

# Climate & Health Adaptation Workshops

**Plenary Session: Part I**  
*September 29<sup>th</sup>, 2022*



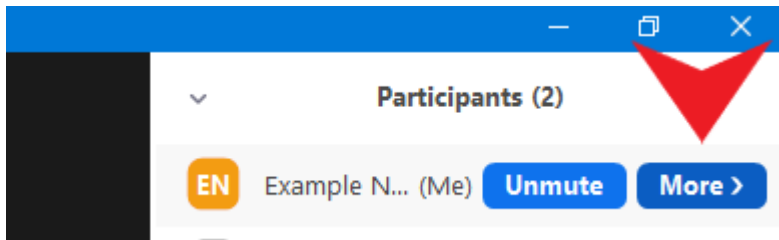
CDC-RFA-EH16-1602  
CDC-RFA-EH21-2101



CDC-RFA-EH17-1702  
CDC-RFA-EH22-2202

# Before We Begin...

- **This session is being recorded** and will be emailed out to all registrants, and be uploaded onto NYSACHO's webpage
- Please remain **muted** to limit background noise
- At any time during the session, share your thoughts, feedback, and questions using the chat box, or Zoom's "reactions"!
- Please **rename yourself** to include your name and county/affiliation



In the "Participants" list, hover over your name and click "Rename"

# Today's Agenda

- Overview of Workshop Framework
- State & Local Updates in Climate Adaptation
- Preview of Plenary Part II
- Q&A

# Overview of Workshop Framework



**Department  
of Health**



# **LHD Climate and Health Adaptation Meetings**

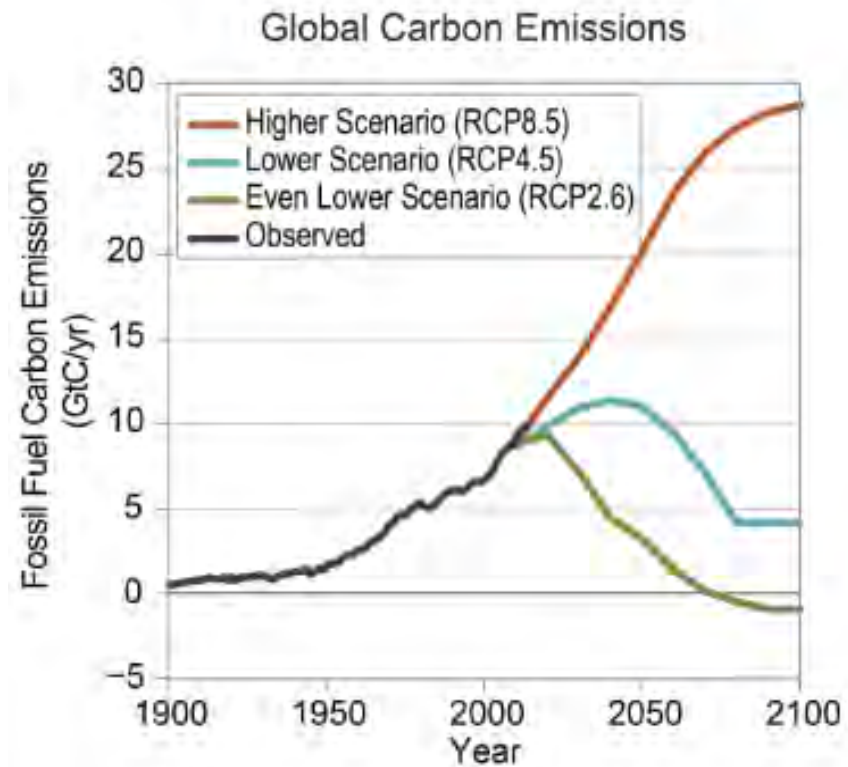
## **“Setting the Stage”**

**Neil Muscatiello**

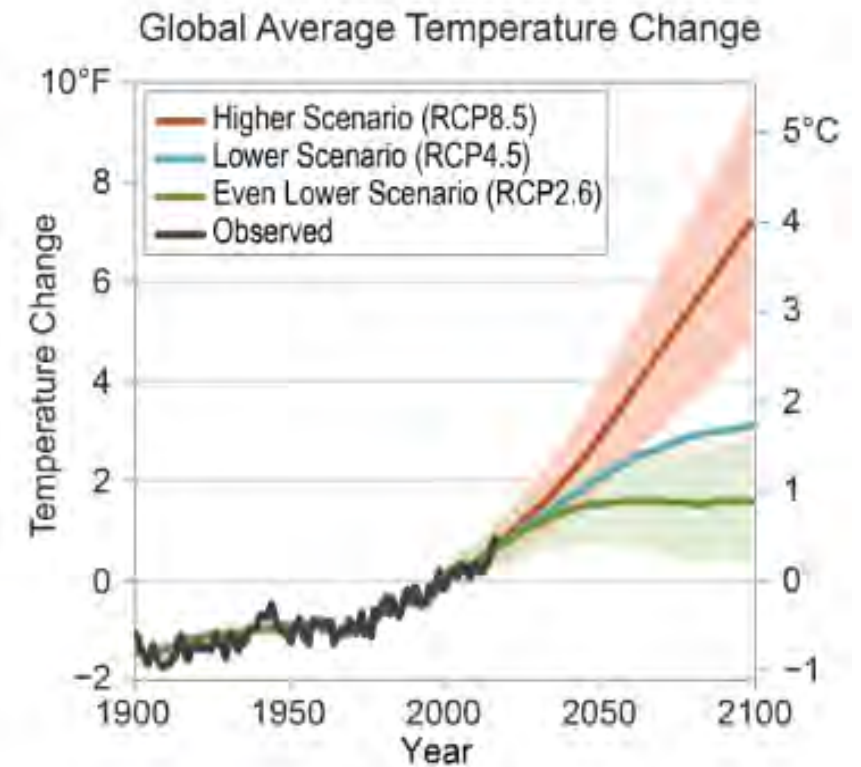
# Thank you!

# Why?

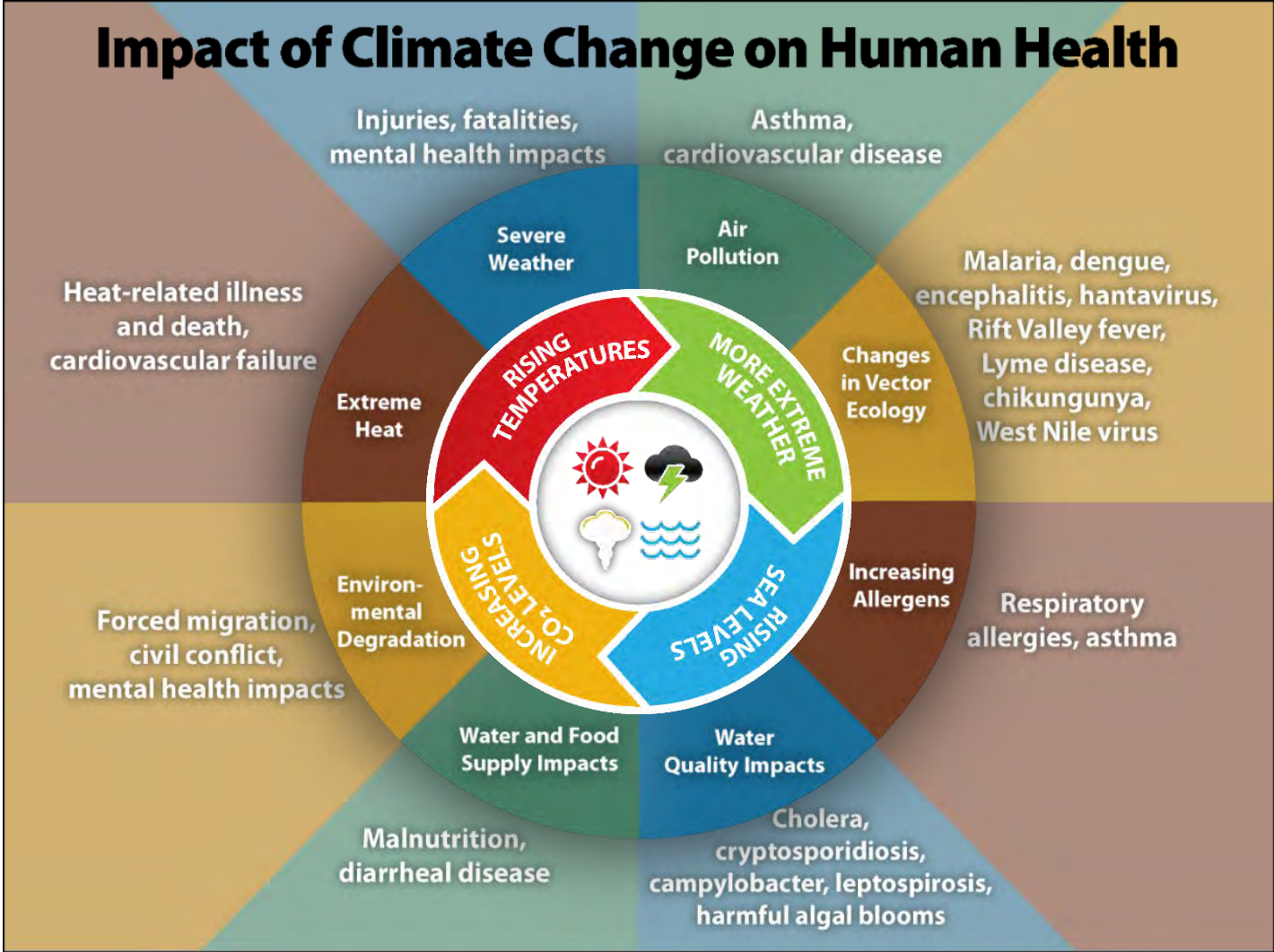
- Even with concerted action to mitigate GHG, impacts from GHG already in atmosphere will continue
- LHDs are already responding to the impacts of climate change



Source: 4<sup>th</sup> National Climate Assessment







Source: Centers for Disease Control and Prevention, Climate and Health Program

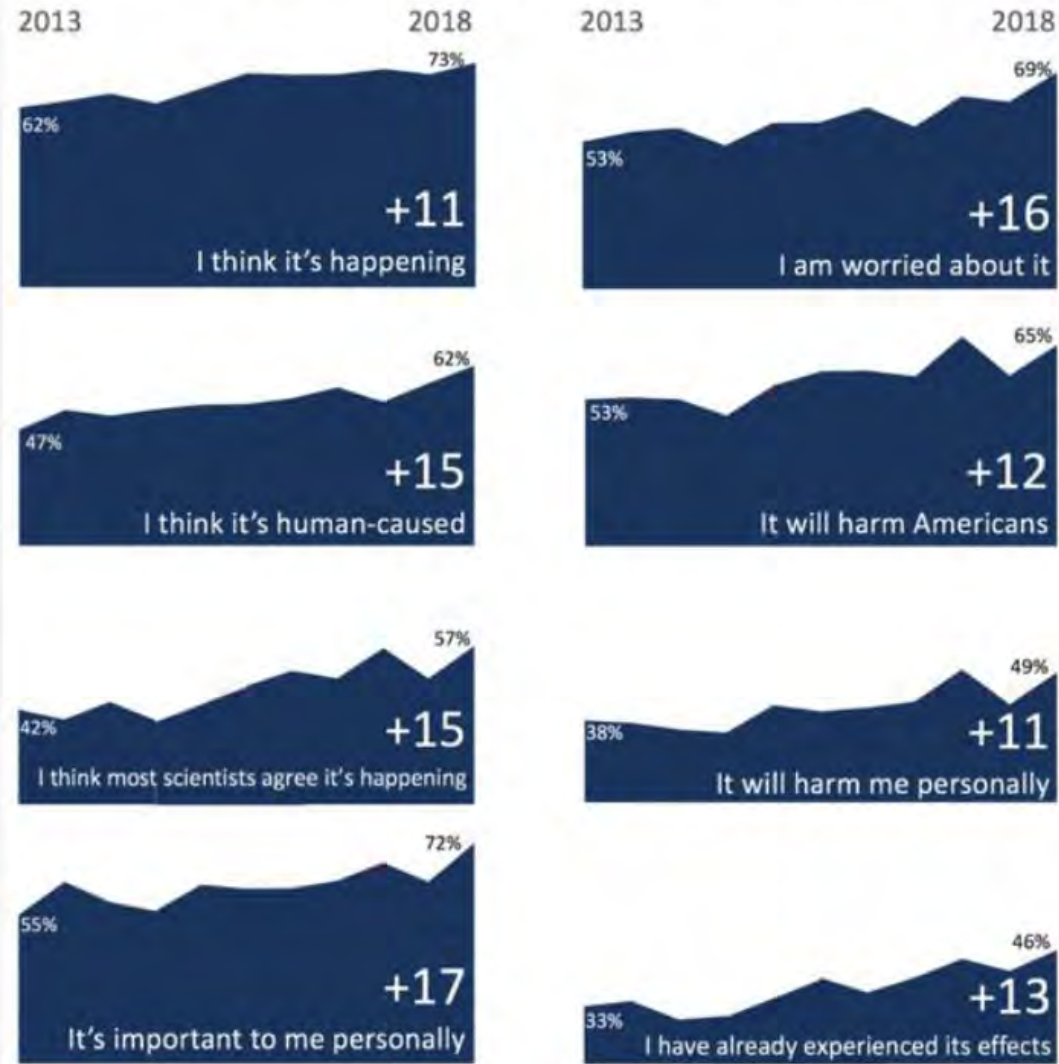
# Climate Change Adaptation

Any action that lowers the risks posed by the **consequences of a changing climate**; specifically, we are concerned with those actions that **reduce or avoid public health impacts**

# What are our hopes for these workshops?

- Build awareness of ongoing climate and health adaptation activities and related programs in NYS
- Advance discussions around climate and health adaptation in coordination with community partners
- Identify or customize next steps that are consistent with LHD priorities and resources.

## How Americans View Climate Change: 5yr Trend



Data from 11 national surveys (n=13,103) from Nov. 2013 to Dec. 2018.



VALE PROGRAM ON  
Climate Change  
Communication



GEORGE MASON UNIVERSITY  
CENTER for CLIMATE CHANGE  
COMMUNICATION

# The time is right!

- It's real
- It's human caused
- Experts agree on climate change
- It's bad for people
- There's hope

Source: Dr. Ed Maibach, George Mason University, Center for Climate Change Communication



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# Hearing from local health departments

Learning about priorities, partners,  
needs and next steps

*Faith Schottenfeld*

- Two- week period in February and March 2020; NYSACHO and NYSDOH
- Spoke to 50 people in 32 counties
- From every region; rural and urban areas
- Titles: Commissioners, Administrators and Public Health Directors, Public Health Nurses, Emergency Coordinators, Sanitarians, Health Educators, Epidemiologists, Planners, Outreach Coordinators, Directors of Environmental Health, Vector Control, Preventive Services and Research and Evaluation
- Focus on priority areas of concern, potential partners to help expand accomplishments or newly address local impacts from a changing climate

# 14 Priority areas identified by LHD's

- Vector-borne disease (surveillance, population control, community education and outreach, provider education, trailhead signs and posting)
- Extreme weather/heat vulnerability (vulnerable populations, cooling centers, buddy system)
- Food Security (Farmer's Markets, vulnerable populations, vulnerability mapping, farm to school program)
- Harmful Algal Blooms (education and outreach, signs and postings)
- Flood mitigation and storm response (recreational water quality, public and private drinking water quality, septic systems, lake shore resiliency)
- Funding Opportunities/cross-cutting grants



- Complete Streets/Built Environment/Healthy Neighborhoods
- Emergency Response Framework (shelters, temporary housing, disaster preparedness)
- Leveraging Existing Community Resources (education and outreach, networking and information sharing, partnerships with EMS)
- Environmental Improvements (fleet management, food inspection, recyclable materials, energy reduction, environmentally-friendly farming practices, composting)
- Air Quality
- Climate Action Plans/Climate Smart Communities/Climate Vulnerability Assessments
- Policy Development
- Communication Plans



# Outcome of calls with Local Health Depts

## Four workshops with unique content focus:

1. Extreme Heat and Weather Vulnerability
2. Flood Mitigation, Storm Response and Emergency Response Framework
3. Complete Streets, Climate Smart Communities and Environmental Improvements
4. Vector-borne Disease, Harmful Algal Blooms and Food Security

# About the workshops

- Attend as many as your interest/time allows
- Identify community-based partners who are also interested in this issue and invite them to participate
- Use the ~month between plenaries and workshops to seek community partners and/or ask for help to identify or reach out

# Potential partners

## Government

Climate Smart Community Coordinators

Sustainability Offices/City and County Leaders

Your own agency! As well as Planning, Transportation, Environmental Protection, Emergency Management, Parks and Recreation, Public Works, Social Services, Aging, etc.

