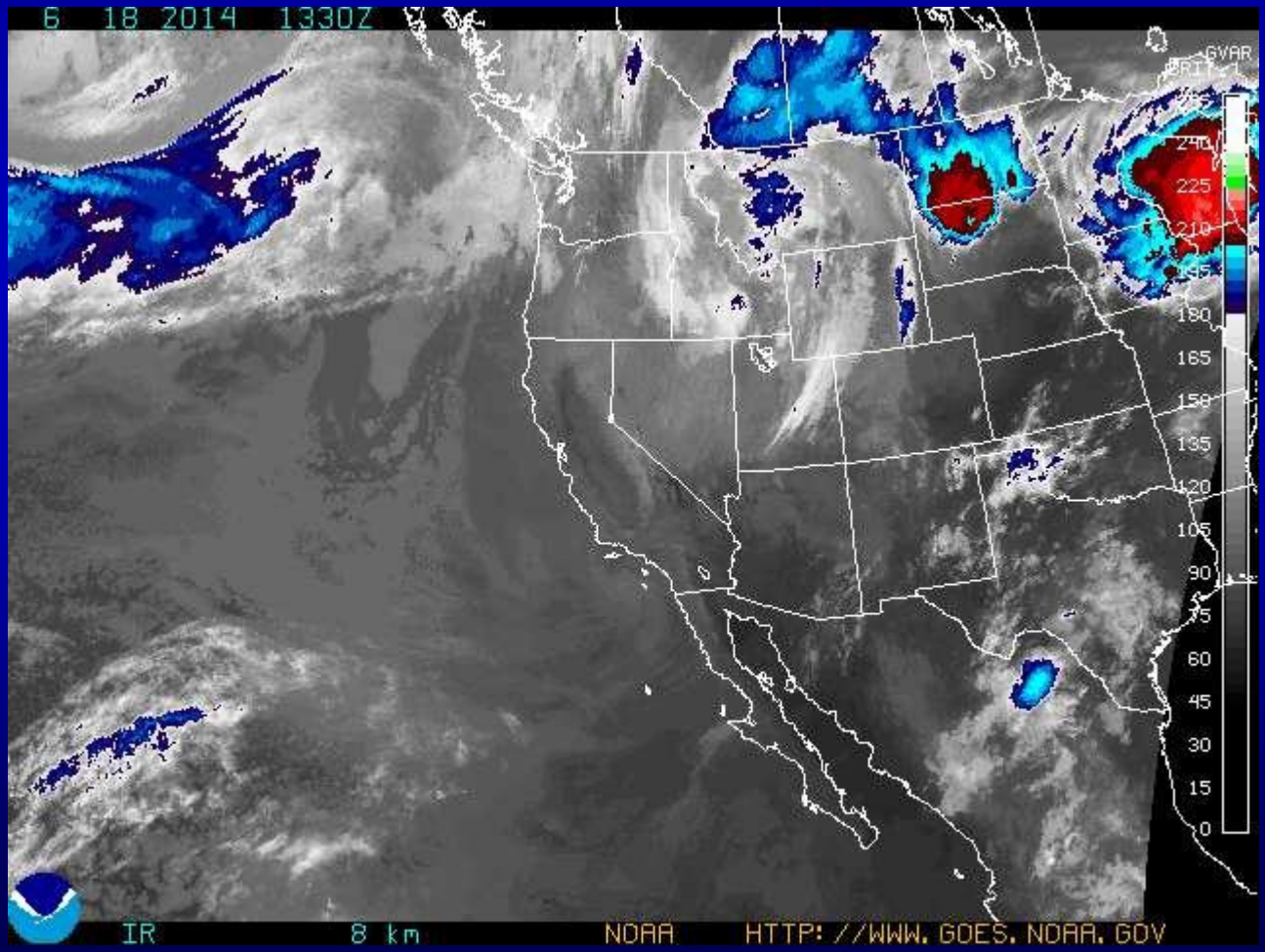
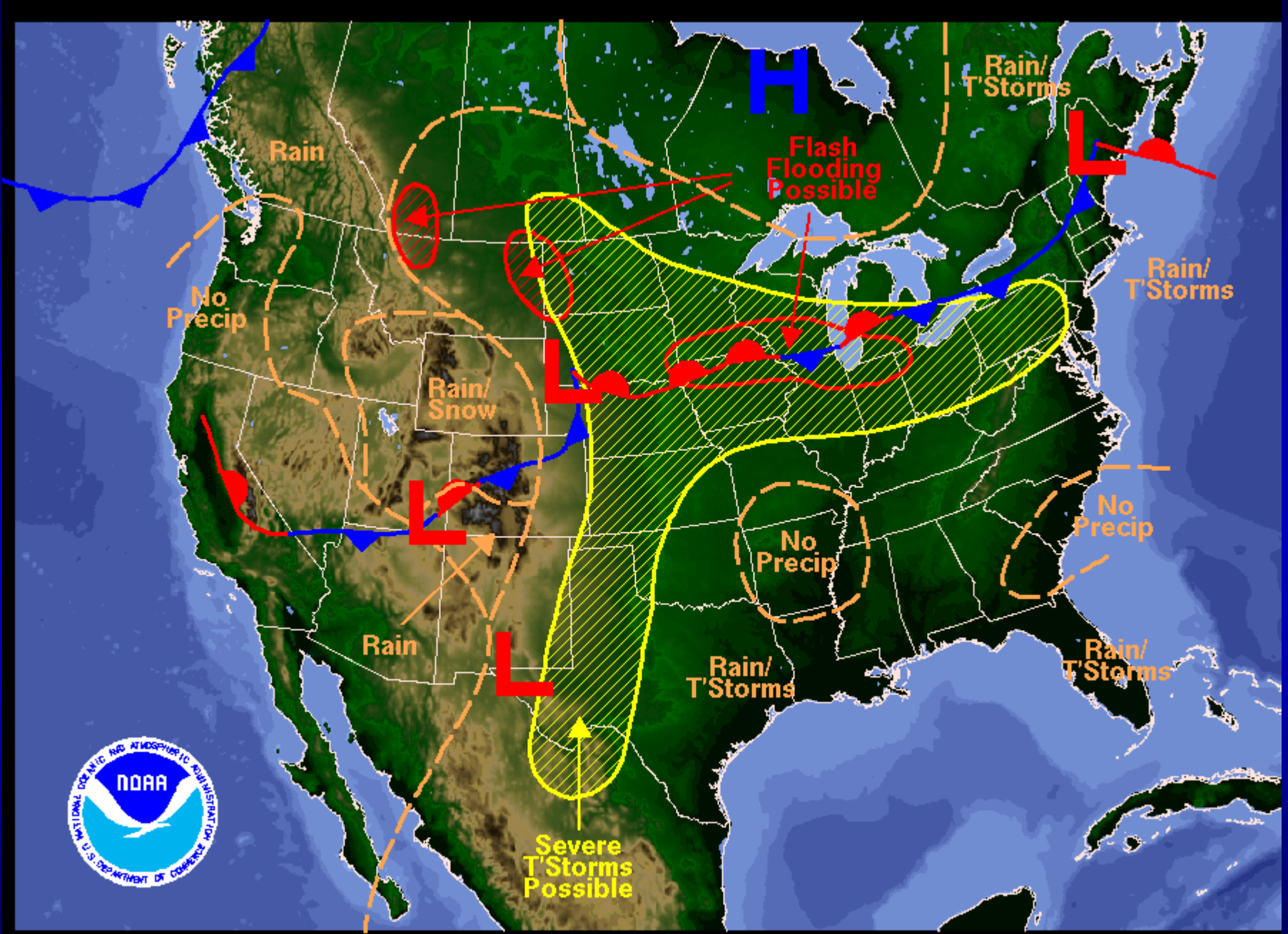
Short term Weather

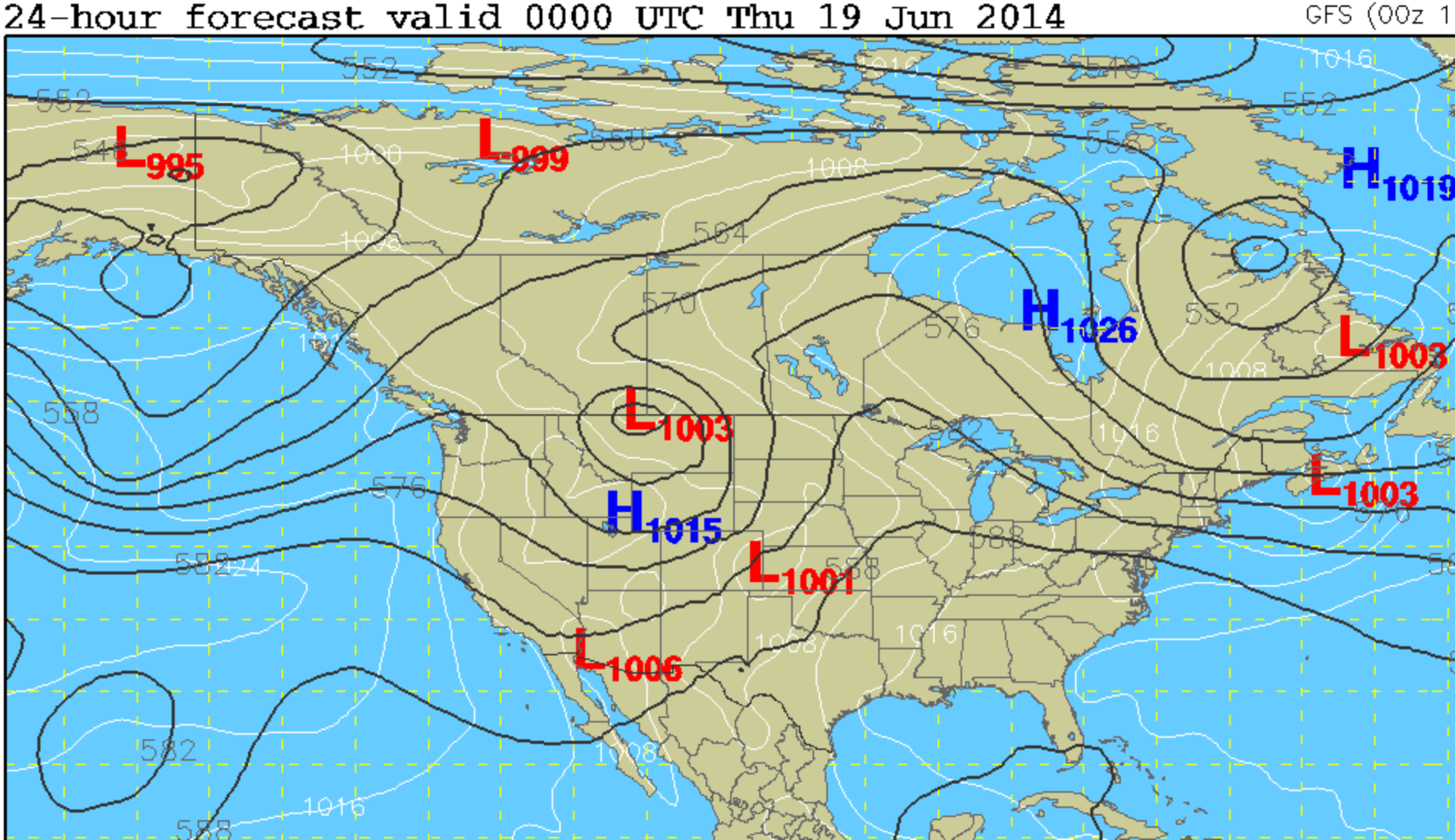
Presentation to:
Water Availability Task Force Meeting
June 18, 2014
Treste Huse, National Weather Service

