

Central Region Drought Outlook

15 November 2012

Des Moines River near Boone, IA
Oct. 2012
Douglas Todey photo

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General Information

- * **Providing climate services to the Central Region**

- * Collaboration with Dennis Todey (South Dakota State Climatologist), Doug Kluck (NOAA - RCSD) and John Eise (Climate Service Program Manager), State Climatologists and the Midwest Regional Climate Center, High Plains Regional Climate Center, NOAAs Climate Prediction Center, National Drought Mitigation Center, Iowa State University

- * **Next Climate/Drought Outlook Webinar**

- * December 20th, 2012 (1 PM CST)
- * Hosted by (Brian Fuchs - NDMC)

- * **Access to Climate/Drought Webinars and information**

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

- * **Operator Assistance for questions at the end**

Agenda

- * **Current conditions & historical context**
- * **Current impacts**
- * **Predictions**
- * **Questions/Comments**

Pierre, SD – October 2012
Author photo



Key Points

* **Current Conditions**

- * Improved conditions in the eastern corn belt
- * Lack of recovery still in the plains generally
- * Colder temperatures pushing soils close to freezing (N)

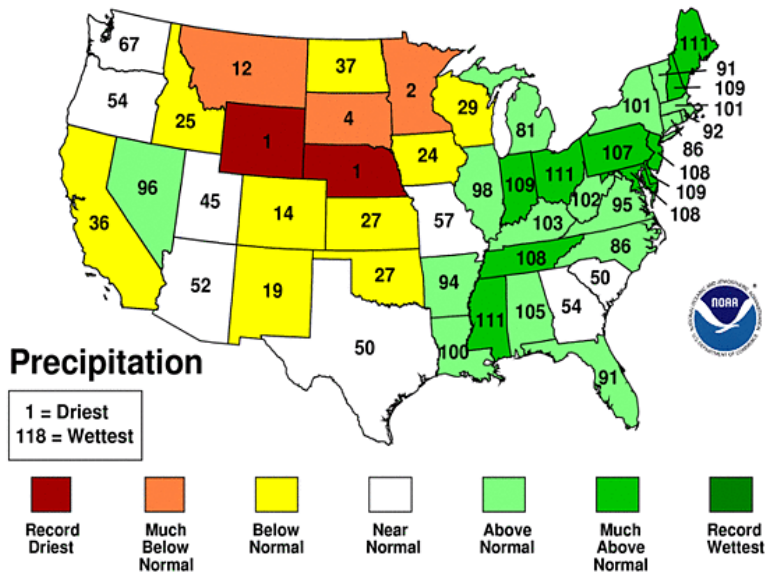
* **Predictions**

- * El Nino – nada
- * Hinting at pattern change - cooler across northern areas
- * Precipitation chances not well defined for winter
- * Limited chance for recovery until spring

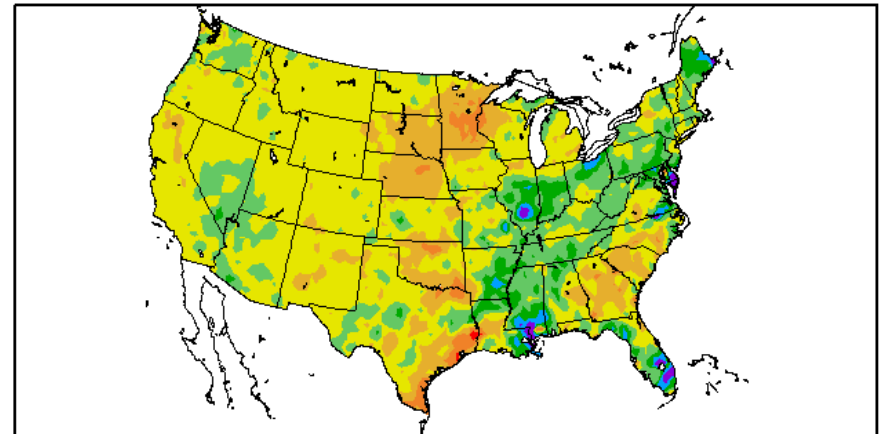
August – October Precip Data

August-October 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



Departure from Normal Precipitation (in)
8/16/2012 – 11/13/2012



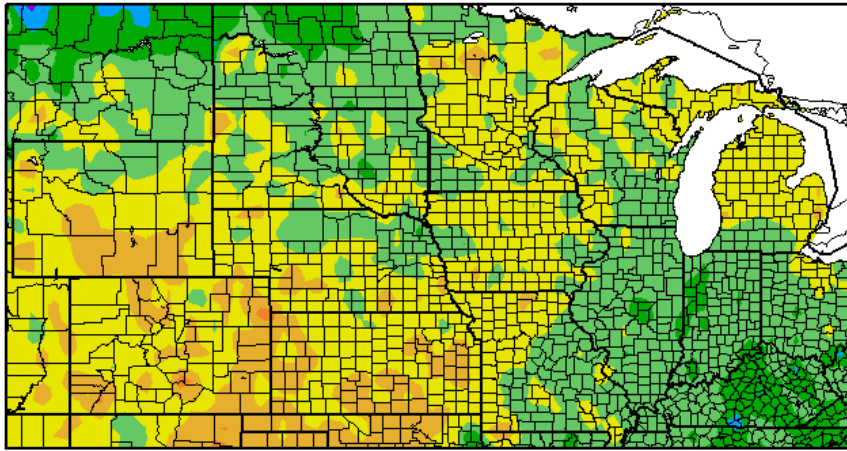
Generated 11/14/2012 at HPRCC using provisional data.

Regional Climate Centers

<http://www.ncdc.noaa.gov/temp-and-precip/maps.php?>

http://www.hprcc.unl.edu/maps/current/index.php?action=update_product&product=PDept

Departure from Normal Temperature (F) 10/15/2012 – 11/13/2012

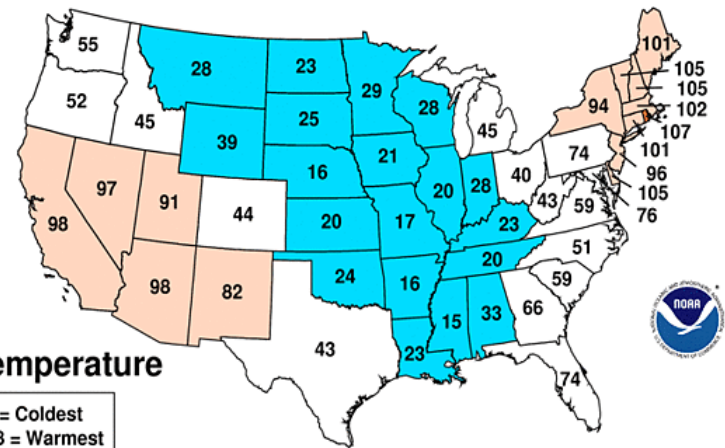


Generated 11/14/2012 at HPRCC using provisional data.

