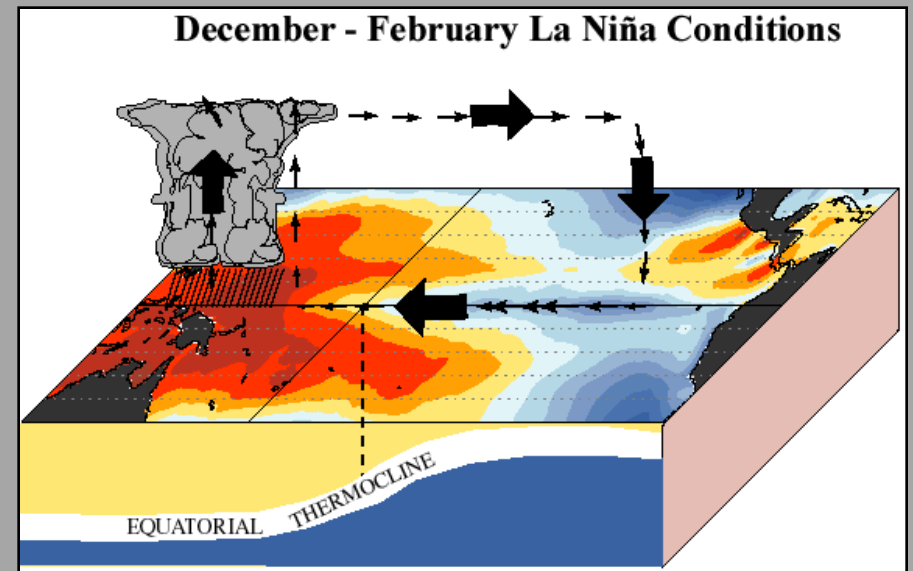
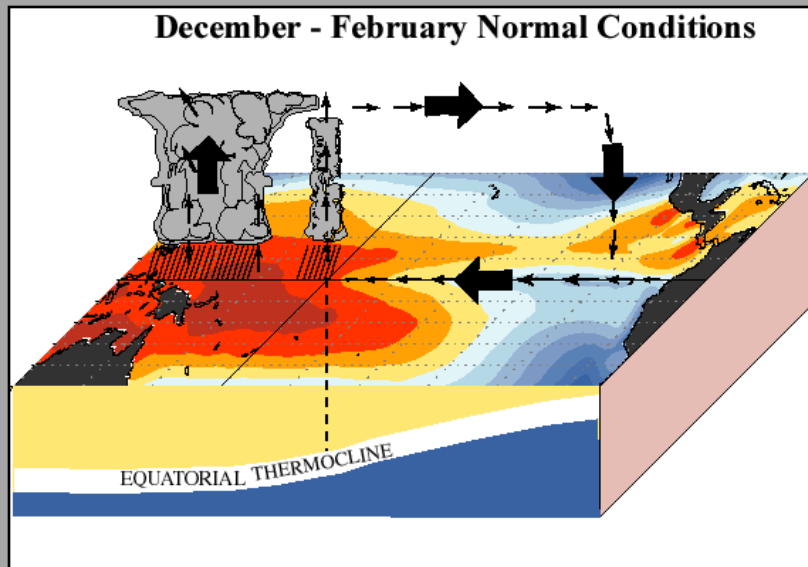


