

## Great Lakes – St. Lawrence River Water Levels

### Lake Michigan-Huron had a very wet May, while the other lakes were drier than average

During the month of May, the Great Lakes Basin experienced the following:

- The mean monthly water level of Lake Superior was slightly below average, while Lake Michigan-Huron was slightly above average. Lake Erie remained well above average, while Lake Ontario was below average.
- Lake Michigan-Huron experienced very wet water supply conditions (a combination of the precipitation, evaporation, and runoff), while all the other lakes had dry water supply conditions.
- May precipitation amounts were higher than average for Lakes Superior and Michigan-Huron, and below average for Lakes Erie and Ontario.
- Lake Michigan-Huron experienced a higher-than-average monthly rise, and Lakes Superior and Erie had less than average rises, while Lake Ontario declined when it typically rises at this point in the year.

Great Lakes water level information:					
May 2024 monthly mean levels					
Lake	Level <sup>a</sup>	Compared to May monthly average (1918–2023)	Compared to May 2023	Compared to record high (1918–2023)	Notes
Superior	183.33 m	4 cm below	34 cm below	44 cm below	-
Michigan–Huron	176.58 m	7 cm above	10 cm below	79 cm below	-
St. Clair	175.41 m	25 cm above	4 cm below	57 cm below	-
Erie	174.62 m	28 cm above	3 cm below	46 cm below	-
Ontario	74.96 m	7 cm below	40 cm below	84 cm below	-

<sup>a</sup>Water levels are referenced to International Great Lakes (Vertical) Datum 1985 (IGLD85). For more information, please visit International Great Lakes Datum Update – Great Lakes Coordinating Committee at <https://www.greatlakescc.org/en/international-great-lakes-datum-update/>



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This is the time of year when all lakes typically continue their seasonal rise into summer.

With water levels remaining above average on some lakes and the possibility of large storms and winds, low-lying areas are at risk for accelerated coastline erosion and flooding. For current information and forecasts, please refer to the sources listed below.

Lake levels are often presented compared to “Chart Datum.” See below for a further explanation of what this term means.

<b>Great Lakes water level information:</b>				
<b>May 2024 lake level changes<sup>a</sup></b>				
Lake	May lake level change	May monthly average change (1918-2023)	Compared to average May change (1918-2023)	Notes
Superior	7 cm rise	10 cm rise	less than average rise	-
Michigan–Huron	10 cm rise	8 cm rise	greater than average rise	-
St. Clair	8 cm rise	7 cm rise	close to average rise	
Erie	3 cm rise	6 cm rise	less than average rise	
Ontario	1 cm decline	8 cm rise	decline instead of a rise	-

<sup>a</sup> Lake level changes are based on the differences in levels at the beginning of the months and not the monthly average levels.

Great Lakes water level information:					
Beginning-of-June 2024 level <sup>a</sup>					
Lake	Level <sup>a,b</sup>	Compared to June beginning-of-month average (1918–2023)	Compared to June 2023	Compared to record high (1918-2023)	Notes
Superior	183.37 m	5 cm below	31 cm below	45 cm below	-
Michigan–Huron	176.62 m	8 cm above	7 cm below	82 cm below	-
St. Clair	175.48 m	31 cm above	4 cm above	52 cm below	-
Erie	174.63 m	27 cm above	1 cm above	50 cm below	-
Ontario	74.94 m	13 cm below	36 cm below	95 cm below	-

<sup>a</sup> At the beginning of June, all of the Great Lakes were at least 17 cm above their chart datum level. Chart datum is a reference elevation for each lake that provides more information on the depth of water for safe boat navigation on the lakes. For more information, please visit Low Water Datum – Great Lakes Coordinating Committee at <https://www.greatlakescc.org/en/international-great-lakes-datum-update/low-water-datum/>

<sup>b</sup> Water levels are referenced to International Great Lakes (Vertical) Datum 1985 (IGLD85). For more information, please visit International Great Lakes Datum Update – Great Lakes Coordinating Committee at <https://www.greatlakescc.org/en/international-great-lakes-datum-update/>

**Water levels forecast**

Lake Superior ended the month just below its average level and is expected to remain near average under typical water supply conditions. If there are very wet water supply conditions, lake levels could move above average, while very dry conditions would result in lake levels moving further below average.

Lake Michigan-Huron is expected to remain slightly above average under typical water supply conditions, although wetter than average conditions could result in a further increase above average. Drier than average conditions could result in lake levels falling below average within the next few months.

Lake Erie is expected to stay above average under most water supply scenarios. It would take very dry water supply conditions for lake levels to fall below average by early summer.

Lake Ontario water levels are expected to remain near or slightly below average under typical water supply conditions. Wetter than average water supply conditions may result in above average lake levels, while drier than average water supply conditions would result in the level moving below average.

