340	2390	715	378	33	18	19	14
12	18	15	17	19	3510	2140	704	337	32	18	18	15
13	17	15	16	16	5710	1920	711	223	31	19	18	15
14	15	e17	15	16	13300	1780	578	160	32	19	17	14
15	15	e17	15	16	5790	1670	759	179	31	20	17	14
16	16	17	16	18	3560	1560	742	446	31	22	17	14
17	15	18	16	17	2820	1490	785	534	29	21	16	14
18	15	16	16	19	2360	1400	950	512	29	19	16	14
19	15	17	18	18	2110	1340	898	456	29	18	16	14
20	15	17	18	18	1920	1320	813	412	29	17	17	14
21	18	17	18	17	1720	1280	777	367	33	18	19	14
22	17	17	17	17	1780	1250	760	332	33	22	22	15
23	18	16	17	19	4660	1220	729	266	31	22	18	13
24	20	15	18	103	3090	1200	696	187	30	20	17	13
25	19	16	19	331	2400	1170	665	152	30	18	19	13
26	19	17	19	719	1990	1130	612	153	30	17	18	13
27	19	17	18	721	5460	1110	572	156	31	18	e18	12
28	19	17	17	779	5160	1080	439	165	33	20	e18	14
29	19	16	17	772	3710	1040	375	159	32	17	19	14
30	19	17	19	801	---	1000	434	154	32	16	19	13
31	19	---	19	1150	---	969	---	162	---	16	18	---
TOTAL	526	505	517	5793	81583	55689	22323	7934	1331	567	550	439
MEAN	17.0	16.8	16.7	187	2813	1796	744	256	44.4	18.3	17.7	14.6
MAX	20	22	19	1150	13300	3240	950	534	154	25	22	21
MIN	12	15	15	16	733	969	375	45	29	15	15	12
AC-FT	1040	1000	1030	11490	161800	110500	44280	15740	2640	1120	1090	871

e Estimated.

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 - 2000, BY WATER YEAR (WY)

MEAN	23.0	143	456	987	1303	1184	740	252	72.7	19.6	15.7	16.2
MAX	263	1606	2668	3954	5201	3845	3796	1035	484	72.6	29.5	73.2
(WY)	1999	1984	1984	1997	1986	1983	1982	1983	1998	1995	1967	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	209835		177757			
ANNUAL MEAN	575		486		430	
HIGHEST ANNUAL MEAN					1191	1983
LOWEST ANNUAL MEAN					3.42	1977
HIGHEST DAILY MEAN	10400	Feb 9	13300	Feb 14	35900	Feb 17 1986
LOWEST DAILY MEAN	11	Sep 22	12	Oct 4	.00	Oct 14 1976
ANNUAL SEVEN-DAY MINIMUM	12	Sep 21	13	Sep 23	.00	Oct 29 1976
INSTANTANEOUS PEAK FLOW			15700	Feb 14	48000	Feb 17 1986
INSTANTANEOUS PEAK STAGE			16.28	Feb 14	23.72	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	416200		352600		311400	
10 PERCENT EXCEEDS	1780		1360		1240	
50 PERCENT EXCEEDS	25		19		23	
90 PERCENT EXCEEDS	15		15		8.2	

11425410 ROCK CREEK LAKE NEAR AUBURN, CA

LOCATION.—Lat 38°56'43", long 121°05'20", in SE 1/4 SW 1/4 sec.28, T.13 N., R.8 E., Placer County, Hydrologic Unit 18020127, on upstream side of earthfill dam at outlet structure on Lower Lindsay Lake Dam, and 5.5 mi southeast of Graniteville.

PERIOD OF RECORD.—October 1999 to September 2000. Unpublished records for water years 1981–99 available in the files of the U.S. Geological Survey.

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

REMARKS.—Missing records are due to equipment malfunction. Lake is formed by earthfill dam. Usable capacity, 548 acre-ft, between gage heights 0.0 ft, invert of outlet valve, and 21.0 ft, crest of spillway.

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.

Capacity table (gage height, in feet, and contents, in acre-feet)

0	0	15	268
5	32	20	493
10	111	21	548

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	493	---	342	209	243	320	336	356	351	473	439
2	388	412	---	358	200	208	313	350	342	375	491	397
3	382	414	---	357	244	182	303	339	349	400	305	386
4	370	354	---	348	247	149	316	331	386	429	309	372
5	362	320	---	354	215	223	343	330	420	458	326	364
6	356	299	224	346	206	190	379	337	433	482	334	357
7	349	329	223	349	203	174	368	352	452	452	350	355
8	350	309	218	352	201	224	371	375	457	459	367	349
9	357	292	208	351	202	247	381	377	457	456	363	349
10	357	315	210	309	274	241	382	374	454	461	357	350
11	349	321	216	327	395	226	380	375	438	477	355	350
12	337	327	215	297	303	204	425	383	427	485	368	342
13	322	322	225	270	334	188	420	400	403	481	387	335
14	433	317	244	250	218	185	429	405	393	484	399	331
15	518	320	252	253	355	188	430	416	386	482	375	339
16	548	332	254	260	318	190	421	423	351	489	311	336
17	548	377	257	227	294	182	389	425	372	495	245	330
18	480	418	261	280	236	176	359	423	385	474	236	329
19	423	421	259	198	198	174	356	422	390	448	229	325
20	382	420	260	195	187	185	393	414	384	457	235	314
21	349	416	265	226	188	194	415	395	365	474	196	337
22	309	---	272	215	300	193	354	397	337	487	195	359
23	268	---	307	281	288	195	362	400	358	486	233	365
24	251	---	306	458	230	196	375	396	358	485	280	372
25	280	---	318	274	171	198	376	392	355	486	307	376
26	329	---	328	188	189	194	363	382	358	491	320	382
27	406	---	331	176	413	216	365	377	361	484	328	386
28	467	---	330	177	247	294	348	377	358	489	342	383
29	521	---	332	178	270	302	344	377	339	487	325	389
30	510	---	335	253	---	302	339	376	336	474	323	374
31	521	---	339	229	---	323	---	372	---	460	316	---
MAX	548	---	---	458	413	323	430	425	457	495	491	439
MIN	251	---	---	176	171	149	303	330	336	351	195	314
a	20.52		16.75	13.95	15.05	16.39	16.76	17.52	16.70	19.36	16.22	17.59
b				-110	+41	+53	+16	+33	-36	+124	-144	+58

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

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 mi^2.

PERIOD OF RECORD.—October 1989 to current year (low-flow records only).

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 500 ft above sea level, from topographic map.

REMARKS.—Records not computed above 8.5 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	7.9	---	---	---	8.1	---	---	---	---
2	8.1	---	---	8.0	---	---	---	---	---	---	---	---
3	---	4.0	---	8.0	---	---	---	8.3	---	---	---	---
4	8.3	---	---	7.9	---	---	---	---	---	---	---	---
5	---	---	---	7.6	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	7.6	---	---	---	---	---	---	---	---
8	---	---	8.4	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	7.6	3.8	---	---	---	---	---	---	---	---	---	---
12	7.8	3.2	8.5	---	---	---	---	---	---	---	---	---
13	8.2	1.8	8.2	---	---	---	---	---	---	---	---	---
14	---	---	7.1	---	---	---	---	---	---	---	---	7.8
15	7.7	---	6.7	---	---	---	---	---	---	---	---	8.0
16	7.6	---	6.7	---	---	---	---	---	---	---	---	8.0
17	---	---	7.2	---	---	---	---	---	---	---	---	7.9
18	2.7	---	7.0	---	---	---	---	---	---	---	---	7.3
19	---	---	---	---	---	---	---	---	---	---	---	6.9
20	.90	---	7.1	---	---	---	---	---	---	---	---	6.8
21	.75	---	---	---	---	---	---	---	---	---	---	7.2
22	.72	---	---	---	---	---	---	---	---	---	---	---
23	.73	---	---	---	---	---	---	---	---	---	---	---
24	.66	---	8.4	---	---	---	---	---	---	---	---	---
25	1.0	8.4	8.4	---	---	---	---	---	---	---	---	8.1
26	---	8.2	8.0	---	---	---	---	---	---	---	---	---
27	1.5	8.2	7.6	---	---	---	---	---	---	---	---	7.9
28	---	8.2	7.8	---	---	---	---	---	---	---	---	8.2
29	2.5	8.2	7.7	---	---	---	---	---	---	---	---	---
30	2.2	---	7.7	---	---	---	---	---	---	---	---	---
31	---	---	7.7	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---
a	6790	7690	15860	11970	15260	16350	11430	3190	0	0	307	8000

CAL YR 1999 a 116000
WTR YR 2000 a 96860

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

11425500 SACRAMENTO RIVER AT VERONA, CA

LOCATION.—Lat 38°46'28", long 121°35'50", in SW 1/4 NW 1/4 sec.25, T.11 N., R.3 E., Sutter County, Hydrologic Unit 18020109, on left bank, 1.3 mi southeast of Verona, 1.5 mi downstream from Feather River, 6.2 mi east of Knights Landing, and at mile 19.1 upstream from Sacramento.

DRAINAGE AREA.—21,251 mi^2.

PERIOD OF RECORD.—May 1926 to September 1929 (low-water periods only), October 1929 to current year.
CHEMICAL DATA: Water years 1952, 1969–70, 1996–98.
SPECIFIC CONDUCTANCE: Water years 1995–98.
WATER TEMPERATURE: Water years 1980, 1995–98.
SEDIMENT: Water years 1980, 1996–98.

REVISED RECORDS.—WDR CA-77-4: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 3.00 ft below sea level. May 1926 to Sept. 30, 1987, at site 0.5 mi upstream at same datum.

REMARKS.—Records good. 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 ft^3/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, 94,000 ft^3/s, Jan. 2, 1997, gage height, 42.09 ft; maximum gage height, Feb. 20, 1986, 42.11 ft, site then in use; minimum daily, 304 ft^3/s, July 23, 24, 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12100	9120	13100	12100	37200	65700	22300	20000	13500	18100	19900	16600
2	11800	8870	14900	12000	37400	65000	21700	20200	13600	18100	19700	16900
3	11600	8590	16100	12100	37400	64300	21000	20300	13200	17900	19700	17200
4	11500	8690	15600	11900	36900	63800	20300	20900	13100	17900	19600	17400
5	11200	9010	15100	11900	36000	64000	19800	21200	13300	18500	19100	17100
6	11200	8820	14600	11800	34400	64500	19400	20900	13400	18800	18200	16900
7	11400	8840	14400	11700	33600	64100	19000	21200	13100	18900	17400	16400
8	11700	9280	14000	11500	32800	64400	18800	22000	12900	18700	17100	15700
9	11700	9950	14000	11400	30800	64500	19200	21900	13400	18700	16700	14900
10	11500	10300	14300	11300	28700	64300	19900	21200	14400	18900	16600	14300
11	11400	10600	14800	11400	32200	63800	21400	19200	15000	18700	16000	14000
12	11100	11000	14900	11800	40000	63200	22900	16600	15100	18300	15700	13900
13	10300	11500	14900	12400	48300	62400	23400	14100	14800	18300	16000	13900
14	9310	11500	14700	13500	59900	61400	23500	12800	14500	18100	16100	13800
15	8510	11200	14500	13600	65800	59900	23900	12900	14600	18000	16200	13400
16	8010	11000	14400	14300	65100	58200	24300	14200	15000	18300	16300	13100
17	7860	11100	14100	18700	65100	56400	24600	16100	14400	18000	16400	13400
18	7900	11300	13700	21300	64100	53500	25700	17500	13800	18100	16200	13000
19	8010	11800	13400	21800	62700	49600	28300	16700	13100	18200	15900	12600
20	8170	12300	13100	20400	61700	45500	29600	15400	12500	18200	15400	12500
21	8180	12800	12800	22600	61400	41700	28400	14400	11900	18200	15100	12700
22	8090	13900	12700	24800	60700	38900	26700	15100	12100	18800	15100	13000
23	8090	14100	12500	22100	62800	36500	25300	15300	12900	19100	15500	13200
24	8180	13500	12400	22300	64100	34400	24300	15200	13800	18600	15900	13100
25	8210	12900	12400	34600	63700	32500	23300	14900	14800	19300	15900	12700
26	8450	12400	12500	39900	63400	30300	22000	14700	15300	19600	15800	12400
27	8490	12000	12400	37700	64400	28600	20600	14400	15900	19500	15900	12400
28	8630	11700	12400	35400	66600	27200	19300	14000	16700	19500	16100	12200
29	8960	11700	12300	33800	65900	25900	19100	13800	17100	19800	16200	11600
30	9420	12200	12200	32600	---	24700	19600	14000	17700	19900	16400	11100
31	9420	---	12100	35000	---	23400	---	13800	---	19900	16500	---
TOTAL	300390	331970	425300	617700	1483100	1562600	677600	524900	424900	578900	518600	421400
MEAN	9690	11070	13720	19930	51140	50410	22590	16930	14160	18670	16730	14050
MAX	12100	14100	16100	39900	66600	65700	29600	22000	17700	19900	19900	17400
MIN	7860	8590	12100	11300	28700	23400	18800	12800	11900	17900	15100	11100
AC-FT	595800	658500	843600	1225000	2942000	3099000	1344000	1041000	842800	1148000	1029000	835800

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 - 2000, BY WATER YEAR (WY)

MEAN	10620	13950	22700	29930	35230	32540	25140	20220	14600	11830	12190	12830
MAX	24920	43300	64470	71040	70030	71340	62140	51600	45560	24550	21400	22110
(WY)	1963	1974	1984	1997	1998	1983	1982	1952	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	7979260		7867360			
ANNUAL MEAN	21860		21500		20070	
HIGHEST ANNUAL MEAN					39150	1983
LOWEST ANNUAL MEAN					7178	1977
HIGHEST DAILY MEAN	63700	Feb 10	66600	Feb 28	92300	Feb 20 1986
LOWEST DAILY MEAN	7860	Oct 17	7860	Oct 17	3590	Jun 24 1992
ANNUAL SEVEN-DAY MINIMUM	8030	Oct 16	8030	Oct 16	3960	Jun 22 1992
INSTANTANEOUS PEAK FLOW			66800	Feb 28	94000	Jan 2 1997
INSTANTANEOUS PEAK STAGE			34.84	Feb 28	42.11	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	15830000		15600000		14540000	
10 PERCENT EXCEEDS	54800		46300		47800	
50 PERCENT EXCEEDS	14900		16000		13600	
90 PERCENT EXCEEDS	11200		11200		7520	

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 ft^3/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.—No flow for 2000 water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.27	127	542	802	781	536	87.8	2.20	.22	.000	.000	.000
MAX	72.6	7014	12470	19700	23920	17830	2042	79.1	12.7	.000	.000	.000
(WY)	1963	1951	1965	1997	1986	1983	1982	1983	1998	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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1943 - 2000
ANNUAL MEAN			235
HIGHEST ANNUAL MEAN			2075 1986
LOWEST ANNUAL MEAN			.000 1944
HIGHEST DAILY MEAN			123000 Feb 20 1986
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jan 1 1943
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jan 1 1943
INSTANTANEOUS PEAK FLOW			128000 Feb 20 1986
INSTANTANEOUS PEAK STAGE			33.01 Dec 23 1955
ANNUAL RUNOFF (AC-FT)			170300
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

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 mi^2.

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 South 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, 8,225 acre-ft, Jan. 1, 1997, gage height, 58.35 ft; minimum, 1,153 acre-ft, Feb. 28, 1990, gage height, 25.01 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 7,960 acre-ft, May 7, 8, maximum gage height, 57.76 ft, May 8; minimum, 2,430 acre-ft, Jan. 14, gage height, 34.16 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5910	4580	3350	2570	3890	5180	5280	7640	7830	7510	6970	5580
2	5880	4530	3310	2550	3900	5190	5300	7700	7820	7490	6970	5530
3	5850	4480	3250	2540	3940	5200	5350	7780	7810	7480	6880	5490
4	5810	4420	3210	2520	3970	5200	5430	7870	7800	7460	6880	5450
5	5760	4380	3170	2510	3990	5200	5490	7930	7780	7440	6810	5420
6	5720	4330	3130	2500	4010	5200	5540	7940	7770	7420	6750	5370
7	5680	4330	3090	2490	4030	5200	5590	7960	7760	7410	6710	5330
8	5640	4300	3050	2470	4040	5190	5650	7960	7780	7390	6660	5290
9	5560	4260	3010	2460	4070	5180	5700	7900	7780	7370	6610	5260
10	5510	4220	2970	2450	4130	5180	5770	7870	7780	7350	6610	5220
11	5460	4170	2940	2470	4190	5160	5860	7840	7780	7340	6500	5180
12	5420	4130	2900	2460	4230	5150	5960	7830	7770	7320	6470	5150
13	5370	4080	2870	2450	4410	5140	6240	7850	7760	7300	6470	5110
14	5320	4040	2840	2430	4900	5130	6350	7870	7750	7280	6470	5090
15	5280	4000	2820	2470	4980	5130	6420	7890	7740	7270	6350	5080
16	5230	3980	2810	2480	5020	5120	6510	7890	7720	7240	6280	5070
17	5190	3940	2790	2500	5030	5120	6660	7870	7710	7230	6220	5060
18	5140	3890	2780	2700	5040	5120	6740	7870	7700	7210	6190	5040
19	5090	3880	2770	2850	5040	5140	6790	7890	7690	7190	6140	5030
20	5050	3860	2750	2970	5050	5140	6850	7900	7670	7170	6090	5020
21	5010	3810	2730	3030	5050	5140	6920	7920	7660	7150	6090	5000
22	4960	3760	2720	3050	5090	5130	7000	7920	7650	7130	6000	5000
23	4920	3710	2700	3100	5100	5140	7070	7930	7630	7110	5980	4980
24	4880	3660	2680	3510	5110	5140	7130	7930	7620	7090	5980	4970
25	4850	3610	2670	3670	5130	5160	7200	7910	7600	7070	5900	4960
26	4810	3560	2650	3730	5150	5180	7270	7890	7590	7050	5900	4950
27	4770	3510	2640	3760	5160	5200	7370	7890	7580	7030	5810	4940
28	4730	3460	2620	3790	5160	5230	7460	7890	7560	7010	5730	4920
29	4700	3420	2610	3810	5170	5240	7530	7880	7550	6990	5700	4910
30	4660	3390	2590	3850	---	5250	7600	7870	7530	6970	5670	4900
31	4620	---	2580	3870	---	5260	---	7850	---	6960	5670	---
MAX	5910	4580	3350	3870	5170	5260	7600	7960	7830	7510	6970	5580
MIN	4620	3390	2580	2430	3890	5120	5280	7640	7530	6960	5670	4900
a	45.09	39.74	35.01	41.82	47.46	47.87	56.27	57.12	56.04	54.14	49.49	46.28
b	-1291	-1230	-810	+1290	+1300	+90	+2340	+250	-320	-570	-1290	-770
c	1320	1560	987	1300	1630	2160	2020	2000	384	142	994	433

CAL YR 1999 MAX 7943 MIN 2119 b +150 c 16650
WTR YR 2000 MAX 7960 MIN 2430 b -1011 c 14920

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.
c Diversion, in acre-feet, to Lake Valley Canal, provided by Pacific Gas & Electric Co.

11426180 KELLY LAKE NEAR CISCO, CA

LOCATION.—Lat 39°18'40", long 120°34'49", in SE 1/4 NW 1/4 sec.25, T.17 N., R.12 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on outlet structure on Kelly Lake Dam, on unnamed tributary to North Fork of North Fork American River, and 2.2 mi west of Cisco.

DRAINAGE AREA.—0.58 mi^2.

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 records computed during the winter months. 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.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	117	---	---	---	---	---	340	337	326	303	281
2	266	111	---	---	---	---	---	335	337	325	303	282
3	267	107	---	---	---	---	---	334	337	325	300	281
4	266	102	---	---	---	---	---	334	335	324	300	281
5	265	97	---	---	---	---	317	333	334	324	301	282
6	265	93	---	---	---	---	316	334	334	321	297	279
7	263	89	---	---	---	---	316	341	334	321	297	279
8	257	84	---	---	---	---	316	341	336	320	296	278
9	251	78	---	---	---	---	316	336	337	319	296	278
10	246	73	---	---	---	---	316	335	337	318	295	277
11	240	67	---	---	---	---	317	333	337	318	295	277
12	234	62	---	---	---	---	319	334	337	318	295	276
13	229	61	---	---	---	---	320	336	336	316	292	275
14	223	62	---	---	---	---	319	337	335	316	291	275
15	218	61	---	---	---	---	317	337	335	316	291	275
16	212	61	---	---	---	---	318	337	334	315	291	274
17	206	60	---	---	---	---	319	336	334	314	290	274
18	201	---	---	---	---	---	317	334	334	314	288	274
19	195	---	---	---	---	---	318	333	334	313	287	273
20	190	---	---	---	---	---	318	331	333	312	287	272
21	185	---	---	---	---	---	318	332	333	312	286	272
22	179	---	---	---	---	---	317	333	332	311	285	271
23	173	---	---	---	---	---	319	335	332	310	284	272
24	166	---	---	---	---	---	321	335	331	309	283	271
25	160	---	---	---	---	---	322	336	331	308	283	270
26	153	---	---	---	---	---	331	336	330	307	281	270
27	151	---	---	---	---	---	335	336	329	306	281	268
28	145	---	---	---	---	---	338	336	327	306	280	269
29	138	---	---	---	---	---	340	337	327	305	280	268
30	130	---	---	---	---	---	340	337	326	305	280	268
31	123	---	---	---	---	---	---	337	---	304	280	---
MAX	268	---	---	---	---	---	---	341	337	326	303	282
MIN	123	---	---	---	---	---	---	331	326	304	280	268
a	7.63						17.24	17.12	16.69	15.83	14.90	14.40
b	-146							-3	-11	-22	-24	-12

WTR YR 2000 b -1

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

11426195 CANYON CREEK NEAR BLUE CANYON, CA

LOCATION.—Lat 39°15'27", long 120°43'57", in NW 1/4 NW 1/4 sec.15, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020128, on left bank 200 ft upstream from culvert, and 1.2 mi west of Blue Canyon.

DRAINAGE AREA.—0.51 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000 (low-flow records only). Unpublished records for water years 1981–99 available in files of the U.S. Geological Survey.

GAGE.—Nonrecording gage read most days. Datum of gage is 4,660 ft above sea level (from topographic map).

REMARKS.—No records computed above 1.2 ft^3/s. No regulation or diversion 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.04	---	.07	---	---	---	.76	.49	.21	.10	.12
2	.02	.04	.12	.07	---	---	---	.76	.54	.18	.10	.08
3	.02	.04	.12	.07	1.0	---	---	.70	.49	.18	---	.08
4	.02	.04	.12	.07	---	---	---	.70	.44	.18	.10	.08
5	.02	.04	.10	.07	---	---	---	.64	.44	.18	.10	.07
6	.02	.04	.10	.07	---	---	---	.64	.44	---	.10	.07
7	.02	.03	.09	.07	---	---	---	1.0	.40	.18	.10	.05
8	.02	---	.10	.06	1.2	---	---	---	---	.18	.10	.05
9	.01	.08	.08	.06	1.2	---	---	1.0	.44	.18	.10	.05
10	.01	.05	.08	.06	---	---	---	.96	.44	---	.08	.04
11	.02	.05	.14	1.0	---	---	---	.82	.44	.18	.08	.04
12	.02	.05	.17	.17	---	---	---	.82	.40	.18	.08	.04
13	.03	.05	.12	.12	---	---	---	.76	.32	.18	.08	.04
14	.02	.05	.09	.11	---	---	---	.76	---	---	.08	.04
15	.02	.08	.09	.76	---	---	---	.96	.29	.12	.08	.04
16	.02	.05	.09	.76	---	---	---	---	---	.12	.06	.04
17	.03	.12	.08	.76	---	---	---	1.0	.29	.12	.06	.04
18	.02	.08	.08	---	---	---	---	.89	.29	.10	.06	.04
19	.03	.07	.08	---	---	---	---	.82	.29	.12	.06	.03
20	.03	.21	.08	---	---	---	---	.82	.29	.11	.06	.03
21	.03	.18	.09	.76	---	---	---	.76	.29	---	.06	.03
22	.03	.09	.09	.70	---	---	---	.70	.25	.11	.05	---
23	.02	.07	.07	.64	---	---	---	.70	.25	.11	---	.05
24	.03	.10	.08	---	---	---	---	.70	.25	.11	.06	.04
25	.02	.08	.08	---	---	---	1.1	.70	.22	.10	.04	.04
26	.02	.08	.08	---	---	---	1.0	.70	.22	.10	.05	.04
27	.02	.08	---	---	---	---	.96	.64	---	---	.05	.04
28	---	.05	.07	---	---	---	.96	.64	.19	---	.04	.04
29	.05	.06	.08	---	---	---	.89	.64	.19	---	.05	---
30	.05	.32	.08	---	---	---	.82	.64	---	.12	.05	.01
31	.04	---	.07	1.1	---	---	---	.59	---	.10	.05	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11426196 CANYON CREEK BELOW TOWLE DIVERSION DAM, NEAR BLUE CANYON, CA

LOCATION.—Lat 39°14'31", long 120°45'03", in SE 1/4 NW 1/4 sec.21, T.16 N., R.11 E., Placer County, Hydrologic Unit 18020128, on left bank 4 ft downstream from Towle Diversion Dam, and 2.4 mi southwest of Blue Canyon.

DRAINAGE AREA.—1.35 mi^2.

PERIOD OF RECORD.—October 1999 to September 2000 (low-flow records only). Unpublished records for water years 1981–99 available in files of the U.S. Geological Survey.

GAGE.—Nonrecording gage read most days. Datum of gage is 4,320 ft above sea level (from topographic map).

REMARKS.—No records computed above 1.2 ft^3/s. Flow regulated by Towle Diversion Dam. Water from the Drum Canal is diverted out of Drum Forebay to Canyon Creek upstream. Most of this water is diverted at the Towle Diversion Dam. 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 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.12	---	.14	1.0	1.1	1.0	.76	.49	.38	.18	.14
2	.05	.12	.25	.13	---	1.1	1.0	1.0	.49	.36	.25	.12
3	.05	.12	.25	.10	1.0	1.1	1.0	.76	.49	.36	---	.12
4	.12	.12	.40	.12	1.0	1.1	1.0	.76	.44	.34	.14	.12
5	.09	.27	.25	.12	1.0	1.1	1.0	.82	.44	.56	.14	.19
6	.10	.14	.25	.12	1.0	1.2	1.0	1.0	.44	---	.14	.19
7	.09	.24	.25	.12	1.0	1.1	1.0	1.0	.64	.44	.14	.12
8	.07	.00	.22	.12	1.0	1.1	1.0	---	---	.44	.18	.17
9	.09	.24	.22	.12	1.0	1.1	1.0	1.0	.64	.44	.18	.12
10	.09	.24	.12	.12	1.2	1.1	1.0	.96	.49	---	.14	.14
11	.13	.24	.29	1.0	1.1	1.1	1.0	.82	.49	.25	.12	.10
12	.12	.24	.44	.25	---	1.1	1.0	.82	---	.25	.12	.10
13	.09	.24	.44	.18	---	1.1	---	.82	---	.29	.12	.10
14	.12	.12	.36	.22	---	1.1	1.0	.82	---	---	.12	.10
15	.09	.18	.25	1.0	---	1.1	1.0	.96	---	.21	.12	.10
16	.10	.40	.22	1.0	1.0	---	1.0	---	---	.21	.12	.06
17	.12	.25	.22	1.0	1.1	1.1	1.0	1.0	---	.18	.10	.06
18	.11	.25	.22	---	1.1	1.1	1.0	.89	---	.14	.10	.06
19	.10	.14	.22	---	1.1	1.1	1.0	.82	---	.13	.08	.06
20	.07	.27	.21	1.0	1.1	1.1	1.0	.82	---	.17	.08	.06
21	.17	.25	.25	1.0	1.1	1.1	1.0	.76	---	---	.10	.06
22	.17	.22	.19	.92	1.1	1.1	---	.76	---	.17	.22	---
23	.06	.22	.19	.70	---	1.1	---	.76	.29	.17	---	.29
24	.10	.25	.18	1.0	1.1	1.0	1.0	.76	.29	.44	.10	.12
25	.06	.17	.17	1.0	1.1	---	1.0	.76	.25	.44	.08	.07
26	.17	.17	.17	1.0	1.1	1.1	1.0	.76	.25	.44	.10	.07
27	.12	.17	.25	1.0	---	1.1	1.0	.76	---	---	.25	.06
28	---	.25	.22	1.0	1.1	1.1	.96	.64	.22	---	.06	.06
29	.12	.25	.18	1.0	1.1	1.0	.89	.64	.25	---	.08	---
30	.12	.44	.18	1.0	---	---	.82	.64	---	.18	.07	.06
31	.12	---	.25	---	---	1.0	---	.59	---	.18	.10	---
TOTAL	---	6.33	---	---	---	---	---	---	---	---	---	---
MEAN	---	.21	---	---	---	---	---	---	---	---	---	---
MAX	---	.44	---	---	---	---	---	---	---	---	---	---
MIN	---	.00	---	---	---	---	---	---	---	---	---	---
AC-FT	---	13	---	---	---	---	---	---	---	---	---	---

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 mi^2.

PERIOD OF RECORD.—October 1941 to current year.
CHEMICAL DATA: Water years 1977–80.
WATER TEMPERATURE: Water years 1959–83.
SEDIMENT DATA: Water year 1980 (periodic record).

REVISED RECORDS.—WSP 1931: Drainage area.

GAGE.—Water-stage recorder and ogee section of concrete debris dam. Datum of gage is 715.0 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.—Records good. Minor regulation by Lake Clementine, usable capacity, 12,800 acre-ft, formed by North Fork Dam. Storage in Big Reservoir and Lake Valley Reservoir (station 11426170), combined capacity, 10,300 acre-ft, upstream from station. Lake Valley Canal (station 11426190) diverts from North Fork of North Fork American River into Bear River Basin for power development in powerplants of Pacific Gas & Electric Co. Combined storage and diversion have small effect on natural flow. See schematic diagrams of Bear and lower Sacramento River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 65,400 ft^3/s, Dec. 23, 1964, gage height, 11.87 ft, from rating curve extended above 24,000 ft^3/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 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	2330	11,500	5.24	Feb. 27	0945	8,320	4.59
Feb. 14	1330	19,800	6.60	May 8	1400	4,510	3.62

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	75	212	83	849	2800	1120	1390	629	156	75	62
2	53	69	188	85	814	2280	1210	1480	596	148	74	87
3	53	65	160	86	766	1920	1500	1480	566	143	73	98
4	53	64	141	82	1050	1730	1740	1430	539	140	69	79
5	52	64	123	82	1080	1890	1920	1470	545	134	68	68
6	53	64	114	81	924	1870	1680	1410	505	131	66	64
7	51	68	109	78	799	1650	1540	1220	463	129	65	63
8	53	125	107	78	707	1730	1570	3230	497	127	64	61
9	52	135	104	78	648	1900	1490	2420	542	124	63	61
10	52	97	119	77	828	1810	1400	1600	440	121	62	61
11	51	82	110	103	1280	1640	1480	1230	394	119	62	61
12	50	77	103	228	2550	1570	1520	1020	367	114	61	61
13	50	74	102	165	4600	1510	2340	910	372	111	60	61
14	50	73	108	132	14300	1510	2190	850	383	109	59	61
15	50	77	105	157	6450	1570	1510	1030	381	104	59	61
16	49	88	101	641	3670	1530	1250	1230	350	101	58	62
17	48	133	98	520	2750	1460	1550	1120	319	99	58	61
18	48	138	97	1970	2130	1380	1660	1110	292	98	57	59
19	49	125	97	2380	1740	1520	1250	1190	282	98	55	59
20	50	250	97	2480	1540	1600	1100	1340	264	96	55	57
21	50	253	102	1620	1530	1340	1140	1410	241	93	56	56
22	50	173	103	891	1770	1200	1320	1480	227	91	57	58
23	50	134	100	678	3620	1220	1210	1430	217	89	56	60
24	49	114	97	4700	2360	1270	1180	2170	206	87	56	60
25	50	105	94	5610	1750	1330	1140	1610	199	85	55	58
26	52	100	92	2340	1550	1390	1260	1280	190	83	55	57
27	55	98	90	1440	6330	1480	1430	1120	184	82	54	57
28	153	95	89	1030	4570	1520	1670	1020	183	79	53	57
29	195	92	86	804	3330	1350	1350	952	175	77	53	57
30	100	132	85	784	---	1300	1230	802	166	76	55	57
31	81	---	85	1040	---	1190	---	691	---	76	55	---
TOTAL	1904	3239	3418	30523	76285	49460	43950	42125	10714	3320	1868	1884
MEAN	61.4	108	110	985	2631	1595	1465	1359	357	107	60.3	62.8
MAX	195	253	212	5610	14300	2800	2340	3230	629	156	75	98
MIN	48	64	85	77	648	1190	1100	691	166	76	53	56
AC-FT	3780	6420	6780	60540	151300	98100	87170	83550	21250	6590	3710	3740

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	104	369	899	1383	1479	1507	1576	1628	799	196	67.2	50.7
MAX	1749	3307	5781	7303	8403	5187	4490	3688	2855	928	214	121
(WY)	1963	1951	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000	
ANNUAL TOTAL	337704		268690			
ANNUAL MEAN	925		734		835	
HIGHEST ANNUAL MEAN					1843	1982
LOWEST ANNUAL MEAN					88.5	1977
HIGHEST DAILY MEAN	12500	Feb 9	14300	Feb 14	50100	Jan 2 1997
LOWEST DAILY MEAN	48	Oct 17	48	Oct 17	.00	Aug 27 1944
ANNUAL SEVEN-DAY MINIMUM	49	Oct 13	49	Oct 13	.00	Sep 2 1944
INSTANTANEOUS PEAK FLOW			19800	Feb 14	65400	Dec 23 1964
INSTANTANEOUS PEAK STAGE			6.60	Feb 14	11.87	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	669800		532900		604800	
10 PERCENT EXCEEDS	2250		1730		2070	
50 PERCENT EXCEEDS	240		139		277	
90 PERCENT EXCEEDS	57		56		43	

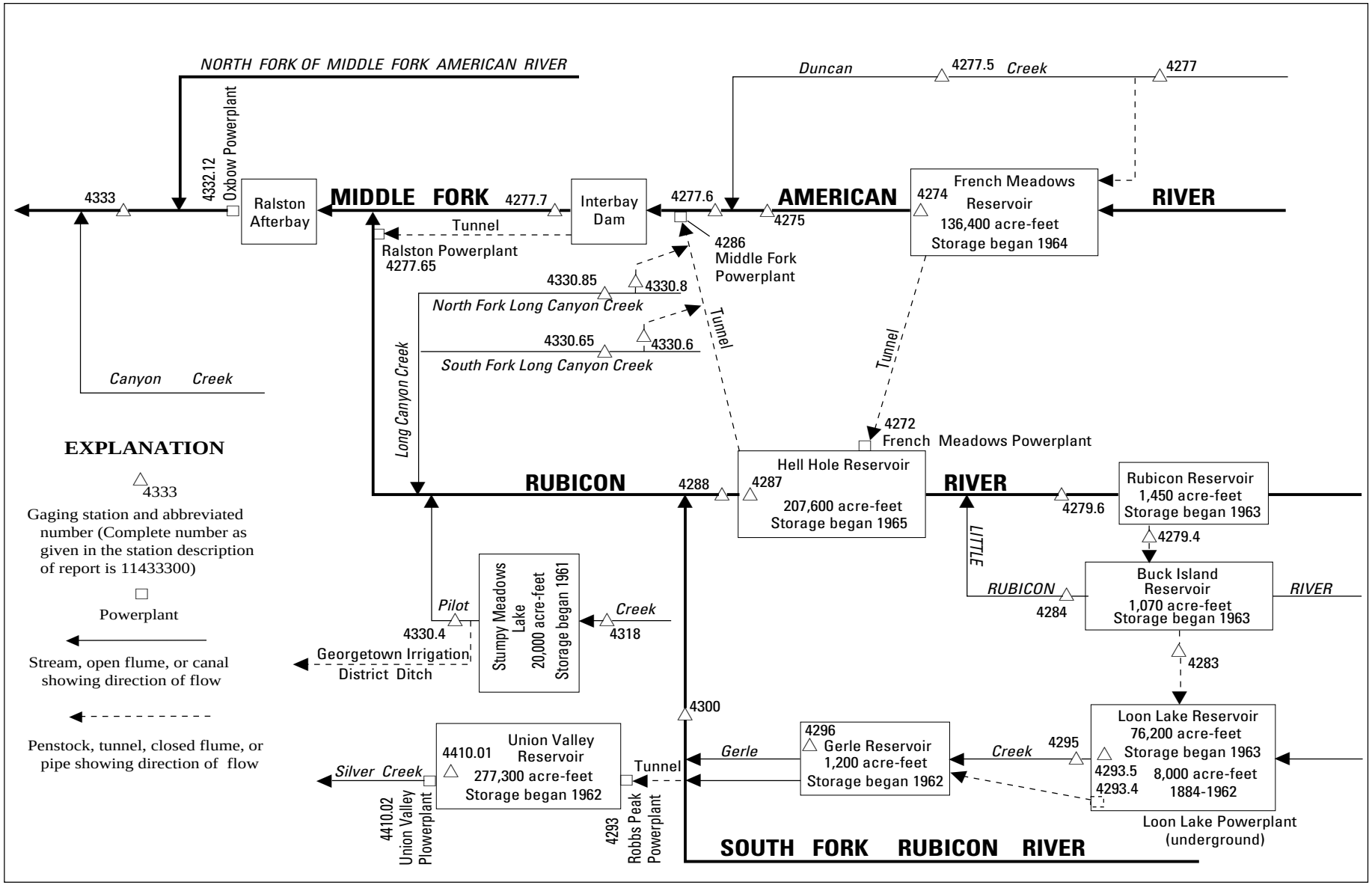

Figure 34. Diversions and storage in Middle Fork American and Rubicon River Basins.

11427400 FRENCH MEADOWS RESERVOIR NEAR FORESTHILL, CA

LOCATION.—Lat 39°06'32", long 120°25'49", in SW 1/4 NE 1/4 sec.32, T.15 N., R.14 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank, 2.2 mi upstream from dam, on Middle Fork American River, 6.9 mi upstream from Chipmunk Creek, and 21 mi northeast of Foresthill.

DRAINAGE AREA.—47.0 mi^2.

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 ft^3/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, 128,700 acre-ft, May 30, elevation, 5,257.5 ft; minimum, 69,300 acre-ft, Jan. 14, elevation, 5,207.0 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey by Placer County Water Agency in 1965)

5,125	10,800	5,200	62,400
5,130	13,100	5,230	94,100
5,150	23,700	5,270	146,500
5,170	37,100		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92500	75600	76200	71400	75700	82000	83100	111000	128200	120800	109800	92100
2	92000	75600	76200	71300	75600	81900	83600	111900	128200	120500	109200	91700
3	92000	75600	76200	71200	75600	81700	84400	112900	127900	120500	108600	91300
4	92000	75600	76200	71000	75700	81800	85400	113800	127600	120300	108000	91000
5	91900	75600	76200	70900	75900	81900	86600	114700	127500	120000	107500	90300
6	91900	75500	76200	70700	76100	81500	87400	115700	127200	119700	107100	89600
7	91900	75600	76200	70600	76000	81300	88000	117100	127000	119500	106500	88900
8	91700	75700	76200	70400	75700	81100	89200	120100	126800	119300	106000	88500
9	91000	75700	76300	70300	75600	80900	90300	121600	126700	119200	105400	87900
10	90300	75600	76200	70100	75800	80600	91200	122800	126300	118800	104900	87500
11	89600	75600	76200	70200	76000	80600	92100	123300	126000	118500	104300	87000
12	88900	75600	76200	70000	76200	80600	93000	123600	125600	118300	103900	86500
13	88300	75600	76300	69600	77200	80500	95500	123600	125300	118200	103600	85900
14	87500	75600	76300	69300	80900	80400	96600	123700	125100	117900	103000	85500
15	86700	75600	75900	69400	82100	80300	97800	123800	124900	117500	102400	84900
16	85900	75700	75700	69500	82700	80100	98800	124000	124700	117200	101700	84600
17	85300	75700	75400	69500	82600	80000	100000	124300	124500	116900	101100	84300
18	84500	75700	75100	70300	82700	79800	100700	124300	124500	116500	100500	83600
19	83700	75900	74700	71200	82600	80400	101000	124500	124400	116100	100000	83100
20	83100	76000	74400	72500	82500	80100	101400	124800	124100	115700	99200	82400
21	82300	76000	74000	73000	82600	80500	102200	125300	124000	115300	98500	82100
22	81500	76000	73700	73100	82700	80600	103200	125900	123600	114800	97800	81400
23	80800	76000	73400	73100	82700	80700	104000	126400	123300	114400	97100	81400
24	80000	76000	73100	74900	82400	80600	104500	127200	123200	114000	96500	81300
25	79300	76000	72900	76000	82100	81000	105300	127600	122900	113500	95800	81000
26	78500	76000	72800	76400	82200	81300	105900	127900	122500	113000	95200	80600
27	77900	76000	72500	76600	82600	81700	107000	127900	122100	112500	94900	80000
28	77500	76000	72200	76500	82300	82000	108000	128100	121700	112000	94300	79600
29	76700	76000	72000	76300	82200	82200	109000	128500	121300	111400	93700	79100
30	76000	76100	71800	76300	---	82400	110000	128600	121000	111000	93200	79100
31	75600	---	71600	75900	---	82600	---	128500	---	110300	92600	---
MAX	92500	76100	76300	76600	82700	82600	110000	128600	128200	120800	109800	92100
MIN	75600	75500	71600	69300	75600	79800	83100	111000	121000	110300	92600	79100
a	5213.2	5213.7	5209.3	5213.5	5219.4	5219.8	5243.2	5257.3	5251.8	5243.5	5228.7	5216.5
b	-17400	+500	-4500	+4300	+6300	+400	+27400	+18500	-7500	-10700	-17700	-13500

CAL YR 1999 b +1300
WTR YR 2000 b -13900

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 mi^2.

PERIOD OF RECORD.—October 1951 to current year.

REVISED RECORDS.—WSP 1445: 1953–54. WSP 1931: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,920 ft above sea level, from topographic map. Prior to Oct. 1, 1962, at site 0.8 mi upstream at different datum.

REMARKS.—Considerable regulation by French Meadows Reservoir (station 11427400) 0.6 mi upstream beginning December 1964. Water diverted into basin from Duncan Creek to French Meadows Reservoir since December 1964. Water diverted out of basin from French Meadows Reservoir through French Meadows Powerplant (station 11427200) to Hell Hole Reservoir (station 11428700) since December 1965. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,500 ft^3/s, Jan. 31, 1963, gage height, 14.20 ft, from rating curve extended above 1,100 ft^3/s on basis of peak flow at former site; minimum, 0.3 ft^3/s, Oct. 4, 5, 21–25, 1960, Oct. 5, 6, 1961. Maximum discharge since construction of French Meadows Dam in 1964, 6,050 ft^3/s, May 16, 1996, gage height, 11.61 ft, from flow over spillway of French Meadows Reservoir; minimum daily, 0.8 ft^3/s, Oct. 22–25, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	11	10	9.9	13	14	14	9.5	11	9.7	9.9	9.9
2	10	10	10	9.9	13	14	14	9.5	11	9.7	9.9	10
3	11	10	10	9.9	13	14	14	9.3	11	9.7	9.9	9.7
4	11	10	10	9.9	13	14	15	9.1	11	9.7	9.9	9.5
5	11	10	10	9.9	13	15	14	9.3	11	9.7	9.9	9.5
6	11	10	10	9.9	13	14	13	9.8	11	9.7	9.9	9.5
7	11	11	10	9.9	13	14	11	12	11	9.7	9.9	9.5
8	11	11	10	9.9	13	13	11	15	12	9.7	10	9.5
9	11	11	10	9.9	13	13	11	12	11	9.7	9.9	9.5
10	11	10	10	9.9	15	13	11	12	11	9.6	9.9	9.5
11	11	10	9.9	11	14	13	10	11	11	9.5	9.9	9.5
12	11	10	10	10	14	14	10	11	11	9.5	9.9	10
13	11	10	10	10	24	14	14	11	11	9.5	9.9	11
14	11	10	10	9.9	60	14	13	11	11	9.5	9.9	11
15	11	11	10	11	23	15	12	11	11	9.5	9.8	11
16	11	10	10	11	19	15	12	12	11	9.5	9.7	11
17	11	8.8	10	11	17	15	13	12	11	9.5	9.7	11
18	11	8.4	10	16	16	15	13	11	11	9.3	9.7	11
19	11	9.0	10	14	15	16	12	11	11	9.3	9.7	10
20	11	9.1	10	15	15	16	12	11	11	9.3	9.7	9.9
21	11	8.9	9.9	13	15	15	12	11	11	9.3	9.7	9.9
22	11	8.7	9.9	12	15	15	11	11	11	9.3	9.7	9.9
23	11	9.3	9.9	13	14	15	11	11	11	9.3	9.7	9.7
24	11	9.7	9.9	40	14	15	11	11	11	9.3	9.7	9.7
25	11	9.7	9.9	24	13	15	10	10	11	9.4	9.7	9.7
26	11	9.7	9.9	17	14	15	10	10	11	9.5	9.7	9.6
27	11	9.7	9.9	14	19	16	10	10	11	9.5	9.7	9.5
28	11	9.7	9.9	13	16	15	9.9	10	10	9.6	9.7	9.5
29	11	9.7	9.9	13	15	15	9.9	10	9.7	9.7	9.7	9.5
30	11	10	9.9	14	---	14	9.7	9.9	9.7	9.9	9.7	9.5
31	11	---	9.9	13	---	14	---	9.9	---	9.9	9.7	---
TOTAL	338.7	295.4	308.8	403.9	484	449	353.5	333.3	327.4	296.0	303.7	298.0
MEAN	10.9	9.85	9.96	13.0	16.7	14.5	11.8	10.8	10.9	9.55	9.80	9.93
MAX	11	11	10	40	60	16	15	15	12	9.9	10	11
MIN	9.7	8.4	9.9	9.9	13	13	9.7	9.1	9.7	9.3	9.7	9.5
AC-FT	672	586	613	801	960	891	701	661	649	587	602	591
a	17320	.00	4500	6770	10210	14260	6910	14310	14510	10300	16870	12390

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

11427500 MIDDLE FORK AMERICAN RIVER AT FRENCH MEADOWS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1964, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.8	20.3	101	92.5	143	151	356	550	297	52.4	6.04	2.10
MAX	222	106	882	377	561	367	537	1110	775	232	25.3	5.06
(WY)	1963	1964	1956	1956	1963	1960	1962	1958	1952	1952	1952	1952
MIN	.40	1.60	1.76	5.57	40.1	55.2	187	210	69.7	6.22	1.57	.64
(WY)	1961	1960	1960	1960	1955	1962	1955	1959	1959	1959	1959	1961

SUMMARY STATISTICS	WATER YEARS 1952 - 1964	
ANNUAL MEAN	149	
HIGHEST ANNUAL MEAN	265	1956
LOWEST ANNUAL MEAN	68.7	1961
HIGHEST DAILY MEAN	11300	Dec 23 1955
LOWEST DAILY MEAN	.30	Oct 22 1960
ANNUAL SEVEN-DAY MINIMUM	.34	Oct 19 1960
INSTANTANEOUS PEAK FLOW	21500	Jan 31 1963
INSTANTANEOUS PEAK STAGE	14.20	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	108000	
10 PERCENT EXCEEDS	446	
50 PERCENT EXCEEDS	38	
90 PERCENT EXCEEDS	1.5	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	15.1	10.2	12.8	19.9	18.3	22.6	23.6	60.4	43.0	16.3	8.56	11.8
MAX	266	42.7	83.3	249	200	375	248	518	272	136	15.0	136
(WY)	1966	1966	1965	1997	1982	1986	1965	1965	1995	1983	1965	1965
MIN	1.67	3.16	3.91	4.37	4.53	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	18314.3		4191.7			
ANNUAL MEAN	50.2		11.5		21.9	
HIGHEST ANNUAL MEAN					97.3	1965
LOWEST ANNUAL MEAN					3.90	1977
HIGHEST DAILY MEAN	515	May 14	60	Feb 14	3430	May 16 1996
LOWEST DAILY MEAN	8.4	Nov 18	8.4	Nov 18	.80	Oct 22 1964
ANNUAL SEVEN-DAY MINIMUM	8.9	Nov 17	8.9	Nov 17	.84	Oct 21 1964
INSTANTANEOUS PEAK FLOW			105	Feb 14	6050	May 16 1996
INSTANTANEOUS PEAK STAGE			6.81	Feb 14	11.61	May 16 1996
ANNUAL RUNOFF (AC-FT)	36330		8310		15870	
TOTAL DIVERSION (AC-FT)a	120200		128300			
10 PERCENT EXCEEDS	36		15		15	
50 PERCENT EXCEEDS	10		11		9.7	
90 PERCENT EXCEEDS	9.9		9.5		5.8	

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

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA

LOCATION.—Lat 39°08'09", long 120°28'39", in NE 1/4 NW 1/4 sec.24, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe National Forest, on left bank, 0.2 mi upstream from diversion dam, 0.5 mi downstream from Little Duncan Creek, 2 mi northwest of French Meadows, and 20 mi northeast of Foresthill.

