

MIDWEST CLIMATE OUTLOOK

February 10, 2016

Ray Wolf, Science and Operations Officer
NOAA/National Weather Service
Davenport, Iowa

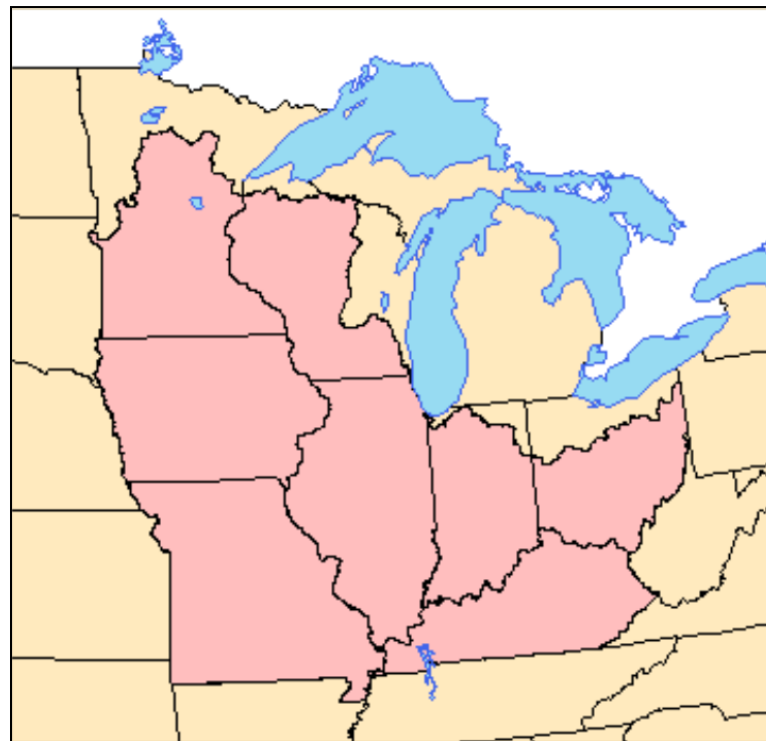
ray.wolf@noaa.gov



CLIMATE, DROUGHT AND WEATHER-READY NATION

Topics

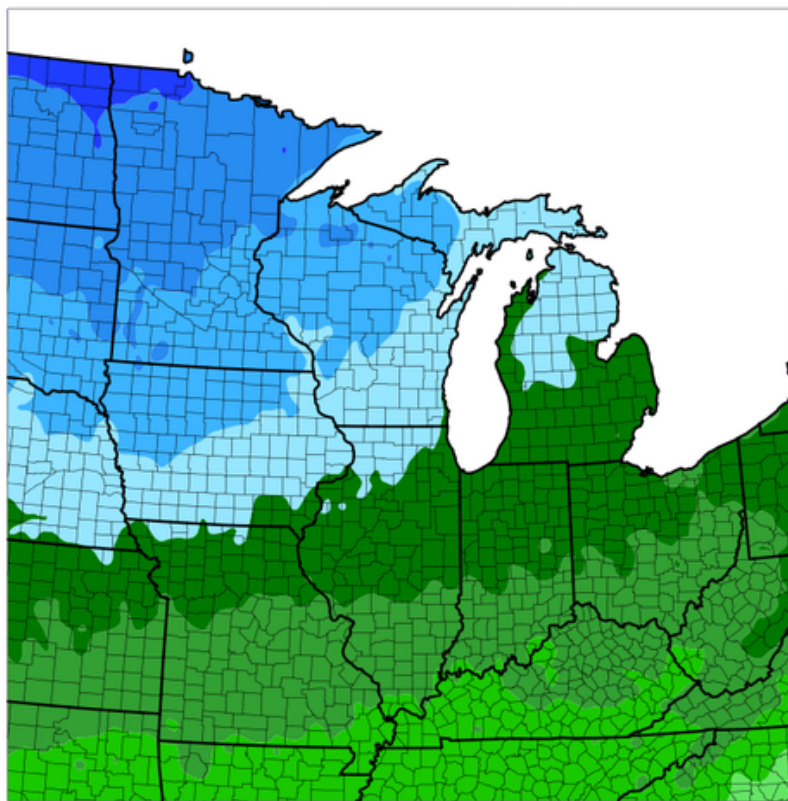
- **Climate Summary**
- **Current Conditions**
- **Outlooks**



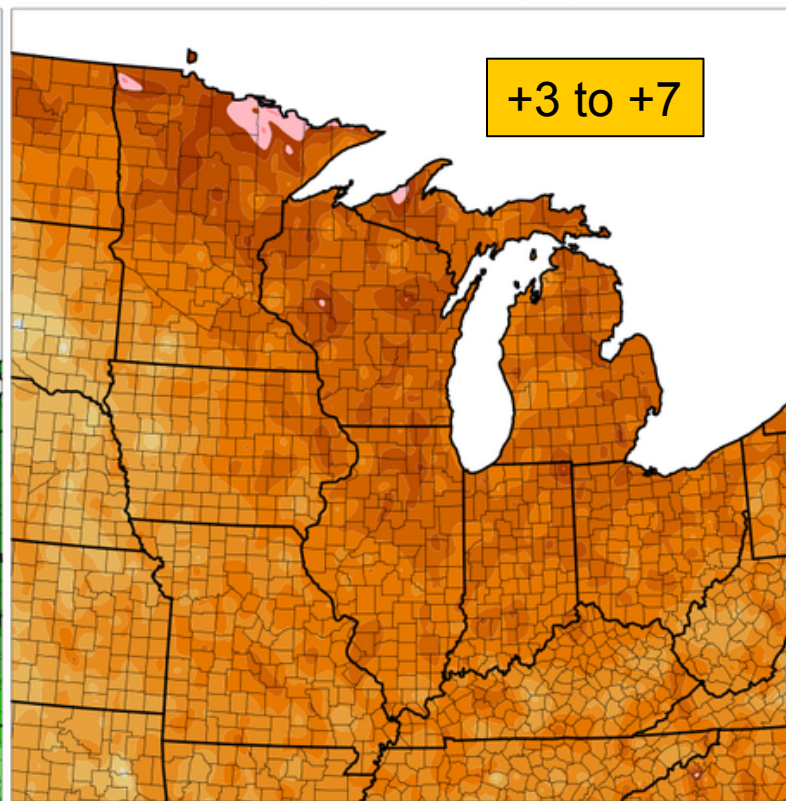
WINTER SO FAR...

Dec – Jan Temps / Anomalies

Average Temperature (°F)
December 01, 2015 to January 31, 2016



Average Temperature (°F): Departure from 1981-2010 Normals
December 01, 2015 to January 31, 2016



0 5 10 15 20 25 30 35 40 45 50 55 60



-2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12



is from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet,

Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet,

Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:36:26 AM CST

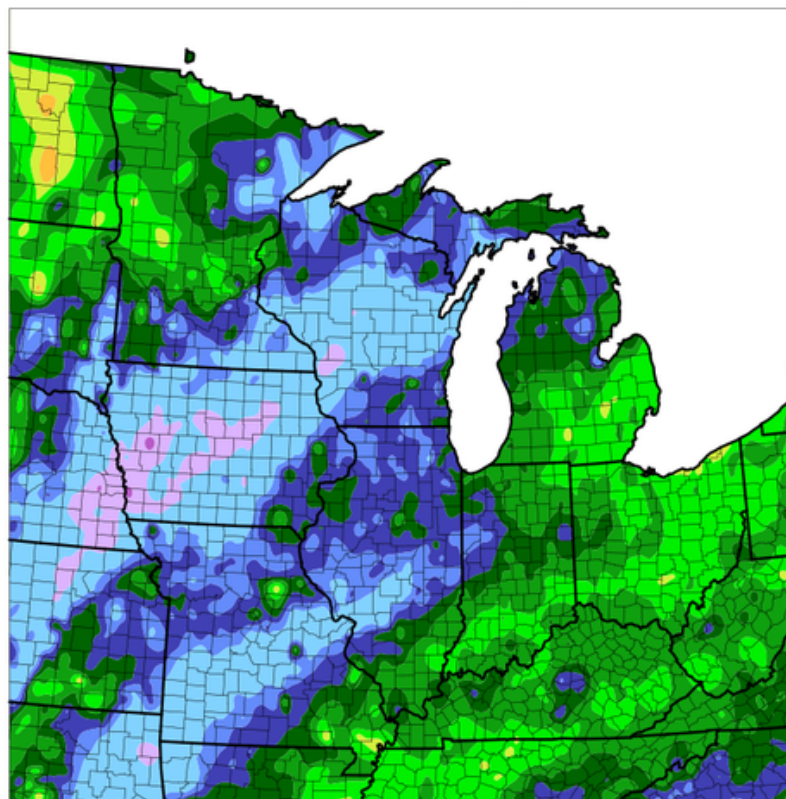
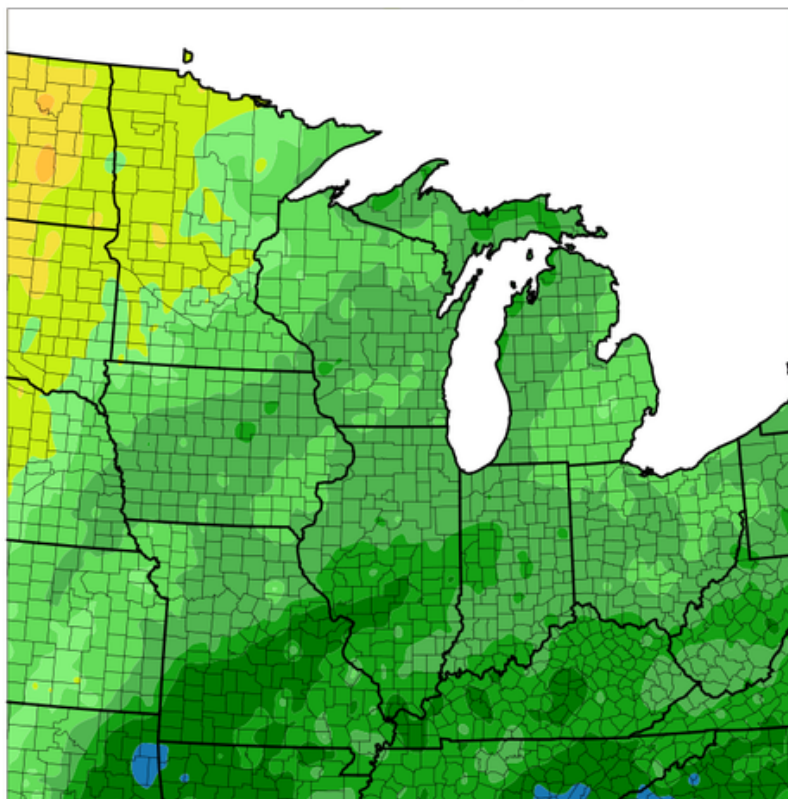
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:38:02 AM CST



