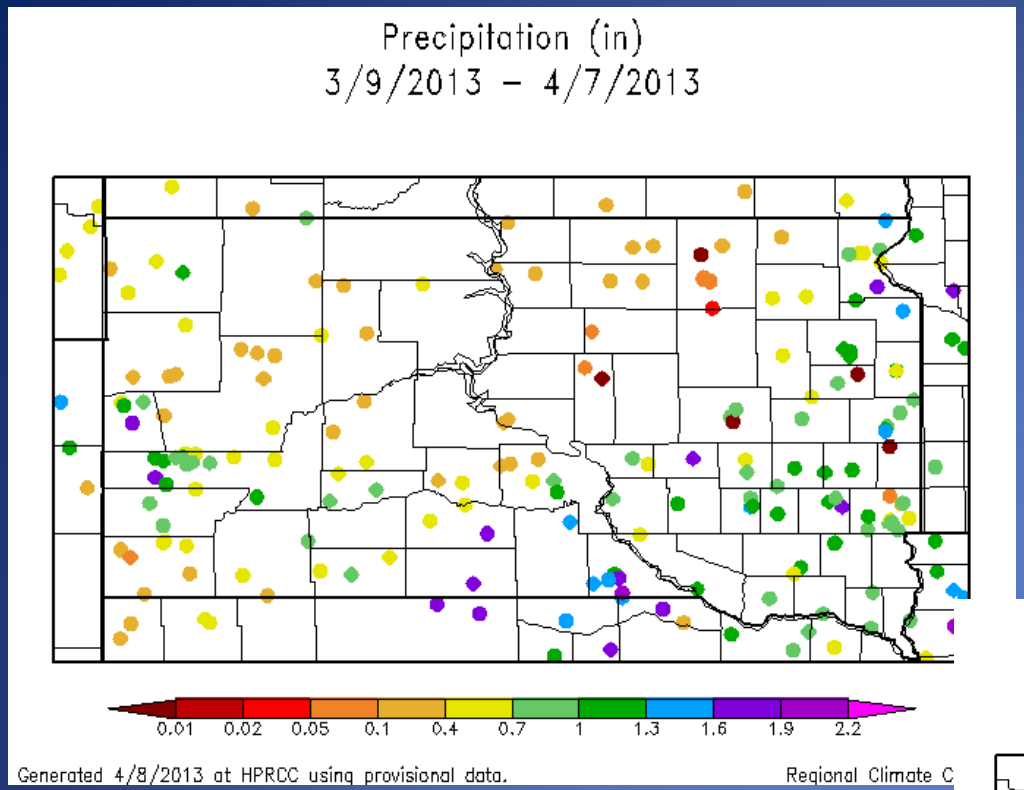
South Dakota Drought Update
8 April 2013

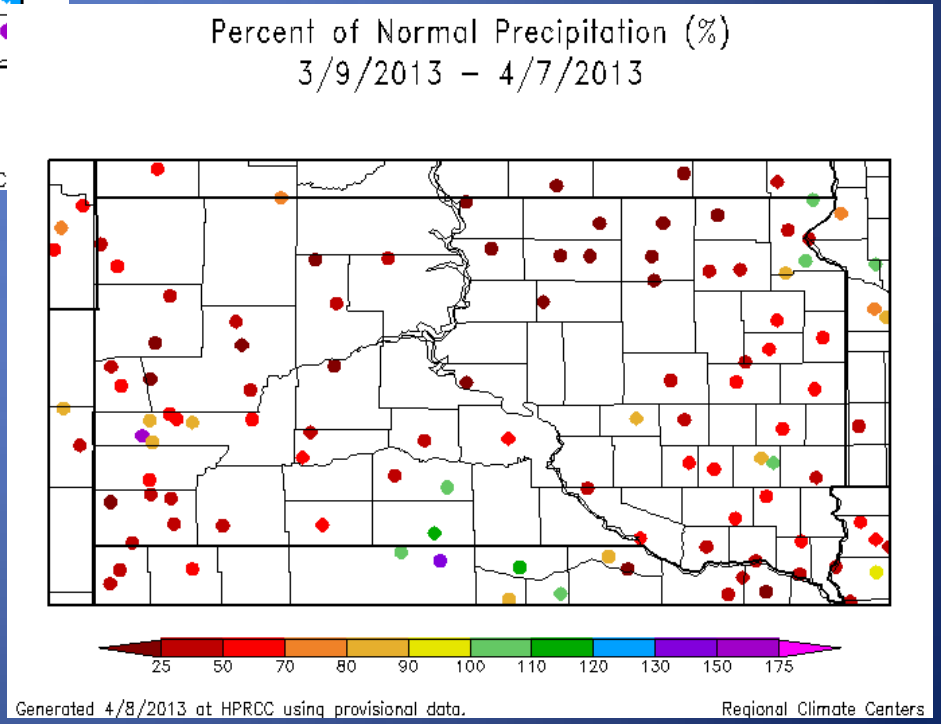
Dr. Dennis Todey
South Dakota State Climatologist
SDSU Extension/AES/ABE

SOUTH DAKOTA Climate and Weather

Issues

- Fire – continuing until green-up
- Flood – far northeast
- Precipitation – near term significant
- Temperature – cool side for now
- Outlook – not bad, but enough?