DRAINAGE AREA.—9.94 mi^2.

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 ft^3/s, Dec. 22, 1964, gage height, 10.6 ft, from floodmarks, from rating curve extended above 400 ft^3/s on basis of computation of flow over diversion dam; maximum gage height, 10.95, Jan. 1, 1997 (backwater from debris dam); minimum daily, 0.10 ft^3/s, several days during July and August 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	1545	325	7.36	Apr. 13	0515	304	7.32
Jan. 24	1815	621	7.85	May 8	0630	421	7.53
Feb. 14	0045	576	7.78				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	1.4	5.9	2.8	31	33	70	140	30	3.7	1.2	1.7
2	.79	1.3	5.1	2.8	32	33	91	143	27	3.7	1.2	6.7
3	.79	1.3	4.4	2.8	30	32	117	139	24	3.5	1.2	2.1
4	.77	1.2	4.2	2.7	30	34	148	137	22	3.2	1.1	1.6
5	.77	1.2	4.4	2.9	30	34	151	134	20	3.2	1.1	1.4
6	1.0	1.2	4.1	2.8	30	30	141	114	18	3.1	1.1	1.3
7	1.1	1.4	3.9	2.6	28	27	138	165	17	3.1	1.0	1.2
8	.94	4.5	4.1	2.6	27	26	139	332	22	3.0	.99	1.1
9	.91	3.1	3.5	2.5	28	25	128	210	18	2.8	.97	1.0
10	.85	3.1	3.6	2.7	43	24	132	155	16	2.6	.97	1.0
11	.84	3.1	3.6	7.1	38	26	136	117	14	2.6	.96	1.0
12	.83	2.7	3.7	5.6	34	28	143	94	14	2.5	.92	1.0
13	.80	2.3	4.1	5.4	85	32	253	80	13	2.4	.87	.99
14	.79	2.2	4.0	5.9	431	35	185	74	12	2.4	.86	.94
15	.78	3.1	3.8	17	182	39	142	89	10	2.3	.83	.95
16	.76	3.6	3.6	19	119	40	120	79	9.6	2.2	.81	.95
17	.76	7.2	3.8	21	83	40	155	79	8.7	2.1	.79	.91
18	.76	4.1	4.3	152	64	46	118	85	8.2	2.1	.75	.85
19	.76	9.9	5.9	130	55	56	97	96	7.6	2.0	.74	.82
20	.76	15	6.7	166	50	53	94	107	7.0	1.9	.79	.79
21	.76	8.1	5.2	74	46	47	105	115	6.5	1.8	.79	.78
22	.76	5.2	4.4	43	41	48	110	112	6.0	1.7	.77	.88
23	.76	4.1	4.1	35	38	52	110	124	5.6	1.7	.75	.99
24	.77	3.5	3.9	269	33	57	107	130	5.3	1.6	.73	.93
25	.78	3.6	3.8	174	30	64	110	102	5.0	1.5	.71	.87
26	.81	4.0	3.6	89	32	72	123	80	4.7	1.5	.69	.85
27	2.5	3.7	3.4	61	59	85	149	67	4.5	1.5	.69	.83
28	19	3.2	3.4	47	40	82	150	57	4.2	1.4	.68	.80
29	2.4	3.2	3.3	38	36	76	128	48	3.9	1.3	.69	.79
30	1.7	6.3	2.8	34	---	73	130	40	3.7	1.3	.83	.74
31	1.5	---	2.8	30	---	68	---	35	---	1.2	.85	---
TOTAL	48.28	117.8	127.4	1450.2	1805	1417	3920	3479	367.5	70.9	27.33	36.76
MEAN	1.56	3.93	4.11	46.8	62.2	45.7	131	112	12.2	2.29	.88	1.23
MAX	19	15	6.7	269	431	85	253	332	30	3.7	1.2	6.7
MIN	.76	1.2	2.8	2.5	27	24	70	35	3.7	1.2	.68	.74
AC-FT	96	234	253	2880	3580	2810	7780	6900	729	141	54	73

11427700 DUNCAN CREEK NEAR FRENCH MEADOWS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.00	17.5	34.0	44.5	41.9	51.5	77.2	121	61.2	9.29	1.59	1.13
MAX	51.1	172	256	213	291	161	162	245	316	100	10.4	4.51
(WY)	1963	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1960 - 2000	
ANNUAL TOTAL	16197.88		12867.17			
ANNUAL MEAN	44.4		35.2		38.7	
HIGHEST ANNUAL MEAN					86.8	1982
LOWEST ANNUAL MEAN					4.27	1977
HIGHEST DAILY MEAN	408	May 25	431	Feb 14	2800	Jan 1 1997
LOWEST DAILY MEAN	.76	Oct 16	.68	Aug 28	.10	Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	.76	Oct 16	.71	Aug 23	.11	Aug 8 1977
INSTANTANEOUS PEAK FLOW			621	Jan 24	3650	Dec 22 1964
INSTANTANEOUS PEAK STAGE			7.85	Jan 24	a10.95	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	32130		25520		28050	
10 PERCENT EXCEEDS	142		121		108	
50 PERCENT EXCEEDS	11		4.4		9.3	
90 PERCENT EXCEEDS	.94		.81		.76	

a Backwater from debris dam.

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 mi^2.

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 ft^3/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 ft^3/s, Dec. 22, 1964, gage height, 8.74 ft, in gage well, 10.0 ft, from floodmarks, from rating curve extended above 400 ft^3/s on basis of computation of peak flow over diversion dam; no flow at times in 1965–66.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	1.5	6.1	2.8	14	15	18	14	13	3.8	1.3	1.5
2	.81	1.4	5.4	2.8	14	15	19	14	12	3.7	1.2	7.1
3	.82	1.3	4.5	2.8	15	14	21	14	12	3.6	1.2	2.3
4	.81	1.2	4.4	2.8	15	15	22	14	12	3.5	1.2	1.7
5	.81	1.2	4.7	2.6	15	15	21	14	12	3.4	1.2	1.5
6	1.1	1.2	4.3	2.7	15	15	20	14	12	3.4	1.1	1.4
7	1.2	1.4	4.3	2.6	15	14	19	15	12	3.3	1.0	1.2
8	1.1	4.6	3.7	2.6	15	14	18	52	12	3.2	1.0	1.1
9	1.0	3.2	3.8	2.6	15	14	17	17	12	3.0	1.0	1.1
10	1.0	3.2	3.8	2.8	16	14	17	15	12	2.8	1.0	1.1
11	.95	3.1	3.7	7.3	16	14	17	15	12	2.7	1.0	1.1
12	.95	2.8	3.9	6.1	15	14	16	14	11	2.6	1.0	1.0
13	.94	2.4	4.3	5.4	23	15	20	14	11	2.5	.95	1.0
14	.89	2.2	3.8	6.1	247	16	18	14	11	2.4	.93	.95
15	.88	3.0	3.7	10	35	17	17	14	11	2.3	.89	.95
16	.88	3.3	3.8	12	21	18	17	14	9.7	2.2	.87	.95
17	.88	7.4	3.9	12	18	17	18	14	8.9	2.2	.84	.94
18	.88	4.2	4.5	24	17	18	17	15	8.4	2.1	.83	.87
19	.88	6.8	5.7	23	16	20	17	14	7.9	2.0	.81	.81
20	.88	12	7.1	25	16	19	16	14	7.4	1.9	.84	.81
21	.88	8.6	5.6	18	16	18	16	14	6.9	1.8	.84	.81
22	.88	5.5	4.8	15	15	18	16	14	6.5	1.8	.84	.86
23	.88	4.2	4.4	14	15	18	15	14	6.1	1.7	.83	1.0
24	.88	3.6	4.1	118	14	19	15	14	5.7	1.6	.79	.96
25	.88	3.6	4.0	30	14	20	15	14	5.4	1.6	.78	.93
26	.91	4.1	3.8	19	14	21	15	14	5.1	1.5	.77	.87
27	1.8	3.8	3.6	17	17	22	15	13	4.8	1.5	.77	.81
28	9.3	3.3	3.4	16	15	21	15	13	4.5	1.5	.77	.81
29	2.7	3.2	3.2	15	15	20	14	13	4.3	1.4	.75	.81
30	1.9	6.2	3.0	14	---	19	14	13	4.0	1.3	.85	.80
31	1.6	---	3.1	14	---	18	---	13	---	1.3	.92	---
TOTAL	41.08	113.5	132.4	448.0	708	527	515	474	272.6	73.6	29.07	38.04
MEAN	1.33	3.78	4.27	14.5	24.4	17.0	17.2	15.3	9.09	2.37	.94	1.27
MAX	9.3	12	7.1	118	247	22	22	52	13	3.8	1.3	7.1
MIN	.81	1.2	3.0	2.6	14	14	14	13	4.0	1.3	.75	.80
AC-FT	81	225	263	889	1400	1050	1020	940	541	146	58	75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	2.12	8.54	21.7	30.6	22.0	19.3	15.7	28.7	13.7	3.99	1.42	1.10
MAX	17.3	76.1	244	225	237	80.3	91.7	149	107	21.9	5.87	3.61
(WY)	1983	1982	1965	1997	1986	1986	1982	1967	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	3780.09		3372.29			
ANNUAL MEAN	10.4		9.21		14.1	
HIGHEST ANNUAL MEAN					43.1	1982
LOWEST ANNUAL MEAN					2.16	1977
HIGHEST DAILY MEAN	108	May 25	247	Feb 14	2560	Jan 1 1997
LOWEST DAILY MEAN	.81	Sep 29	.75	Aug 29	.00	Sep 10 1965
ANNUAL SEVEN-DAY MINIMUM	.81	Sep 29	.78	Aug 23	.00	Sep 10 1965
INSTANTANEOUS PEAK FLOW			409	Feb 14	3640	Dec 22 1964
INSTANTANEOUS PEAK STAGE			4.00	Feb 14	8.74	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	7500		6690		10190	
10 PERCENT EXCEEDS	19		18		16	
50 PERCENT EXCEEDS	10		4.8		5.5	
90 PERCENT EXCEEDS	1.0		.88		.74	

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 mi^2.

PERIOD OF RECORD.—August 1965 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,540 ft above sea level, from topographic map. Prior to May 15, 1980, at datum 5.00 ft higher. May 15, 1980, to Oct. 11, 1984, at datum 4.00 ft higher.

REMARKS.—Considerable regulation by French Meadows Reservoir (station 11427400) 11 mi upstream. Transbasin diversions from French Meadows Reservoir to Hell Hole Reservoir (station 11428700) through French Meadows Powerplant (station 11427200). See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,900 ft^3/s, Jan. 2, 1997, gage height, 14.6 ft, from floodmark, from rating curve extended above 4,200 ft^3/s; minimum daily, 5.3 ft^3/s, Sept. 11, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	37	20	113	216	167	94	66	29	19	19
2	17	17	31	20	112	201	169	91	66	29	18	38
3	19	17	29	20	109	189	175	88	64	29	18	24
4	18	17	25	20	125	183	183	85	63	29	18	19
5	18	17	25	19	120	193	182	83	61	28	18	18
6	19	17	24	19	115	187	173	82	60	28	18	18
7	18	19	25	20	109	176	161	108	59	28	17	17
8	18	36	23	19	104	175	156	222	69	27	17	17
9	18	25	24	19	103	171	149	141	62	27	17	17
10	17	21	24	19	134	162	141	123	58	26	17	16
11	17	20	23	31	143	166	136	114	56	26	17	16
12	17	20	23	38	153	166	134	108	55	26	17	16
13	17	19	27	26	255	168	184	103	53	25	17	18
14	17	19	24	26	990	178	176	99	51	25	17	17
15	16	21	23	46	488	189	155	108	49	24	16	17
16	17	22	23	77	346	194	147	123	47	24	16	17
17	17	33	23	64	276	193	167	120	45	24	16	17
18	17	24	23	155	233	194	163	113	44	23	16	17
19	17	27	23	134	206	210	149	105	43	23	16	16
20	17	45	26	177	193	211	142	100	41	23	16	15
21	17	38	25	120	188	196	135	96	40	22	16	15
22	17	27	24	94	191	188	132	91	38	22	16	16
23	17	23	23	102	200	188	126	88	37	22	16	16
24	16	22	22	488	174	190	120	85	36	21	15	16
25	17	21	22	407	161	192	114	82	36	21	15	16
26	17	21	21	230	162	195	111	80	35	21	15	16
27	19	21	21	166	329	202	109	77	34	20	15	15
28	56	21	21	135	259	201	107	74	33	20	15	15
29	24	20	20	116	241	191	102	72	31	20	15	15
30	19	29	20	123	---	185	97	70	30	20	16	15
31	18	---	20	123	---	174	---	68	---	19	15	---
TOTAL	585	697	744	3073	6332	5824	4362	3093	1462	751	510	524
MEAN	18.9	23.2	24.0	99.1	218	188	145	99.8	48.7	24.2	16.5	17.5
MAX	56	45	37	488	990	216	184	222	69	29	19	38
MIN	16	17	20	19	103	162	97	68	30	19	15	15
AC-FT	1160	1380	1480	6100	12560	11550	8650	6130	2900	1490	1010	1040

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.4	46.6	89.6	178	177	212	180	183	98.5	36.8	19.5	17.4
MAX	270	262	446	781	969	696	601	600	451	184	33.2	29.5
(WY)	1966	1984	1997	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	48938		27957			
ANNUAL MEAN	134		76.4		105	
HIGHEST ANNUAL MEAN					271	1982
LOWEST ANNUAL MEAN					14.3	1977
HIGHEST DAILY MEAN	963	Feb 9	990	Feb 14	7600	Jan 2 1997
LOWEST DAILY MEAN	16	Oct 15	15	Aug 24	5.3	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	17	Oct 10	15	Aug 23	5.5	Sep 8 1977
INSTANTANEOUS PEAK FLOW			1340	Feb 14	13900	Jan 2 1997
INSTANTANEOUS PEAK STAGE			8.17	Feb 14	14.60	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	97070		55450		76210	
10 PERCENT EXCEEDS	389		188		252	
50 PERCENT EXCEEDS	43		29		39	
90 PERCENT EXCEEDS	18		17		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 left bank, at Interbay Dam, 3.3 mi upstream from Big Mosquito Creek, and 10.6 mi east of Foresthill.

DRAINAGE AREA.—89.1 mi^2.

PERIOD OF RECORD.—October 1965 to current year (since October 1985, operated as low-flow station only).

GAGE.—Acoustic-velocity meter system. Elevation of gage is 2,470 ft above sea level, from topographic map. Prior to February 1986, water-stage recorder at same site. March 1986 to September 1987, nonrecording gage and V-notch sharp-crested weir at same site and datum as previous gage.

REMARKS.—Flow regulated by French Meadows Reservoir (station 11427400) and after Aug. 22, 1966, by Interbay Reservoir (usable capacity, 130 acre-ft between normal operating limits) 500 ft upstream. Water is diverted out of the basin from French Meadows Reservoir to Hell Hole Reservoir (station 11428700) and from Interbay Reservoir to Ralston Powerplant (station 11427765). Water is diverted into the basin from Hell Hole Reservoir to Middle Fork Powerplant (station 11428600) and through South Fork and North 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 ft^3/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 ft^3/s, Jan. 13, 1980, gage height, 7.95 ft; minimum daily, 1.0 ft^3/s, Oct. 25–30, 1966, Jan. 19, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	23	23	23	23	23	e23	23	e23	21	20
2	20	23	23	23	23	23	23	e23	23	e23	20	23
3	21	23	23	23	23	23	e23	23	23	e23	20	23
4	22	23	23	23	23	23	e23	23	23	e23	20	23
5	21	23	23	23	23	23	e23	23	23	e23	20	e20
6	21	23	23	23	23	23	e23	23	23	23	20	e18
7	21	23	23	23	23	23	e23	23	23	23	20	e17
8	20	23	23	23	23	23	e23	23	23	23	20	e17
9	20	23	23	23	23	23	e23	23	23	23	20	e17
10	20	23	23	23	23	23	e23	23	23	23	20	e16
11	20	23	23	23	23	23	e23	23	23	23	20	e16
12	20	23	23	23	23	23	e23	23	23	23	20	e16
13	19	23	23	23	23	23	e23	23	23	23	20	e18
14	20	23	23	23	---	23	e24	23	23	23	19	e17
15	20	23	23	23	23	23	e24	23	23	23	19	e17
16	22	23	23	23	23	23	e23	23	23	23	19	e17
17	23	23	23	23	23	23	e23	23	23	23	19	e17
18	23	23	23	23	23	23	e23	23	23	23	19	e17
19	23	23	23	23	23	23	e23	23	23	23	19	e16
20	23	23	23	23	23	23	e23	23	23	23	19	e15
21	23	23	23	23	23	23	e23	23	23	23	19	e15
22	23	23	23	23	23	23	e23	23	23	23	19	e16
23	23	23	23	23	23	23	e23	23	23	23	19	e16
24	23	23	23	---	23	23	e23	23	23	23	19	e16
25	23	23	23	23	23	23	e23	23	23	23	19	e16
26	23	23	23	23	23	23	e23	23	23	23	19	e16
27	23	23	23	23	23	23	e23	23	23	23	19	e15
28	23	23	23	23	23	23	e23	23	23	23	19	e15
29	23	23	23	23	23	23	e23	23	23	22	19	e15
30	23	23	23	23	---	23	e23	23	23	21	19	e15
31	23	---	23	23	---	23	---	23	---	21	19	---
TOTAL	672	690	713	---	---	713	692	713	690	708	603	515
MEAN	21.7	23.0	23.0	---	---	23.0	23.1	23.0	23.0	22.8	19.5	17.2
MAX	23	23	23	---	---	23	24	23	23	23	21	23
MIN	19	23	23	---	---	23	23	23	23	21	19	15
AC-FT	1330	1370	1410	---	---	1410	1370	1410	1370	1400	1200	1020
a	22660	29190	18700	16680	28530	44130	28830	42830	44190	33630	36660	20720

e Estimated.
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		FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR
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			
TOTAL DIVERSION (AC-FT) a			455700	366800
10 PERCENT EXCEEDS	141			
50 PERCENT EXCEEDS	22			
90 PERCENT EXCEEDS	11			

a Diversion, in acre-feet, through Ralston Powerplant, provided by Placer County Water Agency.

11427940 RUBICON–ROCKBOUND TUNNEL NEAR MEEKS BAY, CA

LOCATION.—Lat 38°59'16", long 120°13'29", in NE 1/4 SE 1/4 sec.8, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at tunnel intake, 100 ft upstream from diversion dam on Rubicon River, 3.5 mi upstream from Rubicon Springs, and 6.4 mi southwest of Meeks Bay.

PERIOD OF RECORD.—December 1963 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,533.23 ft above sea level (levels by Sacramento Municipal Utility District). Auxiliary water-stage recorder since Aug. 26, 1966, 220 ft downstream from tunnel outlet at different datum.

REMARKS.—Tunnel diverts water from Rubicon River to Rockbound Lake which flows into Buck Island Lake. Water is then diverted via Buck–Loon Tunnel (station 11428300) to Loon Lake (station 11429350) for power development. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records were collected by Sacramento Municipal Utility District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.3	17	1.9	25	32	87	350	251	110	3.4	.00
2	.00	5.6	17	1.9	25	29	117	389	266	85	3.4	.01
3	.00	3.9	14	1.6	27	27	187	405	276	75	3.4	9.4
4	.00	2.9	9.8	1.3	27	29	270	450	297	64	3.4	23
5	78	2.3	8.7	.95	24	36	310	490	338	54	3.0	21
6	49	1.8	7.8	.65	22	33	264	366	301	27	2.5	15
7	11	1.1	7.9	.50	22	28	236	391	281	.08	1.8	11
8	4.5	1.5	7.2	.28	23	25	244	884	277	.01	1.1	6.4
9	.36	3.1	6.9	.17	30	24	202	593	199	.01	.49	3.2
10	.10	4.7	6.6	.14	34	23	195	308	163	.18	.08	1.5
11	.05	5.0	6.3	.25	30	25	230	189	161	17	.00	.41
12	.02	5.2	6.4	.54	26	32	265	144	185	36	.00	.02
13	.01	5.2	7.2	.79	40	42	500	133	239	39	.00	.00
14	.00	5.1	7.5	1.3	342	57	280	143	306	35	.00	.00
15	.00	7.6	7.3	7.0	214	73	159	175	310	31	.00	.00
16	.00	14	6.8	24	126	73	112	173	286	27	.00	.00
17	.00	43	e6.8	22	86	68	113	142	239	24	.00	.00
18	.00	37	e6.6	100	56	67	103	190	233	20	.00	.00
19	.00	53	e6.5	226	41	98	84	301	222	17	.00	.00
20	.00	108	e6.5	306	37	108	103	405	199	13	.00	.00
21	.00	57	e6.4	189	35	72	156	503	187	11	.00	.00
22	.00	30	e6.4	98	31	55	191	552	178	9.7	.00	.00
23	.00	18	e6.3	60	30	68	177	607	157	8.6	.00	.00
24	.00	10	6.2	109	30	83	179	899	152	7.5	.00	.00
25	.00	7.7	5.5	158	28	108	201	770	141	6.4	.00	.00
26	.00	7.6	4.8	86	28	133	273	585	136	5.4	.00	.00
27	.00	8.2	4.1	55	56	153	379	485	151	4.4	.00	.00
28	122	7.6	3.4	38	48	141	403	506	139	4.5	.00	.00
29	66	7.3	3.0	31	38	114	270	497	142	4.3	.00	.00
30	24	11	2.6	28	---	108	263	373	131	3.9	.00	.00
31	11	---	2.4	25	---	94	---	281	---	3.6	.00	---
TOTAL	366.04	481.7	221.9	1574.27	1581	2058	6553	12679	6543	743.58	22.57	90.94
MEAN	11.8	16.1	7.16	50.8	54.5	66.4	218	409	218	24.0	.73	3.03
MAX	122	108	17	306	342	153	500	899	338	110	3.4	23
MIN	.00	1.1	2.4	.14	22	23	84	133	131	.01	.00	.00
AC-FT	726	955	440	3120	3140	4080	13000	25150	12980	1470	45	180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	15.9	48.2	45.1	50.1	43.7	67.1	156	361	324	116	18.4	10.4
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	40861.78		32915.00			
ANNUAL MEAN	112		89.9		105	
HIGHEST ANNUAL MEAN					197	1982
LOWEST ANNUAL MEAN					30.5	1977
HIGHEST DAILY MEAN	848	May 25	899	May 24	1180	Jan 1 1997
LOWEST DAILY MEAN	.00	Sep 2	.00	Oct 1	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 2	.00	Oct 14	.00	Oct 1 1963
ANNUAL RUNOFF (AC-FT)	81050		65290		75900	
10 PERCENT EXCEEDS	384		280		338	
50 PERCENT EXCEEDS	24		24		27	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated.

11427960 RUBICON RIVER BELOW RUBICON DAM, NEAR MEEKS BAY, CA

LOCATION.—Lat 38°59'20", long 120°13'20", in NW 1/4 SW 1/4 sec.9, T.13 N., R.16 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, at outlet structure, on diversion dam on Rubicon River, 3.3 mi upstream from Rubicon Springs, and 6.2 mi southwest of Meeks Bay.

PERIOD OF RECORD.—October 1991 to current year (low-flow records only). Unpublished records for water years 1964–91 available in files of the U.S. Geological Survey.

GAGE.—Differential-pressure gage and orifice control in outlet pipes. Auxiliary nonrecording gage 1,300 ft downstream at different datum. Datum of gage is 6,520 ft above sea level from topographic map. Prior to Sept. 4, 1991, nonrecording gage at site 1,300 ft downstream at different datum.

REMARKS.—Records not computed above 10 ft^3/s. Flow regulated by Rubicon Reservoir. Flow over the spillway bypasses this station. Most of the water is diverted through Rubicon–Rockbound Tunnel (station 11427940) to Rockbound Lake, which flows into Buck Island Lake. Water is then diverted via Buck–Loon Tunnel (station 11428300) to Loon Lake (station 11429350) for power development. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records were collected by Sacramento Municipal Utility District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	1.4	6.7	6.4	6.7	6.8	7.1	7.9	7.7	7.6	6.7	2.7
2	4.0	1.4	6.7	6.4	6.7	6.8	7.1	8.0	7.8	7.7	6.7	2.8
3	4.0	1.4	6.6	6.4	6.7	6.6	7.5	8.0	7.7	7.6	6.7	2.9
4	4.0	1.4	6.6	6.4	6.7	6.6	7.8	8.1	7.7	7.5	6.7	2.9
5	2.8	1.4	6.6	6.4	6.7	6.6	7.9	8.2	7.8	7.4	6.7	2.9
6	1.3	2.1	6.6	6.4	6.7	6.7	7.8	8.1	7.7	7.3	6.7	2.9
7	1.3	3.1	6.6	6.3	6.7	6.7	7.7	8.1	7.5	7.4	6.7	4.0
8	1.2	3.1	6.6	6.3	6.6	6.6	7.7	8.3	7.4	7.6	6.7	6.1
9	1.3	3.2	6.6	6.3	6.7	6.7	7.6	8.3	7.2	7.8	6.7	6.1
10	1.3	3.2	6.6	6.3	6.8	6.7	7.6	7.7	7.0	7.7	6.6	6.1
11	1.3	3.2	6.6	6.3	6.8	6.7	7.6	7.4	6.8	7.8	6.6	6.1
12	1.3	3.2	6.6	6.4	6.6	6.7	7.7	7.2	6.9	7.9	6.6	6.1
13	1.3	3.2	6.6	6.4	6.7	6.7	8.1	7.1	6.9	8.0	6.6	6.1
14	1.3	3.2	6.6	6.4	7.8	6.8	7.8	7.1	7.2	8.1	6.5	3.7
15	1.3	3.2	6.6	6.4	7.6	6.8	7.4	7.2	7.2	8.0	6.5	2.3
16	1.3	3.2	6.6	6.7	7.2	6.8	7.2	7.3	7.0	7.5	6.5	2.3
17	1.3	3.3	6.6	6.7	7.1	6.9	7.2	7.3	6.8	7.2	3.1	2.3
18	1.3	3.3	6.6	7.0	6.9	7.0	7.1	7.2	6.7	7.4	2.8	2.3
19	1.3	3.4	6.6	7.7	6.8	7.2	7.1	7.6	6.6	7.4	2.8	2.2
20	1.3	3.5	6.7	7.9	6.7	7.2	7.0	8.0	6.5	7.6	2.8	2.3
21	1.3	3.4	6.7	7.7	6.8	7.0	7.2	7.7	6.5	7.7	2.8	1.6
22	1.3	4.8	6.6	7.3	6.8	7.0	7.5	8.2	6.6	7.5	2.8	.95
23	1.3	6.7	6.6	7.1	6.7	7.0	7.4	8.2	7.2	7.5	2.8	1.1
24	1.3	6.6	6.6	7.1	6.8	7.0	7.3	8.5	7.3	7.5	2.8	1.4
25	1.4	6.6	6.6	7.3	6.8	7.2	7.5	8.6	7.1	7.4	2.8	1.4
26	1.4	6.6	6.5	7.1	6.8	7.2	7.7	8.5	7.1	7.2	2.8	1.4
27	1.3	6.6	6.6	7.0	6.8	7.4	8.0	8.3	7.2	e6.7	2.8	1.4
28	1.4	6.6	6.5	6.9	6.8	7.3	8.1	8.2	7.4	6.7	2.8	1.4
29	1.4	6.6	6.5	6.7	6.8	7.2	7.8	8.2	7.3	6.7	2.7	1.4
30	1.4	6.6	6.4	6.7	---	7.2	7.7	7.9	7.4	6.7	2.7	1.4
31	1.4	---	6.5	6.7	---	7.1	---	7.7	---	6.7	2.7	---
TOTAL	53.1	115.5	204.4	209.1	198.3	214.2	226.2	244.1	215.2	230.8	148.2	88.55
MEAN	1.71	3.85	6.59	6.75	6.84	6.91	7.54	7.87	7.17	7.45	4.78	2.95
MAX	4.0	6.7	6.7	7.9	7.8	7.4	8.1	8.6	7.8	8.1	6.7	6.1
MIN	1.2	1.4	6.4	6.3	6.6	6.6	7.0	7.1	6.5	6.7	2.7	.95
AC-FT	105	229	405	415	393	425	449	484	427	458	294	176

CAL YR 1999 TOTAL 2236.2 MEAN 6.13 MAX 8.9 MIN 1.2 AC-FT 4440
WTR YR 2000 TOTAL 2147.65 MEAN 5.87 MAX 8.6 MIN .95 AC-FT 4260

e Estimated.

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, and 7.4 mi southwest of Meeks Bay.

PERIOD OF RECORD.—November 1963 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,425.0 ft above sea level (levels by Sacramento Municipal Utility District).

REMARKS.—Tunnel diverts water from Buck Island Lake and discharges into Loon Lake (station 11429350). Buck Island Lake receives water from Rubicon River via Rubicon–Rockbound Tunnel (station 11427940). Gates are closed at the tunnel entrance during the summer 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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	218	23	4.9	37	41	101	442	316	133	1.5	e.03
2	.89	54	25	5.0	36	36	119	517	318	99	1.3	e.03
3	.88	11	23	4.4	37	32	204	546	333	34	1.2	e.03
4	.88	6.1	18	3.8	40	32	323	573	347	.34	1.1	e.03
5	.87	4.3	15	3.3	37	37	422	642	393	.44	.99	e.03
6	.95	3.1	12	2.9	34	40	374	555	391	17	.83	e.03
7	1.8	1.9	12	2.7	32	35	323	493	346	21	.66	e.03
8	6.0	3.7	11	2.3	32	33	326	949	347	11	.40	e.03
9	6.1	3.6	9.7	2.0	37	33	289	844	282	5.8	.40	e.03
10	4.4	3.5	9.6	1.8	45	30	260	505	206	3.9	.40	e.03
11	3.0	4.1	8.3	3.1	46	29	296	295	182	3.3	.40	e.03
12	2.2	4.8	7.4	5.1	44	32	342	202	195	8.4	.40	e.03
13	1.6	5.5	8.7	4.4	53	39	600	171	256	20	.39	e.03
14	1.2	5.6	9.0	3.7	389	52	493	173	332	27	.39	e.03
15	1.0	6.6	8.9	10	402	70	260	215	364	27	.39	e.03
16	1.0	15	8.6	38	207	78	166	245	346	24	.39	e.03
17	1.0	42	8.2	43	126	77	147	201	296	20	e.21	e.03
18	1.0	51	9.1	116	79	72	146	216	280	17	e.03	e.03
19	1.0	54	12	336	55	92	112	348	277	14	e.03	e.03
20	1.0	132	15	489	45	132	109	488	246	12	e.03	e.03
21	1.0	99	18	355	42	102	173	595	218	10	e.03	e.03
22	1.0	54	15	187	40	69	256	663	207	8.5	e.03	e.03
23	1.0	33	12	105	42	68	260	687	184	6.8	e.03	e.03
24	1.0	22	9.7	142	38	84	249	936	172	5.5	e.03	e.03
25	.99	15	7.7	266	34	115	262	917	163	4.6	e.03	e.03
26	.99	11	6.3	161	35	153	340	758	147	3.8	e.03	e.03
27	.99	10	5.8	90	67	184	471	602	157	3.1	e.03	e.03
28	17	10	6.0	62	65	186	568	588	160	2.5	e.03	e.03
29	82	9.1	6.2	48	52	156	434	598	155	2.1	e.03	e.03
30	54	13	5.8	43	---	140	356	506	151	1.8	e.03	e.03
31	30	---	5.3	42	---	120	---	379	---	1.6	e.03	---
TOTAL	227.63	905.9	351.3	2582.4	2228	2399	8781	15849	7767	548.48	11.77	0.90
MEAN	7.34	30.2	11.3	83.3	76.8	77.4	293	511	259	17.7	.38	.030
MAX	82	218	25	489	402	186	600	949	393	133	1.5	.03
MIN	.87	1.9	5.3	1.8	32	29	101	171	147	.34	.03	.03
AC-FT	452	1800	697	5120	4420	4760	17420	31440	15410	1090	23	1.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	20.6	65.6	61.8	68.9	58.6	87.7	200	461	405	137	20.1	12.7
MAX	182	405	264	297	254	239	356	861	994	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	53309.13		41652.38			
ANNUAL MEAN	146		114		133	
HIGHEST ANNUAL MEAN					245	1982
LOWEST ANNUAL MEAN					39.2	1977
HIGHEST DAILY MEAN	985	May 26	949	May 8	1240	Dec 23 1964
LOWEST DAILY MEAN	.76	Jul 22	.03	Aug 18	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.89	Sep 29	.03	Aug 18	.00	Oct 1 1963
ANNUAL RUNOFF (AC-FT)	105700		82620		96660	
10 PERCENT EXCEEDS	544		355		427	
50 PERCENT EXCEEDS	29		27		35	
90 PERCENT EXCEEDS	1.0		.03		.05	

e Estimated.

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, and 7.4 mi southwest of Meeks Bay.

DRAINAGE AREA.—6.00 mi^2.

PERIOD OF RECORD.—October 1990 to current year (low-flow records only). Unpublished records for water years 1964–90 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,420 ft above sea level, from topographic map. Aug. 14, 1964, to Oct. 4, 1973, nonrecording gage at site 60 ft downstream at different datum. Nonrecording gage at present site Oct. 4, 1973, to Aug. 26, 1986, at different datum and Aug. 27, 1986, to Sept. 30, 1990, at same datum.

REMARKS.—No records computed above 2 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.4	1.3	1.3	1.5	1.6	1.6	1.5	1.3	1.3	1.4	1.4
2	1.2	1.4	1.3	1.3	1.5	1.6	1.6	1.5	1.3	1.2	1.4	1.4
3	1.2	1.3	1.3	1.3	1.5	1.6	1.7	1.5	1.3	1.2	1.4	1.4
4	1.2	1.2	1.3	1.3	1.5	1.6	1.7	1.5	1.4	1.4	1.4	1.4
5	1.2	1.1	1.3	1.3	1.5	1.6	1.8	1.6	1.4	1.5	1.4	1.4
6	1.4	1.2	1.3	1.3	1.5	1.6	1.8	1.5	1.5	1.4	1.4	1.5
7	1.4	1.2	1.3	1.3	1.5	1.6	1.7	1.5	1.4	1.3	1.4	1.5
8	1.4	1.3	1.3	1.3	1.5	1.6	1.7	---	1.4	1.2	1.4	1.3
9	1.4	1.3	1.3	1.3	1.5	1.6	1.7	---	1.4	1.2	1.4	1.3
10	1.4	1.3	1.3	1.3	1.6	1.6	1.7	1.5	1.3	1.4	1.3	1.3
11	1.4	1.3	1.3	1.3	1.6	1.6	1.7	1.4	1.3	1.4	1.3	1.3
12	1.4	1.2	1.3	1.3	1.5	1.6	1.7	1.4	1.3	1.4	1.3	1.3
13	1.4	1.2	1.3	1.3	1.6	1.6	1.9	1.3	1.4	1.4	1.3	1.3
14	1.4	1.2	1.2	1.3	1.8	1.6	1.9	1.3	1.5	1.4	1.3	1.3
15	1.4	1.2	1.2	1.4	1.8	1.6	1.7	1.3	1.6	1.4	1.3	1.3
16	1.4	1.3	1.2	1.4	1.7	1.6	1.6	e1.3	1.6	1.4	1.3	1.3
17	1.4	1.3	1.2	1.4	1.6	1.6	1.6	1.3	1.5	1.5	e1.3	1.3
18	1.4	1.3	1.2	1.5	1.6	1.6	1.6	1.4	1.6	1.5	e1.3	1.3
19	1.3	1.4	1.2	1.7	1.6	1.6	1.6	1.4	1.6	1.5	e1.3	1.3
20	1.3	1.4	1.2	1.8	1.6	1.6	1.6	e1.4	1.6	1.4	e1.3	1.3
21	1.3	1.4	1.2	1.8	1.6	1.6	1.6	e1.4	1.6	1.4	e1.3	1.3
22	1.4	1.3	1.2	1.6	1.6	1.6	1.7	e1.5	1.5	1.4	e1.3	e1.3
23	1.4	1.3	1.2	1.6	1.6	1.6	1.7	1.6	1.3	1.4	e1.3	e1.3
24	1.3	1.3	1.2	1.6	1.6	1.6	1.7	---	1.3	1.4	e1.3	e1.3
25	1.3	1.3	1.2	1.7	1.6	1.6	1.7	---	1.3	1.4	e1.4	e1.3
26	1.3	1.3	1.2	1.6	1.6	1.7	1.6	1.6	1.3	1.4	e1.4	1.4
27	1.3	1.3	1.2	1.6	1.6	1.7	1.5	1.5	1.3	1.4	e1.4	1.3
28	1.3	1.3	1.3	1.5	1.6	1.6	1.5	1.5	1.3	1.4	e1.4	1.3
29	1.3	1.3	1.3	1.5	1.6	1.6	1.4	1.5	1.3	1.4	e1.4	1.3
30	1.3	1.3	1.3	1.5	---	1.6	1.4	1.5	1.3	1.4	e1.4	1.3
31	1.3	---	1.3	1.5	---	1.6	---	1.4	---	1.4	e1.4	---
TOTAL	41.3	38.6	38.9	44.9	45.9	49.8	49.7	---	42.2	42.8	41.9	40.0
MEAN	1.33	1.29	1.25	1.45	1.58	1.61	1.66	---	1.41	1.38	1.35	1.33
MAX	1.4	1.4	1.3	1.8	1.8	1.7	1.9	---	1.6	1.5	1.4	1.5
MIN	1.2	1.1	1.2	1.3	1.5	1.6	1.4	---	1.3	1.2	1.3	1.3
AC-FT	82	77	77	89	91	99	99	---	84	85	83	79

e Estimated.

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 mi^2.

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 though 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, 217,400 acre-ft, Jan. 2, 1997, elevation, 4,637.7 ft; minimum since reservoir first filled, 37,499 acre-ft, Mar. 23, 1973, elevation, 4,428.28 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 194,500 acre-ft, May 29, elevation, 4,619.4 ft; minimum, 88,500 acre-ft, Jan. 12, elevation, 4,507.4 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136200	128300	101900	90000	105600	123600	129400	162500	193900	175500	151400	130300
2	136500	127100	101200	89700	105700	123400	130500	163400	193700	175000	150700	130100
3	136500	125700	100300	89500	106000	123300	132000	164300	193900	174300	149900	129800
4	136400	124400	99400	89400	106200	123700	132700	165200	193900	173800	149000	129500
5	136400	123200	98900	89100	106700	124300	133500	166200	193900	173000	148500	129100
6	136400	122000	98100	89200	107100	124300	134400	167100	193300	171600	148100	128500
7	136100	120800	97300	89100	107300	124200	135500	169000	193100	171000	147300	128100
8	136400	119700	96500	88900	107400	124000	136800	175000	192800	170200	146400	127500
9	137100	119200	95600	88800	107400	123700	137900	176400	192200	169400	145600	127000
10	137700	117900	95000	88600	107700	123400	139100	177800	191800	168300	144700	126700
11	138300	116800	94200	88600	107800	123700	140300	178000	191200	167200	143800	125900
12	138900	115800	93800	88500	108600	124300	141900	178400	190600	166200	143300	125200
13	139400	114800	93000	88800	110300	124100	145700	179200	190100	165200	142900	124400
14	139900	114000	92300	88800	115100	124200	147300	179900	189500	164300	142000	123600
15	139900	112700	91800	88800	116400	124400	148500	180500	188500	164000	141200	122800
16	138900	111800	91700	89200	116700	124600	149300	181400	187600	163700	140500	122200
17	138100	111000	91600	89400	117200	124700	150400	181700	186600	162900	139600	121600
18	137200	110400	91600	91600	117600	124800	151100	182300	185700	162300	138600	120800
19	136300	110000	91600	93000	118200	125000	151700	183200	184800	161500	138400	120100
20	135700	109400	91600	94900	118200	125500	152200	184800	183700	160800	138000	119400
21	135300	108400	91500	95500	119000	125000	152600	186400	182800	160100	137400	119600
22	134800	107500	91400	95800	119700	124700	153600	187400	181700	159900	136700	120100
23	133800	106600	91300	96700	120000	124700	154300	188700	180700	159400	136000	120000
24	133100	105700	91200	101000	120100	125000	154900	191000	180800	158300	135200	119900
25	132400	105300	91000	102700	120200	126000	155500	192500	180500	157300	134500	120300
26	132100	104900	90700	103300	120700	127200	156600	193300	179700	156100	134100	120600
27	131700	104500	90700	103600	122300	127900	158000	194100	178700	155300	133800	121000
28	131600	104100	90700	103800	122900	128300	159000	194400	177900	154200	133100	121400
29	131100	103300	90600	104400	123600	128400	159900	194100	176900	153700	132300	121900
30	130400	102600	90500	105000	---	128700	161400	194100	176200	153200	131400	121900
31	129600	---	90300	105300	---	128800	---	194100	---	152300	130700	---
MAX	139900	128300	101900	105300	123600	128800	161400	194400	193900	175500	151400	130300
MIN	129600	102600	90300	88500	105600	123300	129400	162500	176200	152300	130700	119400
a	4557.9	4525.6	4509.7	4529.0	4551.0	4557.0	4590.5	4619.0	4603.8	4581.8	4559.2	4549.0
b	-6000	-27000	-12300	+15000	+18300	+5200	+32600	+32700	-17900	-23900	-21600	-8800

CAL YR 1999 b -24900
WTR YR 2000 b -13700

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

11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA

LOCATION.—Lat 39°03'24", long 120°24'25", in NE 1/4 NE 1/4 sec.21, T.14 N., R.14 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank, 600 ft downstream from outlet of dam, and 15.3 mi west of Meeks Bay.

DRAINAGE AREA.—114 mi^2.

PERIOD OF RECORD.—November 1965 to current year.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 4,231.52 ft above sea level (levels by Placer County Water Agency).

REMARKS.—Flow completely regulated by Hell Hole Reservoir (station 11428700) 600 ft upstream from station. During years when Hell Hole Dam spills, records include flow which bypasses the station. Transbasin diversions upstream from station through Buck–Loon Tunnel (station 11428300) to Loon Lake Reservoir (station 11429350); from Middle Fork American River Basin through tunnel from French Meadows Reservoir (station 11427400) to Hell Hole Reservoir; from Hell Hole Reservoir through tunnel to Middle Fork Powerplant (station 11428600). Diversion began Sept. 8, 1966. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,800 ft^3/s, Jan. 2, 1997, including flow over spillway; no flow Aug. 25 to Sept. 11, 1966.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	22	22	11	13	13	13	13	22	22	29	22
2	23	22	21	11	12	13	13	13	22	22	29	22
3	26	22	21	12	12	14	14	12	22	22	29	22
4	27	22	21	12	13	14	14	12	22	22	26	22
5	27	22	21	12	13	14	14	12	23	22	22	22
6	27	22	21	12	12	13	13	12	23	22	22	22
7	27	22	21	12	12	13	13	16	23	22	22	22
8	26	22	21	12	12	12	13	26	23	22	22	22
9	23	22	21	12	12	12	13	18	23	22	22	22
10	23	22	22	12	13	12	12	13	22	22	22	22
11	23	22	22	12	13	13	12	12	22	22	22	22
12	23	22	22	12	13	13	13	12	22	22	22	22
13	23	22	22	12	25	13	17	12	22	22	22	22
14	23	22	22	12	44	13	14	16	22	22	22	22
15	23	22	14	13	23	13	12	24	22	22	22	22
16	23	22	11	13	17	13	12	25	22	22	22	21
17	23	22	11	14	14	13	14	24	22	22	22	22
18	22	22	11	17	13	13	13	23	22	22	22	22
19	22	23	11	15	13	13	12	23	22	22	22	22
20	22	22	11	17	15	13	12	23	22	22	22	22
21	22	22	11	14	15	15	12	23	22	22	22	37
22	22	22	11	14	14	17	12	22	22	22	22	47
23	22	22	11	15	13	13	12	23	22	22	22	47
24	22	22	11	34	12	13	12	23	22	22	22	47
25	22	22	11	24	12	13	12	23	22	22	22	38
26	22	22	11	17	14	13	13	23	22	22	22	22
27	22	22	11	14	20	14	13	23	22	22	22	22
28	22	22	11	13	15	13	14	22	22	22	22	22
29	22	22	11	13	14	13	13	22	22	22	22	22
30	22	22	11	13	---	13	13	22	22	24	22	24
31	22	---	11	13	---	13	---	22	---	29	22	---
TOTAL	721	661	490	439	443	410	389	589	665	691	707	767
MEAN	23.3	22.0	15.8	14.2	15.3	13.2	13.0	19.0	22.2	22.3	22.8	25.6
MAX	27	23	22	34	44	17	17	26	23	29	29	47
MIN	22	22	11	11	12	12	12	12	22	22	22	21
AC-FT	1430	1310	972	871	879	813	772	1170	1320	1370	1400	1520
a	22660	28550	18000	11900	18060	34640	22450	39790	44120	34000	36700	20440

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

11428800 RUBICON RIVER BELOW HELL HOLE DAM, NEAR MEEKS BAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.4	17.5	24.8	61.8	21.8	30.9	21.9	67.1	109	45.5	15.6	17.1
MAX	40.6	25.8	318	1615	172	478	129	1053	1007	303	23.6	36.7
(WY)	1989	1984	1982	1997	1982	1986	1982	1996	1995	1983	1995	1989
MIN	7.14	7.51	7.57	6.24	6.34	6.33	7.78	7.92	7.74	6.93	6.50	6.43
(WY)	1974	1977	1989	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	7026		6972			
ANNUAL MEAN	19.2		19.0		38.3	
HIGHEST ANNUAL MEAN					158	1997
LOWEST ANNUAL MEAN					7.11	1977
HIGHEST DAILY MEAN	31	Sep 18	47	Sep 22	17100	Jan 2 1997
LOWEST DAILY MEAN	11	Jan 1	11	Dec 16	.00	Aug 25 1966
ANNUAL SEVEN-DAY MINIMUM	11	Dec 16	11	Dec 16	.00	Aug 25 1966
INSTANTANEOUS PEAK FLOW			63	Feb 13	28800	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	13940		13830		27740	
TOTAL DIVERSION (AC-FT)a	382800		331300			
10 PERCENT EXCEEDS	23		23		27	
50 PERCENT EXCEEDS	22		22		18	
90 PERCENT EXCEEDS	12		12		8.9	

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

11429350 LOON LAKE NEAR MEEKS BAY, CA

LOCATION.—Lat 38°58'59", long 120°19'22", in SE 1/4 SW 1/4 sec.8, T.13 N., R.15 E., El Dorado County, Hydrologic Unit 18020128, Eldorado National Forest, in powerplant intake structure, 1.6 mi southwest of right bank end of Loon Lake Dam on Gerle Creek, and 10 mi southwest of Meeks Bay.

