

# **NE Drought Conditions CARC Update: June 2006**

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Mark Svoboda and Mike Hayes  
National Drought Mitigation Center

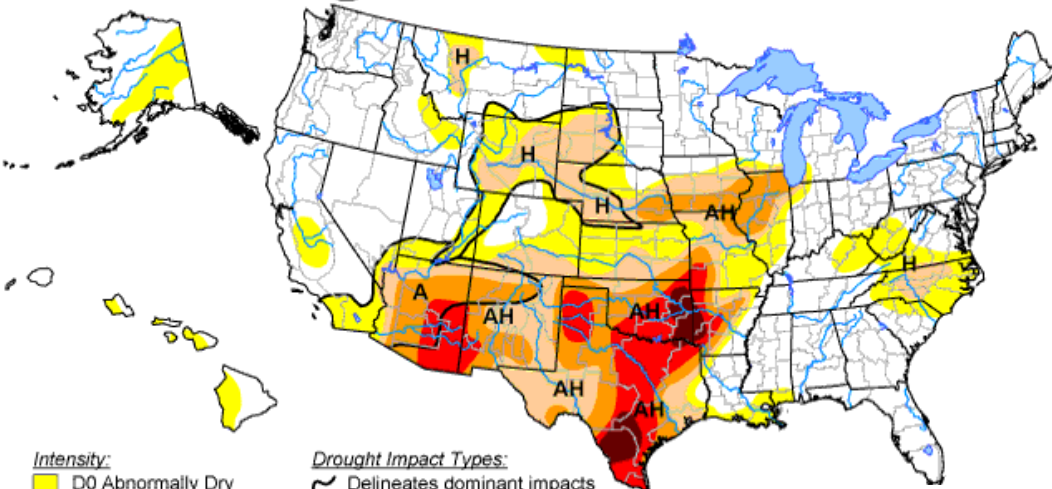
Al Dutcher, State Climatologist  
School of Natural Resources  
University of Nebraska-Lincoln

# ***Nebraska Current Conditions...***

# U.S. Drought Monitor

February 28, 2006

Valid 7 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>



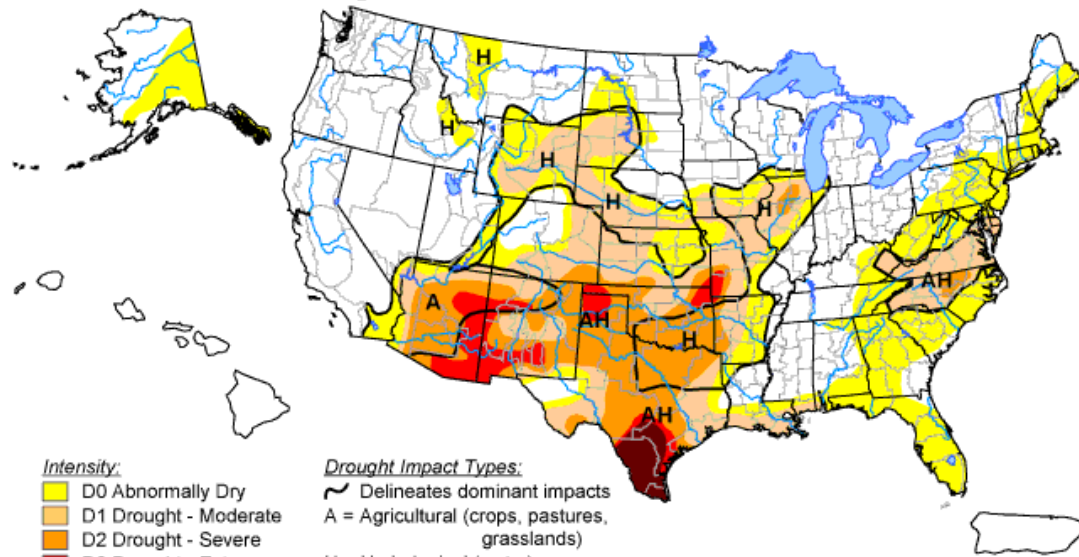
Released Th

Author: Brian Fuchs, Nati

# U.S. Drought Monitor

April 4, 2006

Valid 7 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)
- (No type = Both impacts)