Dec – Jan Precip / Anomalies

Accumulated Precipitation (in)
December 01, 2015 to January 31, 2016

Accumulated Precipitation (in): Percent of 1981-2010 Normals
December 01, 2015 to January 31, 2016



Stations from the following networks used: WBAN, COOP, FAA, GHCN, IEX, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet

Stations from the following networks used: WBAN, COOP, FAA, GHCN, IEX, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet

Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:04:22 AM CST

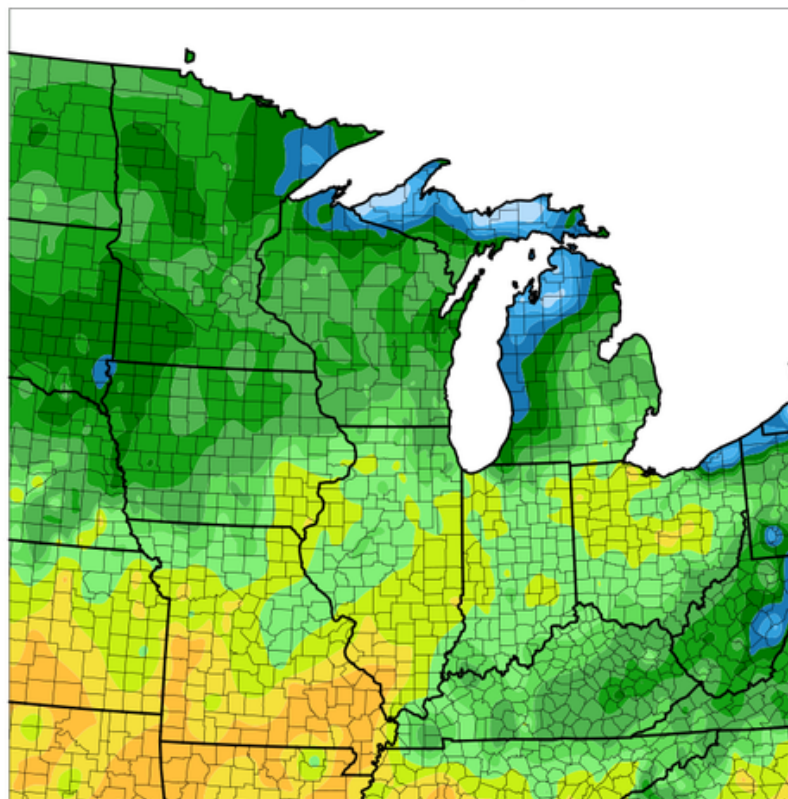
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:06:10 AM CST



Dec – Jan Snow / Anomalies

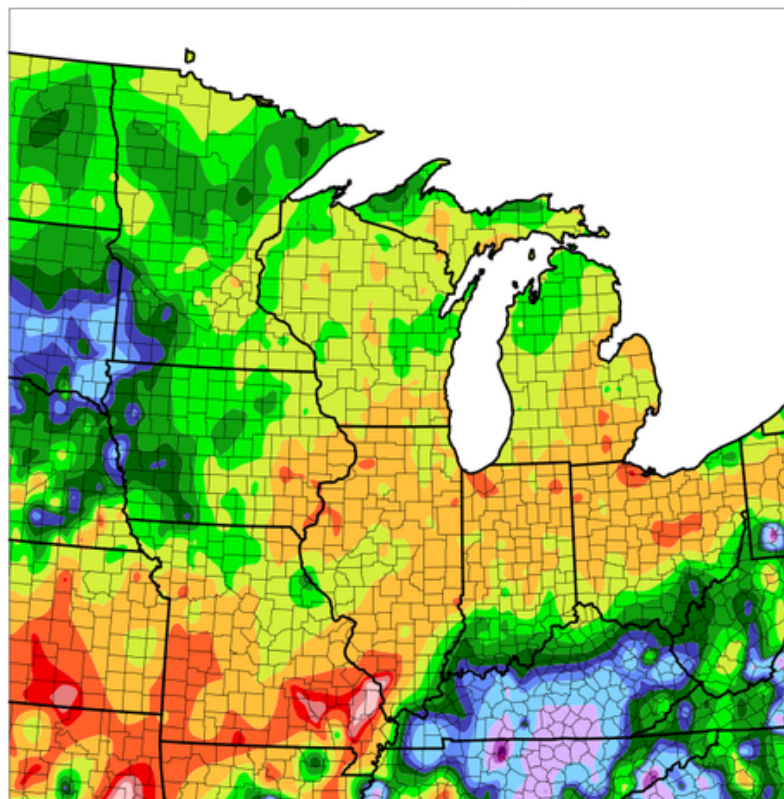
Accumulated Snowfall (in)

December 01, 2015 to January 31, 2016



Accumulated Snowfall (in): Percent of 1981-2010 Normals

December 01, 2015 to January 31, 2016



0.1 1 2.5 5 7.5 10 15 20 30 40 50 60 80



0 2 5 10 25 50 75 100 125 150 175 200 300 400 500 750



Stations from the following networks used: WBAN, COOP, FAA, GHCN, IEX, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet

Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:08:08 AM CST

Stations from the following networks used: WBAN, COOP, FAA, GHCN, IEX, CoCoRaHS, WMO, ICAO, NWSLI, Missouri FSA, Missouri Mesonet

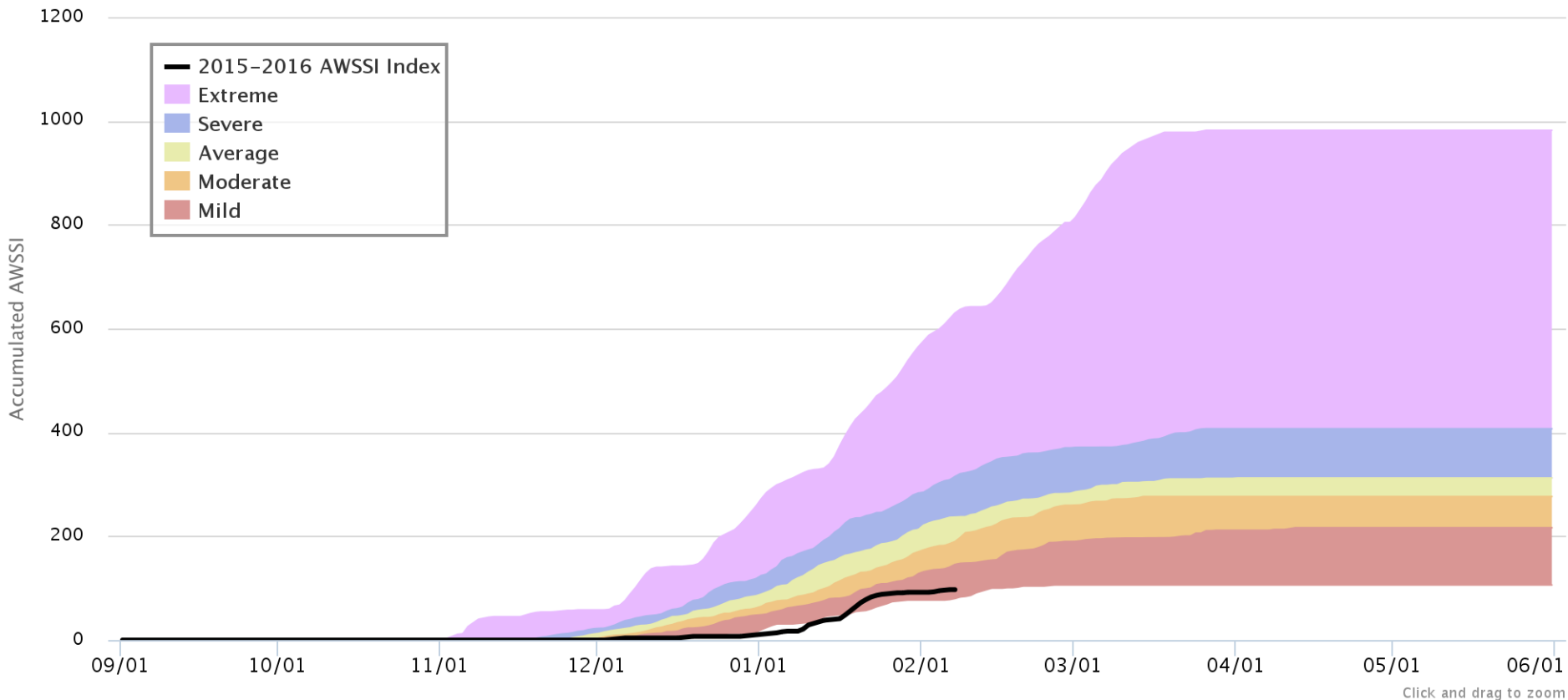
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 2/5/2016 12:10:14 AM CST



Accumulated Winter Season Severity Index

2015-2016 AWSSI Index: "MO - St. Louis"

