

## Information

Recorded water levels in this bulletin are derived from a representative network of water level gages on each lake (see cover map). Providers of these data are the U.S. Department of Commerce, NOAA, National Ocean Service, and Integrated Science Data Management, Department of Fisheries and Oceans, Canada. The Detroit District, Corps of Engineers and Environment Canada derive historic and projected lake levels under the auspices of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

This bulletin is produced monthly as a public service. The Corps also publishes the "Great Lakes, Connecting Channels and St. Lawrence River Water Levels and Depths," weekly, which provides a forecast of depths in the connecting rivers between the Great Lakes and the International Section of the St. Lawrence River. This Monthly Bulletin of the lake levels for the Great Lakes may be obtained free of charge by writing to the address shown on the front cover, by calling (313) 226-6442 or emailing [hhpm@usace.army.mil](mailto:hhpm@usace.army.mil). Notices of change of address should include the name of the publication. This information is available on the internet at <http://www.lre.usace.army.mil/Missions/GreatLakesInformation.aspx>.

### Great Lakes Basin Hydrology July 2013

Most of the Great Lakes basin received above average precipitation for the month of July. The Superior basin received above average precipitation in July at 161%, of average. The Michigan-Huron basin, however, received average precipitation. The Erie and Ontario basins received 149% and 108% of average precipitation, respectively, in July. Overall, the Great Lakes basin received above average precipitation last month. The net basin supply of water to the lakes was above average in July, with the exception of Michigan-Huron's net basin supply which was below average. The outflows from lakes Superior and Michigan-Huron were below average while the outflow from Lake Erie was near average. The outflow from Lake Ontario was above average. The tables below list July precipitation and water supplies for the Great Lakes basin.

The water levels of all of the Great Lakes are starting to round out their seasonal rise. Each of the lakes rose between 2 and 5 inches from June's monthly mean to July's monthly mean. A comparison of July's monthly mean lake levels to long-term average (1918-2012) shows Lakes Superior, Michigan-Huron and St. Clair were 5, 19 and 3 inches below average, respectively. Lakes Erie and Ontario were 2 and 6 inches above LTA, respectively. Boaters should be aware of hazards to navigation due to continued below average water levels on the upper lakes.

PRECIPITATION (INCHES)								
BASIN	July				12-Month Comparison			
	2013	Average (1900-2010)	Diff.	% of Average	Last 12 months	Average (1900-2010)	Diff.	% of Average
Superior	5.27	3.27	2.00	161	29.08	30.46	-1.38	95
Michigan-Huron	3.03	3.03	0.00	100	33.87	32.44	1.43	104
Erie	5.04	3.39	1.65	149	38.42	35.43	2.99	108
Ontario	3.44	3.18	0.26	108	35.99	35.73	0.26	101
Great Lakes	3.96	3.16	0.80	125	33.30	32.64	0.66	102

LAKE	July Net Basin Supplies <sup>1</sup> (cfs)		July Outflows <sup>2</sup> (cfs)	
	2013	Average <sup>3</sup> (1900-2008)	2013	Average <sup>3</sup> (1900-2008)
Superior	225,000	129,000	77,000	81,000
Michigan-Huron	94,000	128,000	168,000	195,000
Erie	38,000	7,000	208,000	209,000
Ontario	28,000	24,000	264,000	261,000

Notes: Values (excluding averages) are based on preliminary computations; cfs denotes cubic feet per second.

<sup>1</sup> Net basin supply is the net result of precipitation falling on the lake, runoff from precipitation falling on the land which flows to the lake, and evaporation from the lake. Negative net basin supply denotes evaporation exceeded runoff and precipitation. The net total supply can be found by adding the net basin supply and the outflow from the upstream lake.

<sup>2</sup> Does not include diversions.

<sup>3</sup> Lake Ontario average water supplies and average outflows are based on period of record 1900-2005