

GC3 Public Health and Safety Working Group



Public Forum

October 7, 2020

Working Group Chair:

Dept. of Public Health

Deputy Commissioner Heather Aaron

Co-leads on behalf of DC Aaron:

Lori Mathieu

Laura Hayes

Opening Remarks

Heather Aaron, Deputy Commissioner, Department of Public Health

Welcome – GC3 Public Health & Safety Working Group Public Forum

Today's Presentation – Public Health & Safety Draft Report

Presentation - Highlights of the Draft Report –

7 Domains: Extreme Heat, Air Quality, Vector-borne Diseases, Extreme Events, Water-borne Illnesses, Nutrition/Food Security/Food Safety, and Mental Health and Well-being

Focus on Health Equity/Environmental Justice, prioritizing vulnerable populations

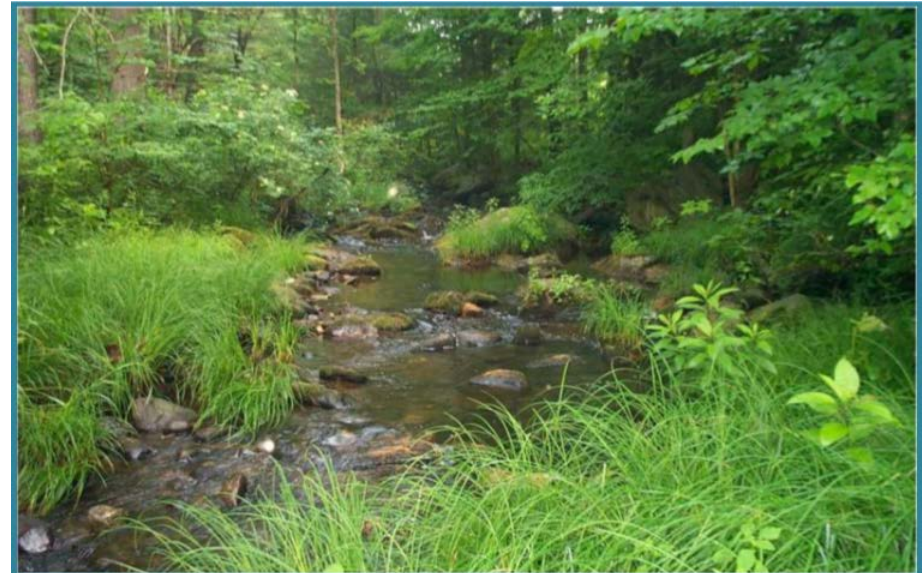
Welcome your thoughts, comments, questions and input

Please plan to join the conversation in the breakout rooms

GC3 Public Health and Safety Working Group Process and Report Overview

Laura Hayes

- Governor Lamont's Executive Order 3 mandates an updated adaptation plan based on most current and locally scaled scientific information prioritizing protection of vulnerable communities
- Public Health was included as one of the four theme areas in for which recommendations were put forward in the 2011 Preparedness Plan (18 total), but little progress has been made on those recommendations.



Connecticut Climate Change Preparedness Plan

*Adaptation Strategies for Agriculture, Infrastructure, Natural
Resources and Public Health Climate Change Vulnerabilities*

*A Report by the Governor's Steering Committee on Climate Change (GSC)
Adaptation Subcommittee
2011*



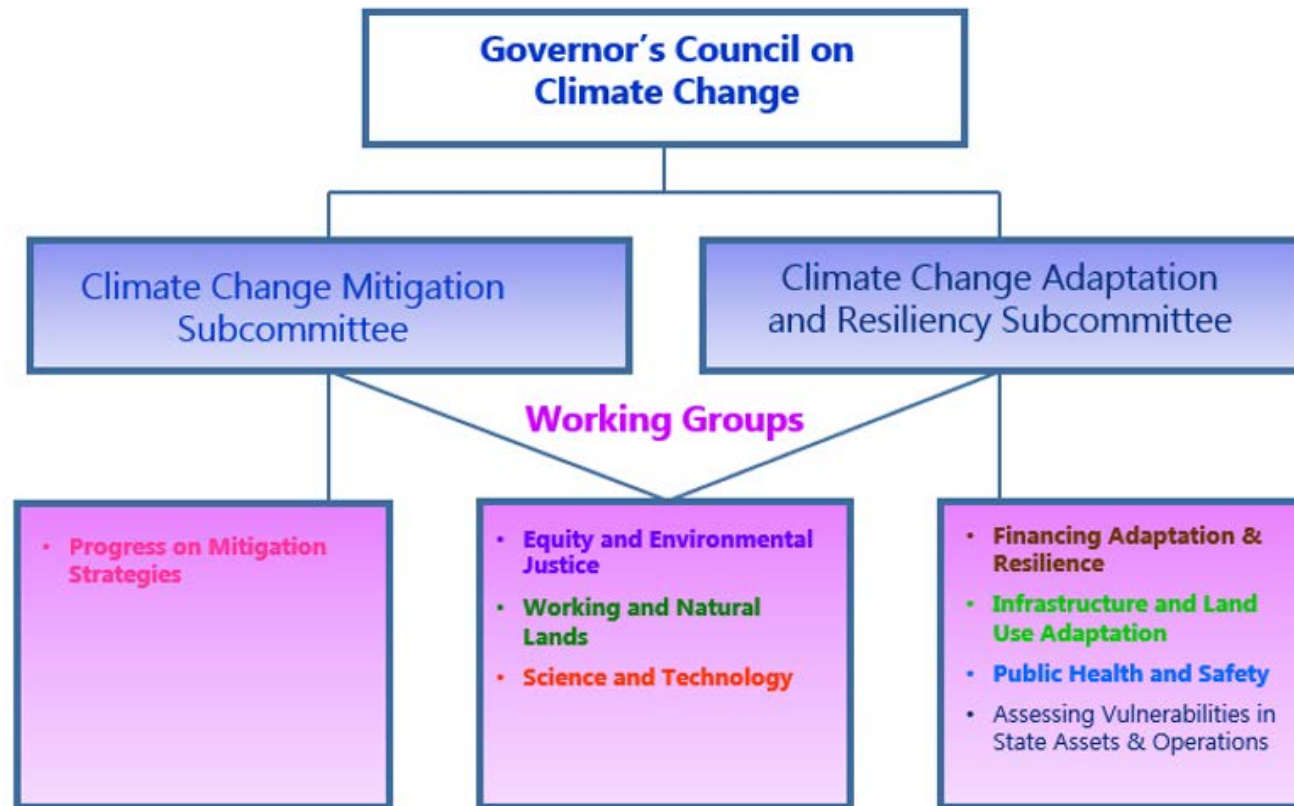
A child born today will experience a world that is more than four degrees warmer than the pre-industrial average, with climate change impacting human health from infancy and adolescence to adulthood and old age.”

