

THE ATMOSPHERIC RESERVOIR

Examining the Atmosphere and Atmospheric Resource Management

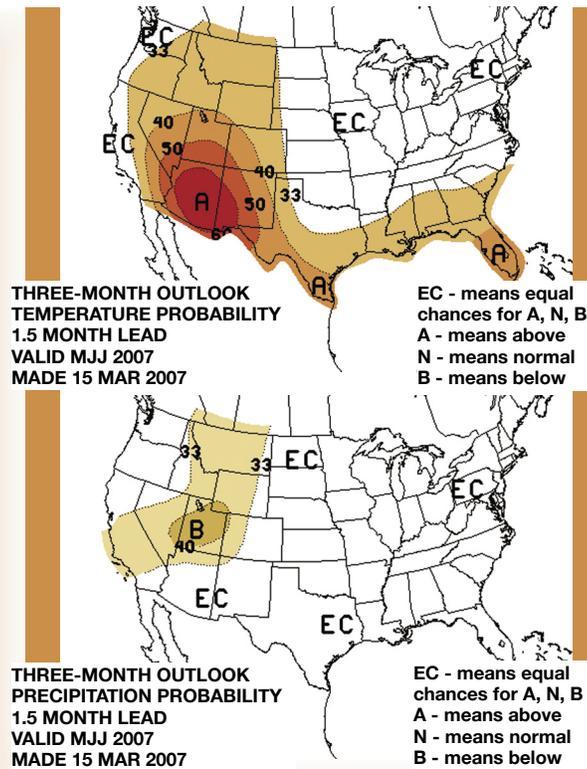
Spring and Summer Weather Outlook

By Mark D. Schneider

North Dakota farmers and ranchers have been asking about temperature and precipitation predictions for the remaining part of spring and the upcoming summer. Looking at the Climate Prediction Center's Three-Month Outlook for May, June, and July, equal chances for normal temperatures and precipitation are forecasted for North Dakota (See graphic). Just to our west in Montana though, increased chances for above normal temperatures and below normal precipitation are forecasted.

As we all know, temperatures and precipitation don't usually follow straight lines drawn on maps. North Dakotans experienced warmer than normal temperatures and normal or just below normal precipitation this past winter. February was unusually cold, but the rest of the winter months made up for it. This was due in part to the effects of an El Nino cycle, which was discussed in the Nov. 2006 issue of *North Dakota Water*.

The El Nino cycle, talked about so frequently this past winter, has ended and a new La Nina cycle is likely to take its place over the next few months. La Nina is defined by the cooler than normal sea-surface temperatures in the eastern equatorial Pacific Ocean which prevail during its occurrence. Typically, a La Nina is also a longer-term cycle



that can last for two to three years. Only significant El Nino events last for two or more years. Most El Nino events only last between a half-year and a year and a half in duration.

What does La Nina mean for North Dakota's weather? There isn't a strong correlation between La Nina and spring or summer weather here in North Dakota. However, during the winter months cooler than normal temperatures are often observed over our state. Precipitation during a La Nina winter may be above normal for early winter and then below normal during late winter and early spring. These temperature and precipitation patterns that occur during a La Nina cycle aren't understood as well as

patterns that occur during El Nino cycles.

Many of us have been watching the news and hearing reports of a significant hurricane season being forecasted for the Atlantic Ocean this year. Dr. William Gray and Philip Klotzbach from Colorado State University recently revised their Atlantic Basin Seasonal Hurricane Forecast on April 3 to include 17 named storms. The reasoning behind increasing the number of forecasted storms focused on the recent retreat of the El Nino cycle. During an El Nino, conditions in the Atlantic Basin aren't as favorable for hurricane development. El Nino produces strong westerly winds at upper levels of the atmosphere over the Atlantic

Ocean. These winds shear the tops off of developing hurricanes before strong circulations can form.

With increased hurricane activity being forecast, the United States' eastern seaboard and gulf coast states will have to watch the upcoming hurricane season closely. With more storms, there will be a higher probability of one of them making landfall than last season.

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