

Southeast

Regional Climate Impacts

Alabama, Arkansas, Florida, Georgia, Kentucky,
Louisiana, Mississippi, North Carolina, South
Carolina, Tennessee, Virginia

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ENVIRONMENTAL
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Fast Facts Series

Worsening weather-related disasters and rising sea-level



Rising seas and sinking land mean that the Gulf Coast region is losing land at record rates. Consequently, high-tide flooding has on average doubled in the area.



Higher temperatures in the Southeast have reduced crop yields and these trends are expected to worsen with climate change.



More North Atlantic **hurricanes** are expected to strengthen to at least Category 4 intensity.



Changing precipitation patterns have been attributed to climate change, and some Southeast counties with higher social vulnerability are experiencing more frequent flooding compared to other counties.

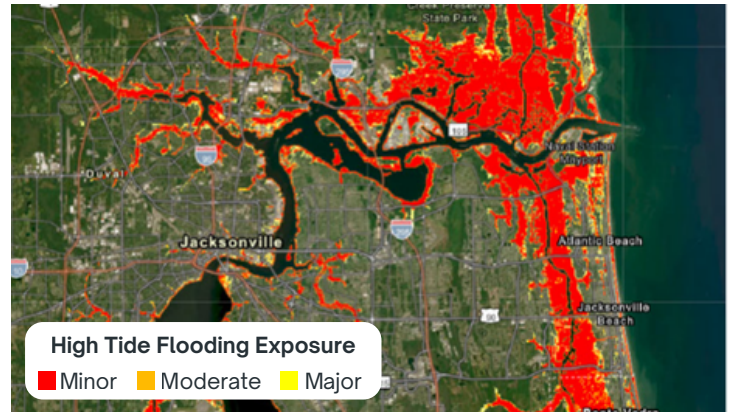


Droughts can happen slowly or quickly. Droughts that onset rapidly, or flash droughts, occur more frequently in the Southeast than in any other region.

Sea-level rise is leading to litigation

Higher sea levels cause storm surge flooding to reach farther inland, posing a risk to coastal communities and infrastructure. This risk is amplified by intensifying hurricanes driven by climate change. Lawsuits frequently result from these impacts and cases commonly revolve around **zoning, land use, and development** decisions along the coast, and whether planners adequately assessed climate risks and prepared **vulnerable infrastructure**. Cases can also involve **damages** and **insurance claims**.

Sea-Level Rise and Flooding in Florida



By 2050, Jacksonville, Florida, could see about 30 times more minor flood events (under an Intermediate-High sea-level rise scenario). Image from the Fifth U.S. National Climate Assessment.

CASE SPOTLIGHT: SEA-LEVEL RISE

Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992)

Summary: After a state-appointed Committee in South Carolina found that state beaches were “critically eroding,” the state legislature enacted a law barring development in designated coastal areas—including on plaintiff David Lucas’s land. The case went to the U.S. Supreme Court, which found the South Carolina law’s prohibition on construction amounted to a taking because it denied Mr. Lucas [or the owner] of “all economically viable use” of his property.

Science: The Committee, referencing an EPA report, stated that “**Sea-level rise in this century is a scientifically documented fact** ... It must be accepted that regardless of attempts to forestall the process, **the Atlantic Ocean ... is ultimately going to force those who have built too near the beach front to retreat.**”



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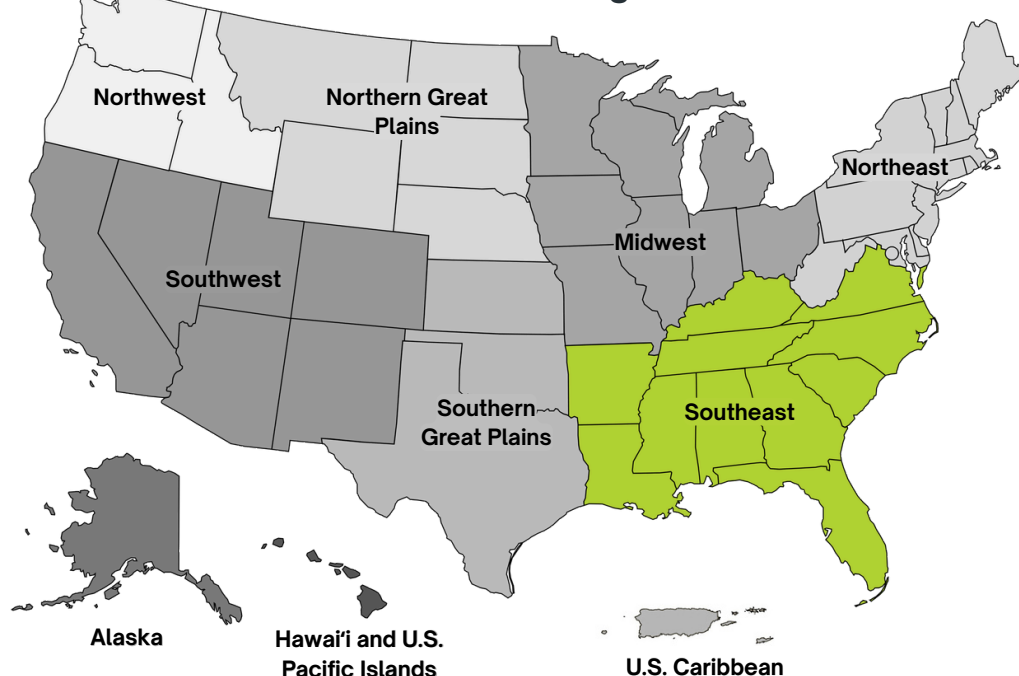
Climate change impacts all regions of the United States

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

NCA Climate Regions



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

Jeremy S. Hoffman et al., *Chapter 22: Southeast in Fifth National Climate Assessment* (2023), <https://nca5.climate.us/>.

Ethan Huang, *Why Seas are Rising Faster on the Southeast Coast*, NASA (June 6, 2023), <https://sealevel.nasa.gov/news/264/why-seas-are-rising-faster-on-the-southeast-coast/>.

Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992).

