



Climate & Health Adaptation Workshops



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

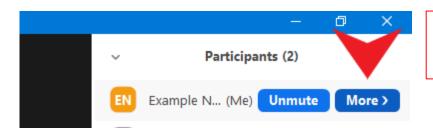


CDC-RFA-EH17-1702 CDC-RFA-EH22-2202



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"







Review of Plenary Part I

To access materials from the plenary sessions, visit: https://www.nysacho.org/topic/climate-and-health-workshops/

Today's Agenda

- Cross-Cutting Issues in Climate and Health
- Preview of Topic-Specific Workshops
- Q&A



Cross-Cutting Issues in Climate & Health

Leveraging Resources & Partnerships | Dazzle Ekblad, NYS Department of Environmental Conservation

Health Equity | Josh Wilson, Erie County Department of Environment & Planning

Funding | Cari Olson, NYC Department of Health & Mental Hygiene

Mental Health | Hunter L. McQuistion, NYU Grossman School of Medicine

Communications | Dr. Ed Maibach, George Mason University Center for Climate Change Communications







Leveraging Resources & Partnerships: Climate Smart Communities Coordinators

Dazzle Ekblad
DEC Office of Climate Change
September 30, 2022
Climate & Health Adaptation Workshops



State Support for Local Climate Action



Assistance to local government leaders to:

- Reduce greenhouse emissions
- Adapt to climate change

Voluntary. No fees. Sponsored by 7 NYS state agencies.

Comprehensive. Flexible.



Milestones



- 2009 Launch of the CSC program: focus on passing 10-point CSC pledge
- 2012-2015 CSC regional coordinators pilot, funded by NYSERDA
- 2014 Launch of CSC certification program
- 2016 1st year of <u>DEC CSC grants and ZEV rebates/grants</u>
- 2016 1st round of NYSERDA Clean Energy Communities: \$ for certification
- 2017 Reinvigorated governance structure w/ interagency committees
- 2018 Launch of new CSC website: https://climatesmart.ny.gov/
- 2019 Passage of NYS CLCPA (climate act): https://climate.ny.gov/
- 2022 Start CSC Coordinators
 - This week: reached over 100 certified CSCs!



CSC Certification Program

- Organized by the 10 pledge elements
- 120 points for the bronze level, 300 for silver
- ~25 actions to get to bronze.
- Action types:
 - > Planning, outreach, policies, implementation
- Action descriptions offer detailed guidance for over 100 actions
 - > Recommended steps, time & resources needed
 - Examples to follow & inspire you!







DEC CSC Funding Programs



Municipal Zero-emission Vehicle (ZEV) Program

- Rebates for electric vehicles for municipal fleets
- Grants for ZEV charging/fueling stations

CSC Grants

- Competitive, 50/50 match, for local gov'ts only
- Climate adaptation and GHG mitigation (outside power sector)
 - \$ for heat emergency plans, vulnerability assessments, improvements to cooling/emergency centers



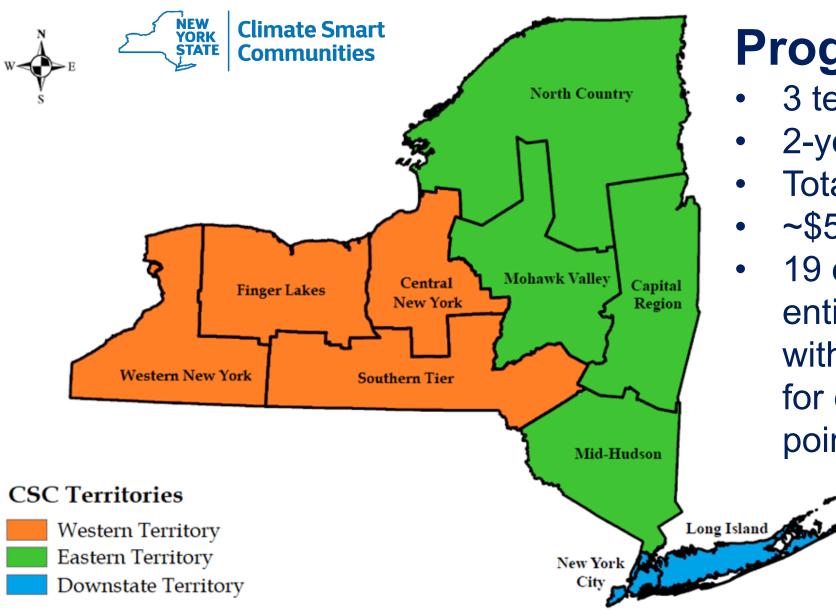


CSC Coordinators





Climate Smart About Actions & Certification Support **DASHBOARD** SIGN OUT **Communities** About Find a Coordinator in Your Region **Actions & Certification** Climate Smart Communities Coordinators are available to provide free support services to municipalities across the state as part of the Climate Smart Communities program. Coordinators assist and support local governments in taking action to reduce greenhouse Support gas emissions and adapt to climate change through outreach, planning, education, and **CSC Coordinators** capacity building. CSC Scorecard CAPITAL REGION Regional Greenhouse Gas Tara Donadio Inventories in NYS Capital District Regional Planning Commission Webinar Presentation Archive Tara.Donadio@cdrpc.org (518) 453-0850 CENTRAL NEW YORK Mike Boccuzzi Central New York Regional Planning and Development Board mboccuzzi@cnyrpdb.org (315) 422-8276 x1204 FINGER LAKES Rachel Scudder Genesee/Finger Lakes Regional Planning Council rscudder@qflrpc.org 585-454-0190 x15



Program Structure

- 3 territories
- 2-year timeframe
- Total: \$3.57 M
- ~\$595k per territory per year
- 19 organizations covering entire state and all tasks, with three leads ("directors") for each territory as main point of contact with DEC



Coordinator Tasks Related to Health

Contact your CSC coordinator to get involved in these projects in your region:

- Local climate adaptation planning
 - Local responses to extreme heat, vector-borne disease, etc.
 - Pledge Element 7 actions like <u>vulnerability assessments</u>.
 - Build on Resilient NY flood risk studies.
- Climate and transportation listening sessions
 - Participatory dialogues to inform strategies for low-carbon transportation, e.g., increasing the safety of biking and walking in your region.





