This issue of *Health and Safety News* serves as an FYI about drought and what to expect during that type of condition. Even though there are no immediate concerns related to drought, the information is the focus of this month’s newsletter because there have been years recently where little rainfall has occurred. Also, this condition has presented problems in the past and there are actually actions that can be taken in order to help get through this dire situation. The CDC’s (Center for Disease Control and Prevention) website ([http://www.cdc.gov/features/drought/](http://www.cdc.gov/features/drought/)) serves as the source for the information that follows. In order to read further about topics appearing in blue type, simply right click and select Open Hyperlink.

Drought is a natural phenomenon in which rainfall is lower than average for an extended period, resulting in water shortage.

Drought has affected the United States throughout history, and cycles of drought have affected North America for the last 10,000 years. Because drought can cause health
problems, CDC and its partners are using both lessons learned from history and today's technology to prepare for future droughts.

(CDC website images)

**Health Effects**

Serious drought events have regularly occurred in the U.S. In 2012, 60 percent of the contiguous U.S. suffered the worst drought in 60 years. A decade earlier, a devastating 2002 drought across the Midwest greatly increased the danger of that year's fire season. In 1999, extensive heat waves and drought conditions affected the Northeast. And the North American Drought of 1988, which killed thousands of people and livestock across the country, is one of the worst on record.

But perhaps the most well-known drought event is the Dust Bowl of the 1930s. This severe drought, which affected 65% of the U.S, was characterized by substantial clouds of dust and sand that often blocked out the sun for days at a time. A number of adverse health effects and conditions were attributed either directly or indirectly to drought. For example, people exposed to dust clouds were at increased risk for acquiring "dust pneumonia," an often fatal type of pneumonia caused when dust fills the lungs and inflames them, resulting in high fever, coughing, chest pain, and difficulty breathing.

During droughts, dry soils—and often wildfires—increase the amount of airborne particles, such as pollen and smoke. These particles can irritate the airways and worsen chronic respiratory illnesses such as **asthma**. Poor air quality can also increase the risk of respiratory infections, such as bacterial pneumonia and **valley fever**, a fungal infection and common cause of pneumonia in many areas of the southwestern United States, Mexico, Central and South America.

In addition to reduced air quality, drought poses many far reaching health implications. Some drought-related health effects occur in the short-term and can be directly observed and measured. But drought also can result in lasting, indirect health implications that are not always easy to anticipate or monitor. The following are some examples of the health-related issues that can arise from drought:

- Water
- Food and Nutrition
- Sanitation and Hygiene
- Recreational Risks
- Infectious Disease
- Chronic Disease
- Diseases Transmitted by Insects and Animals
Moreover, drought affects the quantity as well as the quality of America's crops and produce. Drought can lower crop yields and kill livestock, resulting in increased food prices and therefore decreased nutrition. Mental stress and its deadly effects are another result of drought. During the 1980s, the National Farm Medicine Center conducted a nine-year study that examined suicide rates in the Upper Midwest. This decade was a particularly stressful time for farmers, with record drought, declining land values, indebtedness, foreclosures, and bankruptcies. The study found that more than 900 male farmers and ranchers in Wisconsin, Minnesota, North Dakota, South Dakota, and Montana committed suicide in the 1980s. In some years, the incidence of suicide was nearly double the national average for white men.

Outlook

Knowing that drought is a recurring event, CDC's National Center for Environmental Health (NCEH) and CDC continue to lead efforts to prepare for this particular public health challenge and to keep people safe and healthy when it happens.

Advances in science and technology have allowed researchers from federal agencies, including the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA), to use rainfall patterns, climate models, historical records, and other indicators to predict the amount and distribution of precipitation in the U.S. in the twenty-first century. These researchers concur that severe droughts are likely to occur within the next century, particularly in mid-latitude areas like the U.S.

In 2008, as a first step toward creating public health guidance focused on drought NCEH created a working group composed of both internal subject-matter experts and external experts representing diverse fields including environmental protection and water-related sciences. This group created "When Every Drop Counts: Protecting Public Health During Drought Conditions" [PDF - 4.83MB]. This has assisted numerous public health officials, practitioners, and other stakeholders in their efforts to understand and prepare for drought in their communities.

In 2012, as 60 percent of the contiguous U.S. was in drought, scientists and public health workers from NCEH and several of its national partners, such as the American Public Health Association (APHA), worked to address the drought cycle. They developed a series of webinars and a seminar designed to create awareness about drought health effects. Additionally, NCEH is working with the National Public Health Information Coalition (NPHIC) to develop tools to help local and state health communicators address the needs of their communities before, during, and after drought events.
Please visit NCEH's website on drought to learn more about this topic and about the CDC's efforts to face this slow-moving disaster at www.cdc.gov/nceh/drought/

(CDC website image)

Source:

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