

# ENSO Update

## Eastern Region

Michelle L'Heureux  
Climate Prediction Center / NCEP/ NOAA  
29 November 2016

# Summary

## ENSO Alert System Status: La Niña Advisory

La Niña conditions are present.\*

Equatorial sea surface temperatures (SST) are below average in the central and east-central Pacific Ocean.

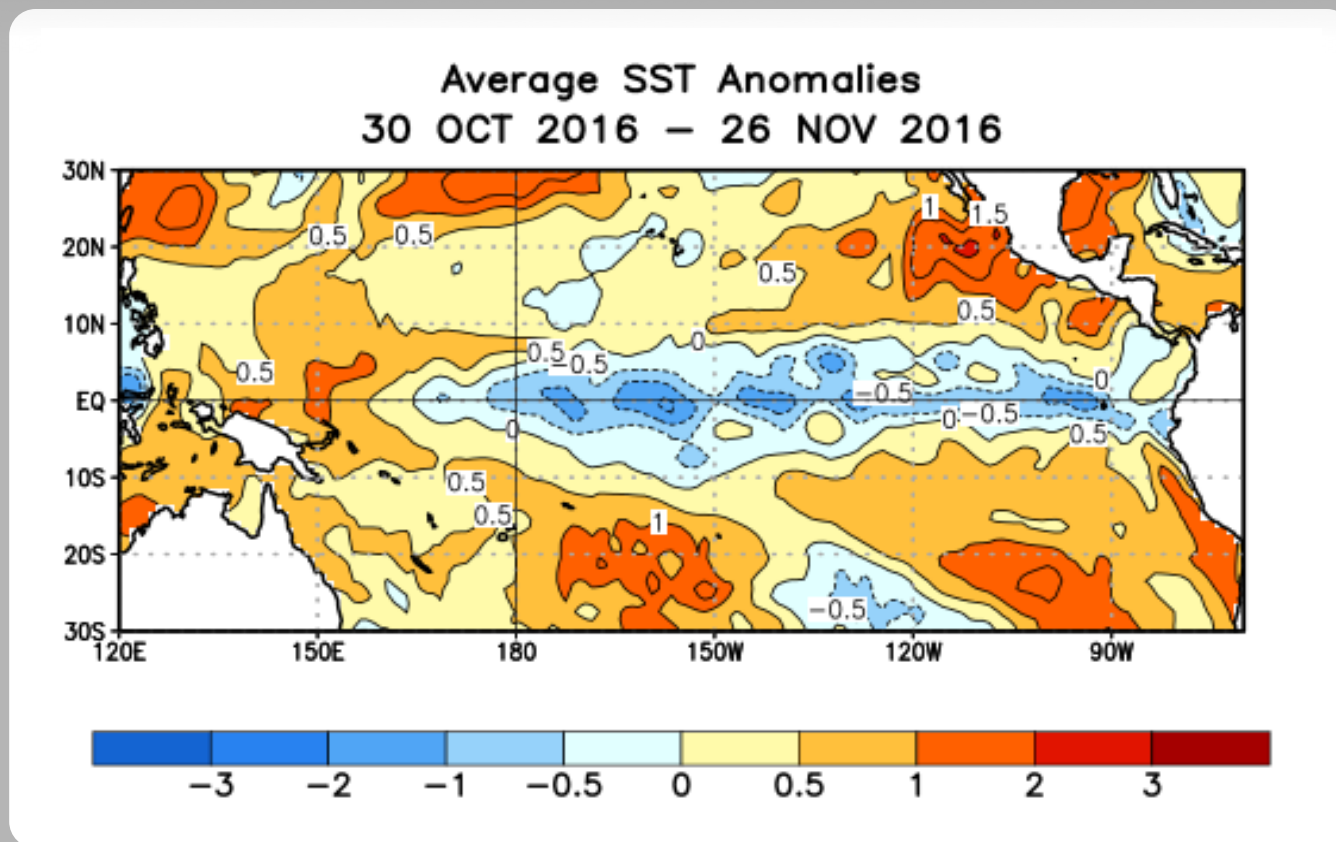
La Niña is slightly favored to persist (~55% chance) through winter 2016-17.\*

Over New England, slight tilt toward above-average temperatures, which expands as the winter progresses. Precipitation outlook is dominated by “Equal Chances” (or Climatology), but slight tilt toward above-median precipitation toward western part of region and tilt toward below-median precipitation in the southeastern portion of region (Mid-Atlantic).

**ENSO Diagnostics Discussion** [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.html](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html)

**ENSO Blog** <http://www.climate.gov/news-features/department/enso-blog>

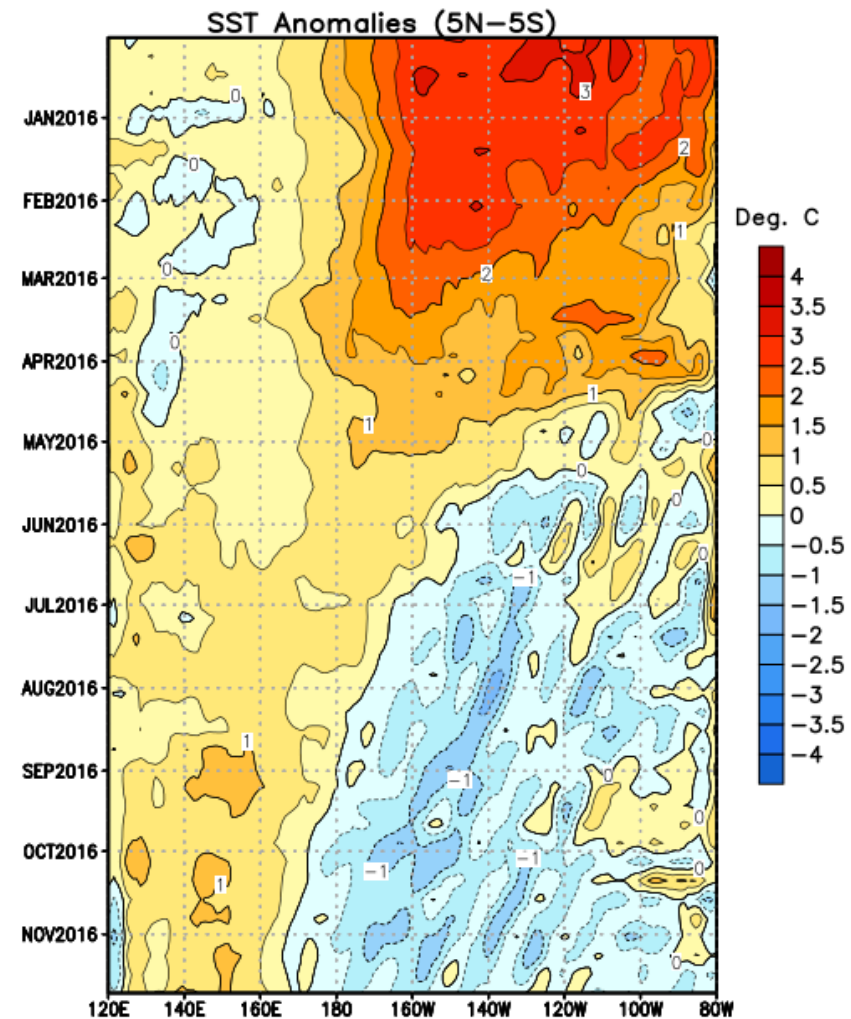
# SST Departures (°C) in the Tropical Pacific During the Last Four Weeks