Department of

Coordinators Purpose Statement



Coordinators will provide **technical assistance and guidance** to local governments that help them **develop their capacity** to play a leadership role in community initiatives that reduce GHG emissions, adapt to the effects of climate change, and thrive in the new green economy.

Coordinators will do this in a way that 1) **generates excitement** among the local governments about building a better future for their communities, 2) respects the **unique nature of their place**, 3) supports continuous **learning**, 4) connects them to available resources, and 5) **fosters strong**, **mutually beneficial relationships** with local, regional, and state partners.

So that local governments in New York State and their constituents will be inspired to help reverse climate change and improve the **quality of life** in their communities on an ongoing basis.

Goal of the CSC Coordinators: **Build Capacity in Communities**



Partnerships are key to building capacity.

Who are your potential partners?

Within your county gov't? Break through silos.

Remember: You are not alone!

There's a role for everyone.
There's help available.
Together we can do this.





Thank You!



Dazzle Ekblad Office of Climate Change NYS DEC, 625 Broadway Albany NY 12233-1030 climatesmart@dec.ny.gov cscgrants@dec.ny.gov zevrebates@dec.ny.gov 518-402-8448

Useful climate-related sites:

- CLCPA: https://climate.ny.gov/
- NY Climate Change Science Clearinghouse
- Regional GHG Inventories for NY (2010)
- NYS ClimAID report (projections & data)
- Sustainable Shorelines



Health Equity and Erie County's Climate Vulnerability Assessment







P. Josh Wilson, Sustainability DirectorErie County Department of Environment and Planning

peter.wilson@erie.gov

Agenda

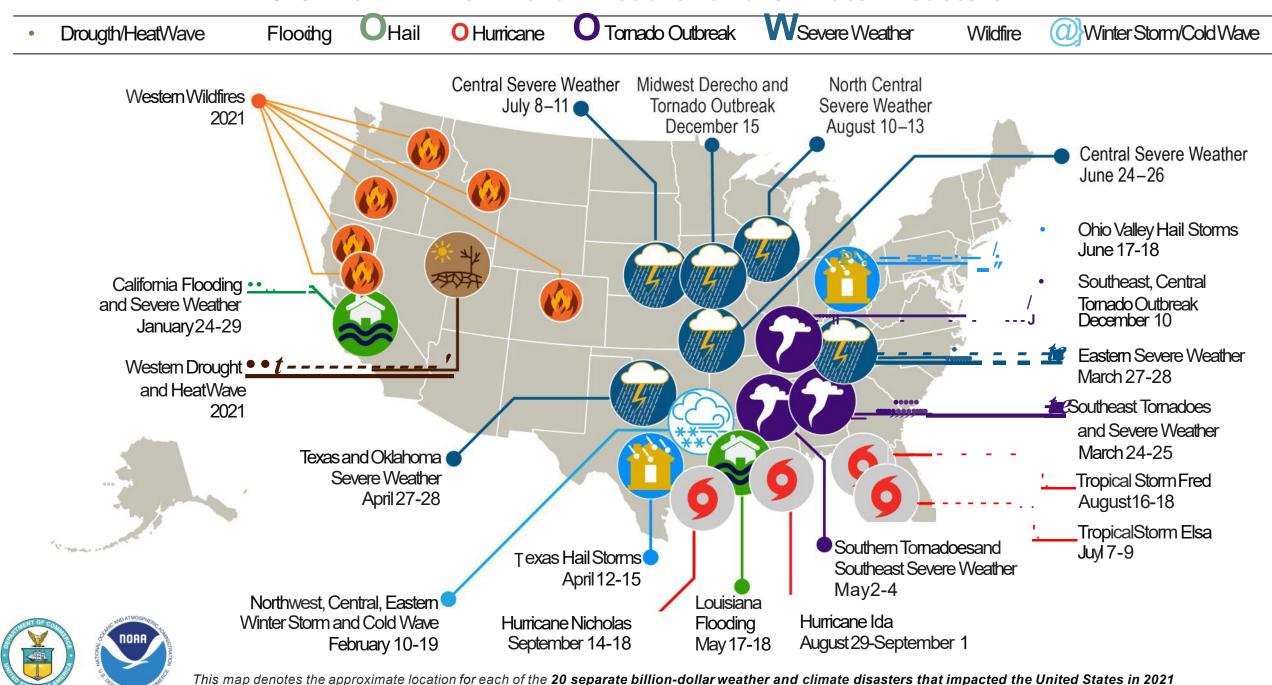
- Background
- Climate Vulnerability Assessment
- Heat Emergency Plan

