

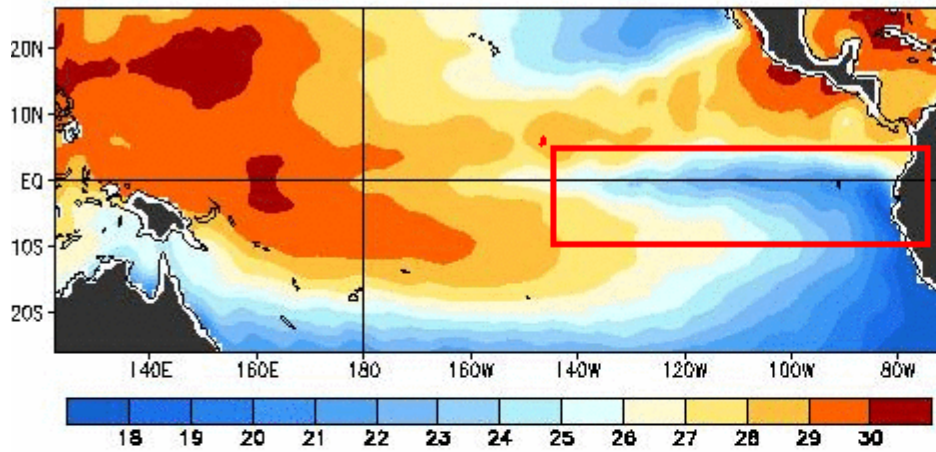
El Nino Update:

In the spring addition of Under the Big Sky there was talk about the possibility that the El Nino that was experienced last winter might quickly transition to a La Nina pattern this summer. As you may recall a La Nina is a periodic cooling of ocean surface temperatures in the central and east-central Pacific that usually occurs every 3 to 5 years. Most of the long range computer models this spring were indicating that additional cooling would occur this spring and summer, and some of the forecast models were indicating a rapid transition to La Nina conditions. So, what actually occurred during the last few months? In the figures below I have highlighted in red the observed sea surface temperature as well as the sea surface temperature anomalies along and off the South American Coast in the regions that are closely monitored for El Nino and La Nina. One can see that sea surface temperatures in this region remain below average. The transition to La Nina has slowed in recent weeks, but nearly all of the models indicate that temperatures will remain below average into the coming winter. There is still uncertainty as whether there will be a weak La Nina or more neutral conditions - where there is neither an El Nino or La Nina.

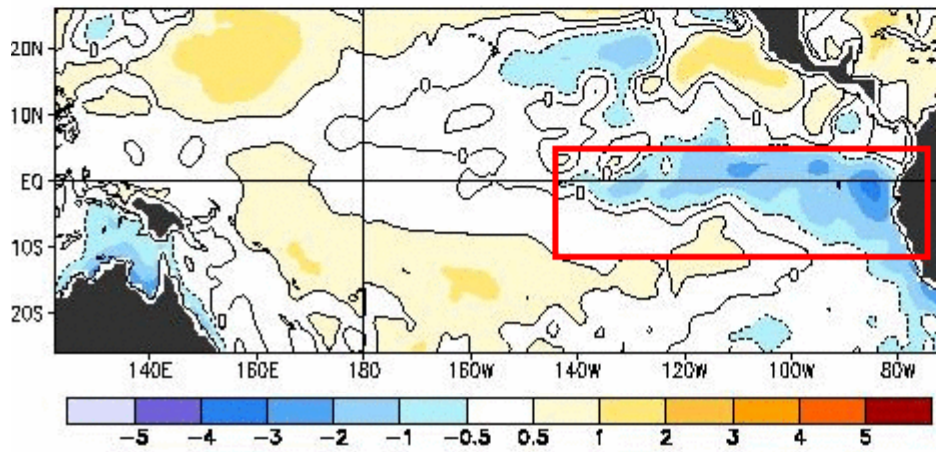
So, what does all this mean for the weather across northeast Montana for the fall and winter? There is a strong correlation across the Northern Plains for colder than average temperatures during the winter months during a La Nina. During the fall months there is no strong climate signal generated by a La Nina across the Northern Plains. Right now the best forecast for this coming fall is climatology – with equal chances of below, near, or above normal temperatures. See the figure below with the official forecast from the Climate Prediction Center.

As far as the winter goes, the official forecast from the Climate Prediction Center calls for an increased chance of above normal temperatures with an equal chance of below, near, or above average precipitation. This could of course change if there is a more rapid transition to La Nina conditions this fall.

