

Direct from USGS's Jeff Woods

Basically there are 2 elevations you are dealing with here. The first is the 733.12 ft. value which is the average water level elevation of Lake Maxinkuckee to sea level using the National Geodetic Vertical Datum of 1929. This value was obtained using surveying techniques on August 9, 1948 by Marshall County according to historical records. There are several vertical datums used in the U.S. so it is important to note the correct one is referenced. The second elevation which you see on the left axis of the plot (1.0 to 5.0) is an arbitrary number set to read above the surveyed value which for this gage is 3.12 ft. What this means is that 733.12 ft and 3.12 ft. are considered equal for the purposes of reporting water level on Lake Maxinkuckee. So for example, when you see a value of 3.50 ft. on one of our plots the actual water surface level of the lake relative to sea level is 733.12 ft. plus 0.38 ft. (gage reading minus arbitrary datum value of 3.12 ft) for a value of 733.50 ft. above sea level.

Since large numbers like those could lead someone without knowledge of the datum to think the lake was 733.5 ft. deep, it is standard practice for the USGS to provide arbitrary water levels (the 3.50 ft. example for instance) instead. Therefore when the gage was initially established someone decided that 3.12 would accurately represent average water levels and that the lake water levels would not go below that (they could of course). Confused yet?!

Bottom line, 3.12 ft. is considered the "average" water level at Lake Max and the plots from our website will follow that arbitrary datum. I have included a link to last year's station manuscript which is part of our annual data report publication for all gages around the state. This will have information on the datums and other items of interest related to the period of record collected at this gage.

<http://wdr.water.usgs.gov/wy2011/pdfs/03331440.2011.pdf>



USGS 03331440 LAKE MAXINKUCKEE AT CULVER, IN