DRAINAGE AREA.—7.96 mi^2.

PERIOD OF RECORD.—December 1963 to current year.
CHEMICAL ANALYSES: June to September 1996.

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 and 11428300, respectively). 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, 68,479 acre-ft, June 23, elevation, 6,404.40 ft; minimum, 19,801 acre-ft, Mar. 24, elevation, 6360.29 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52616	42981	32584	28304	35785	33083	20430	43942	64438	67484	57919	32018
2	52321	42765	32665	28294	35405	32543	20781	44783	64610	67578	56450	32128
3	52198	e42379	32665	28285	35069	31446	21292	45655	64887	67511	55696	32108
4	51733	41949	32665	28266	34891	30770	22105	46732	65179	67297	54334	32068
5	51148	41578	32675	28247	34610	30385	23002	48009	65723	67190	52936	32038
6	51100	e41086	32675	28152	34132	29399	23776	49143	66228	67109	51990	31366
7	50978	40593	32736	28133	33688	28323	24455	50505	66628	67056	51782	30434
8	50844	40315	32716	28104	33205	27312	25370	53071	67163	66936	51733	30415
9	50735	39717	32746	28076	32695	26273	26153	54945	67525	e66882	50844	30395
10	50626	39475	32371	28057	32088	25171	26836	55734	67525	66829	50215	30385
11	50082	38784	31376	28171	31817	24136	27453	56022	67632	66735	49347	30307
12	49467	38076	31028	28161	31576	24216	28409	56476	67645	66468	e48617	30277
13	48916	37935	30612	28152	31786	23322	30464	56854	67780	66468	e47855	30238
14	48569	37903	30110	28142	33420	22727	31776	57272	67283	66415	46968	30218
15	48474	37903	29593	28294	34360	21802	32492	57487	66829	66361	45993	30199
16	48307	38033	28897	28638	34568	21442	32940	57729	67417	66335	e45015	30110
17	48093	e38125	28782	28648	34070	21193	33431	58263	67753	66295	e43896	30052
18	47902	38217	28782	29399	33863	21193	33873	58276	68008	66148	e42844	29264
19	47487	37838	e28811	30474	e33977	21342	34173	58416	68210	65776	e42096	28228
20	47204	37363	28782	31897	e33770	21209	34505	58991	68344	65616	e41398	28066
21	47003	37213	28791	32777	33904	20773	34985	e59684	68318	e65470	e40326	28038
22	46673	36506	28667	33226	34101	20414	35700	60302	e68466	e65404	e39211	e28019
23	46474	35732	28552	33564	34225	20098	36411	61298	68479	65324	e37719	e27990
24	46075	35405	28562	34776	34080	19801	37095	62861	68304	64980	e36187	e27953
25	45678	34776	28533	35616	33884	19897	37784	63977	68156	64188	e35437	27915
26	45259	34132	e28533	35996	34059	20373	38522	64148	68129	63977	e34370	27877
27	44726	33308	28485	36251	34537	20211	39750	63911	67753	63058	e33492	27839
28	44402	32472	28466	36389	34194	20155	40916	64030	67350	62482	e32290	27801
29	44137	32432	28437	36506	33698	20098	41994	64544	67190	61557	31987	27754
30	43575	32513	28428	36741	---	19969	42856	64597	67364	60831	e31977	27716
31	43289	---	28323	36528	---	20187	---	64319	---	59619	31937	---
MAX	52616	42981	32746	36741	35785	33083	42856	64597	68479	67578	57919	32128
MIN	43289	32432	28323	28057	31576	19801	20430	43942	64438	59619	31937	27716
a	6384.24	6374.26	6370.00	6378.12	6375.42	6360.77	6383.86	6401.28	6403.57	6397.67	6373.69	6369.36
b	-9967	-10776	-4190	+8205	-2830	-13511	+22669	+21463	+3045	-7745	-27682	-4221

CAL YR 1999 MAX 75288 MIN 14016 b -12259
WTR YR 2000 MAX 68479 MIN 19801 b -25540

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

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 mi^2.

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.—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 ft^3/s, unregulated, Feb. 1, 1963, gage height, 12.65 ft, from rating curve extended above 970 ft^3/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 ft^3/s, June 5, 1969, gage height, 9.03 ft; minimum daily, 3.6 ft^3/s, Sept. 27, 28, Nov. 3, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	12	12	12	11	12	14	11	11	10	9.9
2	11	12	12	12	12	11	12	14	11	11	10	11
3	11	12	12	12	12	11	13	13	11	11	10	9.2
4	11	12	12	12	12	11	13	13	11	11	10	9.2
5	12	12	12	12	12	11	13	13	11	11	10	9.2
6	12	12	12	12	12	10	13	13	11	11	9.8	9.1
7	12	12	12	12	12	10	13	16	11	11	9.8	9.2
8	12	12	11	12	12	10	13	17	11	11	9.8	9.2
9	12	12	11	12	12	10	13	13	11	11	9.8	9.2
10	12	12	11	12	12	10	14	13	11	11	9.8	9.2
11	12	12	11	12	12	12	14	13	11	11	9.8	9.0
12	12	12	11	12	12	13	14	13	11	11	9.8	8.9
13	11	12	11	13	14	12	17	13	11	11	9.8	8.9
14	11	12	11	13	17	12	14	13	11	11	9.8	9.0
15	11	12	11	e13	12	12	13	13	12	11	9.8	9.2
16	12	12	12	12	11	11	13	13	12	e11	9.7	9.3
17	12	12	12	12	11	11	14	13	12	11	9.5	9.5
18	12	12	12	e12	11	11	13	12	12	11	9.5	9.5
19	12	e12	12	e12	11	12	13	12	12	11	9.5	9.5
20	12	12	12	e12	11	11	14	12	11	11	9.5	9.5
21	12	12	12	12	11	11	14	12	11	11	9.3	9.8
22	12	12	12	12	11	11	14	12	11	11	9.2	10
23	12	12	11	12	11	11	14	12	11	11	9.2	11
24	12	12	11	e12	11	12	14	12	11	11	9.2	11
25	12	11	11	e13	11	12	14	12	11	11	9.2	11
26	12	11	11	13	11	12	14	12	11	11	9.1	10
27	13	11	11	13	12	12	14	12	11	11	8.9	8.6
28	14	11	11	13	11	12	14	12	10	10	8.9	8.6
29	12	11	11	12	11	12	14	12	10	10	8.9	8.6
30	12	12	12	13	---	11	14	11	11	10	9.0	8.6
31	12	---	12	12	---	11	---	11	---	10	9.2	---
TOTAL	368	355	357	380	342	349	408	396	333	337	295.8	283.9
MEAN	11.9	11.8	11.5	12.3	11.8	11.3	13.6	12.8	11.1	10.9	9.54	9.46
MAX	14	12	12	13	17	13	17	17	12	11	10	11
MIN	11	11	11	12	11	10	12	11	10	10	8.9	8.6
AC-FT	730	704	708	754	678	692	809	785	661	668	587	563
a	9050	11600	4110	670	9720	18830	1820	14400	11530	7320	25150	3340

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	1970
LOWEST ANNUAL MEAN	127	1965
HIGHEST DAILY MEAN	1030	Jun 5 1969
LOWEST DAILY MEAN	6.0	Dec 2 1969
ANNUAL SEVEN-DAY MINIMUM	6.4	Dec 10 1969
INSTANTANEOUS PEAK FLOW	1050	Jun 5 1969
INSTANTANEOUS PEAK STAGE	9.03	Jun 5 1969
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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.07	8.92	9.53	9.30	9.21	9.26	9.26	11.1	9.24	9.17	8.75	8.77
MAX	13.3	11.8	23.9	13.0	12.8	11.6	13.6	48.7	13.6	15.7	12.0	12.0
(WY)	1993	2000	1984	1997	1996	1996	2000	1996	1999	1995	1999	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1972 - 2000	
ANNUAL TOTAL	4490		4204.7			
ANNUAL MEAN	12.3		11.5		9.30	
HIGHEST ANNUAL MEAN					13.5	1996
LOWEST ANNUAL MEAN					6.06	1977
HIGHEST DAILY MEAN	16	May 12	17	Feb 14	403	May 17 1996
LOWEST DAILY MEAN	11	Feb 14	8.6	Sep 27	3.6	Sep 27 1977
ANNUAL SEVEN-DAY MINIMUM	11	Mar 2	9.0	Aug 24	3.7	Sep 23 1977
INSTANTANEOUS PEAK FLOW			23	Feb 14	510	May 18 1996
INSTANTANEOUS PEAK STAGE			2.27	Feb 14	6.65	May 18 1996
ANNUAL RUNOFF (AC-FT)	8910		8340		6740	
ANNUAL DIVERSION (AC-FT) a	130200		117500			
10 PERCENT EXCEEDS	15		13		11	
50 PERCENT EXCEEDS	12		12		8.9	
90 PERCENT EXCEEDS	11		9.5		7.9	

a Diversion, in acre-feet, to Loon Lake Powerplant, provided by Sacramento Municipal Utility District.

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 mi^2.

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 1962. 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, 1,469 acre-ft, Jan. 1, 1997, elevation, 5,235.39 ft; minimum, 845 acre-ft, Dec. 15, 1994, elevation, 5,222.15 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,261 acre-ft, Jan. 24, elevation, 5,231.38 ft; minimum, 882 acre-ft, Jan. 4, elevation, 5,223.05 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1041	e972	954	956	1000	991	975	939	1123	1037	1180	1120
2	954	941	957	973	1062	1075	1006	982	1003	1097	1164	1134
3	969	e940	949	892	1040	1087	1029	993	1013	1118	1157	1135
4	1031	985	970	882	946	1007	1014	971	1048	1057	1171	1132
5	948	953	989	908	1010	1014	1038	959	1031	1100	1151	1131
6	924	1020	949	980	1027	1085	1010	1046	1134	1094	1145	1111
7	969	1016	970	906	992	1110	1010	1085	1025	1140	1073	1034
8	941	950	987	904	e1026	1104	998	1043	1039	1096	e1072	1033
9	984	976	977	929	1028	1127	964	960	1100	e1065	1162	1031
10	946	934	1083	948	1126	1111	991	1056	1006	1093	1130	1030
11	1019	1016	1021	958	990	1115	1022	1013	1074	1087	1114	970
12	1008	1030	953	913	1009	936	967	912	1137	1064	e1090	970
13	1053	945	1091	943	993	1109	1084	908	1110	1074	e1164	970
14	1014	981	1051	972	1193	1096	973	907	1142	1131	1076	970
15	937	986	987	942	990	1144	947	1007	1064	1081	1074	969
16	959	964	1039	981	1061	1011	942	1009	973	1123	e1170	994
17	974	938	956	980	1119	1052	975	937	1014	e1141	e1153	1020
18	966	963	984	1036	942	965	943	1079	1051	e1169	1109	1038
19	992	1019	e909	1026	e930	1048	940	1033	1107	1109	e1093	1122
20	957	1060	939	994	e1031	1044	942	1093	1036	e1065	e1127	1115
21	997	1042	967	941	920	1041	945	e1118	1027	e1050	e1120	1104
22	955	1048	954	934	943	1009	939	1108	e1031	e1063	e1111	e1097
23	905	1011	958	977	949	1046	947	1056	1116	1095	e1177	e1097
24	973	991	977	1261	975	1090	938	982	1080	1014	e1182	e1096
25	955	1014	933	986	942	1022	943	1180	1098	1087	e1073	1095
26	987	1048	e953	936	945	978	1013	1159	1058	1051	e1168	1098
27	989	1058	981	922	944	1060	957	1152	1074	1135	e1171	1094
28	955	1100	922	912	997	1030	985	1079	1030	1083	e1145	1093
29	991	924	953	890	984	1048	934	1074	1058	1119	1133	913
30	988	951	971	887	---	1031	940	1174	965	1179	e1123	912
31	966	---	951	1020	---	993	---	1135	---	1172	1118	---
MAX	1053	1100	1091	1261	1193	1144	1084	1180	1142	1179	1182	1135
MIN	905	924	909	882	920	936	934	907	965	1014	1072	912
a	5225.04	5224.69	5224.69	5226.27	5225.44	5225.66	5224.42	5228.77	5225.02	5229.56	5228.41	5223.78
b	-45	-15	0	+69	-36	+9	-53	+195	-170	+207	-54	-206

CAL YR 1999 MAX 1174 MIN 892 b -15
WTR YR 2000 MAX 1261 MIN 882 b -99

e Estimated.
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 mi^2.

PERIOD OF RECORD.—February 1910 to June 1914 (published as Little South Fork Rubicon River below Gerle Creek near Quintette), August 1961 to current year.

REVISED RECORDS.—WSP 1931: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,970 ft above sea level, from topographic map. Feb. 1, 1910, to June 21, 1914, nonrecording gage at site about 700 ft downstream at different datum.

REMARKS.—Beginning in 1884, flow regulated by Loon Lake (station 11429350). Original dam was dismantled during September and October 1962 to permit construction of a new earthfill dam completed Dec. 27, 1963. Loon Lake receives water from Rubicon River via Rubicon–Rockbound Tunnel (station 11427940) to Buck Island Lake and from Buck Island Lake to Loon Lake via Buck–Loon Tunnel (station 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 ft^3/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, 12,600 ft^3/s, Jan. 1, 1997, gage height, 12.65 ft, from rating curve extended above 2,500 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.8 ft^3/s, Sept. 21, 1962.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	7.6	6.4	11	9.8	7.1	11	12	11	11	14
2	11	10	7.6	6.4	9.6	9.2	6.5	11	12	11	11	15
3	10	6.4	7.1	6.5	9.4	9.2	6.5	11	11	12	11	14
4	10	6.6	7.0	6.2	10	9.4	6.5	11	11	12	11	13
5	11	6.6	7.2	6.1	9.6	9.6	6.3	11	12	12	11	13
6	11	6.3	7.4	6.2	9.2	9.0	6.0	11	12	12	11	13
7	11	6.9	7.2	6.6	8.8	8.4	5.7	13	12	12	11	13
8	11	8.5	7.2	6.2	8.5	8.2	5.5	92	13	12	11	12
9	11	7.1	7.4	6.3	8.9	7.8	7.9	17	12	11	11	12
10	11	6.8	7.4	6.5	11	7.4	6.7	12	12	11	11	12
11	11	6.7	7.5	8.8	11	8.0	8.3	11	12	12	12	12
12	11	7.6	7.2	8.0	10	8.1	8.5	11	12	11	11	12
13	11	7.3	7.3	7.3	20	8.4	18	11	12	12	11	12
14	11	6.6	7.3	7.2	554	10	12	11	12	12	11	12
15	11	7.0	7.2	12	19	10	10	12	11	11	11	12
16	11	7.8	7.1	11	14	10	9.6	13	11	11	11	11
17	11	7.9	7.0	11	13	9.6	10	12	10	12	11	12
18	11	7.0	7.0	22	11	9.7	10	12	10	19	11	12
19	11	9.6	7.2	16	10	10	9.7	12	11	13	11	12
20	11	9.4	6.9	18	9.7	9.6	9.1	12	10	12	11	16
21	11	8.1	6.8	13	10	8.7	8.7	12	11	12	11	13
22	11	7.6	7.0	11	10	8.5	8.5	12	11	12	11	13
23	11	7.5	6.9	14	9.9	8.8	8.3	13	11	12	12	13
24	12	7.2	6.9	511	8.8	8.9	8.1	11	11	12	12	13
25	12	7.1	7.1	131	8.6	9.1	7.9	12	11	12	13	13
26	12	7.2	6.7	17	9.6	8.8	7.6	12	11	11	12	13
27	12	7.1	6.8	13	18	8.9	7.7	12	12	11	13	13
28	15	7.2	6.7	11	12	8.7	7.5	12	11	11	12	13
29	12	7.0	6.4	11	12	8.1	7.6	12	11	11	13	12
30	12	7.6	6.3	12	---	7.7	10	12	11	10	13	12
31	12	---	6.4	11	---	31	---	12	---	11	13	---
TOTAL	349	227.7	218.8	939.7	866.6	298.6	251.8	449	341	366	356	382
MEAN	11.3	7.59	7.06	30.3	29.9	9.63	8.39	14.5	11.4	11.8	11.5	12.7
MAX	15	12	7.6	511	554	31	18	92	13	19	13	16
MIN	10	6.3	6.3	6.1	8.5	7.4	5.5	11	10	10	11	11
AC-FT	692	452	434	1860	1720	592	499	891	676	726	706	758
a	9170	12320	4960	10840	23270	32960	23200	28870	14230	7190	24990	3530

a Diversion, in acre-feet, to Robbs Peak Powerplant, provided by Sacramento Municipal Utility District.

11430000 SOUTH FORK RUBICON RIVER BELOW GERLE CREEK, NEAR GEORGETOWN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.8	19.1	36.1	59.0	36.2	20.4	13.2	26.6	20.4	13.0	9.28	9.45
MAX	52.2	268	396	530	524	130	141	276	249	92.5	12.5	22.3
(WY)	1963	1984	1965	1997	1986	1986	1982	1996	1983	1967	1983	1982
MIN	2.40	2.75	4.79	4.86	5.03	3.11	2.35	2.42	2.29	2.36	2.03	1.99
(WY)	1978	1978	1968	1968	1966	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	3912.0		5046.2			
ANNUAL MEAN	10.7		13.8		22.8	
HIGHEST ANNUAL MEAN					67.1	1997
LOWEST ANNUAL MEAN					3.59	1977
HIGHEST DAILY MEAN	84	Feb 9	554	Feb 14	8050	Jan 1 1997
LOWEST DAILY MEAN	6.3	Nov 6	5.5	Apr 8	1.3	Sep 29 1963
ANNUAL SEVEN-DAY MINIMUM	6.6	Dec 25	6.1	Apr 2	1.5	Sep 28 1963
INSTANTANEOUS PEAK FLOW			1190	Feb 14	12600	Jan 1 1997
INSTANTANEOUS PEAK STAGE			6.27	Feb 14	12.65	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	7760		10010		16490	
ANNUAL DIVERSION (AC-FT) a	227800		195500			
10 PERCENT EXCEEDS	12		13		13	
50 PERCENT EXCEEDS	11		11		8.5	
90 PERCENT EXCEEDS	7.1		7.0		5.3	

a Diversion, in acre-feet, to Robbs Peak Powerplant, provided by Sacramento Municipal Utility District.

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 mi^2.

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 July and August, which are poor. 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 ft^3/s, Feb. 17, 1986, gage height, 7.15 ft, from rating curve extended above 540 ft^3/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 ft^3/s, Aug. 16, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 140 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	2130	574	4.00	Feb. 27	0545	167	2.34
Feb. 14	1045	767	4.41				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	6.0	9.7	6.7	42	80	47	29	18	9.6	6.4	7.5
2	5.2	5.9	9.1	6.8	39	75	47	28	18	9.7	6.3	13
3	5.3	5.8	8.7	7.1	38	68	47	28	18	9.6	6.3	8.0
4	5.3	5.8	7.9	6.6	45	64	47	27	17	9.2	6.5	7.4
5	5.2	5.9	7.6	7.1	42	68	46	27	17	9.1	6.5	7.1
6	5.6	5.8	7.4	e7.0	40	64	43	28	16	9.1	6.2	6.8
7	5.8	6.5	7.4	6.9	37	59	41	34	16	9.1	6.1	6.5
8	5.4	12	7.2	7.0	36	57	40	44	19	8.9	6.0	6.4
9	5.3	8.4	7.3	7.2	36	55	39	34	17	8.6	6.1	6.2
10	5.3	7.2	7.3	7.5	46	51	38	32	16	8.2	6.1	6.2
11	5.1	6.7	7.1	12	47	51	36	30	15	8.0	6.0	6.3
12	5.2	6.4	6.9	13	47	51	36	29	15	8.1	5.9	6.1
13	5.1	6.3	7.5	11	115	51	53	27	14	8.5	5.9	6.0
14	5.1	6.1	7.1	11	480	52	49	27	14	8.3	5.8	5.7
15	5.1	6.7	6.9	18	246	55	42	30	14	7.9	5.7	5.9
16	5.0	7.1	6.8	21	169	58	40	33	14	7.9	5.7	6.1
17	5.0	10	6.7	23	127	58	44	32	13	8.1	5.6	5.7
18	5.1	8.0	6.9	65	101	58	43	30	13	8.0	5.6	5.5
19	5.2	12	7.0	41	85	62	40	28	13	7.9	5.6	5.3
20	5.1	14	7.3	56	76	63	38	26	13	7.7	5.7	5.3
21	5.0	10	7.0	35	73	59	37	25	12	7.4	5.6	5.3
22	5.1	8.6	6.8	28	70	57	36	25	12	7.3	5.6	5.8
23	5.1	7.9	6.7	33	68	57	35	24	12	7.3	5.5	6.2
24	5.2	7.5	6.7	293	59	57	34	23	11	7.2	5.5	5.9
25	5.3	7.3	6.6	258	56	57	33	23	11	7.2	5.4	5.4
26	5.2	7.1	6.6	124	58	57	32	22	11	7.1	5.3	5.4
27	5.9	7.0	6.5	78	127	58	31	22	11	7.1	5.4	5.4
28	21	6.8	6.5	60	99	57	31	20	10	7.0	5.3	5.3
29	7.9	6.7	6.5	50	93	54	30	20	9.9	7.1	5.4	5.0
30	6.8	9.4	6.5	49	---	52	29	19	9.8	7.0	5.8	4.9
31	6.3	---	6.6	46	---	48	---	19	---	6.7	5.8	---
TOTAL	183.4	230.9	222.8	1394.9	2597	1813	1184	845	419.7	249.9	180.6	187.6
MEAN	5.92	7.70	7.19	45.0	89.6	58.5	39.5	27.3	14.0	8.06	5.83	6.25
MAX	21	14	9.7	293	480	80	53	44	19	9.7	6.5	13
MIN	5.0	5.8	6.5	6.6	36	48	29	19	9.8	6.7	5.3	4.9
AC-FT	364	458	442	2770	5150	3600	2350	1680	832	496	358	372

e Estimated.

11431800 PILOT CREEK ABOVE STUMPY MEADOWS LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.54	12.7	25.8	48.3	51.1	54.5	47.7	36.3	15.6	8.50	5.45	4.90
MAX	24.8	74.1	159	268	373	195	139	118	50.4	17.8	16.2	16.3
(WY)	1963	1984	1965	1997	1986	1983	1982	1967	1967	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1961 - 2000	
ANNUAL TOTAL	10856.1		9508.8			
ANNUAL MEAN	29.7		26.0		26.3	
HIGHEST ANNUAL MEAN					64.8	1983
LOWEST ANNUAL MEAN					2.96	1977
HIGHEST DAILY MEAN	511	Feb 9	480	Feb 14	2840	Feb 17 1986
LOWEST DAILY MEAN	5.0	Oct 16	4.9	Sep 30	.14	Aug 16 1977
ANNUAL SEVEN-DAY MINIMUM	5.1	Oct 15	5.1	Oct 15	.15	Aug 12 1977
INSTANTANEOUS PEAK FLOW			767	Feb 14	3510	Feb 17 1986
INSTANTANEOUS PEAK STAGE			4.41	Feb 14	8.05	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	21530		18860		19070	
10 PERCENT EXCEEDS	73		57		60	
50 PERCENT EXCEEDS	10		9.5		10	
90 PERCENT EXCEEDS	5.4		5.4		3.5	

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 mi^2.

PERIOD OF RECORD.—June 1961 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 3,760 ft above sea level, from topographic map.

REMARKS.—Records good. Flow regulated by Stumpy Meadows Lake 2.5 mi upstream, usable capacity, 20,000 acre-ft, completed in November 1961. Georgetown Irrigation District Ditch, capacity, about 60 ft^3/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, 7,830 ft^3/s, Jan. 2, 1997, gage height, 10.95 ft, from rating curve extended above 970 ft^3/s on basis of slope-area measurement at gage height 10.06 ft; minimum daily, 0.20 ft^3/s, Sept. 24, Nov. 1–5, 1966.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.9	7.1	4.9	50	152	62	13	5.6	4.5	4.5	5.0
2	5.4	4.7	6.0	4.9	41	133	59	12	5.4	4.5	4.3	6.2
3	5.5	4.7	5.7	4.9	43	121	58	11	5.2	4.7	4.3	4.8
4	5.5	4.7	5.4	4.9	76	112	57	10	5.1	5.1	4.3	4.7
5	5.5	4.5	5.3	4.8	55	124	56	10	5.2	5.1	4.3	4.5
6	5.2	4.5	5.1	4.7	48	110	54	11	5.2	5.1	4.3	4.5
7	4.7	5.0	5.1	4.7	42	97	52	27	5.1	5.0	4.3	4.5
8	4.7	7.3	5.1	4.7	38	107	49	65	6.6	4.9	4.2	4.5
9	4.7	5.4	5.1	4.7	38	103	49	35	6.0	4.9	4.2	4.5
10	4.7	5.1	5.1	4.7	59	91	47	24	5.9	4.9	4.2	4.5
11	4.7	5.0	5.1	6.4	71	86	43	20	5.8	4.9	4.2	4.5
12	4.7	4.9	5.1	6.0	92	82	41	17	5.5	5.0	4.2	4.3
13	4.7	4.9	5.4	5.2	211	79	74	15	5.0	5.1	4.2	4.3
14	4.7	4.9	5.4	4.9	687	79	77	14	4.9	4.9	4.2	4.3
15	4.6	4.9	5.3	5.7	493	80	56	25	4.9	4.5	4.3	4.3
16	4.5	5.2	5.1	9.2	330	82	52	36	4.8	4.5	4.4	4.3
17	4.5	6.4	5.1	8.1	226	82	66	30	4.7	4.5	4.7	4.3
18	4.6	5.3	5.1	15	172	81	61	24	4.7	4.5	4.7	4.6
19	4.7	6.6	5.1	9.7	139	83	52	20	4.7	4.3	4.7	4.9
20	4.7	6.5	5.1	10	120	91	47	17	4.6	4.3	4.7	4.5
21	4.7	5.6	5.1	8.3	117	80	43	15	4.9	4.3	4.7	4.5
22	4.7	5.2	5.0	7.8	120	70	42	12	4.9	4.2	4.7	4.5
23	4.7	5.1	4.9	9.0	137	71	41	9.8	4.9	4.2	4.5	4.5
24	4.8	5.0	4.9	63	99	71	29	7.7	4.9	4.2	4.4	4.5
25	4.8	4.9	4.9	48	88	69	19	5.6	4.9	4.5	4.4	4.5
26	4.7	4.9	4.9	23	88	68	18	5.0	4.9	4.5	4.3	4.5
27	5.0	4.9	4.9	15	246	65	17	5.0	4.9	4.5	4.3	4.5
28	9.4	4.7	4.9	14	192	65	16	4.5	4.8	4.5	4.3	4.5
29	5.4	4.7	4.9	35	178	64	15	3.9	4.7	4.5	4.3	4.5
30	5.1	6.3	4.9	68	---	61	14	4.6	4.7	4.5	4.3	4.5
31	4.9	---	4.9	70	---	79	---	5.6	---	4.5	4.3	---
TOTAL	155.4	156.7	161.0	489.2	4296	2738	1366	514.7	153.4	143.6	135.7	137.0
MEAN	5.01	5.22	5.19	15.8	148	88.3	45.5	16.6	5.11	4.63	4.38	4.57
MAX	9.4	7.3	7.1	70	687	152	77	65	6.6	5.1	4.7	6.2
MIN	4.5	4.5	4.9	4.7	38	61	14	3.9	4.6	4.2	4.2	4.3
AC-FT	308	311	319	970	8520	5430	2710	1020	304	285	269	272

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

MEAN	2.93	5.77	29.9	63.6	82.7	78.2	68.3	38.7	9.74	4.30	3.35	2.92
MAX	7.19	28.6	340	621	585	370	289	171	54.4	15.6	13.4	8.54
(WY)	1963	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1961 - 2000	
ANNUAL TOTAL	17752.9		10446.7			
ANNUAL MEAN	48.6		28.5		32.3	
HIGHEST ANNUAL MEAN					109	1983
LOWEST ANNUAL MEAN					.84	1977
HIGHEST DAILY MEAN	1360	Feb 9	687	Feb 14	5210	Jan 2 1997
LOWEST DAILY MEAN	4.2	Jan 13	3.9	May 29	.20	Sep 24 1966
ANNUAL SEVEN-DAY MINIMUM	4.3	Jan 8	4.2	Aug 8	.23	Oct 30 1966
INSTANTANEOUS PEAK FLOW			776	Feb 14	7830	Jan 2 1997
INSTANTANEOUS PEAK STAGE			7.80	Feb 14	10.95	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	35210		20720		23390	
10 PERCENT EXCEEDS	135		80		88	
50 PERCENT EXCEEDS	5.1		5.1		4.3	
90 PERCENT EXCEEDS	4.5		4.5		1.2	

11433060 SOUTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.—Lat 39°03'04", long 120°28'14", in SW 1/4 NE 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank at diversion dam, 3.3 mi upstream from confluence with North and South Forks Long Canyon Creek, and 17.2 mi east of Volcanoville.

PERIOD OF RECORD.—October 1965 to current year.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 4,630 ft above sea level, from topographic map.

REMARKS.—Tunnel completed in September 1965; diversion began in February 1966. Flow is diverted from South Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork Powerplant on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 251 ft^3/s, Nov. 12, 1973; no flow for part of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	15	30	38	26	2.8	.00	.00	.00
2	.00	.00	.00	.00	16	28	42	25	.00	.00	.00	.00
3	.00	.00	.00	.00	14	27	45	24	.00	.00	.00	.00
4	.00	.00	.00	.00	17	29	47	23	.00	.00	.00	.00
5	.00	.00	.00	.00	17	32	47	22	.00	.00	.00	.00
6	.00	.00	.00	.00	16	30	45	21	.00	.00	.00	.00
7	.00	.00	.00	.00	14	26	43	38	.00	.00	.00	.00
8	.00	.00	.00	.00	14	24	42	91	.00	.00	.00	.00
9	.00	.00	.00	.00	14	22	39	50	.00	.00	.00	.00
10	.00	.00	.00	.00	24	21	38	40	.00	.00	.00	.00
11	.00	.00	.00	.00	21	23	38	35	.00	.00	.00	.00
12	.00	.00	.00	.00	19	26	36	30	.00	.00	.00	.00
13	.00	.00	.00	.00	43	30	68	26	.00	.00	.00	.00
14	.00	.00	.00	.00	92	36	57	23	.00	.00	.00	.00
15	.00	.00	.00	.00	64	40	47	26	.00	.00	.00	.00
16	.00	.00	.00	.00	60	40	41	30	.00	.00	.00	.00
17	.00	.00	.00	.00	45	38	50	30	.00	.00	.00	.00
18	.00	.00	.00	.00	38	41	43	25	.00	.00	.00	.00
19	.00	.00	.00	.00	34	47	38	22	.00	.00	.00	.00
20	.00	.00	.00	.00	34	42	36	21	.00	.00	.00	.00
21	.00	.00	.00	.00	34	35	34	19	.00	.00	.00	.00
22	.00	.00	.00	.00	32	36	33	18	.00	.00	.00	.00
23	.00	.00	.00	.00	30	38	32	17	.00	.00	.00	.00
24	.00	.00	.00	69	26	42	31	19	.00	.00	.00	.00
25	.00	.00	.00	69	24	43	30	16	.00	.00	.00	.00
26	.00	.00	.00	40	26	45	29	13	.00	.00	.00	.00
27	.00	.00	.00	26	54	48	30	12	.00	.00	.00	.00
28	.00	.00	.00	19	38	45	30	9.8	.00	.00	.00	.00
29	.00	.00	.00	14	34	43	28	8.7	.00	.00	.00	.00
30	.00	.00	.00	16	---	40	27	7.9	.00	.00	.00	.00
31	.00	---	.00	15	---	37	---	6.9	---	.00	.00	---
TOTAL	0.00	0.00	0.00	268.00	909	1084	1184	775.3	2.80	0.00	0.00	0.00
MEAN	.000	.000	.000	8.65	31.3	35.0	39.5	25.0	.093	.000	.000	.000
MAX	.00	.00	.00	69	92	48	68	91	2.8	.00	.00	.00
MIN	.00	.00	.00	.00	14	21	27	6.9	.00	.00	.00	.00
AC-FT	.00	.00	.00	532	1800	2150	2350	1540	5.6	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

MEAN	.002	3.24	5.32	10.6	14.0	22.3	28.0	25.5	8.64	.32	.002	.000
MAX	.034	37.2	38.6	42.1	77.3	77.7	67.8	80.6	54.0	4.54	.067	.001
(WY)	1980	1974	1984	1974	1996	1989	1980	1975	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	6355.70		4223.10			
ANNUAL MEAN	17.4		11.5		9.79	
HIGHEST ANNUAL MEAN					24.1	1998
LOWEST ANNUAL MEAN					.43	1977
HIGHEST DAILY MEAN	166	Feb 9	92	Feb 14	251	Nov 12 1973
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)	12610		8380		7100	
10 PERCENT EXCEEDS	55		40		34	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11433065 SOUTH FORK LONG CANYON CREEK BELOW DIVERSION DAM, NEAR VOLCANOVILLE, CA

LOCATION.—Lat 39°03'04", long 120°28'14", in SW 1/4 NE 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on right bank, 21 ft below diversion dam, 3.3 mi upstream from confluence of North and South Forks Long Canyon Creek, and 17.2 mi east of Volcanoville.

PERIOD OF RECORD.—October 1988 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 4,630 ft above sea level, from topographic map.

REMARKS.—Discharge is computed only during periods of operation of South Fork Long Canyon Creek Diversion Tunnel (station 11433060). See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	6.0	6.3	6.4	6.3	6.6	---	---	---
2	---	---	---	---	6.2	6.3	6.4	6.2	---	---	---	---
3	---	---	---	---	6.2	6.2	6.4	6.2	---	---	---	---
4	---	---	---	---	6.2	6.2	6.4	6.2	---	---	---	---
5	---	---	---	---	6.3	6.3	6.5	6.2	---	---	---	---
6	---	---	---	---	6.3	6.2	6.5	6.2	---	---	---	---
7	---	---	---	---	6.3	6.0	6.5	6.4	---	---	---	---
8	---	---	---	---	6.3	6.0	6.5	6.9	---	---	---	---
9	---	---	---	---	6.3	6.0	6.5	6.5	---	---	---	---
10	---	---	---	---	6.3	6.2	6.5	6.4	---	---	---	---
11	---	---	---	---	6.3	6.3	6.5	6.3	---	---	---	---
12	---	---	---	---	6.3	6.3	6.5	6.3	---	---	---	---
13	---	---	---	---	6.6	6.3	6.8	6.3	---	---	---	---
14	---	---	---	---	14	6.4	6.8	6.3	---	---	---	---
15	---	---	---	---	8.7	6.4	6.6	6.3	---	---	---	---
16	---	---	---	---	6.9	6.5	6.5	6.3	---	---	---	---
17	---	---	---	---	6.6	6.5	6.6	6.3	---	---	---	---
18	---	---	---	---	6.5	6.5	6.5	6.3	---	---	---	---
19	---	---	---	---	6.5	6.5	6.5	6.3	---	---	---	---
20	---	---	---	---	6.5	6.5	6.5	6.3	---	---	---	---
21	---	---	---	---	6.5	6.5	6.4	6.3	---	---	---	---
22	---	---	---	---	6.5	6.5	6.4	6.3	---	---	---	---
23	---	---	---	---	6.4	6.5	6.4	6.3	---	---	---	---
24	---	---	---	10	6.4	6.5	6.4	6.3	---	---	---	---
25	---	---	---	8.2	6.3	6.5	6.4	6.2	---	---	---	---
26	---	---	---	6.6	6.4	6.5	6.4	6.2	---	---	---	---
27	---	---	---	6.3	6.8	6.5	6.4	6.0	---	---	---	---
28	---	---	---	6.2	6.4	6.5	6.4	5.9	---	---	---	---
29	---	---	---	6.2	6.4	6.4	6.4	5.9	---	---	---	---
30	---	---	---	6.2	---	6.4	6.3	5.9	---	---	---	---
31	---	---	---	6.0	---	6.4	---	5.8	---	---	---	---
TOTAL	---	---	---	---	195.4	197.1	194.3	193.6	---	---	---	---
MEAN	---	---	---	---	6.74	6.36	6.48	6.25	---	---	---	---
MAX	---	---	---	---	14	6.5	6.8	6.9	---	---	---	---
MIN	---	---	---	---	6.0	6.0	6.3	5.8	---	---	---	---
AC-FT	---	---	---	---	388	391	385	384	---	---	---	---

11433080 NORTH FORK LONG CANYON CREEK DIVERSION TUNNEL NEAR VOLCANOVILLE, CA

LOCATION.—Lat 39°02'57", long 120°28'56", in SW 1/4 NW 1/4 sec.24, T.14 N., R.13 E., Placer County, Hydrologic Unit 18020128, Eldorado National Forest, on left bank at diversion dam, 3.2 mi upstream from confluence of North and South Forks Long Canyon Creek, and 16.9 mi east of Volcanoville.

PERIOD OF RECORD.—October 1965 to current year.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 4,700 ft above sea level, from topographic map.

REMARKS.—Tunnel completed in September 1965 and diversions began in February 1966. Flow is diverted from North Fork Long Canyon Creek to a tunnel from Hell Hole Reservoir to Middle Fork Powerplant (stations 11428700 and 11428600) on the Middle Fork American River. See schematic diagram of Middle Fork American and Rubicon River Basins.

COOPERATION.—Records provided by Placer County Water Agency, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 100 ft^3/s, Jan. 15, 1998; no flow for part of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	7.1	12	20	8.8	.00	.00	.00	.00
2	.00	.00	.00	.00	8.6	12	23	7.9	.00	.00	.00	.00
3	.00	.00	.00	.00	7.5	12	26	7.1	.00	.00	.00	.00
4	.00	.00	.00	.00	8.1	14	28	6.5	.00	.00	.00	.00
5	.00	.00	.00	.00	8.4	15	26	5.9	.00	.00	.00	.00
6	.00	.00	.00	.00	9.0	13	24	5.3	.00	.00	.00	.00
7	.00	.00	.00	.00	7.9	10	22	19	.00	.00	.00	.00
8	.00	.00	.00	.00	7.3	9.5	22	55	.00	.00	.00	.00
9	.00	.00	.00	.00	6.7	8.1	19	22	.00	.00	.00	.00
10	.00	.00	.00	.00	15	8.1	19	16	.00	.00	.00	.00
11	.00	.00	.00	.00	11	10	19	14	.00	.00	.00	.00
12	.00	.00	.00	.00	8.6	13	18	13	.00	.00	.00	.00
13	.00	.00	.00	.00	26	17	44	10	.00	.00	.00	.00
14	.00	.00	.00	.00	17	20	32	8.8	.00	.00	.00	.00
15	.00	.00	.00	.00	9.0	23	25	12	.00	.00	.00	.00
16	.00	.00	.00	.00	20	21	23	15	.00	.00	.00	.00
17	.00	.00	.00	.00	23	20	34	18	.00	.00	.00	.00
18	.00	.00	.00	.00	19	23	25	13	.00	.00	.00	.00
19	.00	.00	.00	.00	17	27	22	10	.00	.00	.00	.00
20	.00	.00	.00	.00	17	24	20	8.1	.00	.00	.00	.00
21	.00	.00	.00	.00	16	20	19	6.9	.00	.00	.00	.00
22	.00	.00	.00	.00	15	21	18	5.5	.00	.00	.00	.00
23	.00	.00	.00	.00	13	22	16	4.4	.00	.00	.00	.00
24	.00	.00	.00	37	11	24	15	4.1	.00	.00	.00	.00
25	.00	.00	.00	37	9.2	26	14	3.5	.00	.00	.00	.00
26	.00	.00	.00	22	11	26	13	2.9	.00	.00	.00	.00
27	.00	.00	.00	12	32	28	13	.98	.00	.00	.00	.00
28	.00	.00	.00	8.6	18	25	12	.00	.00	.00	.00	.00
29	.00	.00	.00	6.3	15	24	10	.00	.00	.00	.00	.00
30	.00	.00	.00	6.3	---	22	9.2	.00	.00	.00	.00	.00
31	.00	---	.00	5.9	---	20	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	135.10	393.4	569.7	630.2	303.68	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	4.36	13.6	18.4	21.0	9.80	.000	.000	.000	.000
MAX	.00	.00	.00	37	32	28	44	55	.00	.00	.00	.00
MIN	.00	.00	.00	.00	6.7	8.1	9.2	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	268	780	1130	1250	602	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

MEAN	.045	.78	1.83	4.00	6.57	11.0	13.3	11.0	2.59	.017	.003	.004
MAX	.74	13.2	12.7	18.5	35.6	35.5	33.0	39.9	22.5	.20	.093	.077
(WY)	1980	1982	1997	1998	1996	1993	1993	1998	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1966 - 2000	
ANNUAL TOTAL	3300.63		2032.08			
ANNUAL MEAN	9.04		5.55		4.25	
HIGHEST ANNUAL MEAN					12.7	1998
LOWEST ANNUAL MEAN					.007	1977
HIGHEST DAILY MEAN	92	Jan 20	55	May 8	100	Jan 15 1998
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)	6550		4030		3080	
10 PERCENT EXCEEDS	29		20		16	
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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	4.0	4.5	3.8	3.5	---	---	---	---
2	---	---	---	---	4.1	4.5	3.9	3.5	---	---	---	---
3	---	---	---	---	4.1	4.5	3.9	3.4	---	---	---	---
4	---	---	---	---	4.2	4.7	3.9	3.4	---	---	---	---
5	---	---	---	---	4.2	4.7	3.9	3.3	---	---	---	---
6	---	---	---	---	4.4	4.6	3.8	3.3	---	---	---	---
7	---	---	---	---	4.2	4.4	3.8	3.7	---	---	---	---
8	---	---	---	---	4.2	4.4	3.8	4.7	---	---	---	---
9	---	---	---	---	4.2	4.2	3.7	3.9	---	---	---	---
10	---	---	---	---	4.6	4.2	3.7	3.8	---	---	---	---
11	---	---	---	---	4.5	4.5	3.6	3.7	---	---	---	---
12	---	---	---	---	4.4	4.7	3.6	3.6	---	---	---	---
13	---	---	---	---	5.2	4.8	4.2	3.6	---	---	---	---
14	---	---	---	---	e8.5	5.1	4.1	3.5	---	---	---	---
15	---	---	---	---	e8.5	5.2	3.9	3.7	---	---	---	---
16	---	---	---	---	e6.8	5.2	3.9	3.8	---	---	---	---
17	---	---	---	---	5.2	5.1	4.1	3.9	---	---	---	---
18	---	---	---	---	5.1	5.2	4.1	3.8	---	---	---	---
19	---	---	---	---	4.8	5.5	4.0	3.7	---	---	---	---
20	---	---	---	---	4.8	4.5	4.0	3.6	---	---	---	---
21	---	---	---	---	4.8	3.9	3.9	3.6	---	---	---	---
22	---	---	---	---	4.8	4.0	3.8	3.6	---	---	---	---
23	---	---	---	---	4.7	4.0	3.8	3.6	---	---	---	---
24	---	---	---	e8.0	4.5	4.0	3.8	3.6	---	---	---	---
25	---	---	---	e6.7	4.5	4.1	3.8	3.5	---	---	---	---
26	---	---	---	e5.0	4.5	4.0	3.7	3.5	---	---	---	---
27	---	---	---	4.6	5.6	4.0	3.7	4.3	---	---	---	---
28	---	---	---	4.4	5.0	3.9	3.7	---	---	---	---	---
29	---	---	---	4.0	4.7	3.9	3.6	---	---	---	---	---
30	---	---	---	3.9	---	3.8	3.6	---	---	---	---	---
31	---	---	---	3.9	---	3.8	---	---	---	---	---	---
TOTAL	---	---	---	---	143.1	137.9	115.1	---	---	---	---	---
MEAN	---	---	---	---	4.93	4.45	3.84	---	---	---	---	---
MAX	---	---	---	---	8.5	5.5	4.2	---	---	---	---	---
MIN	---	---	---	---	4.0	3.8	3.6	---	---	---	---	---
AC-FT	---	---	---	---	284	274	228	---	---	---	---	---

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 mi^2.

PERIOD OF RECORD.—October 1958 to current year.
CHEMICAL DATA: Water year 1979.
BIOLOGICAL DATA: Water year 1979.

GAGE.—Water-stage recorder. Elevation of gage is 1,070 ft above sea level, from topographic map. Prior to Oct. 22, 1965, at site 3.2 mi downstream at different datum. Oct. 22, 1965, to Aug. 28, 1985, at site 400 ft downstream at different datum.