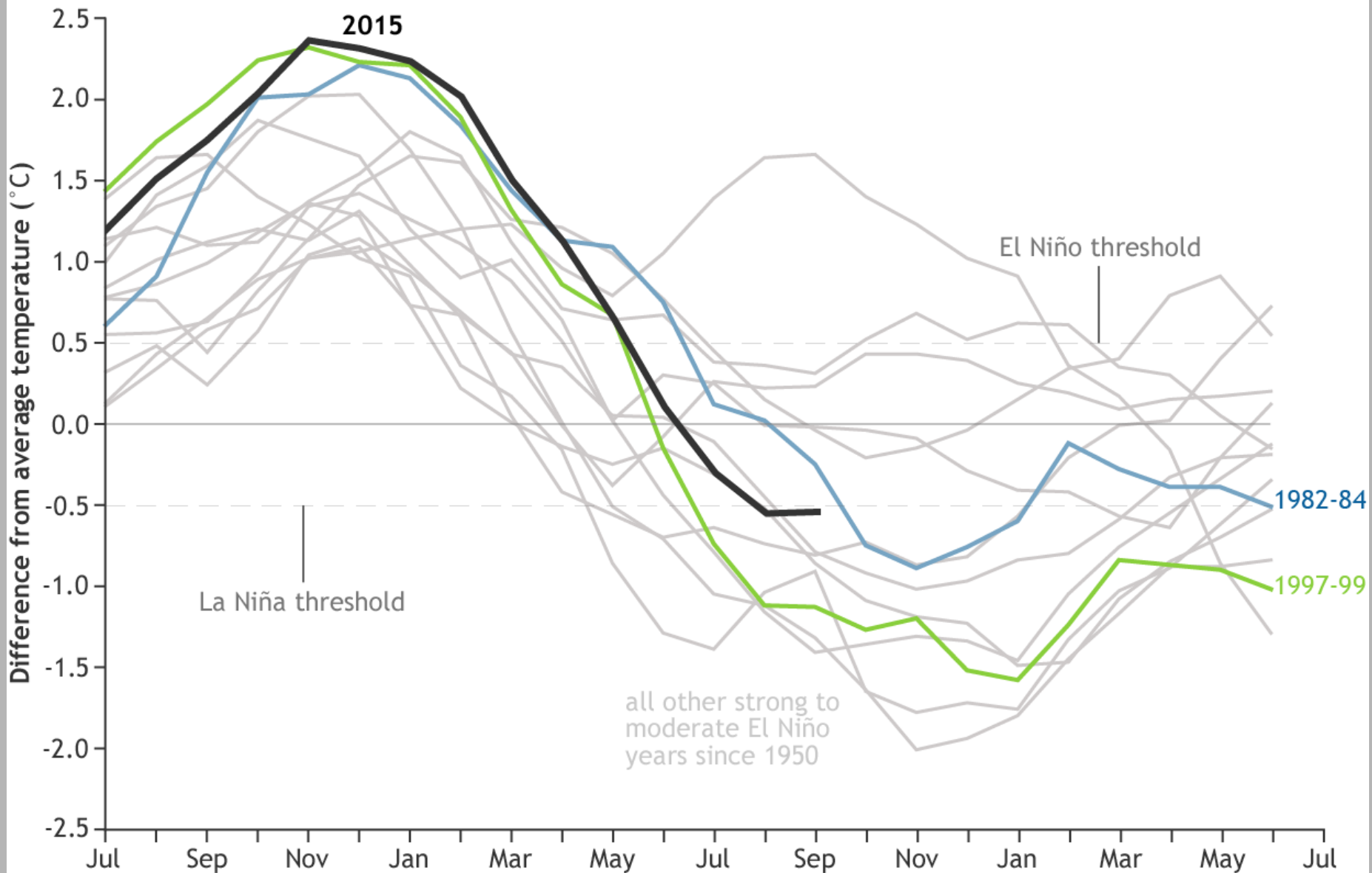
## Recent Evolution of Equatorial Pacific SST Departures (°C)

Since mid-April 2016, near-to-below average SSTs have expanded westward toward the Date Line.

Negative SST anomalies have persisted in the central and east-central Pacific, while the SST anomalies have been more variable in the eastern Pacific.

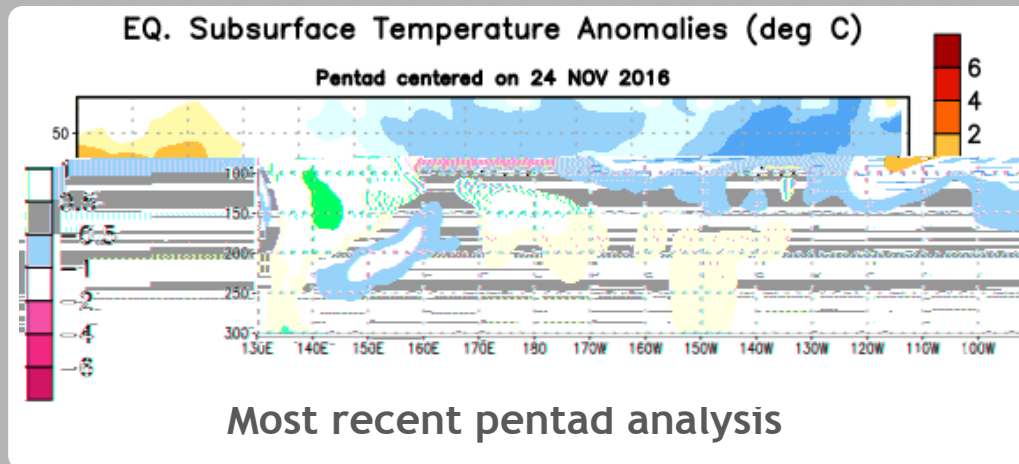


# Monthly sea surface temperature Niño 3.4 Index Values

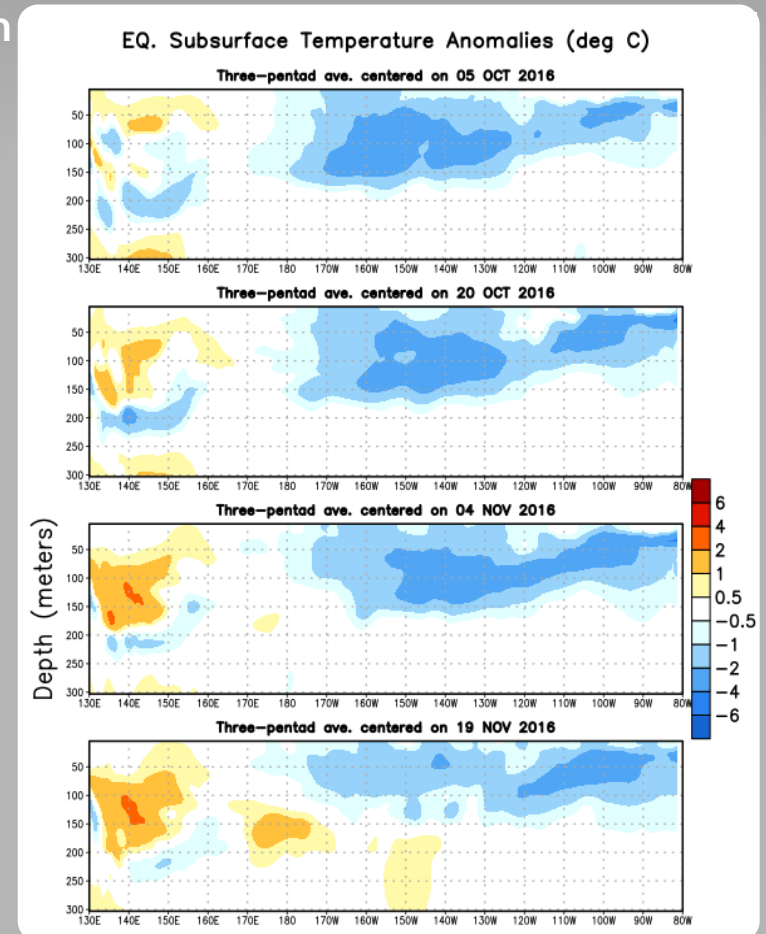


# Sub-Surface Temperature Departures in the Equatorial Pacific

During the last two months, negative subsurface temperature anomalies have extended to the surface in portions of the central and eastern Pacific Ocean.