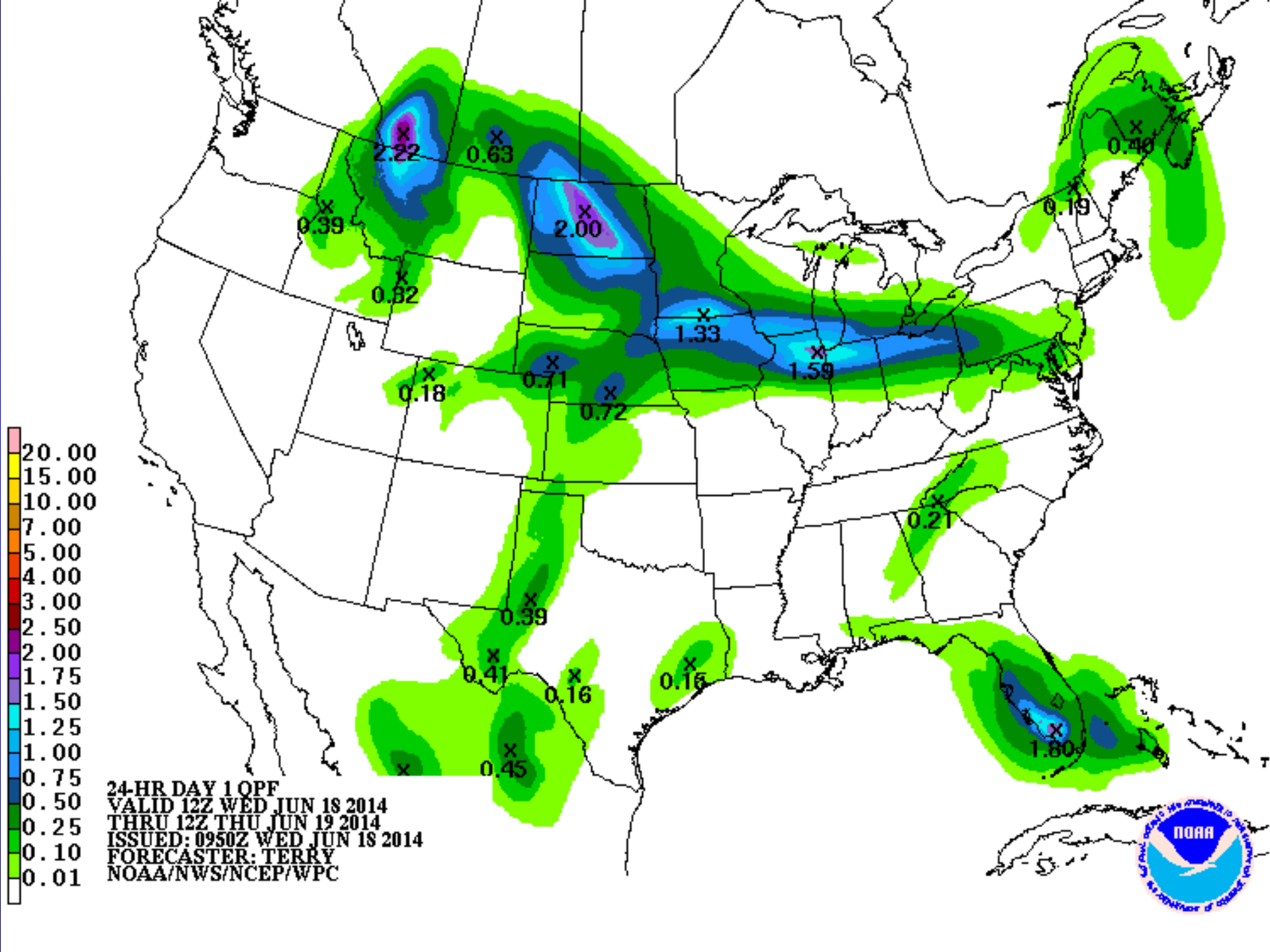




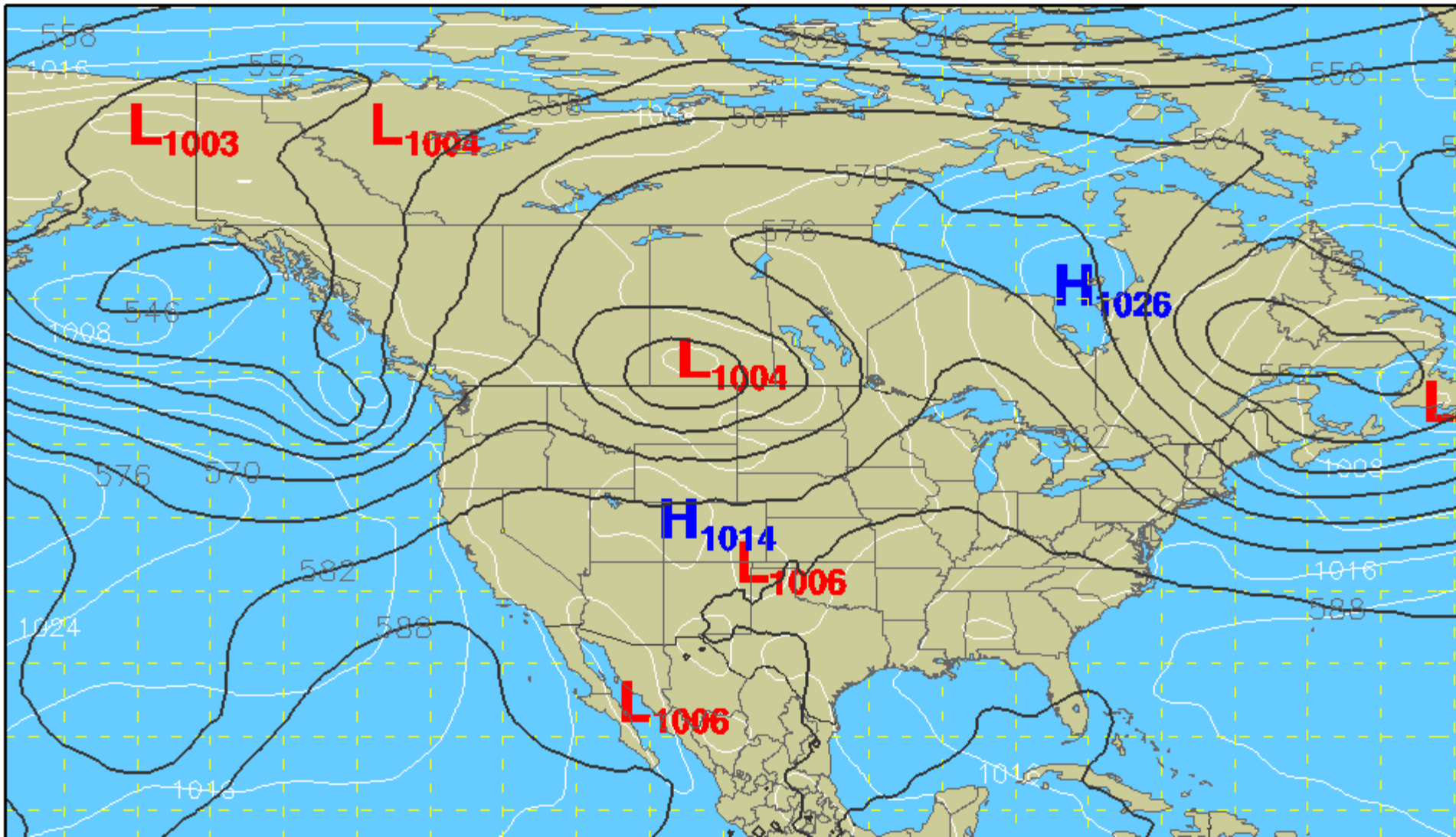
Weather Forecast for Wed, Jun 18, 2014, issued 3:00 AM EDT
DOC/NOAA/NWS/NCEP/Weather Prediction Center
Prepared by Mcreynolds based on WPC, SPC and NHC forecasts

