

Report of Precipitation and Long-Range Forecasts for Delaware



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Water Supply Coordinating Council Meeting – September 22, 2010

Departure from Normal

	June	July	August
Wilmington	-1.76" (1.83")	1.87" (6.15")	-2.17" (1.34")
Dover	-2.09" (1.51")	1.63" (5.74")	-1.35" (3.32")
Georgetown	-0.63" (2.69")	-1.06" (2.41")	-3.19" (2.40")

Since September 1 (through Sept. 21)

Wilmington = $-2.11''$ (0.74'')*

Dover = $-2.51''$ (0.64'')*

Georgetown = $-2.51''$ (0.51'')*



Rainfall for Selected DEOS Stations

	June	July	August	Sept*
Greenville/Winterthur	0.96"	9.00"	1.69"	0.61"
Hockessin	0.95"	4.40"	1.86"	0.50"
Mt. Cuba	0.96"	8.09"	2.62"	0.73"
Cherry Island	2.02"	6.42"	1.28"	0.70"
Newark	2.62"	4.39"	1.52"	1.01"
Glasgow	1.82"	5.52"	1.61"	0.70"
Blackbird	1.36"	5.06"	2.55"	M
Townsend	1.16"	3.49"	3.24"	0.35"
Smyrna	1.06"	2.74"	3.68"	0.78"
Kenton	1.36"	5.33"	4.08"	0.73"
Dover FS	0.96"	4.34"	3.79"	0.35"
Viola	3.14"	5.21"	4.06"	0.38"
Harrington	1.80"	5.94"	5.10"	0.39"



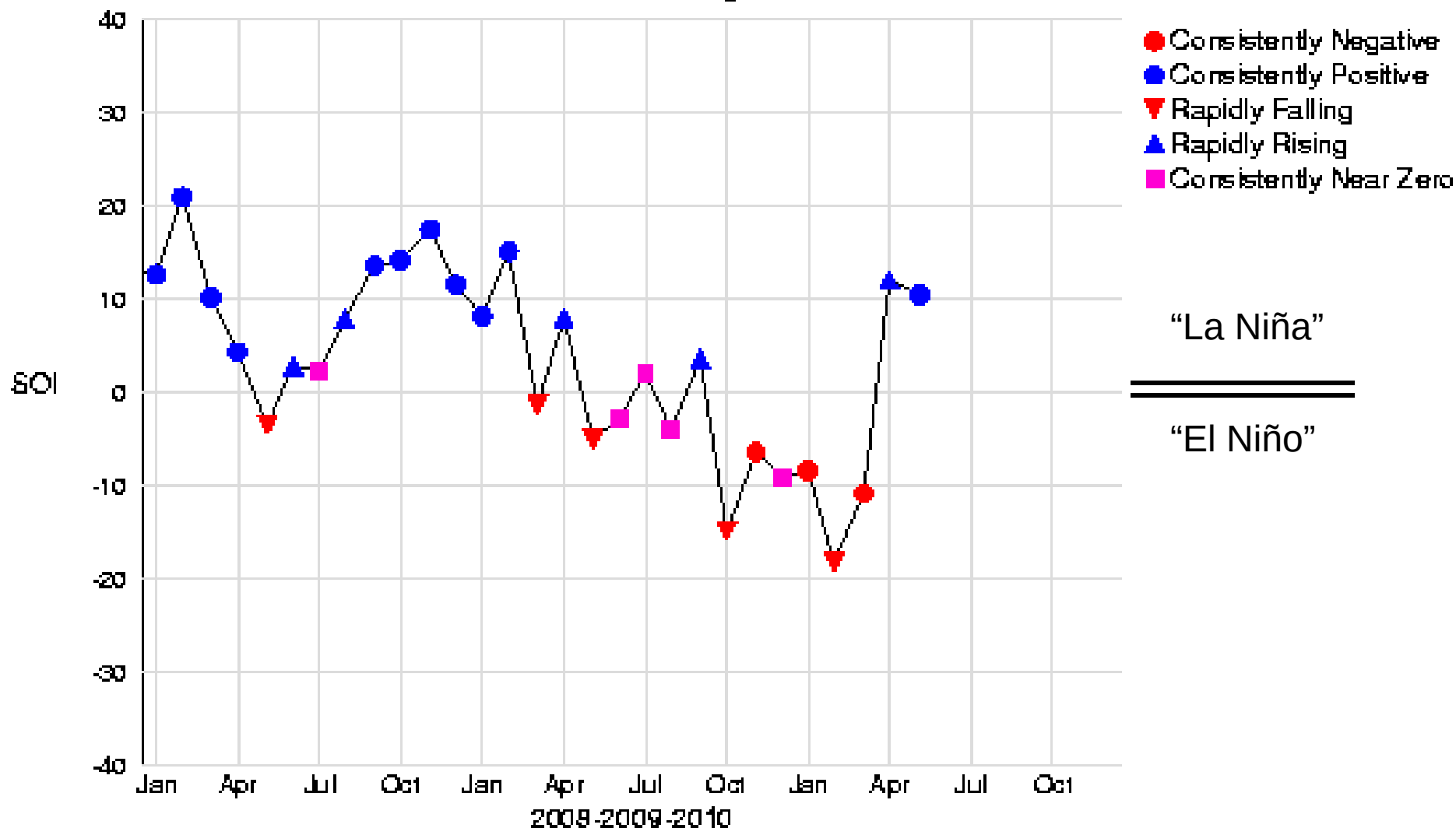
Rainfall for Selected DEOS Stations

	June	July	August	Sept*
Milford	1.96"	3.10"	5.79"	0.42"
Greenwood/Adamsville	0.96"	M	1.69"	0.61"
Ellendale	2.50"	3.05"	4.61"	0.36"
Bridgeville	2.88"	4.13"	2.22"	0.46"
Rehoboth Beach	2.56"	2.20"	5.80"	0.62"
Harbeson	2.65"	1.46"	3.16"	0.73"
Seaford	1.34"	4.16"	3.02"	0.45"
Georgetown REC	2.08"	2.39"	2.03"	0.59"
Indian River	1.69"	2.29"	7.49"	0.64"
Jones Crossroads	2.26"	3.14"	1.54"	0.52"
Laurel	1.56"	2.31"	1.42"	0.56"
Bethany Beach	1.81"	1.50"	6.05"	0.62"
Selbyville	2.44"	1.89"	6.71"	0.64"
Delmar	1.74"	M	3.83"	0.59"



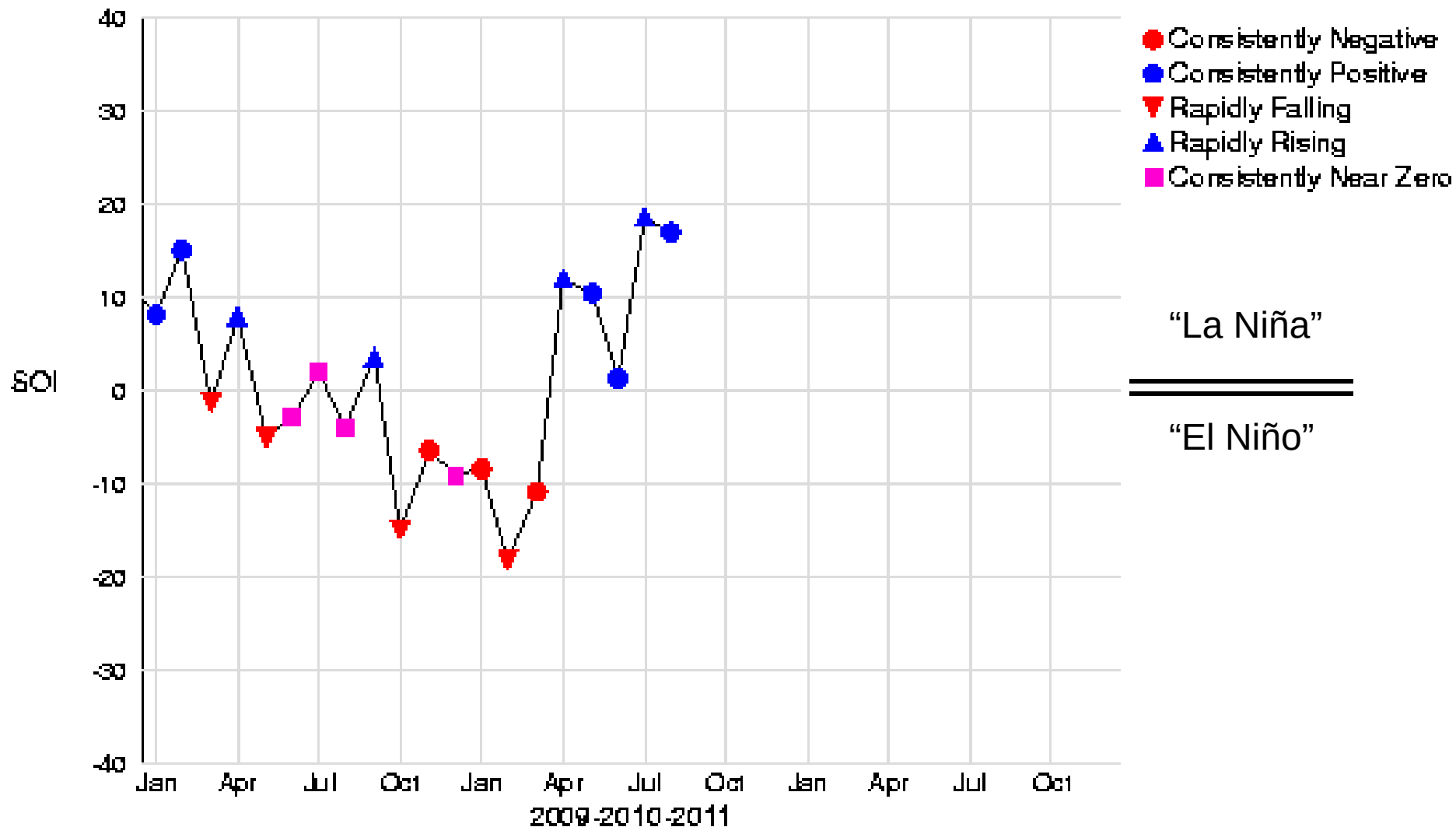
Southern Oscillation Index & 'SOI Phase'

data source: Queensland Climate Change Centre of Excellence.