-2019 Report of The Lancet Countdown on Health and Climate Change

GC3 Public Health and Safety Working Group

Statement of Scope

- Our scope is the suite of planning and implementation actions needed to address present-day and foreseeable threats to the protection and improvement of the health and safety of all people of Connecticut associated with climate change, with a focus on health equity.



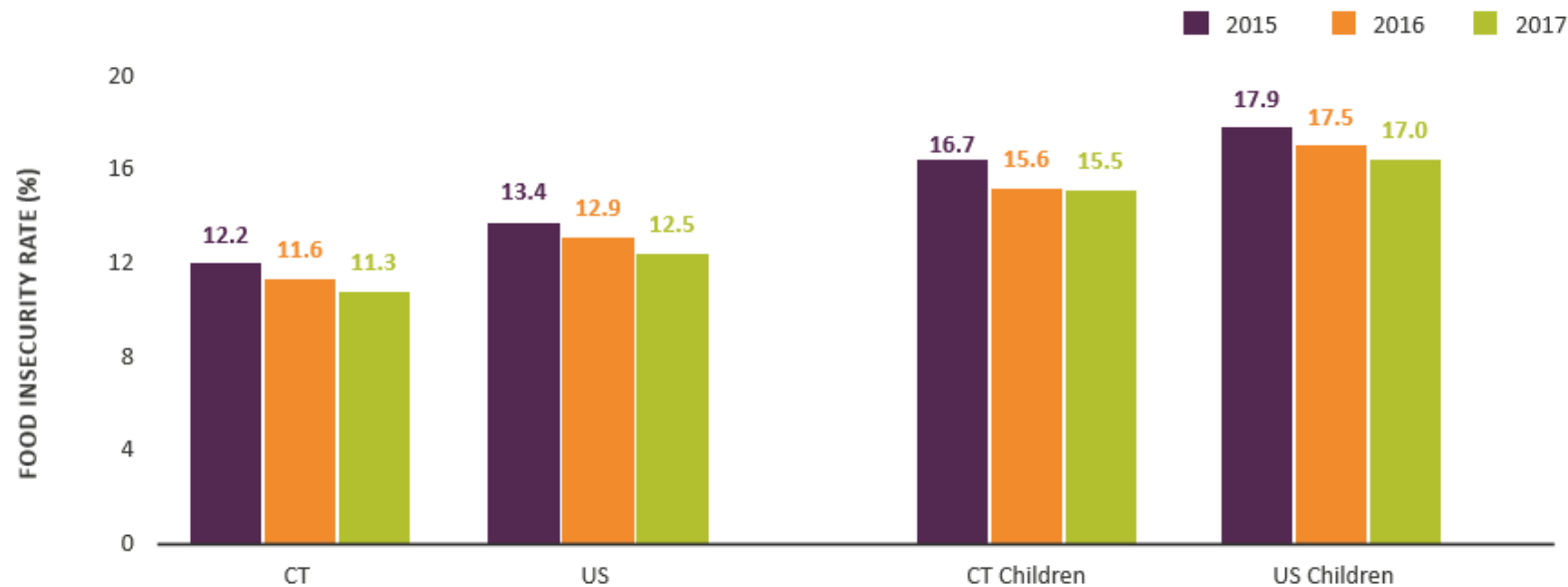
GC3 Public Health and Safety Working Group

Statement of Scope

- Health equity means that everyone has a fair and just opportunity to attain his or her full health potential, and that no one should be disadvantaged from achieving this potential because of income, race, ethnicity, physical status, exposure to environmental contaminants, social position or other socially determined circumstance.