ENSO: Recent Evolution, Current Status and Predictions



Update prepared by:
Climate Prediction Center / NCEP
3 October 2016

Summary

ENSO Alert System Status: Not Active

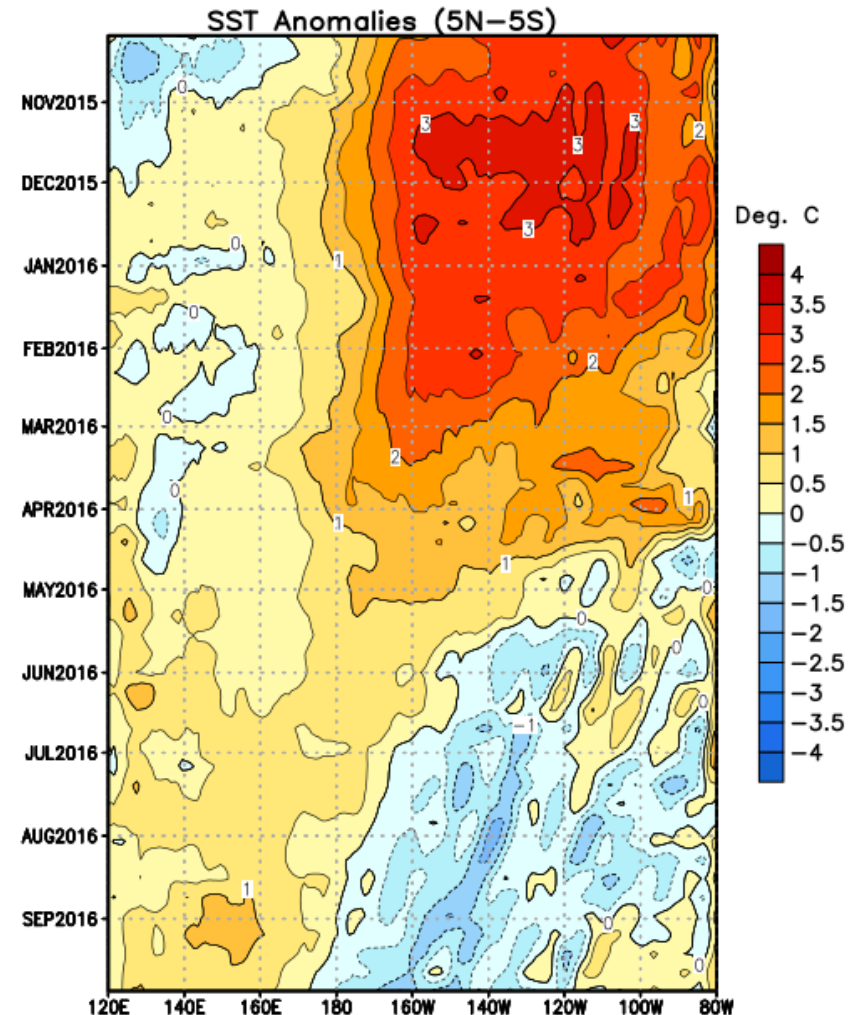
- ENSO-neutral conditions are present.*
- Equatorial sea surface temperatures (SST) are near or below average in the east-central and eastern Pacific Ocean.
- ENSO-neutral conditions are slightly favored (between 55-60%) during the upcoming Northern Hemisphere fall and winter 2016-17.*
- Stay tuned! The ENSO forecasts and conditions have been borderline between cool neutral and weak La Nina. The latest information will be released next Thursday (10/13/2016).

* Note: These statements are updated once a month (2nd Thursday of each month) in association with the ENSO Diagnostics Discussion, which can be found by clicking [here](#).

Recent Evolution of Equatorial Pacific SST Departures (°C)

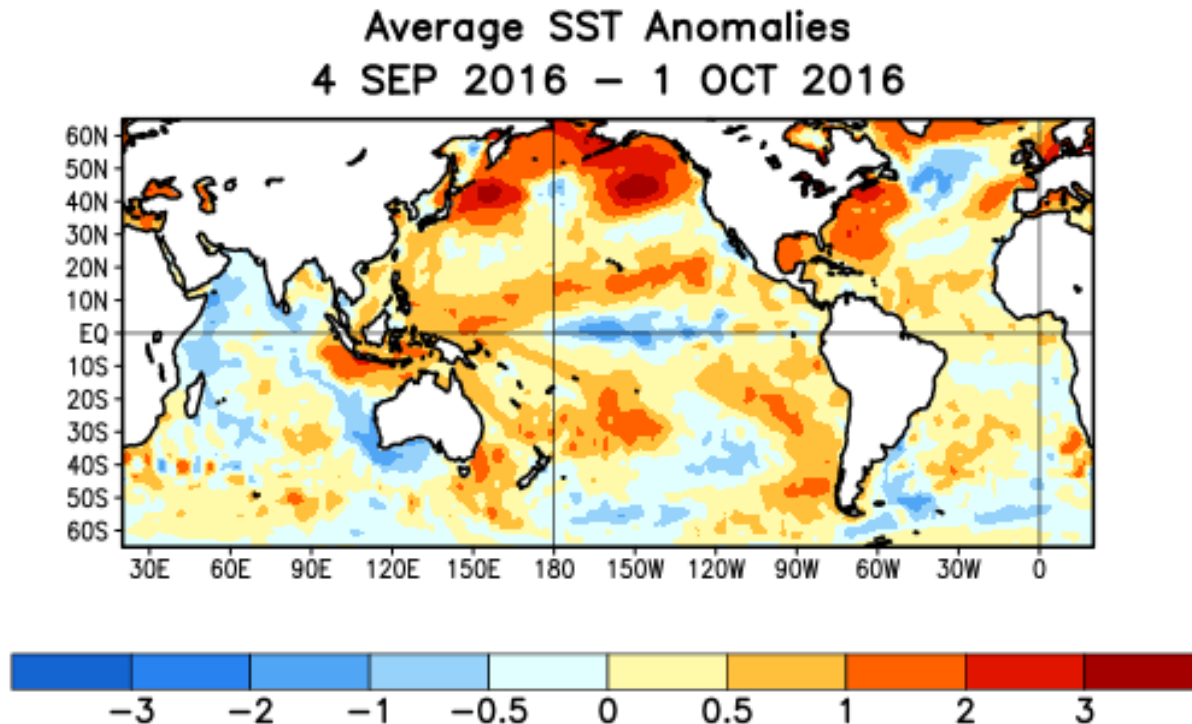
Since mid-April 2016, near-to-below average SSTs have expanded westward toward the Date Line.

Since late August, near-to-above average SSTs have persisted in the far eastern Pacific Ocean.