Season: 2015-12-01 to 2016-02-07, 69 days



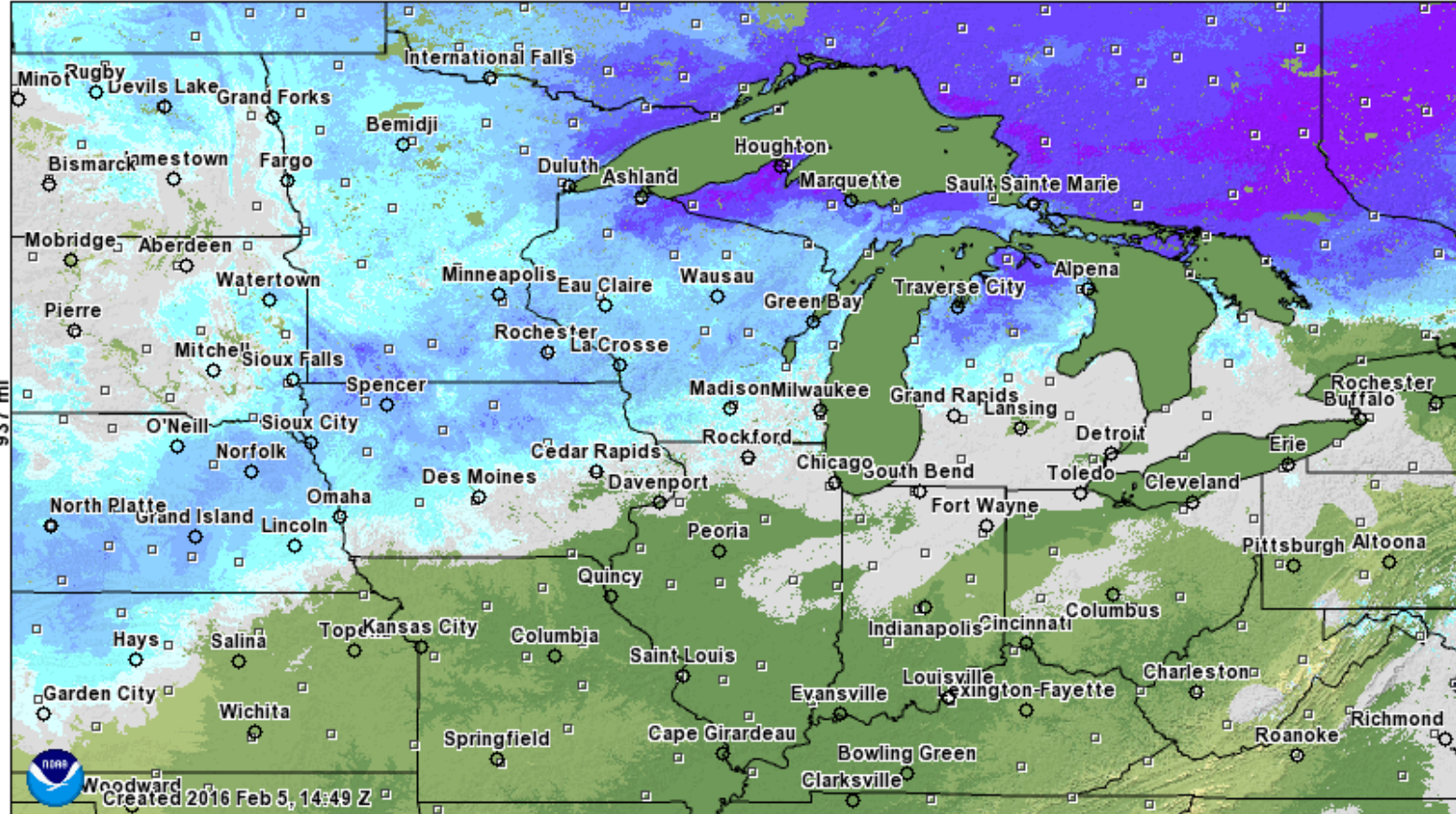
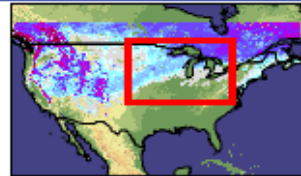
AWSSI is based on the intensity and persistence of cold weather, the frequency and amount of snow, and the amount and persistence of snow on the ground.

CURRENT CONDITIONS

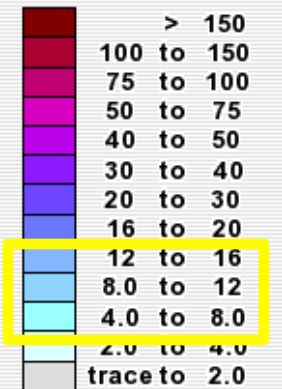
Snow Depth

Modeled Snow Depth forecasted for 2016 February 5, 15:00 UTC

1073 mi

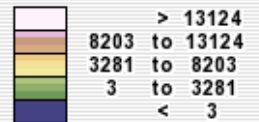


Inches of depth



Not Estimated

Elevation in feet



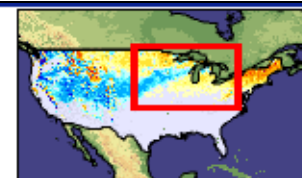
NOAA
Woodward
Created 2016 Feb 5, 14:49 Z



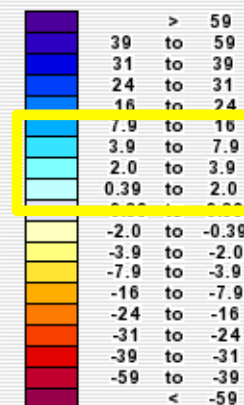
Snow Depth Departure from Normal

Modeled Snow Depth Departure from Normal (Daily) for 2016 February 5, 6:00 UTC

1073 mi

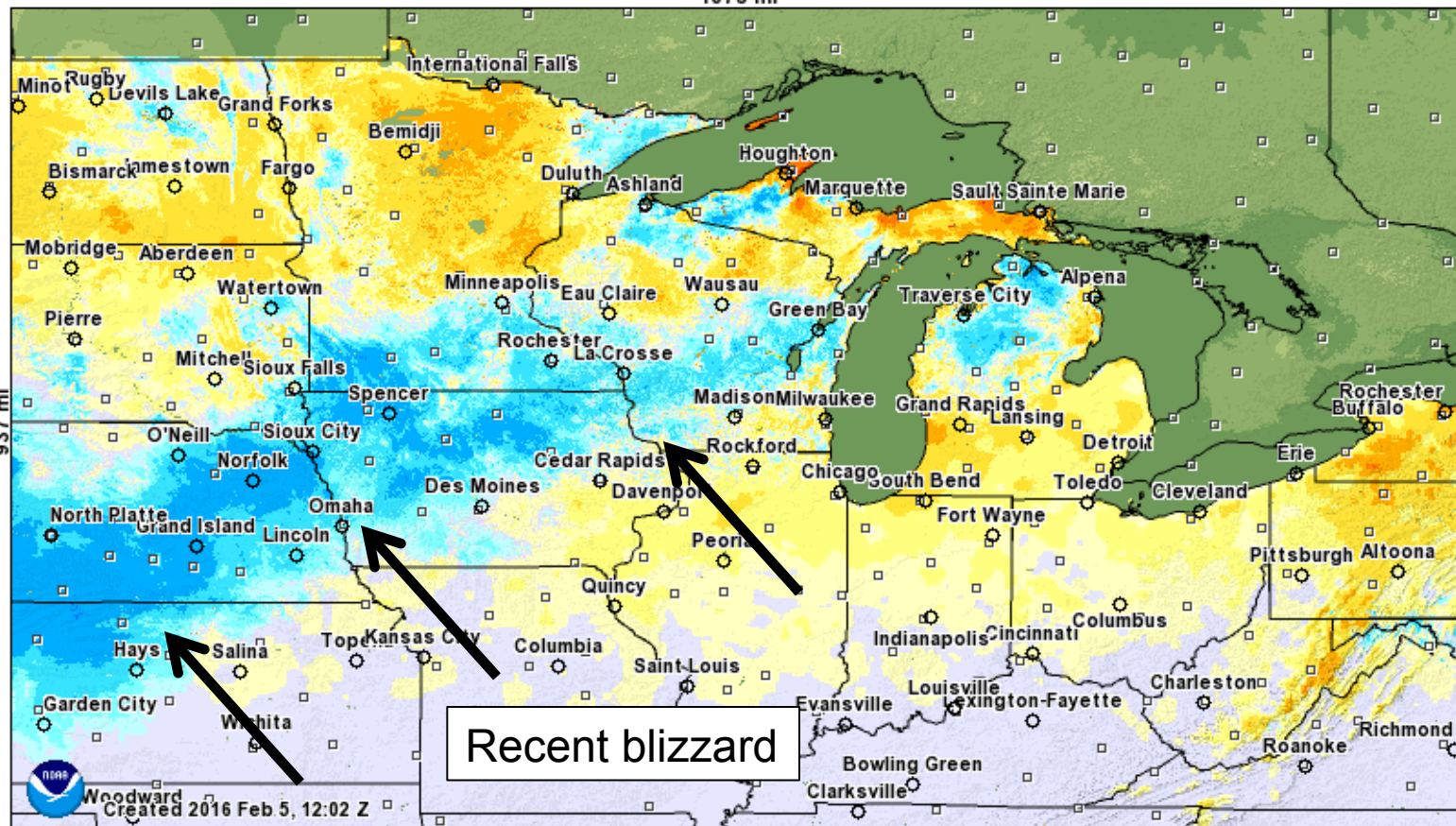


Inches of depth



Not Estimated

Elevation in feet



Recent blizzard

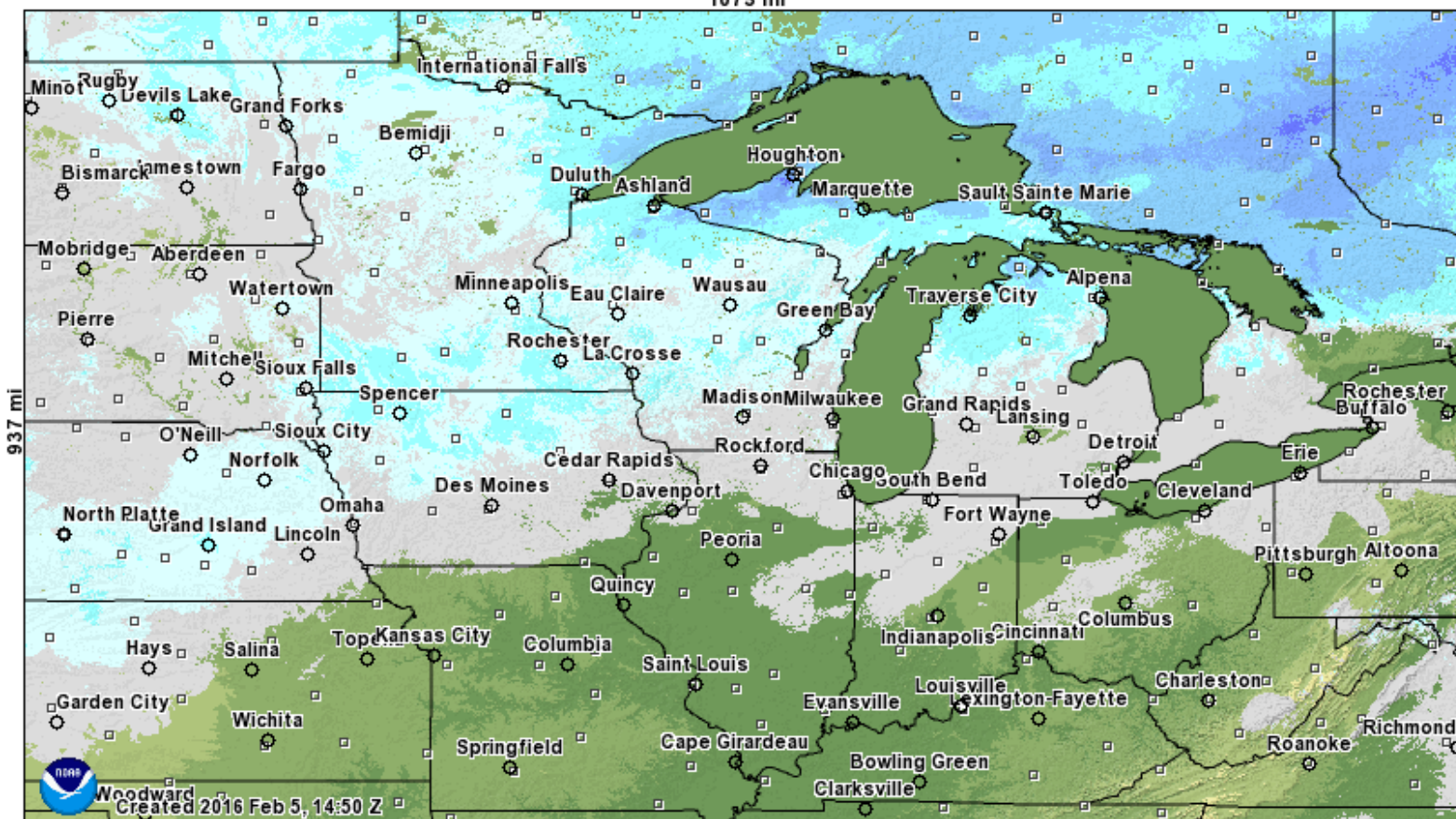
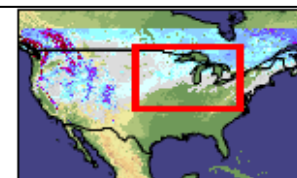
1343 mi



