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LEVELnews

Great Lakes — St. Lawrence River Water Levels

Mixed Conditions Across Great Lakes

Lakes Superior and Michigan–Huron experienced wetter than normal conditions for November while overall conditions in the lower Great Lakes were drier than normal and wet conditions were seen in the St. Lawrence River.

- Lake Superior's level fell by 4 cm in November, which is 1 cm less than the 1918–2012 period-of-record average decline of 5 cm, due to above-average water supplies.
- Above-average water supplies from its local basin combined with above-average inflows from Lake Superior caused Lake Michigan–Huron to rise by 1 cm when on average it falls by 5 cm in November. Lake Michigan–Huron has risen only 18 times in November (including this year) since 1918.
- Even with above average water supplies to Lake Erie, the below-average inflow caused Lake Erie's level to fall by 7 cm during November which is 2 cm more than its average November decline of 5 cm.
- Lake Ontario had above-average water supplies in the basin but also above-average outflows resulting in the lake falling 7 cm during a month it falls by 3 cm on average.
- Wet weather downstream of the Great Lakes brought the monthly mean level at Montreal Harbour to 3 cm below average in November, but 86 cm higher than the level last year.

Lake Erie Surge

High westerly winds with peak wind gusts of 109 km/h at Port Colborne on November 18

(continued on next page)

Great Lakes Water Level Information

Lake	November 2013 Monthly Mean Level		Beginning-of-December 2013 Level	
	Compared to Monthly Average (1918–2012)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2012)	Compared to One Year Ago
Superior	6 cm below	30 cm above	6 cm below	32 cm above
Michigan–Huron	36 cm below	33 cm above	34 cm below	38 cm above
St. Clair	11 cm below	20 cm above	9 cm below	22 cm above
Erie	2 cm below	12 cm above	3 cm below	13 cm above
Ontario	7 cm above	31 cm above	3 cm above	32 cm above

Canada

pushed water in Lake Erie toward the eastern end of the lake, causing a maximum positive surge of 1.49 m above pre-storm levels at Buffalo, NY. With this surge in lake level, the flow over Niagara Falls increased to 4,576 m^3/s, the highest amount seen since January 28, 2012. For information on short-period, seasonal, and long-term water level fluctuations on the Great Lakes visit the Canadian Hydrographic Service website at:
www.waterlevels.gc.ca/C&A/fluctuations_e.html

Lake Levels

Levels of all the Great Lakes remain above last year's levels at the beginning of December. Lake Superior's beginning-of-December level was 6 cm below average, but 32 cm above last year's level, and the highest it has been since 2004. Lake Michigan–Huron's level was 34 cm below average. Lower beginning-of-December levels have been recorded on Lake Michigan–Huron in 22 years since 1918 and it is 38 cm higher than it was last year. Lake Erie at the beginning of December was 3 cm below average, but 13 cm higher than last year. Lake Ontario finished the month 3 cm above average and 32 cm above last year's level.

Water Level Forecast

Relative to their beginning-of-December levels and assuming average water supply conditions, all the Great Lakes are expected to continue their typical seasonal decline in December. Assuming average water supplies, forecasts indicate that Montreal Harbour's monthly mean level in December is expected to fall.

For a graphical representation of recent and forecasted water levels on each of the Great Lakes, Lake St. Clair and Montreal Harbour compared to their respective period-of-record monthly averages and extreme levels please refer to the November 2013 edition of the Canadian Hydrographic Service's monthly water levels bulletin at: **www.waterlevels.gc.ca/C&A/bulletin_e.html**

FOR MORE INFORMATION:

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November Precipitation over the Great Lakes*

Great Lakes Basin	**93%**	**Lake Erie (including Lake St. Clair)**	**62%**
Lake Superior	**94%**		
Lake Michigan–Huron	**108%**	**Lake Ontario**	**73%**

November Outflows from the Great Lakes*

Lake Superior	**108%**	**Lake Erie**	**103%**
Lake Michigan–Huron	**93%**	**Lake Ontario**	**108%**

***As a percentage of the long-term November average.**
NOTE: These figures are preliminary.