2019: State Health Assessment Healthy Connecticut 2025

FIGURE 4: Food insecurity rate overall and among children, CT and US, 2015–2017

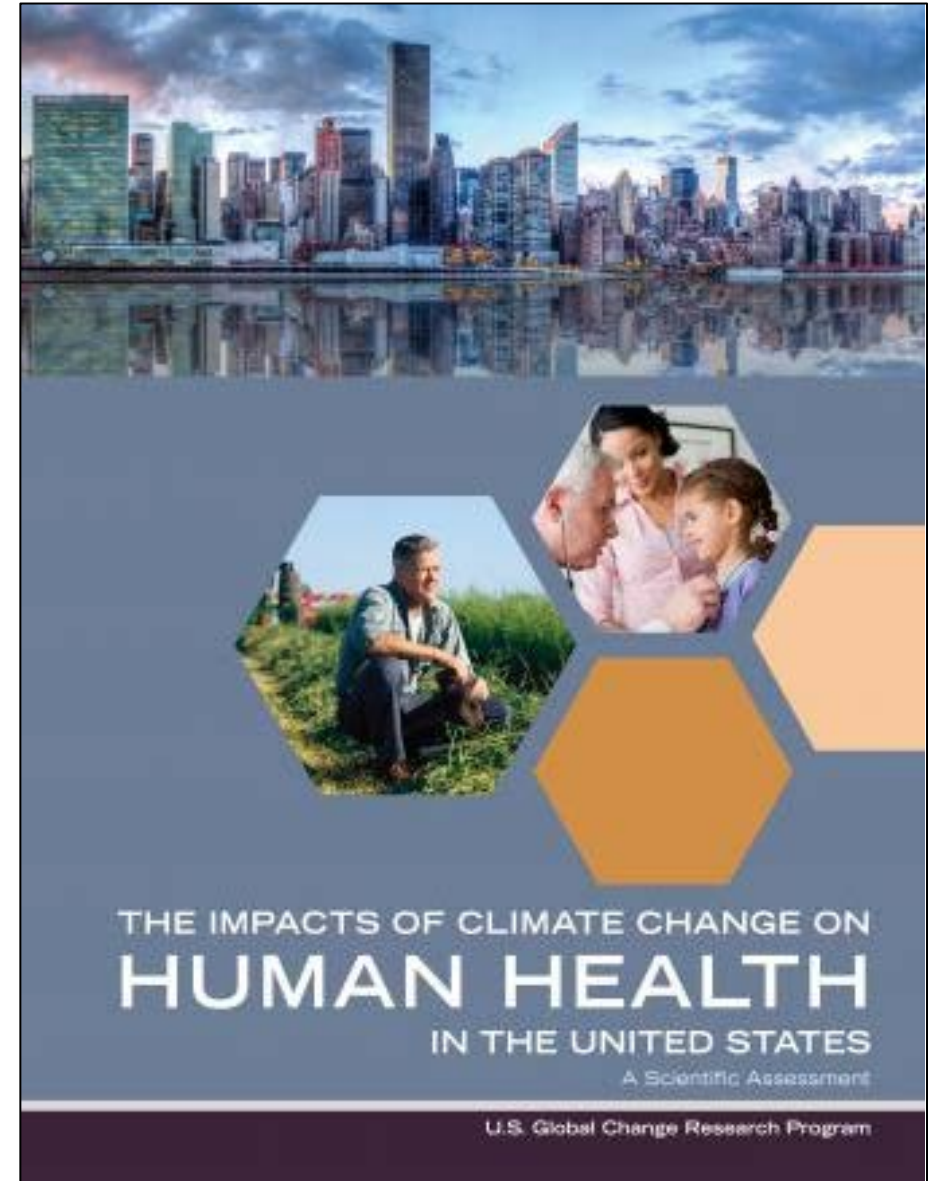


Source: Feeding America. Child Food Insecurity in the United States. Data retrieved from <https://map.feedingamerica.org/>.

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Report Overview

- Section 1: Update on 2011 Recommendations
- Section 2: Overview of Health Impact Domains (modeled after 2016 USGCRP Report)

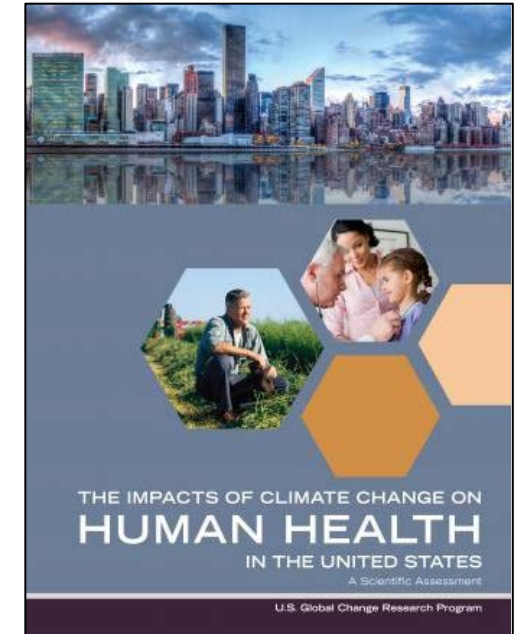


GC3 Public Health and Safety Working Group

Report Overview

- Section 1: Update on 2011 Recommendations
- Section 2: Overview of Health Impact Domains
(modeled after 2016 USGCRP Report)

Health Impact Domains	



Domain 1: Extreme Heat

Presenter: Laura Bozzi

Team Lead: Dr. Laura Bozzi, Director of Programs for the Yale Center on Climate Change and Health (YCCCH).

Members:

Mariana Fragomeni, UCONN

Laura Hayes, DPH

Mark Mitchell, George Mason University

Extreme Heat

- Heat-related illnesses, like heat exhaustion or heat stroke, happen when the body is not able to properly cool itself.
- Hotter nighttime temperatures are especially dangerous to health, since cool nights are typically an opportunity for the body to cool down.
- Heat-related illness is preventable.
- Vulnerable groups include:
 - Older adults
 - Young children and pregnant women
 - People with chronic illnesses and/or taking certain medications
 - Low-income populations
 - People experiencing homelessness
 - Those living alone or with limited mobility
 - Urban residents
 - Athletes
 - Outdoor workers

BEAT THE HEAT:
Extreme Heat

Heat-related deaths are preventable

WHAT:
Extreme heat or heat waves occur when the temperature reaches extremely high levels or when the combination of heat and humidity causes the air to become oppressive.

WHO:
Children
Older adults
More males than females are affected
Outside workers
People with disabilities

WHERE:
Houses with little to no AC
Construction worksites
Cars

HOW to AVOID:
Stay hydrated with water, avoid sugary beverages
Stay cool in an air conditioned area
Wear lightweight, light-colored, loose-fitting clothes

Extreme Heat Recommendations

- 4 recommendations; 2 also address air quality issues
- Recommended actions focus on addressing vulnerable groups: outdoor workers, low-income residents and renters, children in school and daycare
- To enact the recommendations will require: a stakeholder commission, legislation, agency action, and inclusive municipal planning processes.

Health Equity Highlight	
Enact policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure.	
Recommended Implementation Action Description	<p>Policies and programs to be pursued include:</p> <ul style="list-style-type: none"> • Expansion of CT Energy Assistance Program (CEAP) to include cooling assistance and air conditioner purchase • For government-supported housing, legislation requiring landlords to assure a maximum indoor air temperature and indoor air quality. • Partnerships and/or policies to prevent power and water companies from shutting off services to their customers due to nonpayment of bills during extreme heat events. • Pursue funding to implement the Connecticut Green and Healthy Homes Initiative that focuses on the nexus of health, safety, and energy in residential housing needs.
Completion Timeframe	<ul style="list-style-type: none"> • Less than 2 years
Implementation Entities	CT Department of Health and Human Services, DOH, DPH, stakeholders from impacted communities
Climate challenges addressed	This action will address increasing temperatures in Connecticut, and associated risk of exposure to extreme heat in vulnerable populations.
Protection of vulnerable communities	This action aims to protect low-income populations who are vulnerable to heat-related illness due to factors including a lack of adequately insulated housing, inability to afford or to use air conditioning, inadequate access to cooling centers, and inadequate access to routine and emergency health care (Crimmins et al., 2016).
References for action	<p>Ito K, Lane K, Olson C. 2018 Equitable access to air conditioning: a city health department's perspective on preventing heat-related deaths. <u>Epidemiology</u> 29(6):749-752.</p> <p>State HEAP programs with cooling assistance: <u>https://liheapch.acf.hhs.gov/tables/program_dates.htm</u></p> <p>Connecticut Green and Healthy Homes Project: <u>https://ctgreenbank.com/ct-ghhi/</u></p>

Domain 2: Air Quality

Presenter: Laura Bozzi

Team Lead: Brian Toal, Acting Section Chief, Environmental Health, DPH

Members:

Paul Farrell, DEEP

Laura Hayes, DPH

Anne McWilliams, EPA Region 1

Mark Mitchell, George Mason University

Air Quality

- Main types of pollution sensitive to climate change that negatively affect human health:
 - Ground-level ozone (smog)
 - Pollen, in particular, ragweed pollen
 - Wildfire smoke
- Ground-level ozone is a strong lung irritant that can cause respiratory symptoms, asthma exacerbation, and premature death. The hottest days and ozone alert days often occur together. This combination poses a major health risk to vulnerable groups, especially those with asthma and other preexisting respiratory conditions.
- Indoor air quality also is affected by climate change, including when storms/ heavy rainfall damage buildings and cause indoor mold.
- Vulnerable groups include: elderly and children; those with asthma, allergies, and other respiratory conditions; and those with cardiac disease; people of color; low wealth families are at risk, especially those who live in substandard housing; outdoor workers
 - New Haven and Hartford are ranked as the #11 and #13 most challenging cities to live in with asthma in the country (Asthma and Allergy Foundation 2019 ranking).