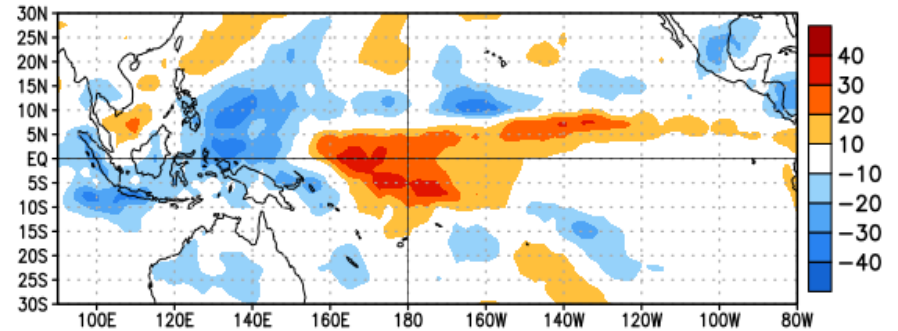


During November, the negative subsurface temperature anomalies weakened in the central and east-central Pacific Ocean.

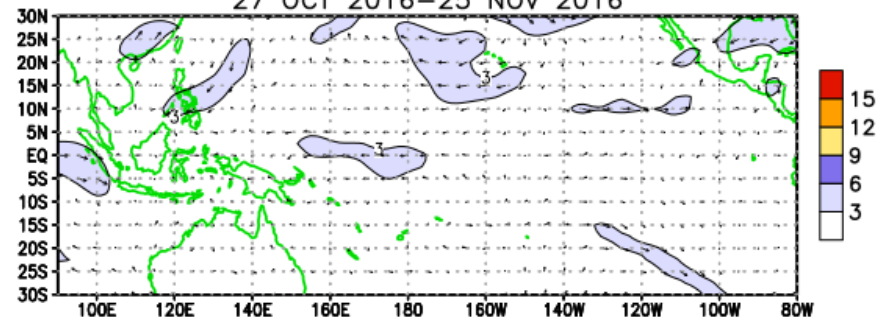


# Tropical OLR and Wind Anomalies During the Last 30 Days

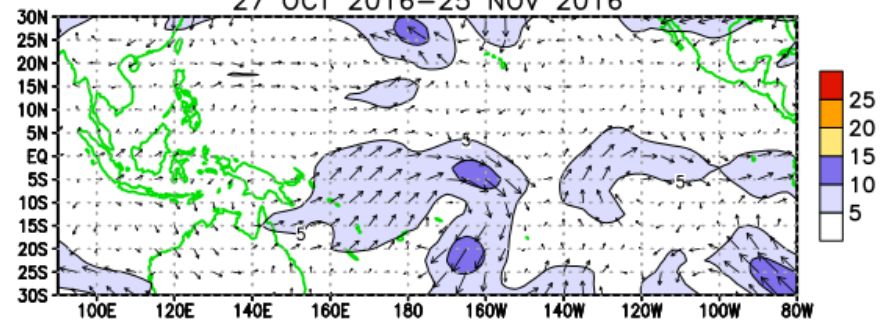
OLR Anomalies  
30 OCT 2016 to 24 NOV 2016