REMARKS.—Flow regulated by French Meadows Reservoir, Hell Hole Reservoir, Loon Lake (stations 11427400, 11428700, and 11429350), Stumpy Meadows Lake, usable capacity, 17,500 acre-ft, several smaller reservoirs, and Oxbow Powerplant (station 11433212). Robbs Peak Powerplant (station 11429300) and Georgetown Divide Ditch, capacity about 60 ft^3/s, divert water out of basin upstream from station. See schematic diagrams of lower Sacramento River Basin and 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, 310,000 ft^3/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 ft^3/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, 123,000 ft^3/s, Jan. 2, 1997, gage height, 29.56 ft, from rating curve extended above 37,000 ft^3/s; minimum, 35 ft^3/s, Oct. 10–20, 1961.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	764	694	562	1300	2700	1400	954	1040	697	839	650
2	104	642	665	552	1030	2370	1250	1100	1050	579	834	585
3	104	663	622	323	1140	2250	1490	1020	923	550	784	515
4	104	852	704	420	1230	1810	1790	1140	946	544	759	488
5	114	689	475	282	1010	1860	1750	1160	1000	714	588	661
6	118	702	581	114	913	2210	1720	910	1200	980	563	617
7	115	790	590	328	1200	2140	1570	904	1010	622	837	657
8	116	841	664	274	1030	2110	1190	1850	1150	665	756	671
9	115	426	643	287	1210	2160	1070	1630	1220	634	821	552
10	113	732	680	276	1180	2100	1270	1080	1090	878	741	586
11	111	745	395	489	1520	1690	1190	1220	1070	950	768	741
12	107	768	418	287	1650	1630	1120	1350	1090	772	516	719
13	107	548	686	330	2690	1930	1450	1050	1060	706	554	771
14	99	572	654	308	11800	2040	1620	1030	1030	724	795	753
15	114	747	606	571	5490	2110	1250	1200	1190	359	796	740
16	712	705	353	798	3710	2140	892	1380	1180	578	767	494
17	809	709	404	695	2880	2090	1420	1410	1000	695	824	610
18	902	529	329	1590	2430	2180	1480	1450	1170	674	723	866
19	927	556	347	1650	1890	2080	1400	1350	934	665	543	799
20	760	872	481	1430	1730	2210	1270	1230	981	682	562	682
21	852	776	407	1340	1980	2060	1380	993	1010	642	850	502
22	523	746	430	987	1730	1950	873	1290	1010	526	740	333
23	937	618	375	777	2470	1930	972	1280	1030	520	818	178
24	827	616	381	4580	2140	1930	1170	1260	379	879	749	195
25	807	320	660	5120	1930	1610	1300	1050	571	933	781	186
26	658	570	363	2310	1550	1400	1150	1260	831	902	555	143
27	738	166	370	1680	4080	1840	1080	1240	996	882	507	124
28	1070	348	230	1520	3560	1950	1120	1230	911	750	721	114
29	778	618	395	943	2760	1880	844	1230	989	646	723	113
30	951	555	259	1110	---	1840	554	1220	646	610	777	112
31	793	---	332	1260	---	1770	---	1190	---	839	799	---
TOTAL	14692	19185	15193	33193	69233	61970	38035	37661	29707	21797	22390	15157
MEAN	474	640	490	1071	2387	1999	1268	1215	990	703	722	505
MAX	1070	872	704	5120	11800	2700	1790	1850	1220	980	850	866
MIN	99	166	230	114	913	1400	554	904	379	359	507	112
AC-FT	29140	38050	30140	65840	137300	122900	75440	74700	58920	43230	44410	30060
a	23930	32320	20650	30170	54630	64530	48640	55350	51340	37930	39710	23570

a Diversion, in acre-feet, through Oxbow Powerplant, provided by Placer County Water Agency.

11433300 MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	450	655	1159	1669	1901	1872	1771	1568	1034	671	627	523
MAX	1634	2952	7172	8778	8815	5076	5572	4642	3300	1836	1142	1084
(WY)	1963	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1959 - 2000	
ANNUAL TOTAL	484335		378213			
ANNUAL MEAN	1327		1033		1155	
HIGHEST ANNUAL MEAN					2723	1982
LOWEST ANNUAL MEAN					179	1977
HIGHEST DAILY MEAN	11900	Feb 9	11800	Feb 14	65000	Dec 23 1964
LOWEST DAILY MEAN	99	Oct 14	99	Oct 14	35	Oct 19 1961
ANNUAL SEVEN-DAY MINIMUM	108	Sep 29	109	Oct 1	38	Oct 14 1961
INSTANTANEOUS PEAK FLOW			157000	Feb 14	310000	Dec 23 1964
INSTANTANEOUS PEAK STAGE			20.05	Feb 14	69.00	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	960700		750200		836500	
TOTAL DIVERSION (AC-FT)a	551800		482800			
10 PERCENT EXCEEDS	2500		1930		2420	
50 PERCENT EXCEEDS	926		826		765	
90 PERCENT EXCEEDS	367		329		99	

a Diversion, in acre-feet, through Oxbow Powerplant, provided by Placer County Water Agency.

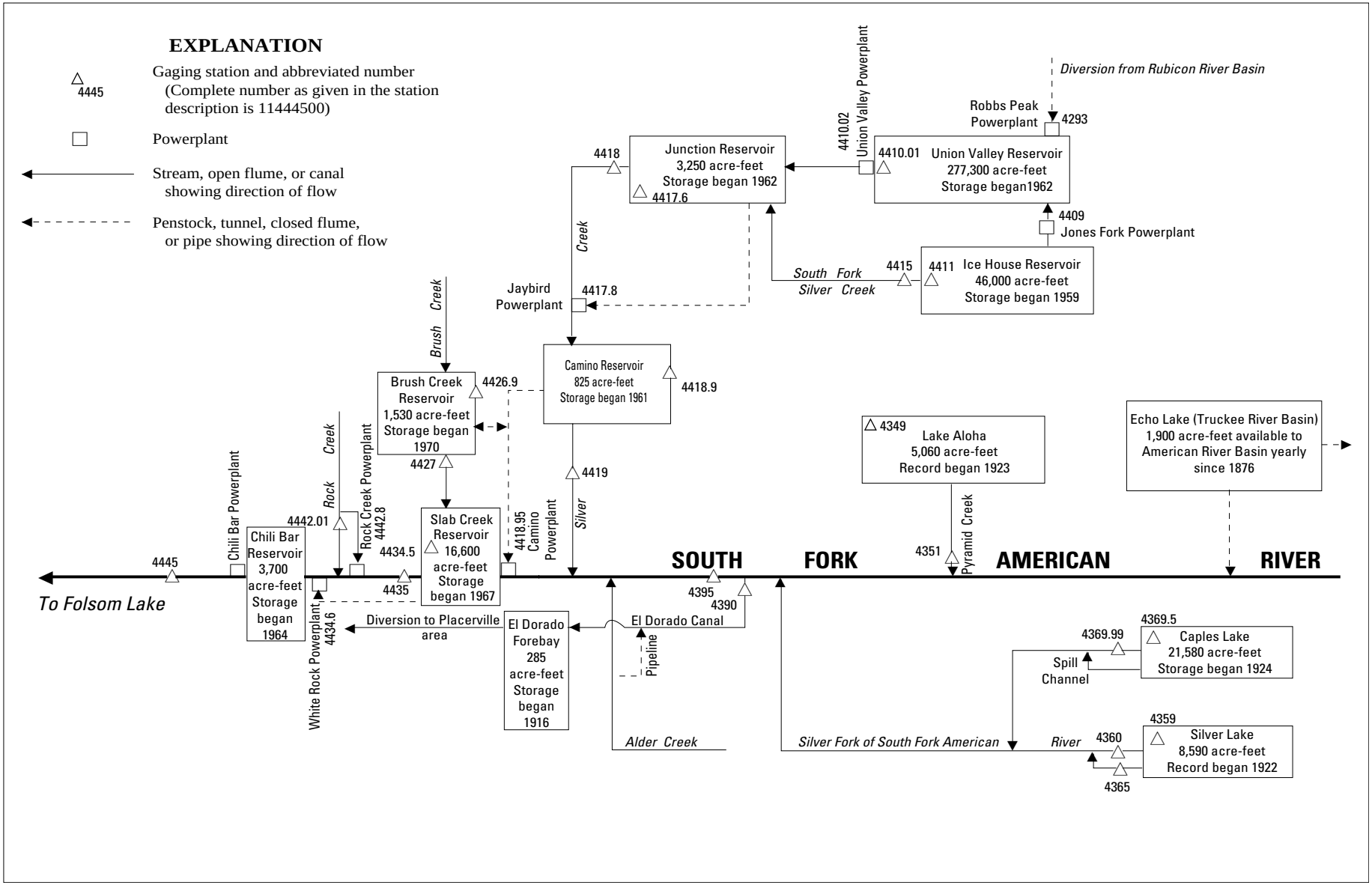

Figure 35. Diversions and storage in South Fork American River Basin.

11433790 NORTH FORK AMERICAN RIVER AT AUBURN DAM SITE, NEAR AUBURN, CA

LOCATION.—Lat 39°51'06", long 121°03'26", in SW 1/4 NW 1/4 sec.23, T.12 N., R.8 E., Placer County, Hydrologic Unit 18020128, on the right bank upstream side of the Auburn Dam Site diversion tunnel, 0.7 mi upstream from Knickerbocker Creek, and 1.3 mi southeast of Auburn.

DRAINAGE AREA.— 972 mi^2.

PERIOD OF RECORD.—Water year 1999 to current year.
WATER TEMPERATURE.—Water year 1999 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE.—June 1999 to current year.

INSTRUMENTATION.—Water-temperature recorder since June 4, 1999.

REMARKS.—Water temperature can be affected by upstream releases. Interruption in record was due to the malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 24.0°C, June 26, 2000; minimum recorded, 4.5°C, Jan. 6, 2000.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 24.0°C, June 26; minimum recorded, 4.5°C, Jan. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	---	14.5	12.5	11.0	10.0	7.0	5.5	8.0	7.5	9.0	8.0
2	20.5	18.5	14.5	13.0	10.5	9.5	6.5	5.5	8.5	7.5	8.5	8.0
3	20.5	18.0	14.5	12.5	9.5	8.5	6.5	5.0	8.5	8.0	9.5	8.0
4	20.0	18.0	14.5	12.5	9.0	8.0	6.0	5.5	8.5	8.0	10.0	8.0
5	19.5	17.5	14.5	13.0	9.5	8.0	6.0	5.0	8.5	8.0	9.5	9.0
6	19.5	18.0	14.5	13.0	9.0	8.0	5.5	4.5	9.0	8.0	9.5	8.5
7	19.0	16.5	13.5	12.5	9.5	8.5	6.5	5.0	9.0	8.0	8.5	8.0
8	19.5	16.5	14.0	13.0	9.0	7.5	6.0	5.0	9.0	8.5	9.0	8.0
9	19.5	17.0	14.0	13.0	9.0	8.0	6.0	5.0	9.0	8.0	8.5	7.5
10	19.5	17.0	13.5	12.5	9.0	8.5	7.0	6.0	9.0	8.5	9.0	7.5
11	19.5	17.0	14.0	12.5	8.5	7.5	7.5	7.0	8.5	8.5	9.5	8.0
12	19.5	17.0	14.0	12.0	8.0	7.0	7.5	7.0	9.0	8.0	10.5	9.0
13	19.5	16.5	13.5	12.5	9.5	8.0	8.0	6.5	9.0	7.5	10.5	9.0
14	19.0	17.0	13.5	12.0	8.5	7.5	8.0	7.0	9.5	8.0	11.0	9.0
15	18.5	16.5	14.0	12.5	8.0	7.0	8.0	7.5	8.5	7.5	11.0	9.0
16	17.5	15.5	13.5	12.5	8.0	7.0	8.0	7.0	8.5	7.5	11.0	9.5
17	16.5	13.0	13.5	12.5	8.0	7.0	8.0	7.0	8.5	8.0	10.5	9.0
18	14.0	12.5	12.5	11.5	8.5	7.0	8.5	7.5	8.5	7.5	10.5	8.5
19	14.0	12.0	12.0	10.5	8.0	7.0	9.0	7.5	9.0	7.5	10.5	9.0
20	14.0	12.0	13.0	11.0	8.0	7.0	9.0	8.0	9.0	8.0	10.5	9.0
21	14.0	12.0	12.5	11.5	7.5	6.5	9.0	8.0	10.0	8.5	10.0	8.0
22	14.0	12.0	11.5	10.0	7.5	6.0	8.5	8.0	9.0	8.5	10.5	8.0
23	14.0	12.0	10.5	9.5	7.5	6.0	8.5	8.0	9.0	8.0	10.5	9.0
24	13.5	11.5	10.5	9.0	7.0	6.0	8.5	8.0	8.5	7.5	11.0	9.0
25	13.5	11.5	10.5	9.0	7.0	5.5	8.5	8.0	8.5	7.5	11.5	9.5
26	13.5	11.5	10.5	9.0	6.5	5.5	8.5	8.0	9.0	7.5	12.0	10.0
27	14.0	12.0	10.5	9.5	6.5	5.5	8.5	7.5	9.0	8.5	11.0	10.5
28	14.5	13.0	11.0	10.0	6.5	5.5	8.0	7.0	8.5	8.5	11.0	9.5
29	15.0	13.0	10.5	9.5	6.0	5.0	8.0	6.5	9.0	8.5	11.0	9.0
30	14.5	12.5	11.0	10.0	6.0	5.0	7.5	7.0	---	---	11.0	9.0
31	14.5	12.5	---	---	6.5	5.5	8.0	7.0	---	---	11.5	9.0
MONTH	21.0	---	14.5	9.0	11.0	5.0	9.0	4.5	10.0	7.5	12.0	7.5

11433790 NORTH FORK AMERICAN RIVER AT AUBURN DAM SITE, NEAR AUBURN, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	9.0	14.5	12.0	18.5	14.5	21.0	18.0	20.0	17.0	16.5	15.0
2	12.5	10.5	15.0	13.0	18.0	14.0	21.5	17.0	20.5	16.5	17.5	14.5
3	13.5	11.0	15.5	13.0	19.0	14.5	21.5	17.5	20.5	16.5	18.5	15.5
4	13.0	11.5	15.0	13.0	19.5	15.5	22.0	17.5	20.5	17.0	19.0	15.5
5	12.5	11.0	14.5	13.0	19.0	15.5	21.0	18.0	21.5	17.5	19.0	15.5
6	12.0	10.5	13.5	12.0	17.5	15.0	19.5	16.5	22.5	18.0	19.0	15.5
7	12.0	10.0	12.5	11.5	18.5	14.5	19.5	15.5	22.0	18.5	19.0	15.5
8	12.5	10.5	12.0	11.0	16.5	14.5	21.0	16.5	20.5	17.0	19.0	15.5
9	13.0	11.0	12.5	10.5	16.0	14.0	21.0	17.0	20.5	17.0	18.5	15.5
10	13.0	11.0	12.5	11.0	17.5	14.0	21.5	17.0	19.5	16.0	19.5	15.5
11	13.0	11.0	13.0	10.5	17.0	14.0	19.5	16.0	20.0	16.0	19.5	16.0
12	13.0	11.5	12.0	10.5	17.0	14.5	20.0	16.0	20.5	16.5	18.5	16.0
13	12.5	11.5	12.5	10.5	19.0	15.0	20.5	16.5	21.5	17.0	18.5	16.0
14	11.5	10.5	12.5	10.5	20.0	15.5	21.0	17.0	21.0	17.0	19.0	15.5
15	10.5	9.5	12.5	11.5	19.0	16.5	21.5	17.0	20.0	16.5	19.0	16.0
16	11.0	9.5	11.5	10.5	19.0	16.5	22.0	18.0	20.5	16.0	19.0	16.0
17	10.5	10.0	12.0	10.0	20.5	16.5	21.5	17.5	19.5	16.0	20.0	16.0
18	10.5	9.5	13.5	11.0	18.5	16.5	21.5	17.0	19.5	16.0	19.5	16.5
19	10.5	9.0	15.0	12.5	21.0	16.0	22.0	17.0	19.5	16.0	19.5	16.5
20	11.5	9.0	16.5	13.5	21.0	16.5	21.5	17.0	20.0	16.0	20.0	16.5
21	12.5	10.0	18.0	15.0	20.5	16.5	21.5	17.5	20.0	16.5	18.5	17.0
22	13.0	11.5	17.0	15.5	20.5	16.5	21.5	17.5	20.0	16.0	18.5	17.0
23	13.0	11.0	17.0	15.5	18.5	16.0	22.5	17.5	20.0	16.5	19.0	16.5
24	13.5	11.0	17.0	16.0	22.0	17.0	22.0	18.5	19.5	15.5	19.5	17.0
25	13.0	11.5	17.5	15.5	23.5	18.5	20.0	16.5	19.5	16.0	20.0	17.0
26	13.5	11.0	17.0	15.5	24.0	20.0	20.0	16.0	19.5	16.0	20.0	17.5
27	13.5	12.0	17.5	15.5	21.5	18.0	19.5	15.5	20.5	16.5	20.5	18.0
28	14.0	12.0	17.5	15.5	22.0	17.5	20.0	16.0	21.0	17.5	20.5	18.5
29	13.5	11.5	17.5	15.5	21.0	17.0	20.5	17.0	19.5	16.5	20.5	18.0
30	14.0	11.5	17.0	14.5	21.0	17.0	21.5	17.5	16.5	15.5	21.0	18.5
31	---	---	16.5	14.0	---	---	21.5	17.5	18.0	14.5	---	---
MONTH	14.0	9.0	18.0	10.0	24.0	14.0	22.5	15.5	22.5	14.5	21.0	14.5

11434900 LAKE ALOHA NEAR PHILLIPS, CA

LOCATION.—Lat 38°51'36", long 120°08'11", in sec.30, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on upstream face of dam at outlet structure and 4.3 mi northwest of Phillips.

DRAINAGE AREA.—3.36 mi^2.

PERIOD OF RECORD.—May to September 2000.

GAGE.—Non-recording gage observed intermittently during the summer months. Elevation of gage is 8,116 ft above sea level, from topographic map.

REMARKS.—Reservoir formed by cut stone gravity dam completed in 1917. Usable capacity, 5,000 acre-feet, between gage heights 5.0 ft and 19.7 ft, spillway. See schematic diagram of South Fork American River Basin.

COOPERATION.—Records were collected by the El Dorado Irrigation District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by El Dorado Irrigation District, dated Oct. 28, 1932)

5.0	0	13.0	1,610
7.0	104	15.0	2,510
9.0	237	17.0	3,510
11.0	824	19.7	5,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	3056	---	---	3837	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	1360
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	3413	---
16	---	---	---	---	---	---	---	---	4485	---	---	---
17	---	---	---	---	---	---	---	---	---	5033	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	4541	---	---	---
21	---	---	---	---	---	---	---	---	---	4992	---	---
22	---	---	---	---	---	---	---	---	---	---	2704	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	4975	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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 mi^2.

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 El Dorado 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, 2,920 ft^3/s, Jan. 2, 1997, gage height, 7.22 ft, from rating curve extended above 300 ft^3/s; minimum daily, 0.03 ft^3/s, Oct. 26–28, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	4.3	10	e5.8	13	14	22	103	117	47	48	42
2	50	3.9	8.7	e5.8	14	12	35	107	117	47	47	65
3	47	3.7	8.5	5.8	14	12	54	112	119	46	47	57
4	43	3.4	7.5	5.4	13	13	80	124	121	41	43	50
5	39	3.4	7.2	e5.2	12	14	78	155	128	39	24	46
6	34	3.2	6.9	e5.1	12	13	66	116	122	36	22	44
7	25	3.1	7.5	5.1	12	12	61	148	118	34	21	43
8	14	5.4	7.7	e5.1	13	12	60	281	120	33	21	42
9	9.1	6.7	6.6	5.1	14	11	46	131	107	32	20	40
10	6.7	7.4	7.4	5.1	14	12	47	105	99	32	20	39
11	5.4	7.6	7.6	5.7	13	13	61	85	97	32	20	37
12	4.5	8.2	6.9	6.9	14	14	72	77	97	32	20	17
13	4.0	7.2	7.9	5.6	21	17	104	77	102	32	20	9.6
14	3.6	6.4	7.6	5.1	53	20	51	77	117	31	19	8.8
15	3.3	7.1	7.4	7.8	31	22	35	82	116	29	20	8.5
16	2.9	8.2	7.2	11	20	21	27	78	113	28	40	8.3
17	2.7	14	7.8	11	16	19	26	82	105	27	42	8.1
18	2.6	13	8.7	e20	14	22	24	100	99	26	42	7.9
19	2.4	14	7.9	e30	13	33	22	125	98	26	41	7.9
20	2.3	16	8.0	e30	13	26	29	141	93	26	41	7.8
21	2.2	13	7.7	e23	13	19	42	154	63	28	41	7.6
22	2.1	11	7.2	20	12	18	45	150	52	49	41	7.5
23	2.0	9.6	7.0	18	13	21	42	160	49	50	41	7.7
24	1.9	7.9	6.9	e18	14	22	48	215	48	49	42	7.6
25	1.8	8.5	6.8	e17	13	28	61	181	46	49	42	7.5
26	1.7	10	6.5	e16	12	34	84	153	44	48	41	7.4
27	1.7	9.7	6.5	15	16	36	112	147	42	48	41	7.4
28	37	8.1	6.3	13	18	30	94	157	41	47	41	7.3
29	13	8.3	6.2	12	15	28	65	155	45	48	41	7.3
30	7.1	9.4	6.2	11	---	26	80	135	46	49	41	7.2
31	5.1	---	5.8	15	---	22	---	122	---	48	40	---
TOTAL	429.1	241.7	228.1	364.6	465	616	1673	4035	2681	1189	1070	663.4
MEAN	13.8	8.06	7.36	11.8	16.0	19.9	55.8	130	89.4	38.4	34.5	22.1
MAX	52	16	10	30	53	36	112	281	128	50	48	65
MIN	1.7	3.1	5.8	5.1	12	11	22	77	41	26	19	7.2
AC-FT	851	479	452	723	922	1220	3320	8000	5320	2360	2120	1320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2000, BY WATER YEAR (WY)

MEAN	12.2	17.8	16.3	20.2	18.0	24.6	41.0	97.3	103	70.2	44.6	18.6
MAX	35.8	57.1	53.2	133	55.6	63.2	70.2	160	249	198	90.2	77.4
(WY)	1996	1997	1997	1997	1982	1982	1997	1974	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1971 - 2000	
ANNUAL TOTAL	15779.5		13655.9			
ANNUAL MEAN	43.2		37.3		40.5	
HIGHEST ANNUAL MEAN					65.1	1982
LOWEST ANNUAL MEAN					15.3	1977
HIGHEST DAILY MEAN	196	May 25	281	May 8	1570	Jan 2 1997
LOWEST DAILY MEAN	1.7	Oct 26	1.7	Oct 26	.03	Oct 26 1992
ANNUAL SEVEN-DAY MINIMUM	1.9	Oct 21	1.9	Oct 21	.04	Oct 22 1992
INSTANTANEOUS PEAK FLOW			347	May 8	2920	Jan 2 1997
INSTANTANEOUS PEAK STAGE			4.29	May 8	7.22	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	31300		27090		29320	
10 PERCENT EXCEEDS	128		104		100	
50 PERCENT EXCEEDS	19		21		21	
90 PERCENT EXCEEDS	6.8		5.8		3.4	

e Estimated.

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 mi^2.

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 El Dorado 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.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 8,791 acre-ft, June 3, 1996, gage height, 23.10 ft; minimum, 0 acre-ft, Feb. 13, 15, 20, 22, 27, 1991, gage height, 0 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 8,669 acre-ft, June 14, gage height, 22.81 ft; minimum, 1,729 acre-ft, Jan. 10, gage height, 6.18 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by El Dorado Irrigation District, dated Sept. 30, 1999)

0.0	0	12.0	3,756
2.0	519	15.0	5,003
4.0	1,076	18.0	6,364
6.0	1,671	21.0	7,799
9.0	2,646	24.0	8,792

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4124	2423	2279	1778	2441	3360	3986	4863	7879	8442	7246	6208
2	4010	2404	2275	1774	2451	3368	4004	4982	7940	8407	7211	6241
3	3898	2376	2269	1772	2465	3366	4081	5197	8009	8366	7174	6222
4	3785	2356	2255	1765	2484	3358	4207	5390	8154	8327	7140	6196
5	3678	2337	2247	1757	2493	3362	4384	5570	8318	8289	7100	6167
6	3569	2326	2240	1751	2499	3368	4466	5645	8439	8250	7065	6139
7	3461	2310	2234	1746	2508	3372	4509	5667	8540	8212	7029	6114
8	3359	2326	2224	1739	2512	3385	4561	6049	8553	8174	6993	6088
9	3260	2316	2212	1731	2522	3399	4547	6206	8447	8140	6953	6063
10	3160	2308	2190	1729	2552	3400	4527	6081	8372	8106	6912	6037
11	3069	2297	2173	1738	2575	3397	4553	6020	8349	8072	6873	6015
12	2982	2290	2153	1750	2605	3397	4611	5983	8397	8035	6837	5990
13	2888	2283	2141	1745	2661	3397	4886	5914	8528	7993	6800	5966
14	2797	2275	2123	1736	2794	3408	4744	5933	8669	7949	6764	5946
15	2703	2283	2109	1760	2902	3446	4503	5979	8648	7909	6728	5914
16	2608	2285	2091	1795	2969	3486	4326	6017	8559	7867	6691	5888
17	2525	2309	2076	1808	3006	3520	4245	6041	8528	7828	6656	5860
18	2507	2310	2060	1854	3030	3557	4227	6167	8506	7785	6616	5834
19	2495	2320	2058	1908	3054	3623	4190	6423	8482	7745	6578	5784
20	2481	2345	2035	1981	3080	3695	4165	6627	8508	7707	6540	5712
21	2468	2348	2013	2049	3097	3742	4189	7239	8535	7669	6507	5653
22	2457	2339	1998	2097	3118	3758	4246	7497	8553	7628	6477	5600
23	2447	2332	1982	2135	3168	3806	4281	8057	8354	7588	6444	5560
24	2433	2324	1967	2223	3183	3857	4325	8477	8564	7550	6410	5519
25	2420	2317	1954	2310	3198	3925	4388	8626	8552	7512	6381	5480
26	2412	2307	1935	2341	3215	3978	4507	8406	8542	7472	6351	5441
27	2405	2300	1921	2353	3292	4035	4701	8092	8529	7434	6322	5402
28	2466	2295	1899	2368	3332	4060	4810	7977	8512	7394	6293	5363
29	2460	2293	1872	2383	3351	4051	4757	7974	8490	7358	6266	5323
30	2446	2277	1828	2405	---	4033	4757	7920	8474	7320	6252	5284
31	2433	---	1787	2432	---	4009	---	7862	---	7283	6231	---
MAX	4124	2423	2279	2432	3351	4060	4886	8626	8669	8442	7246	6241
MIN	2405	2275	1787	1729	2441	3358	3986	4863	7879	7283	6231	5284
a	8.36	7.90	6.36	8.39	10.97	12.57	14.59	21.14	22.33	19.91	17.69	15.60
b	-1814	-156	-490	+645	+919	+658	+748	+3105	+612	-1191	-1052	-947

CAL YR 1999 MAX 8746 MIN 977 b +731
WTR YR 2000 MAX 8669 MIN 1729 b +1037

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

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA

LOCATION.—Lat 38°40'18", long 120°07'19", in NE 1/4 SW 1/4 sec.32, T.10 N., R.17 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, on right bank, 1,000 ft downstream from Silver Lake Dam, and 3.5 mi southwest of Kirkwood.

DRAINAGE AREA.—15.2 mi^2.

PERIOD OF RECORD.—September 1922 to current year. Records for water year 1923 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.—WDR CA-75-4: 1927(M), 1929(M), 1932(M), 1937–38(M), 1940–45(M), 1950–53(M), 1955–58(M), 1963(M), 1965(M), 1967(M), 1969–70(M), 1973(M).

GAGE.—Water-stage recorder. Concrete control since Sept. 8, 1986. Datum of gage is 7,198.0 ft above sea level (levels by Pacific Gas & Electric Co.).

REMARKS.—Low and medium flow regulated by Silver Lake (station 11435900) 1,000 ft upstream. Some water, in addition to that released through dam and over spillway, escapes from Silver Lake through porous rock formation and is measured at staff gage (station 11436500) 0.25 mi east of station. For leakage from Silver Lake, refer to monthly figures below. See schematic diagram of South Fork American River Basin.

COOPERATION.—Records were collected by El Dorado 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, 2,170 ft^3/s, Jan. 2, 1997, gage height, 7.79 ft, from rating curve extended above 430 ft^3/s; no flow many days in February and March 1948, Jan. 13, 14, 1954, Nov. 3, 1959, to Feb. 5, 1960.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	6.6	4.7	2.9	3.5	3.5	55	163	92	3.5	3.5	2.6
2	61	9.1	4.7	2.8	3.5	6.4	60	139	84	3.5	3.5	2.8
3	60	9.1	4.6	2.7	3.5	9.3	80	126	63	3.5	3.5	2.7
4	59	9.1	4.6	2.8	3.5	9.3	84	134	30	3.5	3.2	2.6
5	58	6.5	4.4	2.8	3.4	9.3	93	140	29	3.0	3.0	2.9
6	57	5.3	4.3	2.8	3.4	9.3	106	142	30	2.7	2.9	2.6
7	55	5.3	4.2	2.8	3.4	9.3	110	144	58	2.5	2.9	2.6
8	54	5.5	6.7	2.7	3.4	9.3	119	178	112	2.5	2.8	2.6
9	53	4.1	9.1	2.7	3.4	9.3	117	197	105	2.4	3.2	2.6
10	52	3.1	9.1	2.7	3.4	9.3	116	194	82	2.4	3.4	2.7
11	51	3.6	9.0	2.8	3.4	9.4	120	121	52	2.7	3.4	2.8
12	50	3.4	8.6	2.8	3.4	9.6	126	80	19	2.8	3.4	2.5
13	49	3.4	8.3	2.8	3.5	9.7	203	80	6.3	2.8	3.3	2.4
14	48	3.4	8.0	2.9	4.0	9.8	211	80	53	2.5	3.3	2.6
15	47	3.4	7.9	2.9	3.6	9.9	161	79	114	3.1	3.4	2.7
16	46	3.4	7.9	3.0	3.6	9.8	127	78	91	3.7	3.3	2.6
17	24	3.4	7.8	3.0	3.7	9.7	92	46	61	3.3	3.2	2.5
18	3.7	3.2	7.7	3.0	3.6	9.9	76	23	58	2.9	3.1	8.0
19	3.7	3.4	7.7	3.1	3.6	10	69	14	35	2.6	3.2	23
20	3.6	3.4	7.7	3.1	3.6	10	65	7.2	7.1	2.5	2.9	25
21	3.6	3.4	7.7	3.2	3.7	10	69	7.4	2.6	2.6	2.9	15
22	3.6	3.2	7.7	3.2	3.7	10	77	13	2.4	2.4	2.6	12
23	3.6	3.1	7.7	3.3	3.7	11	82	7.6	2.3	2.4	2.5	12
24	3.6	4.1	7.7	3.4	3.7	13	88	119	2.4	2.6	2.6	12
25	3.6	5.0	7.7	3.4	3.7	22	96	403	2.5	2.7	2.7	12
26	3.5	5.0	7.7	3.4	3.6	48	112	305	2.8	2.4	2.8	12
27	3.5	5.0	7.7	3.4	3.8	69	141	235	2.6	2.1	2.7	12
28	3.7	5.0	10	3.4	3.6	77	160	185	2.8	2.5	2.6	11
29	3.5	4.8	18	3.4	3.5	74	151	154	3.6	3.0	2.5	11
30	3.4	4.7	23	3.5	---	71	147	150	3.6	3.1	2.7	11
31	3.4	---	11	3.5	---	65	---	e120	---	3.1	2.6	---
TOTAL	936.0	141.0	252.9	94.2	103.4	652.1	3313	3864.2	1209.0	87.3	93.6	220.8
MEAN	30.2	4.70	8.16	3.04	3.57	21.0	110	125	40.3	2.82	3.02	7.36
MAX	62	9.1	23	3.5	4.0	77	211	403	114	3.7	3.5	25
MIN	3.4	3.1	4.2	2.7	3.4	3.5	55	7.2	2.3	2.1	2.5	2.4
AC-FT	1860	280	502	187	205	1290	6570	7660	2400	173	186	438
a	0	0	0	0	0	0	0	390	812	656	350	183

e Estimated.
a Leakage, in acre-feet, from Silver Lake, provided by El Dorado Irrigation District.

11436000 SILVER LAKE OUTLET NEAR KIRKWOOD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.3	18.5	16.0	15.1	13.6	15.7	44.0	127	88.5	19.8	8.38	37.1
MAX	54.3	110	116	188	93.2	98.2	133	306	353	186	50.5	74.6
(WY)	1953	1951	1951	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1923 - 2000	
ANNUAL TOTAL	14801.6		10967.5			
ANNUAL MEAN	40.6		30.0		35.8	
HIGHEST ANNUAL MEAN					85.4	1983
LOWEST ANNUAL MEAN					8.76	1976
HIGHEST DAILY MEAN	416	May 25	403	May 25	1940	Jan 2 1997
LOWEST DAILY MEAN	3.1	Nov 10	2.1	Jul 27	.00	Feb 24 1948
ANNUAL SEVEN-DAY MINIMUM	3.3	Nov 17	2.4	Jul 22	.00	Feb 28 1948
INSTANTANEOUS PEAK FLOW			441	May 24	2170	Jan 2 1997
INSTANTANEOUS PEAK STAGE			5.14	May 24	7.79	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	29360		21750		25950	
ANNUAL LEAKAGE (AC-FT) a	1730		2390			
10 PERCENT EXCEEDS	121		107		96	
50 PERCENT EXCEEDS	13		4.5		12	
90 PERCENT EXCEEDS	4.7		2.6		.80	

a Leakage, in acre-feet, from Silver Lake, provided by El Dorado Irrigation District.

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 mi^2.

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 El Dorado 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.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 22,319 acre-ft, July 12, 2000, gage height, 61.97 ft, maximum gage height, 62.19 ft, July 9, 10, 1997, capacity table then in use; minimum, 2,427 acre-ft, Mar. 30, 31, 1987, gage height, 20.7 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 22,319 acre-ft, July 12, gage height, 61.97 ft; minimum, 11,282 acre-ft, Mar. 23–27, gage height, 41.99 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by El Dorado Irrigation District, dated Sept. 30, 1999)

15.0	1,347	45.0	12,743
20.0	2,665	50.0	15,331
25.0	4,254	55.0	18,122
30.0	6,086	60.0	21,103
35.0	8,129	63.0	22,338
40.0	10,349		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19288	16179	14708	13190	12144	11790	11349	15085	21606	22126	22089	20137
2	19117	16085	14628	13089	12100	11766	11387	15363	21736	22145	22089	20137
3	19010	16019	14565	13039	12071	11737	11454	15687	21866	22164	22095	20071
4	18816	15937	14507	12963	12037	11698	11554	16030	22077	22182	22077	20011
5	18675	15871	14449	12903	12007	11698	11674	16317	22176	22201	21996	19987
6	18535	15773	14381	12815	11998	11645	11780	16584	22232	22226	21928	19944
7	18412	15708	14313	e12730	11959	11650	11886	16846	22251	22244	21872	19944
8	18273	15698	14255	e12660	11925	11612	11993	17280	22188	22244	21779	19890
9	18134	15606	14183	e12580	11891	11612	12080	17438	22039	22269	21674	19890
10	17995	15557	14131	12511	11877	11564	12173	17461	21934	22301	21582	19866
11	17839	15514	14090	12491	11872	11540	12300	17438	21884	22307	21520	19831
12	17712	15476	14017	12413	11862	11511	12550	17353	21835	22319	21409	19687
13	17575	15422	13971	12339	11944	11487	12788	17274	21959	22288	21293	19591
14	17444	15363	13914	12266	11993	11459	12883	17184	22108	22301	21213	19478
15	e17280	15315	13883	12266	11993	11459	12948	17150	22139	22294	21109	19377
16	e17110	15288	13822	12246	11983	11416	13024	17099	22083	22294	21030	19288
17	e16950	15277	13786	12231	11959	11387	13079	17032	21996	22282	20962	19193
18	16790	15219	13724	12256	11935	11387	13124	17155	21921	22282	20895	19117
19	16746	15240	13673	12217	11901	11316	13165	17432	21884	22244	20852	19022
20	16712	15219	13642	12153	11882	11344	13210	17799	21884	22263	20816	18969
21	16695	15202	13591	12144	11857	11320	13291	18261	21928	22226	20749	18904
22	16880	15160	13566	12144	11848	11297	13357	18722	22039	22195	20718	18893
23	16790	15160	13535	12134	11843	11282	13449	19258	22151	22195	20645	18869
24	16729	15112	13510	12251	11824	11282	13556	19981	22207	22195	20591	18846
25	16634	15053	13474	12275	11809	11282	13694	20603	22182	22164	20554	18840
26	16539	14978	13459	12261	11780	11282	13914	21054	22176	22151	20475	18810
27	16484	14920	13398	12231	11843	11282	14193	21330	22145	22145	20439	18787
28	16512	14835	13398	12231	11843	11292	14397	21514	22108	22120	20354	18781
29	16406	14798	13342	12173	11824	11311	14560	21606	22101	22108	20330	18734
30	16312	14734	13327	12188	---	11330	14798	21619	22120	22108	20264	18734
31	16245	---	13251	12163	---	11344	---	21606	---	22108	20203	---
MAX	19288	16179	14708	13190	12144	11790	14798	21619	22251	22319	22095	20137
MIN	16245	14734	13251	12134	11780	11282	11349	15085	21606	22108	20203	18734
a	51.68	48.88	46.01	43.82	43.12	42.12	49.00	60.82	61.65	61.63	58.52	56.05
b	-2419	-1511	-1483	-1088	-339	-480	+3454	+6808	+514	-12	-1905	-1469

CAL YR 1999 MAX 21519 MIN 13251 b -3960
WTR YR 2000 MAX 22319 MIN 11282 b +70

e Estimated.
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 mi^2.

PERIOD OF RECORD.—October 1992 to current year. Records for September 1922 to September 1992 were published as station 11437000, Caples Lake Outlet. This record combined the spillway discharge. Records for water year 1945 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1969, published as Twin Lakes Outlet near Kirkwood.

REVISED RECORDS.—WSP 1931: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 7,730 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Caples Lake (station 11436950) 500 ft upstream. Flow over Caples Lake Spillway bypasses this gage. No diversion upstream from station. See schematic diagram of South Fork American River Basin.

COOPERATION.—Records were collected by El Dorado 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, 292 ft^3/s, May 28, 1999, gage height, 3.21 ft; minimum daily, 5.5 ft^3/s, Sept. 10, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	36	30	34	19	19	9.2	10	115	35	7.0	30
2	73	36	30	34	19	19	9.4	10	82	25	7.0	30
3	72	36	30	34	19	19	9.6	10	82	16	7.0	30
4	72	36	29	34	19	19	9.9	9.9	82	12	22	30
5	71	36	29	34	19	19	9.8	9.9	82	12	31	20
6	71	36	29	43	19	19	9.7	9.9	83	12	34	8.1
7	71	36	29	46	19	19	9.6	10	82	9.5	37	7.8
8	71	36	29	43	19	19	9.5	34	110	8.2	40	7.8
9	71	27	29	42	18	19	9.3	81	126	8.2	42	7.8
10	71	21	29	40	19	19	9.3	103	126	8.2	42	7.8
11	71	24	29	37	19	19	9.3	103	126	8.2	46	36
12	70	24	29	38	19	19	9.4	103	93	8.2	48	57
13	70	24	29	37	19	19	10	103	73	8.2	48	49
14	70	24	26	37	19	19	9.5	102	95	8.2	48	42
15	69	24	23	38	19	19	9.4	103	148	8.2	41	42
16	69	24	23	38	19	19	9.2	102	156	8.2	29	42
17	55	24	23	32	19	19	9.2	69	151	8.2	24	42
18	28	24	23	28	19	19	9.2	25	152	8.2	21	42
19	14	19	23	27	19	19	9.2	7.3	127	7.5	20	42
20	11	14	19	22	19	19	9.2	7.3	97	7.1	20	26
21	8.0	14	14	18	19	19	9.3	7.4	46	13	20	7.9
22	26	13	14	18	19	20	9.4	7.4	18	16	20	7.8
23	37	13	14	18	19	20	9.4	7.4	28	16	20	7.7
24	37	23	14	18	19	20	9.5	7.6	58	11	22	7.6
25	37	30	14	18	19	18	9.6	7.6	75	7.4	24	7.7
26	37	30	14	18	19	19	9.7	27	75	7.1	24	7.8
27	36	30	14	19	19	19	9.8	89	75	7.1	24	7.8
28	36	30	14	19	19	14	9.7	136	75	7.0	24	7.8
29	36	30	14	19	19	9.2	9.7	154	54	7.0	27	7.8
30	36	30	23	19	---	9.2	9.7	154	37	7.0	30	7.8
31	36	---	34	19	---	9.1	---	153	---	7.0	30	---
TOTAL	1605.0	804	723	921	550	556.5	284.7	1762.7	2729	331.9	879.0	677.0
MEAN	51.8	26.8	23.3	29.7	19.0	18.0	9.49	56.9	91.0	10.7	28.4	22.6
MAX	73	36	34	46	19	20	10	154	156	35	48	57
MIN	8.0	13	14	18	18	9.1	9.2	7.3	18	7.0	7.0	7.6
AC-FT	3180	1590	1430	1830	1090	1100	565	3500	5410	658	1740	1340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

MEAN	28.8	19.1	17.7	34.0	29.5	22.6	31.3	64.7	115	64.4	27.7	31.5
MAX	54.5	33.1	29.8	116	92.4	40.0	83.5	134	203	183	64.5	55.3
(WY)	1996	1996	1996	1997	1997	1997	1995	1999	1995	1995	1995	1995
MIN	6.72	6.75	6.60	13.0	9.54	9.87	9.37	8.63	9.34	10.7	10.1	17.0
(WY)	1998	1998	1998	1999	1996	1996	1994	1994	1994	2000	1999	1994

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	16508.0		11823.8			
ANNUAL MEAN	45.2		32.3		40.5	
HIGHEST ANNUAL MEAN					63.1	1995
LOWEST ANNUAL MEAN					20.8	1994
HIGHEST DAILY MEAN	290	May 28	156	Jun 16	290	May 28 1999
LOWEST DAILY MEAN	8.0	Oct 21	7.0	Jul 28	5.5	Sep 10 1996
ANNUAL SEVEN-DAY MINIMUM	10	Aug 3	7.0	Jul 28	6.4	Oct 5 1997
INSTANTANEOUS PEAK FLOW			168	Jun 15	292	May 28 1999
INSTANTANEOUS PEAK STAGE			2.79	Jun 15	3.21	May 28 1999
ANNUAL RUNOFF (AC-FT)	32740		23450		29360	
10 PERCENT EXCEEDS	113		74		96	
50 PERCENT EXCEEDS	29		20		23	
90 PERCENT EXCEEDS	10		8.2		8.5	

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 mi^2.

PERIOD OF RECORD.—August to December 1907, October 1922 to current year. Prior to October 1956, records for river and El Dorado Canal published separately; combined flow only, October 1956 to September 1960.
CHEMICAL DATA: Water years 1979, 1980.
BIOLOGICAL DATA: Water years 1979, 1980.
SUSPENDED SEDIMENT: Water year 1980.
WATER TEMPERATURE: Water years 1966–79.

REVISED RECORDS.—WSP 1445: 1923(M), 1925(M), 1927(M), 1928 (river only), 1935–37(M). WSP 1515: 1928 (combined). WSP 1931: Drainage area.

GAGE.—Water-stage recorder on river; water-stage recorder for canal diversion (station 11439000). Elevation of gage is 3,840 ft above sea level, from topographic map. Prior to Oct. 1, 1962, at datum 1.00 ft higher.

REMARKS.—Low and medium flows regulated by Echo Lake, Silver Lake, Caples Lake (stations 10336608, 11435900, and 11436950), and Lake Aloha, total capacity, 37,100 acre-ft. Some water is diverted out of river 0.6 mi upstream at diversion dam to El Dorado Canal (station 11439000). Part of this water is used for irrigation and domestic use and the remainder is returned to river at El Dorado Powerplant. See schematic diagram of South Fork American River Basin.

