NE Drought Conditions
CARC Update: August 2007

Al Dutcher
Nebraska State Climatologist

Michael Hayes
National Drought Mitigation Center

School of Natural Resources, UNL

University of Nebraska Lincoln

National Drought Mitigation Center

Current National and Regional Conditions…

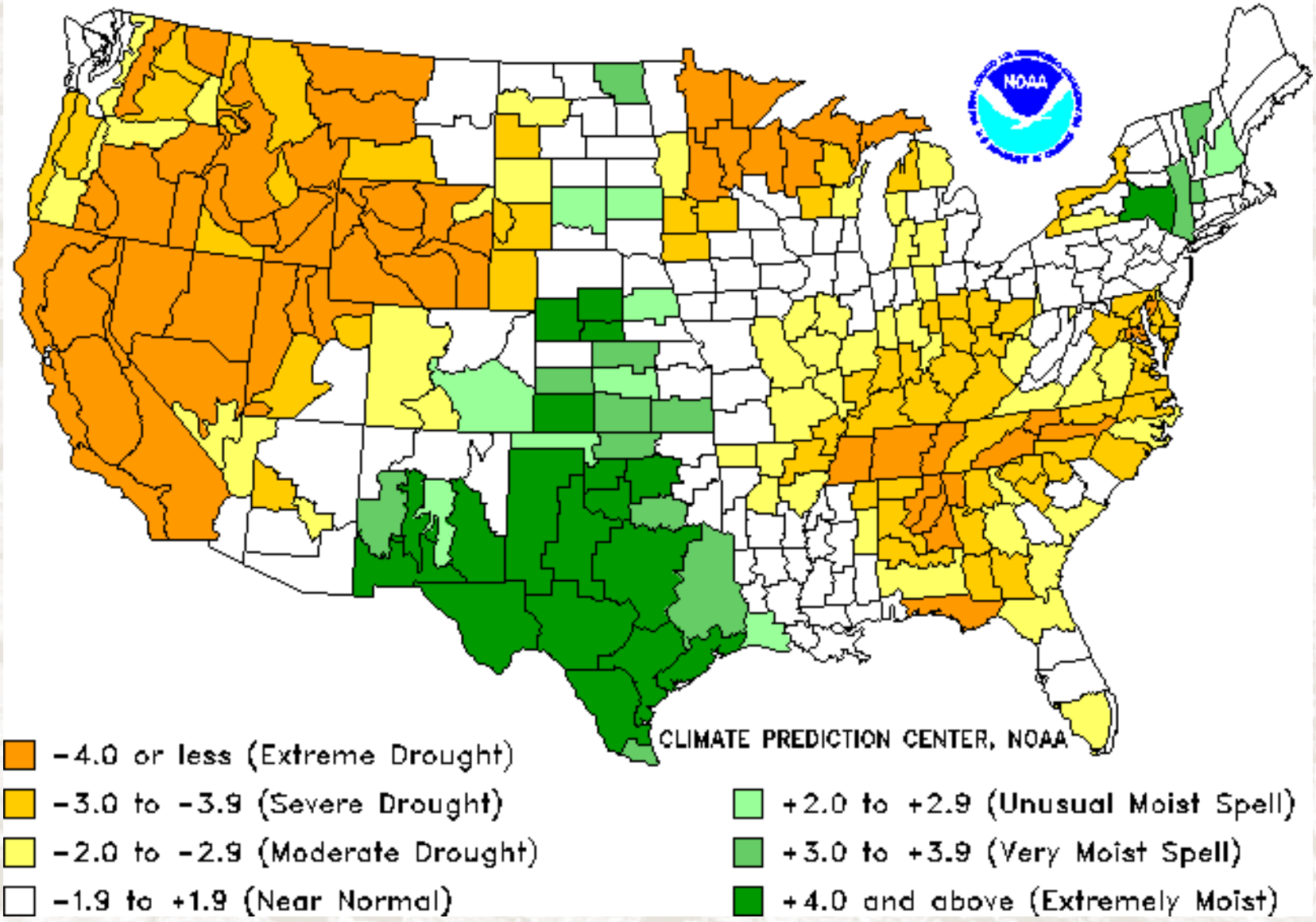
University of Nebraska Lincoln

National Drought Mitigation Center

Drought Severity Index by Division

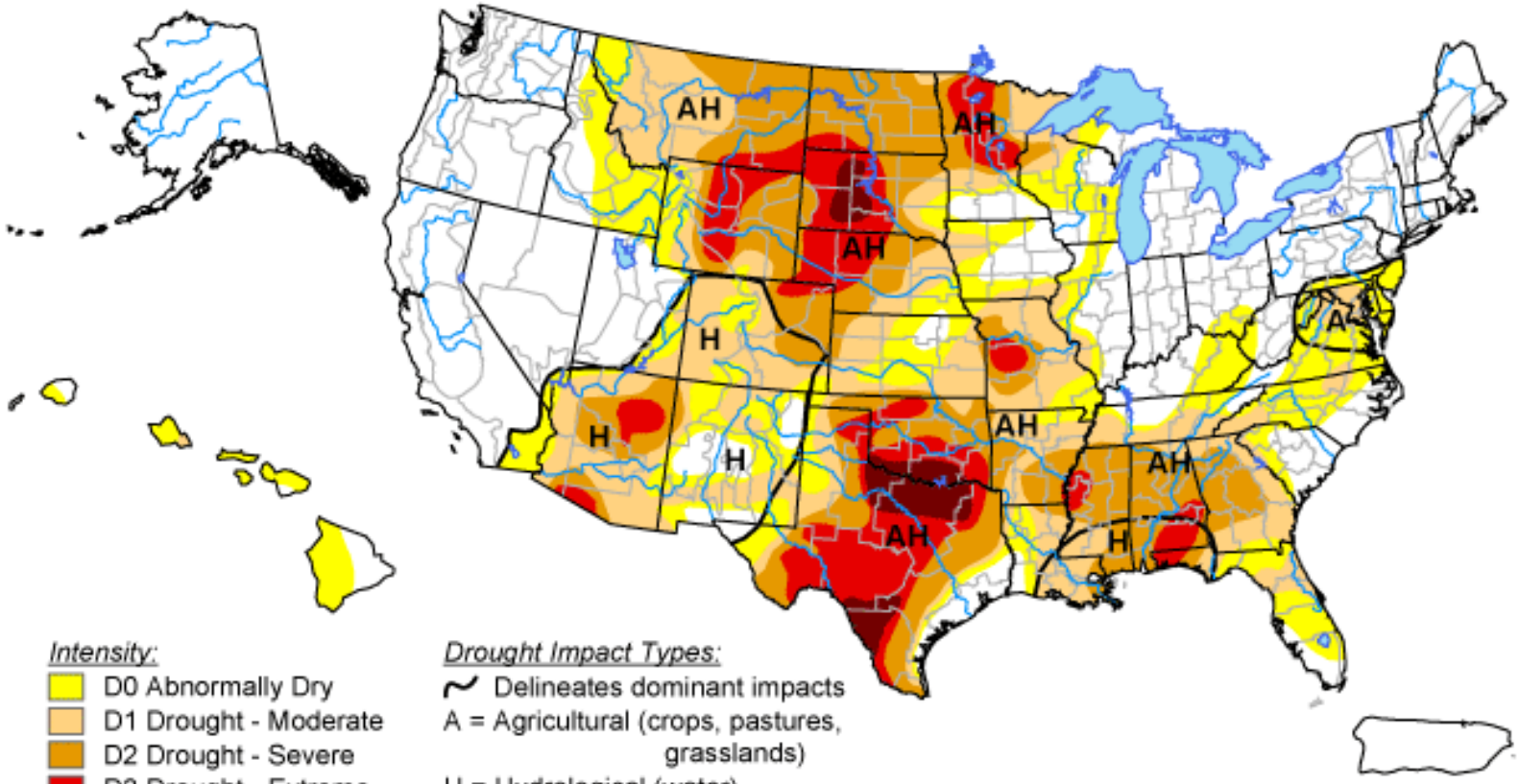
Weekly Value for Period Ending 11 AUG 2007