## Non-profit organizations

Boy Scouts/Girl Scouts

Food Councils, Farmers Markets, CSAs

Senior Centers

Environmental justice

Sheltering orgs (e.g. Red Cross)

## Other

Cornell Cooperative Extension/Soil & Water Conservation Districts

High School Key Clubs, School Boards  
Youth Organizations

Faith-based leaders

Hospitals and medical associations

Business leaders

Private, public and community colleges

# Workshop Format

1. State agencies, local health departments and community partners share their projects and experiences with all participants
2. Local health departments and their community-based partners gather in virtual breakout sessions around their priority area (s)
3. Counties share local ideas, strengths, challenges, and potential next steps with all participants



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# State & Local Updates in Climate Adaptation

**Sameer Ranade**, NYS Energy Research & Development Authority

**Heather Brown & Bonnie Lawrence**, NYS Association of Counties' Standing Committee on Climate Action

**Tabassum Insaf**, NYS Department of Health

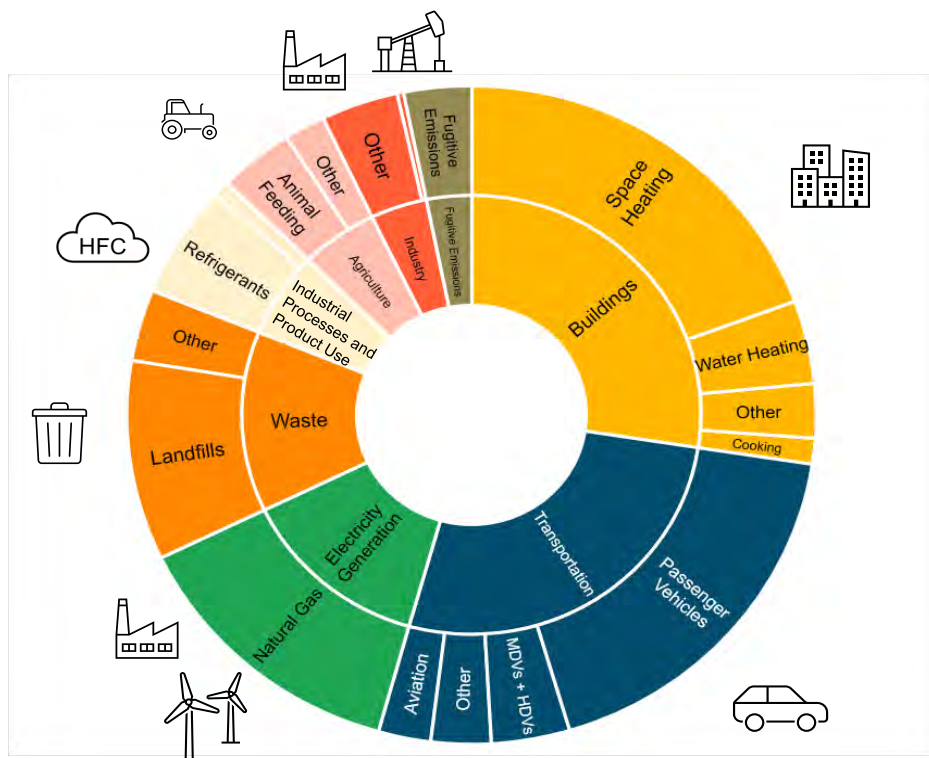
# Presentation on Climate Leadership and Community Protection Act (Climate Act) by Sameer Ranade

## Two main stakeholder bodies of the Climate Act:

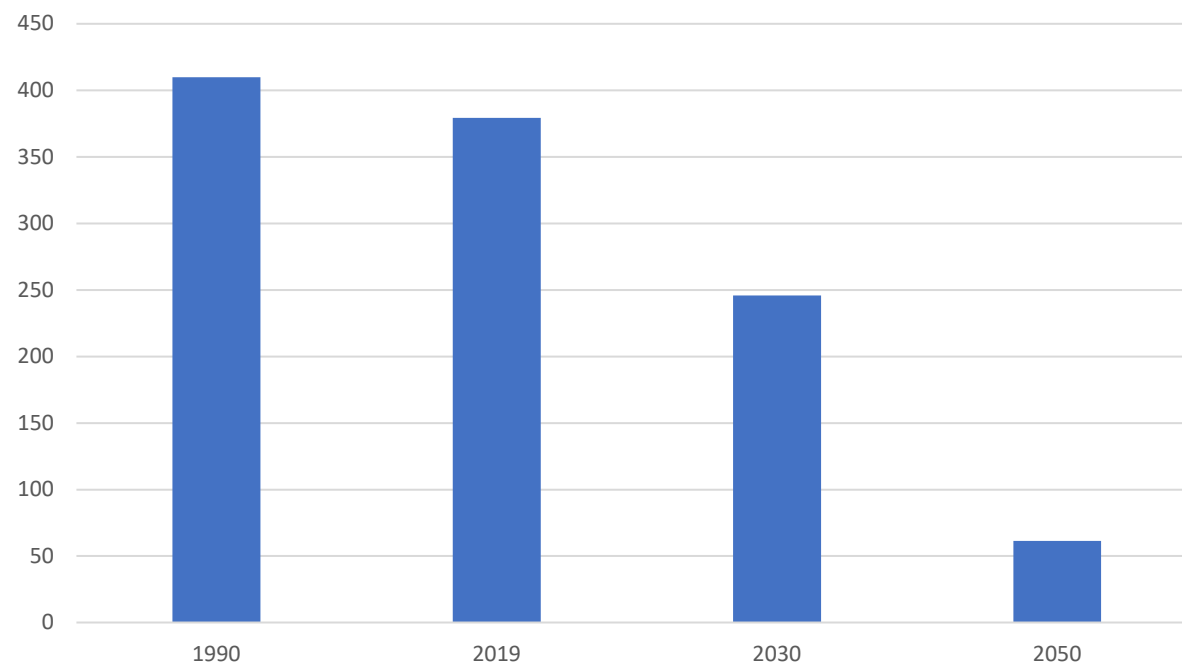
- > 22-member Climate Action Council: Task is to adopt a Scoping Plan that recommends how the State will achieve the Climate Act's goals to achieve net zero greenhouse gas emissions, increase clean energy usage, and ensure climate justice. Co-Chaired by NYSERDA and DEC, it includes 10 other State entity members, and 9 members representing regulated industry, academia, labor, environmental, and social justice.
- > 13-member Climate Justice Working Group: Task is to identify disadvantaged communities to guide the equitable implementation of the Scoping Plan. The Working Group is chaired by DEC and includes NYSERDA, the Departments of Health and Labor, and 9 appointed environmental justice community representatives, evenly divided between rural, downstate urban, and upstate urban.

# GHG Emissions Reduction Requirements

## Current Estimated GHG Emissions by Sector



## New York State GHG Emissions (MMtCO<sub>2</sub>e)



# Climate Act Clean Energy & Justice Goals

## Progress as of April 27, 2022

- > **100% zero-emissions electricity by 2040**
- > **70% renewable electricity by 2030**
  - *Currently on pace for over 66%*
- > **9,000 MW of offshore wind by 2035**
  - *30 MW built & over 4,300 MW contracted*
- > **6,000 MW of distributed solar by 2025**
  - *3,593 MW built & 2,417 MW contracted*
- > **3,000 MW of energy storage by 2030**
  - *130 MW built & 1,100 MW contracted*
- > **185 TBtu on-site energy savings by 2025**
  - *80 TBtu saved and 15 TBtu contracted*

**At least 35 percent, with a goal of 40 percent, of the overall benefits of all NY State spending on clean energy and energy efficiency programs must accrue in disadvantaged communities**

**Barriers & Opportunities report recommendations require disadvantaged community consideration in climate health and hazard protection programs too**



# Carbon Removal and Sequestration Projects Include:

- **Natural carbon sinks**
  - Afforestation, reforestation, wetlands restoration
- **Green infrastructure**
- **Restoration and sustainable management of lands**
  - Natural and urban forests or working lands, grasslands, coastal wetlands, and subtidal habitats
- **Reduction in ozone depleting substances**
- **Anaerobic digesters**
  - Where energy produced is utilized locally
- **Carbon capture and sequestration**
- **Ecosystem restoration**
- **Other projects recommended by the Council and Climate Justice Working Group**

# Integration Analysis Scenario Overview

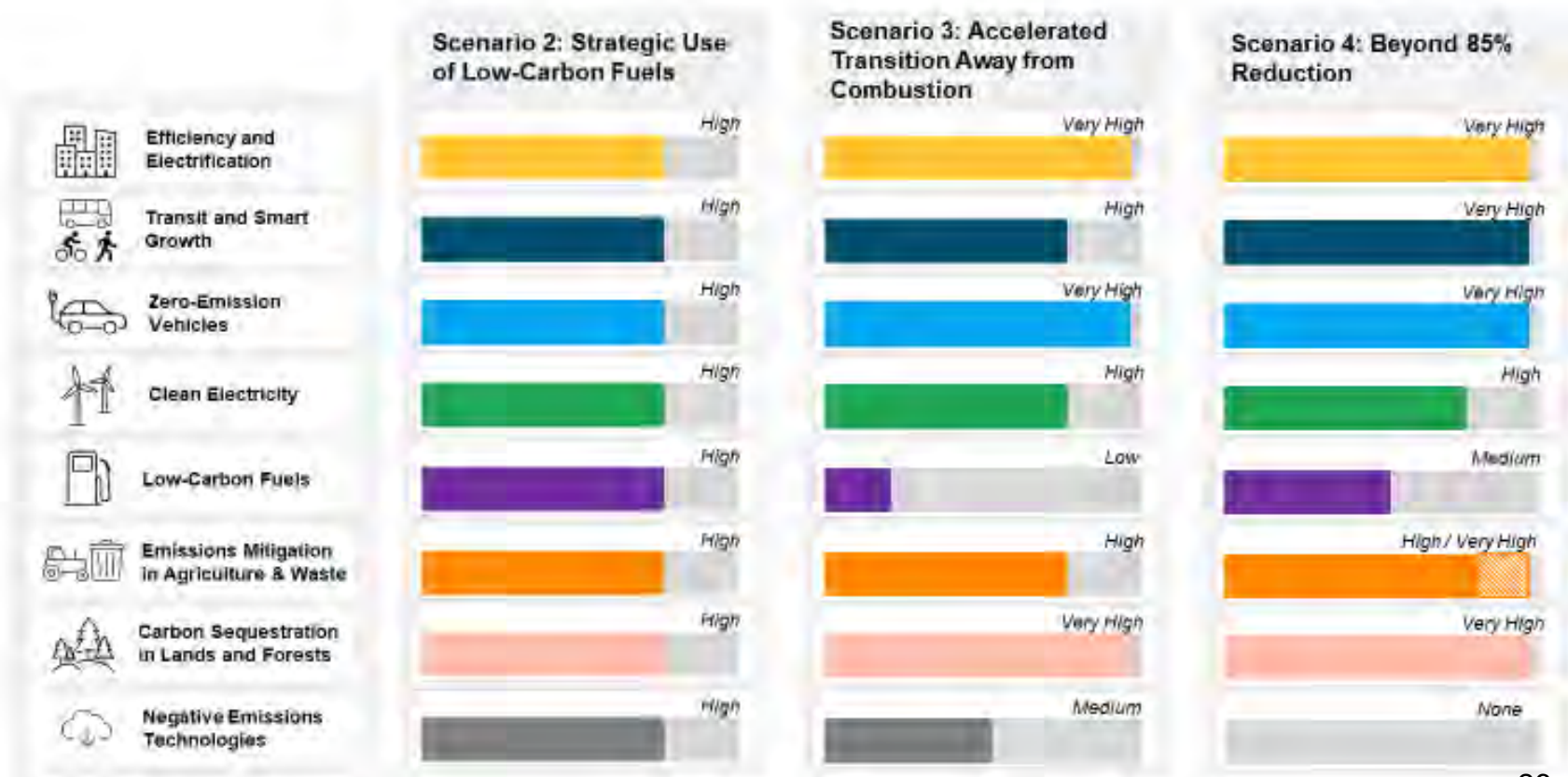
> Foundational themes across all mitigation scenarios based on findings from Advisory Panels and supporting analysis

- Zero emission power sector by 2040
- Enhancement and expansion of transit & vehicle miles traveled (VMT) reduction
- More rapid and widespread end-use electrification & efficiency
- Higher methane mitigation in agriculture and waste
- End-use electric load flexibility reflective of high customer engagement and advanced techs

> **Differences among Scenarios**

- Level of low-carbon fuel utilization
- Acceleration of electrification
- Need for negative emissions technologies
- Level of natural carbon sequestration
- Level of methane mitigation
- Level of VMT reduction

**Level of Transformation by Mitigation Scenario**



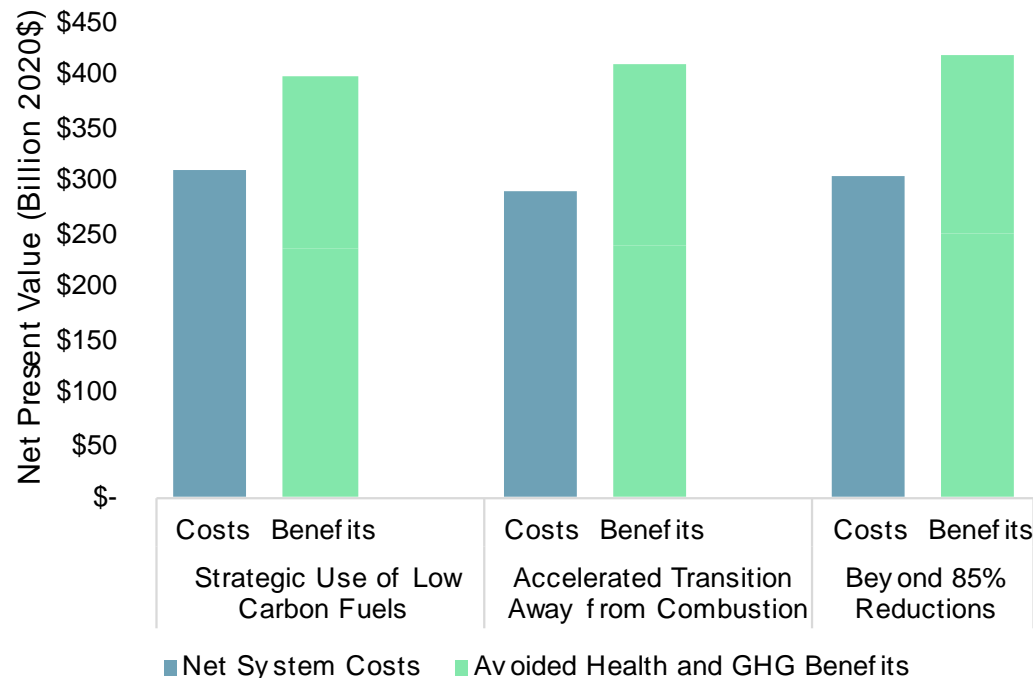
# Key Cost-Benefit Findings

## [NPV 2020-2050]

### Cost of Inaction Exceeds the Cost of Action by More Than \$90 Billion

There are significant required investments to achieve Climate Act GHG emissions limits, accompanied by even greater external benefits and the opportunity to create hundreds of thousands of jobs.

