



Department
of Health

New York State Climate and Health Indicators: Extreme Heat

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Introduction

- Tracking Climate and Health Indicators
- NWS Heat Advisory
- Heat Vulnerability Index
- County Heat and Health Profiles
- Extreme Heat Resources

Tracking Climate and Health Indicators

On Our Portal

- Air Pollution
- Heat Stress (Hospitalizations and ED Visits)

Data

- Temperature
- Precipitation

NWS Heat Advisory

Purpose

- Lower heat advisory thresholds to reflect current research findings that heat related illness starts at lower temperatures than heat advisory
- National Weather Service Heat Advisory was at 100 degrees Fahrenheit

Method

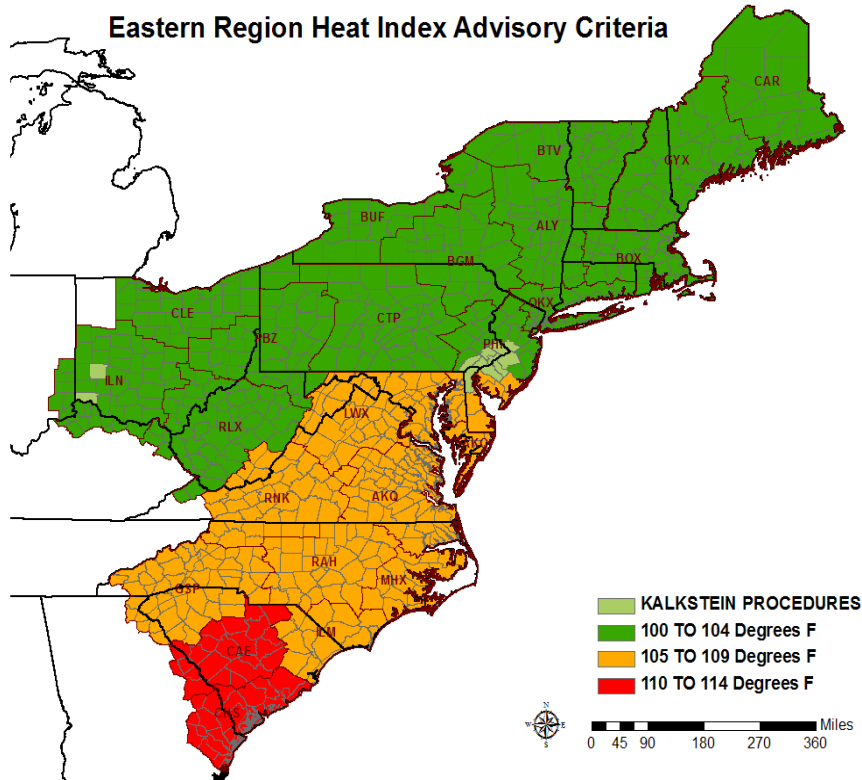
- Analyzed association between temperature and heat related hospitalizations and ED visits (Heat Stress, Dehydration, Acute Kidney Failure, Cardiovascular Diseases)
- Presented NASA research findings to NWS meteorologists
- Worked with NWS meteorologists to lower thresholds to 95 degrees Fahrenheit



NATIONAL WEATHER SERVICE

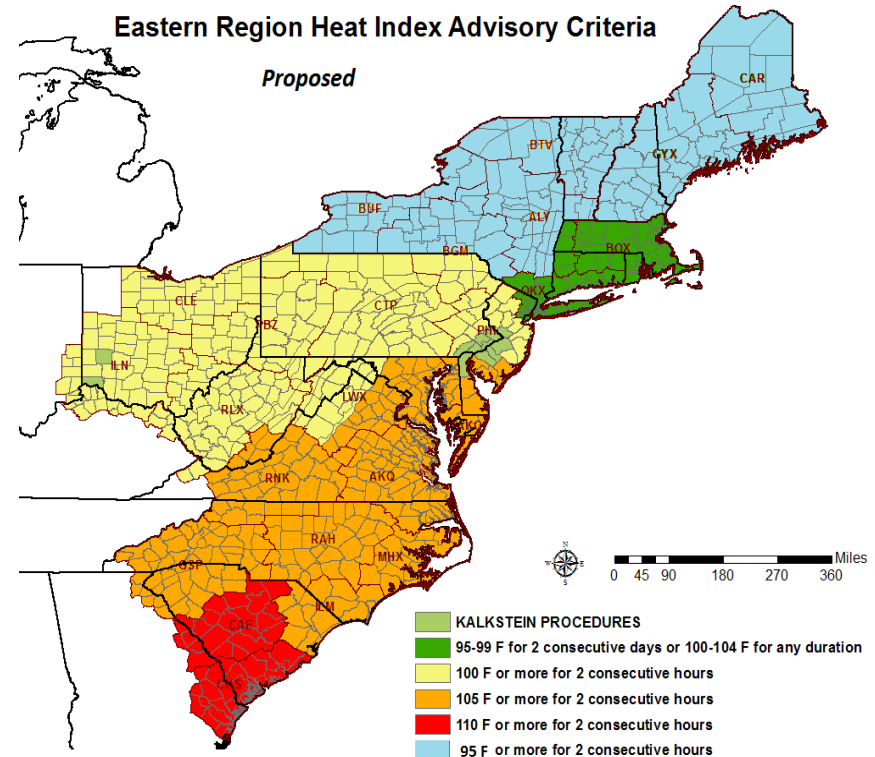
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Eastern Region Heat Index Advisory Criteria