Long Term Palmer



U.S. Drought Monitor

August 22, 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

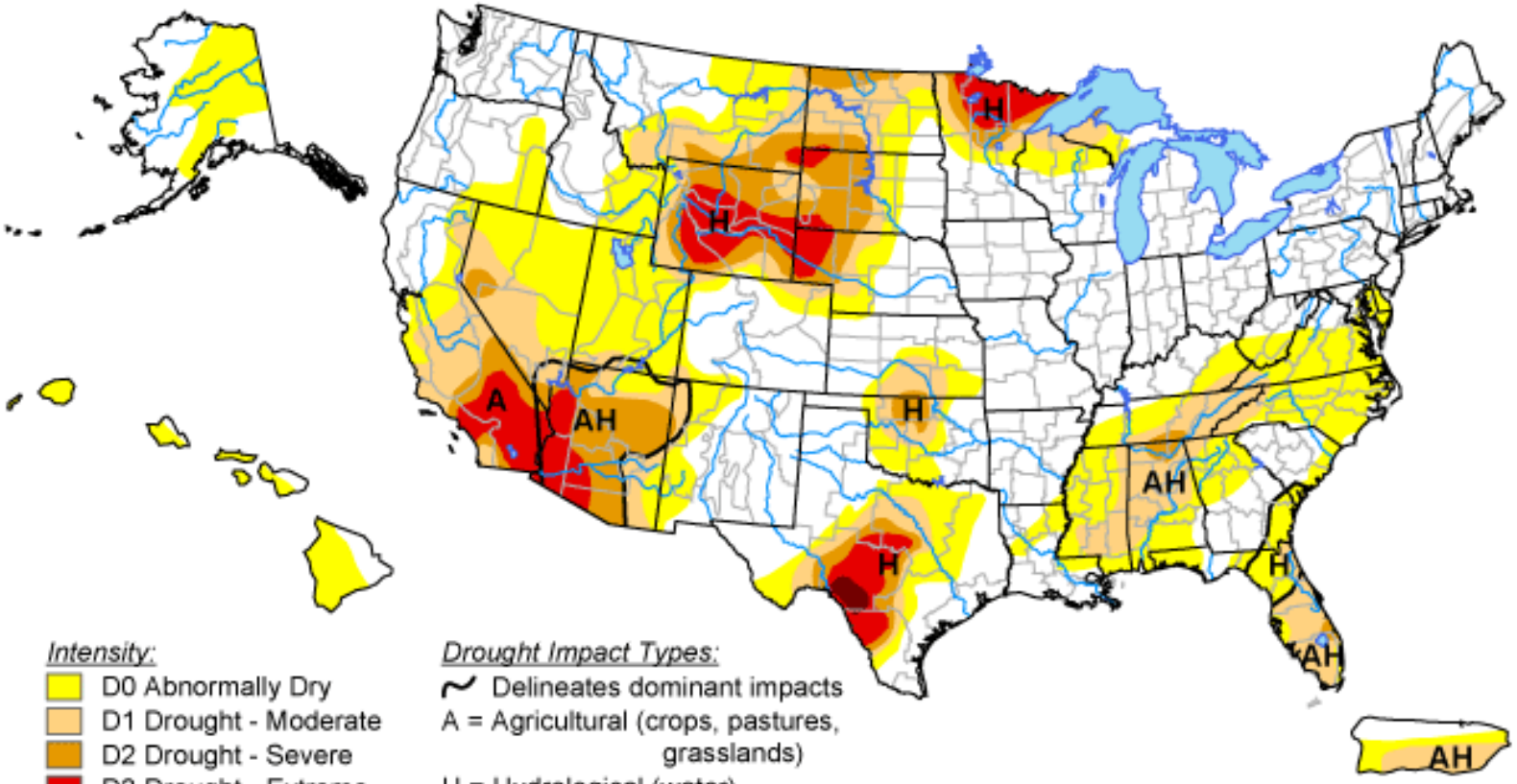
USDA National Drought Mitigation Center

Released Thursday, August 24, 2006

Author: Brian Fuchs, National Drought Mitigation Center

U.S. Drought Monitor

March 13, 2007
Valid 8 a.m. EDT



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http://drought.unl.edu/dm

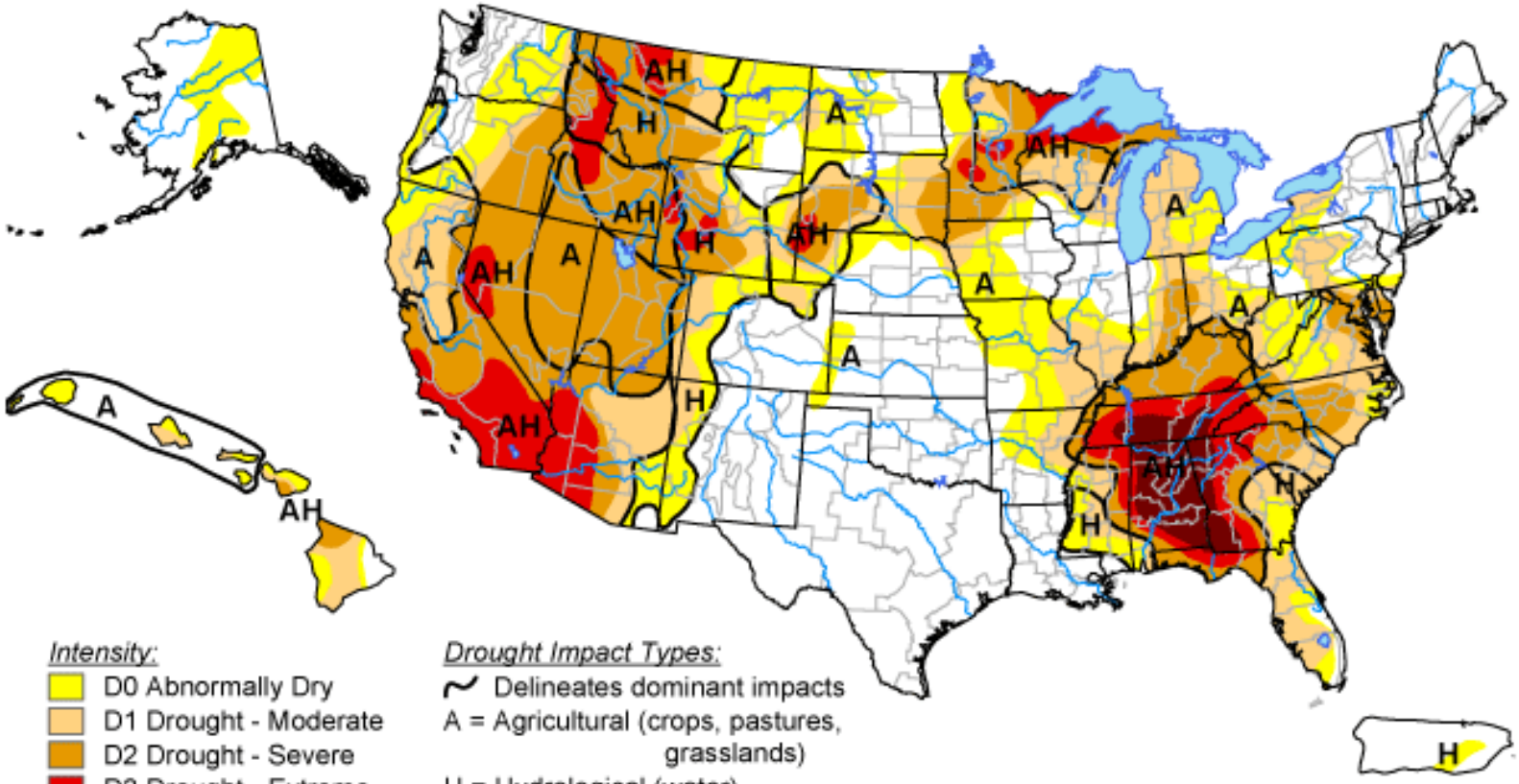
USDA National Drought Mitigation Center

Released Thursday, March 15, 2007

Author: Richard Heim, NOAA/NESDIS/NCDC

U.S. Drought Monitor

August 14, 2007
Valid 8 a.m. EDT



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http://drought.unl.edu/dm

USDA National Drought Mitigation Center

Released Thursday, August 16, 2007

Author: Brad Rippey, U.S. Department of Agriculture

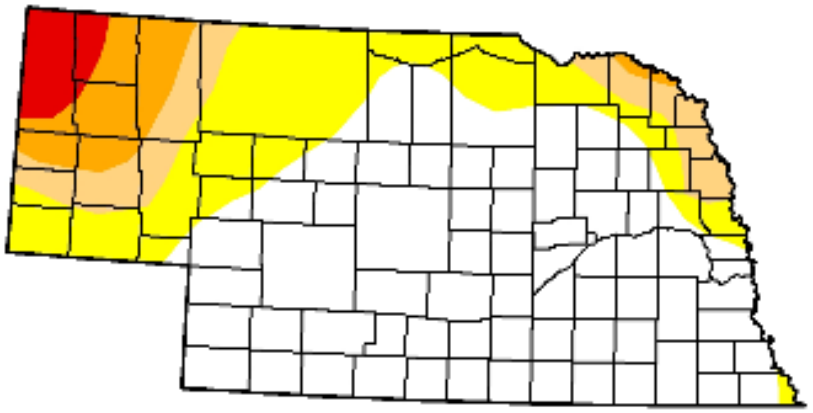
U.S. Drought Monitor

Nebraska

August 14, 2007
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	61.3	38.7	17.3	9.5	3.1	0.0
Last Week (08/07/2007 map)	52.2	47.8	20.5	9.5	3.1	0.0
3 Months Ago (05/22/2007 map)	77.7	22.3	14.5	7.0	0.0	0.0
Start of Calendar Year (01/02/2007 map)	35.9	64.1	56.3	38.9	25.6	0.0
Start of Water Year (10/03/2006 map)	9.0	91.0	66.9	41.6	30.7	0.0
One Year Ago (08/15/2006 map)	0.0	100.0	96.4	71.9	34.1	0.0



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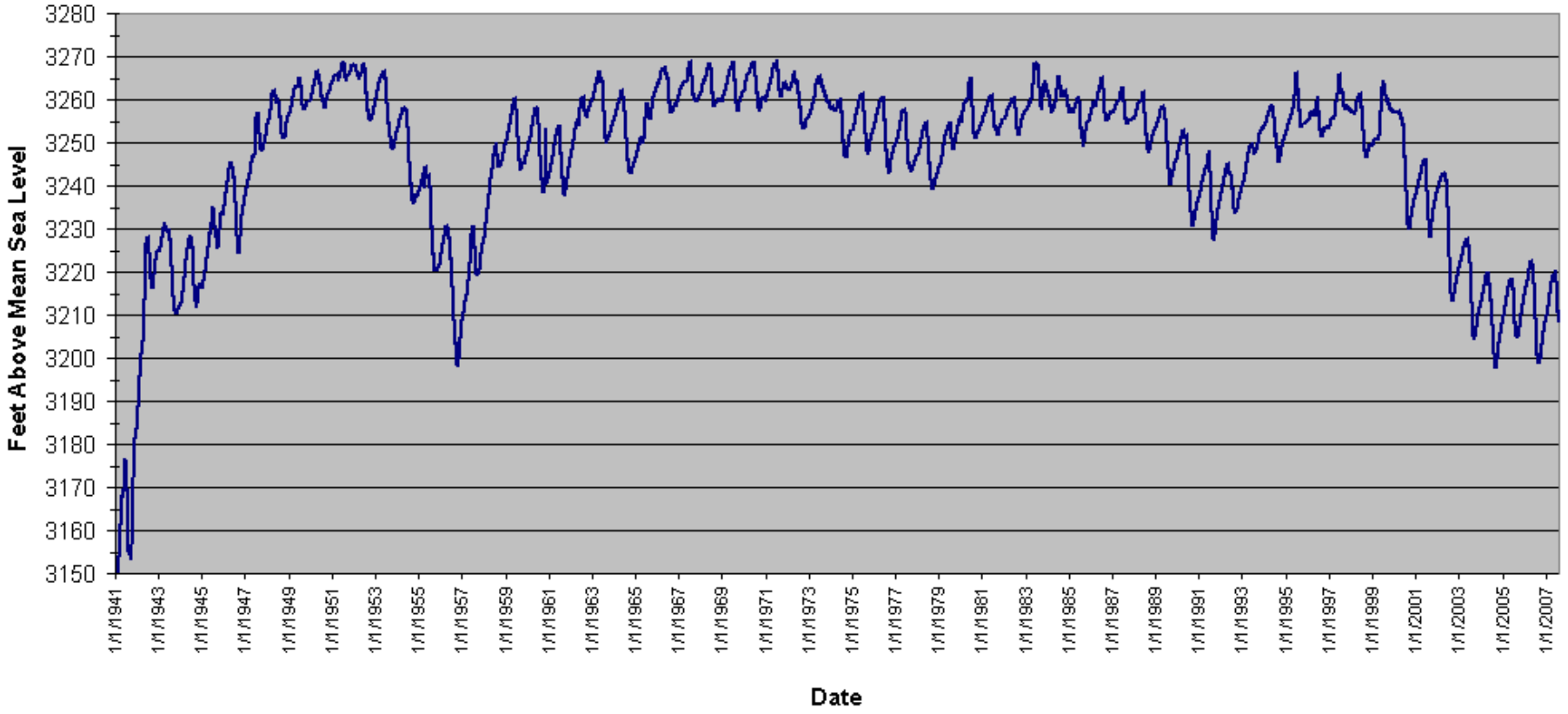
http://drought.unl.edu/dm

