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LEVELnews

Great Lakes — St. Lawrence River Water Levels

Above-average Great Lake levels likely to continue into spring

All the Great Lakes continued to show above average water levels at the beginning of February. Water levels are predicted to stay above average at least into the spring for all the lakes. Levels on the St. Lawrence River were mixed with below average levels on the upper river and record high levels reached on the lower river due to ice impacts and high outflows from Lake Ontario at the end of January.

January monthly lake levels

Monthly means for all the lakes were above average in January. The January monthly mean water level of Lake Superior was 33 cm above its period-of-record (1918–2016) average and 18 cm higher than January 2017. Lake Superior's monthly January level was the second highest January mean level on record and 5 cm below the record high set in 1986.

Lake Michigan–Huron's mean level in January was 44 cm above average, 26 cm higher than last January's level and the highest since 1998. Lake Erie's mean monthly level was 35 cm above average, 6 cm above its level the previous January and was last seen this high in 2012. Lake Ontario's mean monthly January level was 27 cm above average, 21 cm higher than the level last year but was higher at this time of year as recent as 2007.

Great Lakes Water Level Information

Lake	January 2018 Monthly Mean Level		Beginning-of-February 2018 Level	
	Compared to Monthly Average (1918–2016)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2016)	Compared to One Year Ago
Superior	33 cm above	18 cm above	33 cm above	18 cm above
Michigan–Huron	44 cm above	26 cm above	46 cm above	26 cm above
St. Clair	39 cm above	4 cm above	57 cm above	14 cm above
Erie	35 cm above	6 cm above	38 cm above	2 cm below
Ontario	27 cm above	21 cm above	32 cm above	17 cm above

Canada

Lake level changes

Mixed conditions across the Great Lakes basin in January resulted in variable response between lakes when compared to their average level changes. After December's well-above-average water supplies, Lake Superior received below-average water supplies in January and, combined with above-average January outflow, contributed to the lake level dropping 8 cm over the month of January when its average (1918–2016) decline is 7 cm. Lake Michigan–Huron received relatively wet water supplies in January, so its level remained stable over the month, when on average it declines 2 cm. The wet supplies on Lake Erie were offset by greater-than-average outflow, resulting in its level falling its average amount of 2 cm over January. Lake Ontario received well-above-average water supplies that more than offset by above-average outflows resulting in its levels rising 16 cm over January, when on average it rises 6 cm over the month.

Beginning-of-February lake levels

All of the Great Lakes levels were well above average at the beginning of February. However Lake Erie's level was slightly below its level the same time in 2017, while all the other lakes were above last year's levels. Lake Superior's beginning-of-February level was 33 cm above average (1918–2016), 18 cm above the level at this time last year and 5 cm below the record high for this time of year set in 1986. Lake Michigan–Huron's beginning-of-February level was 46 cm above average, 26 cm higher than last year and the highest it has been since 1997. Lake Erie was 38 cm above average at the beginning of February but 2 cm below its level this time last year. Lake Ontario's level at the start of February was 32 cm above average, 17 cm above this time last year and has been this high as recently as 2012. At the beginning of January, all of the lakes were at least 42 cm above their chart datum level.

Water levels forecast

Looking ahead to spring and early summer water levels, it is likely that levels will continue to be well above average based on their beginning-of-February levels and past conditions on the lakes (1918–2016). Looking forward if the lakes encounter wet conditions, lakes Michigan–Huron, Erie and Ontario are not likely to reach record high levels even if relatively wet conditions occur over the next six months. Lake Superior levels are near record-high, but would only reach record values if relatively wet conditions occur over the next few months. Looking at lake levels if dryer conditions are encountered, Lake Ontario levels are the most likely to return to average values and could do so as soon as early spring with relatively dry conditions over the next few months, while the other lakes are predicted to stay above average into the summer months, even if relatively dry conditions are encountered. Relative to their beginning-of-February levels, and assuming average water supply conditions, lakes Superior and Michigan–Huron are expected to follow their seasonal declines through February. On average Lake Ontario levels rise through

January Precipitation over the Great Lakes*

Great Lakes Basin	**73%**	**Lake Erie (including Lake St. Clair)**	**70%**
Lake Superior	**71%**		
Lake Michigan–Huron	**70%**	**Lake Ontario**	**91%**

January Outflows from the Great Lakes*

Lake Superior	**108%**	**Lake Erie**	**114%**
Lake Michigan–Huron	**107%**	**Lake Ontario**	**114%**

***As a percentage of the long-term January average.**
NOTE: These figures are preliminary.

February, however outflow is expected to be well above average and due to this its levels are expected to decline. Lake Erie is expected to rise through February with average water supplies. Everyone around the Great Lakes should be aware that soon all the lakes are likely to be into their seasonal spring level rises as average spring water supplies are greater than those through the winter months. 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: http://tides-marees.gc.ca/C&A/bulletin-eng.html.

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