

El Niño-Southern Oscillation (ENSO) Update + Seasonal Outlooks

NOAA Eastern Region Climate Services

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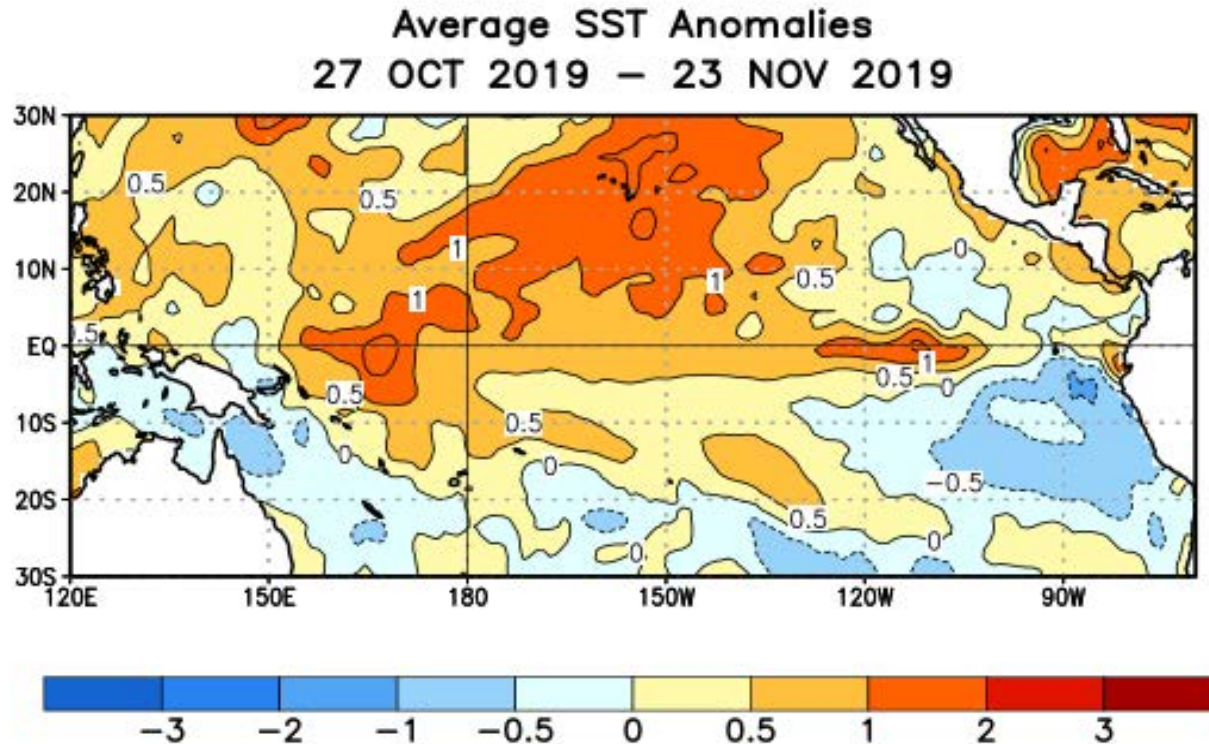


No ENSO Alerts in place.

ENSO-neutral is favored during the Northern Hemisphere winter 2019-20 (~70% chance), continuing through spring 2020 (60 to 65% chance).

**Oceanic temperatures in the tropical Pacific Ocean has been rather above-average recently!
We don't expect it to become an El Niño, but there is still a ~25% chance through the winter.**

Sea surface temperatures (SST) anomalies over the last Month



Blue shading is Below-Average SST

Yellow-Red shading is Above-Average SST

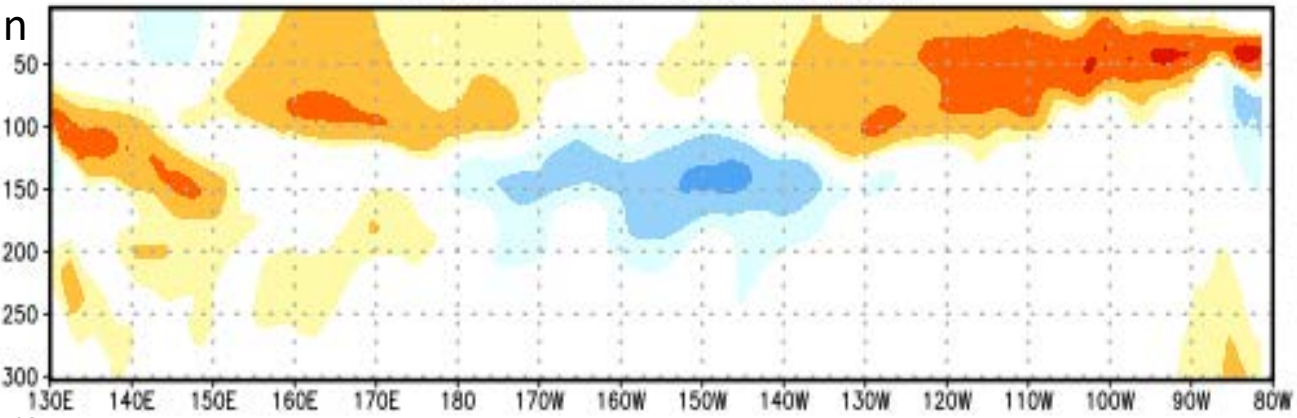
Above-average SSTs, which are pretty El Niño-ish!
But El Niño is not just short-term (monthly average) SSTs.

Subsurface temperature anomalies on the Equator (Pacific Ocean)

EQ. Subsurface Temperature Anomalies (deg C)

Pentad centered on 19 NOV 2019

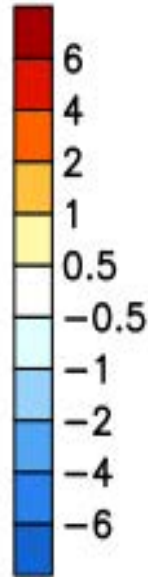
Surface
of Ocean



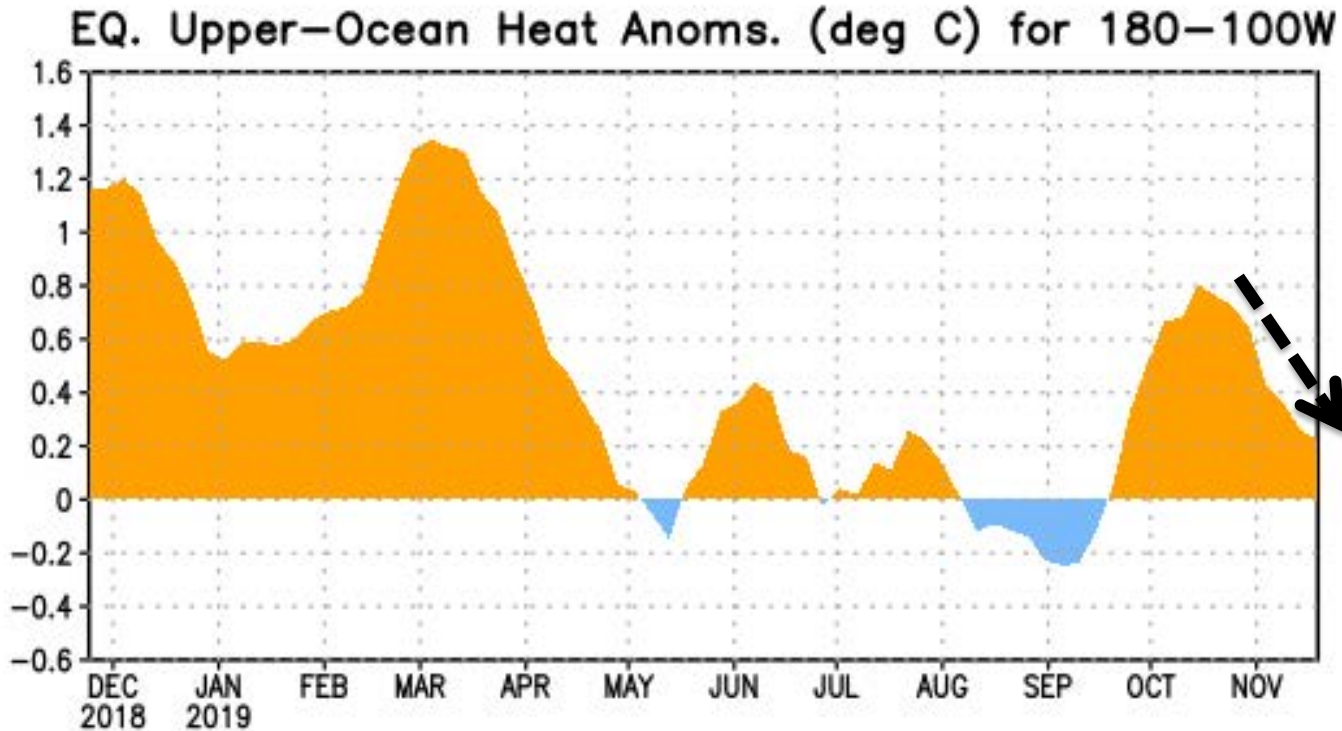
300 meters
below
surface

Blue shading is Below-Average Temperatures

Yellow-Red shading is Above-Average Temperatures



Subsurface temperature anomalies Over Time

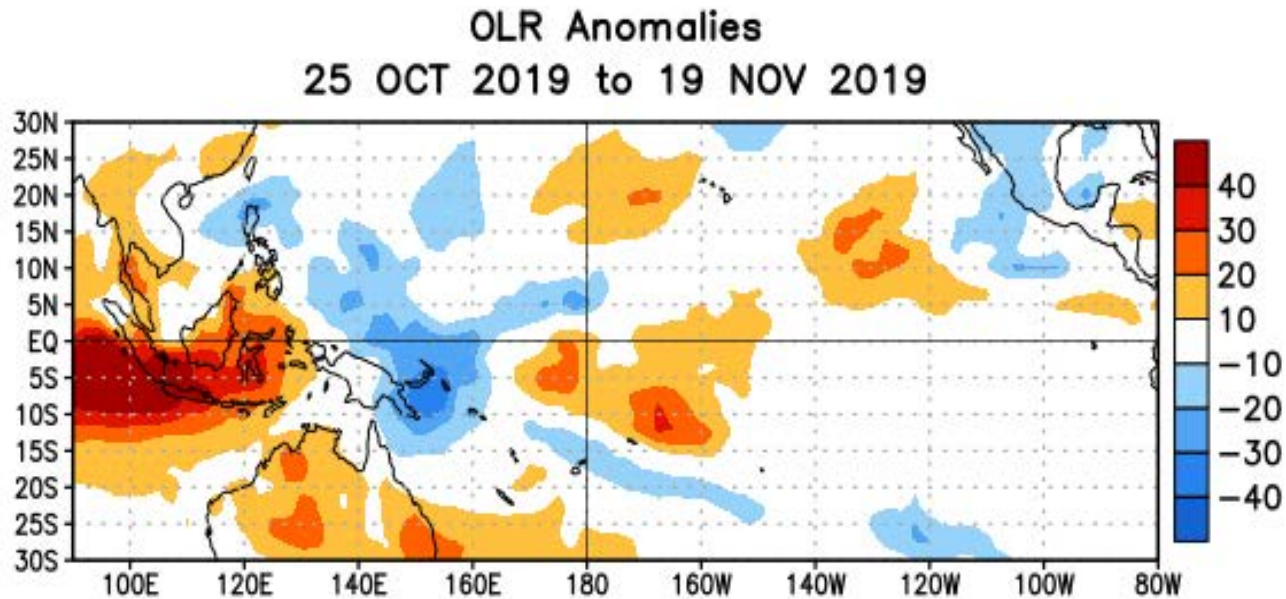


Blue shading is Below-Average Temperatures

Orange shading is Above-Average Temperatures

Subsurface temperature anomalies have declined since mid-October. Diminishing “fuel” for a possible El Niño.

Tropical Cloudiness/Rainfall(Outgoing Longwave Radiation) anomalies over the last Month



Blue shading is where it is more cloudy/wetter than average

Yellow-Red shading is where it is less cloudy/drier than average

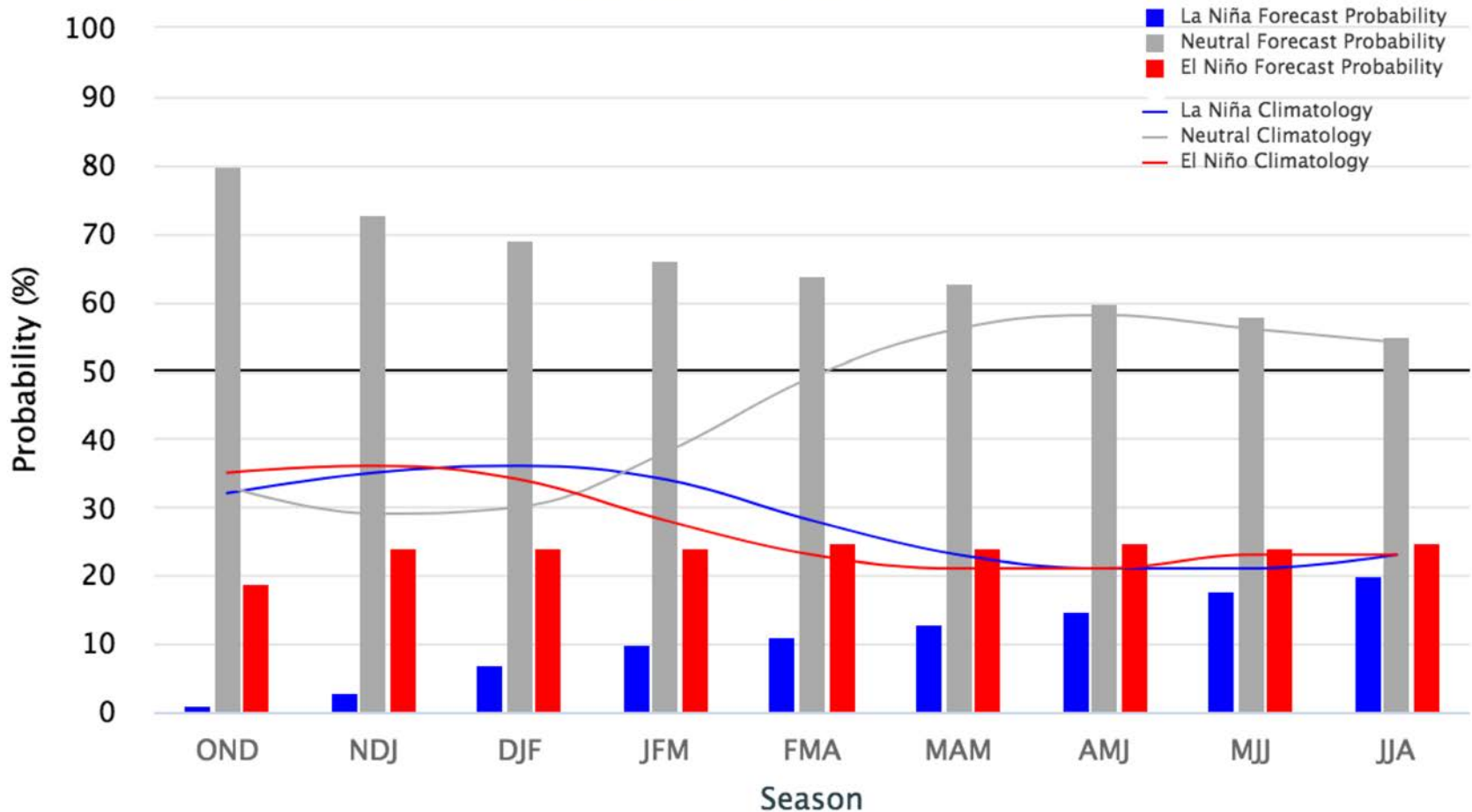
During El Niño, you want to see the persistence of wetter than average conditions at the equator, on the Date Line. Right now, it remains drier than average.

Current ENSO Probabilities or Chances (updated 14 November 2019)

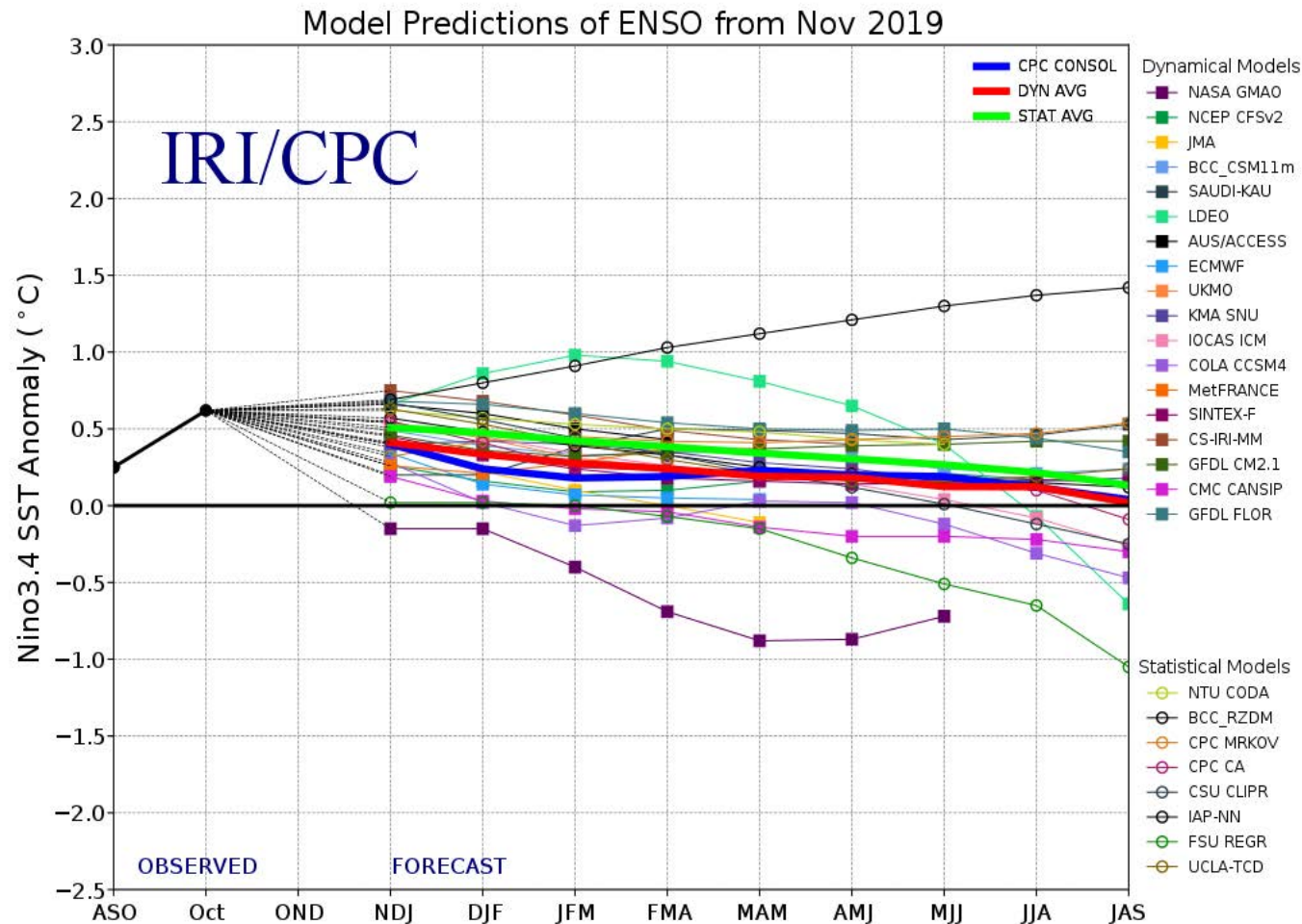
Early-November 2019 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: $-0.5\text{ }^{\circ}\text{C}$ to $0.5\text{ }^{\circ}\text{C}$



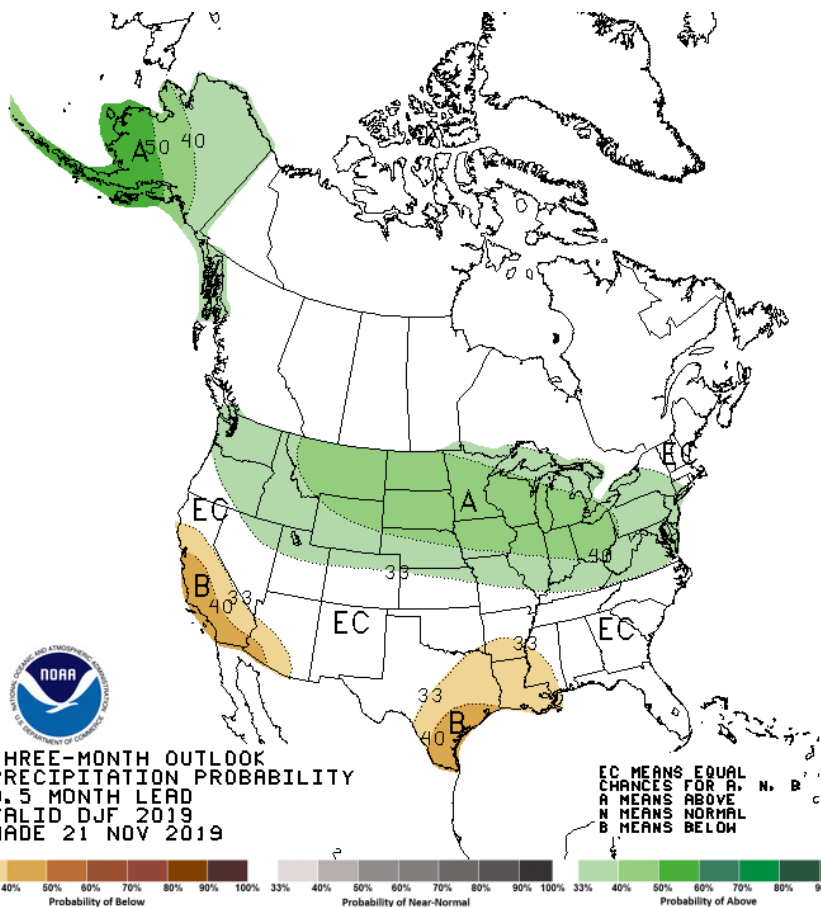
Various National and International Models of the Niño-3.4 Index (ENSO) (updated 19 November 2019)



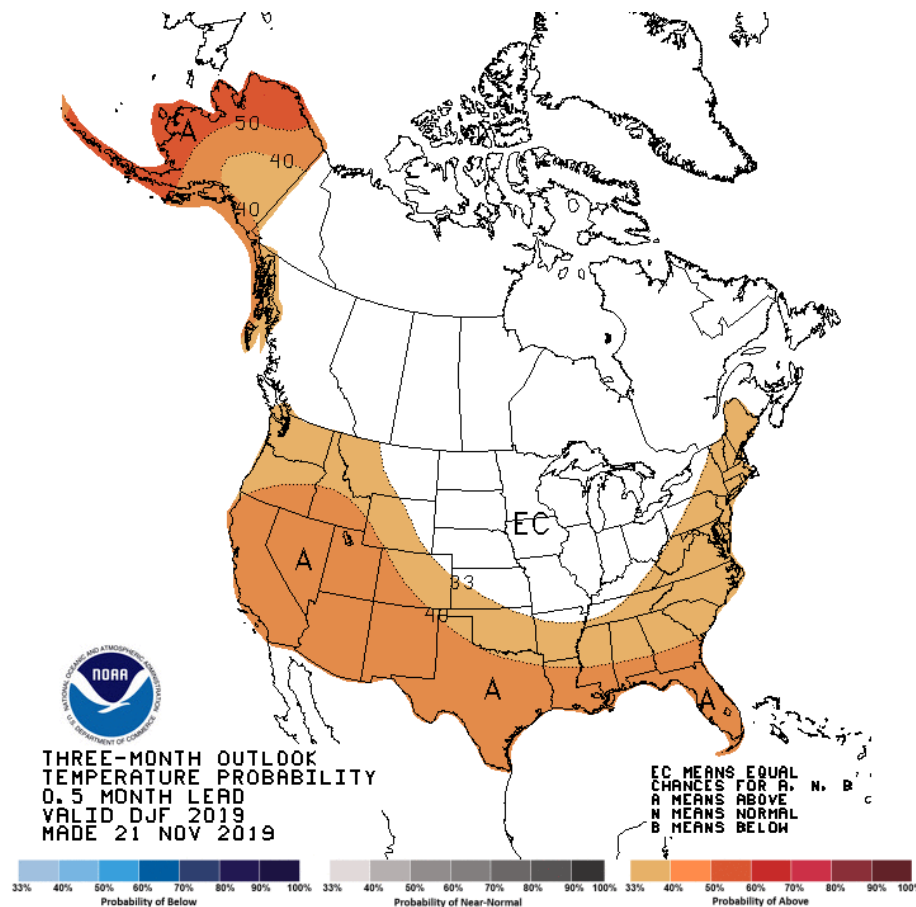
Niño-3.4 index is forecast to decrease from current values and remain around ENSO-Neutral.

December-January-February (DJF) Outlook 2019-20

Precipitation Chances

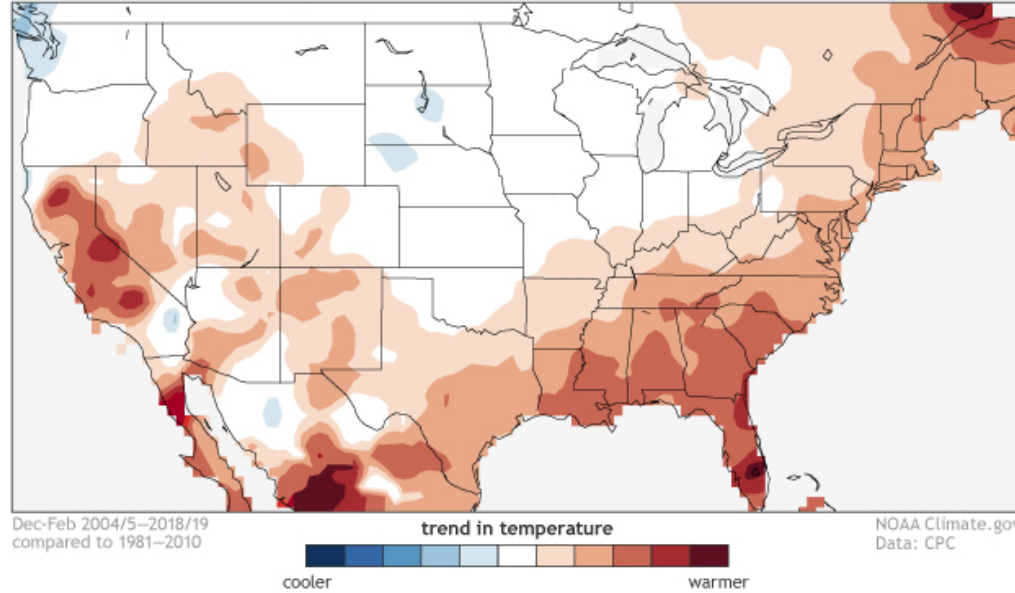


Temperature Chances

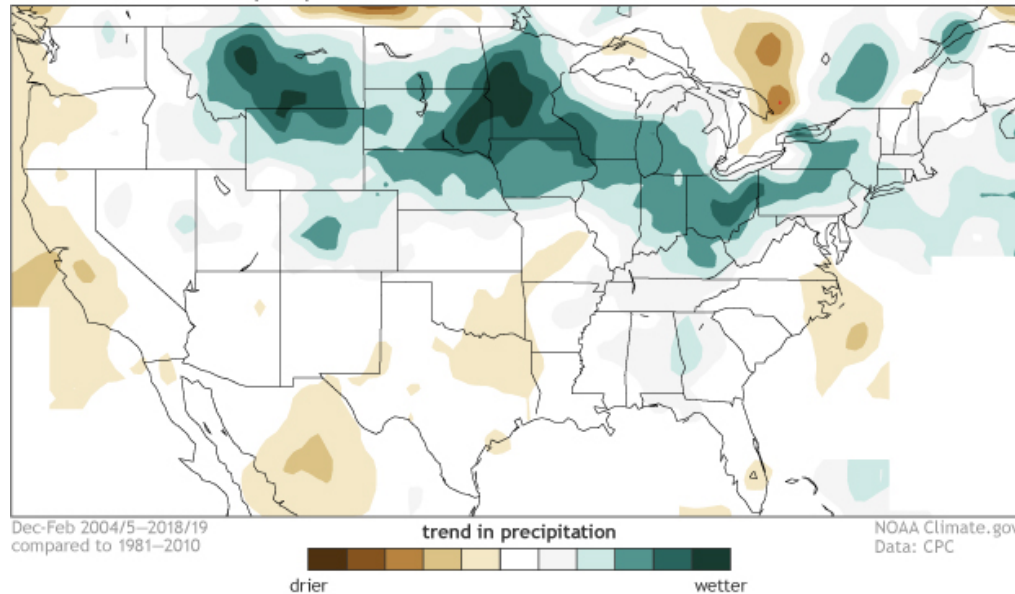


Dec-Feb Trend based on Optimal Climate Normals (OCN)

Recent trends in winter temperatures



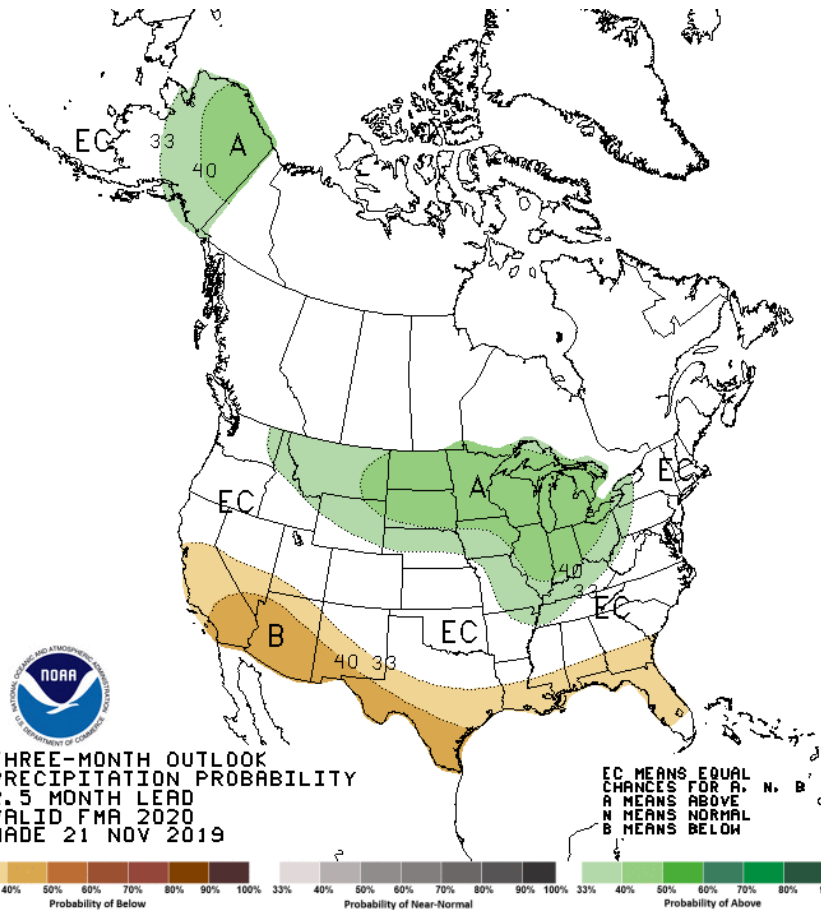
Recent trends in winter precipitation



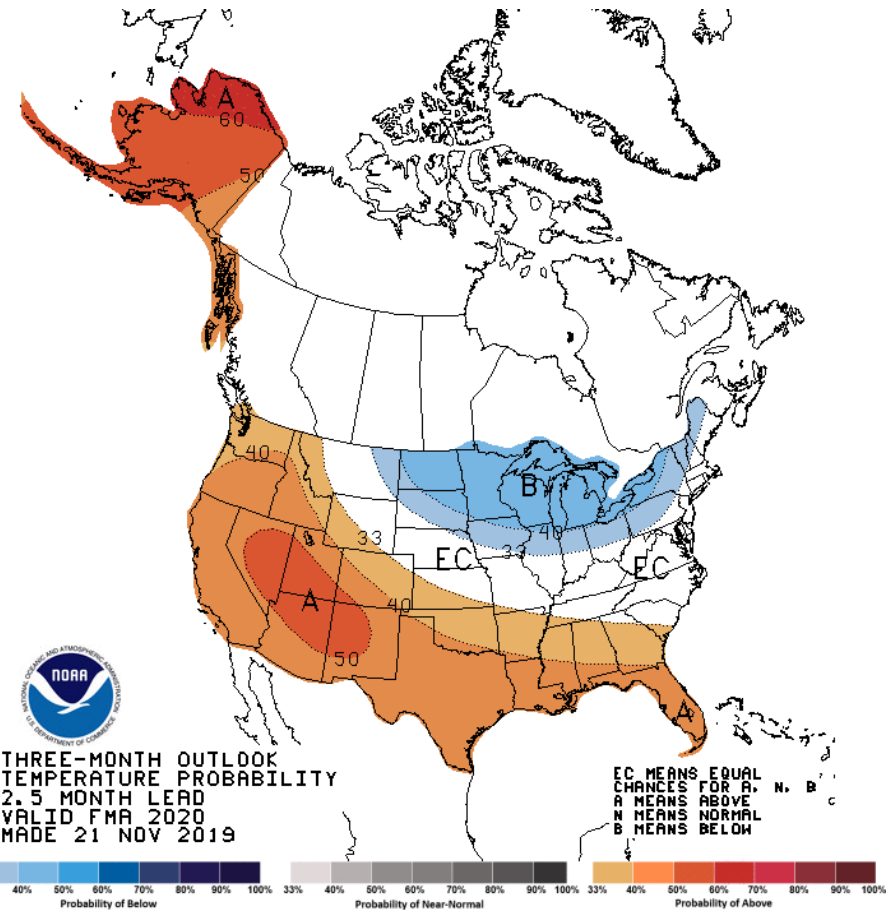
For more details on OCN, check out the ENSO blog post on climate.gov that will be released today!

February-March-April (FMA) Outlook 2020

Precipitation Chances



Temperature Chances



http://www.cpc.ncep.noaa.gov/products/predictions/long_range/

Summary

- Currently, the ENSO Alert system is inactive.
- ENSO-neutral is favored during the Northern Hemisphere winter 2019-20 (~70% chance), continuing through spring 2020 (60 to 65% chance).
- Still some chances of El Niño development though it is the less favored category (~25% in the winter/spring)
- Winter (Dec-Feb) seasonal prediction mostly makes use of the “Trend” (15-year average relative to 30-year climo)

[ENSO Diagnostics Discussion](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html)

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[ENSO Blog](http://www.climate.gov/news-features/department/enso-blog) <http://www.climate.gov/news-features/department/enso-blog>