



Water-Data Report 2008

**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 mi<sup>2</sup>.

**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, 422,300 acre-ft, July 18, elevation 239.48 ft; minimum contents, 376,800 acre-ft, Feb. 12, elevation 227.78 ft.

MONTH-END ELEVATION AND CONTENTS AT 2400  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

| Date               | Elevation<br>(feet) | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) |
|--------------------|---------------------|-------------------------|-----------------------------------|
| September 30       | 235.72              | 407,400                 | --                                |
| October 31         | 238.68              | 419,100                 | +11,700                           |
| November 30        | 232.98              | 396,700                 | -22,400                           |
| December 31        | 230.60              | 387,500                 | -9,200                            |
| Calendar Year 2007 | --                  | --                      | -17,100                           |
| January 31         | 236.87              | 412,000                 | +24,500                           |
| February 29        | 229.54              | 383,500                 | -28,500                           |
| March 31           | 237.11              | 412,900                 | +29,400                           |
| April 30           | 236.78              | 411,600                 | -1,300                            |
| May 31             | 237.64              | 415,000                 | +3,400                            |
| June 30            | 238.76              | 419,500                 | +4,500                            |
| July 31            | 238.50              | 418,400                 | -1,100                            |
| August 31          | 235.38              | 406,100                 | -12,300                           |
| September 30       | 236.50              | 410,500                 | +4,400                            |
| Water Year 2008    | --                  | --                      | +3,100                            |