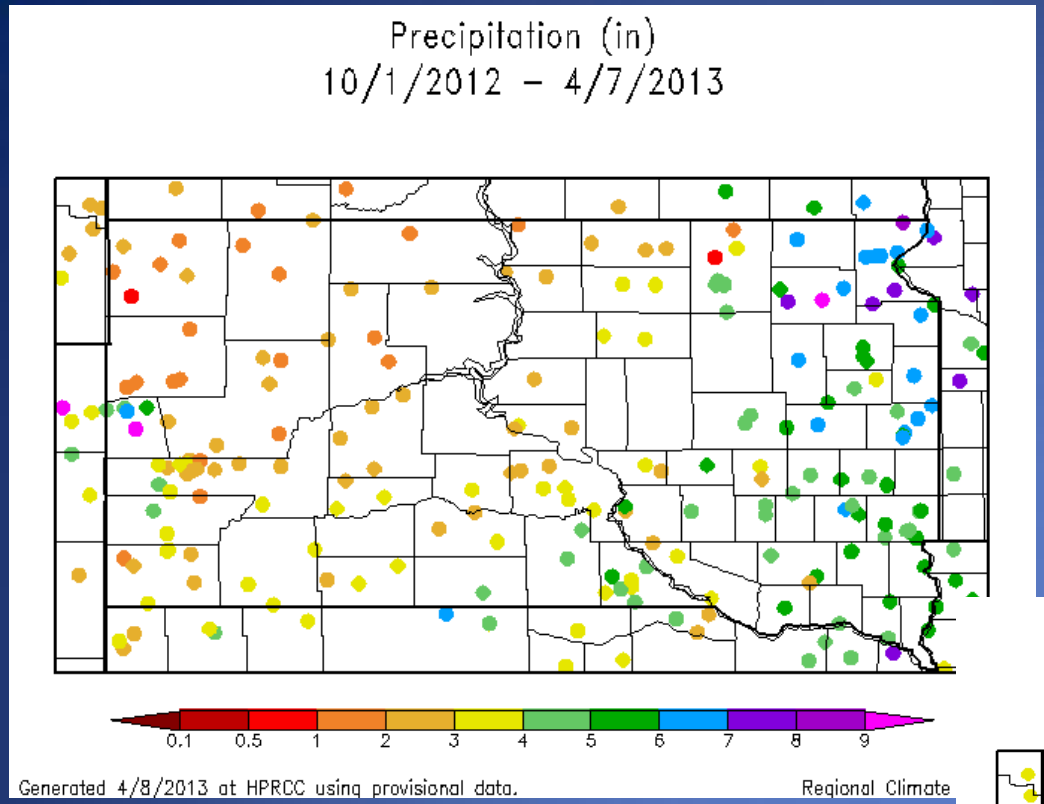


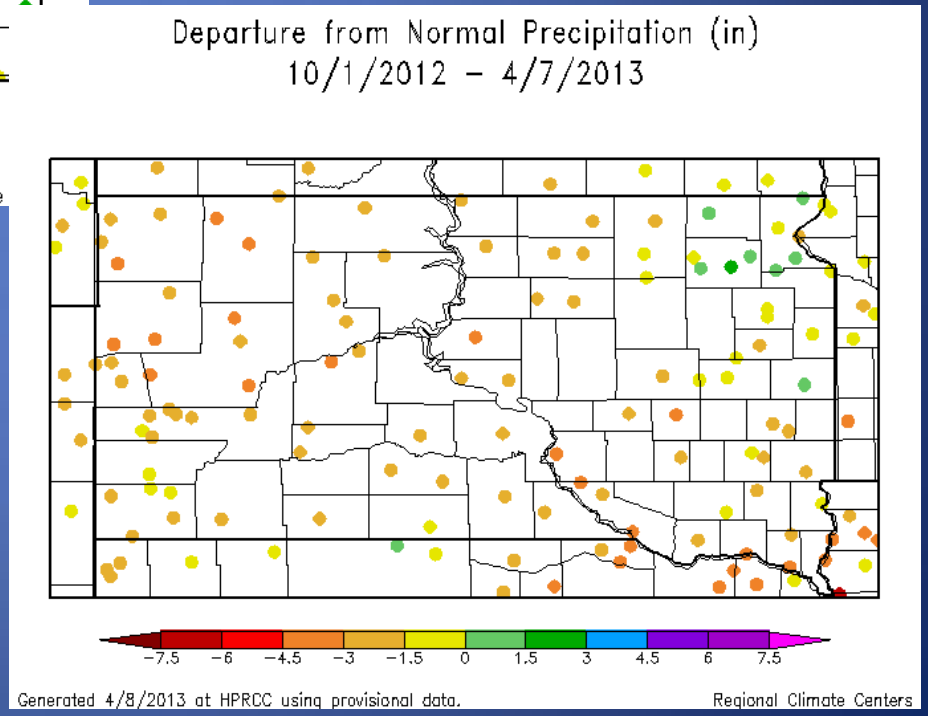


Some return of precipitation last 30 days – still largely below average

SOUTH DAKOTA Climate and Weather

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

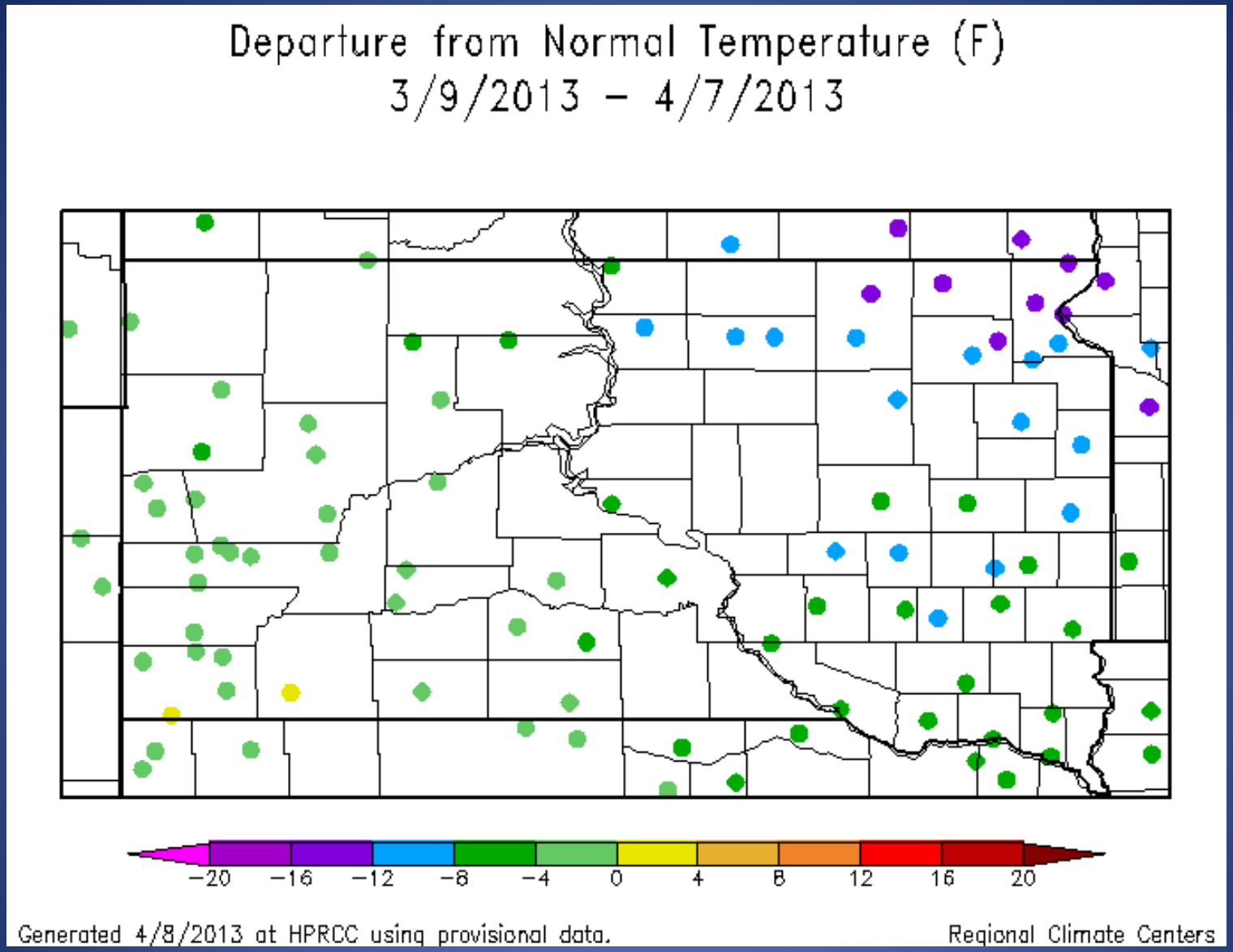




Large deficits since last fall

SOUTH DAKOTA Climate and Weather

