# NOAA and Partners Midwest and Great Plains Drought Update Webinar

**Brian Fuchs**

**National Drought Mitigation Center**
**School of Natural Resources**
**University of Nebraska-Lincoln**


**NOAA Webinar Series, July 18, 2013**

# General Information

* **Providing climate services to the Central Region**
  * Collaboration with Brian Fuchs (National Drought Mitigation Center)Dennis Todey (South Dakota State Climatologist), Doug Kluck and John Eise (NOAA), State Climatologists and the Midwest Regional Climate Center, High Plains Regional Climate Center, NOAAs Climate Prediction Center, Iowa State University,
* **Next Climate/Drought Outlook Webinar: August 15, 2013**
* **Access to past Climate/Drought Webinars and information**
* *http://mrcc.isws.illinois.edu/webinars.htm*
* *http://www.hprcc.unl.edu/webinars.php*
* **Operator Assistance for questions at the end**
* **To sign up for the next webinar, please visit:**

http://drought.gov/drought/content/regional-programs/regional-drought-webinars

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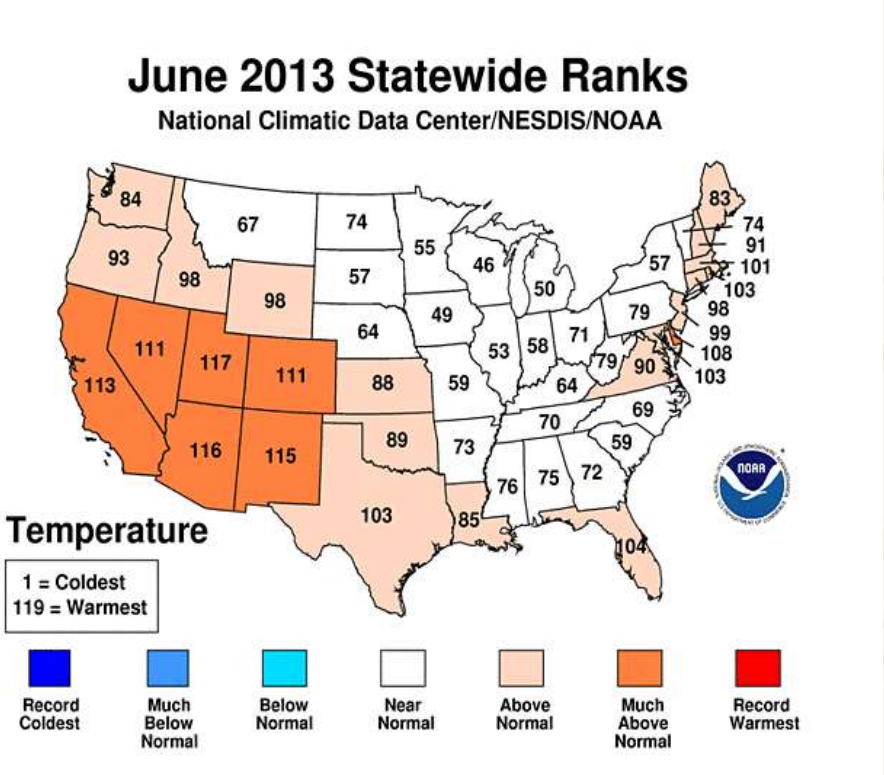
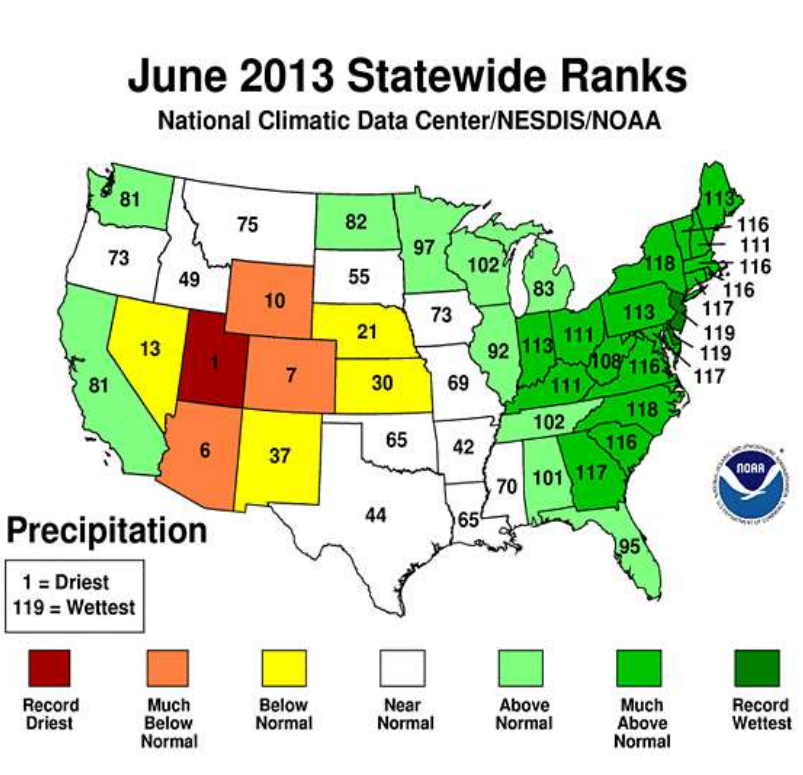
# Agenda

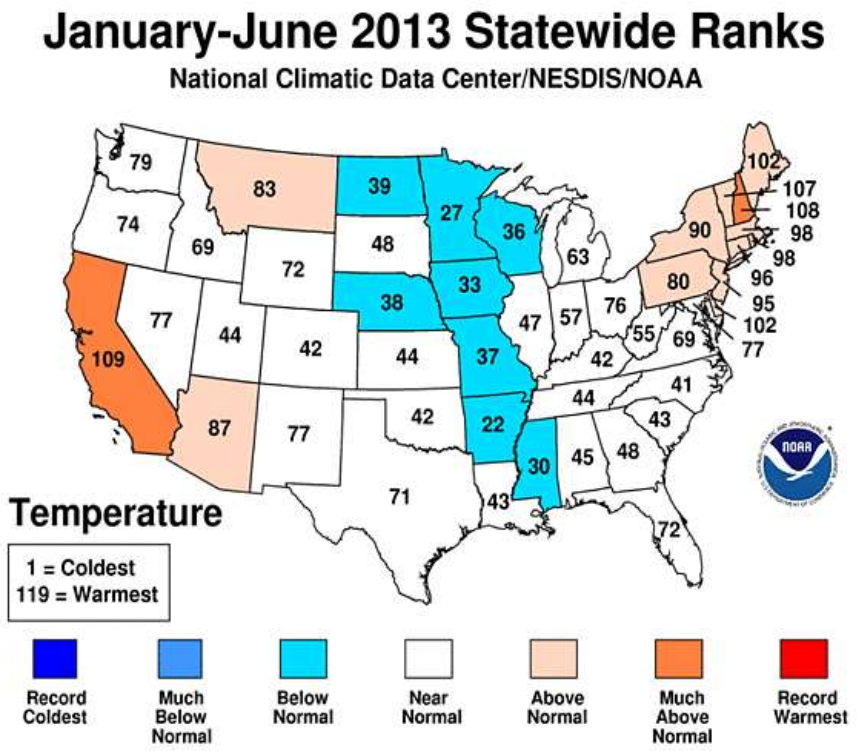
- Current Conditions
- Agricultural Update
- Impacts
- Outlooks
- Questions/Comments

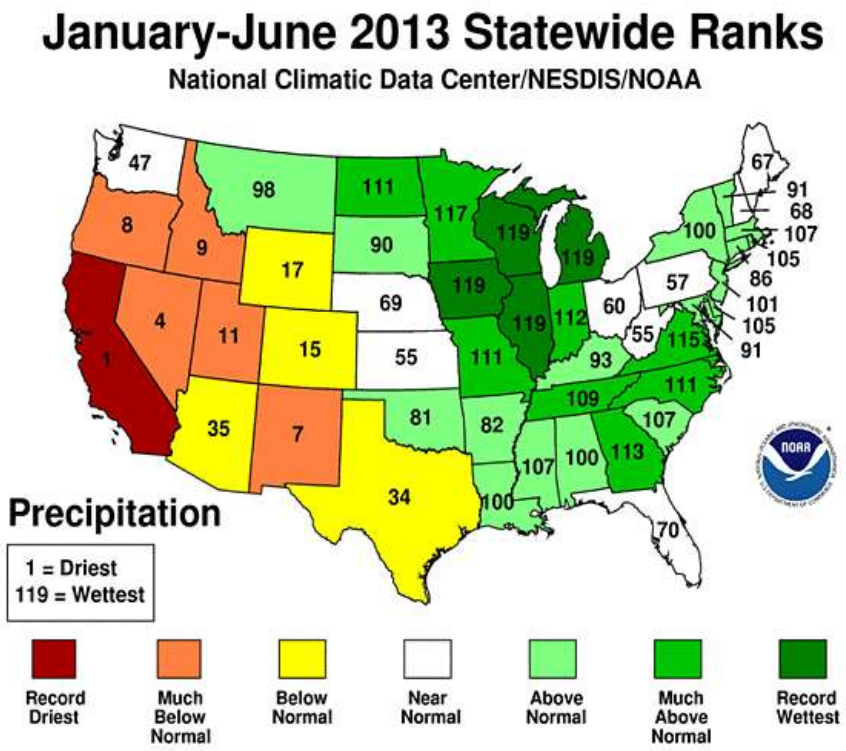
# June Data


June 2013 Statewide Ranks
National Climatic Data Center/NESDIS/NOAA
Temperature
1 = Coldest
119 = Warmest
Record Coldest
Much Below Normal
Below Normal
Near Normal
Above Normal
Much Above Normal
Record Warmest

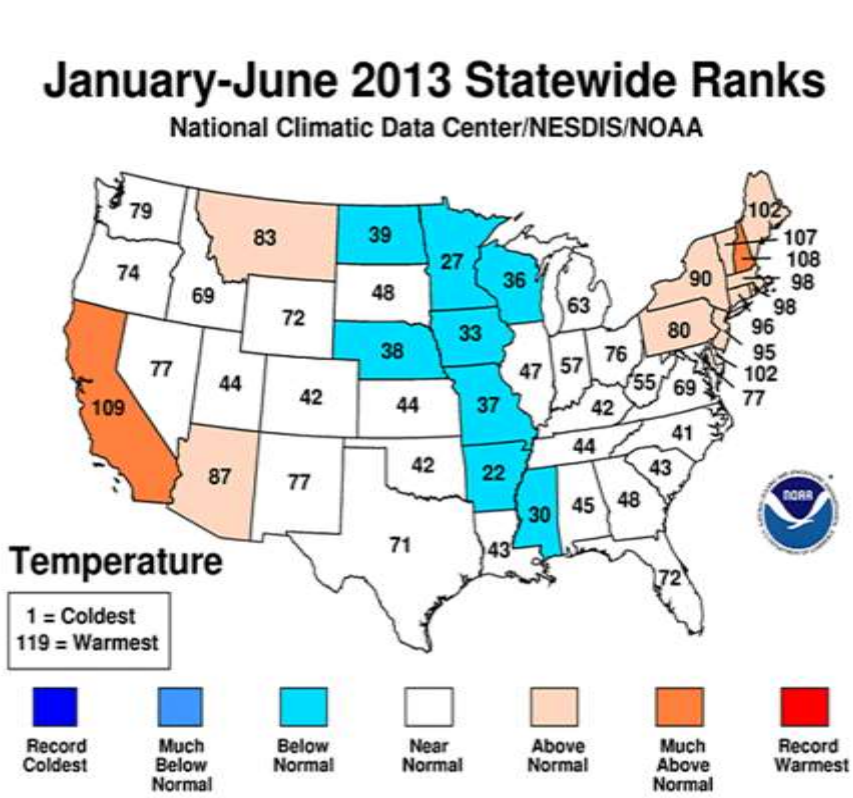

June 2013 Statewide Ranks
National Climatic Data Center/NESDIS/NOAA
Precipitation
1 = Driest
119 = Wettest
Record Driest
Much Below Normal
Below Normal
Near Normal
Above Normal
Much Above Normal
Record Wettest

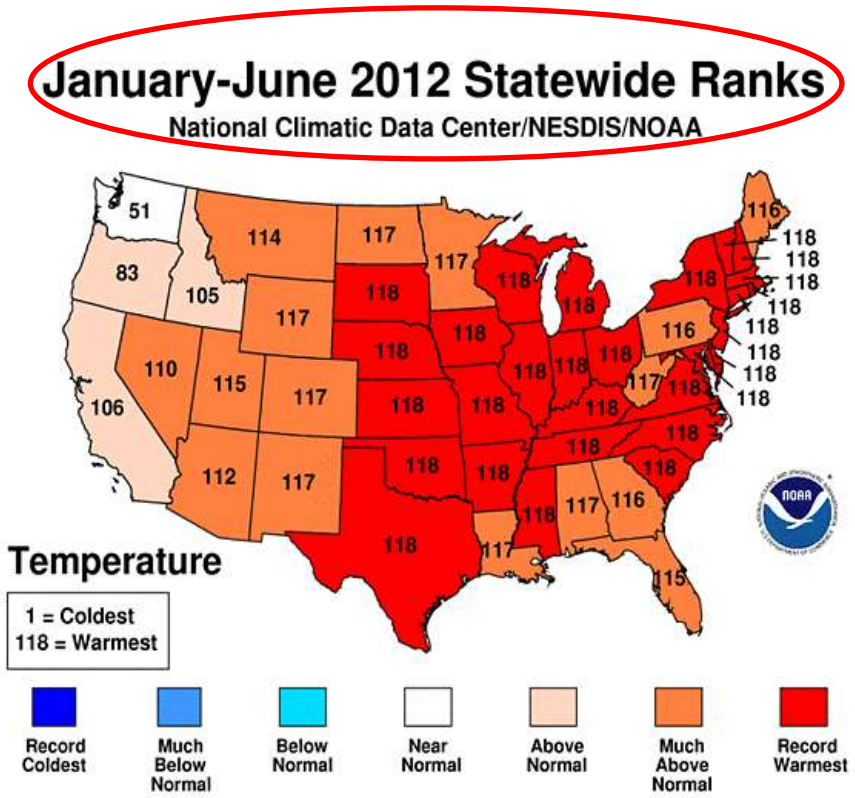
# Calendar Year to date Rankings



# Calendar Year to Date Rankings

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# Significant Events for June 2013

NOAA's National Climatic Data Center


The average U.S. temperature during June was 70.4°F, 2.0°F above average. The June U.S. precipitation total of 3.43 inches was 0.54 inch above average.

