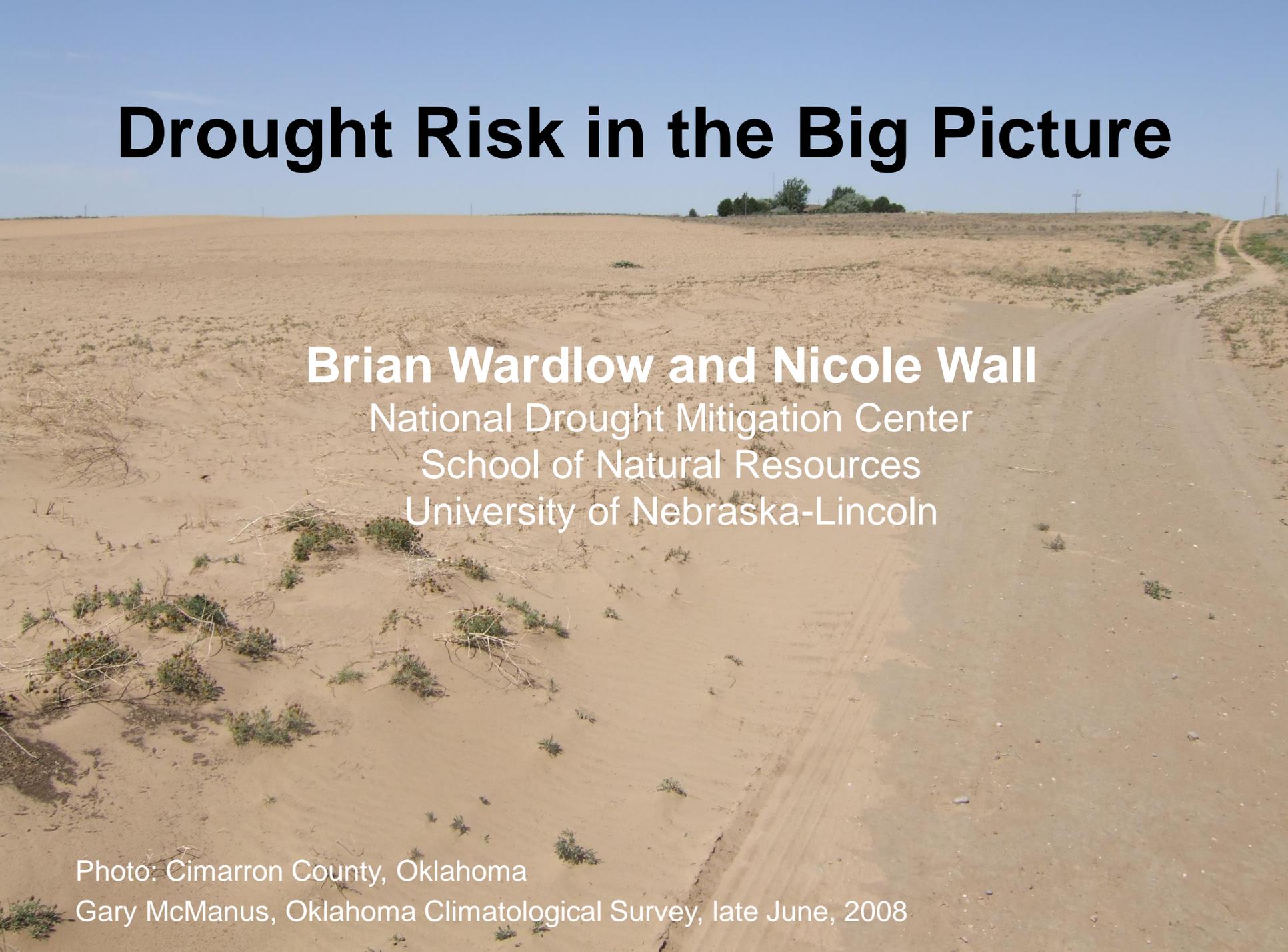


# Drought Risk in the Big Picture



**Brian Wardlow and Nicole Wall**

National Drought Mitigation Center

School of Natural Resources

University of Nebraska-Lincoln

Photo: Cimarron County, Oklahoma

Gary McManus, Oklahoma Climatological Survey, late June, 2008

What state do you live in currently?

**X** A. Washington

**X** B. Idaho

**X** C. Oregon

**X** D. Montana

**X** E. Nebraska

**X** F. Other

What group of users do you represent?

- A. Agricultural producer (rancher or farmer)
- B. Government agency representative
- C. Private business
- D. Other

When you look to the future, what issue provides the greatest threat to agricultural producers in the Northwest?