Eastern Region Heat Index Advisory Criteria

Proposed



Heat Vulnerability Index

Purpose

- Identifies heat vulnerable areas in the state
- State and Local health department can assist in directing adaptation resources to vulnerable areas

Method

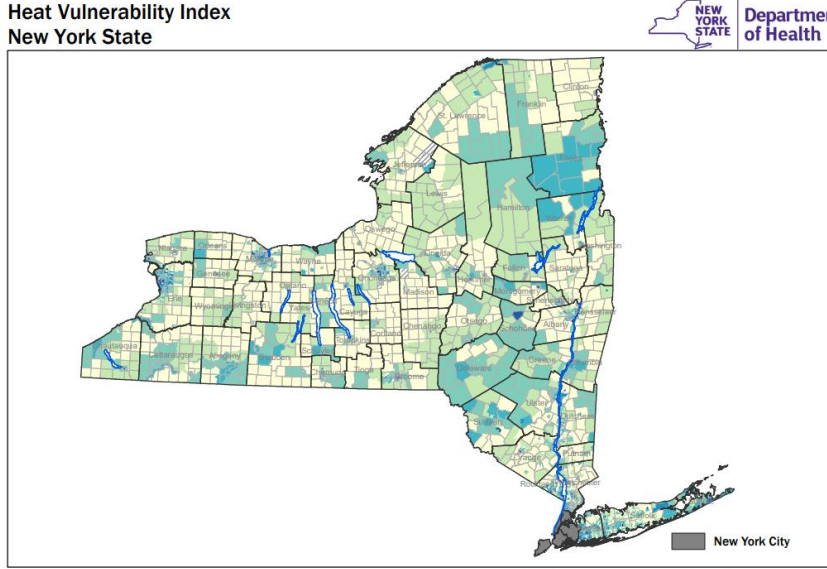
- 13 environmental and socio-demographic heat vulnerability factors identified from previous studies; Grouped into 4 categories
- Heat stress emergency department (ED) visits and admissions were used to perform a preliminary validation of the HVI
- Statewide and county heat vulnerability maps
 - HVI for each census tract

For more information

Nayak, S. G....(2017). Development of a heat vulnerability index for New York State. *Public Health*, 161, 127–137. <https://doi.org/10.1016/j.puhe.2017.09.006>

