

11406800 Lake Oroville near Oroville, CA

Sacramento River Basin

LOCATION.--Lat 39°32'06", long 121°28'25" referenced to North American Datum of 1927, in NE ¼ SW ¼ sec.1, T.19 N., R.4 E., Butte County, CA, Hydrologic Unit 18020123, near intake structure, at left end of Oroville Dam on Feather River, 1.0 mi downstream from North Fork Feather River, and 4.2 mi east of Oroville.

DRAINAGE AREA.--3,607 mi².

SURFACE-WATER RECORDS

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

REVISED RECORDS.--WDR US-2007: 2006 (monthly total evaporation).

GAGE.--Water-stage recorder. Datum of gage is 0.47 ft above NGVD of 1929 (levels by California Department of Water Resources). Contents based on capacity table in use since Sept. 21, 1967.

COOPERATION.--Records, including total evaporation (not reviewed by the U.S. Geological Survey) and diversion to Edward Hyatt Powerplant (station 11406820), were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2100. Contents not rounded to U.S. Geological Survey standards. Records for Kelly Ridge Powerplant (station 11396329) were provided by South Feather Water and Power Agency, under general supervision of the U. S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2088.

REMARKS.--Reservoir is formed by an earth-fill dam with concrete chute-type sidehill spillway completed May 13, 1968; storage began Nov. 14, 1967. Usable capacity, 2,685,385 acre-ft, between elevations 640.0 ft, minimum power pool, and 900.0 ft, normal maximum pool. Dead storage, 852,192 acre-ft. Total capacity at normal maximum pool, 3,537,577 acre-ft; temporary detention storage occurred at times during construction; maximum was 155,200 acre-ft, Dec. 23, 1964. Water is released to Edward Hyatt Powerplant through penstock in left abutment of dam and to Palermo Canal (station 11406810) through concrete tunnel also in left abutment of dam. Three of the total of six turbines in the Edward Hyatt Powerplant are reversible and during periods of low power demand water is pumped at times from the river back into Lake Oroville. Records, excluding extremes, represent total contents at 2400 hours. Maximum inflow of 266,000 ft³/s during a 2-hour period Feb. 17, 1986. Prior to 2007, diversion through Kelly Ridge Powerplant was published with Miners Ranch Canal (station 11396310). See schematic diagrams showing diversions and storage from Feather River at Lake Oroville and South Fork Feather River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Prior to Oct. 1, 2008, maximum contents at 2400 hours, 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. Since Oct. 1, 2008, maximum contents, 2,720,526 acre-ft, June 30, 2010, gage height, 843.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,720,526 acre-ft, June 30, gage height, 843.38 ft; minimum, 1,009,336 acre-ft, Jan. 11, minimum gage height, 665.37 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)

Elevation	Contents	Elevation	Contents	Elevation	Contents	Elevation	Contents
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		