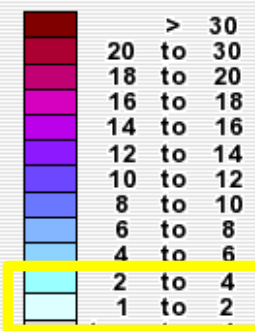
Snow Water Equivalent

Modeled Snow Water Equivalent forecasted for 2016 February 5, 15:00 UTC

1073 mi

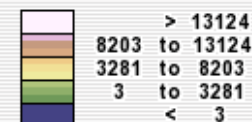


Inches of water equivalent

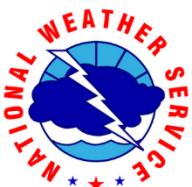


Not Estimated

Elevation in feet

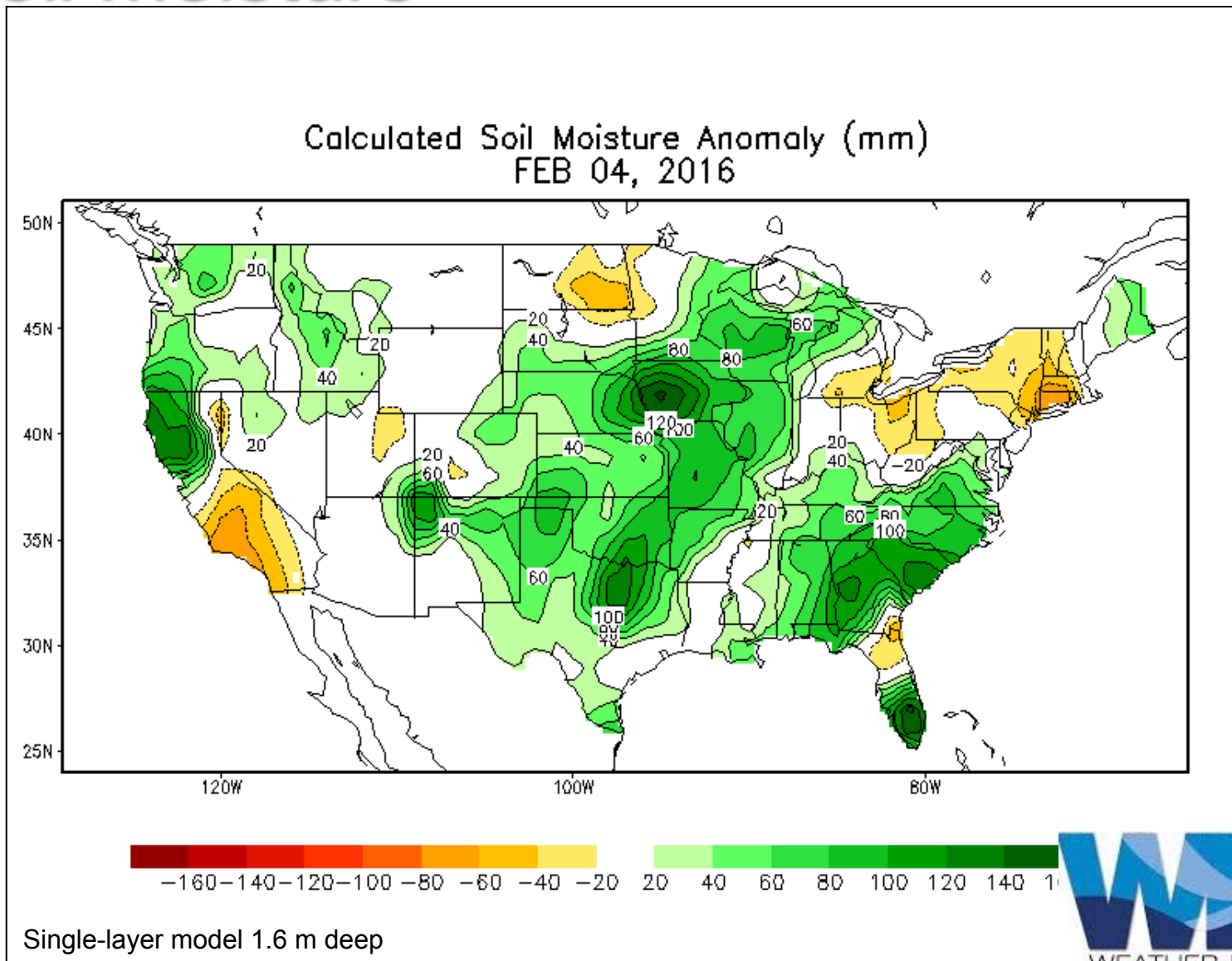


1343 mi

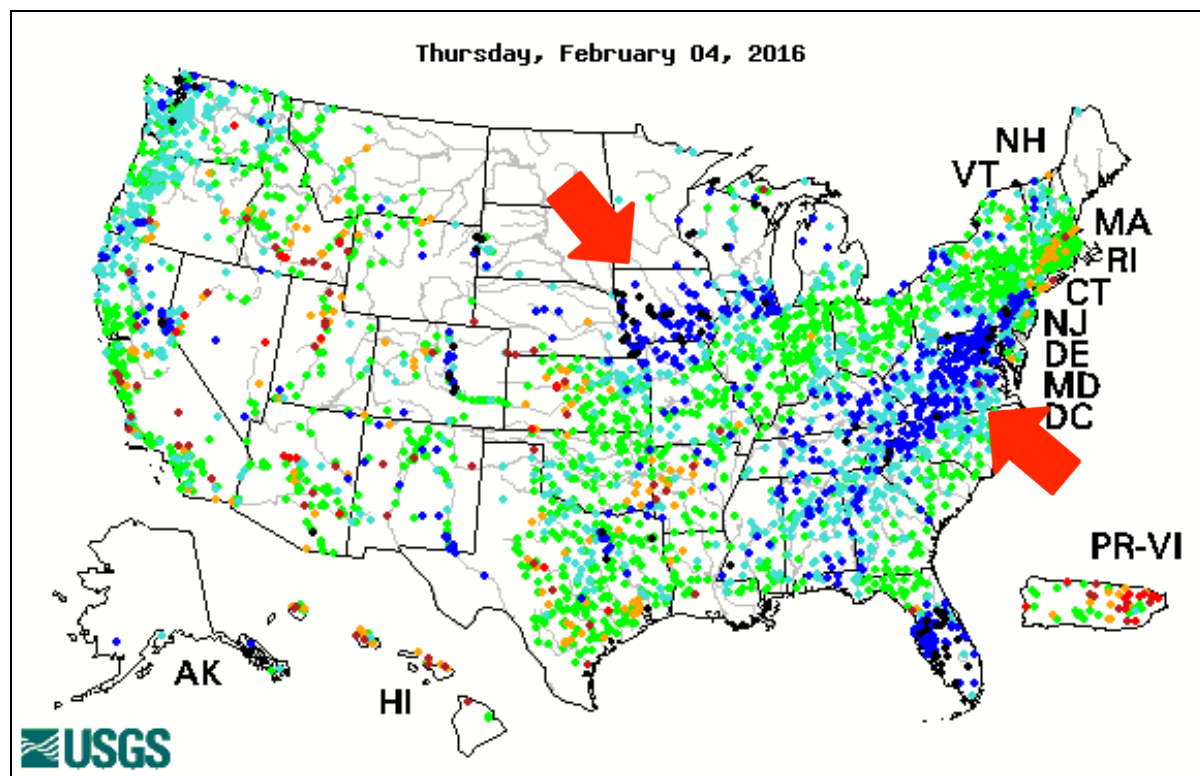


Created 2016 Feb 5, 14:50 Z