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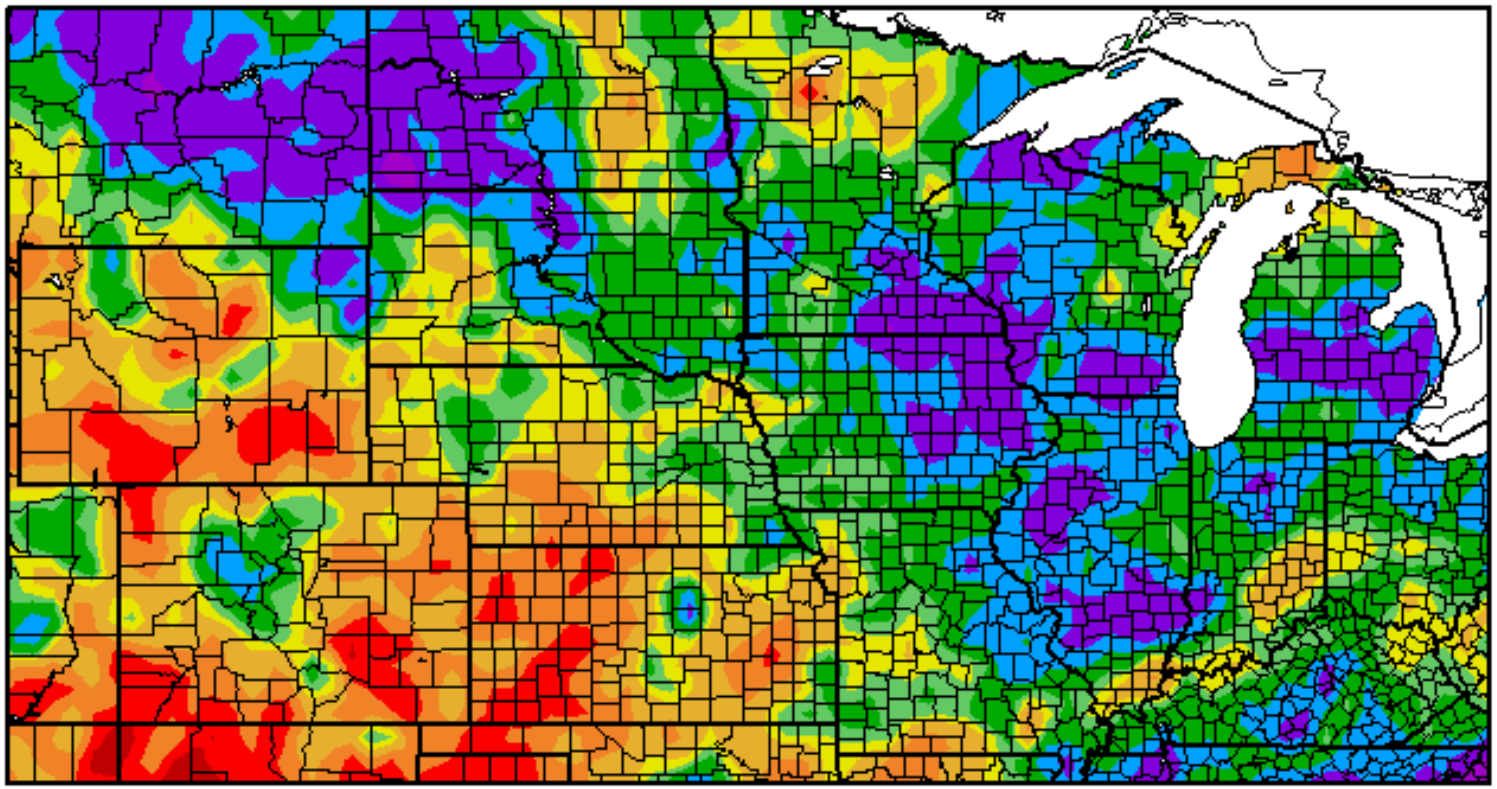
http://www.ncdc.noaa.gov/sotc/national

# 2013 Growing Season Conditions

http://www.hprcc.unl.edu/maps/current/

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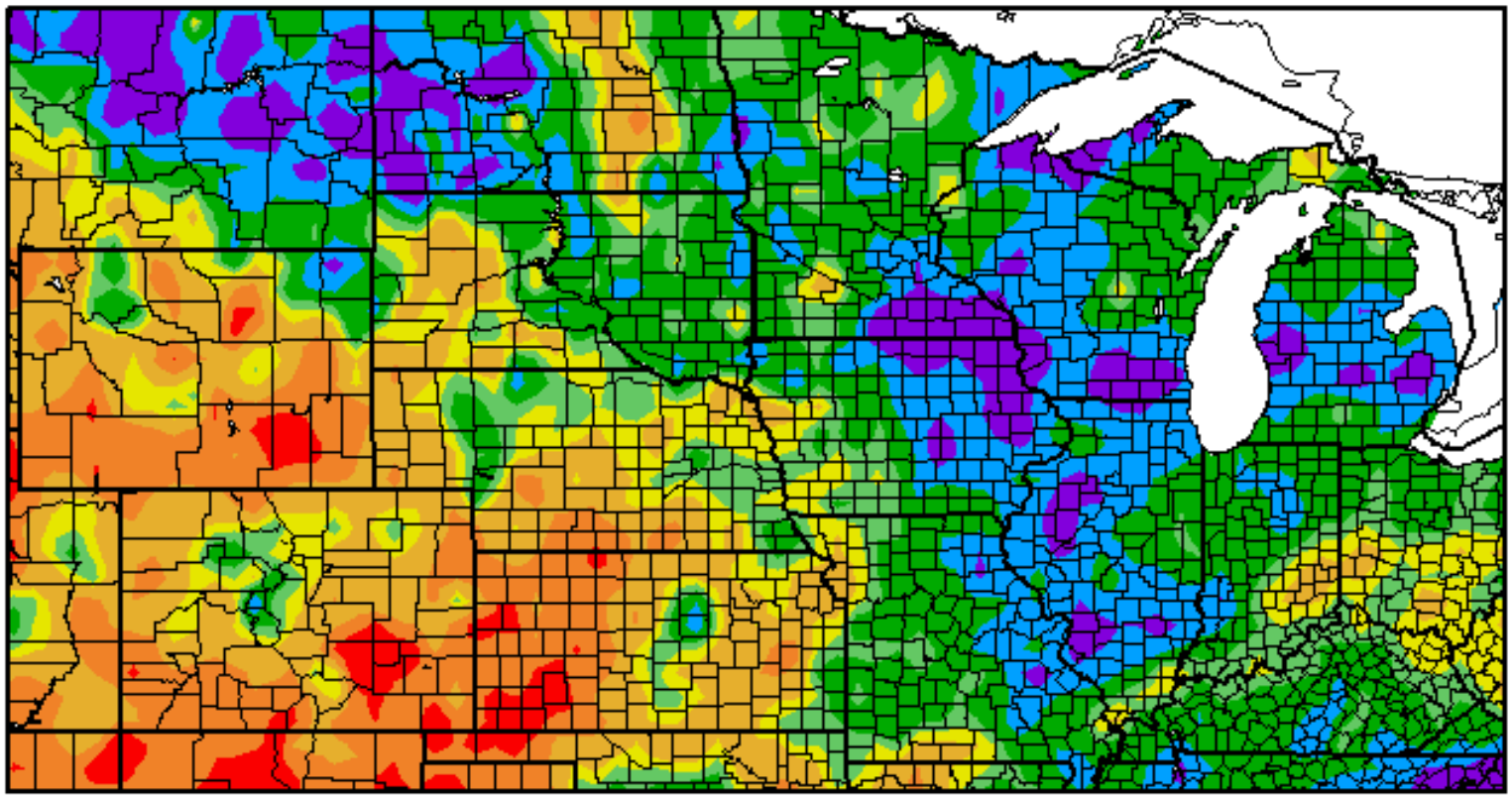
# Year to Date Precipitation

Percent of Normal Precipitation (%)
1/1/2013 – 7/16/2013



5 25 50 70 90 100 110 130 150 200 300

Generated 7/17/2013 at HPRCC using provisional data.

Regional Climate Centers

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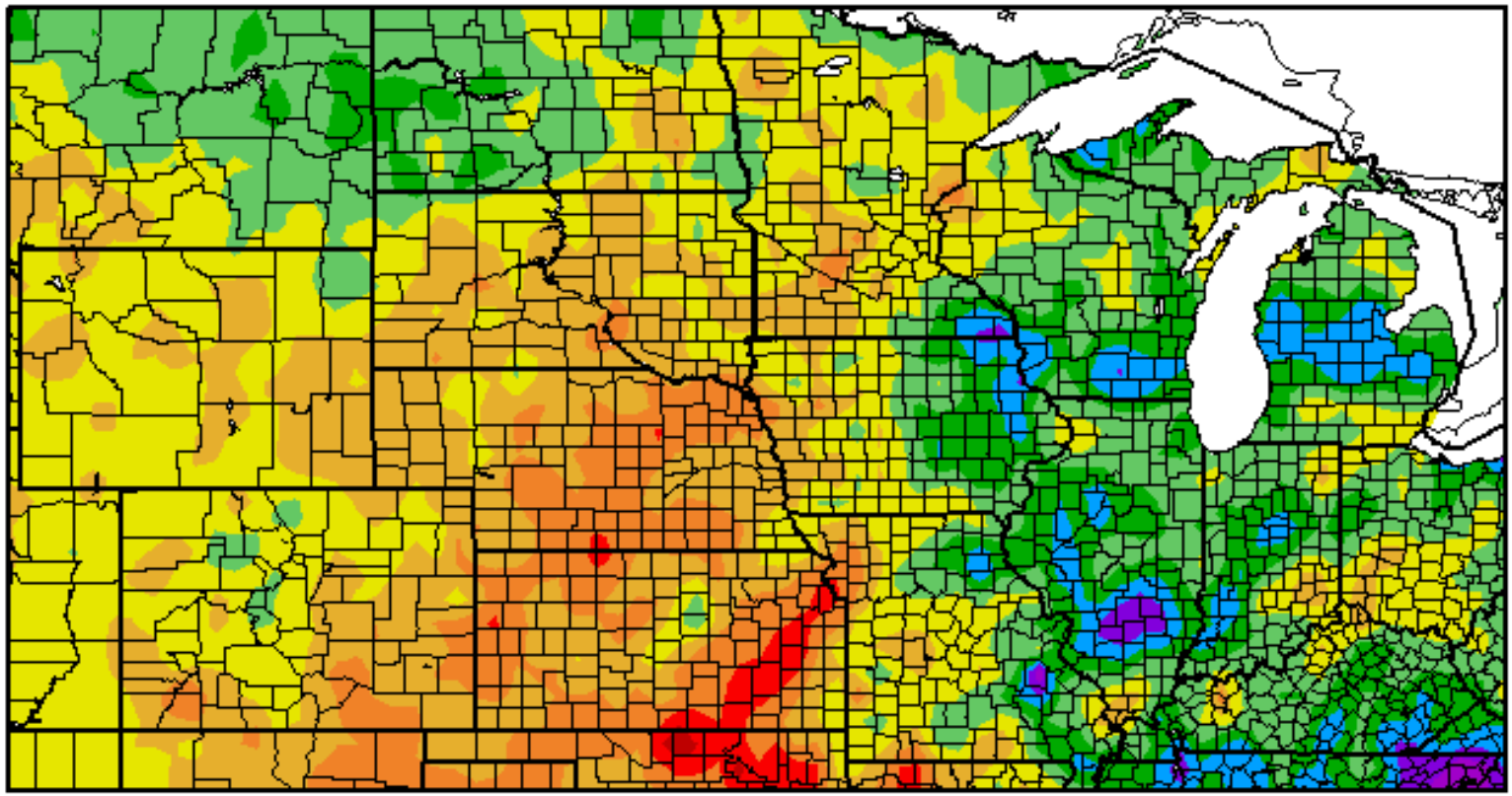
# 12 Month Departure from Normal

