

ASPR TRACIE Technical Assistance Request

Requestor:

Requestor Phone:

Requestor Email:

Request Receipt Date (by ASPR TRACIE): 13 August 2015

Type of TA Request: Standard

Request:

Requestor is inquiring if ASPR TRACIE is aware of municipal heat wave mitigation plans. Would also be interested in other similar plans for extreme cold and other events related to the effects of climate change.

Response:

The ASPR TRACIE team collected various municipal heat wave mitigation plans and related resources (tools, templates, checklists, etc.) and organized them in the following four main sections: 1. Municipal Plans, Toolkits, and Checklists; 2. Additional resources included in the ASPR TRACIE Natural Disasters Topic Collection; 3. Additional resources that do not fit into the first two sections; and 4. Applicable websites that have additional information on heat wave/ extreme heat events.

NOTE TO ASPR TRACIE Users: If you are interested in receiving any of the resources that do not have a hyperlink, please contact the ASPR TRACIE Assistance Center.

I. Municipal Plans, Toolkits, and Checklists

Arizona Department of Health Services. (2014). [Arizona Department of Health Services Heat Emergency Response Plan.](#)

This plan was developed by the Arizona Department of Health Services to address and help limit the adverse public health effects from excessive heat. It identifies conditions or events that would trigger activation of the emergency response plan, and provides a framework for coordinating efforts with other agencies that provide services to at-risk populations. The plan also includes a list of prevention and educational resources that can help mitigate heat-health adverse effects and deaths.

Arizona Department of Health Services. (n.d.). [Extreme Weather and Public Health: Heat Safety - School Toolkit.](#)

This toolkit was created by the Arizona Department of Health Services in response to a Centers for Disease Control and Prevention Morbidity & Mortality Report (MMWR) published in 2010. The toolkit is intended to educate students, school staff, athletic coaches, and parents regarding heat-related illness and prevention.

Arizona Department of Health Services, Office of Environmental Health, Climate & Health Program. (2014). [Arizona Heat Safety Resource Guide: Resources for Local Health Officials and Public Information Officers during Extreme Heat Events.](#)

This guide provides local health officials and public information officers with information on health impacts of extreme heat events, decision-support tools, and useful resources for prevention of heat-related illnesses. This document also supports the Arizona Department of Health Services Heat Emergency Response Plan.

City of New York, Department of Health and Mental Hygiene. (2013). [Heat Wave Preparedness Checklists for Mental Health Service Providers.](#)

These checklists can help mental health service providers identify consumers and vulnerable residents at highest risk for heat-related illnesses.

City of New York, Department of Health and Mental Hygiene. (2013). [Heat Wave Preparedness Checklists for Vulnerable Population Service Providers.](#)

These checklists can help healthcare and other service providers identify vulnerable residents at highest risk for heat-related illnesses.

East Central (GA) Regional Hospital. [Heat Plan.](#)

This document outlines the East Central Regional Hospital's plans for extreme heat situations. It includes response actions by title (e.g., Safety Manager, Nurse Director) and recovery actions. The plan also includes a list of preventive measures, symptoms and treatment, and a weather index chart that lists steps to follow by temperature level.

Health Canada. (2011). [Communicating the Health Risks of Extreme Heat Events.](#)

This toolkit can help health communicators charged with developing or updating heat-health communication strategies, and features strategies for reaching specific audiences.

Maricopa Association of Governments. (2012). [FAQs about the Heat Relief Network.](#)

The Maricopa Association of Governments developed this three-page fact sheet, which provides answers to the most frequently asked questions related to the Heat Relief Network. The Heat Relief Network is a network of service providers, faith-based groups, municipalities, businesses, and citizens that mobilize to provide hydration and heat refuge for individuals in need during an extreme heat event.

Maryland Department of Health and Mental Hygiene, Office of Preparedness and Response. (n.d.). Heat-related Morbidity and Mortality. **(Resource provided as attachment.)**

This presentation provides an analysis of heat-related illnesses and deaths, and examples of real-life incidents in Maryland over several years (various data and statistics presented from 2003-2012). Planning concerns and considerations, including at-risk population

factors, are addressed as it relates to heat planning efforts taken by the state. The presentation also includes information on the process of how vulnerable facilities are tracked to ensure that local health departments provide the appropriate information to the state level.

New Hampshire Department of Health and Human Services, Division of Public Health Services. (n.d.). [Fact Sheet: Excessive Heat](#).

The New Hampshire Department of Health and Human Services developed this two-page fact sheet, which provides answers to commonly asked questions related to excessive heat. Examples of questions include, “Is very hot weather dangerous for people?” and “What factors cause the body to be unable to cool itself?”

New Hampshire Department of Health and Human Services. (2014). Excessive Heat Emergency Response Plan: Appendix 2 to Emergency Services Function 8 Annex of New Hampshire State Emergency Operations Plan. (**Resource provided as attachment.**)

This plan identifies the New Hampshire (NH) Department of Health and Human Services’ role in response to excessive heat emergencies in the state, in collaboration with the NH Public Health Regions and other state agencies, and in accordance with the National Incident Management System. It includes templates for press releases, hotline scripts, and health alert messages, and provides a heat fact sheet.