Background

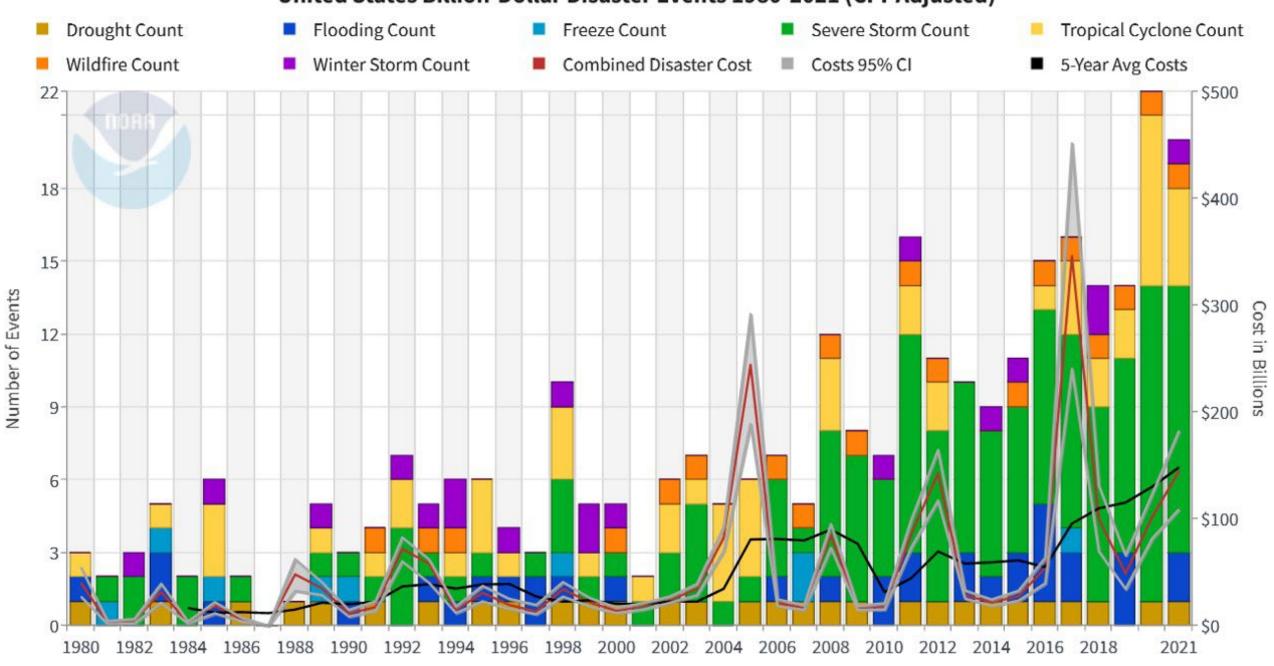
- Climate equity and health equity
- Mitigation and Resilience
- Role of Counties



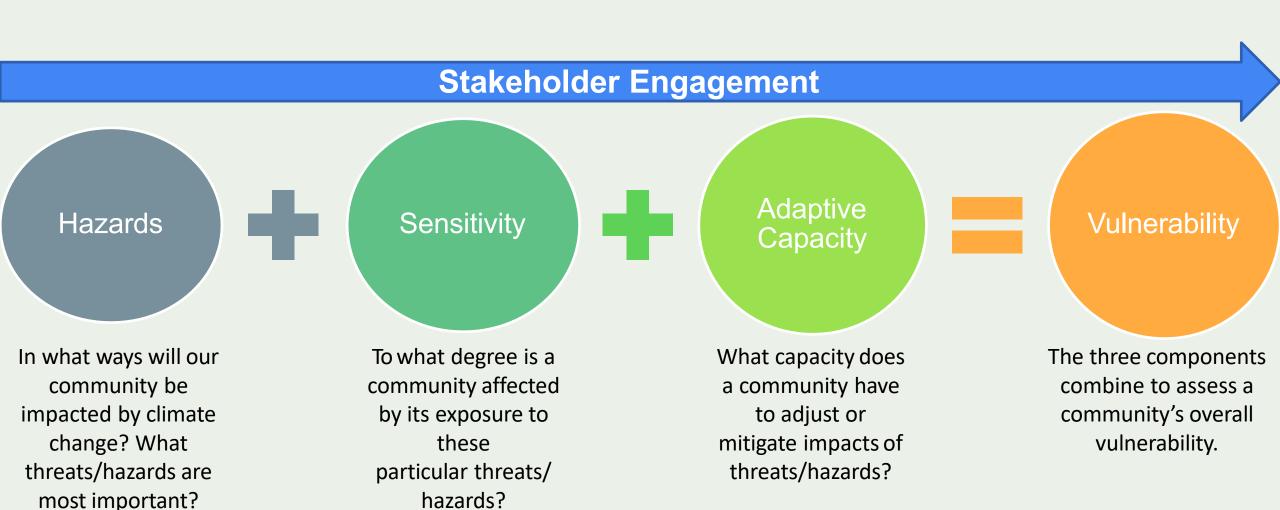
U.S. 2021 Billion-Dollar Weather and Climate Disasters



United States Billion-Dollar Disaster Events 1980-2021 (CPI-Adjusted)



Climate Vulnerability Assessment Process





Stakeholder Engagement

www.erie.gov/climateaction

1 Minute:

Sign up for email updates on Erie County Climate Action

5 Minutes:

Share Erie County Climate Action images & content on social media



10 Minutes:

Take the Community Survey to provide feedback on how climate change has impacted you

30 Minutes:

Meet with Erie County Dept. Environment & Planning Staff

1 Hour a Month

Be a Climate Action Ambassador to represent your community!

