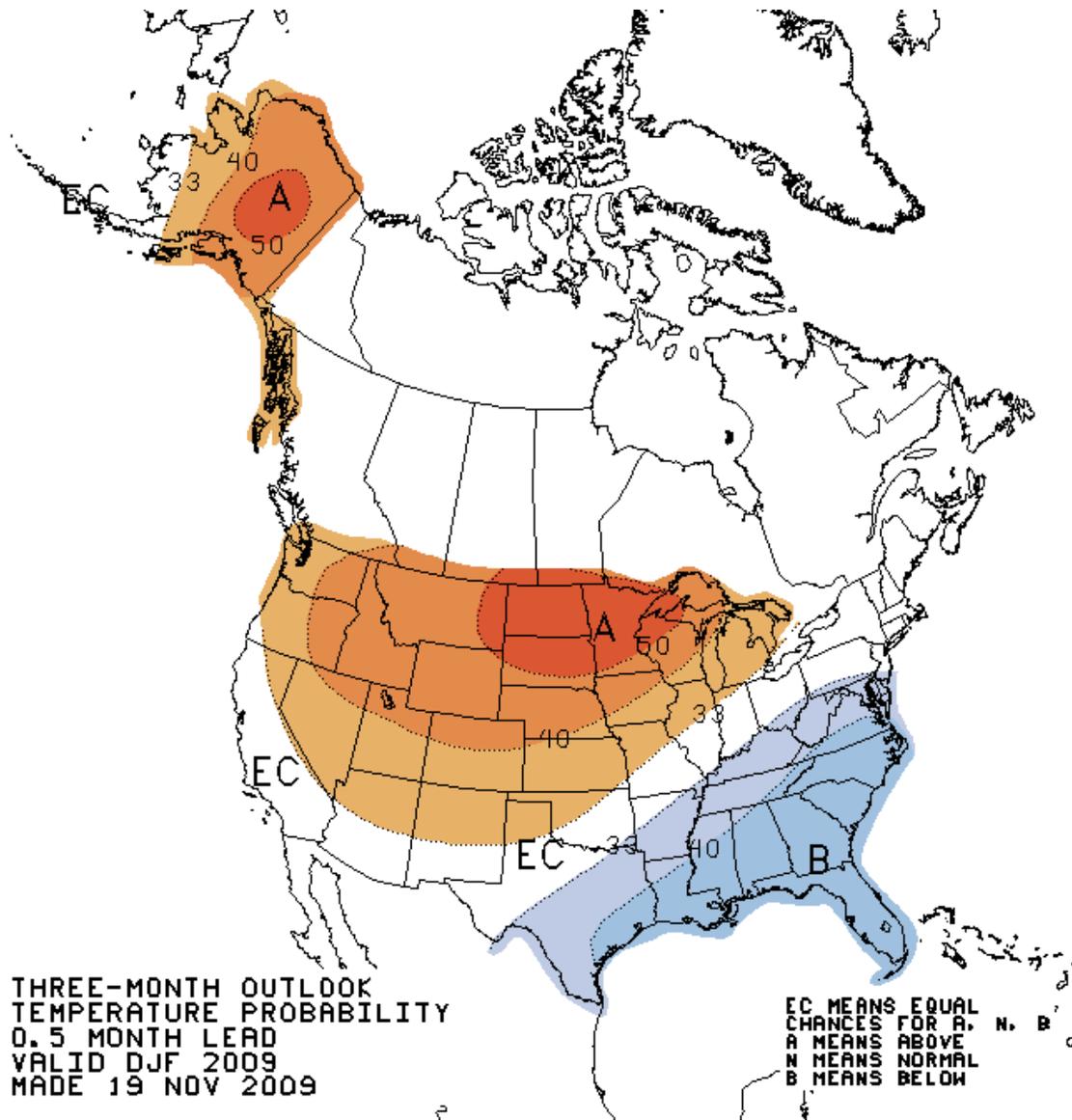