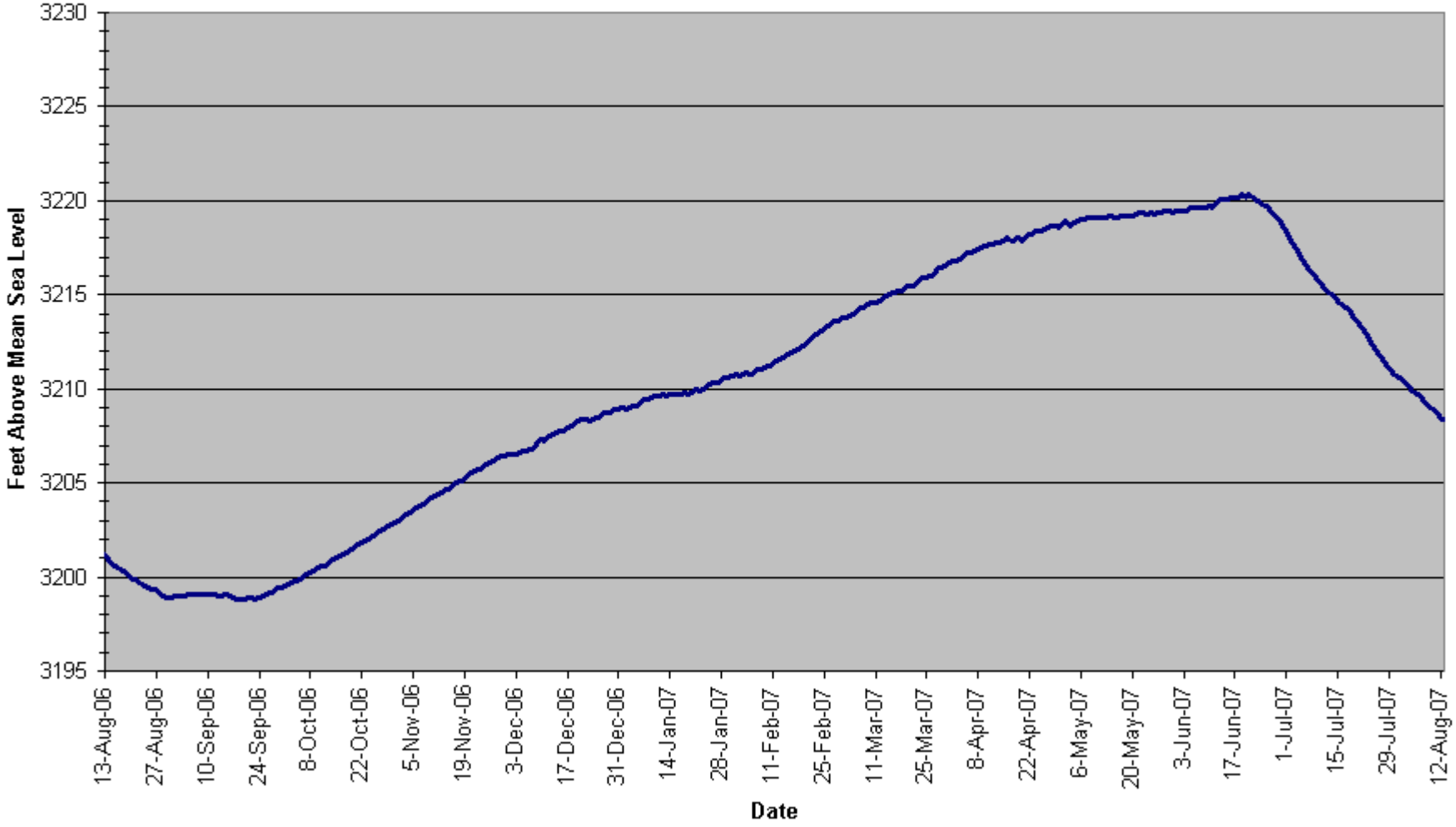
Released Thursday, August 16, 2007

Author: Brad Rippey, U.S. Department of Agriculture

Lake McConaughy Elevation
1941 to Present



Lake McConaughy Elevation
Since Aug. 13, 2006

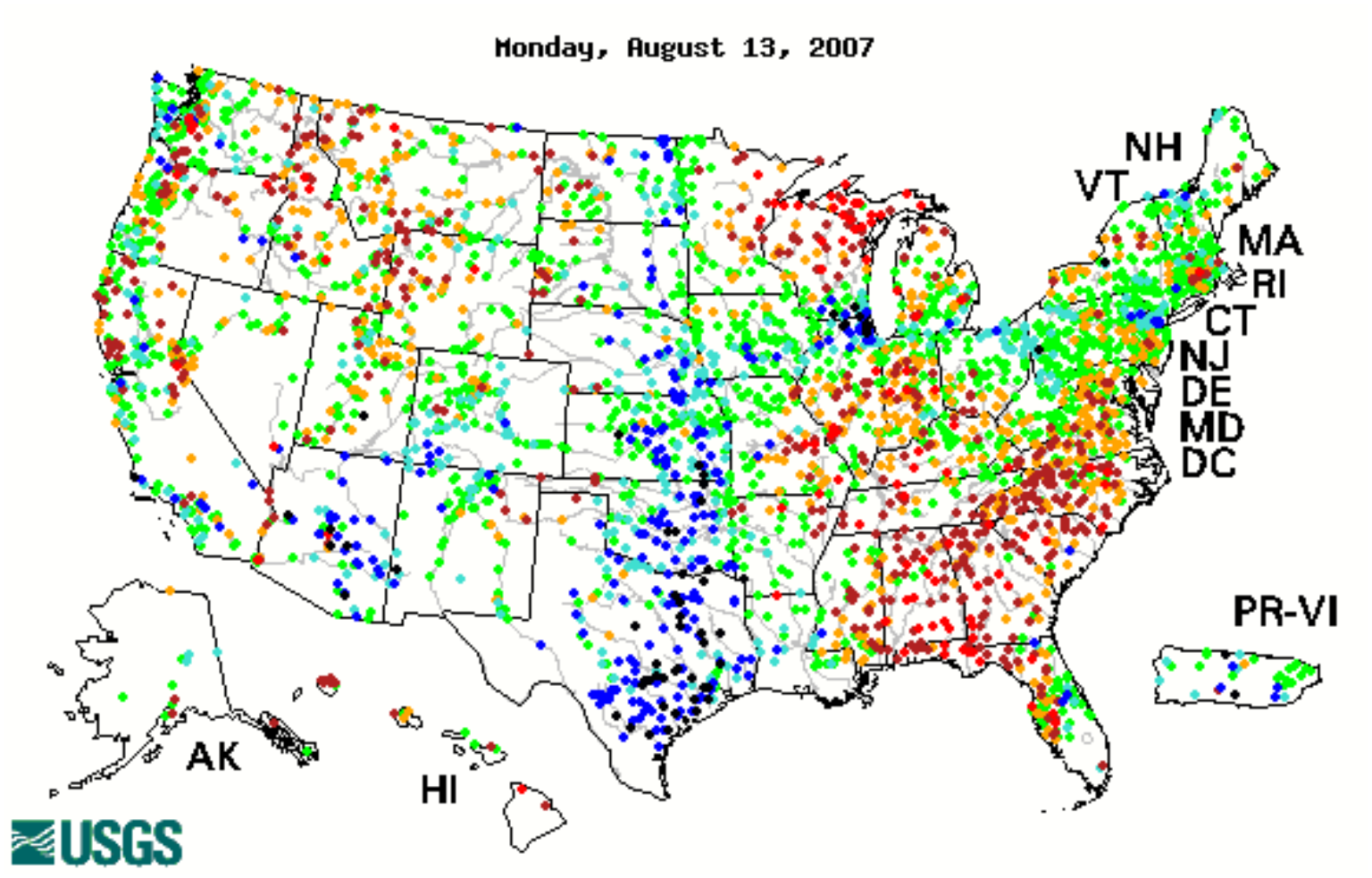


Lake McConaughy

"As the irrigation season comes to an end, (Cory) Steinke reported, releases from Lake McConaughy have been lower than projected. He attributed that to timely and generous amounts of rainfall in the irrigated area, higher flows in the South Platte River that could be diverted into the Supply Canal early in the season, and lower than anticipated river losses. However, he added, inflows to the lake have averaged about half of normal for the year."

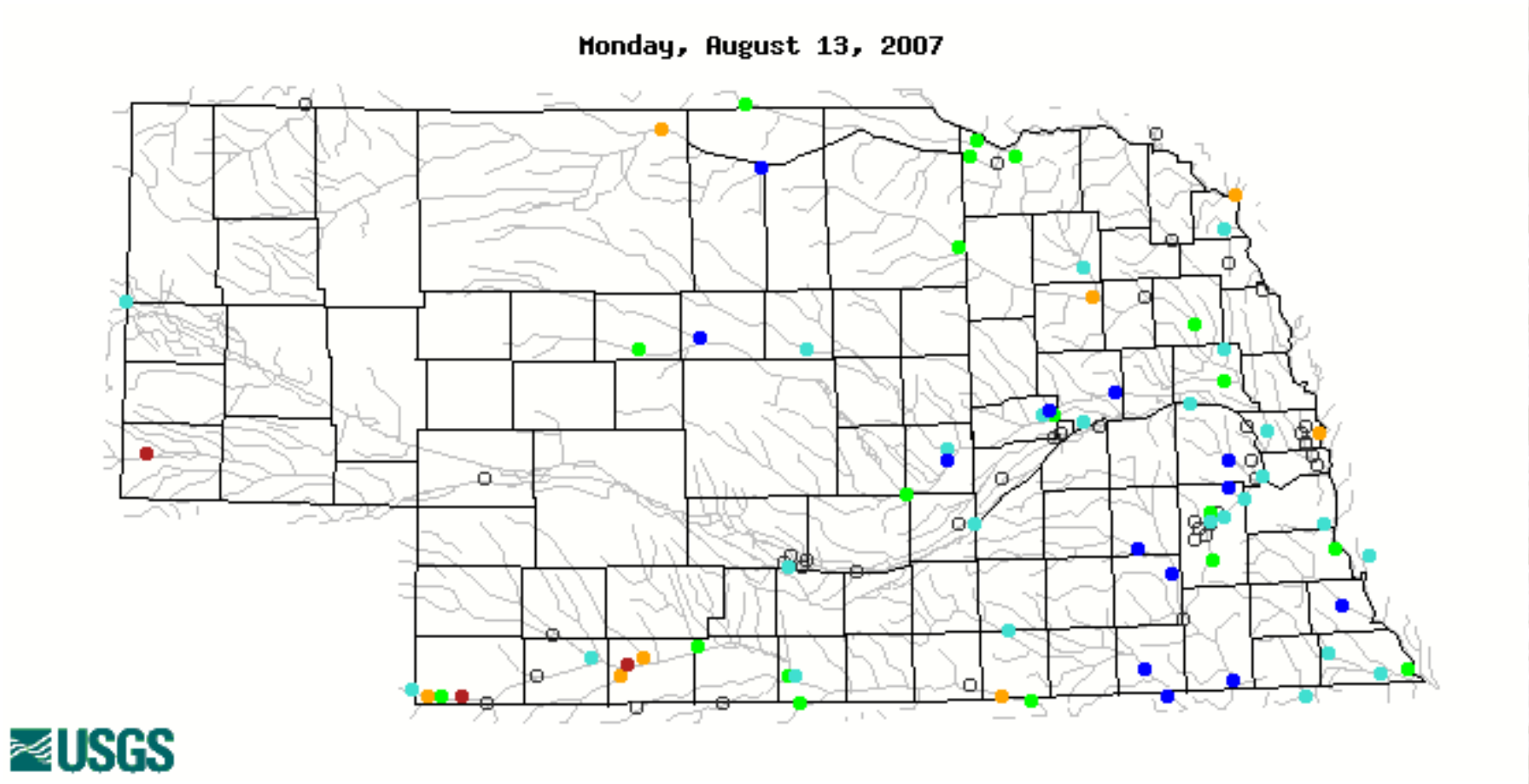
SOURCE: CNPPID News Release, August 6, 2007

Map of 14-day average streamflow compared To historical streamflow for the day of year



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		

Map of 14-day average streamflow compared To historical streamflow for the day of year



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		

Republican River Basin

- Courtesy of Bill Peck, McCook Office, Bureau of Reclamation
- Overall assessment: “Much better”
- Timely rains with good amounts
  - May especially
  - May 28, June 11 events

Republican River Basin

- Hugh Butler and Enders: volumes have doubled since January 1
- Harry Strunk: full and spilling
- Swanson: some improvement
- Bonny: the exception, lower than this time last year

Republican River Basin

- Harlan County: Since January 1…
  - 136,000 acre-ft more
  - 14 feet higher
  - 80% full now

University of Nebraska Lincoln

National Drought Mitigation Center

Republican River Basin

- Prognosis: “looking pretty good”
- Most optimistic for the next year since before 2002
- 2007 had 4 of 14 canals in operation across Basin
- 2008: ?

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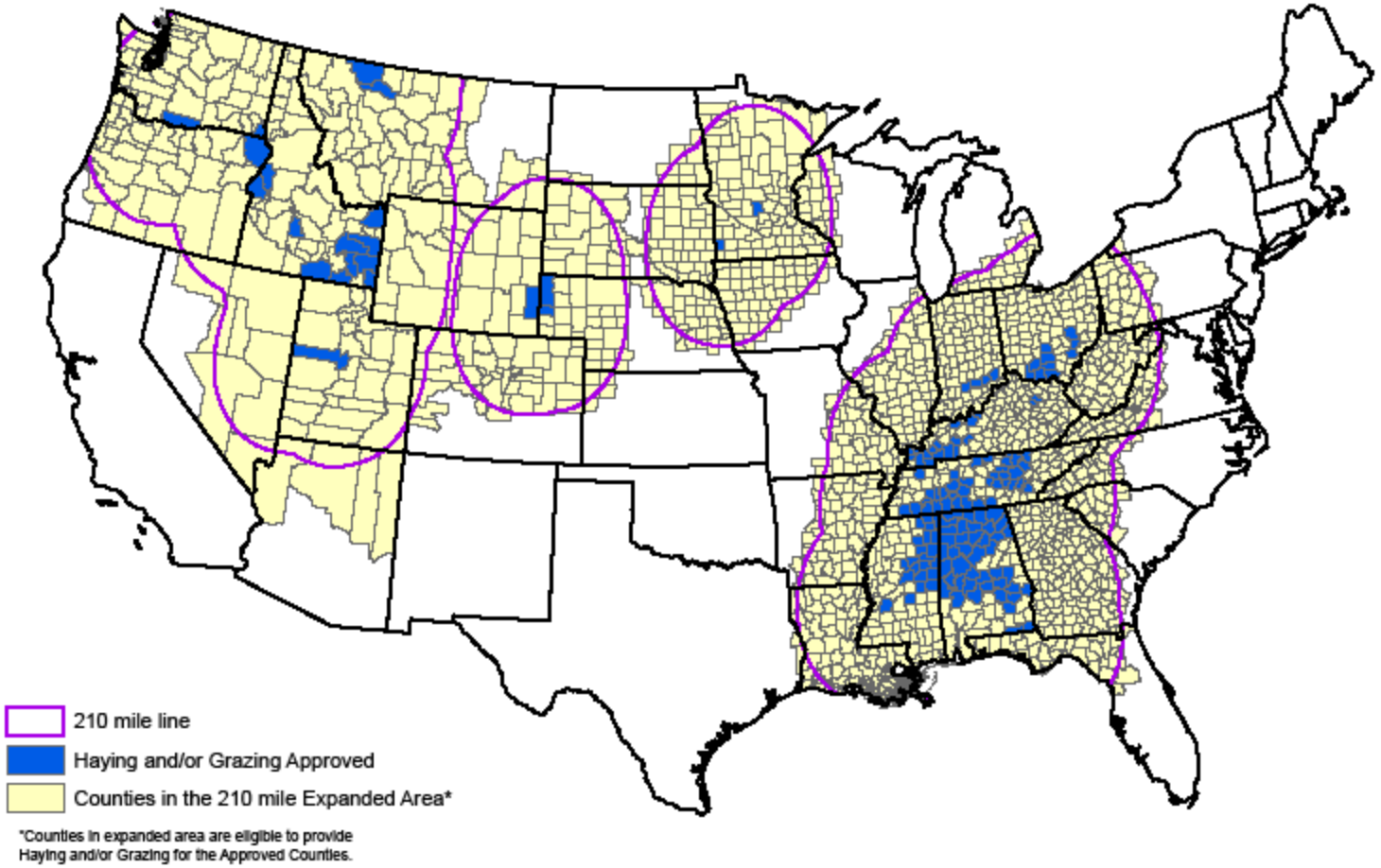
National Drought Mitigation Center

2007 Emergency Haying and Grazing Status

As of August 13, 2007



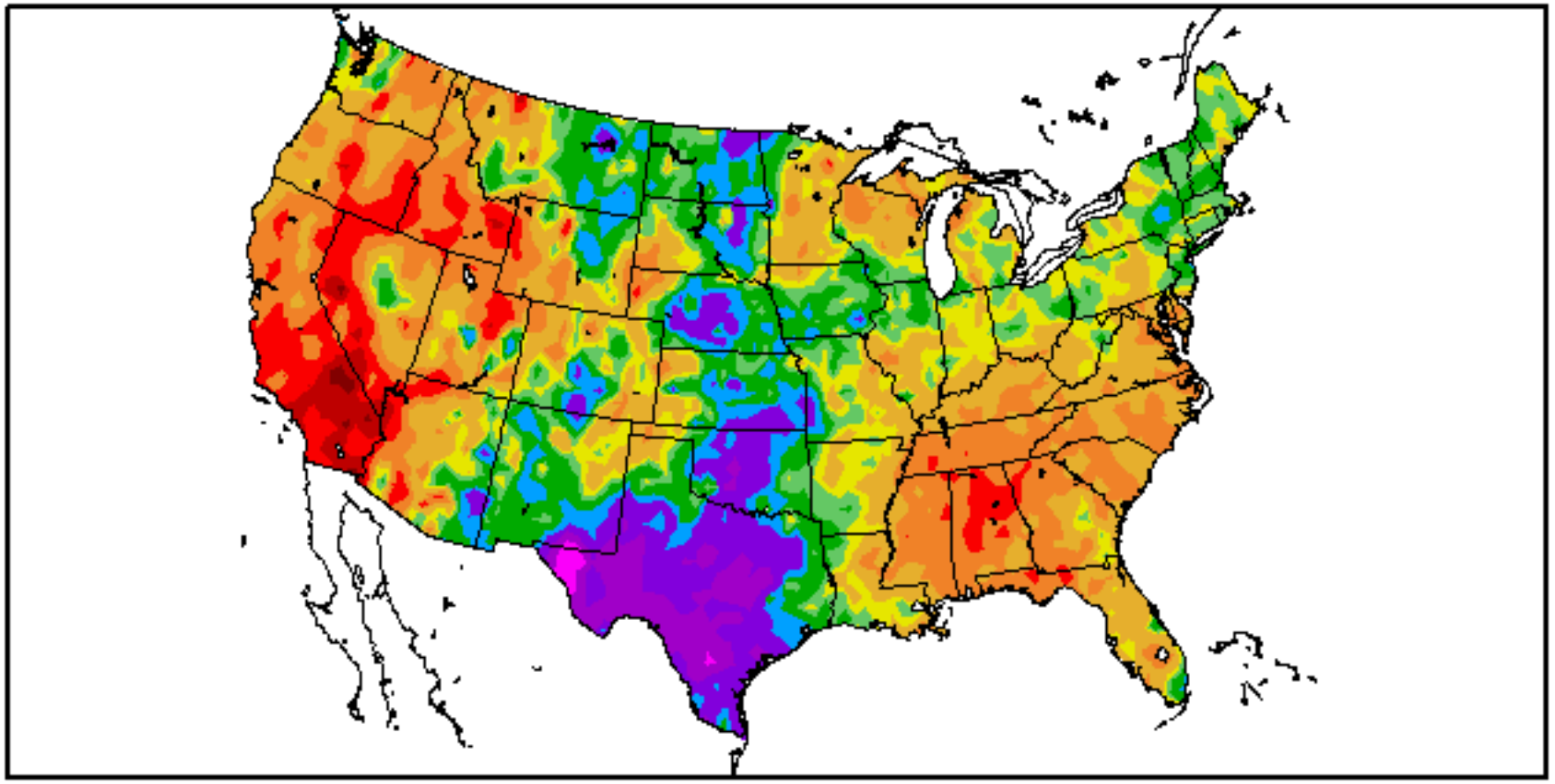
Map provided by FSA/CEPD/CEPD. If you have any questions, please call (202) 690-0794.
FSA will continue to monitor and make changes as needed.

