

# Drought and Health

Jesse E. Bell, PhD

Claire M. Hubbard Professor of Water, Climate and Health

*Director, Water, Climate and Health Program at UNMC*

*Director, Water, Climate and Health at Daugherty Water for Food Global Institute*

UNMC College of Public Health

UNL School of Natural Resources

# National Drought and Health Strategy



Two-fold purpose:

Assess needs and gaps

Convene stakeholders  
National Drought and Health Summit



Rachel Lookadoo, JD



Approach:

5 Regional Drought and Health Workshops

16 Health Department Interviews



## NATIONAL DROUGHT & PUBLIC HEALTH SUMMIT

June 17-19, 2019 | Atlanta, GA

Thank you to our Summit Planning Partners:

Centers for Disease Control and Prevention (CDC)  
National Integrated Heat Health Information System (NIHHIS)  
Environmental Protection Agency (EPA)  
Natural Resources Defense Council (NRDC)  
UNL National Drought Mitigation Center (NDMC)



COLLEGE  
OF PUBLIC HEALTH



## Drought and Public Health:

A Roadmap for Advancing  
Engagement and Preparedness

May 2023



Document prepared by the National Integrated Drought  
Information System (NIDIS) in partnership with key stakeholders.



# Research Needs



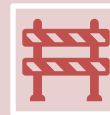
**Improve understanding of drought indicators**



**Conduct a comprehensive review of past drought events**



**Improve understanding of how drought impacts on private wells**



**Address barriers to data access**



# Drought & Health Roadmap



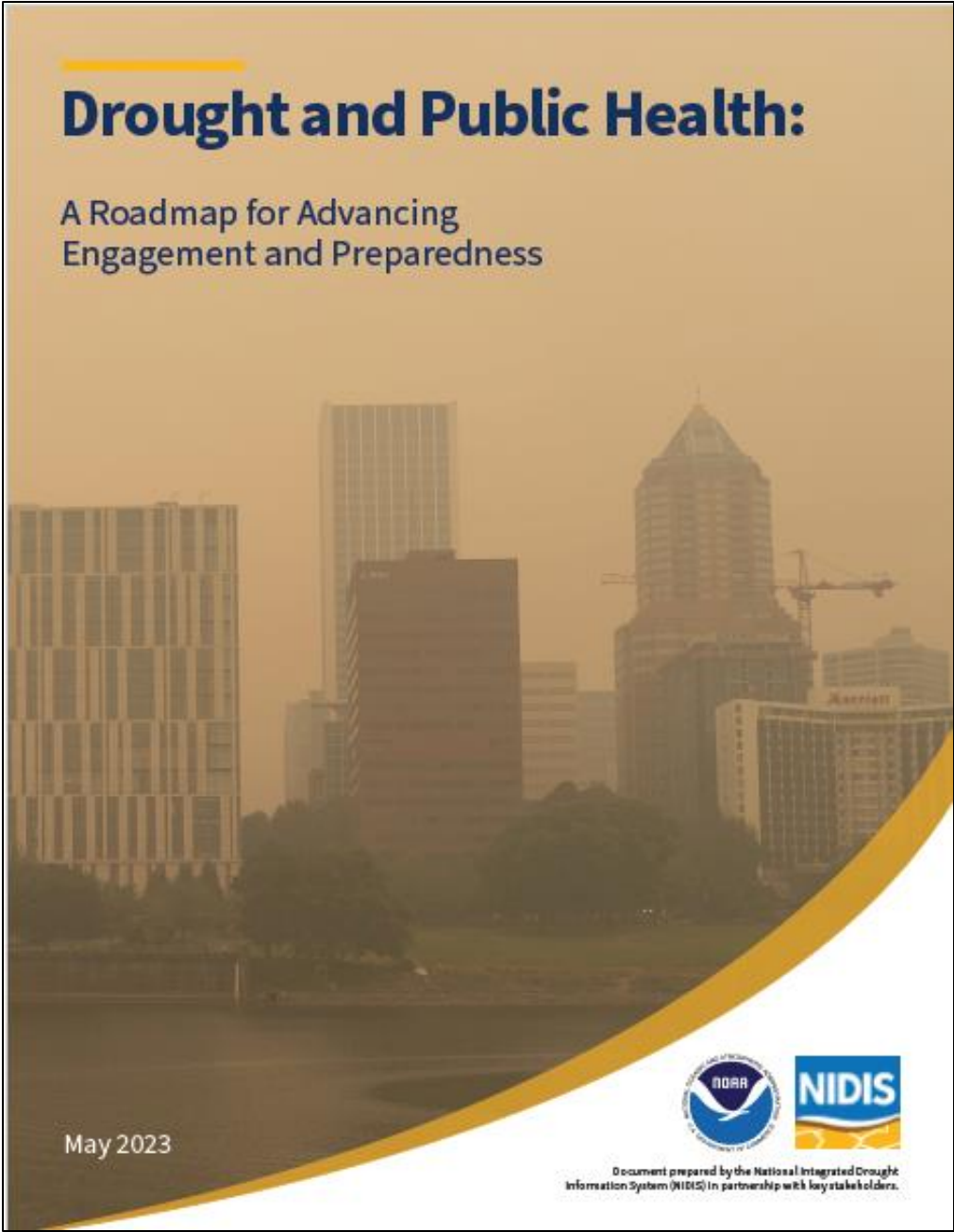
Partnership between National Integrated Drought Information System (NIDIS) and University of Nebraska Medical Center (UNMC)



Culmination of public health engagement efforts from 2019-2022



Purpose: Inform and direct future efforts and investments in drought and public health



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# Tools and Resources for Drought and Health



## Drought and Public Health:

A Roadmap for Advancing  
Engagement and Preparedness



Partnership and Collaboration



Communication and Outreach



Interdisciplinary Research and  
Applications



Planning and Preparedness

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# Partnership and Collaboration



Build community of practice



Expand public health representation at drought-related meetings



Increase adoption of early warning systems



Incorporate drought into vulnerability and Community Health Needs Assessments (CHNAs)



# Communication and Outreach



Develop impact-based communication resources



Tailor communication tools for vulnerable populations



Increase drought and health resources for health departments



Utilize federal agency websites to share resources





# Interdisciplinary Research and Application



Improve  
understanding of  
drought indicators



Conduct a  
comprehensive review  
of past drought events



Improve  
understanding of how  
drought impacts  
private wells



Address barriers to  
data access



# Planning and Preparedness



Incorporate health impacts into drought vulnerability assessments



Utilize tabletop exercises for drought events



Engage with tribal nations

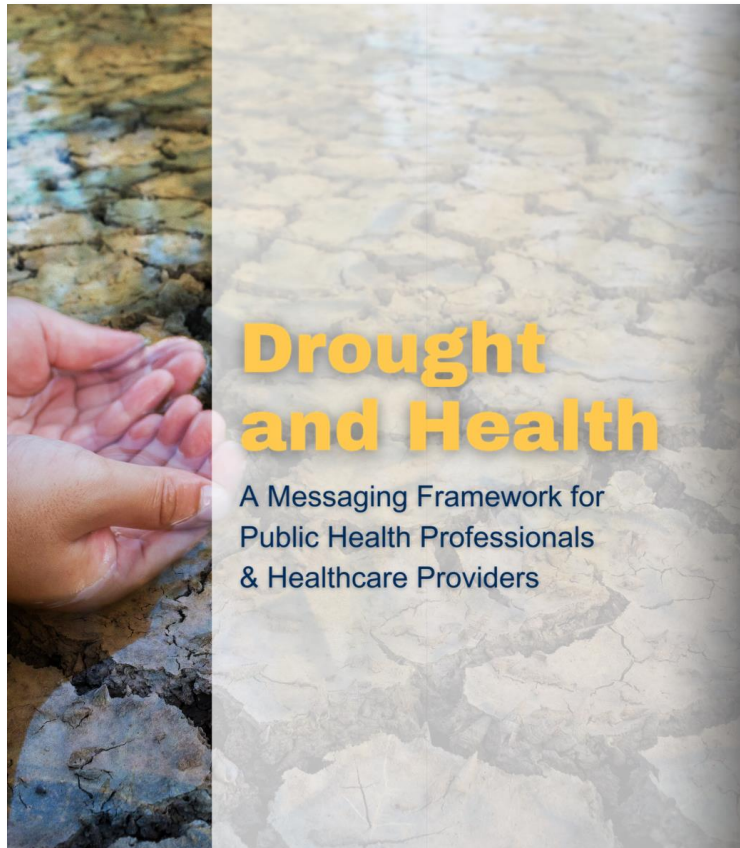


Create sample drought and health questions for community health needs assessments



# Outcomes

# Drought & Health Messaging Toolkit



## The Stages of Drought

Drought is categorized into five severity-based stages. While different geographic locations face conditions specific to their region during each drought stage, there are certain drought stage characteristics that apply to all locations. See the [Drought Impacts by State and U.S. Drought Monitor Category](#) tool for more detailed information about drought stages specific to your location.