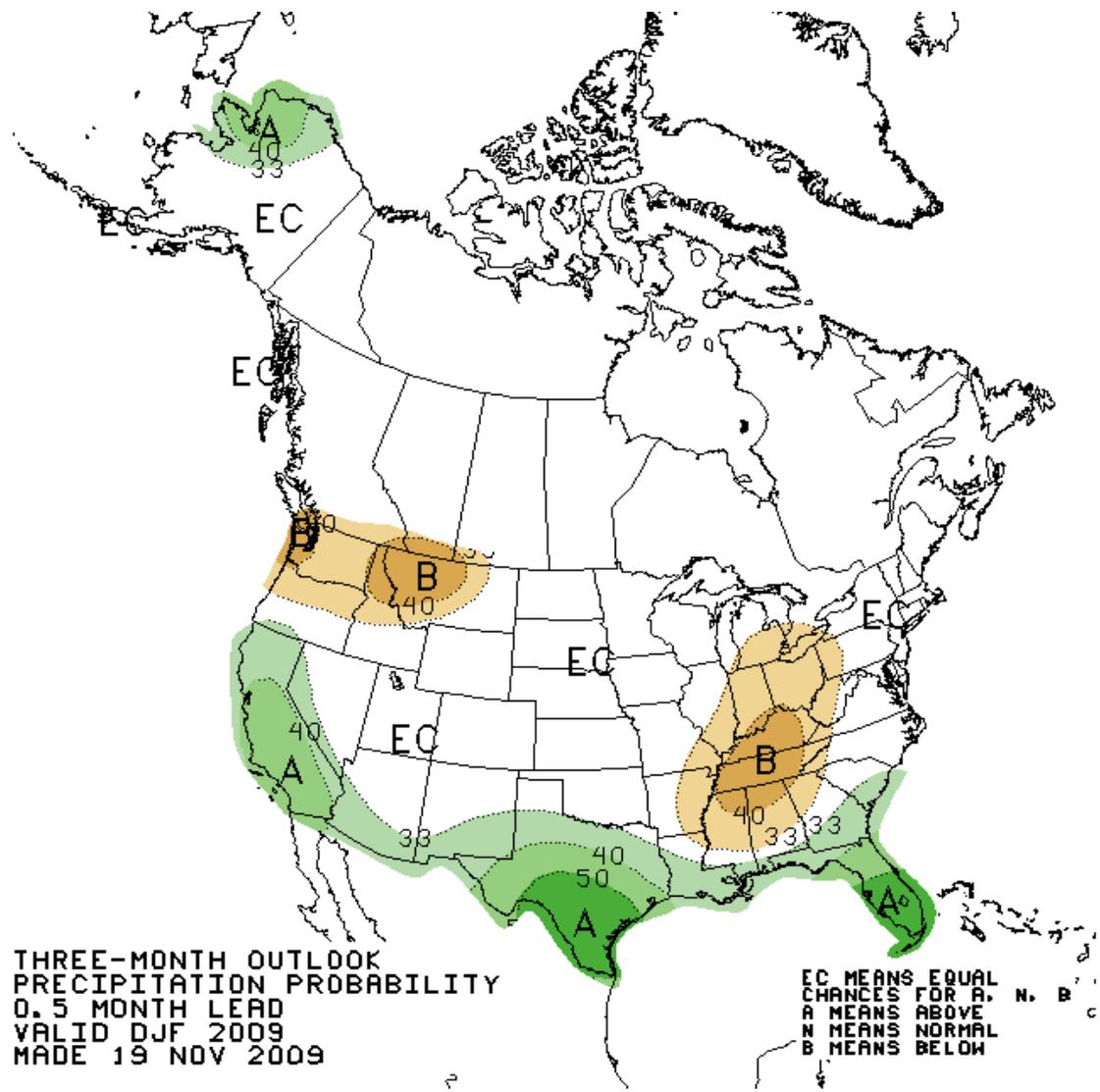