Source: CDC

Air Quality

- 3 Recommendations
- Two recommendations to better understand environmental conditions: (1) increase monitoring of outdoor allergens and (2) to evaluate how climate change will affect air quality conditions in Connecticut.
- One recommendation evaluates the existing air quality alert system to identify ways to make it more effective.

Health Equity Highlight	
Evaluate Ozone Alert Education Efforts	
Recommended Implementation Action Description	This recommendation is similar to the 2011 Recommendation, “Evaluate ozone non-attainment alert systems”. DEEP and DPH should conduct an evaluation on air quality forecasting and public education and outreach efforts DEEP currently implements on a year round basis.. In particular, DPH should survey the public on their awareness of summertime warning about ozone through the Behavioral Risk Factor Surveillance System. Community outreach and focus groups within vulnerable communities should be developed to ascertain input on alert systems and effective communication strategies. In addition, the evaluation should consider new ways of informing the public including wireless emergency alerts via all phones, social media, direct communications to vulnerable populations and direct alerts to institutions such as: youth camps, schools, nursing homes and medical providers. A study in Canada found that air quality alerts alone had limited effectiveness in protecting public health ¹ .
Completion Timeframe	<ul style="list-style-type: none"> • Less than 2 years
Implementation Entities	DEEP, DPH, American Lung Association, CADH, NWS, DEMHS, stakeholders from impacted communities
Climate challenges addressed	This recommendation addresses the well documented increase and duration of summertime heat and associated increase in ozone levels.
Protection of vulnerable communities	This recommendation will help assure that vulnerable populations change their behavior on high ozone days to help prevent adverse respiratory diseases. Such groups include asthmatics, people with COPD, communities in inner cities with higher rates of asthma and children.
References for action	<p>Chen, H., Li, Q., Kaufman, J. S., Wang, J., Copes, R., Su, Y., & Benmarhnia, T. (2018). Effect of air quality alerts on human health: A regression discontinuity analysis in Toronto, Canada. <i>The Lancet Planetary Health</i>, 2(1), e2–e3. doi:10.1016/S2542-5196(17)30185-7</p> <p>Ramírez AS, Ramondt S, Bogart KV, Perez-Zuniga R. 2019. Public Awareness of Air Pollution and Health 361 Threats: Challenges and Opportunities for Communication Strategies To Improve Environmental Health 362 Literacy. <i>J Health Commun.</i> 24:75–83.</p>

Domain 3: Vector-borne Diseases

Presenter: Jocelyn Mullins

Team Lead: Dr. Goudarz Molaei, Research Scientist. Department of Environmental Sciences, Center for Vector Biology & Zoonotic Diseases, Connecticut Agricultural Experiment Station

Members:

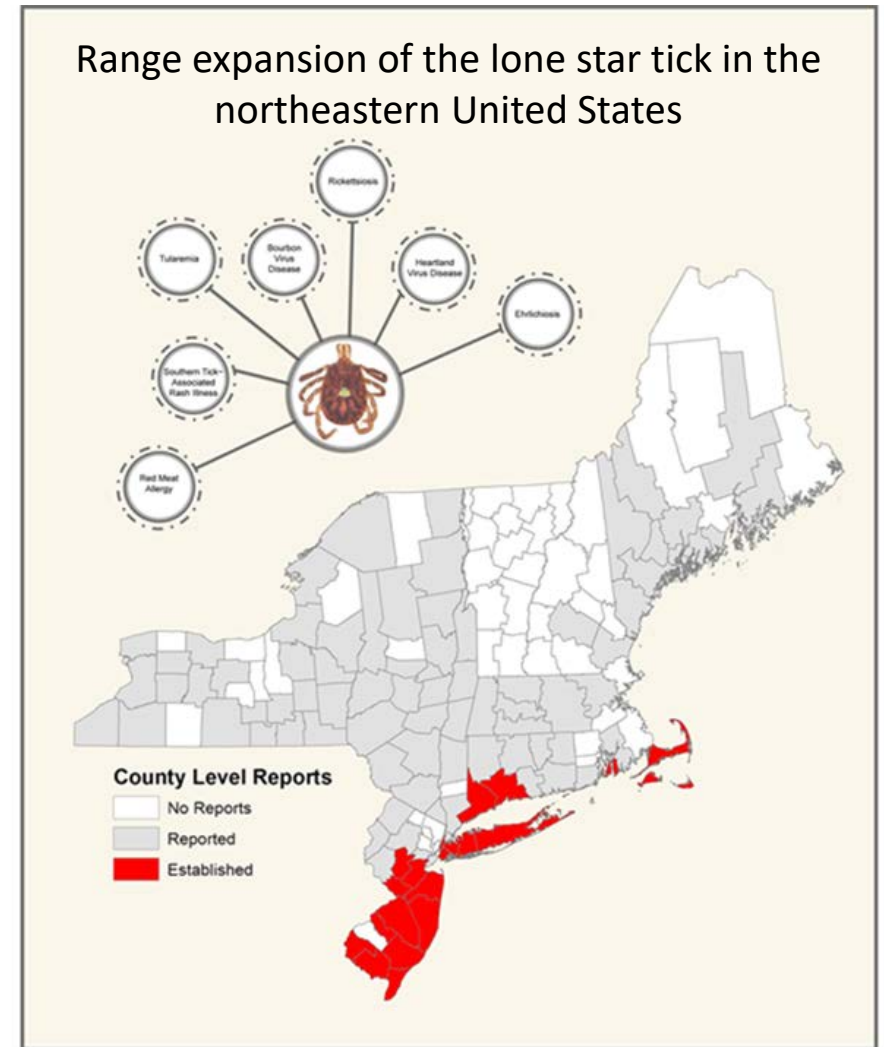
Jocelyn Mullins, DPH

Huan Ngo

Kirby Stafford, CAES

Domain 3: Vector-borne Diseases

- Vector-borne diseases (VBDs) are human illnesses transmitted by arthropod vectors, including mosquitoes, ticks, and fleas. VBDs are 17% of infectious diseases worldwide. In 2018 over 53,000 cases were reported in the United States.
- Warmer temperatures and changes in humidity and rainfall will increase the geographic range, abundance, and active season of disease vectors. In the Northeast, transmission of endemic pathogens are increasing, and new vectors and pathogens are establishing.
- Comprehensive surveillance data and modelling identify areas where mosquitoes and ticks could successfully breed and proliferate. These are the areas where human populations are at greater risk.
- People living in poverty, sub-standard housing, having poor access to healthcare, and in areas with greater environmental risk factors are at higher risk for VBDs.