Regional Climate Cen

October 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

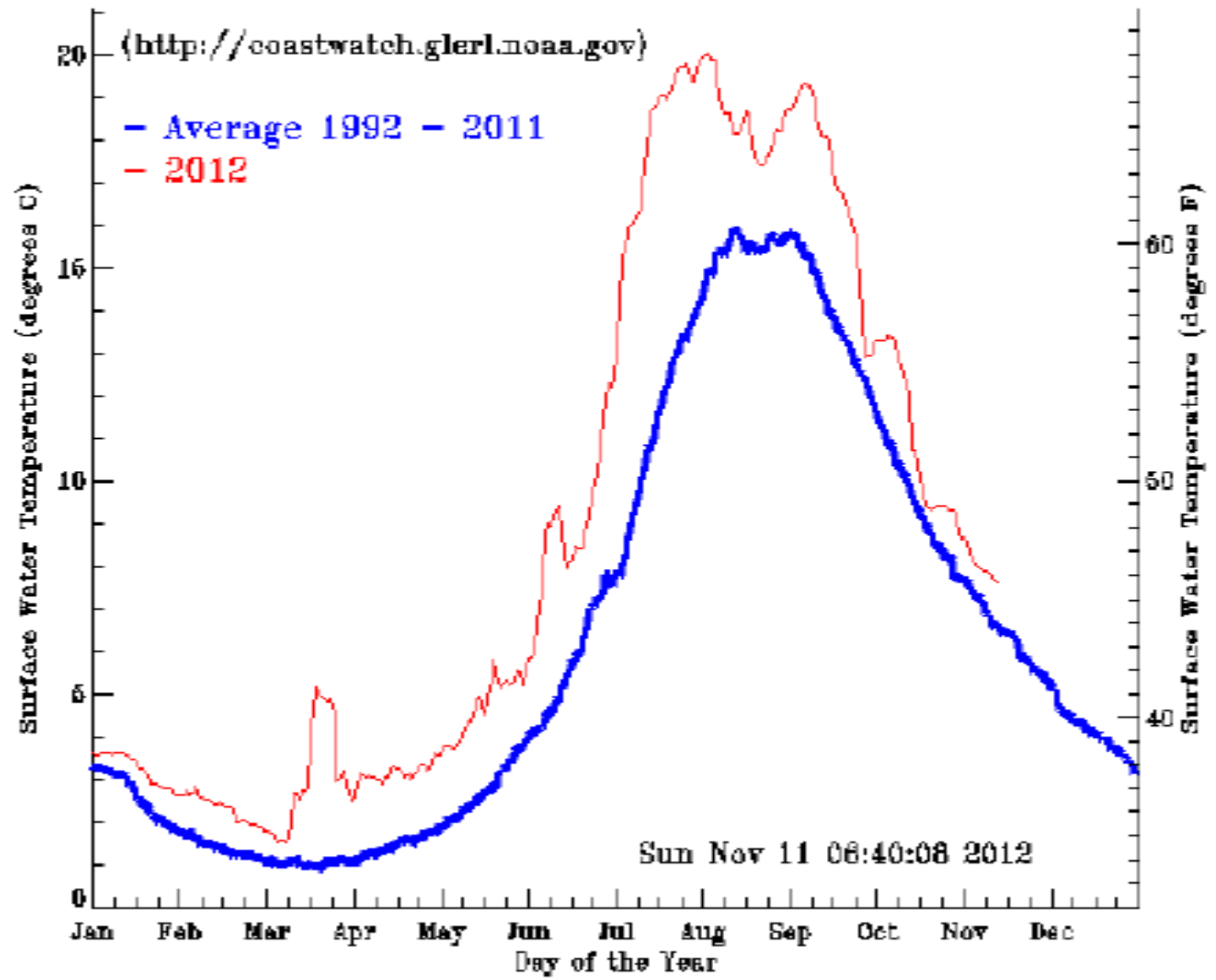


Temperature

1 = Coldest
118 = Warmest

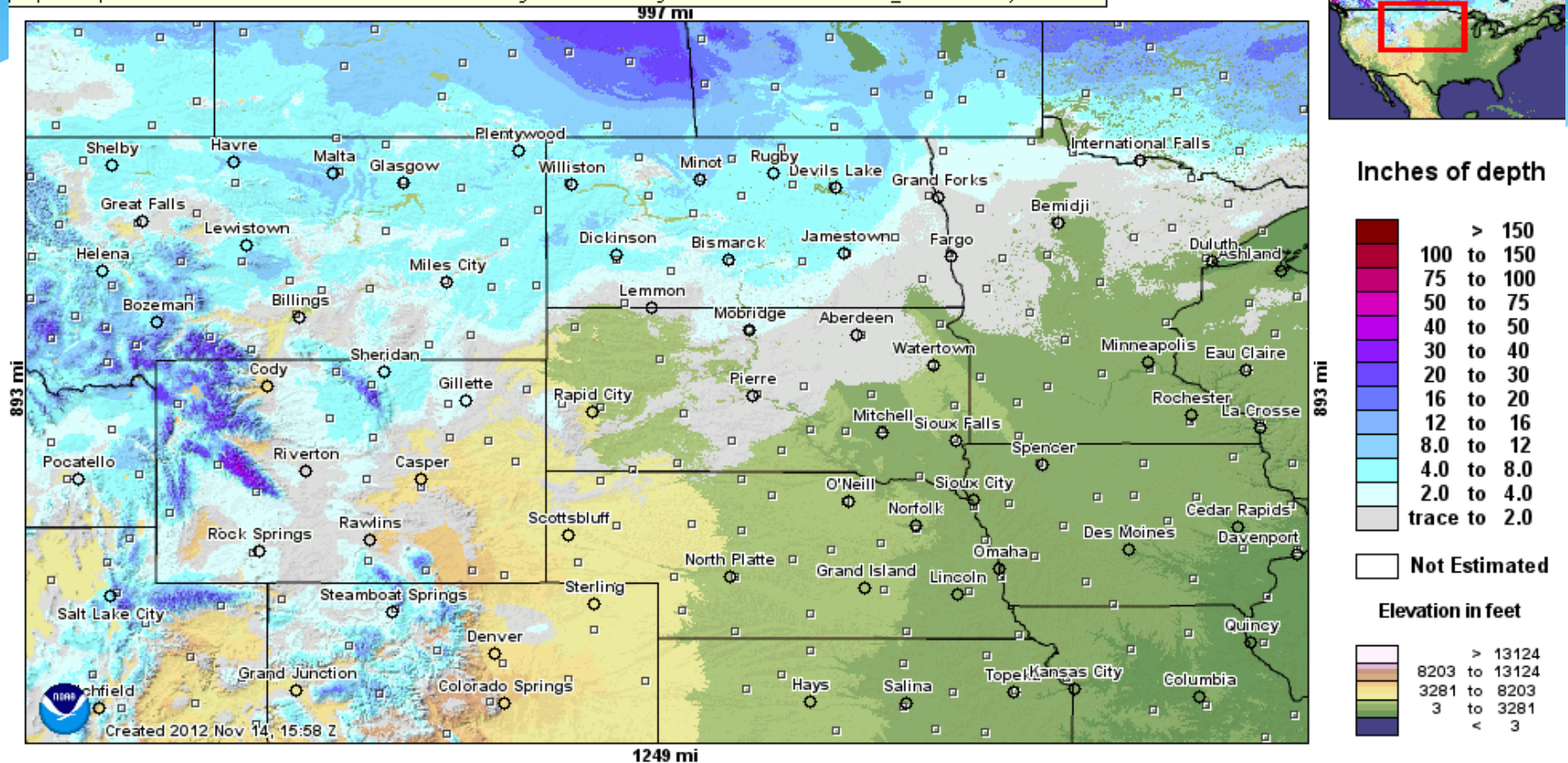


Lake Superior Average Great Lakes Surface Environmental Analysis (GLSEA) Surface Water Temperature Compared to Current Year



Current snow cover

/map.html?q=station&zoom=&loc=48.33+N%2C...shdvar=shading&width=800&height=450&nw=800&nh=450&h_o=0&font=0&js=1&uc=0

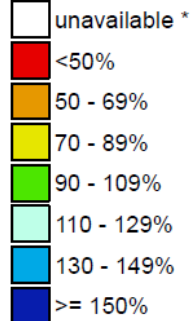


<http://nohrc.noaa.gov/interactive/html/map.html?>

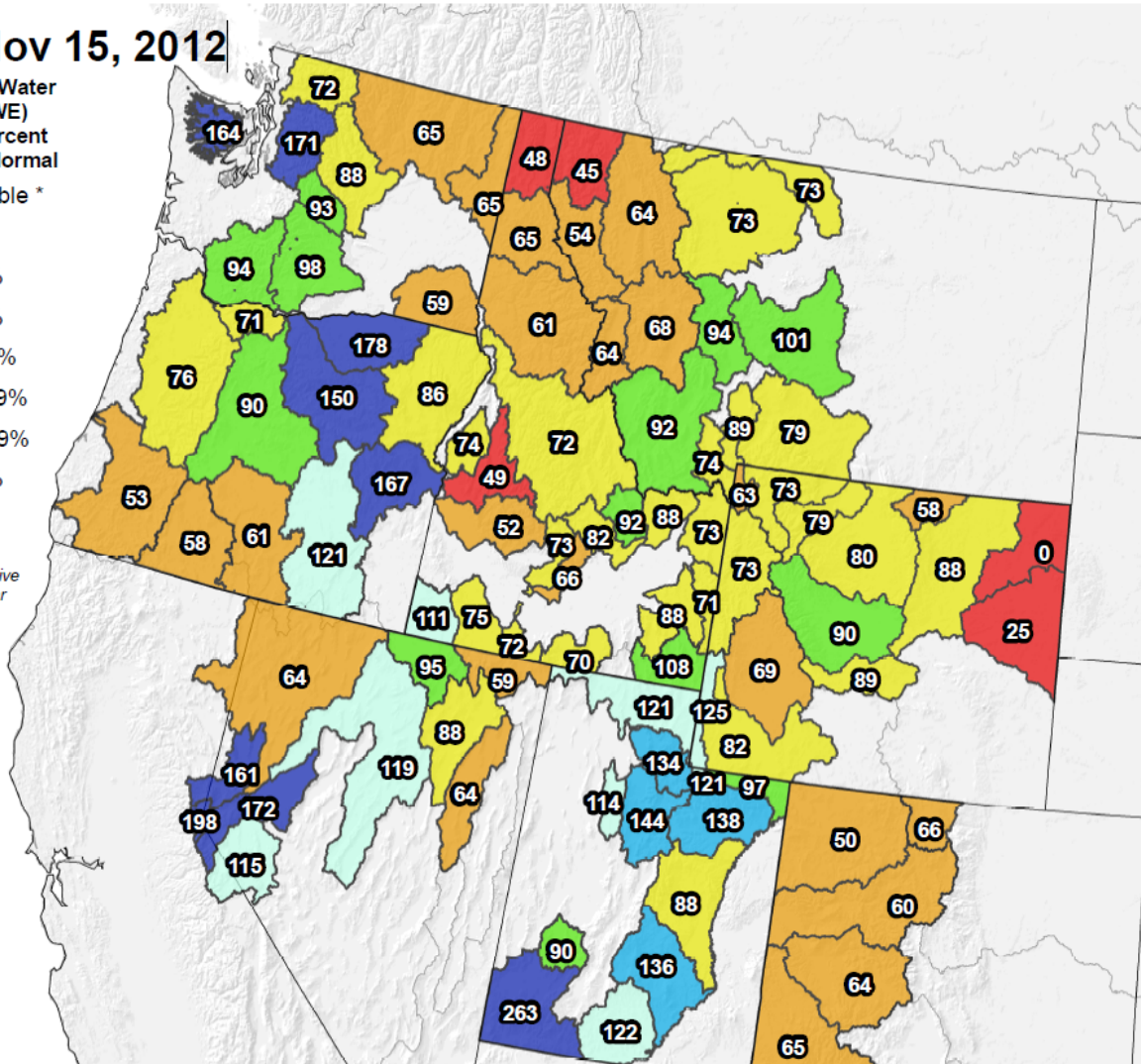
Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Nov 15, 2012