2009-2010 Winter Outlook for South Central and Southeast Colorado

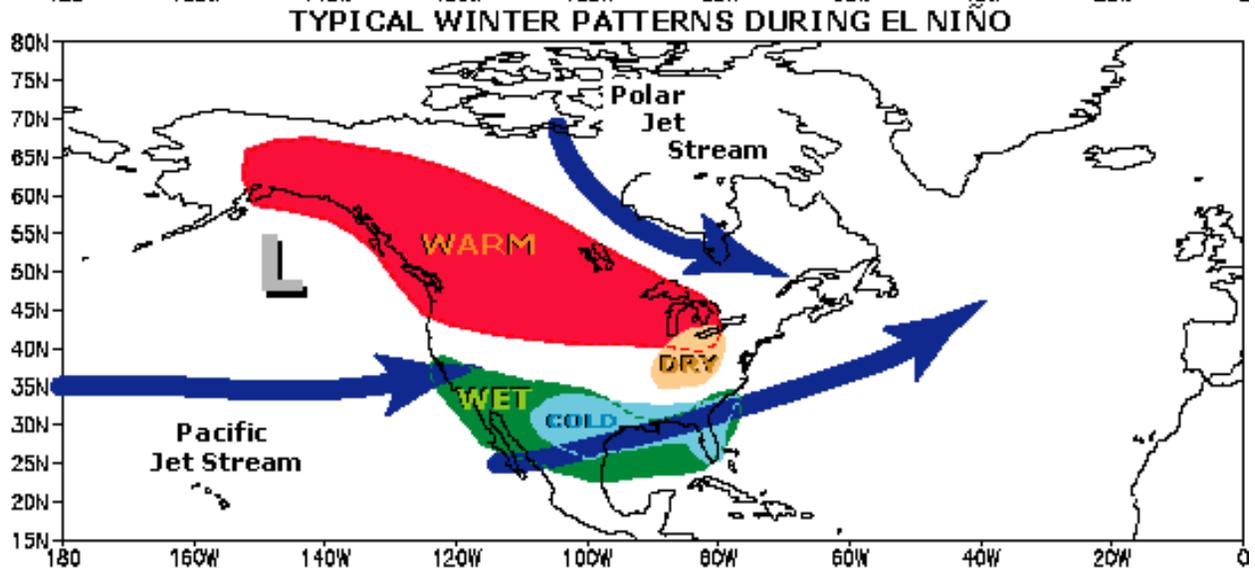
NOAA's Climate Prediction Center (CPC) recently released the 2009-2010 Winter Outlook (December 2009 through February 2010) for the United States.