COOPERATION.—Records were collected by El Dorado 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.—River only: Maximum discharge, 25,000 ft^3/s, Jan. 2, 1997, gage height, 14.26 ft (from floodmarks), from rating curve extended above 6,300 ft^3/s on basis of contracted-opening measurement at gage height 10.40 ft; minimum daily, 0.13 ft^3/s, Nov. 26, 1977.
Combined flow: Maximum discharge, 25,000 ft^3/s, Jan. 2, 1997; minimum daily, 10 ft^3/s, Oct. 17, 19, 1929.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	53	72	70	173	302	521	1330	982	164	55	65
2	184	58	70	68	184	295	602	1340	886	144	55	143
3	181	57	65	65	190	285	829	1320	855	126	56	112
4	175	56	63	63	194	298	1030	1360	826	111	56	82
5	168	58	63	56	180	333	1080	1410	830	102	57	73
6	165	57	61	65	167	306	1020	1190	778	95	53	69
7	158	57	62	75	165	277	1000	1380	809	90	54	60
8	145	78	56	64	168	269	1070	2660	950	84	53	53
9	136	71	73	66	188	260	969	1750	833	80	57	48
10	131	57	67	66	242	245	906	1470	700	77	57	46
11	124	55	69	68	231	259	996	1180	625	75	56	45
12	139	57	69	71	212	289	1080	997	588	75	59	60
13	144	56	71	66	258	323	1930	962	545	80	59	59
14	144	55	66	64	1600	372	1370	945	604	75	58	46
15	142	58	65	83	809	445	1030	998	721	69	57	44
16	138	65	63	117	548	445	858	999	705	62	57	44
17	134	95	63	106	422	427	880	959	577	61	61	44
18	82	76	64	345	355	428	763	999	558	63	57	46
19	61	79	64	367	318	529	652	1080	514	63	54	58
20	53	118	66	450	303	581	644	1190	408	55	54	77
21	48	76	60	334	306	446	750	1320	323	51	53	66
22	42	58	54	190	286	409	807	1340	235	66	53	52
23	55	53	56	172	286	441	774	1360	209	76	52	46
24	60	56	54	829	262	459	814	1780	214	75	52	44
25	50	62	54	735	252	534	886	1900	236	69	53	43
26	46	64	54	376	245	632	1060	1610	229	64	55	45
27	46	65	52	262	442	726	1290	1490	231	62	54	49
28	141	63	50	211	384	714	1300	1470	214	60	54	49
29	78	61	52	192	349	633	1070	1380	229	59	53	49
30	59	66	60	190	---	628	1120	1220	183	58	60	48
31	53	---	82	182	---	562	---	1090	---	57	63	---
TOTAL	3469	1940	1940	6068	9719	13152	29101	41479	16597	2448	1727	1765
MEAN	112	64.7	62.6	196	335	424	970	1338	553	79.0	55.7	58.8
MAX	187	118	82	829	1600	726	1930	2660	982	164	63	143
MIN	42	53	50	56	165	245	521	945	183	51	52	43
AC-FT	6880	3850	3850	12040	19280	26090	57720	82270	32920	4860	3430	3500

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.8	78.2	130	156	177	278	640	1209	852	186	27.0	25.8
MAX	223	1283	1587	1964	1333	1252	1497	2765	3551	1628	343	417
(WY)	1984	1951	1951	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1923 - 2000	
ANNUAL TOTAL	178490		129405			
ANNUAL MEAN	489		354		316	
HIGHEST ANNUAL MEAN					907	1983
LOWEST ANNUAL MEAN					19.4	1977
HIGHEST DAILY MEAN	3070	May 26	2660	May 8	18000	Jan 2 1997
LOWEST DAILY MEAN	42	Oct 22	42	Oct 22	.13	Nov 26 1977
ANNUAL SEVEN-DAY MINIMUM	50	Oct 21	46	Sep 23	.36	Nov 5 1928
INSTANTANEOUS PEAK FLOW			3000	May 8	25000	Jan 2 1997
INSTANTANEOUS PEAK STAGE			6.07	May 8	14.26	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	354000		256700		229300	
10 PERCENT EXCEEDS	1480		1030		1040	
50 PERCENT EXCEEDS	210		135		52	
90 PERCENT EXCEEDS	60		53		2.8	

11439501 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CA—Continued

SOUTH FORK AMERICAN RIVER AND EL DORADO CANAL NEAR KYBURZ, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	73	83	70	173	302	521	1330	1000	201	95	105
2	209	74	81	68	184	295	602	1340	910	180	95	183
3	206	73	76	70	190	285	829	1320	884	162	96	151
4	200	73	74	72	194	298	1030	1360	855	148	95	121
5	192	71	74	63	180	333	1080	1410	862	141	96	112
6	189	67	72	67	167	306	1020	1190	814	134	92	109
7	182	67	73	84	165	277	1000	1380	847	129	93	100
8	169	88	65	76	168	269	1070	2660	989	123	93	92
9	160	81	78	77	188	260	969	1750	871	119	97	87
10	155	67	72	77	242	245	906	1470	737	116	97	85
11	148	65	74	80	231	259	996	1180	661	114	96	84
12	145	67	74	83	212	289	1080	998	625	114	99	100
13	144	66	76	77	258	323	1930	963	583	120	99	98
14	144	65	71	75	1600	372	1370	946	642	115	98	85
15	142	68	70	95	809	445	1030	999	760	109	97	83
16	138	75	68	129	548	445	859	1000	743	102	96	83
17	134	106	68	118	422	427	880	960	614	101	101	81
18	82	86	69	358	355	428	763	1000	595	104	97	79
19	61	89	69	379	318	529	652	1080	551	104	94	91
20	53	128	71	462	303	581	644	1190	445	95	94	111
21	50	86	65	346	306	446	750	1320	360	90	92	76
22	46	68	59	202	286	409	807	1340	272	105	92	59
23	60	60	61	183	286	441	774	1360	246	115	91	56
24	67	59	59	842	262	459	814	1780	251	114	91	52
25	71	70	59	745	252	534	886	1900	273	108	92	50
26	71	75	59	384	245	632	1060	1610	266	103	94	50
27	71	76	58	270	442	726	1290	1490	268	102	93	50
28	168	74	55	216	384	714	1300	1470	251	100	94	49
29	104	72	57	192	349	633	1070	1380	267	99	93	49
30	85	77	68	190	---	628	1120	1230	220	98	100	48
31	79	---	87	182	---	562	---	1100	---	97	103	---
TOTAL	3937	2266	2145	6332	9719	13152	29102	41506	17662	3662	2955	2579
MEAN	127	75.5	69.2	204	335	424	970	1339	589	118	95.3	86.0
MAX	212	128	87	842	1600	726	1930	2660	1000	201	103	183
MIN	46	59	55	63	165	245	521	946	220	90	91	48
AC-FT	7810	4490	4250	12560	19280	26090	57720	82330	35030	7260	5860	5120
a	931	642	417	521	0	0	17	116	2110	2410	2440	1610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

MEAN	110	160	219	242	273	382	744	1329	981	311	148	133
MAX	365	1301	1698	1964	1412	1344	1533	2905	3561	1637	357	424
(WY)	1983	1951	1951	1997	1986	1986	1982	1969	1983	1995	1983	1983
MIN	20.8	25.1	44.2	35.9	38.4	53.7	178	207	99.7	75.0	73.0	46.4
(WY)	1978	1930	1960	1929	1977	1977	1977	1977	1924	1931	1994	1987

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1923 - 2000	
ANNUAL TOTAL	183438		135017			
ANNUAL MEAN	503		369		420	
HIGHEST ANNUAL MEAN					980	1983
LOWEST ANNUAL MEAN					104	1977
HIGHEST DAILY MEAN	3100	May 26	2660	May 8	18000	Jan 2 1997
LOWEST DAILY MEAN	46	Oct 22	46	Oct 22	10	Oct 17 1929
ANNUAL SEVEN-DAY MINIMUM	58	Oct 19	50	Sep 24	13	Oct 6 1929
INSTANTANEOUS PEAK FLOW			3000	May 8	25000	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	363800		267800		303900	
ANNUAL DIVERSION (AC-FT) a	9890		11210			
10 PERCENT EXCEEDS	1510		1030		1150	
50 PERCENT EXCEEDS	220		146		167	
90 PERCENT EXCEEDS	71		68		74	

a Diversion, in acre-feet, to El Dorado Canal, provided by El Dorado Irrigation District.

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 mi^2.

PERIOD OF RECORD.—October 1962 to current year.
CHEMICAL ANALYSES.—June to September 1996.

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, 270,300 acre-ft, between elevations 4,645.0 ft, minimum operating level, and 4,870.0 ft, top of radial spillway gates. Dead storage, 7,000 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, 271,981 acre-ft, May 28, elevation, 4,868.17 ft; minimum, 106,169 acre-ft, Jan. 11, elevation, 4,791.74 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149155	143366	132033	109511	131946	169237	188466	230075	271036	255039	216784	175887
2	148166	143997	131547	109029	133029	170034	189442	231652	270800	254390	216583	175134
3	147181	143997	129837	108578	134364	170750	190240	233528	270711	253714	215806	173230
4	146314	144760	128331	107920	135390	171849	191797	235282	271213	252814	214657	171425
5	145732	145115	126838	107324	136315	172740	194103	236911	271154	251610	213886	169572
6	144480	145489	125928	106908	137460	173699	195194	238791	270829	251023	213488	168171
7	143070	146202	124540	107086	138576	174405	196243	241604	270505	250214	211730	166861
8	142056	146804	122965	107160	139589	175005	197812	248907	270652	249463	209493	164675
9	140937	147446	121749	106538	140956	175521	199532	251610	270358	e248463	208028	162754
10	139662	147654	120754	106184	142093	175995	200265	252871	270593	246942	206424	160426
11	138810	148166	120104	106169	143700	176340	200906	253714	270475	245785	205650	158222
12	138431	148299	118797	106361	144984	175908	202646	253911	270004	245099	203843	155765
13	137460	147408	117485	106435	147597	176556	207589	254615	269299	244085	e201834	153571
14	136386	145526	116485	106449	153941	177140	209518	255293	269064	242148	200479	151805
15	136404	144164	115868	106834	157089	176534	210868	256085	269828	241305	199201	149652
16	136404	143181	115616	107249	158721	177704	211805	257163	268565	240438	198117	147332
17	136529	142001	115491	107279	160245	178334	212546	257107	268243	239087	e197038	145564
18	136672	140791	115019	109029	161031	179032	213116	258074	267540	237823	e195963	145190
19	137012	140244	115239	110892	161475	180082	213687	259301	266839	236510	e194080	143904
20	137316	139953	114362	113584	e161860	180477	213985	259615	265703	234404	192302	142001
21	137406	139263	113553	114769	162245	180609	215406	e260991	264831	232576	e191200	141047
22	137711	138937	112964	115522	162794	180763	217035	262718	263730	e230994	e190012	e139916
23	137927	138576	113212	116611	162611	181093	218446	263990	262892	229237	e188602	e139444
24	138395	137065	112702	122028	163161	181556	219305	266898	262430	228193	e187154	e136886
25	138792	136101	112902	125794	163794	182617	220142	268506	261509	227699	e186051	136618
26	139118	135621	112686	127464	164490	184373	221236	270063	260131	225546	e184641	135461
27	139844	135106	112039	128518	166571	185423	223281	271420	259158	223435	e183349	134700
28	140901	135568	111518	129287	167713	186433	225598	271981	258131	222308	e182218	134470
29	141358	134753	110800	130009	168463	187041	227179	271745	257533	220752	181093	134223
30	142240	133519	110238	130836	---	187651	228611	270977	255632	218648	e179513	132609
31	142608	---	109904	131668	---	187809	---	270770	---	217312	176988	---
MAX	149155	148299	132033	131668	168463	187809	228611	271981	271213	255039	216784	175887
MIN	136386	133519	109904	106169	131946	169237	188466	230075	255632	217312	176988	132609
a	4813.75	4808.70	4794.24	4807.64	4826.91	4835.81	4852.58	4867.76	4862.52	4848.17	4830.92	4808.18
b	-7618	-9089	-23615	+21764	+36795	+19346	+40802	+42159	-15138	-38320	-40324	-44379
c	21230	28110	34710	6180	11080	40800	18560	34660	43420	48480	71470	56770

CAL YR 1999 MAX 272159 MIN 109904 b -38319 c 521100
WTR YR 2000 MAX 271981 MIN 106169 b -17617 c 415500

e Estimated.
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 mi^2.

PERIOD OF RECORD.—October 1959 to current year.
CHEMICAL ANALYSES: June to September 1996.

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 ft^3/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, 45,057 acre-ft, June 9, elevation, 5,448.68 ft; minimum, 21,758 acre-ft, Mar. 18, elevation, 5,408.85 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33220	29038	25154	21980	23450	24639	23167	34964	44443	43855	41030	33515
2	33014	28732	24970	21941	23415	24396	23450	35433	44527	43876	40664	33568
3	32768	e28732	24883	21946	23455	24149	23664	35899	44612	43883	40465	33562
4	32517	28672	24827	21951	23479	23939	23878	36393	44704	43883	40089	33550
5	32279	28656	24705	21960	23470	23708	24149	36992	44767	43827	39734	33538
6	32036	28639	24432	21951	23460	23599	24619	37426	44838	43820	39531	33243
7	31938	28645	24185	21956	23450	23326	25042	38105	44880	43806	39447	32821
8	31714	28520	23994	21956	23405	23133	25504	39924	45015	43800	39388	32401
9	31473	28373	23813	21951	23405	22862	25876	40691	45057	43786	39186	32105
10	31279	28097	23519	21965	23465	22573	26256	41044	45043	43779	39141	31783
11	31029	27936	23400	22009	23445	22334	26665	41258	44986	43765	38837	31456
12	30791	27920	23246	22023	23405	22373	27092	41446	44951	43751	e38579	31143
13	30543	27909	23123	22028	23375	22096	28011	41634	44887	43737	e38431	30740
14	30285	27887	22970	21956	23848	21859	28498	41729	44788	43723	38080	30408
15	30263	27882	22832	22014	24185	21936	28836	41918	44682	43709	37692	30184
16	30235	27936	22724	22086	24260	21854	29060	42135	44732	43688	37426	29744
17	30201	27914	22661	22086	24316	21787	29401	42271	44739	43667	e37174	29351
18	30167	27861	22607	22154	24371	21758	29666	42496	44732	43612	36823	28879
19	30139	27619	e22538	22300	e24492	21849	29872	42770	44668	43466	e36611	28444
20	30112	27368	22548	22529	24497	21869	30095	43141	44647	43369	e36424	28011
21	30084	27113	22480	22656	24543	21980	30403	e43529	44619	43217	e36072	27861
22	30056	26965	22451	22700	24629	21936	30752	43897	44584	43190	e35739	e27544
23	30028	26712	22412	22813	24700	21869	31069	44275	44513	43148	e35433	e27214
24	29772	26649	22382	23222	24710	21801	31422	44661	44464	43017	e35086	e27008
25	29750	26570	22339	23385	24731	21970	31829	44845	44352	42866	e34674	26744
26	29722	26261	22314	23415	24797	22203	32239	44809	44261	42825	e34325	26465
27	29678	25938	22246	23460	24924	22387	32821	44718	44044	42482	e34044	26277
28	29578	25607	22173	23524	24863	22499	33450	44640	43904	42244	e33704	26251
29	29467	25421	22135	23539	24822	22641	33936	44718	43883	41993	33562	26000
30	29296	25390	22101	23599	---	22769	34457	44661	43827	41763	33532	25969
31	29269	---	22033	23619	---	22990	---	44499	---	41446	33491	---
MAX	33220	29038	25154	23619	24924	24639	34457	44845	45057	43883	41030	33568
MIN	29269	25390	22033	21941	23375	21758	23167	34964	43827	41446	33491	25969
a	5423.44	5416.15	5409.42	5412.65	5415.04	5411.38	5432.46	5447.89	5446.93	5443.45	5430.84	5417.27
b	-4181	-3879	-3357	+1586	+1203	-1832	+11467	+10042	-672	-2381	-7955	-7522

CAL YR 1999 MAX 43549 MIN 13547 b -1770
WTR YR 2000 MAX 45057 MIN 21758 b -7481

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

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 mi^2.

PERIOD OF RECORD.—October 1924 to current year.

REVISED RECORDS.—WSP 1395: 1928, 1938. WSP 1635: Drainage area at former site.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 5,290 ft above sea level, from topographic map. Prior to Oct. 1, 1959, at site 0.3 mi upstream at different datum.

REMARKS.—Flow regulated by Ice House Reservoir (station 11441100) beginning in December 1959. Diversion to Jones Fork Powerplant (station 11440900) starting April 1985 bypasses station and returns to Silver Creek at Union Valley Reservoir (station 11441001). See schematic diagram of South Fork American River Basin.

COOPERATION.—Records were collected by Sacramento Municipal Utility District, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge prior to construction of Ice House Dam in 1959, 3,940 ft^3/s, Dec. 23, 1955, gage height, 6.71 ft, site and datum then in use, from rating curve extended above 540 ft^3/s on basis of slope-area measurement at gage height 6.69 ft; no flow Oct. 31 to Nov. 9, 1958. Maximum discharge since construction of the dam, 7,530 ft^3/s, May 16, 1996, gage height, 7.64 ft, from rating curve extended above 730 ft^3/s on basis of computation of flow over dam at gage height 5.66 ft; minimum daily, 1.2 ft^3/s, Mar. 17–19, 1960.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	13	4.9	4.9	4.6	4.9	4.6	9.0	10	18	17	16
2	14	11	4.9	4.9	4.4	4.9	4.6	9.0	10	18	17	17
3	14	12	4.7	4.9	4.3	5.2	4.6	9.0	10	18	17	16
4	14	19	4.6	5.0	4.4	5.3	4.5	9.3	10	18	17	16
5	14	12	5.3	4.3	4.3	5.4	4.2	9.2	10	18	17	16
6	13	12	5.6	3.7	4.2	5.1	4.2	9.1	10	18	17	16
7	13	12	5.1	3.7	4.2	5.1	4.3	9.9	10	18	17	16
8	13	13	5.1	3.7	4.2	5.2	4.4	11	11	18	17	16
9	13	13	5.1	3.7	4.3	5.4	4.4	9.7	10	18	17	16
10	13	13	5.1	3.7	4.6	4.9	4.4	9.7	11	18	17	16
11	13	13	5.0	4.0	4.4	5.0	4.4	9.7	10	18	17	16
12	13	13	5.0	4.0	4.3	5.0	4.4	9.7	10	18	17	16
13	13	13	5.1	3.9	6.3	5.0	5.8	9.6	10	18	17	16
14	13	13	5.1	3.7	8.1	5.1	5.0	9.4	10	17	17	16
15	12	13	4.9	4.4	5.4	5.1	4.9	9.9	10	17	16	16
16	13	13	4.9	4.1	5.0	5.1	4.7	10	10	17	16	16
17	13	9.0	4.9	4.5	4.8	5.2	4.9	9.9	10	17	16	16
18	13	5.4	5.1	5.4	4.6	5.4	5.0	9.7	10	17	16	16
19	13	5.7	5.0	4.6	4.6	5.0	4.8	9.8	9.5	17	16	16
20	13	5.4	4.9	4.8	4.7	4.8	4.6	9.7	9.4	17	16	16
21	13	5.2	4.9	4.3	4.7	4.7	4.8	9.7	9.7	17	16	16
22	13	5.1	4.9	4.2	4.6	4.8	4.9	9.7	9.5	17	17	16
23	13	5.1	4.9	5.4	4.6	4.8	4.6	10	9.4	17	16	16
24	13	5.1	4.9	9.5	4.6	4.8	4.6	9.7	9.2	17	16	15
25	13	5.1	4.9	6.8	4.6	4.6	4.9	9.7	9.0	17	16	15
26	13	5.1	4.9	5.3	4.7	4.6	4.9	9.7	9.0	17	16	16
27	13	5.1	4.9	4.7	6.0	4.6	4.3	9.7	9.0	17	16	16
28	14	5.1	4.9	4.7	5.7	4.7	4.4	10	9.0	17	16	16
29	13	4.9	4.9	4.4	5.0	4.9	4.4	10	12	16	16	16
30	13	4.9	4.9	4.6	---	4.7	7.5	10	17	17	16	15
31	13	---	4.9	4.6	---	4.6	---	10	---	17	16	---
TOTAL	408	284.2	154.2	144.4	140.2	153.9	142.0	300.5	303.7	539	511	478
MEAN	13.2	9.47	4.97	4.66	4.83	4.96	4.73	9.69	10.1	17.4	16.5	15.9
MAX	14	19	5.6	9.5	8.1	5.4	7.5	11	17	18	17	17
MIN	12	4.9	4.6	3.7	4.2	4.6	4.2	9.0	9.0	16	16	15
AC-FT	809	564	306	286	278	305	282	596	602	1070	1010	948
a	3610	4220	3810	1020	2570	6460	1010	7550	5960	1770	6860	7220

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)

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 - 2000, BY WATER YEAR (WY)

MEAN	10.2	7.64	5.49	17.1	5.57	9.07	5.30	13.6	24.2	15.8	12.2	12.2
MAX	14.3	11.2	6.12	184	7.03	55.0	6.13	87.9	168	61.9	18.2	17.6
(WY)	1998	1997	1993	1997	1986	1986	1990	1996	1995	1995	1997	1996
MIN	5.32	5.65	4.78	3.65	3.97	4.13	4.01	5.49	5.54	5.46	5.21	5.29
(WY)	1989	1993	1990	1987	1987	1987	1986	1988	1988	1987	1992	1992

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	3635.2		3559.1			
ANNUAL MEAN	9.96		9.72		11.6	
HIGHEST ANNUAL MEAN					26.2	1995
LOWEST ANNUAL MEAN					5.68	1988
HIGHEST DAILY MEAN	19	Nov 4	19	Nov 4	2840	Jan 2 1997
LOWEST DAILY MEAN	3.9	Jan 6	3.7	Jan 6	2.8	Jan 3 1986
ANNUAL SEVEN-DAY MINIMUM	4.4	Jan 11	3.8	Jan 6	3.0	Apr 11 1989
INSTANTANEOUS PEAK FLOW			25	Nov 3	7530	May 16 1996
INSTANTANEOUS PEAK STAGE			2.79	Nov 3	7.64	May 16 1996
ANNUAL RUNOFF (AC-FT)	7210		7060		8380	
ANNUAL DIVERSION (AC-FT) a	61380		52060			
10 PERCENT EXCEEDS	16		17		16	
50 PERCENT EXCEEDS	11		9.6		6.1	
90 PERCENT EXCEEDS	4.7		4.5		4.6	

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 mi^2.

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, 3,737 acre-ft, Jan. 2, 1997, elevation, 4,459.10 ft; minimum, 875 acre-ft, Oct. 3, 1991, elevation, 4,397.47 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 3,218 acre-ft, Oct. 14, elevation, 4,449.78 ft; minimum, 989 acre-ft, Oct. 17, elevation, 4,401.32 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2982	e1865	2630	2959	3064	2209	2555	2585	2717	2540	2990	2795
2	2891	1912	2389	3031	3062	1943	2408	2638	2724	2692	2910	2843
3	2680	e1914	2764	2925	2881	2548	2576	2570	2732	2782	2765	2670
4	2606	2022	2840	2847	2909	2545	2936	2527	2683	2878	2938	2820
5	2815	2071	2916	2852	2925	2692	2631	2634	2722	2877	3104	2921
6	2961	2118	2948	2671	2946	2671	2612	2599	2664	2860	2502	2890
7	2953	2175	3004	2379	2718	2504	2495	2799	2759	2826	2413	3109
8	2914	2274	3045	2202	e2563	2537	2912	2713	2767	2531	e2698	2949
9	2888	2333	2919	2646	2399	2567	2920	2630	2803	e2273	2858	2995
10	2901	2657	2811	2829	2595	2536	2637	2744	2773	2694	2666	2768
11	2837	2853	2843	3005	2365	2663	2865	2710	2869	2706	2485	2764
12	2993	2930	2914	2900	2281	2645	2826	2591	2882	2730	e2813	2984
13	3122	2614	3021	2711	2391	2577	2485	2531	2655	2680	e3002	3132
14	3218	2831	2997	2596	3201	2396	2519	2622	2761	2789	2712	2902
15	2363	2927	2876	2580	2764	2822	2180	2548	2735	2794	2953	2536
16	1010	2887	2917	2827	2568	2919	2278	2391	2377	2826	e3031	2973
17	989	2700	2942	2833	2781	2578	2247	2476	2642	e2907	e3100	2955
18	1043	2819	2801	2918	2549	2714	2508	2519	2417	e2802	e2738	2764
19	1096	3019	e2821	2768	e2686	2444	2473	2335	2606	2726	e2748	3010
20	1146	3019	2990	2676	e2772	2440	2417	2637	2587	e2820	e3032	2921
21	1197	2866	3014	2866	2747	2514	2435	e2693	2452	e2886	e3123	2666
22	1247	2801	3138	2794	2170	2684	2365	2700	e2318	e2936	e2959	e2779
23	1296	2502	2720	2303	2477	2760	2430	2904	2408	2898	e3130	e2828
24	1347	2659	2965	2965	2261	2806	2609	2813	2355	2682	e3153	e2762
25	1397	2554	2675	2974	2033	2698	2473	2810	2417	2813	e2943	2942
26	1447	2535	e2674	2433	2071	2498	2567	2835	2588	2565	e2913	2921
27	1505	2757	2753	2315	2207	2857	2576	2683	2444	3045	e2756	2656
28	1641	2674	2810	2442	2395	2872	2390	2674	2490	2895	e3055	2213
29	1701	2557	2811	2250	2399	2684	2480	2733	2400	2530	2701	2244
30	1755	2625	2884	2165	---	2493	2493	2870	2538	2678	e2458	2341
31	1808	---	2707	2108	---	2924	---	2897	---	3006	2686	---
MAX	3218	3019	3138	3031	3201	2924	2936	2904	2882	3045	3153	3132
MIN	989	1865	2389	2108	2033	1943	2180	2335	2318	2273	2413	2213
a	4422.33	4438.82	4440.37	4428.67	4434.48	4444.31	4436.29	4443.91	4437.14	4445.91	4439.97	4433.34
b	-1040	+817	+82	-599	+291	+525	-431	+404	-359	+468	-320	-345

CAL YR 1999 MAX 3360 MIN 989 b -324
WTR YR 2000 MAX 3218 MIN 989 b -507

e Estimated.
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 mi^2.

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 ft^3/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 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	5.7	11	11	11	11	11	21	21	21	e20	20
2	21	5.6	12	11	11	11	11	21	21	21	e20	20
3	21	5.9	11	11	11	11	11	21	21	21	e20	20
4	21	5.8	11	11	11	11	11	21	21	21	e20	20
5	21	5.8	11	11	11	11	11	21	21	21	e20	20
6	21	5.6	11	11	11	11	11	21	21	21	e20	20
7	21	5.6	11	11	11	11	11	21	21	21	e20	20
8	21	5.7	11	11	10	11	11	21	21	21	e20	20
9	21	5.7	11	11	11	11	11	21	21	e21	e20	20
10	21	10	11	11	11	11	11	21	21	e21	e20	20
11	21	14	11	11	11	11	11	21	21	e21	20	20
12	21	25	11	11	11	11	11	21	21	e21	e20	20
13	21	12	11	11	11	11	11	21	21	e21	e20	20
14	21	12	11	11	11	11	11	21	21	22	e20	20
15	21	12	11	11	11	11	11	21	21	20	e20	20
16	21	12	11	11	11	11	11	21	21	20	e20	20
17	11	12	11	11	11	11	11	21	21	e20	e20	20
18	5.6	11	11	11	11	11	11	21	21	e20	e20	20
19	5.7	11	11	11	11	11	11	21	21	e20	e20	20
20	5.8	11	11	11	11	11	11	21	21	e20	e20	20
21	5.8	11	11	11	11	11	11	21	21	e20	e20	20
22	5.7	11	11	11	11	11	11	21	e21	e20	e20	e20
23	5.8	11	11	11	11	11	11	21	e21	e20	e20	e20
24	5.8	11	11	11	11	11	11	21	21	e20	e20	e20
25	5.7	11	11	11	11	11	11	21	21	e20	e20	e20
26	5.7	11	11	11	11	11	11	21	21	e20	e20	e20
27	5.8	11	11	11	11	11	11	20	21	e20	e20	e20
28	5.7	11	11	11	11	11	11	21	21	e20	e20	20
29	5.8	11	11	11	11	11	11	21	21	e20	e20	20
30	5.8	11	11	11	---	11	15	20	21	e20	e20	20
31	5.8	---	11	11	---	11	---	21	---	e20	e20	---
TOTAL	427.5	303.4	342	341	318	341	334	649	630	635	620	600
MEAN	13.8	10.1	11.0	11.0	11.0	11.0	11.1	20.9	21.0	20.5	20.0	20.0
MAX	21	25	12	11	11	11	15	21	21	22	20	20
MIN	5.6	5.6	11	11	10	11	11	20	21	20	20	20
AC-FT	848	602	678	676	631	676	662	1290	1250	1260	1230	1190
a	23060	27890	34630	13760	20410	48420	24450	37530	44790	47300	71490	56930

CAL YR 1999 a 578100
WTR YR 2000 a 450700

e Estimated.
a Diversion, in acre-feet, to Jaybird Powerplant, provided by Sacramento Municipal Utility District.

11441890 CAMINO RESERVOIR NEAR POLLOCK PINES, CA

LOCATION.—Lat 38°49'44", long 120°32'09", in NW 1/4 NW 1/4 sec.4, T.11 N., R.13 E., El Dorado County, Hydrologic Unit 18020129, Eldorado National Forest, in outlet tower to Camino Powerplant, 100 ft upstream from right abutment of Camino Diversion Dam, 0.3 mi upstream from Round Tent Canyon, and 5.3 mi northwest of Pollock Pines.

DRAINAGE AREA.—160 mi^2.

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, 775 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; no storage on many days in 1999.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 763 acre-ft, Aug. 14, elevation, 2,912.23 ft; no storage on many days.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	561	0	631	578	584	618	553	647	639	684	680	654
2	604	0	651	692	648	506	668	555	683	607	666	545
3	661	0	604	574	651	565	627	637	655	488	531	631
4	540	0	638	602	581	640	665	617	628	605	702	660
5	653	0	663	663	622	624	528	661	572	672	587	632
6	529	0	605	658	648	597	606	525	546	545	556	615
7	621	0	625	592	616	711	648	558	634	604	600	630
8	657	0	653	610	e650	658	611	624	564	666	e578	616
9	e641	0	689	570	634	671	586	546	572	e632	597	614
10	e669	230	650	695	617	693	645	573	633	626	572	646
11	640	314	649	667	608	698	555	562	620	646	599	627
12	700	492	678	624	529	720	571	593	604	704	615	523
13	695	570	609	621	656	696	603	622	595	723	674	586
14	729	698	633	652	636	702	601	614	728	654	763	645
15	466	653	629	659	540	589	599	628	720	610	708	498
16	314	641	597	632	664	610	589	668	654	623	e652	562
17	355	624	697	638	633	604	609	617	628	e634	e535	608
18	316	630	e642	665	603	472	611	649	451	e555	e649	670
19	316	620	529	596	e625	559	592	566	713	684	e691	587
20	221	618	629	561	e613	442	630	577	605	e584	e634	615
21	0	696	634	655	652	469	582	e562	612	e602	e659	627
22	0	663	614	621	590	545	610	675	e483	e528	e614	e683
23	0	713	637	605	624	571	626	715	693	655	e569	e608
24	0	656	592	664	626	568	583	689	561	695	e536	e609
25	0	658	662	535	541	664	588	537	702	566	e577	615
26	0	678	e650	579	530	719	565	542	591	586	e581	568
27	0	623	580	579	534	646	642	609	504	639	e431	568
28	0	615	681	681	575	619	593	614	678	596	e586	601
29	0	592	598	679	660	519	663	659	735	529	610	595
30	0	615	615	657	---	547	632	533	605	550	e636	588
31	0	---	660	586	---	626	---	525	---	640	588	---
MAX	729	713	697	695	664	720	668	715	735	723	763	683
MIN	0	0	529	535	529	442	528	525	451	488	431	498
a		2903.35	2906.19	2901.47	2906.21	2904.04	2904.45	2897.32	2902.74	2904.96	2901.60	2901.63
b	-694	+615	+45	-74	+74	-34	+6	-107	+80	+35	-52	0

CAL YR 1999 MAX 731 MIN 0 b +99
WTR YR 2000 MAX 763 MIN 0 b -106

e Estimated.
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 mi^2.

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder. Datum of gage is 2,754.06 ft above sea level (Sacramento Municipal Utility District benchmark).

REMARKS.—Flow is regulated by Ice House Reservoir (station 11441100) since 1959, Union Valley Reservoir (station 11441001) since 1962, and Junction and Camino Reservoirs (stations 11441760 and 11441890). 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, about 47,700 ft^3/s, Jan. 2, 1997, gage height, 15.72 ft, backwater from log jam, from rating curve extended above 4,700 ft^3/s on basis of slope-area measurement at gage height 11.28 ft; minimum daily, 1.0 ft^3/s, Nov. 1, 1980.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	8.6	11	11	17	45	13	22	23	22	23	23
2	28	8.6	11	11	15	38	12	23	23	22	23	23
3	30	8.6	11	11	16	33	21	23	23	22	22	23
4	30	8.6	11	11	24	31	20	23	24	22	23	23
5	28	8.3	11	12	20	36	20	23	23	22	22	23
6	28	8.6	11	12	18	34	20	23	23	22	23	23
7	18	9.1	11	11	16	28	26	23	23	22	23	23
8	28	9.7	11	11	14	26	19	29	23	22	23	23
9	29	9.0	11	11	14	25	18	22	23	22	23	23
10	28	10	11	11	17	23	16	22	23	22	23	23
11	29	11	11	12	18	23	12	23	23	22	23	23
12	29	13	11	11	21	23	11	23	23	22	23	23
13	29	13	11	11	71	23	11	22	23	22	23	23
14	30	12	11	11	323	24	11	22	23	22	23	23
15	28	12	11	12	148	25	11	23	22	22	23	22
16	24	13	11	12	79	25	11	24	22	32	23	23
17	19	12	11	12	57	23	11	22	22	43	23	23
18	19	12	11	31	46	22	11	22	22	32	23	23
19	19	13	11	21	33	21	11	22	22	23	23	23
20	18	12	12	33	26	19	11	22	22	23	23	23
21	15	12	11	18	24	18	11	23	22	23	23	23
22	10	12	11	16	23	16	11	23	22	22	23	e23
23	8.2	13	11	23	24	14	11	23	22	26	23	e23
24	7.3	14	11	136	21	13	11	23	22	42	23	e23
25	8.1	14	11	123	19	12	11	23	22	23	23	e23
26	8.2	14	12	61	20	12	11	22	22	22	23	23
27	8.9	13	12	36	71	11	11	23	22	23	23	23
28	23	13	12	24	57	10	11	23	22	22	23	23
29	12	13	11	19	53	11	11	23	22	22	23	23
30	8.7	12	11	18	---	10	18	23	22	23	23	23
31	8.6	---	12	18	---	10	---	23	---	23	23	---
TOTAL	638.0	342.1	346	770	1305	684	413	710	675	754	711	689
MEAN	20.6	11.4	11.2	24.8	45.0	22.1	13.8	22.9	22.5	24.3	22.9	23.0
MAX	30	14	12	136	323	45	26	29	24	43	23	23
MIN	7.3	8.3	11	11	14	10	11	22	22	22	22	22
AC-FT	1270	679	686	1530	2590	1360	819	1410	1340	1500	1410	1370
a	24630	28760	36720	21860	33640	54290	32120	43090	48250	50130	73590	58710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

MEAN	27.9	44.3	71.6	201	127	115	116	186	145	65.6	32.4	26.3
MAX	138	1088	856	4122	1168	1207	956	1505	1019	503	364	188
(WY)	1995	1984	1965	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1961 - 2000	
ANNUAL TOTAL	30484.1		8037.1			
ANNUAL MEAN	83.5		22.0		96.5	
HIGHEST ANNUAL MEAN					461	1997
LOWEST ANNUAL MEAN					4.16	1977
HIGHEST DAILY MEAN	1850	Feb 9	323	Feb 14	32900	Jan 2 1997
LOWEST DAILY MEAN	7.3	Oct 24	7.3	Oct 24	1.0	Nov 1 1980
ANNUAL SEVEN-DAY MINIMUM	8.6	Oct 31	8.6	Oct 31	2.7	Mar 2 1977
INSTANTANEOUS PEAK FLOW			688	Feb 14	47700	Jan 2 1997
INSTANTANEOUS PEAK STAGE			5.31	Feb 14	15.72	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	60470		15940		69880	
ANNUAL DIVERSION (AC-FT) a	616200		505800			
10 PERCENT EXCEEDS	144		28		138	
50 PERCENT EXCEEDS	28		22		20	
90 PERCENT EXCEEDS	11		11		6.9	

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 mi^2.

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, 1,275 acre-ft, between elevations 2,825 ft, invert of tunnel, and 2,915 ft, crest of spillway. Dead storage, 255 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, 1,546 acre-ft, Jan. 25, 1997, elevation, 2,915.72 ft; minimum, 541 acre-ft, June 29, 1995, elevation, 2,853.64 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,464 acre-ft, July 18, elevation, 2,911.71 ft; minimum, 746 acre-ft, Aug. 2, elevation, 2,869.51 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1278	e1124	1278	1273	1323	1226	1345	1338	1385	1354	776	1317
2	1277	1120	1279	1268	1333	1178	1355	1343	1395	1421	746	1326
3	1277	e1120	1278	1263	1347	1217	1364	1346	1405	1424	899	1329
4	1276	1111	1275	1257	1380	1257	1366	1350	1414	1427	1011	1331
5	1275	1106	1271	1252	1400	1246	1375	1353	1423	1430	1325	1332
6	1274	1102	1268	1247	1413	1288	1382	1359	1432	1434	1325	1334
7	1273	1101	1265	1243	1422	1236	1390	1373	1411	1437	1325	1334
8	1273	1104	1260	1238	e1429	1273	1398	1434	1425	1440	1325	1336
9	1272	912	1257	1234	1270	1313	1405	1174	1434	e1443	1326	1337
10	1271	842	1254	1230	1300	1352	1412	1191	1443	1446	1326	1338
11	1233	839	1250	1234	1318	1264	1212	1204	1452	1449	1326	1339
12	1180	941	1246	1235	1149	1299	1220	1214	1460	1451	1326	1340
13	1114	935	1244	1235	1085	1332	1224	1225	1379	1454	1325	1229
14	1113	1221	1240	1232	1437	1365	1238	1235	1088	1456	1128	1171
15	1112	1311	1237	1236	1268	1397	1248	1250	1055	1458	1139	1170
16	1111	1308	1233	1268	1344	1428	1258	1275	1252	1460	e958	1170
17	1110	1308	1231	1269	1080	1344	1274	1296	1259	1462	e1012	1170
18	1109	1304	1227	1315	1114	1233	1288	1312	1266	1464	e1024	1074
19	1108	1305	e1225	1338	e1141	1180	1297	1325	1289	1412	e1089	1249
20	1107	1308	1219	1367	e1176	1202	1250	1336	1392	e1414	e1314	1214
21	1106	1307	1214	1384	1201	1222	1260	e1346	1398	1417	e1305	1208
22	1105	1303	1210	1395	1125	1241	1269	1165	e1381	e1419	e1303	e1204
23	1105	1299	1206	1369	1169	1259	1296	1296	1386	1422	e1302	e1390
24	1104	1295	1202	1431	1204	1276	1303	1380	1391	1227	e1300	e1383
25	1104	1291	1200	1246	1231	1307	1307	1387	1397	1348	e1299	1378
26	1104	1288	e1197	1230	1208	1378	1311	1393	1402	1349	e1297	1378
27	1106	1283	1215	1255	1207	1425	1317	1361	1407	1350	e1295	1378
28	1125	1279	1297	1273	1300	1298	1323	1364	978	1351	e1293	1378
29	1127	1274	1290	1285	1379	1311	1329	1369	1191	1352	1310	1378
30	1128	1276	1284	1299	---	1323	1334	1373	1350	1352	1311	1378
31	1129	---	1279	1313	---	1334	---	1377	---	1030	1311	---
MAX	1278	1311	1297	1431	1437	1428	1412	1434	1460	1464	1326	1390
MIN	1104	839	1197	1230	1080	1178	1212	1165	978	1030	746	1074
a	2893.90	2902.00	2902.20	2904.00	2907.42	2905.10	2905.08	2907.30	2897.41	2888.12	2903.87	2907.34
b	-168	+147	+3	+34	+66	-45	0	+43	-27	-320	+281	+67

CAL YR 1999 MAX 1505 MIN 839 b +59
WTR YR 2000 MAX 1464 MIN 746 b +81

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

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 mi^2.

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, 620 ft^3/s, Jan. 2, 1997; minimum daily, 2.1 ft^3/s, many days in 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	6.8	6.9	7.0	7.1	7.2	7.0	7.2	4.4	3.3	3.3	3.4
2	3.5	7.0	6.9	7.0	7.1	7.2	7.0	7.2	3.1	3.4	3.2	3.4
3	3.5	7.0	6.9	7.0	7.1	7.0	7.0	7.1	3.2	3.4	3.2	3.4
4	3.5	7.0	6.9	7.0	7.1	7.1	7.0	7.1	3.2	3.4	3.2	3.4
5	3.5	7.0	6.9	7.0	7.0	7.1	7.0	7.1	3.2	3.4	3.3	3.3
6	3.5	7.0	6.9	7.0	7.0	7.0	7.1	7.1	3.2	3.4	e3.3	3.3
7	3.5	7.0	6.9	7.0	7.0	7.1	7.1	7.1	3.2	3.4	3.3	3.3
8	3.5	7.0	6.9	7.0	7.0	7.1	7.1	7.1	3.2	3.4	3.4	3.3
9	3.4	6.9	6.9	7.0	7.0	7.2	7.1	7.0	3.2	3.4	3.3	3.3
10	3.4	7.0	6.9	6.9	7.1	7.0	7.1	7.0	3.2	3.4	3.4	3.3
11	3.4	7.0	6.9	6.9	7.0	7.1	7.0	7.0	3.2	3.3	3.3	3.3
12	3.3	7.0	6.9	7.0	7.1	7.1	7.0	7.1	3.2	3.3	3.3	3.3
13	3.4	6.9	6.9	7.0	7.1	7.1	7.0	6.9	3.2	3.4	3.4	3.3
14	3.5	6.9	6.9	7.0	7.3	7.0	7.1	6.9	3.2	3.3	3.3	3.2
15	3.5	7.0	6.9	7.0	7.2	7.1	7.1	7.0	3.2	3.3	3.3	3.2
16	3.5	6.9	6.9	7.0	7.0	7.2	7.1	7.1	3.2	3.3	e3.3	3.1
17	3.5	6.9	6.9	7.1	7.1	7.1	7.0	7.1	3.2	3.4	e3.3	3.1
18	3.4	6.9	6.9	7.0	7.1	7.0	7.1	7.1	3.2	3.4	e3.3	5.1
19	3.4	6.9	6.8	7.2	7.0	7.1	7.1	7.1	3.2	3.3	e3.3	7.6
20	3.4	6.9	6.8	7.1	7.1	7.0	7.2	7.0	3.3	3.3	e3.3	6.0
21	3.4	6.9	6.8	7.0	7.1	7.1	7.1	7.0	3.4	3.3	e3.3	3.4
22	3.4	6.9	6.9	7.0	7.1	7.1	7.1	7.0	3.3	e3.3	e3.4	e3.4
23	3.4	6.9	6.9	7.0	7.1	7.1	7.2	7.0	3.3	e3.3	e3.4	e3.4
24	3.3	6.9	6.9	7.1	7.1	7.1	7.2	7.0	3.4	3.2	e3.4	e3.4
25	3.3	6.9	6.9	7.3	7.2	7.1	7.2	7.0	3.4	3.3	e3.4	e3.4
26	3.3	6.9	6.9	7.1	7.1	7.2	7.2	7.1	3.3	3.2	e3.4	3.3
27	3.3	6.9	6.9	7.0	7.0	7.0	7.1	7.1	3.4	3.2	e3.4	3.4
28	3.4	6.9	6.8	7.0	7.3	7.1	7.2	7.0	3.3	3.2	e3.4	3.4
29	3.3	6.9	7.0	7.1	7.1	7.0	7.2	7.0	3.3	3.2	e3.4	3.4
30	3.3	6.9	7.0	7.1	---	7.0	7.1	7.0	3.4	3.3	3.4	3.4
31	4.2	---	7.0	7.0	---	7.0	---	7.0	---	3.2	3.3	---
TOTAL	106.4	208.0	213.8	217.9	205.6	219.6	212.8	218.5	98.7	102.9	103.2	108.5
MEAN	3.43	6.93	6.90	7.03	7.09	7.08	7.09	7.05	3.29	3.32	3.33	3.62
MAX	4.2	7.0	7.0	7.3	7.3	7.2	7.2	7.2	4.4	3.4	3.4	7.6
MIN	3.2	6.8	6.8	6.9	7.0	7.0	7.0	6.9	3.1	3.2	3.2	3.1
AC-FT	211	413	424	432	408	436	422	433	196	204	205	215

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

MEAN	3.10	5.78	5.78	9.68	5.84	6.01	6.17	5.97	3.22	3.13	3.08	3.09
MAX	3.86	8.06	7.81	58.0	7.76	8.95	10.4	9.09	4.43	4.26	3.87	3.81
(WY)	1994	1990	1990	1997	1997	1997	1997	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	1925.3		2015.9			
ANNUAL MEAN	5.27		5.51		5.07	
HIGHEST ANNUAL MEAN					10.5	1997
LOWEST ANNUAL MEAN					3.39	1988
HIGHEST DAILY MEAN	10	Feb 8	7.6	Sep 19	620	Jan 2 1997
LOWEST DAILY MEAN	3.0	Jul 6	3.1	Jun 2	2.1	Jul 4 1988
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 14	3.2	Jun 2	2.1	Aug 15 1988
ANNUAL RUNOFF (AC-FT)	3820		4000		3670	
10 PERCENT EXCEEDS	6.9		7.1		7.0	
50 PERCENT EXCEEDS	6.6		6.9		4.4	
90 PERCENT EXCEEDS	3.1		3.3		2.5	

e Estimated.

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 mi^2.

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 (station 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, 18,637 acre-ft, Jan. 1, 1997, elevation, 1,859.70 ft; minimum, 3,917 acre-ft, Oct. 27, 1991, elevation, unknown.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 16,811 acre-ft, Feb. 14, elevation, 1,851.18 ft, minimum, 11,471 acre-ft, Feb. 28, elevation, 1,822.44.

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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14512	13794	13335	14891	12173	13442	14739	14672	14256	14926	14657	15233
2	15427	13609	13236	14739	12549	12937	e13890	15376	14646	15200	13864	15038
3	16169	13600	13407	15042	13314	13211	e13955	15581	14647	15054	13931	15315
4	16236	13269	13750	15882	13426	14016	e13540	15490	14701	15143	13384	15538
5	15585	13081	13703	15522	13389	13531	12979	14684	14667	15413	12713	15707
6	15884	12912	13362	14934	13476	12977	14945	14350	14632	15727	13794	15032
7	15909	12734	13122	15120	13360	13339	15303	14510	14928	15679	15301	14124
8	15498	12725	12843	15225	13324	13161	14909	15570	15058	15762	e15699	11971
9	15343	12634	12620	15286	13145	13148	14747	13638	15376	e15593	15266	12153
10	15483	e12495	12834	15056	13050	13567	14323	13725	15878	15583	14884	e13653
11	14880	e12279	13296	14907	13379	13505	14286	13741	15935	15060	14063	e13200
12	15046	e12297	13961	14588	13686	13359	14365	13974	15647	15178	e14199	12753
13	15762	e13426	13957	14336	13534	13758	15874	13211	15225	15019	e15025	11499
14	16493	e13855	13829	14177	16811	13951	13798	13558	14780	14759	14737	12718
15	16387	13684	13061	14672	16100	13586	12820	12898	13835	14872	14338	14943
16	16553	13571	13567	14397	13717	12884	11873	13009	14676	14803	e13388	15593
17	16546	13896	13422	14403	13283	12804	12533	14154	14372	e14914	e13312	16342
18	16516	13970	13937	14965	12441	13279	12564	14338	15481	e14074	e13748	14762
19	16364	14002	13748	13914	e12327	13391	12293	14399	14870	13500	e15208	14743
20	16189	14374	13829	13898	e12108	14353	13184	14376	13927	14799	e15631	14499
21	16043	14348	13937	14261	12386	14705	13518	e14216	13660	e15163	e14087	14976
22	15860	13796	13866	14615	12156	14188	e13635	15167	e14728	e15490	e13350	e15601
23	15280	14009	13780	13460	13011	13968	14295	15315	15609	15583	e13254	e15392
24	15087	13942	14308	15159	12944	13726	e13985	15852	16003	15351	e12422	e15683
25	14893	13961	14726	15987	12750	13699	e13653	14982	15884	15058	e12247	15245
26	14669	14457	14905	14192	11763	14171	13987	15301	14808	15325	e12868	15792
27	14433	14845	14617	13471	12388	13591	13909	14934	13684	14308	e13638	16126
28	14520	14130	14566	13979	11471	13972	14126	14533	13617	14052	e14050	15943
29	14522	14098	14507	13664	13876	14093	13242	15264	13769	14976	15329	16248
30	14374	13793	14783	13008	---	14143	13573	14947	14182	15695	16025	16114
31	14201	---	15130	12259	---	14808	---	14340	---	15804	15750	---
MAX	16553	14845	15130	15987	16811	14808	15874	15852	16003	15804	16025	16342
MIN	14201	12279	12620	12259	11471	12804	11873	12898	13617	13500	12247	11499
a	1837.96	1835.76	1842.82	1827.13	1836.21	1841.16	1834.56	1838.70	1837.86	1846.24	1845.97	1847.78
b	-302	-408	+1337	-2871	+1617	+932	-1235	+767	-158	+1622	-54	+364

CAL YR 1999 MAX 17124 MIN 9360 b +910
WTR YR 2000 MAX 16811 MIN 11471 b +1611

e Estimated.
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 mi^2.