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

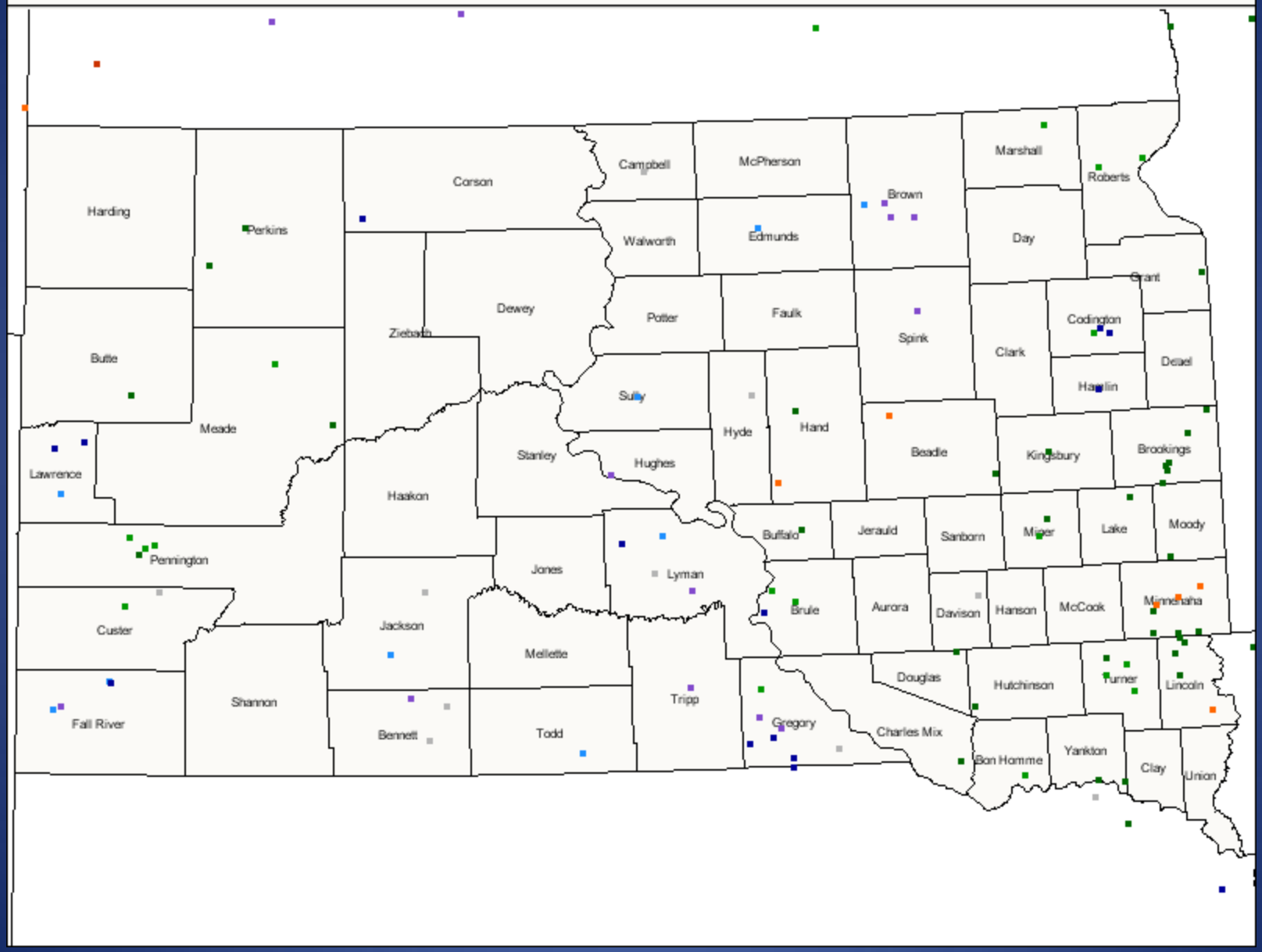


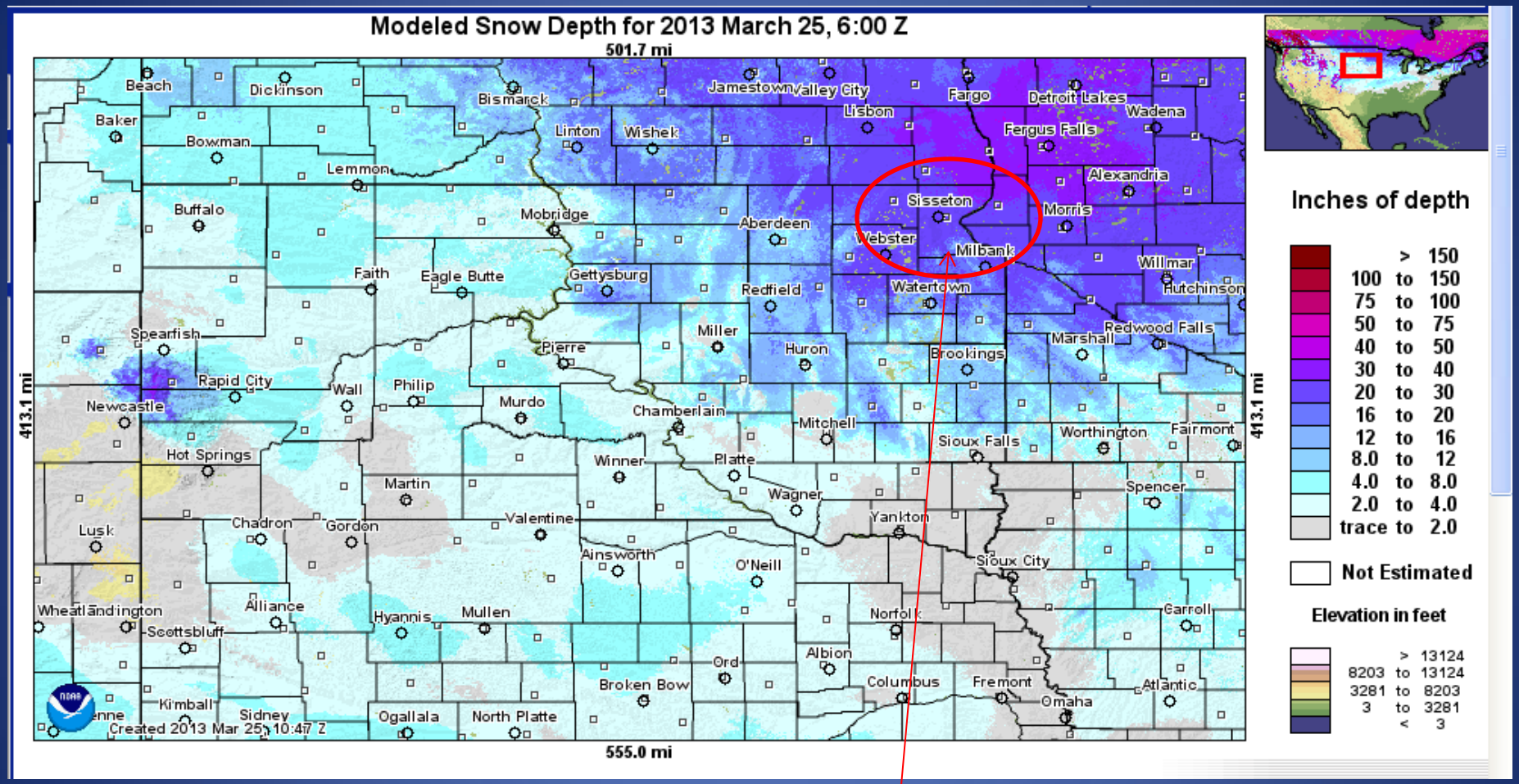
Clear impact of snow cover in the northeast

Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

South Dakota 4/8/2013

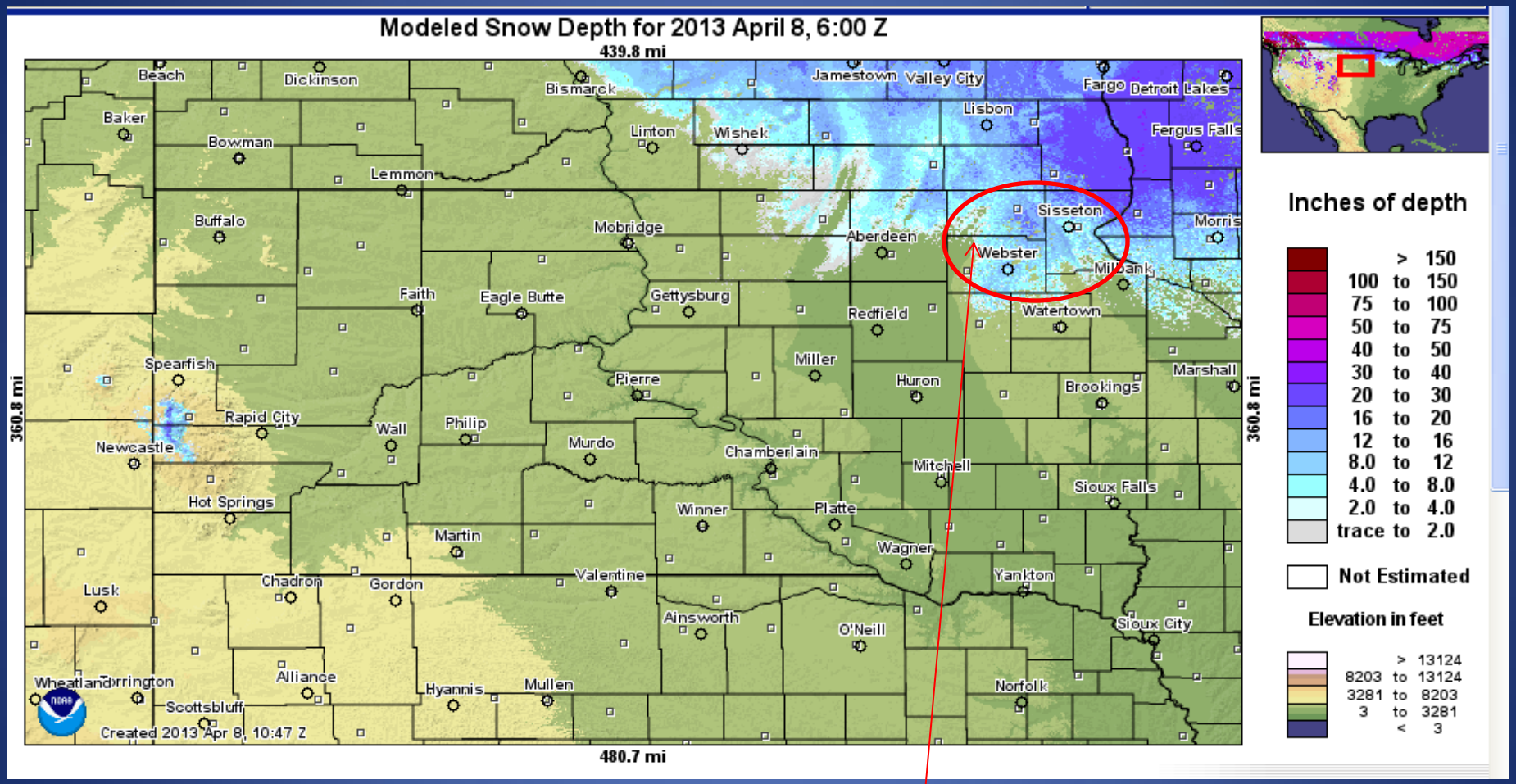
0.0 | Trace | 0.01 - 0.02 | 0.03 - 0.04 | 0.05 - 0.09 | 0.10 - 0.21 | 0.22 - 0.31 | 0.32 - 0.33





