



US Army Corps
of Engineers
North Central Division

GREAT LAKES LEVELS UPDATE NO. 55 FEBRUARY 2, 1990

Precipitation in the Great Lakes basin was very close to average in January. All of the individual lake basins were within 10% of their average total amounts. The following table shows estimated precipitation for the month of January. Beginning next month, we will add to the table by providing estimated year-to-date totals.

Basin	Provisional Great Lakes Precipitation (inches)			
	1990*	1900-89 Average	Diff.	% of Ave.
Superior	1.7	1.8	-0.1	90%
Mich-Huron	2.2	2.1	+0.1	105%
Erie	2.6	2.4	+0.2	110%
Ontario	2.5	2.7	-0.2	95%
Great Lakes	2.1	2.1	0.0	100%

* Estimated

The National Weather Service is forecasting above-average precipitation during February for the Great Lakes, except for the Lakes Superior and Ontario basins where near-average precipitation is forecast. February's temperature forecast is for above-average throughout the Great Lakes basin, except for Lake Superior, where near-average temperatures are forecasted.

The water levels of Lakes Superior and Michigan-Huron continue to be well below average for this time of year. Lakes St. Clair and Erie levels remain above average, while Lake Ontario is near average. Lakes Superior and Michigan-Huron are continuing in their seasonal decline towards their winter lows. Lakes Erie and Ontario appear to have begun their seasonal rise towards next summer's highs. Concerning Lake Ontario, the forecast, at this time, does not reflect any actions that the International St. Lawrence River Board of Control may take in the spring to raise the levels.

Last month I showed how beach nourishment can provide benefits to riparians far downdrift. The feature continues this month.

Rapid recession rates heighten public

awareness of shore processes when water levels are high. However, shore processes can be critical for some reaches of shoreline when water levels are low. This is consistent with our experience during the recent time of high water and the subsequent lake level decline. We encourage riparians to observe their shoreline as water levels decline because the low-water processes may also be important.

This month's area of interest is the Little Sable Point, Michigan area on Lake Michigan. Those of you who regularly visit this area may have noticed water flowing across the beach in many places from springs near the bluff toe. These springs are quite prominent in the Juniper Beach/Sahara Sands area wherever there is a beach. On the south side of the Point, springs also exist within one mile south of the lighthouse. These springs tell us that the beach sand is underlain by a wide clay bench. Storm activities sometimes erode chunks of clay and transport them onto the beach. Then, storm driven waves can attack the clay bench.

The longer the duration of low water conditions, the more the clay bench will be eroded. When water levels rise, the bench is inundated and the waves widen the bench by eroding away the sand bluff. Future water level rises may see increasing rates of shoreline recession in localities with these shoreline characteristics. With the many shoreline types in the Great Lakes, we do not yet know the extent of these localities; however, we expect a large part of the east shore of Lake Michigan may be in this category. More on this next month.

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