

**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 mi<sup>2</sup>.

**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. The 2400 hour reservoir storage values for Aug. 2, 2008, to Sept. 30, 2008, were interpolated based on 0700-hour observations provided by California Department of Water Resources.

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, including extremes, represent total contents at 2400 hours. Maximum inflow of 266,000 ft<sup>3</sup>/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.--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, 1,781,717 acre-ft, May 26, gage height, 760.93 ft; minimum, 1,097,259 acre-ft, estimated, Sept. 30, minimum gage height unknown.

**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		

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**RESERVOIR STORAGE, ACRE FEET**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY OBSERVATION AT 2400 HOURS**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,564,847	1,440,187	1,271,887	1,227,133	1,331,831	1,455,844	1,683,157	1,705,799	1,762,140	1,511,316	1,288,524	e1,125,636
2	1,559,169	1,434,910	1,264,966	1,227,735	1,335,730	1,463,208	1,684,467	1,706,177	1,759,920	1,507,071	e1,284,177	e1,124,223
3	1,555,628	1,433,823	1,255,014	1,228,713	1,340,035	1,471,193	1,687,088	1,711,091	1,757,122	1,498,261	e1,277,133	e1,122,670
4	1,552,446	1,429,981	1,262,511	1,231,122	1,339,317	1,477,757	1,691,588	1,713,931	1,750,768	1,491,461	e1,270,501	e1,115,980
5	1,545,567	1,424,064	1,261,132	1,248,691	1,341,792	1,484,941	1,697,601	1,713,931	1,747,597	1,484,170	e1,264,429	e1,120,625
6	1,540,378	1,411,537	1,261,209	1,258,070	1,342,351	1,491,032	1,703,723	1,716,584	1,744,046	1,480,577	e1,258,070	e1,120,554
7	1,536,165	1,402,295	1,259,983	1,258,453	1,346,991	1,495,246	1,710,524	1,717,627	1,738,012	1,470,343	e1,250,823	e1,119,356
8	1,530,036	1,388,673	1,257,917	1,259,907	1,350,117	1,500,071	1,712,416	1,716,679	1,733,425	1,461,259	e1,243,902	e1,120,413
9	1,526,105	1,382,467	1,257,994	1,262,665	1,352,927	1,506,725	1,712,321	1,721,045	1,727,513	1,456,435	e1,239,278	e1,121,682
10	1,521,136	1,382,141	1,251,890	1,268,270	1,355,580	1,512,444	1,707,688	1,722,565	1,719,620	1,446,318	e1,234,817	e1,121,470
11	1,518,873	1,379,860	1,246,029	1,267,270	1,357,672	1,517,307	1,705,988	1,726,085	1,717,058	1,432,068	e1,229,014	e1,119,145
12	1,515,917	1,377,825	1,244,661	1,266,195	1,360,009	1,523,227	1,708,255	1,729,419	1,712,794	1,428,729	e1,222,404	e1,115,629
13	1,513,399	1,369,059	1,242,309	1,266,118	1,363,156	1,528,026	1,712,132	1,732,280	1,703,157	1,420,240	e1,212,612	e1,112,470
14	1,510,623	1,364,771	1,238,597	1,268,424	1,368,411	1,539,851	1,716,869	1,736,100	1,693,934	1,410,876	e1,202,951	e1,113,101
15	1,502,920	1,360,896	1,235,271	1,271,425	1,370,031	1,549,180	1,720,855	1,742,320	1,688,025	1,406,911	e1,195,777	e1,112,891
16	1,497,054	1,351,240	1,236,782	1,273,429	1,373,600	1,554,302	1,720,950	1,749,902	1,676,062	1,399,004	e1,189,076	e1,109,878
