



Great Lakes low water levels 2013

U.S. ARMY CORPS OF ENGINEERS

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CURRENT

- 1) Lake Michigan-Huron's January 2013 monthly mean water level set an all-time record low at 576.02 ft. This is lower than any other month in the entire period of record, which goes back to 1918. The previous all-time record low was set in March 1964 at 576.05 ft. All elevations are referenced to the 1985 International Great Lakes Datum.
- 2) The most probable forecast from our most recent 6 month bulletin shows Lake Michigan-Huron remaining 2 to 4 inches ABOVE record lows through September. If dry conditions are experienced in the Michigan-Huron basin during the next few months, water levels could return to record lows.
- 3) Lakes Superior and Michigan-Huron have been below average for 14 straight years, the longest stretch in each of their recorded histories.
- 4) Current forecasts for Lakes Superior, St. Clair, Erie, and Ontario do not call for record low levels given any scenario.
- 5) All the Great Lakes are below their long term averages and below their levels of a year ago. Lakes Superior, Michigan-Huron, St. Clair and Erie are expected to remain below their long term averages (LTA) for at least the next 6 months. Lake Ontario is expected to remain below LTA through June, and then return to LTA by July. Even under very wet scenarios, Michigan-Huron will remain below its LTA for a much longer period of time.
- 6) Lake Superior and Lake Michigan-Huron are currently below chart datum. Lake Superior is forecasted to remain below chart datum through July, be at chart datum in August and rise 1 inch above chart datum in September. Lake Michigan-Huron is forecasted to remain 6 to 13 inches below chart datum over the next six months.
- 7) The lack of a solid snowpack during the winter of 2011 to 2012, coupled with the very hot and dry summer of 2012, are the biggest factors leading to the lower water levels this year. Snowmelt runoff and spring precipitation are the largest contributors to the seasonal rises on all the Great Lakes. Evaporation, a major component of water loss from the system, was also well above average during the heat wave of 2012 and continuing into the autumn and winter months.
- 8) In an average year, Lake Michigan-Huron's seasonal rise is close to 12 inches. Because of dry conditions throughout the basin, the lake's rise was only about 4 inches in 2012. Lakes St. Clair and Erie have average seasonal rises of about 15 inches, but in 2012 both lakes had no seasonal rise, but rather have been either steady or declining since January 2012. This was the first time in its recorded history that Lake Erie did not have a seasonal rise.

- 9) Conditions needed for the lakes to make gains with respect to their long term averages include heavy precipitation over multiple months, abundant runoff and reduced evaporation. Snow water equivalent values across northern Ontario, the U.P. of Michigan, northern/eastern Wisconsin and the Arrowhead of Minnesota are higher than those of 2012. The official spring outlook, issued by the National Weather Service shows the potential for above average precipitation in April, May and June. These conditions may lead to an average or above average seasonal rise for the Great Lakes.

- 10) There are no discernible long term cycles of water levels apparent over our period of record (1918-2012) for Great Lakes water levels. While the historical record shows periods of high and low water, it is not possible to predict with any certainty when/if water levels would return to long term average levels. Lake levels could go higher or lower from their current levels in future years.