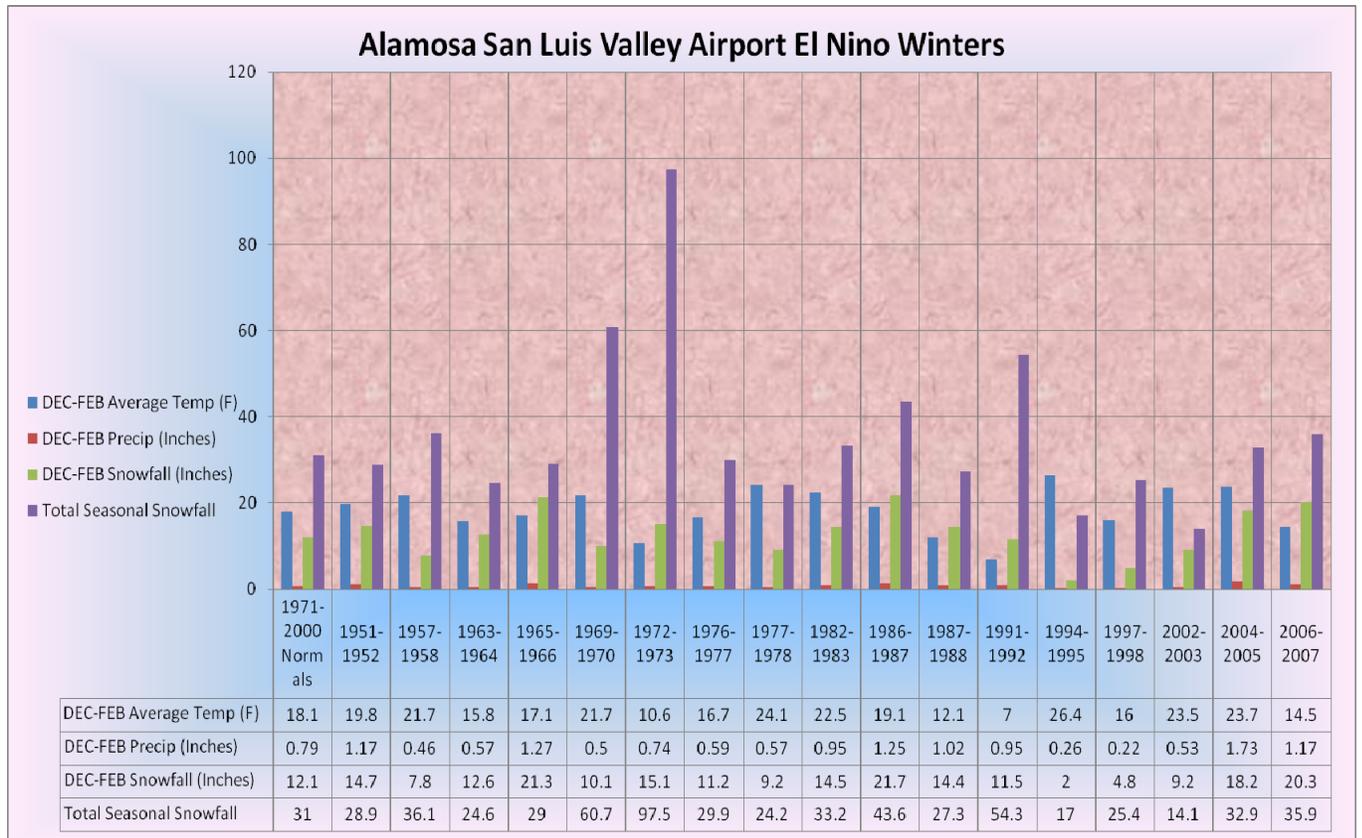
The above graphics are indicating a 36 percent chance of seeing above normal temperatures across all of South Central and Southeast Colorado for the upcoming winter season, with a 33 percent chance of near normal temperatures and a 31 percent chance of below normal temperatures. The current outlook is also indicating equal chances of seeing above normal, near normal or below normal precipitation across the area this winter.

The CPC winter outlook is based heavily on the fact that moderate El Niño conditions currently exist in the tropical Pacific and are expected to persist into the 2009-2010 Northern Hemispheric Winter. **El Niño** conditions refer to the large-scale ocean-atmosphere climate phenomenon linked to a periodic warming in sea-surface temperatures across the central and east-central equatorial Pacific and generally allow for a northern shift in both the Polar and Sub-tropical Jet Streams as illustrated below.