11406800 Lake Oroville near Oroville, CA—Continued

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY OBSERVATION AT 2400 HOURS

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
1	1,336,282	1,288,753	1,129,665	1,028,602	1,193,859	1,396,621	1,666,194	2,135,730	2,505,333	2,715,805	2,395,648	2,028,270		
2	1,333,738	1,284,874	1,121,398	1,029,929	1,197,841	1,407,978	1,680,444	2,155,399	2,515,632	2,713,055	2,383,564	2,014,641		
3	1,334,533	1,283,864	1,111,065	1,029,331	1,202,204	1,422,477	1,692,897	2,176,094	2,530,327	2,711,092	2,371,753	1,999,273		
4	1,338,831	e1,280,142	1,102,330	1,025,750	1,206,731	1,434,988	1,707,397	2,196,833	2,549,226	2,705,213	2,363,893	1,988,092		
5	1,334,691	1,279,446	1,102,400	1,020,652	1,213,651	1,443,876	1,720,374	2,217,025	2,567,706	2,701,166	2,351,554	1,976,857		
6	1,329,603	1,274,657	1,101,703	1,018,672	1,226,229	1,453,051	1,731,035	2,232,430	2,586,284	2,694,900	2,341,728	1,965,556		
7	1,327,300	1,269,499	1,092,264	1,011,766	1,236,476	1,461,000	1,740,303	2,243,256	2,603,815	2,685,658	2,326,996	1,954,415		
8	1,322,152	1,264,192	1,085,838	1,010,715	1,244,199	1,465,666	1,751,534	2,259,470	2,619,378	2,676,577	2,313,962	1,940,308		
9	1,314,577	1,259,441	1,080,407	1,012,292	1,251,348	1,473,315	1,763,388	2,276,216	2,632,952	2,667,106	2,303,320	1,928,341		
10	1,317,969	1,253,715	1,072,248	1,013,345	1,257,072	1,478,009	1,775,595	2,292,938	2,646,708	2,656,893	2,292,938	1,918,371		
11	1,321,283	1,246,552	1,063,869	1,009,402	1,262,044	1,480,576	1,787,945	2,308,698	2,654,185	2,644,518	2,283,413	1,905,785		
12	1,318,679	1,240,337	1,067,206	1,014,330	1,269,577	1,489,994	1,805,850	2,316,774	2,662,059	2,632,567	2,270,891	1,893,872		
13	1,314,893	1,234,133	1,069,520	1,028,933	1,275,351	1,499,465	1,821,610	2,324,290	2,670,346	2,620,146	2,262,004	1,885,043		
14	1,315,761	1,227,430	1,065,094	1,034,254	1,281,072	1,507,150	1,835,783	2,331,471	2,677,613	2,611,330	2,250,716	1,872,421		
15	1,315,445	1,222,026	1,066,252	1,036,057	1,285,340	1,512,092	1,847,936	2,341,609	2,685,398	2,602,925	2,240,508	1,863,157		
16	1,315,288	1,214,099	e1,059,388	1,039,335	1,290,462	1,516,524	1,856,737	2,357,719	2,691,512	2,593,135	2,230,766	1,857,939		
17	1,317,969	1,207,401	e1,059,185	1,046,367	1,296,618	1,521,042	1,869,195	2,368,534	2,696,857	2,584,637	2,219,152	1,850,136		
18	1,319,783	1,201,907	e1,057,493	1,055,332	1,302,094	1,527,408	1,882,209	2,383,564	2,701,689	2,571,115	2,204,763	1,841,849		
19	1,318,757	1,195,333	e1,057,155	1,070,747	1,307,183	1,531,433	1,895,396	2,392,411	2,704,560	2,558,764	2,195,965	e1,837,372		
20	1,317,812	1,189,438	e1,057,020	1,087,630	1,314,025	1,539,668	1,912,946	2,402,614	2,709,523	2,546,339	2,183,060	1,829,135		
21	1,316,709	1,182,251	e1,054,320	1,103,725	1,321,441	1,547,590	1,929,577	2,411,772	2,709,523	2,532,698	2,169,150	1,825,963		
22	1,315,051	1,174,799	e1,053,038	1,114,008	1,327,141	1,555,888	1,942,480	2,421,813	2,707,171	2,519,987	2,155,065	1,820,919		
23	1,307,340	1,167,458	e1,050,675	1,123,163	1,332,864	1,565,287	1,954,519	2,431,266	2,705,996	2,506,571	2,143,497	1,810,277		
24	1,306,477	1,161,157	e1,043,952	1,130,658	1,342,104	1,575,971	1,969,318	2,438,187	2,705,996	2,496,177	2,129,315	1,801,532		
25	1,305,850	1,150,429	e1,042,345	1,139,977	1,350,916	1,581,513	1,985,462	2,443,055	2,705,474	2,482,110	2,114,868	1,793,608		
26	1,299,903	1,151,577	e1,043,014	1,150,860	1,361,456	1,585,369	2,034,473	2,450,740	2,706,779	2,468,963	2,101,813	1,786,482		
27	1,299,199	1,148,991	e1,039,000	1,161,808	1,373,187	1,590,031	2,034,366	2,460,141	2,712,531	2,455,985	2,090,766	1,778,408		
28	1,296,150	1,147,484	e1,035,522	1,169,634	1,385,807	1,597,227	2,067,726	2,467,613	2,716,591	2,447,567	2,078,358	1,770,069		
29	1,294,589	1,145,262	1,034,588	1,177,208		---	1,607,615	2,092,512	2,476,088	2,718,951	2,433,692	2,065,563	1,760,395	
30	1,292,173	1,138,623	1,029,066	1,184,593		---	1,628,894	2,114,098	2,484,203	2,719,607	2,420,601	2,052,288	1,754,903	
31	1,290,462		---	1,029,597	1,190,173		---	1,649,357	---	2,493,580	---	2,408,032	2,039,615	---
Max	1,338,831	1,288,753	1,129,665	1,190,173	1,385,807	1,649,357	2,114,098	2,493,580	2,719,607	2,715,805	2,395,648	2,028,270		
Min	1,290,462	1,138,623	1,029,066	1,009,402	1,193,859	1,396,621	1,666,194	2,135,730	2,505,333	2,408,032	2,039,615	1,754,903		
Gage height, in feet, at end of month	704.65	684.28	668.44	691.40	716.61	746.96	793.03	825.56	843.31	818.55	768.17	758.16		
Change in contents, in acre-feet	-46,462	-151,839	-109,026	+160,576	+195,634	+263,550	+464,741	+379,482	+226,027	-311,575	-368,417	-284,712		
Total evaporation, in acre-feet	2,757	1,275	448	363	647	1,835	2,192	4,561	7,590	9,303	8,389	6,315		
Diversion, in acre-feet, to Edward Hyatt Powerplant	181,500	240,200	199,600	108,100	68,490	83,260	33,450	165,300	204,300	508,900	533,900	434,700		
Diversion, in acre-feet, through Kelly Ridge Powerplant	9,320	14,230	11,800	9,980	10,470	12,600	13,940	14,640	13,510	13,400	13,610	13,140		

11406800 Lake Oroville near Oroville, CA—Continued

	Calendar Year 2009	Water Year 2010
Change in contents, in acre-feet	+49,204	+417,979
Annual diversion, in acre-feet, through Edward Hyatt Powerplant	2,702,000	2,762,000
Diversion, in acre-feet, through Kelly Ridge Powerplant	139,800	150,600