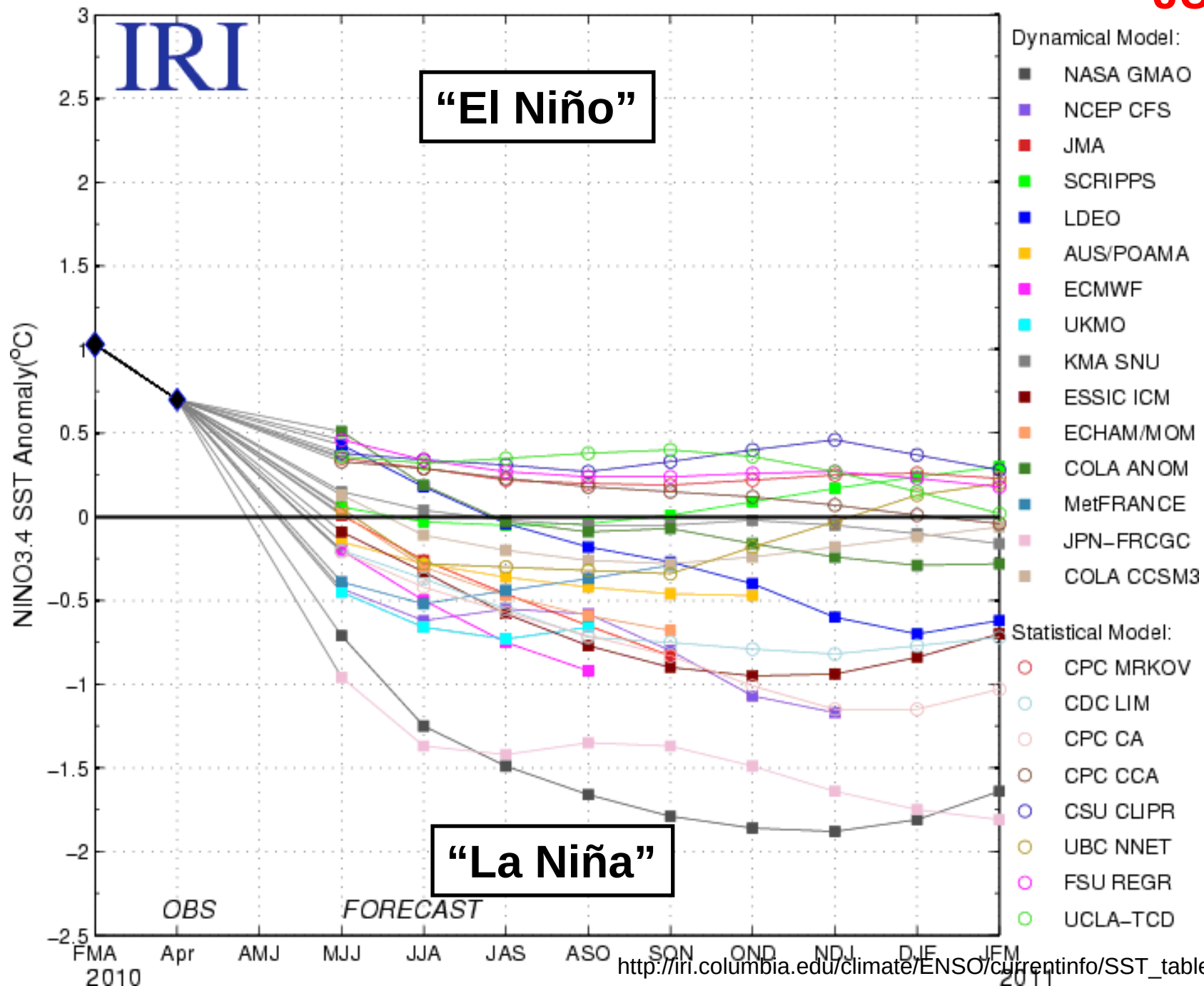
Southern Oscillation Index & 'SOI Phase'

data source: Queensland Climate Change Centre of Excellence.

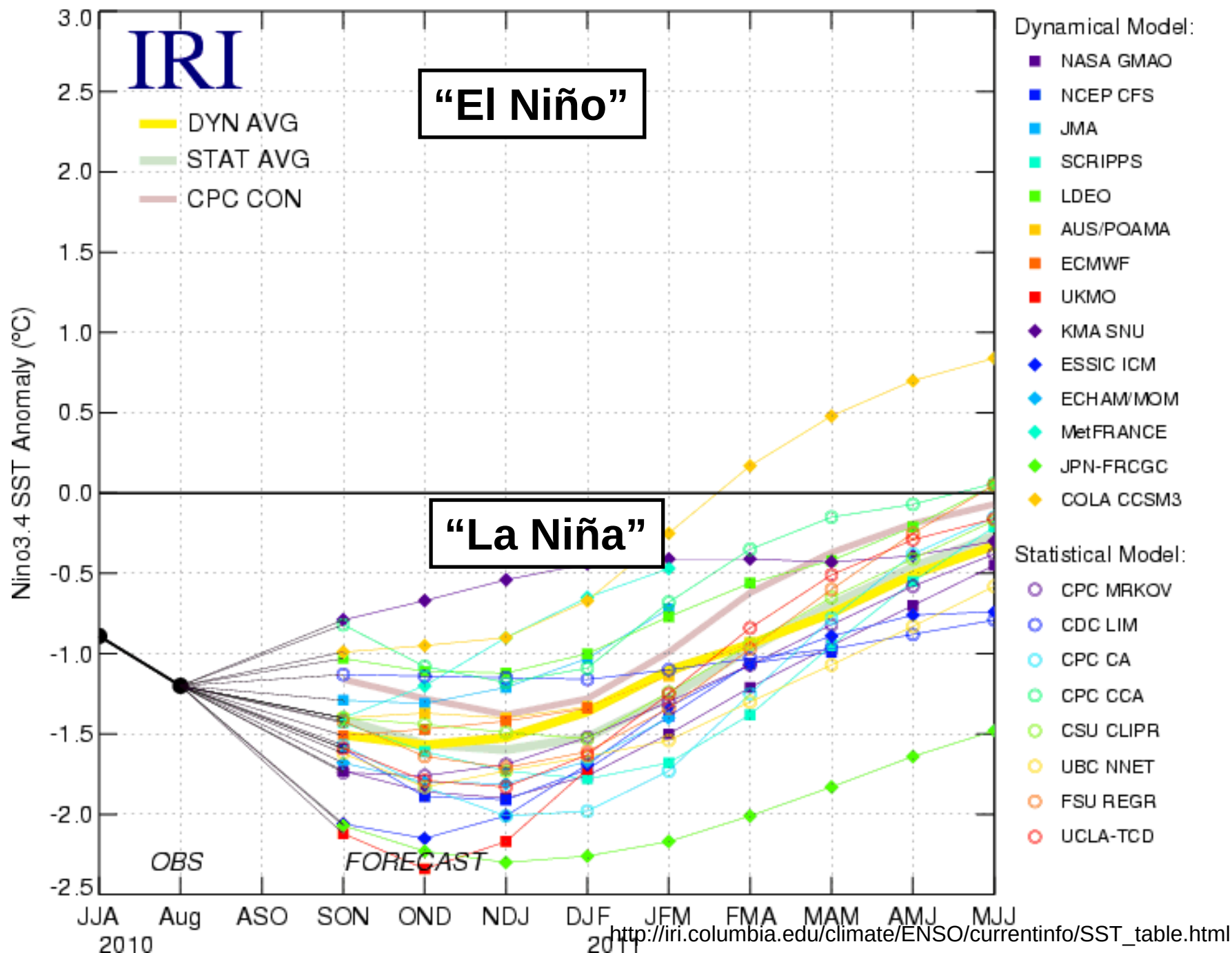


Model Forecasts of ENSO from May 2010

JUNE

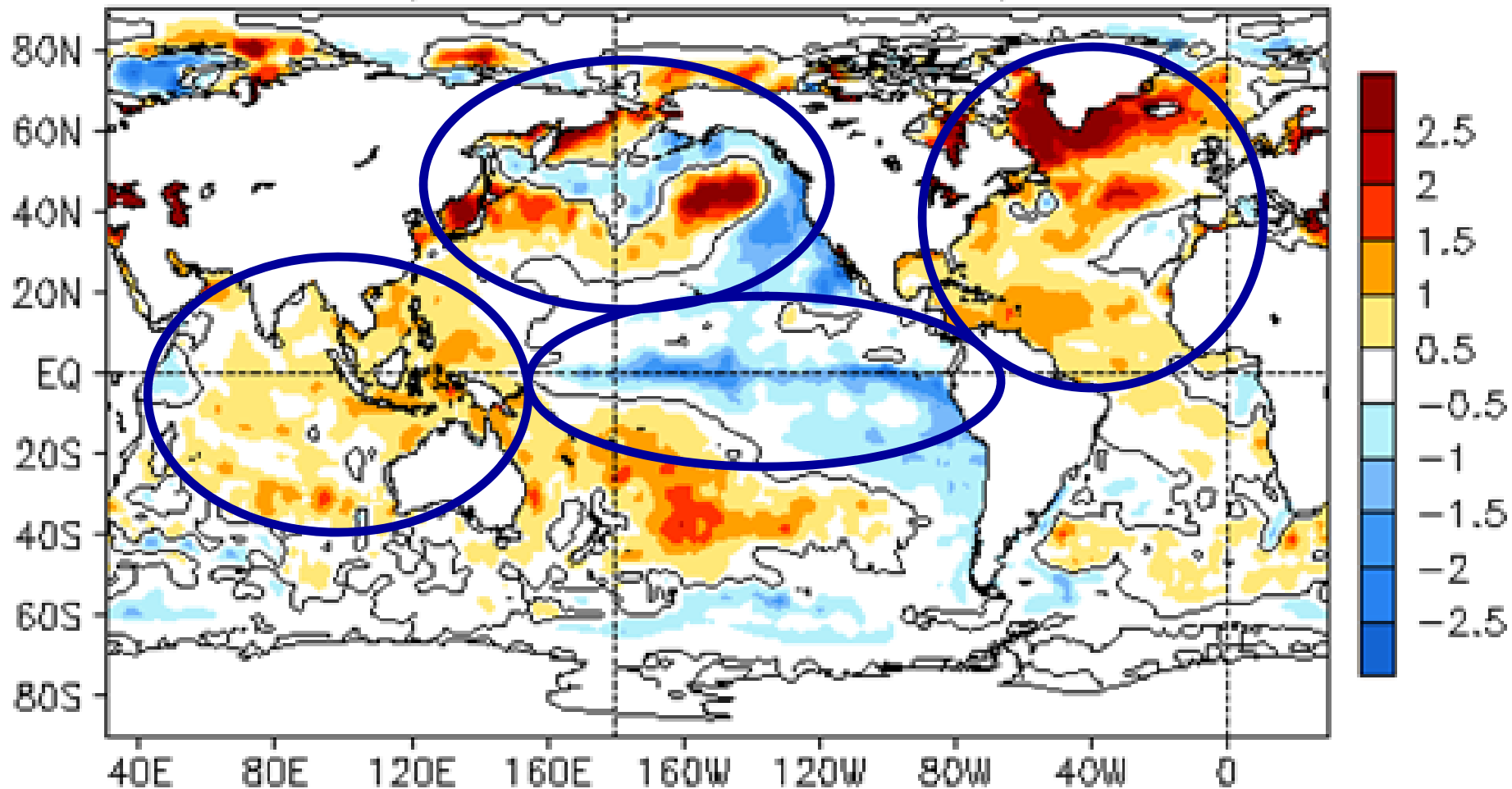


Model Predictions of ENSO from Sep 2010



Sea Surface Temperature Anomalies

AUG 2010 SST Anomaly ($^{\circ}\text{C}$)
(OISST.v2, Climo. 71-00)



Warming in the North Atlantic, Indian Ocean, and the Pacific

CPC Summary

SEA SURFACE TEMPERATURES ALONG THE EQUATOR IN THE EASTERN AND CENTRAL PACIFIC HAVE DRAMATICALLY DECREASED FROM ABOVE NORMAL TO WELL BELOW NORMAL THROUGH AUGUST, INDICATING THAT LA NIÑA HAS STRENGTHENED OVER THE PAST FEW MONTHS.