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1971-2000 Normal

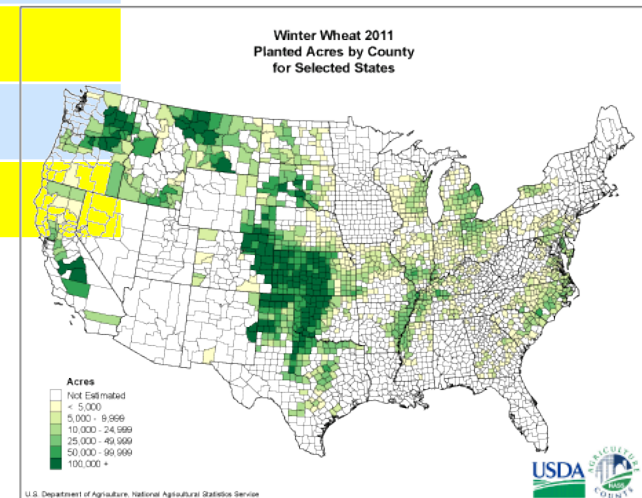


* Data unavailable at time of posting or measurement is not representative at this time of year



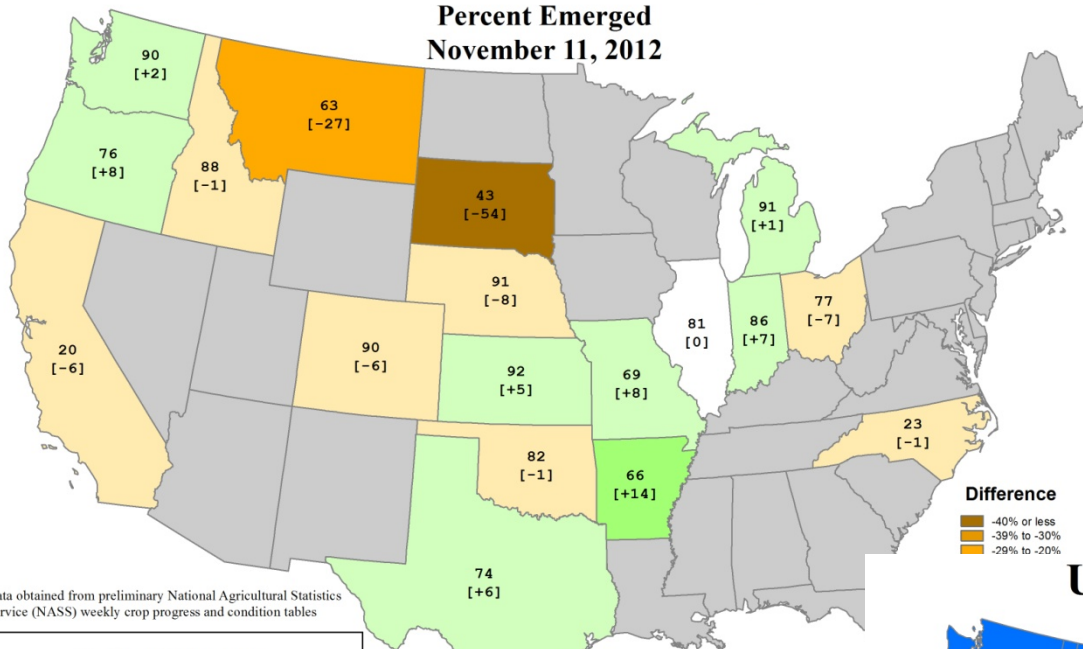
Winter Wheat Emergence/Condition

State	% Emerged	5 Year Avg.	% P-VP
CO	90	96	31
IL	81	81	4
IN	86	79	2
KS	92	87	21
MI	91	90	2
MO	69	61	2
MT	63	90	8
NE	91	99	42
OH	82	83	1
SD	43	97	53