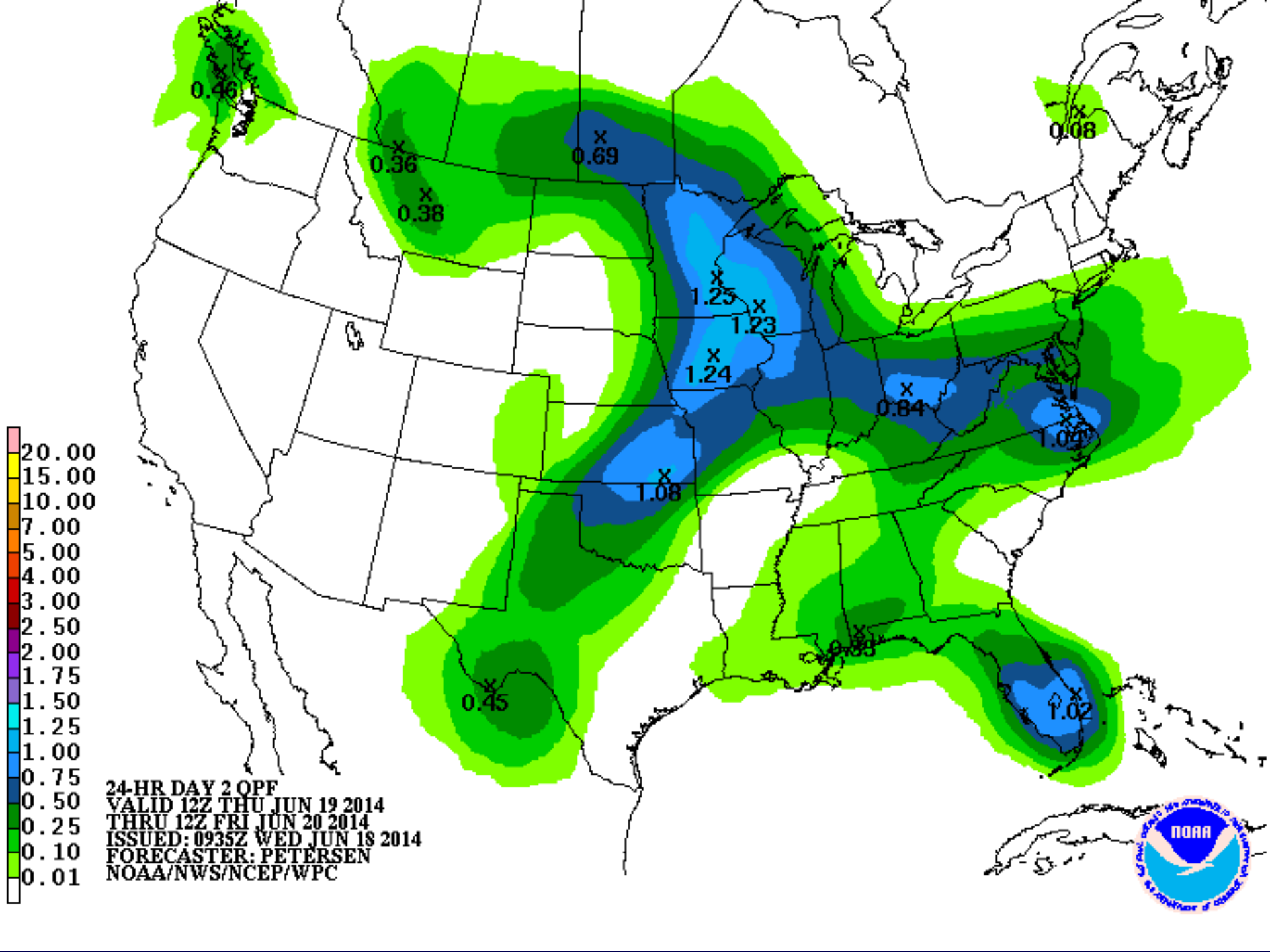
MSLP (mb) / 500 mb Heights (dm)



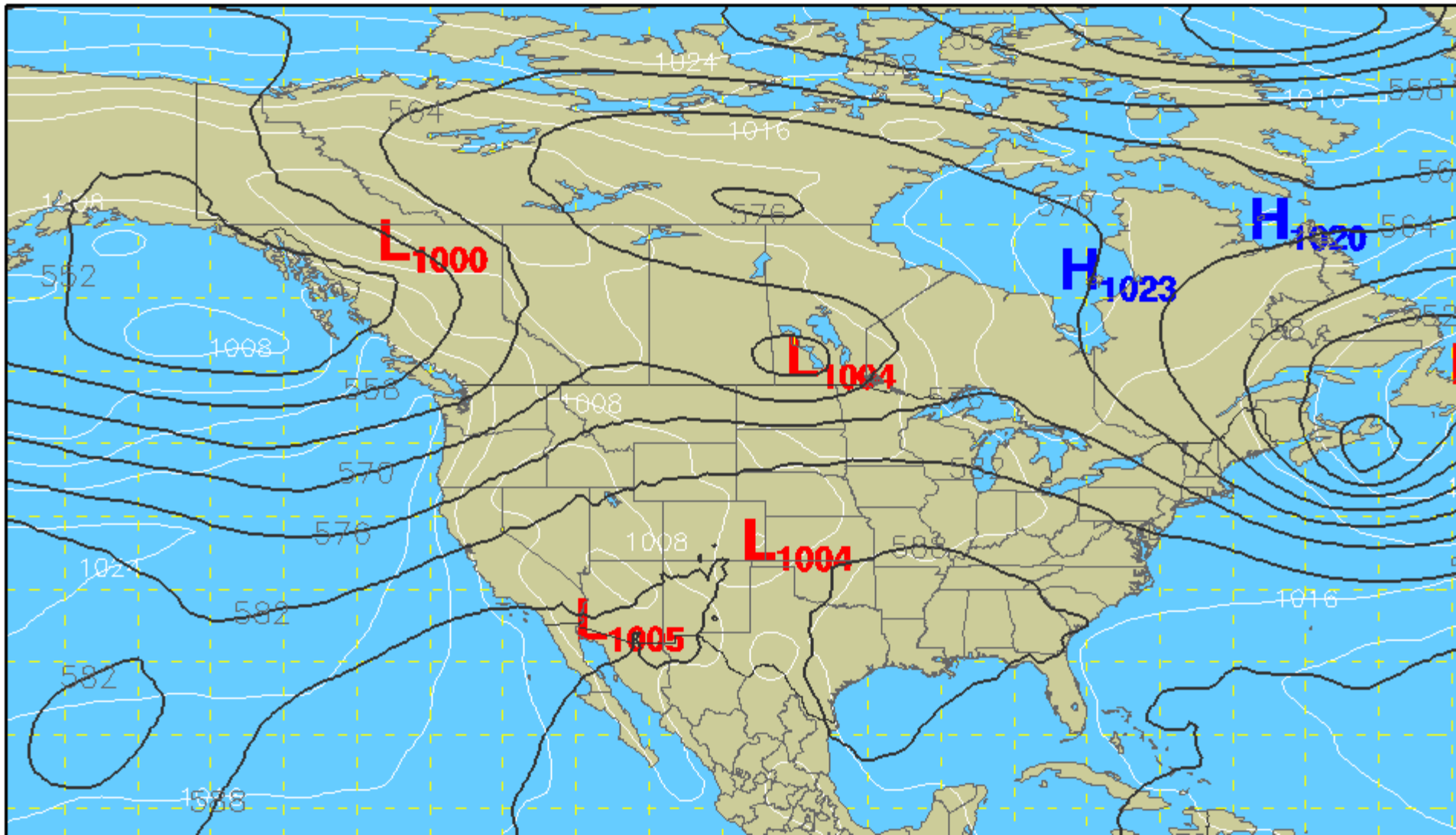

20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
2.22
0.63
0.39
2.00
0.32
1.33
1.59
0.18
0.71
0.72
0.40
0.19
0.21
0.39
0.41
0.16
0.16
0.45
1.80
24-HR DAY 1 QPF
VALID 12Z WED JUN 18 2014
THRU 12Z THU JUN 19 2014
ISSUED: 0950Z WED JUN 18 2014
FORECASTER: TERRY
NOAA/NWS/NCEP/WPC
NOAA

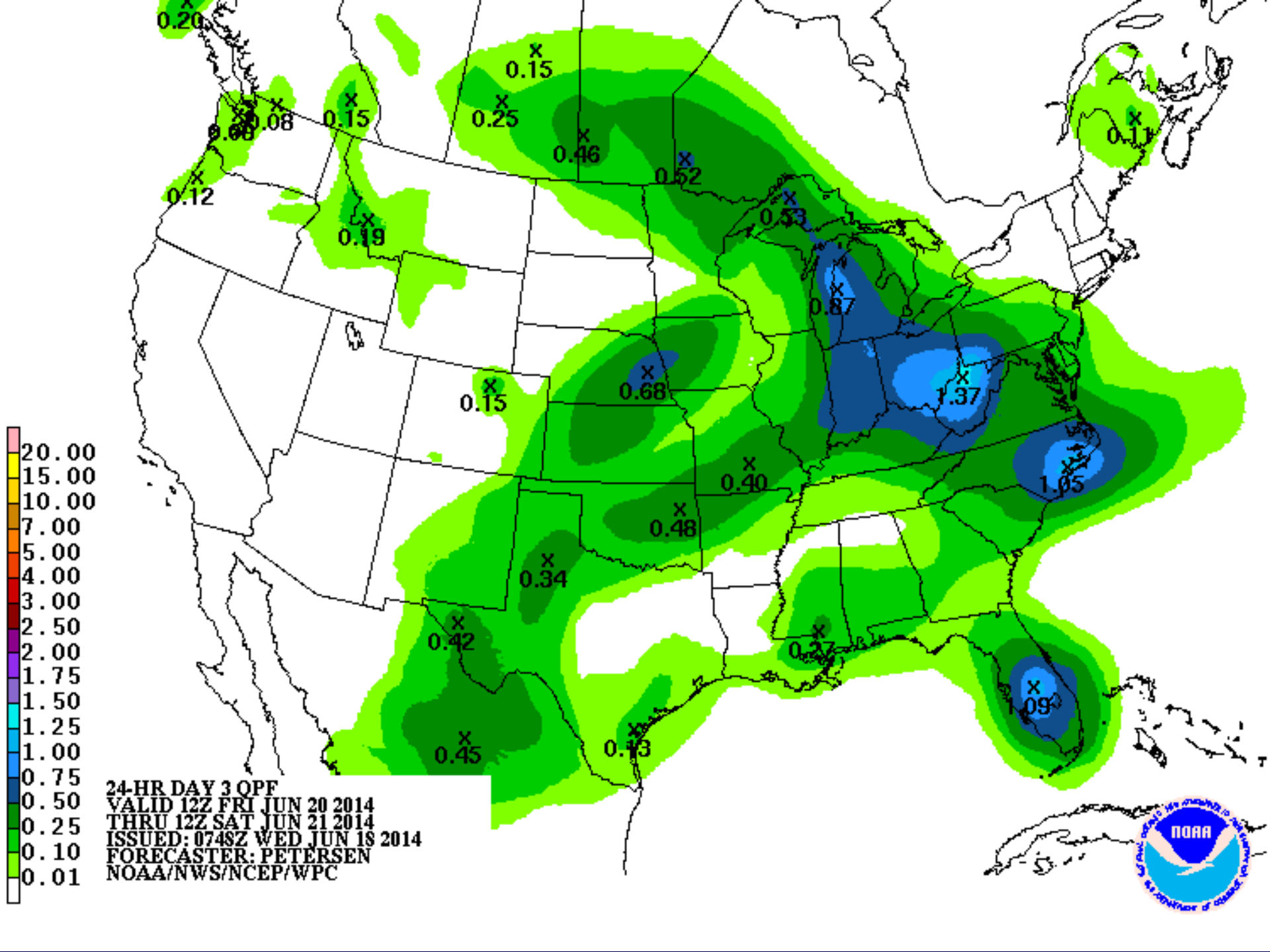
MSLP (mb) / 500 mb Heights (dm)



