

11406870 THERMALITO AFTERBAY NEAR OROVILLE, CA

Sacramento River Basin

LOCATION.--Lat 39°27'30", long 121°38'17" referenced to North American Datum of 1927, in NE ¼ SE ¼ 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.

WATER-DISCHARGE RECORDS

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

WATER TEMPERATURE: Water year 1968.

GAGE.--Water-stage recorder. Datum of gage is 100.47 ft above NGVD of 1929 (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 ft³/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. Total evaporation provided by California Department of Water Resources; not reviewed by the U.S. Geological Survey. Diversion to Thermalito 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, 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, 50,944 acre-ft, Jan. 14, gage height, 135.05 ft; minimum, 16,689 acre-ft, Oct. 17, gage height, 124.64 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)

Elevation	Contents	Elevation	Contents	Elevation	Contents
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

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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	34,311	28,500	36,537	46,011	42,728	32,685	46,839	42,160	36,115	36,326	39,266	50,290
2	29,320	28,720	38,611	41,897	42,541	33,426	47,076	41,148	35,765	35,486	38,070	49,680
3	25,922	29,481	34,827	42,845	41,709	33,087	46,129	41,297	34,346	35,521	37,318	46,050
4	24,880	29,799	30,671	49,356	39,925	32,685	45,345	45,893	36,538	34,552	37,460	42,349
5	25,176	33,459	26,707	44,918	37,890	32,317	44,684	47,711	30,025	34,449	37,711	41,185
6	24,912	28,342	25,087	42,163	35,834	35,242	45,697	43,951	30,575	37,603	37,175	43,567
7	25,891	27,073	24,880	41,484	33,799	36,326	46,090	41,409	32,887	40,998	37,711	42,842
8	22,918	28,594	23,116	41,824	31,919	37,140	46,050	36,467	38,358	40,924	37,175	38,792
9	20,252	30,058	24,324	42,050	30,251	36,714	45,073	39,339	41,222	38,250	40,627	33,460
10	17,434	30,964	23,316	45,190	28,093	37,069	44,413	41,073	41,934	36,679	42,236	26,951
11	17,959	30,090	21,829	48,631	26,555	35,660	43,759	41,297	43,157	39,741	44,182	21,497
12	18,651	29,928	21,718	49,317	24,794	35,660	44,840	46,602	34,724	43,529	45,815	23,688
13	19,351	26,253	24,560	50,698	22,892	35,730	44,491	46,011	38,178	47,830	43,147	25,324
14	18,987	23,978	25,116	50,944	20,708	36,361	45,854	42,349	39,375	49,194	34,655	29,993
15	23,401	23,547	26,798	48,230	19,747	43,605	46,642	37,140	38,865	47,472	36,785	33,358
16	20,012	25,443	29,769	45,424	21,579	49,477	46,129	35,835	36,927	46,839	41,185	39,047
17	16,689	28,093	33,528	42,883	21,005	49,154	46,090	37,568	37,246	41,709	43,376	35,000
18	17,581	28,878	31,687	44,222	25,443	48,832	45,776	36,891	37,211	42,690	47,950	31,952
19	19,378	30,802	32,117	44,030	25,802	48,230	45,228	41,859	37,711	43,299	49,518	35,069
20	21,033	26,585	31,589	45,189	23,719	46,247	44,878	45,972	37,998	44,684	49,396	37,782
21	26,011	26,646	31,622	45,384	22,190	44,066	45,736	43,797	39,083	43,261	37,675	40,072
22	28,030	27,442	33,562	42,769	22,722	42,123	47,274	40,998	39,631	43,567	34,931	42,576
23	27,196	30,025	35,765	38,902	23,776	43,836	46,247	42,387	43,223	36,396	39,011	45,502
24	23,918	30,671	35,625	38,503	27,442	46,957	45,267	45,652	43,797	32,987	38,142	37,747
25	26,101	31,128	32,484	38,793	29,704	47,990	43,682	43,414	44,646	31,424	40,627	33,867
26	25,651	31,096	33,087	38,286	30,964	46,050	43,644	45,306	39,266	32,819	41,073	34,655
27	26,646	29,992	34,551	37,033	32,184	44,028	43,070	47,552	36,856	35,800	41,559	36,714
28	29,832	29,352	39,595	38,106	32,719	44,529	43,682	44,375	33,697	38,756	40,590	42,236
29	32,550	33,190	42,880	39,011	---	42,576	45,697	35,835	35,590	35,765	42,274	44,452
30	28,187	35,660	46,326	40,405	---	40,257	46,997	31,787	35,975	37,783	44,956	45,815
31	26,011	---	50,537	43,835	---	41,634	---	33,731	---	38,901	47,711	---
Max	34,311	35,660	50,537	50,944	42,728	49,477	47,274	47,711	44,646	49,194	49,518	50,290
Min	16,689	23,547	21,718	37,033	19,747	32,317	43,070	31,787	30,025	31,424	34,655	21,497
Gage height, in feet, at end of month	128.06	131.03	134.95	133.26	130.17	132.68	134.07	130.47	131.12	131.94	134.25	133.77
Change in contents, in acre-feet	-10,280	+9,649	+14,877	-6,702	-11,116	+8,915	+5,363	-13,266	+2,244	+2,926	+8,810	-1,896
Total evaporation, in acre-feet	1,115	507	354	174	348	867	1,312	1,604	1,999	2,986	2,636	2,167
Diversion, in acre-feet, to Thermalito Powerplant	185,000	185,800	165,700	109,200	50,380	77,220	45,840	215,200	315,100	362,100	365,300	275,800

	Calendar Year 2004	Water Year 2005
Change in contents, in-acre-feet	+26,154	+9,524
Annual Diversion, in acre-feet	3,622,000	2,352,000

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