Hazards Assessment

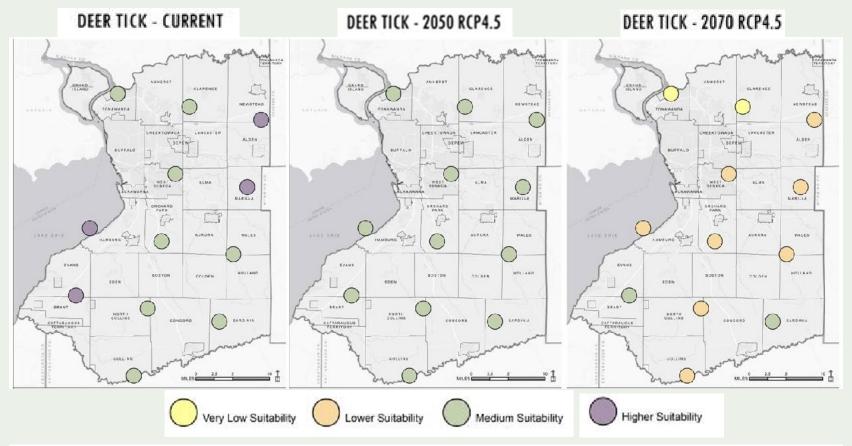
	Frequency & Duration	Jurisdiction	Impact
Temperature			
Precipitation/Wind			
Biological Threats			
Impacts to Soils			
Coastal Erosion			
Earthquake			
Wildfire			
Tornados			

Hazards Assessment

	Frequency & Duration	Jurisdiction	Impact
Temperature			
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CLIMATE ACTION

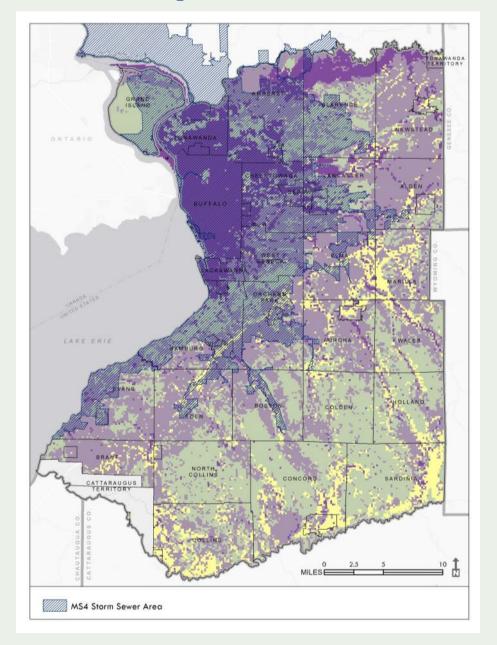
Vector-Bourne Disease – Deer Tick

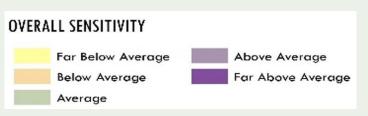


Habitat suitability changes for the native Deer Tick for current and future warming conditions in Erie County. Results indicate less favorable conditions for this particular native species in the future, as the climate warms.



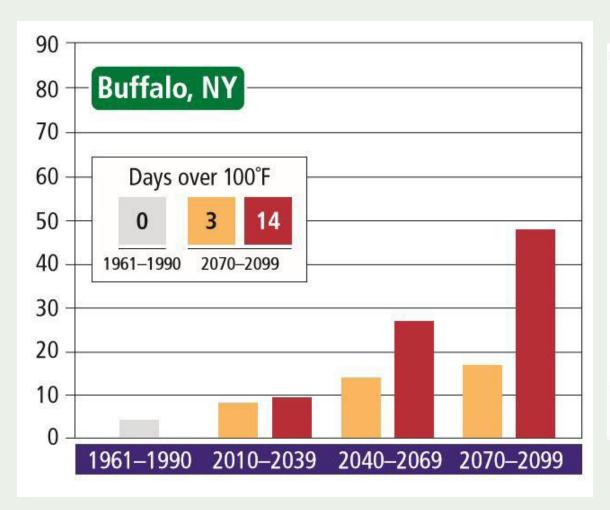
Sensitivity to Local Flooding







Extreme Heat



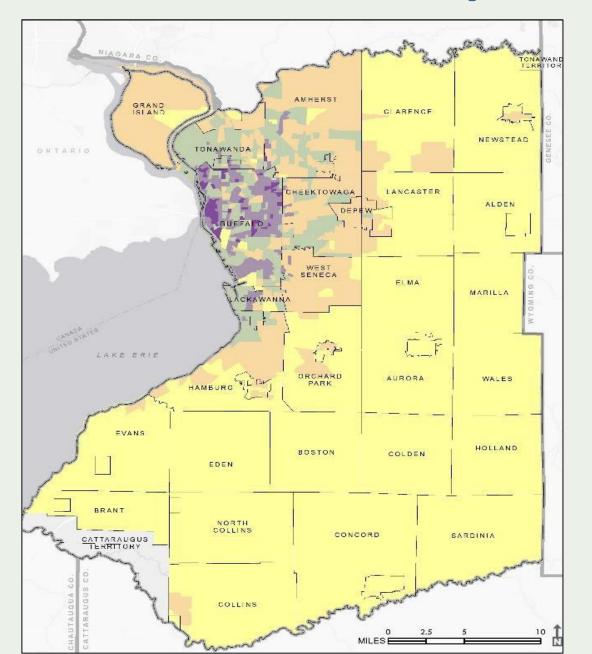
The number of days over 90°F in large northeastern cities is projected to increase in the coming decades until, by late-century, some cities could experience nearly an entire summer of such days under the higher-emissions scenario. Projections under this scenario also show a dramatic increase in the currently small number of days over 100°F (as depicted in the inset boxes).