Temperature and Precipitation Outlook Probabilities

Four Possibilities

Above Normal

Near Normal

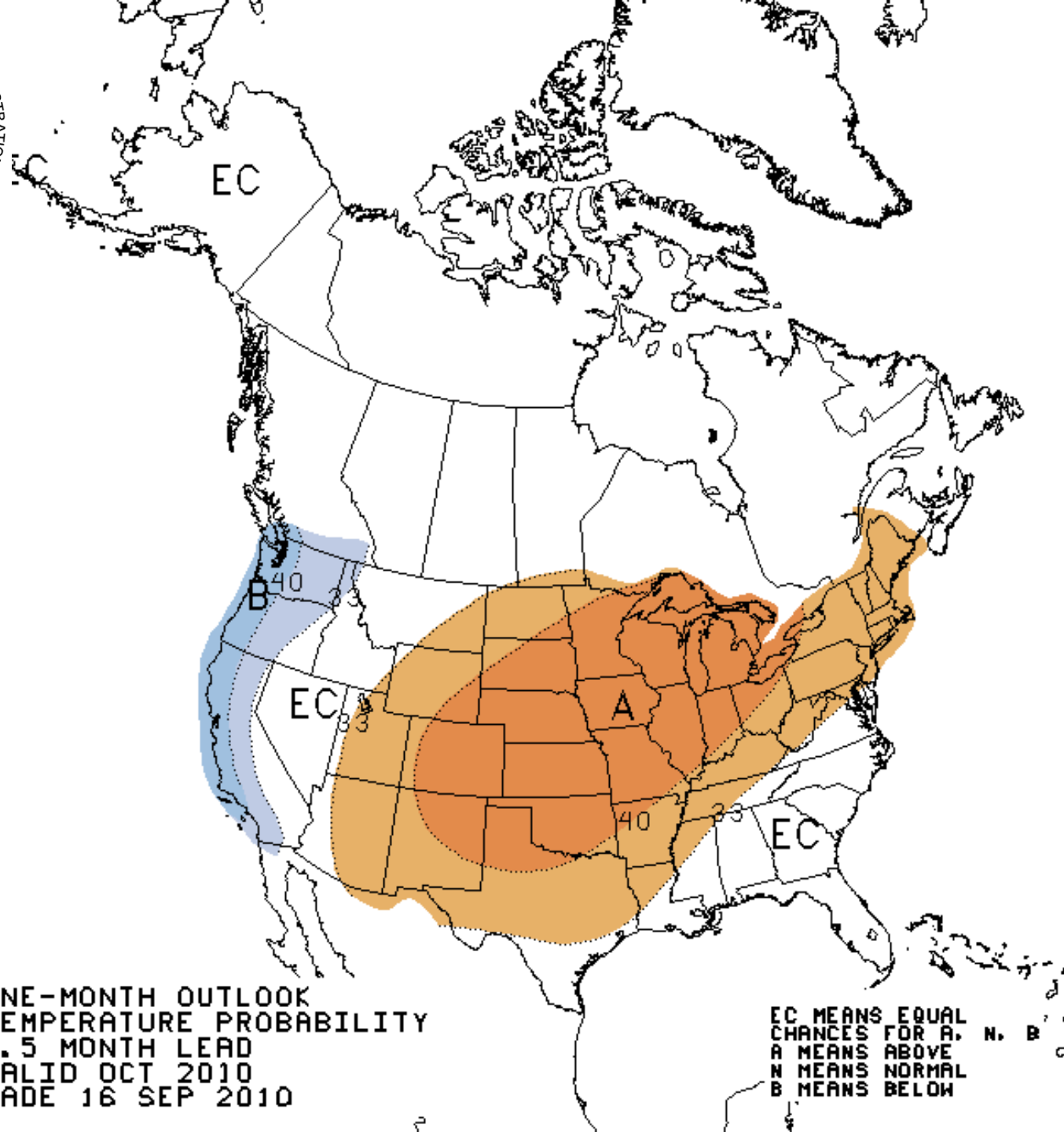
Below Normal

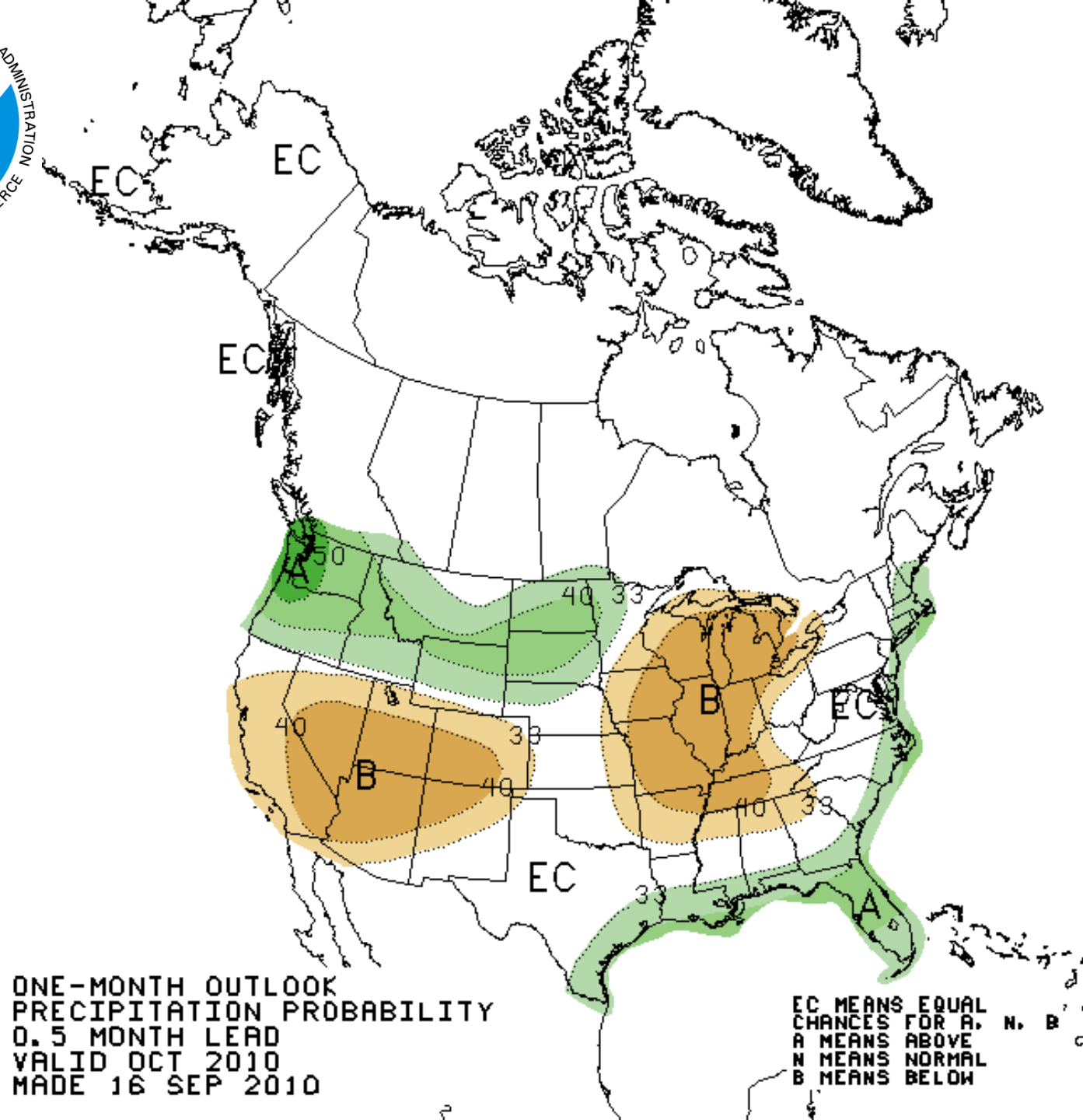
Equal Chances

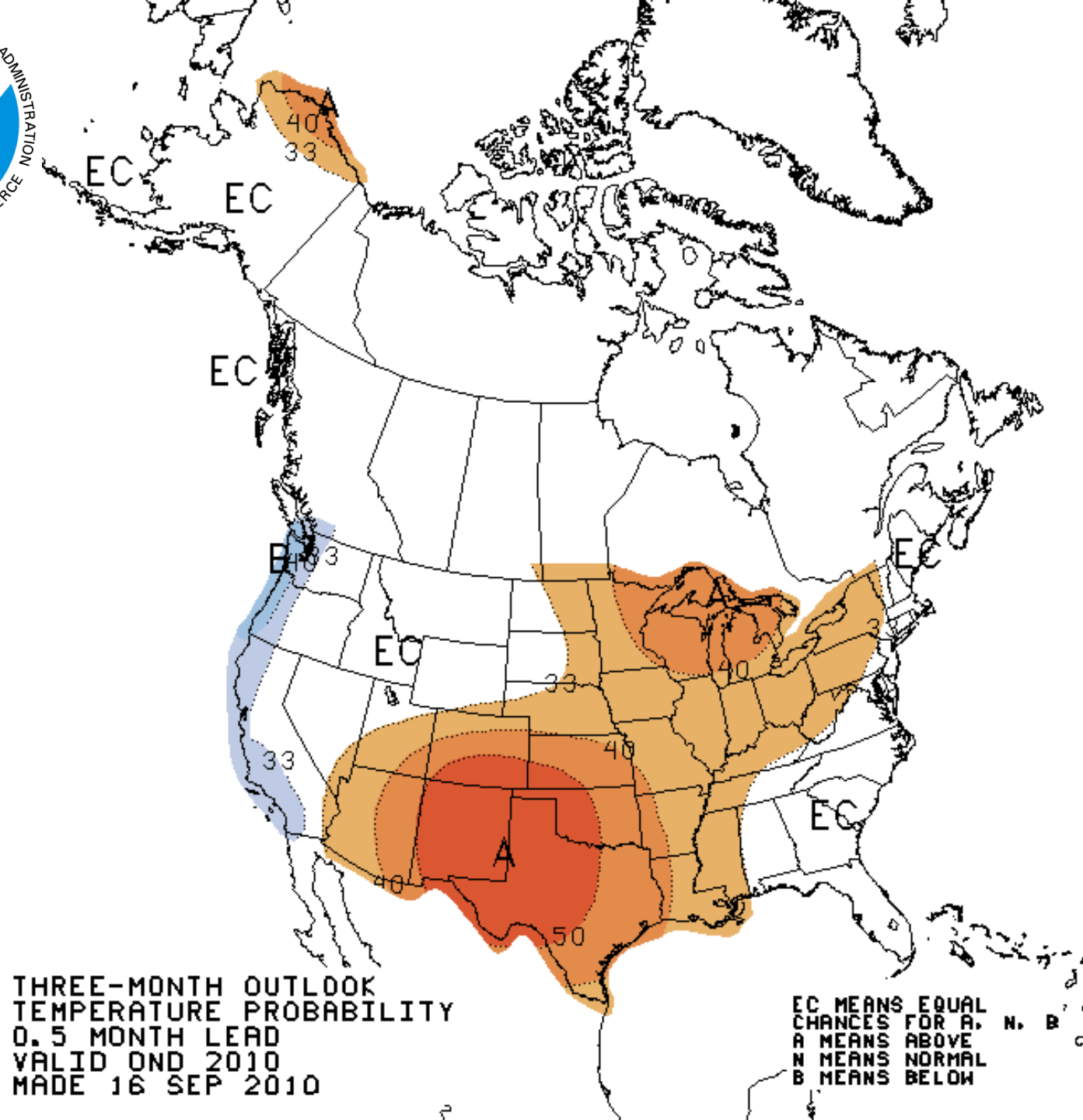


ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID OCT 2010
MADE 16 SEP 2010

