

LEVEL *news*



Great Lakes - St. Lawrence River Water Levels

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Winter Finally Arrives to the Great Lakes Region

While the unseasonably warm weather of November and December continued into the first two weeks of January, the Great Lakes region saw a dramatic drop in temperatures as winter set in at mid-month. It then tightened its grip on the region during the last two weeks of the month. While sub-zero temperatures and lake-effect snow replaced the mild, and in some places rainy, weather of early January, water level conditions on each of the Great Lakes reflect the two weather regimes that existed during the month.

Lake Superior

Although temperatures were above normal over the Lake

Superior basin during the first part of January, the warm weather did not bring a significant amount of precipitation to its basin. Total precipitation was well below average for the month as a whole and, once the cold temperatures arrived, evaporation off the lake's surface increased. As a result, January's water supply to Lake Superior was well below average for the month and its level fell by 9 cm during January; about 2 cm more than its long-term average decline for the month.

Lake Superior began February 44 cm below average for this time of year and about 34 cm below its level of one year

ago. The last time Lake Superior was lower at this time of year was in February 1926. The level of Lake Superior is expected to continue to decline during the next couple of months.

Lakes Michigan-Huron

Daily water levels on Lakes Michigan-Huron increased 3 cm during the first few days of January due to precipitation that fell in the form of rain. Subsequent rainfall and reduced evaporation due to the mild weather helped sustain this small increase in levels until the second half of the month. That's when the cold weather set in, evaporation increased and **(continued on next page)**

Great Lakes Water Level Information

Lake	January 2007 Monthly Mean Level		Beginning of February 2007 Level	
	Compared to Monthly Average (1918-2005)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918-2005)	Compared to One Year Ago
Superior	42 cm below	32 cm below	44 cm below	34 cm below
Michigan-Huron	33 cm below	12 cm above	33 cm below	6 cm above
St. Clair	13 cm above	24 cm above	16 cm above	17 cm above
Erie	32 cm above	33 cm above	34 cm above	29 cm above
Ontario	35 cm above	42 cm above	46 cm above	26 cm above

levels on the lakes resumed their seasonal decline. In the end, water supplies to Lakes Michigan-Huron were a bit above average during January and water levels fell just 1 cm during the month. This is 2 cm less than its average decline for January. The level of Lakes Michigan-Huron began February about 33 cm below its long-term average, but about 6 cm higher than one year ago. Water levels are expected to remain about the same on Lakes Michigan-Huron over the next month or two.

Lakes Erie and Ontario

In contrast to the upper lakes, water supplies to both lakes Erie and Ontario were very high during January. The basins of both lakes received periods of heavy rainfall during the first half of the month, which caused water levels to rise sharply. Despite the loss of water due

January Precipitation over the Great Lakes

As a percentage of the long-term January average:

Great Lakes Basin	86%	Lake Erie	169%
Lake Superior	38%	(including Lake St. Clair)	
Lakes Michigan-Huron	78%	Lake Ontario	105%

NOTE: These figures are preliminary

to evaporation during the latter half of the month, water levels on lakes Erie and Ontario increased 12 and 18 cm, respectively, during January. These large increases, along with smaller ones during November and December, have erased the decline in levels that lakes Erie and Ontario experienced from August through mid-November. In fact, both lakes began February at virtually the same level as they were when they peaked on August 5 last summer. Although the current levels on both lakes are similar to average conditions experienced during the summer, they are well above average for this time of year. High water levels combined with open-water conditions at this time of year significantly increase the risk of flood and erosion damage during a winter storm event.

Water levels on Lake Erie are expected to fall a few centimetres during February. However, levels could increase a centimetre or two on Lake Ontario.

Ice Conditions

Ice formation on the Great Lakes and their connecting channels is two to four weeks later than normal in terms of freeze-up this year, due to the very mild temperatures experienced during the early part of winter. Water temperatures finally started to fall during the latter half of January and areas of ice in varying concentrations and stages of development can now be found on each of the lakes.

Please visit the Canadian Ice Service Web site at: <http://ice-glaces.ec.gc.ca/> for the latest ice conditions on each of the Great Lakes.

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January Outflows from the Great Lakes

As a percentage of the long-term January average:

Lake Superior	78%	Lake Erie	116%
Lake Huron	93%	Lake Ontario	111%

NOTE: These figures are preliminary