



Overview of “Preparing for the Health Effects of Drought: A Resource Guide for Public Health Professionals”

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Preparing for Health Effects of Drought: A Resource Guide for Public Health Professionals

- Interviews with public health professionals
- Review of state drought plans
- Literature review on health effects of drought

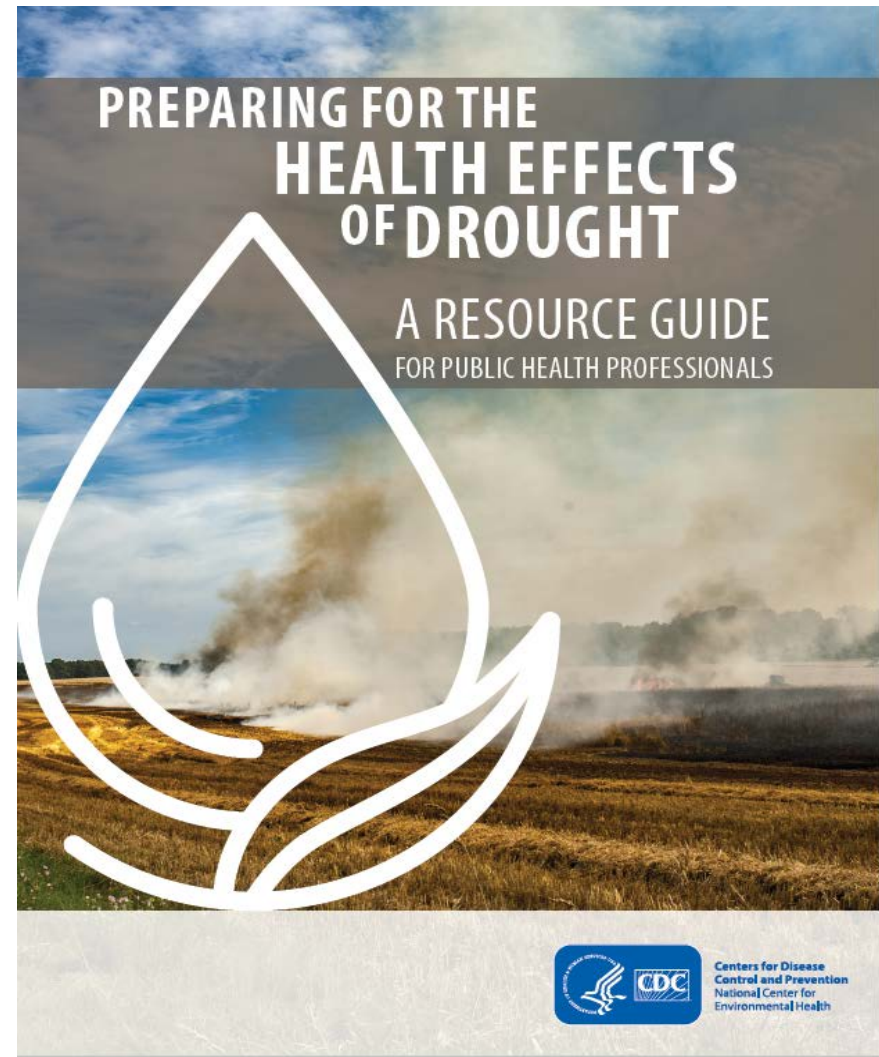
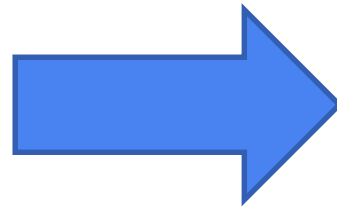


Table of Contents

MODULES

- 1** What You Need to Conduct or Contribute to a Hazard and Vulnerability Assessment
- 2** How to Communicate Drought Preparedness and Response Strategies
- 3** How to Collaborate With and Educate Key Partners on Drought Efforts
- 4** Where to Find Drought Data and How to Use It
- 5** How to Find Funding and Resources

HANDOUTS

Drought Preparedness and Response:

Why You Need Your Public Health Department's Support

Saving Time, Money, and Lives—the Benefits of Drought Preparation

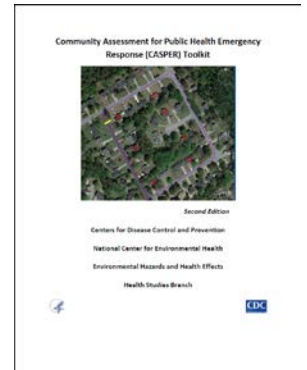
HSS Disaster-related Preparedness Activities

□ Resource materials development

- Community Assessment for Public Health Emergency Response (CASPER) toolkit
- Death Scene Investigation After Natural Disaster or Other Weather-Related Events Toolkit
- A Reference Guide for Certification of Deaths in the Event of a Natural, Human-induced, or Chemical/Radiological Disaster
- Planning for and Emergency: Strategies for identifying and Engaging At-Risk Groups
- A Primer for Understanding the Principles and Practices of Disaster Surveillance in the United States
- Preparing for Health Effects of Drought: A Resource Guide for Public Health Professionals

Death Scene Investigation After Natural Disaster or Other Weather-Related Events

A Toolkit

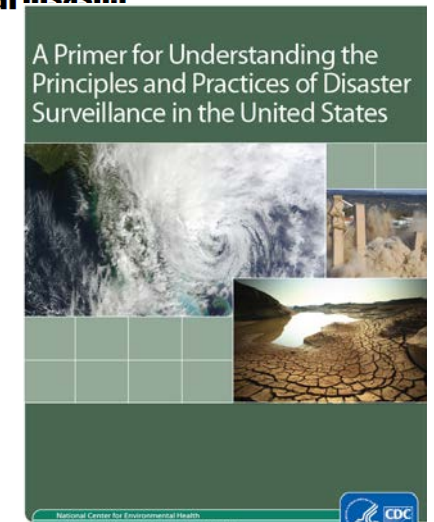
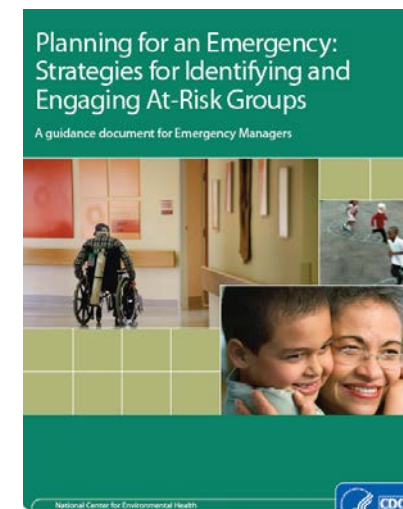


Vital Statistics Reporting Guidance

Report No. 1 • October 2017



A Reference Guide for Certification of Deaths in the Event of a Natural, Human-induced, or Chemical/Radiological Disaster



Module 4:

Where to Find Drought Data and How to Use it

- Accurate and appropriate data can be used to:
 - Assess how drought affects health
 - Prepare for a drought
 - Respond to a drought, disasters, and emergencies

Included in Guide

- Tips for success:
 - Collaborate with climatologists
 - Long term surveillance to measure health effects of drought
- Links and information on drought data resources for
 1. Effects of drought
 2. Drought Trends
 3. Planning tools and frameworks

Module 4:

Where to Find Drought Data and How to Use it

1. Effects of drought

- US Drought Portal
- National Weather Service Drought Portal
- Climate Change and Human Health Literature Portal
- U.S. Global Change Research Program

2. Drought Trends

3. Planning tools and frameworks

Module 4:

Where to Find Drought Data and How to Use it

1. Effects of drought

2. Drought Trends

- U.S. Drought Monitor
- North American Drought Monitor
- National Weather Service Climate Prediction Center: Drought Monitoring
- National Drought Mitigation Center
- NOAA's National Centers for Environmental Information
- Regional Climate Center Program
- NOAA's Climate.gov
- Data Basin
- Critical Zone Observatories

Module 4:

Where to Find Drought Data and How to Use it

1. Effects of drought
2. Drought Trends
3. Planning tools and frameworks
 - CDC's Climate Ready States and Cities Initiative
 - CDC's Drought Communication Toolkit
 - CDC's Community Assessment for Public Health Emergency Response
 - CDC's Drought and Health Analysis Document
 - The Federal Emergency Management Agency (FEMA) Mitigating Flood and Drought Conditions Under Hazard Mitigation Assistance

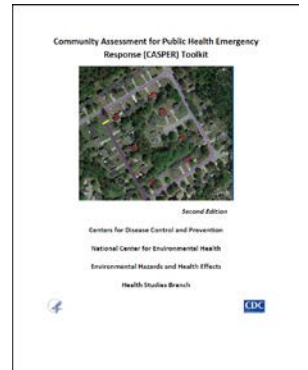
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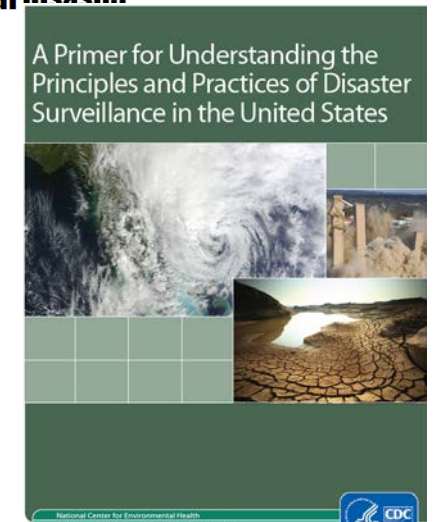
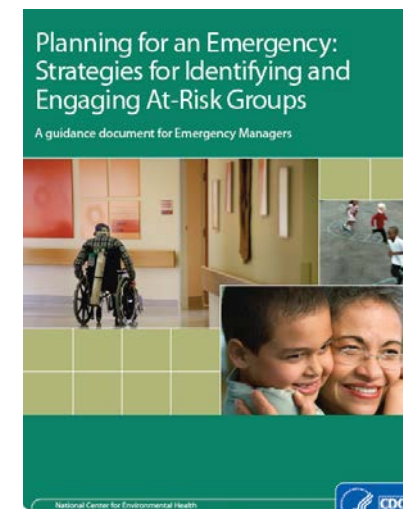


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Drought and Public Health: Challenges

- Limited data exist on drought and public health
- Limited guidance is currently available
 - ‘When Every Drop Counts” Published in 2010
 - Introduced research-supported categories of drought-related health effects
 - Advocated inclusion of public health in drought preparedness and response
 - Listed recommended drought-associated research gaps and future initiatives

Next Steps

- Understand the progress (if any) since the release of CDC's "When Every Drop Counts" resource document
- Understand the full impact that drought has on public health
- Share the components of successful drought planning and response strategies

Module 1: What You Need to Conduct or Contribute to a Hazard and Vulnerability Assessment

- Community specific assessments minimize adverse health effects of drought through helping plan ahead by:
 - Evaluating strengths and weakness of preparedness
 - Determining likely effects of drought
 - Identifying vulnerable populations

Included in Guide

- Information and resources on Jurisdiction-wide Hazard and Vulnerability Assessment (JHVAs) and Public Health Vulnerability Assessments (PHVAs)
- Steps to success
 - Consider interactive multiple phase process of assessment
 - Reference the many assessment tools that are available

Module 1: What You Need to Conduct or Contribute to a Hazard and Vulnerability Assessment

- Steps for conducting a vulnerability assessment to assess what hazards are likely to happen in your community to decide how your community should prepare
 1. Probability of a mishap
 2. Severity of consequences
 3. Scoring the consequences
 4. Risk analysis
 5. Translating the assessment into practice

Module 1: What You Need to Conduct or Contribute to a Hazard and Vulnerability Assessment

Tools

- Community Assessment Tool (CAT) for Public Health Emergencies Including Pandemic Influenza (CDC)
- Pennsylvania Public Health Risk Assessment Tool (Drexel University School of Public Health, Center for Public Health Readiness and Communication, Pennsylvania Department of Health)
- Comprehensive Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide (FEMA)
- Reducing Drought Risk: Bridging Theory and Practice (*Journal of Natural Hazards Review*)
- Hazard Risk Assessment Instrument (UCLA Center for Public Health and Disasters)
- Assessing Health Vulnerability to Climate Change: A Guide for Health Departments (U.S. Climate Resilience Toolkit)
- Hazard Vulnerability and Risk Assessment web portal (Florida Department of Health)

Module 1: What You Need to Conduct or Contribute to a Hazard and Vulnerability Assessment

Examples of assessments and plans

- Climate Science and Drought Planning: the Arizona Experience (*Journal of the American Water Resources Association*)
- Colorado Drought Mitigation and Response Plan (Colorado Water Conservation Board, Department of Natural Resources)
- Incorporating Medical and Social Vulnerability into an All-Hazards Assessment for the State of Florida (Florida Department of Health)
- Pre-Disaster Mitigation Plan for Lake County, Montana (Lake County Office of Emergency Management, Helena, Montana: Tetra Tech Inc.)
- Public Health Hazard Vulnerability Assessment (Oregon Health Authority)

Module 2: How to communicate drought preparedness and response strategies

- Communication plans:
 - Ensures decision makers, emergency managers, and public get the information they need
 - Keeps public and officials informed

Included in Guide

- Tips for success
 1. Stay active in creating and updating communication plan
 2. Engage community early and often
 3. Use a variety of outlets
 4. Meet the needs of your audience
 5. Watch the tone and timing of your messages

Module 2: How to Communicate Drought Preparedness and Response Strategies

- Resources with links:
 - From CDC: Drought Communication Toolbox, Drinking Water Advisory Communication Toolbox, Crisis and Emergency Risk Communication
 - Examples of drought communication plans
 - For ranchers and their families
 - For coping with drought related mental stress
 - Water conservation tips, including schools and businesses
 - For drought and water conservation communications
 - For residents with private wells water on protecting their water during a drought

Module 3: How to Collaborate with and Educate Key Partners on Drought Efforts

- Proactive risk management with collaboration reduces the public health effects of drought

Included in Guide

- Tips for success
 1. Join your regional drought planning task force
 2. Get involved early
 - Planning
 - Response
 3. Educate others
 4. Collaborate with others beyond regional task forces

Module 3: How to Collaborate with and Educate Key Partners on Drought Efforts

RESOURCES

Collaboration Resources. National Forest Foundation.
<https://www.nationalforests.org/collaboration-resources>.

Collaboration Resources. Red Lodge Clearinghouse.
<http://www.rlch.org/content/collaboration-resources>.

Collaboration Toolkit: How to Build and Maintain Effective Partnerships to Protect Sources of Drinking Water. Source Water Collaborative. <http://sourcewatercollaborative.org/how-to-collaborate-toolkit/>.

Centers for Disease Control and Prevention. Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups. A guidance document for Emergency Managers: First ed. 2015. <https://www.cdc.gov/nceh/hsb/disaster/atriskguidance.pdf>.

Wall N, Hayes M. Drought and health in the context of public engagement. In: Steinberg SL, Sprigg, WA, eds. Extreme weather, health, and communities. New York (NY): Springer; 2016. <https://www.springer.com/us/book/9783319306247>.

Module 5:

How to Find Funding and Resources

- Develop a needs based fundraising plan
- Research and identify funders
 - Possible sources
 - Federal Government
 - State, Local Tribal, Territories program
 - Foundation or community organization

Handouts

DROUGHT PREPAREDNESS AND RESPONSE: Why You Need Your Public Health Department's Support

Economic Effects of Drought



Droughts are among the most harmful and costly of all natural disasters.



The frequency, intensity, and duration of droughts are increasing in many areas of the country, a trend that is expected to continue.



From 2000 to 2017, **14 drought events** occurred across the United States, resulting in more than **\$120 billion** in property and infrastructure damage; asset, time, and other economic loss; and mitigation and recovery costs.

2000-2017* Billion-Dollar Drought Disasters By State



Please note that the map reflects a summation of billion-dollar events for each state affected (i.e., it does not mean that each state shown suffered at least \$1 billion in losses for each event).

*as of July 7, 2017

Source: NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2017). <https://www.ncei.noaa.gov/billions>

Health Effects of Drought



Dusty, dry weather not only increases risk of wildfires, but can also aggravate lung conditions such as asthma, bronchitis, and bacterial pneumonia.



Stagnant water, from reduced levels in water bodies, provides a breeding ground for disease-carrying mosquitoes and other insects.



Decreased water for crops and livestock can lead to food shortages, and using recycled water to irrigate fields can result in *E. coli* and *Salmonella* contamination, causing severe illness.



As water levels fall, bacteria and other harmful contaminants can build up in private wells or in areas where people boat, swim, and fish.



People whose livelihoods depend on water may experience financial loss, leading to mental health issues such as stress, anxiety, or depression.



Lack of water can halt power plant operations and cause shortages in electricity, endangering at-risk populations such as those in hospitals, nursing homes, and other healthcare facilities.

A public health department's preparation for and response to drought can save money, time, and lives.

We can help you by



Planning

- Determine if critical resources are in place to address public health needs.
- Develop mitigation strategies, such as ways to conserve water supplies.
- Work with the community and key partners to ensure coordinated preparedness and response efforts.
- Educate key partners about harmful health effects and ways to prevent them.



Responding


- Share strategies and recommendations with the community and key partners.
- Coordinate response activities with key partners to reduce adverse health effects.
- Participate in incident management systems and structures.
- Document and evaluate public health impacts and response activities.

Contact Us For More Information

Phone:


E-mail:

Handouts




Saving Time, Money, and Lives—THE BENEFITS OF DROUGHT PREPARATION


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Lack of water can halt power plant operations and cause shortages in electricity, endangering at-risk populations such as those in hospitals, nursing homes, and other healthcare facilities.

Public health departments' role in drought preparation can save money, time, and lives

- ✓ Determining if critical resources are in place to address public health needs during drought
- ✓ Developing drought mitigation strategies, such as ways to conserve water supplies
- ✓ Working with the community and key partners to ensure coordinated preparedness and response efforts
- ✓ Educating key partners about the detrimental health effects of drought and ways to prevent them
- ✓ Sharing drought preparedness strategies and recommendations with the community and key partners

How You Can Help

Funding for drought preparedness saves response time and money when drought occurs.



Public health departments need funding to provide critical assistance during drought. This funding will help to

- ✓ Gather and examine data to prepare for drought
- ✓ Engage with the public to increase community resilience
- ✓ Implement critical programs to protect communities
- ✓ Hire staff to provide essential services during crises
- ✓ Establish long-term intervention strategies

Contact Us For More Information

Phone:
E-mail:

For every \$1 spent on preparing for drought, you save \$4

SPEND NOW  **SAVE LATER** 

Preparing for Health Effects of Drought: A Resource Guide for Public Health Professionals

The screenshot shows a web browser window with the URL <https://www.cdc.gov/nceh/hsb/cwh/drought.htm>. The page header includes the CDC logo and the text "Centers for Disease Control and Prevention" with the tagline "CDC 24/7: Saving Lives, Protecting People™". A search bar and a "CDC A-Z INDEX" dropdown menu are also visible.

The main content area is titled "Health Studies Branch - Promoting Clean Water for Health". On the left, a navigation menu lists several categories: "Health Studies Branch", "Promoting Clean Water for Health", "Water-related Research", "Drought", "Private Well Initiative", "Technical Assistance and Emergency Response", and "Capacity-Building and Training".

The "Drought" category is expanded, showing a breadcrumb trail "Health Studies Branch > Promoting Clean Water for Health > Drought" and social media sharing icons for Facebook, Twitter, and a plus sign. Below this is a large image of a dry, cracked riverbed.

Below the image, there is a text box with a small graphic of a water drop. The text reads: "New! Public health effects of drought can be severe, but they are often hard to observe or measure directly. To address this issue, CDC developed [Preparing for the Health Effects of Drought: A Resource Guide for Public Health Professionals](#). The guide has five modules that provide steps to success, tips, best practices, and where to find more resources. Also, it offers two attractive, user-friendly handouts that can be easily customized and reproduced for community outreach."

<https://www.cdc.gov/nceh/hsb/cwh/drought.htm>

Thank you!

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For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