Oregon Health Authority, Public Health Division Health Security, Preparedness, and Response Program. (2014). [Crisis and Emergency Risk Communication Toolkit for Extreme Heat](#).

This toolkit can help local health authorities develop public messaging before and during periods of extreme heat. It includes key messages, talking points, sample press releases, fact sheets, sample social media messages for Twitter and Facebook, and links to related information in English and Spanish.

II. ASPR TRACIE Natural Disasters Topic Collection

The following are excerpts from the draft ASPR TRACIE Natural Disasters Topic Collection, to be finalized in September 2015. Please note: plans, tools, templates, and checklists that are included in Section I of this document have been deleted from this section to reduce duplication. For a full draft copy of this collection, please contact ASPR TRACIE. Limited resources are also available at: <https://asprtracie.hhs.gov/technical-resources/36/Weather-event-specific-information/0>

Excessive Heat/ Heat Wave

Iddona, C., Mills, T., Giridharand, R., and Lomas, K. (2015). [The Influence of Hospital Ward Design on Resilience to Heat Waves: An Exploration Using Distributed Lag Models](#). *Energy and Buildings*. 86: 573-588.

The authors use models to measure the resilience of different medical building types to excessive heat. They found that masonry and Nightingale wards (a large room without subdivisions) fared better than rooms in light-weight modular buildings.

Li, X.H., Hou S.K., Zheng J.C. et al. (2012). [Post-Disaster Medical Rescue Strategy in Tropical Regions](#). *World Journal of Emergency Medicine*. 3(1): 23–28.

The authors analyzed the medical response to earthquakes and tsunamis in tropical regions and found that shock, infection, and heat stroke were frequently encountered by survivors.

Rocklöv, J. and Forsberg, B. (2009). [Comparing Approaches for Studying the Effects of Climate Extremes - A Case Study of Hospital Admissions in Sweden during an Extremely Warm Summer](#). *Global Health Action*.

The authors compare approaches for estimating outcomes associated with climate extremes, exemplified by a case study of hospital admissions during the extremely warm summer of 2006 in southern Sweden.

General Climate Change/ Weather Events

U.S. Department of Health and Human Services (HHS). (2014). [Primary Protection: Enhancing Health Care Resilience for a Changing Climate](#).

This 86-page document is a guide and toolkit designed to assist healthcare providers, design professionals, policymakers, and others with roles and responsibilities in assuring the continuity of quality health and human care before, during, and after extreme weather events. It is focused on healthcare infrastructure resilience to climate change impacts as manifested primarily by extreme weather events.

Excessive Cold

Oregon Health Authority, Public Health Division Health Security, Preparedness, and Response Program. (2015). [Risk Communication Toolkit for Winter Weather](#).

This toolkit can help local health authorities develop public messaging before and during periods of extreme cold weather. It includes key messages, sample press releases, factsheets, links to key resources, and sample social media messages for Twitter and Facebook.

St. Joseph's (MN) Medical Center. (2011). [Snow Emergency Plan](#).

This document outlines the hospital's plan for “an anticipated or an actual snow storm, the severity or duration, or any combination in which it is necessary.” It includes information on personnel practices, nurse staffing, and the transportation command center.

Novation. (n.d.) [Emergency Disaster Plan Template](#). (Accessed 7/21/2015.)

Healthcare facility emergency planners can use this template when developing their emergency operations plan. It features 12 disaster scenarios, including: hurricane, tornadoes, structure fires, earthquakes, and extreme cold.

III. Additional Resources

Adrianopoli, C. (2013). Extreme Heat Event (EHE) Response Protocol. **(Resource is a draft and has not been made official. Resource provided as attachment.)**

This draft document provides the concept of operations for coordinating Federal public health and medical assets necessary to support response efforts to expected extreme heat events for the 2009 season.

Adrianopoli, C. (n.d.). OEM Response to Extreme Heat Events (EHE). **(Resource is a draft and has not been made official. Resource provided as attachment.)**

This draft document provides information on when extreme heat events are the deadliest. It also addresses constraints that the National Disaster Medical System (NDMS) assets may face and will need to overcome in order to provide appropriate assistance to a community dealing with extreme heat events.

Adrianopoli, C., and Biedrzycki, P.A. (2012). Extreme Heat Events: Changing Realities and Misconceptions. U.S. Department of Health and Human Services, Office of the Assistance Secretary for Preparedness and Response. **(Resource provided as attachment.)**

The authors of this presentation provide 11 objectives including the following: why develop extreme heat event (EHE) response plans, urban EHE response plans in 31 cities, threshold heat temperatures and heat deaths that result in increased local heat-related mortality rates, the Northeast-Midwest band of EHEs, the Urban Heat Island, EHE physiology, the Chicago/Milwaukee example, basic strategies for reducing EHE mortality, city traits, external support for hospital emergency departments before/during EHEs, and EHE realities and misconceptions.