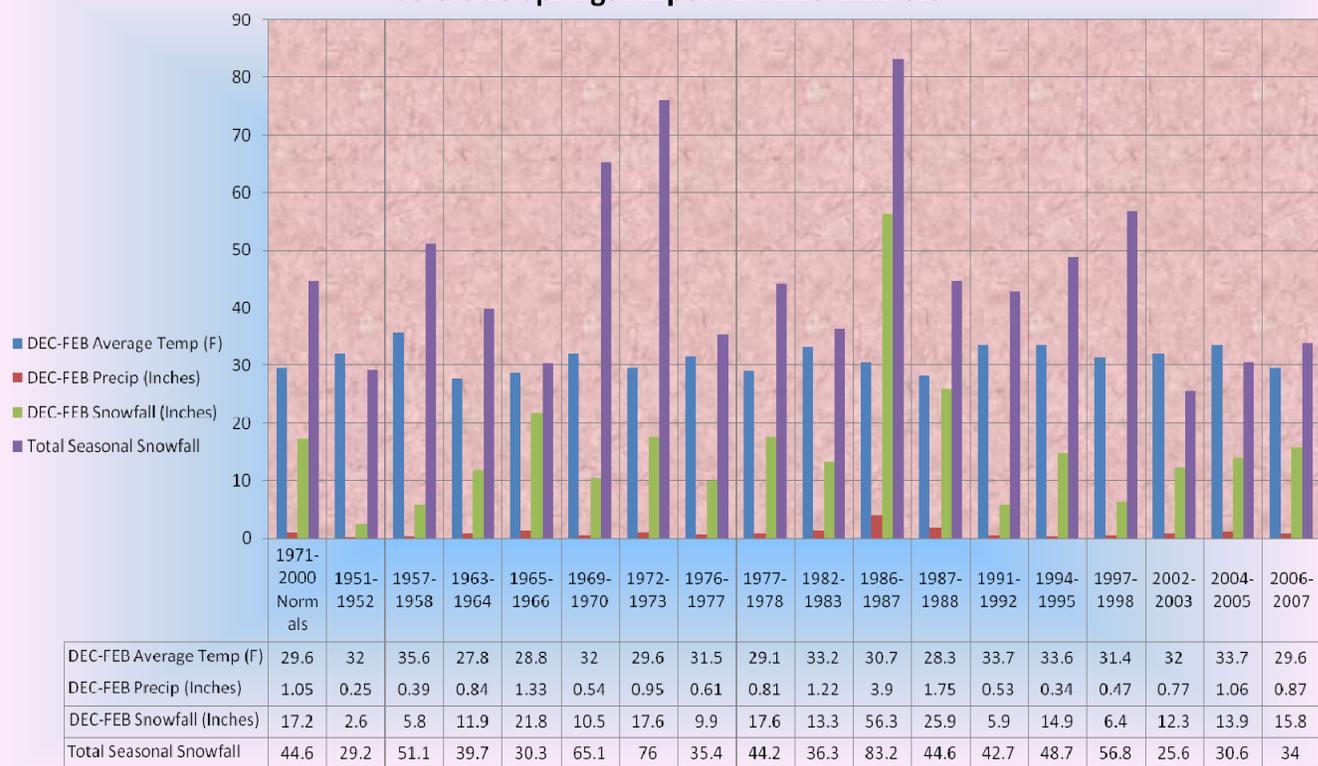


So what does that mean for South Central and Southeast Colorado?