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 ft^3/s May to October, and about 7 ft^3/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, 62,300 ft^3/s, Jan. 2, 1997, from rating curve extended above 24,000 ft^3/s on basis of computation of peak flow over dam; minimum daily, 1.3 ft^3/s, Aug. 24, 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	37	40	40	38	39	40	39	39	39	40	40
2	37	37	40	39	38	39	39	40	39	40	39	40
3	38	37	40	39	38	39	39	40	39	40	39	40
4	38	37	40	40	39	39	39	40	39	39	39	40
5	38	37	40	40	39	39	38	40	39	40	38	40
6	38	37	40	40	39	39	39	40	40	40	39	40
7	38	36	39	40	39	39	40	39	40	40	39	40
8	38	36	39	40	39	39	40	40	40	40	40	38
9	38	36	39	40	38	39	40	40	40	40	40	38
10	38	36	39	40	39	39	39	39	40	40	40	38
11	38	36	39	40	39	39	39	39	40	40	40	38
12	38	36	40	40	39	39	39	39	40	40	40	38
13	38	39	40	39	469	39	40	39	40	40	39	38
14	38	40	40	39	315	39	40	39	40	39	39	38
15	38	40	40	39	41	39	38	39	39	39	39	39
16	38	40	39	40	40	39	38	38	39	39	39	40
17	38	40	38	40	39	38	38	38	39	39	39	40
18	38	40	39	39	39	38	38	39	39	39	39	40
19	38	40	39	39	38	39	38	39	40	39	39	39
20	38	40	39	39	38	39	38	39	39	39	40	39
21	38	40	39	39	38	39	39	39	39	40	40	39
22	38	40	39	39	38	39	39	40	39	40	39	40
23	38	40	39	39	38	39	39	40	40	40	39	40
24	38	40	39	39	38	39	39	40	40	40	39	40
25	38	40	39	40	38	39	39	40	40	40	38	40
26	37	40	39	40	38	39	39	39	40	40	38	40
27	37	41	39	39	38	39	39	40	39	39	39	40
28	37	41	39	39	38	39	39	39	39	39	39	40
29	37	40	39	39	38	39	39	40	39	40	39	40
30	37	40	39	39	---	39	39	40	39	40	40	40
31	37	---	40	38	---	39	---	39	---	40	40	---
TOTAL	1170	1159	1219	1222	1825	1207	1169	1221	1184	1229	1216	1182
MEAN	37.7	38.6	39.3	39.4	62.9	38.9	39.0	39.4	39.5	39.6	39.2	39.4
MAX	38	41	40	40	469	39	40	40	40	40	40	40
MIN	37	36	38	38	38	38	38	38	39	39	38	38
AC-FT	2320	2300	2420	2420	3620	2390	2320	2420	2350	2440	2410	2340
a	34130	35600	41140	55050	87980	107100	96810	132300	83780	55620	78510	64040

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

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	1951
LOWEST ANNUAL MEAN	161	1924
HIGHEST DAILY MEAN	40000	Dec 23 1955
LOWEST DAILY MEAN	1.3	Aug 24 1931
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 29 1931
INSTANTANEOUS PEAK FLOW	49800	Dec 23 1955
INSTANTANEOUS PEAK STAGE	32.6	Dec 23 1955
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)

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	1952
LOWEST ANNUAL MEAN	249	1924
HIGHEST DAILY MEAN	40000	Dec 23 1955
LOWEST DAILY MEAN	20	Aug 24 1931
ANNUAL SEVEN-DAY MINIMUM	30	Aug 19 1931
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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.5	86.3	132	339	227	127	126	334	297	82.2	34.9	34.8
MAX	453	1093	1112	4836	2709	1090	1402	2434	2619	936	45.1	48.2
(WY)	1968	1968	1984	1997	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	64977		15003			
ANNUAL MEAN	178		41.0		155	
HIGHEST ANNUAL MEAN					608	1995
LOWEST ANNUAL MEAN					13.3	1977
HIGHEST DAILY MEAN	5260	Feb 9	469	Feb 13	48900	Jan 2 1997
LOWEST DAILY MEAN	36	May 18	36	Nov 7	2.4	Feb 12 1970
ANNUAL SEVEN-DAY MINIMUM	36	Nov 6	36	Nov 6	2.6	Feb 9 1970
INSTANTANEOUS PEAK FLOW			1870	Feb 14	62300	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	128900		29760		112500	
ANNUAL DIVERSION (AC-FT) a	1051000		872100			
10 PERCENT EXCEEDS	384		40		74	
50 PERCENT EXCEEDS	39		39		36	
90 PERCENT EXCEEDS	37		38		11	

a Diversion, in acre-feet, to White Rock Powerplant, provided by Sacramento Municipal Utility District.

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 mi^2.

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.—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 from 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.

COOPERATION.—Records provided by Sithe Energies, Inc., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,690 ft^3/s, Jan. 2, 1997; no flow Sept. 29 to Oct. 3, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	24	46	25	28	228	24	23	21	28	19	20
2	21	23	24	25	24	102	24	40	21	28	19	41
3	21	23	36	25	27	78	24	20	21	28	19	23
4	21	21	32	25	131	57	24	20	21	28	18	21
5	21	18	30	25	24	84	24	20	21	28	18	20
6	21	18	28	24	23	49	26	20	38	28	18	19
7	21	19	30	24	24	28	26	24	38	28	18	19
8	21	50	31	23	24	49	26	155	23	28	18	18
9	21	27	31	23	24	83	26	21	21	27	18	18
10	21	22	36	24	43	67	25	21	21	25	18	18
11	21	22	30	28	106	64	25	21	21	25	18	18
12	21	22	29	28	500	43	20	21	29	25	17	18
13	21	22	32	28	1190	25	32	21	29	25	17	18
14	21	21	31	26	1620	25	22	21	30	23	17	18
15	21	26	28	30	463	25	20	46	35	23	17	18
16	21	26	28	53	198	25	20	46	33	24	17	18
17	21	40	28	25	118	24	25	24	32	23	16	17
18	21	25	27	227	44	25	21	22	32	23	16	16
19	22	26	27	46	25	25	20	22	32	22	16	16
20	22	26	26	25	25	26	21	24	32	21	17	16
21	21	37	27	24	25	39	21	25	34	21	17	16
22	24	29	26	24	79	33	21	22	33	21	16	18
23	21	28	26	25	604	30	21	28	32	21	16	20
24	21	27	26	798	176	26	20	21	32	21	16	18
25	22	28	26	575	45	25	20	21	32	20	16	17
26	22	26	26	182	29	24	20	21	31	20	16	17
27	22	27	26	23	1020	25	20	21	31	20	16	16
28	56	27	25	23	604	24	20	21	30	20	16	16
29	27	28	25	24	292	25	20	21	30	19	16	16
30	25	27	25	25	---	25	20	22	29	19	18	16
31	23	---	25	72	---	38	---	22	---	19	18	---
TOTAL	706	785	893	2554	7535	1446	678	877	865	731	532	560
MEAN	22.8	26.2	28.8	82.4	260	46.6	22.6	28.3	28.8	23.6	17.2	18.7
MAX	56	50	46	798	1620	228	32	155	38	28	19	41
MIN	21	18	24	23	23	24	20	20	21	19	16	16
AC-FT	1400	1560	1770	5070	14950	2870	1340	1740	1720	1450	1060	1110
a	.00	116	142	1630	4620	6370	2420	2690	378	.00	.00	.00

a Discharge, in acre-feet, through Rock Creek Powerplant near Placerville, provided by Sithe Energies U.S.A., Inc.

11444201 ROCK CREEK NEAR PLACERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.2	21.0	57.6	150	121	96.8	40.1	32.6	19.4	14.7	12.5	10.9
MAX	24.8	36.6	403	737	326	454	99.6	127	31.5	35.2	39.2	25.7
(WY)	1999	1999	1997	1997	1998	1995	1995	1995	1995	1999	1999	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000	
ANNUAL TOTAL	22440		18162			
ANNUAL MEAN	61.5		49.6		48.9	
ANNUAL MEAN b	100		74.9			
HIGHEST ANNUAL MEAN					118	1997
LOWEST ANNUAL MEAN					14.3	1988
HIGHEST DAILY MEAN	1790	Feb 9	1620	Feb 14	4660	Jan 2 1997
LOWEST DAILY MEAN	18	Nov 5	16	Aug 17	.00	Sep 29 1987
ANNUAL SEVEN-DAY MINIMUM	21	Aug 23	16	Aug 22	.35	Sep 28 1987
INSTANTANEOUS PEAK FLOW			2880	Feb 14	6690	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	44510		36020		35420	
TOTAL DIVERISON (AC-FT) a	28090		18370		11230	
ANNUAL RUNOFF (AC-FT) b	72600		54390			
10 PERCENT EXCEEDS	63		46		72	
50 PERCENT EXCEEDS	25		24		21	
90 PERCENT EXCEEDS	21		18		4.8	

a Discharge, in acre-feet, through Rock Creek Powerplant near Placerville, provided by Sithe Energies U.S.A., Inc.
b Adjusted for Rock Creek Powerplant near Placerville.

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 mi^2.

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. Elevation of gage is 925 ft above sea level, from topographic map. Aug. 11, 1911, to July 31, 1920, nonrecording gage 0.6 mi downstream at different datum.

REMARKS.—Flow regulated by Chili Bar Reservoir, capacity, 3,700 acre-ft, Chili Bar Powerplant, and other storage and powerplants (see station 11443500). See schematic diagrams of South Fork American River and lower Sacramento River Basins.

COOPERATION.—Records provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 71,000 ft^3/s, Jan. 2, 1997, gage height, unknown, on basis of computations of flow over dam, maximum gage height, 17.4 ft, from floodmarks, datum then in use, Dec. 23, 1964; minimum daily, 0.2 ft^3/s, Nov. 12, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	354	1270	433	1130	2980	1610	1380	2400	651	2020	1260
2	856	278	992	565	599	2680	2080	1700	1770	559	2040	1140
3	488	246	923	498	406	2040	2070	1770	1930	564	1200	1140
4	1110	230	1170	233	1040	1430	2210	1960	1640	887	1660	1190
5	1270	219	956	402	1140	2320	2680	2390	1670	640	1490	988
6	957	219	1030	927	764	2470	1180	1940	1690	700	1120	1700
7	1220	219	1230	633	1000	2020	1810	1830	1560	700	551	2030
8	1250	277	1340	212	812	2350	1790	3290	1770	780	715	2890
9	1060	261	1260	154	1130	2360	1580	3930	1690	1260	1600	1450
10	1130	469	1080	194	1080	2090	2360	2680	1220	766	1250	1010
11	1340	260	958	318	1260	2200	2290	2200	1220	1190	1790	1600
12	1060	217	747	715	1980	2250	1720	2020	1580	745	1380	1710
13	654	385	1240	479	3780	2000	1960	2120	2040	906	1100	2300
14	515	809	1220	631	6480	2200	3710	1580	1990	1290	1490	1080
15	1040	932	1470	237	5300	2670	2650	2460	2610	822	1580	607
16	1080	1040	525	380	4570	2560	2110	2360	1340	713	2020	592
17	415	752	493	950	3110	2360	1810	1810	1650	912	1350	1050
18	257	1010	327	1220	2910	1940	1860	2070	1160	1410	1290	2000
19	257	1120	374	2000	2100	1720	1900	2240	1460	1510	929	1330
20	260	1140	540	1660	1860	1920	1030	2330	2220	750	783	1700
21	262	1150	702	1210	1830	1860	1000	2420	1650	1290	2040	829
22	264	1430	797	460	2030	2250	1370	2220	1060	742	2040	640
23	452	994	444	1630	2540	2170	692	2220	478	994	1610	679
24	235	1140	242	4290	2190	2200	1710	2210	720	1300	1940	501
25	237	1120	181	4600	1750	1920	1810	3250	1300	1090	1680	1260
26	360	777	156	3740	2050	936	1560	2950	1800	1340	1210	917
27	348	753	474	2080	4000	2450	1860	3070	2230	1960	1080	520
28	252	803	559	930	3940	2110	1760	3180	1650	1760	1150	552
29	255	1550	584	972	1940	2130	1890	2750	1210	1130	689	598
30	256	1190	315	1330	---	2070	1480	3110	956	1010	458	639
31	257	---	489	1510	---	1210	---	2930	---	1780	1260	---
TOTAL	21007	21344	24088	35593	64721	65866	55542	74370	47664	32151	42515	35902
MEAN	678	711	777	1148	2232	2125	1851	2399	1589	1037	1371	1197
MAX	1610	1550	1470	4600	6480	2980	3710	3930	2610	1960	2040	2890
MIN	235	217	156	154	406	936	692	1380	478	559	458	501
AC-FT	41670	42340	47780	70600	128400	130600	110200	147500	94540	63770	84330	71210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

MEAN	521	760	1283	1853	1848	1978	2076	2552	2036	1204	982	852
MAX	935	3806	5386	9673	6613	5561	5382	6159	6496	3648	1719	1401
(WY)	1984	1984	1965	1997	1986	1983	1982	1995	1983	1983	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1965 - 2000	
ANNUAL TOTAL	682367		520763			
ANNUAL MEAN	1869		1423		1494	
HIGHEST ANNUAL MEAN					3275	1983
LOWEST ANNUAL MEAN					224	1977
HIGHEST DAILY MEAN	8510	Feb 9	6480	Feb 14	57100	Jan 2 1997
LOWEST DAILY MEAN	156	Dec 26	154	Jan 9	.20	Nov 12 1964
ANNUAL SEVEN-DAY MINIMUM	239	Nov 3	239	Nov 3	20	Feb 11 1977
INSTANTANEOUS PEAK FLOW			7580	Feb 14	71000	Jan 2 1997
INSTANTANEOUS PEAK STAGE			9.10	Feb 14	17.40	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	1353000		1033000		1082000	
10 PERCENT EXCEEDS	3570		2390		3350	
50 PERCENT EXCEEDS	1490		1260		1020	
90 PERCENT EXCEEDS	383		378		340	

11446030 SOUTH FORK AMERICAN RIVER NEAR PILOT HILL, CA

LOCATION.—Lat 38°45'47", long 121°00'26", in SE 1/4 NE 1/4 sec.31, T.11 N., R.9 E., El Dorado County, Hydrologic Unit 18020128, on left bank, 0.1 mi downstream from Weber Creek, and 5.0 mi south of Pilot Hill.

DRAINAGE AREA.— 801 mi^2.

PERIOD OF RECORD.—Water year 1999 to current year.
WATER TEMPERATURE: Water year 1999 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: August 1999 to current year.

INSTRUMENTATION.—Water-temperature recorder since Aug. 4, 1999.

REMARKS.—Water temperature can be affected by upstream powerplant releases.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 21.0°C, June 19, 24, 25 and July 4, 2000; minimum recorded, 4.0°C, Jan. 5, 6, 2000.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 21.0°C, June 19, 24, 25, and July 4; minimum recorded, 4.0°C, Jan. 5, 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	14.0	14.5	12.5	11.0	10.0	6.5	5.5	8.0	6.5	10.0	7.5
2	16.5	14.0	14.0	13.0	10.0	9.0	6.0	5.0	8.0	6.0	8.5	7.5
3	17.5	15.0	14.0	12.5	9.5	8.5	6.0	4.5	9.0	7.0	9.0	7.0
4	16.5	15.0	14.0	12.0	9.5	8.0	6.0	5.0	9.0	8.0	10.5	7.0
5	16.5	14.0	14.0	12.5	9.5	8.5	5.5	4.0	9.0	7.0	10.0	8.0
6	16.0	14.5	14.0	12.5	9.0	8.0	6.0	4.0	9.0	7.0	9.0	8.0
7	16.5	14.0	13.5	12.0	9.5	9.0	6.0	5.0	9.0	7.0	8.5	7.5
8	16.5	13.5	13.5	12.0	9.0	8.0	5.5	5.0	8.5	7.5	9.0	7.5
9	16.5	13.5	13.0	12.0	9.5	8.5	6.0	4.5	8.0	7.5	9.0	7.5
10	16.5	13.5	13.0	12.0	9.5	8.5	6.5	5.5	9.0	7.5	9.5	6.5
11	16.5	14.0	13.0	12.0	9.0	7.5	7.5	6.5	9.5	7.5	9.5	8.0
12	16.0	13.5	13.0	11.5	8.5	7.5	7.5	6.5	9.5	8.5	10.0	7.0
13	16.5	13.5	12.5	11.0	9.5	8.5	7.0	6.0	10.5	9.0	10.0	7.0
14	16.0	14.5	12.5	11.5	9.0	7.5	7.0	6.0	11.0	9.5	10.5	7.5
15	16.5	14.5	13.0	11.5	8.5	7.0	7.5	6.5	10.0	8.5	10.5	7.5
16	15.5	13.0	12.5	10.5	8.5	7.0	8.5	7.5	9.5	8.5	10.0	7.5
17	15.5	13.0	12.0	10.5	8.0	7.0	8.5	7.0	9.0	8.0	10.0	7.5
18	15.0	13.5	11.5	9.5	8.0	7.0	9.0	7.0	9.5	7.0	10.5	7.5
19	15.0	13.5	11.0	10.0	8.0	7.0	8.5	7.5	8.5	6.5	11.0	8.0
20	15.5	13.5	12.0	10.5	8.0	7.0	8.0	7.5	9.0	7.5	10.0	7.0
21	15.5	13.5	12.0	10.5	8.0	6.5	8.0	6.5	9.5	7.5	10.5	7.0
22	15.5	13.5	11.0	9.5	8.0	6.0	9.0	7.5	9.5	7.5	10.5	7.5
23	15.0	13.5	11.0	9.5	7.5	6.0	8.5	7.5	10.5	8.5	10.0	7.5
24	15.0	13.5	11.0	9.0	6.5	5.5	10.5	8.5	9.0	7.5	10.5	7.0
25	14.5	12.5	11.0	9.0	6.5	5.0	10.0	9.5	9.5	7.0	10.5	7.5
26	14.5	12.5	11.0	9.0	6.0	5.0	9.5	7.5	9.0	7.5	12.0	8.0
27	15.0	13.0	10.5	9.5	6.0	5.0	8.5	7.0	10.0	8.0	11.5	8.5
28	15.5	14.0	10.5	9.5	6.0	4.5	8.0	6.0	10.5	9.0	11.0	7.5
29	15.5	13.5	10.5	10.0	6.0	5.0	7.5	6.0	10.0	8.5	11.0	8.0
30	14.5	12.5	11.0	10.0	6.0	5.0	7.5	6.5	---	---	11.5	8.0
31	14.5	12.5	---	---	6.0	5.0	7.5	6.5	---	---	11.5	8.0
MONTH	17.5	12.5	14.5	9.0	11.0	4.5	10.5	4.0	11.0	6.0	12.0	6.5

11446030 SOUTH FORK AMERICAN RIVER NEAR PILOT HILL, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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 mi^2.

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, 794,500 acre-ft, June 18, elevation, 448.92 ft; minimum, 498,000 acre-ft, Jan. 15, elevation, 416.27 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	720900	632000	580600	528100	563500	593700	675100	691500	778600	769800	659100	656800
2	718600	629600	581100	526200	558700	590600	677600	687900	781100	765800	659400	656900
3	714500	626300	579700	524900	554600	587400	681100	684300	781700	761400	658000	657500
4	711100	623100	579300	522400	554000	583700	685200	681600	782600	756700	657200	658300
5	708100	619700	578500	519300	555100	586100	691500	679700	782800	752600	655700	658300
6	705500	616500	577300	517100	553700	591000	693700	676800	783700	749300	654500	659600
7	702500	613800	575600	515100	553200	594200	696100	673900	784600	746000	651700	660500
8	699900	611500	575200	512800	552200	599000	697500	678800	786400	741900	648300	663400
9	697200	608800	574900	509900	551900	604400	698900	684800	788300	739200	647700	664500
10	694600	605800	574500	507200	552800	608600	701200	687900	788200	735500	648200	665500
11	692400	603000	573800	505100	558700	611100	703700	688700	787800	733800	646500	666100
12	690000	599800	571500	503700	582600	612700	704900	690000	788000	732300	647300	667600
13	687100	596400	569800	502000	601700	614500	706800	691700	789300	729600	647600	670300
14	683700	594100	569300	500200	653800	617400	712100	693000	790300	725200	646300	671100
15	680200	592400	568900	498000	653100	622000	713300	697400	793000	721600	647900	670500
16	677700	592000	568400	498100	635000	626800	712000	702600	794300	716100	649300	669300
17	675300	590900	568500	498600	611600	631700	714200	707100	794400	711600	651000	669700
18	672000	589700	565400	505000	594100	634900	715700	711000	794500	706700	651300	670900
19	668900	588600	562900	517000	580500	637000	716200	715200	793200	704400	651500	672100
20	665900	588800	558700	526800	568400	640400	714900	720500	794000	700500	650700	672500
21	662800	589000	556300	532800	561300	642900	713300	724000	794200	695600	650800	673500
22	659500	588900	554900	534700	562200	645200	711700	729200	793700	691200	652600	672500
23	656200	589300	552100	536900	576700	647700	708900	733700	791700	685100	653800	671500
24	653700	587500	549100	575300	580000	651000	707800	739900	787200	680200	655600	669700
25	650500	585500	545900	609300	575100	654800	708000	745800	782300	675500	656500	668100
26	647100	584000	543000	611400	569200	656700	706500	751900	779700	671900	657300	667400
27	644100	581700	539700	604600	595800	659400	705400	756900	779100	669300	657600	665900
28	641900	580500	537600	594000	602800	663800	704500	762700	778100	666800	657100	664100
29	639700	580300	535600	581200	599000	668800	702000	767200	776100	664700	657000	662100
30	637100	580100	533300	573600	---	671900	697300	771900	772900	661800	655700	660700
31	634800	---	530200	568000	---	674300	---	775700	---	659600	655900	---
MAX	720900	632000	581100	611400	653800	674300	716200	775700	794500	769800	659400	673500
MIN	634800	580100	530200	498000	551900	583700	675100	673900	772900	659600	646300	656800
a	432.35	426.19	420.27	424.78	428.35	436.62	439.05	447.06	446.78	435.05	434.65	435.17
b	-86800	-54700	-49900	+37800	+31000	+75300	+23000	+78400	-2800	-113300	-3700	+4800
c	3184	1095	918	432	478	1634	2942	3620	5478	5970	5193	2868

CAL YR 1999 b -32800
WTR YR 2000 b -60900

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Total evaporation, in acre-feet, provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

11446220 AMERICAN RIVER BELOW FOLSOM DAM, NEAR FOLSOM, CA

LOCATION.—Lat 38°42'14", long 121°09'48", in NE 1/4 SE 1/4 sec.24, T.10 N., R.7 E., Sacramento County, Hydrologic Unit 18020111, on left bank, 0.3 mi downstream from Folsom Dam, and 1.5 mi north of Folsom.

DRAINAGE AREA.— 1,863 mi^2.

PERIOD OF RECORD.—October 1998 to current year.
WATER TEMPERATURE.—October 1998 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE.—October 1998 to current year.

INSTRUMENTATION.—Water-temperature recorder since Oct. 23, 1998.

REMARKS.—Water temperature is affected by upstream releases from Folsom Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 17.5°C, Aug. 11, 15, 16, 1999, and on several days in water year 2000; minimum recorded, 7.0°C, Feb. 6, 15–17, 1999.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 17.5°C, several days during the year; minimum recorded, 8.5°C, Feb. 23, Mar. 9.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11446220 AMERICAN RIVER BELOW FOLSOM DAM, NEAR FOLSOM, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—November 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

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 ft^3/s, Nov. 21, 1950, gage height, 31.85 ft, site and datum then in use; minimum, 3.6 ft^3/s, Aug. 16, 1924. Maximum discharge since regulation by Folsom Lake in 1955, 134,000 ft^3/s, Feb. 19, 1986, gage height, 27.96 ft; minimum daily, 160 ft^3/s, Apr. 17, 1955.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2380	e2400	2380	2040	6600	13400	3610	5940	2410	3000	2480	1480
2	2370	e2400	2390	1970	5790	11400	3580	6040	2380	2990	2480	1480
3	2400	2400	2370	1970	5290	9880	3590	5960	2390	3010	2480	1470
4	2370	2380	2320	1980	4910	8430	3640	5960	2380	2990	2520	1500
5	2400	2400	2320	2010	4470	7220	3670	5910	2390	3050	2480	1490
6	2390	2370	2320	2010	4010	6320	3740	5920	2410	3010	2450	1480
7	2400	2370	2300	2020	3720	5950	3700	5930	2420	2990	2400	1430
8	2410	2360	2260	1980	3720	5970	3700	5700	2430	2980	2430	1440
9	2430	2350	2290	1950	3710	5960	3630	5220	2450	2970	2150	1470
10	2440	2360	2340	1980	3750	5950	3640	4660	2440	2960	2110	1460
11	2440	2390	2350	1970	3730	5940	3600	4220	2450	2610	2030	1450
12	2410	2400	2290	2000	4310	5940	3730	3750	2450	2480	1650	e1430
13	2420	2360	2340	2010	7150	5710	4800	3260	2430	2700	1480	e1430
14	2430	2350	2320	2050	20700	5230	5240	2700	2420	3460	1450	e1540
15	2450	2410	2370	2000	24100	4740	5470	2530	2440	3420	1490	e1520
16	2460	e2400	2330	2050	24100	4530	5400	2540	2510	3480	1480	1470
17	2410	e2350	2290	2000	22700	4710	5160	2500	2530	3460	1450	1450
18	2410	2320	2330	1980	17600	4530	4680	2380	2520	3500	1480	1460
19	2400	2320	2360	1980	14100	4530	4490	2420	2530	3570	1470	1460
20	2390	2350	2320	2010	11900	4580	4490	2390	2490	3530	1480	1460
21	2400	2340	2330	2000	10300	4500	4490	2380	2460	3560	1490	1460
22	2360	2310	2320	2020	8960	4500	4460	2370	2470	3570	1470	1430
23	2380	2300	2330	1990	8130	4500	4520	2360	2860	4030	1480	1440
24	2390	2340	2340	4240	8670	4220	4500	2370	3420	4150	1510	1440
25	2400	2330	2340	8890	9940	3720	4420	2410	3420	4140	1490	1450
26	2370	2330	2320	9980	9960	3670	4530	2390	3280	3670	1470	1490
27	2370	2320	2300	10100	10700	3680	4490	2390	3080	3500	1480	1440
28	2380	2290	2140	10100	14700	3560	5020	2430	2980	3530	1470	1440
29	2370	2360	1960	9460	14700	3570	5690	2390	3030	3130	1480	1470
30	2380	2360	1990	8320	---	3550	5920	2410	3030	2970	1470	1450
31	2420	---	2000	7610	---	3620	---	2450	---	2670	1470	---
TOTAL	74430	70720	70960	114670	292420	174010	131600	112280	78900	101080	55720	43880
MEAN	2401	2357	2289	3699	10080	5613	4387	3622	2630	3261	1797	1463
MAX	2460	2410	2390	10100	24100	13400	5920	6040	3420	4150	2520	1540
MIN	2360	2290	1960	1950	3710	3550	3580	2360	2380	2480	1450	1430
AC-FT	147600	140300	140700	227400	580000	345100	261000	222700	156500	200500	110500	87040

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 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1940	2430	3935	5549	5892	5228	4299	4343	3797	3659	2766	2268
MAX	4102	11700	19360	31780	31140	19340	17760	14270	9828	10710	4500	4014
(WY)	1970	1984	1965	1997	1986	1983	1982	1995	1983	1995	1983	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000	
ANNUAL TOTAL	1592060		1320670			
ANNUAL MEAN	4362		3608		3834	
HIGHEST ANNUAL MEAN					8854	1983
LOWEST ANNUAL MEAN					778	1977
HIGHEST DAILY MEAN	23900	Feb 10	24100	Feb 15	131000	Feb 19 1986
LOWEST DAILY MEAN	910	Sep 14	1430	Sep 7	215	Apr 20 1977
ANNUAL SEVEN-DAY MINIMUM	1400	Sep 11	1440	Sep 7	237	Jan 7 1978
INSTANTANEOUS PEAK FLOW			24600	Feb 17	134000	Feb 19 1986
INSTANTANEOUS PEAK STAGE			13.87	Feb 17	27.96	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	3158000		2620000		2777000	
10 PERCENT EXCEEDS	8970		5950		7660	
50 PERCENT EXCEEDS	3630		2420		2530	
90 PERCENT EXCEEDS	2290		1480		932	

11446500 AMERICAN RIVER AT FAIR OAKS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1960–65, October 1998 to current year.
WATER TEMPERATURE: Water years 1961–65, October 1998 to current year.
CHEMICAL DATA: Water years 1960–62.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Water years 1961–65, October 1998 to current year.

INSTRUMENTATION.—Water-temperature recorder since Oct. 29, 1998.

REMARKS.—Water temperature is affected by upstream releases from Nimbus Dam. Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 19.5°C, on several days during September 2000; minimum recorded, 7.5°C, Jan. 10, 1999.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 19.5°C, on several days during September; minimum recorded, 9.0°C, Feb. 21, 26, Mar. 7, 8.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11446500 AMERICAN RIVER AT FAIR OAKS, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11446980 AMERICAN RIVER BELOW WATT AVENUE BRIDGE, NEAR CARMICHAEL, CA

LOCATION.—Lat 38°34'32", long 121°23'14", in SE 1/4 NW 1/4 sec.12, T.8 N., R.5 E., Sacramento County, Hydrologic Unit 18020111, on right bank, 19.8 mi downstream from Folsom Dam, and 5 mi southwest of Carmichael.

DRAINAGE AREA.—1,938 mi^2.

PERIOD OF RECORD.—November 1998 to current year.
WATER TEMPERATURE.—November 1998 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE.—November 1998 to current year.

INSTRUMENTATION.—Water-temperature recorder since Nov. 13, 1998.

REMARKS.—Water temperature can be affected by releases from Folsom and Nimbus Dams.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 21.5°C, Sept. 14, 1999, July 9–11, and Aug. 11, 2000; minimum recorded, 7.5°C, several days in January and February 1999.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 21.5°C, July 9–11, Aug. 11; minimum recorded, 8.5°C, Feb. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11446980 AMERICAN RIVER BELOW WATT AVENUE BRIDGE, NEAR CARMICHAEL, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

11447293 DRY CREEK AT VERNON STREET BRIDGE, AT ROSEVILLE, CA

LOCATION.—Lat 38°44'00", long 121°18'03", SE 1/4 SE 1/4 sec.10, T.10 N, R.6 E, in Placer County, Hydrologic Unit 18021111, on the left bank downstream side of bridge, and 0.5 mi below confluence of Cirby Creek at Roseville. Prior to Nov. 10, 1999, at site 30 ft upstream.

DRAINAGE AREA.—80.08 mi^2.

PERIOD OF RECORD.—October 1996 to September 1999 (no low-flow records), October 1999 to September 2000.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 99.86 ft above sea level (levels by City of Roseville). Prior to Nov. 10, 1999, at site 30 ft upstream at same datum.

REMARKS.—Records good except for estimated daily discharges, which are fair. Low summer flow sustained by ground-water seepage and residential and industrial wastewater.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,950 ft^3/s, Jan. 22, 1997, gage height, 24.39 ft.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than a base discharge of 1,500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 24	1730	4,010	19.04	Feb. 23	0445	2,510	16.55
Feb. 14	1245	3,030	17.46	Feb. 27	0530	2,680	16.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e27	e14	57	23	230	358	54	40	25	e20	15	53
2	e27	e14	38	22	204	273	51	41	22	e20	14	e67
3	e28	e14	29	23	302	243	48	43	21	e19	16	e52
4	e28	e14	24	26	417	207	50	43	e20	e20	13	46
5	e28	e14	28	25	227	502	49	39	21	e22	13	39
6	e28	e16	36	25	197	285	50	49	22	23	14	35
7	e28	e88	34	23	182	230	50	103	21	21	14	31
8	e27	e30	33	25	171	528	48	160	40	21	15	28
9	e26	e16	30	24	167	351	49	89	50	20	18	24
10	e26	e16	42	23	715	238	50	73	40	18	17	27
11	e25	16	32	95	759	202	45	64	33	16	19	24
12	e24	14	26	71	1510	179	42	53	29	e17	20	23
13	e23	12	26	37	1670	158	187	50	25	e17	17	24
14	e22	12	23	33	2040	145	80	51	19	18	16	26
15	e22	15	22	60	547	140	64	115	21	16	14	24
16	e21	65	21	115	691	124	71	132	19	e17	13	25
17	e20	86	e20	95	451	115	523	85	20	e19	13	25
18	e20	31	e20	486	301	106	230	70	21	20	15	23
19	e19	117	e20	177	248	101	120	61	23	18	15	23
20	e18	115	e21	108	231	94	92	51	24	15	15	20
21	e18	44	e20	75	308	88	82	47	e23	13	16	19
22	e17	26	21	56	476	83	72	38	e22	14	16	34
23	e17	23	23	235	1510	79	70	32	e21	15	14	32
24	e16	20	23	3020	399	78	62	32	e22	13	15	29
25	e16	19	23	e1350	283	74	54	33	e22	12	16	25
26	e15	18	23	e540	283	71	53	32	e21	12	16	21
27	e16	19	23	247	1590	69	49	31	e21	13	15	e18
28	e50	18	21	214	446	69	50	29	e21	17	15	e21
29	e20	20	22	196	598	67	50	27	e21	14	14	e25
30	e14	59	23	615	---	64	46	25	e20	15	20	30
31	e14	---	23	369	---	57	---	26	---	15	32	---
TOTAL	700	985	827	8433	17153	5378	2541	1764	730	530	495	893
MEAN	22.6	32.8	26.7	272	591	173	84.7	56.9	24.3	17.1	16.0	29.8
MAX	50	117	57	3020	2040	528	523	160	50	23	32	67
MIN	14	12	20	22	167	57	42	25	19	12	13	18
AC-FT	1390	1950	1640	16730	34020	10670	5040	3500	1450	1050	982	1770

e Estimated.

11447293 DRY CREEK AT VERNON STREET BRIDGE, AT ROSEVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.6	32.8	26.7	272	591	173	84.7	56.9	24.3	17.1	16.0	29.8
MAX	22.6	32.8	26.7	272	591	173	84.7	56.9	24.3	17.1	16.0	29.8
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	22.6	32.8	26.7	272	591	173	84.7	56.9	24.3	17.1	16.0	29.8
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	40429	
ANNUAL MEAN	110	
HIGHEST DAILY MEAN	3020	Jan 24
LOWEST DAILY MEAN	12	Nov 13
ANNUAL SEVEN-DAY MINIMUM	13	Jul 21
INSTANTANEOUS PEAK FLOW	4010	Jan 24
INSTANTANEOUS PEAK STAGE	19.04	Jan 24
ANNUAL RUNOFF (AC-FT)	80190	
10 PERCENT EXCEEDS	240	
50 PERCENT EXCEEDS	27	
90 PERCENT EXCEEDS	15	

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA

LOCATION.—Lat 38°38'01", long 121°22'54", in Del Paso Grant, Sacramento County, Hydrologic Unit 18021111, on right bank, 500 ft upstream from bridge on Watt Avenue, at intersection with Longview Drive, and 1.3 mi east of Del Paso Heights.

DRAINAGE AREA.—31.5 mi^2.

PERIOD OF RECORD.—July 1963 to June 1978, December 1995 to current year.
CHEMICAL DATA: Water years 1996–98.
SPECIFIC CONDUCTANCE: Water years 1997–98.
WATER TEMPERATURE: Water years 1997–98.
SEDIMENT DATA: Water years 1996–98.

GAGE.—Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map. Prior to December 1995, at site 0.3 mi upstream at different datum.

REMARKS.—Records good except for discharges below 1 ft^3/s, which are poor. Low summer flow sustained by residential and industrial wastewater. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,320 ft^3/s, Feb. 3, 1998, gage height, 15.63; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than a base discharge of 500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	1130	770	10.64	Feb. 23	0415	1,520	13.06
Jan. 24	1745	2,430	14.97	Feb. 27	0715	1,430	12.83
Jan. 30	1815	1,120	11.93	Mar. 5	0830	577	9.58
Feb. 14	1100	1,430	12.83	Apr. 17	1400	930	11.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.69	10	.00	7.6	19	2.4	1.9	1.9	2.2	3.3	29
2	.50	.57	1.1	.00	3.4	9.7	3.1	1.8	2.1	2.1	3.3	28
3	.56	.53	.59	.00	87	6.7	3.3	2.1	2.4	2.4	3.7	7.0
4	.56	.31	.05	.00	60	5.1	2.9	1.9	2.9	2.4	3.1	3.9
5	.51	.00	.00	.00	6.0	258	2.6	1.8	2.8	2.3	2.7	2.9
6	.50	.24	.00	.00	3.5	19	2.1	9.1	2.5	2.2	2.6	2.9
7	.73	37	.00	.00	2.1	17	2.2	42	2.5	2.1	2.4	2.7
8	.57	86	.00	.00	1.7	208	2.8	55	7.4	2.2	2.4	2.6
9	.58	4.6	.00	.00	1.9	76	2.8	6.9	3.2	2.1	2.4	2.8
10	.69	1.9	.02	.00	487	14	2.5	5.0	2.7	2.0	2.2	3.5
11	.65	.92	.63	81	312	7.0	2.3	5.2	2.7	1.8	2.5	3.1
12	.55	.55	.05	9.4	558	4.5	2.3	3.4	2.6	2.0	2.4	2.9
13	.58	.20	.00	1.3	576	3.5	116	4.0	2.3	2.2	2.2	2.5
14	.60	.00	.00	.59	813	3.1	7.9	4.5	2.6	2.4	2.4	2.1
15	.60	.27	.00	14	40	2.7	4.8	42	3.0	2.5	2.1	1.9
16	.43	37	.00	78	255	2.3	3.6	25	2.9	2.5	2.1	2.2
17	.15	37	.00	40	33	2.4	427	3.9	3.0	2.3	1.8	2.1
18	.46	1.7	.00	354	10	2.2	29	2.8	2.6	2.3	1.9	2.0
19	.47	128	.00	23	5.8	2.1	6.9	2.6	2.4	2.4	1.9	2.0
20	.54	60	.00	11	20	2.0	4.2	2.5	2.7	2.4	1.9	2.4
21	.63	3.3	.00	1.6	105	1.6	3.5	2.4	2.9	2.2	2.0	2.0
22	.56	.99	.00	.78	188	1.5	3.0	2.3	3.5	2.6	1.8	42
23	.73	.45	.00	124	663	1.9	2.6	2.4	3.2	3.6	1.8	35
24	.95	.29	.00	1790	21	1.9	2.3	2.4	3.3	4.1	2.2	4.3
25	.60	.02	.00	307	8.3	2.1	2.1	2.3	2.8	3.6	2.0	3.4
26	.64	.00	.00	14	20	2.3	2.0	2.1	3.2	3.7	2.8	2.3
27	.50	.00	.00	4.9	677	1.9	1.8	2.1	3.5	3.1	3.2	2.3
28	12	.00	.00	2.7	23	2.2	1.9	2.2	2.9	3.1	3.6	1.8
29	2.6	.00	.00	2.0	166	2.4	2.0	2.3	2.4	3.5	2.9	1.5
30	1.7	7.8	.00	433	---	3.2	1.7	2.3	2.2	3.8	2.8	1.6
31	1.0	---	.00	62	---	2.3	---	1.9	---	4.1	2.7	---
TOTAL	32.63	410.33	12.44	3354.27	5154.3	687.6	653.6	248.1	87.1	82.2	77.1	204.7
MEAN	1.05	13.7	.40	108	178	22.2	21.8	8.00	2.90	2.65	2.49	6.82
MAX	12	128	10	1790	813	258	427	55	7.4	4.1	3.7	42
MIN	.15	.00	.00	.00	1.7	1.5	1.7	1.8	1.9	1.8	1.8	1.5
AC-FT	65	814	25	6650	10220	1360	1300	492	173	163	153	406

11447360 ARCADE CREEK NEAR DEL PASO HEIGHTS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.69	23.0	32.6	70.2	55.6	18.6	12.1	5.81	3.23	3.44	3.04	3.44
MAX	13.7	76.0	92.4	227	232	64.0	34.7	27.6	5.90	10.0	5.53	14.0
(WY)	1976	1974	1997	1969	1998	1975	1996	1998	1975	1974	1975	1965
MIN	.65	2.67	.40	3.15	.93	.85	.12	.64	.000	.000	.001	1.02
(WY)	1966	1976	2000	1976	1971	1966	1977	1965	1977	1977	1977	1996

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	4158.56		11004.37			
ANNUAL MEAN	11.4		30.1		18.6	
HIGHEST ANNUAL MEAN					38.2	1998
LOWEST ANNUAL MEAN					2.64	1977
HIGHEST DAILY MEAN	527	Feb 9	1790	Jan 24	1910	Feb 3 1998
LOWEST DAILY MEAN	.00	Nov 5	.00	Nov 5	.00	Oct 27 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 13	.00	Dec 13	.00	Dec 31 1963
INSTANTANEOUS PEAK FLOW			2430	Jan 24	3320	Feb 3 1998
INSTANTANEOUS PEAK STAGE			14.97	Jan 24	15.63	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	8250		21830		13450	
10 PERCENT EXCEEDS	15		37		25	
50 PERCENT EXCEEDS	2.0		2.4		2.4	
90 PERCENT EXCEEDS	.17		.00		.40	

11447650 SACRAMENTO RIVER AT FREEPORT, CA

LOCATION.—Lat 38°27'15", long 121°29'54", in SW 1/4 SW 1/4 sec.13, T.7 N., R.4 E., Sacramento County, Hydrologic Unit 18020109, on left bank, 630 ft downstream from drawbridge at Freeport, and 11 mi south of Sacramento.

DRAINAGE AREA.—Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1904 to July 1905 (gage heights only), June to November 1921, October 1948 to current year. Prior to October 1979, published as Sacramento River at Sacramento (station 11447500).

REVISED RECORD.—WDR CA-96-4: 1994–1995 (P).

GAGE.—Water-stage recorder and acoustic-velocity system. Datum of gage is sea level. Prior to Nov. 16, 1956, nonrecording gage and water-stage recorder at various sites in vicinity of I Street Bridge in Sacramento, 13 mi upstream at datum of low-water mark of Oct. 23, 1856, 0.12 ft above sea level. Nov. 17, 1956 to Sept. 20, 1979, at site 1,000 ft upstream from I Street Bridge.

REMARKS.—Records good. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, return flow from irrigated areas, and tide. Floodflows bypass station through Sacramento Weir Spill to Yolo Bypass (stations 11426000 and 11453000). See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD (since 1949).—Maximum discharge, 117,000 ft^3/s, Feb. 19, 1986, elevation, 25.00 ft; minimum daily, 3,970 ft^3/s, Oct. 15, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge known prior to Nov. 21, 1950, 103,000 ft^3/s, Jan. 17, 1909, elevation, 29.6 ft, site then in use at present datum, from reports of California Department of Water Resources.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14800	12200	16000	14600	44700	81100	25800	25100	15600	19900	21000	17500
2	14600	11800	17200	14500	44400	e79000	24800	25500	15500	20000	21000	17900
3	14700	11500	19000	14600	43800	e76900	24300	25500	15400	20000	20700	18000
4	14200	11300	18700	14300	43400	74900	23400	25900	14800	20000	21100	18500
5	14000	11600	18100	14200	41900	74800	23100	26400	15200	20300	20700	18300
6	13800	11400	17600	14200	40200	74500	22800	26400	15600	20900	20000	18000
7	14000	11300	17300	14100	38700	73300	22500	26900	15100	20900	19100	17500
8	14300	12200	17000	13900	38000	73600	21800	27500	15300	21100	18800	16700
9	14300	12700	16600	13800	36300	74200	22400	27000	15300	20800	18200	16100
10	14200	12900	16900	13600	34500	73800	23000	26200	16400	20800	17900	15600
11	14000	13300	17700	13600	37100	73100	24200	24400	16900	20600	17500	15200
12	13800	13700	17800	14800	45600	72400	25600	21500	17000	19600	16800	14800
13	13100	14100	17800	14800	57000	71600	27200	18200	16900	19800	16600	14800
14	12100	14000	17800	16100	75700	70300	27700	16000	16200	20400	16900	14800
15	11500	14500	17800	16300	87700	68400	28200	15200	15900	20200	16900	14500
16	11100	13800	17600	16300	87500	66300	28800	16400	16400	20300	16900	14400
17	10700	14500	17200	19700	87000	64700	29900	18200	16000	20600	16900	14300
18	10800	14200	16600	23900	82900	61900	30700	19700	15700	20600	16900	14300
19	10800	14300	16300	25000	78700	58000	32000	19700	15400	20700	16700	13600
20	10800	15400	15800	23600	75600	53800	34200	18200	14500	20700	16400	13200
21	10800	15500	15300	24400	74000	49100	33300	17000	13800	20600	15900	13400
22	10500	16300	15300	27800	72300	45400	31600	17000	13500	21300	15700	14600
23	10300	16900	15100	26200	74500	42600	30200	17200	14600	21900	16100	14800
24	10700	16400	15200	29900	75700	39700	28900	17000	16100	22200	16900	14500
25	10700	15800	15200	43600	75500	37600	27700	17300	17300	22100	16800	14000
26	10800	15000	15200	50600	75300	35000	26700	17100	17800	22000	16600	13400
27	11000	14800	15400	48900	77200	32900	25000	17000	18000	21900	16400	13100
28	11200	14500	15300	46500	81700	31400	24200	16300	18600	21600	16500	13600
29	11800	14500	15000	44500	81900	29700	24300	16000	18600	21600	16700	13000
30	12200	14900	14800	42400	---	28300	24900	16100	19200	21500	17000	12500
31	12200	---	14400	43800	---	27100	---	16000	---	21400	17000	---
TOTAL	383800	415300	513000	754500	1808800	1815400	799200	633900	482600	646300	548600	454900
MEAN	12380	13840	16550	24340	62370	58560	26640	20450	16090	20850	17700	15160
MAX	14800	16900	19000	50600	87700	81100	34200	27500	19200	22200	21100	18500
MIN	10300	11300	14400	13600	34500	27100	21800	15200	13500	19600	15700	12500
AC-FT	761300	823700	1018000	1497000	3588000	3601000	1585000	1257000	957200	1282000	1088000	902300

e Estimated.