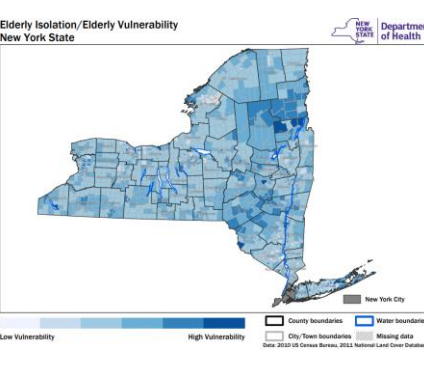
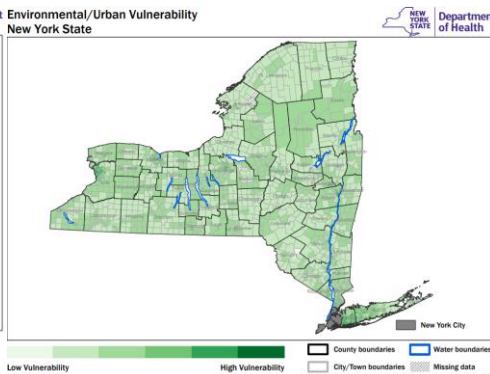
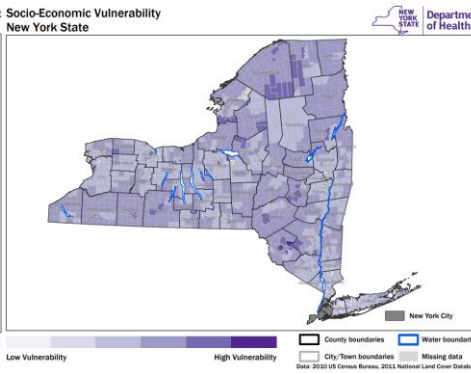
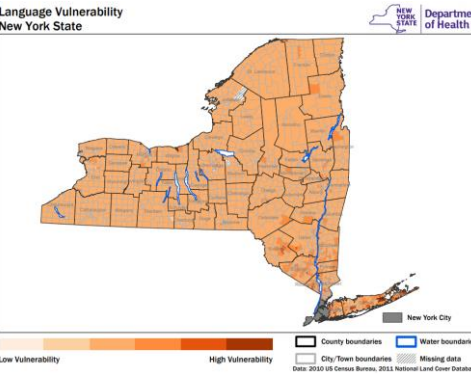


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Heat Vulnerability	Vulnerability Category	Heat Vulnerability Factors (Variables)
	Language Vulnerability	Percent population that is Hispanic Percent population that is foreign born Percent population who speak English 'less than very well'
	Socio-economic Vulnerability	Percentage population with income below poverty level Percentage population that is Black Percentage population (18–64 years) that has a disability Percentage population (18–64 years) that are unemployed
	Environmental/Urban Vulnerability	Percentage houses built before 1980 Density of housing units per square mile Percentage land with highly developed areas Percentage land that consists of open undeveloped areas
	Elderly Isolation and Vulnerability	Percentage population 65 years of age and over Percentage population 65 years of age and over and living alone

https://www.health.ny.gov/environmental/weather/vulnerability_index/



County Heat and Health Profiles

Purpose

- Identifies populations and neighborhoods at highest risk
- Assess temperature trends, rates of hospitalization and emergency room visits for heat-related health outcomes, heat vulnerability index, and each county's adaptive capacity
- Local health departments, county emergency planning offices and local governments can use this information to support efforts towards mitigating the impacts of extreme heat

Method

- Exposure – temperature anomalies, monthly and summer averages, and projections
- Sensitivity – heat related illness, renal illness, and cardiovascular disease
- Vulnerability – language, Socio-economic, environmental/urban, elderly vulnerability
- Adaptive Capacity – heat adaptation measures

<https://www.health.ny.gov/environmental/weather/profiles/>

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Services News Government Local Location Translate

Individuals/Families Providers/Professionals Health Facilities Search

Heat and Health Profiles

County Heat and Health Profile Reports

Heat and Health Profile Reports are available for each New York State county (excluding New York City). These county reports are compilations of temperature trends and future projections, heat related health effects, population and environmental vulnerability to heat and availability of adaptation resources. They are designed to help inform local efforts towards heat impact mitigation and planning.

Click a county on the map below to view its Heat and Health Profile Report.

Questions or comments: ehs@health.ny.gov

Revised: March 2018

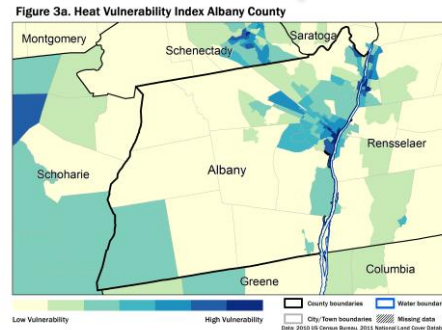
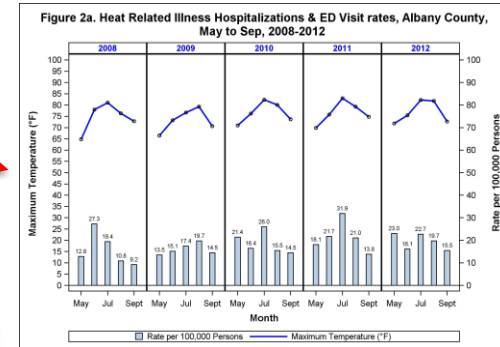
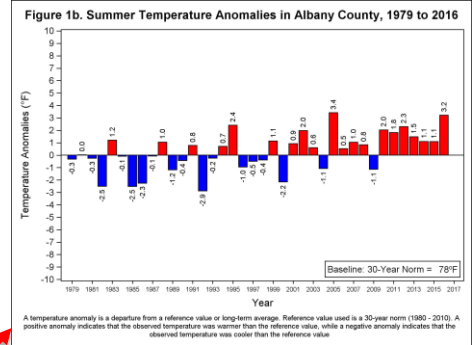
Downloadable
data at census
tract level

