

Midwest

Regional Climate Impacts

Illinois, Indiana, Iowa, Michigan,
Minnesota, Missouri, Ohio, Wisconsin

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ENVIRONMENTAL
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Fast Facts Series

Climate change implicates agriculture and the Great Lakes ecosystem



Climate change is projected to increase extreme **heat** events across the Midwest, which amplify health risks such as respiratory illnesses.



Increased flash **drought**—drought that onsets rapidly—has caused moisture stress to crops and native vegetation. This leads to financial losses and mental health impacts for farmers in the Midwest.



Climate change is affecting **precipitation** across the Midwest. For example, in Wisconsin, average precipitation has increased 17% since 1950.

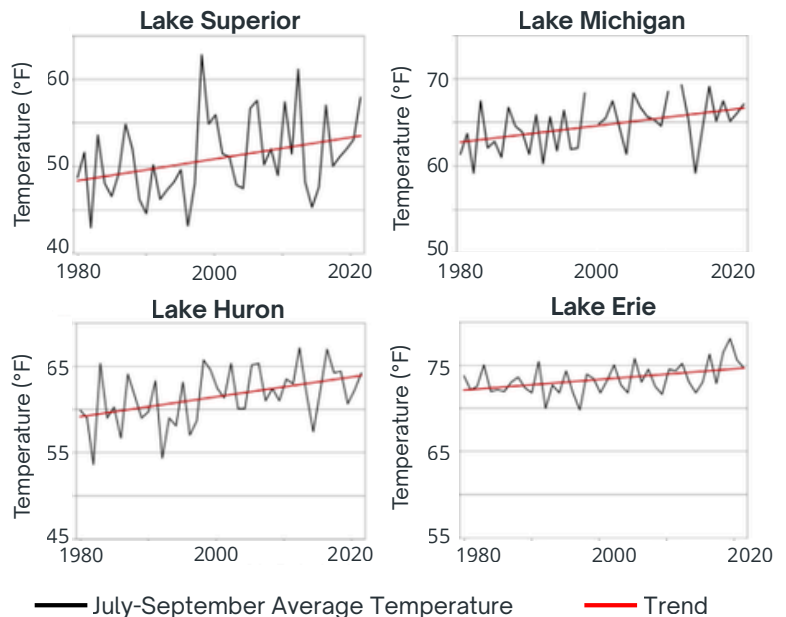


The Great Lakes are the largest freshwater ecosystem on Earth and are among the **fastest-warming lakes** in the world.

Changes in water quality, quantity, and management are leading to litigation

Litigation is arising over the effects of climate change on water quality and quantity in the Great Lakes. Disputes stemming from changes in water levels have raised questions related to the **public trust doctrine** and whether the public has access to the shore for walking and fishing.

Great Lakes Summer Surface Water Temperature Trends



Summer surface water temperatures have been increasing for Lakes Superior, Michigan, Huron, and Erie since the late 1970s. Figure adapted from the Fifth U.S. National Climate Assessment.

CASE SPOTLIGHT: WATER QUALITY

Environmental Law & Policy Center v. U.S. Environmental Protection Agency (N.D. Ohio 2023)

Summary: In a Clean Water Act citizen suit filed by environmental groups, a federal district court approved a consent decree that established a binding schedule for EPA and Ohio to develop a plan for reducing nutrient pollution and algal blooms in western Lake Erie.

Science: Citing the most recent U.S. National Climate Assessment, plaintiffs asserted that reducing water pollution was “especially urgent” because algal bloom and nutrient pollution problems “**are likely to be exacerbated by climate change.**”



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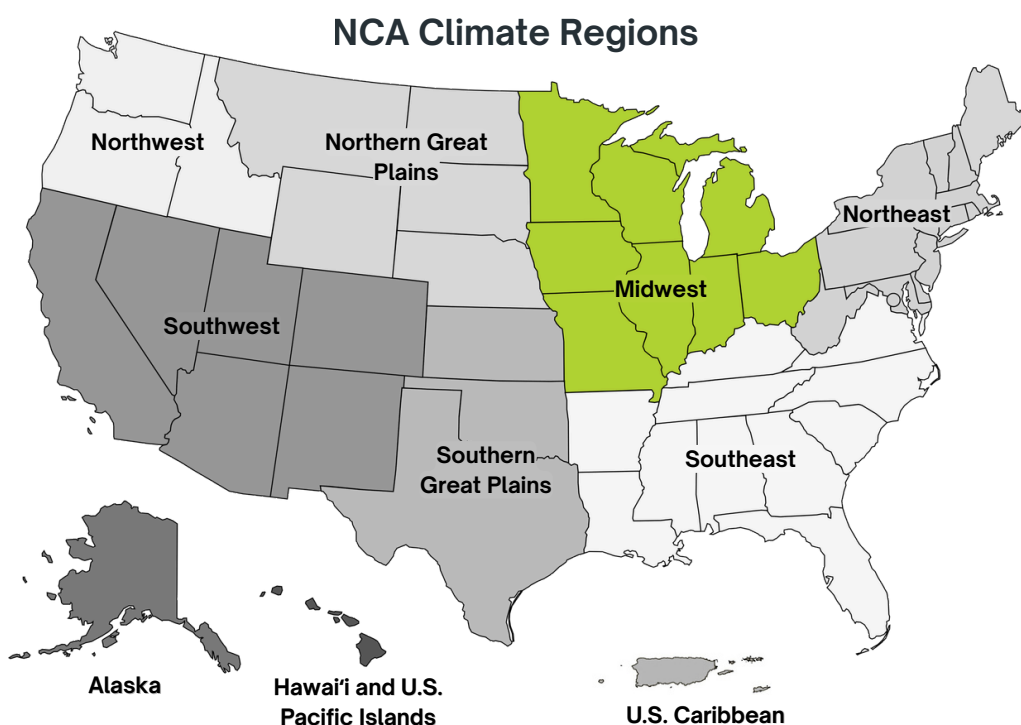
Providing judges with authoritative, objective, and trusted education on climate science and the law.

Climate change impacts all regions of the United States

The Fifth National Climate Assessment (NCA5) of 2023 divides the United States into ten regions to assess the current and future risks posed by climate change in each region. View fact sheets for other regions at cjp.eli.org and learn more about climate impacts at nca5.climate.us/regions.

Primary impacts from climate change vary regionally, typically affecting:

- Heat
- Sea-level rise and flooding
- Precipitation patterns
- Hurricanes and tropical storms
- Wildfires
- Air quality
- Sea ice and glacier melt



SO Why should judges care?

The effects of climate change are reshaping society and, with it, many aspects of the law. There are thousands of cases in courts throughout the country raising issues related to climate change that cover an extremely wide variety of topics, including, for example, insurance, permitting, and land use. As the impacts of climate change accelerate, judges can expect more cases that will draw upon scientific and technical evidence about these impacts.

SOURCES

Aaron B. Wilson et al., *Chapter 24: Midwest* in Fifth National Climate Assessment (2023), <https://nca5.climate.us/>.

Compl., Env't L. & Pol'y Ctr. v. U.S. Env't Prot. Agency, No 3:19-cv-00295 (N.D. Ohio Feb. 7, 2019).

Wisconsin Initiative on Climate Change Impacts, *2021 Assessment Report Fact Sheet* (2021), <https://uwmadison.app.box.com/s/h8968hdq95claql5x19sue9opdf13bk2>.