Soil Moisture



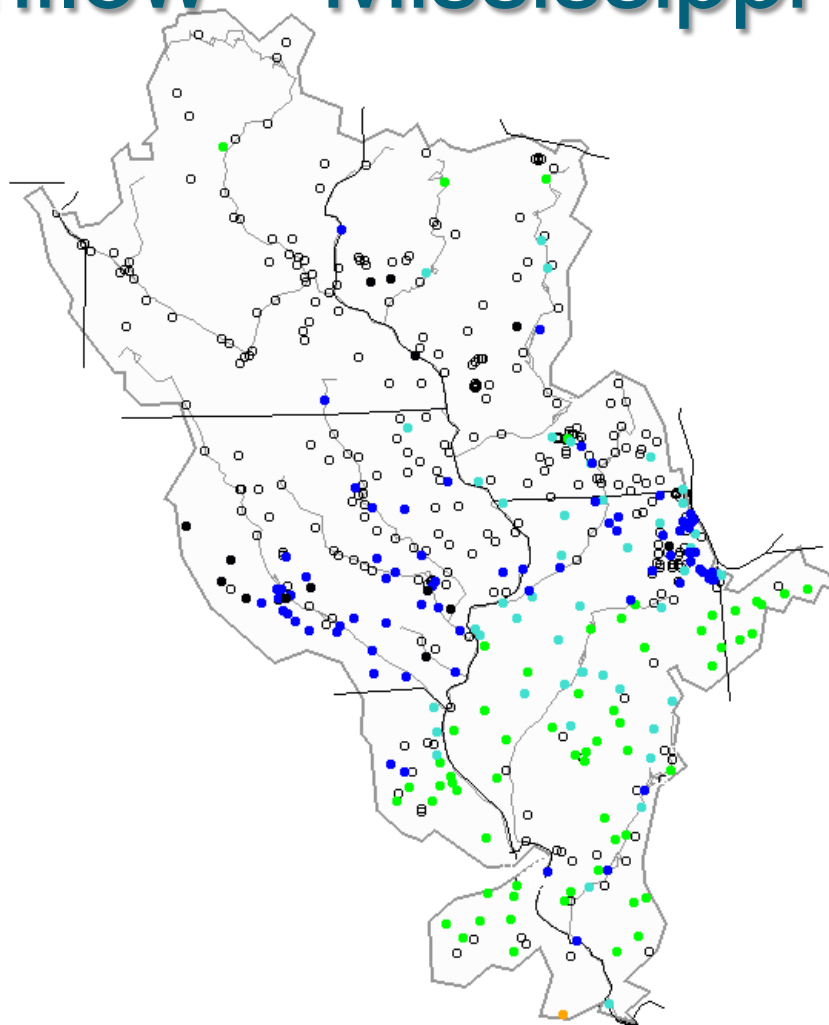
Streamflow



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



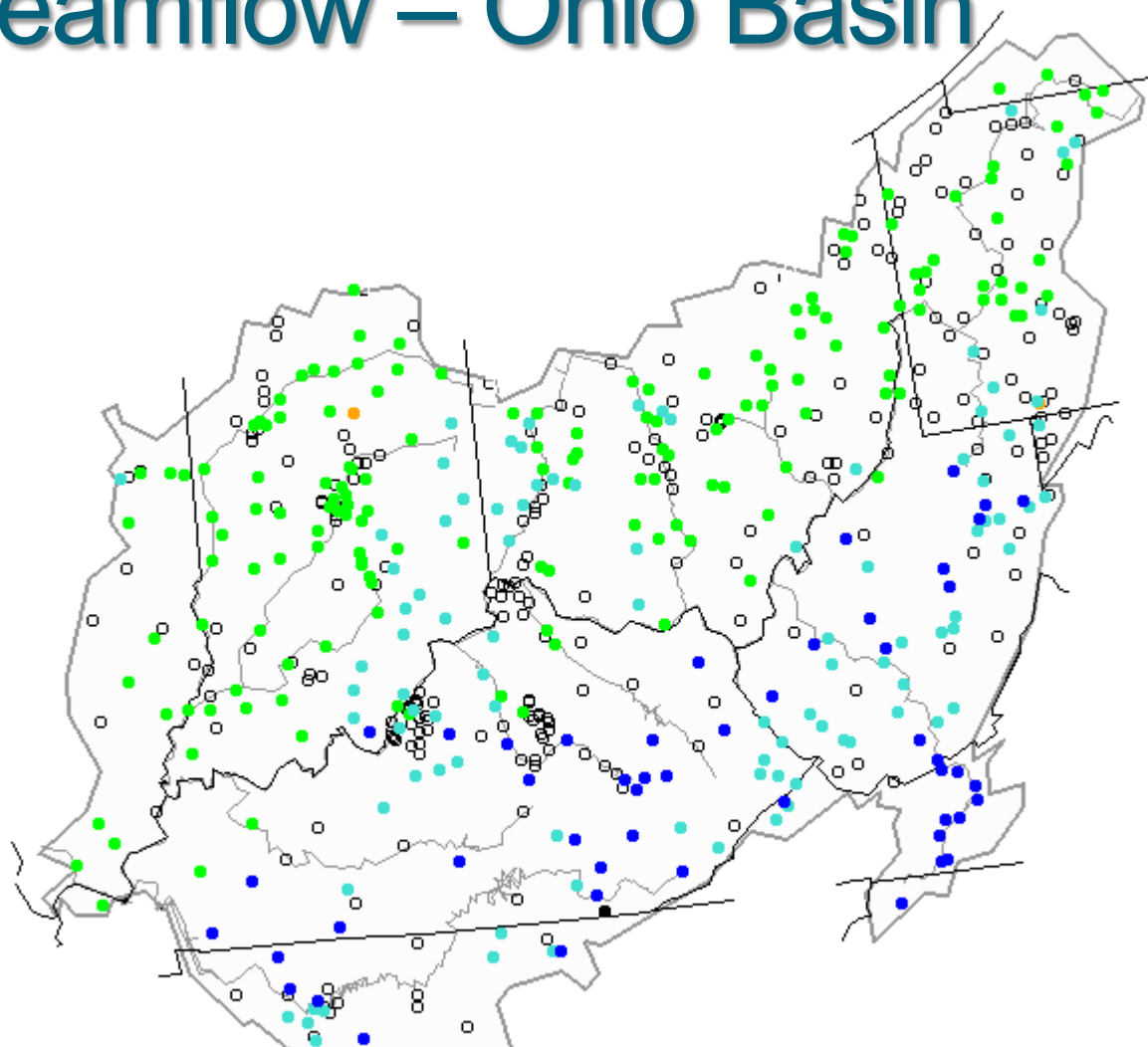
Streamflow – Mississippi Basin



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



Streamflow – Ohio Basin

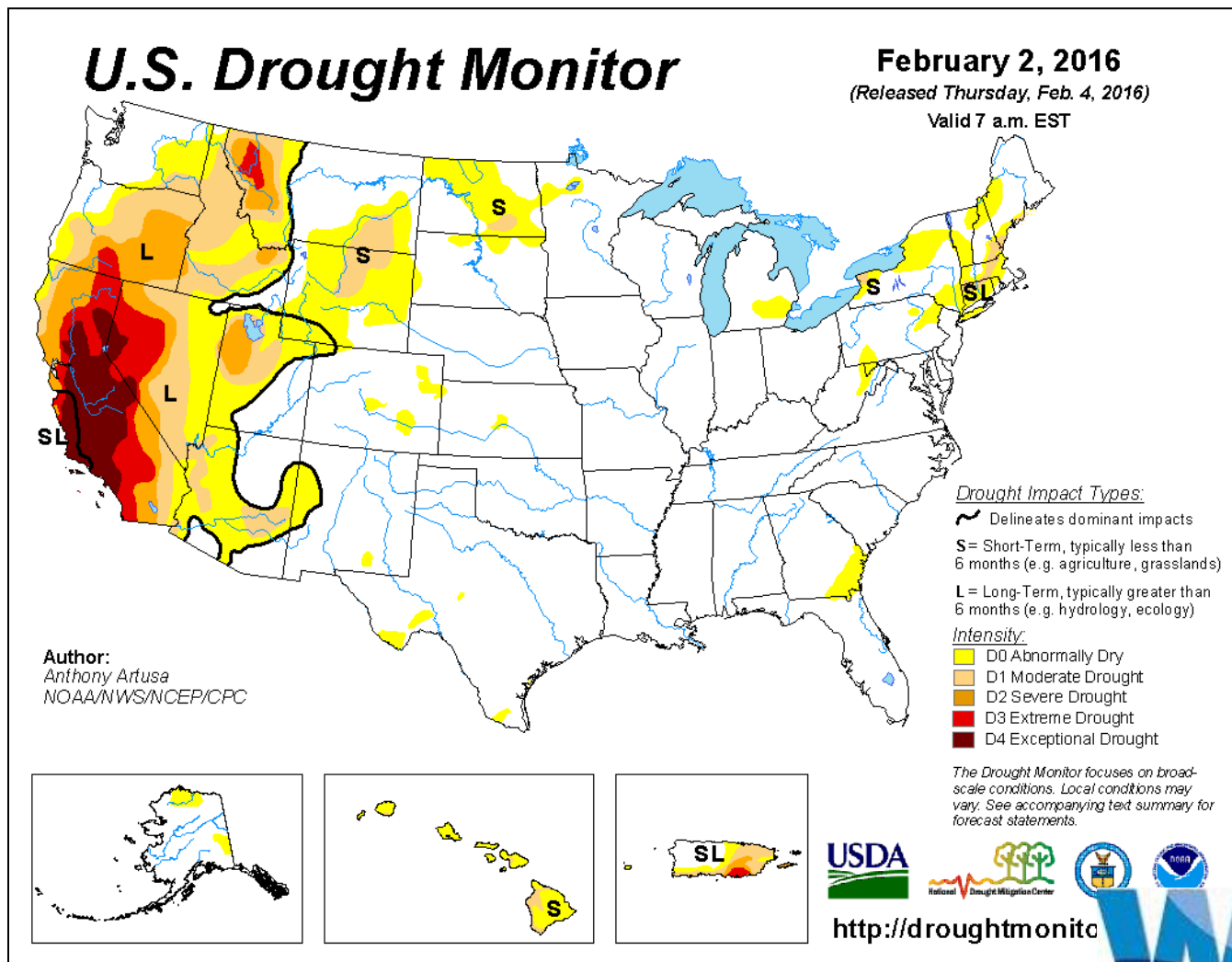


Explanation - Percentile classes

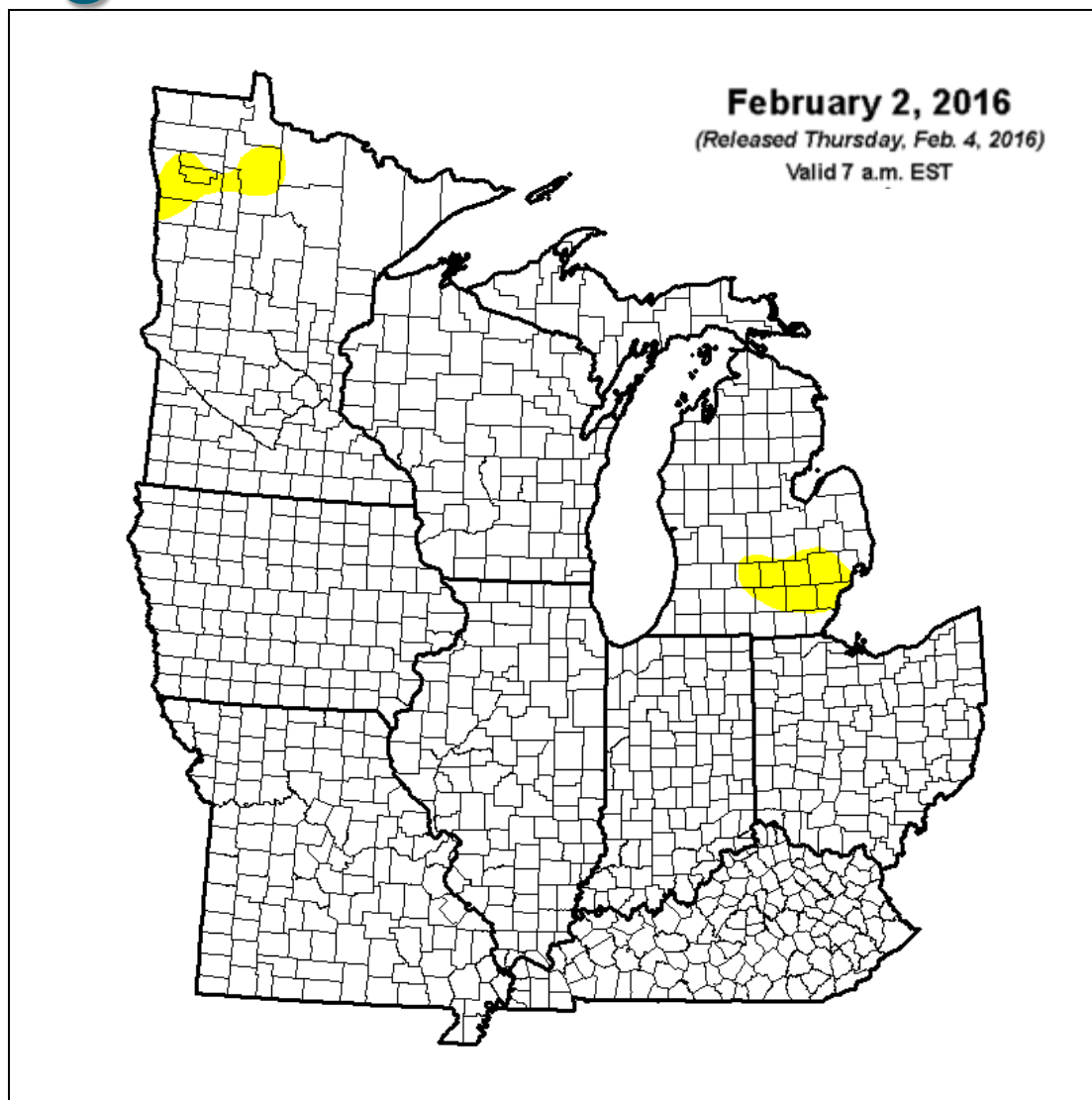