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

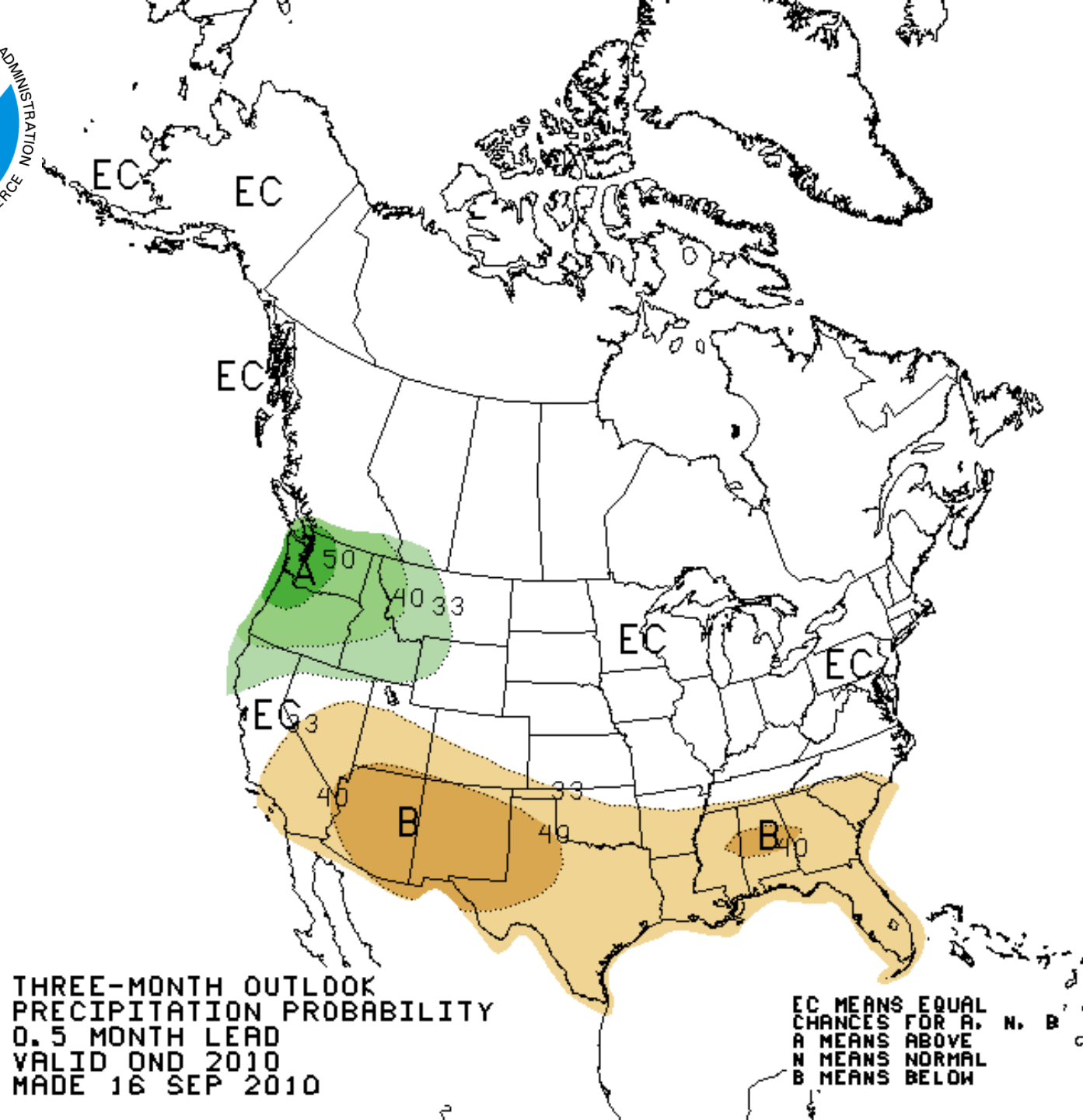


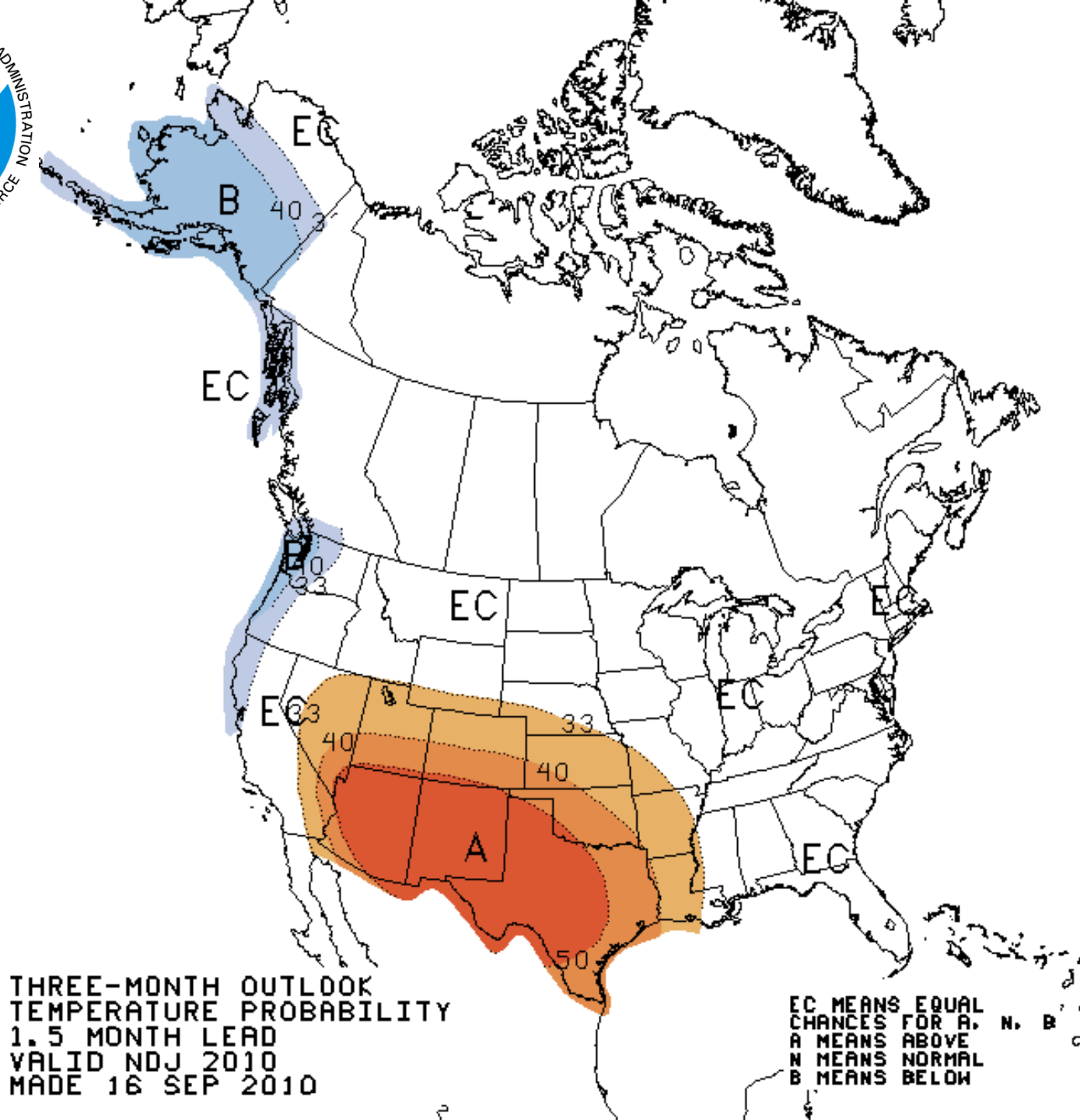


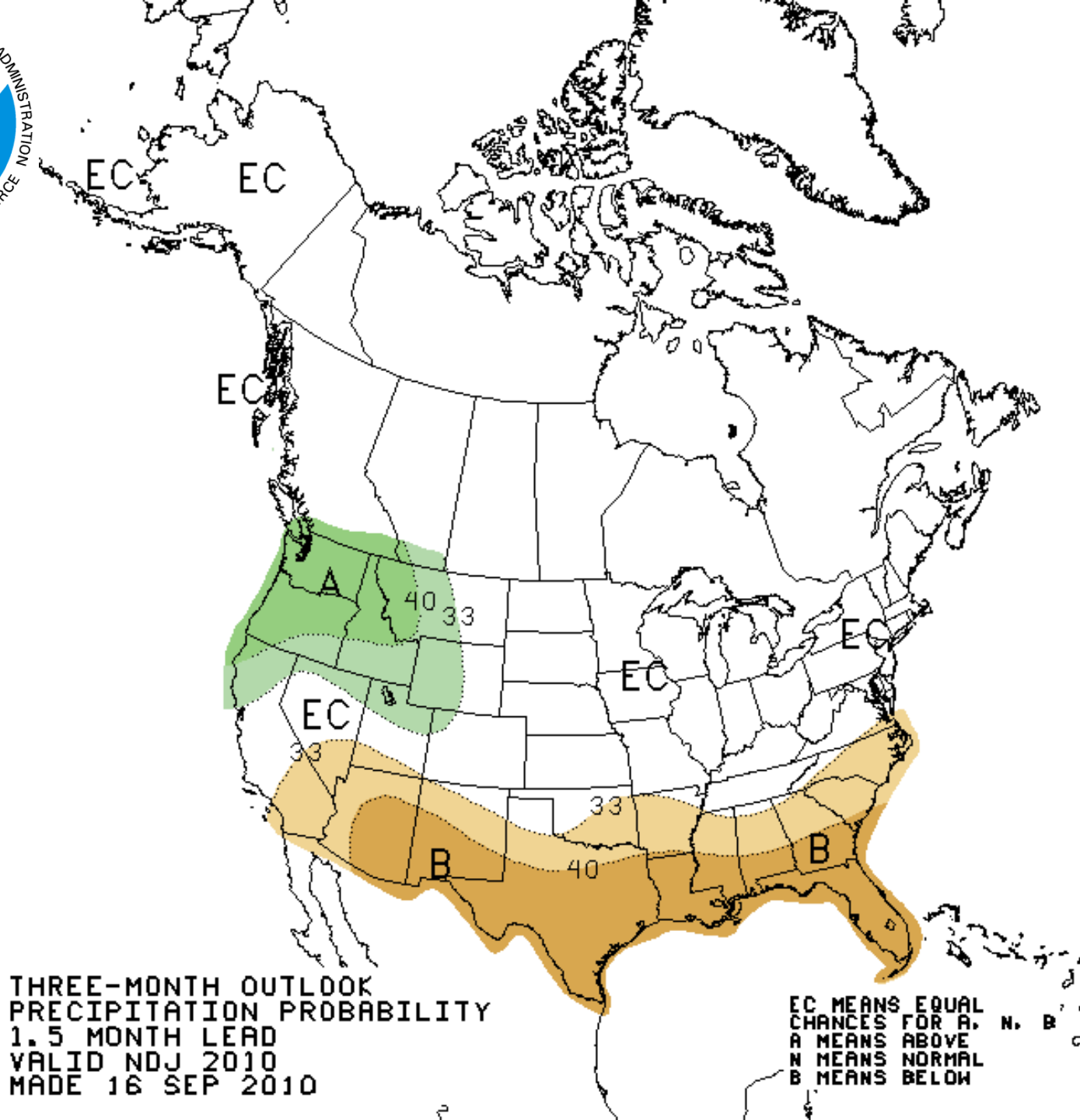


THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID OND 2010
MADE 16 SEP 2010