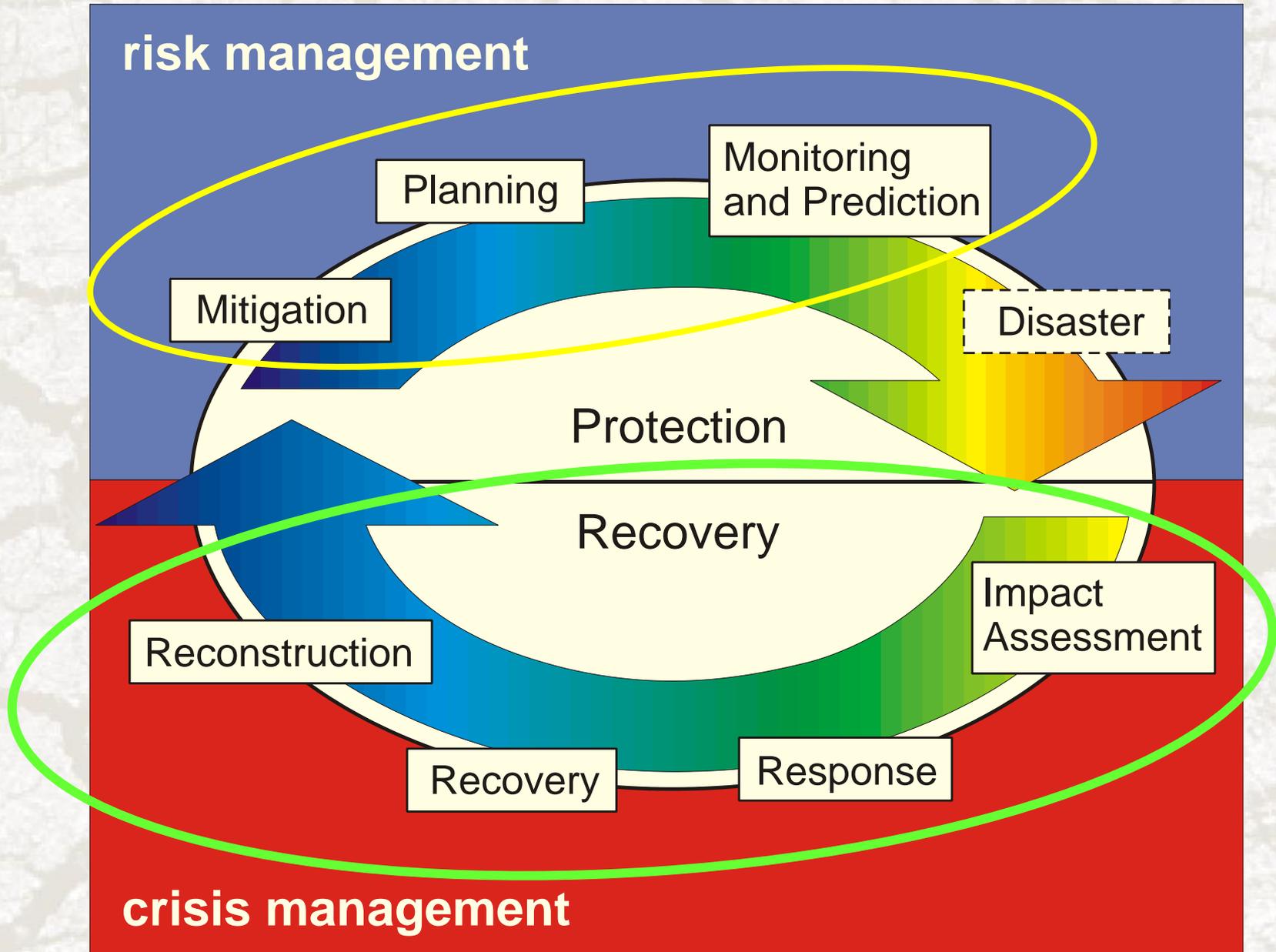
- A. Drought
- B. Climate Change
- C. Water Resources
- D. Food
- E. Economy
- F. Other



“There’s nothing more frightening than being without water.”