Observed Sea Surface Temperature (°C)

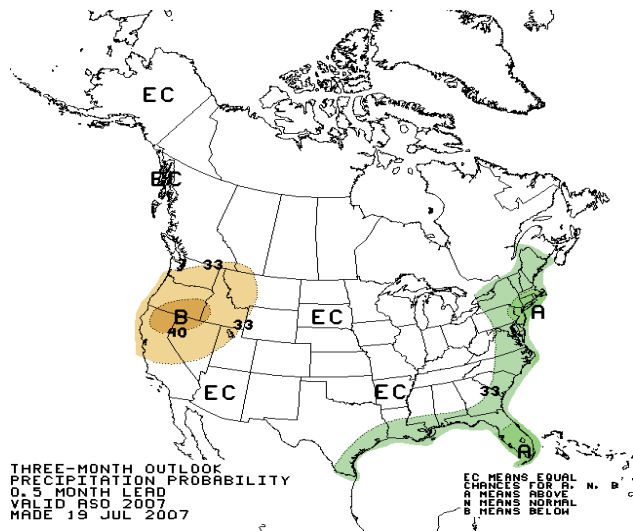
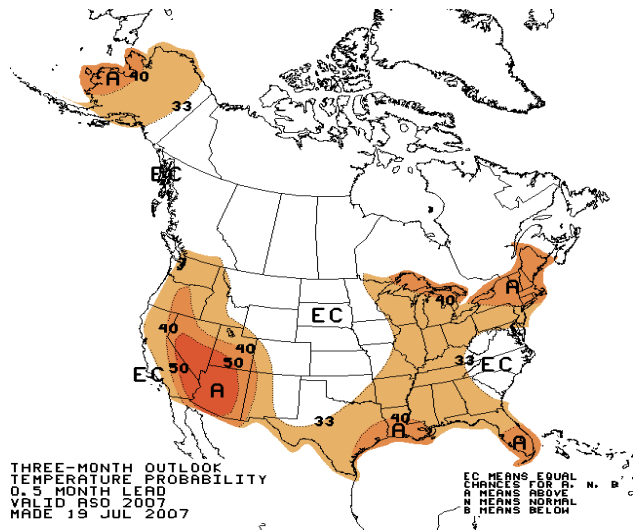


Observed Sea Surface Temperature Anomalies (°C)

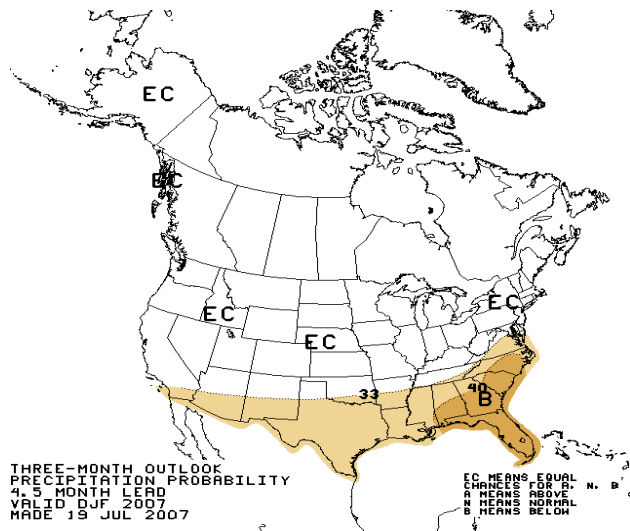
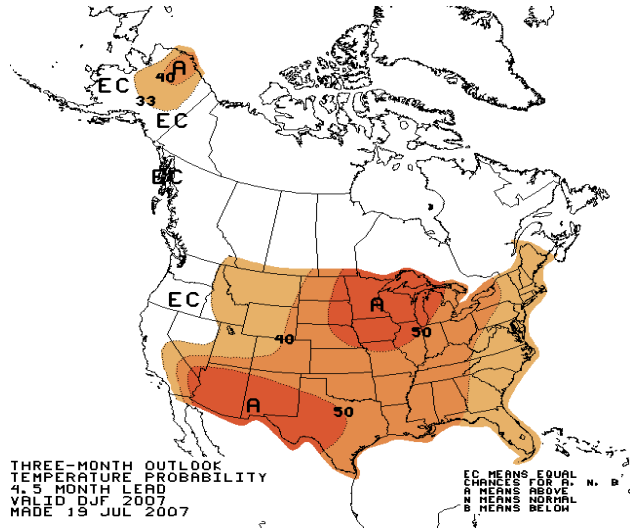


7-day Average Centered on 18 July 2007

Here are the current temperature and precipitation outlooks from the Climate Prediction Center for August through October. Right now there is no strong climate signal, and the best forecast is to use climatology.



Here are the current temperature and precipitation outlooks from the Climate Prediction Center for December through February. Right now there is some indication that there is an increased chance of above normal temperatures, but there is no strong climate signal as far as precipitation goes. Of course if a full fledged La Nina were to develop later this fall the forecast would likely change with an increased chance of below average temperatures. This is something that will be monitored closely during the next few months.



Corey Bogel
General Forecaster