



NIDIS and Midwest Drought Early Warning System (DEWS) Update

Molly Woloszyn

Midwest Regional Drought Information Coordinator

National Integrated Drought Information System (NIDIS)



NIDIS is a **multi-agency partnership** that coordinates drought monitoring, forecasting, planning, and information at federal, tribal, state, and local levels across the country.

How do we do this work?

- Advancing Regional Drought Early Warning Systems
- Improving drought prediction and forecasting
- Supporting drought planning and preparedness
- Supporting drought impact assessments
- Strengthening collaboration
- Leading the U.S. Drought Portal: www.drought.gov

Enable the Nation to move **from a reactive to a more proactive** approach to managing drought risks and impacts

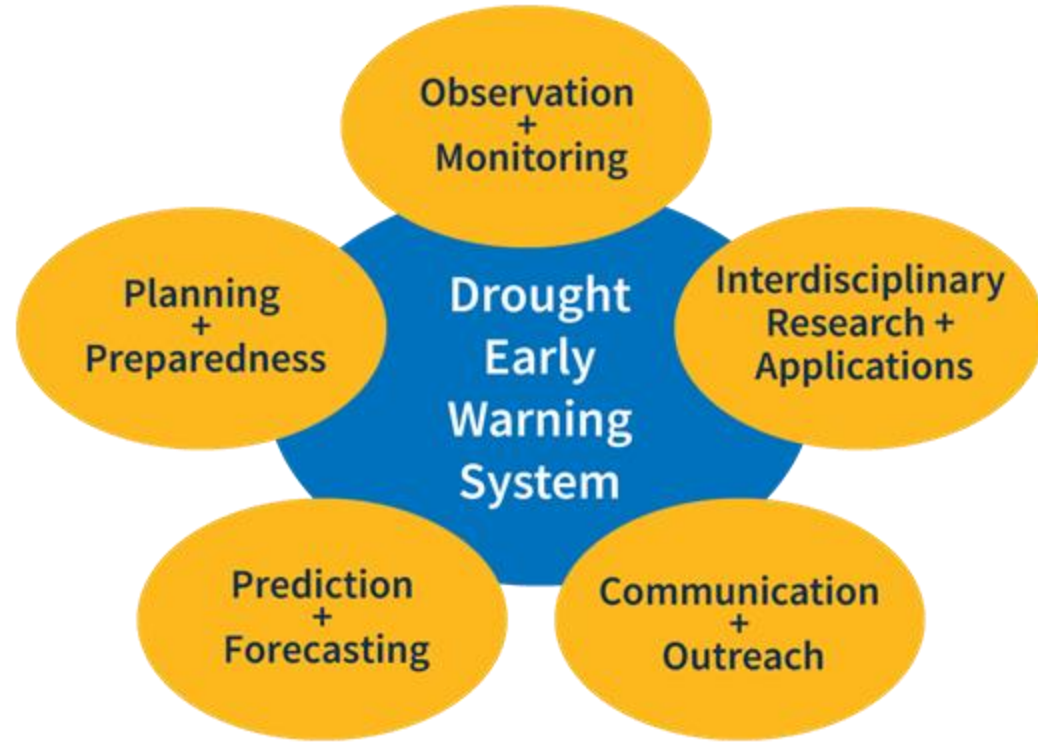
National Integrated Drought Information System Drought Early Warning Systems (DEWS)



APPROACH

Drought Early Warning

“Provision of **timely and effective information** that allows individuals exposed to a hazard to **take action** to avoid or **reduce their risk** and **prepare** for an effective response.”



Unique Role of NIDIS

1

Convening and Coordination

Partnerships, consultations, networks, workshops, etc.

2

Delivering Information

Drought.gov, drought status updates, communications, etc.

3

Advancing and Integrating Research Into Action

Applied research, products development, assessments

Interagency **collaboration** and **partnerships** are key to all we do!



History of the Midwest DEWS

Officially launched February 2016

- In response to 2012 drought in the central U.S.