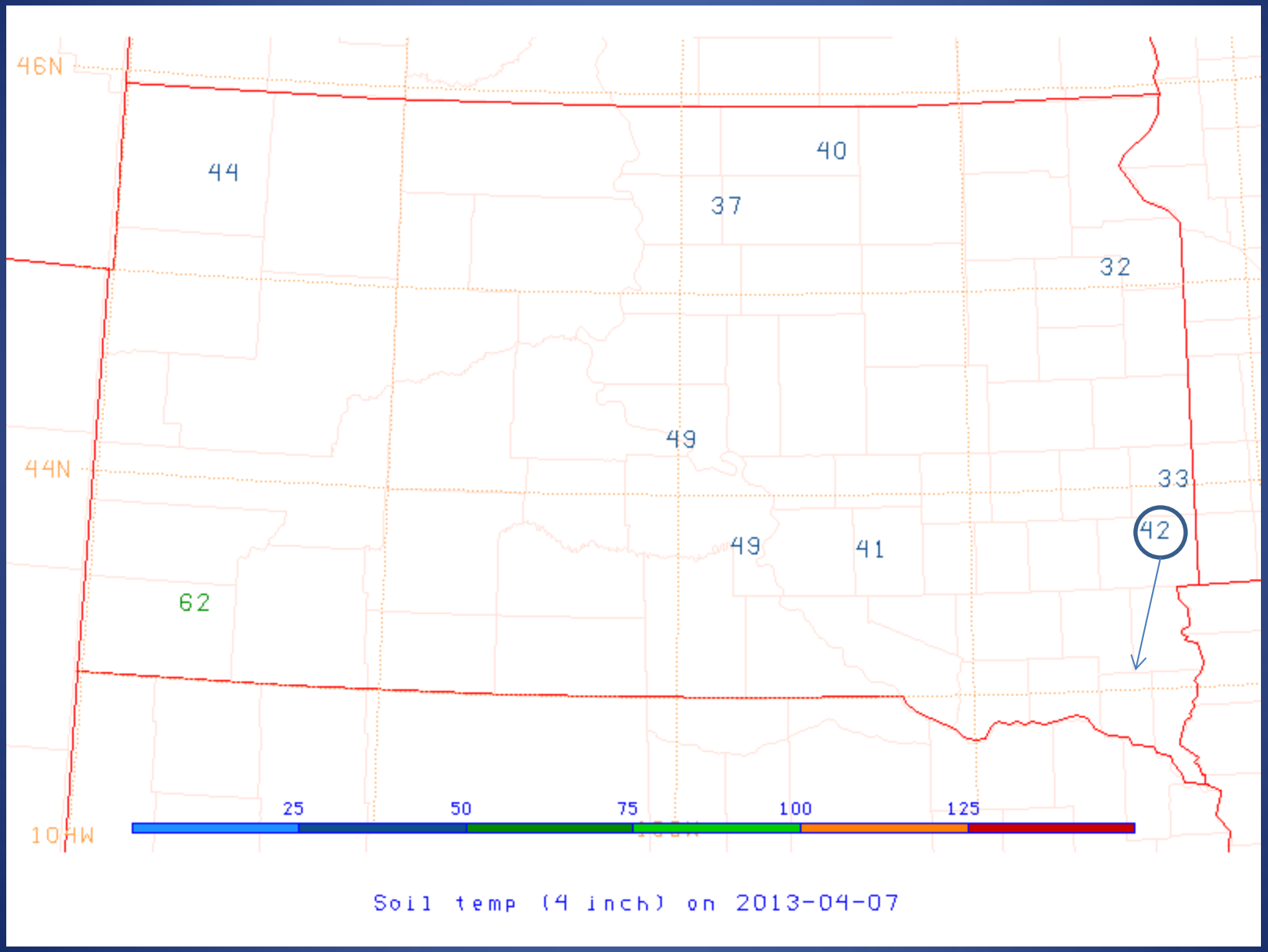
4 – 5” snow water equivalent

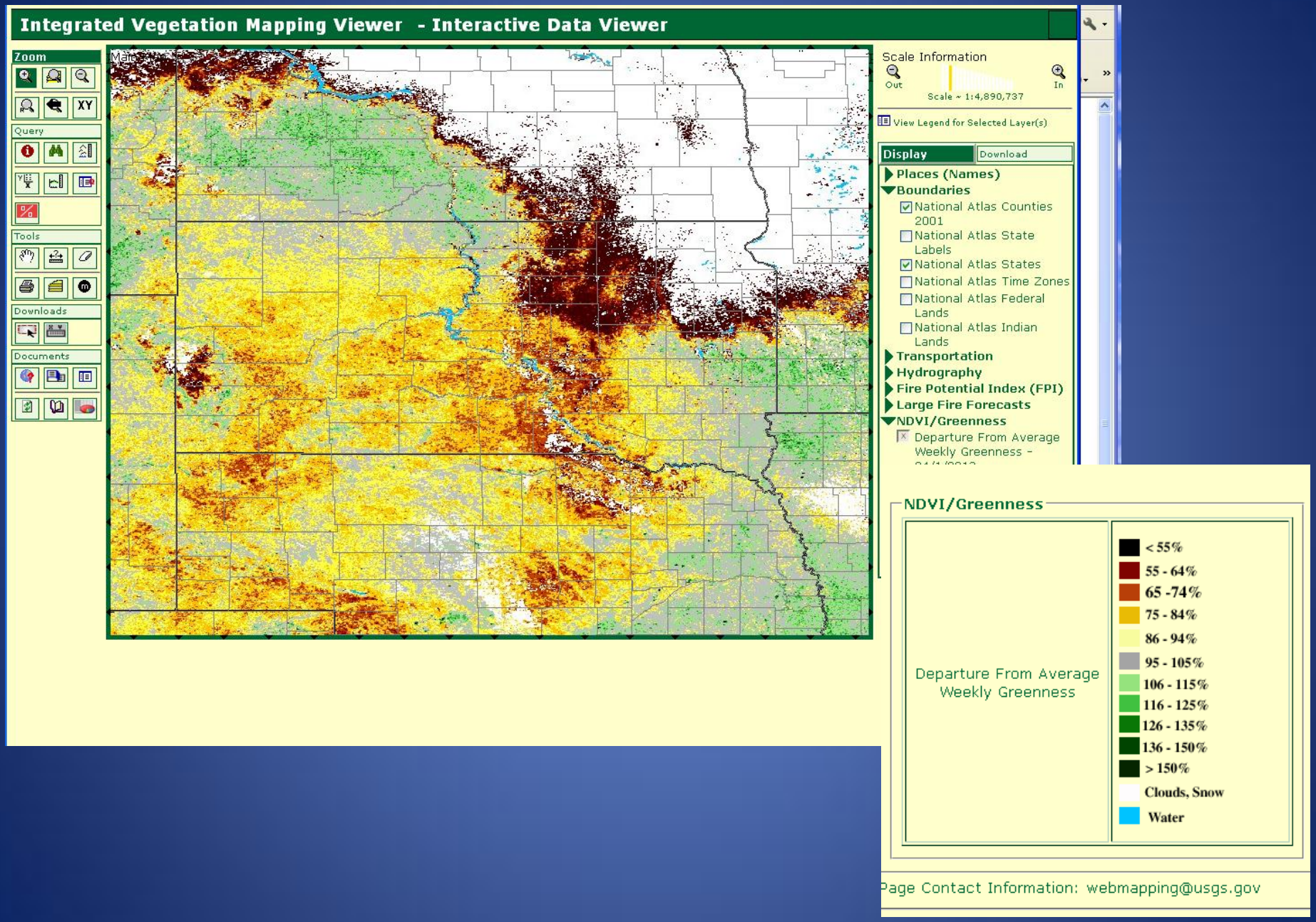
SOUTH DAKOTA Climate and Weather



2 - 4” snow water equivalent

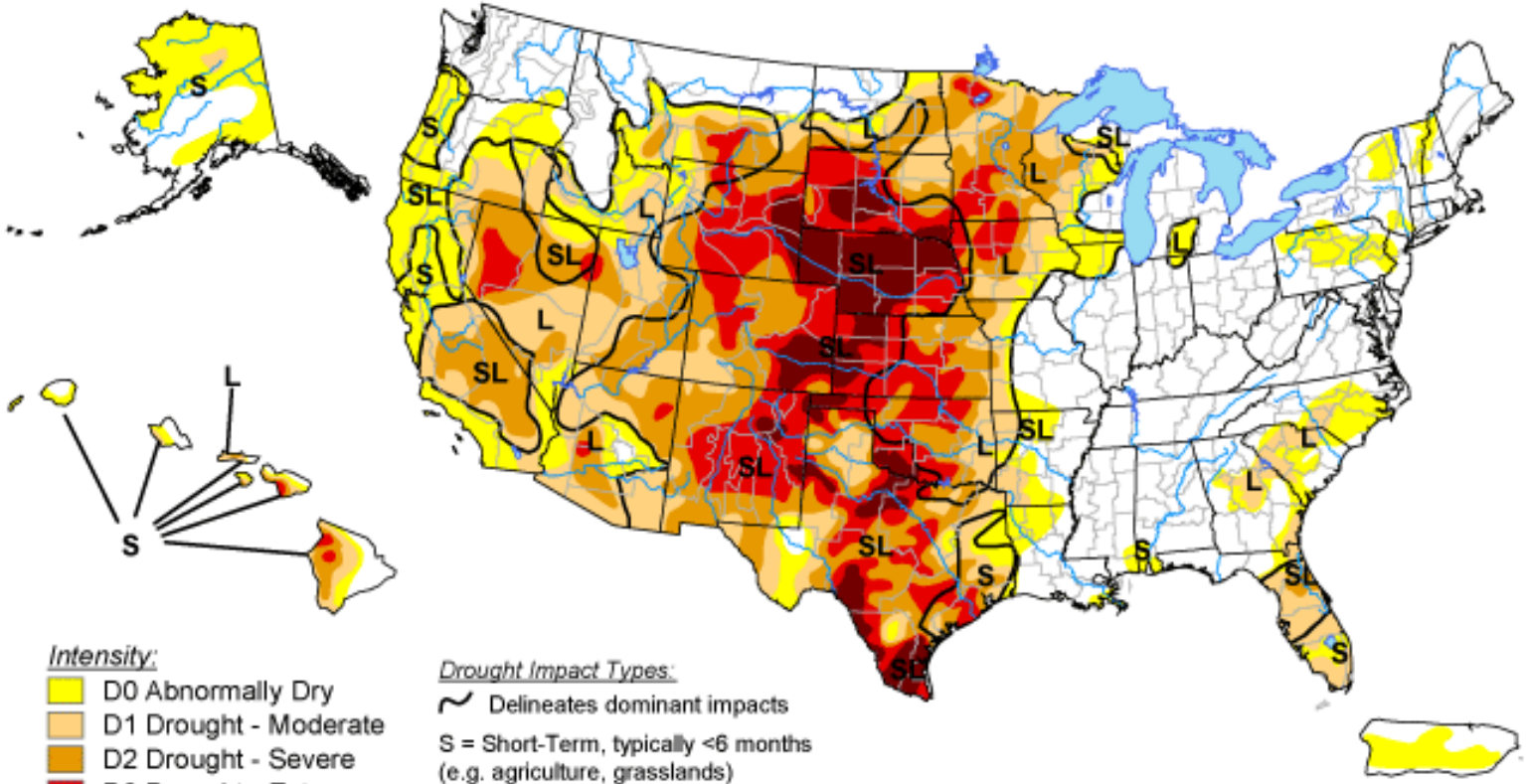
SOUTH DAKOTA Climate and Weather


46N
44N
44
40
37
32
49
33
42
49
41
62
25
50
75
100
125
Soil temp (4 inch) on 2013-04-07


Integrated Vegetation Mapping Viewer - Interactive Data Viewer
Zoom
Query
Tools
Downloads
Documents
Map
Scale Information
Out
In
Scale ~ 1:4,890,737
View Legend for Selected Layer(s)
Display
Download
Places (Names)
Boundaries
National Atlas Counties 2001
National Atlas State Labels
National Atlas States
National Atlas Time Zones
National Atlas Federal Lands
National Atlas Indian Lands
Transportation
Hydrography
Fire Potential Index (FPI)
Large Fire Forecasts
NDVI/Greenness
Departure From Average Weekly Greenness -
NDVI/Greenness
Departure From Average Weekly Greenness
< 55%
55 - 64%
65 -74%
75 - 84%
86 - 94%
95 - 105%
106 - 115%