Mayor Campbell, Edina, MO, May 1989

# The Cycle of Disaster Management



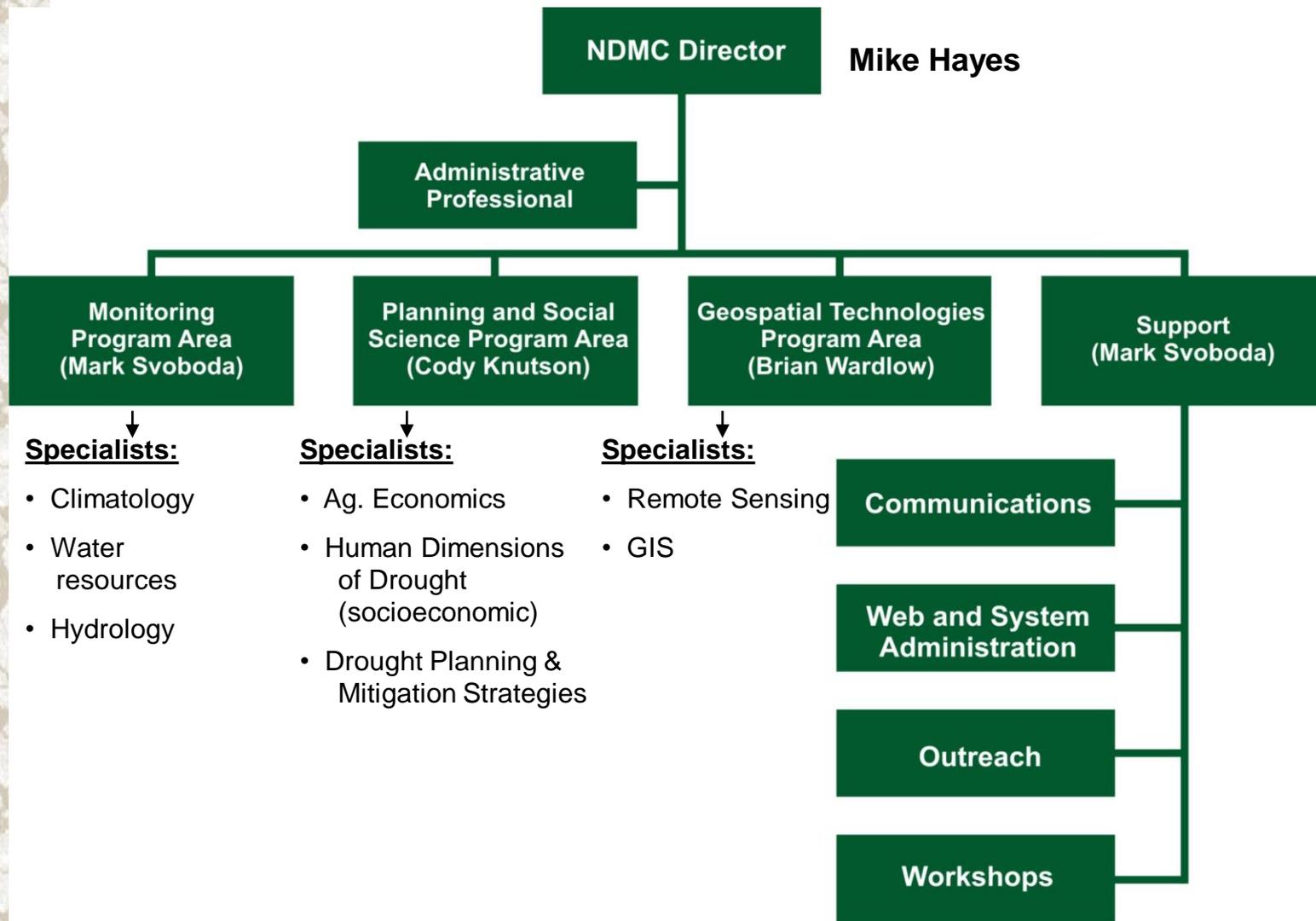
# National Drought Mitigation Center



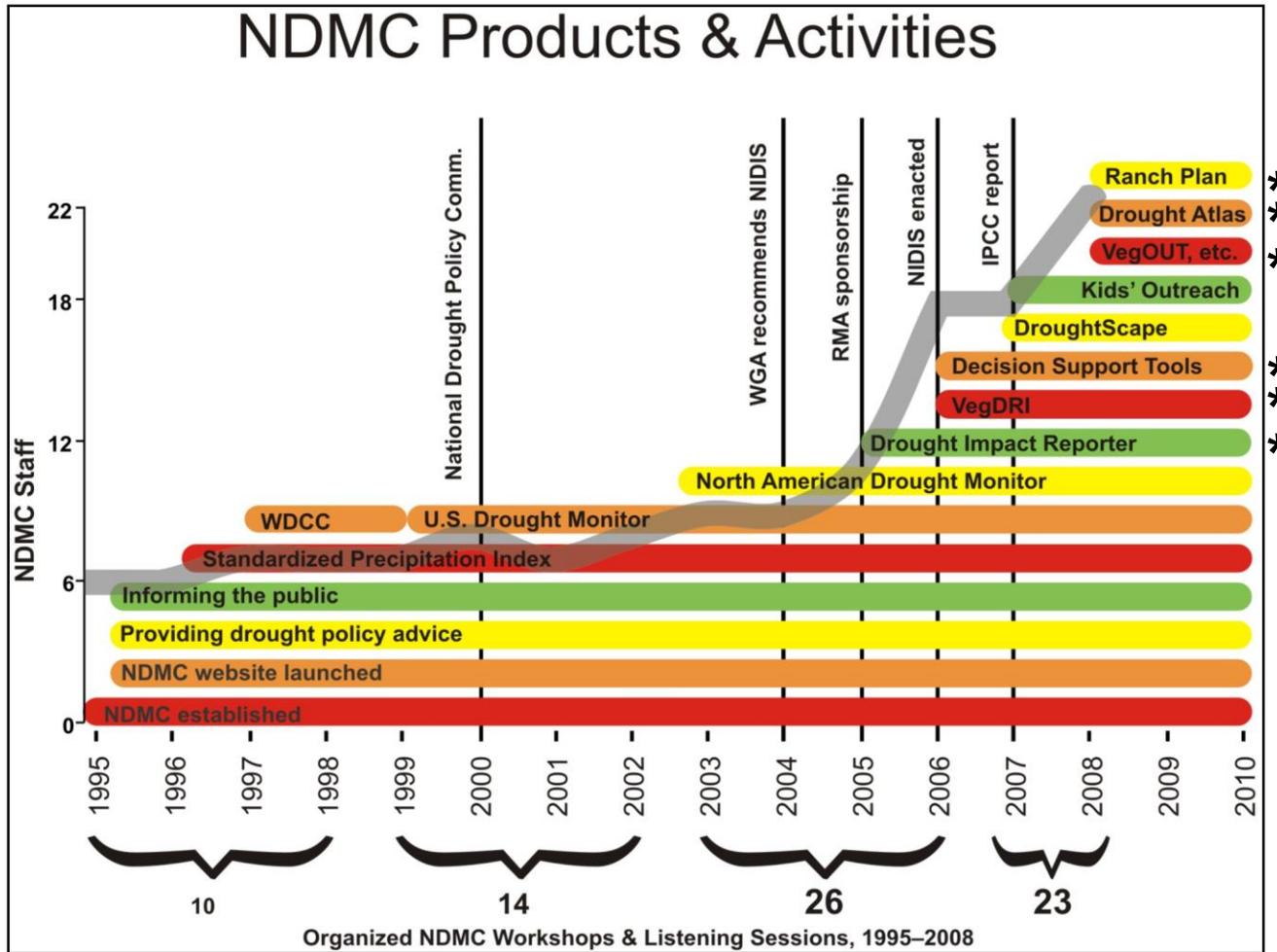
***Founded:* 1995 at the University of Nebraska-Lincoln**