Past In-Person Meetings

- **February 2016:** St. Louis, Missouri
- **November/December 2016:** Champaign, Cincinnati, Cedar Rapids, Rochester
- **November 2019:** St. Paul, Minnesota
- **October 2022:** Omaha, Nebraska (joint with Missouri River Basin DEWS)

Latest development: Michigan is now officially part of the Midwest DEWS!

2021-2024

Midwest

Drought Early Warning System
(DEWS) Strategic Action Plan



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

Midwest DEWS Strategic Plan 2021-2024

Identify **drought indicators** for Midwest DEWS by **sector, season, location**.

Increase understanding of characteristics, predictability, and risk of **drought and the rapid transitions between hydrological extremes** in the Midwest.

Identify **innovative solutions and proactive measures** for drought mitigation and response.

Enhance **collaboration, coordination, and two-way communication** among the Midwest DEWS network.

Integrate the **Great Lakes watershed** into the DEWS.

Midwest DEWS In Action

Supporting research to identify top drought indicators by region/season.

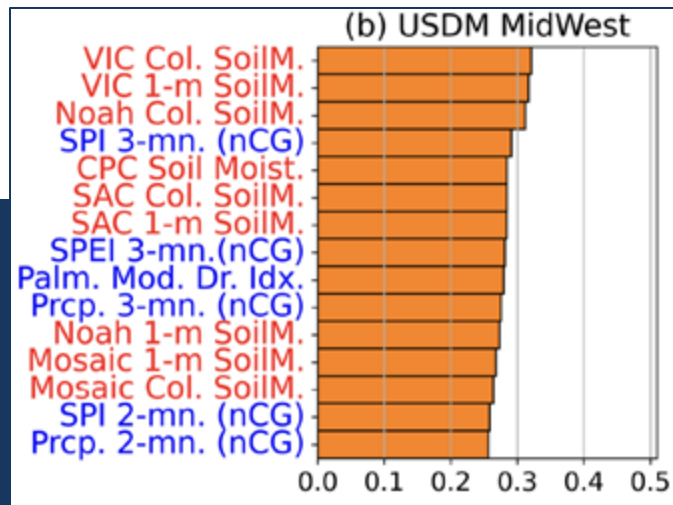
Midwest

- Soil moisture
- Short-term SPI, SPEI, and precip

Supporting state's to identify state-specific drought indicators.

Ohio:

- Improved drought monitoring through an impacts-based approach.
- Developed state-specific dashboard



NEWS & EVENTS

Jan 24

Midwest DEWS Webinar: Developing an Impacts-Based Framework for Drought Mitigation in Ohio: January 24, 2024

January 24, 2024 10:00 am - 11:00 am CDT

Midwest DEWS Webinar: Developing an Impacts-Based Framework for Drought Mitigation in Ohio

Climate change: Climate change refers to long-term shifts in temperatures and weather patterns.

Midwest DEWS Webinar
Developing an Impacts-Based
Framework for Drought
Mitigation in Ohio