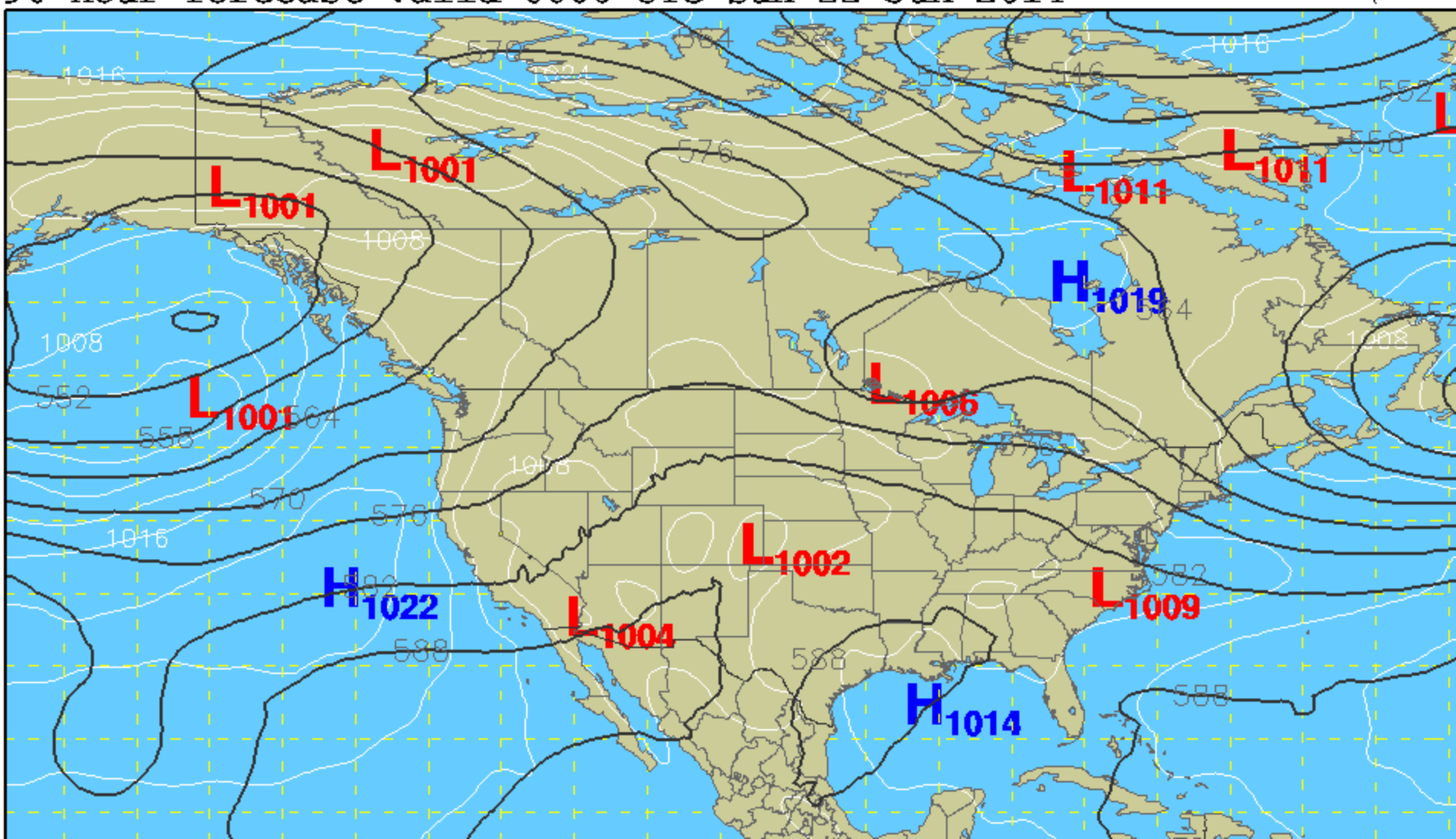

0.46
0.36
0.38
0.69
0.08
1.25
1.23
1.24
0.84
1.04
1.08
0.45
1.02
20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
24-HR DAY 2 QPF
VALID 12Z THU JUN 19 2014
THRU 12Z FRI JUN 20 2014
ISSUED: 0935Z WED JUN 18 2014
FORECASTER: PETERSEN
NOAA/NWS/NCEP/WPC
NOAA

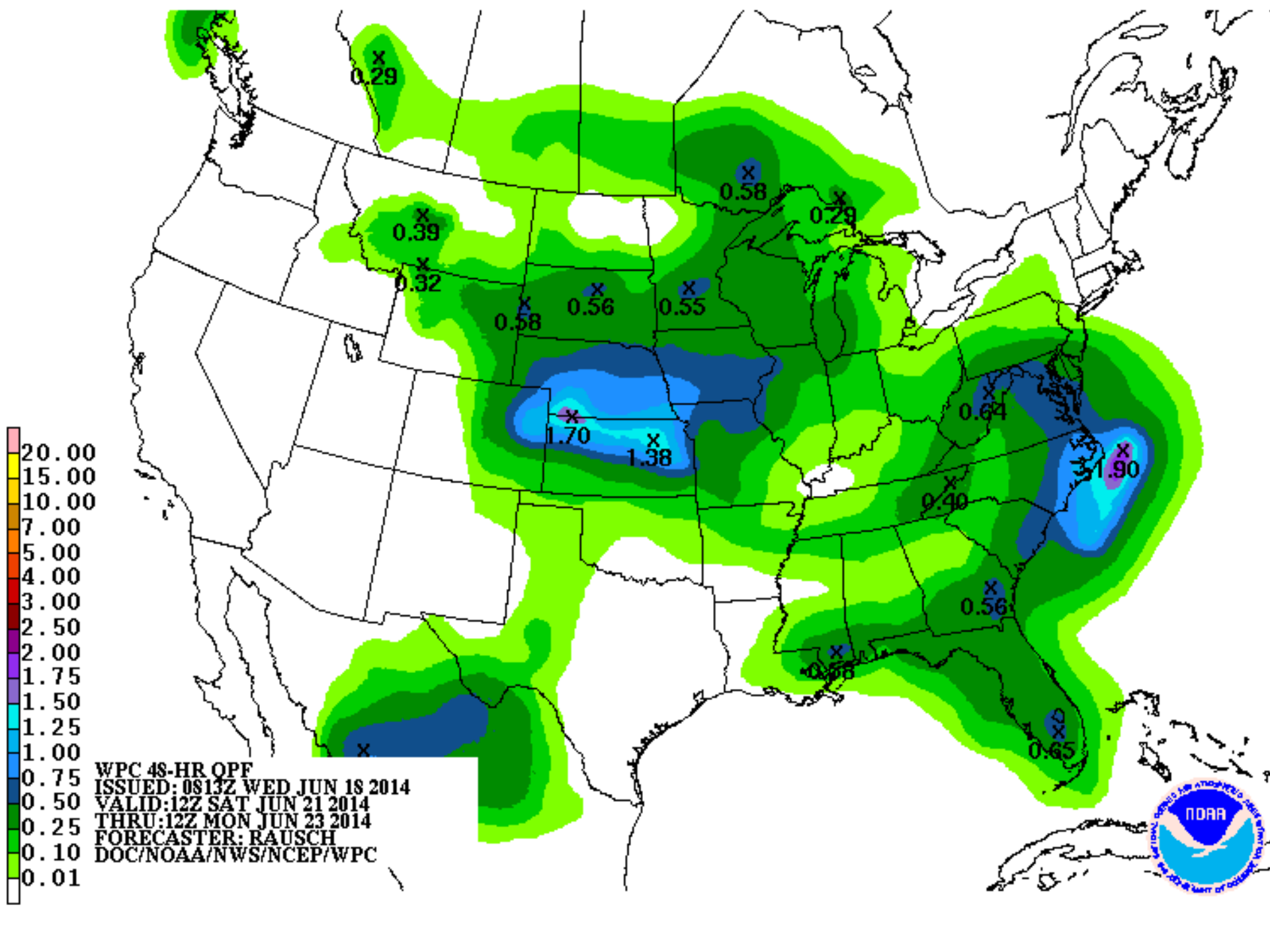
MSLP (mb) / 500 mb Heights (dm)