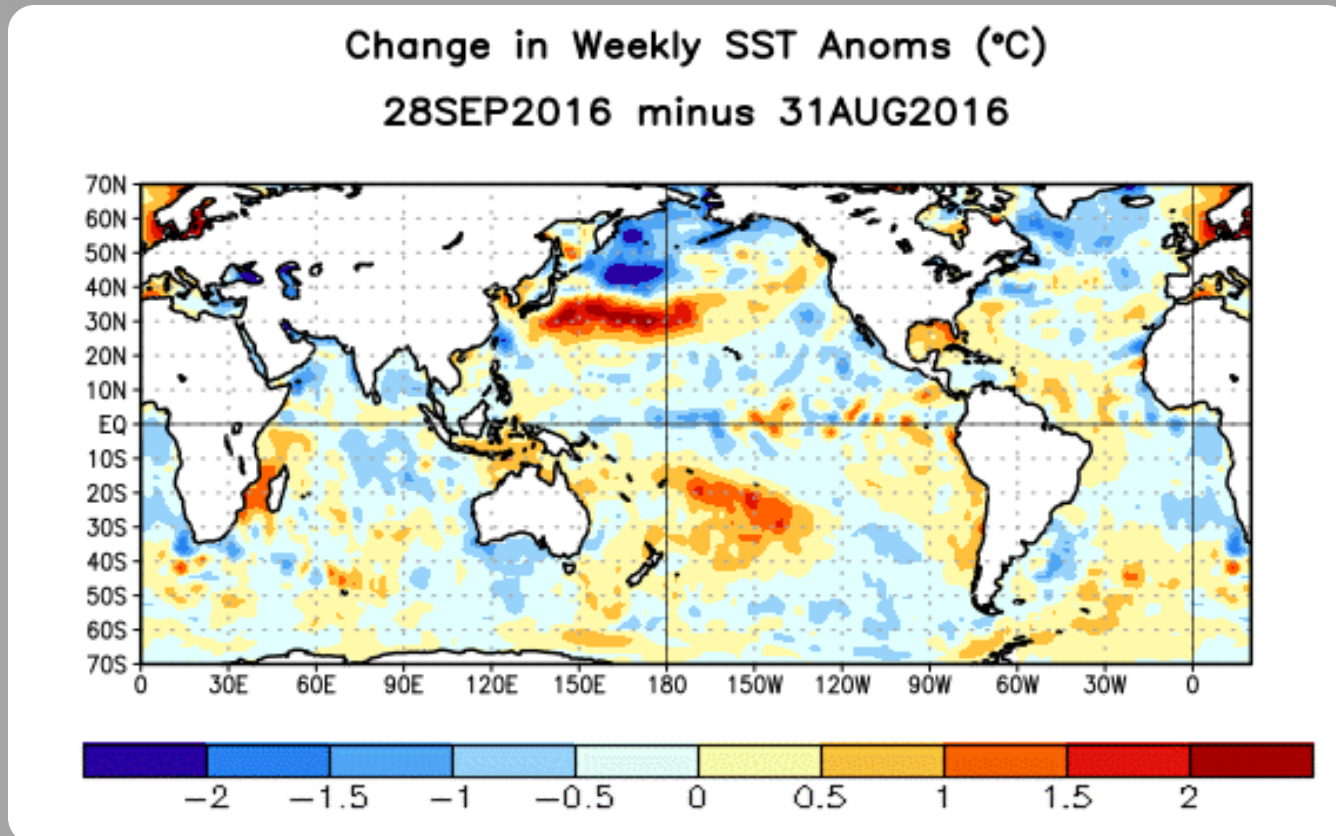
Global SST Departures (°C) During the Last Four Weeks

During the last four weeks, equatorial SSTs were above average near the Maritime Continent and the eastern Atlantic. Equatorial SSTs were near or below average across the central and east-central Pacific Ocean and the Indian Ocean.