17	1,492,665	1,346,350	1,237,840	1,276,516	1,378,883	1,560,676	1,718,197	1,756,543	1,658,045	1,389,164	e1,182,547	e1,104,776
18	1,489,143	1,340,833	1,236,026	1,278,834	1,381,082	1,565,913	1,717,912	1,762,430	1,648,904	1,376,931	e1,177,284	e1,099,761
19	1,485,112	1,336,526	1,239,278	1,279,607	1,383,772	1,574,371	1,718,101	1,764,750	1,636,404	1,368,654	e1,171,747	e1,100,039
20	1,486,912	1,332,467	1,239,430	1,282,317	1,388,673	1,583,488	1,716,774	1,767,846	1,619,327	1,361,057	e1,167,679	e1,101,709
21	1,484,648	1,327,861	1,239,051	1,285,806	1,392,603	1,591,383	1,710,429	1,770,559	1,601,111	1,355,740	e1,165,286	e1,102,476
22	1,479,722	1,320,262	1,238,219	1,288,680	1,395,883	1,598,675	1,703,346	1,774,822	1,588,150	1,349,876	e1,161,090	e1,103,242
23	1,477,672	1,313,794	1,238,824	1,290,079	1,401,554	1,605,177	1,705,422	1,777,345	1,580,802	1,345,070	e1,157,264	e1,104,358
24	1,475,880	1,304,915	1,236,782	1,292,881	1,412,613	1,612,332	1,705,799	1,780,162	1,567,779	1,339,795	e1,155,679	e1,105,056
25	1,470,172	1,298,030	1,237,538	1,295,610	1,423,731	1,622,696	1,706,743	1,781,134	1,564,047	1,331,116	e1,152,441	e1,102,754
26	1,463,887	1,291,013	1,236,404	1,302,096	1,431,400	1,633,931	1,707,027	1,781,717	1,556,070	1,326,831	e1,147,202	e1,100,944
27	1,462,699	1,288,214	1,235,648	1,308,289	1,434,492	1,643,933	1,714,404	1,777,345	1,547,593	1,324,533	e1,142,265	e1,099,969
28	1,463,887	1,286,039	1,231,875	1,318,603	1,441,361	1,652,224	1,713,173	1,776,277	1,536,340	1,323,583	e1,137,130	e1,099,969
29	1,460,243	1,279,066	1,229,616	1,325,166	1,449,096	1,661,471	1,713,836	1,769,687	1,529,948	1,315,527	e1,132,367	e1,098,023
30	1,454,662	1,275,358	1,229,390	1,327,782		1,669,173	1,707,499	1,766,298	1,521,484	1,306,798	e1,128,750	e1,097,259
31	1,446,402		1,226,833	1,329,528		1,676,807		1,765,524		1,296,312	e1,126,626	
<b>Max</b>	1,564,847	1,440,187	1,271,887	1,329,528	1,449,096	1,676,807	1,720,950	1,781,717	1,762,140	1,511,316	1,288,524	1,125,636
<b>Min</b>	1,446,402	1,275,358	1,226,833	1,227,133	1,331,831	1,455,844	1,683,157	1,705,799	1,521,484	1,296,312	1,126,626	1,097,259
<b>Gage height, in feet, at end of month</b>	723.92	702.70	696.33	709.62	724.24	749.92	753.19	759.26	732.69	705.40	---	---
<b>Change in contents, in acre-feet</b>	-121,734	-171,044	-48,525	+102,695	+119,568	+227,711	+30,692	+58,025	-244,040	-225,172	-169,686	-29,367
<b>Total evaporation, in acre-feet</b>	2,644	1,885	836	604	970	2,437	3,777	5,472	6,681	6,213	6,154	4,952
<b>Diversion, in acre-feet, to Edward Hyatt Powerplant</b>	235,100	280,800	179,200	85,350	77,810	50,200	215,700	237,900	322,500	279,800	255,100	124,300
<b>Diversion, in acre-feet, through Kelly Ridge Powerplant</b>	13,420	4,890	8,270	10,720	10,910	14,060	5,960	14,220	13,580	14,140	13,950	13,410

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	Calendar Year 2007	Water Year 2008
<b>Change in contents, in acre-feet</b>	-1,565,852	-470,877
<b>Annual diversion, in acre-feet</b>	3,530,000	2,344,000
<b>Diversion, in acre-feet, through Kelly Ridge Powerplant</b>	136,800	137,500