Molaei, Goudarz, Eliza AH Little, Scott C Williams, and Kirby C Stafford. 2019. "Bracing for the worst—Range expansion of the lone star tick in the northeastern United States." *New England Journal of Medicine* 381 (23): 2189-2192.

Domain 3: Vector-borne Diseases

Mosquitoes

West Nile virus
Eastern equine encephalitis virus
Jamestown canyon virus



**Native Vector Species of
Public Health Concern in CT**

Lone Star Tick

Ehrlichia chaffeensis
(Ehrlichiosis)
Southern tick-associated rash illness
Alpha-Gal meat allergy*
Heartland virus*
Bourbon virus*



Aedes sp.

Zika virus
Dengue virus
Chikungunya virus
WNV, EEEV, La Crosse,
St. Louis Encephalitis viruses



**New Vector Species of Public
Health Concern in CT**

Black-legged tick

Borrelia burgdorferi
(Lyme disease)
Anaplasma phagocytophilum
(Anaplasmosis)
Babesia microti (Babesiosis)
Powassan virus*
*Borrelia miyamotoi**
*Ehrlichia muris**



Asian Longhorned Tick

Threats to humans
and livestock

Gulf Coast Tick

Rickettsia parkeri



***recently identified or emerging pathogens or conditions in the US**

Vector-borne Diseases Recommendations

- Established and emerging VBDs pose an ever-increasing public health threat in Connecticut.
- Recommendations for this Health Domain focus on strategies to:
 - Coordinate and enhance surveillance for vector populations and VBDs
 - Predict future range of invasive species and emerging pathogens to prepare for the effects of climate change on VBDs
 - Identify vulnerable populations and develop targeted strategies for education, prevention, and management

Health Equity Highlight	
Strengthen Monitoring and Surveillance of Vector Populations and Associated Vector-Borne Diseases	
Recommended Implementation Action Description	Monitoring vector populations and VBDs are complementary and required for determining threats to public health and will guide adaptation strategies. This includes assessing changes in vector abundance, pathogen prevalence in vectors, and disease incidence. Vector and VBDs surveillance should be streamlined and augmented as climate change, spatiotemporal distribution shifts, and new vectors are introduced or expand their range. Disease surveillance augmentation includes increased ability to ensure data quality, completeness and analysis as well as novel approaches. Surveillance also includes identifying and monitoring the most important non-native vectors that would adapt to current and projected future climatic conditions and monitoring VBDs.
Completion Timeframe	<ul style="list-style-type: none"> • 3 to 5 years
Implementation Entities	DPH, CAES, Connecticut universities
Climate challenges addressed	Introduction of exotic vector species, range expansion of native vector species, and expansion of seasonal activity with warming temperatures.
Protection of vulnerable communities	The key for reducing the potential impacts of VBDs under climate change is to evaluate prevention options and identify vulnerable communities in Connecticut. Communities with lower socioeconomic status and limited access to public health services and information on preventive measures are at greater risk of contracting VBDs or not receiving appropriate diagnosis and treatment. Increased and targeted culturally appropriate educational efforts for these groups is needed. Surveillance should be more rigorous in impoverished urban or isolated rural areas, floodplains, coastlines, and other locations that are more vulnerable to extreme weather, persistent climate change, and social and economic stressors. Monitor also includes coordination with agencies and military bases to protect outdoor workers and service people exposed to high-risk locations.

Domain 4: Extreme Events

Presenter: Diane Mas

Team Lead: Laura E. Hayes, Ph.D. Epidemiologist Health Statistics & Surveillance

Members:

Todd Berman, United Illuminating

Amanda Clark, DPH

Ken Dumais, DEMHS

Diane Mas, Fuss & O'Neill, Inc.

Robert Scully, DPH

Orlando Velazco, DPH

Kirk Westphal, Brown and Caldwell

David Murphy, Milone and MacBroom

Laura Bozzi, Yale University

Michele DeLuca, City of Norwalk

Christine Kirkchoff, UConn

Lori Mathieu, DPH

Ryan Tetreault, DPH

Jeri Weiss, EPA Region 1

Joanna Wozniak-Brown, CIRCA

Extreme Events

- Health impacts (direct and indirect) result from extreme events including heavy rainfall, extreme heat, floods, droughts and include mental and physical impacts
- Direct Impacts –
 - injury and death
- Indirect Impacts –
 - damage to infrastructure that protects public health,
 - impact to natural systems that impacts water and food availability and quality
- Vulnerable populations depend on geography and demographic profile
- Geographic – flood prone areas, rural areas
- Demographic – housing, age, physical condition, medical/chemical dependence, occupation, income, limited English proficiency



Extreme Events

- 9 recommendations
- **Highlight: State and Regional Access and Functional Needs (AFN) Emergency Preparedness and Response Coordinators**
 - Coordination to ensure safe and equitable access to communication and evacuation services and of medical care during natural disasters is critical to the promotion of health equity in Connecticut.
 - Establish positions at the state agency level as well within DEMHS Regions to coordinate communication and access to public health and emergency services during natural disasters.