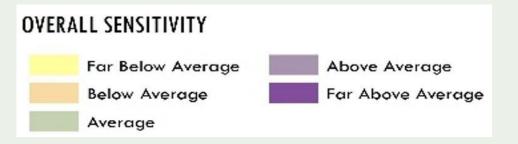
Frumhoff et al





Sensitivity to Heat







Adaptive Capacity

- Mitigation
- Preparation
- Response
- Recovery



Temperature				
Department	Issues	Adaptive Capacity		
DEP	Spatial and temporal patterns of temperature-	Preparation: Assist in data provision,		
Geographic	related hazards and the vulnerable	mapping		
Information	communities that are sensitive to extreme			
Systems	heat			
	High temperatures cause increased			
Sewerage	mechanical weathering and can result in dry			
Management	sewers			
	Biological treatment may experience limited			
Parks,	efficacy during extreme temperatures Employee health and safety in extreme	Mitigation: Precautionary policies to ensure		
Recreation &	onditions when traveling or working risk is minimized			
Forestry	outdoors	risk is minimized		
Homeland	Increased duration, intensity, and frequency of	Response: Coordination with Erie County		
Security &	extreme heat events	Library system to provide cooling centers and		
Emergency		other forms of shelter during extreme events		
Services				
7.331	Health impacts of extreme heat, particularly	Preparation: Public health bulletins warning		
Health	for most vulnerable populations	the public of extreme events		
	Extreme heat can result in increased	Preparation: Public health bulletins warning		
Ticarai	atmospheric ozone, degrading air quality. This	the public of extreme events		
	can be a health concern for some vulnerable			
	communities			
Social	Vulnerable communities lack access to cooling	Mitigation: HEAP provides air conditioners		
Services	units for their homes, which may exacerbate health conditions during heat waves	through programs that fund purchase and installation of cooling units.		
	Elderly residents of the county are particularly	Preparation: Senior alert programs via phone		
Senior	sensitive to heat-related impacts, while at the call and text message to increase a			
Services	same time lack mobility.	of potential issues related to extreme heat.		
	Control of climate in County-owned buildings	Preparation: Energy performance contracts		
	is necessary for the health and wellbeing of	are in place to improve efficiency and		
	employees, yet can be expensive and	weatherization		
	resource-intensive			
Public	Increased risk of heat-related issues among	Mitigation: Projects are scheduled during the		
Works	employees, especially those working outdoors	coolest part of the day and employees are		
		encouraged to drink plenty of water and take		
		frequent breaks		
	County-owned roadways are at risk of heat-	Mitigation: Roadways are engineered		
	related damage during extreme heat events	according to designs suitable for southern		
		climates, making them resilient in the event of a heat wave.		
2	Harmon Control of the	or a neat wave.		



Next Steps

- Finalize CVA
- Community Climate Action Plan
- Heat Emergency Plan





www.erie.gov/climateaction www.erie.gov/cva

Thank you!

P. Josh Wilson

peter.wilson@erie.gov

Funding Local-Level Climate Health Work

"SELLING" A PUBLIC HEALTH APPROACH TO EQUITABLE AND SUSTAINABLE MITIGATION AND ADAPTATION ACTION



Climate Health, Surveillance, and Policy

- ❖ Four pillars of our Climate Health work
 - Applied climate-related public health research and health impact assessment
 - Policy development and advocacy
 - Community-centered programmatic efforts
 - Environmental data communications
- Foundation laid with CDC funding
- Challenge: moving from pilot phase, external funding to integrated, established program





CLIMATE + AIR QUALITY

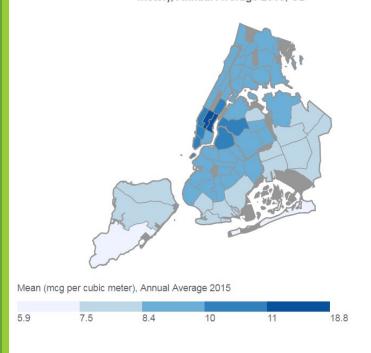
Calculating co-benefits

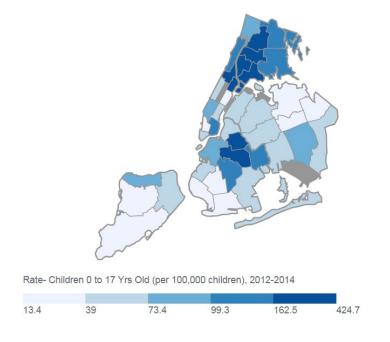
Air pollution-attributable health impacts

Neighborhoods with the most health impacts don't have the worst air quality

Neighborhood Air Quality Fine Particulate Matter (PM_{2.5}) - Mean (mcg per cubic meter), Annual Average 2015, CD







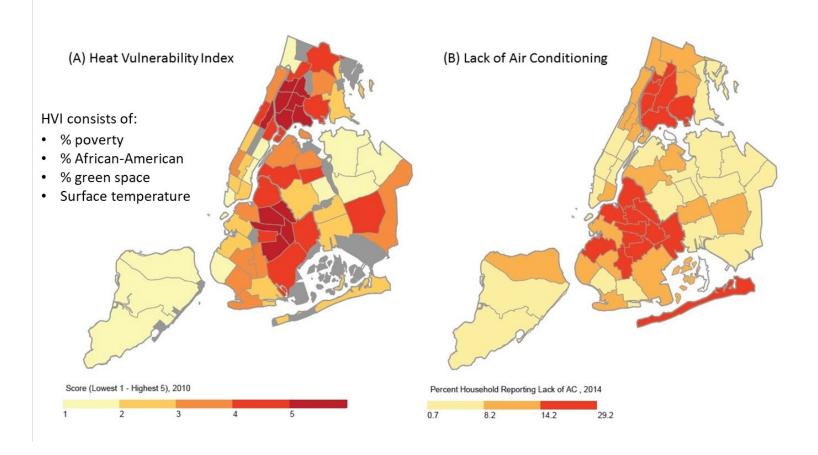


Funding opportunities:

 Partnerships with local/state environmental, transportation and energy organizations

HYPER-LOCAL RESILIENCY

Partnerships with community organizations



- Community organizations
- Houses of worship
- Home-based care providers
- Community health workers

Funding opportunities:

- Foundation and other grant funding
- Non-profit lead on applications

EMBED CLIMATE HEALTH

Earmarking existing funding

Joining efforts to secure funding for related projects



Get Cool NYC: Mayor de Blasio Updates New Yorkers on COVID-19 Summer Heat Plan

City has already installed 4,500 ACs for low-income seniors, an eight-fold increase from last year under the Home Energy Assistance Program; Public Service Commission approves City's petition for \$70 million in cooling subsidies for low-income New Yorkers

Funding opportunities:

- Housing programs: sustainability, resiliency + health
- Emergency preparedness
- Existing health outreach programs (CHWs)

Thank you!

QUESTIONS?

CAROLYN OLSON - COLSON@HEALTH.NYC.GOV



Climate Change:

Linking Physical, Mental and Community Health

Adverse Birth

and Anxiety Disorders

Complicated Grief

Substance Abuse

Trauma and Shock

Stress Disorder

Loss of Personal Identity

Suicidal Ideation

Impaired Cognitive

COMMUNITY HEALTY

Threatened Sense of Belonging

Reduced Public Trust in Community Institutions

Loss of Culture

Social Instability

Interpersonal and Intergroup Aggression and Violence

Degraded Social Behavior

Strains on Social Relationships

Increased Violence and Crime

Hunter L. McQuistion, MD Clinical Professor of Psychiatry

NYU Grossman School of Medicine | NYU Langone Health

climate ' psychiatry alliance

American Psychological Association, 2017

Social Determinants of Health



(weight: 800lbs.)





Acute subacute Long-term













ACUTE: Flooding Disasters....



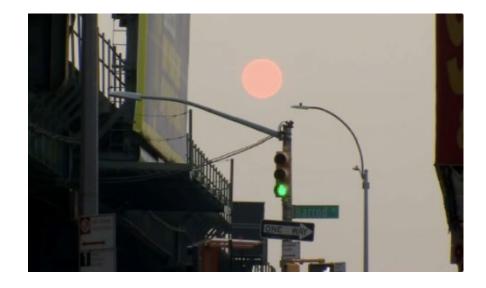


https://www.nytimes.com/2021/09/02/climate/new-york-rain-floods-climate-change.html



Acute Disasters Beget Unexpected Crises





Western Wildfire smoke create haze in the Bronx

July 20, 2021; (ErickAdameOnTV)



Disasters -secondary impacts

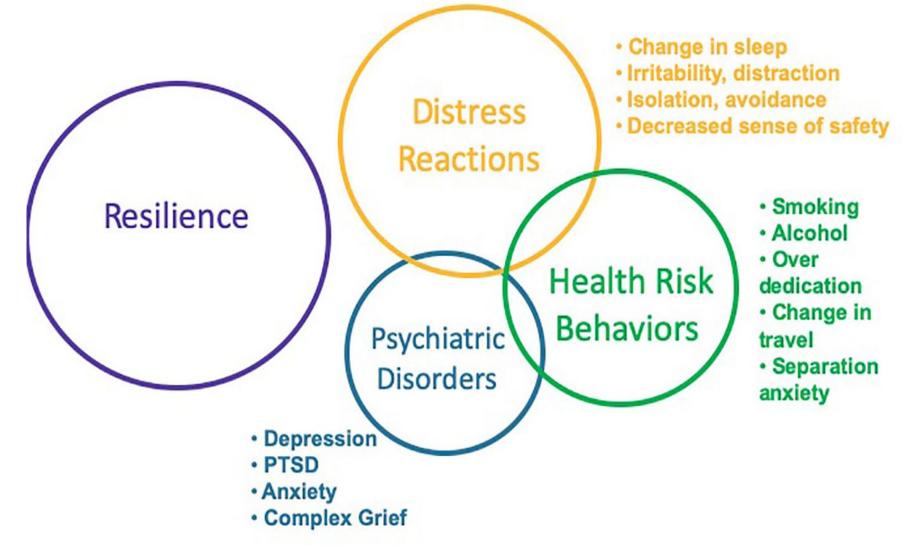
- Loss of livelihood
- Loss of community, connections
- Supply chain interruptions
- Loss of Infrastructure
- Loss of services
 - Breakdown of health & mental health delivery system



2012: Superstorm Sandy: 300 NYULangone + 500 Bellevue patients to other hospitals



Psychological and Behavioral Responses to Acute Disasters







SUBACUTE: Extreme Heat



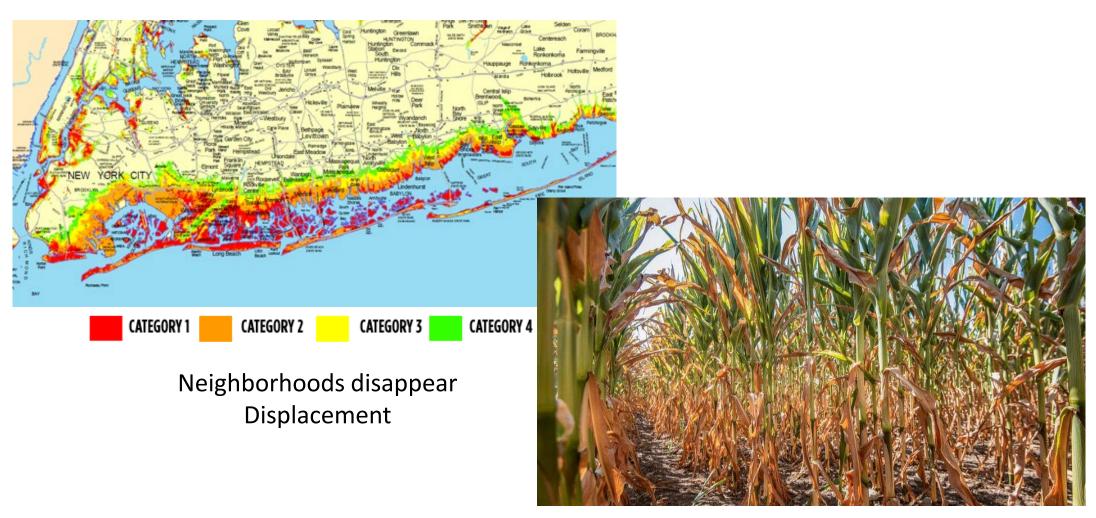
PHOTO SOURCE: Cityofpasadena.net: 2019 No copyright infringement is intended