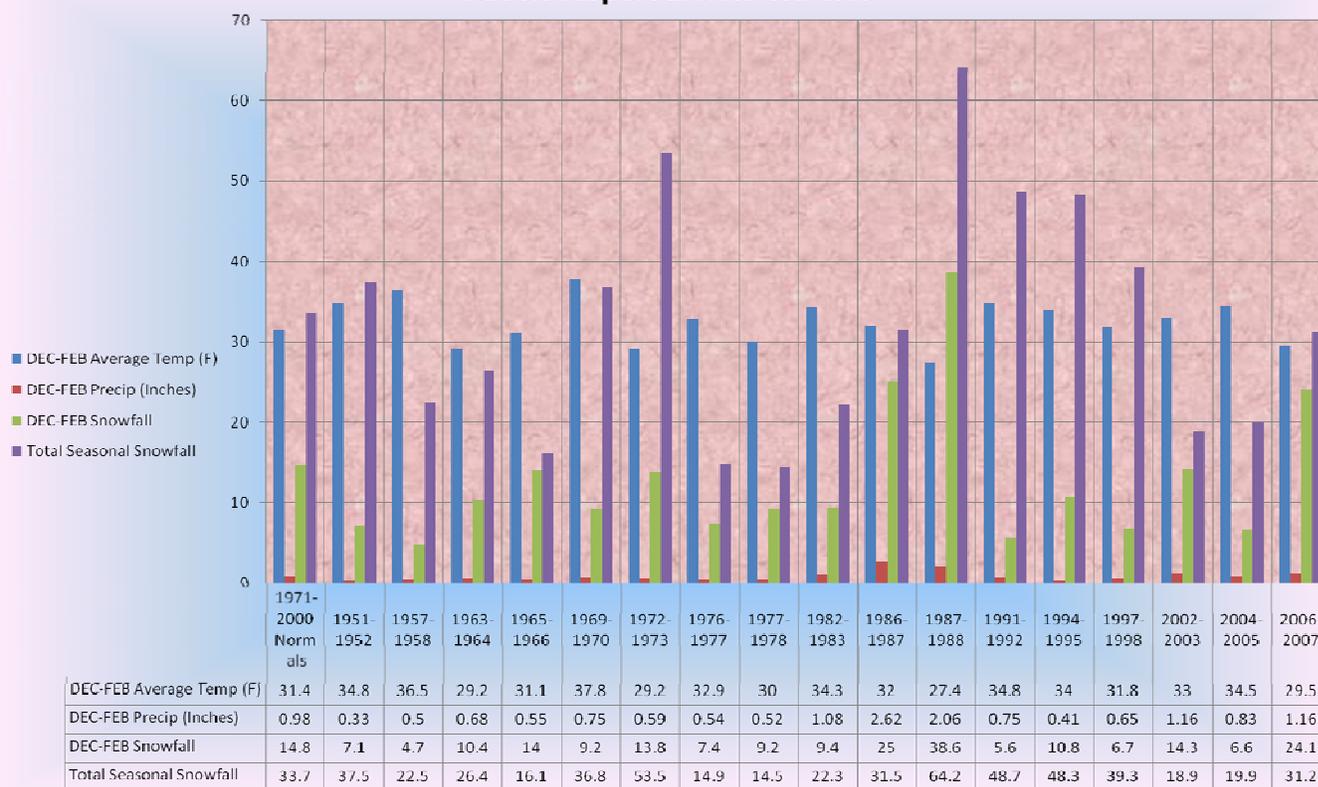
The following graphics illustrate the effects El Niño had on temperatures and precipitation across South Central and Southeast Colorado during previous El Niño winters; namely 1951-52, 1957-58, 1963-64, 1965-66, 1969-70, 1972-73, 1976-77, 1977-78, 1982-83, 1986-87, 1987-88, 1991-92, 1994-95, 1997-98, 2002-03, 2004-05 and 2006-07.