Change in Weekly SST Departures over the Last Four Weeks

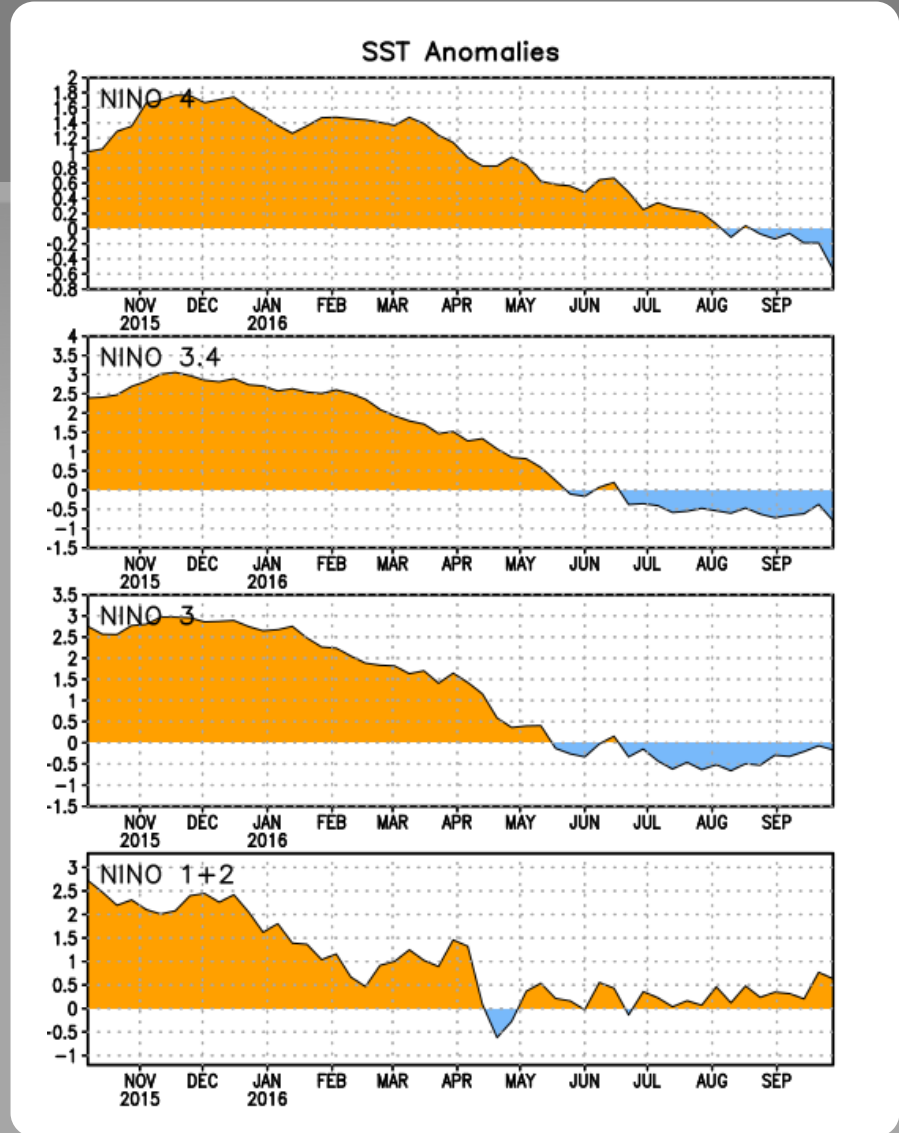
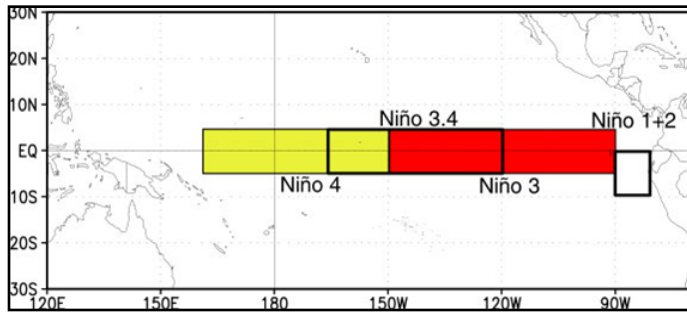
During the last four weeks, equatorial SST anomalies decreased across the central and western Pacific.



Niño Region SST Departures (°C) Recent Evolution

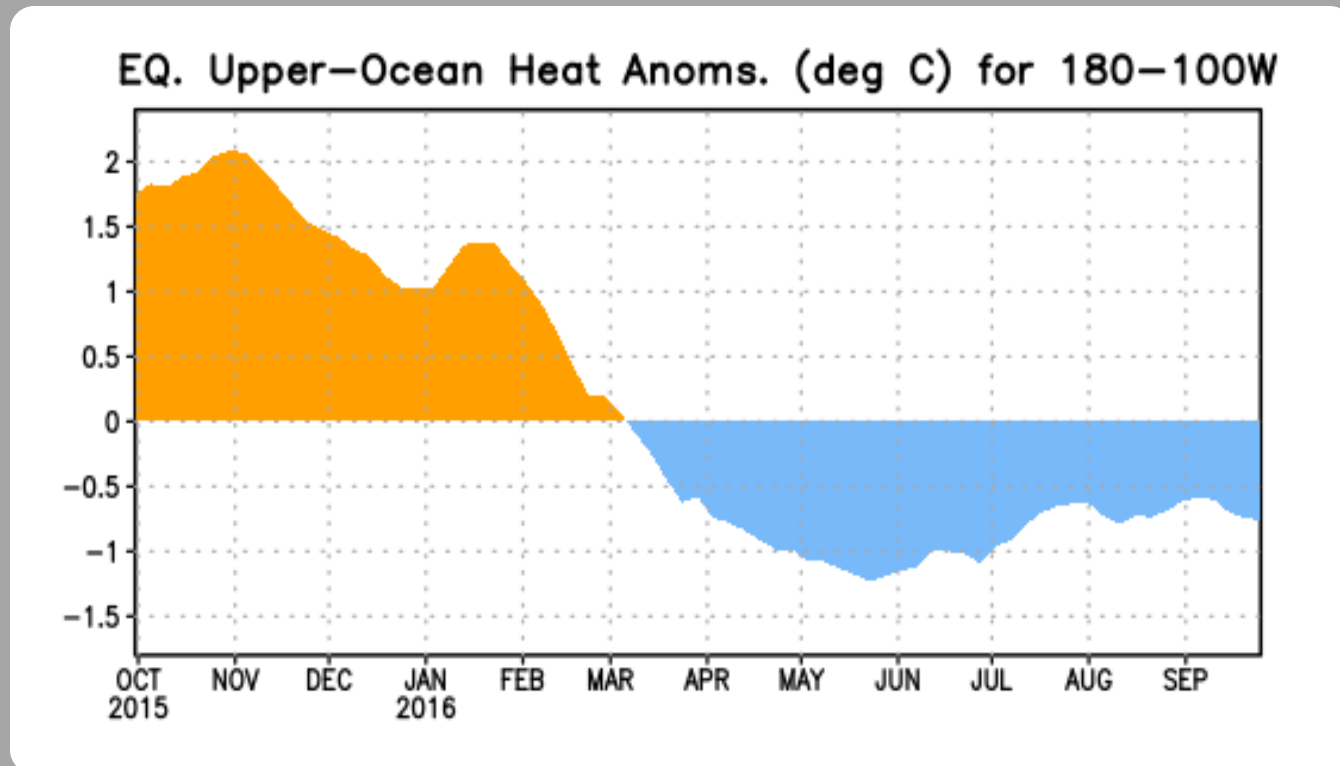
The latest weekly SST departures are:

Niño 4	-0.5°C
Niño 3.4	-0.8°C
Niño 3	-0.2°C
Niño 1+2	0.6°C



Central and Eastern Pacific Upper-Ocean (0-300 m) Weekly Average Temperature Anomalies

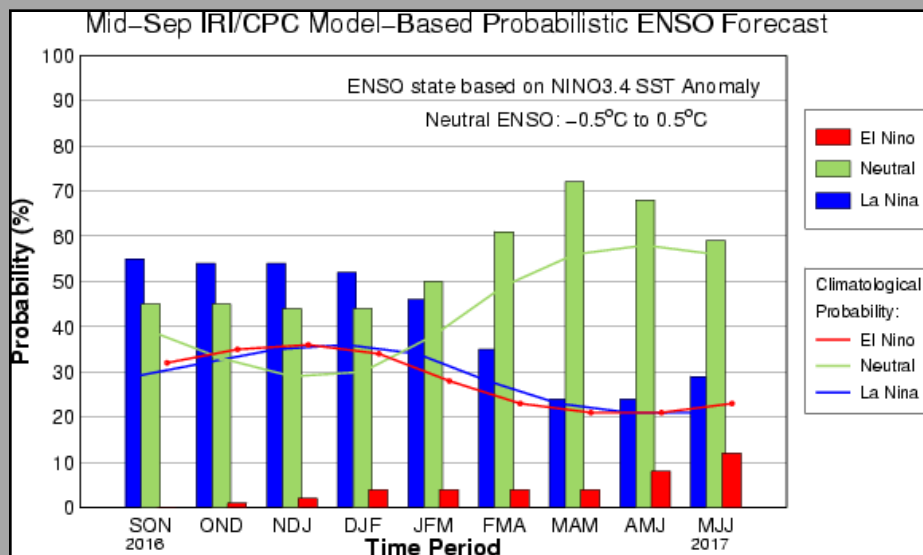
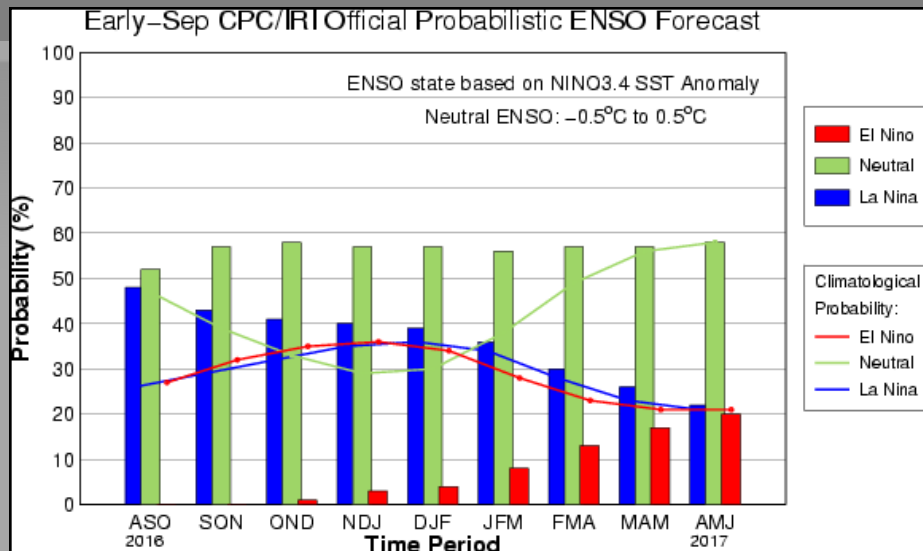
Overall, positive subsurface temperature anomalies decreased following November 2015, and became negative during March 2016. Negative anomalies strengthened during March-May 2016, followed by weakening in June and July 2016. Since August, weak negative anomalies have persisted.