2020 - 2050



- **Net benefits range from \$90-\$120 billion**
- Costs are a small share of **New York's economy**: 0.6-0.7% of GSP in 2030 and 1.4% in 2050
- As a share of current overall **system expenditures**, costs are moderate: 9-11% in 2030 and 25-26% in 2050

# Jobs Study: Top-level Findings

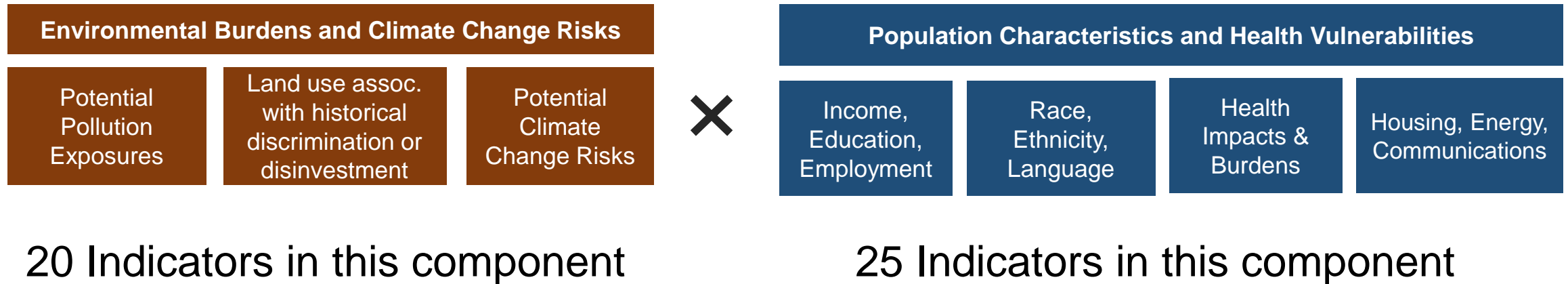
Top Level Jobs Study Finding	Est. total NYS jobs	% increase (and total # new) from baseline year
<b>By 2030: Overall employment (4 Sector: Buildings, Electricity, Fuels, Transportation)</b>	• 189,000 jobs, 2019-2030	• 38% increase in workforce
<b>By 2050: Overall employment</b>	• 268,000 jobs, 2019-2050	• 54% increase in workforce
By 2030: <b>Buildings Sector</b> (6 sub-sectors: commercial HVAC, commercial shell, commercial other, residential HVAC, Res-shell, Res-other)	• 305,126 in 2030	• 85% increase in workforce (+139,895 jobs)
By 2040: <b>Electricity Sector</b> (12 sub-sectors: solar, OSW, hydropower, hydrogen, biomass, T&D, storage, other fossil gen, nuclear)	• 212,000 to 226,000 jobs depending upon scenario	• 61% increase in workforce (+81,185 jobs)
By 2030/40: <b>Fuels Sector</b> (6 sub-sectors: NG, NG distribution, petroleum fuels, hydrogen fuels, and bioenergy)	• 26,000 jobs in 2030 • 20,000 jobs in 2040	• 4% decrease in workforce (-1,172 jobs) • 27% decrease in workforce (-7,386 jobs)
By 2030: <b>Transportation Sector</b> (5 sub-sectors: vehicle mfg, maintenance, wholesale trade parts, conventional fueling stations, charging and hydrogen fuel stations.	• 176,186 jobs in 2030	• <1% decrease in workforce (-193 jobs)

- The wage profile of jobs in the four sectors shows the largest increase from 2019 to 2030 in middle wage positions (\$28 to \$37 an hour), while high wage (>\$37 an hour) and low wage positions (<\$28 an hour) grow at slower rates.
- Geographically, the net job increases from 2019 to 2030 are found in every corner of the state, with each of New York's five regions seeing an increase of between 10,000 and 48,000 net new jobs.

**The number of jobs added from the 21 growing sub-sectors outnumbered the number of jobs lost in the seven displaced sub-sectors by a ratio of approximately 10 to 1.**

# Framework: Burdens, Risks & Vulnerabilities

The Geographic DAC scoring approach uses data from national and state sources to select 45 indicators in the following categories for each census tract in NY state.



# 1

## Environmental Burdens and Climate Change Risks: Draft Indicators

### Potential Pollution Exposures

- Vehicle traffic density
- Diesel truck and bus traffic
- Particulate Matter (PM2.5)
- Benzene concentration
- Wastewater discharge

### Land use and facilities associated with historical discrimination or disinvestment

- Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)
- Regulated Management Plan (chemical) sites
- Major oil storage facilities (incl. airports)
- Power generation facilities
- Active landfills
- Municipal waste combustors
- Scrap metal processors
- Industrial/manufacturing/mining land use (zoning)
- Housing vacancy rate

### Potential Climate Change Risks

- Extreme heat projections (>90° days in 2050)
- Flooding in coastal and tidally influenced areas (projected)
- Flooding in inland areas (projected)
- Low vegetative cover
- Agricultural land
- Driving time to hospitals or urgent/critical care



## 2

## Population Characteristics and Health Vulnerabilities: Draft Indicators

### Income, Education & Employment

- Pct <80% Area Median Income
- Pct <100% of Federal Poverty Line
- Pct without Bachelor's Degree
- Unemployment rate
- Pct Single-parent households

Within this factor, both income metrics have 2x weight

### Race, Ethnicity & Language

- Pct Latino/a or Hispanic
- Pct Black or African American
- Pct Asian
- Pct Native American or Indigenous
- Limited English Proficiency
- Historical redlining score

Within this factor, Pct Latino/a and Pct Black have 2x weight

### Health Impacts & Sensitivities

- Asthma ED visits
- COPD ED visits
- Heart attack (MI) hospitalization
- Premature Deaths
- Low Birthweight
- Pct without Health Insurance
- Pct with Disabilities
- Pct Adults age 65+

### Housing, Energy, Communications

- Pct Renter-Occupied Homes
- Housing cost burden (rental costs)
- Energy Poverty / Cost Burden
- Manufactured homes
- Homes built before 1960
- Pct without Internet (home or cellular)



Department of  
Environmental  
Conservation



# Questions/Actions - Thank you!

- 1) Please review the draft DAC criteria and Barriers Report recommendations and share your thoughts
- 2) Are there other or more granular indicators available that capture signs of climate and pollution burdens and social determinants in your community? Are these available Statewide?
- 3) Is your department engaged in the human health aspect of enforcing local building codes and do you need resources to support this work?
- 4) In what ways can the State support your county in implementing climate and clean energy initiatives that support public health?

Sameer can be reached at [sameer.ranade@nyserda.ny.gov](mailto:sameer.ranade@nyserda.ny.gov) or 347-867-5508 (Mobile)



# Climate Change and Health

## Addressing Health Issues in Climate Response

Sullivan County Office of Sustainable Energy  
Heather Brown, Deputy Commissioner of Planning &  
Sustainability Coordinator

September 2022

# The Sullivan County Office of Sustainable Energy (OSE)



## OSE's Mission

Develop **cost effective projects, policies and practices** for sustainability and climate resilience.

Provide **research, analysis, strategies, informational outreach, grant writing and project support.**

Work closely with other County departments, local and state agencies and community organizations to **maximize the resources available to the County and its residents.**

**Sullivan County is a Bronze Certified Climate Smart Community.**

# A complex problem with cascading health effects

World Health Organization COP 26: The Health Argument for Climate Action:

**Globally, climate change is already having a serious impact on health.**

- Death and illness from extreme weather events – heatwaves, storms and floods;
- Disruption of food systems;
- Increases in zoonoses and food-, water- and vector-borne diseases;
- Mental health issues;
- Undermining of social determinants for good health, such as livelihoods, equality and access to health care and social support structures;
- Climate-sensitive health risks are disproportionately felt by the most vulnerable and disadvantaged, including women, children, ethnic minorities, poor communities, migrants or displaced persons, older populations, and those with underlying health conditions.

# Health Issues in Climate Response: A Two-Way Street

We need to address health issues in our climate initiatives, and we need to incorporate climate and environmental knowledge in our health priorities.

This calls for a collaborative, systems approach for:

- Assessing needs
- Planning initiatives
- Capital projects
- Outreach and public information

**The Climate Smart Communities Program has provided a blueprint and funding sources for many of the County's climate actions and initiatives.**

# Current Sullivan County Initiatives

**Heat vulnerability:** Use regional heat projections per **ClimAID** and **The Climate Act (CLCPA)**.

**Strategies:** Promote residential energy retrofits and plan for shade, outdoor recreation, cooling centers and access to green space for underserved communities.

**CSC PE7: Resiliency Planning, Heat Emergency Planning, Shade Structures, Cooling Centers**

- COUNTYWIDE RESILIENCY PLAN, COMMUNITY COOLING CENTERS, ENERGY RETROFITS WITH HEAT PUMPS FOR COOLING AND HEATING, TECHNICAL ASSISTANCE TO TOWNS AND VILLAGES

**Flood control:** Use ClimAID/CLCPA flood projections rather than relying only on historical data.

**Strategies:** Address issues of mold and water contamination as ongoing health threats associated with flooding and aftermath, as well as public safety issues during a flood event.

**CSC PE7: Flood Mitigation Planning, Freeboard Policies, Culverts and Dams, Green Infrastructure for Stormwater Management, Riparian Buffers, Strategic Relocation**

- KOHLERTOWN FLOOD CONTROL

# Current Sullivan County Initiatives

**Transportation** – mitigation of transportation-related GHGs improves air quality and, in the context of Complete Streets and Smart Growth principles of land use, walkable communities contribute to public health.

**Strategies:** Analyze key routes and develop rural mass transit solutions and opportunities for non-motorized transportation for recreation and essential travel.

**CSC PE6: Land Use, Smart Growth, Complete Streets, Biking & Walking, EVSE, Public Transit, Safe Routes to School**

- MOVE SULLIVAN, O&W TRAIL PROJECT, BIKE AND PEDESTRIAN PLAN, EVSE

**Capital Projects** – renovations/new construction are opportunities to integrate healthy building principles.

**Strategies:** address healthy building issues as well as energy efficiency and cost savings in retrofits of County-owned facilities, and educate the public about these issues.

**CSC PE3: Decrease Energy Use, Interior & Exterior Lighting, HVAC, Water Use, EMS, Fleets;**

**PE9: Inform and Inspire the Public**

- GOVERNMENT CENTER, HEALTH AND COMMUNITY SERVICES COMPLEX, COUNTY COURTHOUSE AND ANNEX, SUNY SULLIVAN – major capital projects improve energy efficiency, reduce GHG emissions and improve indoor air quality – all featured on the County website and benchmarked to demonstrate effectiveness.

# Food Security Initiatives

**Food security** – plan for potential impacts of climate change on food production in SC and the region, and in the context of current food insecurity issues.

**Strategies:** Support County agriculture, promote sustainable farming, address food deserts and lack of access to healthy foods through policies and programs.

## CSC PE6 Action: Policies for Local Food Systems

- AG DISTRICTS, FARMERS' MARKETS, FARM TO SCHOOL, SC FOOD HUB, BUY LOCAL CAMPAIGN
- PARTNERSHIPS WITH CORNELL COOPERATIVE EXTENSION (CCE).
  - The SULLIVAN FRESH COMMUNITY CUPBOARD delivers food and prepared meals to residents of isolated areas and food deserts, veterans, seniors, those with limited transportation.
  - The MARKET-ON-THE-MOVE mobile farmers' market brings fresh, local fruits and vegetables to 8 County locations classified as food deserts, and accepts SNAP, WIC, FMNP, Sullivan Fresh RX vouchers, cash, and credit for payment.
  - FARM TO SCHOOL programs include Edible Garden projects at 7 schools, Agricultural Literacy Week, Chef in the Classroom, Lunchroom Salad Bars, Taste Test Thursdays, and Farm Field Trips.

# Housing and Environmental Justice Initiatives

**Housing:** Understand building science and the impact of substandard housing on public health.



**Strategies:** Promote building standards and retrofits to improve energy efficiency, control moisture intrusion and mold, eliminate toxic building materials and combustion appliances, improve ventilation and temperature/humidity control – in housing across all price points but especially in poor quality housing and disadvantaged communities; support training for Code Enforcement Officers.

**CSC PE8: Green Jobs Training, PACE Financing, Community Campaigns (Energy retrofits, solarize, HeatSmart, Weatherization)**

The US DOE/*Home Rx: The Health Benefits of Home Performance* found health benefits associated with energy efficiency, green building materials and finishes and non-combustion appliances (heating, hot water and cooking) including improved blood pressure; reduced stress, hypertension and fatigue; reduced hospitalizations and ER visits related to respiratory illnesses including asthma and COPD, and elimination of the dangers of home fires and carbon monoxide poisoning from malfunctioning combustion appliances.

<https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/Home%20Rx%20The%20Health%20Benefits%20of%20Home%20Performance%20-%20A%20Review%20of%20the%20Current%20Evidence.pdf>



# Housing and Environmental Justice



Land Banks create opportunities for sustainable, healthy, affordable homes with multiple benefits.

The SC Land Bank adopted a Sustainable Building Policy in 2020.

- Energy efficiency saves money for homeowners.
- “Healthy Homes” reduce health expenses and absenteeism
- Based on the Enterprise Green Community Standards:
  - Robust thermal envelope
  - Eliminate combustion appliances (cooking, heating)
  - Air source heat pumps for heating and cooling
  - Water conserving systems and fixtures
  - Stormwater management
  - Mechanical ventilation for air quality
  - Avoid Red List materials
  - Incorporate carbon-storing building materials



# Sustainability staff and Public Health Services can build broader action on health and climate change

## Key resources:

- **Best practices** (CDC, BRACE Framework, NACCHO, NYS DOH, US DOH, Enterprise Green)
- **Environmental and economic justice resources** (EPA EJScreen, the ALICE Project, CLCPA Implementation Plan)
- **County-specific data** (County Health Improvement Plans, Regional County Health Assessments, NYS DOH Heat Vulnerability Maps)

## Key understandings, actions and strategies:

- Correlate climate projections and public health data to help set priorities.
- Identify the County's most vulnerable populations and develop effective interventions.
- Recognize that by mitigating the GHG emissions that contribute to climate change, we also support human health by reducing toxins and PM2.5 emitted by combustion of fossil fuels for heating & cooking as well as transportation & industrial activities.
- Develop "healthy home" cross-trainings and interventions to correct unhealthy/unsafe conditions.
- Create healthy affordable homes through Land Bank projects and emergency housing initiatives.
- Develop grant-ready data, strategies and project descriptions to help secure climate-related funding for priority health projects.
- Focus on health in all County planning and infrastructure projects.
- Recognize equity as a health issue.

