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LEVELnews

Great Lakes — St. Lawrence River Water Levels

Three Great Lakes Remain Above Average Level

Lakes Superior, Michigan–Huron and Erie had above average monthly and beginning-of-month water levels despite variable basin water supplies for the month of December. Lake Ontario was the wettest in December, retaining slightly above-average amounts of water over the month, and Lake Michigan–Huron was the driest, having retained considerably below-average amounts of water over the month. With all of the lakes remaining relatively ice free during December and fluctuating air temperatures, evaporation and lake-effect precipitation events were significant factors in the December water supplies to the lakes.

- The monthly mean water level of Lake Superior was 14 cm above its period-of-record (1918–2015) average in December and 5 cm lower than December 2015.
- Lake Michigan–Huron's mean level in December was 18 cm above average and 5 cm higher than last December's level.
- Lake Erie's mean monthly level was 18 cm above average and the same as the previous December.
- Lake Ontario was 6 cm below its December average and 1 cm lower than the same time last year.
- The below average trend for Montreal Harbour levels continued for the month of December, a trend that began in the spring of this year. The low trend continued due to relatively low outflow from the Ottawa River for the month along with stable outflow only 4 percent above average from

Great Lakes Water Level Information

Lake	December 2016 Monthly Mean Level		Beginning-of-January 2017 Level	
	Compared to Monthly Average (1918–2015)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2015)	Compared to One Year Ago
Superior	14 cm above	5 cm below	14 cm above	8 cm below
Michigan–Huron	18 cm above	4 cm below	18 cm above	12 cm below
St. Clair	21 cm above	Same	22 cm above	7 cm below
Erie	18 cm above	Same	19 cm above	4 cm below
Ontario	6 cm below	1 cm below	6 cm below	5 cm below

Canada

Lake Ontario.

Despite Lake Superior having considerably higher than average precipitation, which was distributed throughout the month, its level fell by its average (1918–2015) amount of 8 cm through December. This was due in part to the continued higher than average outflow and higher evaporation rates. Lake Michigan–Huron fell by 8 cm, double the average for December, due to the dry conditions in the basin as a result of evaporation and lake-effect snow. Lake Erie's level remained stable over the month, slightly less than the average December rise of 1 cm, but relatively wetter conditions than those seen last month where it tied for the seventh largest November decline on record. Evaporation did not appear to play as big a role on Lake Ontario as on the upper Great Lakes with its level rising 2 cm, which was slightly more than its average December rise of 1 cm.

Beginning-of-January Lake Levels

Lake Superior's beginning-of-January level was 14 cm above average (1918–2015) but 8 cm lower than the level at the same time last year. Lake Michigan–Huron's beginning-of-January level was 18 cm above average but 12 cm lower than last year. Lake Erie was 19 cm above average at the beginning of January, but 4 cm lower than the same time last year. Lake Ontario's level at the start of January was 6 cm below average and 5 cm below this time last year. At the beginning of January, all of the lakes were at least 28 cm above their chart datum level. For more information on chart datum see the July 2016 edition of LEVELnews.

Lake Level Outlook

Relative to their beginning-of-month levels, and assuming average water supply conditions, lakes Superior and Michigan–Huron are predicted to continue their seasonal decline through the month of January, Lake Erie is predicted to remain stable and Lake Ontario predicted to rise. For a graphical representation of recent and forecasted water levels on the Great Lakes, refer to the Canadian Hydrographic Service's monthly water levels bulletin at: tides-marees.gc.ca/C&A/bulletin-eng.html.

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December Precipitation over the Great Lakes*

Great Lakes Basin	**97%**	**Lake Erie**	**82%**
Lake Superior	**113%**	**(including Lake St. Clair)**	
Lake Michigan–Huron	**96%**	**Lake Ontario**	**92%**

December Outflows from the Great Lakes*

Lake Superior	**118%**	**Lake Erie**	**110%**
Lake Michigan–Huron	**108%**	**Lake Ontario**	**104%**

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