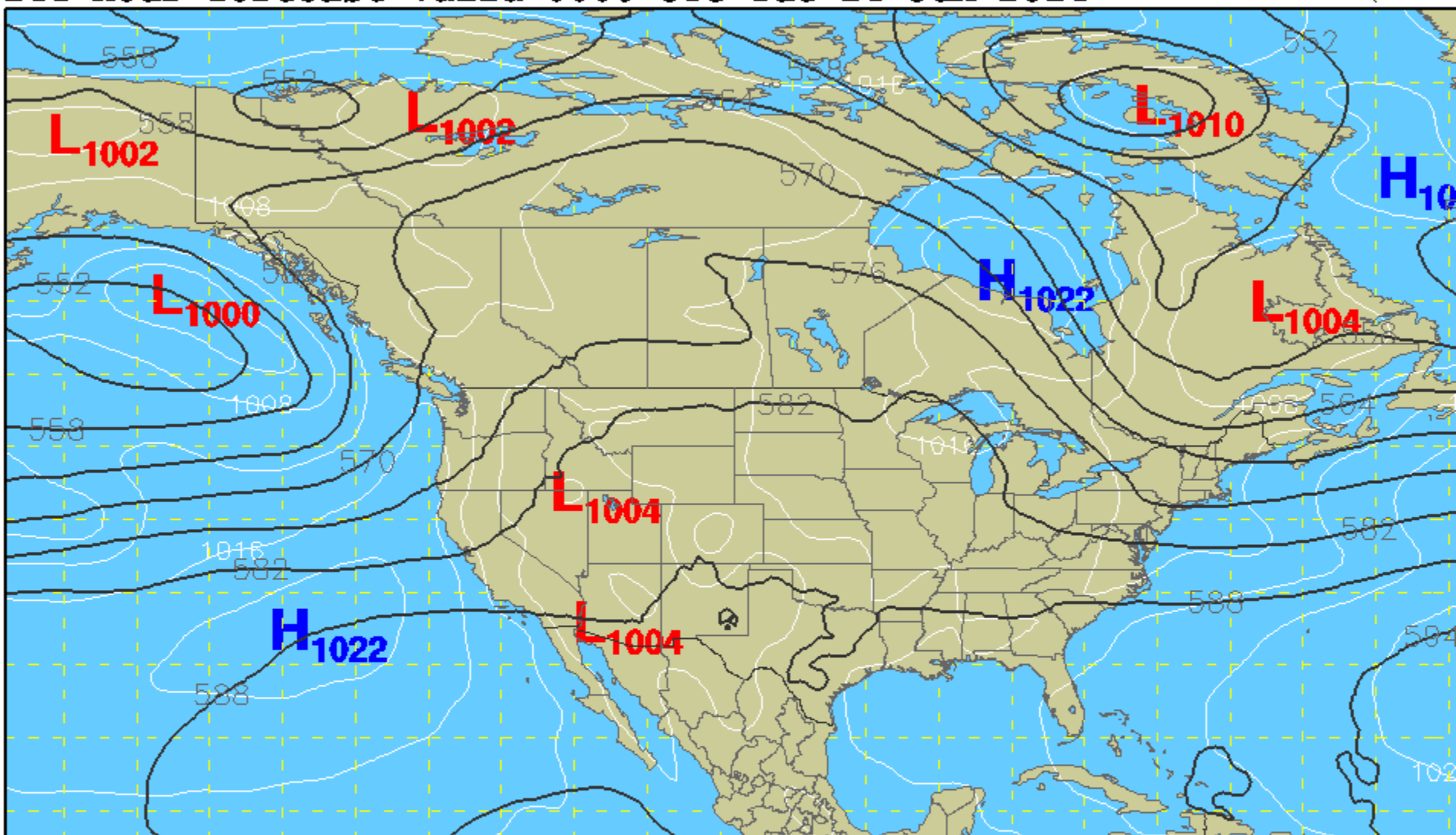

0.20
0.15
0.08
0.15
0.25
0.46
0.52
0.11
0.12
0.19
0.53
0.87
0.15
0.68
1.37
0.40
1.05
0.48
0.34
0.42
0.27
1.09
0.45
0.13
20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
24-HR DAY 3 QPF
VALID 12Z FRI JUN 20 2014
THRU 12Z SAT JUN 21 2014
ISSUED: 0748Z WED JUN 18 2014
FORECASTER: PETERSEN
NOAA/NWS/NCEP/WPC
NOAA

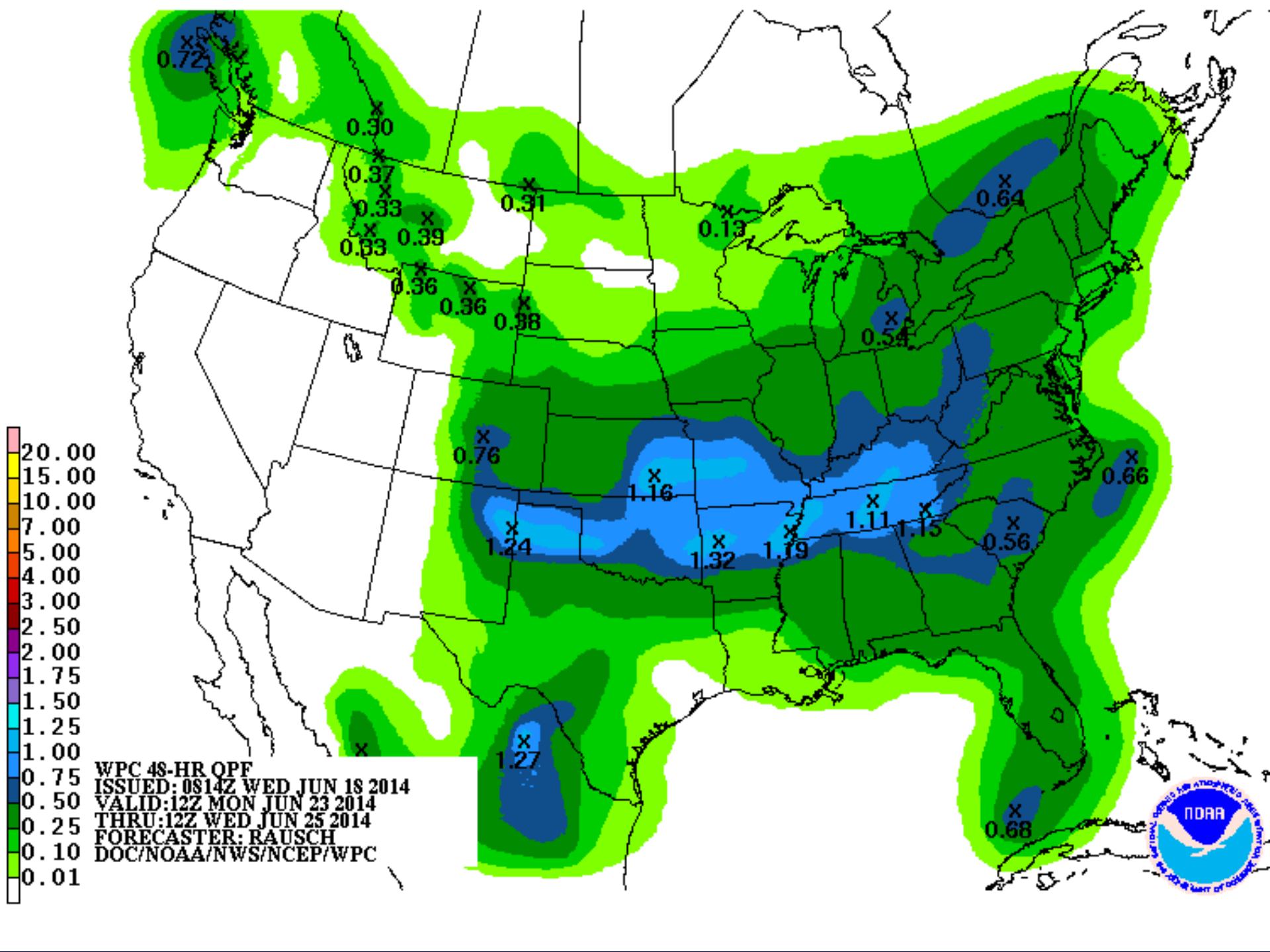
MSLP (mb) / 500 mb Heights (dm)