CDAS 850-hPa Wind Anoms  
27 OCT 2016-25 NOV 2016



CDAS 200-hPa Wind Anoms  
27 OCT 2016-25 NOV 2016

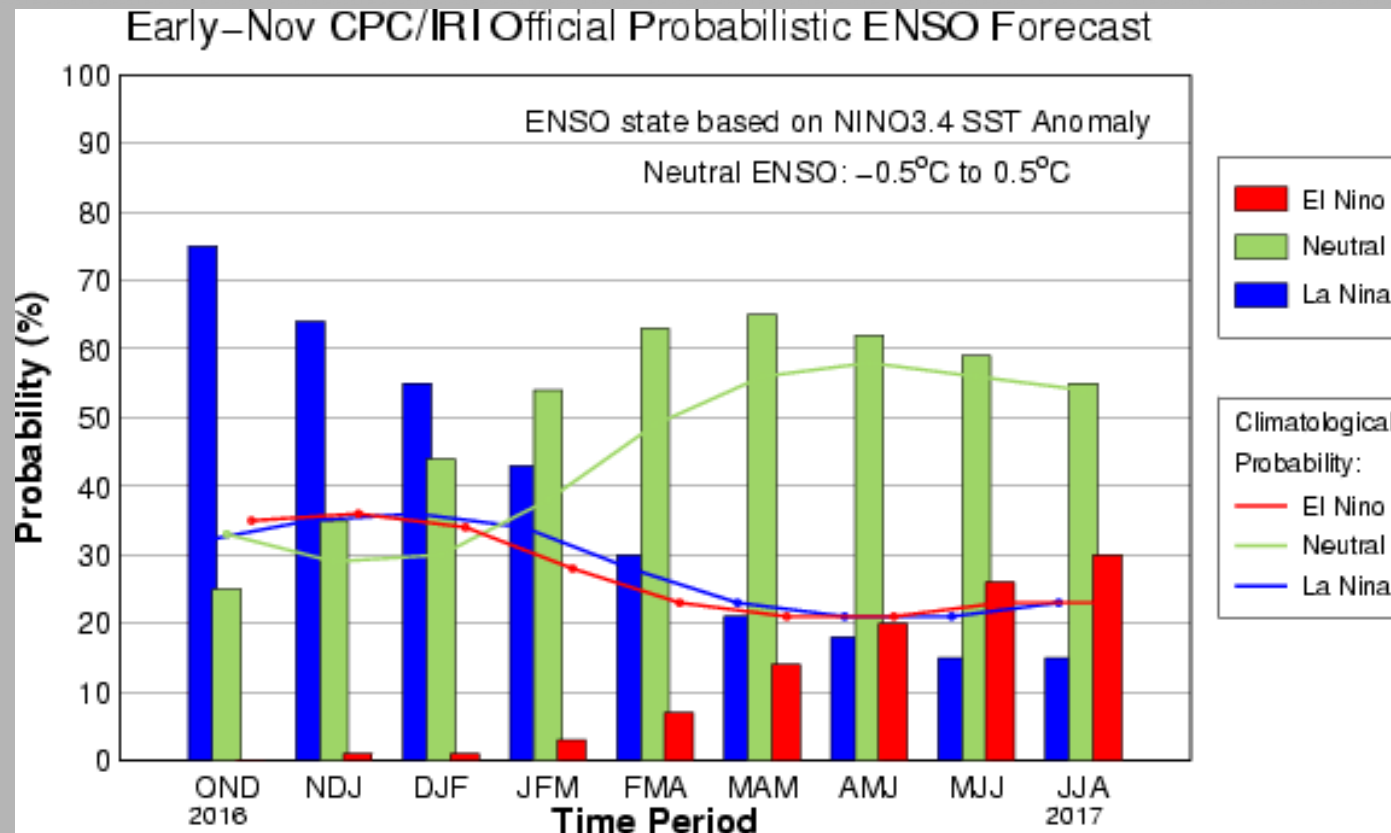




# Current Niño-3.4 SST Probabilities

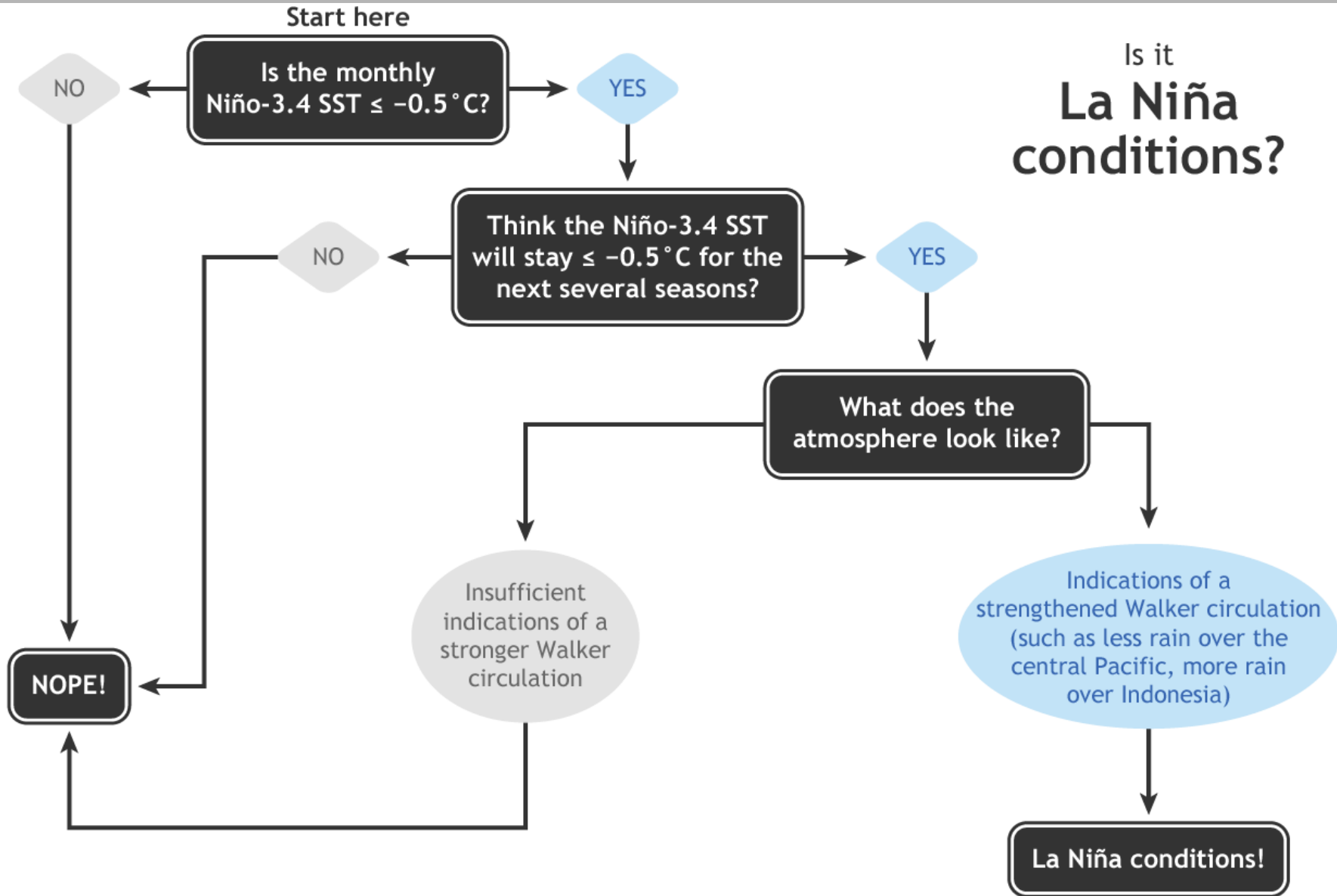
Updated: 10 November 2016

La Niña is slightly favored to persist (~55% chance) through the winter 2016-17.





# Is it La Niña conditions?



# Historical El Niño and La Niña Episodes Based on the ONI computed using ERSST.v4

Recent Pacific warm (red) and cold (blue) periods based on a threshold of +/- 0.5 °C for the Oceanic Niño Index (ONI) [3 month running mean of ERSST.v4 SST anomalies in the Niño 3.4 region (5N-5S, 120-170W)]. For historical purposes, periods of below and above normal SSTs are colored in blue and red when the threshold is met for a minimum of 5 consecutive over-lapping seasons.

The ONI is one measure of the El Niño-Southern Oscillation, and other indices can confirm whether features consistent with a coupled ocean-atmosphere phenomenon accompanied these periods. The complete table going back to DJF 1950 can be found [here](#).