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW







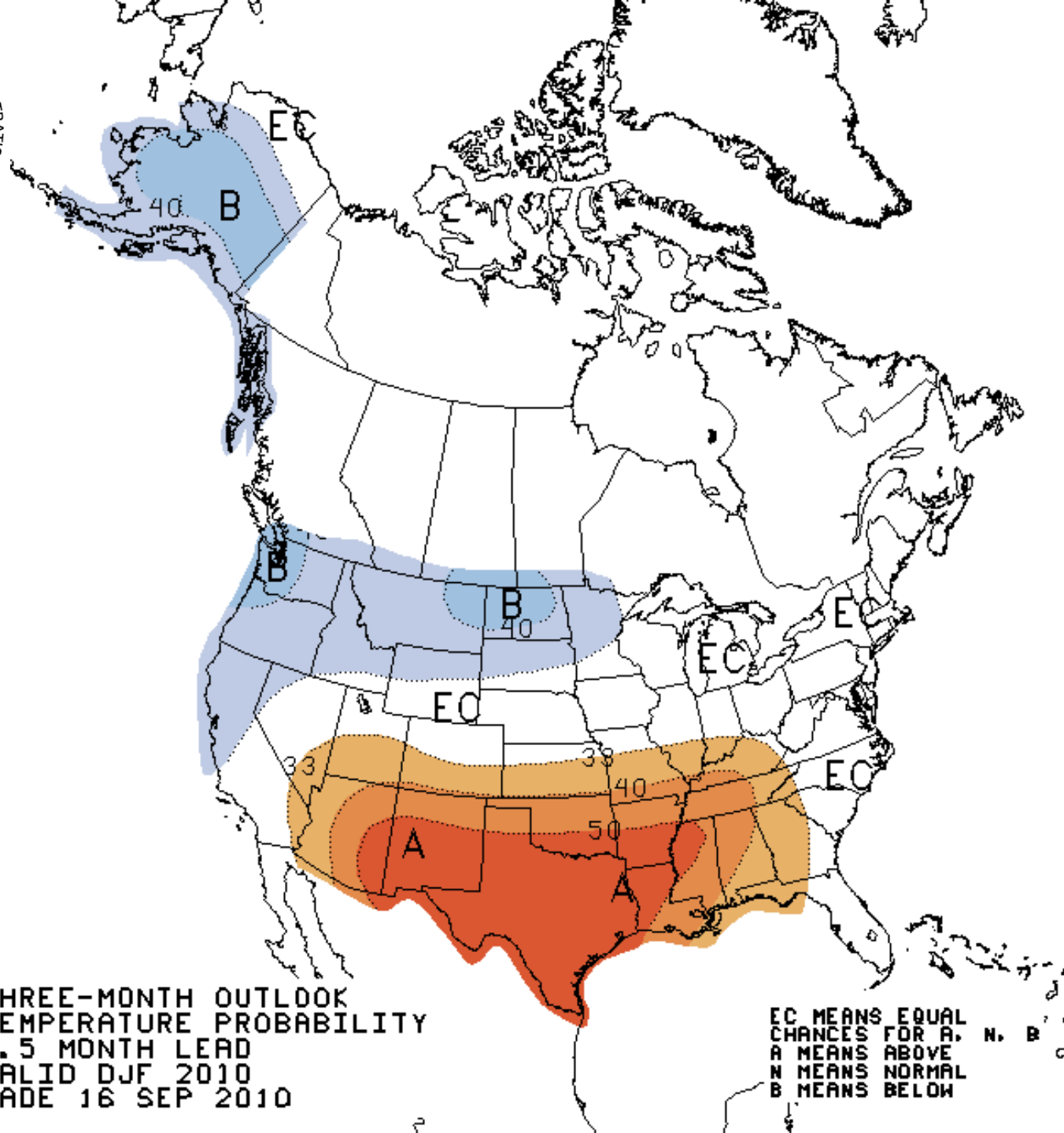
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
1.5 MONTH LEAD
VALID NDJ 2010
MADE 16 SEP 2010

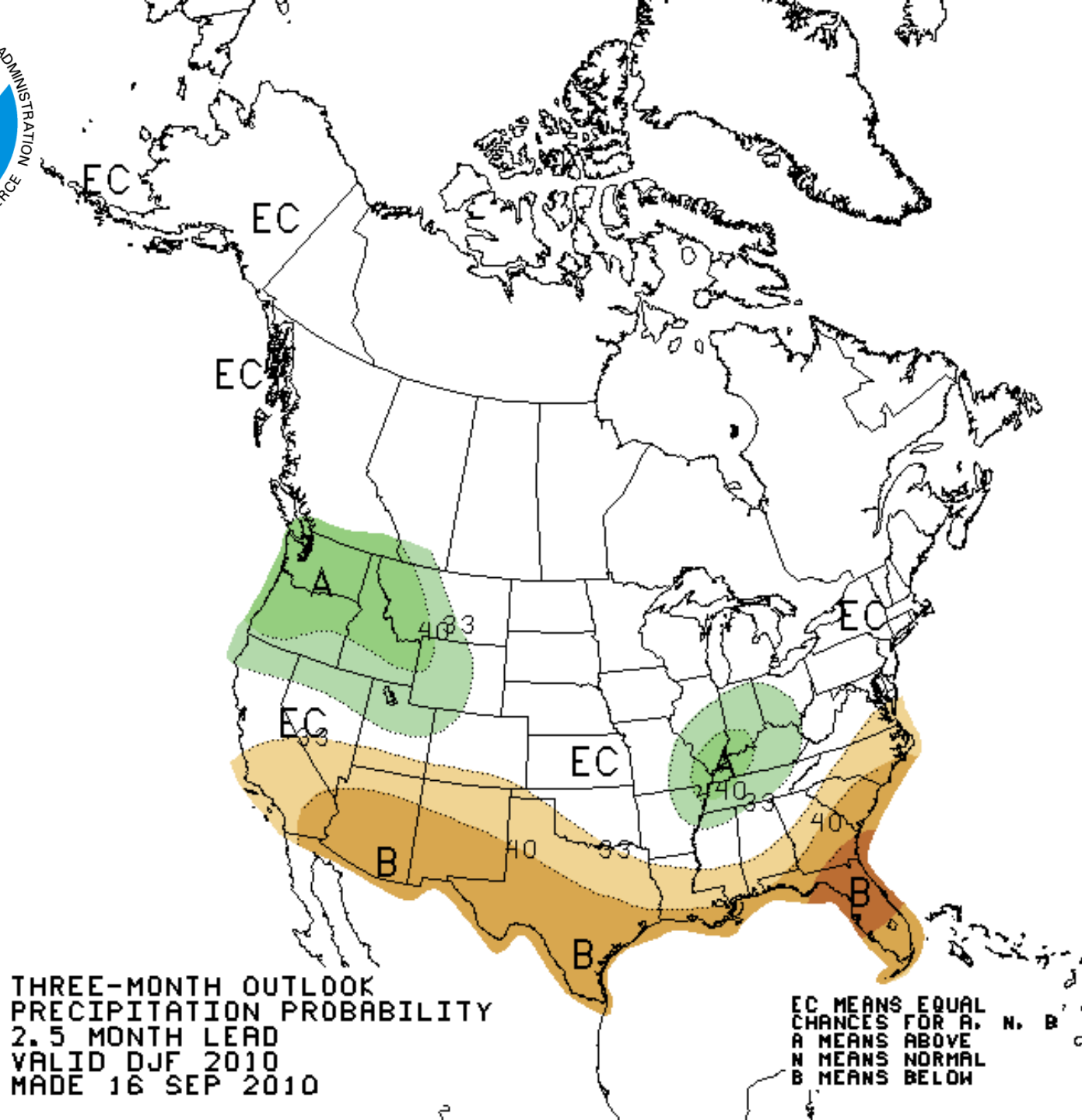
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
2.5 MONTH LEAD
VALID DJF 2010
MADE 16 SEP 2010

