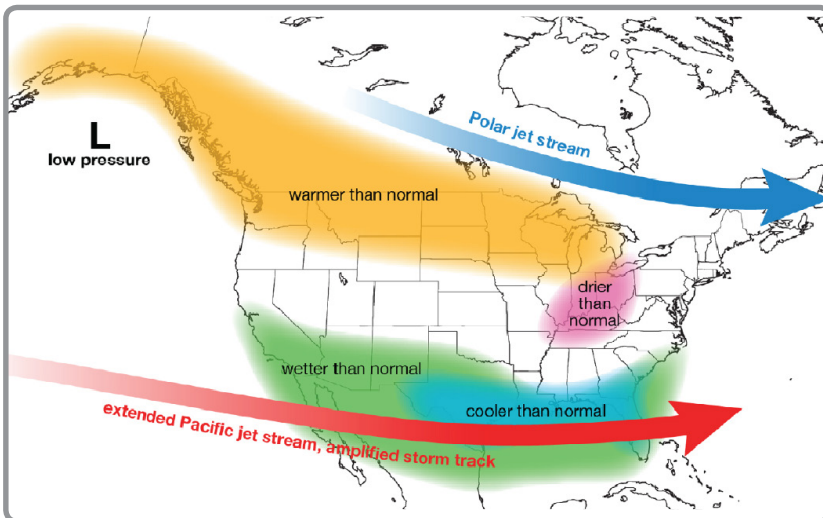


Typical El Niño Winter Weather Pattern



Jet Stream pattern during El Niño Winter, showing the split jet stream. During El Niño winter, the southern branch of the Jet Stream provides a conduit for moisture influx across the southern states. It also acts as a steering mechanism for low pressure systems that track off the Gulf Coast of Texas to the coasts of Louisiana and Mississippi. These Gulf lows bring anomalous precipitation and a slightly higher probability of snow or sleet events. (Image Source: NOAA Climate.gov)

El Niño and the South

What is El Niño?

For reasons that we do not fully understand, the trade winds in the equatorial Pacific break down every 3 to 5 years. This in turn causes the waters along the eastern equatorial Pacific Ocean to warm up dramatically. Because global weather patterns are heavily influenced by the interactions between our oceans and the atmosphere, this warming can have a major impact on weather across the planet, including here in the southern United States. This phenomenon is known as El Niño.

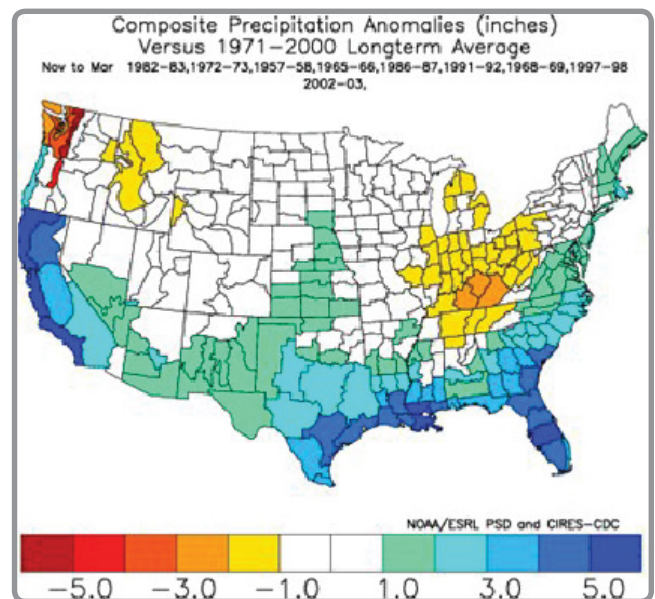
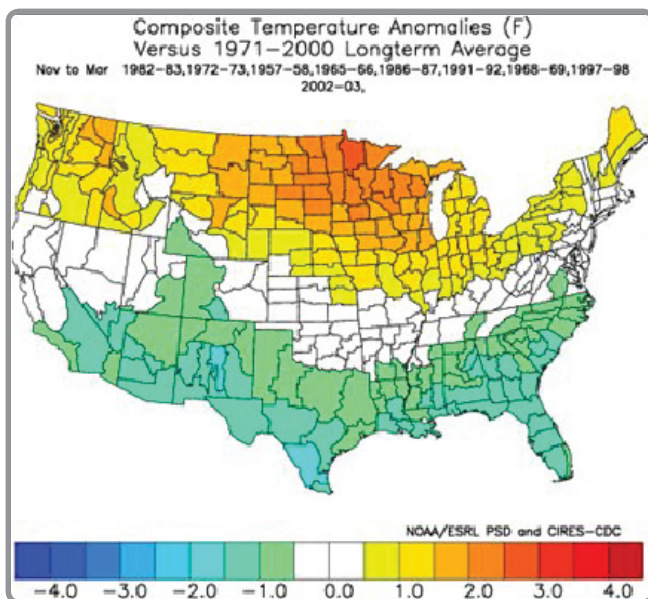
How does El Niño affect our weather?

In the south-central United States, there are typically four major impacts during an El Niño event. These consist of:

- above normal precipitation, particularly during winter
- below normal temperatures, also during winter
- a less active hurricane season, with fewer named storms
- a slightly higher probability of snowfall and sleet events

Winter Temperature and Precipitation Anomalies during El Niño Events

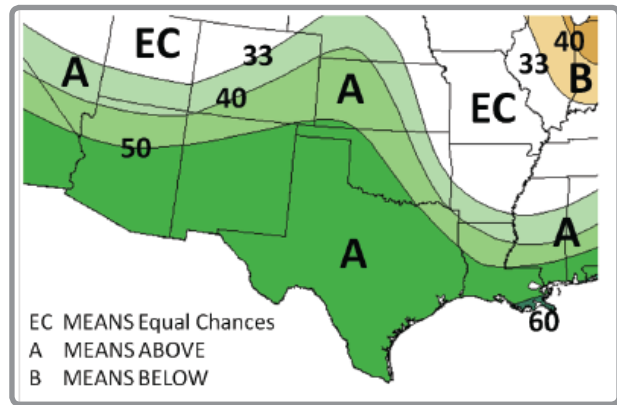
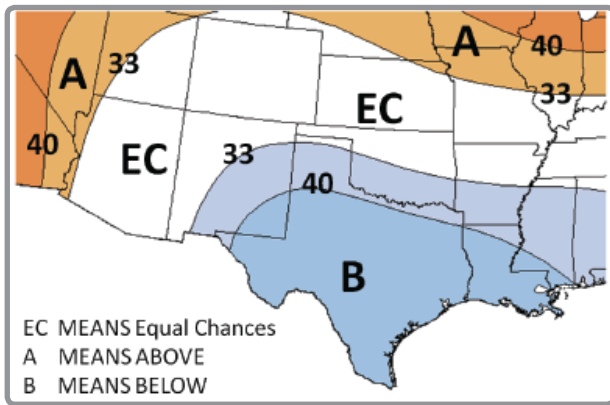
Composite Temperature and Precipitation Anomalies for Nov–Mar during El Niño Events



Composite Temperature (left) and Precipitation (right) Anomalies for Nov–Mar during El Niño Events. Temperatures across the south central states average between 1 to 2 degrees F below normal. Along the Gulf Coast from November through March, precipitation totals generally average between 3 to 5 inches above normal, decreasing to 1 to 3 inches above normal from New Mexico to northeastern Texas (right). Source: NOAA/ESRL and CIRES-CDC.

Climate Outlooks from NOAA's Climate Prediction Center

Temperature and Precipitation Outlooks for Dec–Feb



Seasonal Three-Month (Dec–Feb) Outlooks for Temperature (left) and Precipitation (right). The Climate Prediction Center, in accordance with the strength and persistence of this ENSO event, are calling for colder than normal conditions across most of Texas and Louisiana, as well as southeastern New Mexico. Above normal precipitation is expected across the Southern Plains, with probabilities ranging from just over 60 percent in southeastern Louisiana, to 40–50 percent over much of the remaining region. Maps produced at the Southern Regional Climate Center; Data Source: cpc.noaa.gov

2015 Hurricane Season and El Niño

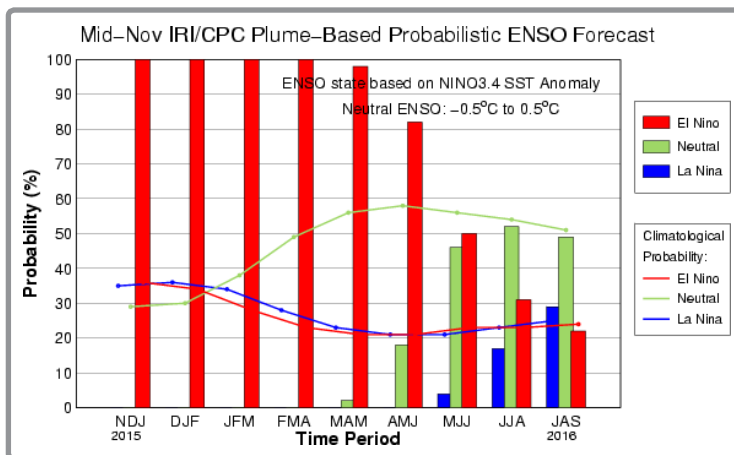
2015 Hurricane Season Statistics through November 18

	NOAA Predicted	CSU Predicted	Seasonal Average	To Date
Named Storms	6–11	7	12	11
Hurricanes	3–6	3	6	4
Major Hurricanes (category 3 or higher)	0–2	1	3	2

2015 Hurricane Season

As expected, the current El Niño has made an impact on this year's hurricane season. As of November 18, there have been 11 named storms, only four of which have reached hurricane status. Of those, there were only two major hurricanes. Though the number of named storms is on the high end of the predicted range by NOAA, the hurricane count this year is well below average (currently: 4; seasonal average: 6). Moreover, only one storm has been located in the Gulf of Mexico this year, and that was Tropical Storm Bill, which occurred in mid-June.

El Niño Winter Outlook



Early November CPC/IRI Consensus Probabilistic ENSO Forecast. Forecasts from the Climate Prediction Center and the International Research Institute indicate that there is near absolute certainty that El Niño is going to persist through winter. There is also a 95 percent chance that it may persist through early spring (March to May). Models are predicting a slight strengthening of the El Niño signal over the winter months. Image Source: <http://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/>

Southern Plains Region Partners

- NOAA/NWS Climate Prediction Center
cpc.noaa.gov
- NOAA/NESDIS National Centers for Environmental Information (NCEI)
ncdc.noaa.gov
- NOAA/NWS Southern Region
srh.noaa.gov
- State Climatologists
stateclimate.org
- Southern Climate Impacts Planning Program
southernclimate.org
- Southern Regional Climate Center
srcc.lsu.edu