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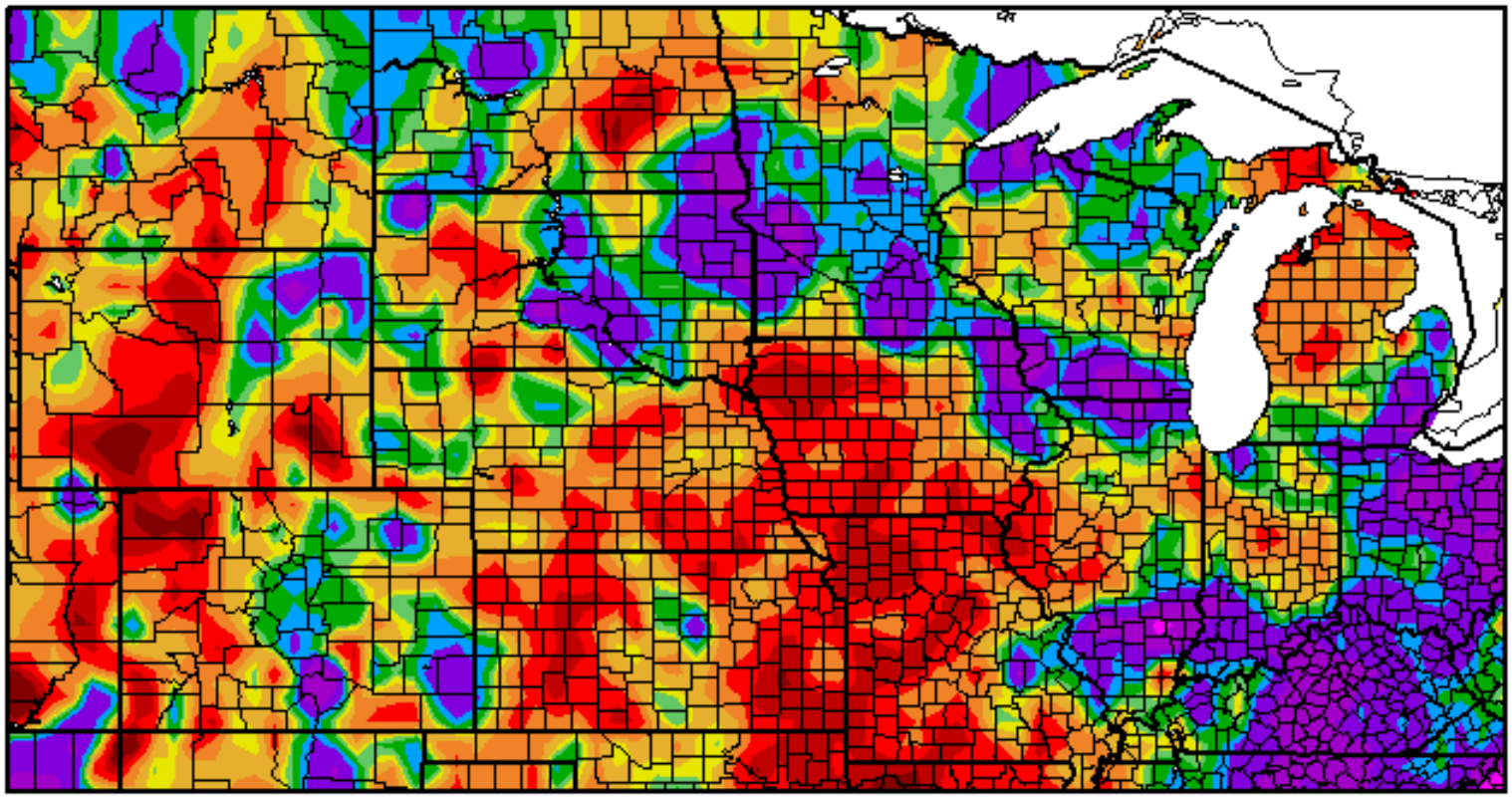
# Precipitation: Last 30 Days (ACIS)

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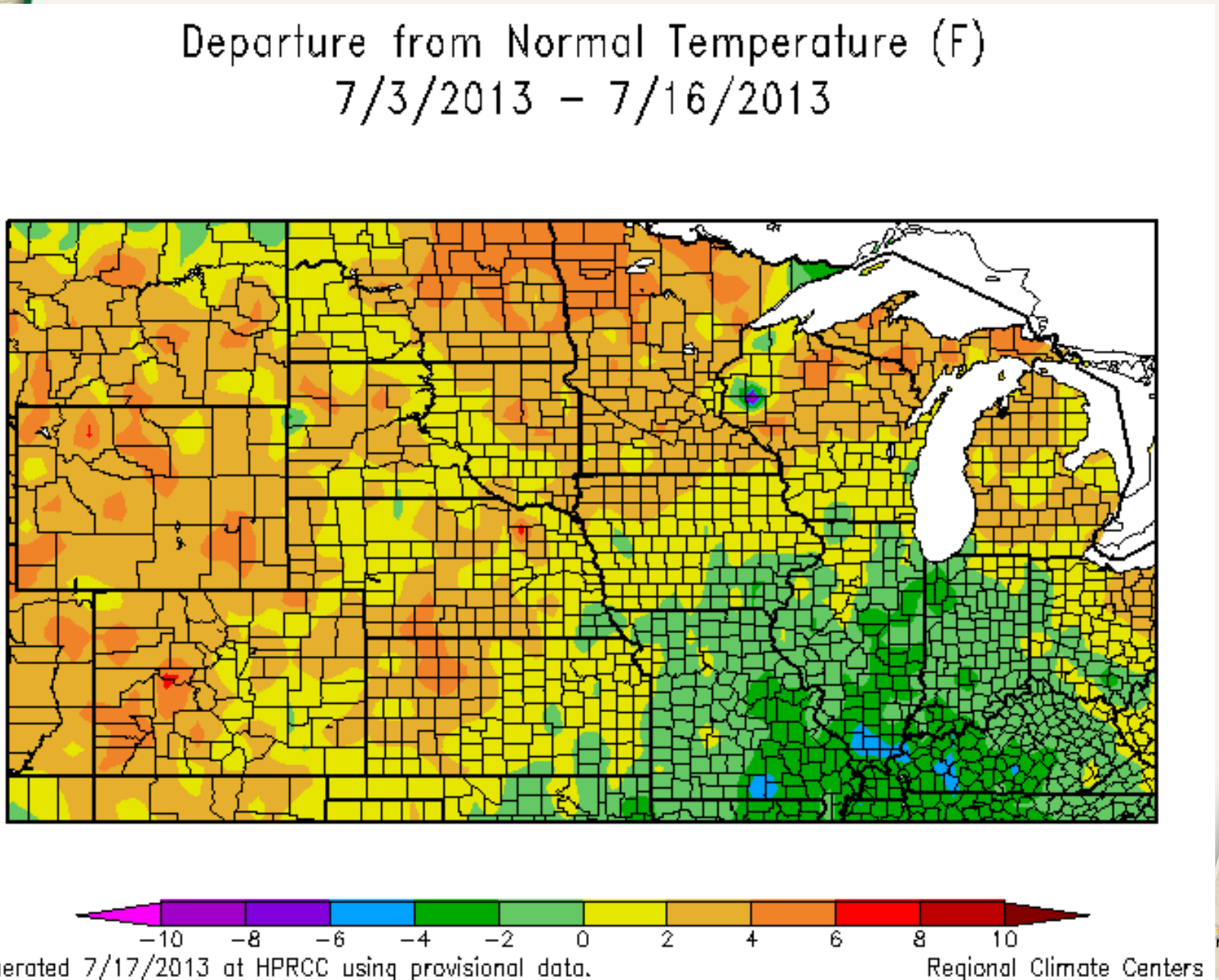
# Precipitation and Temperatures over the last 2 Weeks

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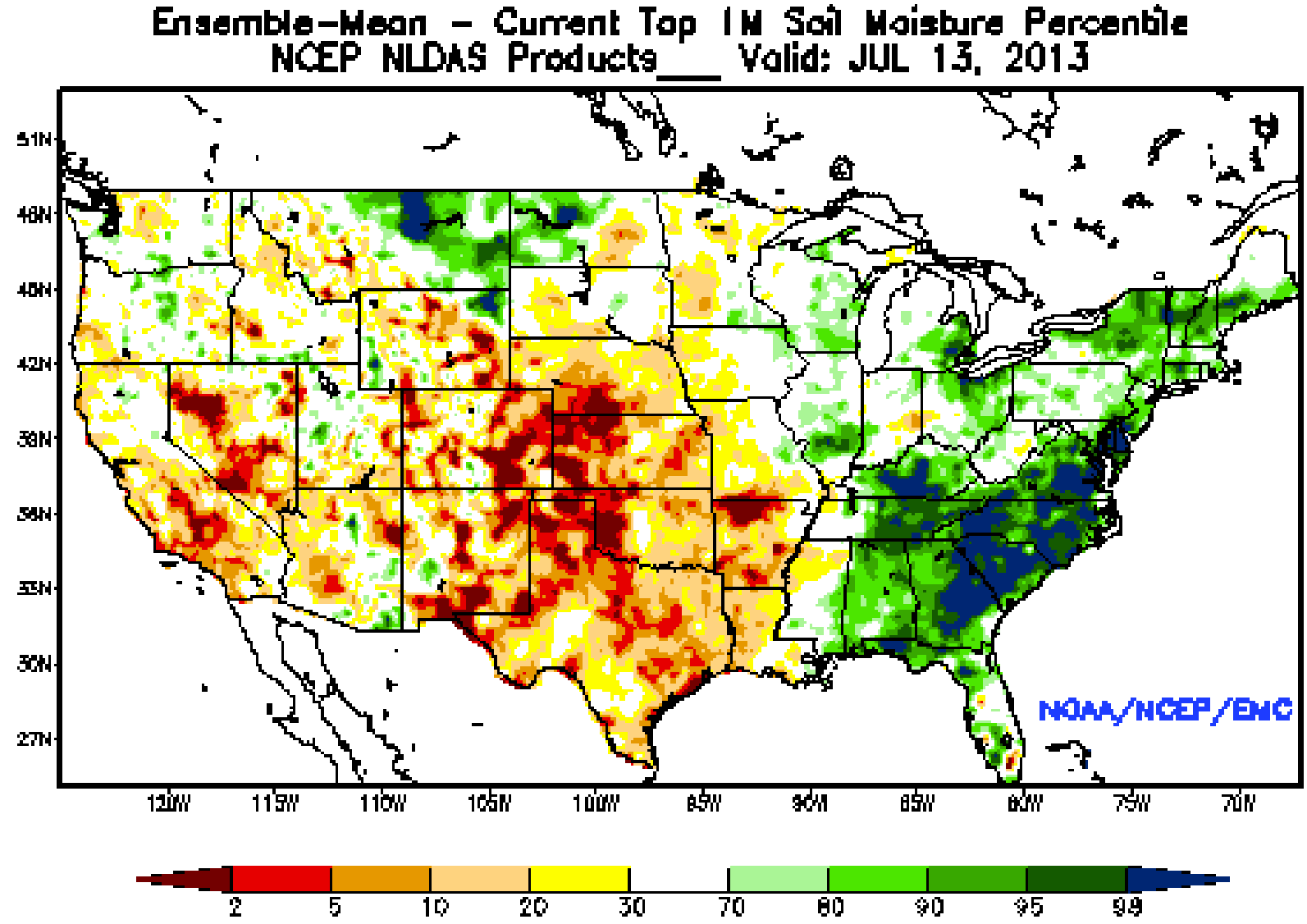
# Current Soil Moisture

http://www.emc.ncep.noaa.gov/mmb/nldas/drought/

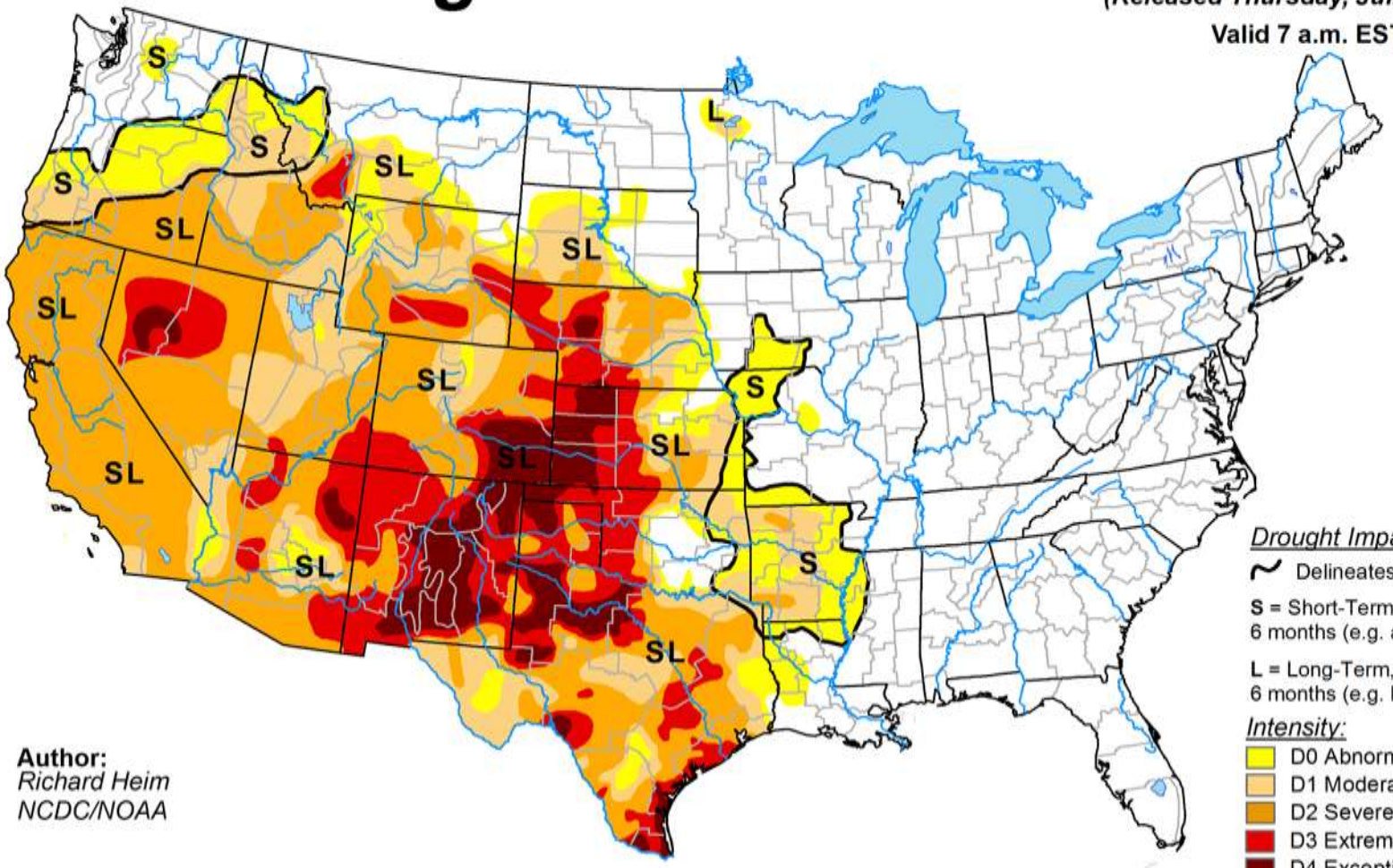


# U.S. Drought Monitor

**July 16, 2013**

*(Released Thursday, Jul. 18, 2013)*

Valid 7 a.m. EST




**Author:**
*Richard Heim*
*NCDC/NOAA*

*Drought Impact Types:*

~ Delineates dominant impacts

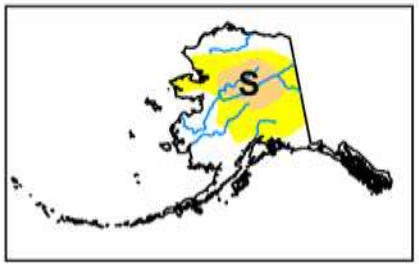
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