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW





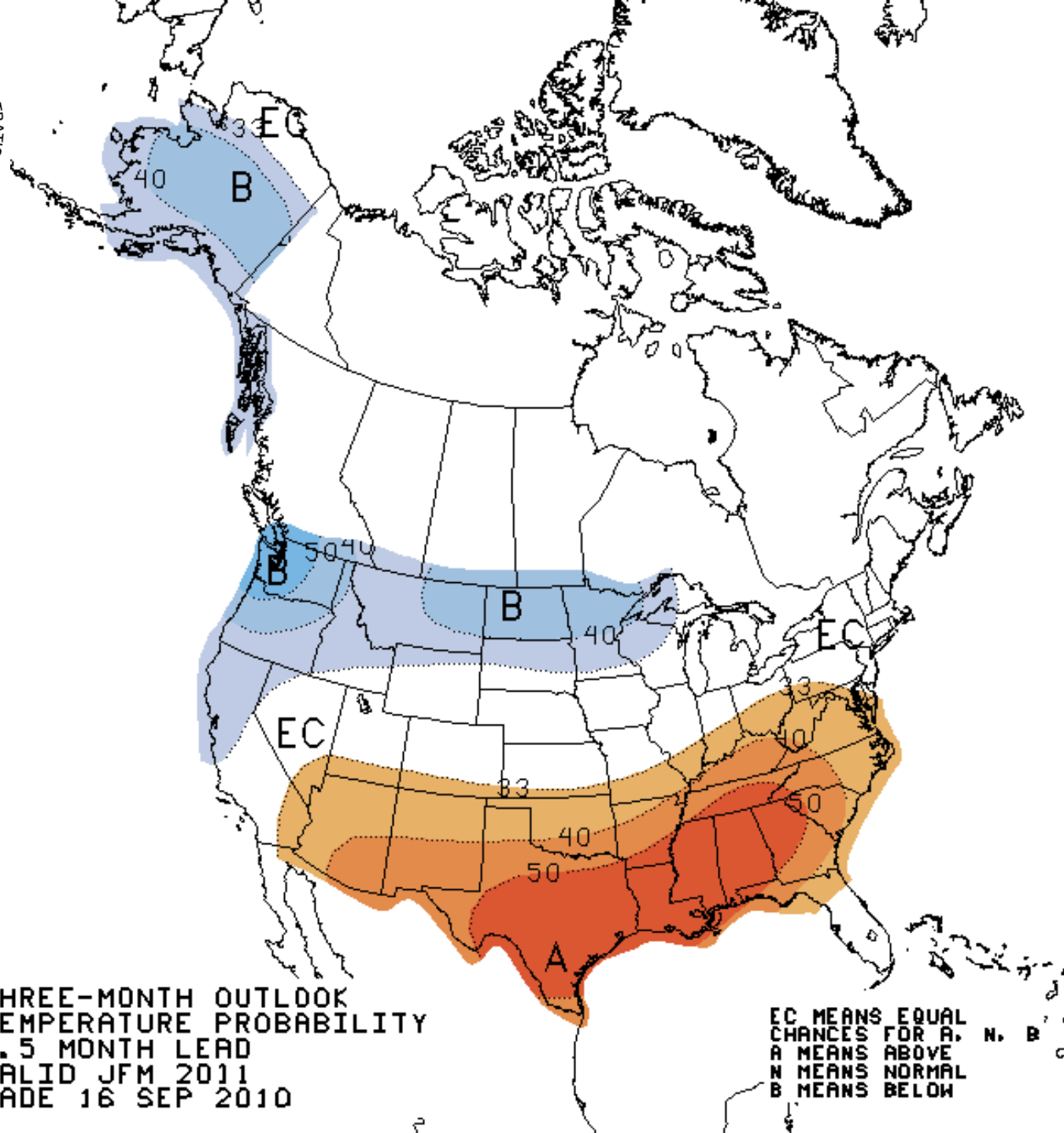
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
2.5 MONTH LEAD
VALID DJF 2010
MADE 16 SEP 2010

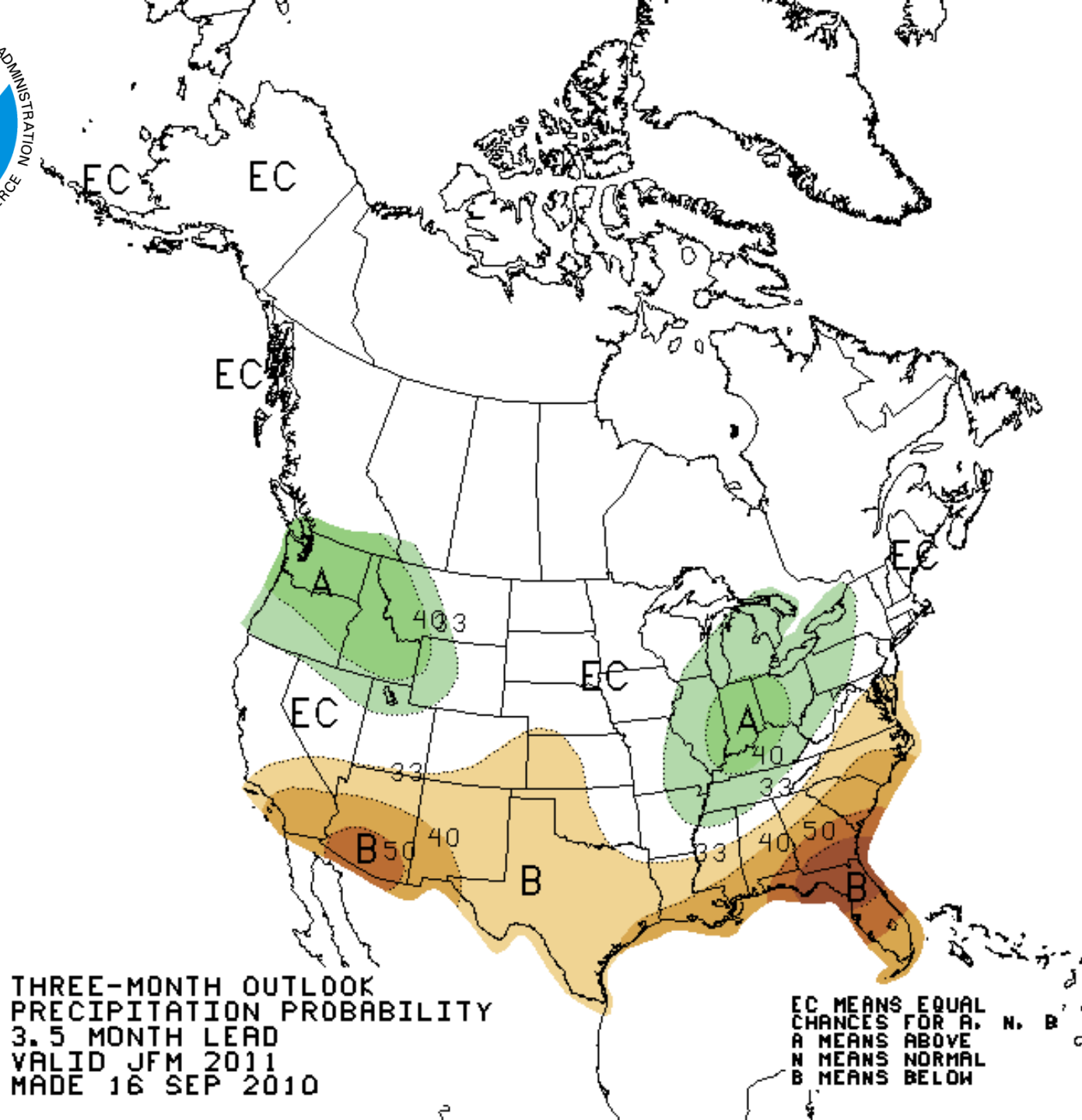
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
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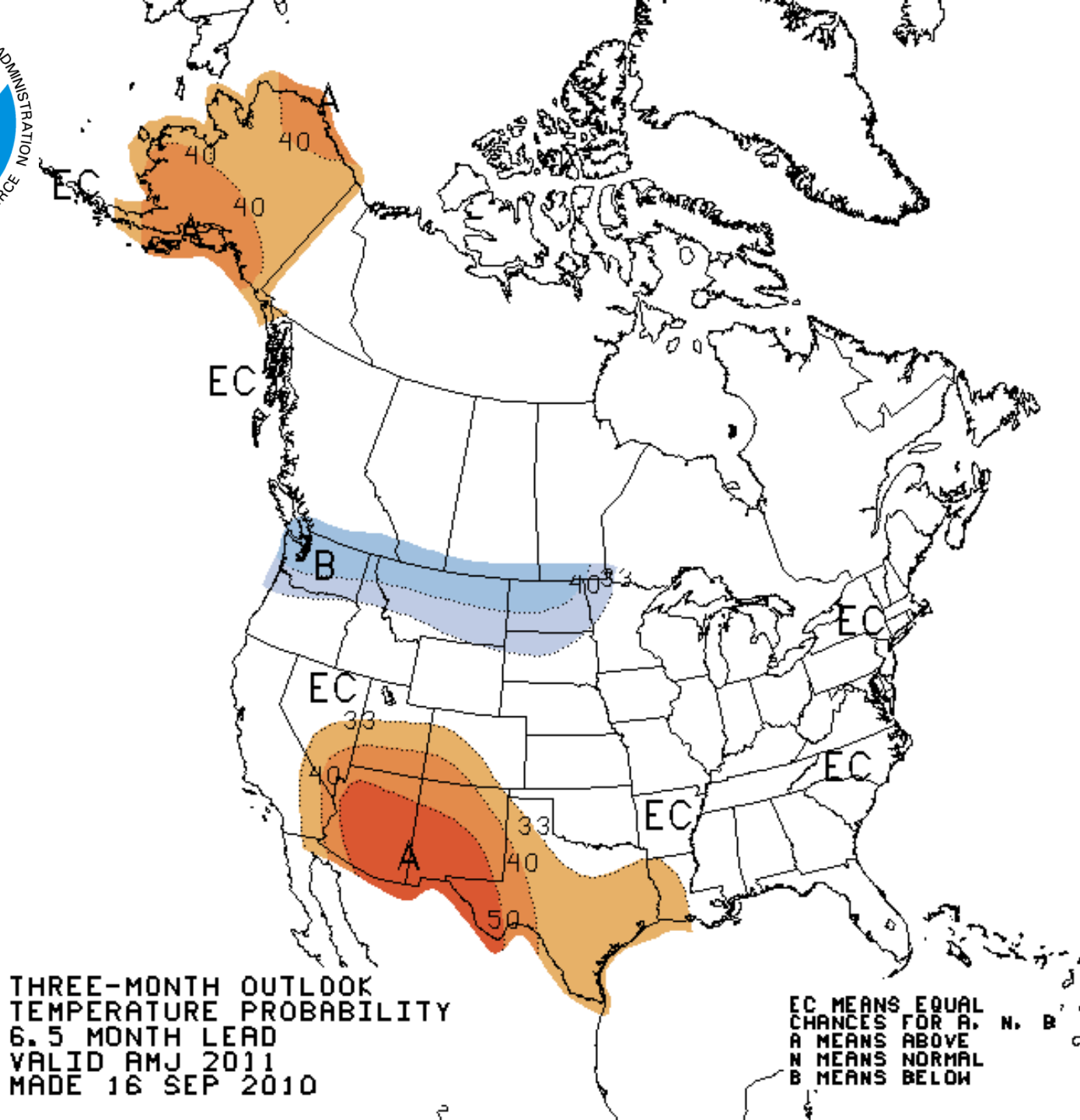


THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
3.5 MONTH LEAD
VALID JFM 2011
MADE 16 SEP 2010