Health Equity Highlight	
Establish State and Regional Access and Functional Needs (AFN) Emergency Preparedness and Response Coordinators	
Recommended Implementation Action Description	Coordination to ensure safe and equitable access to communication and evacuation services and of medical care during natural disasters is critical to the promotion of health equity in Connecticut. Populations most vulnerable to poor access and service disruption include people with disabilities, children, the elderly, and those with chronic medical conditions or rely on medical equipment. This recommendation focuses on the establishment of positions at the state agency level as well within DEMHS Regions to coordinate communication and access to public health and emergency services during natural disasters. A state-level coordinator would be responsible for the development of guidelines and protocols and management of populations on vulnerable populations and would additionally serve as an AFN Officer during invocation of the Incident Command System Structure. Regional coordinators are needed to conduct outreach and manage logistics within communities during natural disasters.
Completion Timeframe	<ul style="list-style-type: none"> • Less than 2 years
Implementation Entities	DEMHS, DPH, DSS, DMHAS, Dept. of Aging and Disability Services
Climate challenges addressed	Increased frequency of severe hurricanes and coastal storms, and extreme precipitation and heat events.
Protection of vulnerable communities	For this recommendation, we look to Hurricane Katrina as an example of the immediate and long-term impacts to our vulnerable populations. Poor housing conditions lead to the immediate displacement of low-income populations, which were disproportionately black. These same poor populations had problems evacuating as they had no immediate access to transportation. Preparation was a problem to LEP populations, as a third of New Orleans population did not speak English well; this impacted what they needed ahead of the disaster as well as communication for directing toward safe sheltering. People with medical conditions could not find access to medication, leading to more deaths after the hurricane because of lack of access. Long-term effects for children included trauma, and access to safe housing and education even 5 years after the hurricane.
References for action	ADA National Network Learning Session: Integrating the Access and Functional Needs Coordinator Role into your Emergency Operations Center webinar (https://www.adapresentations.org/webinar.php?id=162)

Domain 5: Water-borne Illnesses

Presenter: Diane Mas

Co-Lead: Diane Mas, PhD, REHS/RS Vice President, Chief Resilience Officer Fuss & O’Neill, Inc.

Co-lead: Steven Walleth, Sanitary Engineer, DPH

Members:

Chris Bellucci, DEEP

Amanda Clark, DPH

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Betsy Gara, CWWA

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Ryan Tetreault, DPH

Jeri Weiss, EPA Region 1

David Murphy, Milone and MacBroom

Water-borne Illnesses

- Health Impact - Exposure to pathogens, chemicals, and cyanotoxins increase, with subsequent health impacts
- Vulnerable Populations broadly include:
 - Those served by wastewater treatment and water systems - from single residences to regional service areas
 - Those who live, work, and play around fresh or marine water
- Within these populations, health impacts depend on:
 - Individual characteristics (e.g., age, health status, race/ethnicity)
 - Socioeconomic characteristics (e.g., income, English-language proficiency)
 - Occupations that are water-dependent (e.g., water/wastewater treatment, fishing/shellfishing)
 - Geographic location (rural, coastal, floodplain)
- Lack of equity exacerbates vulnerability



Water-borne Illnesses

- 7 Recommendations
- **Highlight: Assess vulnerabilities of recreational freshwater and marine beaches to climate change impacts and prioritize adaptation options to reduce vulnerabilities.**
- Beaches provide cooling options during high heat, are an in-state recreational resource available to those with limited travel options, and are important for economic revenue to the communities within which they are located.
- This action would inventory public beaches and prioritize adaptation options to reduce that vulnerability based on beach gray/green infrastructure, water quality and populations served.
- Recreational waters for heat refuge; waterborne pathogens anticipated to increase under a warmer and wetter climate
- Complements WBI recommendation for coastal water quality monitoring for shellfishing.

Health Equity Highlight	
Assess the vulnerability of public recreational freshwater and marine beaches to impacts from climate change and prioritize adaptation options to reduce vulnerability.	
Recommended Implementation Action Description	Freshwater and marine beaches provide cooling options during high heat, are an in-state recreational resource available to those with limited travel options, and are important for economic revenue to the communities within which they are located. This action would inventory public beaches, documenting existing and potential vulnerability to water quality and beach infrastructure under changing climate and prioritize adaptation options to reduce that vulnerability based on beach gray/green infrastructure, water quality and populations served. This recommendation complements recommendations for coastal water quality monitoring for shellfishing.
Completion Timeframe	<ul style="list-style-type: none"> • 3 to 5 years
Implementation Entities	DEEP, DPH, Watershed Associations and other NGOs, Municipalities, Academic Institutions, Consulting Engineers and Scientists.
Climate challenges addressed	Increasing air and water temperature (GC3 STWG 2020), increased precipitation intensity and subsequent runoff into receiving waters (US EPA, n.d.) both of which can impact water quality (Chapra et al., 2017; Fleming et al., 2018). Sea level rise and storm surge which can damage grey/green infrastructure (Fleming et al., 2018). Coastal and inland flooding which can impact water quality and damage grey/green infrastructure.
Protection of vulnerable communities	Vulnerable populations include those that rely on access to recreational waters for heat refuge including populations without air conditioning or access to cooling centers. In addition, those vulnerable to the adverse effects of waterborne pathogens that are anticipated to increase under a warmer and wetter climate include children; pregnant women, and those with chronic illness, especially immunocompromised individuals
References for action	Chapra, Steven C., Brent Boehlert, Charles Fant, Victor J. Bierman Jr, Jim Henderson, David Mills, Diane ML Mas et al. "Climate change impacts on harmful algal blooms in US freshwaters: a screening-level assessment." <i>Environmental Science & Technology</i> 51, no. 16 (2017): 8933-8943. Fleming, E., J. Payne, W. Sweet, M. Craghan, J. Haines, J.F. Hart, H. Stiller, and A. Sutton-Grier, 2018: Coastal Effects. In <i>Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II</i> [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart

Domain 6: Nutrition, Food Security and Food Safety

Presenter: Michael Puglisi

Team Members:

Michael Puglisi, UCONN

Mindy Chambrelli, Darien Health Dept.