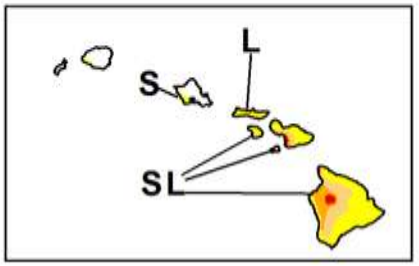
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

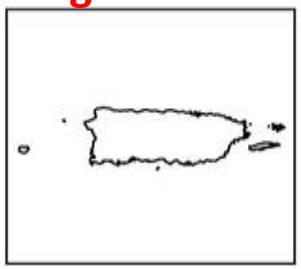
*Intensity:*

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

**46.13% of the U.S. in Drought**



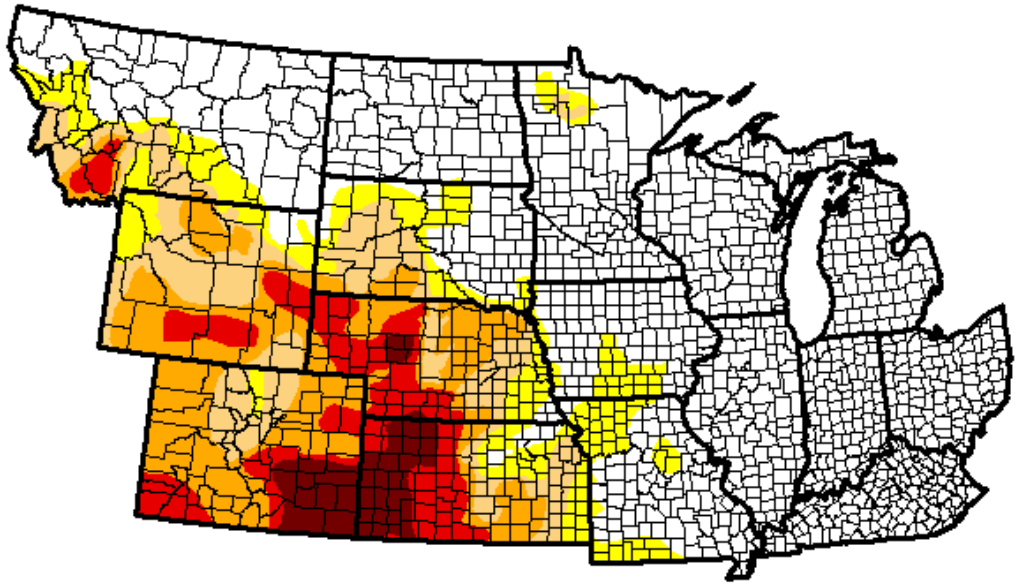
*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

USDA National Drought Mitigation Center

http://droughtmonitor.unl.edu/

*U.S. Drought Monitor*

# NWS Central Region



**July 16, 2013**
***(Released Thursday, Jul. 18, 2013)***
**Valid 7 a.m. EST**

*Drought Conditions (Percent Area)*

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|---|---|---|---|---|---|
| **Current** | 58.09 | 41.91 | 31.97 | 22.00 | 10.28 | 3.47 |
| **Last Week** *7/9/2013* | 61.29 | 38.71 | 31.37 | 21.80 | 10.70 | 3.54 |
| **3 Months Ago** *4/16/2013* | 39.07 | 60.93 | 51.22 | 37.29 | 19.89 | 2.99 |
| **Start of Calendar Year** *1/1/2013* | 19.52 | 80.48 | 69.04 | 53.41 | 30.85 | 11.96 |
| **Start of Water Year** *9/25/2012* | 6.17 | 93.83 | 80.70 | 58.61 | 33.97 | 10.86 |
| **One Year Ago** *7/17/2012* | 14.09 | 85.91 | 72.70 | 48.12 | 11.89 | 0.84 |

*Intensity:*

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

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

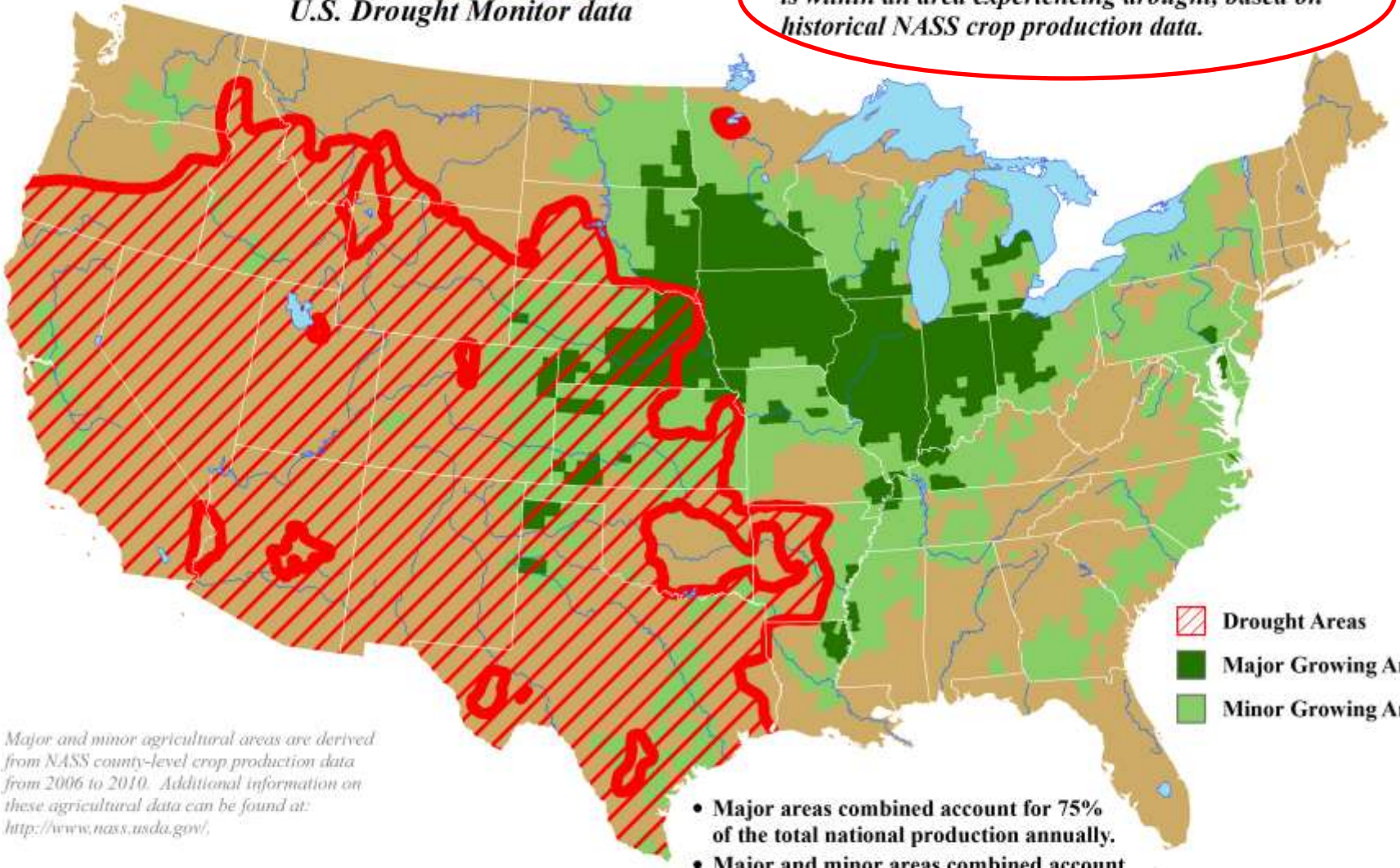
**Author:**
*Richard Heim*
*NCDC/NOAA*

**http://droughtmonitor.unl.edu/**

# U.S. Corn Areas Experiencing Drought

*Reflects July 16, 2013*
*U.S. Drought Monitor data*

*Approximately 17% of the corn grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.*




*Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.*

- **Major areas combined account for 75% of the total national production annually.**
- **Major and minor areas combined account for 99% of the total national production annually.**

*Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.*

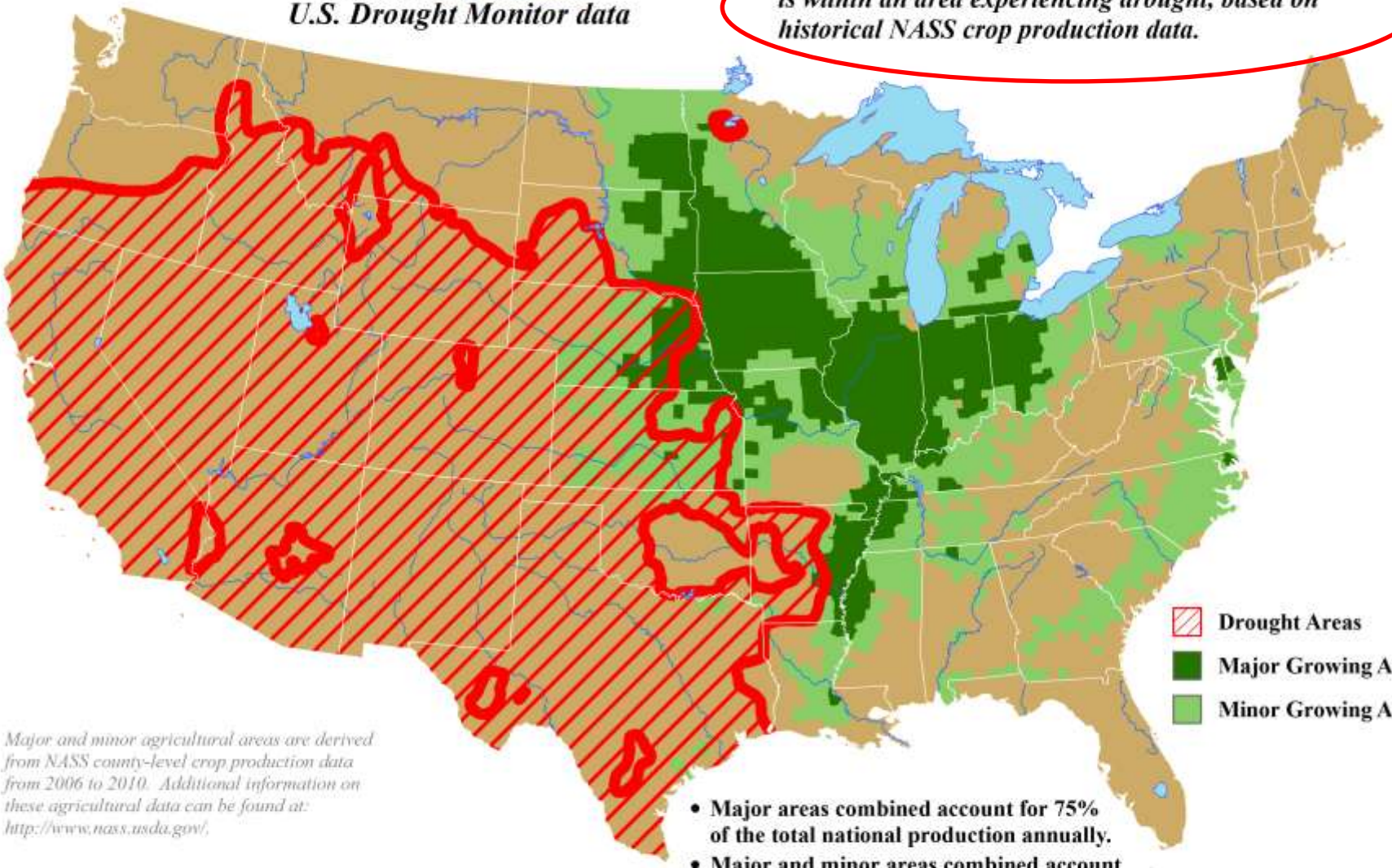
USDA **Agricultural Weather Assessments**
**World Agricultural Outlook Board**

http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf

# U.S. Soybean Areas Experiencing Drought

*Reflects July 16, 2013*
*U.S. Drought Monitor data*

*Approximately 9% of the soybeans grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.*




*Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.*

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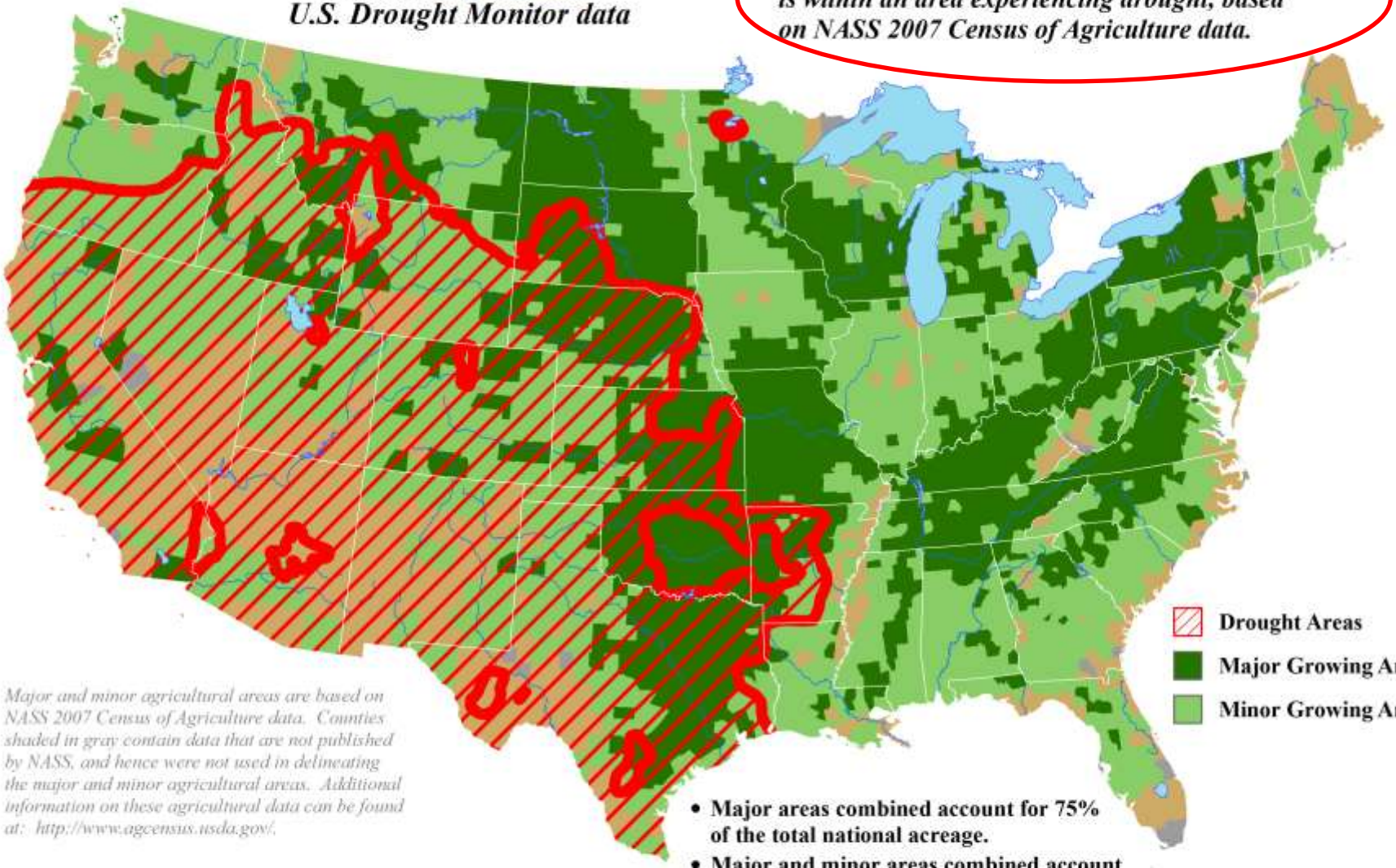
**World Agricultural Outlook Board**

# U.S. Hay Areas Experiencing Drought

*Reflects July 16, 2013*
*U.S. Drought Monitor data*

*Approximately 35% of the domestic hay acreage is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.*




*Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agcensus.usda.gov/.*

- **Major areas combined account for 75% of the total national acreage.**
- **Major and minor areas combined account for 99% of the total national acreage.**

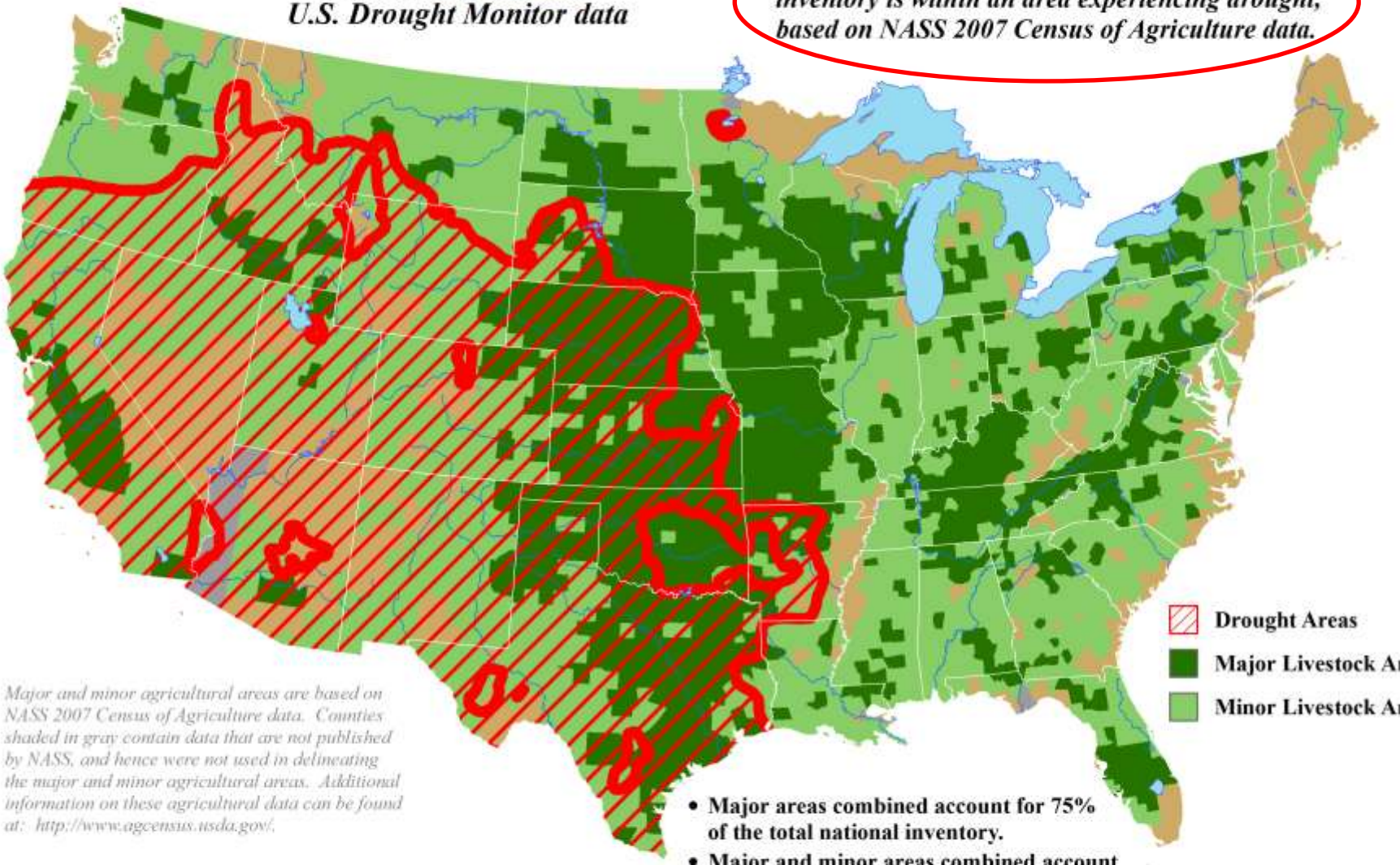
*Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.*

USDA **Agricultural Weather Assessments**
**World Agricultural Outlook Board**

# U.S. Cattle Areas Experiencing Drought

*Reflects July 16, 2013*
*U.S. Drought Monitor data*

*Approximately 48% of the domestic cattle inventory is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.*




- **Major areas combined account for 75% of the total national inventory.**
- **Major and minor areas combined account for 99% of the total national inventory.**

*Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agcensus.usda.gov/.*

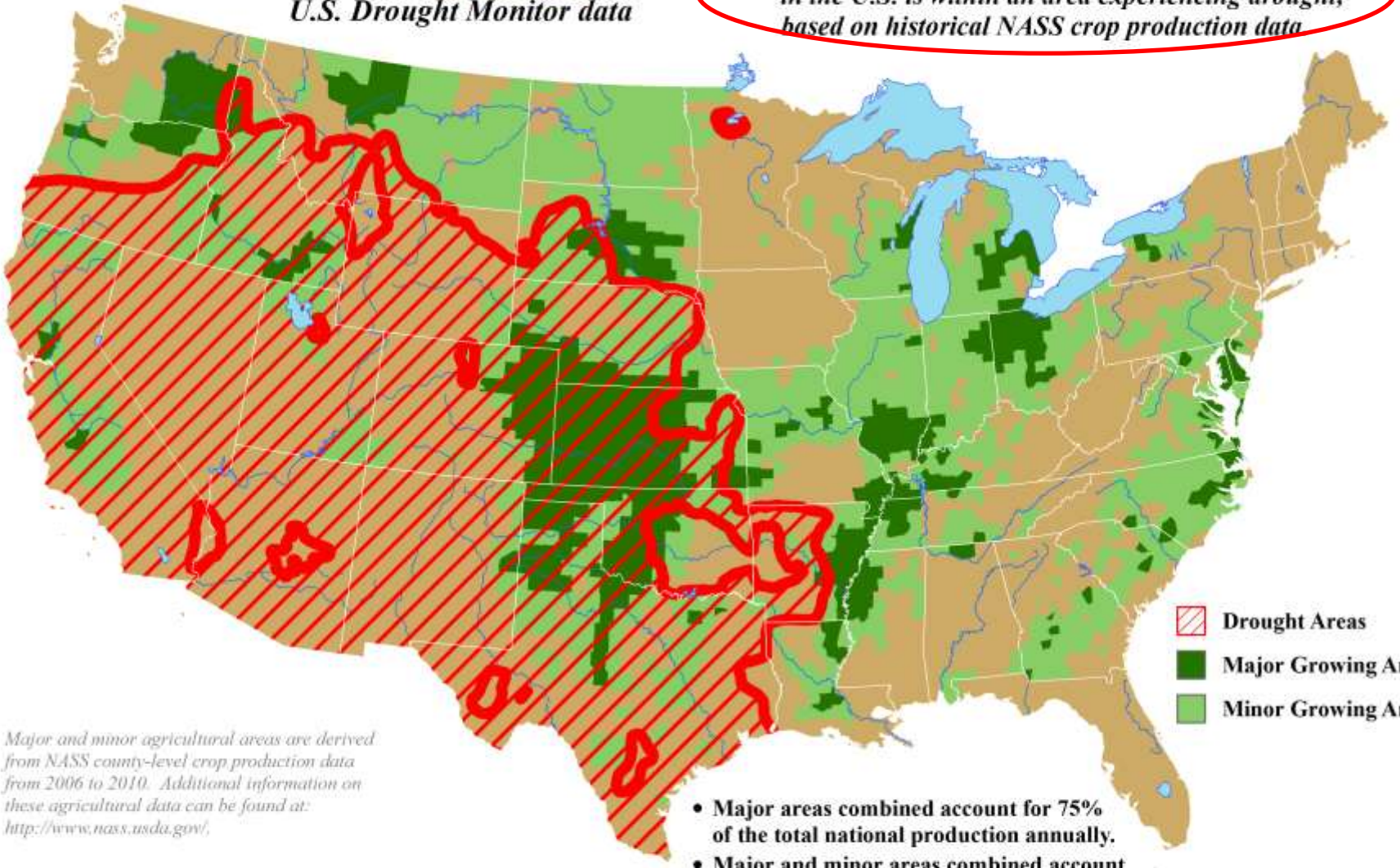
*Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.*

USDA Agricultural Weather Assessments
World Agricultural Outlook Board

# U.S. Winter Wheat Areas Experiencing Drought

*Reflects July 16, 2013*
*U.S. Drought Monitor data*

*Approximately 48% of the winter wheat grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data*




- **Major areas combined account for 75% of the total national production annually.**
- **Major and minor areas combined account for 99% of the total national production annually.**

*Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.*

*Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://droughtmonitor.unl.edu/.*

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**World Agricultural Outlook Board**

# Regional Climatic Impacts

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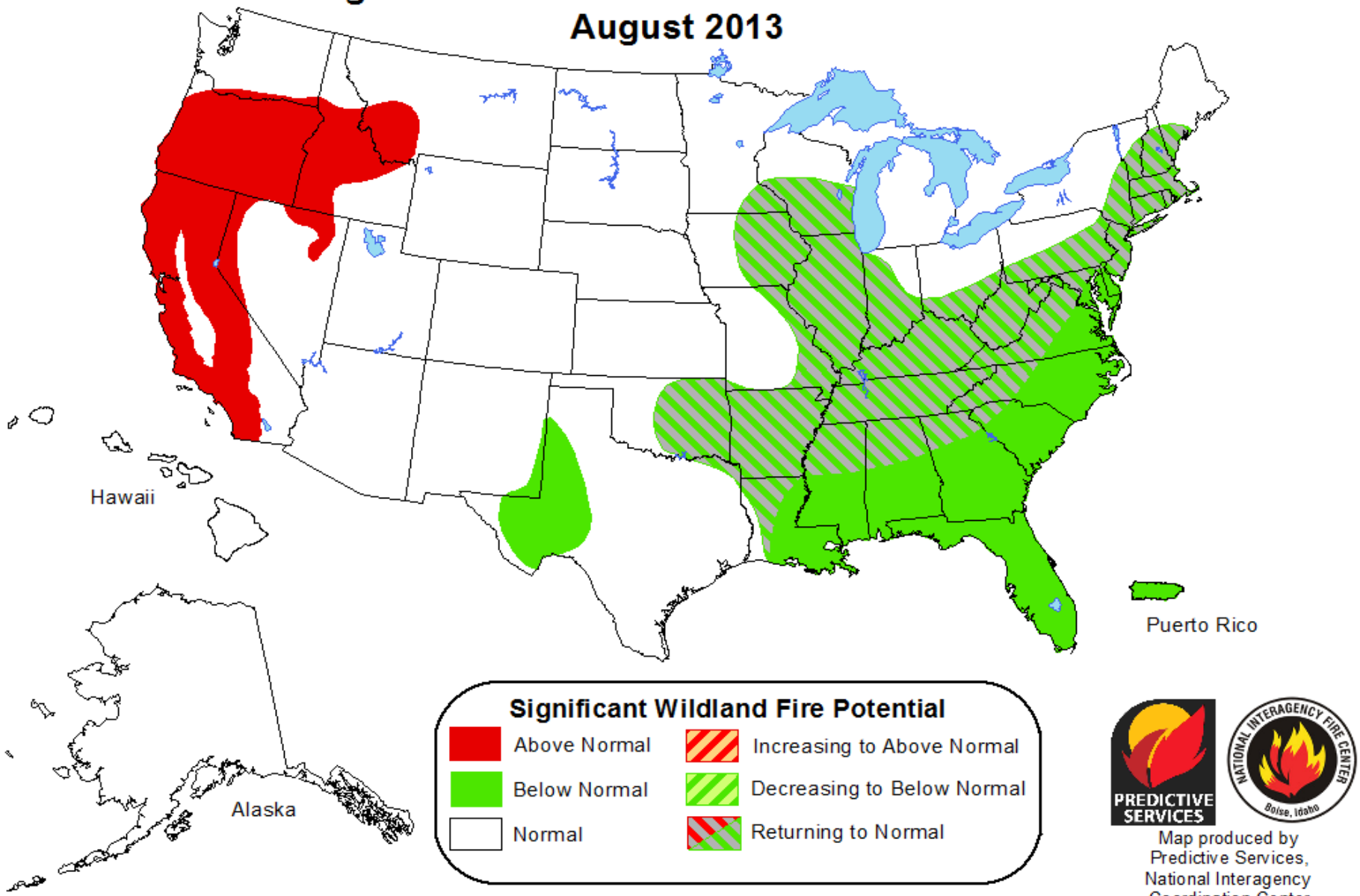
# Significant Wildland Fire Potential Outlook
## August 2013




Above normal significant wildland fire potential indicates a higher than usual likelihood that wildland fires will occur and/or become significant events. Wildland fires are still expected to occur during forecasted normal conditions as would usually be expected.