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	








Drought Monitor



Drought Monitor



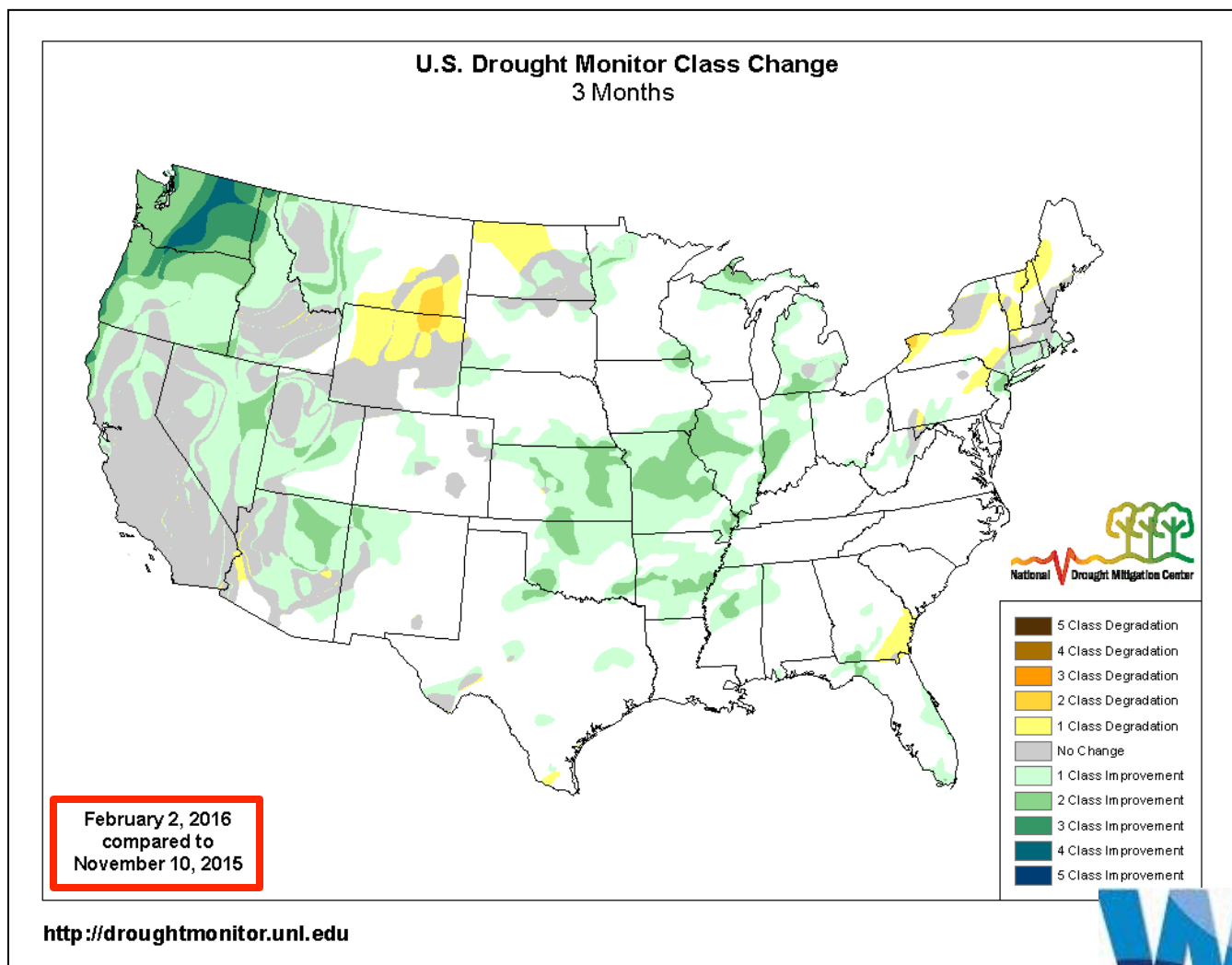
Intensity

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

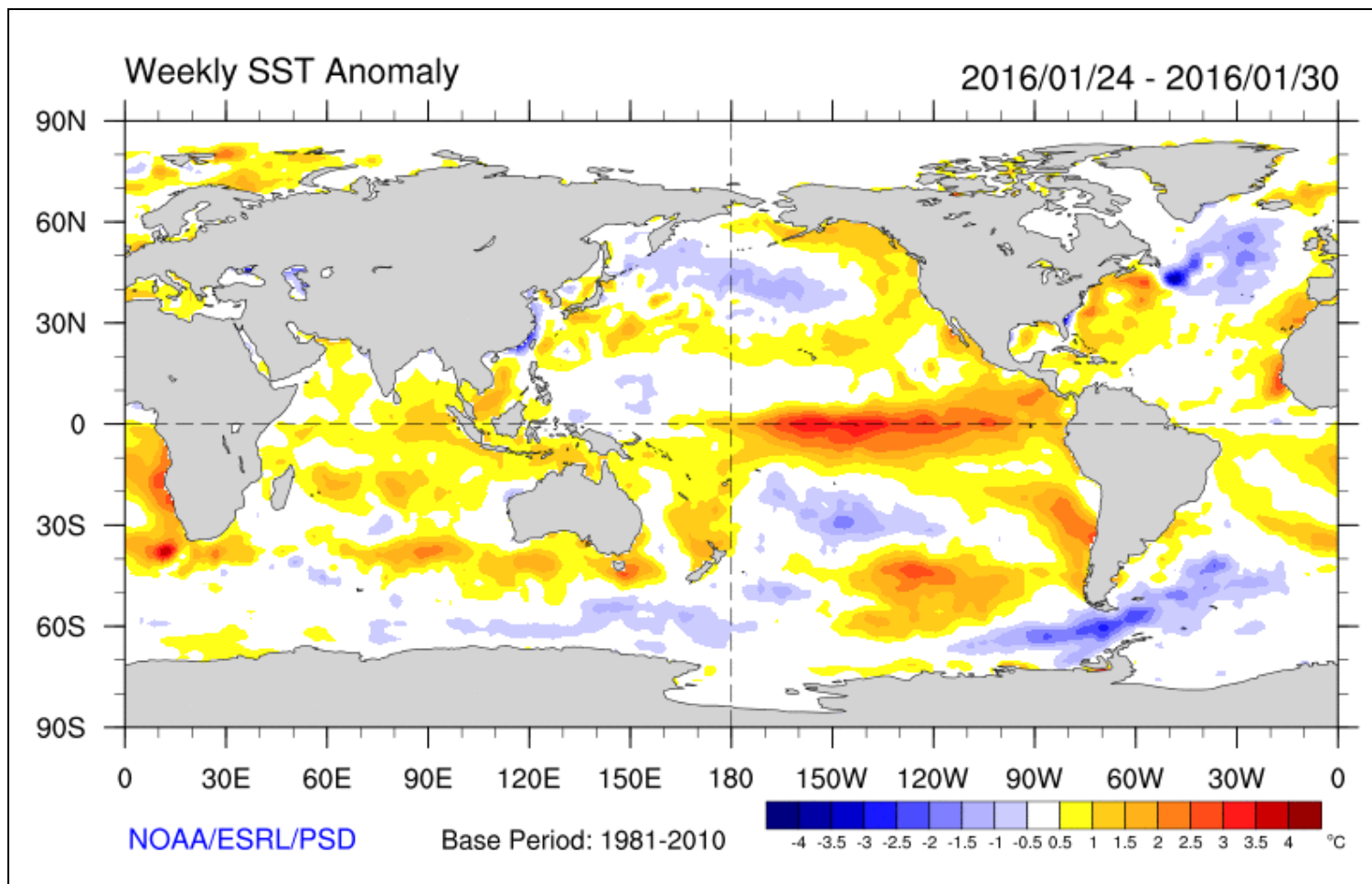
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Drought Monitor – Trends



Sea Surface Temperature Anomalies

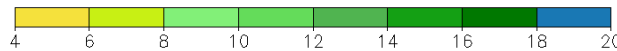
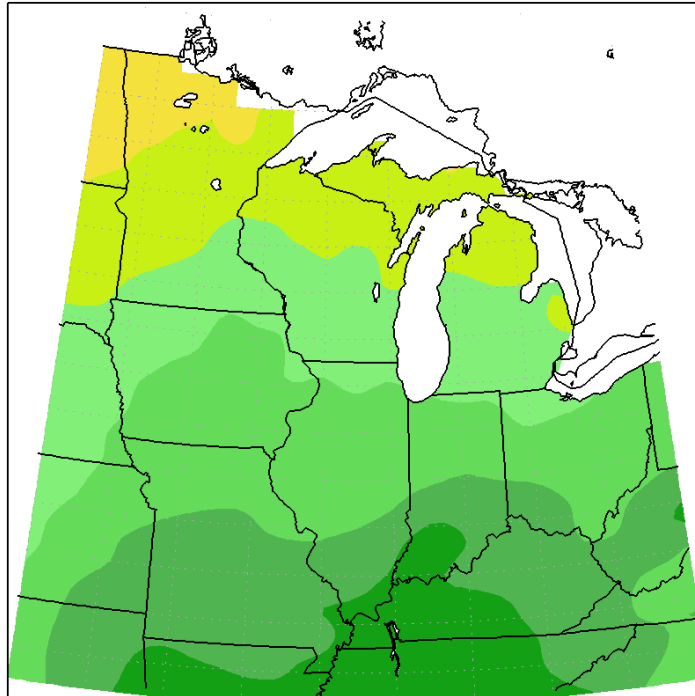