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12480	16420	26630	35170	41860	38560	30090	24920	18400	15090	14570	14930
MAX	28690	48820	74510	87110	81370	78290	76580	69820	55690	31000	25180	25320
(WY)	1963	1984	1984	1997	1998	1983	1982	1952	1998	1983	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	9796300		9256300			
ANNUAL MEAN	26840		25290		24000	
HIGHEST ANNUAL MEAN					46900	1983
LOWEST ANNUAL MEAN					7608	1977
HIGHEST DAILY MEAN	86700	Feb 18	87700	Feb 15	115000	Feb 19 1986
LOWEST DAILY MEAN	10300	Oct 23	10300	Oct 23	3970	Oct 15 1977
ANNUAL SEVEN-DAY MINIMUM	10700	Oct 19	10700	Oct 19	4060	Oct 13 1977
INSTANTANEOUS PEAK FLOW			88500	Feb 15	117000	Feb 19 1986
INSTANTANEOUS PEAK STAGE			19.23	Feb 15	25.00	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	19430000		18360000		17390000	
10 PERCENT EXCEEDS	65600		54800		57000	
50 PERCENT EXCEEDS	18400		17600		16200	
90 PERCENT EXCEEDS	14000		13500		8980	

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1957 to current year.
CHEMICAL DATA: Water years 1959 to current year.
BIOLOGICAL DATA: Water years 1974–81.
SPECIFIC CONDUCTANCE: Water years 1974–75, 1989–98.
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.—October 1956 to current year.
CHEMICAL DATA: June 1960 to June 1963.
SPECIFIC CONDUCTANCE: Water years 1974–75, 1989–94, 1996–98.
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. Interruptions in record were due to malfunction of recording instrument. Chemical Data for water year 2000 available in the files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 318 microsiemens, Nov. 22, 1974; minimum recorded, 32 microsiemens, Apr. 6, 1974.
WATER TEMPERATURE: Maximum recorded, 27.0°C, Sept. 8, 1977; minimum recorded, 3.0°C, Dec. 25–27, 1990.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,960 mg/L, Dec. 24, 1964; minimum daily, 2 mg/L, Jan. 27, 31, and Nov. 21, 1991.
SEDIMENT LOAD: Maximum daily, 525,000 tons, Dec. 24, 1964; minimum daily, 35 tons, Jan. 31, 1991.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 23.5°C, June 16, 17; minimum recorded, 8.5°C, several days in January.
SEDIMENT CONCENTRATION: Maximum daily mean, 249 mg/L, Feb. 14, minimum daily mean, 8 mg/L, Nov. 2, 3.
SEDIMENT LOAD: Maximum daily, 50,900 tons, Feb. 14; minimum daily, 261 tons, Nov. 2.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
08...N	1100	17200	17.0	19	882	98
15...	1316	11000	18.0	11	333	--
NOV						
08...N	1000	14400	15.0	17	661	93
DEC						
01...	1203	12000	11.0	17	528	96
09...N	1100	17400	9.5	18	846	96
JAN						
12...	1159	14000	9.5	12	444	94
19...	1408	21400	10.5	88	5080	97
29...N	1030	44000	10.5	88	10500	73
FEB						
24...	1142	76000	10.0	118	24200	55
24...N	1300	75700	10.0	90	18400	65
MAR						
21...N	1030	49600	12.0	152	20400	89
30...	1109	28000	14.5	78	6000	74
APR						
24...N	1140	28300	16.5	55	4200	82
MAY						
08...	1208	28000	15.0	35	2630	74
17...N	1130	20700	16.0	41	2290	84
JUN						
23...	1240	15500	22.5	22	921	65
27...N	1300	19100	22.0	30	1550	75
JUL						
18...N	1100	22000	20.0	27	1600	84
AUG						
29...N	1100	19800	21.0	20	1070	89
SEP						
05...	1059	19000	18.0	42	2120	91
22...N	1100	17400	21.5	20	940	94

N Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT) (00063)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPERATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)
MAR										
30...	1025	1	28700	14.5	1	18	91	100	--	--
30...	1027	1	28700	14.5	1	12	79	97	100	--
30...	1030	1	28700	14.5	--	7	83	99	100	--
30...	1032	1	28700	14.5	--	3	55	97	99	100
30...	1034	1	28700	14.5	1	3	47	91	98	100

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	14.0	17.0	16.5	21.0	20.5	22.0	20.5	22.0	21.5	19.0	18.5
2	15.5	14.5	17.5	16.5	20.5	20.0	21.5	20.5	22.0	21.5	18.5	18.0
3	16.0	15.0	17.5	17.0	20.5	20.5	21.0	20.0	22.0	21.5	18.5	18.0
4	16.5	15.5	17.5	17.0	20.5	20.5	21.0	19.5	22.0	21.0	18.5	18.0
5	16.5	15.5	17.5	17.0	20.5	20.5	21.0	20.0	22.0	21.0	18.5	18.0
6	16.5	16.0	17.0	16.0	20.5	20.5	20.5	19.5	22.5	21.5	19.0	18.5
7	17.0	16.0	16.0	15.0	21.0	20.5	20.5	19.5	22.0	21.5	19.5	19.0
8	17.0	16.5	15.5	15.0	20.5	20.0	20.5	19.5	22.0	21.0	20.0	19.5
9	17.0	16.5	15.5	15.0	20.5	20.0	21.0	19.5	21.5	20.5	20.0	19.5
10	17.0	16.5	16.0	15.5	20.5	20.0	21.5	20.0	21.5	20.5	20.5	20.0
11	17.0	16.5	16.5	15.5	20.5	20.0	21.5	20.5	21.5	21.0	20.5	20.0
12	17.5	17.0	17.0	16.0	21.0	20.5	21.5	21.0	22.0	21.5	21.0	20.5
13	17.5	17.0	17.5	16.5	21.5	21.0	22.0	21.0	22.0	21.5	21.0	21.0
14	17.0	16.5	17.0	16.5	22.5	21.5	21.5	21.0	22.0	22.0	21.0	21.0
15	16.5	16.0	17.0	16.0	23.0	22.5	21.5	20.5	22.0	22.0	21.0	21.0
16	16.0	15.5	16.5	16.0	23.5	23.0	21.0	20.5	22.5	22.0	21.0	21.0
17	15.5	15.0	16.0	16.0	23.5	23.0	20.5	20.0	22.5	22.0	21.0	21.0
18	15.0	14.5	17.5	16.0	23.0	22.5	20.5	19.5	22.5	22.0	21.5	21.0
19	15.0	14.5	18.5	17.5	22.5	22.0	21.0	20.0	22.0	21.5	21.5	21.0
20	15.0	14.5	20.0	18.5	22.5	22.0	21.5	20.5	21.5	21.0	22.0	21.5
21	15.5	14.5	21.5	20.0	23.0	22.5	21.5	20.5	21.5	21.0	22.0	21.5
22	16.0	15.5	22.5	21.5	23.0	22.5	21.5	20.5	21.5	21.0	21.5	21.0
23	16.5	16.0	22.5	22.5	22.5	22.5	21.5	20.5	21.5	21.0	21.0	20.0
24	16.5	16.0	22.5	22.0	22.5	22.0	21.5	20.5	21.0	21.0	20.0	19.5
25	17.0	16.5	22.0	21.5	22.0	21.5	22.0	20.5	21.5	21.0	20.0	19.5
26	18.0	16.5	22.0	21.5	22.5	21.5	22.0	21.0	21.5	21.0	19.5	19.5
27	18.0	17.5	22.0	21.5	22.5	22.0	21.5	20.5	21.5	21.0	19.5	19.0
28	17.5	16.5	22.0	21.5	23.0	22.0	21.5	20.0	21.5	21.0	19.5	19.0
29	17.0	16.5	22.0	21.5	23.0	22.0	22.0	20.5	21.5	20.5	19.5	19.0
30	17.0	16.0	22.0	21.5	22.5	21.5	22.0	21.0	20.5	19.5	19.5	19.0
31	---	---	21.5	21.0	---	---	22.0	21.0	19.5	19.0	---	---
MONTH	18.0	14.0	22.5	15.0	23.5	20.0	22.0	19.5	22.5	19.0	22.0	18.0

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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	14800	18	719	12200	9	296	16000	20	864
2	14600	17	670	11800	8	261	17200	34	1580
3	14700	17	675	11500	8	264	19000	34	1740
4	14200	16	613	11300	9	275	18700	33	1670
5	14000	17	643	11600	10	310	18100	32	1560
6	13800	17	633	11400	11	339	17600	30	1430
7	14000	18	680	11300	12	366	17300	29	1350
8	14300	17	656	12200	13	428	17000	28	1290
9	14300	16	618	12700	15	514	16600	27	1210
10	14200	15	575	12900	17	592	16900	27	1230
11	14000	14	529	13300	19	682	17700	27	1290
12	13800	13	484	13700	17	629	17800	28	1350
13	13100	13	460	14100	15	571	17800	28	1350
14	12100	13	425	14000	12	454	17800	28	1350
15	11500	11	342	14500	11	431	17800	25	1200
16	11100	9	282	13800	9	350	17600	22	1050
17	10700	10	286	14500	10	392	17200	22	1020
18	10800	10	292	14200	12	460	16600	22	986
19	10800	11	321	14300	15	579	16300	23	1010
20	10800	11	321	15400	19	790	15800	23	981
21	10800	11	321	15500	24	1000	15300	24	991
22	10500	11	312	16300	30	1320	15300	22	909
23	10300	10	278	16900	36	1640	15100	20	815
24	10700	10	280	16400	34	1510	15200	19	780
25	10700	9	269	15800	30	1280	15200	17	698
26	10800	9	274	15000	30	1220	15200	16	657
27	11000	11	327	14800	30	1200	15400	15	624
28	11200	13	393	14500	29	1140	15300	14	578
29	11800	13	414	14500	29	1140	15000	13	526
30	12200	11	362	14900	27	1090	14800	12	480
31	12200	10	329	---	---	---	14400	11	428
TOTAL	383800	---	13783	415300	---	21523	513000	---	32997
		JANUARY			FEBRUARY			MARCH	
1	14600	11	434	44700	117	14100	81100	64	14000
2	14500	10	392	44400	161	19300	e79000	69	e14700
3	14600	10	378	43800	122	14400	e76900	67	e13900
4	14300	9	351	43400	103	12100	74900	70	14200
5	14200	9	360	41900	96	10900	74800	75	15100
6	14200	10	380	40200	90	9770	74500	76	15300
7	14100	10	381	38700	84	8780	73300	65	12900
8	13900	11	413	38000	82	8410	73600	68	13500
9	13800	11	410	36300	89	8720	74200	60	12000
10	13600	12	441	34500	76	7080	73800	57	11400
11	13600	12	441	37100	87	8710	73100	56	11100
12	14800	13	519	45600	125	15400	72400	55	10800
13	14800	14	559	57000	187	28800	71600	54	10400
14	16100	16	696	75700	249	50900	70300	51	9680
15	16300	25	1100	87700	201	47600	68400	62	11500
16	16300	40	1760	87500	147	34700	66300	57	10200
17	19700	63	3350	87000	104	24400	64700	77	13500
18	23900	94	6070	82900	100	22400	61900	89	14900
19	25000	93	6280	78700	92	19500	58000	97	15200
20	23600	82	5230	75600	84	17100	53800	115	16700
21	24400	74	4880	74000	76	15200	49100	154	20400
22	27800	88	6610	72300	72	14100	45400	111	13600
23	26200	109	7710	74500	98	19700	42600	98	11300
24	29900	141	11400	75700	98	20000	39700	86	9220
25	43600	214	25200	75500	70	14300	37600	81	8220
26	50600	220	30100	75300	80	16300	35000	77	7280
27	48900	184	24300	77200	94	19600	32900	72	6400
28	46500	130	16300	81700	101	22300	31400	62	5260
29	44500	117	14100	81900	73	16100	29700	64	5130
30	42400	109	12500	---	---	---	28300	69	5270
31	43800	103	12200	---	---	---	27100	61	4460
TOTAL	754500	---	195245	1808800	---	540670	1815400	---	357520

e Estimated.

11447650 SACRAMENTO RIVER AT FREEPORT, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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	25800	64	4460	25100	40	2710	15600	17	716
2	24800	69	4620	25500	40	2750	15500	15	628
3	24300	68	4460	25500	41	2820	15400	14	582
4	23400	48	3030	25900	40	2800	14800	13	519
5	23100	42	2620	26400	37	2640	15200	12	492
6	22800	41	2520	26400	37	2640	15600	12	505
7	22500	38	2310	26900	36	2610	15100	14	571
8	21800	41	2410	27500	35	2600	15300	18	744
9	22400	45	2720	27000	35	2550	15300	20	826
10	23000	47	2920	26200	38	2690	16400	22	974
11	24200	41	2680	24400	39	2570	16900	23	1050
12	25600	49	3390	21500	37	2150	17000	25	1150
13	27200	57	4190	18200	35	1720	16900	27	1230
14	27700	57	4260	16000	32	1380	16200	28	1220
15	28200	58	4420	15200	32	1310	15900	27	1160
16	28800	61	4740	16400	42	1860	16400	25	1110
17	29900	64	5170	18200	55	2700	16000	23	994
18	30700	67	5550	19700	54	2870	15700	20	848
19	32000	69	5960	19700	51	2710	15400	18	748
20	34200	67	6190	18200	47	2310	14500	17	666
21	33300	65	5840	17000	43	1970	13800	16	596
22	31600	63	5380	17000	40	1840	13500	19	693
23	30200	60	4890	17200	36	1670	14600	20	788
24	28900	58	4530	17000	33	1510	16100	19	826
25	27700	55	4110	17300	31	1450	17300	23	1070
26	26700	48	3460	17100	28	1290	17800	29	1390
27	25000	39	2630	17000	26	1190	18000	34	1650
28	24200	39	2550	16300	24	1060	18600	38	1910
29	24300	39	2560	16000	22	950	18600	38	1910
30	24900	40	2690	16100	20	869	19200	38	1970
31	---	---	---	16000	18	778	---	---	---
TOTAL	799200	---	117260	633900	---	62967	482600	---	29536
		JULY			AUGUST			SEPTEMBER	
1	19900	37	1990	21000	24	1360	17500	30	1420
2	20000	36	1940	21000	22	1250	17900	33	1590
3	20000	35	1890	20700	25	1400	18000	36	1750
4	20000	35	1890	21100	29	1650	18500	39	1950
5	20300	34	1860	20700	33	1840	18300	41	2030
6	20900	33	1860	20000	34	1840	18000	33	1600
7	20900	31	1750	19100	34	1750	17500	32	1510
8	21100	32	1820	18800	31	1570	16700	33	1490
9	20800	34	1910	18200	29	1430	16100	32	1390
10	20800	36	2020	17900	27	1300	15600	29	1220
11	20600	37	2060	17500	26	1230	15200	26	1070
12	19600	38	2010	16800	25	1130	14800	24	959
13	19800	33	1760	16600	23	1030	14800	21	839
14	20400	29	1600	16900	22	1000	14800	19	759
15	20200	28	1530	16900	21	958	14500	15	587
16	20300	27	1480	16900	20	913	14400	13	505
17	20600	26	1450	16900	19	867	14300	15	579
18	20600	25	1390	16900	18	821	14300	16	618
19	20700	27	1510	16700	18	812	13600	18	661
20	20700	28	1560	16400	19	841	13200	20	713
21	20600	30	1670	15900	20	859	13400	22	796
22	21300	31	1780	15700	21	890	14600	22	867
23	21900	33	1950	16100	22	956	14800	21	839
24	22200	34	2040	16900	24	1100	14500	19	744
25	22100	35	2090	16800	27	1220	14000	17	643
26	22000	37	2200	16600	29	1300	13400	15	543
27	21900	37	2190	16400	29	1280	13100	13	460
28	21600	38	2220	16500	29	1290	13600	12	441
29	21600	37	2160	16700	29	1310	13000	12	421
30	21500	32	1860	17000	28	1290	12500	11	371
31	21400	28	1620	17000	28	1290	---	---	---
TOTAL	646300	---	57060	548600	---	37777	454900	---	29365
YEAR	9256300		1495703						

11449500 KELSEY CREEK NEAR KELSEYVILLE, CA

LOCATION.—Lat 38°55'39", long 122°50'33", in SE 1/4 SE 1/4 sec.34, T.13 N., R.9 W., Lake County, Hydrologic Unit 18020116, on left bank, 1.6 mi downstream from Widow Creek, and 3.5 mi south of Kelseyville.

DRAINAGE AREA.—36.6 mi^2.

PERIOD OF RECORD.—October 1946 to current year.

REVISED RECORDS.—WSP 1285: 1947–48(M), 1950–52(P). WSP 1931: Drainage area. WDR CA-96-4: 1956–93(P).

GAGE.—Water-stage recorder. Datum of gage is 1,475.44 ft above sea level. Prior to July 16, 1955, at site 600 ft upstream at different datum.

REMARKS.—Records good. Some minor diversions upstream from station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,600 ft^3/s, Mar. 9, 1995, gage height, 13.80 ft; minimum daily, 0.13 ft^3/s, Sept. 6–11, 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,400 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	0600	3,110	9.88				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	8.8	85	13	168	264	38	27	16	5.8	3.6	4.1
2	4.5	8.6	33	13	117	232	37	27	15	6.1	3.4	4.8
3	4.6	8.7	24	13	111	190	35	26	15	6.6	3.2	4.8
4	4.7	8.6	21	13	121	168	34	26	14	6.8	3.2	4.1
5	5.1	8.8	19	13	300	187	34	25	14	6.8	3.3	4.3
6	5.2	8.9	18	13	216	161	33	24	14	7.1	3.1	4.0
7	5.4	12	17	13	134	159	32	27	14	7.4	3.0	3.6
8	4.9	33	16	13	100	233	31	28	17	7.3	3.2	3.5
9	4.5	16	23	13	82	355	30	25	16	6.6	3.3	3.5
10	4.4	14	23	13	128	237	30	24	15	6.1	3.4	3.3
11	4.5	18	20	97	386	192	29	23	14	6.0	3.5	3.2
12	4.4	16	19	47	369	158	29	22	13	5.8	3.2	3.1
13	4.6	14	18	32	763	135	40	23	13	5.6	3.0	3.4
14	4.7	13	17	89	1580	117	35	27	11	5.6	2.8	3.4
15	4.7	17	16	69	481	103	30	56	10	5.1	2.8	3.6
16	4.6	25	16	432	273	92	60	34	9.8	5.1	2.9	3.8
17	4.5	31	16	98	190	82	325	29	9.4	5.5	2.8	3.6
18	4.8	19	15	131	147	76	93	26	9.7	5.7	2.8	3.3
19	5.4	43	15	201	121	70	63	24	9.6	5.2	2.8	3.0
20	5.7	42	15	165	220	65	52	23	9.1	5.1	2.9	2.9
21	5.8	24	15	103	303	61	46	22	8.4	4.7	2.9	2.9
22	5.8	19	14	90	658	57	42	21	8.1	4.7	2.9	3.6
23	5.9	17	14	150	554	55	39	20	7.7	4.5	2.9	4.1
24	6.3	16	14	275	269	53	36	19	7.5	4.3	3.0	3.8
25	6.5	15	14	186	194	50	35	19	7.4	4.3	3.0	3.5
26	7.1	15	14	118	416	48	33	18	6.9	3.9	2.7	3.3
27	8.2	14	14	84	928	46	32	18	6.6	3.6	2.7	3.3
28	16	14	14	66	392	45	31	17	6.3	4.1	2.7	3.4
29	10	14	14	55	420	42	28	17	5.9	3.8	2.9	3.5
30	9.3	77	14	363	---	40	27	16	5.7	3.8	3.6	3.2
31	8.9	---	13	245	---	38	---	16	---	3.7	3.8	---
TOTAL	185.5	590.4	600	3226	10141	3811	1439	749	329.1	166.7	95.3	107.9
MEAN	5.98	19.7	19.4	104	350	123	48.0	24.2	11.0	5.38	3.07	3.60
MAX	16	77	85	432	1580	355	325	56	17	7.4	3.8	4.8
MIN	4.4	8.6	13	13	82	38	27	16	5.7	3.6	2.7	2.9
AC-FT	368	1170	1190	6400	20110	7560	2850	1490	653	331	189	214

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2000, BY WATER YEAR (WY)

MEAN	11.2	46.0	125	207	216	152	78.2	31.9	13.3	5.80	3.62	3.80
MAX	154	334	688	929	919	640	429	163	64.1	19.2	9.40	16.3
(WY)	1963	1974	1956	1995	1986	1983	1982	1983	1998	1998	1998	1957
MIN	1.22	3.55	4.19	4.83	8.97	11.4	5.67	6.12	1.98	.46	.20	.16
(WY)	1992	1991	1991	1991	1977	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1947 - 2000	
ANNUAL TOTAL	26006.6		21440.9			
ANNUAL MEAN	71.3		58.6		73.8	
HIGHEST ANNUAL MEAN					206	1983
LOWEST ANNUAL MEAN					4.78	1977
HIGHEST DAILY MEAN	2120	Feb 9	1580	Feb 14	6020	Feb 17 1986
LOWEST DAILY MEAN	4.4	Oct 10	2.7	Aug 26	.13	Sep 6 1992
ANNUAL SEVEN-DAY MINIMUM	4.5	Oct 9	2.8	Aug 14	.13	Sep 5 1992
INSTANTANEOUS PEAK FLOW			3110	Feb 14	8600	Mar 9 1995
INSTANTANEOUS PEAK STAGE			9.88	Feb 14	13.80	Mar 9 1995
ANNUAL RUNOFF (AC-FT)	51580		42530		53490	
10 PERCENT EXCEEDS	204		166		156	
50 PERCENT EXCEEDS	16		15		13	
90 PERCENT EXCEEDS	5.3		3.4		2.6	

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, on pier behind 410 Esplanade Street in Lakeport.

DRAINAGE AREA.—528 mi^2.

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, 11.44 ft, Feb. 24, 1998, minimum observed, –3.50 ft, Sept. 24–27, 1920.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 4, 1983, reached a stage of 11.24 ft, present datum, from floodmarks.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.71	1.28	1.37	1.30	2.61	6.89	7.49	7.53	6.61	5.17	3.75	2.39
2	1.68	1.27	1.35	1.29	2.68	6.94	7.50	7.53	6.56	5.12	3.71	2.37
3	1.65	1.27	1.36	1.31	2.74	6.97	7.51	7.50	6.51	5.06	3.65	2.33
4	1.60	1.26	1.37	1.31	2.79	7.02	7.50	7.46	6.47	4.99	3.59	2.29
5	1.55	1.26	1.36	1.31	2.88	7.12	7.50	7.44	6.41	4.93	3.54	2.28
6	1.52	1.26	1.34	1.31	2.99	7.20	7.51	7.40	6.36	4.89	3.49	2.26
7	1.51	1.31	1.32	1.31	3.06	7.24	7.52	7.41	6.29	4.85	3.44	2.24
8	1.49	1.30	1.34	1.30	3.10	7.26	7.50	7.38	6.25	4.81	3.40	2.20
9	1.47	1.30	1.35	1.30	3.16	7.32	7.50	7.32	6.21	4.77	3.34	2.18
10	1.46	1.31	1.35	1.30	3.23	7.36	7.51	7.28	6.16	4.73	3.29	2.17
11	1.45	1.31	1.35	1.33	3.31	7.39	7.51	7.28	6.12	4.70	3.25	2.14
12	1.44	1.31	1.35	1.38	3.50	7.42	7.51	7.26	6.07	4.65	3.20	2.12
13	1.43	1.31	1.33	1.40	3.76	7.43	7.54	7.24	6.05	4.61	3.14	2.10
14	1.42	1.30	1.34	1.41	4.20	7.46	7.56	7.24	6.02	4.58	3.09	2.05
15	1.42	1.33	1.34	1.46	4.61	7.47	7.55	7.25	5.98	4.53	3.04	2.02
16	1.39	1.34	1.34	1.51	4.82	7.45	7.60	7.22	5.94	4.49	3.00	2.02
17	1.35	1.36	1.34	1.58	4.95	7.49	7.66	7.23	5.88	4.43	2.94	2.00
18	1.34	1.37	1.34	1.65	5.02	7.49	7.64	7.22	5.82	4.38	2.86	1.99
19	1.33	1.40	1.36	1.72	5.08	7.46	7.62	7.20	5.78	4.33	2.82	1.97
20	1.32	1.37	1.34	1.79	5.18	7.50	7.60	7.18	5.75	4.29	2.78	1.94
21	1.31	1.34	1.36	1.85	5.35	7.52	7.56	7.16	5.71	4.24	2.75	1.88
22	1.31	1.35	1.33	1.91	5.47	7.51	7.53	7.14	5.65	4.20	2.71	1.87
23	1.29	1.35	1.33	2.00	5.77	7.52	7.54	7.11	5.61	4.16	2.66	1.83
24	1.28	1.34	1.33	2.09	5.96	7.52	7.55	7.05	5.56	4.11	2.62	1.81
25	1.28	1.34	1.33	2.18	6.09	7.51	7.55	6.97	5.51	4.05	2.59	1.79
26	1.27	1.34	1.33	2.23	6.19	7.50	7.56	6.94	5.46	3.98	2.55	1.75
27	1.27	1.35	1.33	2.27	6.46	7.48	7.52	6.88	5.42	3.94	2.53	1.73
28	1.27	1.35	1.32	2.29	6.68	7.49	7.50	6.82	5.36	3.91	2.51	1.70
29	1.28	1.34	1.32	2.32	6.83	7.50	7.54	6.76	5.31	3.87	2.49	1.69
30	1.28	1.35	1.32	2.39	---	7.50	7.54	6.69	5.24	3.83	2.46	1.67
31	1.28	---	1.32	2.53	---	7.50	---	6.66	---	3.79	2.42	---
MEAN	1.41	1.32	1.34	1.69	4.43	7.37	7.54	7.19	5.94	4.46	3.02	2.03
MAX	1.71	1.40	1.37	2.53	6.83	7.52	7.66	7.53	6.61	5.17	3.75	2.39
MIN	1.27	1.26	1.32	1.29	2.61	6.89	7.49	6.66	5.24	3.79	2.42	1.67

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 mi^2.

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 including periods of estimated daily discharges. 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, 10,200 ft^3/s, Feb. 17, 1998, gage height, 11.01 ft, present datum; no flow Nov. 8–20, 1977, Apr. 5, 6, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	5.1	3.8	3.7	5.3	1830	17	199	737	586	640	186
2	340	5.3	4.0	3.7	5.5	1860	17	426	734	608	674	272
3	336	5.0	4.0	3.7	5.5	e1400	17	555	746	604	647	273
4	327	5.1	4.1	3.8	5.7	e2100	18	610	715	567	620	270
5	320	5.1	4.1	3.9	5.9	e2200	18	660	741	545	584	265
6	318	5.4	4.1	3.6	5.8	e2200	18	691	755	506	556	254
7	314	5.4	4.1	3.6	5.9	e2200	19	620	779	516	550	258
8	318	5.5	4.1	3.6	6.1	e1300	19	564	755	539	542	261
9	222	5.1	4.2	3.6	6.3	e1500	19	551	664	500	552	259
10	8.1	4.5	4.2	3.5	6.4	e1500	19	536	621	464	552	293
11	7.4	3.9	4.3	3.5	6.8	e900	18	503	630	466	535	319
12	6.7	3.7	4.2	3.7	6.6	e900	18	501	666	480	517	313
13	6.5	3.6	4.2	3.7	6.8	e720	17	560	695	459	518	288
14	6.2	3.5	4.2	3.7	7.9	e600	e25	596	736	495	530	273
15	5.9	3.4	4.0	3.9	7.4	e600	e40	547	727	541	532	268
16	4.9	3.5	4.0	4.0	7.7	e450	e270	432	713	575	510	266
17	4.7	3.5	4.0	3.9	7.9	e210	e1000	341	746	577	494	269
18	4.8	3.3	4.0	4.0	8.2	e250	e700	352	754	548	493	283
19	4.7	3.3	3.9	4.3	8.4	e250	e800	502	703	546	503	304
20	4.5	3.4	3.8	4.3	8.8	e200	e700	560	662	558	506	321
21	4.6	3.4	3.6	4.4	9.1	e200	e200	616	675	558	515	331
22	4.6	3.1	3.6	4.5	9.6	e200	16	678	689	552	545	333
23	4.7	2.9	3.6	4.8	9.7	e250	16	724	683	560	558	331
24	4.8	2.9	3.5	5.0	9.6	e300	15	811	688	561	524	318
25	4.8	3.0	3.5	4.9	9.7	e300	15	909	687	554	454	292
26	4.9	3.1	3.5	4.8	10	e300	15	909	684	554	227	275
27	4.9	3.1	3.4	4.7	11	e250	15	884	676	547	167	269
28	5.0	3.2	3.6	4.8	852	223	17	892	675	562	14	271
29	4.9	3.5	3.6	4.9	1830	223	18	886	680	569	14	275
30	4.9	3.7	3.6	5.2	---	150	17	854	651	565	12	273
31	5.0	---	3.7	5.3	---	57	---	807	---	586	12	---
TOTAL	2957.5	118.5	120.5	129.0	2885.6	25623	4113	19276	21067	16848	14097	8463
MEAN	95.4	3.95	3.89	4.16	99.5	827	137	622	702	543	455	282
MAX	345	5.5	4.3	5.3	1830	2200	1000	909	779	608	674	333
MIN	4.5	2.9	3.4	3.5	5.3	57	15	199	621	459	12	186
AC-FT	5870	235	239	256	5720	50820	8160	38230	41790	33420	27960	16790
a	.92	4.37	0.42	7.12	9.87	3.05	0.07	1.42	0.00	0.00	0.00	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2000, BY WATER YEAR (WY)

MEAN	31.9	16.0	111	624	854	840	544	332	382	403	321	169
MAX	191	683	2584	3047	4988	4919	3538	951	702	651	514	325
(WY)	1996	1984	1984	1997	1998	1983	1958	1983	2000	1998	1999	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1945 - 2000	
ANNUAL TOTAL	181040.3		115698.1			
ANNUAL MEAN	496		316		383	
HIGHEST ANNUAL MEAN					1342	1983
LOWEST ANNUAL MEAN					.67	1990
HIGHEST DAILY MEAN	2870	Mar 25	2200	Mar 5	7200	Feb 18 1998
LOWEST DAILY MEAN	2.9	Nov 23	2.9	Nov 23	.00	Nov 8 1977
ANNUAL SEVEN-DAY MINIMUM	3.0	Nov 22	3.0	Nov 22	.00	Nov 8 1977
INSTANTANEOUS PEAK FLOW			2780	Mar 2	10200	Feb 17 1998
INSTANTANEOUS PEAK STAGE			7.59	Mar 2	11.01	Feb 17 1998
ANNUAL RUNOFF (AC-FT)	359100		229500		277700	
10 PERCENT EXCEEDS	1100		721		642	
50 PERCENT EXCEEDS	340		238		63	
90 PERCENT EXCEEDS	4.0		3.7		1.1	

e Estimated.
a Precipitation in inches.

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 mi^2.

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 good. No regulation or diversion upstream from station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,200 ft^3/s, Jan. 1, 1997, gage height, 14.14 ft, from rating curve extended above 3,900 ft^3/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 ft^3/s, or maximum.

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	1400	3,000	8.68	Feb. 27	0130	2,840	8.54
Feb. 22	2115	1,850	7.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	4.0	90	12	381	564	62	45	25	7.8	3.1	2.2
2	2.0	4.0	46	11	301	472	62	43	24	7.8	2.9	2.5
3	2.0	4.0	35	11	244	390	60	42	23	7.8	2.8	2.4
4	2.1	4.0	29	11	207	355	58	42	22	7.8	2.8	2.2
5	2.2	4.0	24	11	419	457	56	40	22	7.7	2.8	2.1
6	2.5	4.0	22	11	424	377	55	40	22	7.8	2.7	1.9
7	2.6	6.6	20	11	293	337	53	44	21	7.9	2.6	1.7
8	2.4	20	18	11	226	341	53	51	26	7.7	2.6	1.7
9	2.3	9.9	23	11	189	394	52	40	23	7.4	2.5	1.6
10	2.2	16	26	11	240	373	51	38	21	6.8	2.6	1.6
11	2.2	33	21	143	466	361	49	36	20	6.5	2.5	1.6
12	2.2	14	20	95	708	327	49	35	19	6.1	2.3	1.5
13	2.2	10	20	71	1650	286	55	34	18	5.8	2.0	1.4
14	2.2	9.0	19	116	2640	252	53	50	17	5.6	1.9	1.5
15	2.0	12	18	112	1410	220	51	101	16	5.6	1.9	1.6
16	1.7	18	17	390	697	192	66	64	15	5.6	1.9	1.7
17	1.7	32	16	194	435	167	262	50	14	5.6	1.8	1.7
18	2.0	16	16	255	311	149	155	44	13	5.4	1.7	1.4
19	2.2	61	15	261	242	136	103	41	13	5.3	1.7	1.2
20	2.3	52	15	298	252	125	86	38	12	4.9	1.8	1.1
21	2.3	29	15	225	380	114	77	35	11	4.2	1.9	1.2
22	2.5	21	14	220	687	106	69	34	11	4.0	1.9	1.4
23	2.4	17	14	280	921	99	64	32	11	4.0	1.8	1.7
24	2.5	15	13	377	503	93	61	30	10	3.9	1.7	1.7
25	2.5	13	13	317	371	88	57	29	10	3.7	1.8	1.6
26	2.8	13	13	231	708	82	54	28	10	3.6	1.7	1.5
27	3.9	12	12	170	1720	80	53	28	9.5	3.6	1.6	1.4
28	8.6	12	12	132	851	77	51	28	9.1	3.6	1.5	1.4
29	5.2	12	12	106	772	72	48	27	8.6	3.6	1.3	1.4
30	4.5	60	12	322	---	68	47	27	8.3	3.4	1.7	1.4
31	4.2	---	12	386	---	65	---	26	---	3.2	1.9	---
TOTAL	84.4	537.5	652	4812	18648	7219	2072	1242	484.5	173.7	65.7	49.3
MEAN	2.72	17.9	21.0	155	643	233	69.1	40.1	16.1	5.60	2.12	1.64
MAX	8.6	61	90	390	2640	564	262	101	26	7.9	3.1	2.5
MIN	1.7	4.0	12	11	189	65	47	26	8.3	3.2	1.3	1.1
AC-FT	167	1070	1290	9540	36990	14320	4110	2460	961	345	130	98
a	0.96	7.56	0.61	9.95	10.43	2.61	4.43	0.04	0.03	0.00	0.00	0.00

a Precipitation, in inches.

11451100 NORTH FORK CACHE CREEK AT HOUGH SPRINGS, NEAR CLEARLAKE OAKS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.21	55.9	139	315	358	284	118	47.8	16.4	4.85	1.70	1.30
MAX	12.4	405	738	1750	1382	1258	631	242	90.9	26.7	10.8	6.75
(WY)	1980	1982	1997	1995	1998	1995	1982	1995	1998	1998	1998	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1972 - 2000	
ANNUAL TOTAL	43736.9		36040.1			
ANNUAL MEAN	120		98.5		111	
HIGHEST ANNUAL MEAN					335	1995
LOWEST ANNUAL MEAN					3.67	1977
HIGHEST DAILY MEAN	2520	Feb 9	2640	Feb 14	8340	Feb 17 1986
LOWEST DAILY MEAN	1.7	Oct 16	1.1	Sep 20	.00	Aug 27 1972
ANNUAL SEVEN-DAY MINIMUM	2.0	Oct 12	1.4	Sep 16	.00	Aug 27 1972
INSTANTANEOUS PEAK FLOW			3000	Feb 14	13200	Jan 1 1997
INSTANTANEOUS PEAK STAGE			8.68	Feb 14	14.14	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	86750		71490		80440	
10 PERCENT EXCEEDS	390		313		270	
50 PERCENT EXCEEDS	20		16		12	
90 PERCENT EXCEEDS	2.5		1.8		.52	

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 mi^2.

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 good. 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, 7,950 ft^3/s, Feb. 11, 1998, gage height 10.61; maximum gage height, 10.62 ft, Jan. 2, 1997; minimum daily, 0.37 ft^3/s, Oct. 15, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 26, 1983, reached a stage of 12.74 ft, present datum, discharge about 9,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	115	15	9.5	9.9	2270	185	158	86	320	117	244
2	6.4	95	15	9.5	9.7	2230	242	12	132	317	115	177
3	6.4	55	15	9.5	9.7	1680	263	12	133	316	114	123
4	6.8	33	15	9.5	9.7	272	282	12	139	315	114	96
5	7.0	33	15	9.5	9.8	272	321	12	140	315	110	83
6	7.0	33	14	9.5	9.8	272	402	12	140	315	51	83
7	6.9	33	14	9.5	10	741	467	12	142	314	9.3	83
8	6.9	28	14	9.5	10	862	467	12	142	313	9.1	44
9	133	26	14	9.5	10	403	465	12	143	312	9.1	8.6
10	264	14	14	9.5	10	436	505	12	142	311	9.4	8.5
11	264	5.7	14	9.6	11	492	584	12	143	310	9.5	8.5
12	264	15	14	9.5	11	490	526	12	143	303	9.6	8.6
13	249	39	14	9.5	13	490	442	12	143	296	9.7	8.7
14	241	39	14	9.5	13	492	433	12	144	235	9.7	8.7
15	228	39	14	9.5	13	410	432	12	217	188	9.7	8.7
16	220	23	14	9.7	13	306	285	12	258	188	9.7	8.7
17	218	16	14	9.5	13	272	12	12	258	186	9.7	8.7
18	181	16	14	9.7	13	272	12	12	259	186	9.7	8.7
19	230	16	14	9.9	13	272	12	12	285	176	9.5	8.8
20	198	16	14	9.6	13	225	12	12	300	172	9.5	8.8
21	199	15	11	9.6	13	55	134	12	300	182	9.5	8.9
22	199	15	8.5	9.5	98	9.3	280	12	300	183	9.5	8.9
23	199	15	8.5	9.9	238	9.6	280	12	300	182	9.6	8.9
24	196	14	8.5	10	284	10	279	12	300	182	9.6	8.9
25	168	14	8.5	9.8	393	10	279	30	300	182	85	8.9
26	164	14	8.5	9.7	691	10	335	69	300	182	299	9.0
27	164	14	8.5	9.7	944	11	389	69	300	195	355	9.1
28	164	14	8.5	9.7	1470	11	388	69	300	161	477	9.1
29	138	14	8.6	9.6	2310	11	385	70	300	132	434	9.2
30	115	14	9.5	10	---	11	368	70	312	124	412	9.2
31	114	---	9.5	10	---	96	---	59	---	117	378	---
TOTAL	4563.8	832.7	383.1	298.5	6665.6	13402.9	9466	870	6501	7210	3232.4	1127.1
MEAN	147	27.8	12.4	9.63	230	432	316	28.1	217	233	104	37.6
MAX	264	115	15	10	2310	2270	584	158	312	320	477	244
MIN	6.4	5.7	8.5	9.5	9.7	9.3	12	12	86	117	9.1	8.5
AC-FT	9050	1650	760	592	13220	26580	18780	1730	12890	14300	6410	2240
a	0.09	1.16	0.83	6.45	7.21	3.06	1.45	1.90	0.55	0.00	0.21	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2000, BY WATER YEAR (WY)

MEAN	34.5	14.2	23.4	156	358	218	193	178	215	201	126	77.7
MAX	172	35.5	187	1675	1964	849	557	717	576	370	342	348
(WY)	1998	1997	1999	1997	1998	1986	1987	1987	1987	1988	1996	1996
MIN	6.65	6.96	7.21	7.02	4.62	1.90	8.26	6.98	8.10	8.16	8.17	9.10
(WY)	1994	1995	1994	1994	1994	1994	1993	1993	1993	1993	1990	1990

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1986 - 2000	
ANNUAL TOTAL	76887.5		54553.1			
ANNUAL MEAN	211		149		148	
HIGHEST ANNUAL MEAN					326	1997
LOWEST ANNUAL MEAN					8.54	1990
HIGHEST DAILY MEAN	2380	Feb 10	2310	Feb 29	6690	Feb 11 1998
LOWEST DAILY MEAN	5.2	Sep 25	5.7	Nov 11	.37	Oct 15 1994
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 24	6.7	Oct 1	1.8	Mar 9 1994
INSTANTANEOUS PEAK FLOW			2370	Feb 29	7950	Feb 11 1998
INSTANTANEOUS PEAK STAGE			7.02	Feb 29	10.62	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	152500		108200		107400	
10 PERCENT EXCEEDS	419		341		378	
50 PERCENT EXCEEDS	114		16		12	
90 PERCENT EXCEEDS	11		9.1		7.4	

a Precipitation, in inches.

11451540 HARLEY GULCH NEAR WILBUR SPRINGS, CA

LOCATION.—Lat 39°00'33", long 122°26'04", in sec.5, T.13 N., R.5 W., Lake County, Hydrologic Unit 18020116, on right bank, 500 ft downstream of Highway 20, and 2.2 mi southwest of Wilbur Hot Springs Resort.

DRAINAGE AREA.—2.90 mi^2.

PERIOD OF RECORD.—December 1999 to September 2000.

GAGE.—Water-stage recorder. Elevation of gage is 1,530 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 60 ft^3/s, or maximum.

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2330	62	2.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	.18	.04	1.2	.98	.27	.15	e.06	e.02	e.01	e.02
2	---	---	.12	e.04	.49	1.3	.27	.14	e.06	e.02	e.01	e.01
3	---	---	.09	e.04	.43	.98	.25	.13	e.05	e.03	e.01	e.01
4	---	---	.08	e.04	.34	1.7	.25	.12	e.05	e.04	e.01	e.01
5	---	---	.08	e.04	.41	4.7	.25	.11	e.04	e.04	e.01	e.02
6	---	---	.08	e.04	.33	2.4	.24	.14	e.04	e.04	e.01	e.01
7	---	---	.07	e.04	.27	1.5	.24	.27	e.05	e.03	e.01	e.01
8	---	---	.07	e.04	.25	1.8	.24	.23	e.16	e.03	e.01	.02
9	---	---	.10	e.05	.23	3.2	.23	.16	e.13	e.02	e.01	e.02
10	---	---	.07	e.05	.72	1.5	.24	e.14	e.09	e.02	e.01	e.03
11	---	---	.07	e.10	8.4	1.1	.24	e.14	e.08	e.02	e.02	e.03
12	---	---	.06	e.07	2.1	.96	.27	e.13	e.07	e.02	e.02	e.04
13	---	---	.06	e.06	19	.83	.59	e.14	e.06	e.02	e.02	.04
14	---	---	.06	e.06	12	.68	.41	e.24	e.05	e.01	e.02	.02
15	---	---	.06	e.12	1.2	.59	.30	e.54	e.04	e.01	e.02	.02
16	---	---	.05	e.54	1.0	.49	.85	e.33	e.03	e.01	e.02	.02
17	---	---	.05	e.14	.87	.45	1.7	e.20	e.03	e.01	e.02	e.02
18	---	---	.05	e.27	.54	.44	.45	e.14	e.03	e.01	e.02	e.02
19	---	---	.05	e.50	.44	.42	.34	e.12	e.03	e.01	e.03	e.02
20	---	---	.05	e.28	5.8	.39	.31	e.10	e.03	e.01	e.03	e.02
21	---	---	.05	e.16	4.7	.36	.29	e.09	e.02	e.01	e.03	.03
22	---	---	.05	e.18	8.7	.36	.25	e.09	e.02	e.01	e.03	.02
23	---	---	.05	e1.3	6.7	.36	.23	e.08	e.02	e.01	e.03	.02
24	---	---	.05	e7.2	1.2	.35	.22	e.08	e.02	e.01	e.03	e.02
25	---	---	.05	e1.4	1.1	.34	.20	e.08	e.02	e.01	e.03	e.02
26	---	---	.05	e.30	3.8	.33	.19	e.07	e.02	e.01	e.03	e.03
27	---	---	.04	e.16	7.5	.34	.19	e.07	e.02	e.01	e.03	e.03
28	---	---	.04	e.13	1.3	.33	.18	e.07	e.02	e.01	e.03	.03
29	---	---	.04	e.10	1.4	.31	.17	e.07	e.02	e.01	e.03	.03
30	---	---	.04	e1.6	---	.29	.16	e.07	e.02	e.01	e.03	e.03
31	---	---	.04	e4.5	---	.28	---	e.07	---	e.01	e.03	---
TOTAL	---	---	2.00	19.59	92.42	30.06	10.02	4.51	1.38	0.53	0.65	0.67
MEAN	---	---	.065	.63	3.19	.97	.33	.15	.046	.017	.021	.022
MAX	---	---	.18	7.2	19	4.7	1.7	.54	.16	.04	.03	.04
MIN	---	---	.04	.04	.23	.28	.16	.07	.02	.01	.01	.01
AC-FT	---	---	4.0	39	183	60	20	8.9	2.7	1.1	1.3	1.3

e Estimated.

11451600 DAVIS CREEK AT KNOXVILLE, CA

LOCATION.—Lat 38°51'51", long 122°21'11", in sec.30, T.12 N., R.6 W., Yolo County, Hydrologic Unit 18020116, on left bank of Davis Creek Dam spillway, and 2.5 mi northwest of Knoxville.

DRAINAGE AREA.—10.2 mi^2.

PERIOD OF RECORD.—December 8, 1999, to September 2000.

GAGE.—Water-stage recorder. Datum of gage is 1,480 ft above sea level, from topographic map.

REMARKS.—Records fair. Flow is completely regulated by Davis Creek Reservoir. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 201 ft^3/s, Feb. 27, gage height, 27.87 ft; no flow for many days during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	.00	.00	32	2.7	.86	.00	.00	.00	.00
2	---	---	---	.00	.00	25	2.9	.72	.00	.00	.00	.00
3	---	---	---	.00	.00	20	2.9	.64	.00	.00	.00	.00
4	---	---	---	.00	.00	18	2.7	.52	.00	.00	.00	.00
5	---	---	---	.00	.00	34	2.6	.34	.00	.00	.00	.00
6	---	---	---	.00	.00	36	2.6	.17	.00	.00	.00	.00
7	---	---	---	.00	.00	29	2.6	1.0	.00	.00	.00	.00
8	---	---	.00	.00	.00	46	2.3	1.5	.00	.00	.00	.00
9	---	---	.00	.00	.00	76	2.2	1.0	.00	.00	.00	.00
10	---	---	.00	.00	.00	48	2.2	.26	.00	.00	.00	.00
11	---	---	.00	.00	.00	33	2.3	.00	.00	.00	.00	.00
12	---	---	.00	.00	.00	26	2.2	.00	.00	.00	.00	.00
13	---	---	.00	.00	1.4	20	4.2	.00	.00	.00	.00	.00
14	---	---	.00	.00	127	17	3.5	.57	.00	.00	.00	.00
15	---	---	.00	.00	56	16	3.0	3.1	.00	.00	.00	.00
16	---	---	.00	.00	27	13	3.6	3.9	.00	.00	.00	.00
17	---	---	.00	.00	19	12	16	2.5	.00	.00	.00	.00
18	---	---	.00	.00	13	11	12	1.6	.00	.00	.00	.00
19	---	---	.00	.00	10	9.8	6.6	1.1	.00	.00	.00	.00
20	---	---	.00	.00	15	7.3	4.6	.72	.00	.00	.00	.00
21	---	---	.00	.00	42	5.9	3.8	.44	.00	.00	.00	.00
22	---	---	.00	.00	49	6.2	2.9	.30	.00	.00	.00	.00
23	---	---	.00	.00	118	6.4	2.4	.00	.00	.00	.00	.00
24	---	---	.00	.00	41	6.3	2.2	.00	.00	.00	.00	.00
25	---	---	.00	.00	28	5.8	1.9	.00	.00	.00	.00	.00
26	---	---	.00	.00	33	5.5	1.7	.00	.00	.00	.00	.00
27	---	---	.00	.00	166	5.1	1.4	.00	.00	.00	.00	.00
28	---	---	.00	.00	66	4.8	1.0	.00	.00	.00	.00	.00
29	---	---	.00	.00	47	4.4	.90	.00	.00	.00	.00	.00
30	---	---	.00	.00	---	3.6	1.0	.00	.00	.00	.00	.00
31	---	---	.00	.00	---	2.8	---	.00	---	.00	.00	---
TOTAL	---	---	---	0.00	858.40	585.9	102.90	21.24	0.00	0.00	0.00	0.00
MEAN	---	---	---	.000	29.6	18.9	3.43	.69	.000	.000	.000	.000
MAX	---	---	---	.00	166	76	16	3.9	.00	.00	.00	.00
MIN	---	---	---	.00	.00	2.8	.90	.00	.00	.00	.00	.00
AC-FT	---	---	---	.00	1700	1160	204	42	.00	.00	.00	.00

11451690 SULPHUR CREEK AT WILBUR SPRINGS, CA

LOCATION.—Lat 39°02'19", long 122°25'08", in sec.28, T.14 N., R.5 W., Colusa County, Hydrologic Unit 18020116, on right bank, 0.85 mi upstream from mouth at Bear Creek, and at Wilbur Springs.

