DIRECT FROM CDC ENVIRONMENTAL HEALTH SERVICES BRANCH

Robert G. Blake, MPH, REHS
Centers for Disease Control and Prevention

Jonathan Yoder, MPH
Centers for Disease Control and Prevention

John Kou
Baylor University

Updated Drinking Water Advisory Communication Toolkit

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.

Rob Blake is a health scientist at CDC's Division of Emergency and Environmental Health Services, and has been working in the environmental health field for more than 30 years. Jonathan Yoder is the acting branch chief of CDC's Waterborne Diseases Prevention Branch. John Kou is a student at Baylor University and was a student intern in CDC's Summer Undergraduate Program in Environmental Health during summer 2015.

There have been several high profile contamination events of various municipal water systems, which serve as a reminder of the need for continual preparedness for emergencies and outbreaks related to water. In recent years, numerous emergencies associated with drinking water were caused by multiple factors including

- pipeline infrastructure failures;
- natural disasters damaging water distribution systems;
- contamination of drinking water by chemicals, toxins, and microbes; and
- construction operations severing water mains.

The Drinking Water Advisory Communication Toolkit (DWACT) is designed to help local water utilities, health departments, and community emergency managers create accurate and timely public messaging about these drinking water emergencies.

The DWACT was originally published in 2011 (http://www.cdc.gov/healthywater/emergency/dwa-comm-toolbox/index.html?s_cid=cs_001). It was the product of collaboration between the Centers for Disease Control and Prevention (CDC), the U.S. Environmental Protection Agency (U.S. EPA), and the American Water Works Association (AWWA), along with many external contributors and reviewers including the National Environmental Health Association. It was originally published to help prevent biological outbreaks following a water emergency. It is now being released in an updated edition.

The DWACT addresses four basic types of drinking water advisories.

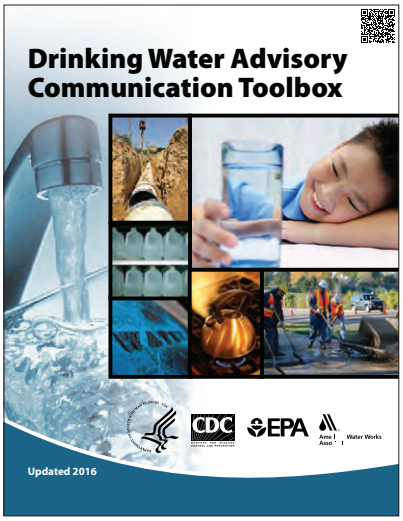
1. Boil water advisory (most common): This advisory is typically issued because of concern about microbial contamination. The advisory may be either precautionary or mandatory.
2. Informational advisories: These announce planned or anticipated changes in water quality and provide advice on appropriate actions.
3. Do not drink advisories: These direct customers to use an alternative source of water and are typically issued because of concern about chemical or toxin contamination that cannot be addressed by boiling the water.
4. Do not use advisories: These instruct customers not to use tap water for any purpose, including flushing toilets or bathing. These types of advisories are issued only if microbial, chemical, or radiological contamination undoubtedly has occurred where any water contact can be dangerous.

The DWACT has been updated to reflect lessons learned in real-life emergencies since its original publication. Updated guidance addresses needs identified as a result of the following responses.

- Chemical spills such as those affecting the Elk River in West Virginia (January 2014).
- Harmful algal blooms affecting the Toledo, Ohio, water supply (August 2014).

FIGURE **1**

Drinking Water Advisory Communication Toolbox



- A *Cryptosporidium* outbreak in Baker City, Oregon, that resulted in an extended boil water advisory (July 2013).
- The Super Storm Sandy response and resulting water sanitation concerns in high-rise buildings in New York City (October 2012).

The DWACT also had importance in a water outage that affected all CDC campuses in Atlanta. The afteraction meetings with officials from DeKalb County, Georgia, allowed us to gain new insight into the needs of local communities in these kinds of events. The new edition contains a number of updates within the text, as well as new pages to address gaps and enhance its usefulness. Below is a list of the new content in this edition.

- Just-in-Time Planning and Response for Water Advisories: A quick guide to help water utilities that haven't had a chance to preplan and address their most pressing communication priorities in the event of an unexpected water advisory.
- Frequently Asked Questions
  - » Do Not Drink Water Advisories
  - » Cyanobacteria Blooms/Cyanotoxins/ Harmful Algal Blooms and Drinking Water
  - » Nitrates and Drinking Water
- Guidelines and Recommendations
  - » Childcare Centers During a Boil Water Advisory
  - » Hotels and Motels During a Boil Water Advisory
  - » Food Service Facilities During and After a Boil Water Advisory
  - » High-Rise Buildings Before and During a Water-Related Emergency
  - » Healthcare Facilities During and After a Boil Water Advisory
  - » Dialysis Centers Before and During a Water Advisory
- Web Site Information Checklist: A list of relevant information that should be included when developing a Web site to communicate with the public, media, and other stakeholders during a water advisory.
- Web Site Example: An example of what the typical front page of a water advisory Web site could look like, with descriptions and explanations.
- Sample Agenda for Afteraction Reporting: This sample agenda provides an example of what to cover in an after action reporting session with your stakeholders.
- Emergency disinfection guidelines to reflect the new chlorine bleach concentration of 8.25% instead of the previous 5.25% concentration.

The changes, drafted by environmental health and infectious disease staff at CDC, were reviewed by external stakeholders at AWWA and U.S. EPA. The comments received from those organizations could be clustered in the following areas.

- Pointers on how to make the DWACT user-friendly for elected officials.
- How to identify stakeholders and other partners.
- Suggestions on new ideas for associated supplemental products.

We hope the new version of the DWACT helps you serve your community when water emergencies occur.

Corresponding Author: Robert G. Blake, Health Scientist, Division of Emergency and Environmental Health Services, National Center for Environmental Health, Centers for Disease Control and Prevention, 4770 Buford Highway NE, MS F-58, Atlanta, GA 30341-3717. E-mail: rgblake@cdc.gov.