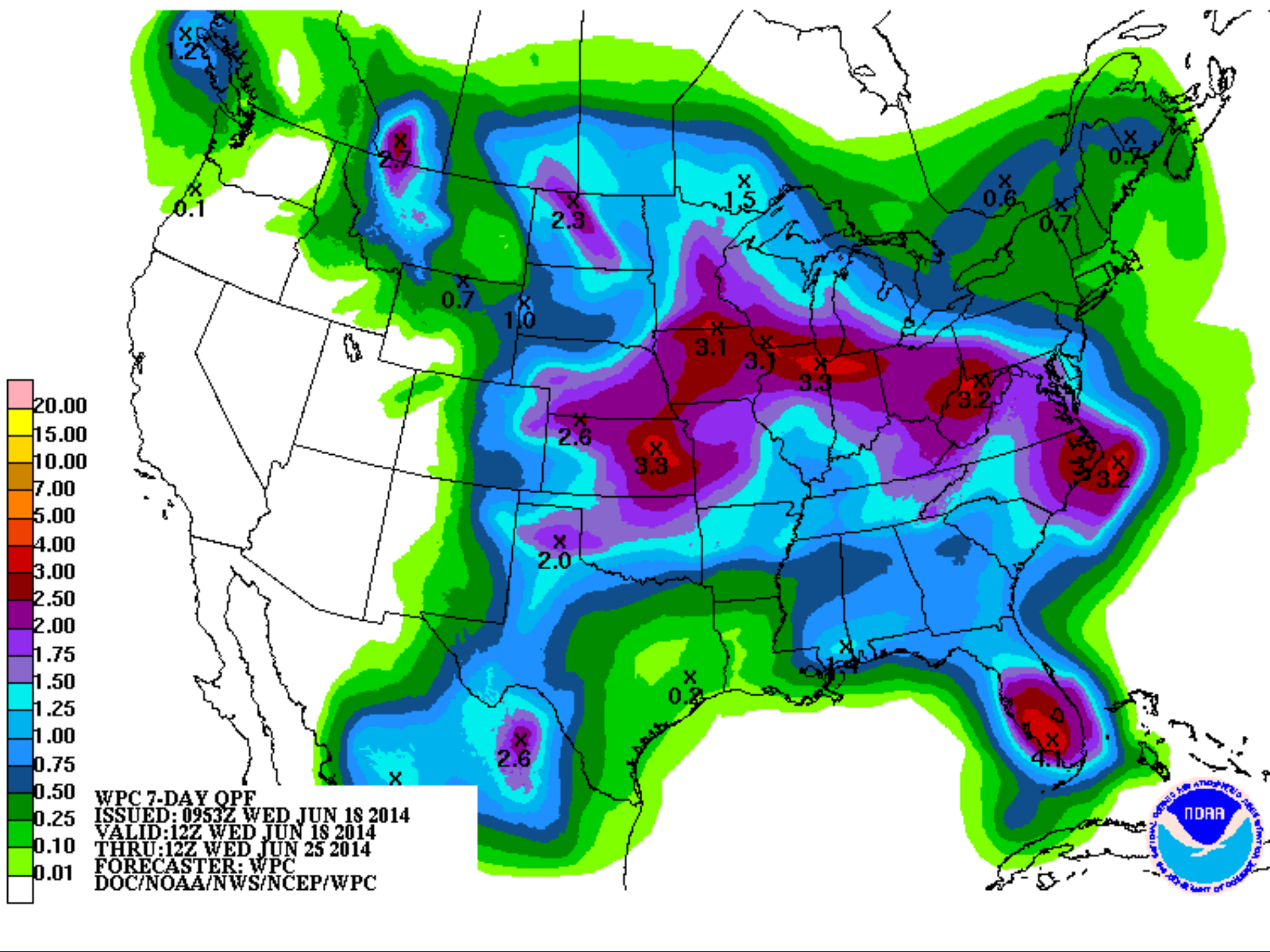


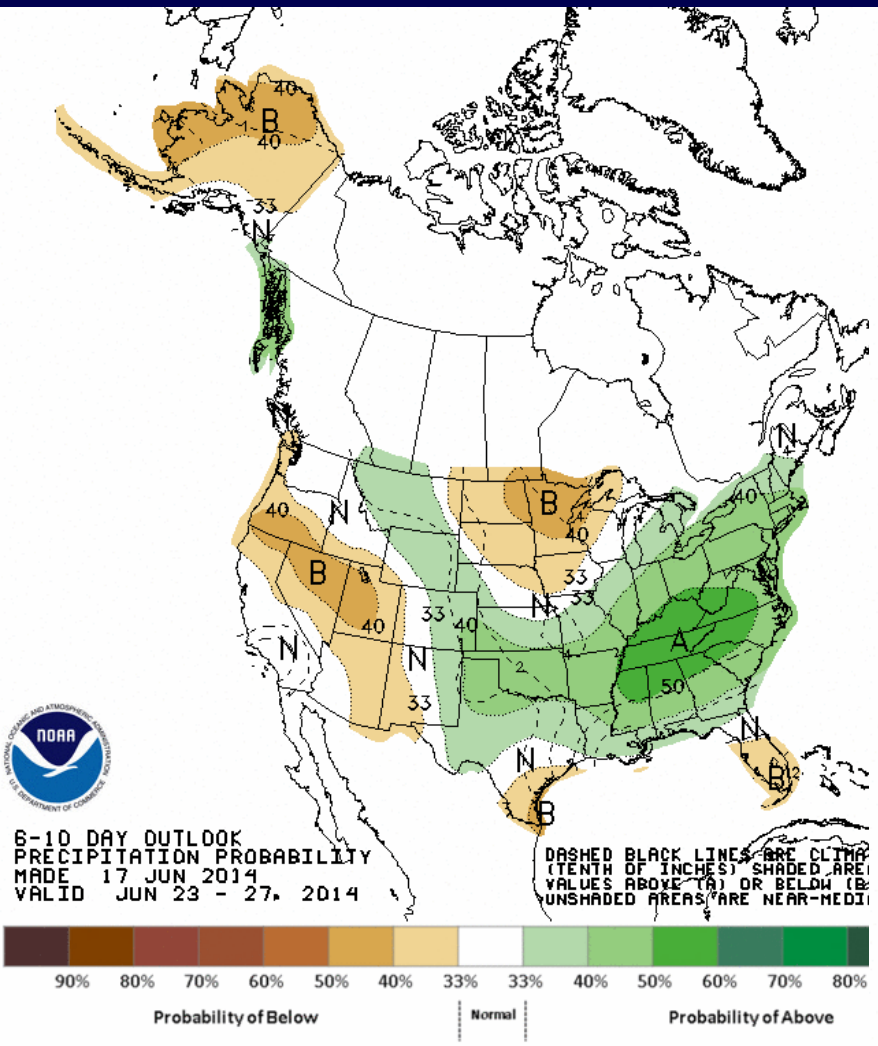

0.29
0.58
0.29
0.39
0.32
0.56
0.55
0.58
0.64
1.70
1.38
1.90
0.90
0.56
0.65
20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
WPC 48-HR QPF
ISSUED: 0813Z WED JUN 18 2014
VALID:12Z SAT JUN 21 2014
THRU:12Z MON JUN 23 2014
FORECASTER: RAUSCH
DOC/NOAA/NWS/NCEP/WPC
NOAA

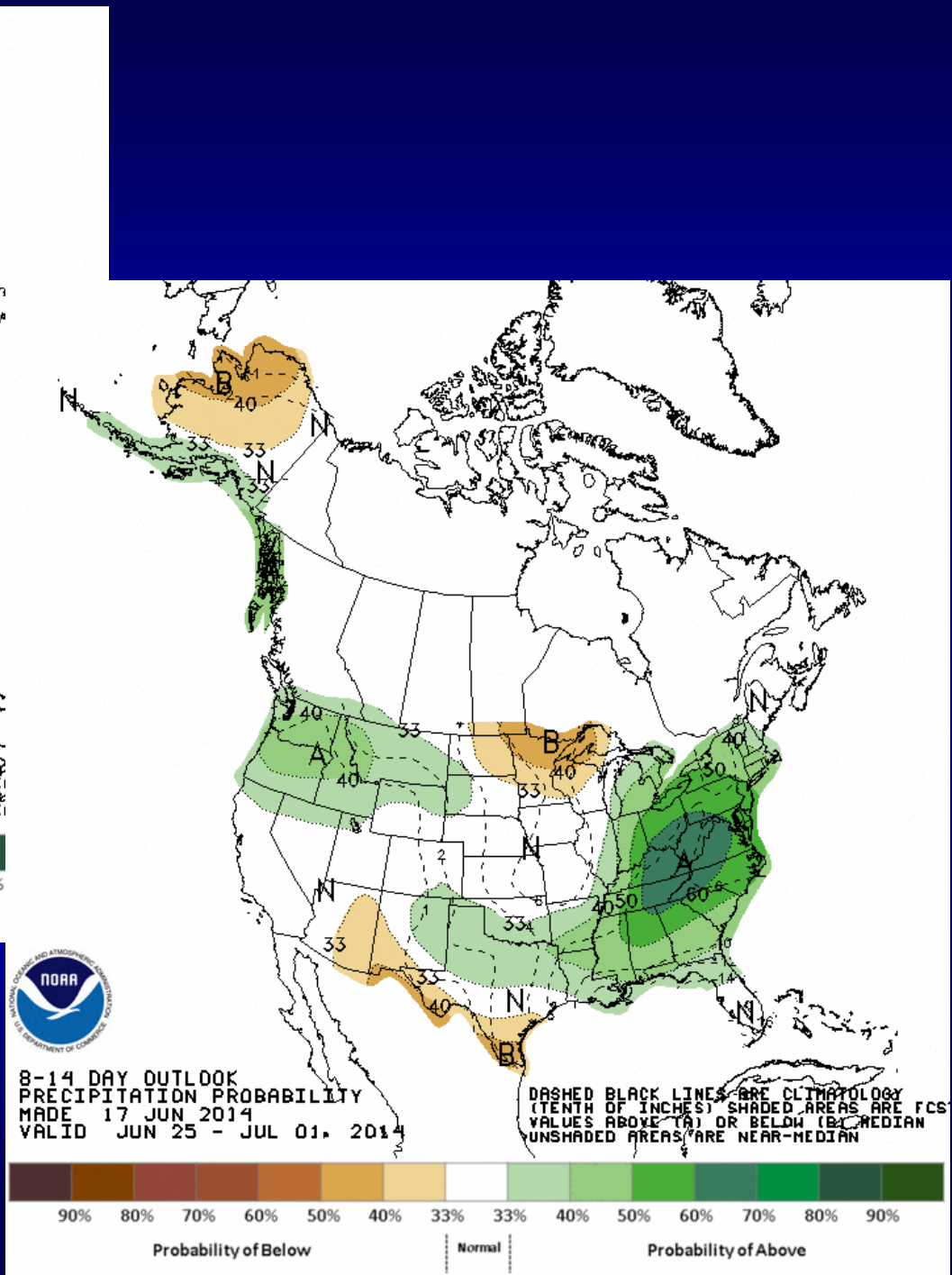
MSLP (mb) / 500 mb Heights (dm)