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

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



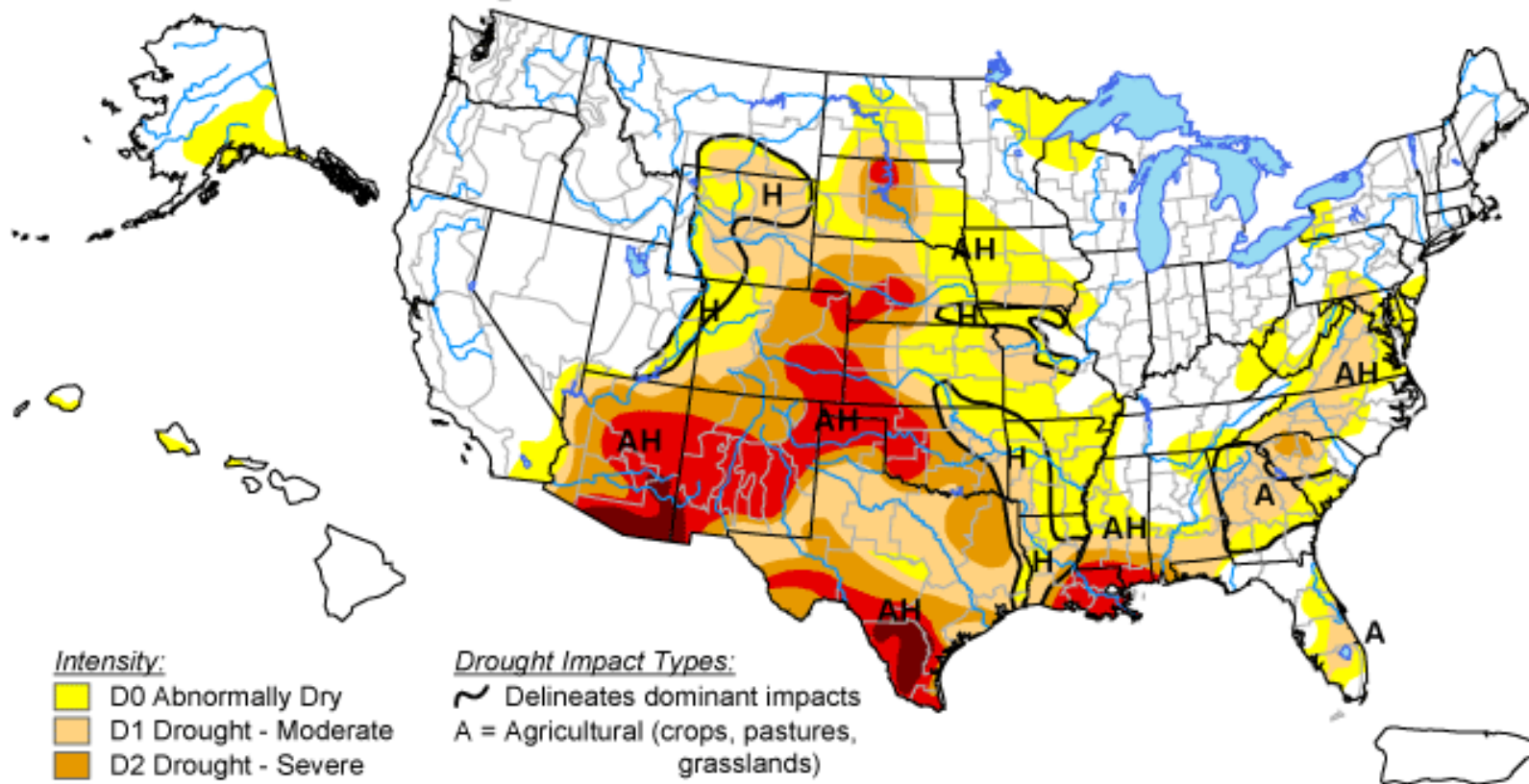
Released Thursday, April 6, 2006

Author: Douglas Le Comte, CPC/NOAA

# U.S. Drought Monitor

June 13, 2006

Valid 8 a.m. EDT



## 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>

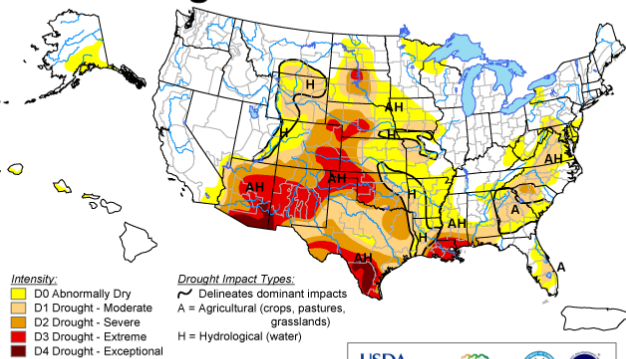


**Released Thursday, June 15, 2006**

**Author: Rich Tinker, Climate Prediction Center, NOAA**







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, June 15, 2006

Author: Rich Tinker, Climate Prediction Center, NOAA

## Nebraska % Area Affected (based on DM map of June 13, 2006)

6/13/2006

D0

100%

D1

69.64%

D2

46.34%

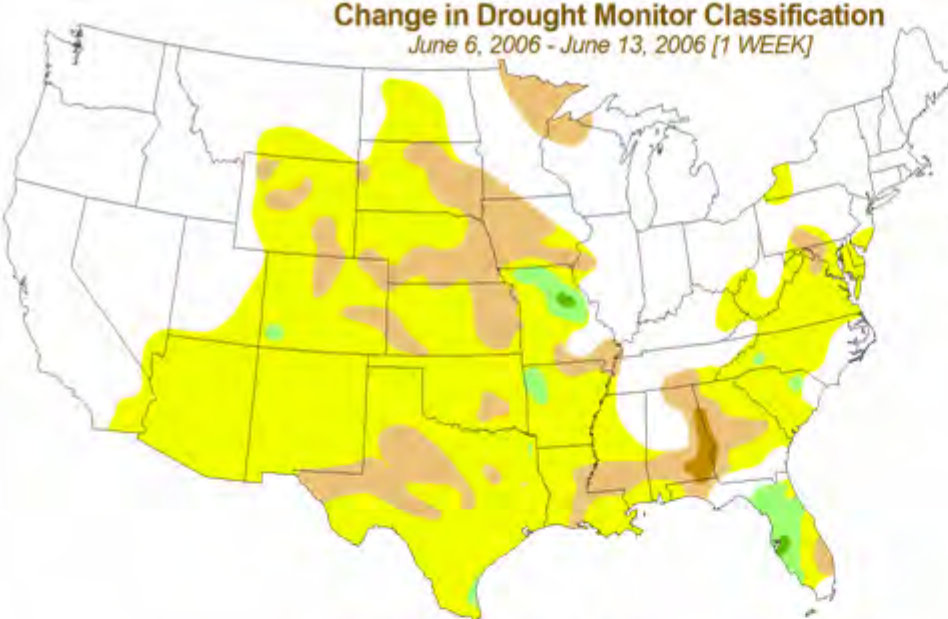
D3

16.91%

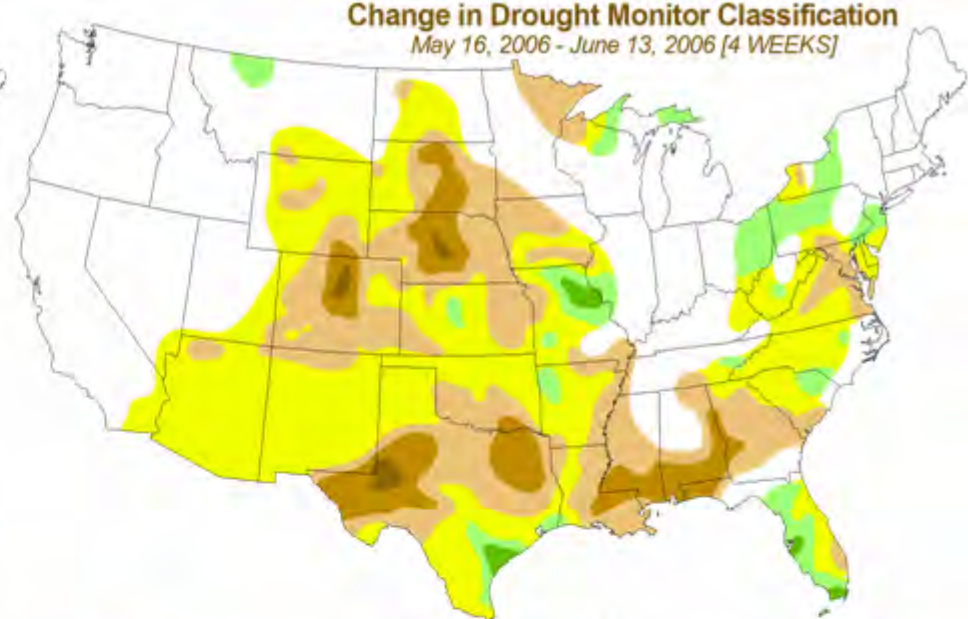
D4

0%

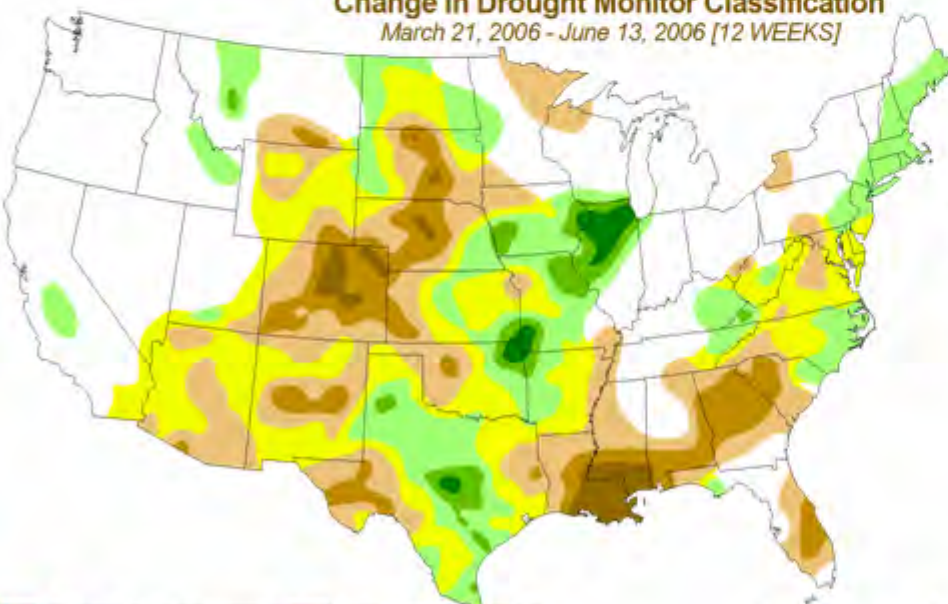
**Change in Drought Monitor Classification**  
June 6, 2006 - June 13, 2006 [1 WEEK]



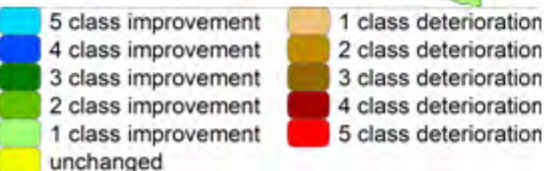
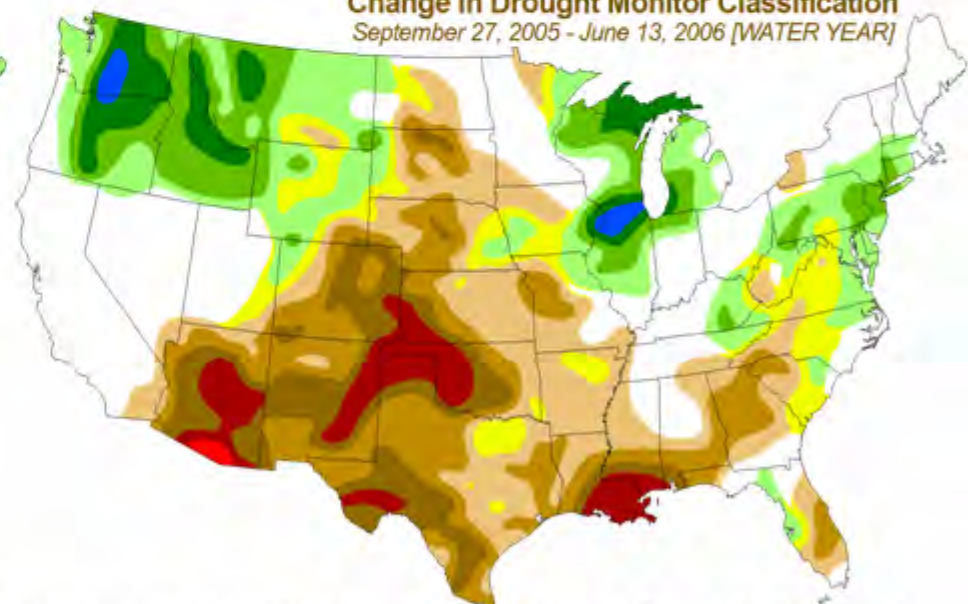
**Change in Drought Monitor Classification**  
May 16, 2006 - June 13, 2006 [4 WEEKS]



**Change in Drought Monitor Classification**  
March 21, 2006 - June 13, 2006 [12 WEEKS]



**Change in Drought Monitor Classification**  
September 27, 2005 - June 13, 2006 [WATER YEAR]

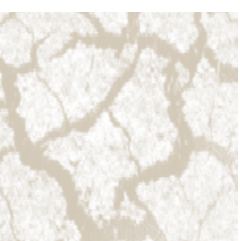
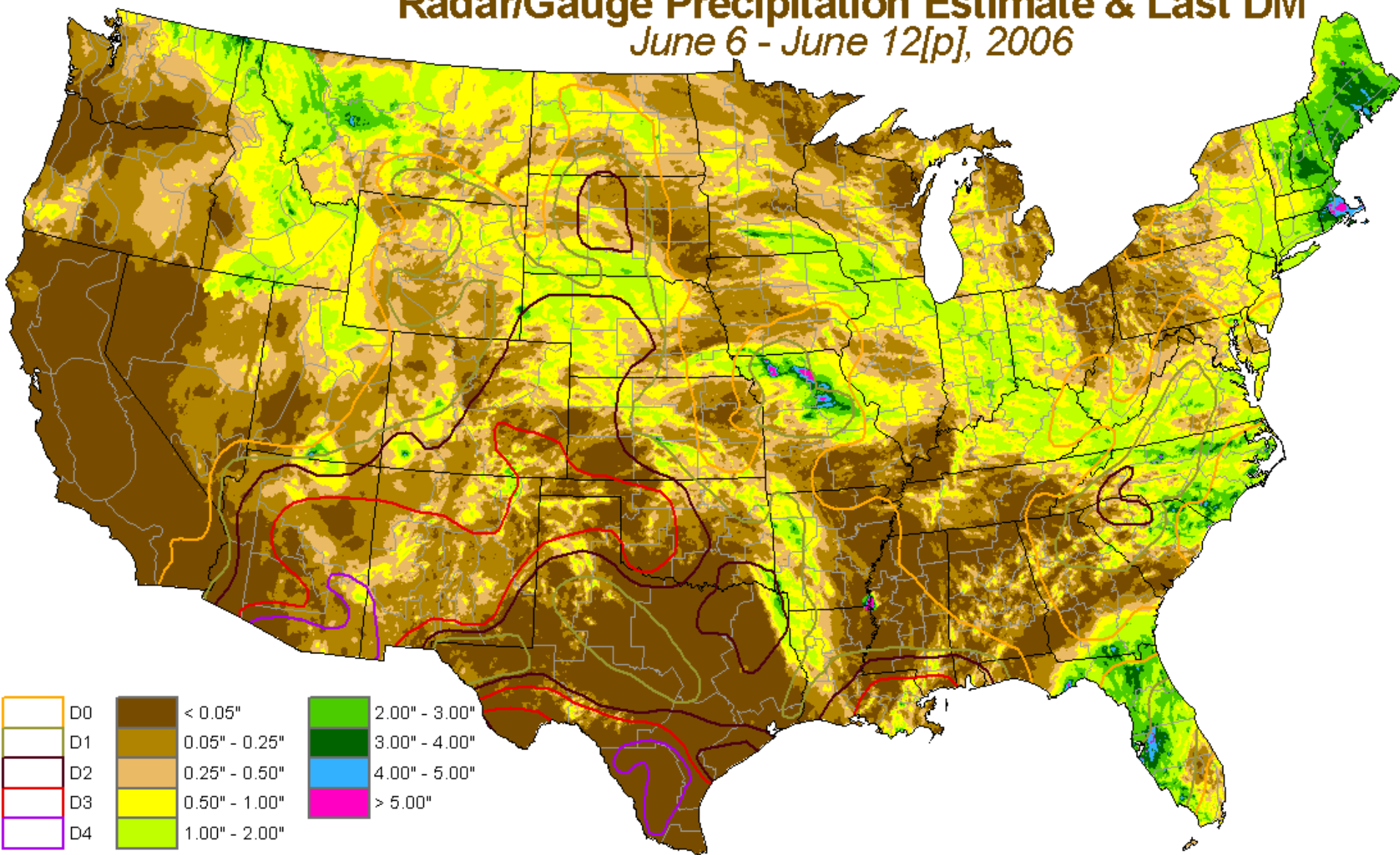


These maps depict approximate changes in drought intensity from selected initial times to the current week, with no consideration given to intervening weeks. The difference calculations are based on interpolated 4 km grids of Drought Monitor classifications, and as a result, will be smoother than would similar products based directly on the published versions of the Drought Monitor.

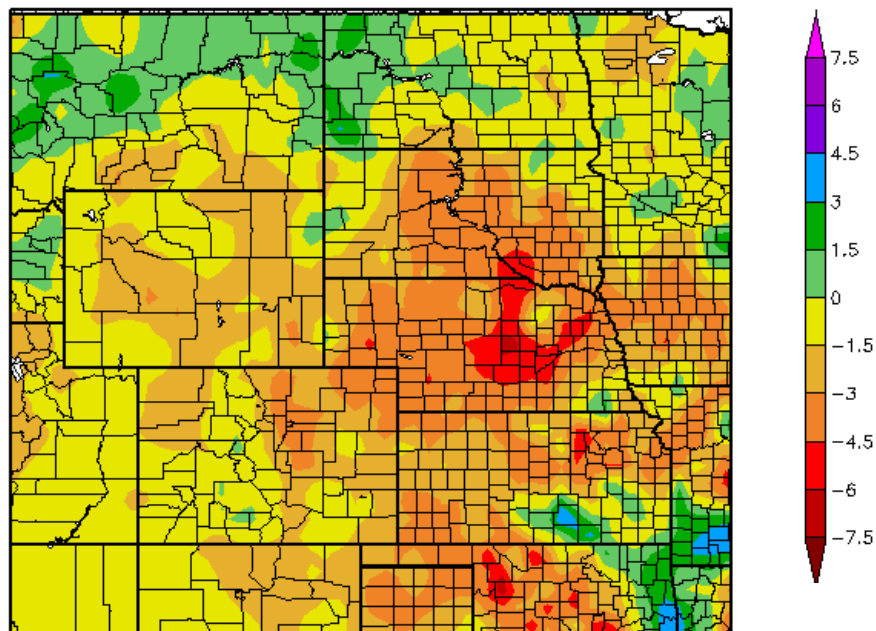


# Radar/Gauge Precipitation Estimate & Last DM

June 6 - June 12[p], 2006



# Departure from Normal Precipitation (in) 4/16/2006 – 6/14/2006

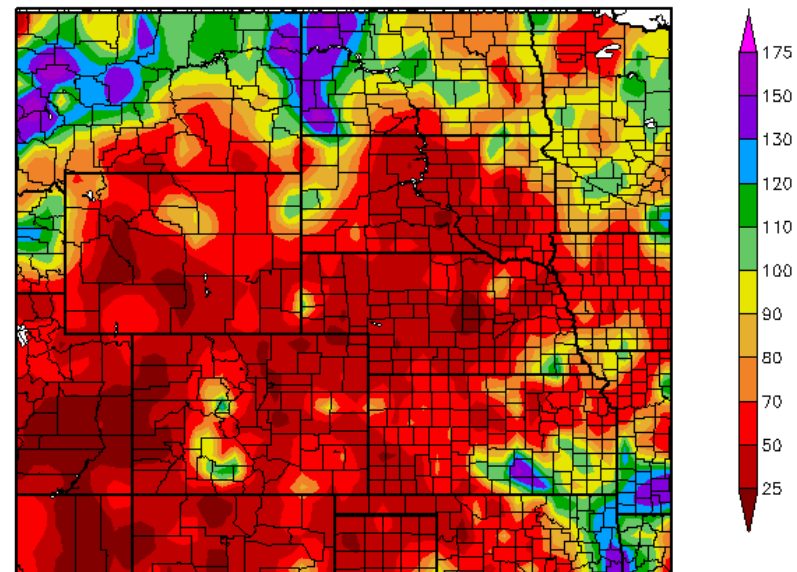


Generated 6/15/2006 at HPRCC using provisional data.