116 - 125%
126 - 135%
136 - 150%
> 150%
Clouds, Snow
Water
Page Contact Information: webmapping@usgs.gov

U.S. Drought Monitor

April 2, 2013
Valid 7 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
- 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/

USDA National Drought Mitigation Center

Released Thursday, April 4, 2013
Author: Rich Tinker, NOAA/NWS/NCEP/CPC

SOUTH DAKOTA Climate and Weather

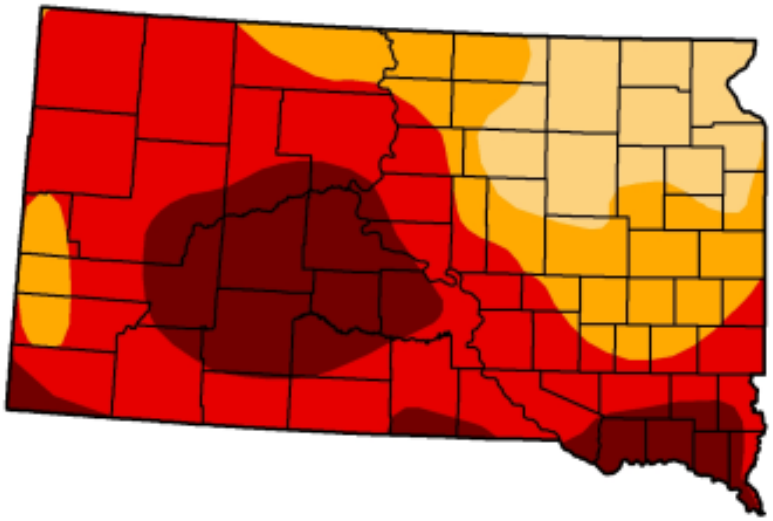
U.S. Drought Monitor

April 2, 2013
Valid 7 a.m. EST

South Dakota

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	86.29	66.49	20.86
Last Week (03/26/2013 map)	0.00	100.00	100.00	86.29	65.78	20.86
3 Months Ago (01/01/2013 map)	0.00	100.00	100.00	96.95	63.17	30.68
Start of Calendar Year (01/01/2013 map)	0.00	100.00	100.00	96.95	63.17	30.68
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	74.69	50.53	6.72
One Year Ago (03/27/2012 map)	23.87	76.13	29.44	1.96	0.00	0.00



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.