# Working across sectors and disciplines

“Protecting health requires action well beyond the health sector, in energy, transport, nature, food systems, finance and more.”

WHO COP 26: The Health Argument for Climate Action



# Sullivan County Office of Sustainable Energy (OSE)

**Heather Brown**

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Sustainability Coordinator**

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**<https://sullivanny.us/Departments/SustainableEnergy>**

**<https://climatesmart.ny.gov/>**



**Climate Smart  
Communities**  
Certified



# NYSERDA's Clean Energy Communities Program

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**Clean Energy  
Communities**



University at Buffalo  
**Regional Institute**  
School of Architecture and Planning

<https://www.nyserra.ny.gov/All-Programs/clean-energy-communities>

# High Impact Actions

## Legislative Actions



**Benchmarking** Up to 1,100



**PACE Financing** Up to 500



**NY Stretch Energy Code** Up to 1,200



**Unified Solar Permit** 200

## Project Actions



**Clean Energy Upgrades** 500



**Clean Fleets** Up to 900



**Clean Heating & Cooling Demo** 700



**LED Street Lights** Up to 900



**100% Renewable Electricity** 500

## Community Actions



**Climate Smart Communities** Up to 800



**Community Campaigns** Up to 1,100



**Community Choice Aggregation (CCA)** Up to 2,000



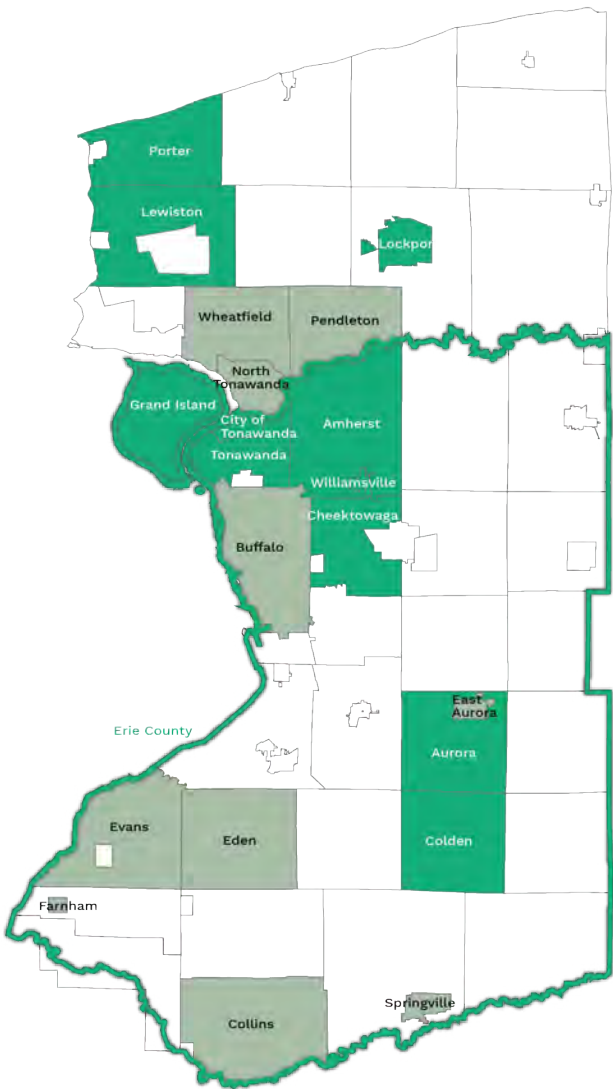
**Energy Code Enforcement Training** 200



**County-Hosted Trainings** Up to 1,500

**NEW**

# Clean Energy Communities Update



2020

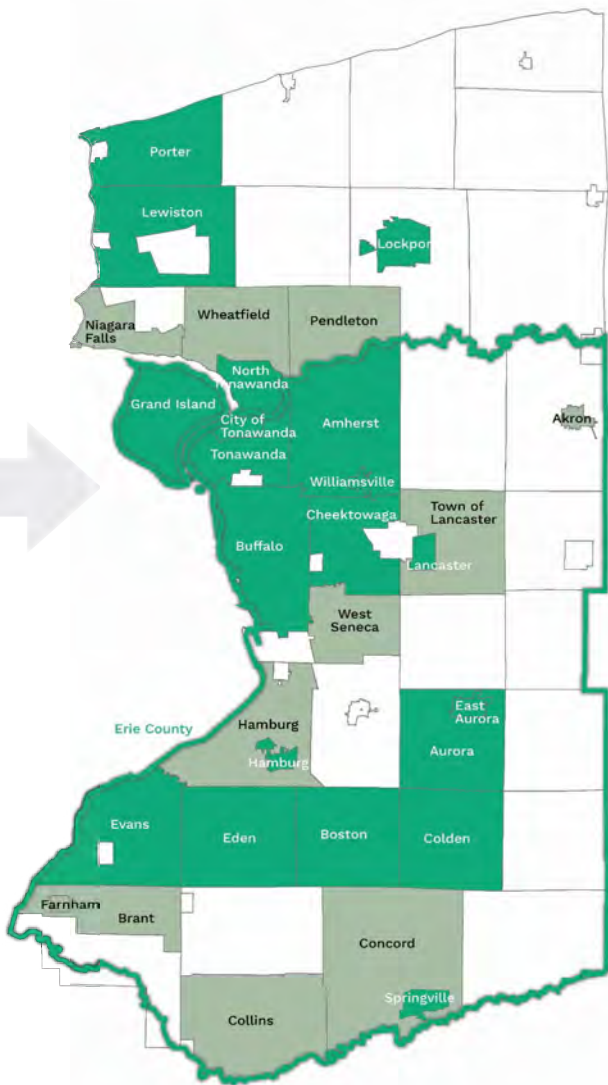
**22** communities participating in NYSERDA's CEC Program as of Dec. 2020



**12** Clean Energy Communities  
(Completed at least 4 High Impact Actions)



**10** Other Participating Communities  
(Completed at least one High Impact Action)



2022

**32** communities participating in NYSERDA's CEC Program as of June 2022

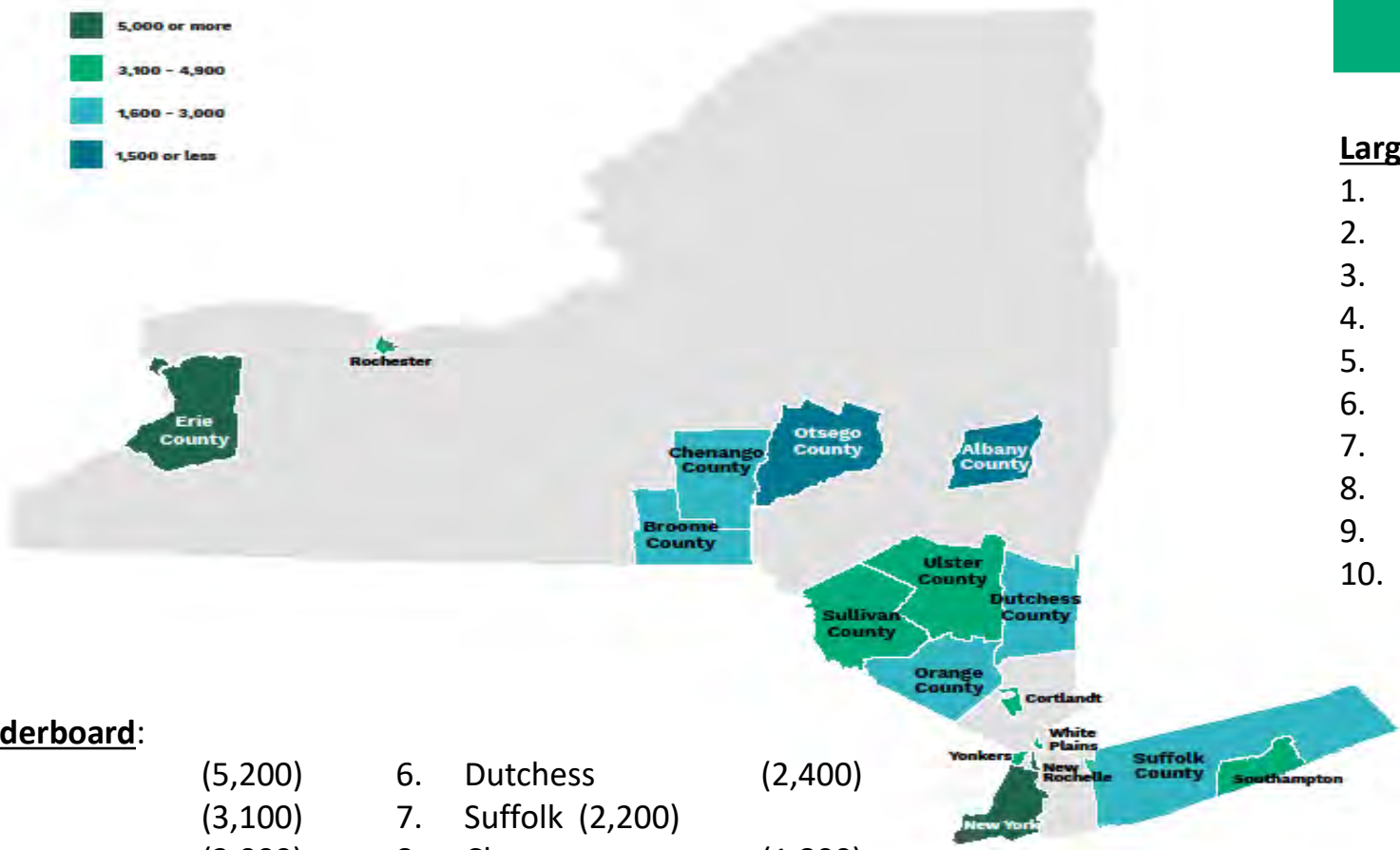


**21** Clean Energy Communities  
(Completed at least 4 High Impact Actions)



**11** Other Participating Communities  
(Completed at least one High Impact Action)

# Large Community & County Leaders



2022

**Large Communities:**

1.	Erie County	(5,200)
2.	City of New Rochelle	(5,000)
3.	New York City	(5,000)
4.	City of Yonkers	(4,200)
5.	Town of Southampton	(4,200)
6.	City of White Plains	(4,100)
7.	City of Rochester	(3,500)
8.	Town of Cortlandt	(3,400)
9.	Ulster County	(3,100)
10.	Sullivan County	(3,000)















**County Leaderboard:**

1.	Erie	(5,200)	6.	Dutchess	(2,400)
2.	Ulster	(3,100)	7.	Suffolk	(2,200)
3.	Sullivan	(3,000)	8.	Chenango	(1,800)
4.	Orange	(2,700)	9.	Albany	(1,500)
5.	Broome	(2,500)	10.	Otsego	(1,400)



# Erie County



															Total Points
Completed Actions	300	200	xx	xx	500	300	700	700	--	800	200	xx	xx	1,500	5,200
On-Going Actions	--	--	xx	xx	--	--	--	--	--	--	--	xx	xx	--	--
Potential Actions	--	??	xx	xx	--	??	--	--	--	--	??	xx	xx	--	???

Funding Opportunity: \$270,000

TOTAL 5,200

# EQUITABLE CLIMATE ACTION FOR A HEALTHY AND RESILIENT ERIE COUNTY, NY







### Learn More - Climate Action Plan

View the Community Climate Action Planning timeline, Scoping Document and Outline. Learn about the chapters of Plan and provide feedback on actions.

[Learn More](#)

### Public Comment is Open

The Community Climate Action Plan chapter goals, strategies, and action items are opening up for public comment! Click below to read about each chapter put forth by the working groups and leave your comments.

[Learn More](#)

### Climate Ambassador Program

The Erie County Ambassador Program encourages Erie County residents to have conversations and share input on how our community can be healthy, sustainable, and resilient. Learn more.

[Learn More](#)

Erie County  
Department of Environment and  
Planning  
95 Franklin St. Buffalo, NY 14202

[sustainability@erie.gov](mailto:sustainability@erie.gov)

### JOIN OUR MAILING LIST



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# Climate and Health Resources at NYSDOH

Tabassum Insaf, PhD

Bureau of Environmental and Occupational Epidemiology

[Tabassum.insaf@health.ny.gov](mailto:Tabassum.insaf@health.ny.gov)