OUTLOOKS

Climatology Mar-Apr-May Precipitation

Accumulated Precipitation (in): March 1 to May 31

Averaged over 30 years: 1981 to 2010



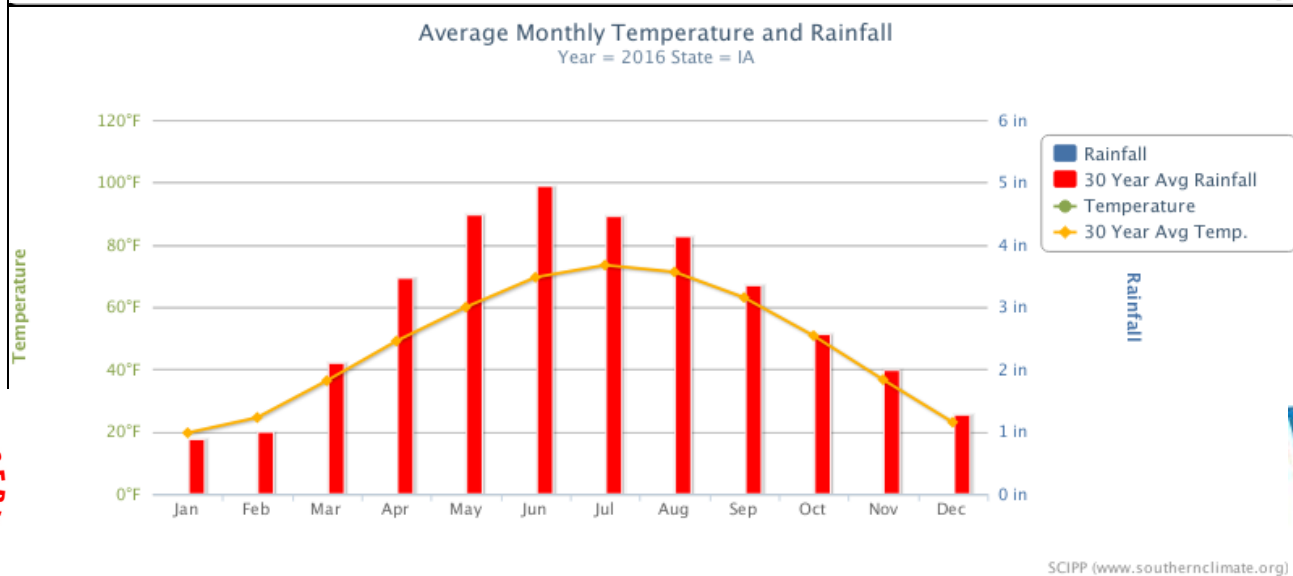
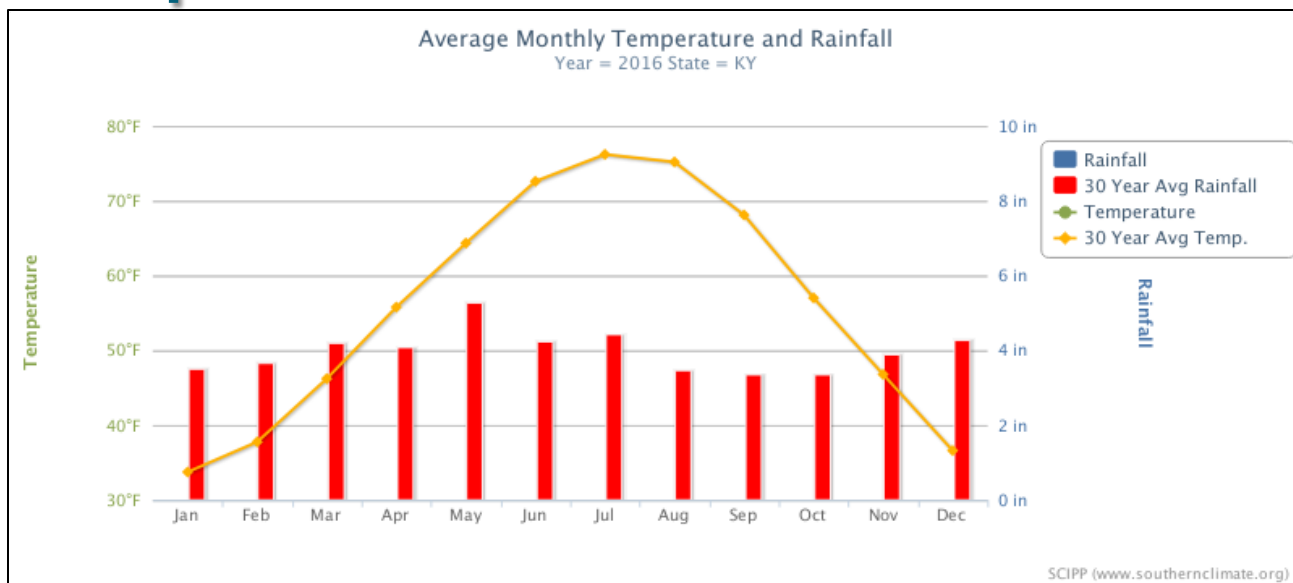
Midwestern Regional Climate Center

