

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, 3,539,315 acre-ft, June 25, 26, 2011, gage height, 900.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,539,315 acre-ft, June 25, 26, gage height, 900.11 ft; minimum, 1,633,198 acre-ft, Dec. 1, minimum gage height, 745.20 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		

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RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY OBSERVATION AT 2400 HOURS

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,749,614	1,696,754	1,634,480	2,195,241	2,447,569	2,689,958	2,847,435	3,306,583	3,405,358	3,516,915	3,494,931	3,301,616
2	1,745,005	1,696,754	1,636,038	2,209,957	2,455,014	2,701,950	2,863,721	3,306,884	3,411,051	3,518,647	3,491,798	3,291,998
3	1,743,566	1,694,874	1,635,854	2,220,981	2,461,127	2,717,124	2,880,890	3,309,596	3,416,907	3,519,592	3,483,975	3,281,053
4	1,740,884	1,693,653	1,637,596	2,227,934	2,467,742	2,731,436	2,894,432	3,312,007	3,422,461	3,522,585	3,477,726	3,270,582
5	1,740,213	1,691,963	1,639,890	2,235,361	2,474,738	2,743,821	2,911,318	3,314,722	3,427,093	3,526,367	3,471,485	3,260,134
6	1,739,639	1,685,777	1,659,248	2,241,085	2,481,625	2,764,992	2,926,064	3,319,855	3,439,470	3,530,627	3,464,629	3,248,967
7	1,740,500	1,685,964	1,670,289	2,247,048	2,483,472	2,787,211	2,939,617	3,327,866	3,456,073	3,530,469	3,461,516	3,240,202
8	1,737,247	1,690,274	1,677,367	2,253,369	2,488,772	2,805,934	2,949,323	3,336,800	3,471,017	3,530,942	3,454,519	3,229,680
9	1,734,285	1,686,526	1,686,151	2,259,470	2,492,350	2,826,361	2,956,132	3,342,108	3,482,256	3,535,364	3,451,256	3,224,945
10	1,732,566	1,683,438	1,701,932	2,265,583	2,495,191	2,846,216	2,965,459	3,343,019	3,489,607	3,535,996	3,446,756	3,220,806
11	1,728,942	1,679,047	1,715,541	2,271,015	2,498,282	2,868,482	2,978,021	3,341,957	3,495,714	3,532,363	3,436,991	3,215,195
12	1,724,657	1,675,223	1,727,227	2,277,729	2,502,985	2,890,871	2,991,742	3,340,136	3,502,300	3,530,627	3,432,658	3,207,233
13	1,719,335	1,671,312	1,735,908	2,285,735	2,507,198	2,913,382	3,007,196	3,341,198	3,509,838	3,530,785	3,434,361	3,199,873
14	1,714,594	1,667,872	1,753,750	2,296,091	2,513,527	2,944,467	3,023,131	3,342,108	3,515,184	3,529,838	3,428,793	3,191,057
15	1,704,101	1,664,530	1,770,753	2,303,791	2,528,089	2,974,109	3,033,315	3,341,350	3,516,443	3,530,469	3,427,093	3,180,501
16	1,697,319	1,664,808	1,780,259	2,314,204	2,555,127	3,010,294	3,044,659	3,334,375	3,516,443	3,530,154	3,422,769	3,168,655
17	1,698,542	1,665,736	1,788,046	2,324,061	2,573,516	3,019,459	3,061,446	3,334,224	3,517,388	3,529,522	3,416,444	3,164,567
18	1,694,780	1,667,315	1,827,553	2,332,534	2,588,320	3,017,484	3,095,934	3,335,436	3,517,545	3,527,944	3,408,435	3,159,463
19	1,692,714	1,667,408	1,896,518	2,343,745	2,602,801	2,993,846	3,127,657	3,335,588	3,516,286	3,527,629	3,401,360	3,150,727
20	1,686,151	1,664,623	1,941,970	2,352,385	2,613,508	2,969,224	3,151,454	3,335,436	3,515,814	3,527,156	3,394,143	3,142,587
21	1,685,028	1,659,248	1,975,079	2,360,930	2,622,965	2,943,219	3,182,698	3,333,921	3,517,545	3,525,737	3,387,091	3,134,463
22	1,683,064	1,656,842	2,003,402	2,369,971	2,630,651	2,914,208	3,207,822	3,335,588	3,522,900	3,524,949	3,380,048	3,128,235
23	1,682,035	1,653,424	2,028,063	2,378,559	2,637,967	2,890,050	3,224,649	3,340,591	3,531,732	3,522,900	3,372,710	3,119,271
24	1,699,765	1,651,670	2,046,486	2,386,690	2,644,910	2,870,525	3,243,766	3,347,119	3,537,893	3,522,742	3,364,622	3,112,920
25	1,706,554	1,645,956	2,064,487	2,393,280	2,659,353	2,854,755	3,263,415	3,361,421	3,539,157	3,528,734	3,358,374	3,106,867
26	1,705,705	1,645,129	2,082,602	2,399,282	2,668,667	2,854,484	3,279,107	3,376,989	3,537,577	3,523,530	3,350,766	3,097,946
27	1,703,063	1,642,829	2,099,953	2,406,258	2,676,315	2,848,383	3,288,847	3,386,324	3,533,784	3,518,805	3,340,743	3,084,168
28	1,700,990	1,641,635	2,120,269	2,413,247	2,683,456	2,839,992	3,296,654	3,392,302	3,531,732	3,514,555	3,332,255	3,071,578
29	1,701,555	1,638,146	2,147,723	2,420,009		2,836,614	3,302,519	3,393,990	3,524,476	3,510,310	3,324,690	3,057,314
30	1,702,121	1,637,504	2,166,240	2,430,301		2,837,290	3,304,927	3,397,059	3,515,184	3,505,440	3,315,628	3,044,517
31	1,701,649		2,180,369	2,439,290		2,839,587		3,400,439		3,504,516	3,308,390	
Max	1,749,614	1,696,754	2,180,369	2,439,290	2,683,456	3,019,459	3,304,927	3,400,439	3,539,157	3,535,996	3,494,931	3,301,616
Min	1,682,035	1,637,504	1,634,480	2,195,241	2,447,569	2,689,958	2,847,435	3,306,583	3,405,358	3,504,516	3,308,390	3,044,517
Gage height, in feet, at end of month	752.57	745.67	798.99	821.13	840.54	852.32	884.92	891.20	898.58	897.71	885.15	867.11
Change in contents, in acre-feet	-53,254	-64,145	+542,865	+258,921	+244,166	+156,131	+465,340	+95,512	+114,745	-10,668	-196,126	-263,873
Total evaporation, in acre-feet	3,419	1,667	783	757	1,757	1,685	3,784	5,896	7,405	10,831	11,217	9,203
Diversion, in acre-feet, to Edward Hyatt Powerplant	221,000	239,600	148,200	141,400	66,480	205,800	438,600	437,800	322,700	301,600	206,100	398,800
Diversion, in acre-feet, through Kelly Ridge Powerplant	7,060	11,980	14,700	14,760	13,170	14,530	13,580	14,130	13,230	12,280	11,790	13,820

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	Calendar Year 2010	Water Year 2011
Change in contents, in acre-feet	1,150,772	1,289,614
Annual diversion, in acre feet, through Edward Hyatt Powerplant	2,749,000	3,128,000
Diversion, in acre-feet, through Kelly Ridge Powerplant	149,000	155,100