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

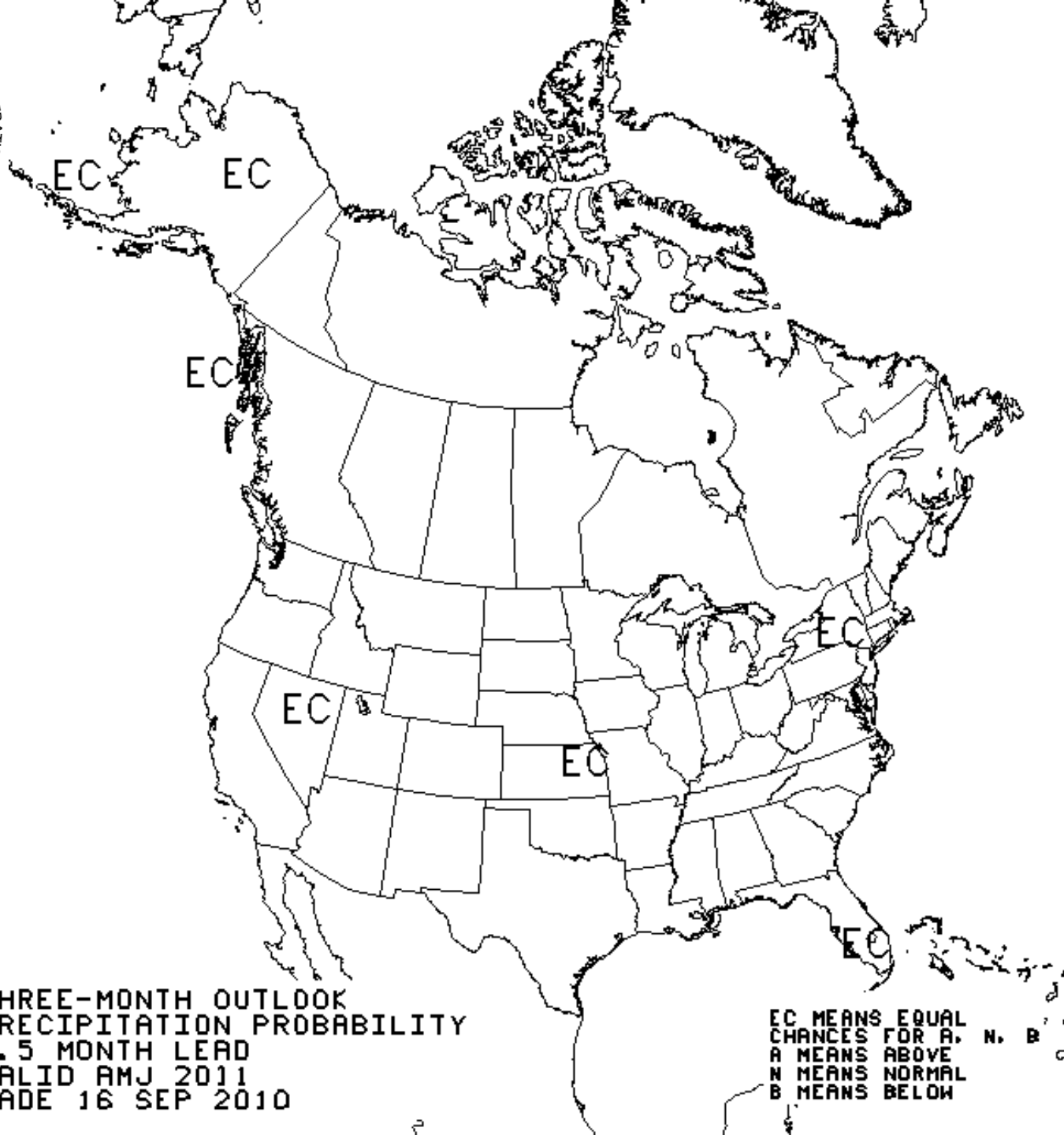






THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
6.5 MONTH LEAD
VALID AMJ 2011
MADE 16 SEP 2010

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

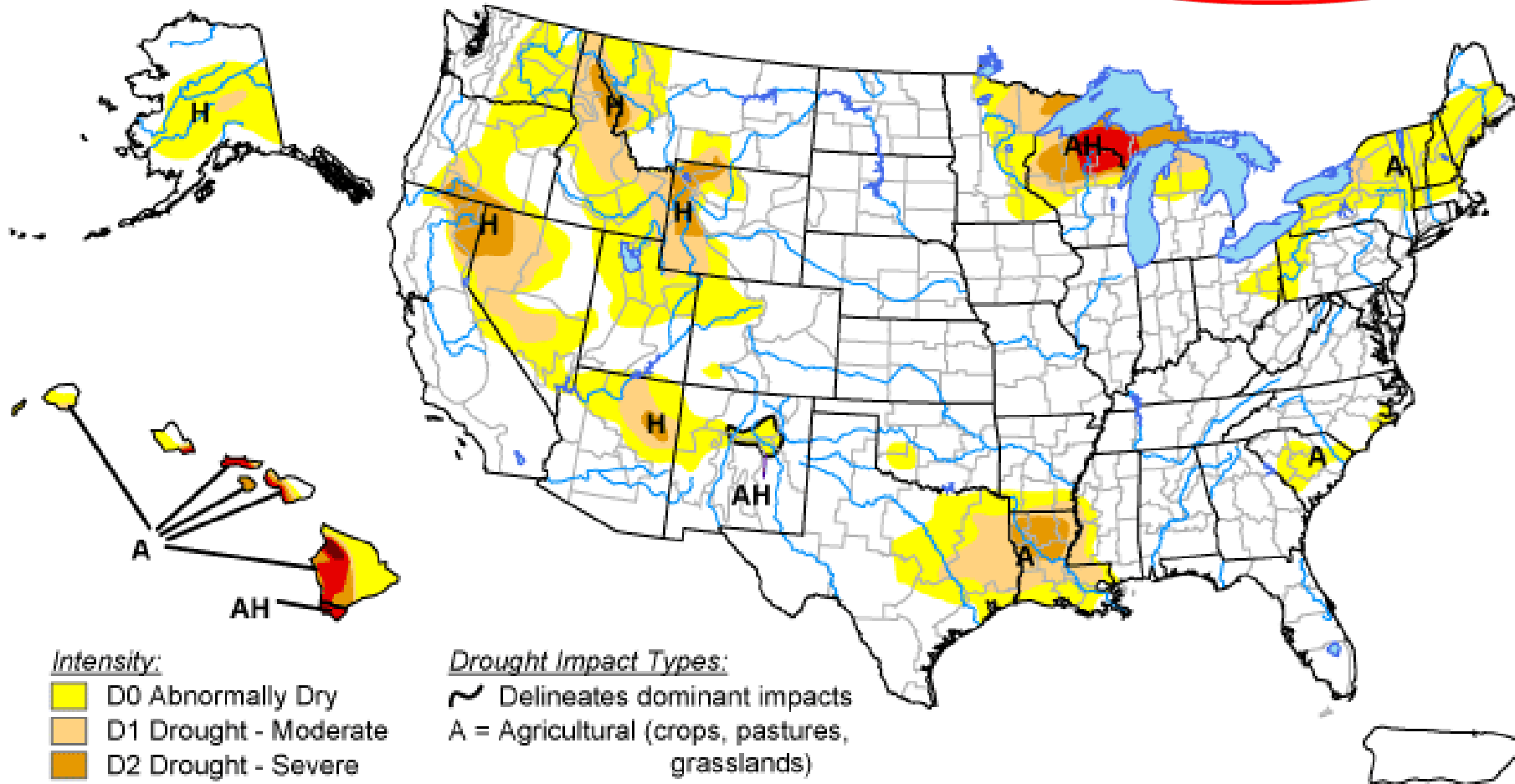


EC MEANS EQUAL
CHANCES FOR A. N. B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

U.S. Drought Monitor

June 1, 2010

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.



Released Thursday, June 3, 2010

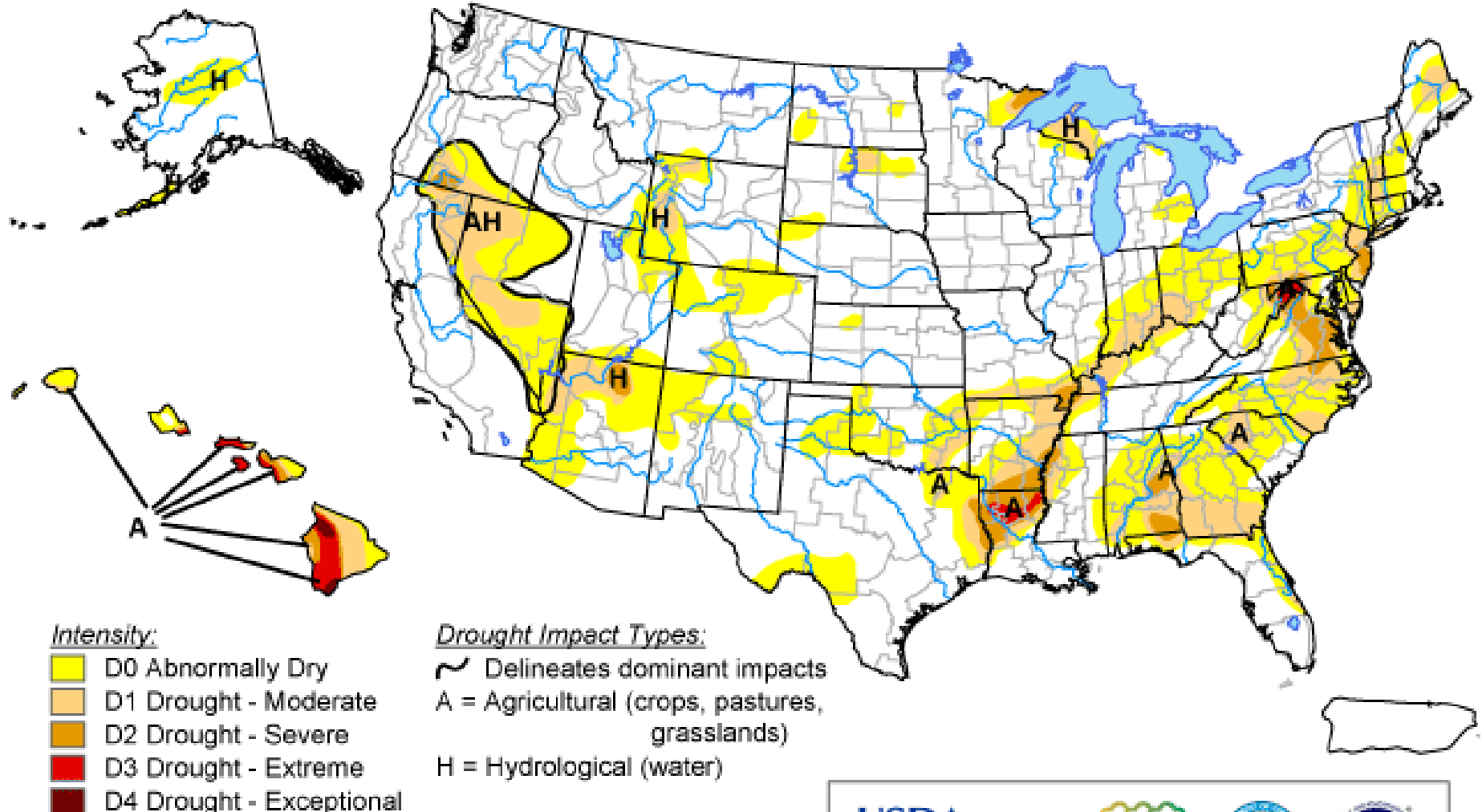
Author: Brian Fuchs, National Drought Mitigation Center

