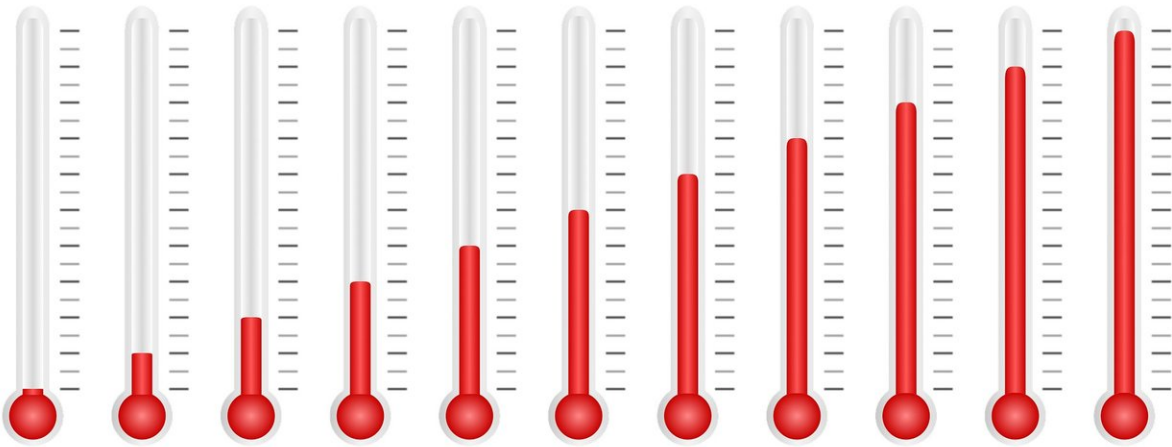


# New online tool shows climate change in your backyard

October 25 2018, by Blaine Friedlander

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Credit: CC0 Public Domain

Climate change hits home. It's where you live. A warming world affects the Northeast region, and to demonstrate, the Cornell Institute for Climate Smart Solutions (CICSS) has developed a new online tool: [Climate Change in Your County](#).

Using data from 1950 to 2013, and [climate models](#) showing future trends, the tool presents useful information for farmers, educators, gardeners and community leaders.

"The tool allows you to zoom in on your particular county in the

Northeast to see how [global climate change](#) is really happening in your own backyard," said Art DeGaetano, professor of climatology in Cornell's Department of Earth and Atmospheric Sciences, and director of the Northeast Regional Climate Center (NRCC) at Cornell.

In addition to DeGaetano, the tool was developed by Brian Belcher, senior developer at CICSS; Allison Chatrchyan, director of CICSS; Danielle Eiseman, postdoctoral associate, CICSS; and Mike Hoffmann, executive director of CICSS.

"We've talked to farmers and they've asked us for how the climate has changed in their specific location," said Chatrchyan. "We know that people can relate more to climate change when the impacts are seen locally and personally."

As a result, DeGaetano notes, "We developed the tool to show how the climate is changing, not just for this week or this month, but how things like growing degree days and average annual temperature are changing through time."

The new tool is housed at the Cornell's [Climate Smart Farming program website](#), which has agricultural decision support tools and resources to help farmers better manage climate change.

The application's map of Northeast counties uncovers a statistical treasure trove of information. Using data supplied by the NRCC, it tracks average annual temperatures, and high and low temperature trends. Farmers will likely use the tool's growing season length statistics and annual growing degree days. Users will also find precipitation trends and [climate projections](#).

If a user clicks on New York County – home to Manhattan, Harlem and Washington Heights – they will see that there were 19.9 days above 90

degrees in 1970 and 36.1 days in 2010. That number is projected to increase to 70.6 in 2073.

In an agricultural part of New York state, Delaware County, the new application shows that the growing season length has extended 11 days since 1980.

For Bucks County, Pennsylvania, there were 10.6 days above 90 degrees in 1970. The tool shows 30.1 days above 90 degrees were observed in 2010, and the climate models project that there will be almost 78 days in 2073 and nearly 96 days by 2099.

Throughout most counties in the Northeast, the annual average temperatures will rise, but there are outliers. Hardy and Mineral counties, West Virginia, near the border with the Virginia, have seen a cooling trend in their average annual temperatures.

In Queens County, New York, the average annual temperature in 1950 was 53.9 degrees. By the end of this century, the projected average annual [temperature](#) in Queens will be 64 degrees. The current climate model shows a rise from 19.7 days above 90 degrees in 2018 and to about 81 days by the end of the century.

DeGaetano explained that the team went through many prototypes in order to display data clearly. "This tool shows how widespread and consistent local [climate change](#) can be," he said. "While variables can change across the region, you still get uniform, reliable patterns of a warming climate."

Provided by Cornell University

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