***Mission:* To lessen societal vulnerability to drought by promoting planning and the adoption of appropriate risk management techniques.**

# NDMC Organizational Structure



# NDMC Products & Activities



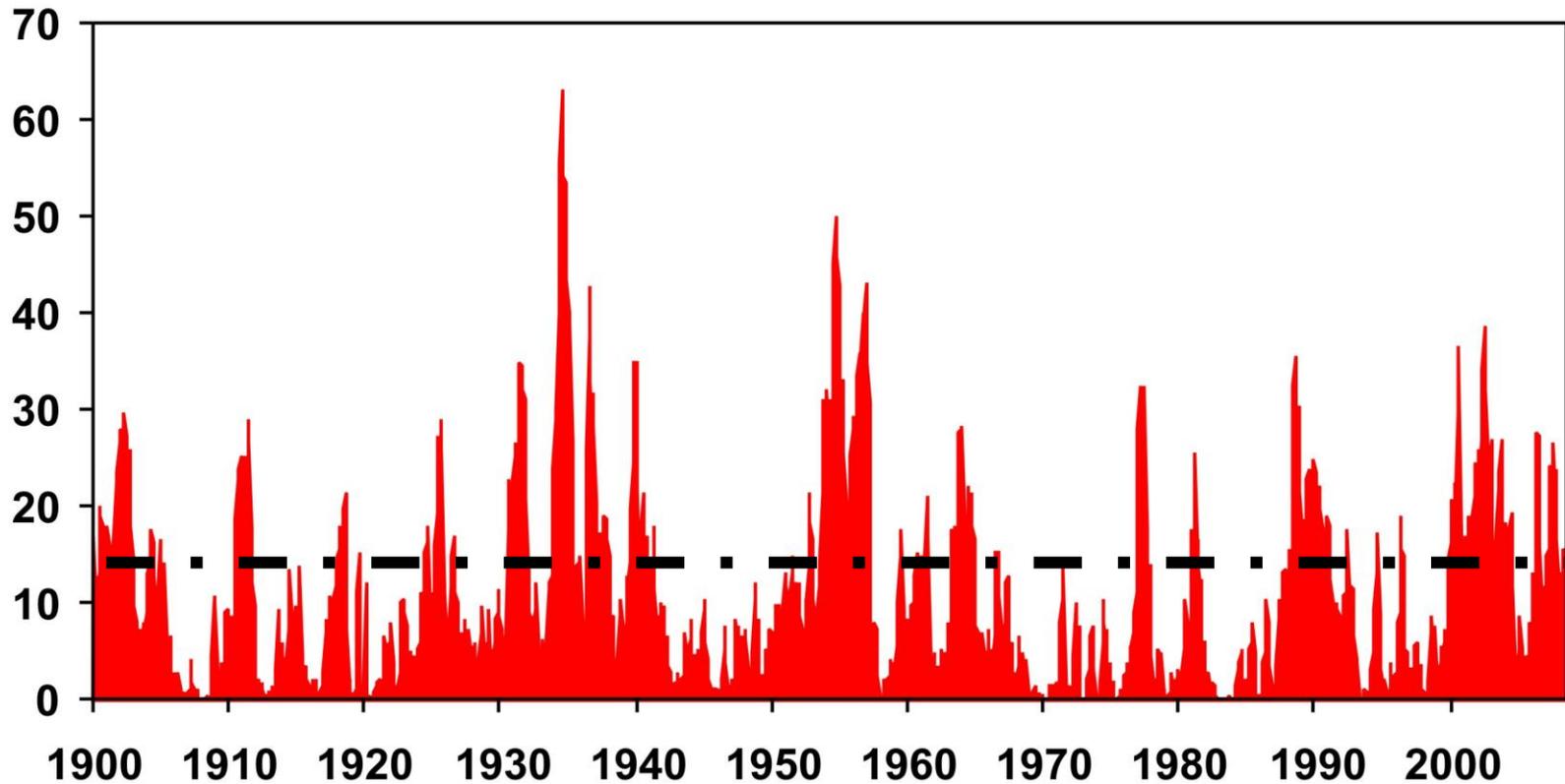
\* RMA supported projects developing drought tools for agricultural producers.

# Drought is:

- X** A. A rare event?
- X** B. A normal feature of climate?

# Percent Area of the United States in Severe and Extreme Drought

January 1895–July 2008



Based on data from the National Climatic Data Center/NOAA

# Lessons Learned



- Drought is not just a physical event
  - Vulnerability plays a major role
  - Vulnerability is dependent upon society
  - Vulnerability is dynamic

# Lessons Learned



- Drought is not just a physical event
- “Wait and see” is a natural reaction
  - Can suppress timely responses
  - Need a plan in place...with triggers/thresholds

# Lessons Learned



- Drought is not just a physical event
- “Wait and see” is a natural reaction
- Communication is critical
  - Overcome fears
  - Essential for public support and buy-in

# Lessons Learned



- Drought is not just a physical event
- “Wait and see” is a natural reaction
- Communication is critical
- Planning ahead is a good investment of resources

# Drought Planning Progress



- Federal level
- State level
- American Indian Tribes
- Local level
  - Municipalities
  - River Basins
  - Counties
  - Producers

Does your state have a drought plan?

