



Water-Data Report 2006

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 two 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, 422,100 acre-ft, June 20, elevation 239.42 ft; minimum contents, 369,100 acre-ft, Jan. 14, elevation 225.77 ft.

| MONTH-END ELEVATION AND CONTENTS AT 2400 | | | |
|---|---------------------|-------------------------|-----------------------------------|
| WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006 | | | |
| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
| September 30 | 239.17 | 421,100 | -- |
| October 31 | 235.41 | 406,200 | -14,900 |
| November 30 | 230.54 | 387,300 | -18,900 |
| December 31 | 231.61 | 391,400 | +4,100 |
| Calendar Year 2005 | -- | -- | -17,400 |
| January 31 | 229.88 | 384,800 | -6,600 |
| February 28 | 234.69 | 403,400 | +18,600 |
| March 31 | 235.96 | 408,400 | +5,000 |
| April 30 | 235.73 | 407,500 | -900 |
| May 31 | 238.42 | 418,100 | +10,600 |
| June 30 | 238.95 | 420,200 | +2,100 |
| July 31 | 236.39 | 410,100 | -10,100 |
| August 31 | 236.22 | 409,400 | -700 |
| September 30 | 237.74 | 415,400 | +6,000 |
| Water Year 2006 | -- | -- | -5,700 |