Altman, P., Lashof, D., Knowlton, K., et al. (2012). [Killer Summer Heat: Projected Death Toll from Rising Temperatures in America Due to Climate Change](#). Natural Resources Defense Council (NRDC).

The authors of this report analyze the results of independent peer-reviewed scientific papers and present the findings of increasing heat-related mortality due to global warming for the 40 largest U.S. cities. Their findings indicate that rising temperatures, driven by persistent climate change, will increase the number of life-threatening excessive heat events. The authors predict thousands of additional heat-related premature deaths will occur each year, with a cumulative toll of approximately 33,000 additional heat-related deaths by midcentury in these cities, and more than 150,000 additional heat-related deaths by the century's end.

City of Berkeley (CA). (2009). [Climate Action Plan](#).

In 2006, City of Berkeley voters issued a call to action on the climate challenge by overwhelmingly endorsing ballot "Measure G." The mandate was to reduce the entire community's greenhouse gas (GHG) emissions by 80% by the year 2050. This plan is a

result of that campaign and serves as a guide for setting the community on a path to achieve their goal.

Parzen, Julia. (2009). [Lessons Learned: Creating the Chicago Climate Action Plan](#).

The Chicago Climate Action Plan focuses most on how action will sustain a high quality of life for the people of Chicago by improving public health and the resilience of natural areas; lowering energy costs and creating jobs in emerging high technology sectors; increasing the comfort and efficiency of buildings, as well as the reliability of energy services; and broadening transportation choices, including higher quality transit and better access to services in greener neighborhoods. It describes how the City will protect its people from climate changes that are no longer avoidable, such as hotter summers, more heat waves and more severe storms. This lessons learned document builds off of the Climate Action Plan process and provides readers with key lessons learned during the process.

The Lancet. (2015). [Health professionals: be prepared for heatwaves](#). 386(9990): 219.

This editorial provides an overview of factors and issues to consider during heatwaves. Provides links to the WHO and World Meteorological Organization report, CDC guidance, and other applicable webpages.

U.S. Environmental Protection Agency (EPA), Office of Atmospheric Programs. (2006). [Excessive Heat Events Guidebook](#).

This guidebook identifies best practices that have been implemented to save lives during excessive heat events in various urban areas. It provides critical information needed to help local public health officials, emergency managers, meteorologists, and others assess their community's vulnerability to excessive heat waves, and develop and implement notification and response programs.

U.S. Government Accountability Office (GAO). (2015.) DRAFT- Climate Change: HHS Count Take Further Steps to Enhance Understanding of Public Health Risks. (**Resource provided as attachment.**)

This report provides the findings from a GAO study focused on reviewing the federal efforts to increase public health system preparedness for climate change. HHS (through NIH and CDC) provides millions of dollars for climate change research and to states and cities to develop risk management frameworks. GAO findings include: officials face challenges communicating the public health risks of climate change; officials are challenged in identifying health risks of climate change due to gaps in research and climate data; and they feel that federal action may not be sufficient to address data challenges such as insufficient local data on health outcomes.

World Meteorological Organization and World Health Organization. (2015.) [Heatwaves and Health: Guidance on Warning-System Development](#). (Accessed 8/18/15.)

Provides overview of general heat–health problem and describes how an understanding of the biometeorology, epidemiology, public-health and risk-communication aspects of

heat as a hazard can be used to inform the development of a heat-health warning system (HHWS) as part of a wider heat-health action plan (HHAP). The Guidance places emphasis on the practical aspects of HHWSs at a generic level and is not intended to be prescriptive.

IV. Websites

The following websites are dedicated providing tools, links, guidance, and templates related to heatwaves/ extreme heat events.

Arizona Department of Health Services. Extreme Weather and Public Health: Heat Safety - Heat-Related Illness: <http://www.azdhs.gov/preparedness/epidemiology-disease-control/extreme-weather/index.php#heat-illness>.

Boston Public Health Commission, Summer Heat Safety: <http://www.bphc.org/whatwedo/physical-health/Pages/SummerOutdoorSafety.aspx>.

CDC, Extreme Heat: <http://emergency.cdc.gov/disasters/extremeheat/>

CDC, Plan for Diabetes Care in Heat & Emergencies: <http://www.cdc.gov/features/DiabetesHeatTravel/>.

Extension Disaster Education Network (EDEN), Heat Wave- Extreme Heat: <http://eden.lsu.edu/topics/hazards/heat/Pages/default.aspx>.

Maricopa County Department of Public Health. Surviving Arizona's Extreme Heat: <http://www.maricopa.gov/publichealth/Programs/Heat/default.aspx>.

National Association of County and City Health Officials, Climate Change Toolkit: <http://www.naccho.org/toolbox/>.

New York City Department of Health and Mental Hygiene, Heat Illness and Heat Waves: <http://www.nyc.gov/html/doh/html/em/heat.shtml>.