CPC/IRI Probabilistic ENSO Outlook

Updated: 3 October 2016

As of early September, ENSO-neutral is slightly favored (55-60% chance) through the Northern Hemisphere fall and winter 2016-17.



IRI/CPC Pacific Niño 3.4 SST Model Outlook

Most multi-model averages indicate borderline ENSO-neutral/ La Niña conditions during the Northern Hemisphere fall/winter 2016-17.

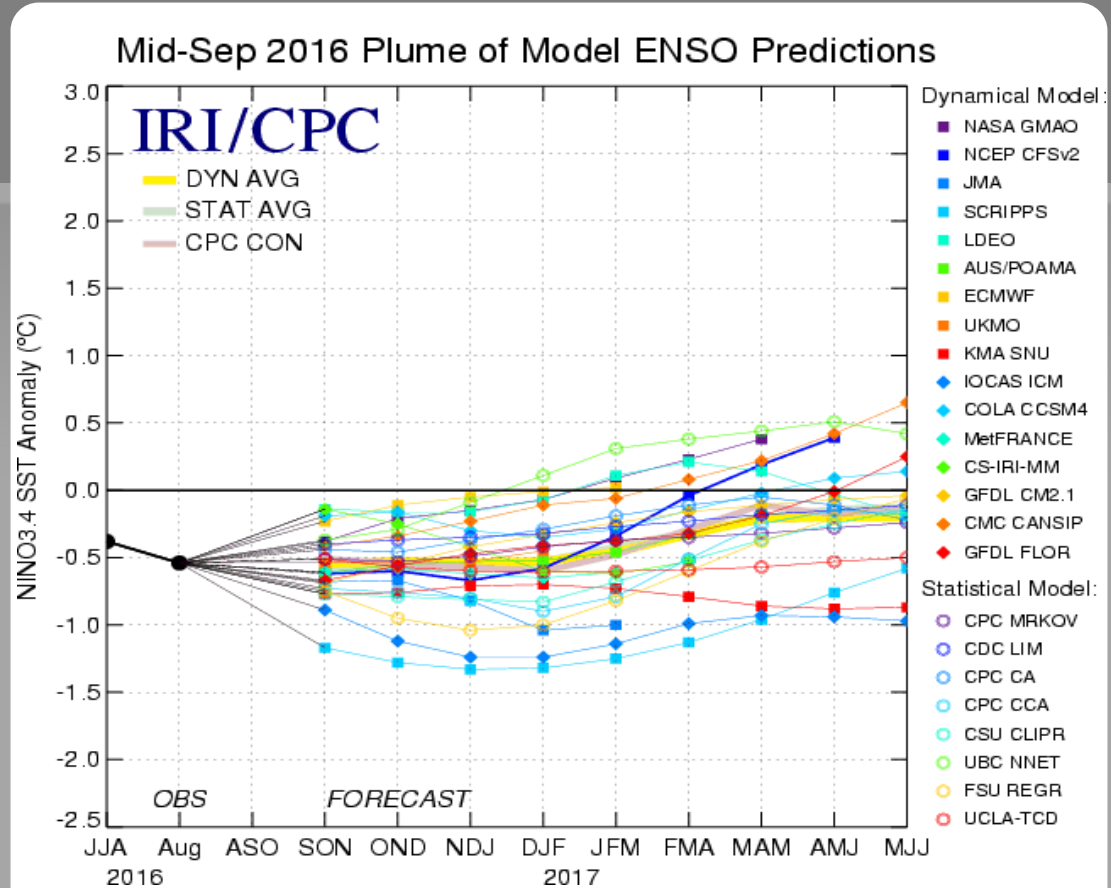


Figure provided by the International Research Institute (IRI) for Climate and Society (updated 13 September 2016).

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

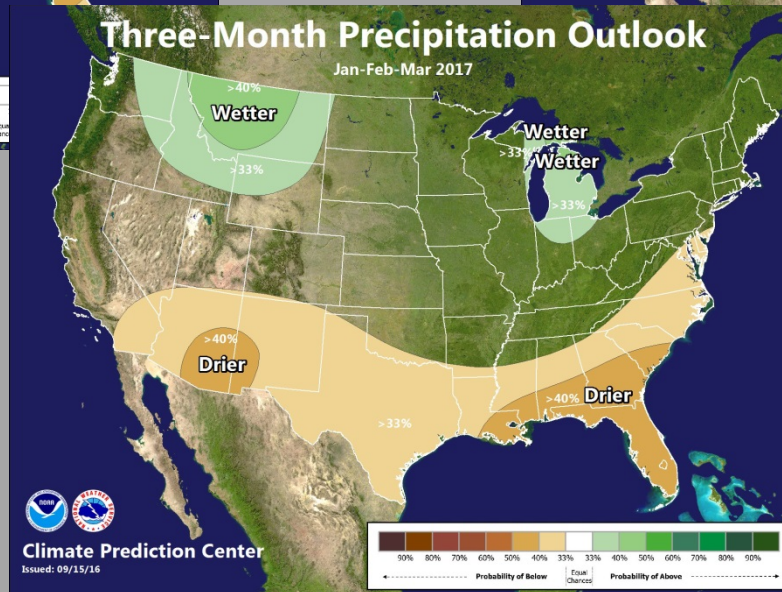
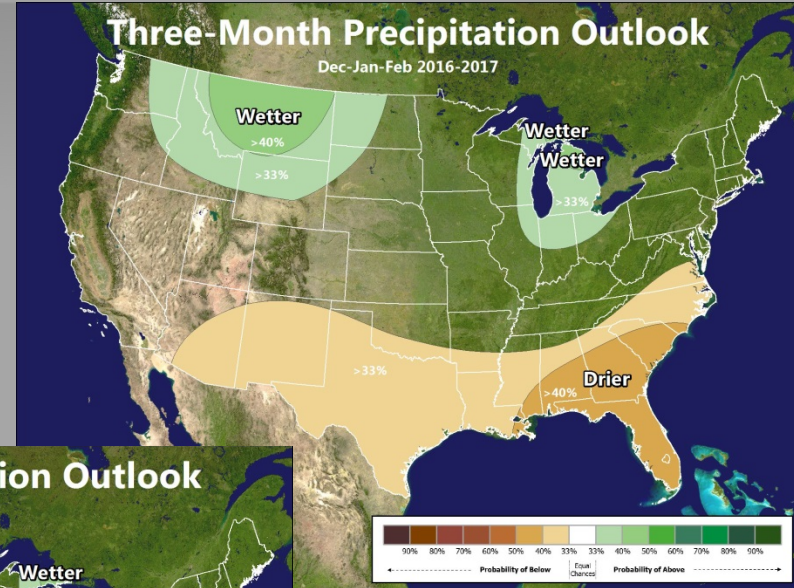
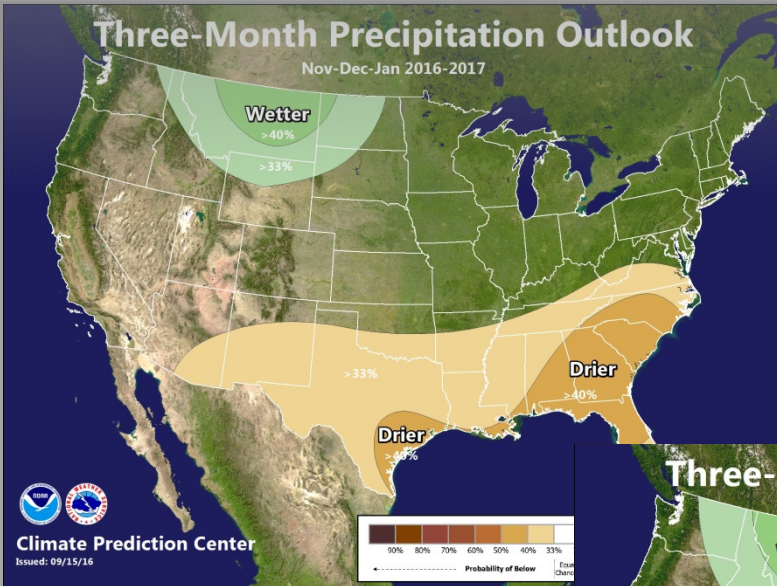
Recent Pacific warm (red) and cold (blue) periods based on a threshold of +/- 0.5 °C for the Oceanic Niño Index (ONI) [3 month running mean of ERSST.v4 SST anomalies in the Niño 3.4 region (5N-5S, 120-170W)]. For historical purposes, periods of below and above normal SSTs are colored in blue and red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

U. S. Seasonal Outlooks

Precipitation

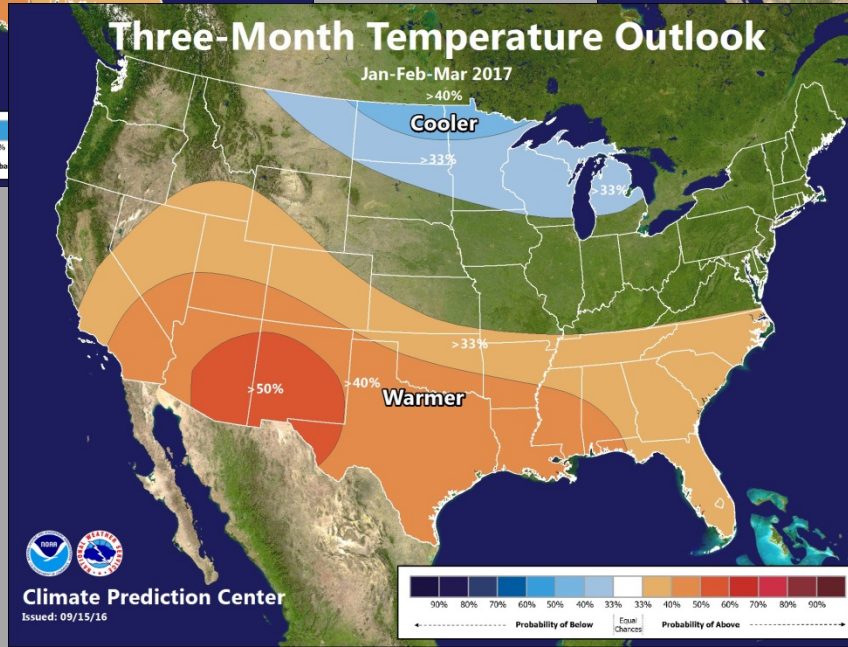
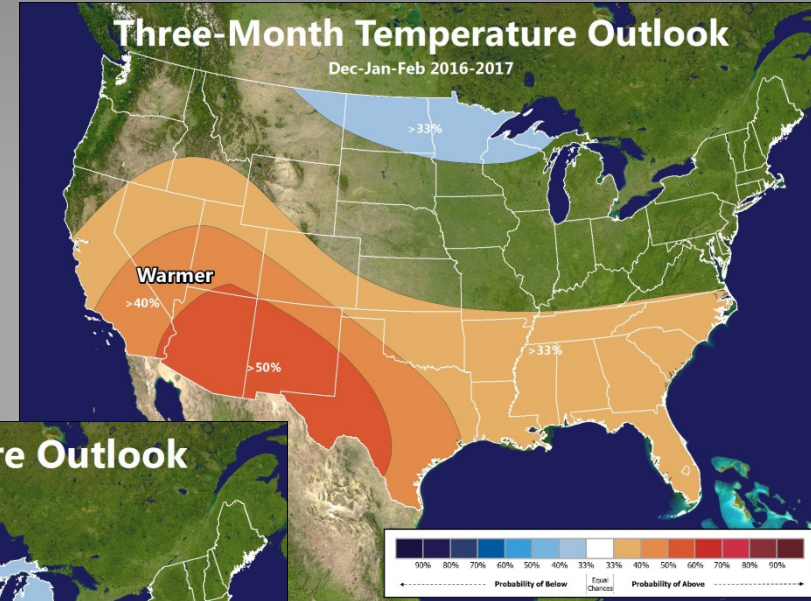
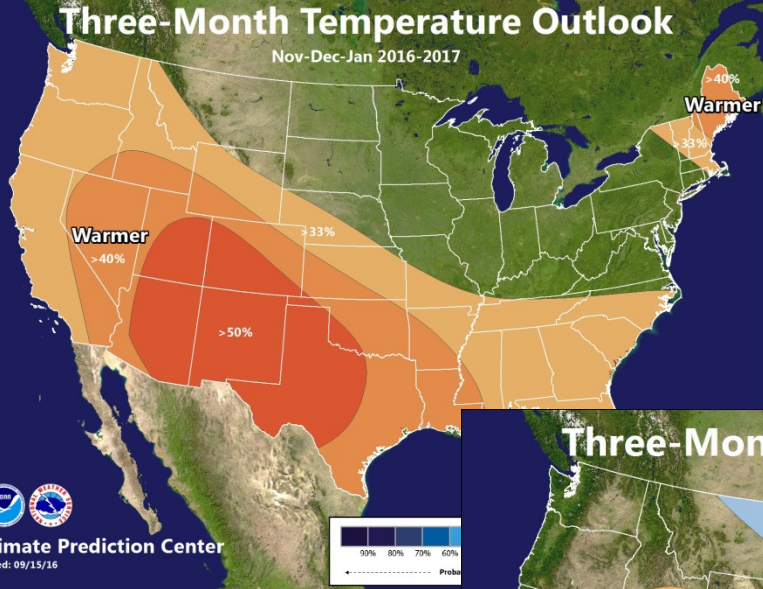


The seasonal outlooks combine the effects of long-term trends, soil moisture, and, when appropriate, ENSO.

The Winter Outlook will be released 10/20/2016

U. S. Seasonal Outlooks

Temperature



The Winter Outlook will be released 10/20/2016

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NOAA Operational Definitions for El Niño and La Niña

El Niño: characterized by a positive ONI greater than or equal to $+0.5^{\circ}\text{C}$.

La Niña: characterized by a negative ONI less than or equal to -0.5°C .

By historical standards, to be classified as a full-fledged El Niño or La Niña episode, these thresholds must be exceeded for a period of at least 5 consecutive overlapping 3-month seasons.

CPC considers El Niño or La Niña conditions to occur when the monthly Niño3.4 OISST departures meet or exceed $\pm 0.5^{\circ}\text{C}$ along with consistent atmospheric features. These anomalies must also be forecasted to persist for 3 consecutive months.