climate psychiatry alliance

MENTAL AND BEHAVIORAL EFFECTS:

- Increases in interpersonal and group violence
- Increases in suicide
- Impaired cognition and concentration
- Impaired sleep
- Impaired mood stability
- Psychotropic and other medications impair temperature homeostasis

LONG TERM: Sea Levels and Drought





No rain = no food = no human nutrition => illness and social unrest

VULNERABLE POPULATIONS

- ➤ ELDERLY: esp. isolated
- >YOUTH :kids and adolescents
- **≻**BIPOC
- **INDIGENT**
- **HOMELESS**
- > CHRONIC MEDICAL ILLNESS
- > MENTAL HEALTH POPULATIONS

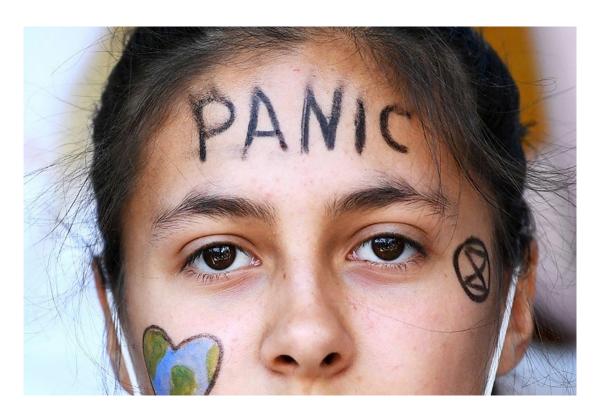




Young People are Anxious: Interfere with their daily lives

Hickman, et al.

Lancet Planetary Health: Dec 2021



Interviewed:

10,000 (age 16 thru 25 y/o) in 10 nations

- Worried/extremely worried: 60%, Angry, Sad
- > Future is frightening: 75% worldwide
- "Humanity is doomed": >50% worldwide
- More than 45% of said feelings about climate change negatively affected their daily life and functioning
- Climate anxiety and distress correlated with perceived inadequate government response; associated feelings of betrayal.

Credit: James Veysey/Shutterstock Source : Nature Sept 18, 2019





Wide Range of emotional responses to living in world confronted by climate crisis (solastalgia)

- Existential distress
- Worry to Anxiety
- Sadness, grief
- Depression
- Anger





LET'S TALK SOLUTIONS





Thinking About Needs:

Acute Events (Disasters)

- Pre-disaster: Health sector infrastructure
 - Support infrastructure: access to electronic health records
 - Increase capacity to mobilize mental health teams
 - crisis stabilization for the most vulnerable
 - Design longer term access to resources, including mental health care
 - Emotional toll goes on beyond FEMA response
 - Supply chain issues
 - medication stockpiling and availability
- Disaster Response
 - "Task Shifting" (per WHO)
 - Train grassroots (teachers, community workers, first responders, etc.)
 - Psychological first aid (PFA) in disaster response
 - EBPs



Thinking About Needs:

Subacute and Long-term

- Public communication, alerting systems
 - Do we reach those with mental illnesses and other vulnerable populations?
- Adequate case management for vulnerable folk and their expanded needs during extreme heat (as well as disasters)
 - Does collaboration among natural community leaders exist?
 - How can we mobilize neighbors?
- Extreme Heat and Drought
 - Farmers during drought at risk for suicide. Community interventions.
 - Impoverished communities: cooling centers that will be used





To be "part of the solution"

Macro --Increased use of peer support, lay leaders, and community programs to scale up responses to population-level and global anxieties and for psychiatric conditions

 With Increased attention to those populations with high pe-existing social determinants of illness

Micro --Treating solastalgia –Forming positive emotions associated with a sense of <u>agency</u>:

- Sense of meaning/purpose
- Pride
- Collegiality
- Helping to making a difference



Thank you!

- Behavioral health Interventions
 - Climate Psychiatry Alliance

https://www.climatepsychiatry.org/resources-to-mitigate-climate-distress



References

Albrecht G, Sartore GM, Connor L, Higginbotham N, Freeman S, Kelly B, et al. Solastalgia: the distress caused by environmental change. *Australas Psychiatry*. 2007;15 Suppl 1:S95-8

Anderson CA. Heat and violence. Current Direct Psychol Sci. 2003: 10-802-805

Arcanjo, M. Eco-anxiety: Mental health impacts of environmental disasters and climate change. Climate Institute, Sept 2019 climate.org/eco-anxiety-mental-health-impacts-of-environmental-disasters-and-climate-change/

Berry HL; Bowen K; Kjellstrom T. Climate change and mental health: a causal pathways framework. *International Journal of Public Health.* 55(2):123-32, Apr. 2010

