

Climate Impact Spotlight: The Mohawk River Valley Region



The New York State Climate Impacts Assessment provides accessible and relevant information on the impacts of climate change across New York State, helping all New Yorkers make climate-smart decisions. This fact sheet summarizes how the climate is changing in the Mohawk River Valley region and how these changes will affect some of the features that make this region unique.

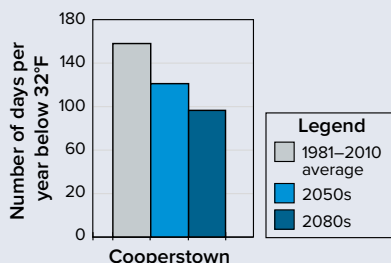
The Mohawk River Valley Region's Changing Climate

Average temperatures are projected to increase in all seasons across all regions of New York State. Averaged over the entire year, temperatures in the Mohawk River Valley region are projected to increase between 4.5°F and 6.4°F by the 2050s and between 5.9°F and 10.5°F by the 2080s, compared with the 1981–2010 average.



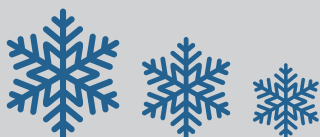
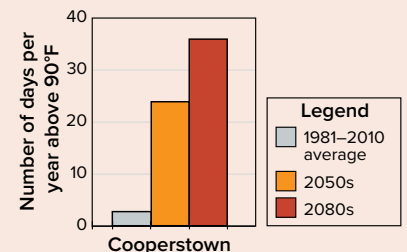
- **Decrease in very cold days.** The number of days below freezing (32°F) in the Mohawk River Valley region is expected to decrease. Cooperstown—the weather station in this region with the best long-term weather data for this assessment—has historically experienced an average of 160 days below freezing per year. These very cold days are expected to become less common. By the middle of this century (the 2050s), Cooperstown is projected to have only 112 to 135 days per year below freezing, and by the end of this century (the 2080s), it is projected to have only 82 to 119 days per year below freezing. Days below 0°F will also decrease.
- **Increase in extremely hot days.** Cooperstown has historically experienced an average of 3 days per year above 90°F. This number is expected to increase to 13 to 30 days per year by the middle of this century and 24 to 66 days per year by the end of this century.
- **More heavy storms.** Like elsewhere in the state, total annual precipitation in the Mohawk River Valley region is projected to increase in the next century. As weather patterns change, more of this precipitation will fall in heavy bursts, leading to higher river flows and flood risks.
- **Less snow and ice.** Warmer winter temperatures mean less precipitation will fall as snow. Warmer air temperatures also lead to higher surface water temperatures in the region's lakes and rivers and shorter periods of ice cover on lakes. For example, on Otsego Lake, near Cooperstown, the date that the lake freezes over completely has shifted later in the season by 11 days since 1849, and ice losses are projected to continue into future decades.

Projections of future climate change depend on the world's future emissions of heat-trapping greenhouse gases. Some of the projections discussed here present a range of numbers, based on those future emissions.



Decrease
in very
cold days

Increase
in very
hot days



Decrease
in snow
and ice

Increase
in heavy precipitation events
that can cause flooding



Example Climate Impacts to Some Important Regional Features

Flooding in the Mohawk River Valley

Many homes, businesses, roadways, and historic sites in the Mohawk River Valley are situated close to waterways that can flood during heavy rainfall or snowmelt events. For example, a June 2006 flood forced hundreds of residents to evacuate homes along East Canada Creek and the Mohawk River. In Montgomery County, it caused notable damage in the village of Canajoharie, including millions of dollars in damage to the Beech-Nut Nutrition Corporation's factory, a leading producer of baby food and key employer in the town. The company later cited the flooding as a reason for relocating its manufacturing facility outside of Canajoharie. Later, in 2022, Hurricane Irene caused damaging floods in the region, leading to road closures and damage to historic sites.



Riverside communities are vulnerable to flooding from the Mohawk River and other creeks in the region. The city of Amsterdam is pictured here.

River floods are projected to become larger and happen more often as precipitation increases, and they could cause more damage to nearby communities. For example, Sauquoit Creek in Oneida County has a significant history of flooding and causing damage to local businesses. Because rainfall in the region is projected to increase with climate change, the risk of flooding will also increase. After a storm in October 2019 resulted in the flooding of more than 150 properties, the Sauquoit Creek Basin Intermunicipal Commission (SBIC) was formed to study and address flooding and stormwater management in the watershed.

Impacts on Dairy Production

Climate change could affect the many dairy farms in the region. High temperatures and humidity can lead to heat stress in dairy cows, which reduces the amount of milk they produce. As temperatures rise, dairy farmers can reduce heat stress to cows by upgrading facility ventilation and cooling mechanisms, including fans and sprinklers.

In addition, the transportation of agricultural goods is often very time sensitive; dairy farmers need functioning roadways to efficiently get milk produced on their farms to the dairies that process it. Agricultural producers could suffer economic losses from increased roadway flooding in the region. In 2011, for example, Hurricane Irene washed out a road in Schoharie County, preventing a local dairy farm from transporting milk.

Changes to Winter Activities and Seasonal Recreation

Winter sports, like cross country skiing, snowshoeing, and snowmobiling, are important to the economies and culture of many Mohawk River Valley communities. For example, winter tourism is a particularly important source of revenue for towns within the Tug Hill region of northern Oneida County. As temperatures warm and snowfall decreases over the coming century, the region may see reduced opportunities for these activities during a shorter winter season. Some organizations are expanding the activities they offer during the rest of the year to help offset the uncertainty of winter revenues.



Utica has a history of welcoming refugees, which has supported economic growth in a region that has experienced population declines.

Climate Migration and Opportunities for the Region

As other parts of the United States and the world become hotter, drier, and more prone to wildfires and other disasters, climate-related population movement could result in opportunities for growth in some of New York State's cities and regions. Given the relatively lesser severity of changes that are predicted in some areas of the state, compared with other areas of the country and world, cities in the Mohawk River Valley region and others in the state may want to assess the potential for climate in-migration and plan and prepare infrastructure that accounts for potential population growth due to climate impacts.

Learn More

Explore the New York State Climate Impacts Assessment at <https://nysclimateimpacts.org>.