For more information on the probable range of water levels, consult <https://www.canada.ca/en/environment-climate-change/services/water-overview/quantity/great-lakes-levels-related-data/levelnews-great-lakes-st-lawrence.html#projection>.

For a graphical representation of recent and forecasted water levels on the Great Lakes, refer to <https://www.tides.gc.ca/en/monthly-water-level-bulletin-great-lakes-and-montreal-harbour>.

May 2024 basin statistics			
Lake	Precipitation- percentage of LTA (1981 – 2010) <sup>a,b</sup>	Net basin supply (probability of exceedance) <sup>c,d</sup>	Outflows (percentage of LTA) <sup>a</sup>
Superior	119%	74% (dry)	95%
Michigan-Huron	111%	29% (very wet)	106%
Erie	74%	64% (dry)	107%
Ontario	71%	76% (very dry)	108%

<sup>a</sup> As a percentage of the long-term average (LTA).  
<sup>b</sup> Environment and Climate Change Canada – Canadian Precipitation Analysis System. For more information, please visit: <https://www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services/display-download/technical-documentation-regional-precipitation-analysis.html>  
<sup>c</sup> <5% extremely wet; <25% very wet; <45% wet; 45-55% average; >55% dry; >75% very dry; >95% extremely dry.  
<sup>d</sup> Please refer to the LEVELnews “What is net basin supply” (<https://www.canada.ca/en/environment-climate-change/services/water-overview/quantity/great-lakes-levels-related-data/levelnews-great-lakes-st-lawrence.html#projection>) for a description of net basin supply.  
**Note:** The data contained in this report are provisional and are subject to change. Data are calculated from the best available observations at the time of posting.

## Chart Datum

At times you may hear the Great Lakes levels compared to chart datum. A chart datum is a horizontal plane used to refer current lake levels to, providing more information on the depth of water for safe boat navigation on the lakes. The chart datum used on navigation charts for the Great Lakes is a low-water level set from recorded lake levels for each lake. Lake levels are expected to be above the chart datum 95% of the time.

At the beginning of June, all of the Great Lakes levels were at least 17 cm above chart datum level. Nautical charts compare the bottom of the lake to the chart datum, so for instance, if a location on the nautical chart indicates that the bottom of the lake is 1 m below chart datum, then using June 1 water levels, you can tell that the depth of water will be at least 1.17 m at that location.

For more information on chart datum refer to the Fisheries and Oceans Canada web page on vertical datums at <https://www.tides.gc.ca/en/vertical-datum-chart-references#about> and the chart datum for each of the Great Lakes is given in the Canadian Hydrographic Service’s monthly water levels bulletin at <https://www.tides.gc.ca/en/monthly-water-level-bulletin-great-lakes-and-montreal-harbour>.

## Flood Information

With water levels remaining high on some lakes, there is a high risk of flooding. Great Lakes water levels are difficult to predict weeks in advance due to natural variations in weather. To stay informed about Great Lakes water levels and flooding, visit the Ontario flood forecasting and warning program website at <https://www.ontario.ca/flooding>.

Additional information can also be found at <https://www.ijc.org/en/labc>, and <https://ijc.org/en/loslrb>.

## Information on current water levels and marine forecasts

**Monthly levels:** A monthly water level bulletin, produced by Fisheries and Oceans Canada, is available at <https://www.tides.gc.ca/en/monthly-water-level-bulletin-great-lakes-and-montreal-harbour> and click on the link “[Full Monthly Water Level Bulletin for the Great Lakes and Montréal Harbour \(PDF\)](#)”. This publication is intended to complement the information provided by LEVELnews on a monthly basis.

**Daily levels:** Current daily lake-wide average levels of all the Great Lakes are available at <https://lre-wm.usace.army.mil/reports/greatLakes/greatLakesLevelsThisMonth/greatLakesLevelsThisMonth.html>.

The daily average water level is an average taken from a number of gauges across each lake and is a good indicator of the overall lake level when it is changing relatively rapidly due to recent high precipitation.

**Hourly levels:** Hourly lake levels from individual gauge sites can be found at the Government of Canada Great Lakes Water Level Gauging Stations website at <https://canada-preview.adobecqms.net/en/environment-climate-change/services/water-overview/quantity/great-lakes-levels-related-data.html>. These levels are useful for determining real-time water levels at a given site, however, it should be noted that they are subject to local, temporary effects on water levels such as wind and waves.

**Marine forecasts:** A link to current Government of Canada marine forecasts for wave heights for each of the Great Lakes can be found at <https://www.canada.ca/en/environment-climate-change/services/water-overview/quantity/great-lakes-levels-related-data.html> under the “Wave and wind data heading”. Current marine forecasts for Lakes Superior, Huron, Erie and Ontario are available by clicking on the link of the lake in which you are interested. To view a text bulletin of recent wave height forecasts for all of the Great Lakes, click on the “Text bulletin wave height forecasts for the Great Lakes and St. Lawrence River” link.

**FOR MORE INFORMATION:**

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