Cynthia Costa, DPH

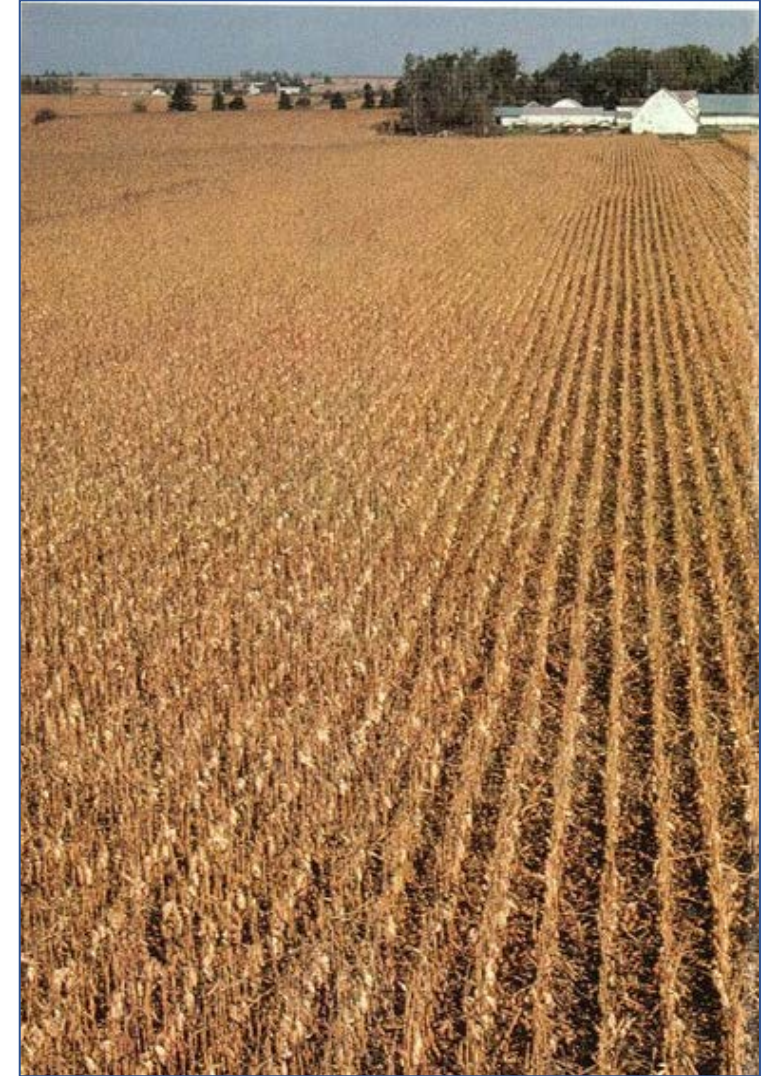
Lori Mathieu, DPH

Martha Page, Hartford Food System

Marica Pessolano, DPH

Domain 6: Nutrition, Food Security and Food Safety

- Food security refers to the situation “when all people at all times have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO 1996, 2012a).
- Climate change is very likely to affect global, regional, and local food security by disrupting food *availability*, decreasing *access* to food, and making food *utilization* more difficult.
- More detailed data and models are needed to assess climate-change effects on all dimensions of food security at subnational, local, and household levels.
- Vulnerable populations, such as low income people, communities of color, children and the elderly are at the highest risk, exacerbating health inequities for these populations

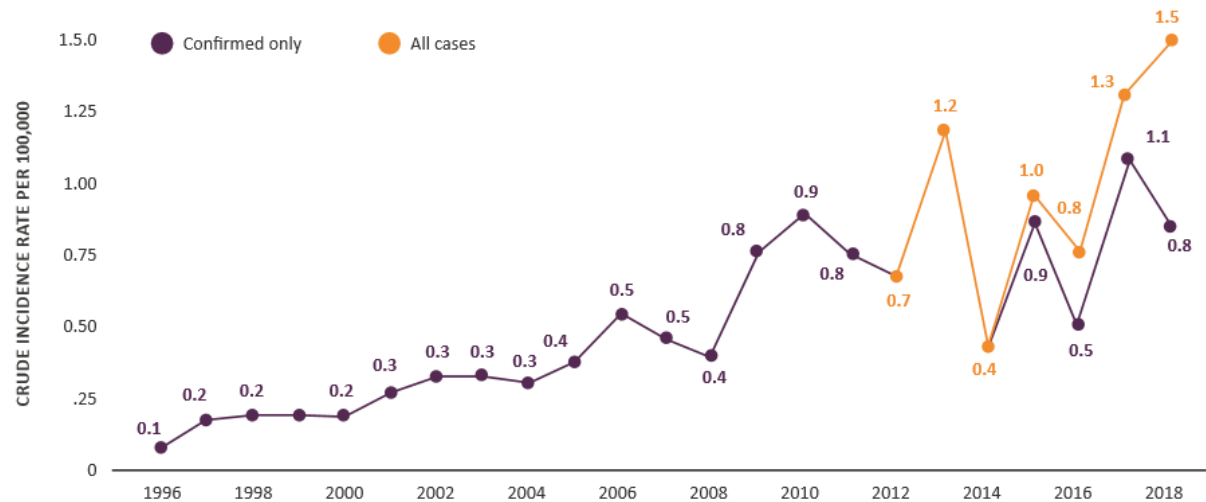


Domain 6: Nutrition, Food Security and Food Safety

- Food Safety – Those conditions and measures necessary for food production, processing, storage, and distribution in order to ensure a safe, sound, wholesome product that is fit for human consumption.
- Food safety and the incidence of foodborne disease have the potential to be greatly affected by some of the environmental variations associated with climate change.

2019: State Health Assessment Healthy Connecticut 2025

FIGURE 8.10: Crude incidence rate of *Vibrio* infections by year, Connecticut, 1996–2018



Source: Centers for Disease Control and Prevention. FoodNet Fast. Retrieved from www.cdc.gov/foodnet/foodnet-fast.html

Nutrition, Food Security, and Food Safety Recommendations

- Our recommendation focuses on state and regional food security action plans with key stakeholders to:
 - Set minimum targets for production and distribution by food category
 - Work with other New England states to ensure sufficient regional food supply
 - Focus on protecting vulnerable populations
 - Learn from COVID-19, Hurricane Maria, and other recent emergencies
- Additional recommendations are planned for the 2021 phase of the GC3 Planning Process