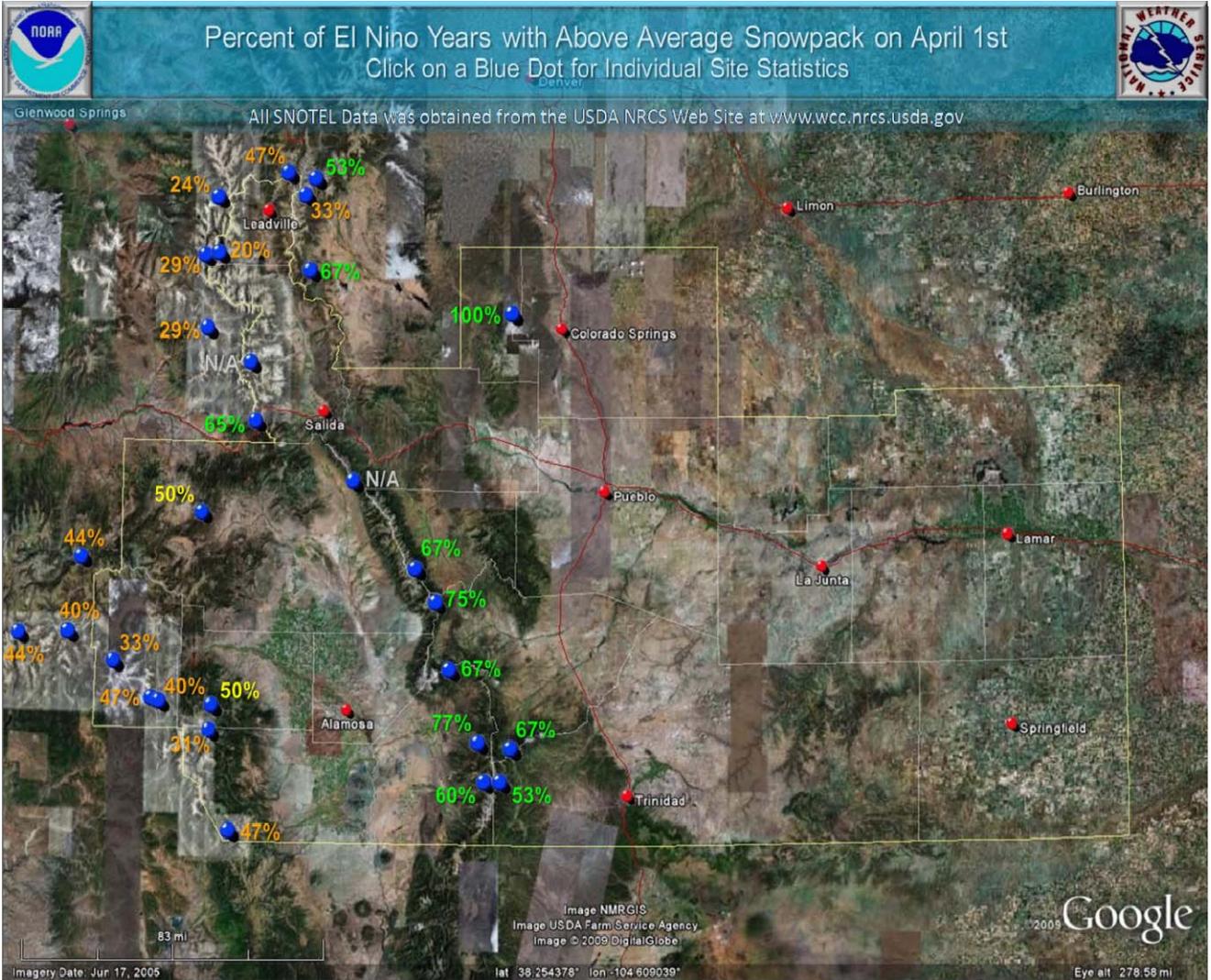


Colorado Springs Airport El Nino Winters



Pueblo Airport El Nino Winters





The temperature data gathered from Alamosa, Colorado Springs and Pueblo during previous El Niño winters does support the higher probability of seeing above normal temperatures for the upcoming winter. Specific temperature forecasts for the 2009-2010 winter season for these and other selected cities across South Central and Southeast Colorado can be found at:

http://www.weather.gov/climate/calendar_outlook.php?wfo=pub

However, the presence of El Niño conditions does not always correlate with warmer temperatures as can be seen in the data from the last El Niño winter of 2006-07, where snowfall from two strong December storm systems allowed for well below average temperatures in January of 2007 (especially across the Southeast Plains) and subsequently below average temperatures for the winter season.

Precipitation forecasts are not as clear cut as temperature forecasts; however some trends in the data can be gathered (especially across the higher terrain). The lower percentage of above normal snowpack across the Southwest and Central Mountains on April 1st and the higher percentage of above normal snowpack across the Southeast Mountains seem to be well correlated with the shift of the Polar and Sub-tropical Jet Streams.

Trends in the data across the southeast plains are more subtle with a general trend of at or above normal precipitation gleaned for El Nino winters. However, data from the winters of 1997-98 and 1982-83 (the two strongest El Nino episodes on record) seemingly show bi-polar results with below normal winter precipitation for the 1997-98 winter season and generally above normal winter precipitation for the 1982-83 winter season. At any rate, if El Nino conditions do persist through the winter of 2009-10, the possibility of more storm systems moving across the eastern plains with the more northern track of the sub-tropical jet stream should lead to the potential of seeing at or above seasonal precipitation this winter.