NOAA Regional Climat



# Percent of Normal Precipitation (%) 4/16/2006 – 6/14/2006



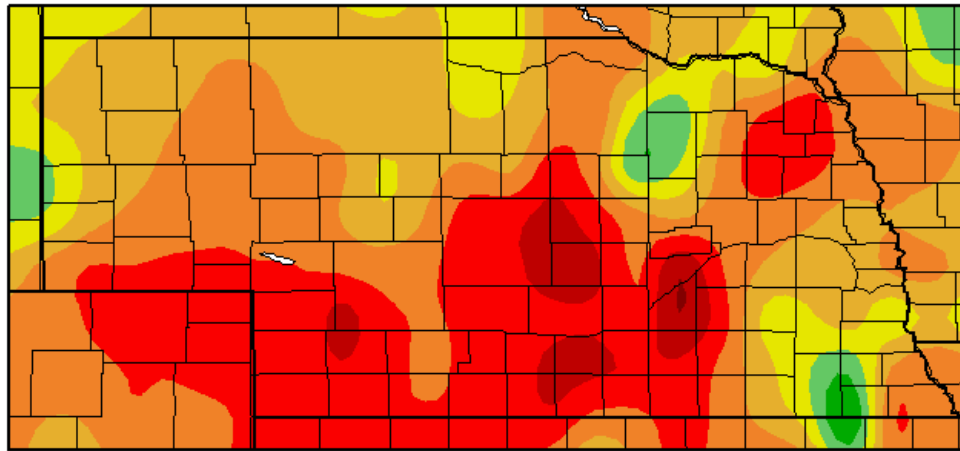
Generated 6/15/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers



# Departure from Normal Precipitation (in)

## 1/1/2006 – 6/14/2006



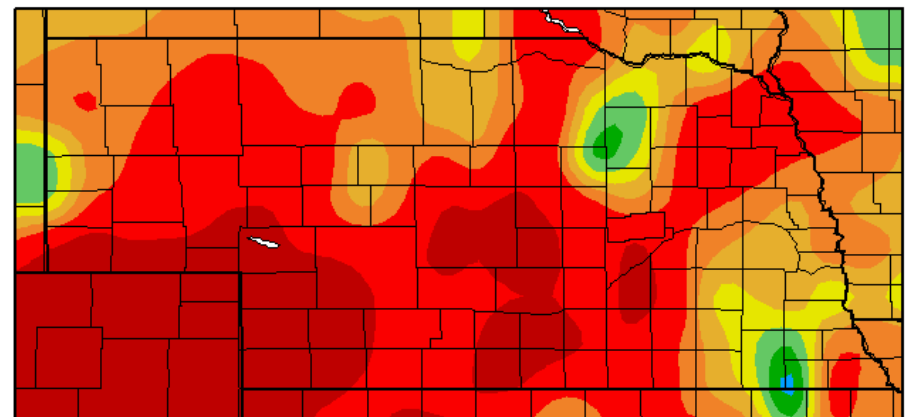
Generated 6/15/2006 at HPRCC using provisional data.

NOAA Regional Clim:



# Percent of Normal Precipitation (%)

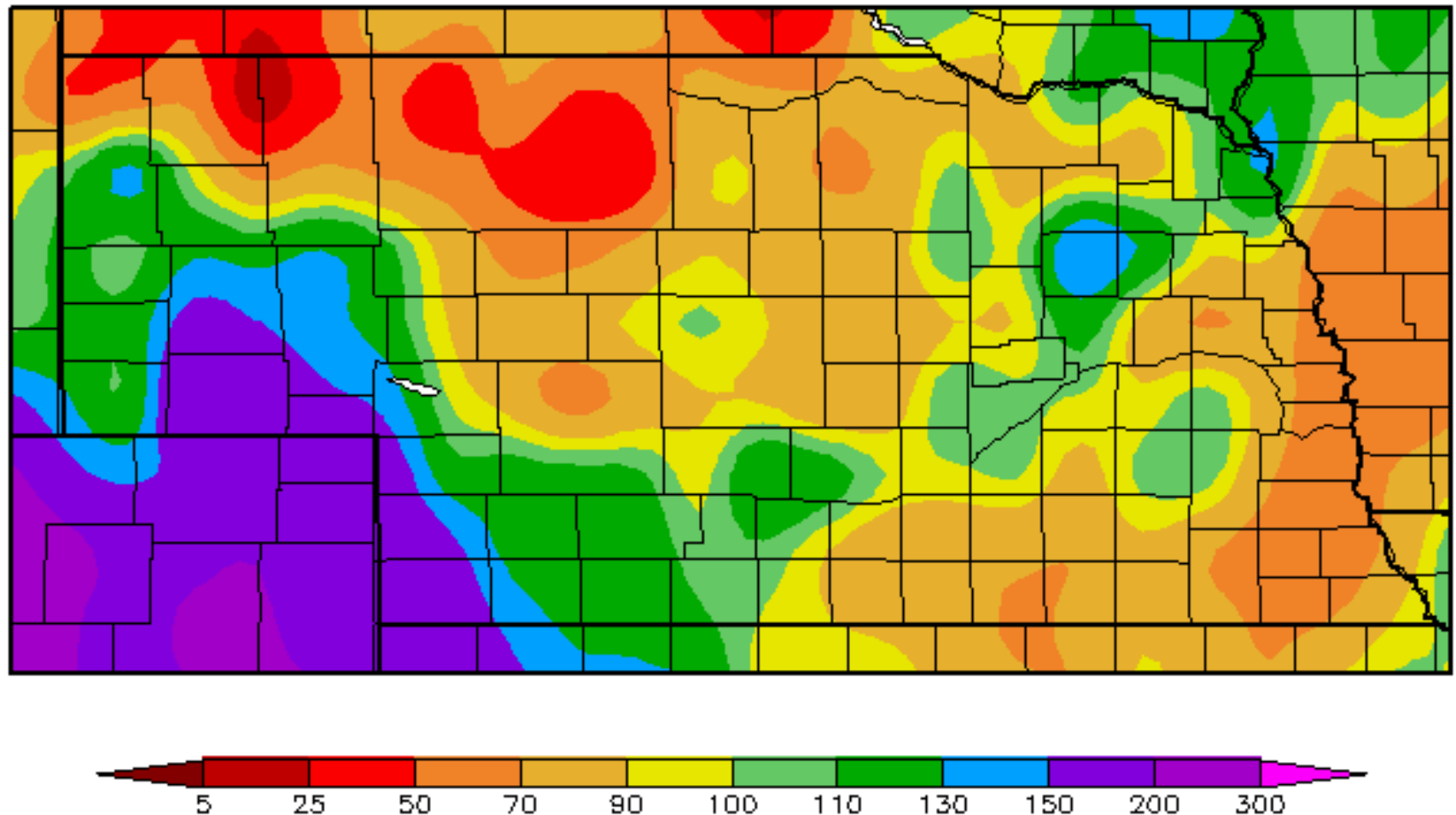
## 1/1/2006 – 6/14/2006



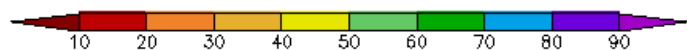
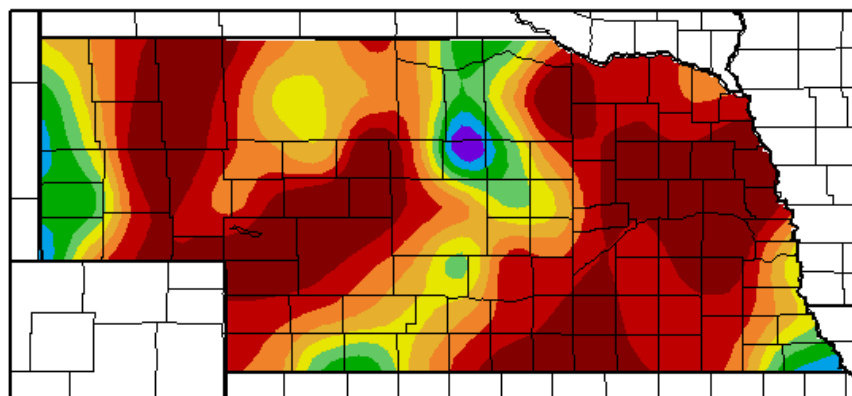
Generated 6/15/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

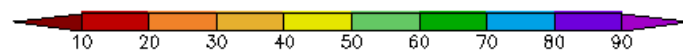
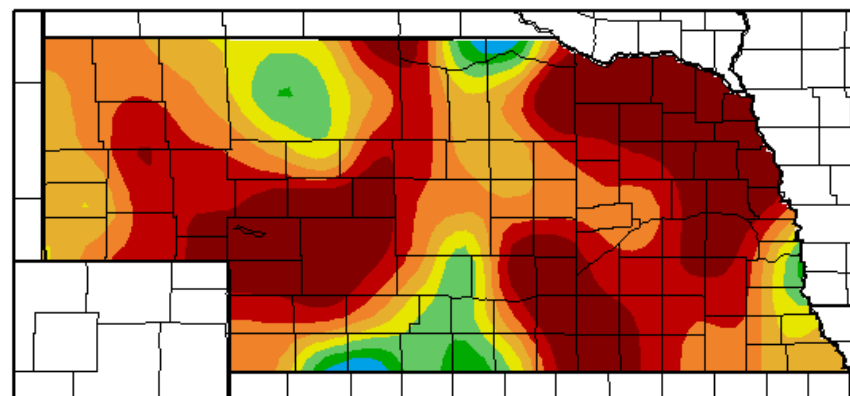
Percent of Normal Precipitation (%)  
10/1/2005 – 12/31/2005



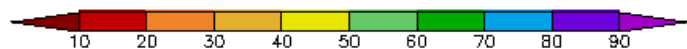
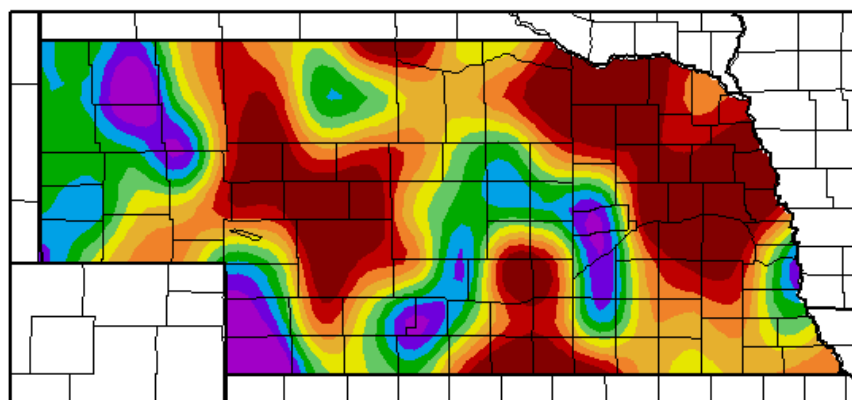
Percent of Max Available Water 10cm (%)  
6/8/2006 – 6/14/2006



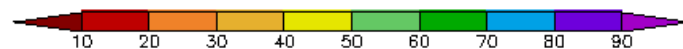
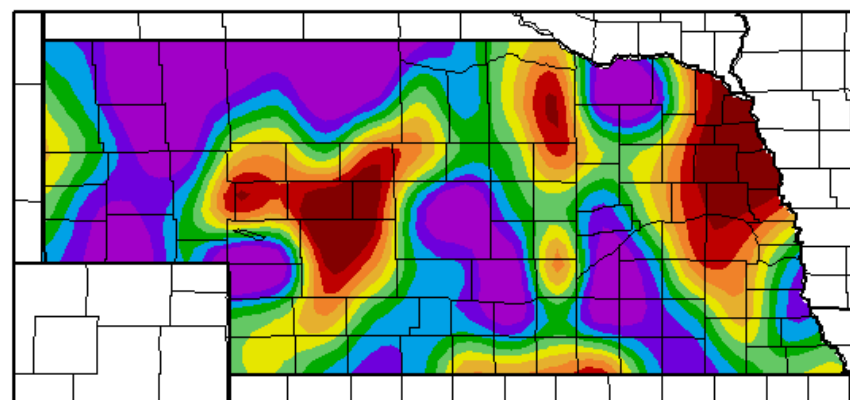
Percent of Max Available Water 25cm (%)  
6/8/2006 – 6/14/2006