U.S. Winter Wheat Progress

Percent Emerged
November 11, 2012

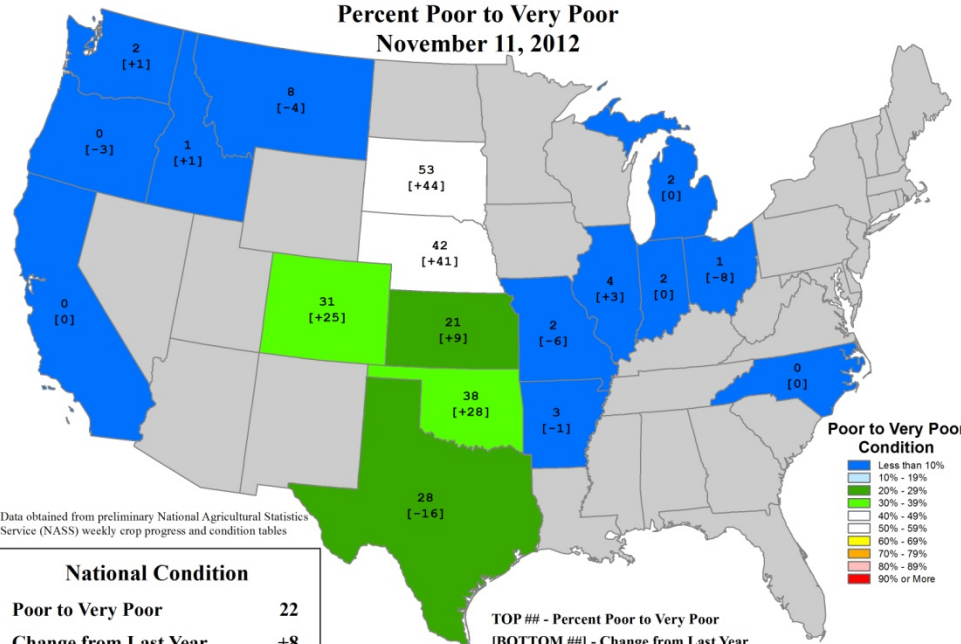


Difference



U.S. Winter Wheat Conditions

Percent Poor to Very Poor
November 11, 2012



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

National Condition

Poor to Very Poor	22
Change from Last Year	+8

TOP ## - Percent Poor to Very Poor
[BOTTOM ##] - Change from Last Year



USDA Agricultural Weather Assessments
World Agricultural Outlook Board

Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

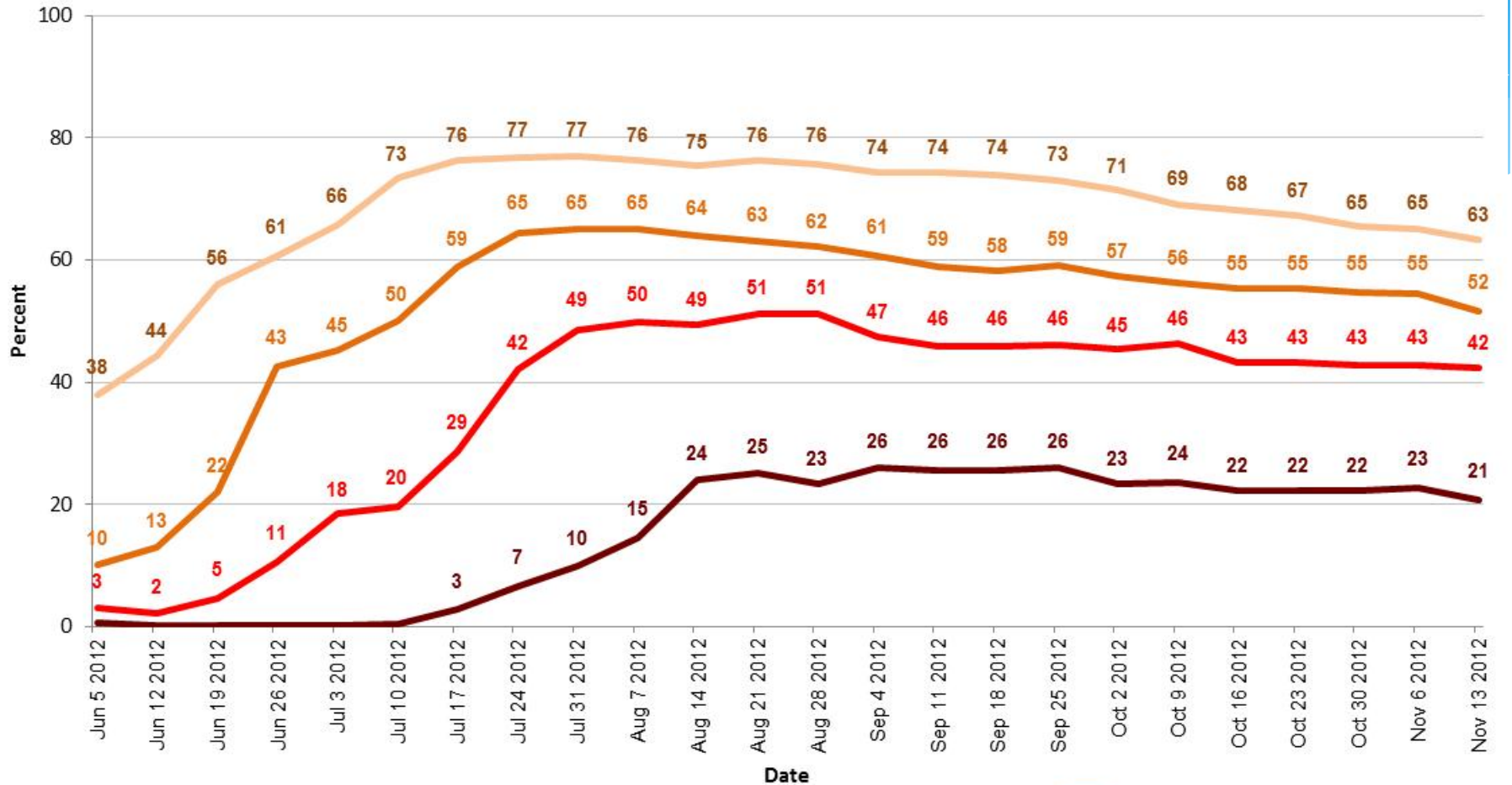
National Progress

Emerged	79
Change from 5-year Average	-2

TOP ## - Percent Emerged
[BOTTOM ##] - Change from 5-year Ave

USDA Agricultural Weather Assessments
World Agricultural Outlook Board

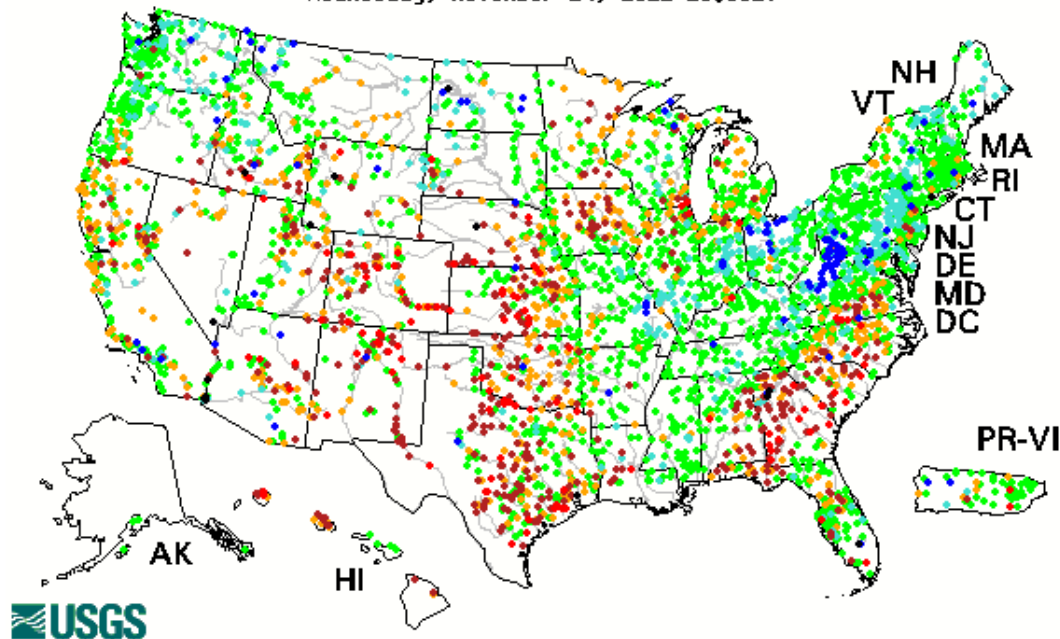
United States Winter Wheat Areas Located in Drought



Map of real-time streamflow compared to historical streamflow for the day of the year (United States)

State or Water-Resources Regions

Wednesday, November 14, 2012 18:30ET



Choose a data retrieval option and select a location on the map

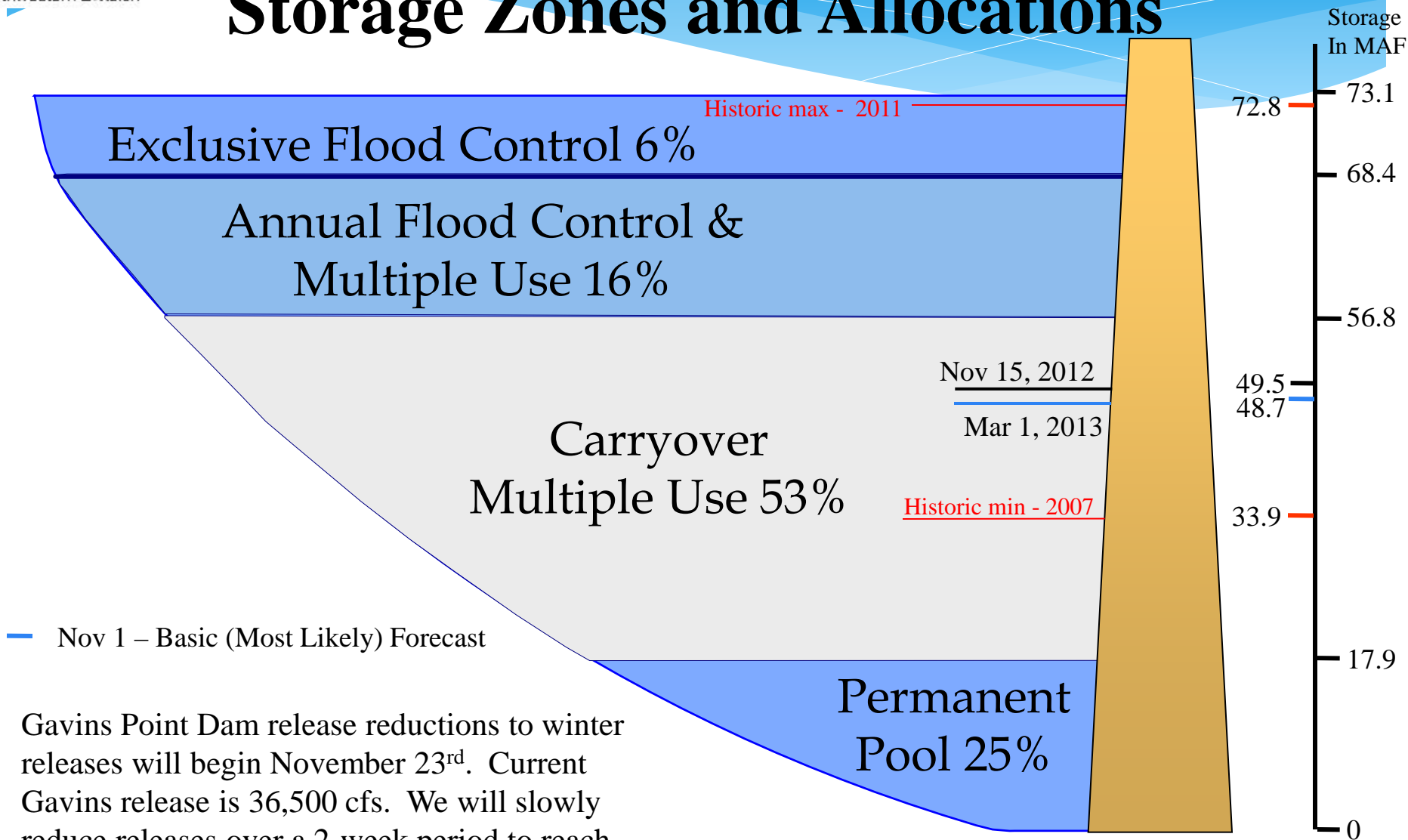
- List of all stations in state, State map, or Nearest stations

Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



US Army Corps
of Engineers
Northwestern Division

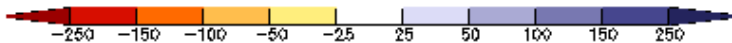
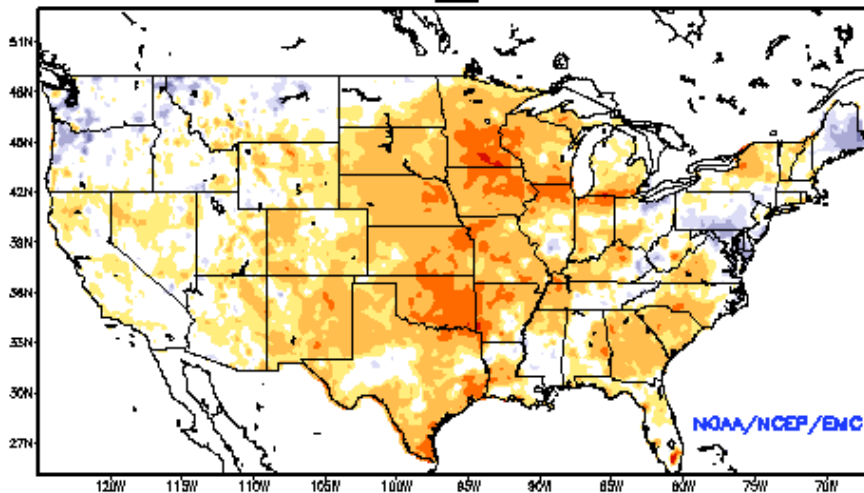
Missouri River Mainstem System Storage Zones and Allocations



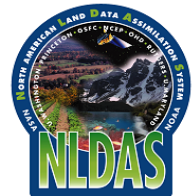
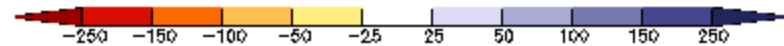
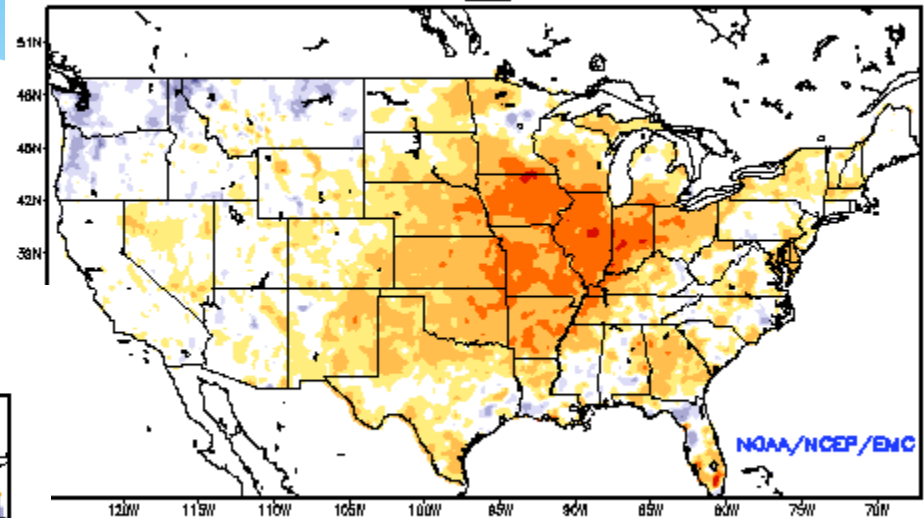
Gavins Point Dam release reductions to winter releases will begin November 23rd. Current Gavins release is 36,500 cfs. We will slowly reduce releases over a 2-week period to reach winter release of 12,000 cfs.

Current Soil Moisture and Recovery

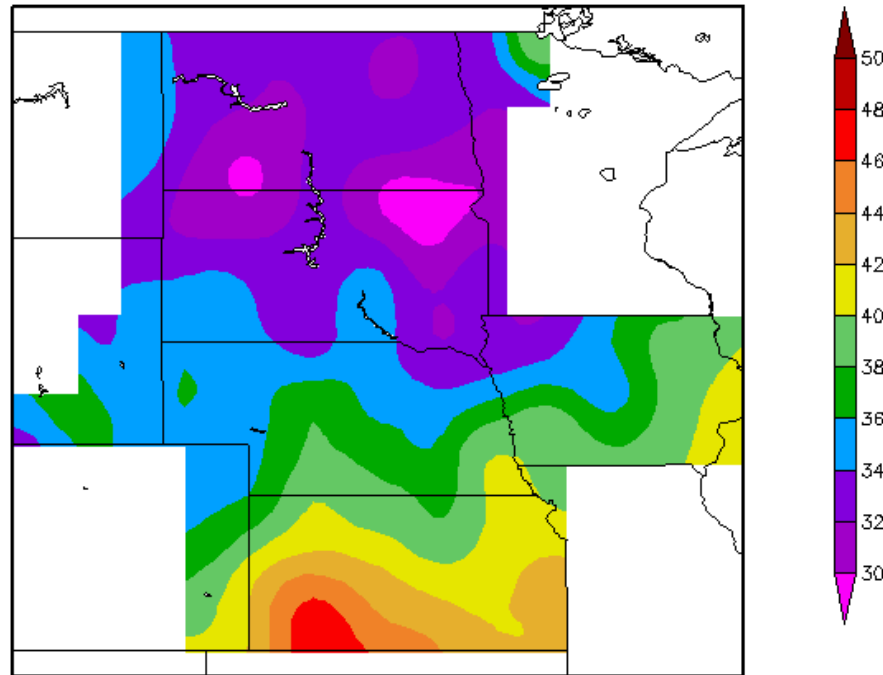
Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: NOV 10, 2012



Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: AUG 02, 2012



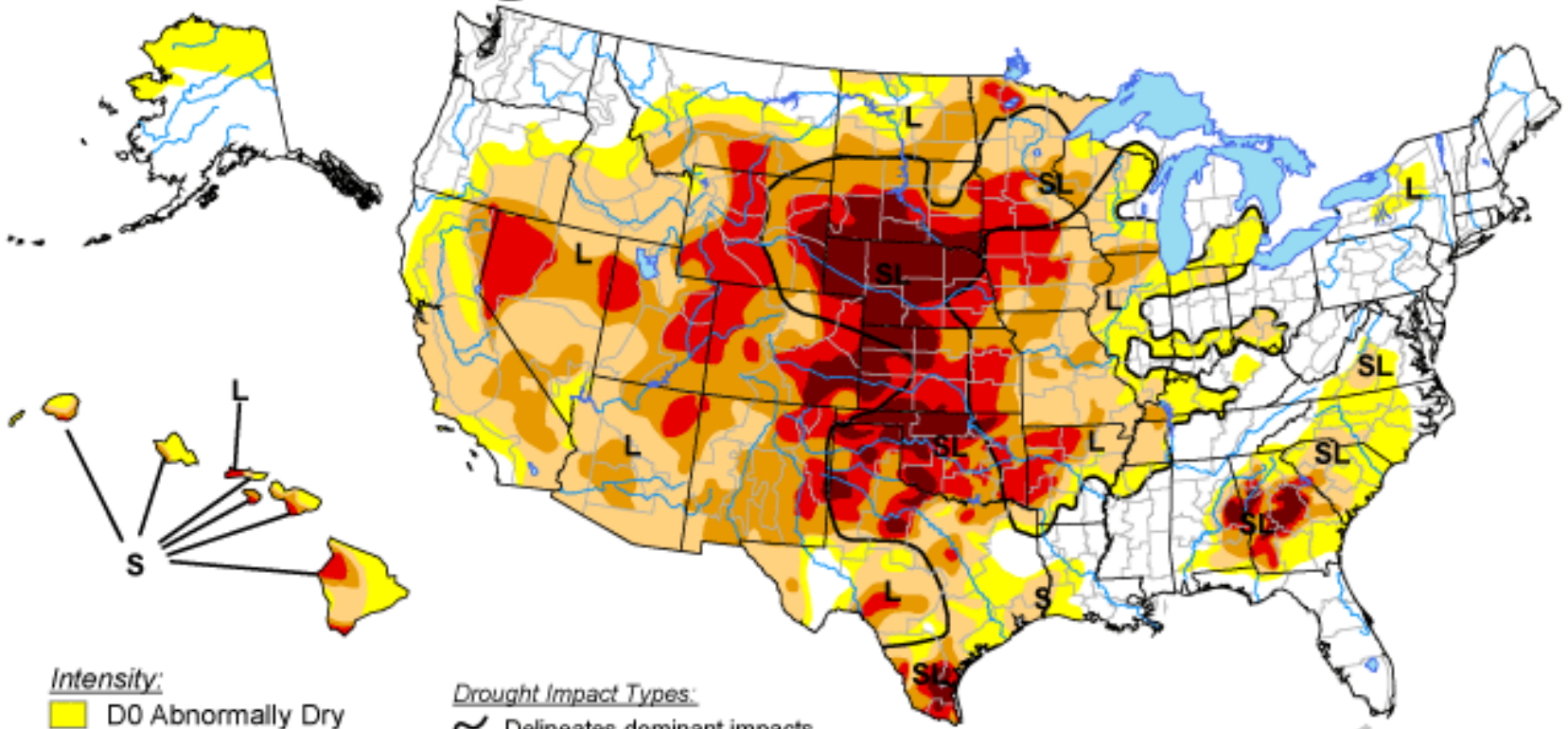
Soil Temperature (F at 4 inches)
11/13/2012 - 11/13/2012








High Plains Regional Climate Center
Generated 11/14/2012 using AWDN data.