# Extreme Heat



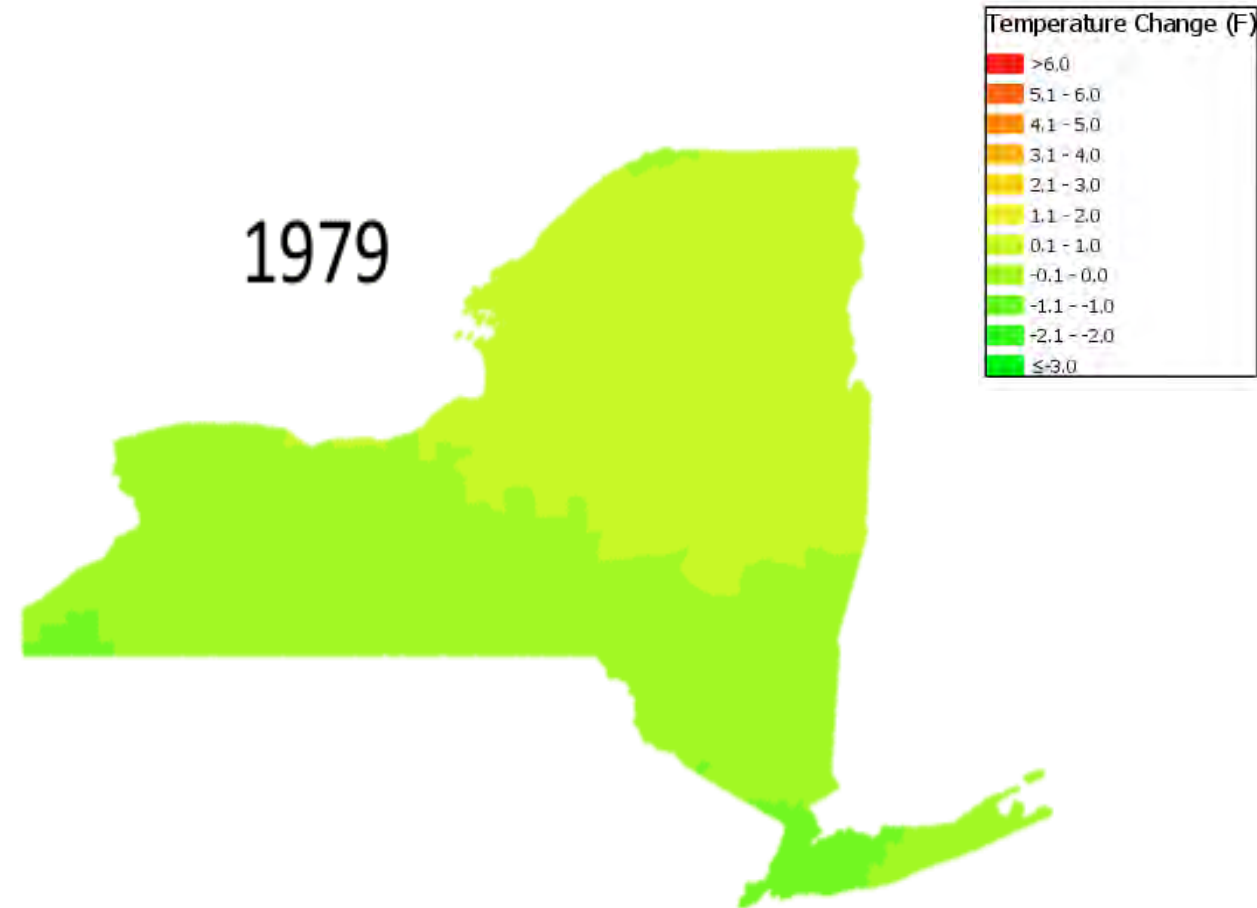


Extreme Heat-  
Where

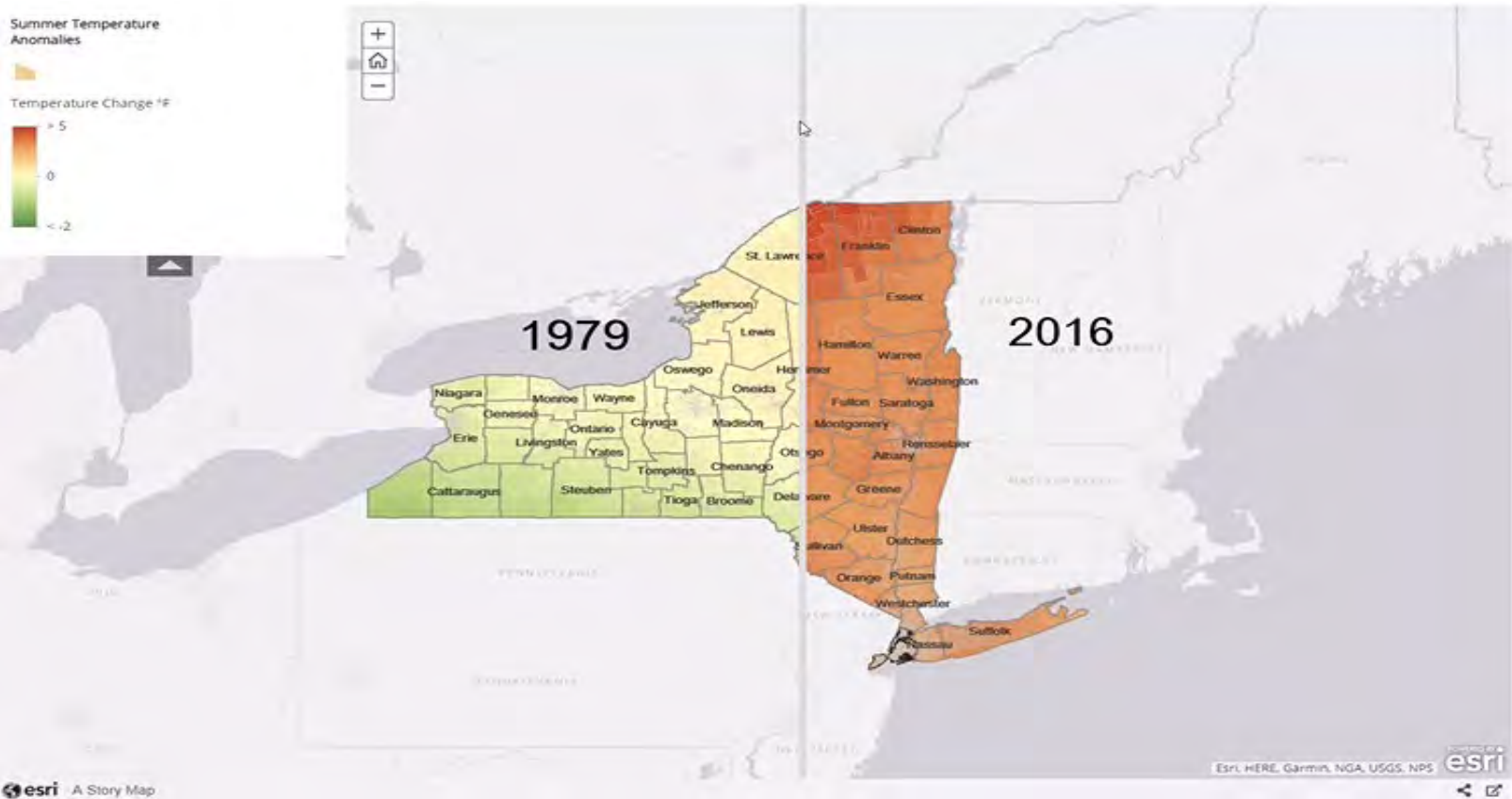
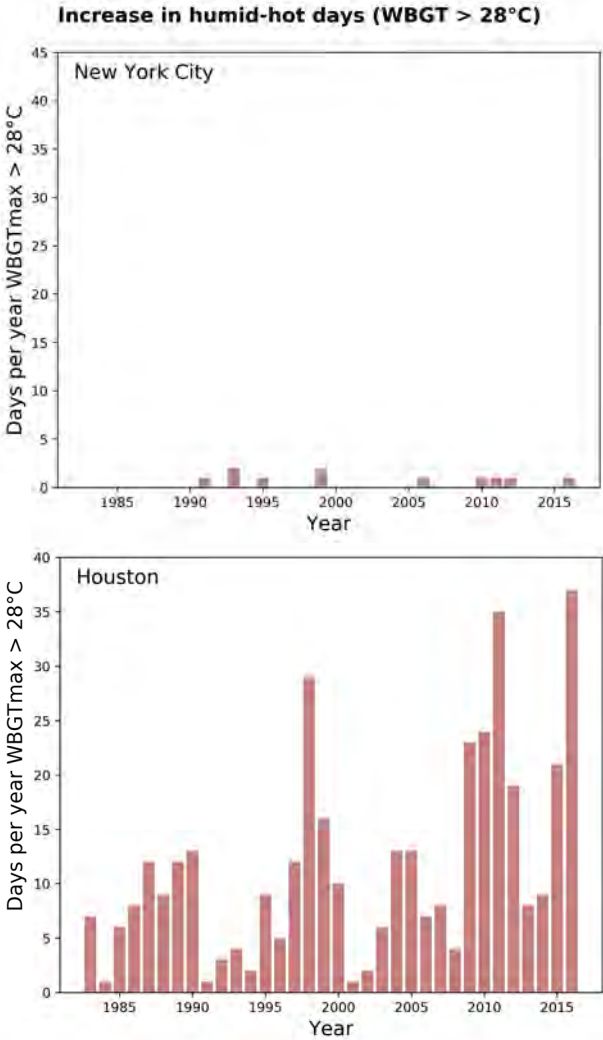


# Extreme Heat in New York State

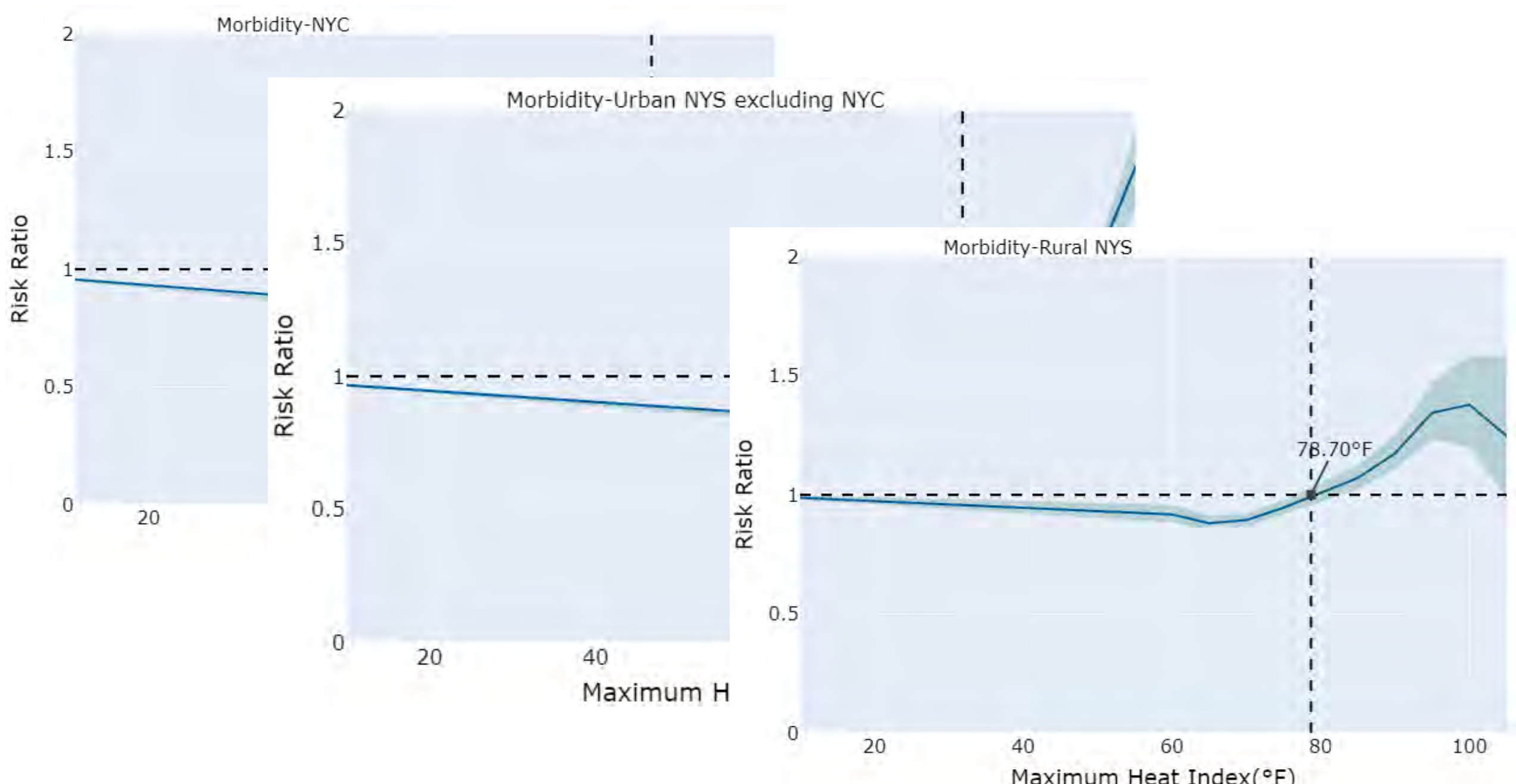
- Average summer temperatures have increased by 2°F since 1970
- Over the next century, average summertime (June-August) temperatures in NYS are projected to increase between 3.6 to 10.8°F
- A 5°F change in temperature can double a New Yorker's chance of heat related illness



