



Water-Data Report 2007

14220000 LAKE MERWIN NEAR ARIEL, WA

Lower Columbia Basin
Lewis Subbasin

LOCATION.--Lat 45°57'23", long 122°33'13" referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.34, T.6 N., R.2 E., Clark County, WA, Hydrologic Unit 17080002, on left bank on Merwin Dam on Lewis River at Ariel, and at mile 19.6.

DRAINAGE AREA.--730 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1931 to current year.

GAGE.--Water-stage recorder and long distance indicator in powerhouse. Datum of gage is NGVD of 1929 (levels by PacifiCorp).

COOPERATION.--Hourly elevations and capacity table furnished by PacifiCorp. Records reviewed and three inspections made by USGS.

REMARKS.--Reservoir is formed by combination gravity-concrete-arch dam; some storage began March 1931; completed May 13, 1931. Usable capacity, 245,600 acre-ft between elevations 165 ft, lower limit of regulation set by Federal Energy Regulatory Commission, and 235 ft, top of spillway gates. Additional storage of 18,200 acre-ft is provided by flashboards to elevation 239.6 ft. Unused storage below elevation 165 ft, 159,000 acre-ft. Figures given herein represent total contents. Water is used by PacifiCorp for power generation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents during the period 1931-52 not determined; maximum since 1953, 424,000 acre-ft, Jan. 24, 1959, elevation 239.86 ft; minimum contents observed since reservoir was first filled, 164,200 acre-ft, Dec. 5, 1936, elevation 166.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 421,700 acre-ft, May 11, elevation 239.33 ft; minimum contents, 371,400 acre-ft, Nov. 11, elevation 226.36 ft.

MONTH-END ELEVATION AND CONTENTS AT 2400

WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	237.74	415,400	--
October 31	235.19	405,300	-10,100
November 30	233.69	399,500	-5,800
December 31	235.01	404,600	+5,100
Calendar Year 2006	--	--	+13,200
January 31	234.84	404,000	-600
February 28	232.47	394,700	-9,300
March 31	229.69	384,000	-10,700
April 30	235.05	404,800	+20,800
May 31	235.68	407,300	+2,500
June 30	231.98	392,800	-14,500
July 31	231.66	391,600	-1,200
August 31	238.70	419,200	+27,600
September 30	235.72	407,400	-11,800
Water Year 2007	--	--	-8,000