U.S. Drought Monitor


November 13, 2012
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
- S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

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

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



Released Thursday, November 15, 2012
Author: David Miskus, NOAA/NWS/NCEP/CPC

<http://www.droughtmonitor.unl.edu/>

U.S. Drought Monitor

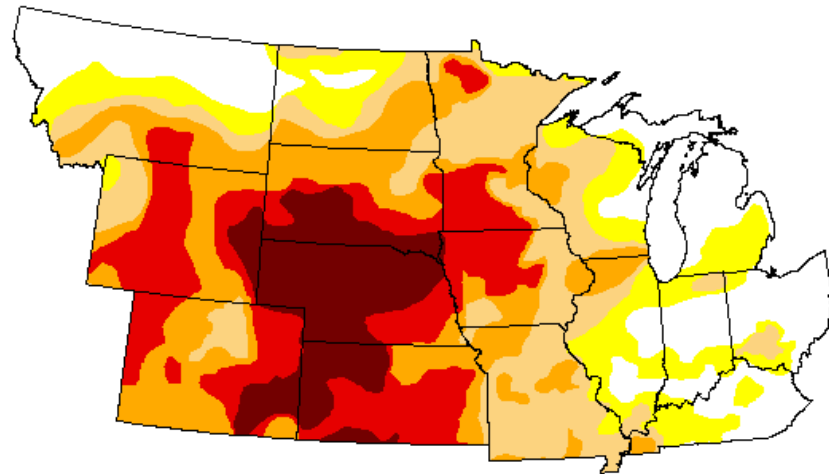
November 13, 2012

Valid 7 a.m. EST

Central Region

Drought Conditions (Percent Area)

	None	D0 - D4	D1 - D4	D2 - D4	D3 - D4	D4
Current	17.86	82.14	68.73	49.24	29.10	11.40
Last Week (11/6/2012)	15.18	84.82	72.25	53.32	31.39	12.13
3 Months Ago (8/14/2012)	13.21	86.79	71.84	76.21	37.18	10.37
1 Year Ago (11/15/2011)	65.70	34.30	17.96	8.75	2.76	1.16



Intensity:



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

<http://droughtmonitor.unl.edu>



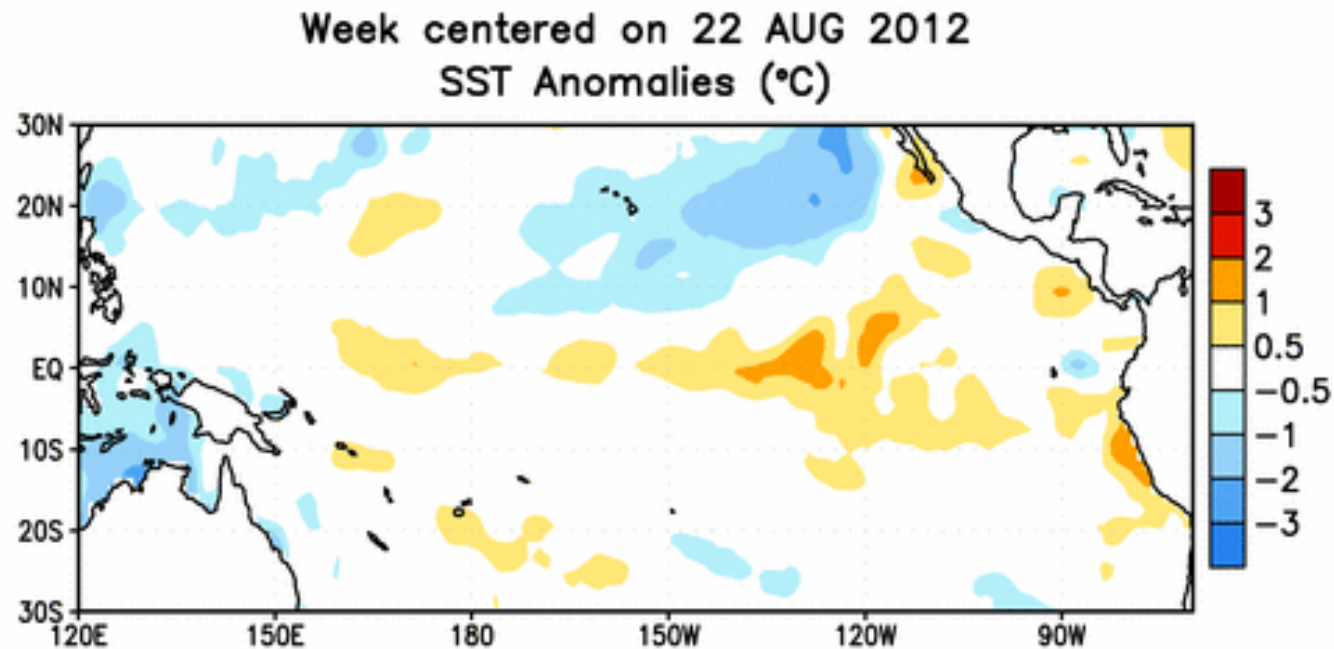
Released Thursday, November 15, 2012
David Miskus, Climate Prediction Center/NCEP/NWS/NOAA

Climate Outlooks

- * **2 weeks out (8-14 days)**
- * **September**
- * **3 Months (September - November)**
- * www.cpc.ncep.noaa.gov
- * Drought Monitor Outlook