<http://drought.unl.edu/dm>

U.S. Drought Monitor

September 14, 2010

Valid 8 a.m. EDT



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

<http://drought.unl.edu/dm>



Released Thursday, September 16, 2010

Author: Matthew Rosencrans, NOAA/NWS/NCEP/CPC

U.S. Drought Monitor

Delaware

June 1, 2010

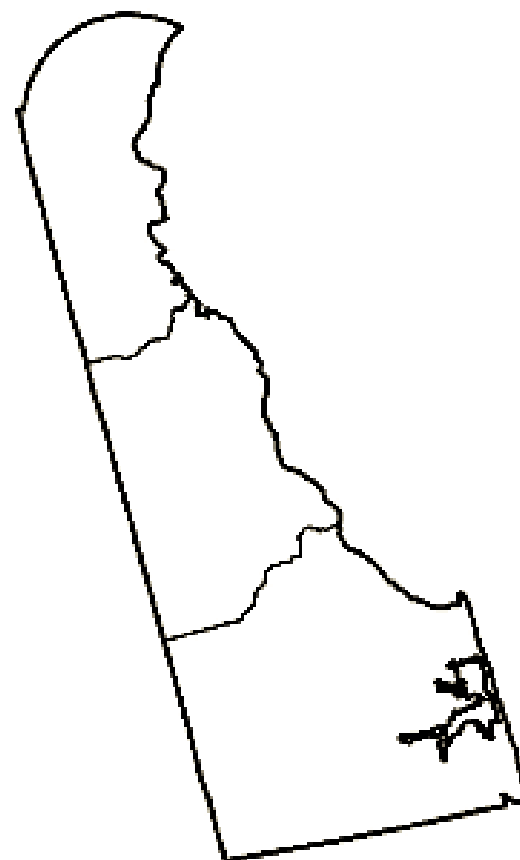
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.0	0.0	0.0	0.0	0.0	0.0
Last Week (05/25/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
3 Months Ago (03/09/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Water Year (10/06/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0
One Year Ago (06/02/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0

Intensity:

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



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

<http://drought.unl.edu/dm>



Released Thursday, June 3, 2010

Author: Brian Fuchs, National Drought Mitigation Center

U.S. Drought Monitor

Delaware

September 14, 2010

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.0	100.0	11.5	0.0	0.0	0.0
Last Week (09/07/2010 map)	2.7	97.3	11.5	0.0	0.0	0.0
3 Months Ago (06/22/2010 map)	14.5	85.5	0.0	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Water Year (10/06/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0
One Year Ago (09/15/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0

Intensity:



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

<http://drought.unl.edu/dm>



Released Thursday, September 16, 2010

Author: M. Rosencrans, CPC/NOAA



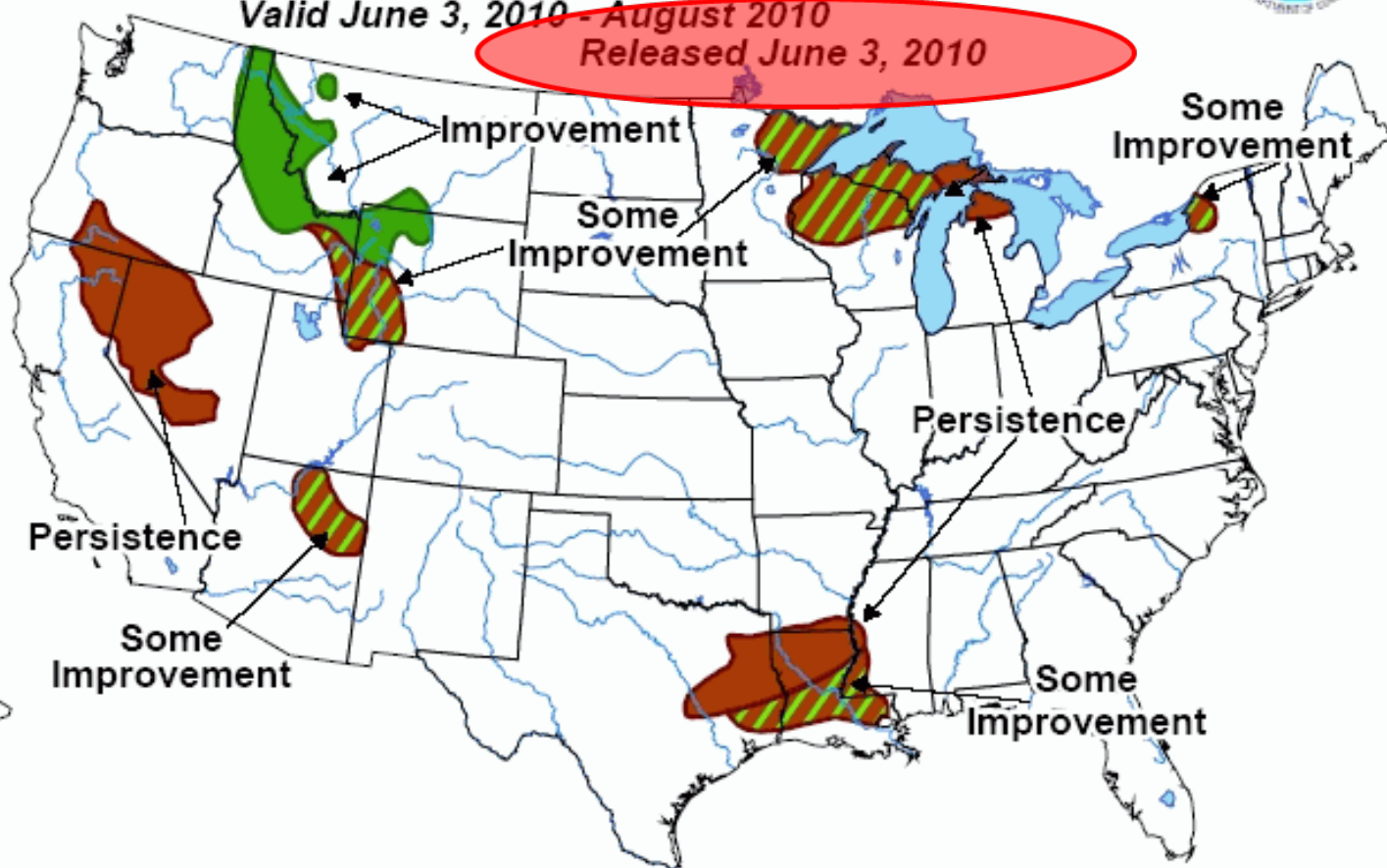
U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period



Valid June 3, 2010 - August 2010

Released June 3, 2010



KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

No Drought
Posted/Predicted



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.

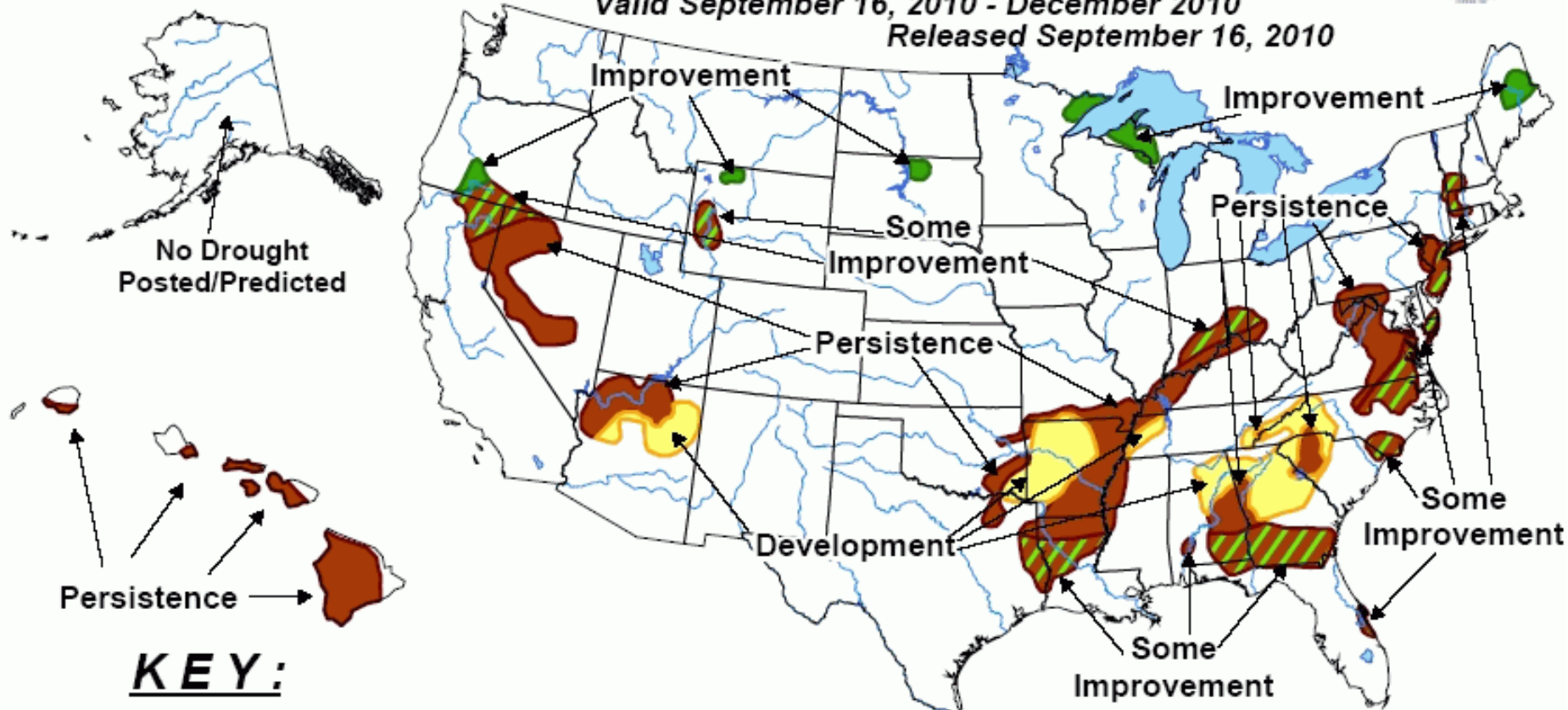


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid September 16, 2010 - December 2010

Released September 16, 2010



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.

NOAA Hurricane Forecast – May

NOAA estimates a 70% probability for each of the following ranges of activity this season:

- 14 to 23 Named Storms 11 (11)
- 8 to 14 Hurricanes 8 (6)
- 3 to 7 Major Hurricanes 2 (2)

85% Chance of Above Normal; 5% Chance of Below Normal

20th Century average in parenthesis

NOAA Hurricane Forecast

NOAA estimates a 70% probability for each of the following ranges of activity this season:

- 14 to **20** Named Storms (11)
- 8 to **12** Hurricanes (6)
- 4 to **6** Major Hurricanes (2)

85% Chance of Above Normal; 5% Chance of Below Normal

20th Century average in parenthesis

Bill Gray's Hurricane Forecast

Updated July 31

- 18 Named Storms (9.6)
- 90 Named Storm Days (49.1)
- 10 Hurricanes (5.9)
- 40 Hurricane Days (24.5)
- 5 Major Hurricanes (2.3)
- 13 Major Hurricane Days (5.0)

1950-2000 average in parenthesis

Bill Gray's Hurricane Forecast

July 31 Update

Probabilities for at least one major (Category 3-4-5) hurricane landfall on each of the following coastal areas:

- Entire U.S. coastline - 75% (76%)
(average for last century is 52%)
- U.S. East Coast & Peninsula Florida - 50% (51%)
(average for last century is 31%)
- Gulf Coast west of the Florida Panhandle - 49% (50%)
(average for last century is 30%)