DRAINAGE AREA.—9.87 mi^2.

PERIOD OF RECORD.—October 29, 1999, to September 2000.

GAGE.—Water-stage recorder. Datum of gage is 1,315 ft above sea level, from topographic map.

REMARKS.—Records fair including period of estimated daily discharges. No regulation or diversion upstream from station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 180 ft^3/s, or maximum.

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2330	190	4.32				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.32	1.3	.56	13	14	2.6	e1.5	.64	.16	.13	.24
2	---	.31	.84	.53	4.5	15	2.6	e1.5	.57	.19	.11	.12
3	---	.31	.68	.54	3.1	12	2.5	e1.4	.55	.24	.11	.10
4	---	.32	.61	.56	2.6	14	2.4	1.3	.53	.35	.13	.11
5	---	.32	.59	.56	2.8	30	2.4	1.3	.49	.37	.13	.11
6	---	.33	.60	.52	2.9	20	2.5	1.4	.51	.27	.13	.12
7	---	.47	.59	.51	2.1	15	2.6	2.0	.52	.28	.13	.14
8	---	.99	.58	.67	1.8	15	2.6	1.9	1.7	.18	.14	.17
9	---	.58	1.0	.57	1.6	24	2.5	1.5	1.4	.16	.14	.16
10	---	.50	.81	.60	3.5	16	2.5	1.4	.90	.17	.15	.16
11	---	.52	.67	1.8	27	12	2.5	1.4	.80	.17	.13	.16
12	---	.49	.64	1.0	23	10	2.5	1.3	.71	.17	.14	.16
13	---	.47	.62	.76	76	8.2	3.6	1.4	.60	.18	.15	.16
14	---	.46	.59	.71	72	7.1	3.1	2.1	.36	.13	.16	.15
15	---	.55	.58	.98	25	6.5	2.7	3.3	.30	.13	.14	.16
16	---	.68	.58	4.9	14	6.0	3.5	2.6	.24	.14	.16	.16
17	---	.81	.59	1.6	11	5.5	9.3	1.7	.18	.14	.15	.16
18	---	.60	.59	3.2	7.1	5.2	3.2	1.4	.21	.14	.16	.15
19	---	1.1	.61	5.2	5.5	4.9	2.5	1.3	.28	.15	.19	.16
20	---	1.1	.58	3.2	17	4.3	2.3	1.2	.22	.10	.22	.16
21	---	.75	.55	1.8	33	4.0	2.1	1.1	.17	.06	.26	.16
22	---	.61	.51	2.2	34	3.9	2.0	1.0	.16	.08	.24	.17
23	---	.55	.52	11	49	3.8	1.9	.94	.15	.11	.23	.17
24	---	.53	.53	26	16	3.7	1.8	.89	.15	.10	.26	.16
25	---	.54	.55	7.9	14	3.5	1.7	.83	.14	.11	.25	.14
26	---	.58	.54	2.8	19	3.4	1.7	.81	.14	.11	.24	.14
27	---	.57	.53	1.8	36	3.4	1.6	.76	.15	.12	.23	.14
28	---	.55	.53	1.5	16	3.3	e1.7	.74	.12	.11	.22	.15
29	.32	.60	.56	1.2	21	3.0	e1.6	.73	.14	.12	.23	.15
30	.34	1.3	.56	8.5	---	2.8	e1.6	.72	.15	.12	.22	.15
31	.33	---	.57	22	---	2.7	---	.68	---	.12	.22	---
TOTAL	---	17.81	19.60	115.67	553.5	282.2	78.1	42.10	13.18	4.98	5.50	4.54
MEAN	---	.59	.63	3.73	19.1	9.10	2.60	1.36	.44	.16	.18	.15
MAX	---	1.3	1.3	26	76	30	9.3	3.3	1.7	.37	.26	.24
MIN	---	.31	.51	.51	1.6	2.7	1.6	.68	.12	.06	.11	.10
AC-FT	---	35	39	229	1100	560	155	84	26	9.9	11	9.0

e Estimated.

11451715 BEAR CREEK ABOVE HOLSTEN CHIMNEY CANYON, NEAR RUMSEY, CA

LOCATION.—Lat 38°57'28", long 122°20'30", in NW 1/4 SE 1/4 sec.19, T.13 N., R.4 W., Colusa County, Hydrologic Unit 18020116, on the left bank downstream side of Highway 16 bridge, 2.9 mi upstream from confluence with Cache Creek, and 7.4 mi northwest of Rumsey.

DRAINAGE AREA.—94.90 mi^2.

PERIOD OF RECORD.—November 1997 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 920 ft above sea level, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Some minor diversions upstream from station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,510 ft^3/s, Feb. 2, 1998, gage height, 13.57 ft, from rating curve extended above 3,000 ft^3/s; minimum daily, 1.3 ft^3/s, several days in August 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 9,200 ft^3/s, Jan. 5, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0045	1,860	9.44				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.1	6.5	3.8	153	205	40	19	7.0	e2.4	e1.7	1.8
2	1.9	3.1	5.1	3.8	63	200	39	19	6.6	e2.4	e1.7	2.0
3	2.0	3.0	4.3	3.7	43	163	38	18	6.2	e2.4	e1.7	1.8
4	2.1	3.0	3.9	3.7	40	142	37	17	5.9	e2.4	e1.6	1.7
5	2.3	3.1	3.8	3.8	36	298	36	16	5.7	e2.4	e1.6	1.7
6	2.4	3.1	3.9	3.8	42	227	36	16	5.6	e2.5	e1.6	1.7
7	2.4	3.6	3.9	3.8	34	173	34	19	5.4	e2.5	e1.6	1.5
8	2.3	6.5	3.8	3.9	29	172	34	22	7.8	e2.4	e1.6	1.6
9	2.4	5.1	4.6	3.9	27	255	33	19	9.0	e2.4	e1.6	1.7
10	2.5	3.9	4.9	4.0	37	170	33	17	6.5	e2.3	1.6	1.7
11	2.4	3.9	4.2	5.3	205	141	33	15	6.1	e2.3	1.6	1.6
12	2.4	3.7	4.0	8.0	339	125	31	14	5.6	e2.2	1.6	1.5
13	2.5	3.6	3.9	5.4	788	111	37	14	5.1	e2.1	1.5	1.5
14	2.7	3.6	3.8	4.8	995	100	37	16	4.7	e2.0	1.5	1.6
15	2.5	3.9	3.6	5.3	317	91	33	31	4.9	e2.0	1.5	1.6
16	2.1	4.1	3.6	14	163	82	34	35	4.4	e1.9	1.4	1.5
17	2.1	4.7	3.6	6.4	144	75	75	25	3.9	e1.9	1.3	1.6
18	2.3	4.2	3.7	13	102	72	74	19	4.0	e1.9	1.3	1.5
19	2.5	5.5	3.6	19	85	68	48	16	4.1	e1.9	1.3	1.4
20	2.6	6.7	3.5	23	160	64	39	14	3.6	e1.9	1.4	1.4
21	2.7	5.1	3.4	19	462	59	36	13	3.3	e1.9	1.4	1.4
22	2.8	4.1	3.4	15	333	58	33	12	3.1	e1.8	1.4	1.4
23	2.8	3.9	3.5	44	676	56	31	11	e3.1	e1.8	1.4	1.7
24	2.8	3.8	3.5	200	210	54	29	10	e3.0	e1.7	1.3	1.7
25	2.8	3.7	3.5	102	181	53	26	9.8	e2.9	e1.7	1.4	1.6
26	2.9	3.8	3.6	42	246	50	23	9.2	e2.8	e1.7	1.3	1.6
27	3.1	3.8	3.6	27	586	50	23	8.6	e2.7	e1.6	1.4	1.6
28	4.4	3.8	3.6	e23	224	50	21	8.3	e2.6	e1.6	1.3	1.6
29	3.7	3.8	3.6	e45	322	49	21	8.2	e2.5	e1.7	1.3	1.6
30	3.2	5.3	3.7	e80	---	46	20	7.8	e2.5	e1.7	1.6	1.6
31	3.1	---	3.8	141	---	43	---	7.5	---	e1.7	1.7	---
TOTAL	80.6	122.5	121.4	880.4	7042	3502	1064	486.4	140.6	63.1	46.2	48.2
MEAN	2.60	4.08	3.92	28.4	243	113	35.5	15.7	4.69	2.04	1.49	1.61
MAX	4.4	6.7	6.5	200	995	298	75	35	9.0	2.5	1.7	2.0
MIN	1.9	3.0	3.4	3.7	27	43	20	7.5	2.5	1.6	1.3	1.4
AC-FT	160	243	241	1750	13970	6950	2110	965	279	125	92	96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

MEAN	4.04	9.02	18.7	97.9	479	130	72.8	52.7	23.3	6.79	3.56	3.06
MAX	5.48	14.0	34.9	252	1029	180	126	124	56.6	14.2	5.97	5.34
(WY)	1999	1999	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	2.60	4.08	3.92	13.6	173	95.5	35.5	15.7	4.69	2.04	1.49	1.61
(WY)	2000	2000	2000	1999	1999	1999	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1998 - 2000	
ANNUAL TOTAL	11376.0		13597.4			
ANNUAL MEAN	31.2		37.2		35.3	
HIGHEST ANNUAL MEAN					37.2	2000
LOWEST ANNUAL MEAN					33.4	1999
HIGHEST DAILY MEAN	1410	Feb 9	995	Feb 14	2660	Feb 3 1998
LOWEST DAILY MEAN	1.7	Sep 28	1.3	Aug 17	1.3	Aug 17 2000
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 27	1.3	Aug 23	1.3	Aug 23 2000
INSTANTANEOUS PEAK FLOW			1860	Feb 23	8510	Feb 2 1998
INSTANTANEOUS PEAK STAGE			9.44	Feb 23	13.57	Feb 2 1998
ANNUAL RUNOFF (AC-FT)	22560		26970		25550	
10 PERCENT EXCEEDS	66		94		168	
50 PERCENT EXCEEDS	5.8		3.9		10	
90 PERCENT EXCEEDS	2.5		1.6		2.2	

e Estimated.

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 Highway 5 bridge, 0.5 mi south of Yolo, and 7.3 mi downstream from Moore Dam.

DRAINAGE AREA.—1,139 mi^2.

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 fair except for estimated daily discharges, which are poor. 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 ft^3/s, Feb. 25, 1958, gage height, 85.35 ft, present datum; maximum stage observed, 86.4 ft (corrected), present datum, Mar. 10, 1904; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	48	21	14	400	4910	61	e120	67	59	43	7.8
2	68	48	22	14	359	4580	39	e95	52	51	37	21
3	68	49	28	13	238	4510	85	e80	43	57	52	48
4	69	49	28	12	179	2660	78	e80	62	84	50	68
5	78	46	26	14	155	1920	67	e80	65	76	45	59
6	79	64	25	14	133	2120	51	e180	52	62	54	52
7	81	53	23	14	184	2070	43	e265	24	39	60	39
8	82	58	22	16	155	3720	37	e250	35	18	42	24
9	83	58	23	17	127	3820	36	e140	88	34	27	20
10	92	53	23	17	122	3930	40	e115	77	46	31	23
11	94	44	24	17	149	3120	36	e95	50	18	27	16
12	87	38	24	23	1180	2310	44	e95	55	19	24	12
13	87	32	22	21	1090	2260	94	e115	48	58	41	17
14	82	25	21	25	4530	1920	52	e150	59	72	38	11
15	71	19	20	27	2510	1750	56	e110	54	73	20	11
16	73	34	21	28	1110	1600	91	e135	65	73	21	11
17	73	44	21	30	782	1120	594	e95	62	72	20	16
18	73	44	20	57	580	939	1200	e90	55	61	19	20
19	66	44	21	54	462	961	906	e85	58	41	21	33
20	61	39	18	60	398	892	776	e80	55	38	14	15
21	57	39	17	82	940	787	641	e75	42	17	9.7	14
22	48	36	18	81	852	625	330	e70	25	6.5	14	12
23	40	31	17	75	3390	492	223	e60	22	17	17	16
24	44	27	20	200	1620	462	e195	40	45	28	21	19
25	54	24	20	562	1120	432	e155	63	64	30	23	36
26	54	24	17	307	1070	401	e125	82	66	29	9.5	43
27	46	22	13	190	2920	374	e105	89	62	29	12	44
28	52	21	13	138	2530	300	e150	96	65	35	13	40
29	60	19	14	107	3970	227	e115	89	68	36	28	39
30	67	18	13	98	---	129	e110	92	61	49	24	45
31	58	---	13	175	---	136	---	97	---	58	23	---
TOTAL	2115	1150	628	2502	33255	55477	6535	3308	1646	1385.5	880.2	831.8
MEAN	68.2	38.3	20.3	80.7	1147	1790	218	107	54.9	44.7	28.4	27.7
MAX	94	64	28	562	4530	4910	1200	265	88	84	60	68
MIN	40	18	13	12	122	129	36	40	22	6.5	9.5	7.8
AC-FT	4200	2280	1250	4960	65960	110000	12960	6560	3260	2750	1750	1650

e Estimated.

11452500 CACHE CREEK AT YOLO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.1	61.2	427	1394	2026	1541	873	199	63.7	27.2	12.9	8.01
MAX	335	1593	5644	7446	12750	10930	6353	1655	784	421	189	105
(WY)	1963	1984	1984	1914	1998	1983	1958	1904	1906	1907	1907	1998
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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1903 - 2000	
ANNUAL TOTAL	225119.1		109713.5			
ANNUAL MEAN	617		300		545	
HIGHEST ANNUAL MEAN					2449	1983
LOWEST ANNUAL MEAN					.000	1977
HIGHEST DAILY MEAN	5320	Feb 9	4910	Mar 1	29300	Feb 25 1958
LOWEST DAILY MEAN	5.6	Sep 7	6.5	Jul 22	.00	Aug 7 1903
ANNUAL SEVEN-DAY MINIMUM	15	Dec 25	13	Dec 29	.00	Aug 7 1903
INSTANTANEOUS PEAK FLOW			5740	Feb 14	41400	Feb 25 1958
INSTANTANEOUS PEAK STAGE			59.05	Feb 14	86.40	Mar 10 1904
ANNUAL RUNOFF (AC-FT)	446500		217600		394900	
10 PERCENT EXCEEDS	2800		806		1420	
50 PERCENT EXCEEDS	54		55		2.8	
90 PERCENT EXCEEDS	21		17		.00	

11453000 YOLO BYPASS NEAR WOODLAND, CA

LOCATION.—Lat 38°40'40", long 121°38'35", unsurveyed, Yolo County, Hydrologic Unit 18020109, on left bank, 300 ft upstream from Sacramento and Woodland Railroad Bridge, 6 mi upstream from Sacramento Bypass, 6 mi downstream from Fremont Weir, and 7 mi east of Woodland.

PERIOD OF RECORD.—October 1939 to current year (since October 1977, high-flow records only). Monthly discharge only for some periods, published in WSP 1315-A.
SEDIMENT DATA: Water years 1957–61, 1980.

REVISED RECORDS.—WDR CA-96-4: 1995(M).

GAGE.—Water-stage recorder. Datum of gage is 3.41 ft below sea level. Prior to Dec. 17, 1941, nonrecording gage, and Dec. 18–31, 1941, water-stage recorder, at datum 0.73 ft higher. Prior to Sept. 30, 1977, a supplementary water-stage recorder 6 mi downstream at different datum recorded low flow.

REMARKS.—Flow is from Cache Creek and Knights Landing Ridge Cut plus floodwater passing over Fremont Weir. Beginning October 1977, only flows above 1,000 ft^3/s are computed. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 374,000 ft^3/s, Feb. 20, 1986, gage height, 34.87 ft; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 68,500 ft^3/s, Feb. 15, gage height, 27.38 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1640	61100	---	---	---	---	---	---
2	---	---	---	---	1910	55300	---	---	---	---	---	---
3	---	---	---	---	1930	49600	---	---	---	---	---	---
4	---	---	---	---	1750	44600	---	---	---	---	---	---
5	---	---	---	---	1550	42100	---	---	---	---	---	---
6	---	---	---	---	1320	46200	---	---	---	---	---	---
7	---	---	---	---	1130	45200	---	---	---	---	---	---
8	---	---	---	---	1020	49200	---	---	---	---	---	---
9	---	---	---	---	---	50900	---	---	---	---	---	---
10	---	---	---	---	---	47900	---	---	---	---	---	---
11	---	---	---	---	---	43400	---	---	---	---	---	---
12	---	---	---	---	1420	38200	---	---	---	---	---	---
13	---	---	---	---	2370	32000	---	---	---	---	---	---
14	---	---	---	---	4430	25800	---	---	---	---	---	---
15	---	---	---	---	57000	19400	---	---	---	---	---	---
16	---	---	---	---	56400	11600	---	---	---	---	---	---
17	---	---	---	---	55100	5490	---	---	---	---	---	---
18	---	---	---	---	48800	3320	---	---	---	---	---	---
19	---	---	---	---	38700	2440	1030	---	---	---	---	---
20	---	---	---	---	30100	2270	1540	---	---	---	---	---
21	---	---	---	---	26700	1760	1740	---	---	---	---	---
22	---	---	---	---	22900	1610	1590	---	---	---	---	---
23	---	---	---	---	29100	1500	1280	---	---	---	---	---
24	---	---	---	---	42400	1330	---	---	---	---	---	---
25	---	---	---	1390	41800	1130	---	---	---	---	---	---
26	---	---	---	2280	40500	---	---	---	---	---	---	---
27	---	---	---	2290	43100	---	---	---	---	---	---	---
28	---	---	---	2070	62900	---	---	---	---	---	---	---
29	---	---	---	1810	60800	---	---	---	---	---	---	---
30	---	---	---	1610	---	---	---	---	---	---	---	---
31	---	---	---	1540	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1977, BY WATER YEAR (WY)

MEAN	441	738	5638	13230	11240	3398	3849	430	144	20.7	26.1	51.0
MAX	13420	10890	48790	86470	92890	27910	37310	4546	1420	107	84.9	155
(WY)	1963	1951	1956	1970	1958	1958	1958	1952	1967	1958	1958	1954
MIN	1.01	2.19	.92	2.43	.88	3.55	.083	.55	.53	.000	.000	.63
(WY)	1977	1960	1977	1977	1977	1977	1976	1977	1977	1966	1966	1977

SUMMARY STATISTICS WATER YEARS 1946 - 1977

ANNUAL MEAN	3230	
HIGHEST ANNUAL MEAN	13020	1958
LOWEST ANNUAL MEAN	1.53	1977
HIGHEST DAILY MEAN	259000	Dec 25 1964
LOWEST DAILY MEAN	.00	Jul 11 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 19 1963
INSTANTANEOUS PEAK FLOW	265000	Dec 25 1964
INSTANTANEOUS PEAK STAGE	32.48	Dec 25 1964
ANNUAL RUNOFF (AC-FT)	2340000	
10 PERCENT EXCEEDS	3080	
50 PERCENT EXCEEDS	35	
90 PERCENT EXCEEDS	1.9	

11453500 PUTAH CREEK NEAR GUENOC, CA

LOCATION.—Lat 38°46'44", long 122°30'59", in Guenoc Grant, Lake County, on right bank just upstream from Coyote Valley damsite, 2.8 mi upstream from Soda Creek, and 3.2 mi downstream from highway bridge at Guenoc.

DRAINAGE AREA.—113 mi^2.

PERIOD OF RECORD.—February 1904 to September 1906, July 1930 to September 1976, and April 1998 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 1285: 1937(M), 1938, 1940, 1943(M), 1951(M).

GAGE.—Water-stage recorder. Datum of gage is 911.18 ft above sea level. February 1904 to September 1906, nonrecording gage 0.2 mi upstream at different datum, July 1930 to September 1976, at datum 3.00 ft higher.

REMARKS.—Records good. Some regulation by Hartmann Dam on Coyote Creek since 1969, capacity, 3,000 acre-ft; diversions and ground-water withdrawals for domestic use and irrigation of about 1,600 acres above station. See schematic diagram of lower Sacramento River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 32,000 ft^3/s, Dec. 11, 1937, gage height, 22.7 ft, from rating curve extended above 13,000 ft^3/s; no flow many days in 1964, 1970, 1974–76.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 5,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	0730	8,830	15.55	Feb. 27	0115	6,830	14.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	2.0	185	19	516	1070	113	64	30	8.0	1.9	.98
2	.82	1.9	89	19	437	900	108	62	27	7.3	1.1	.42
3	.86	2.0	65	18	354	737	101	58	27	9.1	1.3	.04
4	.87	2.6	51	18	323	613	97	56	26	8.3	.52	.72
5	.87	2.6	44	18	607	779	96	56	25	8.1	1.4	.76
6	.88	2.4	40	18	600	613	93	55	25	8.4	.06	.73
7	.88	3.3	35	18	382	540	90	62	24	8.2	1.3	.66
8	.86	65	32	18	295	972	87	72	27	7.7	1.6	.47
9	.86	29	37	17	243	1550	84	66	28	6.8	.88	.00
10	.87	17	42	17	401	1020	82	59	27	6.1	.00	.31
11	.96	23	38	423	1040	832	78	56	26	5.9	.87	.58
12	1.1	19	34	215	1580	661	68	53	23	5.5	1.2	.65
13	1.1	13	31	108	2990	544	95	51	23	3.7	1.1	.72
14	1.2	12	30	206	5500	458	93	57	22	3.2	1.1	.42
15	1.0	13	28	230	1830	396	82	116	17	3.8	1.0	.46
16	.95	16	27	944	1100	344	88	97	17	4.0	1.0	.75
17	.95	26	27	315	804	303	546	76	19	4.4	.63	.77
18	.98	22	26	520	595	274	234	67	17	3.7	.90	.63
19	1.0	132	25	543	476	248	146	60	15	3.4	.46	.28
20	.87	181	23	522	644	226	121	54	13	3.2	.26	.21
21	.45	93	22	340	989	207	108	50	13	3.1	.00	.51
22	.25	55	22	343	1480	191	98	46	13	3.2	.47	.68
23	.19	41	21	1260	2100	179	91	43	13	2.7	.90	.74
24	.10	33	22	1950	1010	168	86	41	12	2.5	.95	.76
25	.10	28	22	970	776	156	82	39	12	2.6	1.0	.80
26	.03	25	21	543	1420	150	78	37	11	2.7	.73	.41
27	.70	25	21	357	3860	143	75	36	10	2.8	.00	.20
28	2.9	24	20	263	1570	137	72	34	9.4	2.7	.48	.46
29	3.8	22	20	206	1570	130	69	33	8.9	2.5	.85	.37
30	2.6	112	20	752	---	120	66	32	8.5	2.4	.89	.34
31	2.3	---	20	770	---	112	---	31	---	2.3	.90	---
TOTAL	31.73	1042.8	1140	11960	35492	14773	3327	1719	568.8	148.3	25.75	15.83
MEAN	1.02	34.8	36.8	386	1224	477	111	55.5	19.0	4.78	.83	.53
MAX	3.8	181	185	1950	5500	1550	546	116	30	9.1	1.9	.98
MIN	.03	1.9	20	17	243	112	66	31	8.5	2.3	.00	.00
AC-FT	63	2070	2260	23720	70400	29300	6600	3410	1130	294	51	31

11453500 PUTAH CREEK NEAR GUENOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.1	90.4	381	630	676	407	223	69.8	27.6	8.02	3.81	2.72
MAX	329	1005	1684	2288	2107	1326	906	264	165	36.8	12.0	10.0
(WY)	1963	1974	1956	1970	1958	1938	1958	1998	1906	1998	1906	1905
MIN	.27	1.35	2.34	15.2	36.7	55.9	26.6	9.48	1.57	.47	.000	.000
(WY)	1965	1932	1937	1976	1976	1976	1931	1976	1976	1976	1976	1976

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1905 - 2000	
ANNUAL TOTAL	76080.16		70244.21			
ANNUAL MEAN	208		192		209	
HIGHEST ANNUAL MEAN					467	1938
LOWEST ANNUAL MEAN					21.8	1976
HIGHEST DAILY MEAN	6780	Feb 9	5500	Feb 14	16500	Dec 10 1937
LOWEST DAILY MEAN	.03	Oct 26	.00	Aug 10	.00	Aug 20 1964
ANNUAL SEVEN-DAY MINIMUM	.26	Oct 21	.26	Oct 21	.00	Jul 26 1976
INSTANTANEOUS PEAK FLOW			8830	Feb 14	32000	Dec 11 1937
INSTANTANEOUS PEAK STAGE			15.55	Feb 14	22.70	Dec 11 1937
ANNUAL RUNOFF (AC-FT)	150900		139300		151100	
10 PERCENT EXCEEDS	629		596		451	
50 PERCENT EXCEEDS	31		25		25	
90 PERCENT EXCEEDS	1.3		.67		1.5	

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, and 7.4 mi west of Winters.

DRAINAGE AREA.—566 mi^2.

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 Canal for irrigation of about 46,000 acres in the lower Sacramento Valley. Total diverted during current year was 204,735 acre-ft. 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, 1,608,700 acre-ft, Mar. 14, 15, elevation, 440.33 ft; minimum, 1,360,500 acre-ft, Jan 10, elevation, 427.05 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 1999 TO SEPTEMBER 2000

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1391200	1370500	1368000	1362400	1399000	1570000	1597500	1588400	1560600	1512300	1461400	1417300
2	1390400	1370100	1368000	1362200	1399700	1572300	1597300	1587800	1558900	1510800	1459900	1415800
3	1389400	1369800	1367400	1362000	1401200	1575200	1597300	1587300	1557600	1508900	1458100	1414700
4	1388600	1369400	1367200	1361800	1402100	1577700	1596700	1586100	1555900	1507200	1455800	1413400
5	1387500	1369200	1367200	1361500	1403000	1582800	1596500	1584800	1554400	1505500	1454500	1412500
6	1386600	1369000	1367200	1361100	1405000	1585200	1596100	1583800	1553000	1503800	1452900	1411400
7	1385500	1369400	1367100	1361100	1406100	1586500	1595700	1583200	1551500	1501900	1451600	1410900
8	1385000	1369900	1366900	1360900	1406700	1591300	1595000	1582800	1550000	1500300	1449900	1409400
9	1384300	1369800	1366900	1360700	1407200	1599800	1594600	1582700	1548600	1498600	1448600	1408500
10	1383700	1369600	1366900	1360500	1408500	1603400	1594200	1580900	1547300	1496900	1447100	1407600
11	1383200	1369200	1366500	1361800	1414500	1605800	1593600	1580200	1545600	1495200	1445800	1406700
12	1382300	1369000	1366500	1362400	1421700	1607100	1593200	1579600	1544600	1493500	1444500	1405800
13	1381700	1369000	1366500	1362400	1448800	1608300	1593000	1578400	1543100	1491600	1443300	1405000
14	1381000	1368900	1366200	1362500	1471800	1608700	1592700	1578200	1541800	1489900	1441800	1403900
15	1380300	1368900	1366200	1363300	1480000	1608700	1592100	1579000	1540100	1488200	1440500	1402800
16	1379400	1368900	1366000	1366200	1483800	1608500	1592300	1578400	1538600	1486800	1439000	1402100
17	1378600	1368500	1365800	1366900	1486900	1607900	1594200	1578200	1536900	1484900	1437500	1400300
18	1377700	1368000	1365600	1368900	1488600	1607500	1594600	1577500	1534800	1483400	1436100	1400500
19	1377200	1368100	1365200	1369800	1489800	1607100	1594600	1576900	1533300	1481900	1434900	1399400
20	1376600	1368700	1364900	1371000	1492800	1606300	1594400	1576300	1531600	1480400	1432900	1398300
21	1375900	1368500	1364500	1371600	1498000	1605200	1594600	1575600	1529700	1480800	1431600	1397500
22	1375200	1368100	1364500	1371600	1506100	1604400	1594400	1574800	1528000	1477000	1430200	1396400
23	1374600	1368000	1364200	1376100	1520200	1603600	1593800	1573700	1526300	1475600	1429100	1395300
24	1374100	1367800	1363800	1386600	1524000	1603400	1593200	1572500	1524400	1473900	1427600	1394600
25	1373600	1367600	1363600	1389900	1526800	1602900	1593000	1571000	1522700	1472400	1426500	1393900
26	1372800	1367400	1363600	1391300	1535400	1602100	1592500	1569600	1521200	1470700	1425200	1393200
27	1372300	1367200	1363400	1391700	1552100	1601500	1591900	1568300	1519600	1469600	1423700	1392300
28	1371900	1366900	1363300	1392300	1557600	1600700	1590900	1567100	1518000	1468300	1422300	1391300
29	1371400	1367200	1362900	1392400	1564500	1600000	1590200	1565400	1516200	1466400	1421200	1390600
30	1371200	1367600	1362900	1394600	---	1599200	1589600	1563300	1514200	1464400	1419900	1390100
31	1370800	---	1362500	1396100	---	1598400	---	1562000	---	1463100	1418600	---
MAX	1391200	1370500	1368000	1396100	1564500	1608700	1597500	1588400	1560600	1512300	1461400	1417300
MIN	1370800	1366900	1362500	1360500	1399000	1570000	1589600	1562000	1514200	1463100	1418600	1390100
a	427.62	427.44	427.16	429.01	438.03	439.80	439.34	437.90	435.38	432.65	430.24	428.68
b	-21500	-3200	-5100	+33600	+168400	+33900	-8800	-27600	-47800	-51100	-44500	-28500
c	4776	1371	1545	891	1045	4433	5816	7757	10328	9763	9697	6583

CAL YR 1999 b -99800
WTR YR 2000 b -2200

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Total 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 mi^2.

PERIOD OF RECORD.—July 1930 to current year.
CHEMICAL DATA: Water years 1951–66, 1973–81.
WATER TEMPERATURE: Water years 1966–81.

REVISED RECORDS.—WSP 901: 1937–38(M). WSP 1285: 1932(M), 1935–36(M), 1940(M), 1942–43(M), 1951, 1952(M). WSP 1565: 1957. WSP 1931: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 160.75 ft above sea level (river-profile survey). June 28, 1930, to Feb. 29, 1940, at datum about 1 ft higher.

REMARKS.—Records fair except for period of estimated daily discharges, which is poor. 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 ft^3/s, Feb. 27, 1940, gage height, 30.5 ft, present datum, from rating curve extended above 30,000 ft^3/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 ft^3/s, Mar. 2, 1983, gage height, 19.55 ft; minimum daily, 6.1 ft^3/s, Dec. 19, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage known since at least 1905, that of Feb. 27, 1940, on basis of records for station at Winters.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	302	115	33	75	58	72	458	432	643	697	710	477
2	304	114	33	83	58	71	410	469	647	700	712	470
3	305	100	33	89	53	69	355	503	658	695	710	450
4	305	72	33	89	44	68	348	513	658	677	665	364
5	307	71	34	89	44	279	346	567	662	665	646	307
6	309	51	58	80	56	660	344	585	662	679	612	336
7	306	33	95	65	67	659	351	494	677	692	601	348
8	275	33	53	66	67	669	371	433	678	714	569	392
9	252	49	68	68	67	681	388	402	657	684	534	392
10	246	72	37	75	59	683	398	380	628	657	497	380
11	245	73	47	79	59	726	394	379	600	707	496	380
12	231	69	47	71	69	770	409	406	614	739	516	380
13	209	69	47	71	96	812	438	441	549	725	507	367
14	209	67	47	65	162	846	437	436	658	706	504	377
15	209	61	47	54	65	853	431	351	771	672	548	369
16	208	68	65	61	52	859	427	278	757	627	568	346
17	207	76	84	81	49	842	339	317	765	609	575	327
18	207	68	88	79	57	829	256	386	754	643	592	344
19	197	74	72	79	80	820	246	350	776	665	583	391
20	185	e80	49	70	80	802	211	362	774	678	543	416
21	206	e90	40	52	75	766	233	412	807	677	528	383
22	238	e90	56	53	84	739	271	483	814	671	511	340
23	228	e90	83	53	145	727	271	572	776	620	490	302
24	207	77	87	54	80	712	280	561	712	616	474	308
25	221	63	87	54	72	697	307	617	703	646	496	304
26	248	63	87	55	69	683	342	670	703	625	478	293
27	247	63	71	55	96	670	387	619	703	608	452	296
28	212	63	56	56	77	661	401	621	703	622	472	302
29	147	63	62	56	74	656	416	651	696	660	509	280
30	124	50	75	57	---	616	417	670	716	693	536	248
31	116	---	75	57	---	497	---	657	---	686	521	---
TOTAL	7212	2127	1849	2091	2114	19494	10682	15017	20921	20755	17155	10669
MEAN	233	70.9	59.6	67.5	72.9	629	356	484	697	670	553	356
MAX	309	115	95	89	162	859	458	670	814	739	712	477
MIN	116	33	33	52	44	68	211	278	549	608	452	248
AC-FT	14310	4220	3670	4150	4190	38670	21190	29790	41500	41170	34030	21160

e Estimated.

11454000 PUTAH CREEK NEAR WINTERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1956, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.62	96.0	993	1284	1716	976	514	137	42.1	12.5	6.94	5.84
MAX	45.4	807	5110	3957	6468	3506	2729	452	156	63.7	31.7	20.8
(WY)	1951	1951	1956	1952	1938	1938	1941	1941	1942	1941	1941	1941
MIN	.89	3.17	7.16	44.6	66.7	118	40.8	12.3	6.72	2.39	.000	1.47
(WY)	1956	1956	1931	1947	1948	1932	1931	1931	1931	1955	1955	1931

SUMMARY STATISTICS	WATER YEARS 1931 - 1956	
ANNUAL MEAN	477	
HIGHEST ANNUAL MEAN	1387	1941
LOWEST ANNUAL MEAN	48.1	1931
HIGHEST DAILY MEAN	54500	Feb 27 1940
LOWEST DAILY MEAN	.00	Sep 6 1950
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 6 1950
INSTANTANEOUS PEAK FLOW	81000	Feb 27 1940
INSTANTANEOUS PEAK STAGE	30.5	Feb 27 1940
ANNUAL RUNOFF (AC-FT)	345500	
10 PERCENT EXCEEDS	924	
50 PERCENT EXCEEDS	38	
90 PERCENT EXCEEDS	3.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	225	89.1	109	495	697	772	648	545	598	628	547	400
MAX	476	263	1625	4406	6271	7791	5023	1018	773	802	681	610
(WY)	1972	1987	1984	1970	1998	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1960 - 2000	
ANNUAL TOTAL	193141		130086			
ANNUAL MEAN	529		355		478	
HIGHEST ANNUAL MEAN					1580	1983
LOWEST ANNUAL MEAN					132	1960
HIGHEST DAILY MEAN	1780	Mar 26	859	Mar 16	17700	Mar 2 1983
LOWEST DAILY MEAN	33	Nov 7	33	Nov 7	6.1	Dec 19 1967
ANNUAL SEVEN-DAY MINIMUM	39	Nov 30	39	Nov 30	8.3	Nov 7 1963
INSTANTANEOUS PEAK FLOW			1300	Jun 14	18700	Mar 2 1983
INSTANTANEOUS PEAK STAGE			9.84	Jun 14	19.55	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	383100		258000		346500	
10 PERCENT EXCEEDS	1130		703		722	
50 PERCENT EXCEEDS	567		345		356	
90 PERCENT EXCEEDS	70		56		52	

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.—October 1994 to September 1997, October 1998 to current year. 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.—Water from canal is diverted for irrigation, municipal, and industrial use. See schematic diagram of lower Sacramento River Basin.

COOPERATION.—Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 784 ft^3/s, June 21, 2000; no flow on some days during most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	90	10	45	35	50	226	414	626	666	684	456
2	284	79	.00	55	35	60	227	428	622	660	696	438
3	271	68	.00	51	35	62	263	465	648	666	685	401
4	279	58	25	50	35	65	299	499	639	643	650	348
5	277	53	22	50	38	65	305	544	646	636	617	306
6	275	28	29	40	40	65	326	556	648	640	589	301
7	279	.00	63	25	40	58	321	498	657	653	576	316
8	252	.00	25	25	33	55	341	412	664	672	547	355
9	226	.00	36	53	30	55	358	377	636	654	505	363
10	216	50	23	65	30	52	364	370	600	630	460	351
11	211	65	40	58	37	55	371	347	575	659	459	346
12	197	50	.00	43	40	55	385	384	593	684	480	342
13	201	57	9	30	40	55	409	419	623	699	466	356
14	183	60	20	30	40	55	402	412	361	673	470	351
15	173	75	13	35	51	55	402	361	703	624	514	338
16	166	.00	53	47	56	55	390	317	750	584	533	311
17	168	109	70	50	50	60	319	289	747	569	541	294
18	181	.00	61	50	56	68	246	292	726	605	556	308
19	170	181	29	50	60	70	216	305	731	628	547	343
20	155	129	20	42	60	70	180	347	754	643	506	367
21	176	79	24	25	60	49	198	390	784	634	491	353
22	209	49	30	25	60	40	228	449	780	635	489	319
23	193	40	49	25	54	44	242	529	753	593	456	282
24	194	43	55	23	50	76	254	556	695	575	454	265
25	204	45	51	20	50	117	285	609	669	605	455	260
26	222	45	50	23	50	120	306	641	665	590	448	267
27	205	45	50	43	50	134	355	613	680	571	423	270
28	167	45	50	42	46	158	378	605	664	580	441	273
29	127	41	50	35	45	184	395	627	664	615	473	246
30	97	36	50	35	---	201	396	636	681	633	470	225
31	90	---	35	35	---	226	---	637	---	635	480	---
TOTAL	6327	1620.00	1042.00	1225	1306	2534	9387	14328	19984	19554	16161	9751
MEAN	204	54.0	33.6	39.5	45.0	81.7	313	462	666	631	521	325
MAX	284	181	70	65	60	226	409	641	784	699	696	456
MIN	90	.00	.00	20	30	40	180	289	361	569	423	225
AC-FT	12550	3210	2070	2430	2590	5030	18620	28420	39640	38790	32060	19340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	203	61.4	45.2	41.6	46.8	81.7	254	438	581	610	539	374
MAX	219	79.0	55.5	47.7	55.1	182	450	573	666	640	575	410
(WY)	1996	1996	1999	1999	1997	1997	1997	1999	2000	1999	1995	1995
MIN	191	50.6	33.6	34.5	42.2	37.8	168	281	518	580	499	325
(WY)	1997	1995	2000	1995	1999	1996	1995	1995	1995	1995	1997	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	102404.00		103219.00			
ANNUAL MEAN	281		282		274	
HIGHEST ANNUAL MEAN					299	1997
LOWEST ANNUAL MEAN					246	1995
HIGHEST DAILY MEAN	725	Jul 1	784	Jun 21	784	Jun 21 2000
LOWEST DAILY MEAN	.00	Nov 7	.00	Nov 7	.00	Nov 23 1994
ANNUAL SEVEN-DAY MINIMUM	17	Nov 30	17	Nov 30	17	Nov 30 1999
ANNUAL RUNOFF (AC-FT)	203100		204700		198500	
10 PERCENT EXCEEDS	620		643		605	
50 PERCENT EXCEEDS	183		244		209	
90 PERCENT EXCEEDS	40		35		40	

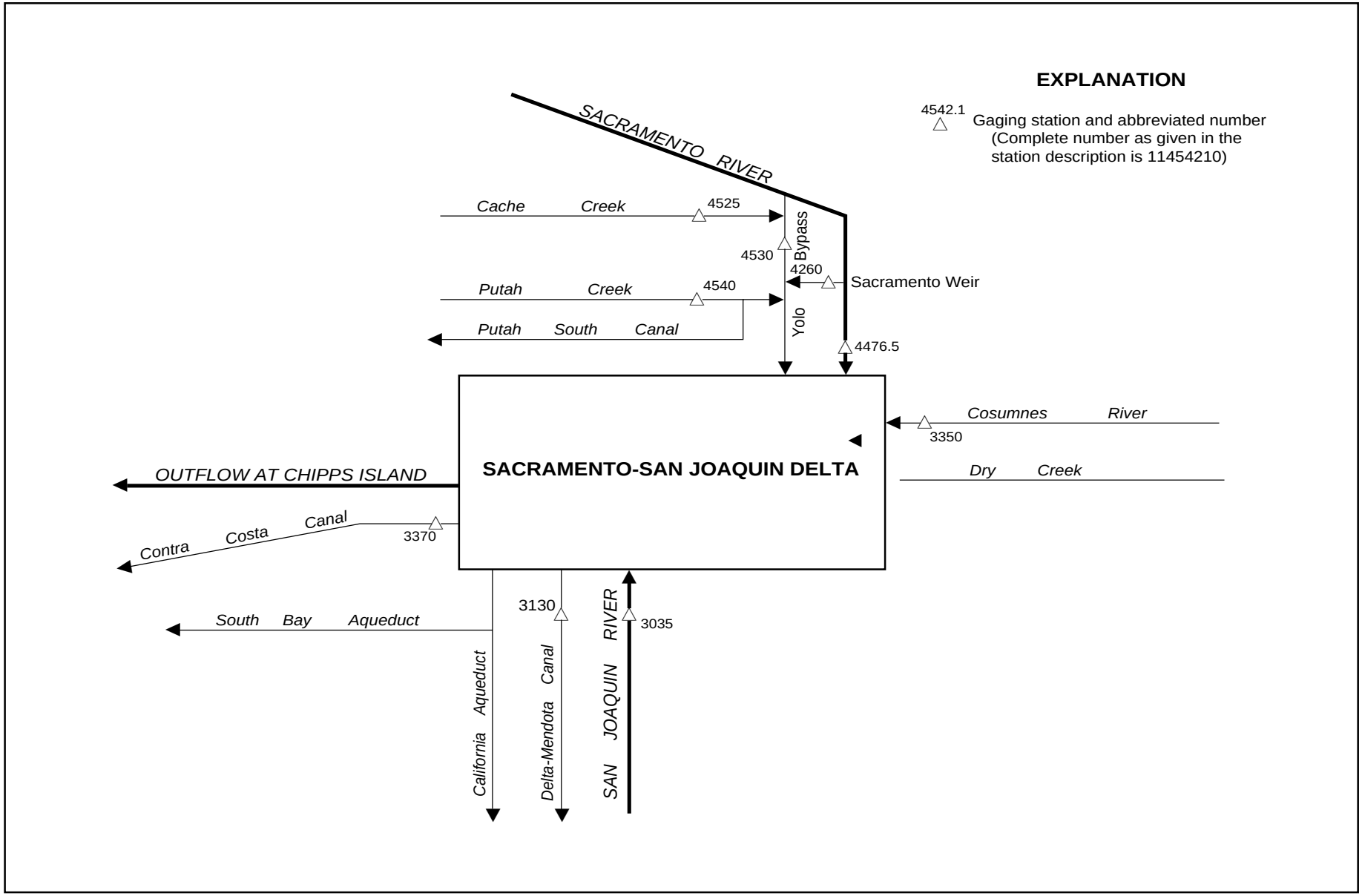

Figure 36. Principal inflows and diversions, Sacramento–San Joaquin Delta.

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 1999

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		SACRAMENTO RIVER BASIN				
383525121434601	Willow Slough Bypass near Davis, CA	Lat 38°35'25", long 121°43'46", in SE 1/4 SE 1/4 sec.27, T.9 N., R.2 E., Yolo County, Hydrologic Unit 18020109, at County Road 102, and 3.5 mi northeast of Davis.	—	—	08-18-99	12.9
					08-27-99	16.3
					09-03-99	23.7
					09-10-99	4.20
					09-17-99	41.0
					09-24-99	9.32
383749121433701	Willow Slough near Woodland, CA	Lat 38°37'49", long 121°43'37", in NW 1/4 NW 1/4 sec.14, T.9 N., R.2 E., Yolo County, Hydrologic Unit 18020109, 1,000 ft downstream of County Road 102, and 3.8 miles southeast of Woodland.	—	—	08-18-99	44.2
					08-27-99	61.6
					09-03-99	52.8
					09-10-99	50.6
					09-17-99	67.4
					09-24-99	59.2

Discharge measurements made at miscellaneous sites during water year 2000

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, 1976–84, 1986–2000	01-20-00	265
					02-17-00	302
					03-06-00	341
					09-13-00	b5.13
383525121434601	Willow Slough Bypass near Davis, CA	Lat 38°35'25", long 121°43'46", in SE 1/4 SE 1/4 sec.27, T.9 N., R.2 E., Yolo County, Hydrologic Unit 18020109, at County Road 102, and 3.5 mi northeast of Davis.	—	—	10-01-99	8.46
					10-08-99	17.1
					10-13-99	16.9
					10-22-99	39.4
					07-28-00	35.3
					08-03-00	52.6
					08-08-00	26.2
					08-17-00	39.3
					08-21-00	30.3
					09-01-00	45.6
					09-08-00	63.6
					09-15-00	37.9
					09-20-00	10.2
					09-27-00	21.6
383749121433701	Willow Slough near Woodland, CA	Lat 38°37'49", long 121°43'37", in NW 1/4 NW 1/4 sec.14, T.9 N., R.2 E., Yolo County, Hydrologic Unit 18020109, 1,000 ft downstream of County Road 102, and 3.8 miles southeast of Woodland.	—	—	10-01-99	22.3
					10-08-99	36.2
					10-15-99	6.58
					10-20-99	7.75
					07-28-00	19.7
					08-03-00	22.9
					08-08-00	21.2
					08-17-00	19.9
					08-21-00	18.2
					09-01-00	18.7
					09-08-00	23.5
					09-15-00	16.5
					09-20-00	15.0
					09-27-00	15.2

a Published as a miscellaneous measurement.
b Base flow.