Percent of Max Available Water 50cm (%)  
6/8/2006 – 6/14/2006



Percent of Max Available Water 100cm (%)  
6/8/2006 – 6/14/2006





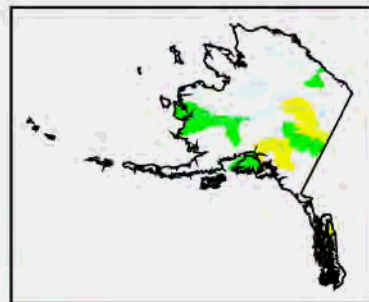
# ***Nebraska Water Supply Update...***



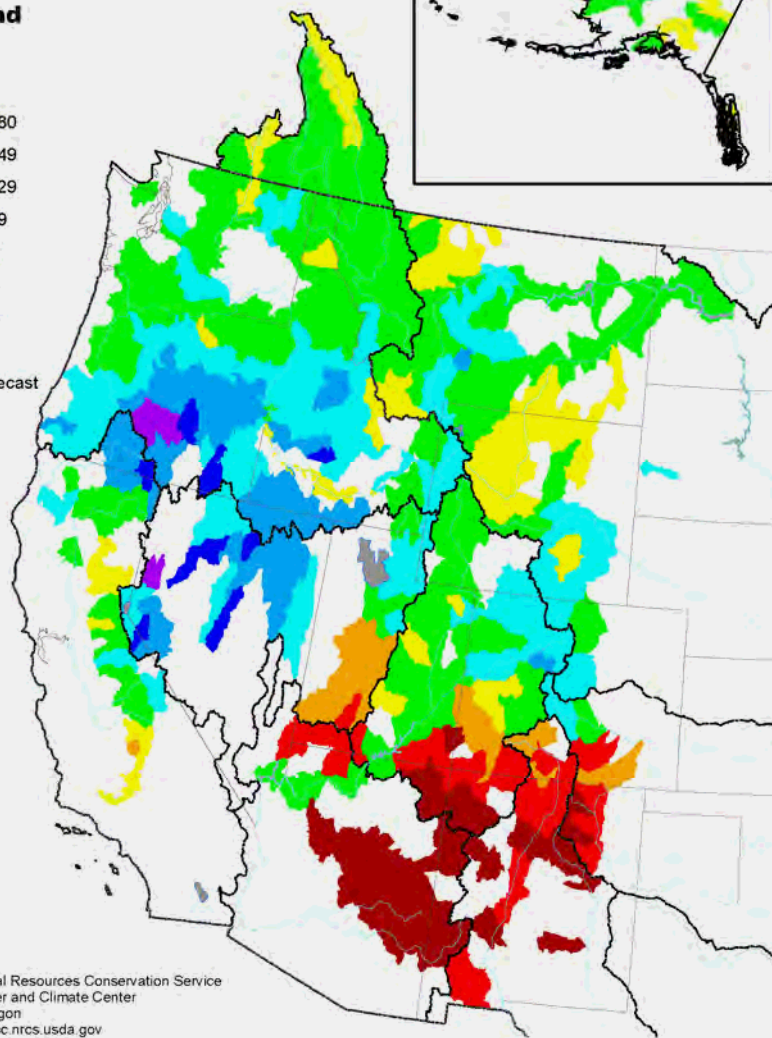
**Platte River, Hamilton/Hall County Line, June 6, 2006**

**Ken Dewey**

# Spring and Summer Streamflow Forecasts as of March 1, 2006

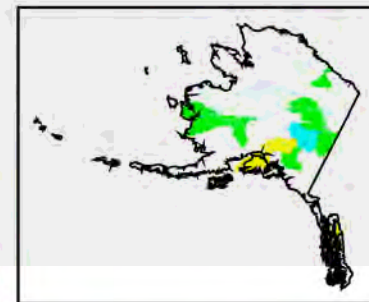


## Legend

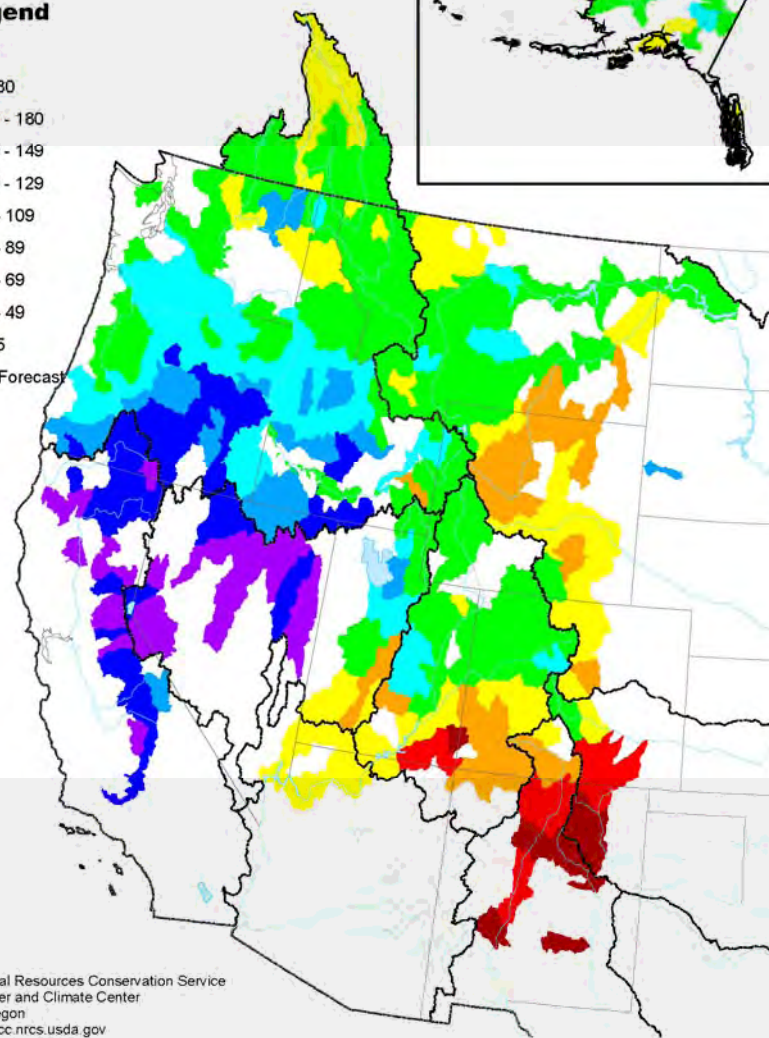


Prepared by  
USDA, Natural Resources Conservation Service  
National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

# Spring and Summer Streamflow Forecasts as of May 1, 2006



## Legend



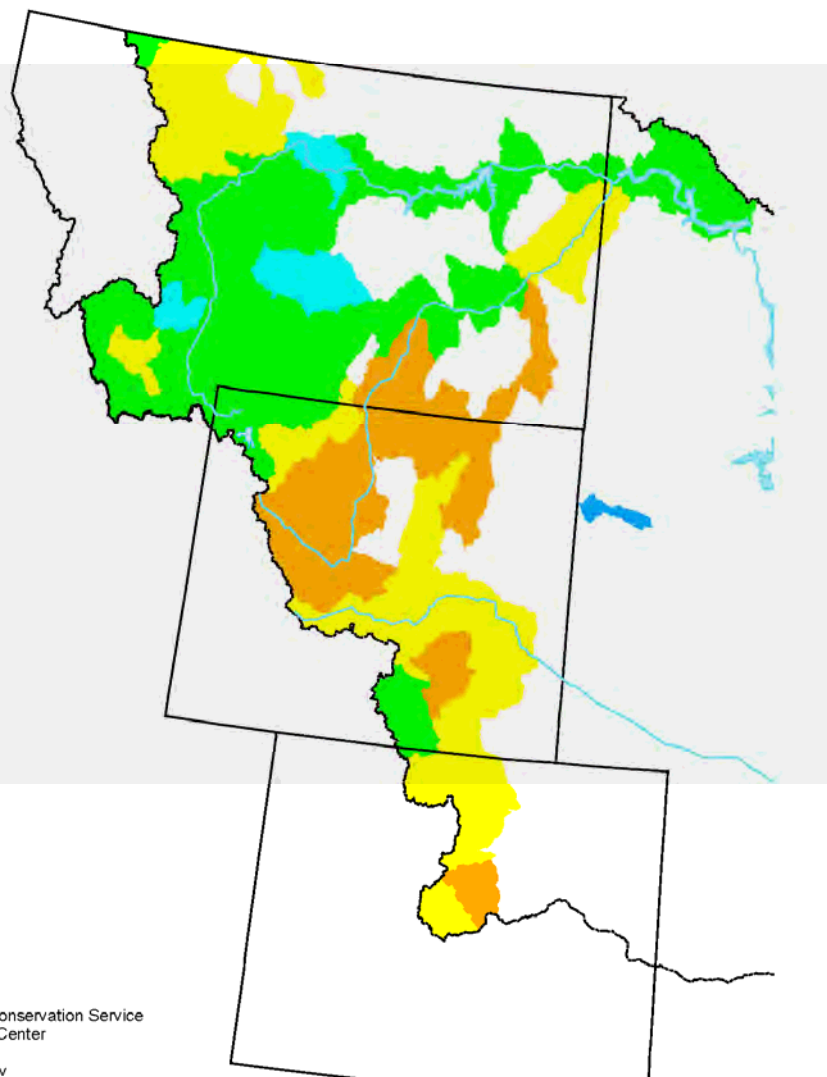
Prepared by  
USDA, Natural Resources Conservation Service  
National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>



# Missouri River Basin Spring and Summer Streamflow Forecasts as of May 1, 2006

## Legend

percent



Prepared by  
USDA, Natural Resources Conservation Service  
National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>



# Lake McConaughy

(as of June 13, 2006)

669,900 af **(38.4% of capacity)**  
(1.3 ft. above this time last year)

