



LEVELnews

Great Lakes — St. Lawrence River Water Levels

April 2013 Sees Large Rise in Michigan-Huron Level

Very wet conditions over the middle part of the Great Lakes basin resulted in a large and rapid rise in Lake Michigan–Huron's level during April. Precipitation in April was above average on all of the Great Lakes. As is normal for this time of year, water levels on each of the Great Lakes began or continued their seasonal rise in April, and all but Lake Superior rose more than average during the month. Downstream of the lakes, below average outflows from Lake Ontario moderated

the significant increase in outflows from the Ottawa River that resulted in daily water levels at Montreal Harbour rising sharply from well below average to just above average during the last week in April.

- Lake Superior's level rose by 8 cm during April, matching its 1918–2012 period-of-record average change in level for the month.
- Lake Michigan–Huron's level rose by 24 cm, more than double its average April rise of 11 cm. The 24 cm increase

was only 1 cm less than the record April rise of 1951.

- Lake Erie's level rose by 20 cm during April, 7 cm more than its average increase for the month.
- Lake Ontario's level increased by 25 cm during April, 5 cm more than its average increase for the month.
- Montreal Harbour's monthly mean in April was 64 cm below monthly average, **(continued on next page)**

Great Lakes Water Level Information

| Lake | April 2013 Monthly Mean Level | | Beginning-of-May 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 | 34 cm below | 8 cm below | 33 cm below | 3 cm below |
| Michigan–Huron | 63 cm below | 28 cm below | 55 cm below | 14 cm below |
| St. Clair | 28 cm below | 23 cm below | 24 cm below | 15 cm below |
| Erie | 20 cm below | 21 cm below | 15 cm below | 16 cm below |
| Ontario | 16 cm below | 20 cm below | 12 cm below | 5 cm below |

but 15 cm higher than April of last year. The daily mean levels at Montreal rose significantly during the middle of April due to a rapid, significant increase in Ottawa River outflows due to spring runoff, and rose slightly above average values during the last week of April.

In spite of the above average basin supplies in April, it will require many such episodes to return water levels to their average values. As indicated in the water level information table, the levels of all the Great Lakes remain below their respective 1918–2012 averages for the beginning of May, and all are lower than they were one year ago. Lake

Superior's beginning-of-May level was 33 cm below average. Lower beginning-of-May levels have only been recorded on Lake Superior in four years since 1918, most recently in 2011. Lake Michigan–Huron's beginning-of-May level is 55 cm below average. Lower beginning-of-May levels have been recorded on Lake Michigan–Huron in seven years since 1918, most recently in 2003. The levels at the beginning of May on both lakes Erie and Ontario were closer to the middle of their respective ranges, being 15 and 12 cm below average, respectively. Since 1918, May has started with lower levels 31 times for Lake Erie (most recently in 2003) and 35 times for Ontario (most recently in 2010).

Water Level Forecast

Relative to their beginning-of-May levels and assuming average water supply conditions, all of the lakes are expected to rise in May, as is typical for this time of year. Water levels at Montreal Harbour are expected to begin falling during the first week of May as the spring runoff

tapers off. Assuming average water supplies, forecasts indicate that Montreal Harbour's monthly mean level in May is expected to match April's value.

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 April 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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April Precipitation over the Great Lakes*

| | | | |
|---------------------|------|----------------------------|------|
| Great Lakes Basin | 158% | Lake Erie | 149% |
| Lake Superior | 130% | (including Lake St. Clair) | |
| Lake Michigan–Huron | 183% | Lake Ontario | 117% |

April Outflows from the Great Lakes*

| | | | |
|---------------------|-----|--------------|-----|
| Lake Superior | 80% | Lake Erie | 97% |
| Lake Michigan–Huron | 87% | Lake Ontario | 90% |

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

NOTE: These figures are preliminary.