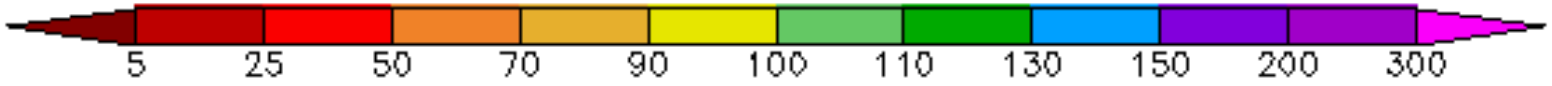
Nebraska Current Conditions…

University of Nebraska Lincoln

National Drought Mitigation Center

Percent of Normal Precipitation (%)
1/1/2007 – 8/14/2007

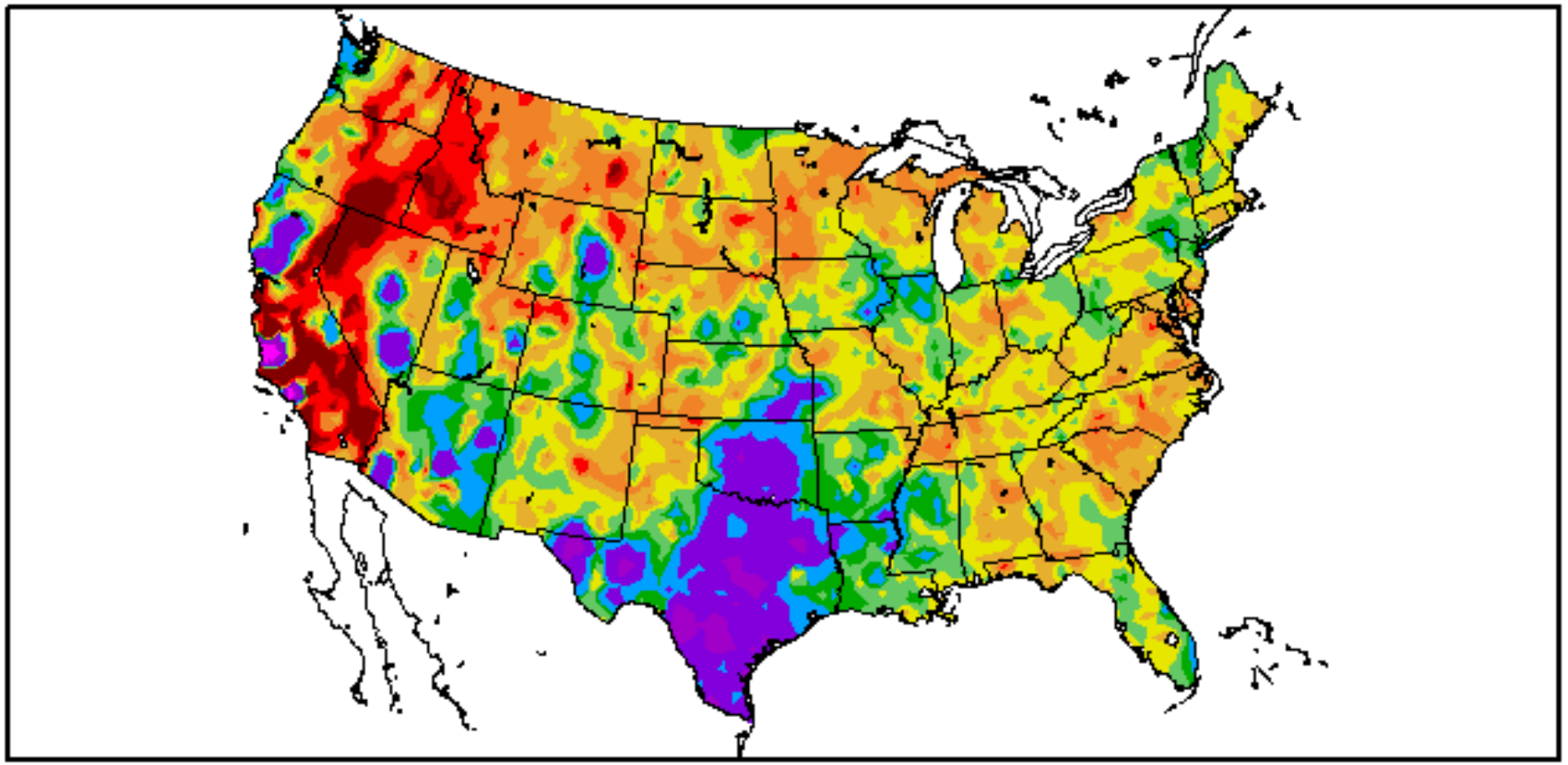


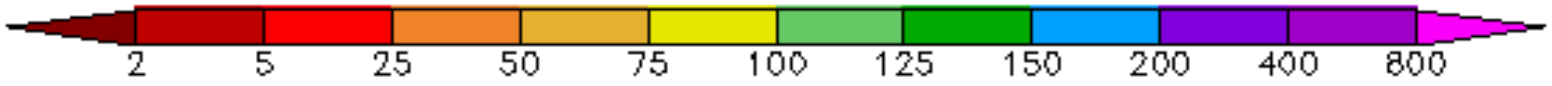


Generated 8/15/2007 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
6/16/2007 – 8/14/2007

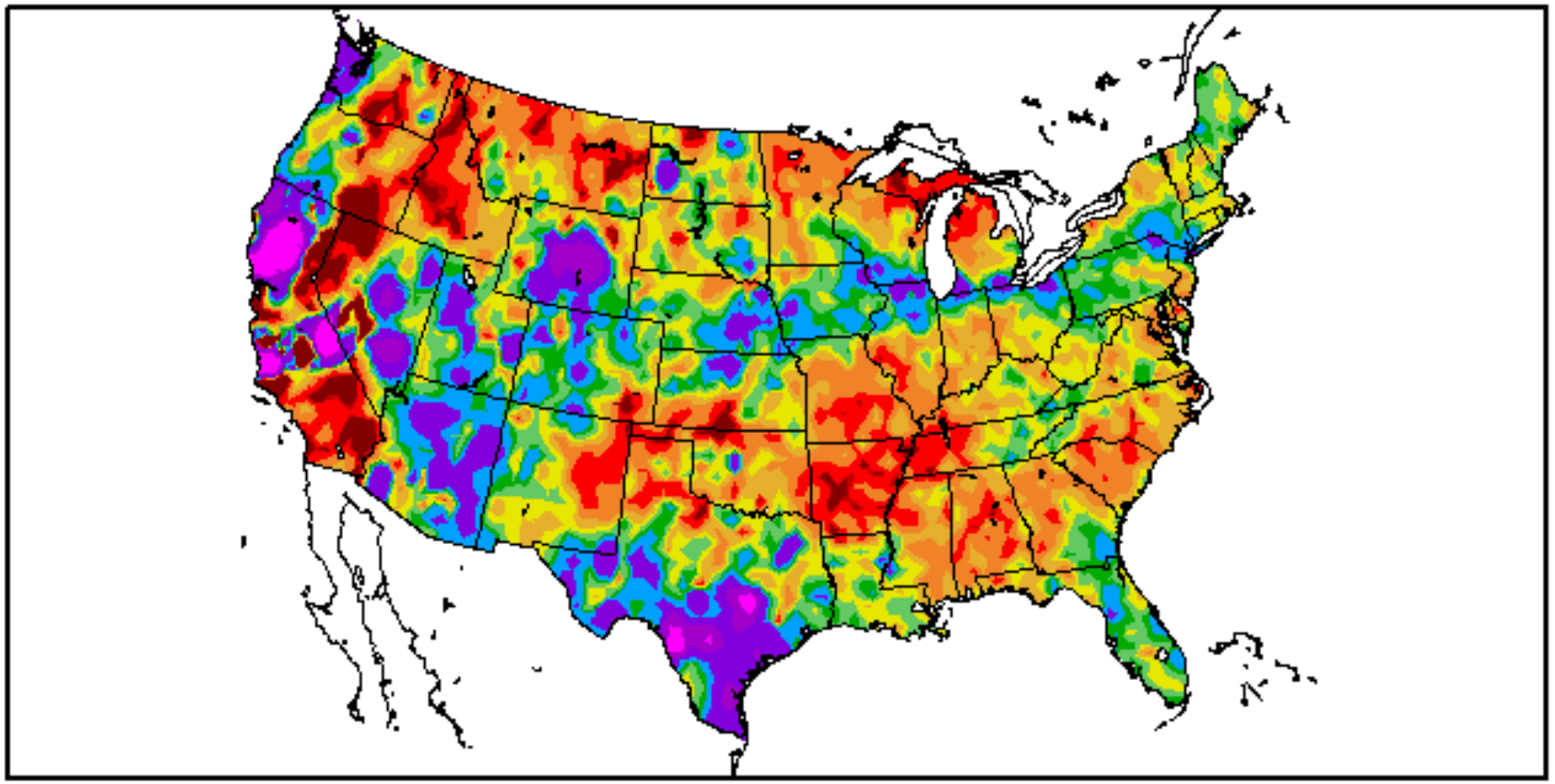




Generated 8/15/2007 at HPRCC using provisional data.

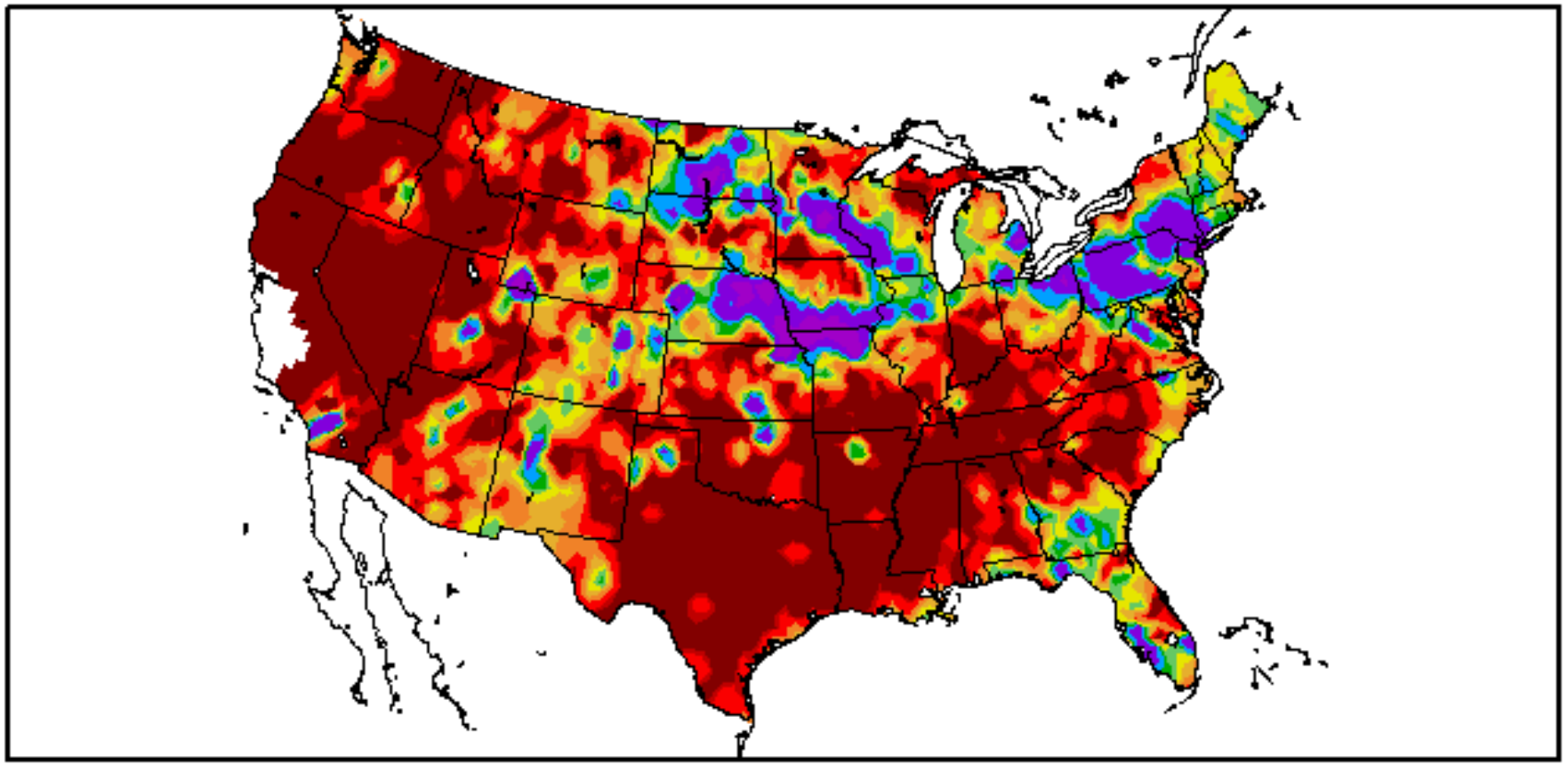
NOAA Regional Climate Centers

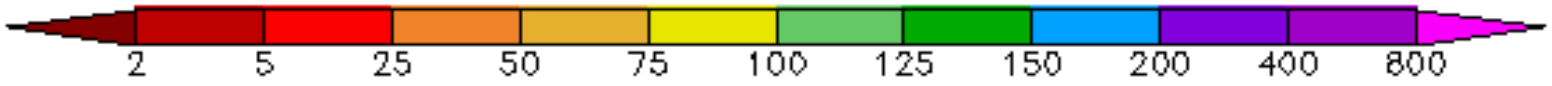
Percent of Normal Precipitation (%)
7/16/2007 – 8/14/2007