**X**

A. Yes

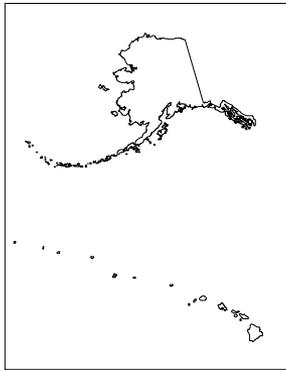
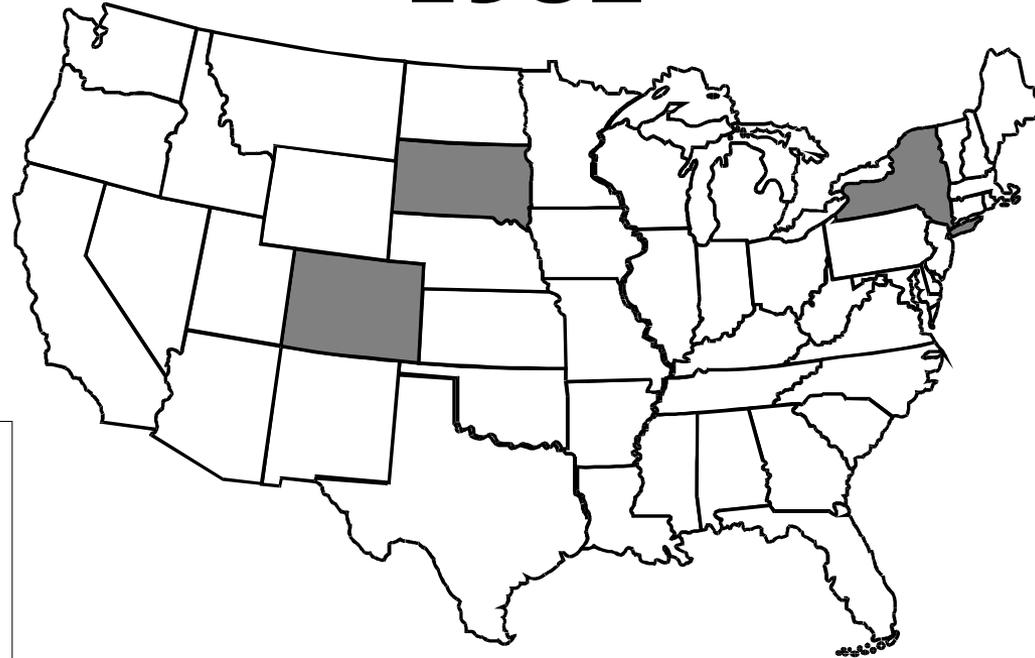
**X**