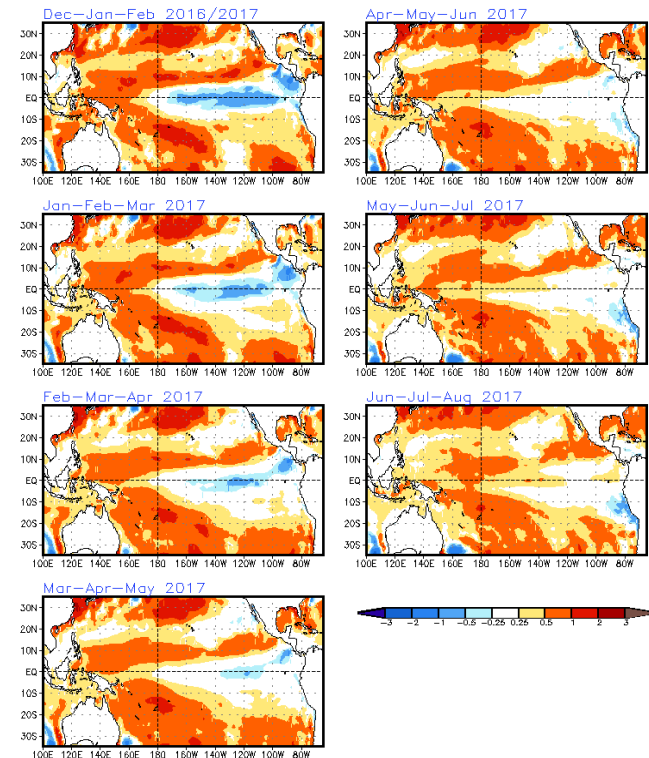
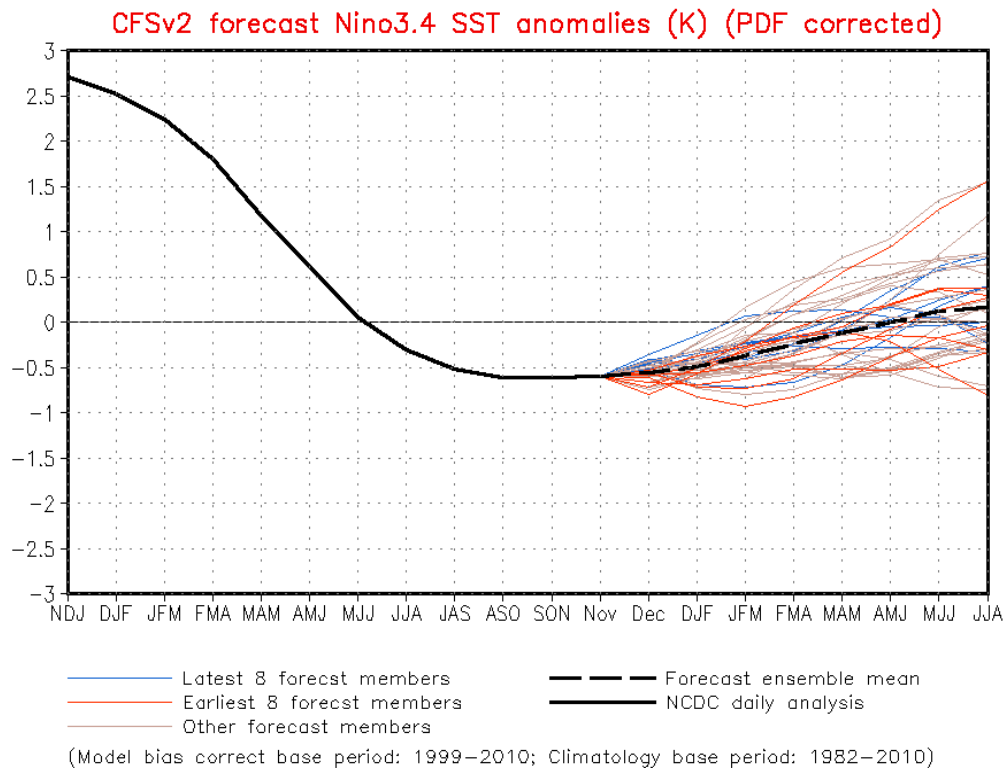
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2004	0.3	0.3	0.2	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.7
2005	0.7	0.6	0.5	0.5	0.3	0.2	0.0	-0.1	0.0	-0.2	-0.5	-0.7
2006	-0.7	-0.6	-0.4	-0.2	0.0	0.0	0.1	0.3	0.5	0.7	0.9	0.9
2007	0.7	0.4	0.1	-0.1	-0.2	-0.3	-0.4	-0.6	-0.9	-1.1	-1.3	-1.3
2008	-1.4	-1.3	-1.1	-0.9	-0.7	-0.5	-0.4	-0.3	-0.3	-0.4	-0.6	-0.7
2009	-0.7	-0.6	-0.4	-0.1	0.2	0.4	0.5	0.5	0.6	0.9	1.1	1.3
2010	1.3	1.2	0.9	0.5	0.0	-0.4	-0.9	-1.2	-1.4	-1.5	-1.4	-1.4
2011	-1.3	-1.0	-0.7	-0.5	-0.4	-0.3	-0.3	-0.6	-0.8	-0.9	-1.0	-0.9
2012	-0.7	-0.5	-0.4	-0.4	-0.3	-0.1	0.1	0.3	0.3	0.3	0.1	-0.2
2013	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3
2014	-0.5	-0.5	-0.4	-0.2	-0.1	0.0	-0.1	0.0	0.1	0.4	0.5	0.6
2015	0.6	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.7	2.0	2.2	2.3
2016	2.2	2.0	1.6	1.1	0.6	0.1	-0.3	-0.6	-0.7			

??

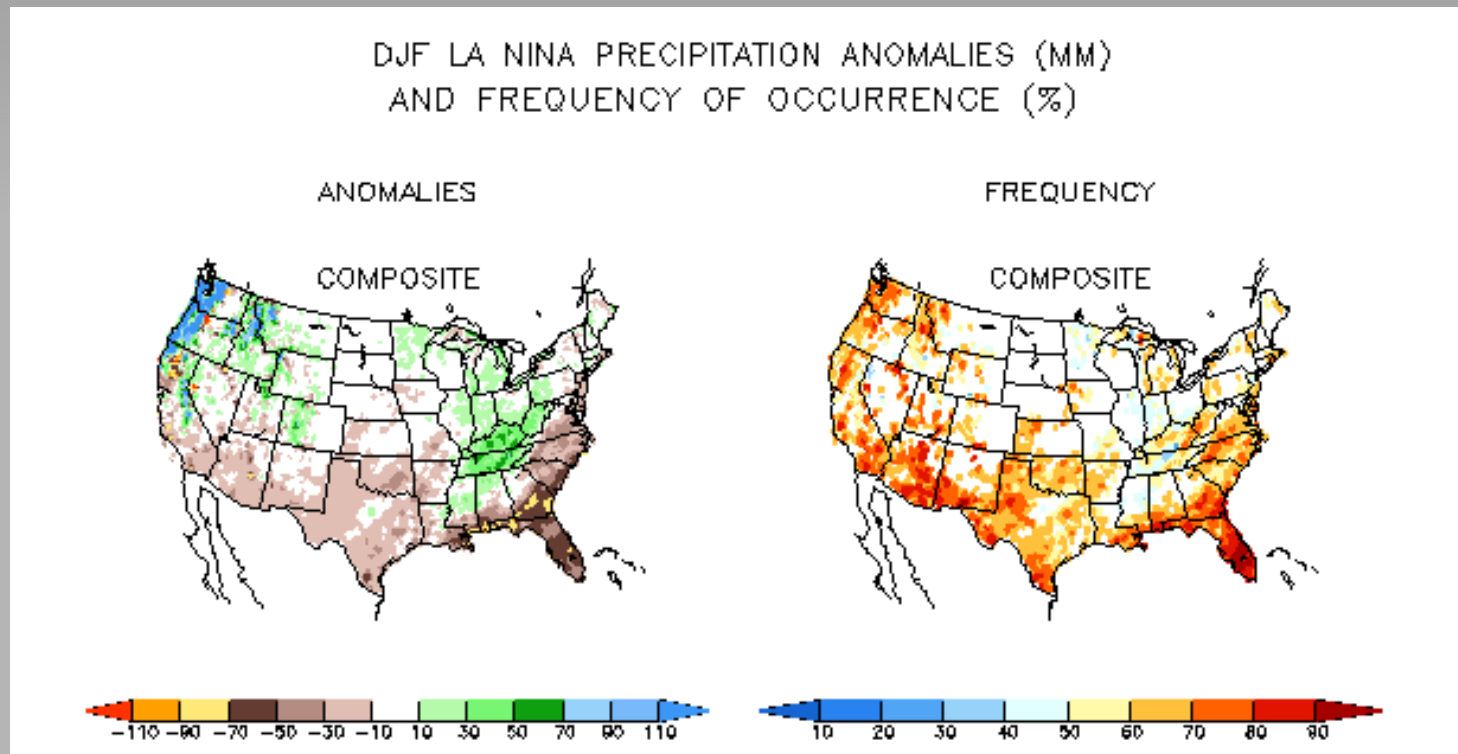
# SST Outlook: NCEP CFS.v2 Forecast (PDF corrected)

Issued: 28 November 2016

The CFS.v2 ensemble mean (black dashed line) favors borderline Neutral-La Niña conditions through the Northern Hemisphere winter 2016-17.