Map produced by Predictive Services, National Interagency Coordination Center
Boise, Idaho
Issued July 1, 2013
Valid August 1, 2013

http://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf

# Colorado Drought Response Tools

## http://www.coh2o.co/

2013 COLORADO STATEWIDE DROUGHT RESPONSE

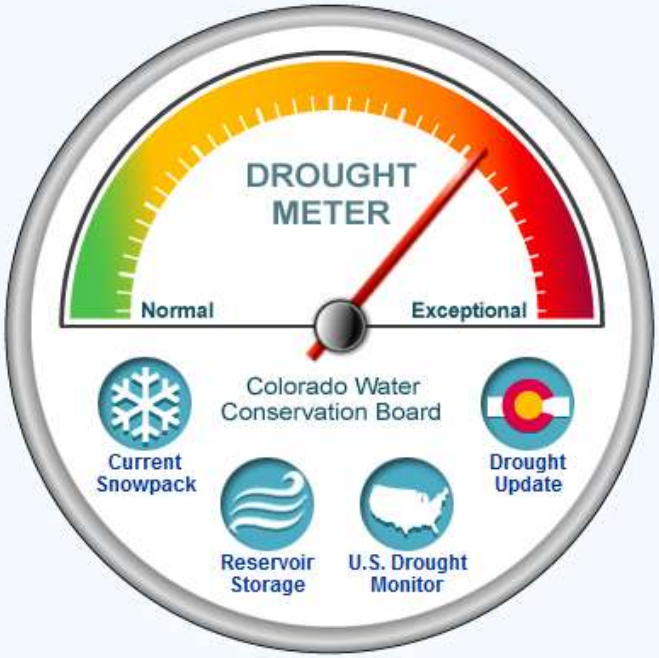
# Colorado Drought Response

***Welcome to Colorado's Drought Response Portal***

Many communities throughout Colorado are currently experiencing below normal precipitation and below average reservoir storage; which can impact water supplies, our natural environments, and society. As a result of persistent dry conditions Governor Hickenlooper has activated the State's Drought Response and Mitigation Plan to ensure that the state is doing everything possible to address drought related impacts.

Many local communities have also implemented drought response measures. For more information on the measures and restrictions in place in your specific community please enter your zip code below.

This website serves to provide information to the citizens of Colorado regarding the 2013 statewide drought response.




**Search Water Restrictions**

**by city, county, or zipcode**

Maintaining Healthy Landscapes During Drought

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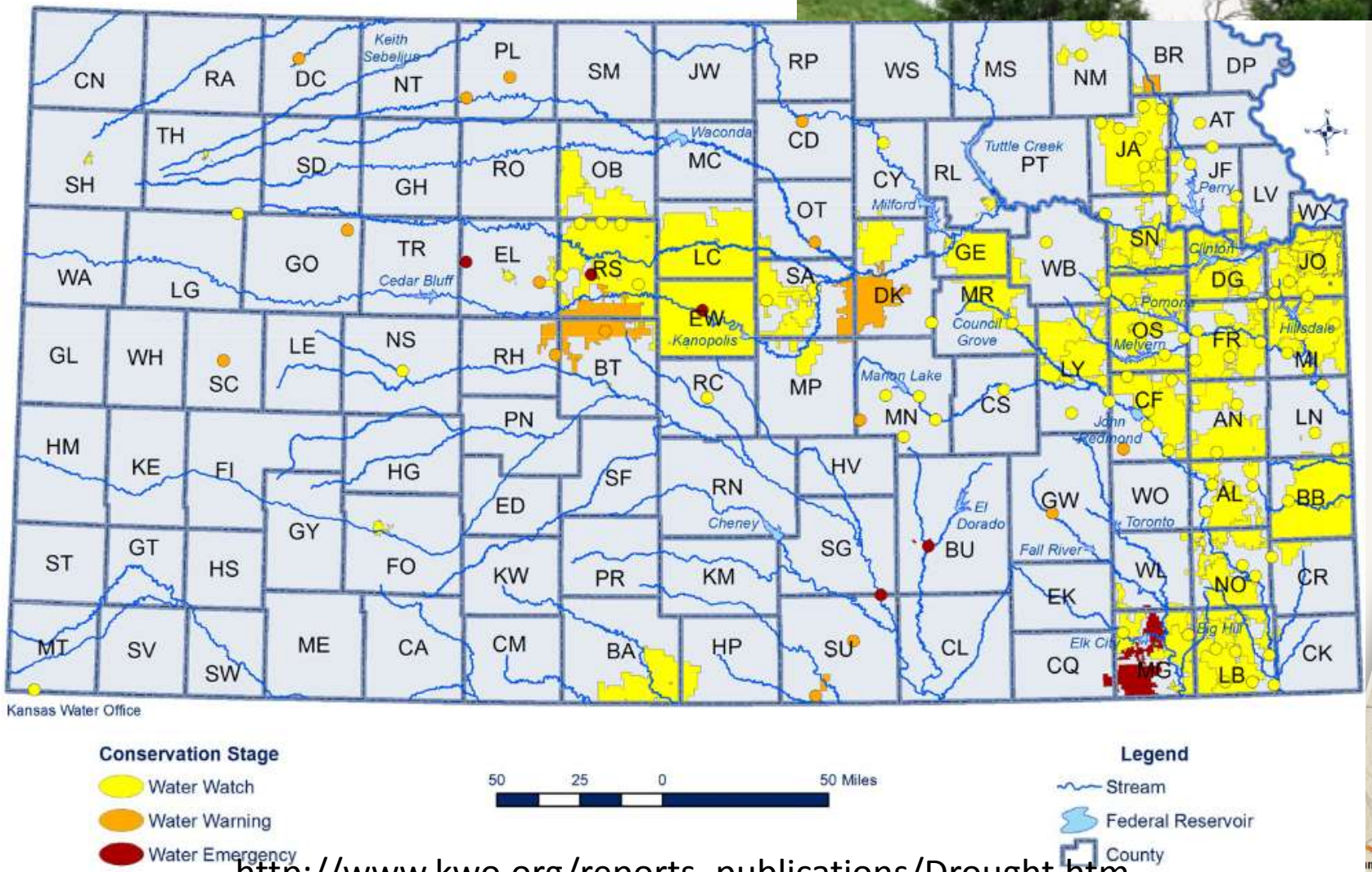
# Kansas Water Conservation




http://www.kwo.org/reports_publications/Drought.htm

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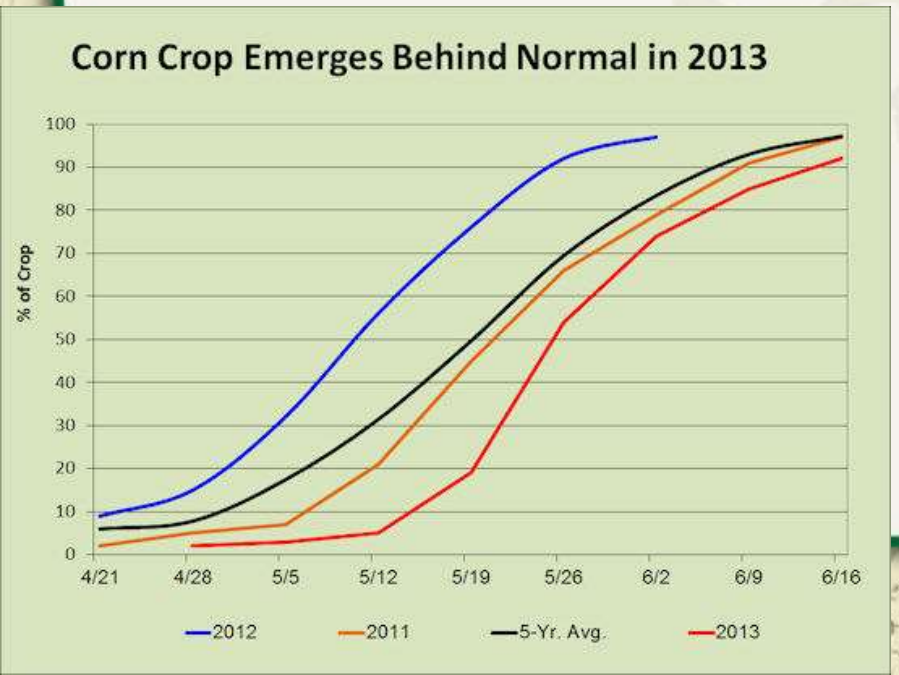
# Nebraska Cattle Deaths

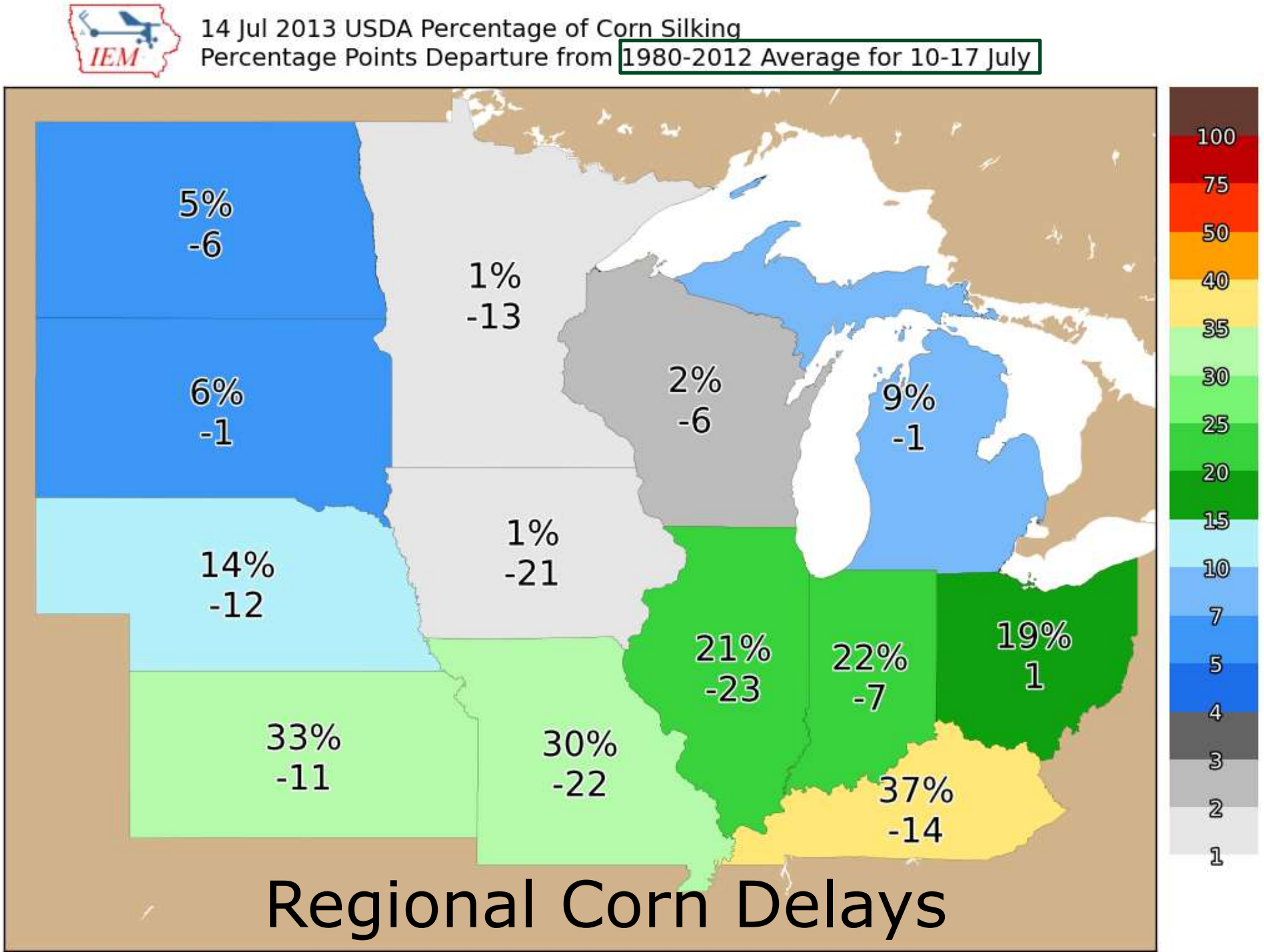
- **July 9, 2013:** A catastrophic loss of cattle on feed here in the Platte Valley area centering around Columbus. It was ***heat related***. Specifically the death loss area seems to be a narrow band from 1 to 9 miles wide going from about Stromsburg – to the NE to about 10 miles ENE of Columbus. Estimated losses is something higher than 3000 head. The animals started suffering at about noon – with most of the death loss from 2 p.m. to 6:00 p.m. that day. It was hot with little or no air movement. It was humid.

# Illinois: Impact from too much rain

- **Spring rain washes debris into Lake Springfield:** The rain has washed an inordinate amount of limbs and even whole trees into the lake that could pose a danger to boaters or swimmers.
  Read more: http://www.sj-r.com/top-stories/x946745746/Spring-rains-wash-debris-into-Lake-Springfield#ixzz2ZJrnpMVX

- Delays in planting/crop development:





14 Jul 2013 USDA Percentage of Corn Silking
Percentage Points Departure from 1980-2012 Average for 10-17 July
5%
-6
1%
-13
6%
-1
2%
-6
9%
-1
1%
-21
14%
-12
21%
-23
22%
-7
19%
1
33%
-11
30%
-22
37%
-14
100
75
50
40
35
30
25
20
15
10
7
5
4
3
2
1
Regional Corn Delays

# Missouri Thistle Problems

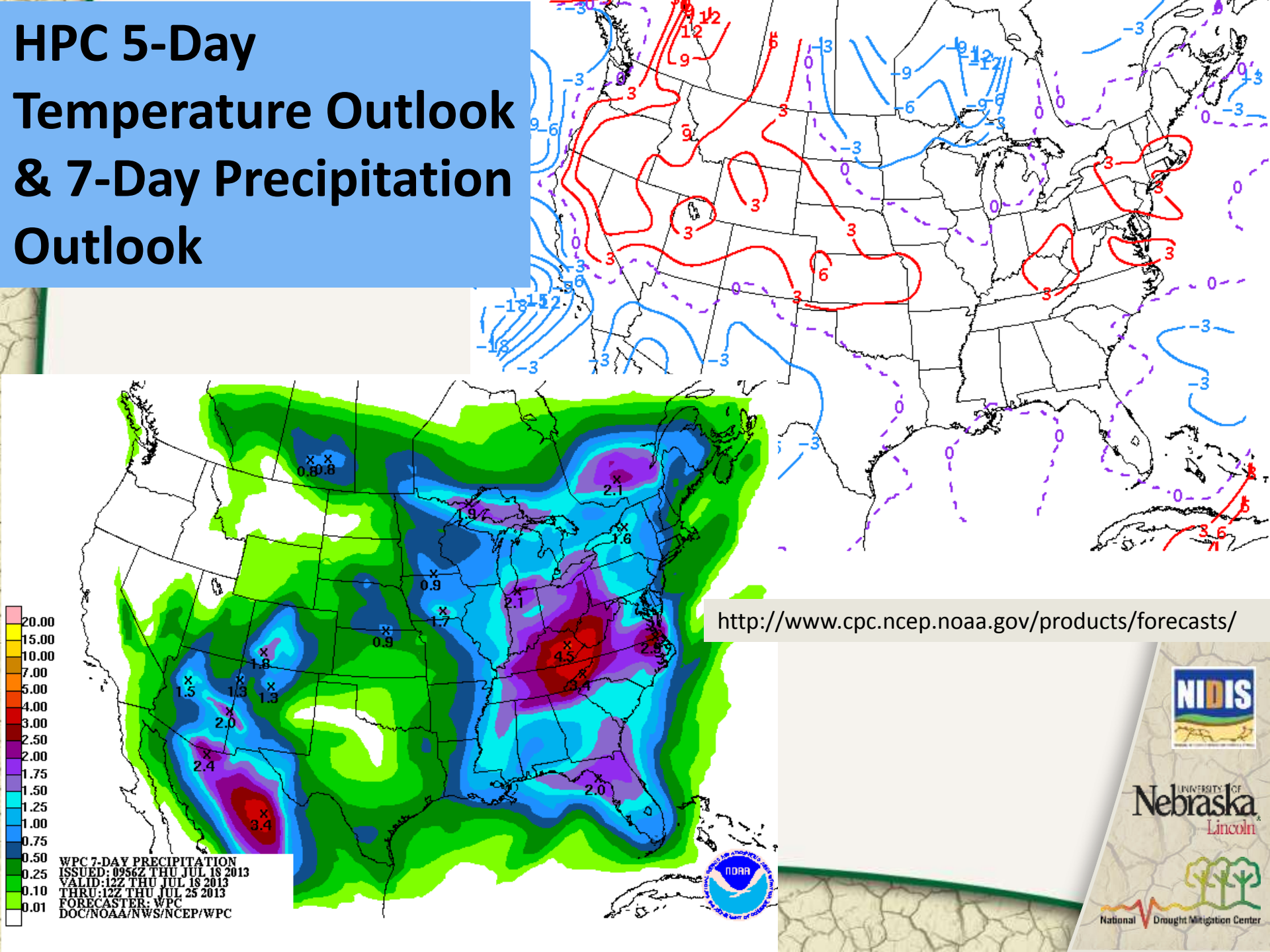
- Musk and bull thistles have proliferated around Galena after drought in 2012 stressed and thinned out grasses. An agronomy specialist with University of Missouri Extension reported, “Many tracts of land in southwest Missouri are inundated with heavy populations of musk and bull thistles.

# Wisconsin Hay Problems

- Drought in 2012 and too much rain in 2013 have forced some livestock producers and dairy farmers to sell their herds as the producers run out of hay. Cattle sales at the Equity Cooperative Livestock Sales Association in Stratford have been even higher this year than it was last year during drought, stated one of its managers.

Lacrosse Tribune (Wis.), July 8, 2013

# HPC 5-Day Temperature Outlook & 7-Day Precipitation Outlook




http://www.cpc.ncep.noaa.gov/products/forecasts/

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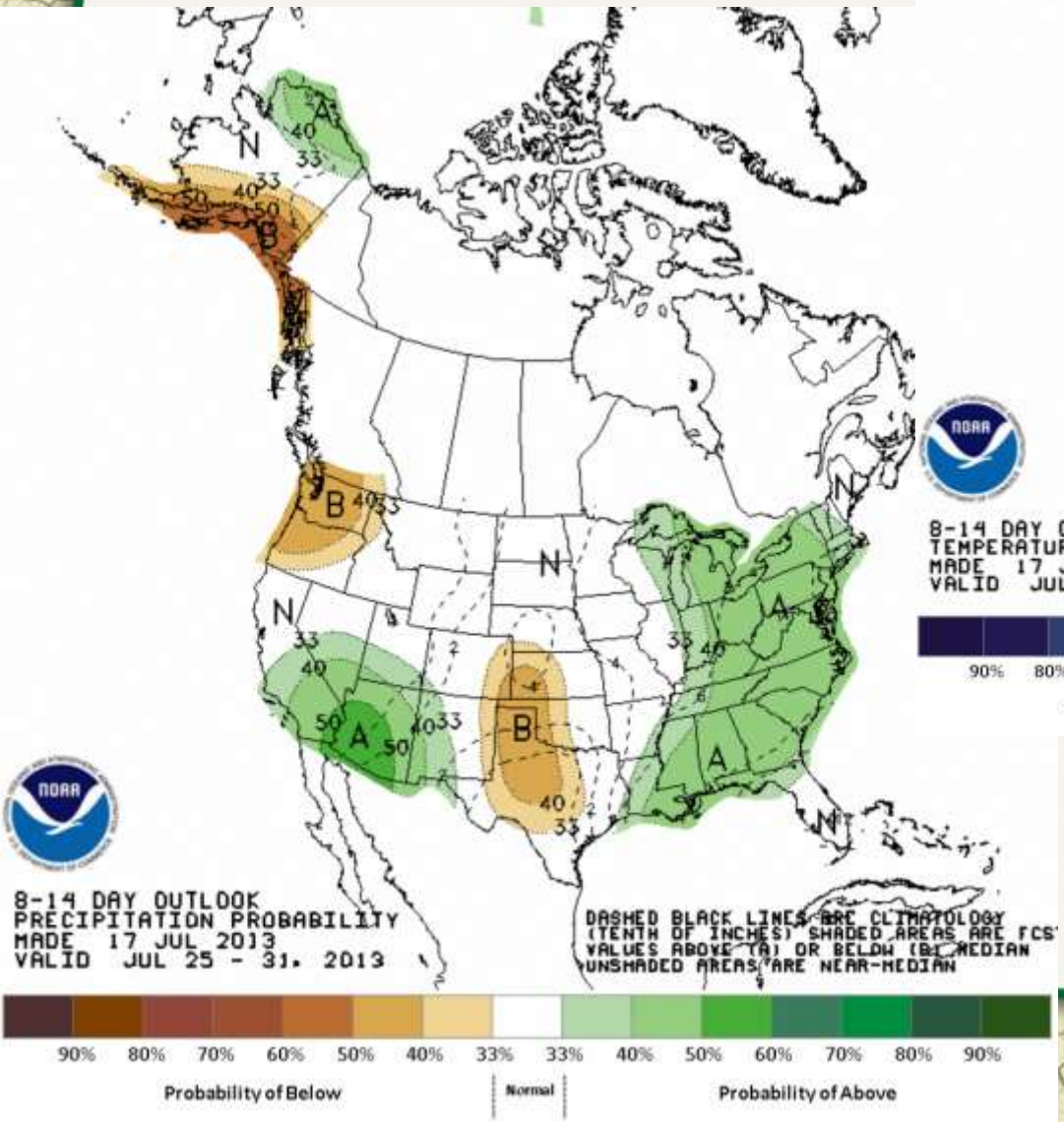
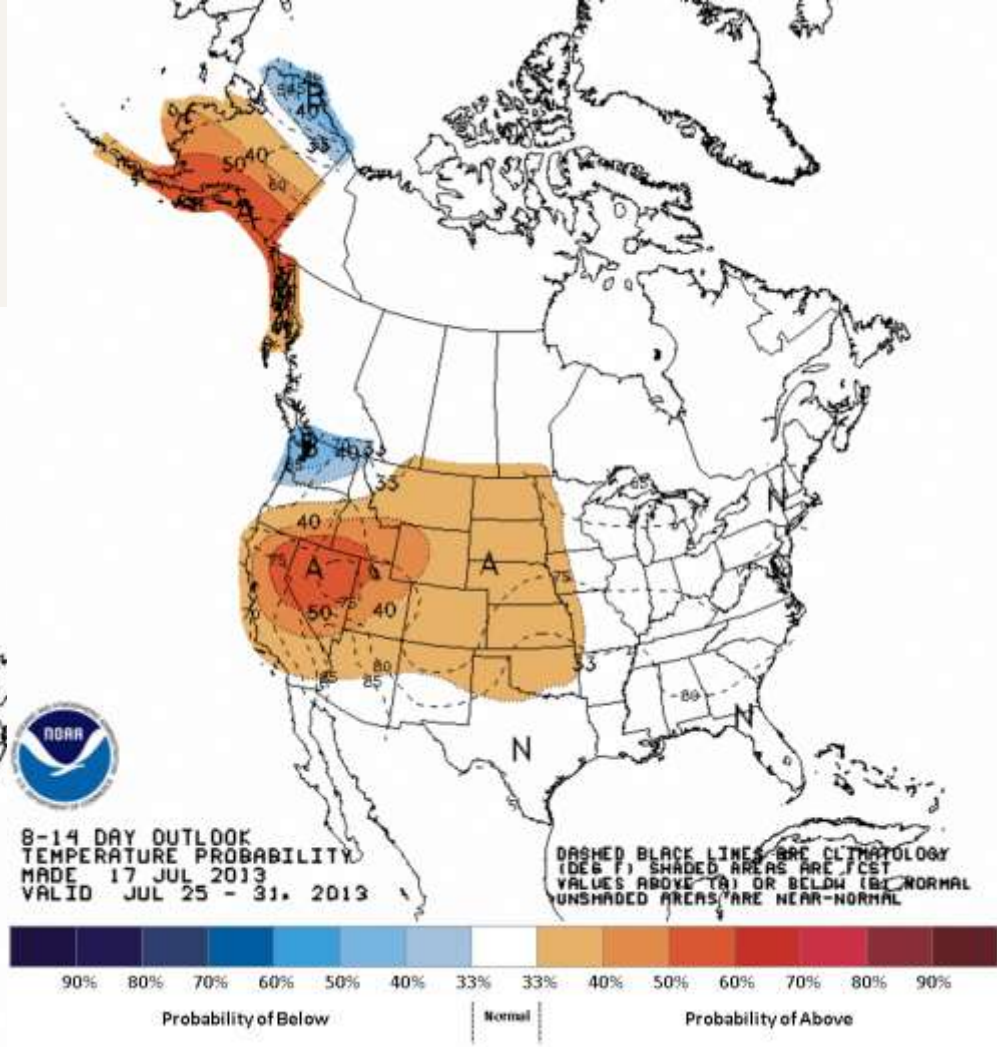
# CPC 8-14-Day Outlooks