B. No

**X**

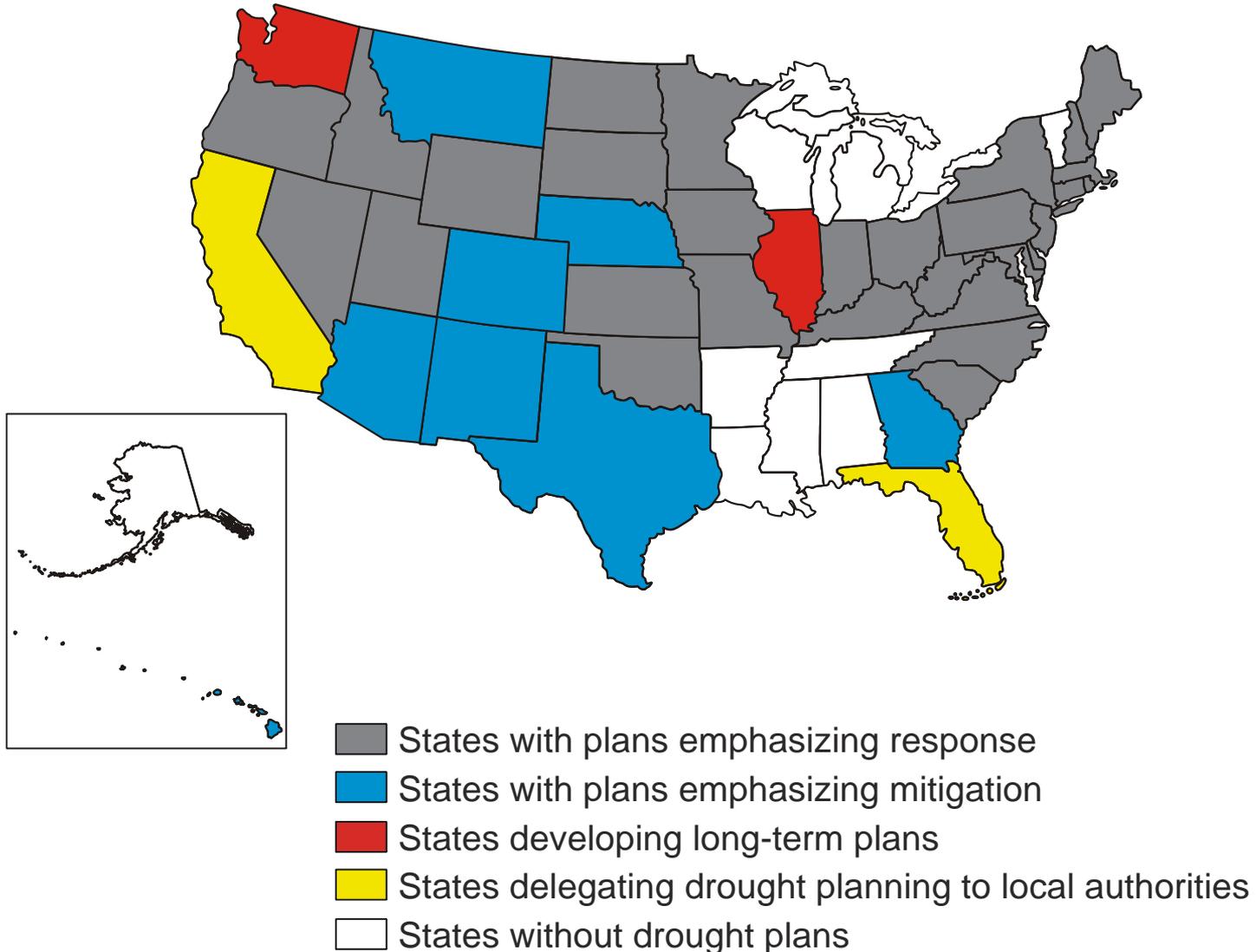
C. Don't Know

# Status of State Drought Planning 1982



-  States with plans
-  States without drought plans

# Status of Drought Planning October 2006



How about you? Do you have a drought plan written down?

**X** A. Yes

**X** B. No



# Managing Risk on the Ranch

[Introduction](#)[Before a Drought](#)[During a Drought](#)[After a Drought](#)[Write a Drought Plan](#)[Contacts/Resources](#)

NDMC > Ranch Plan Home

*"Here's what my dad used to tell me. He said, if you bet on dry weather in this country, you'll be right more than half the time"*

*--Nebraska rancher, 2006*

**Making** management decisions is an every day exercise for livestock and forage producers. Producers manage for things they can control and things they can't; for conditions that persist and those that change daily. All regions are prone to some form of extreme weather events such as thunderstorms, blizzards and drought. These extremes and the unknowns that seem to be around every corner, and the disastrous effects they can cause, demonstrate why long-term planning is essential to effectively manage agricultural risk.



Drought is one hazard that affects every portion of the United States sooner or later, and producers are increasingly implementing new ways to better prepare and respond to it. The information, strategies and resources on this site are designed to provide producers with information on how to incorporate management strategies to reduce the threat drought poses to livestock and forage operations.

## Our Philosophy and Purpose

- Drought is a normal part of climate...it will happen again.
- There are things you can do before, during, and after drought to reduce your risk.
- You should have both a long-term management plan and a drought response plan.
- The goal of this website is to help you become more resilient to hazards such as drought.

## How to Use This Site

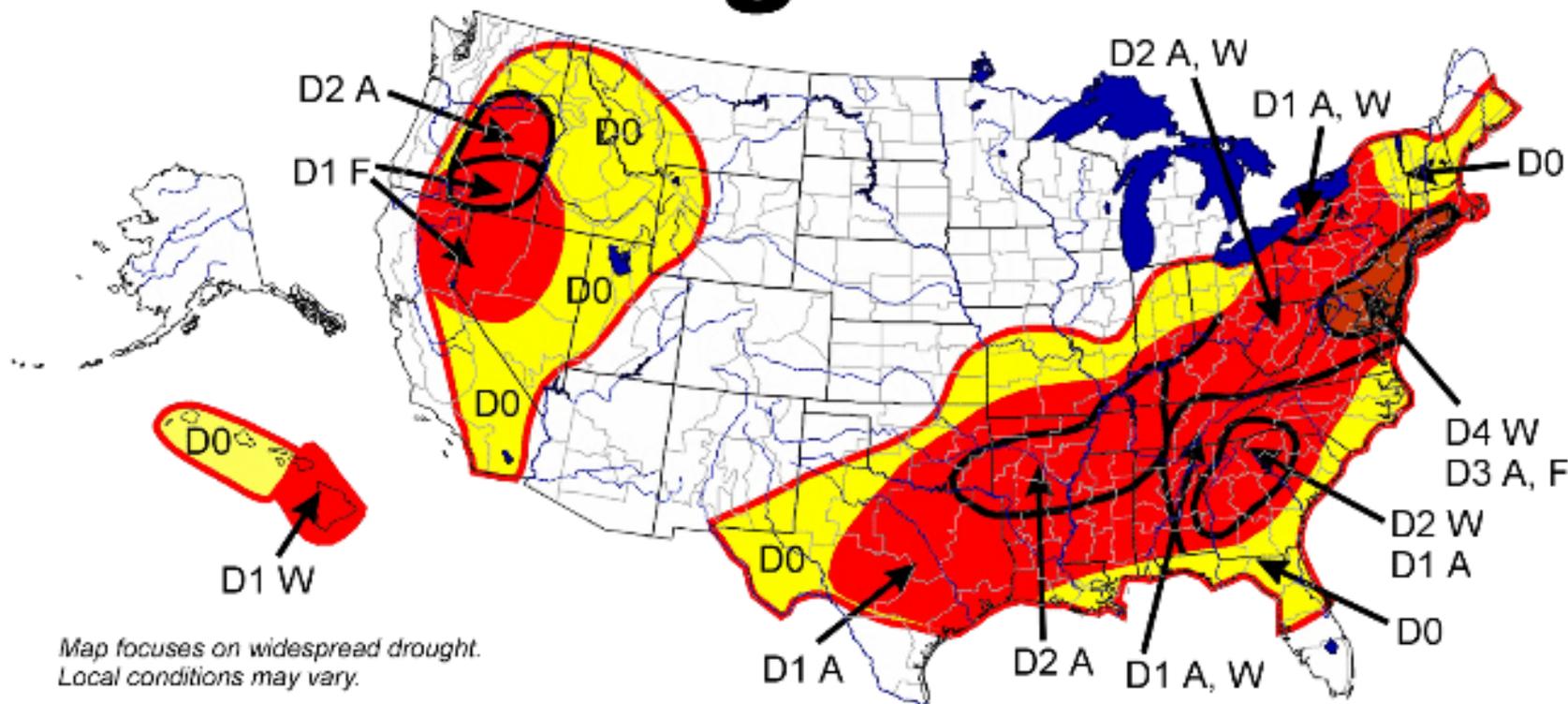
The [Introduction](#) section of this site provides in-depth information on climate and historical drought occurrence; the effects drought has on livestock, grasses, and grazing management; and drought-related financial considerations.