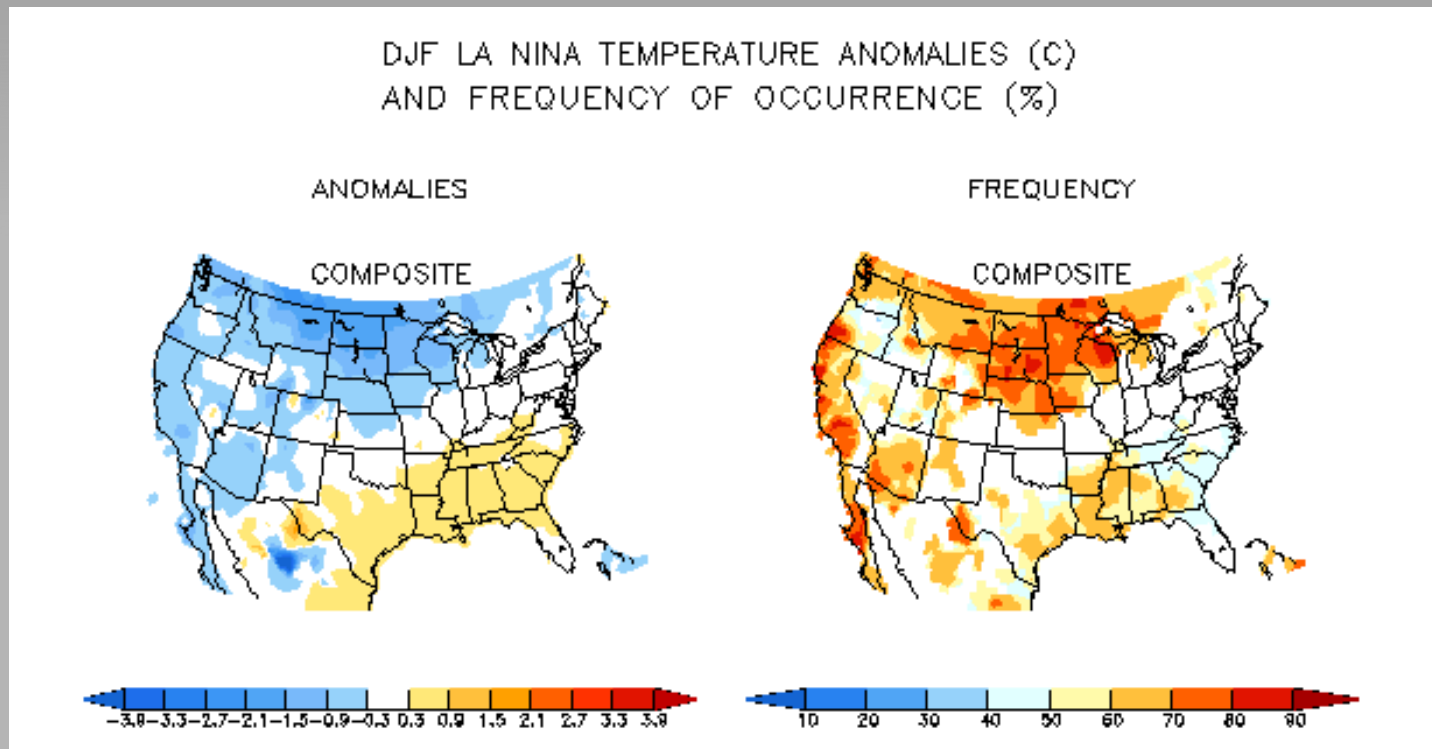


# December-February Precipitation Anomalies associated with La Niña



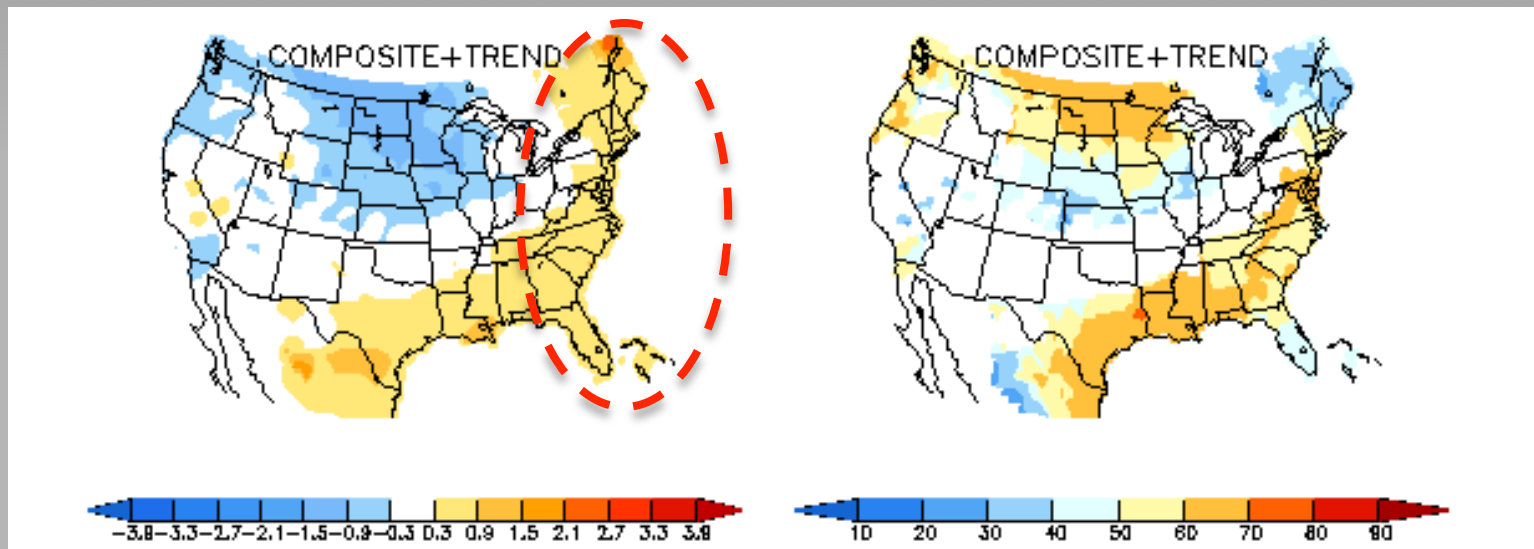
<http://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/composites/>