Wednesday, Jan. 24, 11 p.m. CT/2 p.m. ET

Presenters

Aaron Wilson | Ohio State Climatologist and
Professor, Ohio State University

Steven Quiring | Professor, Ohio State

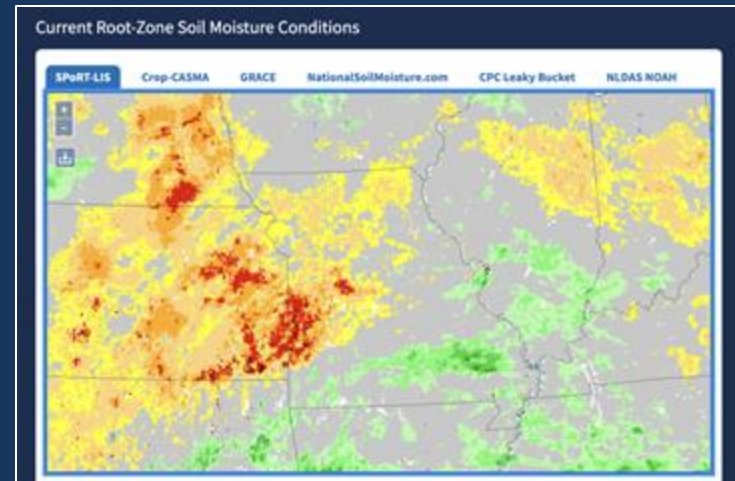
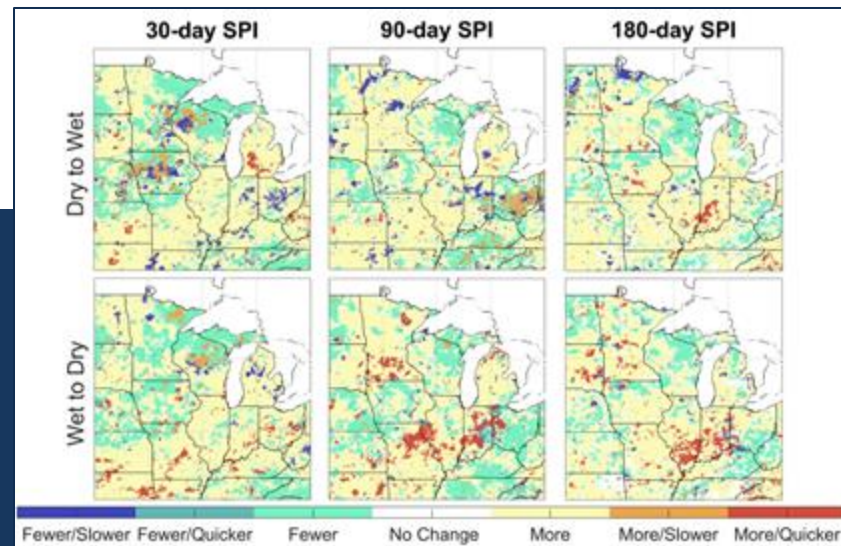
Midwest DEWS In Action

Understanding the complexity of Midwest drought.

- How often have we had rapid transitions between wet and dry conditions?
- How often is this expected in the future?

Improving the availability of data and products for regional monitoring.

- Soil moisture and evapotranspiration.



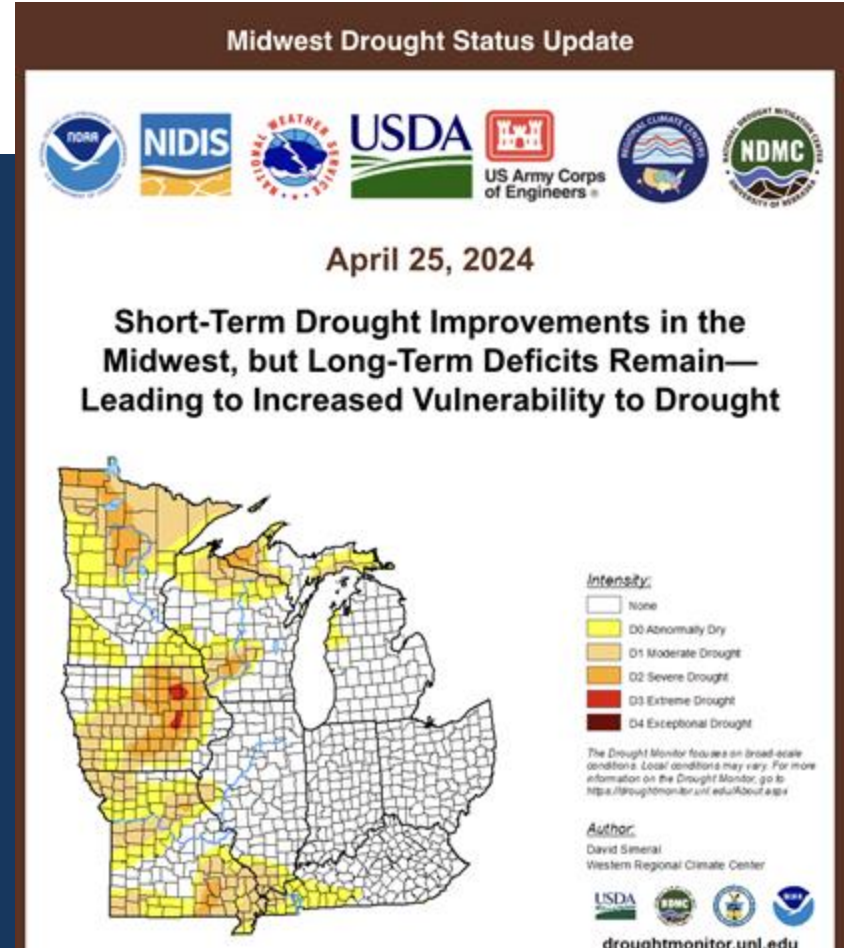
Midwest DEWS In Action

Identifying drought mitigation and response actions used across the Midwest.

