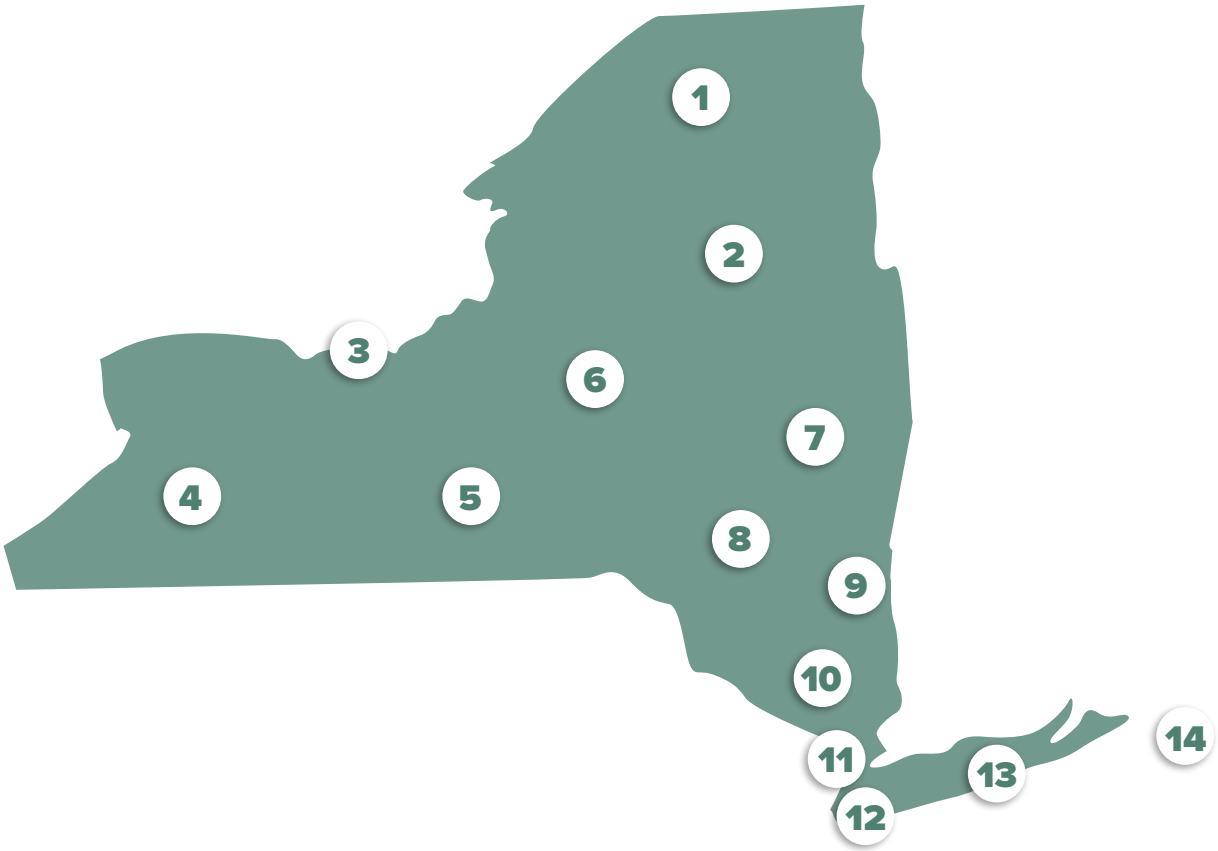
Climate Change Impacts on New York State



1

Warming temperatures will negatively impact coldwater fish species like brook trout, a recreationally important species that brings millions of dollars annually to local economies in the Adirondacks. Warmer, longer summers make these species more vulnerable to heat stress, harmful algal blooms, and low oxygen levels in water.

2

Climate change is altering the diversity and composition of forests. By the mid-to-late twenty-first century, the Catskill and Adirondack Mountain ranges will no longer have the cool climate suitable for spruce, fir, and hemlock forests, alpine tundra, or boreal plant communities, impacting the many wildlife species these ecosystems support, and the biodiversity of the state.

3

Climate change is influencing water levels in the Great Lakes, causing extreme highs and lows. Heavy precipitation causes higher highs, increasing flooding and shoreline erosion. Warmer temperatures increase the rate of evaporation, resulting in lower lows, which can disrupt shipping operations and strand docks and marinas.

4

Climate change is impacting the state's economically important dairy industry. More frequent, longer summer heatwaves can stress livestock and reduce milk production. Farmers are adapting by improving the cooling capacity of barns, but doing so can be costly and increase greenhouse gas emissions.

5

Warmer winters are reducing pest die-offs, and a longer growing season puts crops at greater risk for pest infestations, weeds, and diseases. Because of their limited resources, small farms and rural communities with agriculture-based economies and employment will experience greater impacts from climate change.

6

Greater total annual rainfall amounts and frequent heavy precipitation events are making inland flooding a more common occurrence. High concentrations of development along the state's rivers and within river valleys increase the vulnerability of homes and infrastructure to inland flooding.

7

Sea level rise impacts tidal sections of the Hudson River north to Troy, bringing high-tide flooding and increasing the risk to riverfront homes, roads, and infrastructure. Many Hudson River communities are having to adapt to tidal conditions that they have not seen before.

8

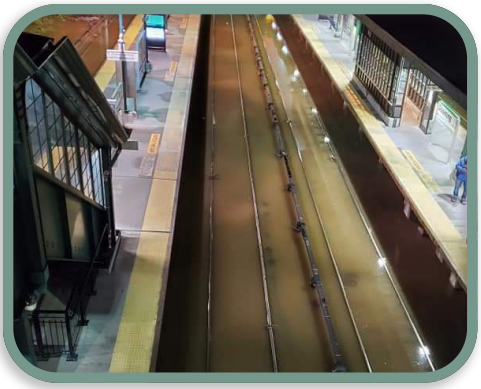
Warming winter temperatures are reducing snow cover and the length of the snow season, impacting the winter recreation industry that contributes millions of dollars annually to the state's economy. The industry is becoming increasingly reliant on artificial snowmaking as a short-term way to adapt.

9

Increasing temperatures are expanding the range of invasive species into New York. Invasive species can be highly destructive to native ecosystems. Warmer winters are also extending the season for disease-carrying vector species like mosquitoes and ticks, increasing the risks of Lyme disease and West Nile virus for humans and wildlife.

10

Sea level rise is permanently flooding wetlands faster than some can adapt, reducing their ability to protect inland areas from flooding by absorbing storm surge and heavy precipitation, and causing the release of carbon stored in wetland vegetation and soils.



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More frequent extreme storms are increasing the risk of damage and disruption to transportation and energy transmission infrastructure. Extreme storms like Superstorm Sandy and Hurricane Ida caused widespread transit delays and power outages in New York City.

12

As heat waves become more frequent and intense, urban areas will experience a more severe “heat island effect” due to buildings, roads, and other built structures that absorb heat, impacting the health and comfort of residents, especially vulnerable populations like elderly and low-income people.

13

Sea level rise and intensifying storms are increasing coastal erosion and flooding coastal communities. Some homeowners can retreat inland, but many cannot afford to, and remain vulnerable to worsening climate change impacts.

14

As ocean temperatures continue to rise, many commercially important fish and shellfish species will shift northward to colder waters. Algal blooms, which can be harmful to marine and aquatic species and ecosystems, will be more common as temperatures rise and precipitation increases.