2 5 25 50 75 100 125 150 200 400 800

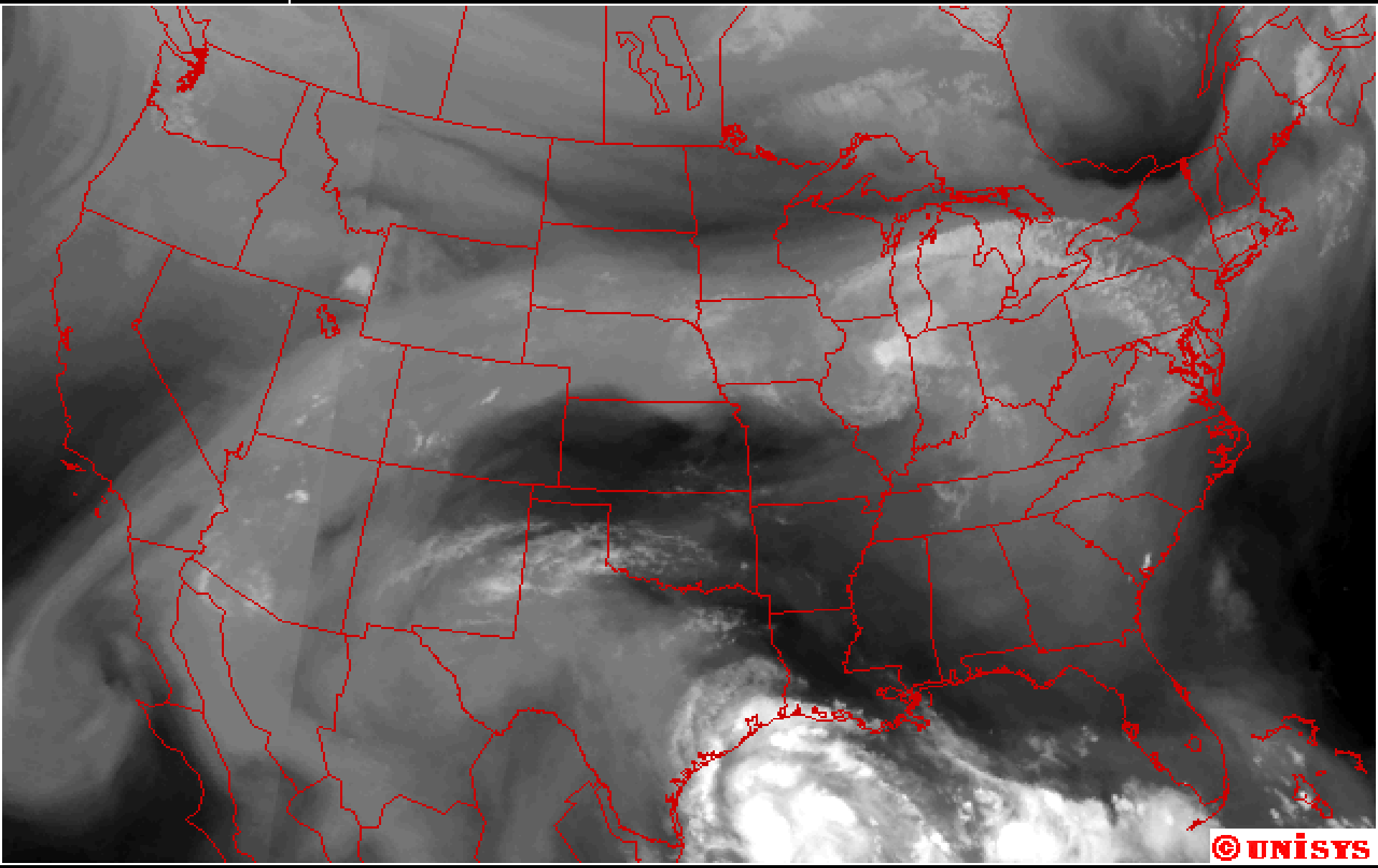
Percent of Normal Precipitation (%)
8/8/2007 – 8/14/2007

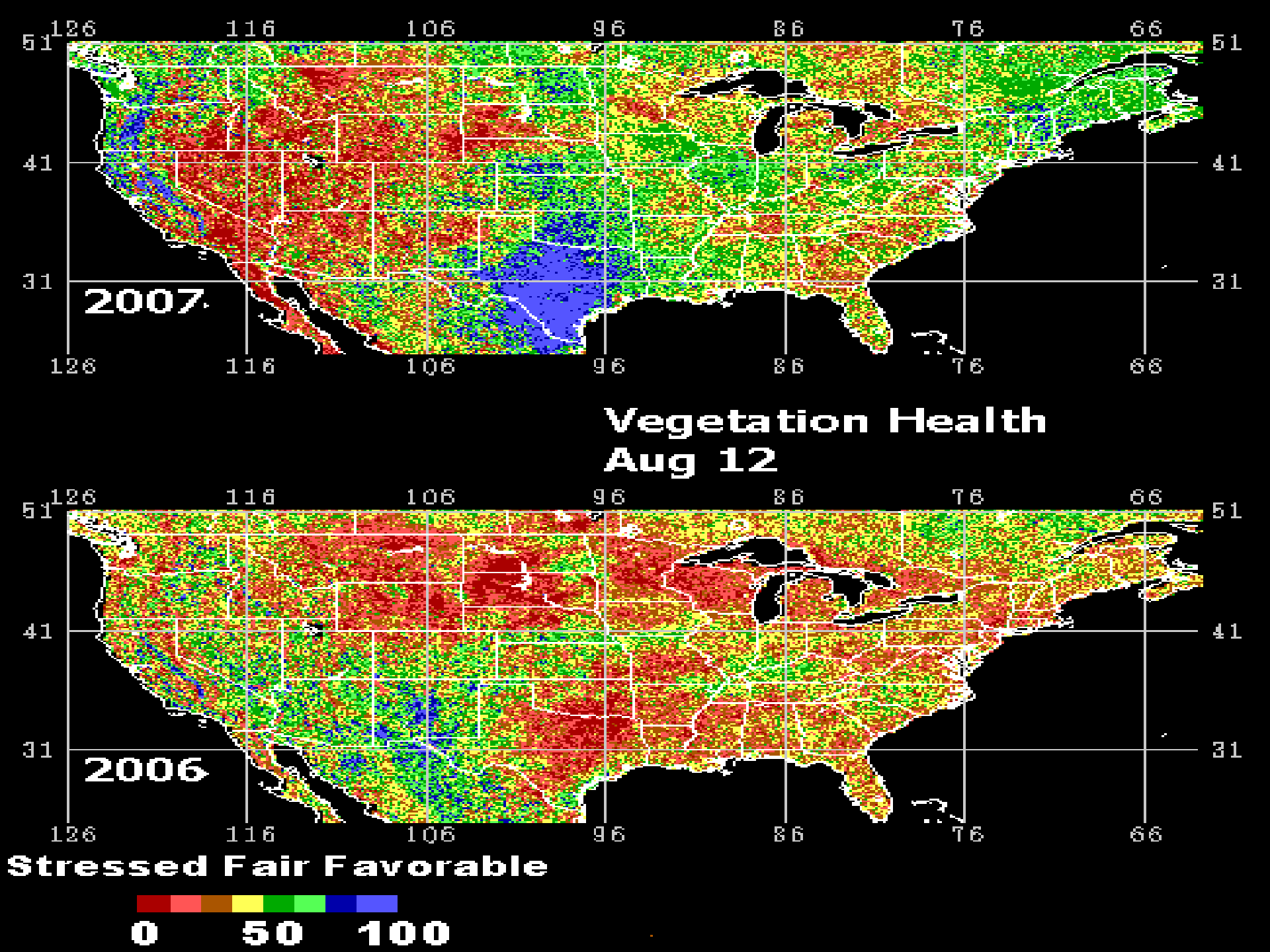




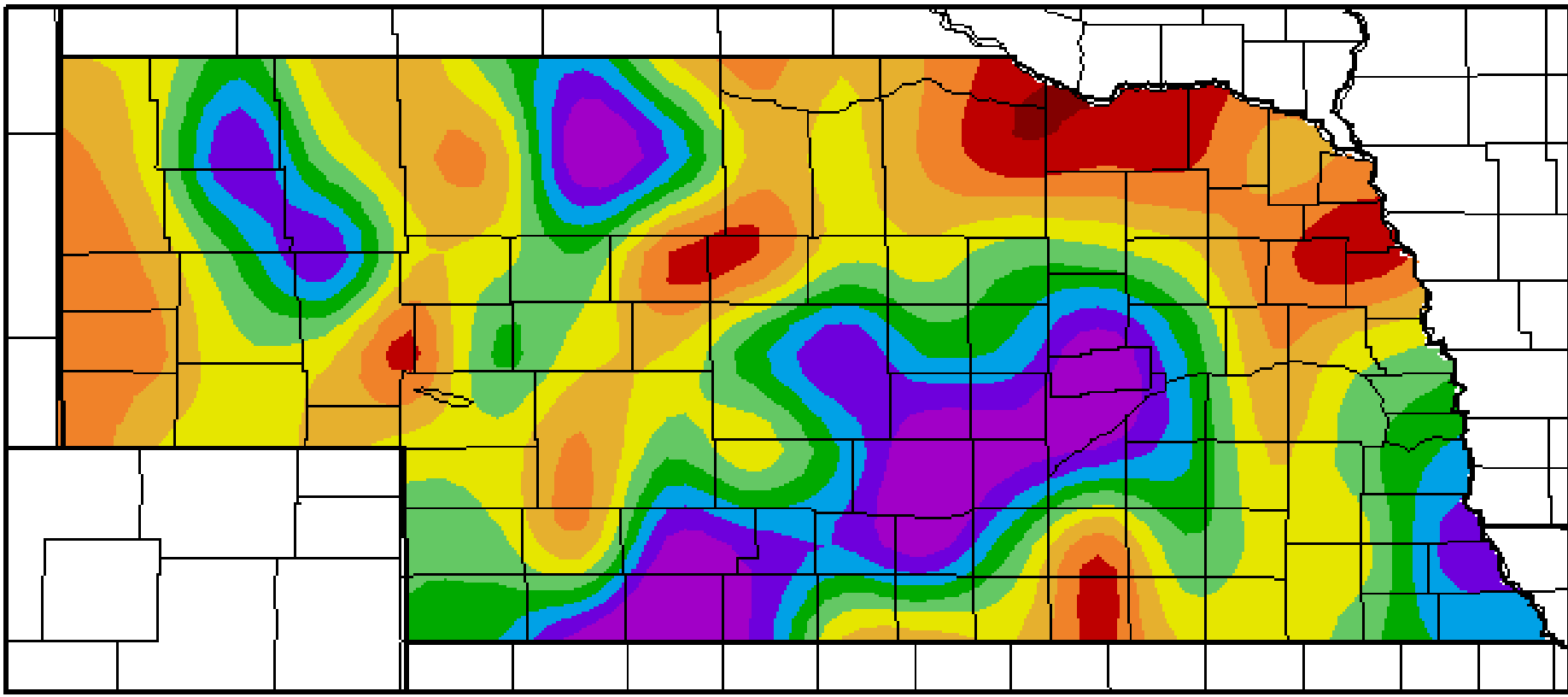
Generated 8/15/2007 at HPRCC using provisional data.

