The National Integrated Drought Information System in the Midwest

Advancing Drought Science and Preparedness Across the Nation

Ohio River Basin Alliance Summit
Thomas More College • October 19, 2018
What is the National Integrated Drought Information System (NIDIS)?

- Authorized by Congress in 2006 and re-authorized 2014.
- Interagency mandate to develop and provide a national drought early warning information system.

“Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts.”
Coordinate and Integrate Research and Monitoring in Support of:

✓ Drought preparedness and resilience through engagement, networking, and collaboration.

✓ Scientific research in drought forecasting, monitoring, and predictions.

✓ Analysis and assessment of past drought events to inform effective drought response.
Components of a Drought Early Warning System (DEWS)

- Observations and Monitoring
- Predictions and Forecasting
- Interdisciplinary Research and Applications
- Planning and Preparedness
- Communication and Outreach

Regional Drought Early Warning Systems (DEWS)
NIDIS has 9 Regional Drought Early Warning Systems (DEWS)

- Network coordination (public, private, NGOs, academia)
- Regional perspectives and priorities for the five components of a DEWS
Benefits of Regional DEWS

- As a large-scale natural hazard that affects all sectors, drought requires large-scale integrated response.

- Leverage partnerships: federal, regional, cross-state, across sectors.
  - Pool expertise and resources
  - Avoid duplication

- Share best practices across states/sectors for drought management.

- Reduce potential conflict over water resources.

- Support scaling of innovations – pilot projects expanding to the state or regional level.
Midwest Drought Early Warning System (DEWS)

- Launched February 2016

- Regional drought information coordinator: Molly Woloszyn (molly.woloszyn@noaa.gov)

- DEWS network: ~230 people

- Implementing 2018-19 Strategic Plan
2018-19 Strategic Plan

• Roadmap for priorities in 2018 and 2019

• Identify existing and new drought-related activities throughout the region

• Living document: flexible and adaptable
Benefits of a DEWS Strategic Plan

• Fostering a regional network

• Collaboration and coordination

• Foster sharing of activities and info within and across other DEWS

• Reference to help generate policy and governmental support

• Resource to assist with leveraging funds
Midwest DEWS Priorities

• **Priority 1:** Integrate Impacts, Data, Management Practices, and Research into Drought Planning

• **Priority 2:** Enhance Drought Observations and Data Availability

• **Priority 3:** Improve Drought Early Warning and Communication Capacity

• **Priority 4:** Foster Stakeholder Collaboration, Coordination, and Relationship Building

Activity 1.1
Improving Collection and Reporting of Drought Impacts
Collection of Drought Impacts

- Missouri State Climatologist worked with NDMC & NIDIS to create a Missouri-specific report form for Extension to submit drought impacts.
Activity 1.4: Drought Economic Study of the Mississippi River

- Understand the sensitivity of the Mississippi River corridor to drought.
- Assess impacts and opportunities for reducing risks to small communities.

Focus Areas
- Agricultural production
- Commercial navigation & transportation
  - Manufacturing
  - Recreation and tourism
Research Objectives

1. How does drought impact trade on the Mississippi River in different geographies (e.g., above/below the Ohio River confluence)?

2. What are the economic implications in the River corridor when the River’s capacity is limited due to low water levels for commercial navigation and transportation?

3. What are those impacts felt within the global marketplace?

4. What are the economic implications of drought on the River’s ability to support recreation and tourism along the River?
Drought Economic Study of the Mississippi River

Select 3-4 communities along Mississippi River

❖ Phase I: Assess the Impacts of Past Events
❖ Phase II: Characterize Likely Future Conditions
❖ Phase III: Identify Vulnerabilities and Capabilities
❖ Phase IV: Develop Regional Strategies
❖ Phase V: Develop Sub-regional Strategies
❖ Phase VI: Integrate into Local and State Government
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Activity 3.1
Establish Midwest DEWS Communications Working Group

Determine and establish new modes of communication to DEWS network and public.
What is the U.S. Drought Portal?

Drought.gov

The U.S. Drought Portal was launched in 2008 as an information clearinghouse for authoritative and easily accessible drought monitoring products, per the mandate of the NIDIS Public Law.
Activity 3.3
Provide Climate and Drought Outlooks and Webinars

Quarterly

https://mrcc.illinois.edu/pubs/pubsMWquarterly.jsp

Monthly

https://mrcc.illinois.edu/multimedia/webinars.jsp

https://mrcc.illinois.edu/pubs/pubsMWquarterly.jsp
Drought Response & Communication

- NIDIS Public Law: “shall communicate drought forecasts, drought conditions, and drought impacts on an ongoing basis to public and private entities...”
Social Media

Midwest DEWS Social Media Listserv

- Utilize our partner network to push out Midwest-specific drought information on Twitter.
- Any program welcome to join!

@DroughtGov

National Integrated Drought Information System
Drought Communication

• *Dry Times* – NIDIS’s email newsletter
  – Interesting drought stories from partners
  – Upcoming events and webinars
  – Featured data and tools
  – Current conditions
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Activity 4.7
Host Annual Midwest DEWS Regional Forum

• Goals of this forum could include...
  – Share innovative research
  – Discuss best management practices for drought response/mitigation
  – Provide training on available data or resources
  – Share info on Midwest DEWS activities
  – Explore new partnerships
Thank You!

Please email me to join the Midwest DEWS network!!

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