date	index	ID	COUNTYPE	year	continent	Indicator	measure	subgroup	subgroup_cat	extent
1979-05-01	121	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	50
1979-05-02	122	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	52.2
1979-05-03	123	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	60.1
1979-05-04	124	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	38.0
1979-05-05	125	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	47.1
1979-05-06	126	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	52.2
1979-05-07	127	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	62.7
1979-05-08	128	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	70.9
1979-05-09	129	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	85
1979-05-10	130	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	39.7
1979-05-11	131	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	70.4
1979-05-12	132	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	70.3
1979-05-13	133	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	71
1979-05-14	134	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	81.6
1979-05-15	135	001014001	001	1979	heat	Max Temperature	degrees	Temperature above 90	0	70

http://www.health.ny.gov/environmental/public_health_tracking/

**Heat and Health
Profile Report**
Albany County

NEW YORK STATE
Department of Health



Includes information on
temperature exposure, heat
impacted health and heat
vulnerability in each county

Extreme Heat Resources

- Cooling Centers Portal
- Infographic
- Social Media
- Magazine and online articles
- Governors Press Release

Cooling Centers Portal

- Over 400 centers listed
- 38 counties
- Driving, walking, and transit directions

<https://www.health.ny.gov/environmental/weather/cooling/>

You are Here: [Home Page](#) > [Climate, Weather & Health](#) > [Cooling Centers](#)

Cooling Centers

Cooling centers are facilities where you can go to cool off during extreme heat. The New York State Department of Health collects information about seasonal cooling centers, which is voluntarily submitted by local health departments and emergency management offices.

To view the address and phone number of a cooling center near you, select your county on the map or dropdown or visit [county cooling centers](#). You can also use the [Cooling Center Mapping Application](#) to get public transportation information or driving and walking directions.

Some counties (gray) do not have cooling centers listed. If a cooling center is not available, libraries, supermarkets, malls, and community swimming pools are great places to stay cool. View our [Cooling Centers FAQ](#) for more information about how cooling centers are identified and why they are important.

Always call before you go to make sure the cooling center is open. Some cooling centers are open daily, while others are opened as needed.

Select a County ▼



Interactive Tool



Environmental Public Health Tracker

Use this tool to view maps, graphs and tables of select environmental health data.

Heat and Health in New York State

New Yorkers are at risk of heat-related illness because summer temperatures are warming and our bodies are not used to long periods of extreme heat. County Heat and Health Profiles help identify populations and neighborhoods at highest risk. Learn more about extreme heat and what can be done to help people keep cool during the hottest days of the year.

WHAT WE KNOW

Heat Exposure

Heat waves or extreme heat events are extended periods of high temperatures and can be harmful to health.

Summer temperatures have been increasing across NYS and are expected to continue rising.

Health Sensitivity

The risk of heat stress, dehydration, kidney illness, cardiovascular illness, and death increases for up to 4 days after a heat wave. Children, older adults, and those with preexisting conditions or participating in outdoor activities are at higher risk.

Community Vulnerability

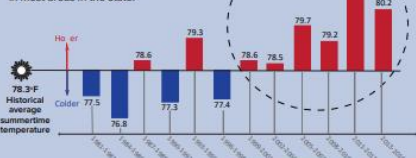
The community and its environment influence heat-related illness. Urban areas or communities with large populations, limited English proficiency, low income, and limited access to air conditioning are at higher risk.

WHAT WE LEARNED

A 5° F change in temperature can double a New Yorker's risk of heat-related illness.

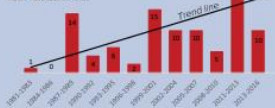
Rising Temperatures in New York State, 1981-2016

In the past decade average summer temperatures have risen by 1-2° F in most areas in the state.



Days with Max Temperature Above 95° F in New York State, 1981-2016

The number of days with maximum temperatures above 95° F in New York State has been increasing, putting New Yorkers at higher risk of heat-related illness.



