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## NEWS

# Great Lakes ice cover reaches historic low. Here's what we know.



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We're in winter's home stretch and the Great Lakes just reached a historic low ice cover for this time of year.

It first dipped below the record for this time of year on Sunday, and it has continued slipping. As of Wednesday, the Great Lakes overall had just over 6.5 percent ice cover – the lowest for a Feb. 15 since scientists began recording ice cover more than 50 years ago.

While you may be enjoying the milder winter, almost nothing good comes from such a record.

At this time of year, ice cover should be roughly 40 percent. Ice cover hasn't come close to the average this year.

Here's what we know.

## **Lack of ice can impact the lakes' ecosystem throughout the year**

Declining ice cover, warming lakes and intensifying rainfall from climate change are prime conditions for algae blooms, which form from agricultural runoff. The thick, green mats that form on the lakes' surface are sometimes toxic to humans and pets.

These blooms appear every summer in Lake Erie and the bay of Green Bay in Lake Michigan. And now, these blooms are showing up in Lake Superior, a lake largely thought of as pristine.

**More:** Blue-green algae blooms, once unheard of in Lake Superior, are a sign that ‘things are changing’ experts say

A lack of ice can also result in low lake levels later in the summer, as the lakes heat up quicker and favor evaporation. But how much rainfall the lakes' get later in the year will be the real wild card determining whether we will see lower lake levels, said Michael Notaro, the director of the Center on Climatic Research at the University of Wisconsin-Madison.

It can also impact important fish throughout the region. For instance, lake whitefish, which spawn in the fall, need nearshore ice to protect their eggs while they incubate over the winter months. Ice tempers the strong winds and waves from winter storms that can stir up the sediment and reduce the number of fish that hatch in the spring.

## **Low ice can impact people living around the region**

Not only does a lack of ice take away fun winter pastimes, like ice-fishing, but it can have a dangerous impact on people living throughout the region.

Ice suppresses waves during winter storms. So when there is no ice, waves are larger, which can lead to lakeshore flooding and erosion. It can also make conditions especially dangerous for the shipping industry.

Low ice cover can also cause more lake-effect snow. Water evaporates off the lakes when cold, dry air masses travel across them. When the air mass hits land, it drops water as lake-effect snow. So far this winter Buffalo, N.Y., which sits on the shores of Lake Erie, has seen multiple disastrous and deadly lake-effect snow events.

**More:** It's mid-January and the Great Lakes are virtually ice-free. That's a problem.

## The lake conditions appear to be symptoms of climate change

The U.S. National Ice Center Forecast released a seasonal outlook at the beginning of December predicting above average ice cover for Lake Superior, normal ice cover for Lake Huron, and below normal ice cover for Lakes Michigan, Erie and Ontario.

But the winter turned out mild and the ice cover didn't approach expectations. Part of the reason is that it's a weak La Niña year, Notaro said, making ice cover unpredictable.

The main reason is likely climate change, he said. Sixteen of the last 25 years have had below-average ice, and this year will add another to the list.

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## More ice is still possible this season

As of Wednesday, ice cover ranges from 0.7% on Lake Erie to just above 11% on Lake Huron. Lake Michigan has just under 8%, most of which is in the bay of Green Bay. Lakes Superior and Ontario have 4.9% and 1.5%, respectively.

But ice cover is a dynamic process that can change quickly.

There's the potential for colder weather to arrive across the region in the next two weeks, according to Notaro, which may help ice expansion.

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