# December-February Temperature Anomalies associated with La Niña



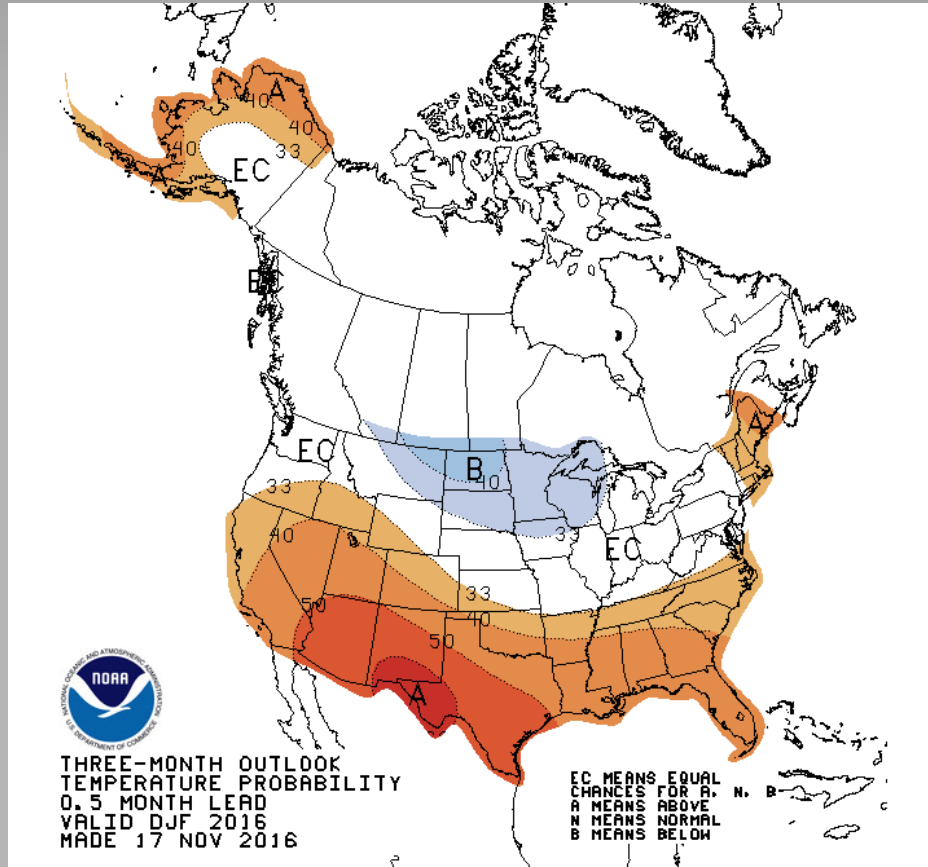
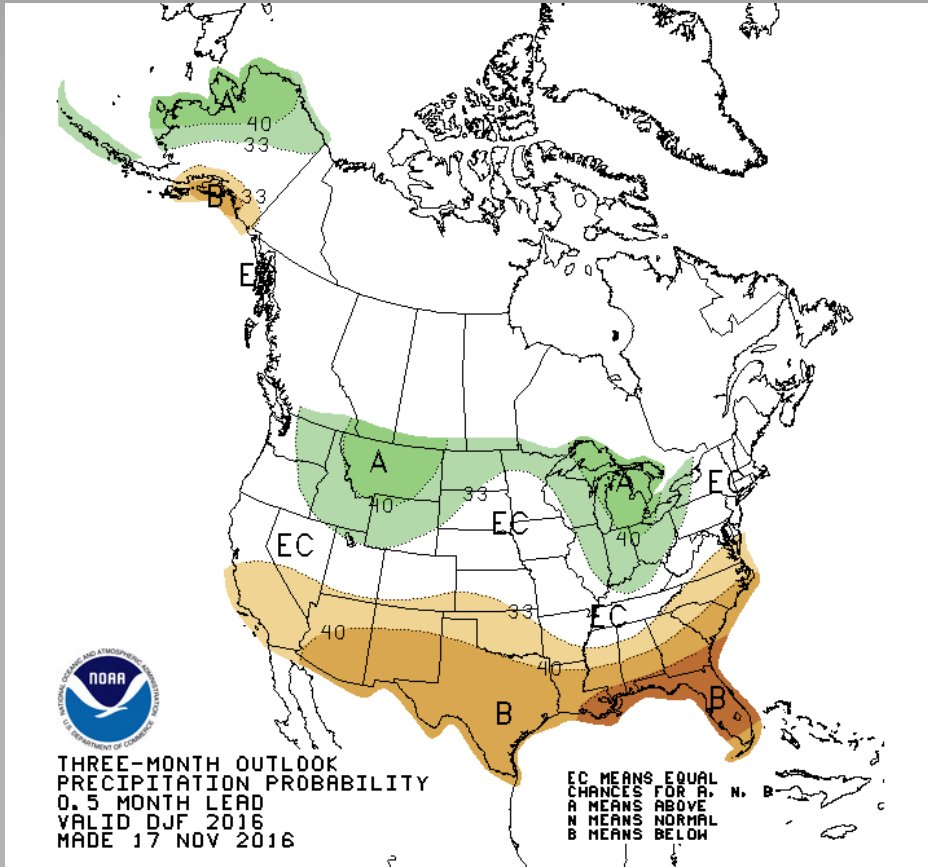
<http://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/composites/>

# December-February Temperature Anomalies associated with La Niña + Trends



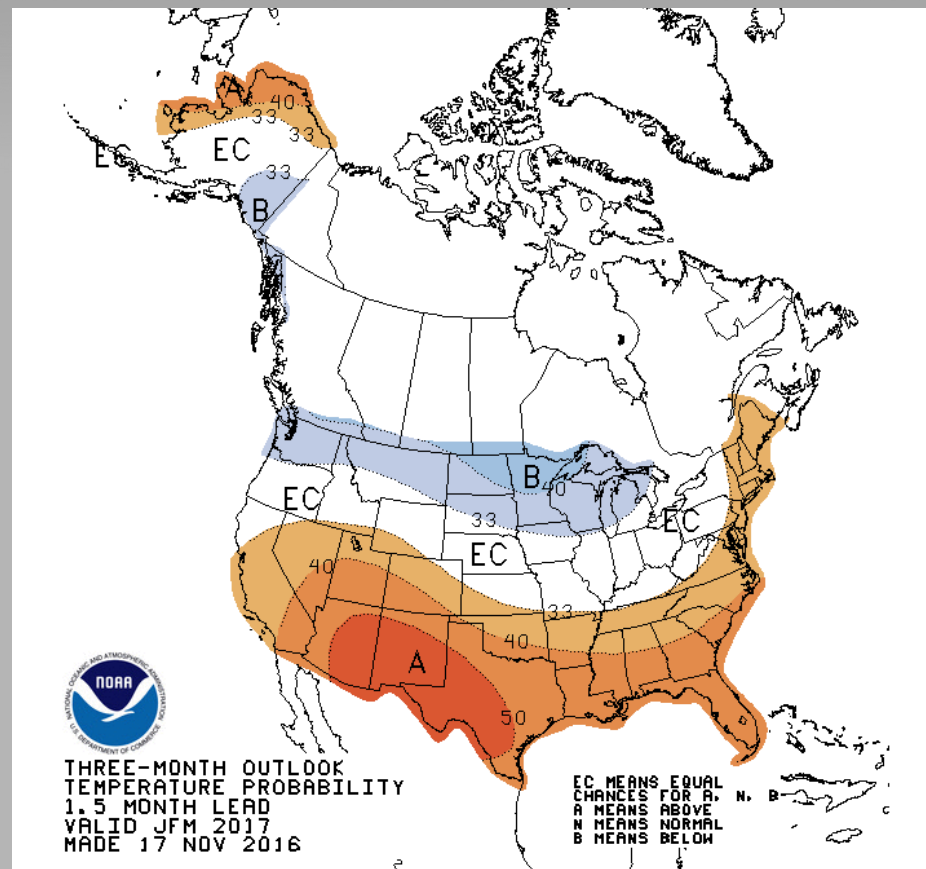
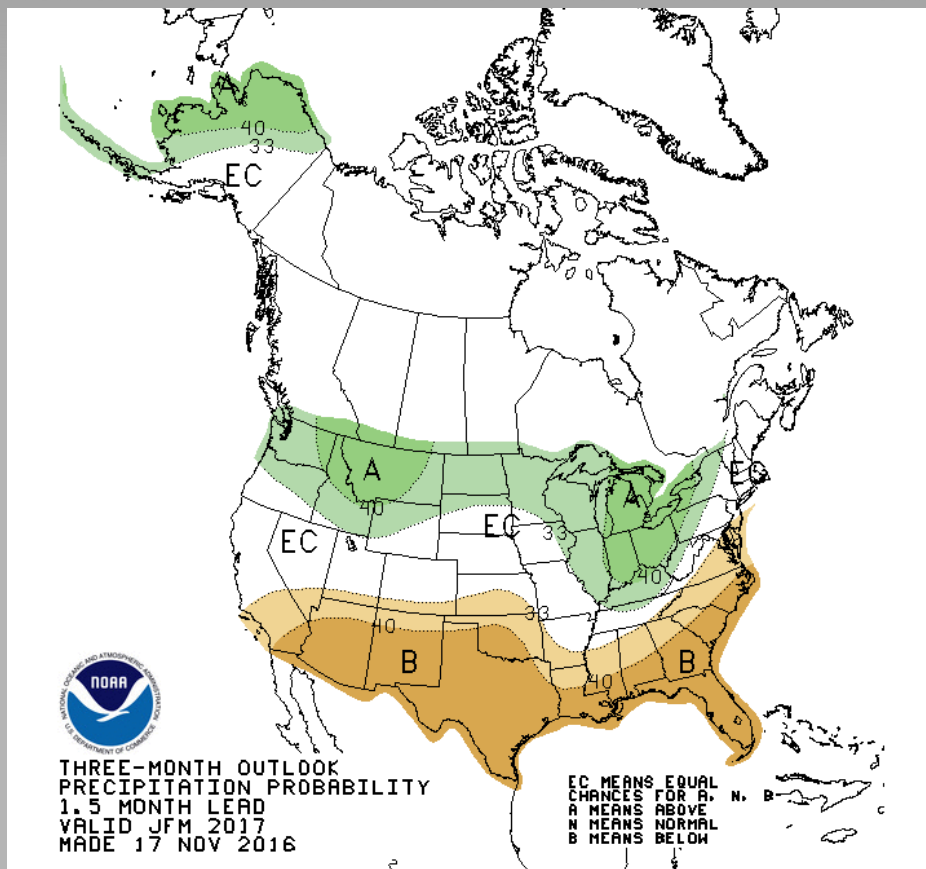
<http://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/composites/>