# Extreme Heat events / Warming trends







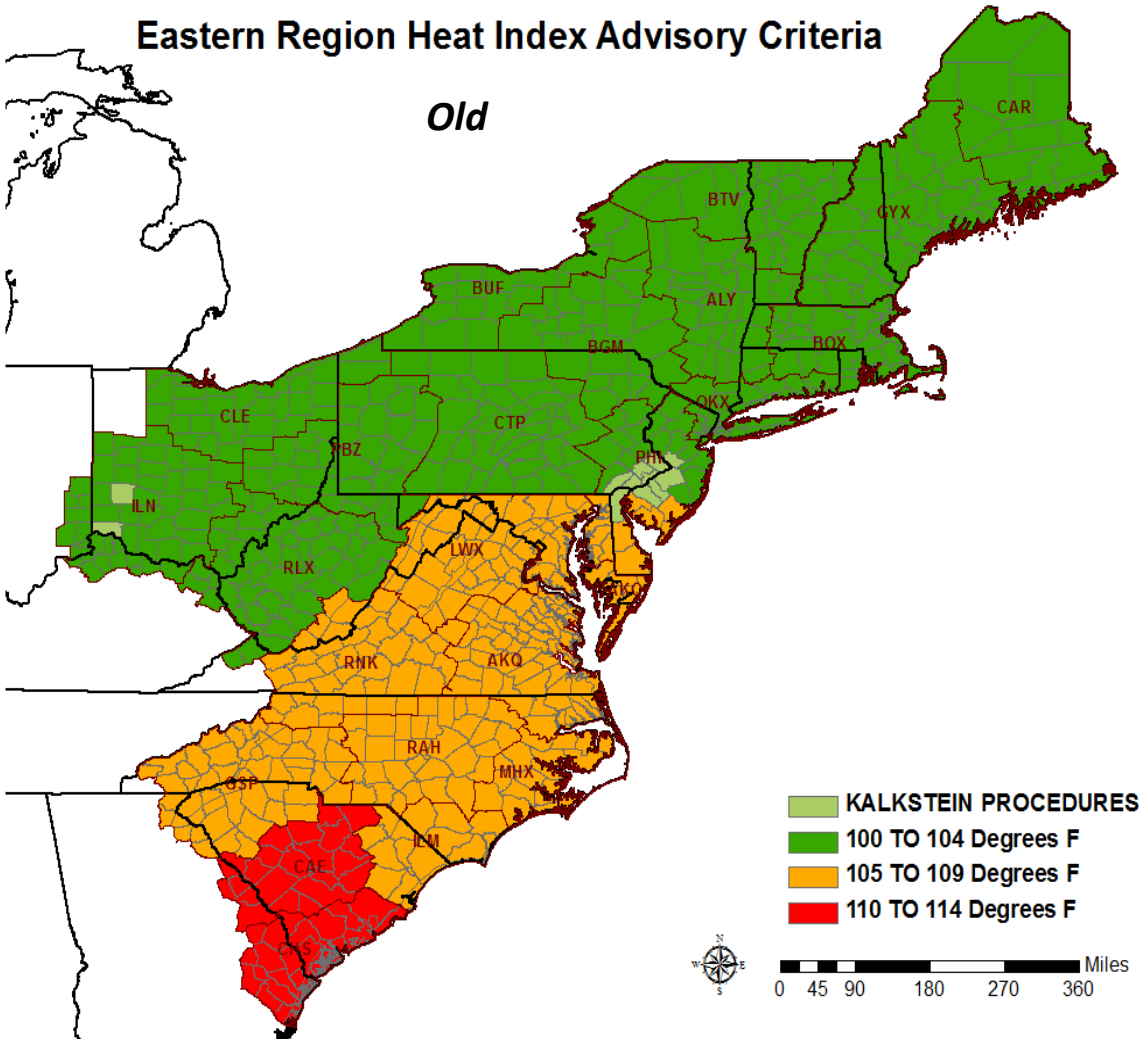


# NATIONAL WEATHER SERVICE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

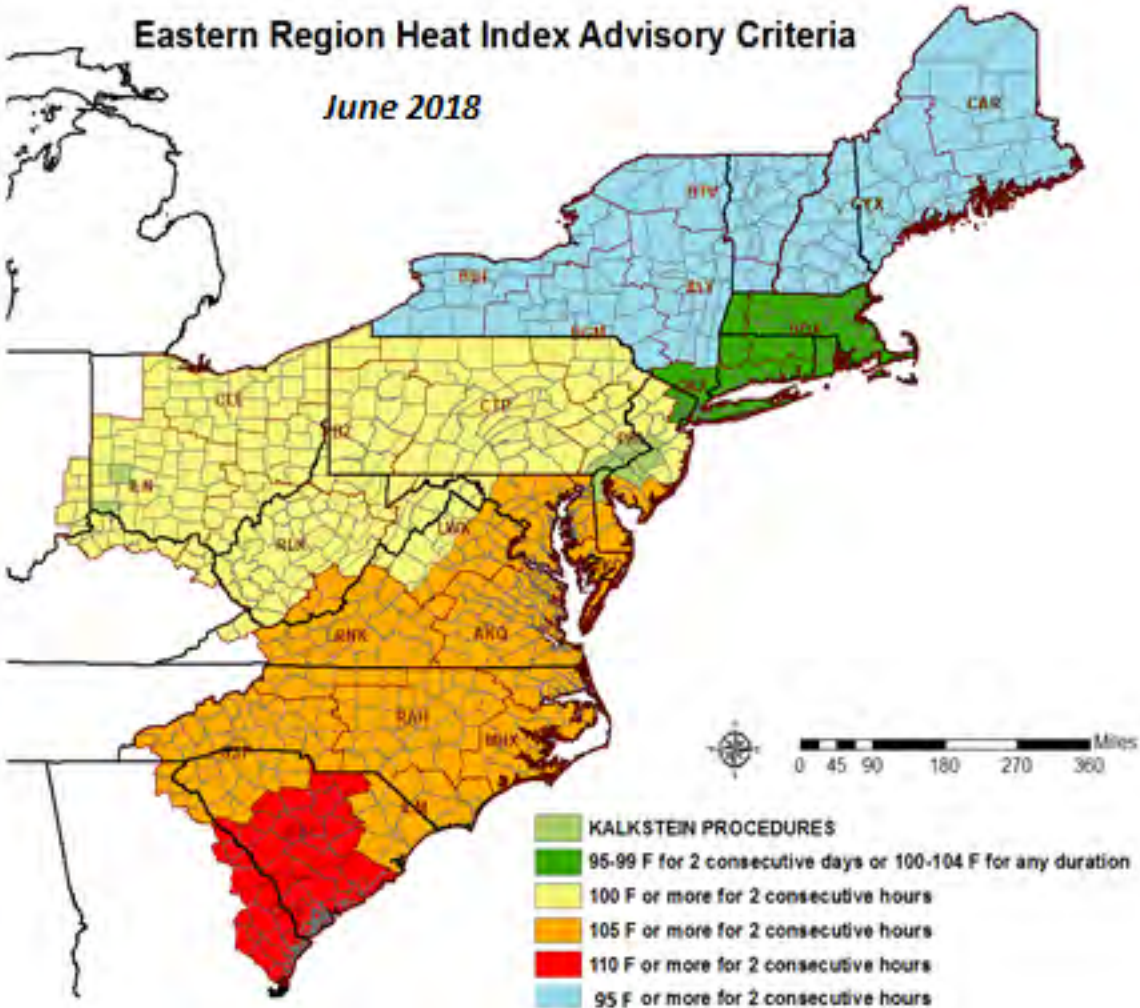
Eastern Region Heat Index Advisory Criteria

*Old*



Eastern Region Heat Index Advisory Criteria

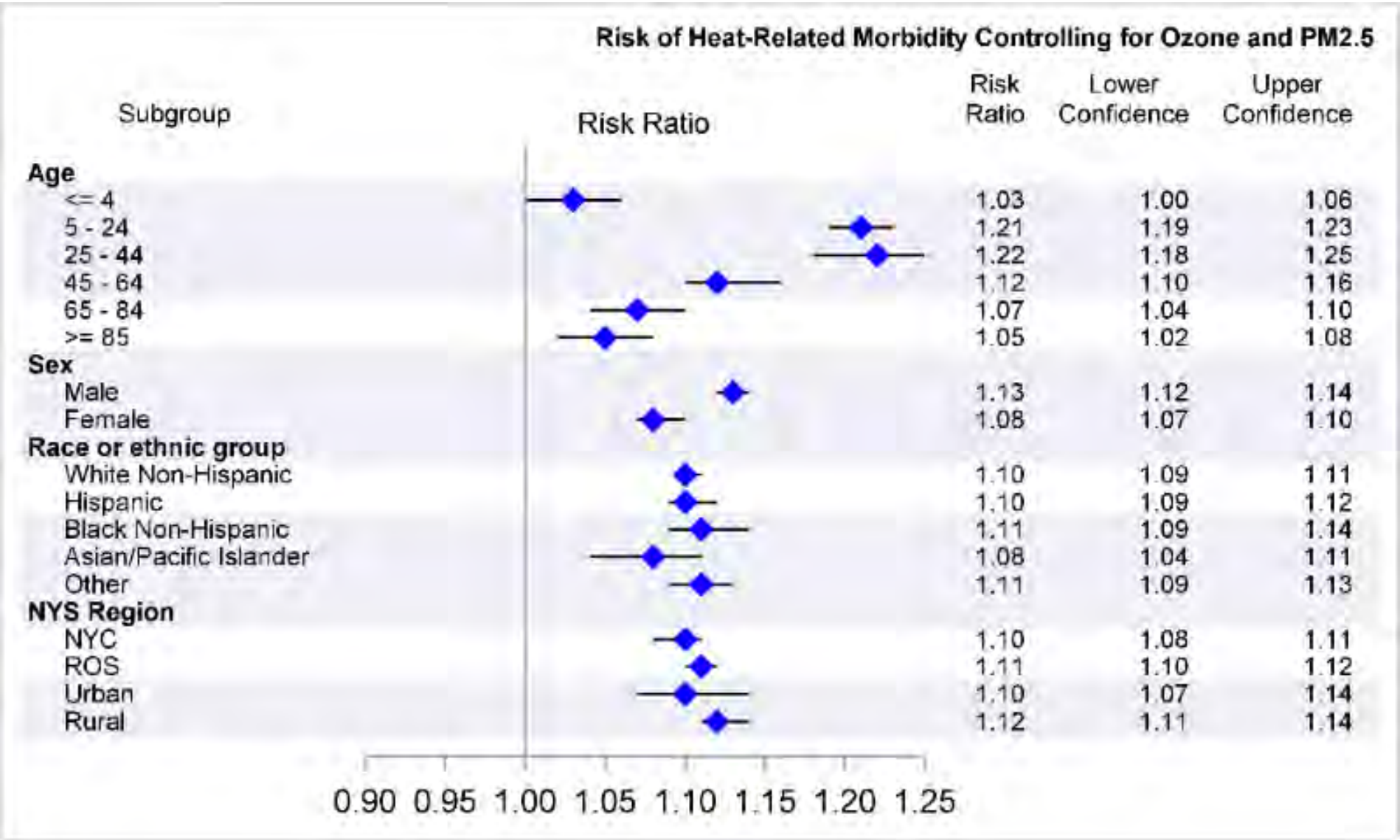
*June 2018*



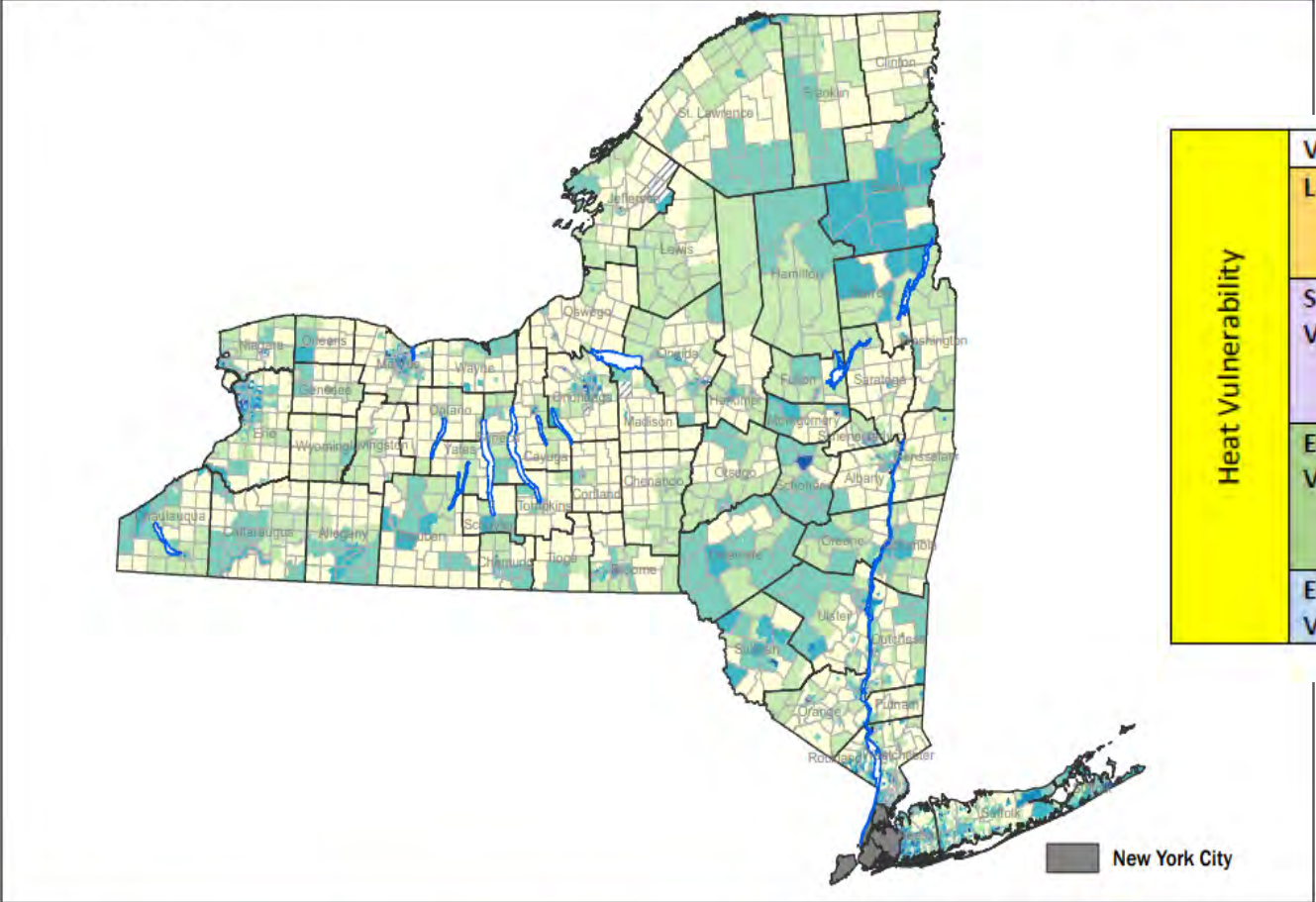


# Extreme Heat- Who





Heat Vulnerability Index  
New York State



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





# Extreme Heat- How



# Mitigation

# Cooling Centers Portal

## 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 and emergency management offices.

If a cooling center is not available, libraries, supermarkets, malls, and community swimming pools are great places to stay cool. You can always check with your local sources for possible additional cooling centers during heat events.

**Remember, call before you go!** Cooling centers may be closed at certain times or only available during extreme heat events. The phone number and address of each information below represents the most up to date information provided by local agencies.

View: 

Map

List

County: 

Select a County

Albany County Cooling Centers

 Call before you go to make sure the cooling center is open

Facility	Street Address	Contact Number	Days and Hour
Arbor Hill Community Center Pool	50 Lark St, Albany, NY 12210	518-434-5699	June 26th, 2022 - Labor Day, 2022:
Arbor Hill/West Hill Branch	148 Henry Johnson Blvd, Albany, NY 12210	518-427-4300	Call for operating hours and capacity
BACH Branch	455 New Scotland Ave, Albany, NY 12208	518-427-4300	Call for operating hours and capacity
Beltrone Living Center	6 A Winners Cir, Colonie, NY 12205	518-459-2711	Call for operating hours
Black Lives Matter Park Spray Pad	484 Livingston Ave, Albany, NY 12206	518-434-5699	June 26th, 2022 - Labor Day, 2022:
Colonie St. Park (Wilkie Playground) Spray Pad	200 Colonie Street, Albany, NY 12210	518-434-5699	May 21, 2022 - Labor Day, 2022: 10:00 AM - 6:00 PM
Colonie Village Hall	2 Thunder Rd, Albany, NY 12205	518-218-7782	Call for operating hours
Delaware Branch	331 Delaware Ave, Albany, NY 12209	518-427-4300	Call for operation hours and capacity. Phone extension: Ext.4
Hackett Park Spray Pad	35 N 1st Street, Albany, NY 12204	518-434-5699	May 21, 2022 - Labor Day, 2022: 10:00 AM - 6:00 PM
Hockey Facility	830 Albany-Shaker Rd., Loudonville, NY 12211	518-452-7396	Hours of operation vary. Please see schedule listed on the website linked here: <a href="https://www.albanycounty.com/departments/recreation/hockey-facility">https://www.albanycounty.com/departments/recreation/hockey-facility</a>
Howe Branch	105 Schuyler Street, Albany, NY 12202	518-427-4300	Call for operation hours and capacity. Phone extension: Ext.5

Cooling centers will not be displayed on the map until a valid address is entered in the "Address" Search bar. Click "List" to view a list of cooling centers by county.

View: 

Map

List

Address: 

Empire State Plaza, Albany, NY, USA

Search

Print

Zoom to NY State

Map

Satellite

Cooling Center: North Central Troy (7th Avenue Park)

Address: 48 Ingalls Avenue, Troy, NY 12180

Phone: 518-235-7761


Hours: 12 PM to 8 PM

Mode of Travel: 

Driving

Go

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

NEW YORK STATE  
Department of Health



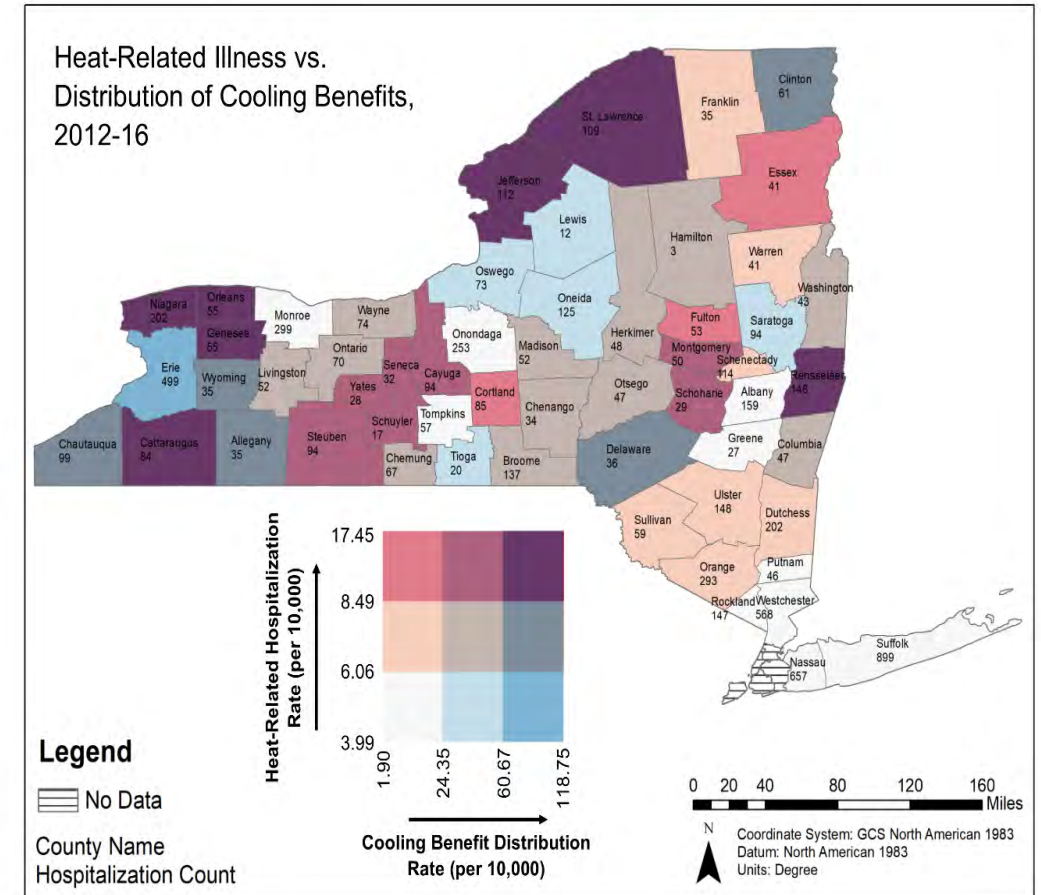
# Office of Temporary and Disability Assistance (OTDA): Home Energy Assistance Program (HEAP)

