



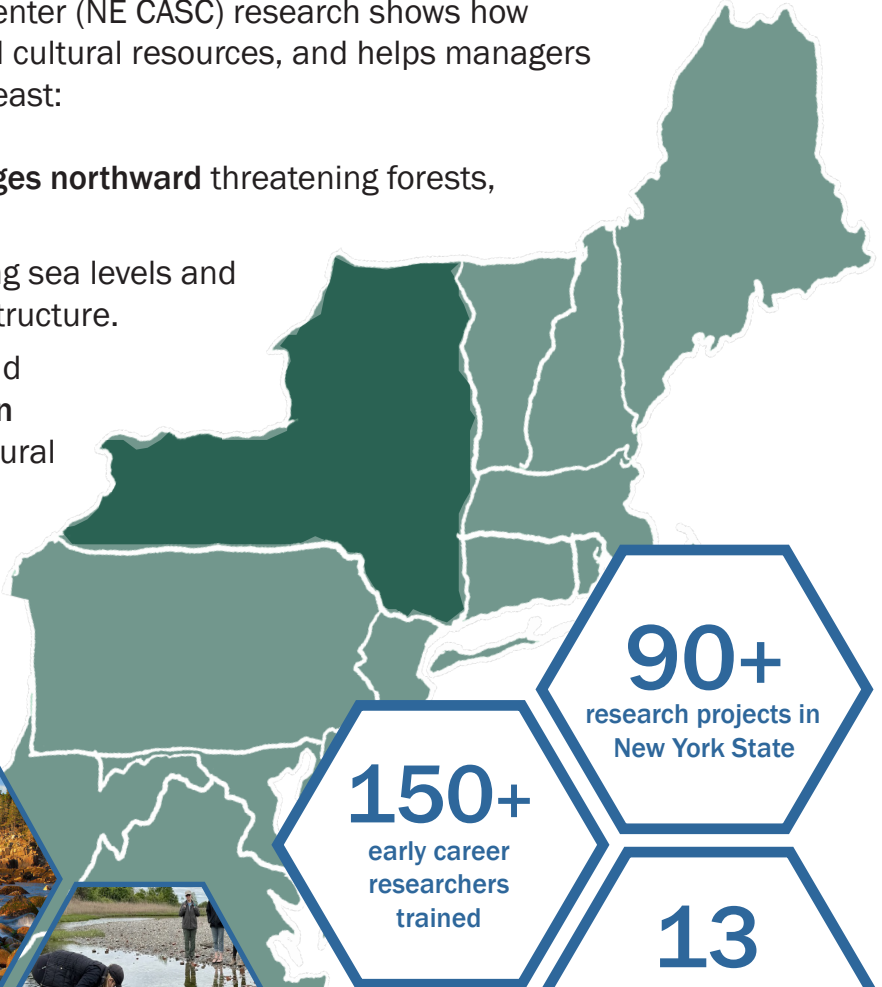
NECASC

Northeast Climate Adaptation Science Center

Protecting New York's Resources for a Safer, Brighter Future

Northeast Climate Adaptation Science Center (NE CASC) research shows how climate impacts threaten our natural and cultural resources, and helps managers address key challenges facing the Northeast:

- Invasive species are **shifting their ranges northward** threatening forests, freshwater, and coastal ecosystems.
- **Increased coastal flooding** due to rising sea levels and more frequent storms damages infrastructure.
- More frequent extreme heat events and summer droughts **increase mortality in fish and wildlife** and decrease agricultural productivity.
- Shifting seasons are **disrupting the migration** of threatened fish and birds.



150+
early career
researchers
trained

90+

research projects in
New York State

13

New York agency and
organization
partnerships

SINCE 2012...

What We Do at NE CASC

- Help **federal, state, and Tribal Nation agencies** prepare for floods, droughts, and other extreme weather events.
- Assess the climate **vulnerability of fish, wildlife, and their habitats**.
- Incorporate cutting edge science into **conservation planning** to improve ecological resilience.
- Prepare **early-career researchers** for leadership roles in climate adaptation science.

Who We Are

NE CASC is part of a network of nine regional climate adaptation science centers managed by the U.S. Geological Survey National Climate Adaptation Science Center and is hosted by the University of Massachusetts Amherst. Our affiliated partners include Columbia University, Cornell University, University of Vermont, Woodwell Climate Research Center, United South and Eastern Tribes, Inc., and the USFS Northern Research Station.

NE CASC Successes in New York State

MANAGING INVASIVE SPECIES

- Collaborated with New York's Department of Environmental Conservation (NYS DEC) to understand how warming waters and control of [invasive smallmouth bass in the Adirondacks](#) affects management of recreational fisheries.
- Collaborated with NYS DEC and the St. Regis Mohawk Tribe to [develop thermal calendars](#) for the emerald ash borer, helping managers to effectively time their control efforts.
- [Following invasions of Hemlock Woolly Adelgid](#), Cornell researchers are developing region-specific plans to help managers restore affected forests and preserve critical resources.
- Established the [Northeast Regional Invasive Species & Climate Change \(RISCC\) Network](#), which connects natural resource managers, researchers, and policymakers in New York State to their counterparts across the Northeast and delivers actionable science to support invasive species early detection and climate-smart management.



ADVANCING ADAPTATION PLANNING THROUGH STATE, LOCAL, and TRIBAL PARTNERSHIPS

- Collaborated with NYS DEC to incorporate climate information into 2025 revisions of [State Wildlife Action Plans](#), helping New York better prepare for changing environmental conditions.
- Collaborating with the Town of Irondequoit and a local dam organization to [manage water levels on Lake Ontario](#) to meet stakeholder needs following record-setting floods in 2017 and 2019.
- Partner with the United South and Eastern Tribes (USET) to support an annual [Tribal Climate Resilience Camp](#), which brings together representatives from Tribal Nations to share technical expertise and advance adaptation planning.
- Supported the NYC Department of Environmental Protection's preparedness efforts by [modeling extreme heat](#) and sea level rise impacts on New York City, leveraging research capacity at Columbia University.

SUPPORTING RECREATION

- Collaborated with NYS DEC, the Adirondack Council, and New York universities to assess how [increased browning of Adirondack lakes](#) is reducing available oxygen and leading to loss of habitat for trout, a key sport species driving tourism in rural New York.
- Working with state and private hatcheries to identify [strains of brook trout stocked in New York](#) will fare better under changing environmental conditions, leveraging research capacity at Cornell University.



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