Develop state and regional food security action plans to mitigate the risk of climate change and extreme weather events on the food system.	
Recommended Implementation Action Description	The overarching recommendation regarding nutrition as it relates to climate change is to connect New England state agencies and key stakeholders to develop state and regional food security action plans with the goal of increasing regional food production and strengthening regional food distribution, especially during times of crisis. Connecticut will utilize lessons from existing food security work which will serve as the basis for learning and building toward long term solutions to be captured in the food security action plan. This includes the work conducted in response to COVID as well as responses to recent severe weather events, such as Hurricane Maria and Tropical Storm Isaias. Examples of current activities to address emergency food needs is the Farms to Families Food Boxes through the Connecticut Department of Agriculture and the Foodshare Emergency Mobile Food Pantry at Rentschler Field in Hartford serving 1,500-2,000 people per day, among many others. We are further drawing on the experiences and examples of the New England regions' food plans, including Massachusetts, Rhode Island, and Vermont. Connecticut's food security action plan will: 1) set minimum targets for production and distribution by food category that can be coordinated with other New England states to achieve the overall goals for New England food systems and 2) work with other New England states to develop and implement policies, procedures, and plans to ensure that the regional food supply is sufficient to weather global or national food supply chain disruptions caused by climate change and global pandemics; with barriers identified during the COVID-19 pandemic as a focal point for preparedness.
Completion Timeframe	<ul style="list-style-type: none"> • 1 to 2 years, continue to work with statewide and regional partners to learn from current food systems work to inform action planning process; and • 3 to 5 years for plan development and implementation, although policy implementation may extend greater than 5 years.
Implementation Entities	CT State Agencies; NGOs such as the Farm Bureau the Connecticut Food Association; Academic Institutions; stakeholders from impacted communities
Climate challenges addressed	Food systems will be greatly disrupted by climate change, resulting in inadequate food supply and increased food insecurity, especially among low income populations (Dupigny-Giroux et al., 2018). Additionally, the climate crisis will bring refugees to New England from areas impacted more greatly from other parts of the world. These individuals will likely be at extremely high risk for food insecurity, further increasing the emergency related to food security for the state. Goals for production and distribution, as well as improved access specifically for food insecure populations are crucial to ensure food security for Connecticut residents.
Protection of vulnerable communities	Development of a state food security action plan will engage partners in Connecticut and within New England to mitigate the risk of climate change on the food system, with a focus on protecting vulnerable populations most impacted by climate-related events such as low income people, people of color, children, and the elderly.
References for action	Dupigny-Giroux, L.A., E.L. Mecray, M.D. Lemcke-Stampone, G.A. Hodgkins, E.E. Lentz, K.E. Mills, E.D. Lane et al. (2018). Northeast. In Impacts, Risks, and

Domain 7: Mental Health and Well-being

Presenter: Caroline Dumont

Team Lead: Dr. Caroline Dumont, Assistant Professor of Clinical Psychiatry, Yale University

Members:

Laura Hayes, DPH

Sarah Lowe, Yale University

Michelle Riordan-Nold, CT Data Collaborative

Domain 7: Mental Health and Well-being

- Mental health impacts of climate change are broad, ranging from psychological distress to clinical illness:
 - anxiety, depression, post-traumatic stress disorder (PTSD), suicide
- Some mental health impacts arise from direct impacts of climate change such as flooding and heat waves
- Other impacts are indirect, via disruption within human systems and infrastructure
 - food insecurity, economic sectors, and human livelihood



Hurricane Harvey Flooding and Damage (cropped) by Jill Carlson available at [https://commons.wikimedia.org/wiki/File:Hurricane_Harvey_Flooding_and_Damage_\(36902885982\).jpg](https://commons.wikimedia.org/wiki/File:Hurricane_Harvey_Flooding_and_Damage_(36902885982).jpg) under a Creative Commons Attribution 2.0 available at <https://creativecommons.org/licenses/by/2.0/deed.en>

Domain 7: Mental Health and Well-being

- Although many individuals recover from the mental health effects of climate change events with time, many experience longer-lasting psychological dysfunction.
- Special consideration is needed for Connecticut's vulnerable populations: those at higher risk following exposure to climate-related disasters include:
 - children
 - elderly
 - pregnant and postpartum women
 - first-responders
 - pre-existing mental illness
 - Lower socio-economic status
 - homelessness



Marietta, Ga., September 4, 2005 -- At Dobbins AFB, this New Orleans Katrina evacuee is at the Yellow Triage Center for assessment and possible medical service. Dr. Steedman Sarbah (Augusta, GA.,VA Hospital), and assistants are about to determine if this woman is critically ill. George Armstrong/FEMA

Mental Health and Well-being Recommendations

- **Chronic mental health problems** were cited as a common risk factor underlying the delay or complete derailment of post-disaster recovery for some individuals in the aftermath of Superstorm Sandy.
- Recommendations for this Health Domain:
 - **Best management practices** and implementation evaluation for addressing needs of mental health populations by **Disaster Case Managers**
 - procurement of **sustained funding** for accessible, equitable, and appropriate mental health services for post-natural disaster recovery
- Additional recommendations are planned for Phase 2 of the GC3 Planning Process

Recommendation Highlight	
Establish Best Practices for Disaster Case Managers for Addressing Needs of Mental Health Populations in Disaster Response	
Recommended Implementation Action Description	Chronic mental health problems were cited as a common risk factor underlying the delay or complete derailment of post-disaster recovery for some individuals in the aftermath of Superstorm Sandy (CT Rises Volunteers, 2019). This action focuses on the development of best management practices and implementation evaluation for addressing needs of mental health populations by Disaster Case Managers and procurement of sustained funding for accessible and appropriate mental health services during post-natural disaster recovery.
Completion Timeframe	<ul style="list-style-type: none"> • Less than 2 years
Implementation Entities	DMHAS, DEMHS, Connecticut Long-term Recovery Committee, stakeholders from impacted communities
Climate challenges addressed	Increasing frequency of severe coastal storms and hurricanes, drought, and extreme heat events.
Protection of vulnerable communities	This action provides the framework to bolster the support for individuals with chronic mental health conditions in long-term disaster recovery.
References for action	CT Rises Volunteers and Survivors of Superstorm Sandy. 2019. CT Rises: Planning for Long-term Disaster Recovery. A Guide and toolkit. Supplement to The Local Emergency Management Directory and Municipal Office Handbook. https://portal.ct.gov/-/media/CTRecovers/CT_Rises-Planning-for-Long-Term_Recovery.pdf

Closing Comments

Lori Mathieu

Thank you for listening, and to those who presented.

Thank you to the members of the Public Health & Safety Workgroup.

Significant work ahead – welcome your input on our draft recommendations.

- EO3 - Mandates an updated adaptation plan based on most current and locally scaled scientific information prioritizing protection of vulnerable communities.

Our scope is the suite of planning and implementation actions needed to address present-day and foreseeable threats to the protection and improvement of the health and safety of all people of Connecticut associated with climate change, with a focus on health equity.

Please join the breakout sessions and please submit written comments.

**Public Comment Period Open Until
11:59 pm October 21, 2020**

We Need Your Thoughts and Ideas!

GC3 Website: <https://portal.ct.gov/DEEP/Climate-Change/GC3>

**Email Public Comments to:
deep.climatechange@ct.gov**

GC3 Public Health and Safety Working Group Breakout Sessions

(Immediately after the Financing Adaptation
and Resilience Forum)

**Next, please join us for the Financing Adaptation
and Resilience Working Group Presentation,
presented by Bryan Garcia, president and CEO of
Connecticut Green Bank.**

Extreme Events
and Water-borne
Illnesses

Nutrition/Food
Security/Food
Safety and Mental
Health/Well-being