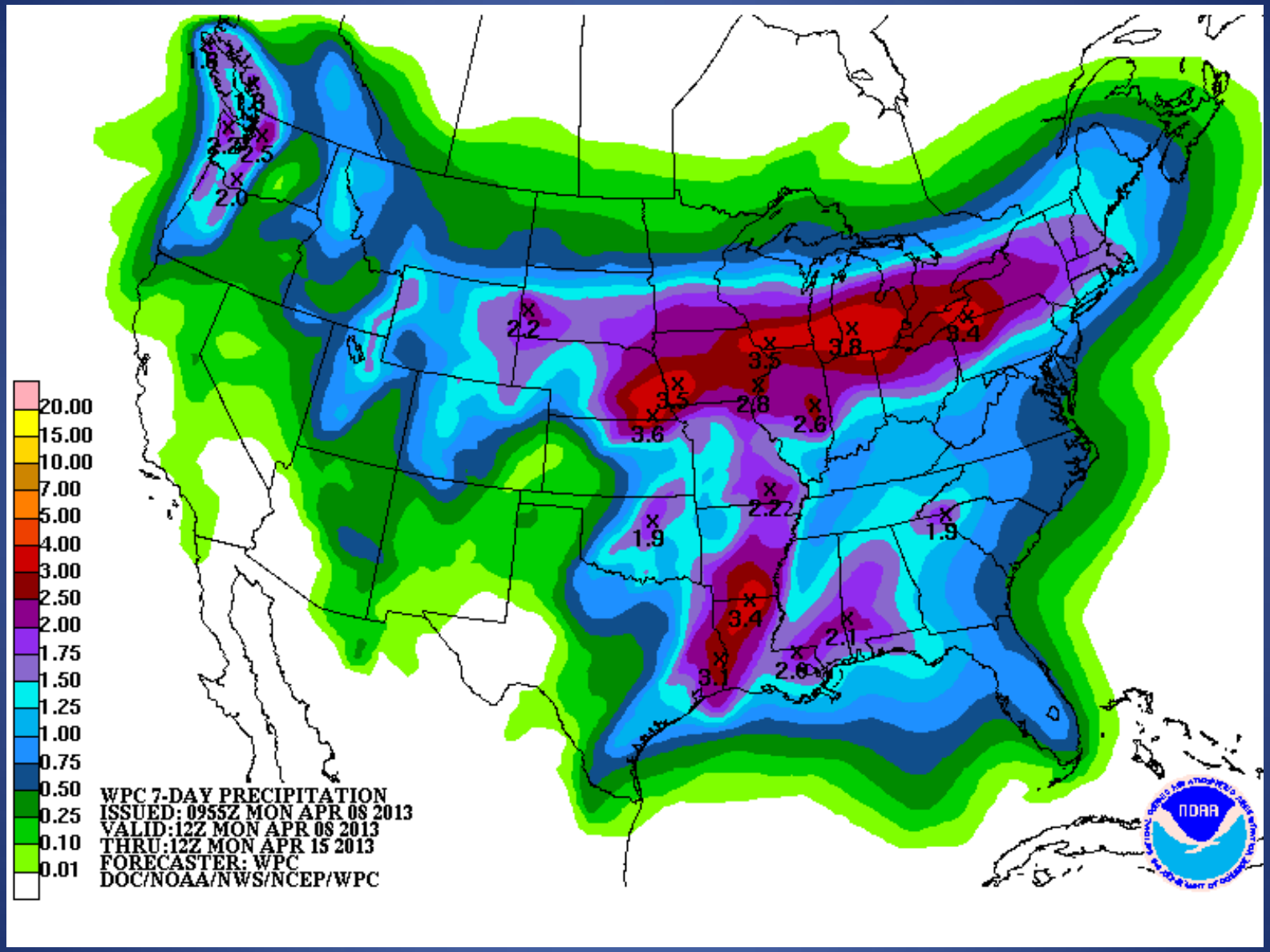
http://droughtmonitor.unl.edu

USDA National Drought Mitigation Center

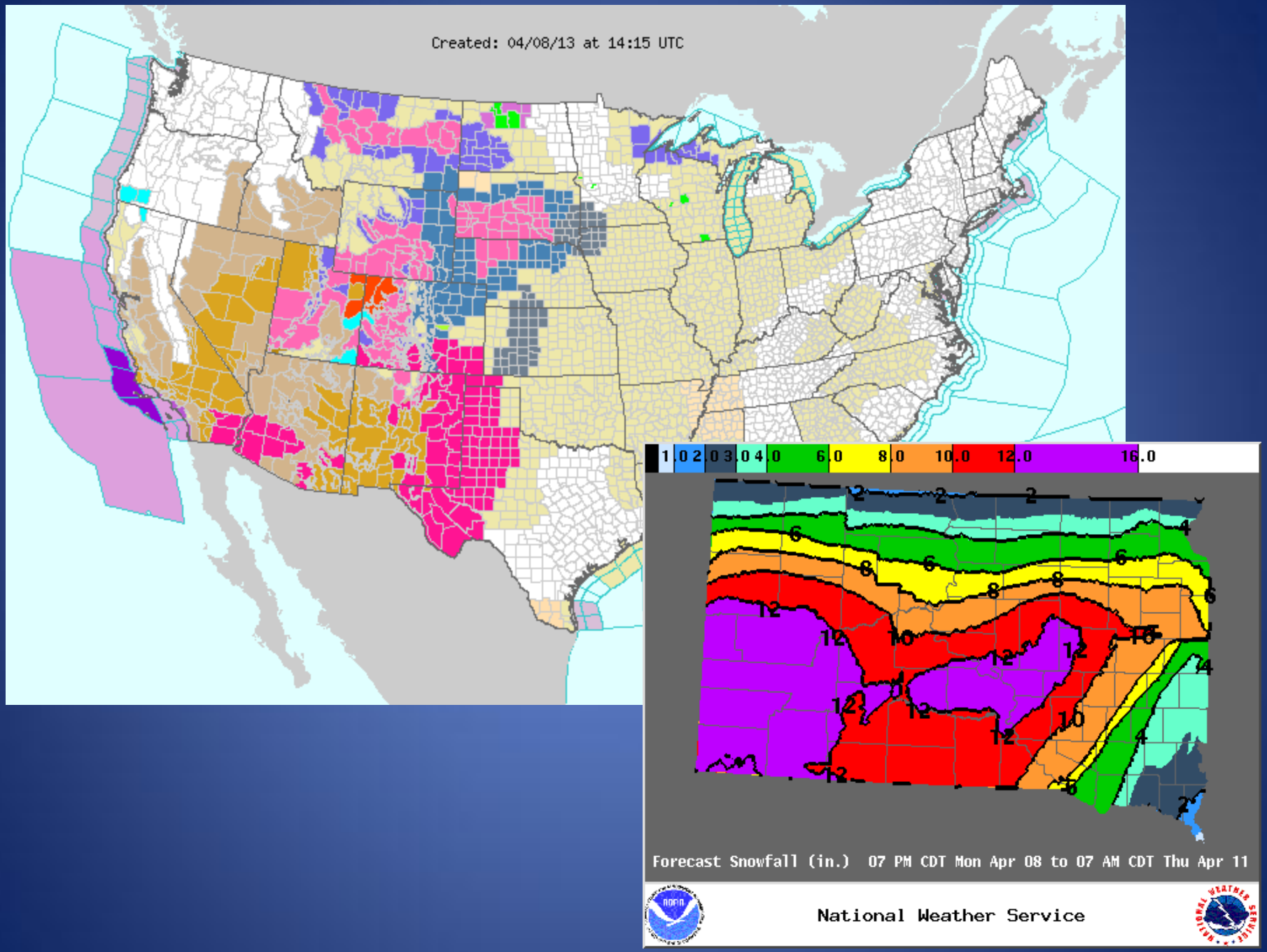
Released Thursday, April 4, 2013
National Drought Mitigation Center,

SOUTH DAKOTA Climate and Weather

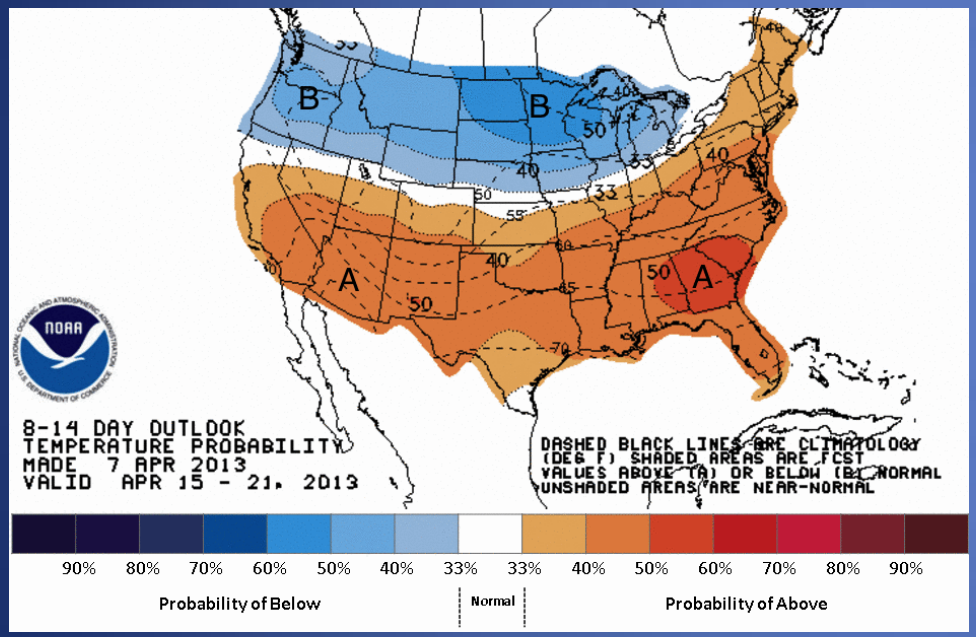
Small improvement in BH. Worsening in the northwest



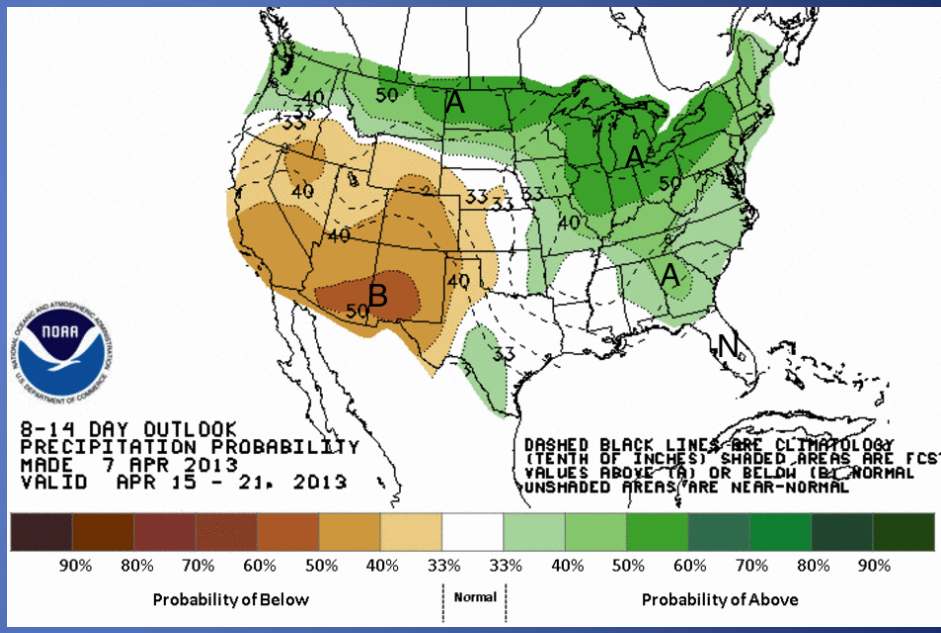
http://www.hpc.ncep.noaa.gov/qpf/day1-7.shtml


