



Water-Data Report CA-2005

**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, 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>.

**WATER-STAGE RECORDS**

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

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.

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<sup>3</sup>/s during a 2-hour period Feb. 17, 1986. Total evaporation provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey. Diversion to Edward Hyatt Powerplant provided by California Department of Water Resources. 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 Federal Energy Regulatory Commission project no. 2100. 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, 3,529,207 acre-ft, June 15, gage height, 899.47 ft; minimum, 1,601,202 acre-ft, Dec. 2, 3, gage height, 741.68 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 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,750,960	1,663,417	1,601,834	1,654,440	1,821,617	2,032,979	2,465,291	2,854,891	3,499,791	3,478,819	3,249,117	3,023,979
2	1,751,730	1,659,989	1,601,202	1,666,943	1,826,761	2,045,197	2,480,641	2,863,993	3,500,888	3,474,136	3,243,023	3,020,165
3	1,750,095	1,657,305	1,601,202	1,669,266	1,832,014	2,056,282	2,498,282	2,870,934	3,506,225	3,471,485	3,237,828	3,018,189
4	1,748,461	1,654,717	1,604,273	1,669,545	1,837,477	2,064,272	2,515,515	2,875,023	3,510,310	3,467,277	3,231,309	3,016,073
5	1,743,759	1,649,641	1,608,435	1,676,528	1,843,451	2,074,561	2,530,210	2,884,716	3,516,759	3,463,228	3,222,875	3,011,702
6	1,740,980	1,653,424	1,608,253	1,680,634	1,850,337	2,080,099	2,539,455	2,900,739	3,521,325	3,454,519	3,217,557	3,001,992
7	1,735,718	1,651,762	1,612,422	1,688,774	1,856,841	2,087,174	2,555,378	2,915,309	3,521,010	3,446,290	3,210,033	2,997,356
8	1,733,043	1,648,167	1,629,174	1,693,841	1,860,952	2,094,702	2,574,653	2,936,294	3,519,750	3,442,104	3,201,933	2,996,794
9	1,733,139	1,644,853	1,637,780	1,700,802	1,869,093	2,104,662	2,593,268	2,966,017	3,523,846	3,437,766	3,191,938	2,997,215
10	1,732,375	1,641,176	1,643,841	1,702,592	1,876,557	2,113,885	2,609,936	2,986,277	3,519,592	3,431,422	3,184,897	3,001,430
11	1,725,228	1,639,339	1,647,890	1,707,877	1,881,103	2,126,226	2,622,965	3,006,352	3,518,490	3,423,386	3,173,624	3,001,992
12	1,721,615	1,638,147	1,650,748	1,713,078	1,885,454	2,136,845	2,634,115	3,017,766	3,527,787	3,411,514	3,164,714	2,995,952
13	1,715,542	1,639,248	1,650,748	1,716,110	1,893,875	2,148,058	2,648,774	3,033,882	3,526,841	3,399,671	3,161,796	2,988,098
14	1,711,280	1,639,615	1,649,180	1,719,715	1,905,587	2,157,191	2,658,708	3,052,049	3,526,367	3,389,696	3,164,130	2,977,602
15	1,700,331	1,639,248	1,645,680	1,723,801	1,913,356	2,157,526	2,669,962	3,074,007	3,529,207	3,381,426	3,152,473	2,970,061
16	1,699,954	1,636,313	1,640,073	1,729,990	1,920,326	2,159,534	2,680,729	3,101,829	3,526,841	3,371,031	3,140,555	2,960,863
17	1,700,330	1,632,649	1,638,972	1,735,048	1,927,830	2,165,345	2,692,562	3,120,572	3,521,482	3,366,910	3,130,552	2,959,471
18	1,693,747	1,629,083	1,638,146	1,735,909	1,929,993	2,171,503	2,706,392	3,174,063	3,516,601	3,356,243	3,117,972	2,958,358
19	1,690,087	1,627,256	1,638,147	1,738,586	1,935,975	2,180,931	2,718,041	3,265,206	3,512,354	3,346,208	3,109,317	2,949,463
20	1,688,118	1,628,991	1,638,238	1,740,501	1,953,272	2,199,874	2,730,384	3,310,953	3,503,870	3,337,255	3,102,549	2,941,695
21	1,677,274	1,625,978	1,637,871	1,742,992	1,965,458	2,219,047	2,740,787	3,343,475	3,499,634	3,327,110	3,109,461	2,934,909
22	1,672,057	1,624,245	1,637,138	1,748,557	1,977,070	2,251,988	2,750,821	3,371,031	3,496,969	3,318,345	3,103,700	2,927,997
23	1,672,243	1,621,147	1,635,121	1,756,062	1,986,942	2,285,387	2,764,859	3,390,463	3,492,425	3,317,590	3,095,073	2,918,478
24	1,674,664	1,618,053	1,631,826	1,758,183	1,993,050	2,308,818	2,779,746	3,407,820	3,488,981	3,312,913	3,087,323	2,919,305
25	1,669,080	1,614,782	1,634,480	1,761,850	1,999,912	2,328,648	2,792,685	3,422,924	3,484,601	3,307,186	3,078,012	2,918,341
26	1,672,150	1,613,239	1,634,663	1,773,465	2,004,355	2,345,519	2,804,192	3,436,063	3,489,138	3,295,903	3,072,292	2,912,419
27	1,668,801	1,613,783	1,633,106	1,785,805	2,014,112	2,365,091	2,814,791	3,447,997	3,490,390	3,286,897	3,063,442	2,905,819
28	1,665,922	1,612,785	1,632,191	1,797,229	2,023,476	2,392,321	2,825,823	3,461,983	3,488,668	3,277,460	3,058,027	2,894,980
29	1,664,066	1,607,348	1,634,755	1,804,776	---	2,418,317	2,834,319	3,481,319	3,483,350	3,271,927	3,049,774	2,887,861
30	1,664,437	1,604,001	1,642,186	1,811,656	---	2,442,210	2,841,886	3,492,112	3,480,831	3,263,713	3,041,537	2,877,751
31	1,665,643	---	1,644,209	1,814,709	---	2,457,703	---	3,495,401	---	3,256,409	3,032,324	---
<b>Max</b>	1,751,730	1,663,417	1,650,748	1,814,709	2,023,476	2,457,703	2,841,886	3,495,401	3,529,207	3,478,819	3,249,117	3,023,979
<b>Min</b>	1,664,066	1,604,001	1,601,202	1,654,440	1,821,617	2,032,979	2,465,291	2,854,891	3,480,831	3,256,409	3,032,324	2,877,751
<b>Gage height, in feet, at end of month</b>	748.72	741.99	746.40	764.30	784.66	822.64	852.49	897.32	896.36	881.68	866.25	855.13
<b>Change in contents, in acre-feet</b>	-87,337	-61,642	+40,208	+170,500	+208,767	+434,227	+384,183	+653,515	-14,570	-224,422	-224,085	-154,573
<b>Total evaporation, in acre-feet</b>	3,779	1,510	1,014	550	1,201	2,691	3,666	5,599	7,866	12,478	12,486	8,441
<b>Diversion, in acre-feet, to Edward Hyatt Powerplant</b>	215,200	209,400	198,600	130,400	71,560	100,800	69,410	241,200	342,300	398,100	393,500	304,700

	Calendar Year 2004	Water Year 2005
<b>Change in contents, in-acre-feet</b>	-603,988	+1,124,771
<b>Annual Diversion, in acre-feet</b>	3,886,000	2,675,000

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