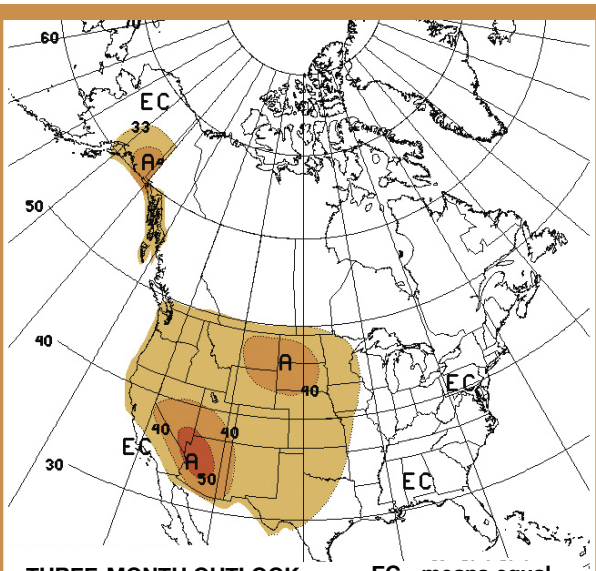
THE
ATMOSPHERIC RESERVOIR
Examining the Atmosphere and Atmospheric Resource Management

Winter '06-'07: Frigid or Mild for North Dakota?

By Mark D. Schneider

Can the weather really be predicted accurately beyond the next three to five days? Climatological trends can be used to forecast the weather for extended periods of time if weather information and models are used correctly.

There are many different long-range weather predictions for the upcoming 2006-2007 winter. Depending on which informational source you believe, we need to be preparing for either frigid or mild weather here in North Dakota.



THREE-MONTH OUTLOOK TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID OND 2006
Made 21 SEP 2006

EC - means equal chances for A, N, B
A - means above
N - means normal
B - means below

The 2007 Farmers' Almanac stated in its' Winter 2006-2007 Outlook for the United States that it, "predicts frigid temperatures, as much as 20 degrees below seasonal norms (and nearly 40 degrees colder than last winter), for Montana, the Dakotas and parts of Wyoming." The Farmers' Almanac has a secret formula for their forecasts that incorporates sunspot, moon phase, astronomical, and atmospheric information. Whether you believe in its forecasts or not, the Farmers' Almanac has been around since 1818 and has a substantial following.

The Climate Prediction Center has an opposing view of what weather might transpire for our state this winter. Their three-month outlook (see graphic) shows a moderate chance for above normal temperatures for most of North Dakota and equal chances for above normal, normal, and below normal precipitation. The Climate Prediction Center has been tracking sea-surface temperatures in the Pacific Ocean in order to predict the magnitude of the current El Nino climatic cycle we are experiencing in North America. Previous articles of The Atmospheric Reservoir explain that El Nino is a condition which results from warmer than normal sea-surface temperatures in the equatorial Pacific Ocean due to weaker than average low-level easterly winds. The current El Nino originated in early April and is expected to last until Spring 2007. During an El Nino, North Dakota typically experiences above normal temperatures and slightly below normal precipitation in the winter months. El Ninos are usually strongest from December through April because sea-surface temperatures reach their peak in the equatorial Pacific during that time.

In regard to North Dakota's ongoing drought, an El Nino weather pattern doesn't promise much relief for our state. The polar and subtropical jet streams are typically too far north and south of North Dakota during El Nino winters to bring the moisture needed for a drought recovery.

One thing is certain for the impending North Dakota winter; if temperatures are even close to normal, it will feel cold in comparison to the mild winters we've experienced so far this decade. Last January was recorded as the warmest on record for the United States. Will we see a repeat this season? We'll know soon enough as December is right around the corner.

Additional information from the Farmers' Almanac and the Climate Prediction Center can be found at http://www.farmersalmanac.com/weather/weather.html and at http://www.cpc.noaa.gov/.

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