WHAT TO DO ABOUT IT

Take steps to prevent heat-related illness



Know the risks and signs of heat-related illness.
www.health.ny.gov/extremeheat



Check your local weather so you can be prepared.
www.weather.gov



Find a place to get cool.
www.health.ny.gov/environmental/weather/cooling



Get involved in community planning.
www.climate-smart.ny.gov/



View your County's Heat and Health Profile at www.health.ny.gov/ExtremeHeat



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Infographic

- Explains research done on the county heat and health profiles
- Describes how New Yorkers are impacted by extreme heat, why we should be prepared in the future, and how we can adapt
- Infographic/report style



Social Media and Article Promotions

Social Media

- NYSDOH SM
- NWS SM
- CDC SM
- NASA SM
- NYS DHSES SM



Articles

- Conservationist magazine (NYSDEC)
- NASA Web Article



NASA Helps New Yorkers Cope with Summer Swelter



NASA Article

Just ahead of the start of astronomical summer on June 21, New York State officially lowered the heat advisory threshold for alerting citizens statewide of the health impacts of upcoming heat waves due in part to NASA-supported research and satellite data.



<https://www.nasa.gov/feature/nasa-helps-new-yorkers-cope-with-summer-swelter>



New York State on June 21, the first day of summer, as seen from NASA's Terra satellite. State health officials lowered the heat advisory threshold for alerting citizens of the health impacts of heat waves based in part to NASA-supported research.

Credits: NASA

Governors Press Release

JUNE 17, 2018 | Albany, NY

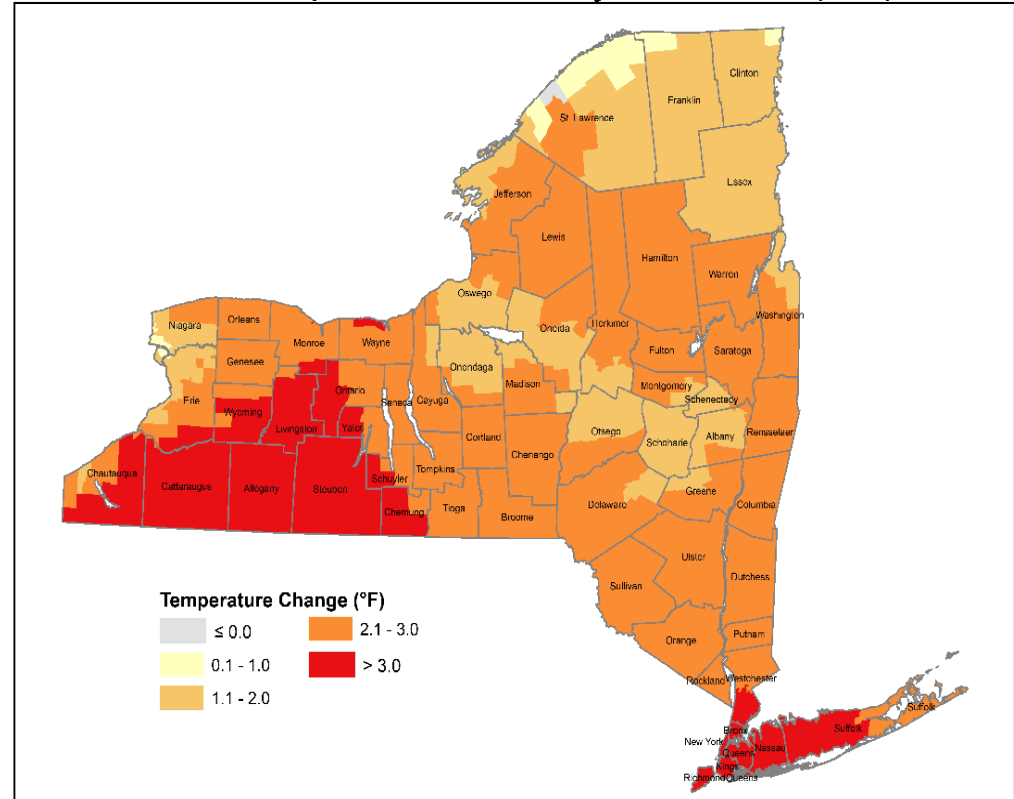
Governor Cuomo Urges New Yorkers to Take Precautions for Excessive Heat Sunday into Monday

WEATHER

Next Steps

- Temperature and Precipitation Data available on Portal
- Air Pollution Research

Summer Temperature Anomalies by Census Tracts (2010)



Questions or Comments?

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