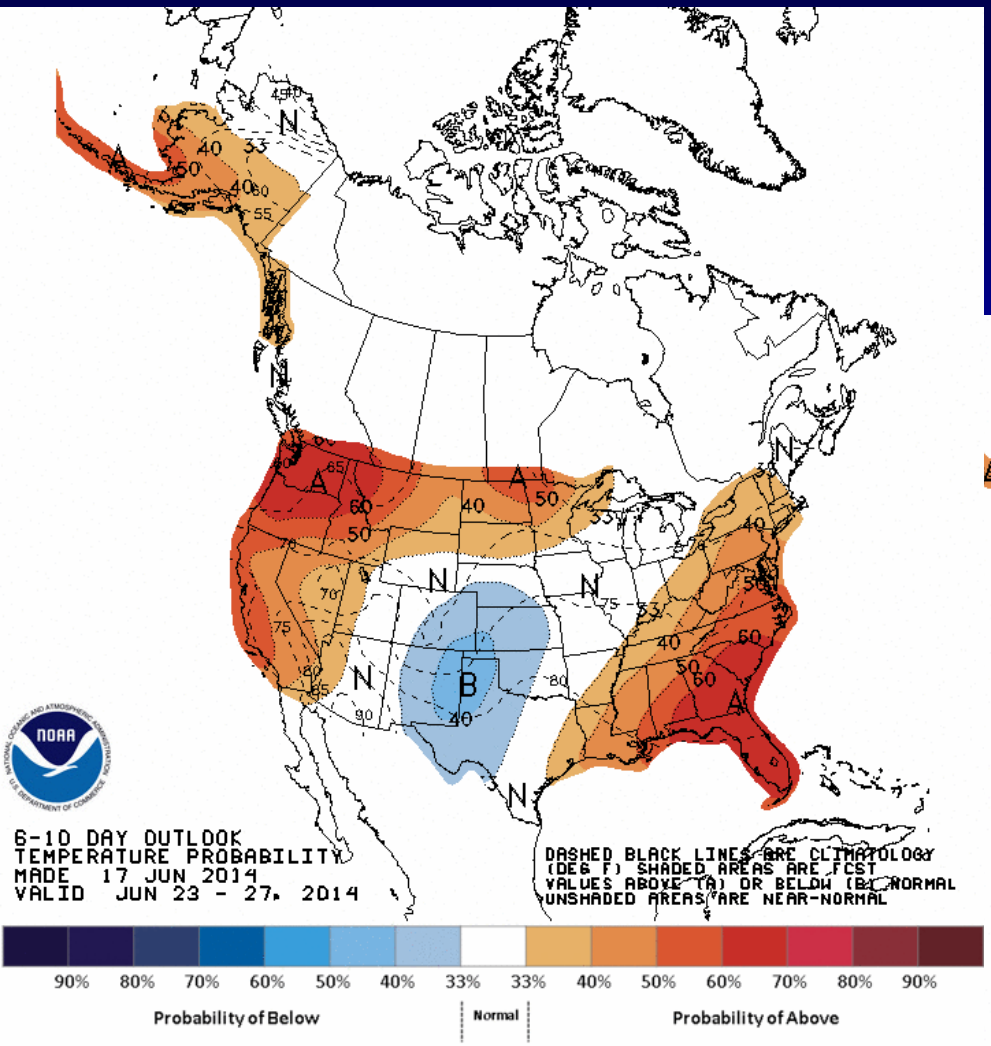


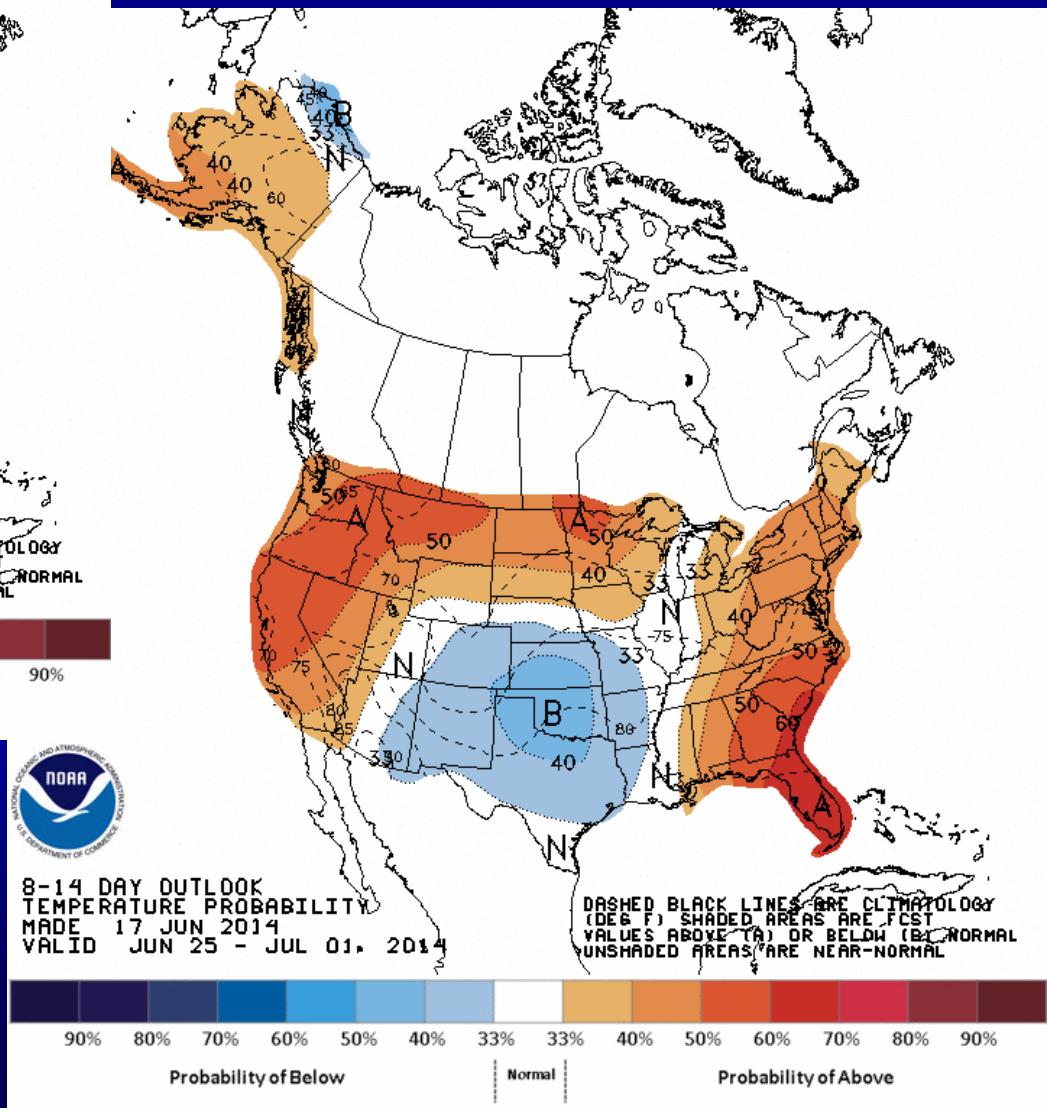

0.72
0.30
0.37
0.33
0.39
0.33
0.36
0.36
0.38
0.31
0.13
0.64
0.54
0.76
1.16
1.24
1.32
1.19
1.11
1.15
0.56
0.66
1.27
0.68
20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
WPC 48-HR QPF
ISSUED: 0814Z WED JUN 18 2014
VALID:12Z MON JUN 23 2014
THRU:12Z WED JUN 25 2014
FORECASTER: RAUSCH
DOC/NOAA/NWS/NCEP/WPC
NOAA


20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01
WPC 7-DAY QPF
ISSUED: 0953Z WED JUN 18 2014
VALID:12Z WED JUN 18 2014
THRU:12Z WED JUN 25 2014
FORECASTER: WPC
DOC/NOAA/NWS/NCEP/WPC
1.2
0.1
2.7
2.3
0.7
1.0
1.5
0.6
0.7
0.7
3.1
3.1
3.3
3.2
2.6
3.3
3.2
2.0
0.2
2.6
4.1
NOAA


6-10 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 17 JUN 2014
VALID JUN 23 - 27, 2014
DASHED BLACK LINES ARE CLIMA
(TENTH OF INCHES) SHADED ARE
VALUES ABOVE (A) OR BELOW (B
UNSHADED AREAS ARE NEAR-MEDI
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80%
Probability of Below
Normal
Probability of Above


8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 17 JUN 2014
VALID JUN 25 - JUL 01, 2014
DASHED BLACK LINES ARE CLIMATOLOGY
(TENTH OF INCHES) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) MEDIAN
UNSHADED AREAS ARE NEAR-MEDIAN
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above


6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 17 JUN 2014
VALID JUN 23 - 27, 2014
DASHED BLACK LINES ARE CLIMATOLOGY (DEG F) SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL UNSHADED AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above


8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 17 JUN 2014
VALID JUN 25 - JUL 01, 2014
DASHED BLACK LINES ARE CLIMATOLOGY (DEG F) SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL UNSHADED AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above

Historical El Niño and La Niña Episodes Based on the ONI computed using ERSST.v3b

Recent Pacific warm (red) and cold (blue) episodes based on a threshold of +/- 0.5 °C for the Oceanic Nino Index (ONI) [3 month running mean of ERSST.v3b SST anomalies in the Nino 3.4 region (5N-5S, 120-170W)]. For historical purposes El Niño and La Niña episodes are defined when the threshold is met for a minimum of 5 consecutive over-lapping seasons.

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2002	-0.2	0.0	0.1	0.3	0.5	0.7	0.8	0.8	0.9	1.2	1.3	1.3
2003	1.1	0.8	0.4	0.0	-0.2	-0.1	0.2	0.4	0.4	0.4	0.4	0.3
2004	0.3	0.2	0.1	0.1	0.2	0.3	0.5	0.7	0.8	0.7	0.7	0.7
2005	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.0	-0.2	-0.5	-0.8
2006	-0.9	-0.7	-0.5	-0.3	0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.0
2007	0.7	0.3	-0.1	-0.2	-0.3	-0.3	-0.4	-0.6	-0.8	-1.1	-1.2	-1.4
2008	-1.5	-1.5	-1.2	-0.9	-0.7	-0.5	-0.3	-0.2	-0.1	-0.2	-0.5	-0.7
2009	-0.8	-0.7	-0.5	-0.2	0.2	0.4	0.5	0.6	0.8	1.1	1.4	1.6
2010	1.6	1.3	1.0	0.6	0.1	-0.4	-0.9	-1.2	-1.4	-1.5	-1.5	-1.5
2011	-1.4	-1.2	-0.9	-0.6	-0.3	-0.2	-0.2	-0.4	-0.6	-0.8	-1.0	-1.0
2012	-0.9	-0.6	-0.5	-0.3	-0.2	0.0	0.1	0.4	0.5	0.6	0.2	-0.3
2013	-0.6	-0.6	-0.4	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.2	-0.3	-0.4
2014	-0.6	-0.6	-0.5	-0.2								

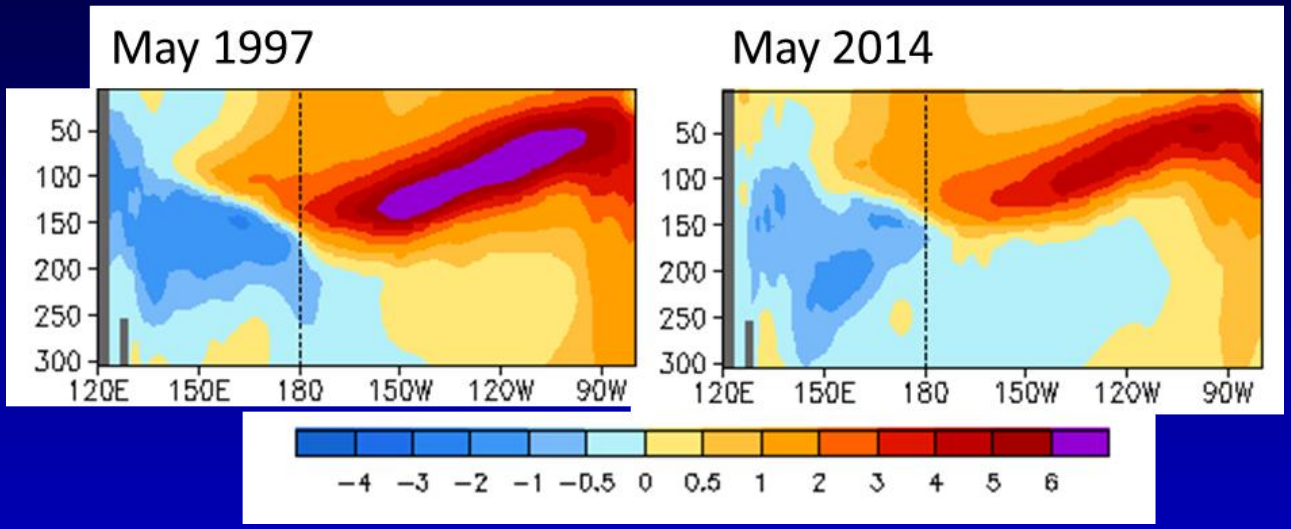
Recently, there's been a lot of speculation about how strong this El Niño will be, especially considering the strong westerly wind bursts in late winter, and the large subsurface temperatures in early spring of this year.