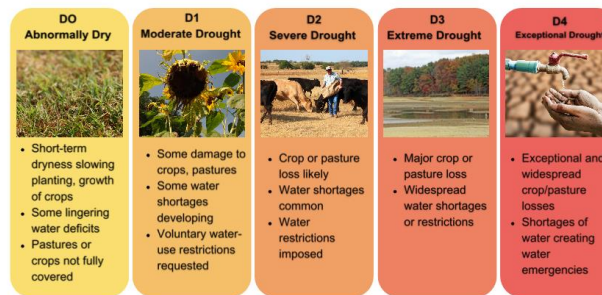


Figure 2: The Stages of Drought, adapted from NIDIS Drought Impacts, [www.drought.gov/impacts/impacts-table](http://www.drought.gov/impacts/impacts-table)

## How do I know what stage of drought my area is experiencing?

Knowing what stage of drought your area is experiencing will help you tailor your response and messaging to the public. You can determine this quickly using the following sources:

- 1) The [County Drought Information](#) tool from the National Integrated Drought Information System (NIDIS), which will give a county-level summary of drought conditions in your area.
- 2) The U.S. Drought Monitor at [www.droughtmonitor.unl.edu](http://www.droughtmonitor.unl.edu).
- 3) Your [state climatologist's](#) office



Figure 3: Image from NIDIS County Drought Information, [www.drought.gov/county](http://www.drought.gov/county)

## The Health Impacts of Drought

Drought can have multiple impacts on public health. As a drought event occurs, changes in the environment can cause secondary impacts to emerge. Secondary impacts of drought can include changes in mosquito and tick habitats, loss of agriculture and food stability, decreases in water quality and quantity, more frequent wildfires, more frequent and intense heatwaves, and increased dust and dust storms. These impacts can happen over both short and long periods of time.

### The Secondary Impacts of Drought



Each of these secondary impacts are associated with several negative health outcomes and one or more of these can increase the risk of 1) negative mental health outcomes (ex: depression, anxiety, and suicide), 2) infectious diseases (ex: West Nile virus & Lyme disease), 3) heat-related illnesses (ex: heat stroke and heat exhaustion), 4) respiratory illnesses (ex: exacerbation of asthma symptoms and hospitalizations), 5) gastrointestinal illness (ex: *Vibrio vulnificus* & *E. coli*), 6) injuries, 7) hunger or famine, and 8) allergy-related illnesses. It is important to note that environmental and socioeconomic factors can affect the severity and risk of each health outcome.

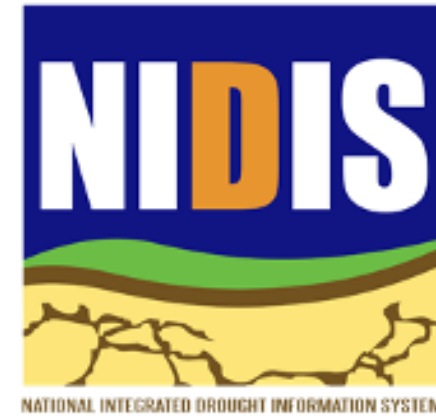
### How Does Drought Impact Health?





# Summary

- NOAA's National Integrated Drought Information System (NIDIS) supported the first comprehensive assessment of drought and health.
- Intended Outcomes of Roadmap
  - strengthen the linkages between drought and public health communities to identify opportunities for NIDIS to engage in drought-health partnerships and alliances
  - continue to grow and coordinate a team of national and regional drought and health partners
  - develop regional public health partnerships through NIDIS's regional Drought Early Warning Systems (DEWS) to help inform the creation of communication tools and efforts on drought impacts





**Thank you!**