BOR snowmelt runoff forecast February 1, 2006  
**130%** of normal

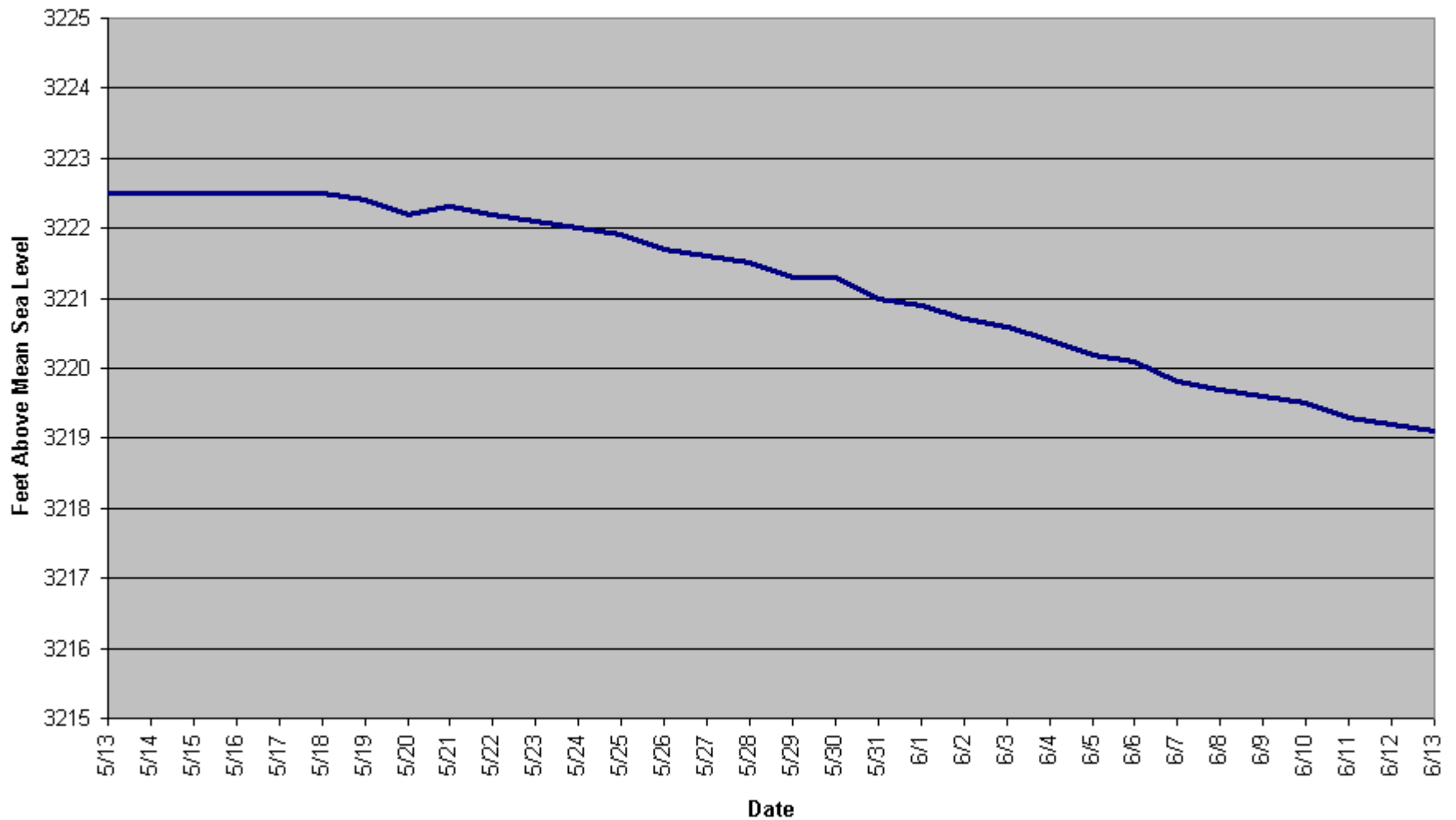
BOR snowmelt runoff forecast June 1, 2006 **less**  
**than 50%** of normal

**SOURCE: CNPPID**

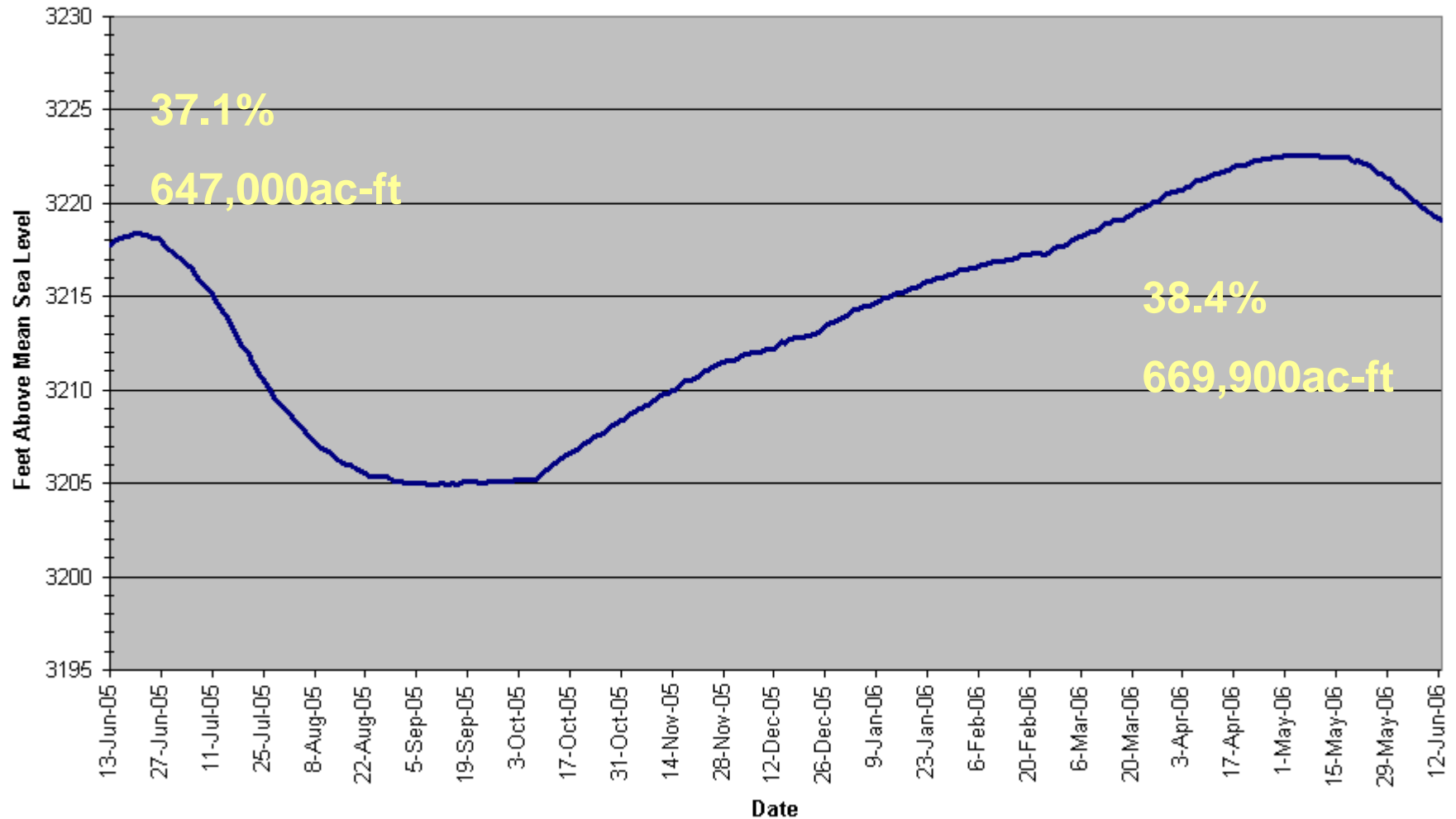


## Lake McConaughy Elevation

May 13 to June 13, 2006

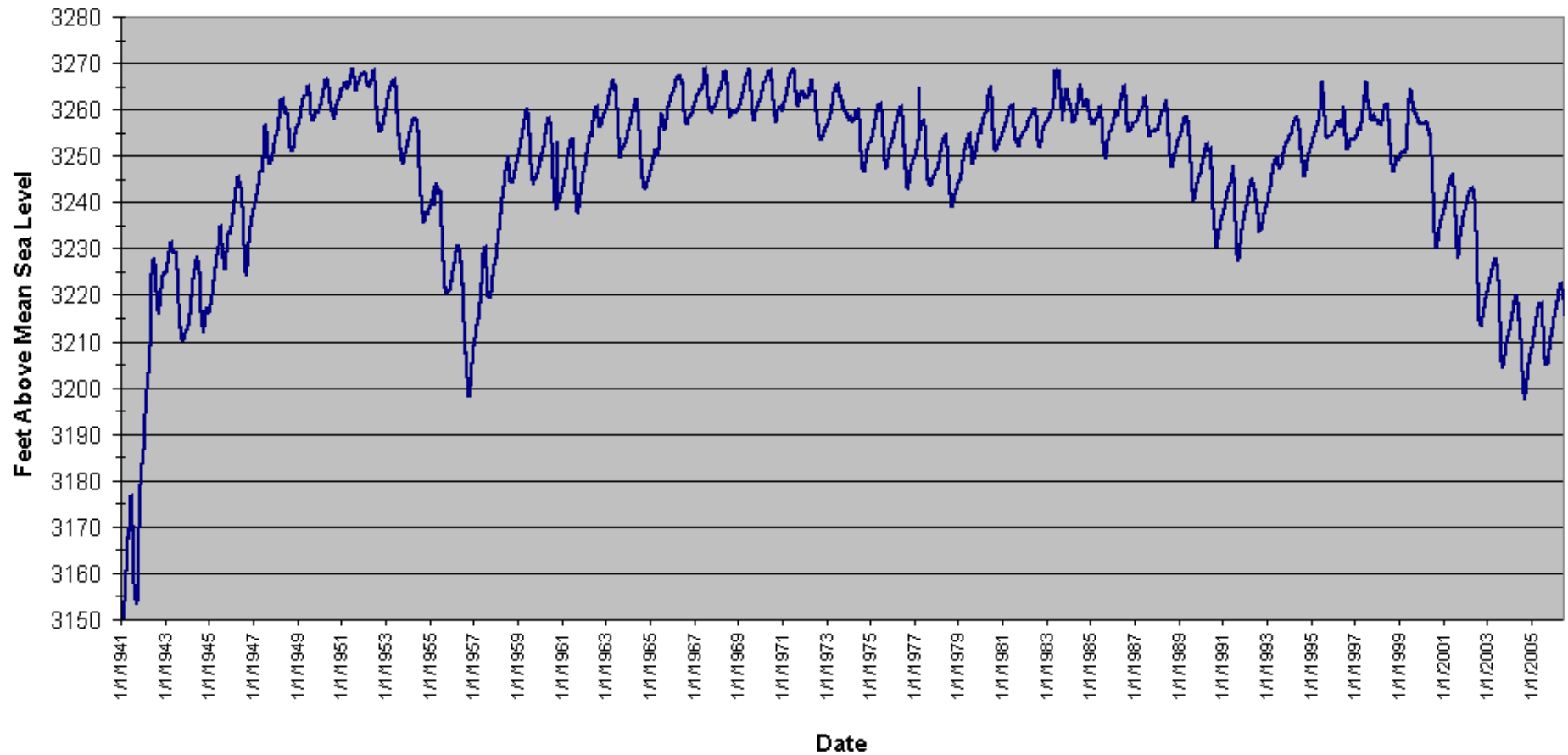


## Lake McConaughy Elevation Since June 13, 2005





## Lake McConaughy Elevation 1941 to Present



# Republican River Basin



- Courtesy of Bill Peck, McCook Office, Bureau of Reclamation
- Overall, “not very good”
- Difficult situation for some local irrigation districts continues
- Inflows in 2005 were generally better than 2004, 2003, and 2002 (which were all successive record lows)