Burke, Marshall, et al. Higher temperatures increase suicide rates in United States and Mexico. *Nature Climate Change*. Nature Climate Change, vol 8, Aug. 2018, 723-729

Bulbena, A., L. Sperry, and J. Cunillera, 2006: "Psychiatric effects of heat waves" *Psychiatric Services*, 57, 1519-1519

Calderón-Garcidueñas L, Leray E, Heydarpour P, et al. Air pollution, a rising environmental risk factor for cognition, neuroinflammation and neurodegeneration: the clinical impact on children and beyond. *Rev Neurol(Paris)*. 2016;172:69

Carleton, TA, Hsiang, SM, Burke M. "Conflict in a Changing Climate" *Physical Journal Special Topics*, 2016, 225, 489-511

Climate Central.org.

psvchiatry

Climate Psychiatry Alliance website: https://www.climatepsychiatry.org/

Fiona Charlson, Suhailah Ali, Tarik Benmarhnia, Madeleine Pearl, Alessandro Massazza, Jura Augustinavicius, James G. Scott 1,7

Climate Change and Mental Health: A Scoping Review. <u>Int J Environ Res Public Health.</u> 2021 May; 18(9): 4486. Published online 2021 Apr 23. doi: 10.3390/ijerph18094486

Chen JC, Wang XH, Wellenius GA, et al. Ambient air pollution and neurotoxicity on brain structure: evidence from Women's Health Initiative Memory Study. Ann Neurol. 2015;78:466-476.

Chong, TW, Castle, DJ. "Layer upon layer: thermoregulation in schizophrenia" Schizophr Res. 2004 Aug 1: 69(2-3),149-57

Cianconi, P.; Betrò, S.; Janiri, L. The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. Front. Psychiatry 2020, 11, 1–15

Dahl, K. et al. Killer Heat in the United States; Climate Choices and the Future of Dangerously Hot Days. Union of Concerned Scientists. July, 2019 www.ucsusa.org/killer-heat

Fox, JA, "Heat wave has chilling effect on violent crime" Corrections.com Sept 14, 2017

Ga, et al. "Association between ambient air pollution and daily hospital admissions for depression in 75 Chinese cities" *Am.J. Psych.* 21. April, 2020

Hancock PA, Vasmatzidis I. "Effects of heat stress on cognitive performance: the current state of knowledge" Int. J. Hyperthermia 19, 2003, 355–372.

Hanna E & Tait, P, Limitations to Thermoregulation and Acclimatization Challenge Human Adaptation to Global Warming. Int. J. Environ. Res. Public Health. 2015, 12, 8034-8074. doi:10.3390/ijerph120708034

Hsiang SM, Burke M, MiquelE, "Quantifying the influence of climate on human conflict." Science, Sep.2013

Leiserowitz, A, et al. climate Change in the American Mind: Dec. 2018, Yale Program on Climate Change Communication. Jan 2019. https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-december-2018/2/



Interview with Dr. Ed Maibach

Link to Video







Preview of Topic-Specific Workshops

Topic-Specific Workshops

Wednesday, Oct. 26th

- Extreme Heat
- Weather Vulnerability

Thursday, Oct. 27th

- Flood Mitigation
- Storm Response
- Emergency Response Framework

Wednesday, Nov. 2nd

- Complete Streets
- Climate Smart Communities
- Environmental Improvements

Thursday, Nov. 3rd

- Vector-Borne Diseases
- Harmful-Algal Blooms
- Food Security



Preparing for Workshops: Next Steps

- Register for the workshop(s) you plan to attend!
 - Early registration encouraged (by October 19th)
- Identify and invite community partners to attend the workshop(s)
 - Community partners will need to register in order to attend

Fall 2022 Virtual Climate & Health Adaptation Workshops

To move the needle forward on addressing the health impacts of climate change, NYSACHO and NYSDOH are hosting virtual workshops. At the workshops, local health departments (LHDs) and their community partners will hear updates and examples of climate adaptation activities, and then work together on next steps that fit the priorities and resources of their agencies and organizations.

These workshops will be held in Zoom and are free to attend!

Who Should Attend?

LHD staff who are:

- Responding to impacts in their communities (e.g. extreme heat, flooding, food insecurity, vectorborne disease)
- Interested in starting or expanding climate and health adaptations
- · Interested in learning more about what others may be doing in this area

Community partners who are working or might be interested in working on climate adaptation activities:

- · Local government agencies (e.g. sustainability offices, town leaders, planning departments)
- · Organizations (e.g. Cornell Cooperative Extension, school groups, faith-based communities)
- Other climate adaption champions, such as Climate Smart Community Coordinators!

How to Register

Click on the links below to register for the plenary sessions and one or more topic-specific workshops.

Plenary Sessions (9:00 - 11:00 AM) | Click here to register for both sessions!
These sessions will provide updates and set the stage for the topic-specific workshops.

Sept. 29: Part I - State and Local Highlights

Sept. 30: Part II - Cross-Cutting Issues

Note: Plan to attend both parts of the plenary!

Topic-Specific Workshops (9:00 AM - 12:00 PM)

Each workshop will provide a content overview, followed by breakout sessions for LHDs and their community partners. LHDs and topic-specific partners can register for one or more of these workshops.

Oct. 26: Extreme Heat, Weather Vulnerability | Register here

Oct. 27: Flood Mitigation, Storm Response, Emergency Response Framework | Register here
Nov. 2: Complete Streets, Climate Smart Communities, Environmental Improvements | Register here
Nov. 3: Vector-Borne Diseases, Harmful Algal Blooms, Food Security | Register here



Contact: Emily D'Angelo edangelo@nysacho.org | (518) 925-5368









Questions?

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