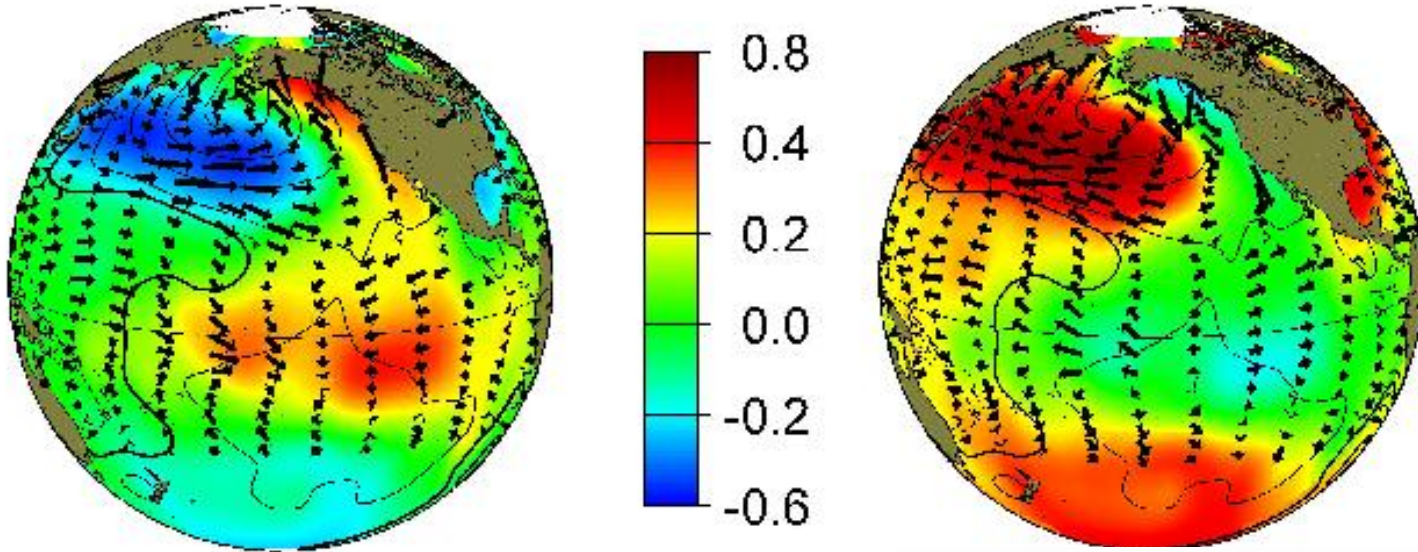
- * Released Thursday 8/16/2012

El Nino Fake-out – SST loop

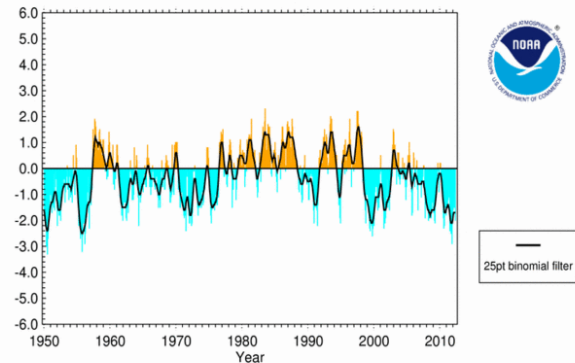


<http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml>

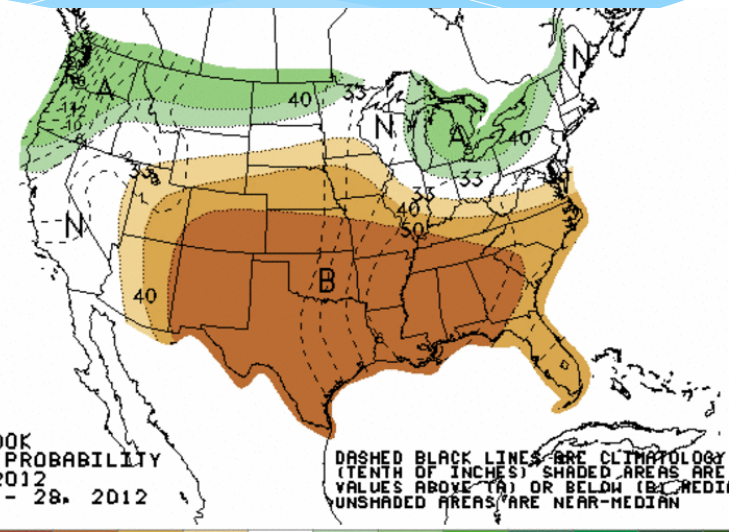
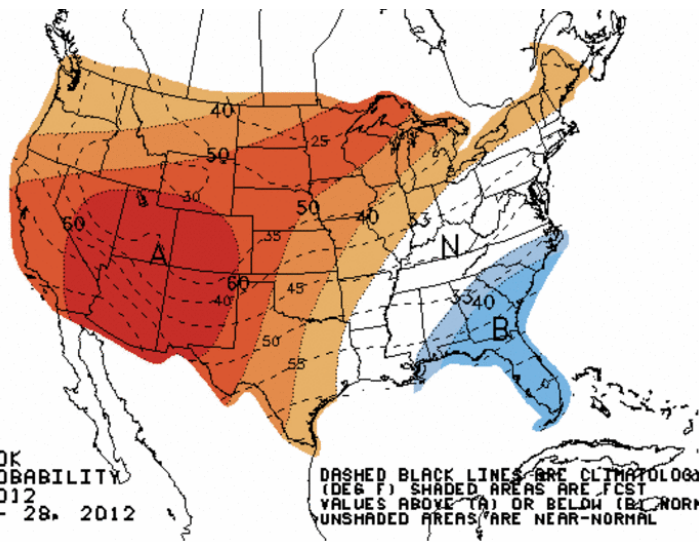
Pacific Decadal Oscillation



Pacific Decadal Oscillation (PDO)