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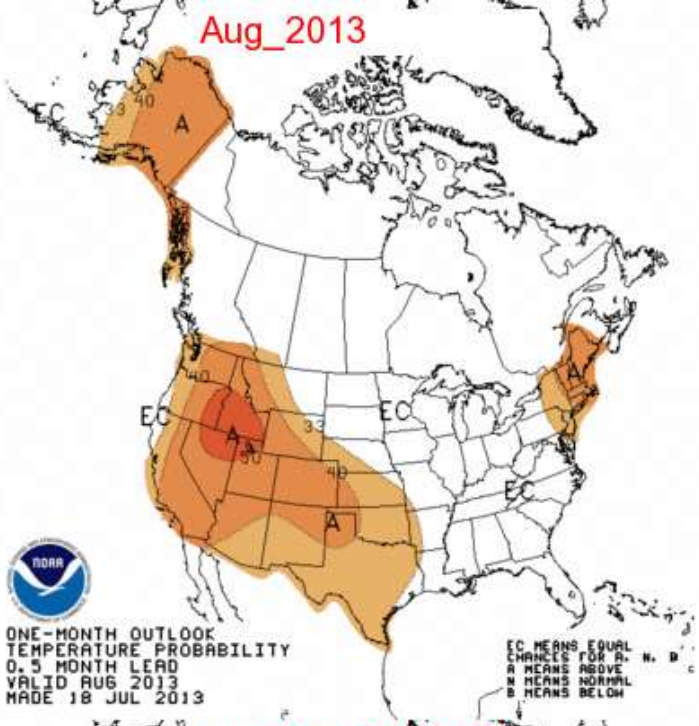
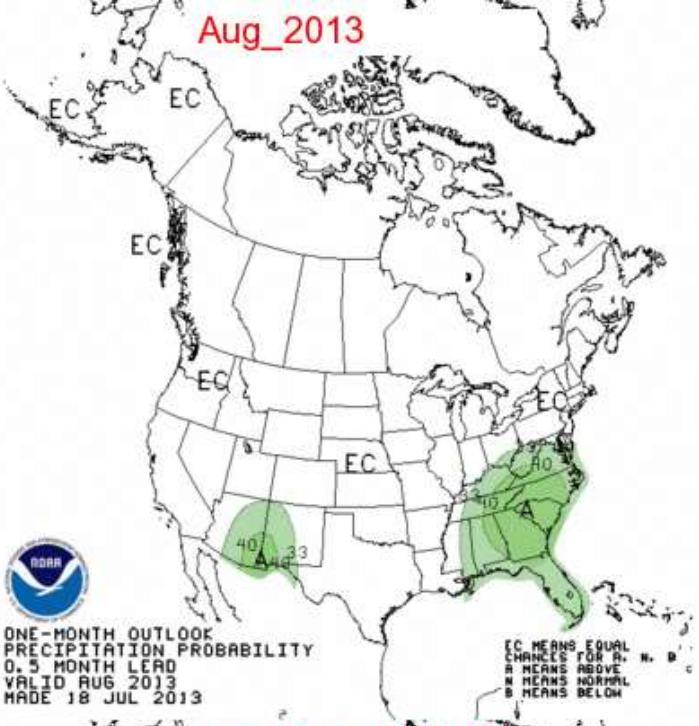
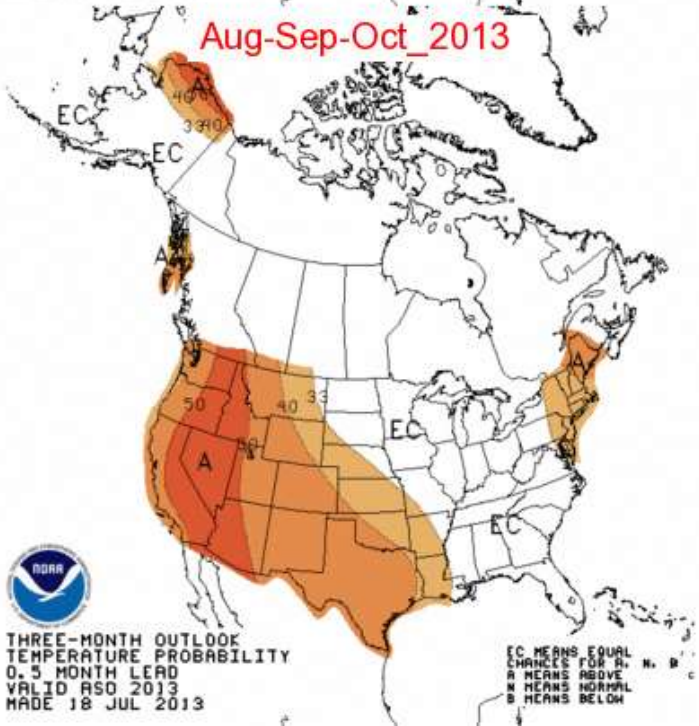
Aug_2013



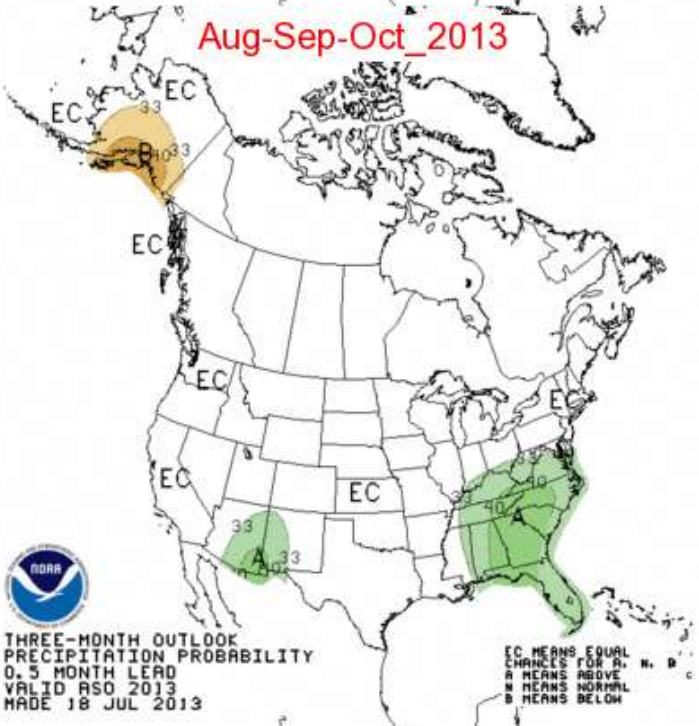

Aug_2013




Aug-Sep-Oct_2013




Aug-Sep-Oct_2013




NIDIS

University of Nebraska Lincoln

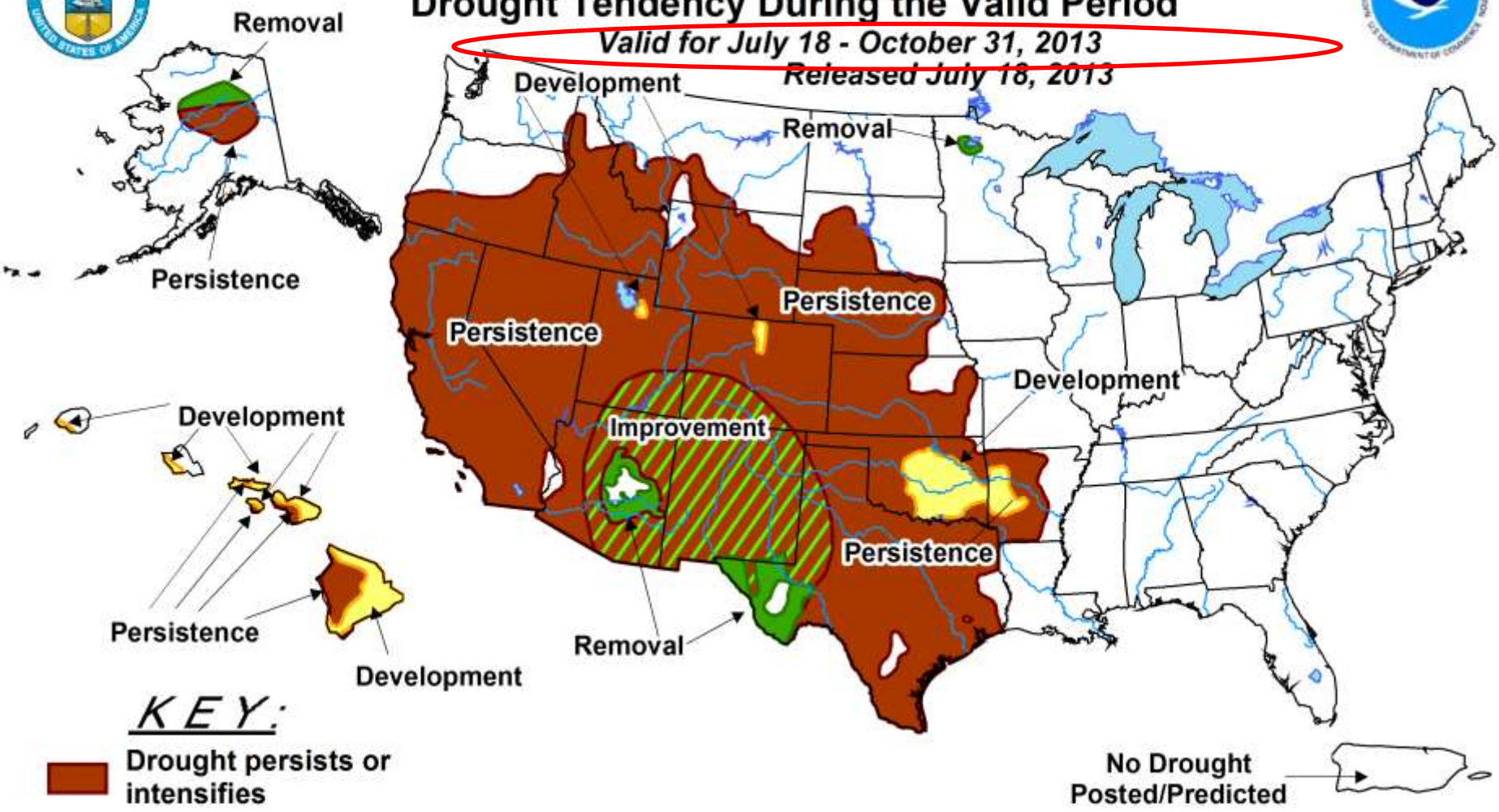
National Drought Mitigation Center

# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period

*Valid for July 18 - October 31, 2013*

*Released July 18, 2013*




KEY:

- Drought persists or intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by 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. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor.

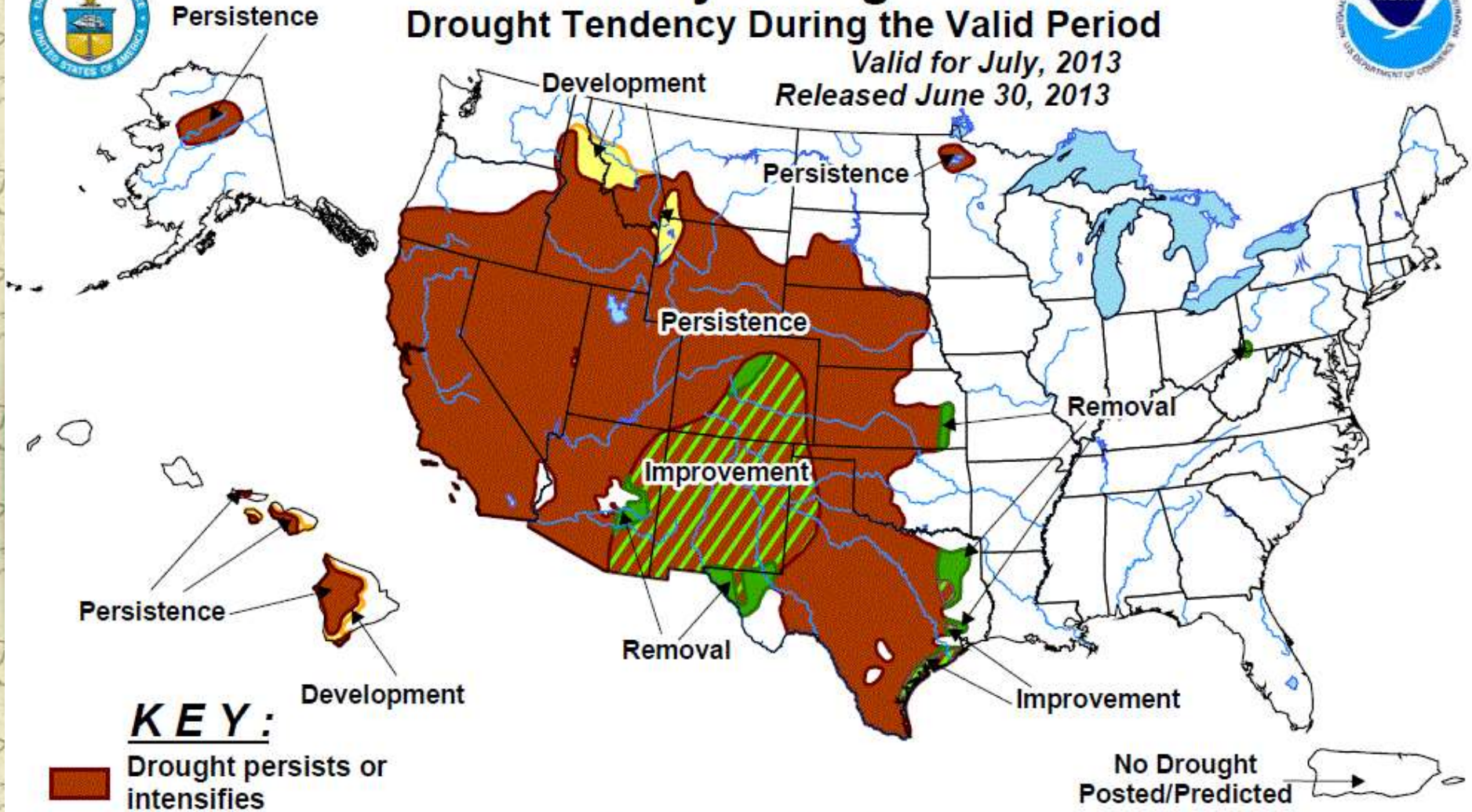
NOTE: The Green and Brown hatched areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain. The Green areas imply drought removal by the end of the period (D0 or none)

# U.S. Monthly Drought Outlook

## Drought Tendency During the Valid Period

*Valid for July, 2013*

*Released June 30, 2013*




***KEY:***

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# Summary

- After a wet spring and early start to summer, many areas in the region have dried out.
- Planting delays due to excessive moisture have also impacted the progression of crops in the region.
- Due to limited root development on plants in areas that were very wet this spring/ early summer, stress may become a concern as temperatures increase and these areas dry out.
- Temperatures in 2013 are in stark contrast to the record setting heat in 2012.

# Further Information

**Today's Recorded Presentation:**

- *http://mrcc.isws.illinois.edu/webinars.htm*
  *http://www.hprcc.unl.edu*

- NOAA's National Climatic Data Center: www.ncdc.noaa.gov
  - Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov
- Climate Portal: www.climate.gov
- U.S. Drought Monitor: www.droughtmonitor.unl.edu
- National Drought Mitigation Center: www.drought.unl.edu
- Drought Impact Reporter: www.droughtreporter.unl.edu
- NIDIS Drought Portal: www.drought.gov
- State climatologists
  - http://www.stateclimate.org
- Regional climate centers
  - http://mrcc.isws.illinois.edu
  - http://www.hprcc.unl.edu

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