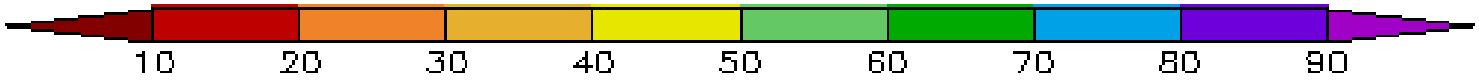
NOAA Regional Climate Centers

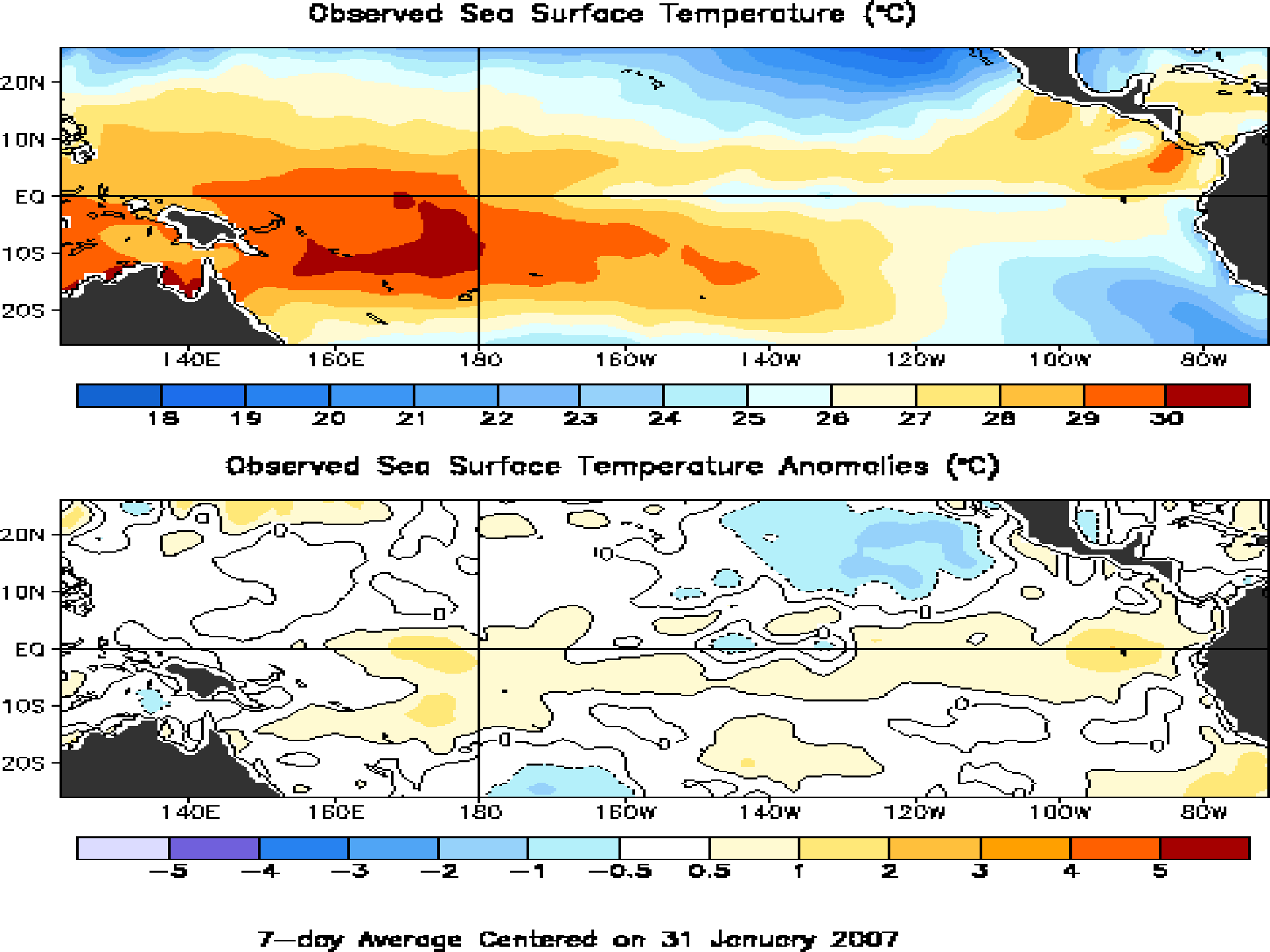

GOES NC Water Vapor
1830Z 15 AUG 07
©UNISYS


126
116
106
96
86
76
66
51
41
31
2007
Vegetation Health
Aug 12
2006
Stressed Fair Favorable
0
50
100

Percent of Max Available Water in Column (%)
8/8/2007 – 8/14/2007






Observed Sea Surface Temperature (°C)
20N
10N
EQ
10S
20S
140E
160E
180
160W
140W
120W
100W
80W
18
19
20
21
22
23
24
25
26
27
28
29
30
Observed Sea Surface Temperature Anomalies (°C)
20N
10N
EQ
10S
20S
140E
160E
180
160W
140W
120W
100W
80W
0
0
0
0
0
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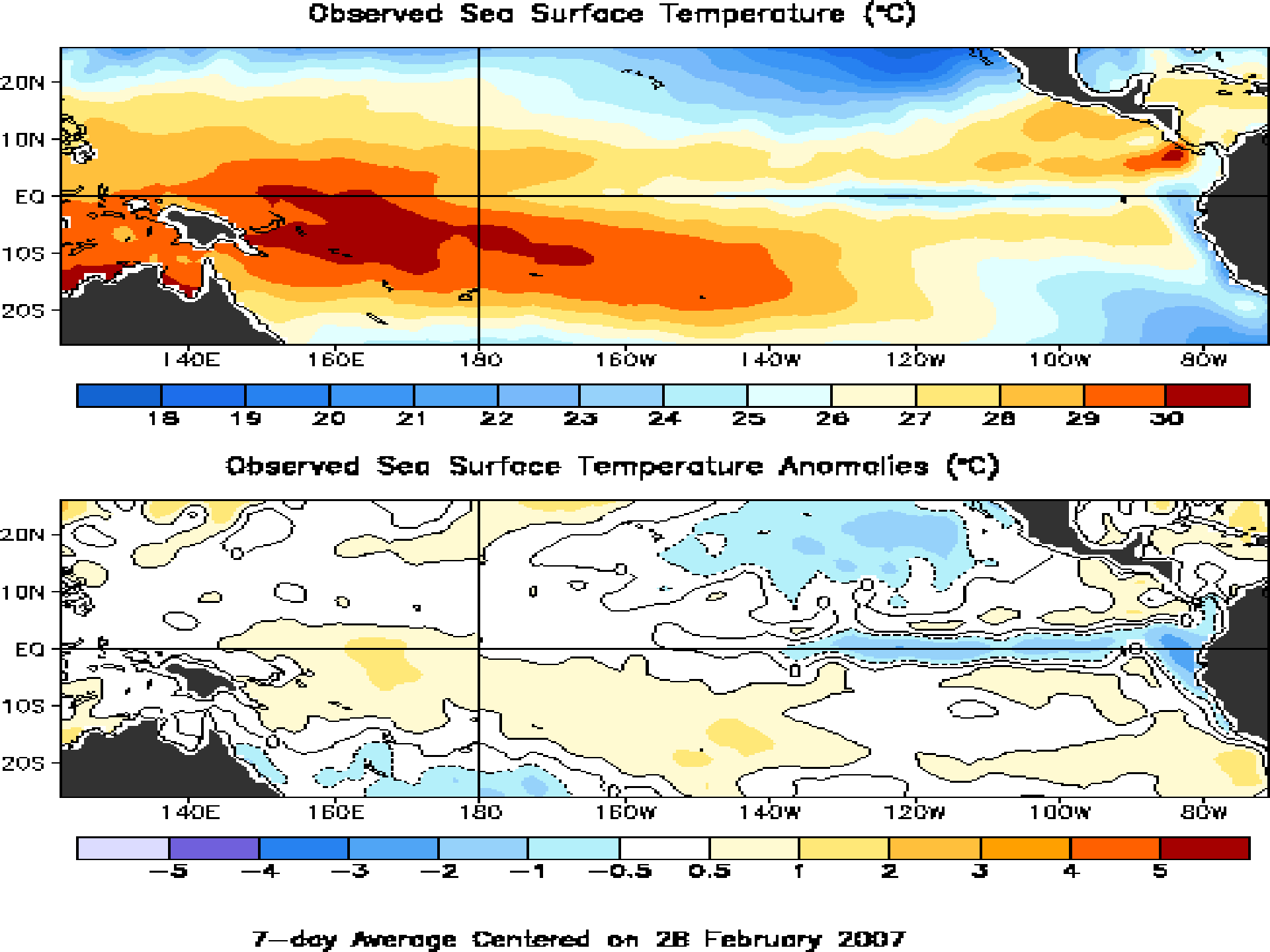
−4
−3
−2
−1
−0.5
0.5
1
2
3
4
5
7−day Average Centered on 31 January 2007


Observed Sea Surface Temperature (°C)
20N
10N
EQ
10S
20S
140E
160E
180
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140W
120W
100W
80W
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22
23
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26
27
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29
30
Observed Sea Surface Temperature Anomalies (°C)
20N
10N
EQ
10S
20S
140E
160E
180
160W
140W
120W
100W
80W
−5
−4
−3
−2
−1
−0.5
0.5
1
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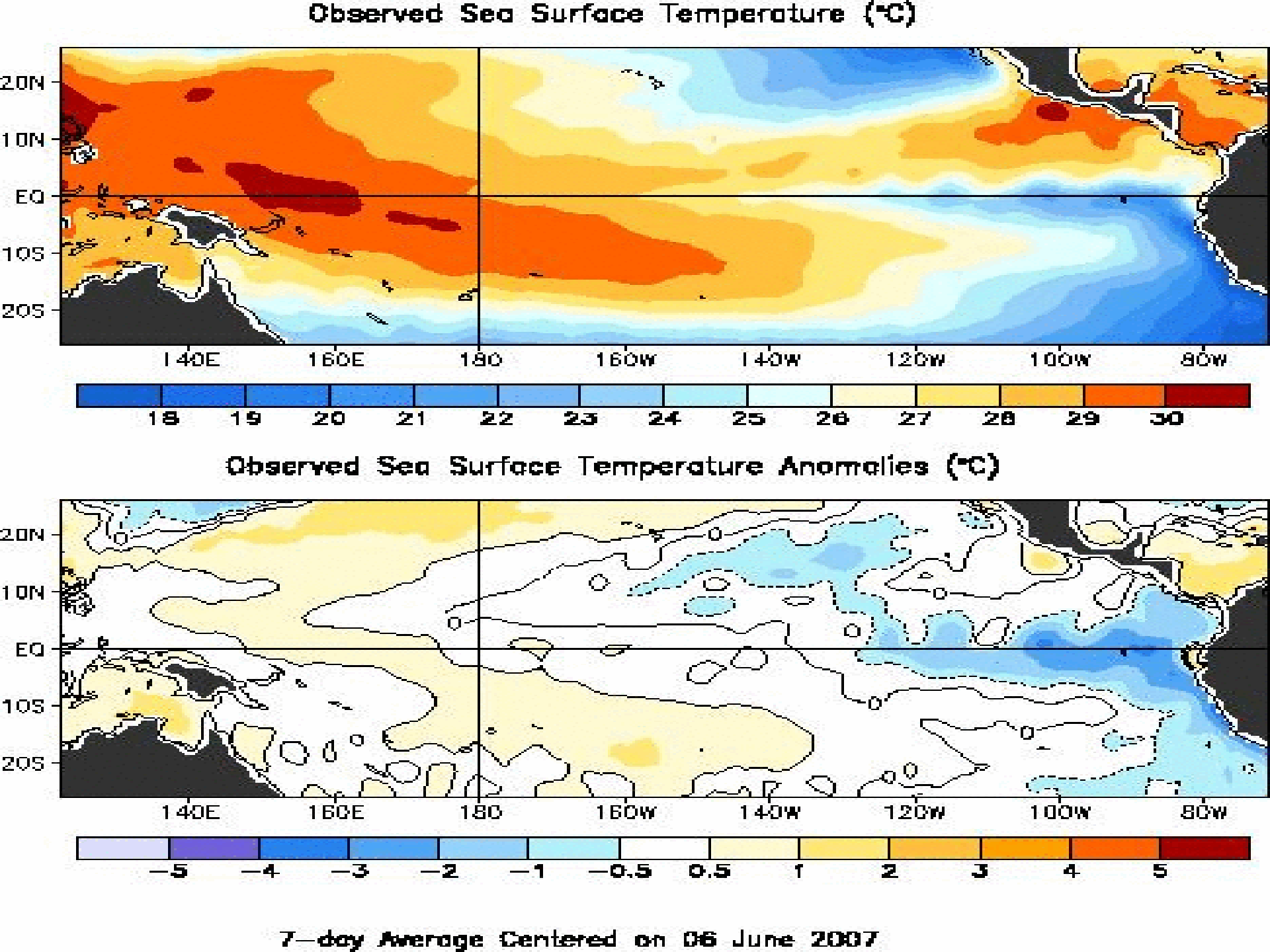
7−day Average Centered on 28 February 2007