Temperature and Precipitation Probabilities for 11/22 – 11/28/12



90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%

Probability of Below

Normal

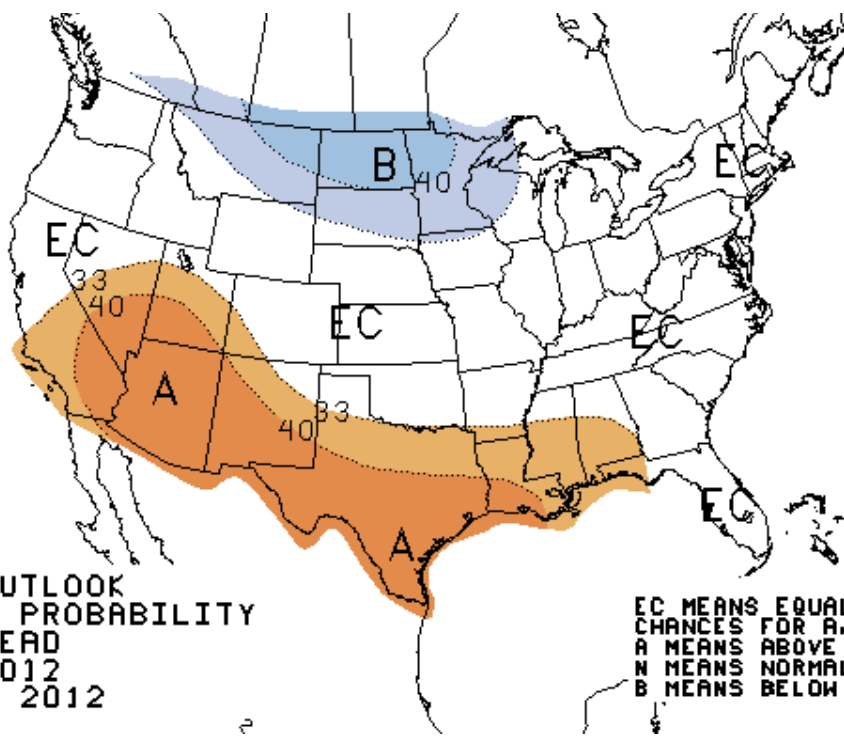
Probability of Above

Temperature

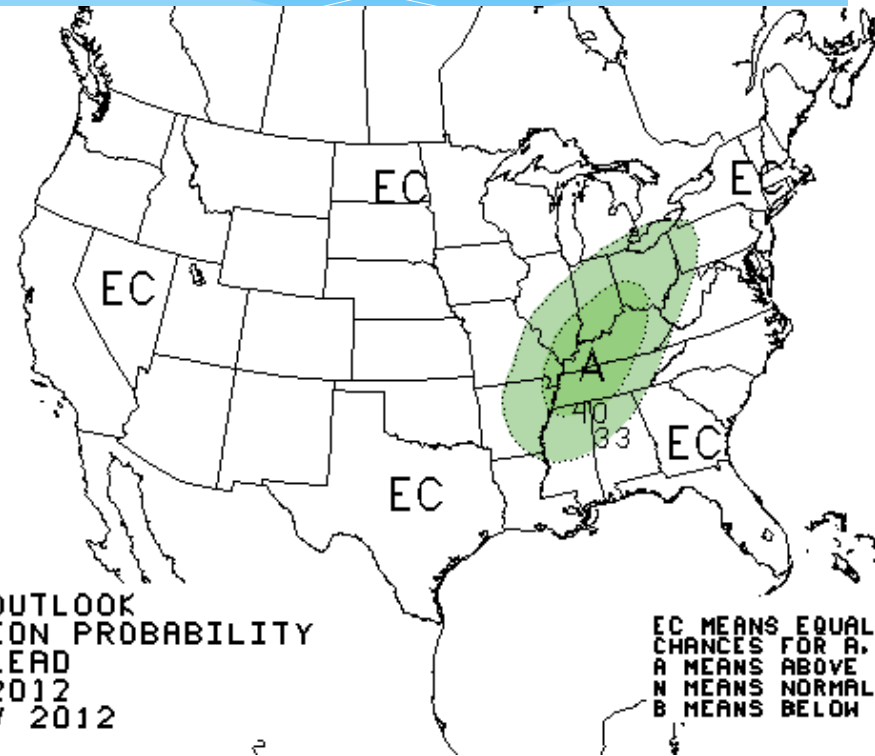
Precipitation

<http://www.cpc.ncep.noaa.gov/products/predictions/814day/index.php>

December Temperature and Precipitation Probabilities



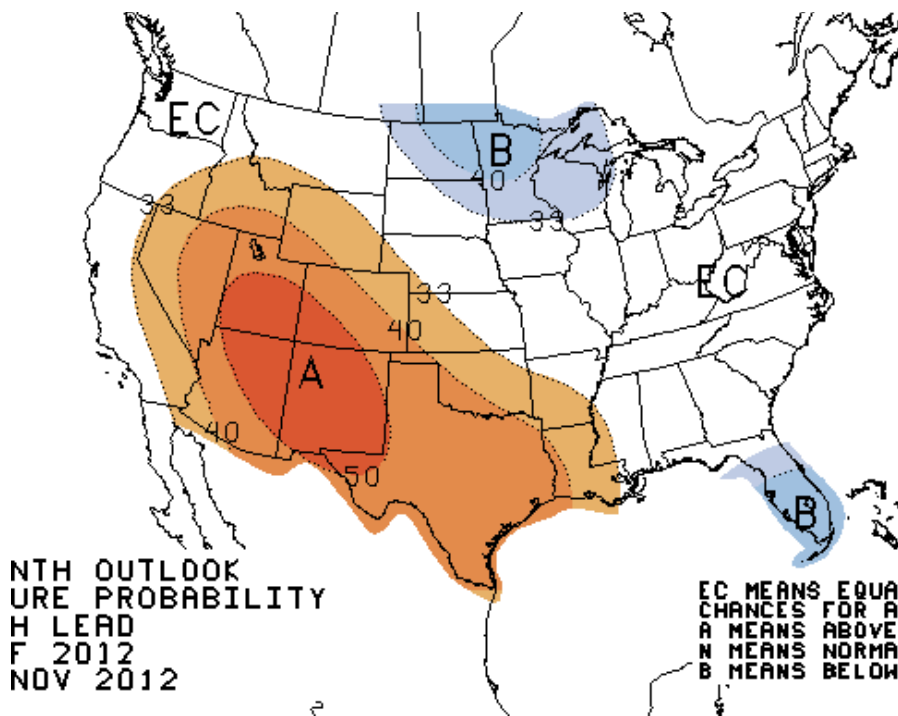
Temperature



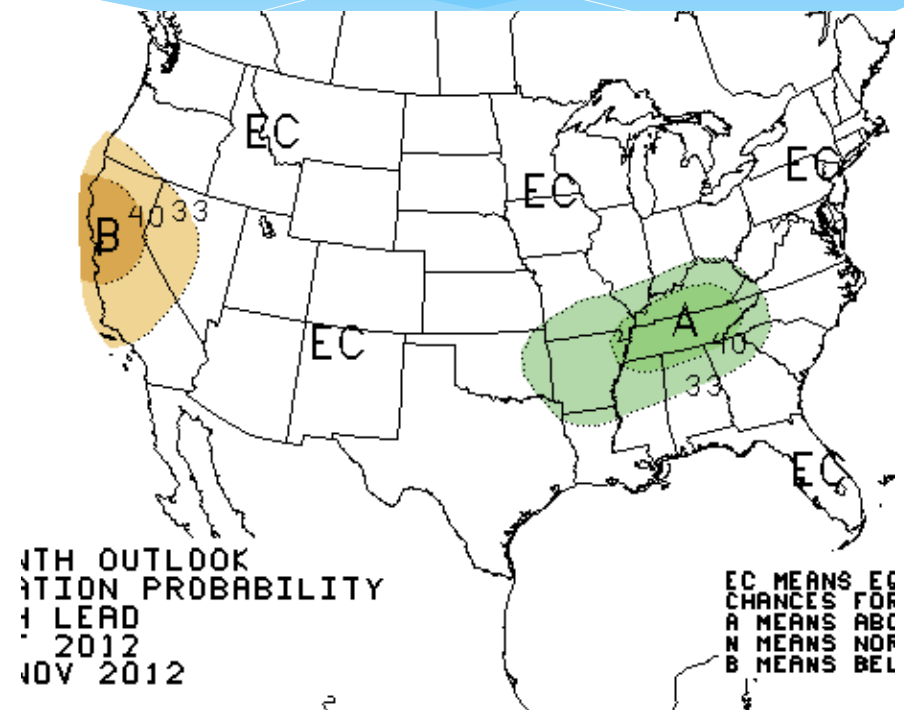
Precipitation

<http://www.cpc.ncep.noaa.gov/products/predictions/30day/>

3 Month Temperature and Precipitation Probabilities (December - February)



Temperature



Precipitation

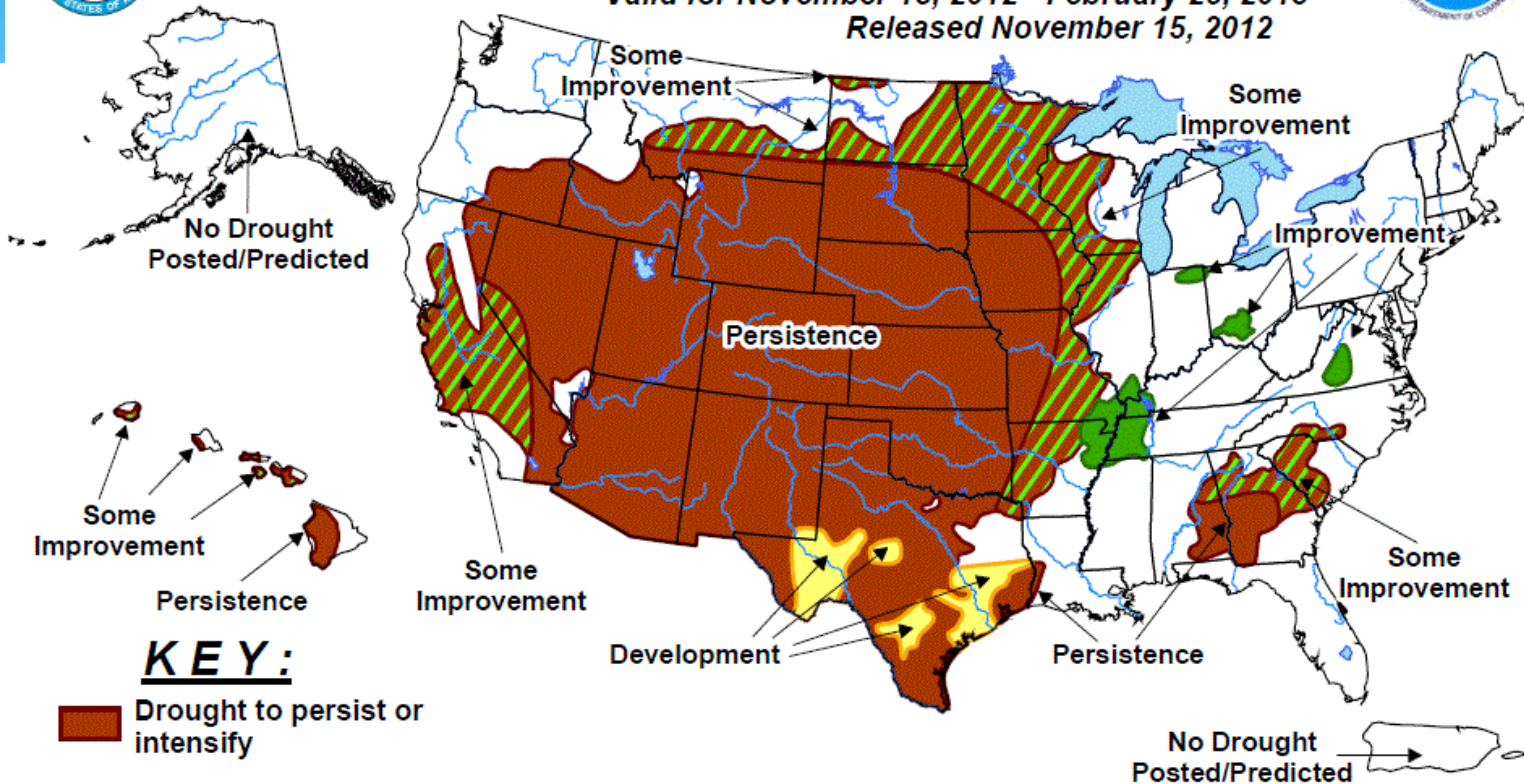
Drought Outlook







U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for November 15, 2012 - February 28, 2013

Released November 15, 2012



KEY:

-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  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 improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif/

Summary

* **Current Conditions**

- * Improved conditions in the eastern corn belt
- * Lack of recovery still in the plains generally
- * Colder temperatures pushing soils close to freezing (N)

* **Predictions**

- * El Nino – nada
- * Hinting at pattern change - cooler across northern areas
- * Precipitation chances not well defined for winter
- * Limited chance for recovery until spring

Drought response USDA Drought Assistance

The screenshot shows the U.S. Drought Portal homepage. At the top, it says "U.S. Drought Portal www.drought.gov". Below the header are navigation tabs: "WHAT IS NIDIS?", "PRODUCTS", "TOOLS", "REGIONAL PROGRAMS", and "RESOURCES". A "Welcome!" section follows, explaining the National Integrated Drought Information System (NIDIS) and its purpose. To the right, there are two main featured sections: "USDA Federal Drought Assistance" with a map of the United States and a link to resources, and "U.S. Drought Monitor" with a map of the United States showing drought severity levels. A "Learn More..." section is on the left, with sub-sections for "Products", "Tools", "Resources", and "Regional Programs". At the bottom, there is a "NIDIS Announcements" section.



The screenshot shows the USDA Drought Assistance page. At the top, it says "Disaster and Drought Assistance | USDA | Mozilla Firefox". Below the header are navigation tabs: "Topics", "Programs and Services", "Newsroom", and "Blog". A search bar is on the right. The main content area is divided into several sections: "Current Drought Response" with links to "Drought Response Home", "News and Information", and "USDA Drought Programs"; "Related Topics" with links to "Animal Emergencies and Disaster Planning", "Crop Insurance Basics - Frequently Asked Questions", "Emergency Farm Issues", "Extension Disaster Education Network Resources", "Farm Service Agencies Disaster Assistance Programs", "Food Assistance Information", "Haying and Grazing", "NAL Food Safety Information Center", "NAL Rural Information Center", "Risk Management Agency", "Risk Management Agency Prevented Planting", "USDA Service Center Agencies of note", and "USDA Service Center Locator"; "Drought and Drought Assistance" with a paragraph of text; "Drought Code Sprint" with a paragraph of text; "2012 Drought Disaster Updates" with a map and a link to "Drought Disaster Designations Map (PDF, 504KB)"; "List of Designated Drought Disaster Counties (PDF, 581KB)"; "Help for You" with a link to "Additional Emergency Funding to Assist Livestock and Crop Producers"; and "Producers and Farmers" with a paragraph of text.

<http://www.drought.gov>

Further Information - Partners

- * **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 Portal: www.drought.gov
- National Drought Mitigation Center: <http://drought.unl.edu/>
- State climatologists
 - * <http://www.stateclimate.org>
- Regional climate centers
 - * <http://mrcc.isws.illinois.edu>
 - * <http://www.hprcc.unl.edu>

Thank You and Questions?

- * Questions:

- * **Climate:**

- * Dennis Todey: dennis.todey@sdstate.edu, 605-688-5678

- * Doug Kluck: doug.kluck@noaa.gov, 816-994-3008

- * John Eise: john.eise@noaa.gov, 816-268-3144

- * Mike Timlin: mtimlin@illinois.edu; 217-333-8506

- * Natalie Umphlett: numphlett2@unl.edu ; 402 472-6764

- * Brian Fuchs: bfuchs2@unl.edu 402 472-6775

- * **Weather:**

- * crhroc@noaa.gov