The [Before Drought](#), [During Drought](#), and [After Drought](#) sections detail long- and short-term management strategies that can be implemented to make your operation more resilient and prepared for drought conditions.

The [Write a Drought Plan](#) section describes how appropriate strategies can be identified and included in a drought plan for your operation, and the [Contacts and Resources](#) section provides examples of other producers who have developed drought plans, as well as, experts and other information sources to help you better prepare for and respond to drought.

August 24, 1999

# U.S. Drought Monitor



Map focuses on widespread drought.  
Local conditions may vary.

- D0 Watch
- D1 Drought
- D2 Drought-Severe
- D3 Drought-Extreme
- D4 Drought-Exceptional

Drought type: used only when impacts differ

A = Agriculture  
W = Water  
F = Forest fire danger



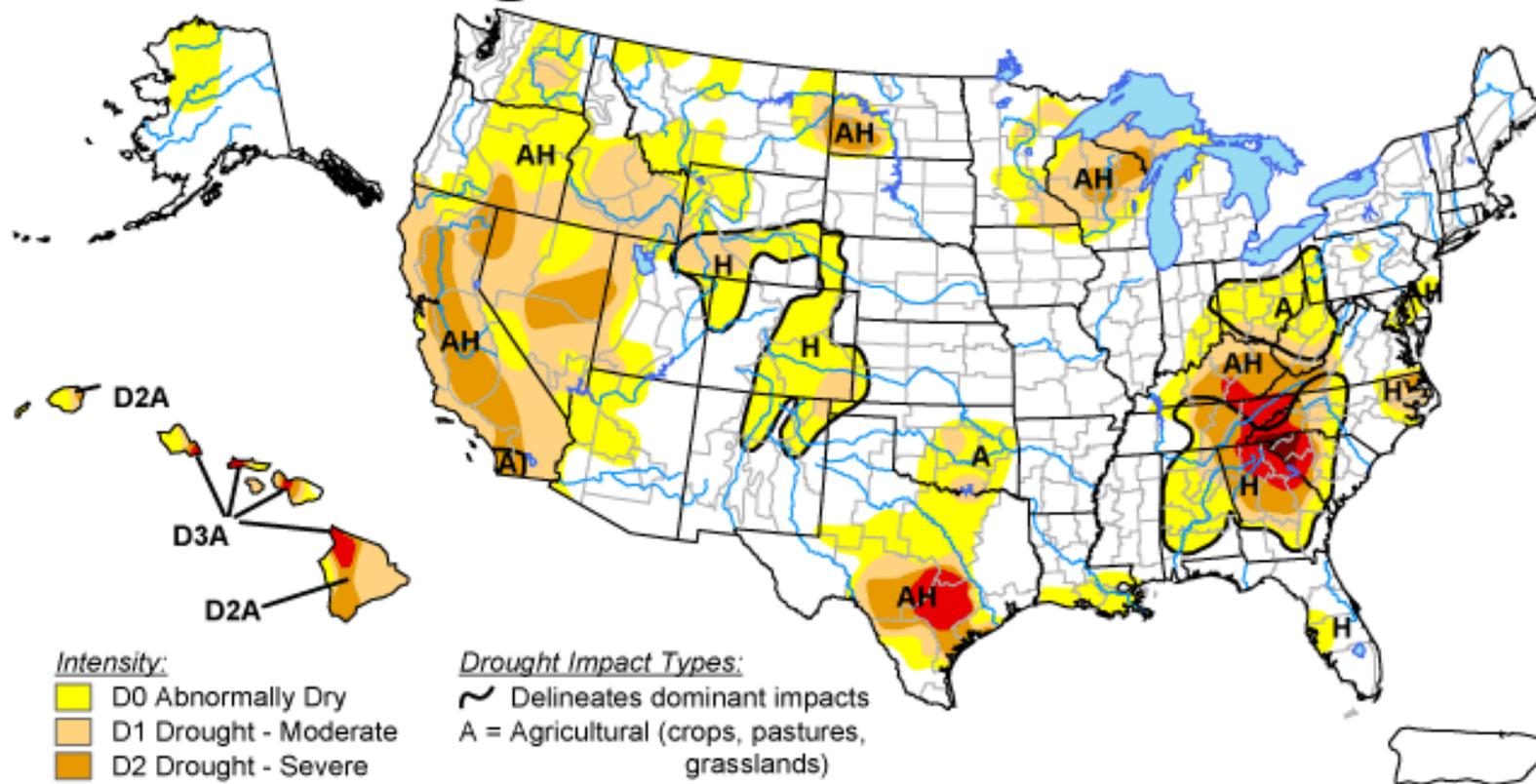
Plus (+) = Forecast to intensify next two weeks  
Minus (-) = Forecast to diminish next two weeks  
No sign = No change in drought classification forecast