Created: 04/08/13 at 14:15 UTC
1.0 2.0 3.0 4.0 6.0 8.0 10.0 12.0 16.0
Forecast Snowfall (in.) 07 PM CDT Mon Apr 08 to 07 AM CDT Thu Apr 11
National Weather Service

8-14 Day Outlook



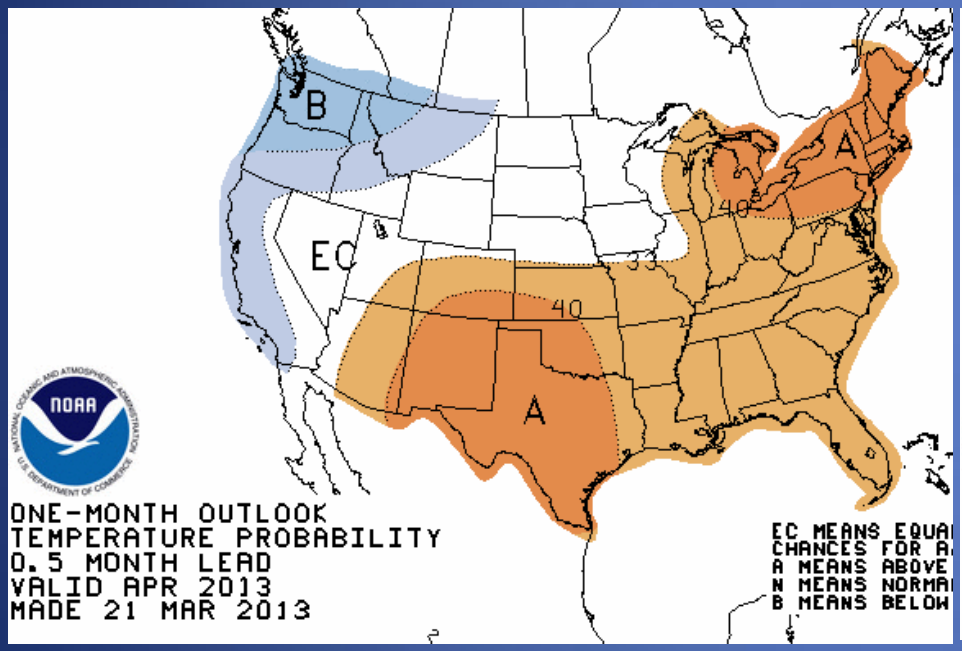
Temperature



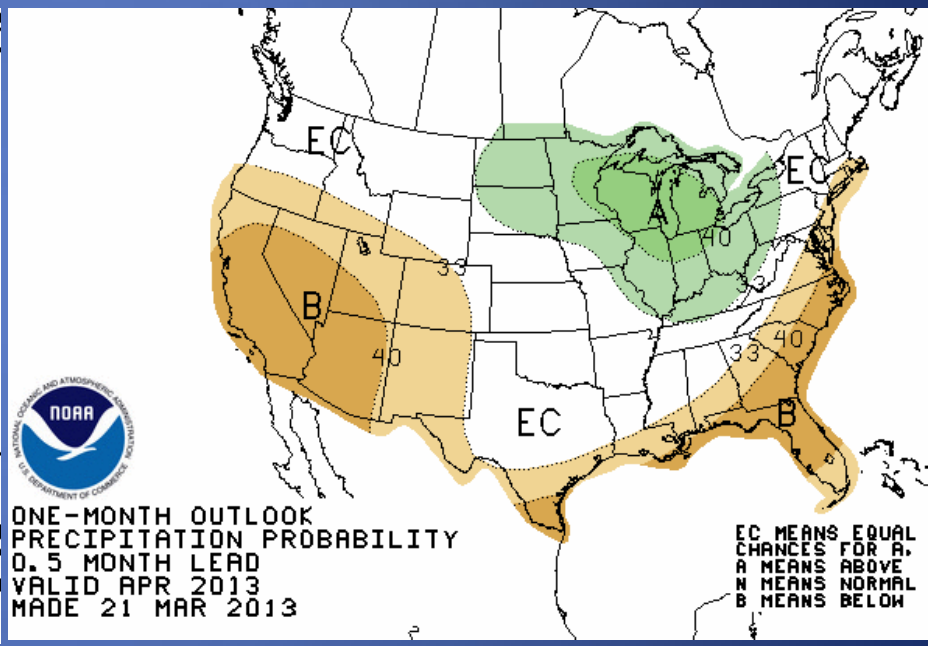
Precipitation

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

April Temperature and Precipitation Probabilities



Temperature

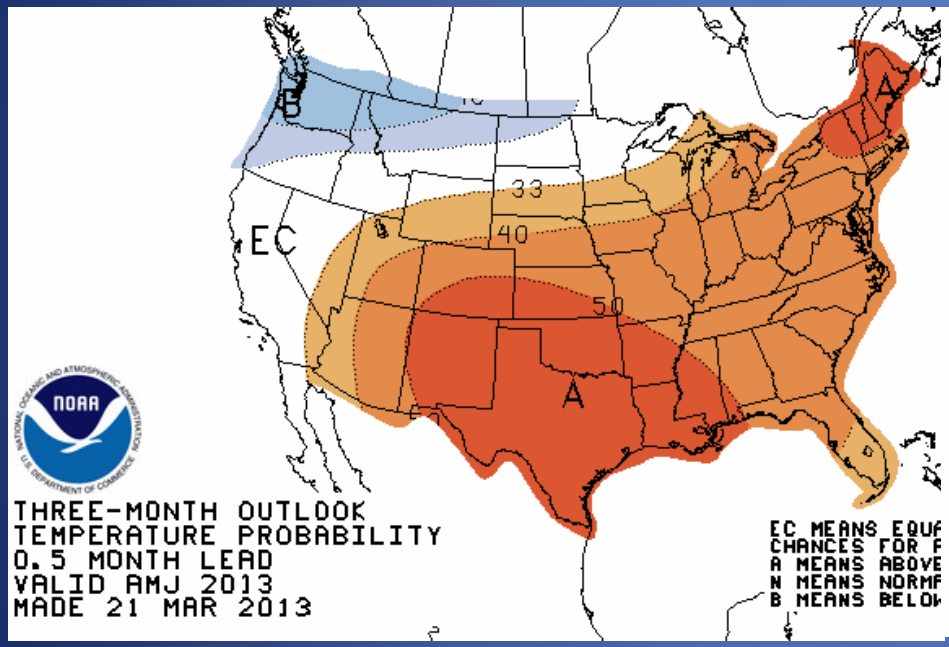


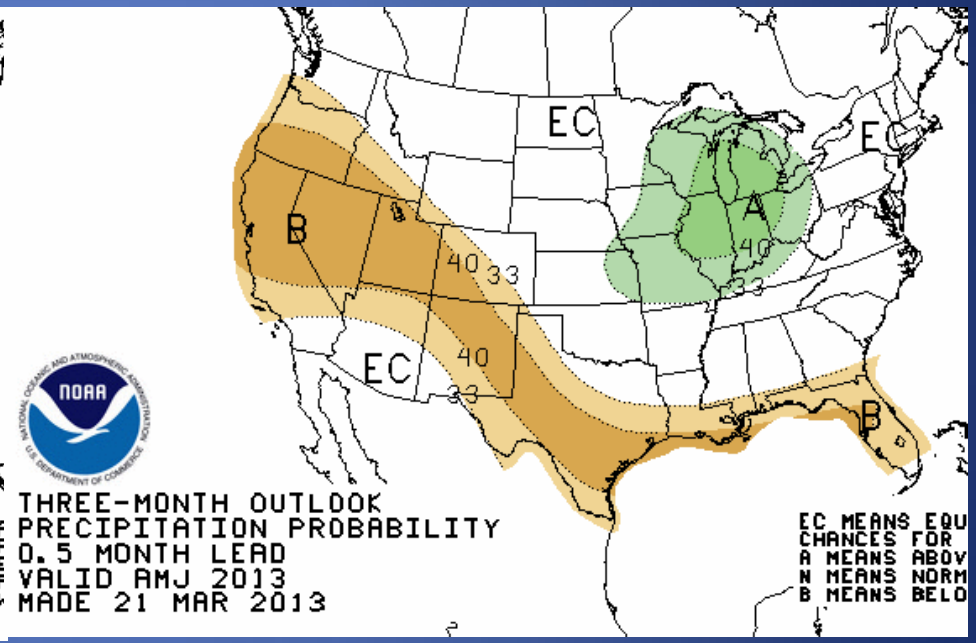
Precipitation

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

3 Month Temperature and Precipitation Probabilities

(April - June)