# Objective

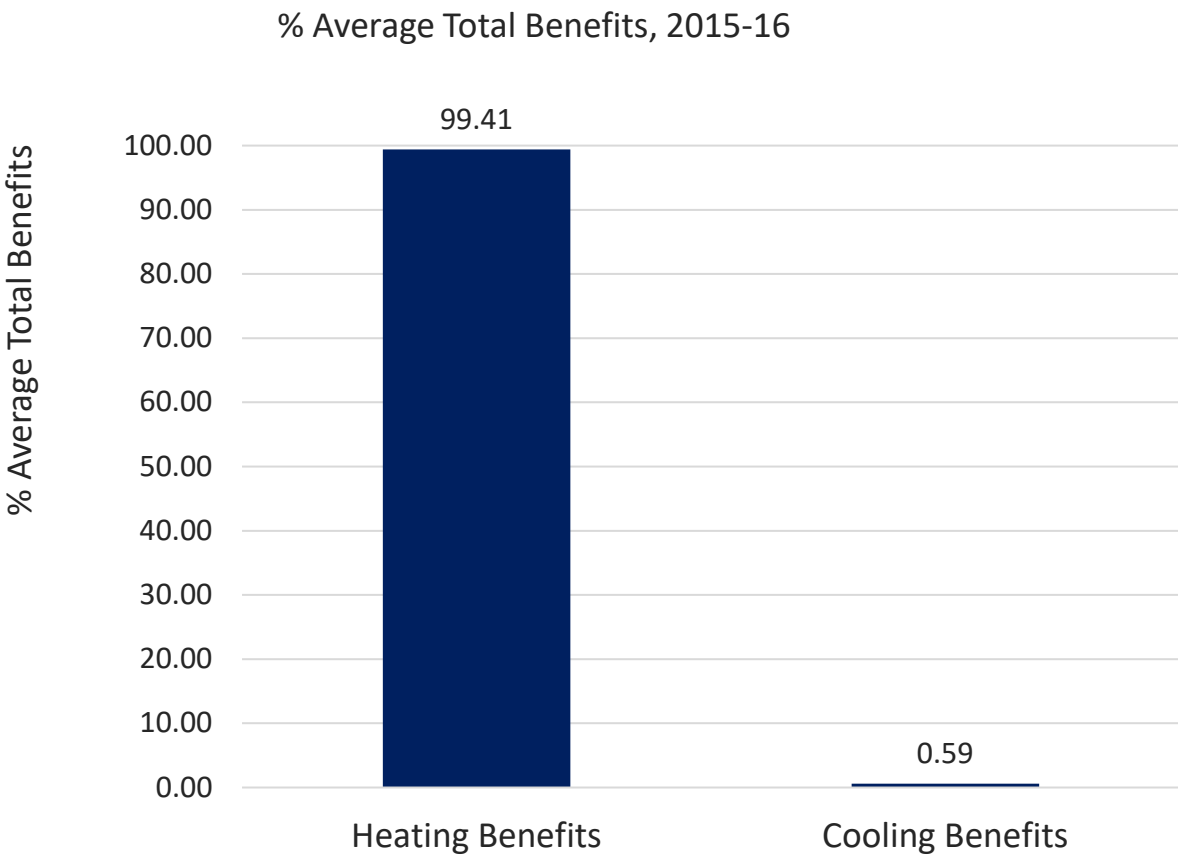
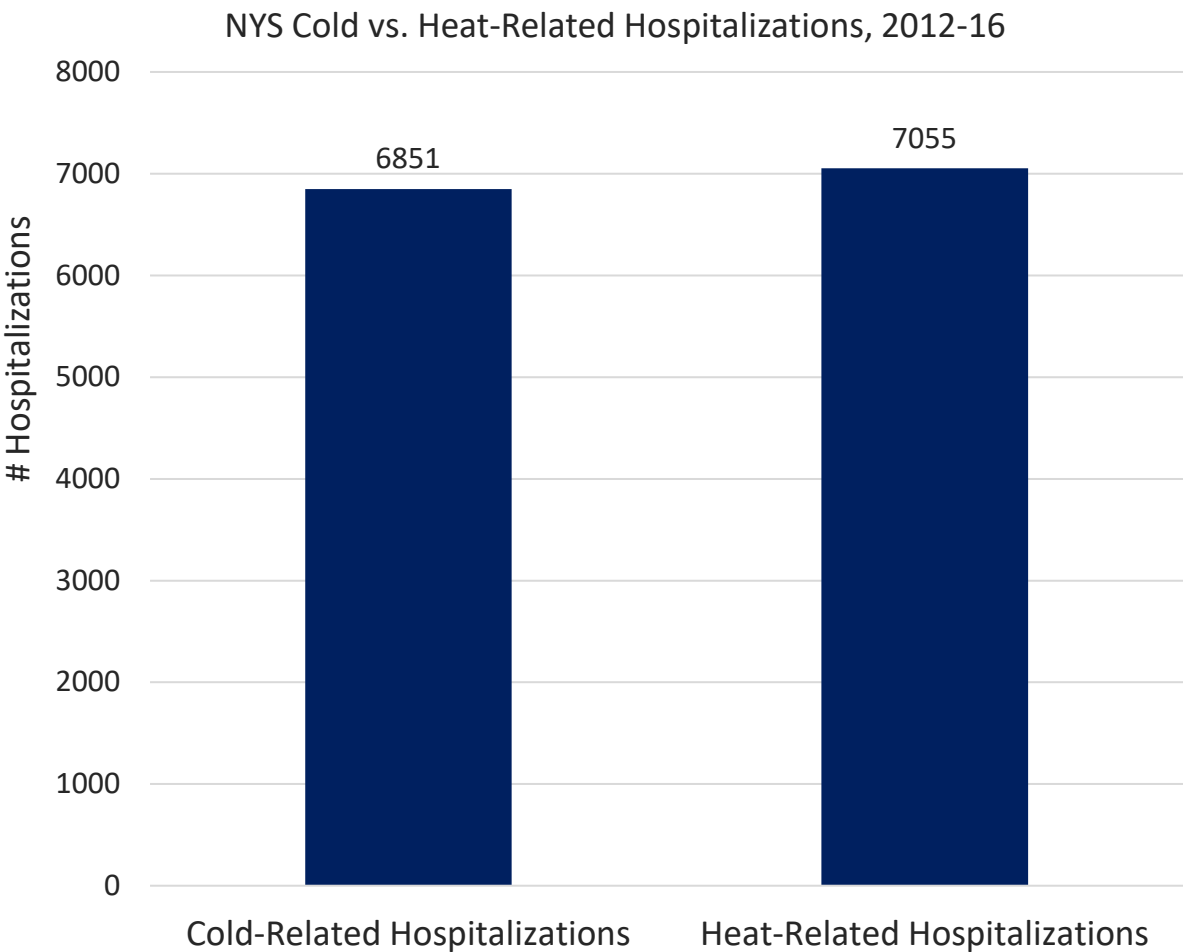
- Collaborate with OTDA to increase utilization of cooling assistance offered by HEAP

## Method

- Promote the cooling assistance program through a variety of resources, such as a promotional flyer and the Cooling Centers program



# Distribution of HEAP Benefits and Illness



JUNE 17, 2018 | Albany, NY

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

WEATHER



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June 22, 2018

### NASA Helps New Yorkers Cope with Summer Swelter



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.

NEW YORK STATE  
**Conservationist**

New York State's premiere outdoor magazine—bringing nature to your door!



Advanced Webinar: Methods in Using NASA Remote Sensing for Health Applications



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Society for  
Epidemiologic  
Research

**PUBLIC HEALTH 3.0**  
Innovating & Transforming

Public Health Partnership Conference  
NYSPPH 69th Annual Meeting  
NYSACHO 2019 Annual Meeting

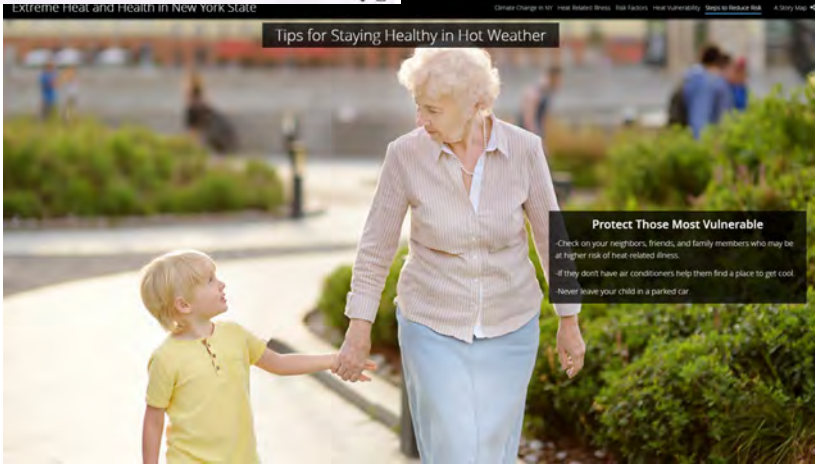
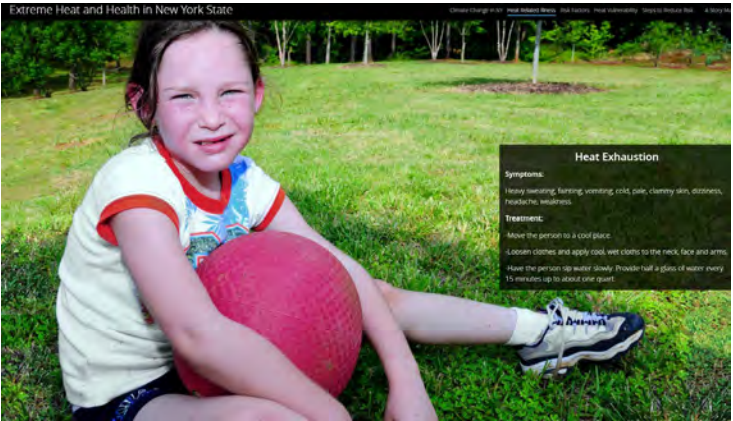
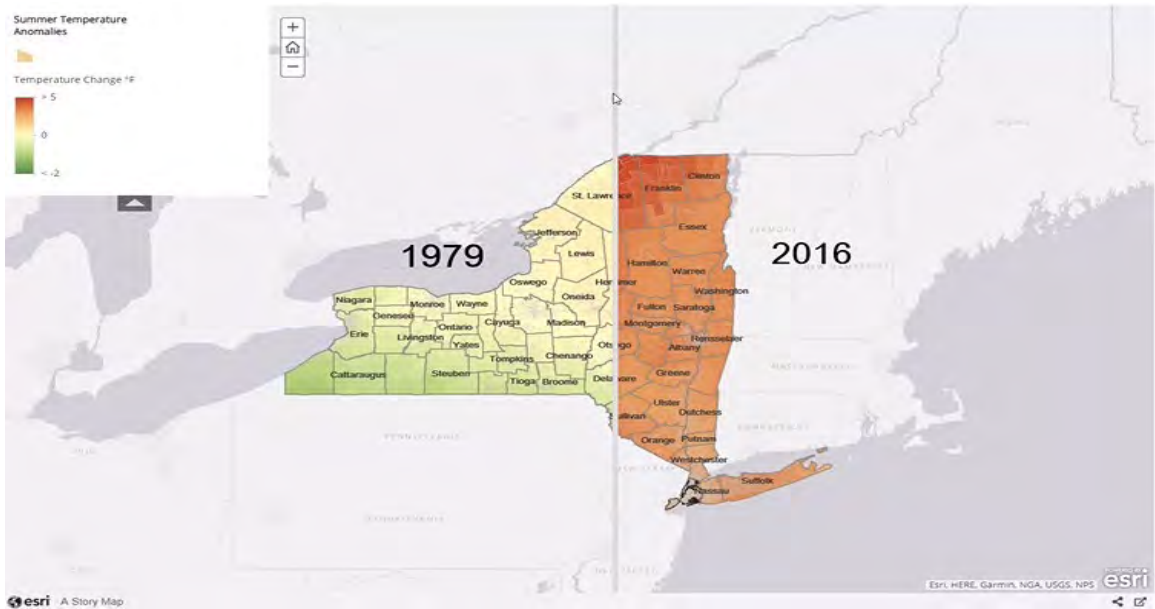
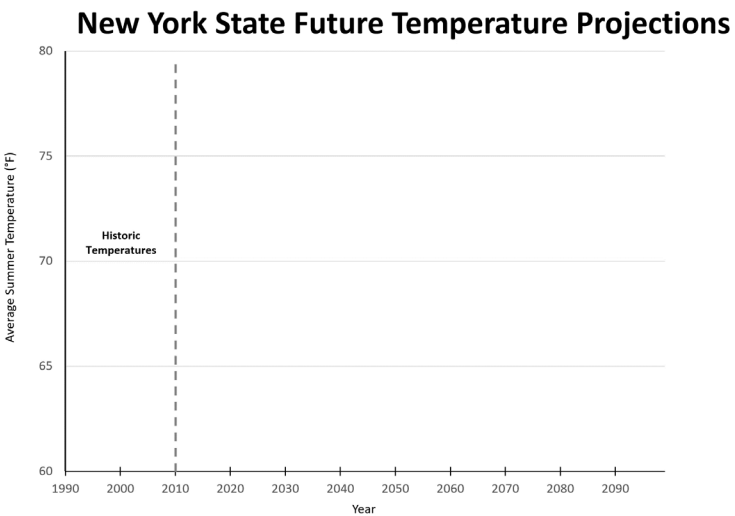
May 1-3 | Greek Peak Mountain Resort | Cortland, NY



# Extreme Heat and Health Story Map

Extreme Heat and Health in New York State

Climate Change in NY Heat Related Illness Risk Factors Heat Vulnerability Steps to Reduce Risk A Story Map



## 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

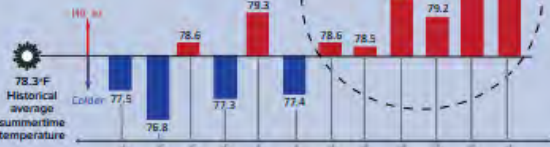
The community and its environment influence heat-related illness. Urban areas or communities with large populations, limited English proficiency, low income, and limited access to air conditioning are at higher risk.

