

Northeast

Regional Climate Impacts

Connecticut, District of Columbia, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Vermont, West Virginia

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Fast Facts Series

Extreme precipitation and storm surges worsen coastal flooding



The number of **extreme heat** days in the Northeast is projected to increase threefold by midcentury under an intermediate emissions scenario.



Stronger storm surges and sea-level rise increase flooding risk. More flooding comes with increased financial risk, especially given that many Northeast households lack flood insurance.



Extreme precipitation events increased by about 60% in the Northeast between 1958 and 2022, the largest increase in the United States relative to other regions.



Sea level in the Northeast rose 9 inches from 1970 to 2024 and is expected to rise another 11 inches between 2020 and 2050 under an intermediate sea level scenario.

Climate impacts cascade at the coast and lead to litigation

Rising sea levels and worsening storms are projected to continue to cause widespread damage in the Northeast. These impacts have already led to cases concerning property damage, facilities siting, infrastructure preparation, and rebuilding and zoning.

Flood Insurance Coverage Rates by County in the Northeastern United States

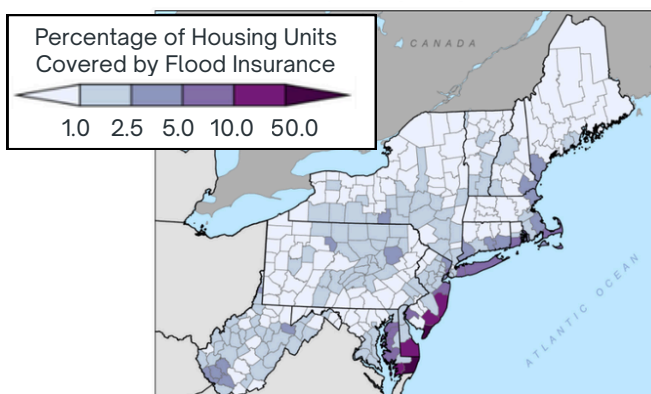


Figure adapted from the Fifth U.S. National Climate Assessment.

CASE SPOTLIGHT: SEA-LEVEL RISE

GreenRoots, Inc. v. Energy Facilities Siting Board (Mass. 2022)

Summary: The Massachusetts Energy Facilities Siting Board approved the siting of a new electric substation in East Boston, determining that the electric company's plans adequately mitigated against sea-level rise risks. GreenRoots, an environmental nonprofit, sought review which went directly to the state Supreme Court. The group argued that sea-level rise risk should have been evaluated on a 60-year horizon rather than the 40-year horizon that was used. The Court deferred to the Board's findings, finding the chosen planning horizon **"reasonable, given the uncertainties in long-term predictions of sea-level rise and electricity demand."**

Science: Evidence presented to the Board included a **flood elevation study** authored by an engineer as well as **testimony and exhibits about rates of sea-level rise**, the time frame that should be used for the evaluation, and whether **sea-level rise projections were uncertain**. The Court did not wade into the science, concluding that the "the board is entitled to deference due to its experience and expertise."



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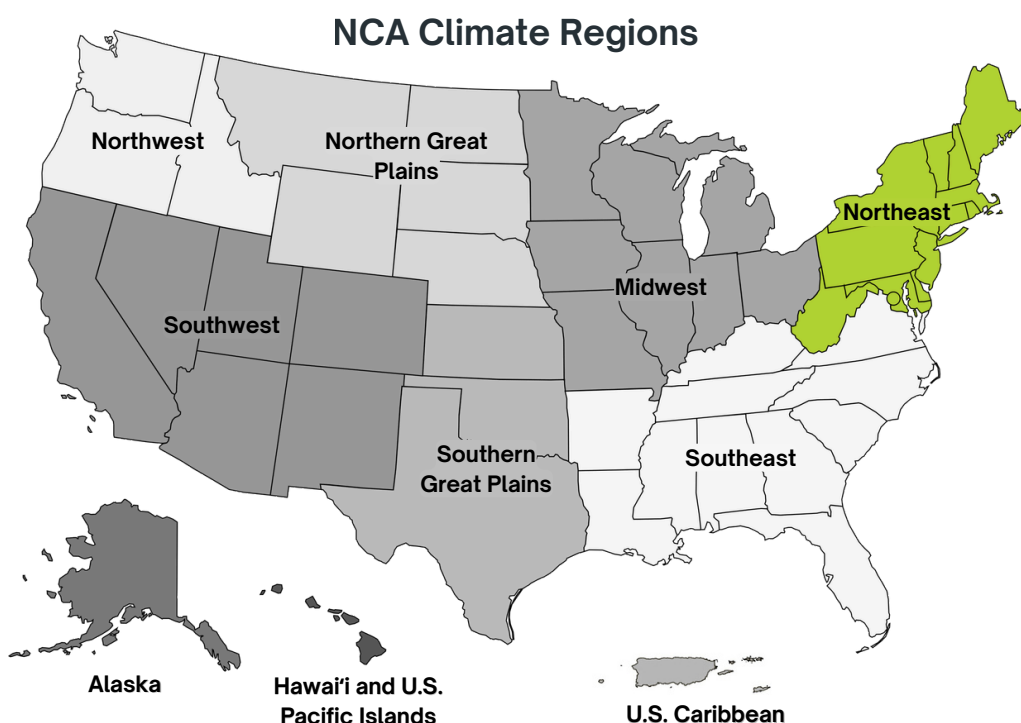
Providing judges with authoritative, objective, and trusted education on climate science and the law.

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

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