



LEVELnews

Great Lakes — St. Lawrence River Water Levels

Near Record Water Supply in 2014 for Upper Lakes

Lakes Superior and Michigan–Huron again experienced wet conditions in December ending a year where preliminary data indicates that average annual water supplies to Lake Superior during 2014 were the 2nd highest on record (since 1900), and the 3rd highest for Michigan–Huron. The December levels of all the lakes, except Ontario, remained above average.

- The monthly mean water level of Lake Superior was 21 cm above its period-of-record (1918–2013) average in

December, 25 cm higher than December 2013, and the highest December level since 1996.

- Lake Michigan–Huron's mean level in December was 21 cm above average, the highest mean level recorded in December since 1997, and up 56 cm from last year.
- Lake Erie's mean monthly level was 19 cm above average and 23 cm above last December's.
- Lake Ontario continued to be the only lake below average

with a December mean level 6 cm below average and 7 cm lower than a year ago.

- Montreal Harbour's monthly mean level was 39 cm below average, and 19 cm lower than last year.

Above-average water supplies were partially offset by above-average outflows on Lake Superior resulting in a level decrease of 6 cm in December, 2 cm less than the lake's average (1918–2013) decline of 8 cm. Lake Michigan–Huron on

(continued on next page)

Great Lakes Water Level Information

Lake	December 2014 Monthly Mean Level		Beginning-of-January 2015 Level	
	Compared to Monthly Average (1918–2013)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2013)	Compared to One Year Ago
Superior	21 cm above	25 cm above	24 cm above	27 cm above
Michigan–Huron	21 cm above	56 cm above	24 cm above	58 cm above
St. Clair	23 cm above	34 cm above	19 cm above	24 cm above
Erie	19 cm above	23 cm above	13 cm above	9 cm above
Ontario	6 cm below	7 cm below	4 cm below	10 cm below

average falls by 4 cm in December but showed no change last month due to the combination of wet conditions in the basin and above-average inflows from Lake Superior. December saw Lake Erie fall 4 cm, when on average it rises 2 cm. This was in part due to drier conditions, but also reflects effects of strong winds and the associated difficulty in accurate measurement of end-of-December lake levels (explained below). After a relatively dry few months, near-average conditions on Lake Ontario, along with above-average Lake Erie

outflows, helped the lake rise 6 cm in December, 5 cm more than the average rise of 1 cm.

Lake Erie Surge

Strong westerly winds on December 25, with peak gusts of 107 km/h at Port Colborne, pushed water in Lake Erie toward the eastern end of the lake. This caused a peak surge (short-period rise) in level of 1.72 m above pre-storm levels at Buffalo, NY, and a 2.36 m difference in level between the east and west end of the lake. When the wind subsides, the water rebounds back to the opposite end of the lake, comparable to water sloshing back and forth in a bathtub. A similar wind on December 31 made it difficult to accurately measure the lake wide end-of-December level. For further information on water level fluctuations on the Great Lakes visit the Canadian Hydrographic Service website at: tides-marees.gc.ca/C&A/fluctuations-eng.html

Beginning-of-January Lake Levels and Forecast

Levels of all the Great Lakes remained above last year's levels at the beginning of January, with the exception of Lake Ontario. Relative to their beginning-of-January levels and assuming average water supply conditions, lakes Superior, Michigan–Huron and St. Clair are expected to show seasonal declines during the coming month, while Lake Erie is expected to increase slightly and Lake Ontario is expected to continue its seasonal rise that began last month.

Upcoming Public Teleconference-Webinar

The International St. Lawrence River Board of Control invites you to discuss water regulation in the St. Lawrence River on March 17, 2015. Watch for further details at: ijc.org/en/islrbc/home

FOR MORE INFORMATION:

Derrick Beach (Editor)
Boundary Water Issues
National Hydrological Services
Meteorological Service Canada
Environment Canada
Burlington ON L7S 1A1
Tel.: 905-336-4714
Fax: 905-336-8901
Email: LEVELnews-infoNIVEAU@ec.gc.ca

Rob Caldwell
Great Lakes–St. Lawrence
Regulation Office
Meteorological Service Canada
Environment Canada
111 Water Street East
Cornwall ON K6H 6S2
Tel.: 613-938-5864

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December Precipitation over the Great Lakes*

Great Lakes Basin	68%	Lake Erie	54%
Lake Superior	74%	(including Lake St. Clair)	
Lake Michigan–Huron	73%	Lake Ontario	59%

December Outflows from the Great Lakes*

Lake Superior	119%	Lake Erie	105%
Lake Michigan–Huron	111%	Lake Ontario	101%

*As a percentage of the long-term December average.

NOTE: These figures are preliminary.