- Available to share through a database to improve planning.

Conveying drought conditions, impacts, and outlooks.

- Through Drought Status Updates and webinars
- Provide key messages and value-added info for data/maps.



Midwest DEWS In Action



Providing opportunities to network across the region.

September 2023 virtual meeting:

- State dialogue around drought planning - opportunity to learn from state's that had recently updated plans.

April 2024 virtual meetings:

- Taking stock of current conditions/concerns
- Conversation around availability of groundwater data

A screenshot of a virtual meeting interface. The main window displays a presentation slide with the following text:

- Agriculture – Low soil moisture heading into the growing season is a concern. Majority of row crops grown in western KY.
- Ohio River Navigation – Issues in 2022 and 2023.
- Water Supply Shortages – Had several systems with low reservoir levels in 2023 but all have recovered. High risk systems are located mainly in south central and eastern KY.

Below the text are two maps: "Public Water System Drought Risk Assessment" and "Agricultural Drought Risk Assessment". The interface also shows a grid of participant video thumbnails and a "People" sidebar on the right with a search bar and a list of names.

NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM (NIDIS)

NIDIS in Action Across the U.S.



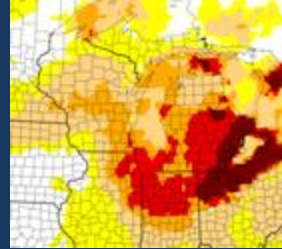
Drought
& Human
Health



Drought &
Wildfire



Flash
Drought



Drought
Impacts &
Indicators



National
Coordinated
Soil Moisture
Monitoring
Network



Drought in a
Changing
Climate

Drought Assessment in a Changing Climate



DROUGHT ASSESSMENT IN A CHANGING CLIMATE

Priority Actions and Research Needs

NOAA Technical Memorandum OAR CPO 002

NOAA NIDIS USDA Climate Hubs U.S. DEPARTMENT OF AGRICULTURE CTRES

NOVEMBER 2023

Drought.gov
National Integrated Drought Information System

Search [] [] [] []

Data and Maps - By Sector - By Location - Research and Learn - About - News and Events -

RESEARCH AND LEARN

Drought Assessment in a Changing Climate: Priority Actions & Research Needs

On This Page

- Background: Assessing Drought in a Changing Climate
- Read the Report
- Focus Areas for Improving Drought Assessments
- Web Resources

Learning with Indigenous Communities

This requires multidisciplinary approaches incorporating indigenous research methods, embracing different world views, and hybrid knowledge frameworks to co-create new knowledge while also considering data sovereignty and reciprocity to fully reflect the contribution of these partners.

Featured Research +

Other Helpful Links +

Benchmarking Our Understanding and Assessment of Drought in a Changing Climate

This includes the need for a national academies or similar study to determine the current state of our understanding of drought and climate change as a foundation for future research as well as the need to learn and exchange best practices with the global drought community.

Featured Research +

Other Helpful Links +

Ensuring Equity in Drought Monitoring and Assessment

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Featured Research +

Other Helpful Links +

Evaluating Data Relevance, Fidelity, Integration, Metadata and New Technologies

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Featured Research +

Other Helpful Links +

FY25 NIDIS CWD Competition: Understanding and Assessing Drought in a Changing Climate



Funding Opportunity: NOAA-OAR-CPO-2025-27758

Letter of Intent Deadline:

September 18, 2024 by 11:59p ET

Full Application Deadline:

December 9, 2024 by 11:59p ET

Competition Informational Webinar:

August 22, 2024 1:00pm ET

Post-Letter of Intent Informational Webinar:

October 23, 2024 1:00pm ET

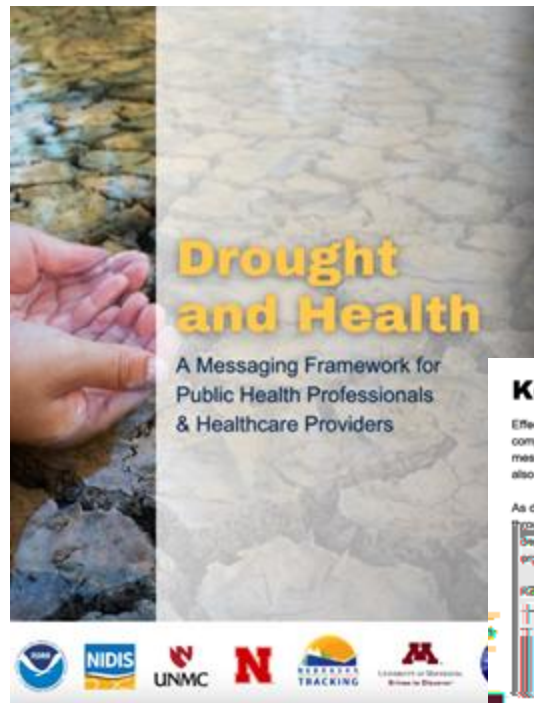
**Full Funding Announcement, Information Sheet,
Applicant Checklist Links, and Webinar Registration**

Questions? Britt.Parker@noaa.gov

Drought and Health: A Messaging Framework for Public Health Professionals and Healthcare Providers

This framework was designed to:

- 1) Provide a background on drought and its impacts on public health
- 2) Help public health professionals and healthcare providers choose messaging and response strategies targeted towards current drought impacts within their individual communities.



Key Partnerships

Effective collaboration with partners in your area is a key component of responding to drought conditions. Drought messaging can not only be spread to and by key partners, but can also be informed by their expertise and available resources.

As drought has widespread impacts that can affect public health through a number of secondary impacts... public health departments should maintain key partnerships with a variety of organizations in their area of jurisdiction.

Recommended partners in your area, or jurisdiction, include both state and local agencies, including: emergency medical services (EMS) providers, state climatologist's office, water conservation testing centers, food banks, community health centers, local food pantries and food banks, health services, mental health services, disaster response, local food preparation services, fire services, and other...

Included below is a checklist of recommended key partners:

What is a State Climatologist?

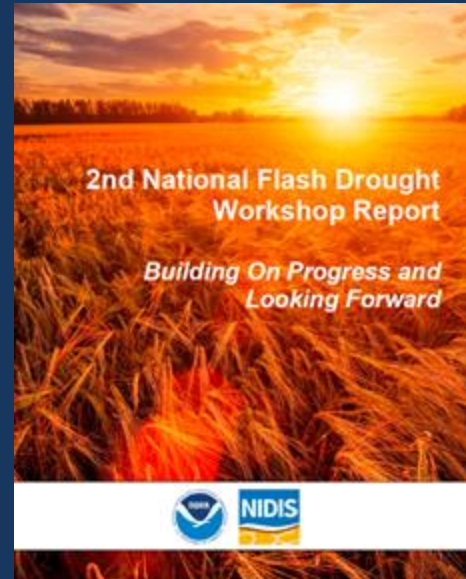
State climatologists exist in 47 states and Puerto Rico. Their role is to collect, interpret, and disseminate reliable climate data, including drought information. You can find your state's climate office online.

Key Partnership Checklist

- State or local emergency management services
- Local hospitals, healthcare systems, clinics, and EMS
- State climatologist's office
- Local food banks and food pantries
- Local mental health services
- Local libraries
- Local health services in your area
- Local law enforcement
- Local fire services
- Local health departments
- Local health care organizations including houses of worship and nonprofits



2nd National Flash Drought Workshop Report: Building on Progress and Looking Forward



Thank You!

Molly Woloszyn

Regional Drought

Information Coordinator

molly.woloszyn@noaa.gov



www.drought.gov



National Integrated Drought
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