

LEVEL *news*



Great Lakes - St. Lawrence River Water Levels

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The water level of Lake Superior rose by 3 cm last month instead of falling slightly as it typically does during September. On average, the level of Lake Superior has fallen by 1 cm in September over the 1918-2009 period of record currently used for water level comparison purposes. The lake's rise, rather than small decline, was due to the above-average water supplies it received during September, coupled with below-average outflow from the lake during the month.

The levels of the remaining Great Lakes and Lake St. Clair fell during September as they continued their annual seasonal declines during the month. The levels of lakes Michigan-Huron and St. Clair

fell by 6 cm this September, close to their average September declines of 5 and 7 cm, respectively. Lake Erie's level fell by 13 cm during September — 3 cm more than its average September decline, largely due to the below-average water supply received by its basin. The level of Lake Ontario fell by 18 cm during September, which is 5 cm more than its average decline for September. This lake's larger-than-average decline this September was due to the below-average water supplies its basin received combined with its near-average outflow for the month.

As indicated in the water level information table provided here, the levels of each of the

Great Lakes and Lake St. Clair are below their respective average levels for this time of year and lower than they were one year ago.

Water Level Forecast

With average water supply conditions, the level of Lake Superior is expected to fall by a few centimetres during October as it begins its annual seasonal decline. The levels of each of the remaining Great Lakes and Lake St. Clair are also expected to fall as they continue their annual seasonal declines.

For a complete range of probable water levels over the next six months on each of the Great Lakes and Lake St. Clair, please refer to the September **(continued on next page)**

Great Lakes Water Level Information				
Lake	September 2010 Monthly Mean Level		Beginning-of-October 2010 Level	
	Compared to Monthly Average (1918-2009)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918-2009)	Compared to One Year Ago
Superior	32 cm below	20 cm below	29 cm below	17 cm below
Michigan-Huron	36 cm below	21 cm below	34 cm below	18 cm below
St. Clair	16 cm below	21 cm below	10 cm below	12 cm below
Erie	14 cm below	22 cm below	12 cm below	19 cm below
Ontario	3 cm below	7 cm below	4 cm below	2 cm below



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2010 edition of the Canadian Hydrograph Service's monthly water Level Bulletin found at: http://www.waterlevels.gc.ca/C&A/tidal_e.html.

A Few Words about Water Level Data

Water levels are measured at several locations along the shores of the Great Lakes, their connecting channels, and the St. Lawrence River, by Fisheries and Oceans Canada (DFO) in Canada and by the National Oceanic and Atmospheric Administration (NOAA) in the United States. To meet water management and public information needs, Environment Canada (EC) and the U.S. Army Corps of Engineers (USACE) calculate lake-wide average daily and monthly mean water levels for each of the Great Lakes.

The lake-wide average values are determined using levels

recorded at a coordinated network of NOAA and DFO gauges on each lake. These gauges are selected in consideration of short-period water level fluctuations due to meteorological disturbances and the impact of differential crustal movement that continues to tilt the Great Lakes basin over time. The lake-wide average monthly mean water levels and their statistics have been used in the U.S. and Canadian monthly water level bulletins since the early 1990s.

Water level data collected by NOAA and DFO at individual water level gauging stations, and the lake-wide average levels calculated by the USACE and EC, are available on the Internet. Links to these data can be found on Environment Canada's Great Lakes Water Level and Related Data Web page at: <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=79962112-1>.

Both short-term (e.g., instantaneous, hourly and daily) as well as long-term (e.g., monthly and annual) water level data are available

on water level Internet sites. Sometimes, more than one type of water level data may be presented on the same page or graph. As a result, care must be taken to interpret the data correctly.

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September Precipitation over the Great Lakes *

Great Lakes Basin	144%	Lake Erie	97%
Lake Superior	173%	Including Lake St. Clair)	
Lakes Michigan-Huron	146%	Lake Ontario	114%

September Outflows from the Great Lakes *

Lake Superior	67%	Lake Erie	95%
Lake Huron	95%	Lake Ontario	101%

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

NOTE: These figures are preliminary