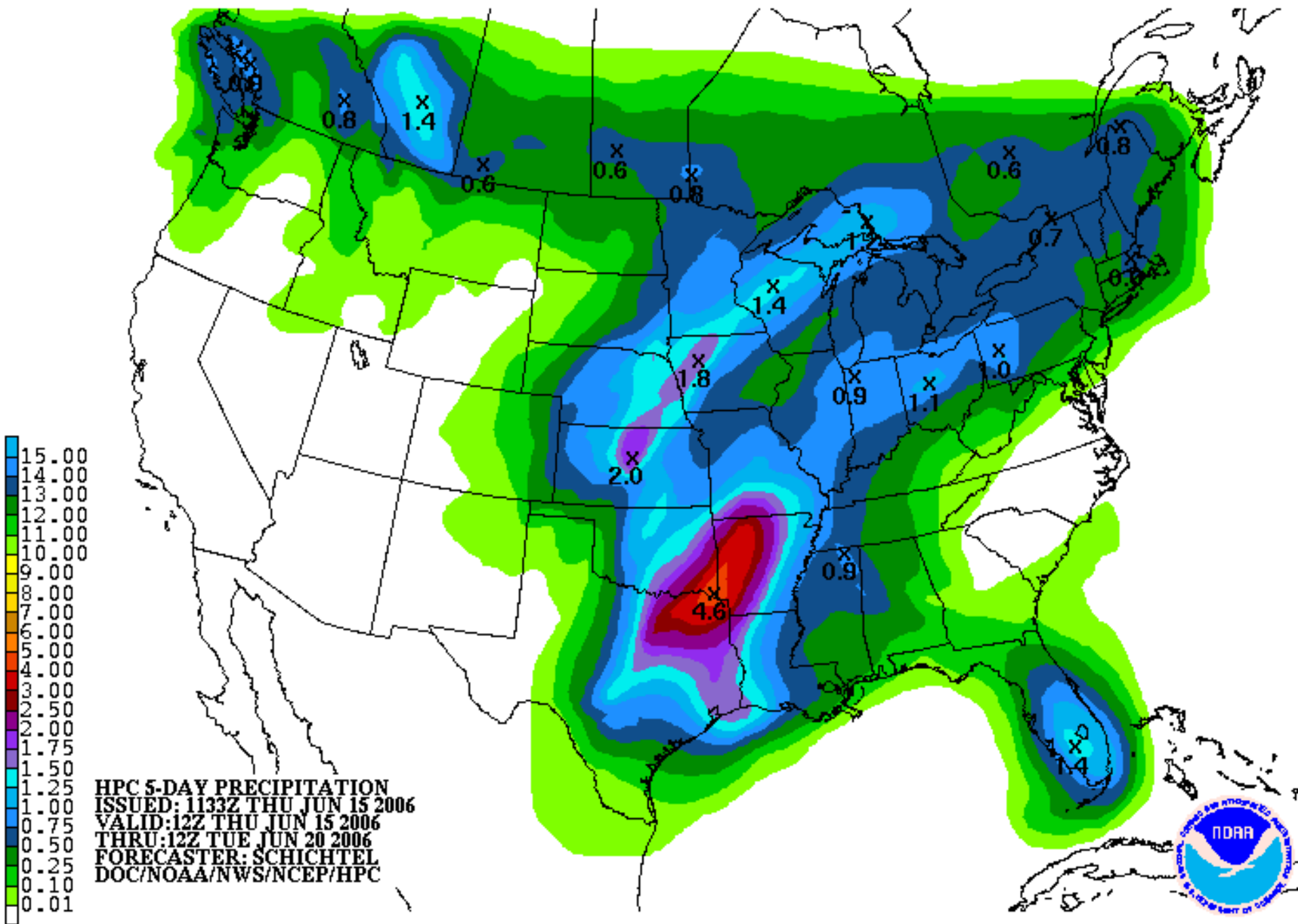
# Republican River Basin

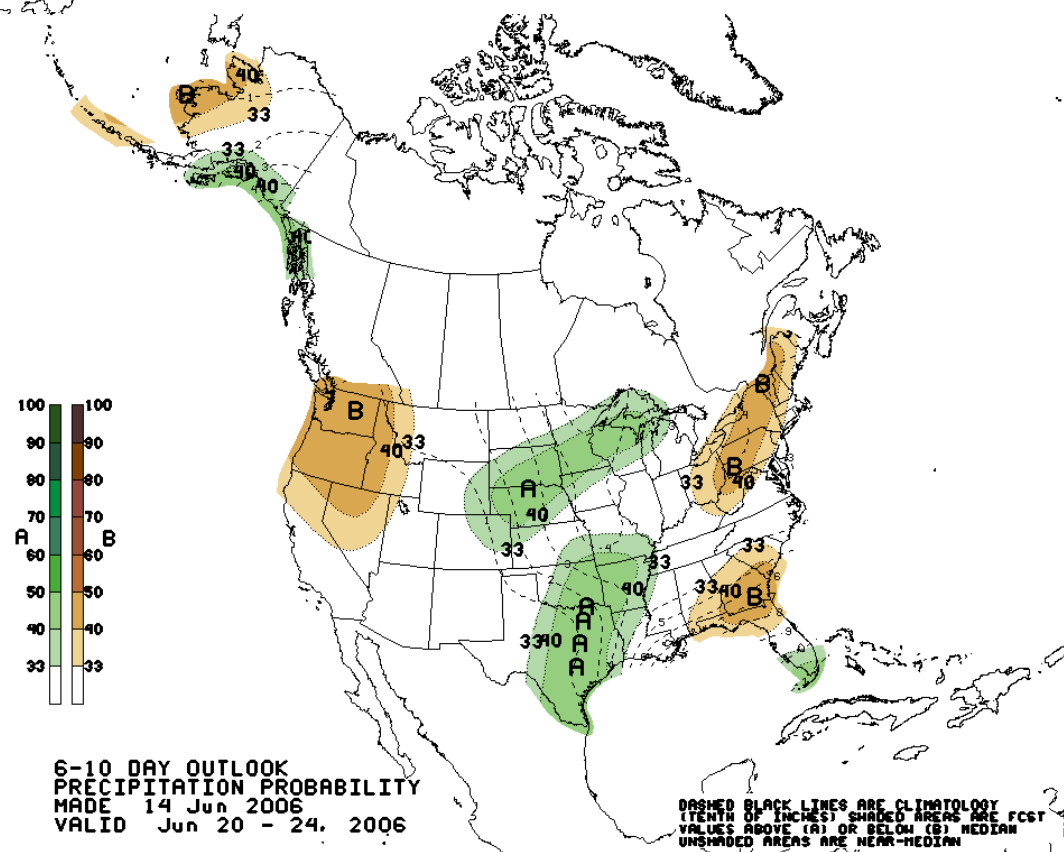
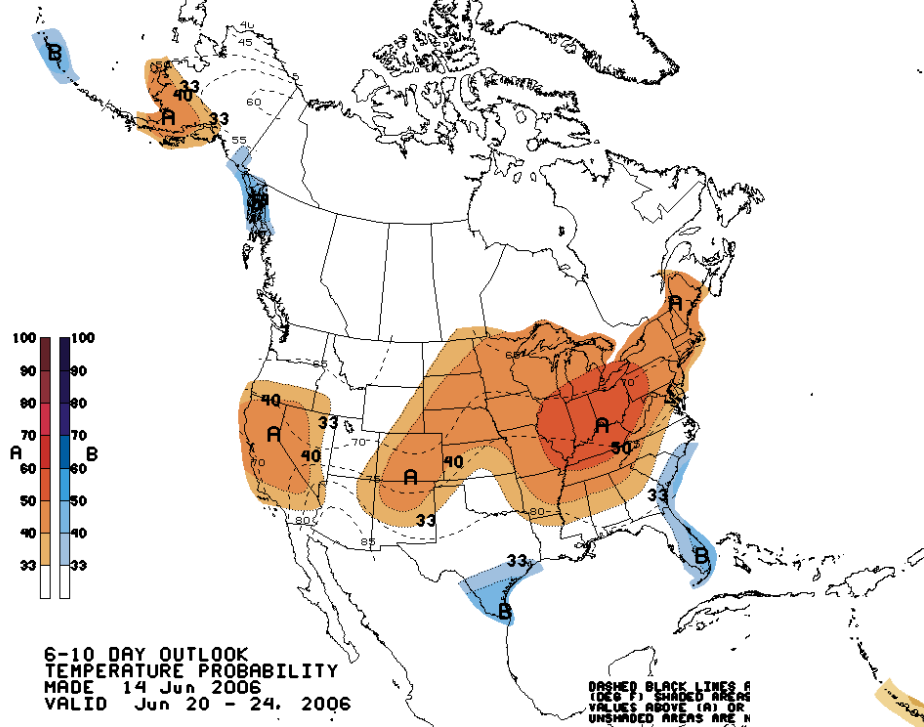


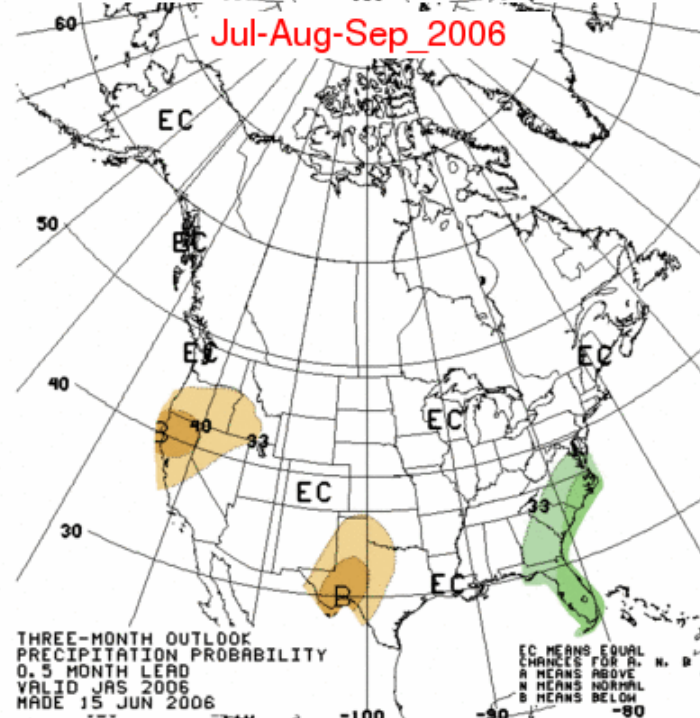
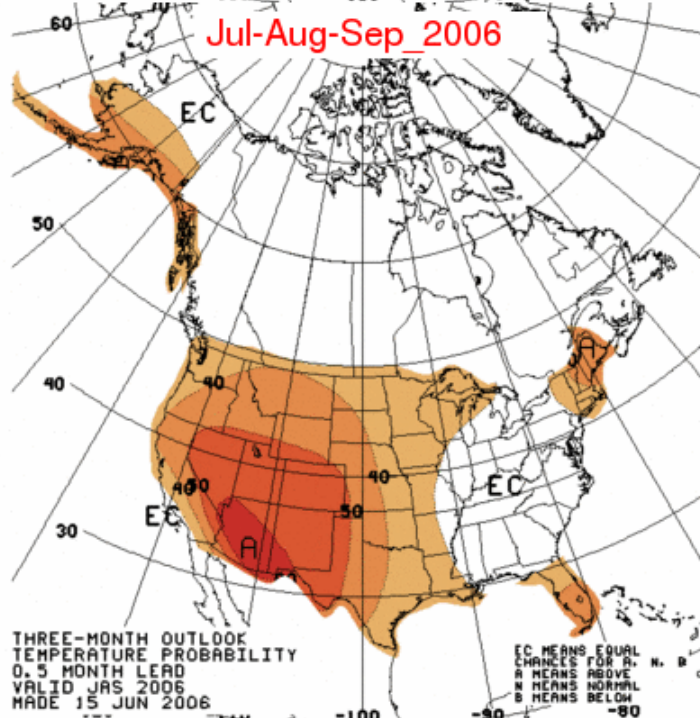
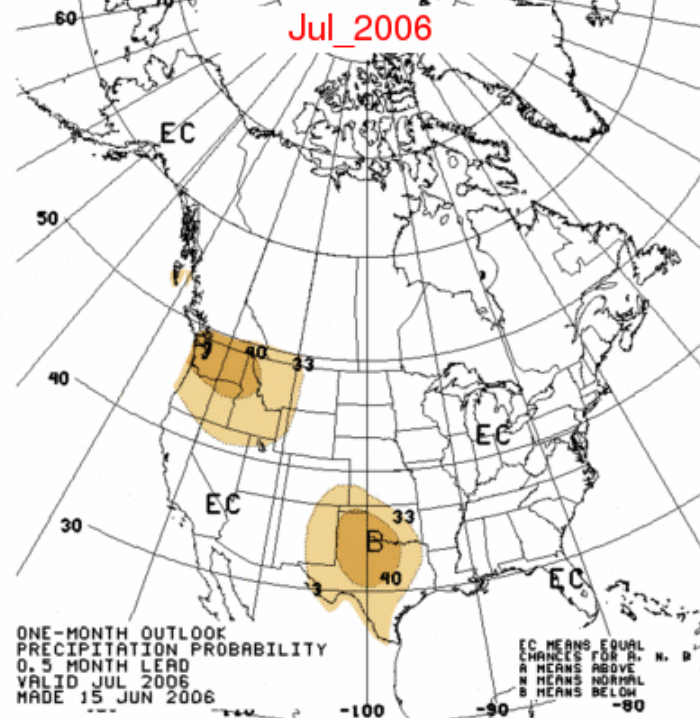
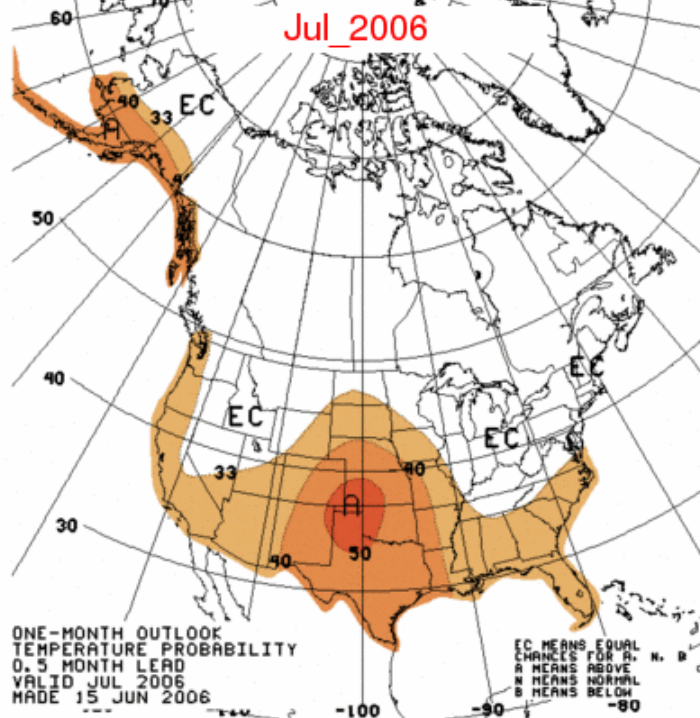
- Inflows in 2006 ceased by mid April
- In 2006, irrigation began in May
  - Warm, windy, and dry month
- Precipitation in some areas less than in 2002



