

# Minnesota lakes have lost about 2 weeks of ice coverage over last 50 years as winters warm

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Minnesota lakes are losing one of the main things that makes them special: ice. Winters have warmed to the point that the state's lakes have lost an average of two weeks of ice coverage since the late 1960s, according to data released this week by the Minnesota Pollution Control

Agency and Department of Natural Resources.

The loss of ice has been one of the main drivers of toxic algae blooms, which have shut down lakes across the state, as well as a key reason that walleye, cisco, [lake trout](#) and other cold water-loving fish have been struggling and losing territory to species such as bass.

"Fish are cold-blooded and temperature is the driving force to every aspect of their lives, including reproduction and survival," said Sarah Strommen, DNR commissioner. "Many lakes are becoming unsuitable for walleye and they're becoming too hospitable for invasive species."

Action is needed to protect winter as we know it, Strommen said.

"We're the land of ten thousand lakes, the state of hockey, the state of fishing," she said. "These unique qualities of our state's identity face an uncertain future."

The DNR and Pollution Control Agency are pushing to use federal infrastructure dollars, as well some of the state's projected \$7.7 billion surplus, to cut the greenhouse gas emissions that have been warming the climate.

The state has fallen woefully behind its promises to cut emissions. In 2007, lawmakers passed a bipartisan measure to cut carbon emissions to under 40 million tons by 2050. The state hasn't come close to the progress needed to reach that goal, and actually allowed emissions to increase in 2017 and 2018—the last two years for which data are available.

The simplest solutions are to protect and restore peatlands, forests and prairies that can store vast amounts of carbon and keep it out of the air, said Katrina Kessler, Pollution Control Agency commissioner.

"To put it simply, what we're putting in our air is affecting our water," Kessler said.

The state also needs to build up infrastructure for electric vehicles and commit to more clean energy production, she said.

"Our commitment is to harness as much as possible any state investment and federal investment to make progress here," Kessler said.

The state has up to 100 years of records on some lakes and rivers, charting exactly when they froze and thawed. Ice-in and ice-out dates can fluctuate greatly from year to year. But when the data are plotted out for several decades, the trend is clear, said Peter Boulay, state climatologist.

"Every [lake](#) is different," Boulay said. "Over time we've seen that span of ice-in and ice-out—that span of ice coverage—grow shorter."

Climatologists analyzed ice and water temperature records on nearly 300 lakes spread out across north, central and southern Minnesota.

Northern lakes have been hit the hardest by warmer winters. Lake Bemidji has lost about 19 days of ice coverage since 1967. Lake Itasca, the source of the Mississippi River, has lost 14 days. Medicine Lake, in the Twin Cities, has lost 12.

Over that time average water temperatures have increased about 4 degrees, the data show.

It's not just the ice, but the missing snow, too, that's changing the state's winters, said Luke Skinner, assistant superintendent of the Three Rivers Park District.

Winter hiking, cross country skiing, snowmobiling and ice skating are all crammed into a shorter season, he said.

"Warming nights, in particular, are impacting a lot of what we can do," Skinner said. "The quality of ice and being able to ski in our parks is so important to getting people outside, especially our kids, in the wintertime."

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