# December-January-February (DJF) Outlook

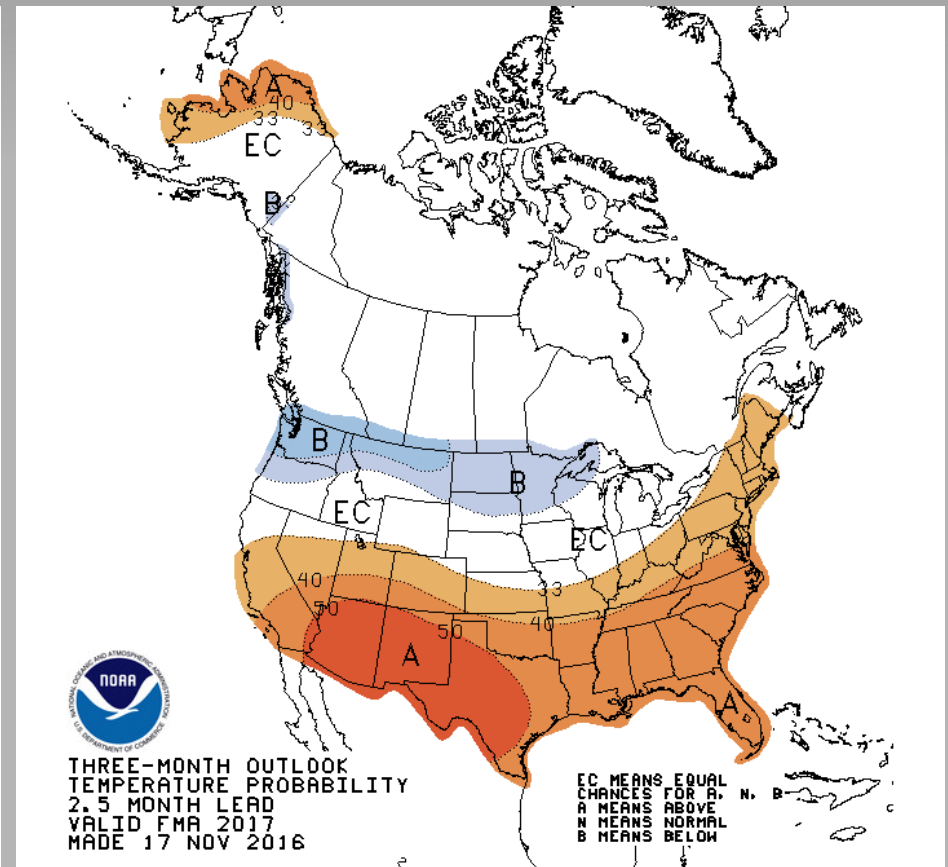
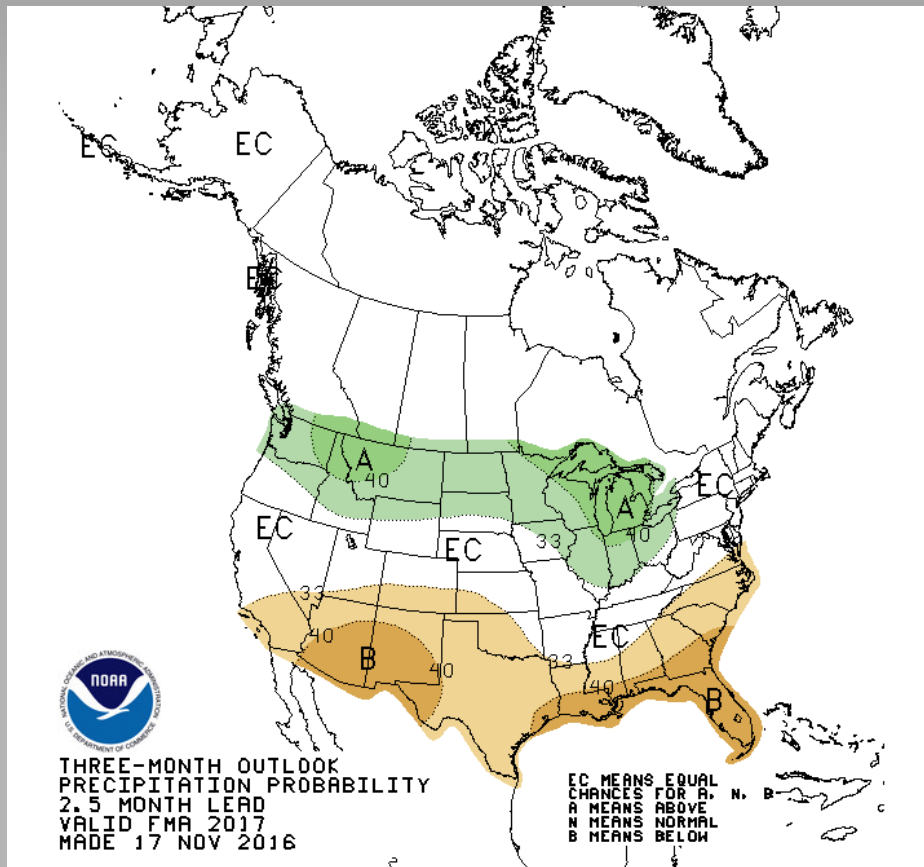




# January-February-March (JFM) Outlook



# February-March-April (FMA) Outlook



# Summary

## ENSO Alert System Status: La Niña Advisory

La Niña conditions are present.\*

Equatorial sea surface temperatures (SST) are below average in the central and east-central Pacific Ocean.

La Niña is slightly favored to persist (~55% chance) through winter 2016-17.\*

Over New England, slight tilt toward above-average temperatures, which expands as the winter progresses. Precipitation outlook is dominated by “Equal Chances” (or Climatology), but slight tilt toward above-median precipitation toward western part of region and tilt toward below-median precipitation in the southeastern portion of region (Mid-Atlantic).

**ENSO Diagnostics Discussion** [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.html](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html)

**ENSO Blog** <http://www.climate.gov/news-features/department/enso-blog>