# ***Forecasts.....***

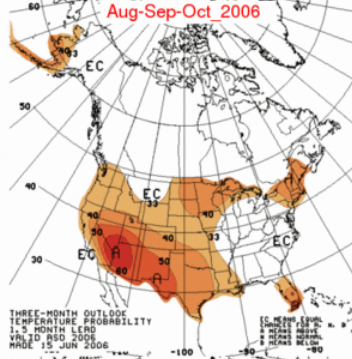




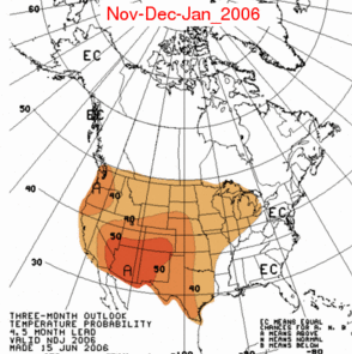




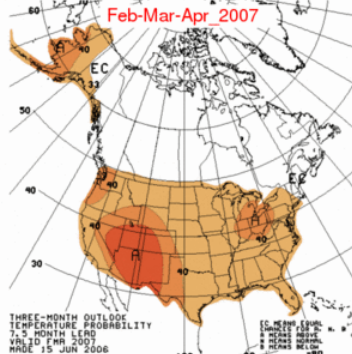
Aug-Sep-Oct 2006



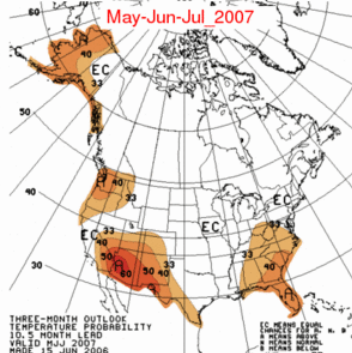
Nov-Dec-Jan 2006



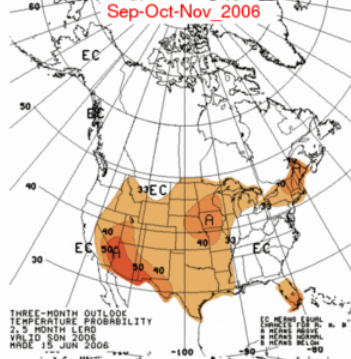
Feb-Mar-Apr 2007



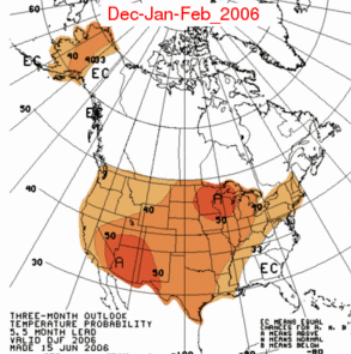
May-Jun-Jul 2007



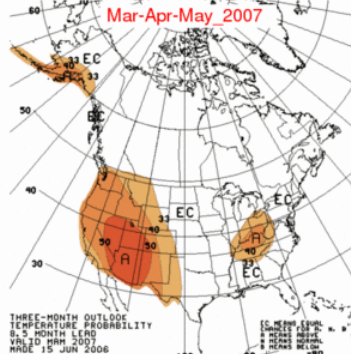
Sep-Oct-Nov 2006



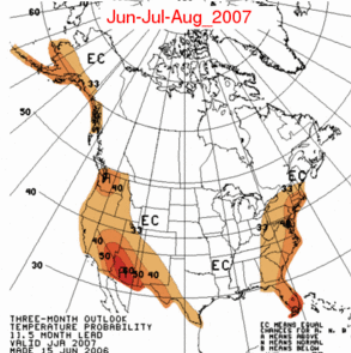
Dec-Jan-Feb 2006



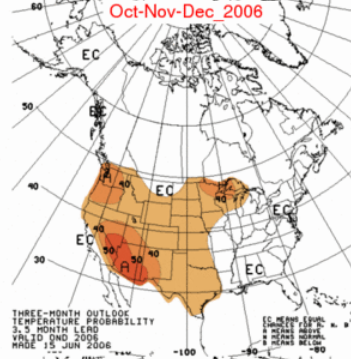
Mar-Apr-May 2007



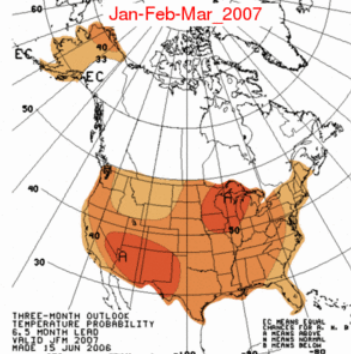
Jun-Jul-Aug 2007



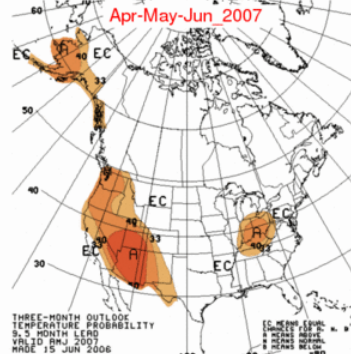
Oct-Nov-Dec 2006



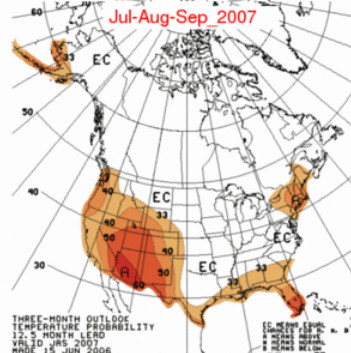
Jan-Feb-Mar 2007

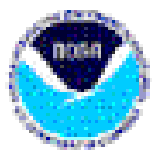


Apr-May-Jun 2007



Jul-Aug-Sep 2007

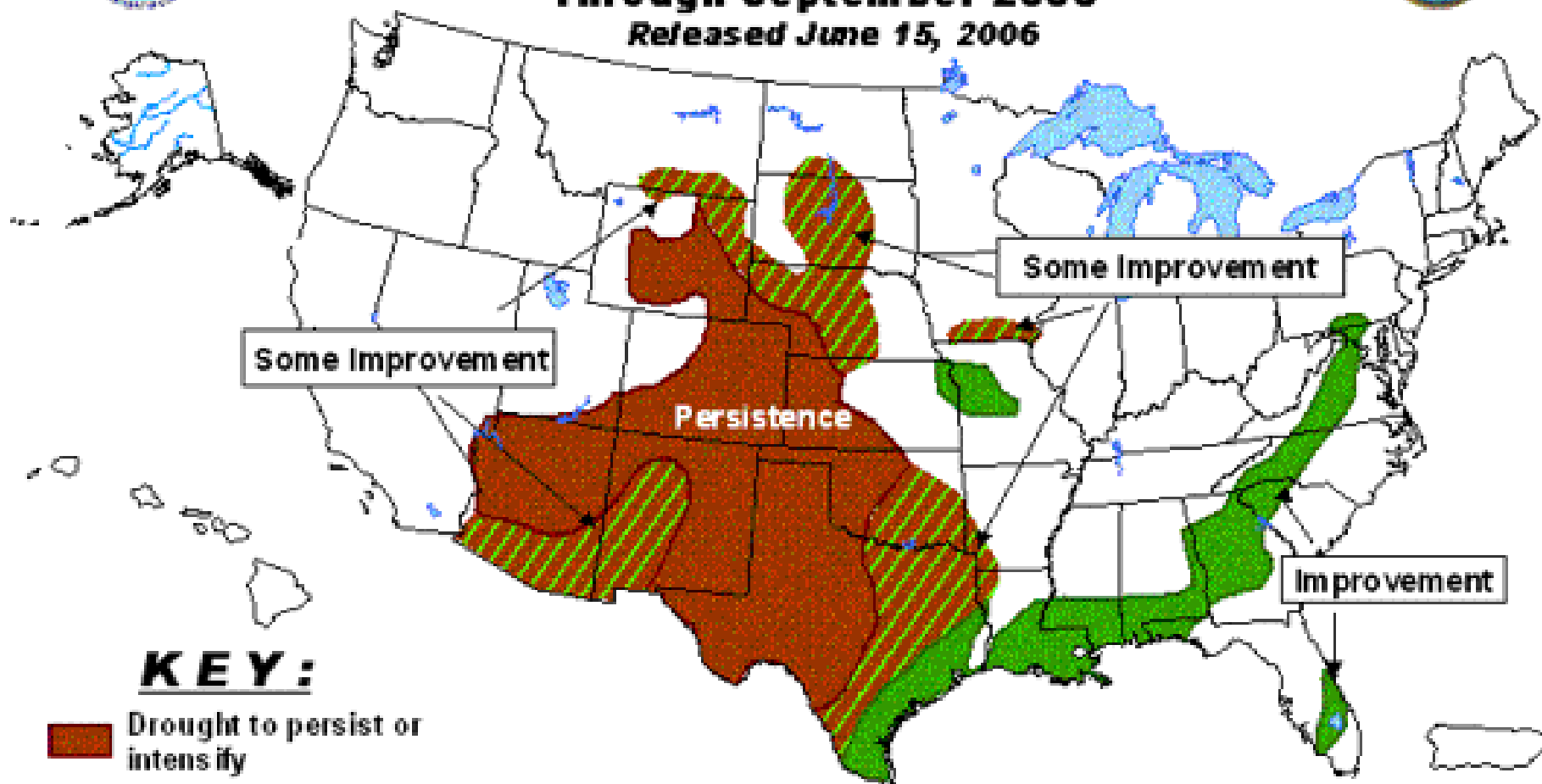




# U.S. Seasonal Drought Outlook

Through September 2006

Released June 15, 2006



## **KEY:**

-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  Drought development likely

Depicts general, large-scale trends based on subjectively derived probabilities guided by numerous indicators, including short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance, so use caution if using this outlook for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4). For weekly drought updates, see the latest Drought Monitor map and text. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

# Summary

- **Conditions deteriorating state-wide**
  - 100% of NE classified as “Abnormally Dry”
  - Almost 50% of state is in “Severe Drought” (D2)
  - “Extreme Drought” (D3) introduced into sw NE 6/13
- **Streamflow forecasts are again below-normal into the Platte Basin**
  - Current projections are less than 50% of normal
- **Little optimism in the outlooks**





# National Drought Mitigation Center

University of Nebraska–Lincoln

The National Drought Mitigation Center (NDMC) helps people and institutions develop and implement measures to reduce societal vulnerability to drought. The NDMC, based at the University of Nebraska–Lincoln, stresses preparation and risk management rather than crisis management.