Observed Sea Surface Temperature (°C)
20N
10N
EQ
10S
20S
140E
160E
180
160W
140W
120W
100W
80W
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Observed Sea Surface Temperature Anomalies (°C)
20N
10N
EQ
10S
20S
140E
160E
180
160W
140W
120W
100W
80W
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−3
−2
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−0.5
0.5
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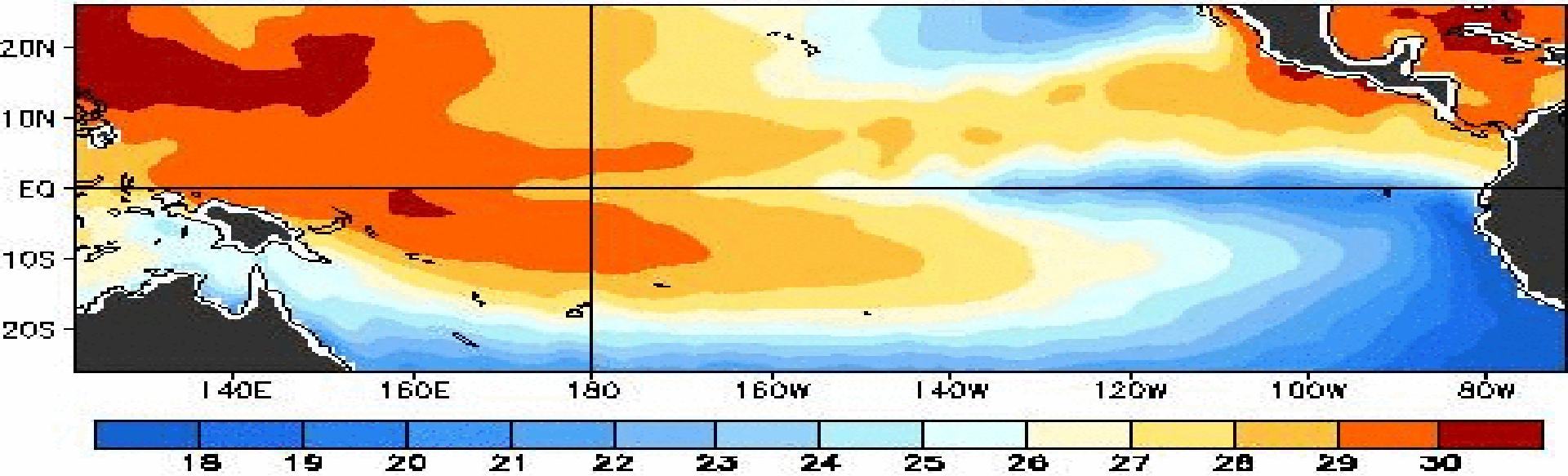
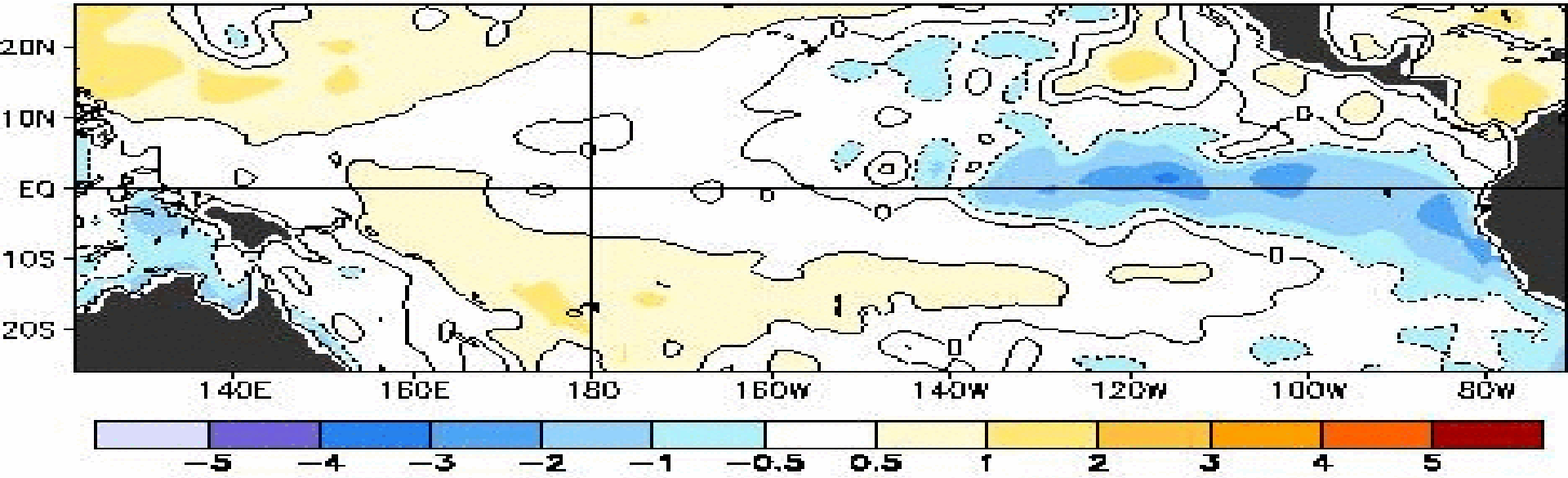
5
7−day Average Centered on 06 June 2007

Observed Sea Surface Temperature (°C)



Observed Sea Surface Temperature Anomalies (°C)



7-day Average Centered on 01 August 2007

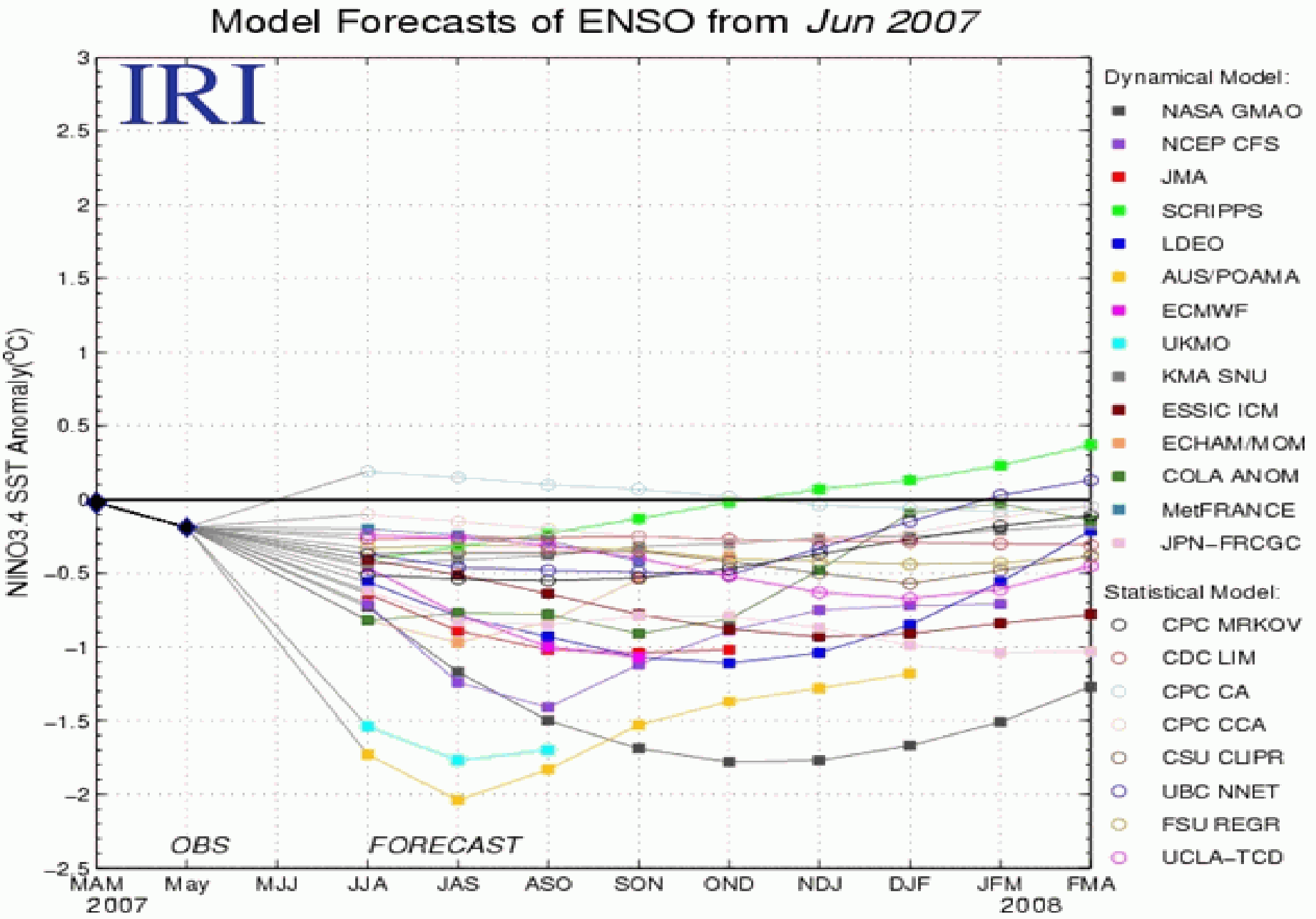
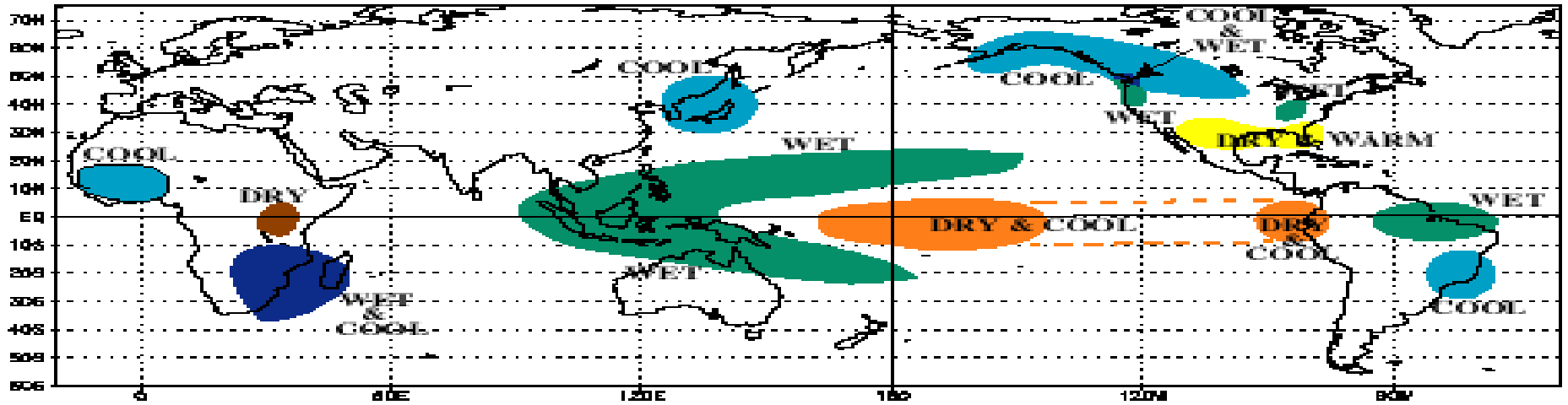
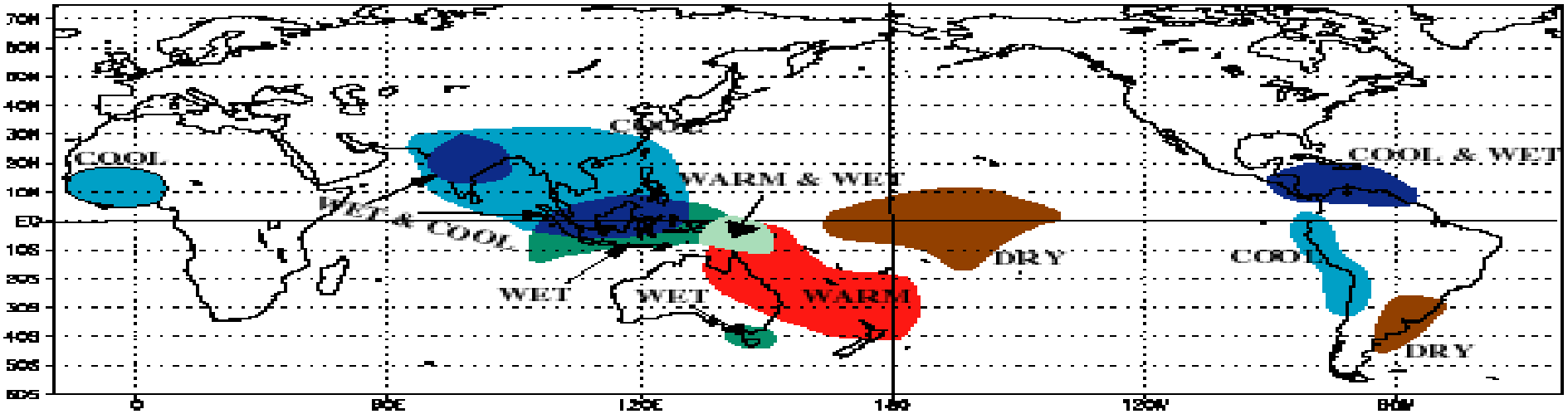


Figure 5. Forecasts of sea surface temperature (SST) anomalies for the Niño 3.4 region (5°N-5°S, 120°W-170°W). Figure courtesy of the International Research Institute (IRI) for Climate and Society.

