CDC’s Drought Guidance: Your Public Health Resource for Understanding and Preparing for Drought in Your Community

Editor’s Note: NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature a column from the Environmental Health Services Branch (EHSB) of the Centers for Disease Control and Prevention (CDC) in every issue of the Journal.

In these columns, EHSB and guest authors share insights and information about environmental health programs, trends, issues, and resources. The conclusions in this article are those of the author(s) and do not necessarily represent the views of CDC.

Martin Kalis works at EHSB on emergency preparedness and environmental health issues. Elaine Curtiss works on EHSB’s communications team.

Are drought issues affecting your community, or could they affect your community in the future? CDC’s drought guidance, When Every Drop Counts, can help you understand how drought may impact public health in your community and how to prepare for it.

Although many aspects and implications of drought have been well researched, the Centers for Disease Control and Prevention (CDC) recognize that there is much to be learned about drought as it affects the health of the U.S. public. To help public health professionals prepare for or respond to drought, CDC recognized the need for a comprehensive, public health-focused guidance document on drought.

As a first step toward developing the document, CDC’s National Center for Environmental Health (NCEH) formed a working group of both internal and external subject-matter experts representing all levels of public health, environmental protection, and water-related sciences. This group determined the types of drought-related information to include in the drought guidance.

To consolidate existing information about the public health effects of drought and identify future research needs and next steps, CDC and its partners sponsored the “Public Health Effects of Drought” workshop in September 2008. This workshop hosted participants from • federal, state, and local public health; • environmental engineering and science; • coastal ecology; • regulatory engineering; • water-related research; • risk communication; • water systems management; and • emergency management.

Workshop participants identified and prioritized drought-related public health issues, identified research gaps and needs in the area of public health as it relates to drought, and developed recommendations to ensure that the nation’s public health system is better prepared for drought. Participants also engaged in discussions and shared personal experiences with drought within their regions, including lessons learned, best practices, and challenges.

The publication resulting from these efforts, When Every Drop Counts: Protecting Public Health During Drought Conditions—a Guide for Public Health Professionals, reflects the experience and knowledge of the working group members, experts who attended the 2008 “Public Health Effects of Drought” workshop.
workshop, and the existing literature and data that have been collected on the impact of drought on health.

In addition to providing an overview of basic drought- and water-related information and principles (such as the definition of drought; U.S. drought and water-use trends; the relationship between drought and climate change; water distribution; water treatment and classification; and water-related policy), this document addresses numerous drought-related public health effects, which are organized into several broad categories within the document.

To assist public health professionals and others concerned with human health during drought conditions, this guidance document also contains information about drought preparedness and response. To ensure usability, the document organizes these activities into two broad categories: those that should be conducted before and in the early stages of drought and those relevant to late-stage, severe drought conditions (see Sidebar 1).

This document also provides readers with tables and tools designed to provide further guidance on preparedness activities, such as examples of at-risk populations and the health implications relevant for specific groups (see Sidebar 2), potential partners in drought preparedness activities, and communication objectives and actions relevant to specific target audiences.

The document concludes with a discussion of much-needed drought-related research and initiatives. Identified by the experts participating in the “Public Health Effects of Drought” workshop, the extensive recommendations for future needs are organized into research-related endeavors and those pertaining to initiatives and resources. Also included in the document is a list of diverse drought-related resources likely to be helpful to those committed to protecting the health of the U.S. public.

When Every Drop Counts: Protecting Public Health During Drought Conditions—a Guide for Public Health Professionals is a collaborative effort by CDC, the American Water Works Association, the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and other stakeholder agencies and organizations. Public health officials, practitioners, and other stakeholders can use this guide first to understand and then to prepare for drought within their own communities.

For your free copy of When Every Drop Counts, go to www.cdc.gov/nceh/ehs/publications/drought.htm.

Corresponding Author: Martin Kalis, Public Health Advisor, NCEH/DEEH, 4770 Buford Highway, Atlanta, GA 30341.
E-mail: lzk6@cdc.gov.

---

Response Activities for Early- and Late-Stage Drought Conditions

<table>
<thead>
<tr>
<th>Response Activities for Early Stages of Drought</th>
<th>Response Activities for Late-Stage, Severe Drought Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assessing internal capacity</td>
<td>• Evaluating drought-related public health impacts</td>
</tr>
<tr>
<td>• Participating in a jurisdiction-wide hazard and vulnerability assessment</td>
<td>• Coordinating drought-response activities with key stakeholders and partners</td>
</tr>
<tr>
<td>• Conducting a public health vulnerability assessment</td>
<td>• Developing and communicating health-response objectives and action plans</td>
</tr>
<tr>
<td>• Identifying and coordinating with key partners and stakeholders</td>
<td>• Assigning and using resources to achieve objectives</td>
</tr>
<tr>
<td>• Communicating drought strategies and recommendations</td>
<td>• Participating in incident management systems and structures</td>
</tr>
<tr>
<td>• Educating and training key partners</td>
<td>• Addressing requests for information and assistance</td>
</tr>
<tr>
<td>• Developing mitigation strategies</td>
<td>• Documenting and evaluating drought preparedness activities</td>
</tr>
<tr>
<td>• Documenting and evaluating drought preparedness activities</td>
<td>• Communicating drought strategies and assistance</td>
</tr>
</tbody>
</table>

---

Drought-Related Public Health Effects

- Compromised quality and quantity of potable water
- Compromised food and nutrition
- Diminished living conditions pertaining to energy, air quality, sanitation, and hygiene
- Increased risk of water-related recreational injuries and illnesses
- Increased risk of mental and behavioral health issues such as depression, anxiety, and other conditions and disorders, especially among persons who rely on rainfall and water for their economic survival
- Increased risk to vulnerable populations such as persons suffering from various chronic health conditions and immune disorders
- Increased disease incidence for infectious, chronic, and vectorborne/zoonotic diseases