## What is Drought?

*An overview of drought • Climographs • Historical Palmer Drought Index maps and graphs • Drought and El Niño • The Dust Bowl*

## Planning for Drought

*How (and why) to plan for drought • The 10-Step Planning Process • Directory of drought planning contacts*

## Monitoring Drought

*How to select monitoring tools • The SPI, the U.S. Drought Monitor, and links to tools elsewhere on the web*

## Understanding Your Risk

*Understanding drought's impacts • Current and historical drought impacts in the United States and around the world*

## Mitigating Drought

*Putting a drought plan together • Existing drought plans and studies • Drought mitigation tools/initiatives • Water conservation*

About the NDMC

Contact Information

What's New

Site Map

Search the Site

Drought Network News

Publications

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



For Media

Other  
Drought-related  
Sites

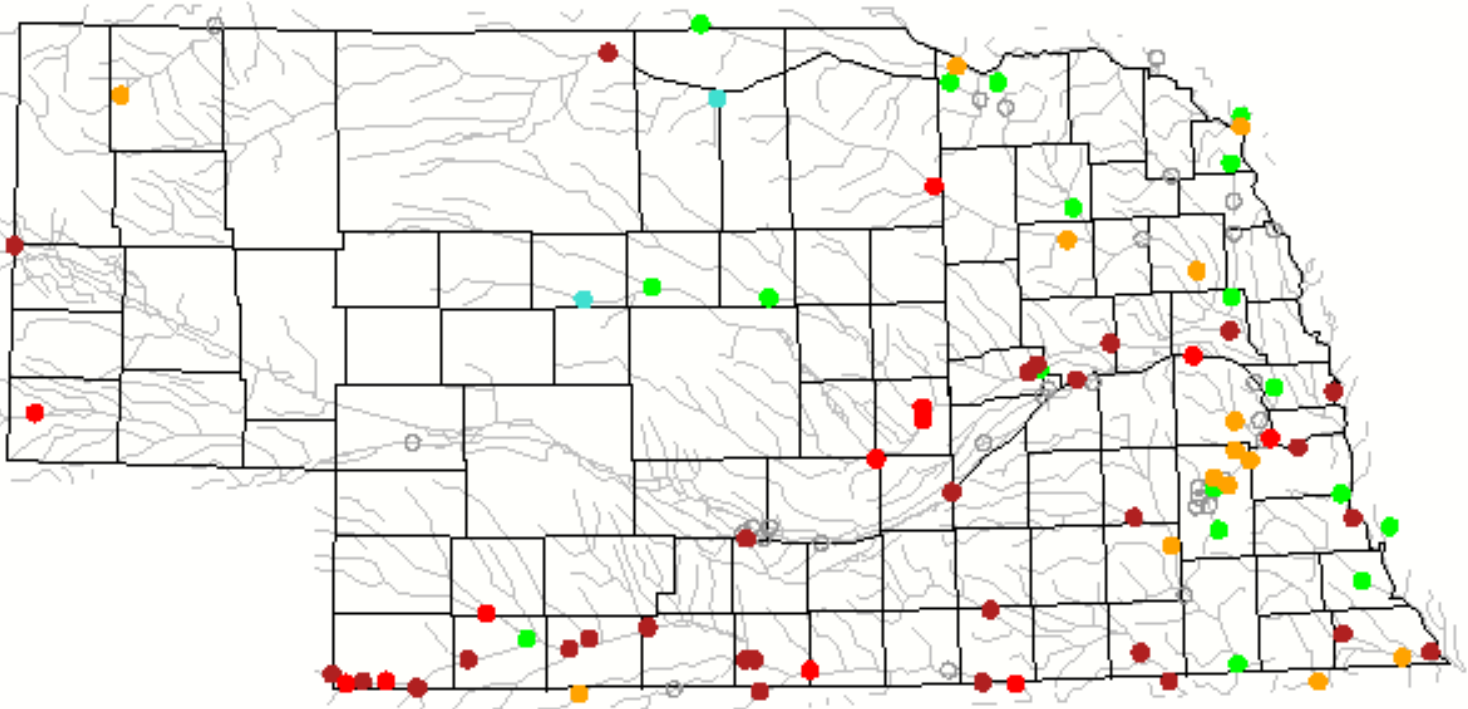
U.S.  
Drought  
Monitor

Interim  
National  
Drought  
Council

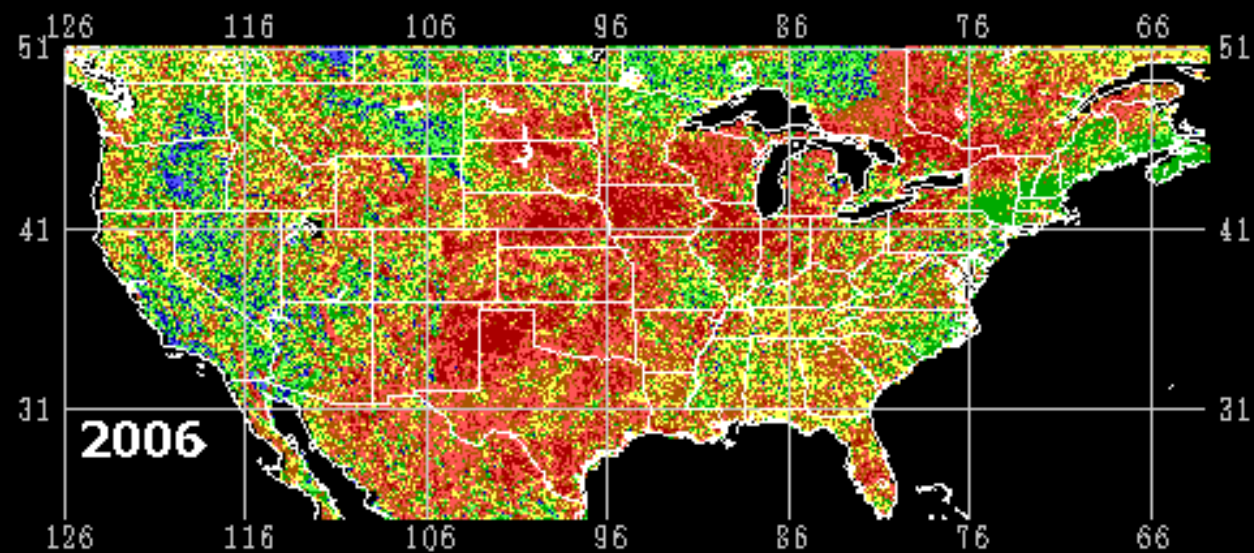
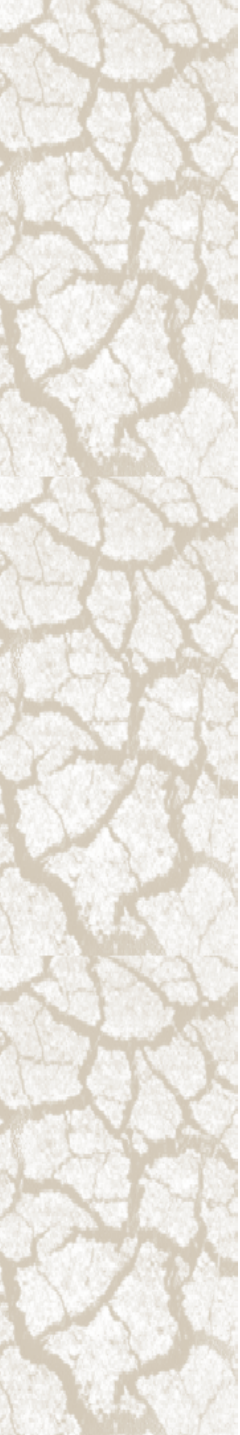


# Map of 7-day average streamflow compared To historical streamflow for the day of year

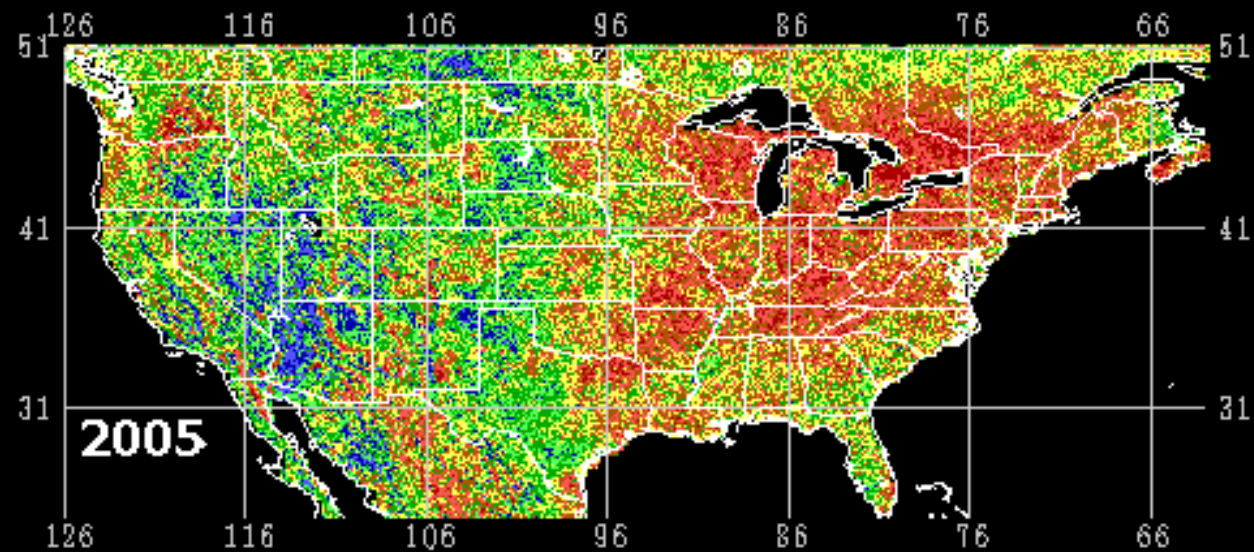
Wednesday, June 14, 2006



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		



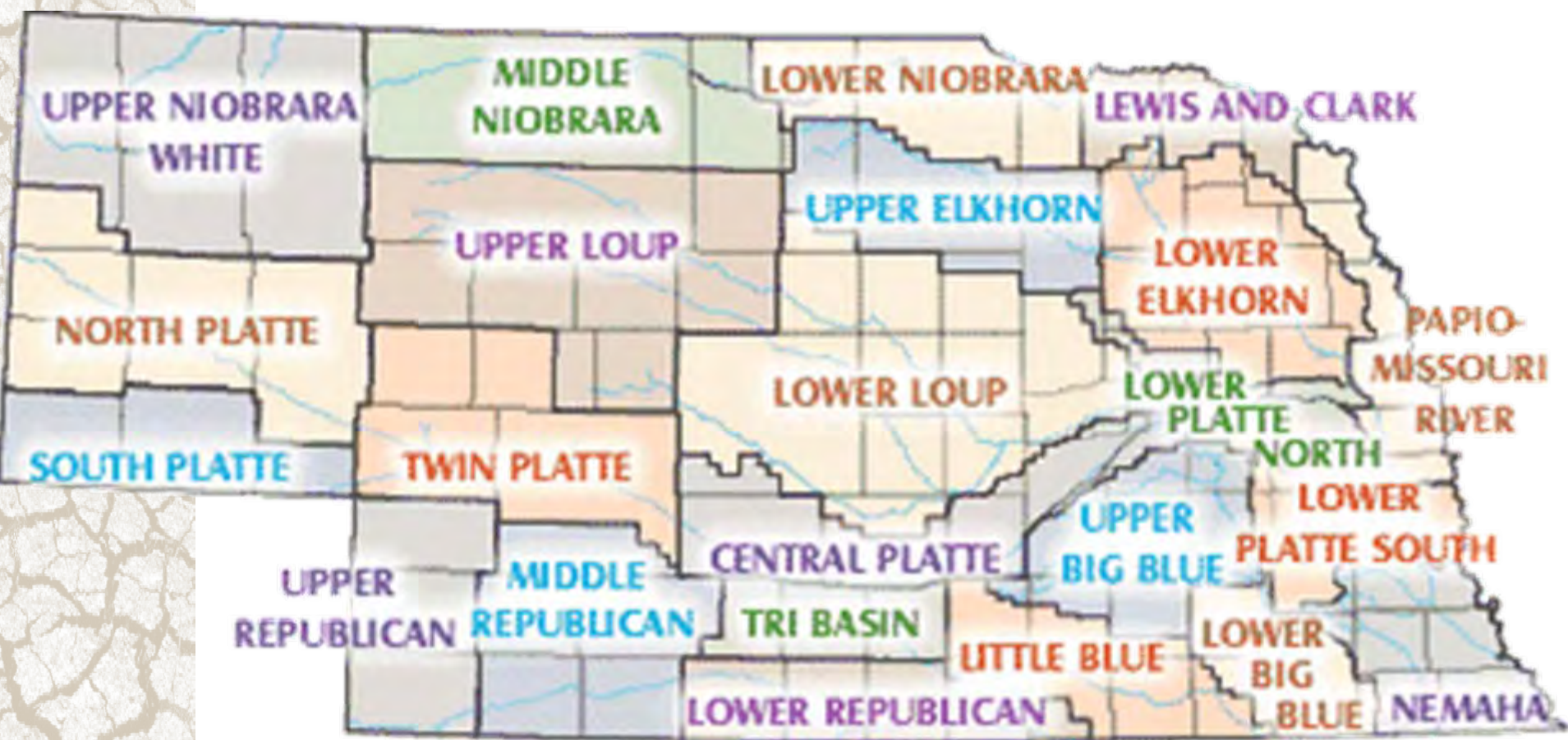
## Vegetation Health Jun 11



**Stressed Fair Favorable**







**Ne RAIN**