

LEVEL *news*



Great Lakes - St. Lawrence River Water Levels

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Notable Increases in Levels on Upper Lakes

Lakes Superior and Michigan-Huron continued their annual seasonal rise during June; however, wet weather helped fuel larger-than-average increases in daily water levels on both lakes during the month.

Daily water levels on lakes Superior and Michigan-Huron increased by 14 centimetres during June. That is twice the long-term average June increase for Lake Superior and almost three times that for Lakes Michigan-Huron. These notable increases helped push water levels on these lakes a bit closer to their average water levels for this time of year. Water levels on Lake Superior have also risen above its chart datum elevation.

The wet weather also caused the seasonal decline on Lake Erie to stall. Daily water levels on the lake actually increased by 3 centimetres during June instead of falling as had been anticipated one month ago.

High water level conditions continue to ease on Lake Ontario and along the St. Lawrence River. Daily water levels on Lake Ontario fell 7 centimetres during June and they have declined 21 centimetres since peaking for the year in early May. Water levels in Montréal Harbour have also declined significantly over the past month and a half.

With average water supply conditions, the levels of lakes Superior and Michigan-Huron

are expected to rise during July. Levels on lakes Erie and Ontario are expected to fall. Of course, what really happens depends on how much water each of the lakes actually receives during the month. A complete range of probable water levels on each of the lakes can be found in the June 2008 edition of the Monthly Water Level Bulletin found at: http://www.waterlevels.gc.ca/C&A/tidal_e.html

A Few Words about Water Level Data and Chart Datum

Water levels are measured at several locations along the shores of the Great Lakes, **(continued on next page)**

Great Lakes Water Level Information

Lake	June 2008 Monthly Mean Level		Beginning-of-July 2008 Level	
	Compared to Monthly Average (1918-2007)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918-2007)	Compared to One Year Ago
Superior	16 cm below	35 cm above	13 cm below	38 cm above
Michigan-Huron	40 cm below	8 cm below	36 cm below	16 cm above
St. Clair	12 cm below	6 cm above	4 cm below	15 cm above
Erie	same	5 cm above	3 cm above	14 cm above
Ontario	15 cm above	21 cm above	12 cm above	25 cm above



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their connecting channels and the St. Lawrence River by the National Oceanic and Atmospheric Administration (NOAA) in the United States and Fisheries and Oceans Canada in Canada. Great Lakes-St. Lawrence River water levels are expressed in two ways, either as: 1) a height above (or below) chart datum, or 2) as an elevation above IGLD1985, the current International Great Lakes (vertical) Datum. Simply stated, an elevation above IGLD1985 is an elevation above mean sea level as defined at Rimouski, Quebec.

Water-level gauges are referenced to the same vertical datums that are used for navigation charts. For safety, depths on a navigation chart are shown from a low-water surface or a low-water datum called chart datum. On most lakes, a single, level surface is adopted

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June Precipitation over the Great Lakes

As a percentage of the long-term June average:

Great Lakes Basin	142%	Lake Erie	130%
Lake Superior	155%	(including Lake St. Clair)	
Lakes Michigan-Huron	142%	Lake Ontario	123%

NOTE: These figures are preliminary

as chart datum over the whole lake. Along a river, chart datum is a sloping surface that approximates the slope of the river surface under low-water conditions. Ideally, water levels on a lake or river will seldom fall below its chart datum elevation and only rarely will there be less depth available than what is portrayed on the navigation chart. Since this is not always the case, it is very important that recreational boaters have up-to-date navigation charts and know how water levels compare to chart datum whenever and wherever they cruise or sail.

Real-time water levels on the Great Lakes, their connecting channels and the upper St. Lawrence River are available by telephone from a network of gauging stations operated by the Canadian Hydrographic Service (CHS). Please visit the CHS Web site at:

http://www.waterlevels.gc.ca/C&A/voice_e.html for a list of voice-announcing water-level gauging stations and their telephone numbers.

June Outflows from the Great Lakes

As a percentage of the long-term June average:

Lake Superior	95%	Lake Erie	98%
Lake Huron	88%	Lake Ontario	108%

NOTE: These figures are preliminary