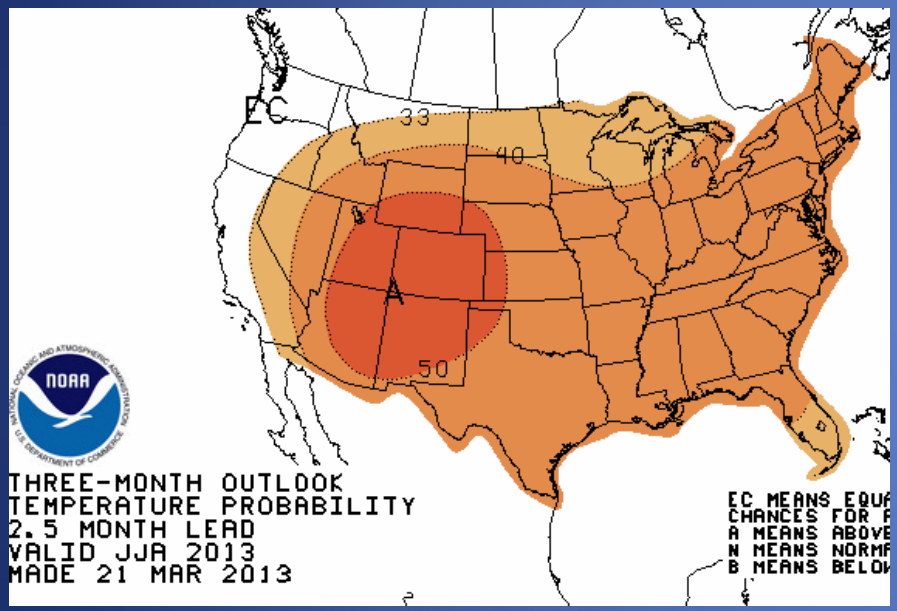


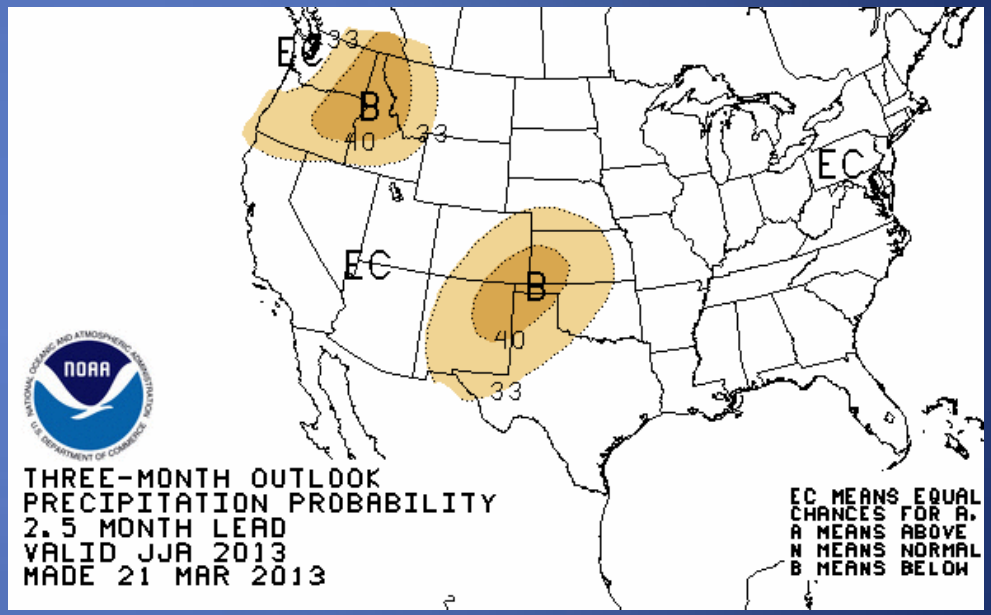
Temperature **Precipitation**

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

3 Month Temperature and Precipitation Probabilities

(June - August)





Temperature **Precipitation**

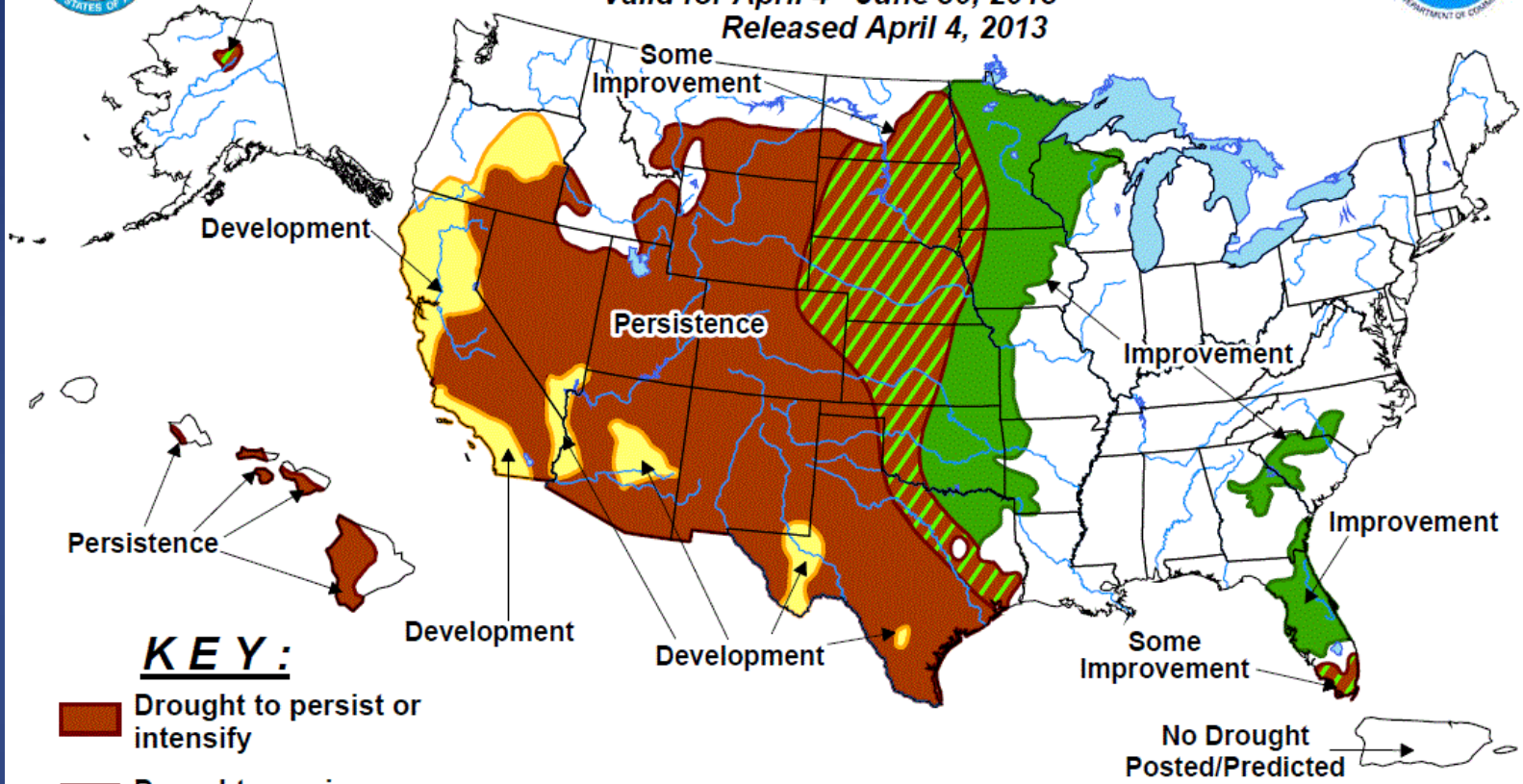
http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=3

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for April 4 - June 30, 2013

Released April 4, 2013



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.

SOUTH DAKOTA Climate and Weather

Issues

- Fire – continuing until green-up
- Flood – far northeast
- Precipitation – near term significant (mixed)
- Temperature – cool side near term, but warming
- Outlook – not bad, but enough?
  - Some improvement will continue