



LEVELnews

Great Lakes – St. Lawrence River Water Levels

High outflows offset water supplies in March

Water supplies to all of the Great Lakes except Lake Erie were above average in March, but high outflows from the lakes had the net effect of average to below average level changes for all of the Great Lakes over the month.

The forecast based on beginning-of-April levels indicates Lake Superior as the only lake that could reach record high values in the coming months, if well above average wet conditions are encountered. Lake Erie is no longer forecasted to reach record levels even with very wet conditions due to below average water supplies and above average outflows for March.

The lower St. Lawrence River remained above average due to above-average outflows from Lake Ontario and average flow from the Ottawa River.

All the Great Lakes remain well above their average levels when compared to their seasonal values from 1918 to 2018. Above average water levels are expected to continue.

Be prepared for high water

Beginning-of-April levels of lakes Michigan-Huron and Erie were the highest they have been in over 20 years for this time of year, and Lake Superior was as high as it has been in over 30 years.

Water levels seasonally rise in the spring so all should be prepared for impacts from potential flooding in low-lying areas and shoreline erosion.

Great Lakes Water Level Information				
Lake	March 2019 Monthly Mean Level		Beginning-of-April 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	34 cm above	3 cm above	33 cm above	6 cm above
Michigan–Huron	56 cm above	10 cm above	56 cm above	14 cm above
St. Clair	65 cm above	5 cm above	64 cm above	13 cm below
Erie	58 cm above	2 cm below	59 cm above	5 cm above
Ontario	29 cm above	4 cm above	25 cm above	13 cm above

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/law-and-safety/flood-forecasting-and-warning-program#section-2>.

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 Lake Superior Board of Control web site, <https://www.ijc.org/en/lisbc>, 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.

March monthly levels

All the Great Lakes had well above average [monthly mean water levels](#) in March. Lake Erie was the highest above average while Lake Ontario was the closest to average for the month.

Lake Superior was 34 cm above its period-of-record (1918–2018) March monthly mean water level, the 2nd highest March level on record and just 4 cm below the record high March level set in 1986.

Lake Michigan–Huron’s monthly mean level in March was 56 cm above average, 10 cm above last March’s level, the 10th highest March mean

level on record and the highest it has been since 1997.

Lake Erie’s monthly mean level was 58 cm above average, 2 cm lower than the level of last March, and the 11th highest March mean level on record.

Lake Ontario’s March monthly mean level was 29 cm above average and 4 cm higher than a year ago, but 3 cm lower than March 2017.

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

Great Lakes Basin	81%	Lake Erie	101%
Lake Superior	79%	(including Lake St. Clair)	
Lake Michigan–Huron	75%	Lake Ontario	79%

March Outflows from the Great Lakes¹

Lake Superior	138%	Lake Erie	122%
Lake Michigan–Huron	124%	Lake Ontario	128%

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

² US Army Corps of Engineers

NOTE: These figures are preliminary.

Lake level changes

Above-average outflows along with seasonal to above-seasonal evaporation rates from all of the Great Lakes offset above-average water supplies in March resulting in average to below-average level changes.

Lake Superior’s levels fell by its average (1918–2018) amount of 2 cm through the month of March.

Lake Michigan–Huron rose by its average 4 cm.

Lake Erie’s level rose by 10 cm, less than its average March rise of 13 cm.

Lake Ontario rose only 2 cm, significantly less than its average 14 cm March rise, as very high outflows offset high water supplies to the lake.

Beginning-of-April lake levels

All the Great Lakes began April at least 25 cm above average and all the lakes had levels above those seen at the beginning of April 2018.

Lake Superior's beginning-of-April level was 33 cm above average (1918–2018) and 6 cm higher than April 2018. The beginning-of-April level was the 2nd highest on record and 6 cm below the record high value set in 1986.

Lake Michigan–Huron's beginning-of-April level was 56 cm above average and 14 cm higher than its level at the same time last year. Lake Michigan–Huron is the highest it has been since 1997 but is still 30 cm below its record high set in 1986.

Lake Erie was 59 cm above average at the beginning of April and 5 cm higher than the same time last year. Lake Erie is the highest it has been since 1998 but is 20 cm below its record high set in 1985.

Lake Ontario's level at the start of April was 25 cm above average and 13 cm higher than the water levels last year.

At the beginning of April, all of the lakes were at least 36 cm above their chart datum level.

Water levels forecast

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

Looking ahead to early 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-April levels and past conditions on the lakes (1918–2018) and with average water supplies.

Lake Superior's probable range of future lake levels looking forward to July are between 14 cm and 41 cm above average. This forecast, based on beginning-of-April conditions, indicates that if the lake receives very wet supplies it could be around record levels (1918–2018) in May and above record high values in June. However it is still more likely that they will remain below record high values.

The probable range of values to July for Lake Michigan–Huron are between 36 cm and 71 cm above average, and even if the lake receives

exceptionally wet conditions, the levels are forecasted to stay below record high values.

The probable range of values for Lake Erie to the month of July are between 25 cm and 65 cm above average, which are below record high levels.

Lake Ontario's levels are forecasted to stay well below record high values, ranging between 18 cm below average with very dry conditions and 52 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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