cli-MATE: MRCC Application Tools Environment

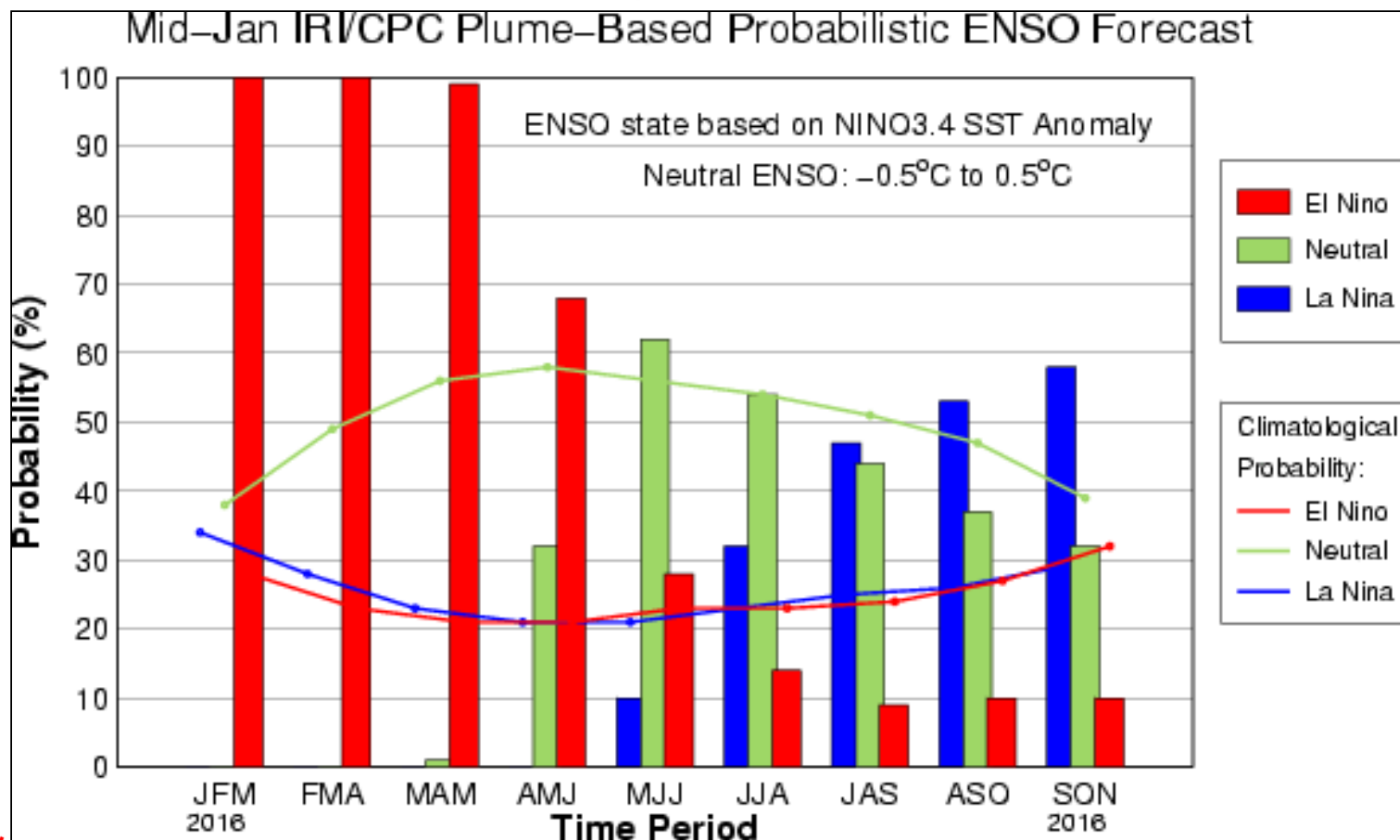
Generated at: 2/4/2016 4:29:51 PM CST



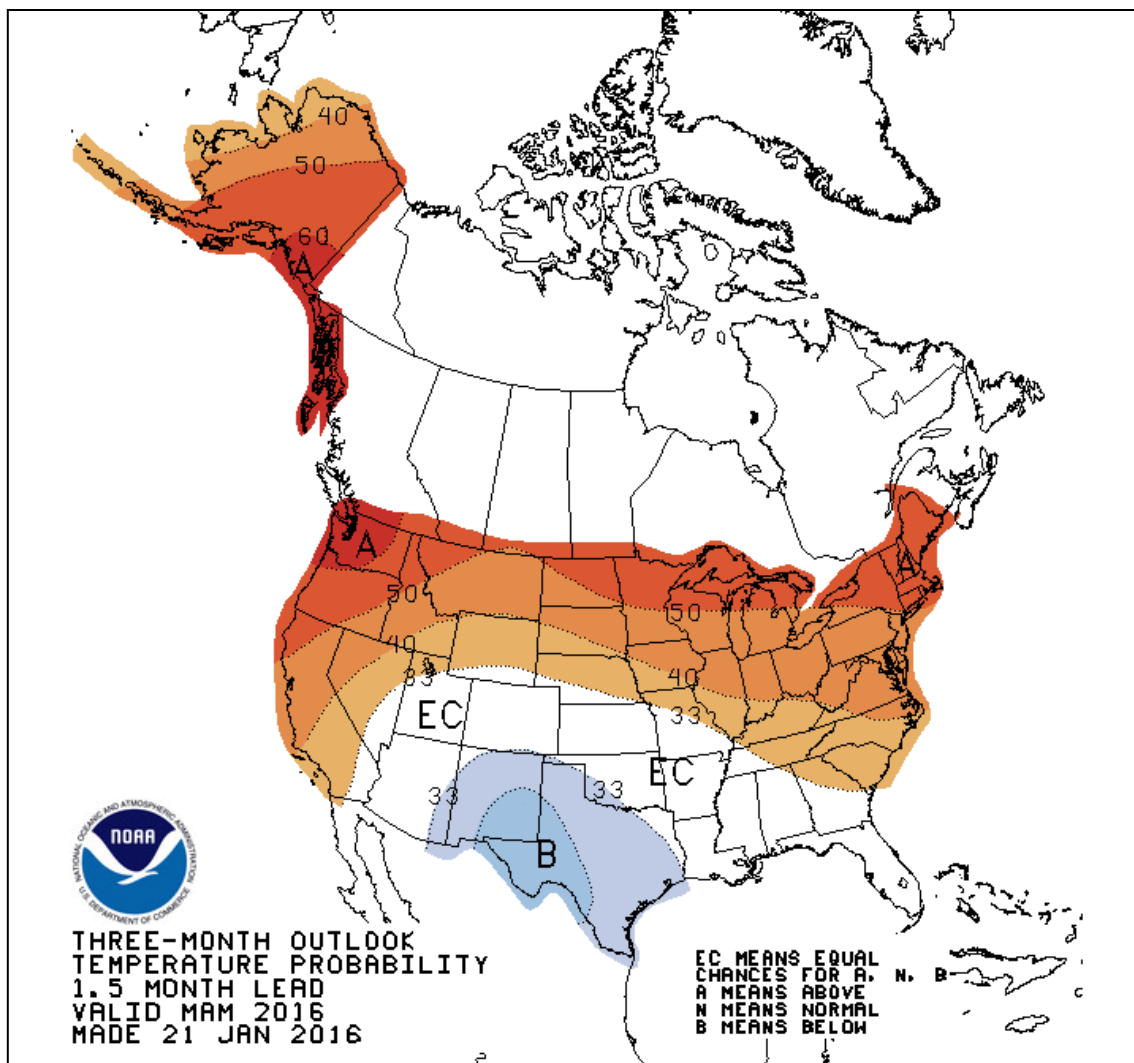
Precip Distribution – KY and IA



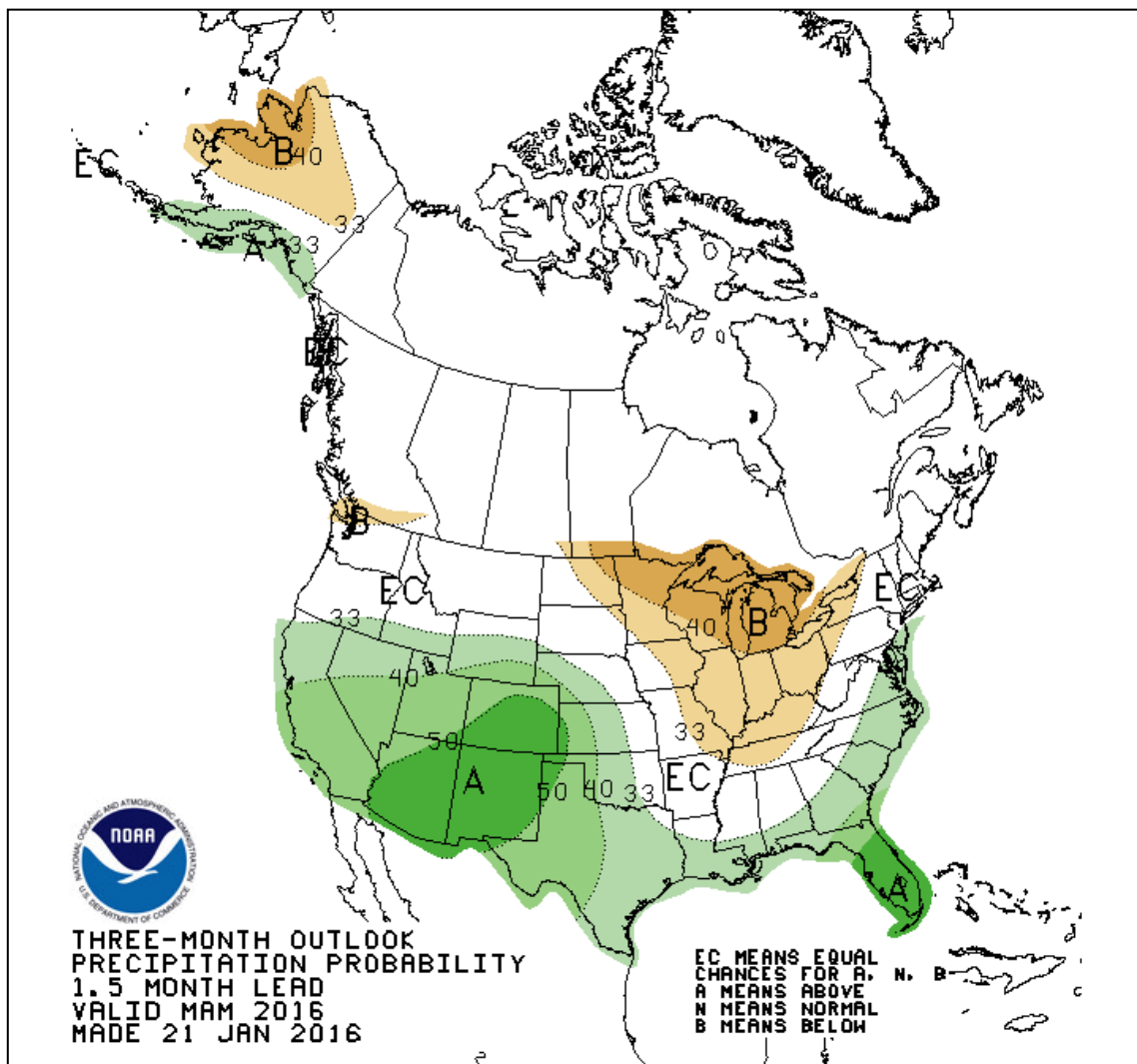
ENSO Probability Outlook



Mar-Apr-May Temperature Outlook



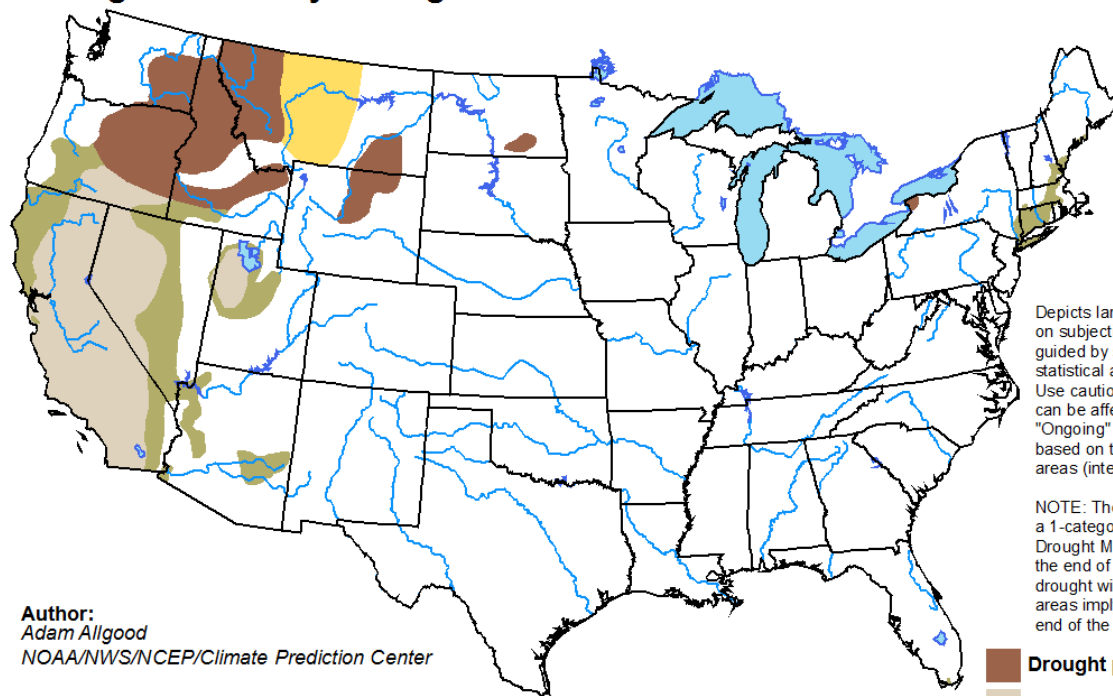
Mar-Apr-May Precipitation Outlook



Seasonal Drought Outlook

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





Valid for January 21 - April 30, 2016
Released January 21, 2016

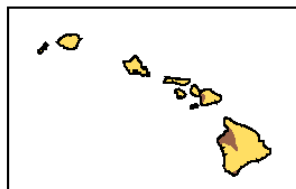
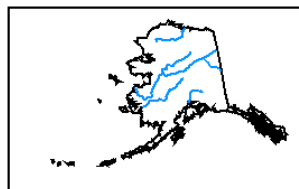


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan 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).

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

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



<http://go.usa.gov/3eZ>



Flood Outlook

- Reasons for concern in the Mississippi Basin
 - Current soil moisture
 - Past El Nino events (analog)
- Ohio Basin
 - Soil moisture close to normal
 - Spring rainfall (rapidly weakening El Nino – high variability)
- **Flood Outlook Release – February 18**
- **River Forecast Center Partner Webinars – February 19**



Thank you!

Questions?

- Midwestern Regional Climate Center
 - <http://mrcc.sws.uiuc.edu/>
- National Operational Hydrologic Remote Sensing Center
 - <http://www.nohrsc.noaa.gov/>
- U.S. Geological Survey
 - <http://watermonitor.gov/>
- National Drought Mitigation Center
 - <http://droughtmonitor.unl.edu/>
- National Weather Service Climate Prediction Center
 - <http://www.cpc.ncep.noaa.gov/>

• **Monthly Climate and Drought Summary and Outlooks**

doug.kluck@noaa.gov