### WHAT WE LEARNED

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

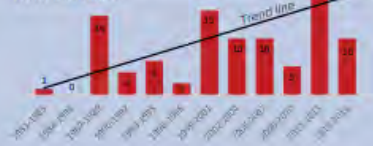
#### Rising Temperatures in New York State, 1981-2016

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](http://www.health.ny.gov/extremeheat)



Check your local weather so you can be prepared.  
[www.weather.gov](http://www.weather.gov)



Find a place to get cool.  
[www.health.ny.gov/environmental/weather/cooling](http://www.health.ny.gov/environmental/weather/cooling)



Get involved in community planning.  
[www.climatesmart.ny.gov/](http://www.climatesmart.ny.gov/)



View your County's Heat and Health Profile at [www.health.ny.gov/ExtremeHeat](http://www.health.ny.gov/ExtremeHeat)



## 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

# County Heat and Health Profiles

## Purpose

- Provides 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



NEW YORK STATE

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Heat and Health Profiles

Home

County Heat and Health Profile Reports

Heat Vulnerability Index

Related Links

Find a Cooling Center

Extreme Heat

Climate and Health

Heat Stress

Climate Change Research

Contact Us

Interactive Tool

Environmental Public Health Tracker

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

You are Here: Home Page > County Heat and Health Profile Reports > County Heat and Health Profile Reports

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.

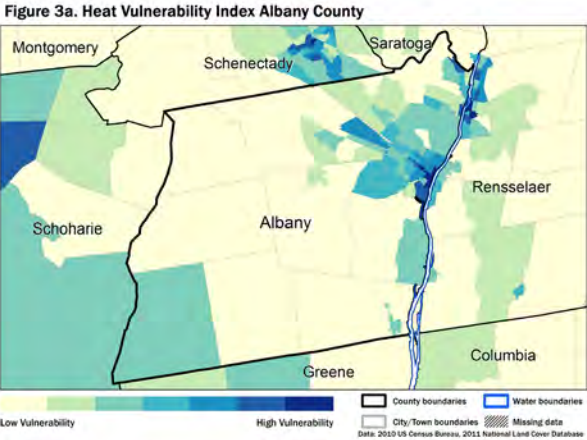
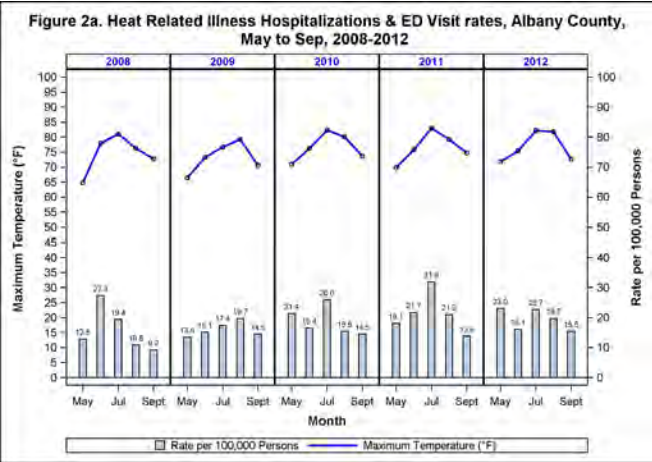
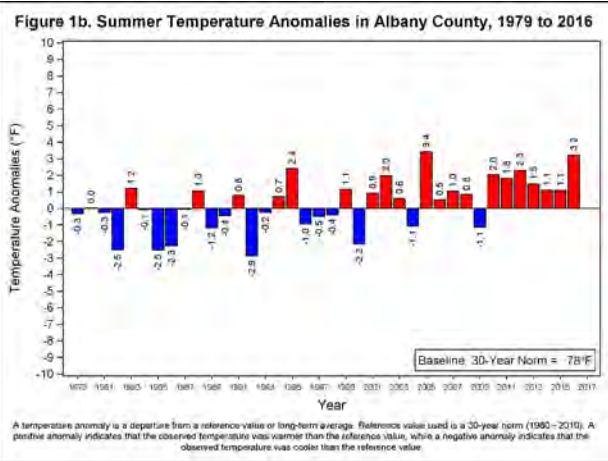
Click a county on the map below to view its Heat and Health Profile Report.

Questions or comments: [eght@health.ny.gov](mailto:eght@health.ny.gov)

Revised: March 2018

Heat and Health Profile Report  
Albany County

Department of Health



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

Downloadable data at census tract level

date	ndays	ID	COUNTYFP1	month	year	context	indicator	measure	subgroup	subgroup_cat	output
1979-05-01	121	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	53
1979-05-02	122	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	52.2
1979-05-03	123	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	62.1
1979-05-04	124	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	58.5
1979-05-05	125	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	47.1
1979-05-06	126	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	52.2
1979-05-07	127	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	62.7
1979-05-08	128	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	75.9
1979-05-09	129	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	83
1979-05-10	130	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	81.7
1979-05-11	131	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	75.4
1979-05-12	132	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	70.3
1979-05-13	133	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	71
1979-05-14	134	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	61.6
1979-05-15	135	001014801	001	5	1979	heat	Max Temperature	degrees	Temperature above 90	0	70

# Extreme Heat Indicators

## Environmental Public Health Tracking Indicators:

- Temperature (forthcoming)
- Heat Stress (Hospitalizations and ED Visits)

Map

Charts

Select Data to Query

Temperature

Otsego

Select Indicator

Daily Temperature Estimates

May through September

2016

Daily Temperature Estimates\* in Otsego County, May through September 2016

Map

Charts

Maximum Temperature, June, 2016, New York State

Find an address, town, county, ZIP code

GO

Select Data to Query

Temperature

Sub-County

New York State

Maximum Temperature

Select Advanced Options

June

2016

Legend

Maximum Temperature (°F)

Less than 70

70 to 75

75 and above

County Boundaries

Selected Areas

NYS Maximum Temperature (°F): 76

Maximum Temperature, June, 2016

Select up to 5 areas to compare/compile

Click 1 to view City, Town, or Neighborhoods within each area

1

72 (°F)

2

72 (°F)

3

73 (°F)

4

75 (°F)

5

74 (°F)

Generate Report

View: Month and Year

Place of Exposure

Years: 2017-2019

Region: New York State

Data Source: ED Visits

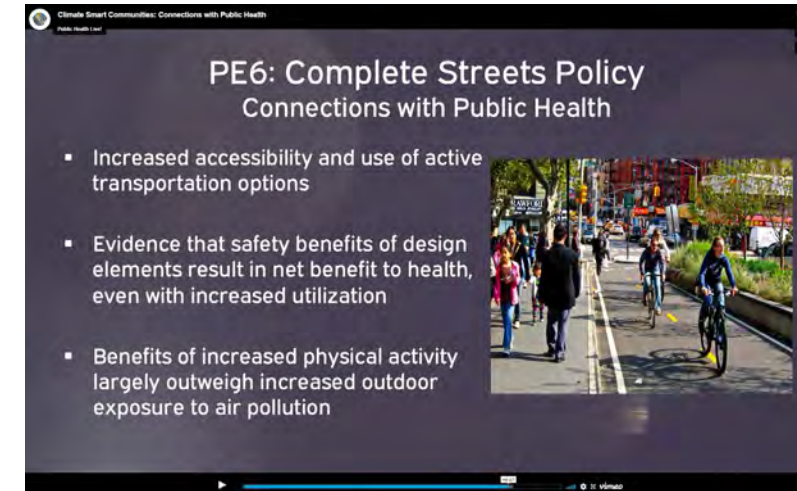
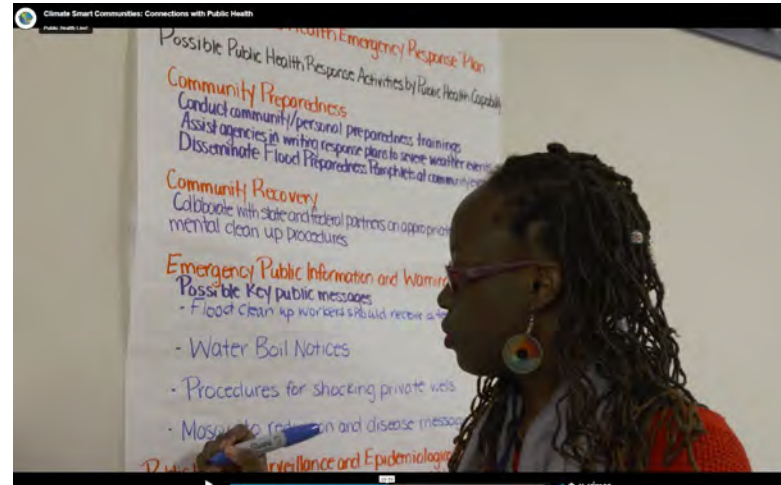
Heat Stress Related Emergency Department Visits and Average Temperatures, By Month and Year, New York State, 2017-2019

Heat Stress Related Emergency Department Visits and Average Temperatures, By Month and Year, New York State, 2017-2019

Months	ED Visits per 100,000			Average Temperature		
	2017	2018	2019	2017	2018	2019
May	0.82	1.17	0.48	63 °F	71 °F	66 °F
June	2.26	2.06	1.51	70 °F	75 °F	75 °F
July	2.32	5.35	6.15	81 °F	83 °F	84 °F
August	0.88	2.77	1.08	79 °F	83 °F	80 °F
September	0.79	1.32	0.36	76 °F	76 °F	74 °F



# Public Health Live!



## Preparing for Extreme Heat in New York State

### Learning Objectives

Describe how greenhouse gas emissions produced through human activity are leading to changes in the climate that may affect health;

- Summarize the benefits of certification as a Climate Smart Community; and
- Identify how actions to become a Climate Smart Community can lead to improved public health outcomes.

## Climate Smart Communities: Connections with Public Health

### Learning Objectives

Describe how greenhouse gas emissions produced through human activity are leading to changes in the climate that may affect health;

- Summarize the benefits of certification as a Climate Smart Community; and
- Identify how actions to become a Climate Smart Community can lead to improved public health outcomes.

# Policy

# Interagency efforts

- NYS Climate Impact Assessment
- NYS Extreme Heat Action Plan
- CLCPA
- Disadvantaged Communities Criterion
- Climate Scoping Plan

# Additional Ongoing Efforts

- Extreme Heat events data
- NWS Messaging
  
- Climate Impacts Compendium
- Flood Vulnerability
- Evaluation of new tools for Harmful algal blooms monitoring

# Questions or Comments?

Tabassum Insaf

Tabassum.Insaf@health.ny.gov



# Heat Metrics

## Meteorological

- Average Temperature
- Maximum Temperature
- Minimum Temperature
- Diurnal Temperature

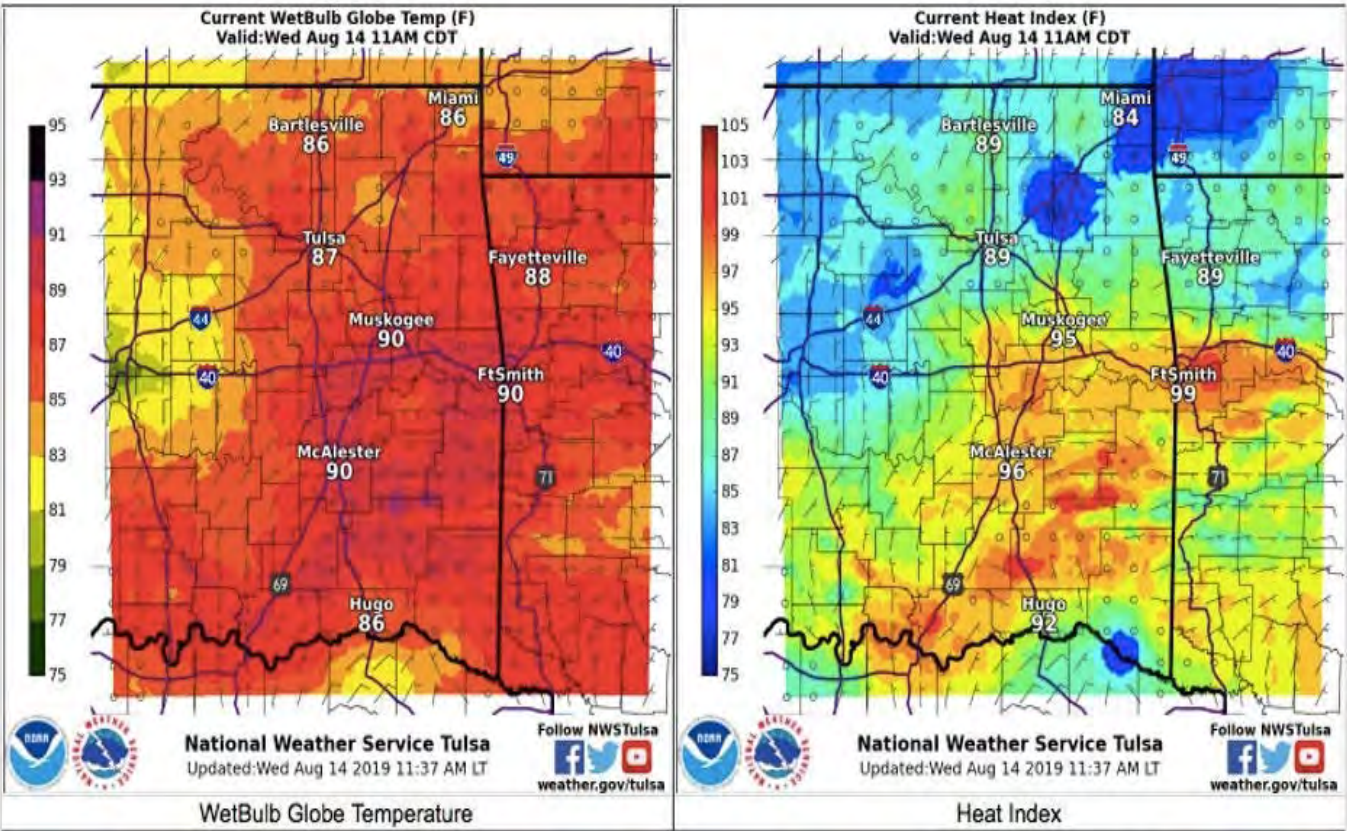
## Health Relevant

- Maximum Heat Index/  
Apparent Temperature
- Wet Bulb Globe  
Temperature

## Heat Waves

- No consensus on definition but combination of temperature value and duration
- Unusually hot weather / 2 or more days
- Outside historical norms
- Lagged and cumulative effects

# WBGT vs Heat Index



[WetBulb Globe Temperature \(weather.gov\)](https://www.weather.gov/wbgt)

## Comparison with Heat Index

	WBGT	Heat Index
Measured in the sun	✓	✗
Measured in the shade	✗	✓
Uses Temperature	✓	✓
Uses RH	✓	✓
Uses Wind	✓	✗
Uses Cloud Cover	✓	✗
Uses Sun Angle	✓	✗

Suggested Actions and Impact Prevention		
WBGT(F)	Effects	Precautionary Actions
< 80		
80-85	Working or exercising in direct sunlight will stress your body after 45 minutes.	Take at least 15 minutes of breaks each hour if working or exercising in direct sunlight
85-88	Working or exercising in direct sunlight will stress your body after 30 minutes.	Take at least 30 minutes of breaks each hour if working or exercising in direct sunlight
88-90	Working or exercising in direct sunlight will stress your body after 20 minutes.	Take at least 40 minutes of breaks each hour if working or exercising in direct sunlight
>90	Working or exercising in direct sunlight will stress your body after 15 minutes.	Take at least 45 minutes of breaks each hour if working or exercising in direct sunlight

# Preview of Plenary Part II

- Cross-Cutting Issues in Climate and Health
  - Leveraging Resources & Partnerships
  - Health Equity
  - Funding
  - Mental Health
  - Communications
- Preview of Upcoming Topic-Specific Workshops!



Department  
of Health



# Questions?

Use the chat box or use the “raise your hand” feature to ask your question(s)!