



LEVELnews

Great Lakes – St. Lawrence River Water Levels

Record-high water levels forecasted

All the Great Lakes remain well above their average levels when compared to their seasonal values from 1918 to 2018. Well-above-average water levels are forecasted to continue through the summer.

Lake Erie and Lake St. Clair set new record-high water levels for the beginning of May and are likely to be above their monthly-average-record-high levels for May. Lake Superior is very close to record-high levels and is likely to surpass records in the coming months. Both Lake Superior and Lake Michigan–Huron were at their highest in 33 years.

All the Great Lakes received above-average water supplies in April, due mainly to above-average precipitation, along with snowmelt in the upper lakes. This resulted in well-above-average water level rises over April for all the lakes.

Outflows from all the lakes were also above average for April, however the Lake Ontario outflow was reduced and continually adjusted to balance high water levels on Lake Ontario and the lower St. Lawrence River starting in mid-April.

Record-high flows from the Ottawa River into the St. Lawrence River at Montreal resulted in severe flooding in both the Ottawa and the lower St. Lawrence River. The record-high outflow from the Ottawa River was due to well-above-average rainfall across the river's large watershed in combination with rapidly melting snow from warming temperatures.

Great Lakes Water Level Information				
Lake	April 2019 Monthly Mean Level		Beginning-of-May 2019 Level	
	Compared to Monthly Average (1918–2018)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2018)	Compared to One Year Ago
Superior	35 cm above	14 cm above	38 cm above	23 cm above
Michigan–Huron	58 cm above	18 cm above	65 cm above	24 cm above
St. Clair	65 cm above	10 cm above	79 cm above	26 cm above
Erie	60 cm above	6 cm above	70 cm above	16 cm above
Ontario	27 cm above	14 cm above	43 cm above	25 cm above

Be prepared for high water

Beginning-of-May levels of lakes Superior, Michigan-Huron and Erie were the highest they have been in over 30 years. Lake Ontario levels were well above average.

Water levels of all the Great Lakes seasonally rise through May, so all should be prepared for impacts from potential flooding in low-lying areas and shoreline erosion.

Information on flooding

Great Lakes water levels are hard to predict weeks in advance due to natural variations in weather. To stay informed on Great Lakes water levels and flooding, visit the Ontario flood forecasting and warning program web site at <https://www.ontario.ca/flooding>.

Local flood watches and flood warning information are issued by your local Conservation Authority at <https://conservationontario.ca/conservation-authorities/find-a-conservation-authority/> or Ministry of Natural Resources and Forestry district office at

<https://www.ontario.ca/page/ministry-natural-resources-and-forestry-regional-and-district-offices>.

Additional information can also be found at the International Lake Superior Board of Control web site, <https://www.ijc.org/en/labc>, and the International Lake Ontario-St. Lawrence River Board web site, <https://ijc.org/en/loslrb>.

More information is also provided in the Water levels forecast section at the end of this newsletter.

April monthly levels

All the Great Lakes had well-above-average [monthly-mean water levels](#) in April.

Lake Superior was 35 cm above its period-of-record (1918–2018) April monthly-mean water level, the 2nd highest April level on record and

just 7 cm below the record-high March level set in 1986.

Lake Michigan–Huron’s monthly-mean level in March was 58 cm above average, 18 cm above last April’s level, the 8th highest April mean level on record and the highest it has been since 1987.

Lake Erie’s monthly-mean level was 60 cm above average, 6 cm above the level of last April, the 8th highest April mean level on record and the highest it has been since 1998.

Lake Ontario’s April monthly-mean level was 27 cm above average and 14 cm higher than a year ago, but 20 cm lower than in April 2017.

April Precipitation over the Great Lakes^{1,2}

Great Lakes Basin	130%	Lake Erie	138%
Lake Superior	126%	(including Lake St. Clair)	
Lake Michigan–Huron	130%	Lake Ontario	123%

April Outflows from the Great Lakes¹

Lake Superior	126%	Lake Erie	121%
Lake Michigan–Huron	122%	Lake Ontario	105%

¹ As a percentage of the long-term April average.

² US Army Corps of Engineers

NOTE: These figures are preliminary.

Lake level changes

High water supplies in April, due mainly to above-average precipitation and snowmelt, resulted in well-above-average water level rises during April for all of the Great Lakes.

Lake Superior’s levels rose by 13 cm in April, when on average (1918–2018), it rises 8 cm through the month of April.

Lake Michigan–Huron rose by 20 cm, the 6th highest April rise on record and almost double the 11 cm average rise.

Lake Erie’s level rose by 24 cm, almost double its average April rise of 13 cm.

Lake Ontario rose 39 cm, the 6th largest April rise on record, and more than its average 21 cm April rise.

Beginning-of-May lake levels

All the Great Lakes began May at least 38 cm above average and all the lakes had levels above those seen at the beginning of May 2018.

Lake Superior's beginning-of-May level was 38 cm above average (1918–2018) and 23 cm higher than May 2018. The beginning-of-May level was the 2nd highest on record and 5 cm below the record-high value set in 1986.

Lake Michigan–Huron's beginning-of-May level was 65 cm above average and 24 cm higher than its level at the same time last year. Lake Michigan–Huron was the highest it had been since 1986 but is still 17 cm below its record high set in 1986.

Lake Erie was 70 cm above average at the beginning of May and 16 cm higher than the same time last year. This broke the record high beginning-of-May level by 2 cm set in 1985.

Lake Ontario's level at the start of May was 43 cm above average and 25 cm higher than the water levels last year. The water levels on Lake Ontario at the beginning of May were higher as recently as 2017 and were 47 cm below the daily-average-record-high level of 75.88 cm set on May 29, 2017.

At the beginning of May, all of the lakes were at least 49 cm above their chart datum level.

Water levels forecast

Relative to their beginning-of-May levels and with average water supplies for this time of year all of the Great Lakes rise over the month of May.

Looking ahead to late-summer water levels, it is likely that levels will continue to be well above average for all the Great Lakes based on their beginning-of-May levels and past conditions on the lakes (1918–2018), even if very dry conditions occur.

Lake Superior's probable range of future lake levels looking forward to August are between 19 cm and 45 cm above average. This forecast, based on beginning-of-May conditions, indicates that if the lake receives average water supplies it will be above record levels (1918–2018) in June and remain above record levels until August.

Within its probable range of lake levels between June and August, Lake Superior could exceed its record values by 14 cm if very wet conditions occur but is more likely to exceed it by only a few centimetres, and if very dry conditions occur it could drop below record values by 13 cm.

The probable range of values to August for Lake Michigan–Huron are between 48 cm and 78 cm above average, and even if the lake receives exceptionally wet conditions, the levels are forecasted to stay below record high values by at least 5 cm.

The probable range of values for Lake Erie to August are between 35 cm and 75 cm above average. If very wet conditions occur Lake Erie could exceed record high levels by 8 cm within the probable range of future lake levels, however it is more likely to be around record high values for May and drop below record values by June.

Lake Ontario's levels are likely to remain below record values through to August, but could exceed record high values by 9 cm if exceptionally wet conditions occur. Lake Ontario's probable range of levels is between 16 cm above average with very dry conditions and 84 cm above average with very wet conditions.

For more information on the probable range of water levels consult the [July 2018 edition of LEVELnews](#).

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: <https://waterlevels.gc.ca/C&A/bulletin-eng.html>.

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ISSN 1925-5713

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