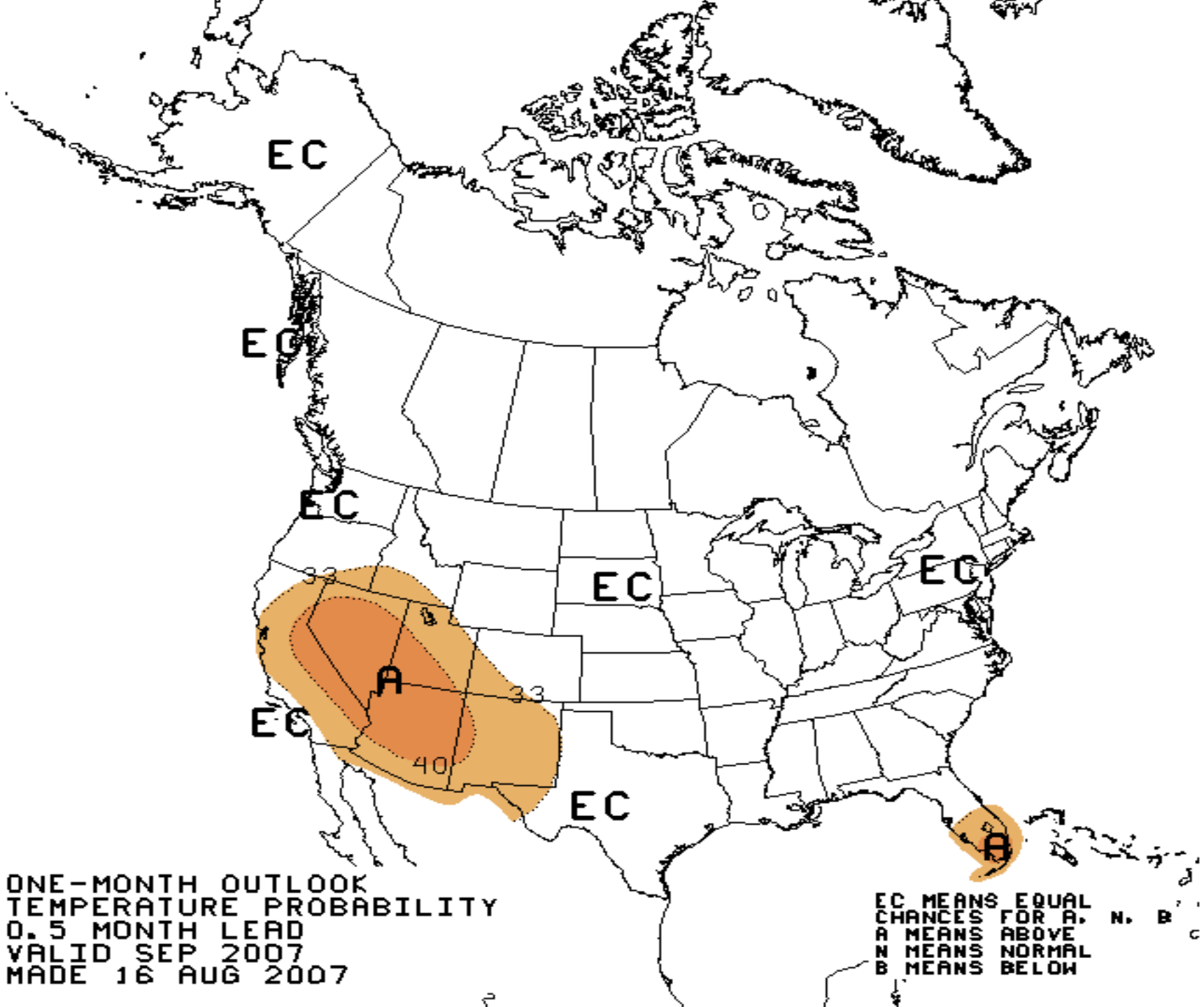
COLD EPISODE RELATIONSHIPS DECEMBER - FEBRUARY

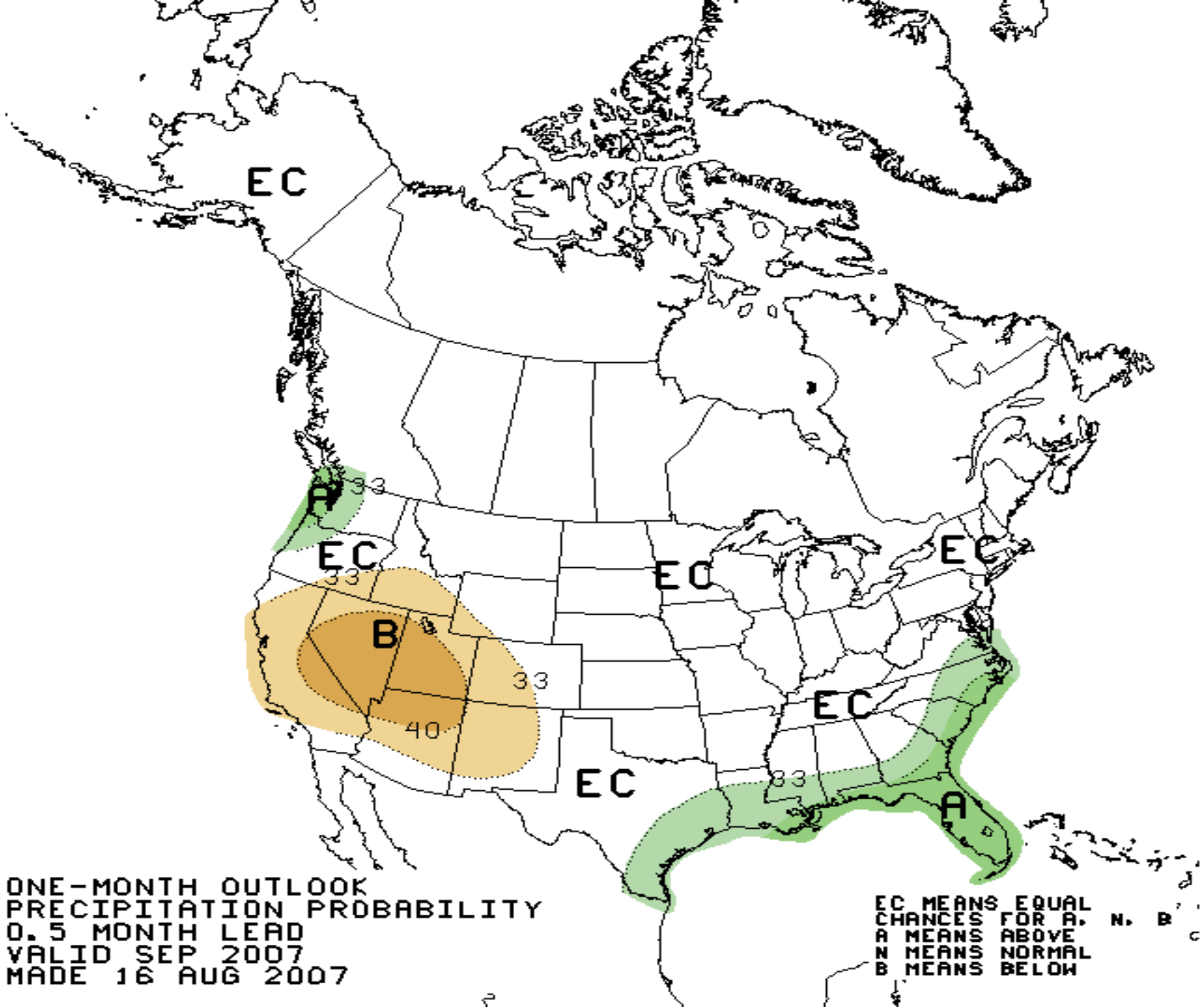


COLD EPISODE RELATIONSHIPS JUNE - AUGUST



Climate Prediction Center
NCEP


EC
EC
EC
EC
EC
EC
EC
A
33
40
A
ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID SEP 2007
MADE 16 AUG 2007
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


EC
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B
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EC
EC
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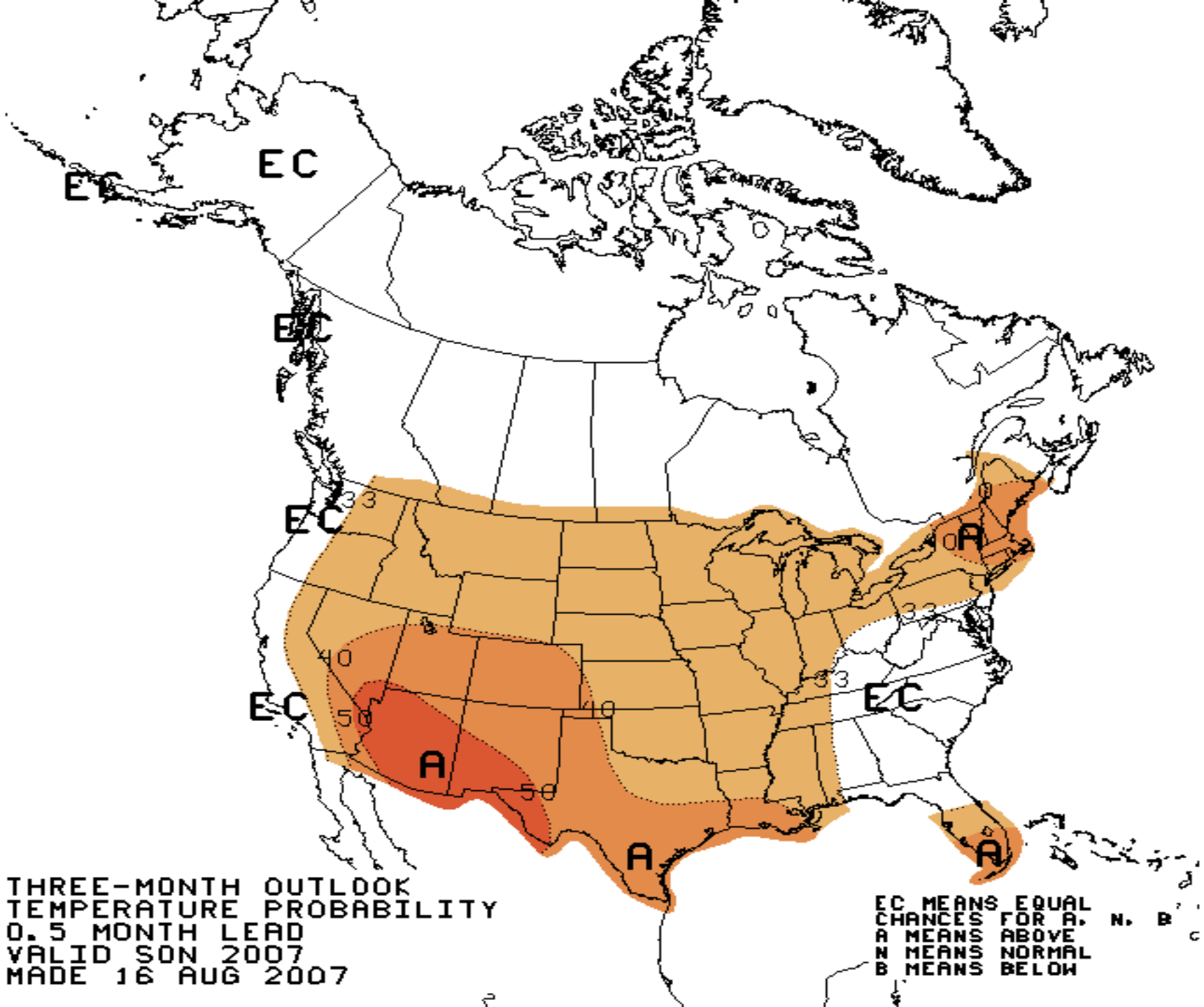
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID SEP 2007
MADE 16 AUG 2007
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


EC
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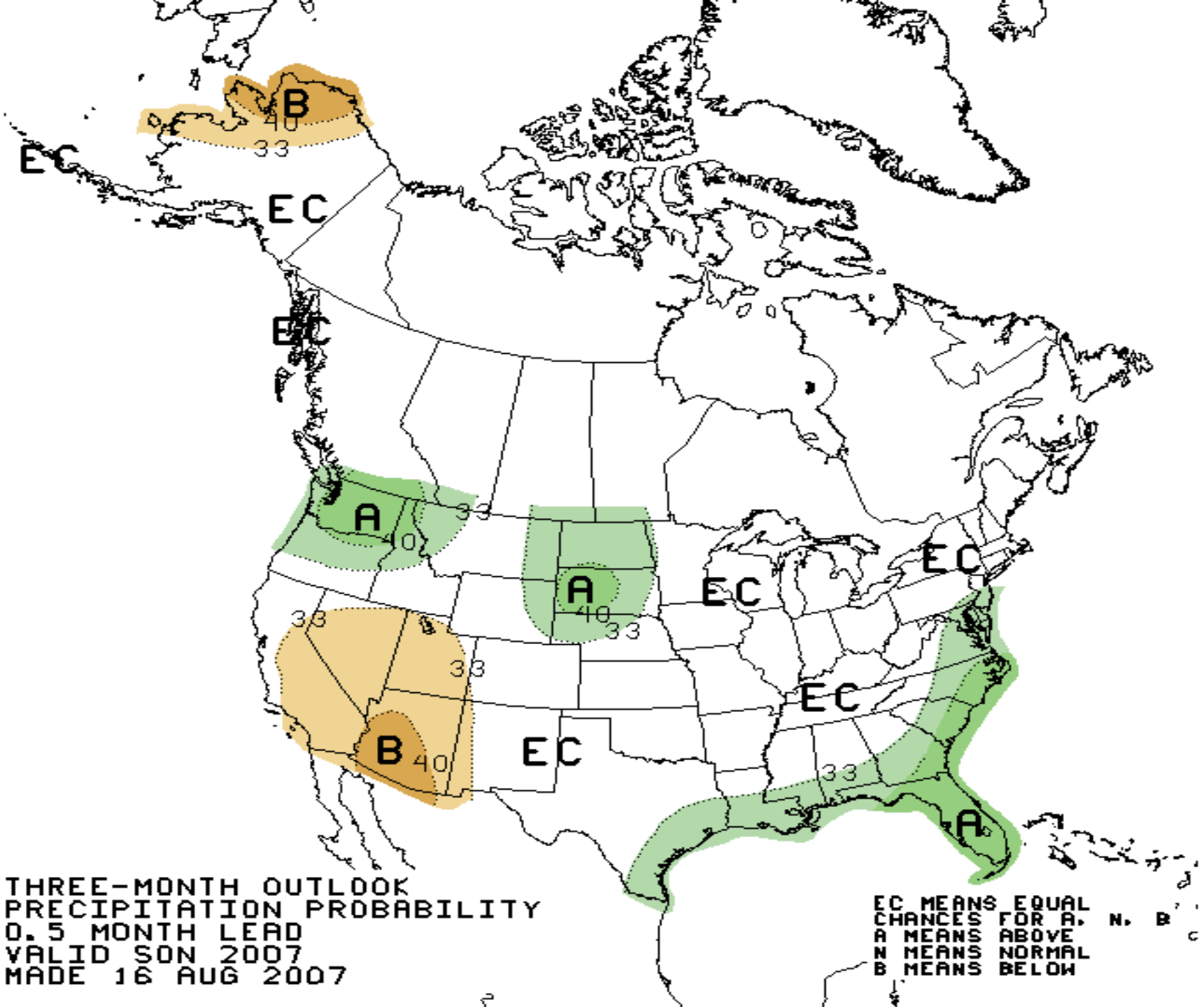
40
50
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID SON 2007
MADE 16 AUG 2007
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


B
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33
A
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID SON 2007
MADE 16 AUG 2007
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW