

SECC Summer Climate Outlook

Date updated: May 20, 2010

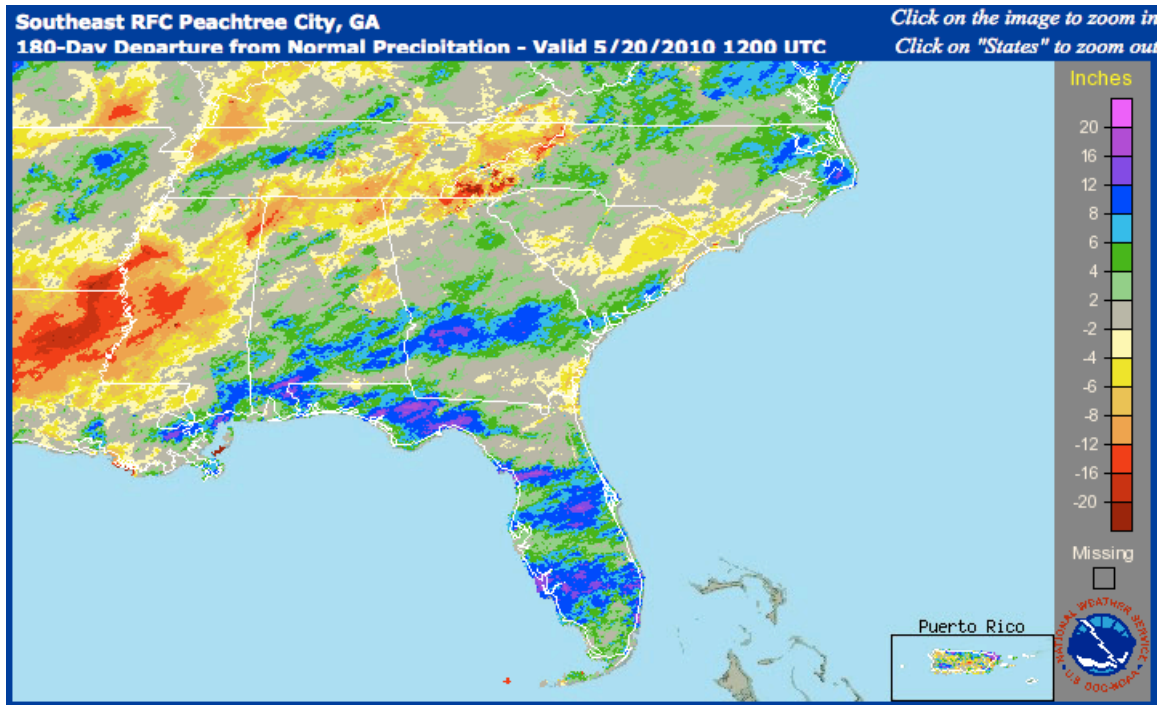
El Niño is over in the Pacific Ocean

Pacific Ocean is Currently in transition. After reaching *moderate to strong* levels in December and January, El Niño has faded over the last two months. El Niño refers to a periodic (every 2-7 years) warming of the tropical Pacific Ocean along the equator from the coast of South America to the central Pacific. This past El Niño can be considered a *strong* event and was certainly the strongest El Niño since the great one in 1997/1998. Ocean surface temperatures warmed to nearly 2.0 degrees C higher than normal in the El Niño region during the peak of this past event in late December.

Since late December, the El Niño began losing strength, but remained at *moderate to strong* intensity through the winter and into the month of April. In the last few weeks the decay has occurred more quickly and sea surface temperatures are now very close to normal across the entire region. When sea surface temperatures are close to normal as they are now, the Pacific Ocean is classified as Neutral phase.

One to three months of Neutral conditions is the most likely forecast right now with a wait and see attitude on the possibility of La Niña developing later this summer. We can say that return to El Niño is highly unlikely for the remainder of 2010.

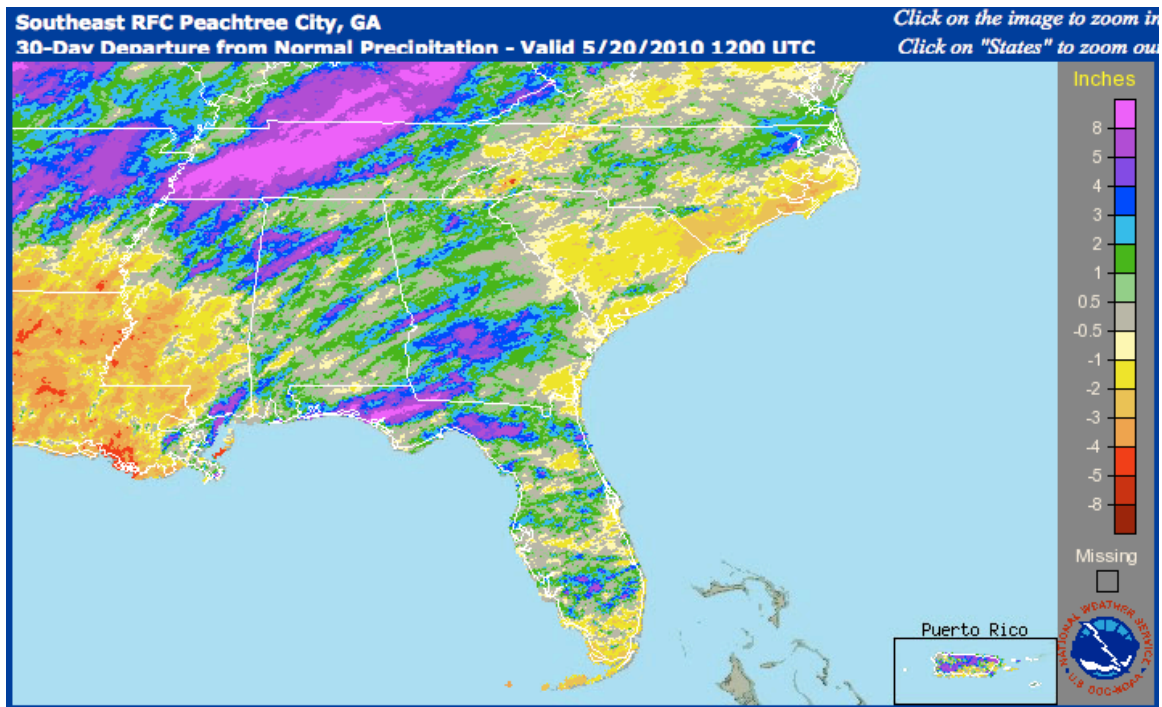
Wet and cold El Niño winter and wet spring set the stage for summer. El Niño is known for bringing frequent storminess and excess rainfall to parts of the Southeast during the winter months and this past year has been no exception. In November through March El Niño typically leads to rainfall 40% to 50% greater than normal over the peninsula of Florida and up to 30% greater than normal over coastal Alabama, South Georgia, and coastal North and South Carolina. The only thing atypical about rainfall patterns this past winter and early spring is that the above normal rainfall extended all the way to northern Alabama and Georgia instead of only affecting the coastal areas. The map below of 180-day rainfall departures from normal for the Southeast U.S. (approximately December through May) shows above normal rainfall that is greatest over the peninsula of Florida, but the pattern extends throughout Florida, Alabama, Georgia, and North Carolina.



180-day rainfall departures from normal in inches (courtesy NOAA/NWS).

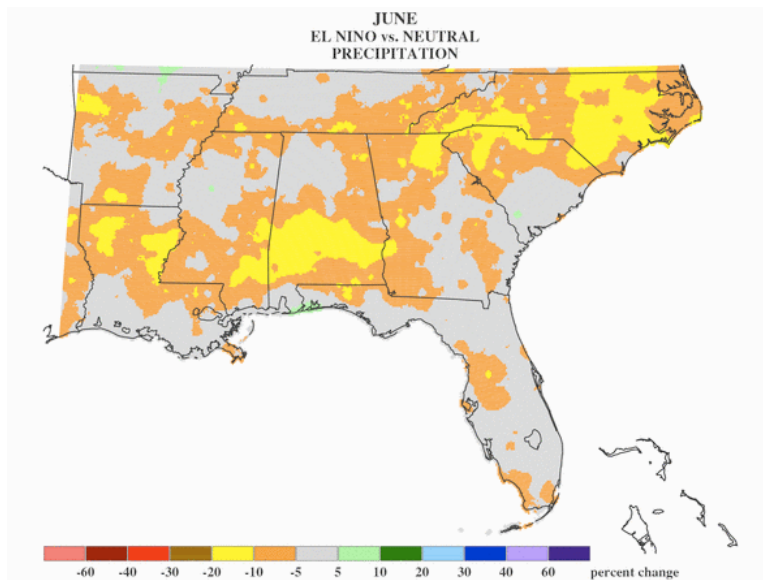
El Niño also exerted its influence on temperatures this winter. Winter temperatures averaged 3 to 5 degrees F below normal across the Southeast, resulting in greater chill accumulations than normal years. Parts of the Southeast, especially Florida, also experienced some of the coldest temperatures since 1985. The first half of January featured an extended freezing spell, where Tallahassee recorded a record 14 consecutive days below freezing. The extreme cold temperatures cannot be blamed on El Niño alone, but were also consistent with one phase of another climate pattern known as the North Atlantic Oscillation, which was highly negative during that time.

Although the connection between El Niño and rainfall usually diminishes in April, this past spring saw a continuation of rainy weather well into the Spring. The map below of 30-day rainfall departures from normal shows excesses from 2 inches to 5 inches or more over parts of the Florida Panhandle and southern Georgia. All of this extra winter and spring rainfall has had the beneficial effect of recharging soil moisture, surface water, and groundwater heading into the summer growing season.



30-day rainfall departures from normal in inches (courtesy NOAA/NWS).

El Niño may be over, but effects could linger into summer. The analysis of past El Niño events show that the following late spring/early summer period often turns somewhat drier than normal. The map below shows typical June rainfall patterns following an El Niño in percent of normal. Most of North Carolina, Alabama, and parts of Georgia indicate that a post-El Niño summer can be 5 to 20 percent drier than normal. A word of caution; summer rainfall patterns in the Southeast are still quite unpredictable and the connection to El Niño is nowhere nearly as strong as in the winter months, when such predictions are much more certain.



Typical June rainfall patterns following an El Niño in percent of normal.

In North Alabama, North Georgia, and the Carolinas, spring potentially brings the last chance of meaningful recharge for surface and groundwater. Evapotranspiration exceeds normal rainfall during the summer months, so winter and spring recharge received this year is important for water resources. During the summer the Southeast is characterized by hot, humid conditions and convective thundershowers. Coverage and frequency of these afternoon thunderstorms is higher in Florida and extreme South Georgia, but more "hit and miss" in the remainder of Georgia, Alabama, and the Carolinas. Over Florida, the onset of the summer rainy season is usually anywhere from mid-May to early June. The summer rains effectively end the wildfire season in the state, which has been extraordinarily quiet this year due to the abnormal winter and spring rainfall. The wildfire season rarely lasts past mid-June.

For more detailed information on El Niño climate shifts in your particular county, please refer to the Climate Risk Tool at AgroClimate:

[Climate Risk Tool](#)