The subsurface temperatures in March, which was a record for the month going back to 1979, inspired comparisons to the early stages of the 1997/98 El Niño, the largest on record (ONI maximum of 2.4). That event also developed in the spring, like this one.

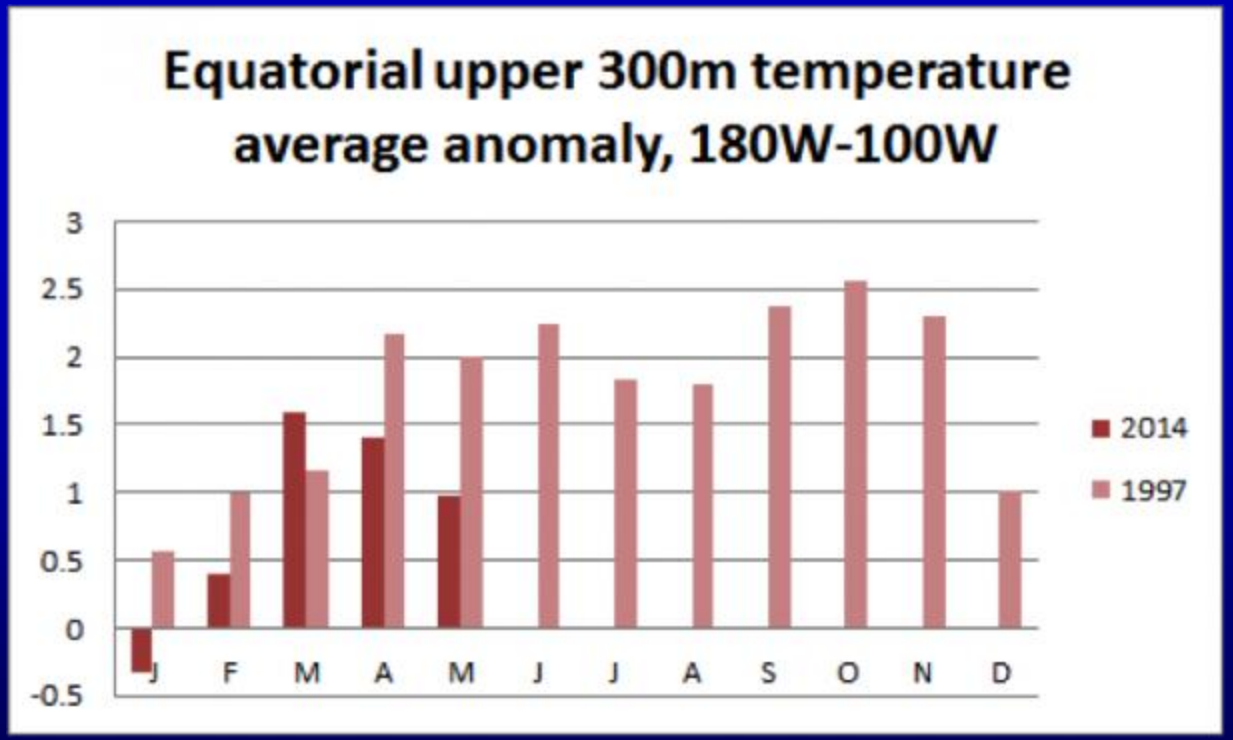
However, right now, forecasters are not favoring a strong event (while not at all ruling it out) and believe a moderate event (ONI 1.0 - 1.5) is slightly more likely, sometime during the fall/winter.

First, the subsurface temperatures have tapered off a bit recently. While still substantially above normal, the average of the upper-ocean (300m to surface) temperatures in the tropical Pacific has decreased over the past two months.

from Climate.gov June 6th



Subsurface temperature (degrees C) cross-sections from May 1997 (left) and 2014 (right). The figures are showing the average of several different subsurface temperature datasets. Maps based on data from the Real Time Multiple Ocean Reanalysis Intercomparison website.

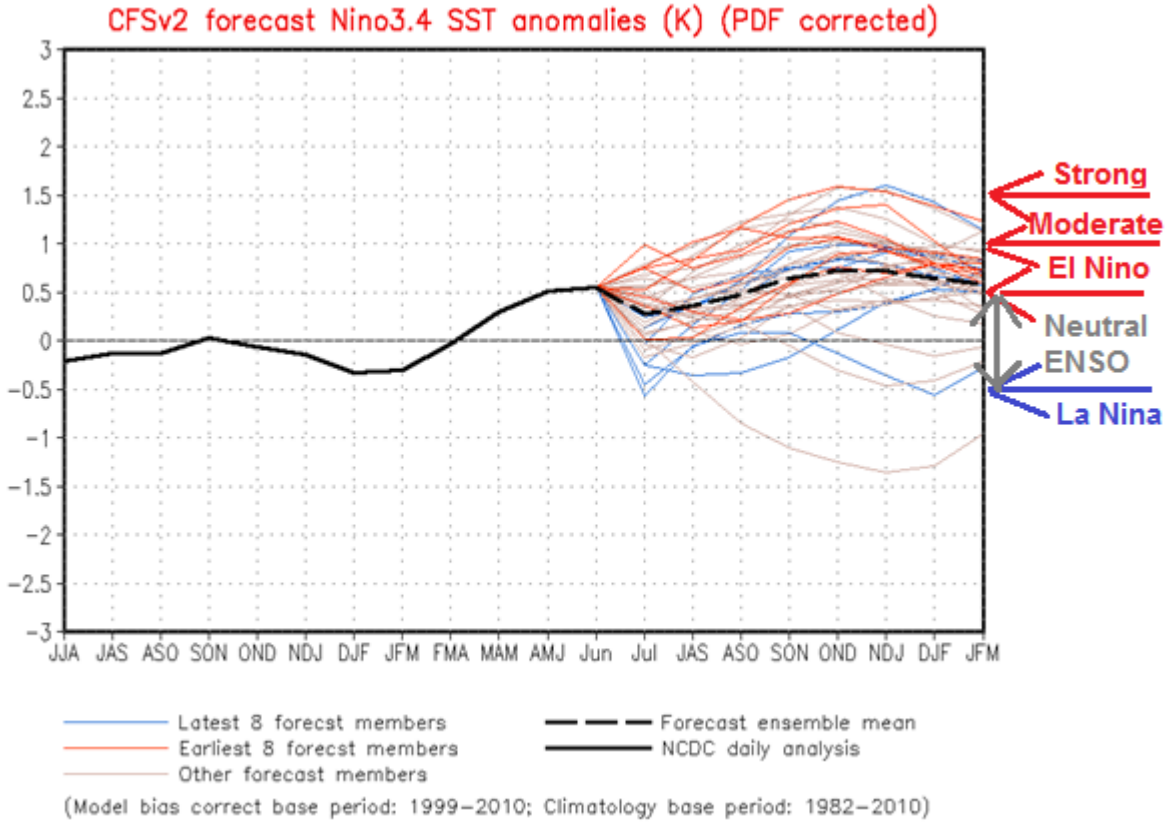


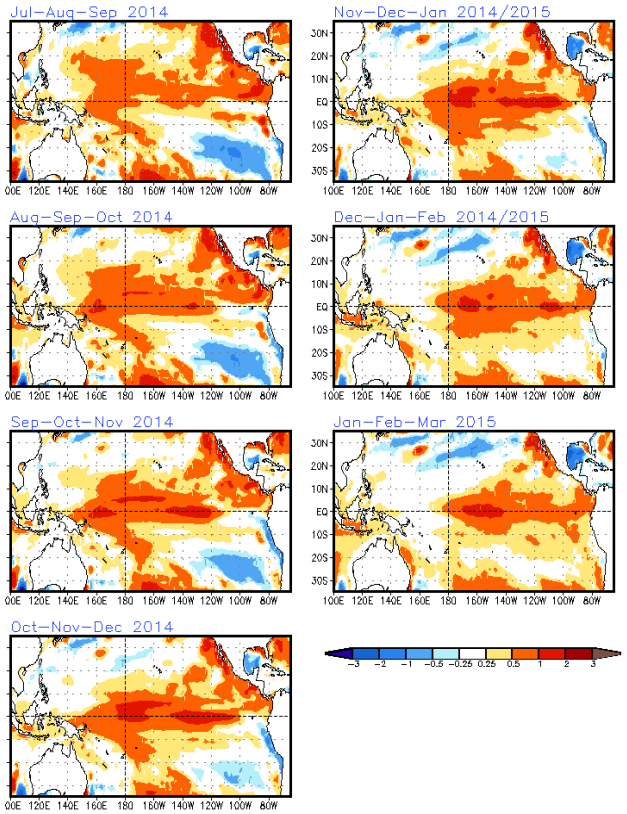
from Climate.gov June 6th

SST Outlook: NCEP CFS.v2 Forecast (PDF corrected)

Issued: 16 June 2014

The CFS.v2 ensemble mean (black dashed line) predicts El Niño starting in the late Northern Hemisphere summer/early fall.





Sea surface temperatures (SST) are above-average across the equatorial Pacific Ocean.

CPC/IRI Probabilistic ENSO Outlook

Updated: 5 June 2014

The chance of El Niño is 70% during the Northern Hemisphere this summer and reaches 80% during the fall and winter.