• **Updated every Thursday morning** •

# U.S. Drought Monitor

November 4, 2008

Valid 8 a.m. EST



## Intensity:

-  D0 Abnormally Dry
-  D1 Drought - Moderate
-  D2 Drought - Severe
-  D3 Drought - Extreme
-  D4 Drought - Exceptional

## Drought Impact Types:

-  Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

<http://drought.unl.edu/dm>



**Released Thursday, November 6, 2008**

**Author: Mark Svoboda, National Drought Mitigation Center**

# U.S. Drought Monitor

## West

November 4, 2008

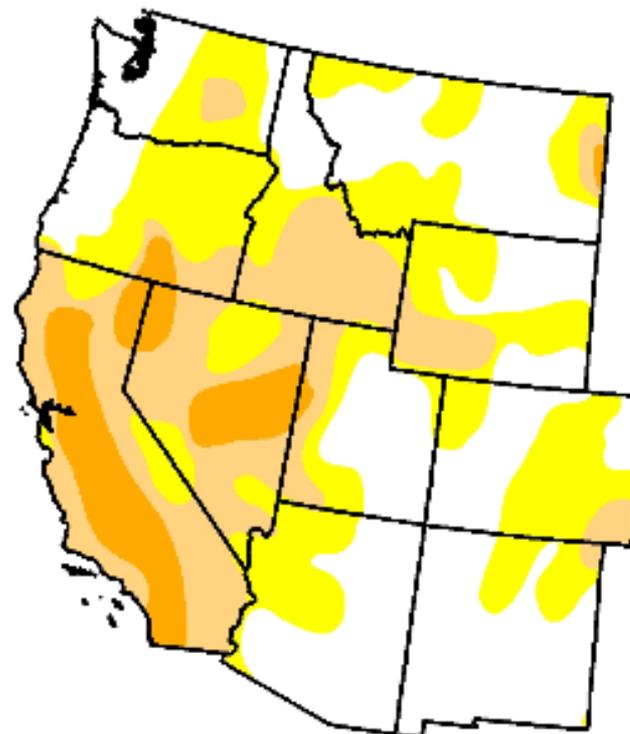
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.9	60.1	29.6	8.5	0.0	0.0
Last Week (10/28/2008 map)	39.9	60.1	30.0	10.4	0.0	0.0
3 Months Ago (08/12/2008 map)	32.7	67.3	31.2	10.0	0.7	0.0
Start of Calendar Year (01/01/2008 map)	26.3	73.7	54.7	33.1	2.7	0.0
Start of Water Year (10/07/2008 map)	41.3	58.7	28.6	10.4	0.1	0.0
One Year Ago (11/06/2007 map)	27.3	72.7	57.5	41.5	10.0	0.0

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



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# U.S. Drought Monitor

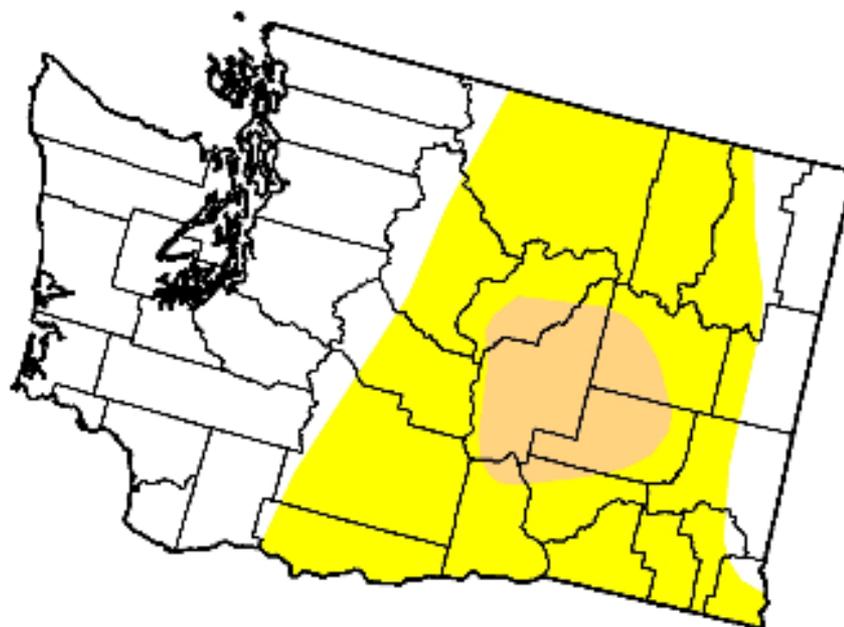
## Washington

November 4, 2008

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	49.2	50.8	8.5	0.0	0.0	0.0
Last Week (10/28/2008 map)	49.2	50.8	8.5	0.0	0.0	0.0
3 Months Ago (08/12/2008 map)	66.9	33.1	5.1	0.0	0.0	0.0
Start of Calendar Year (01/01/2008 map)	95.4	4.6	0.5	0.0	0.0	0.0
Start of Water Year (10/07/2008 map)	66.4	33.6	5.1	0.0	0.0	0.0
One Year Ago (11/06/2007 map)	59.2	40.8	7.0	2.2	0.0	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



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# Workshops on Drought Management Tools



- Provide producers and advisors with tools to better understand the linkages between local climate and agricultural production
- Obtain feedback on what information or tools are needed to better understand these linkages
  - Multiple feedback approaches