



Winter/Spring Outlook Upper Colorado Basin 2010

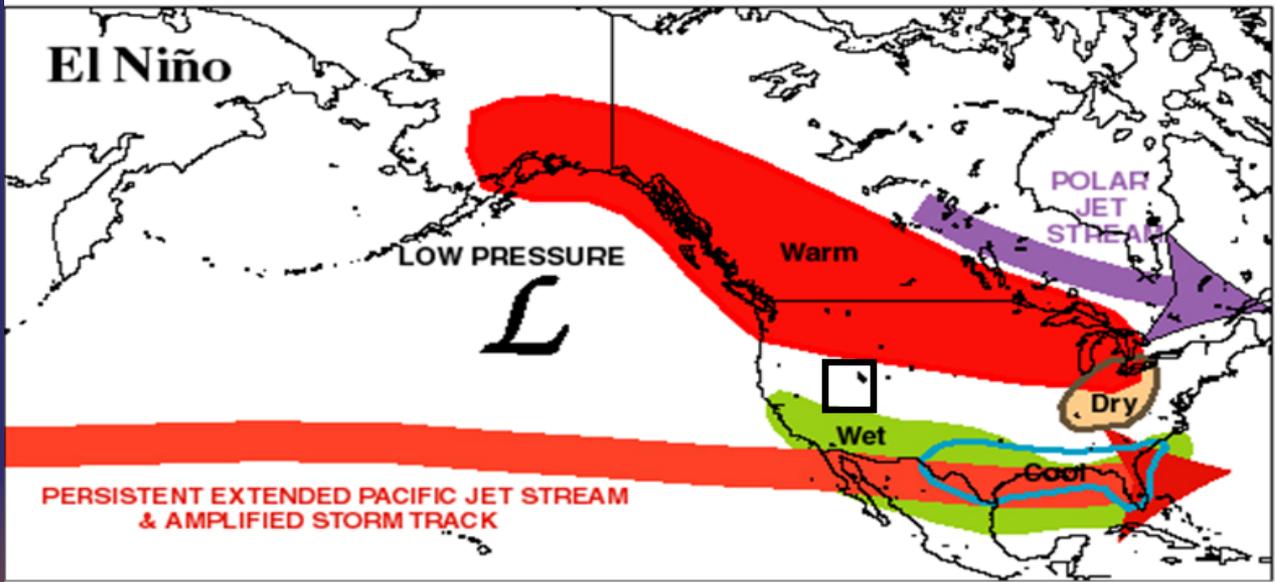




El Nino

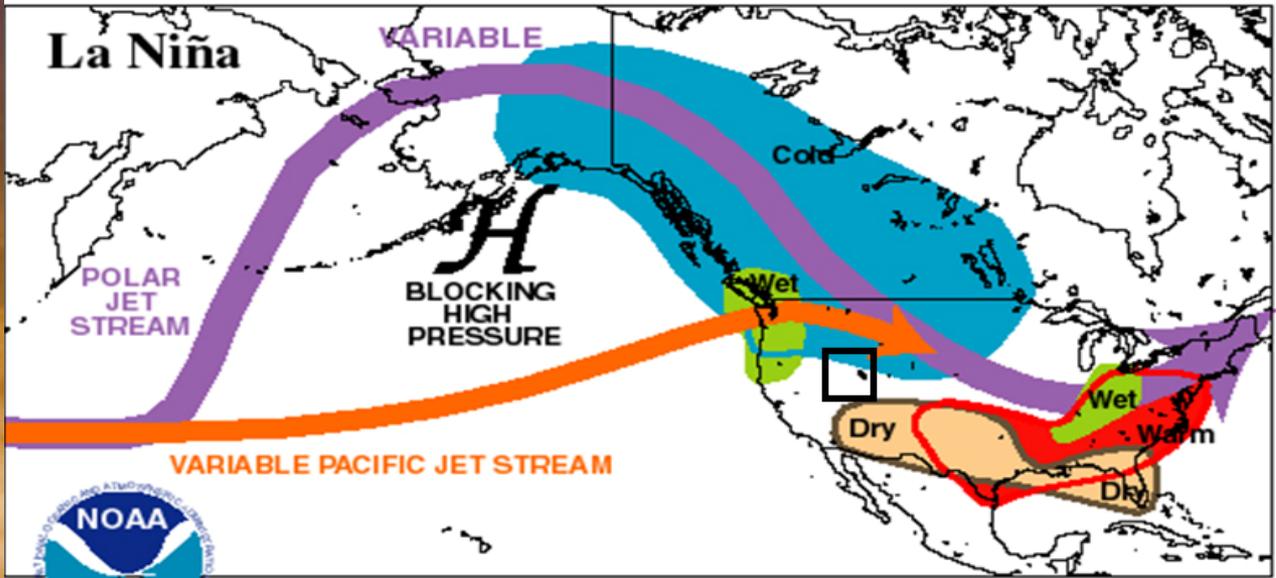


- **According to NOAA's National Weather Service Climate Prediction Center:**
 - **El Niño is present across the equatorial Pacific Ocean.**
 - **Sea surface temperatures (SST) are 1.0°C - 3.0°C above-average across much of the central and east-central equatorial Pacific.**
 - **Based on current observations and dynamical model forecasts, El Niño is expected to continue at least into the Northern Hemisphere spring 2010.**



- **El Niño**
Dry and Warm North of Colorado

Wet and Cool South of Colorado



- **La Niña**
Wet and Cold North of Colorado

Dry and Warm South of Colorado



From 2009 Colorado Snow and Avalanche Workshop Presentation by Joe Ramey, WFO GJT Climate Specialist

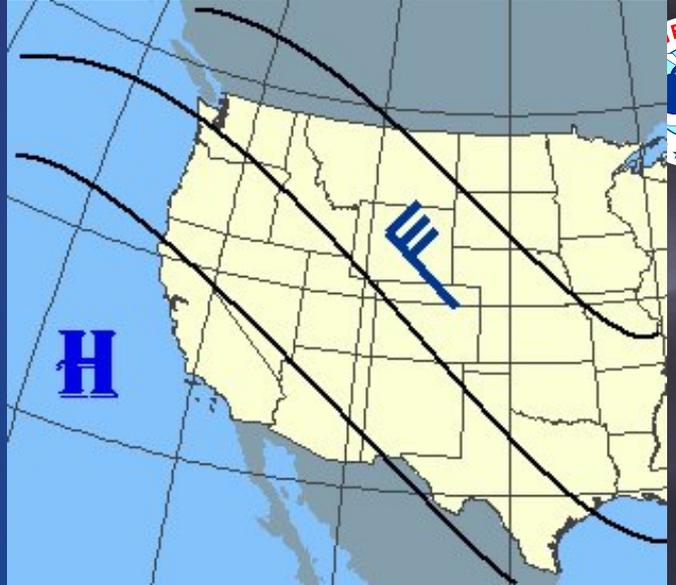


Winter Storm Airflows

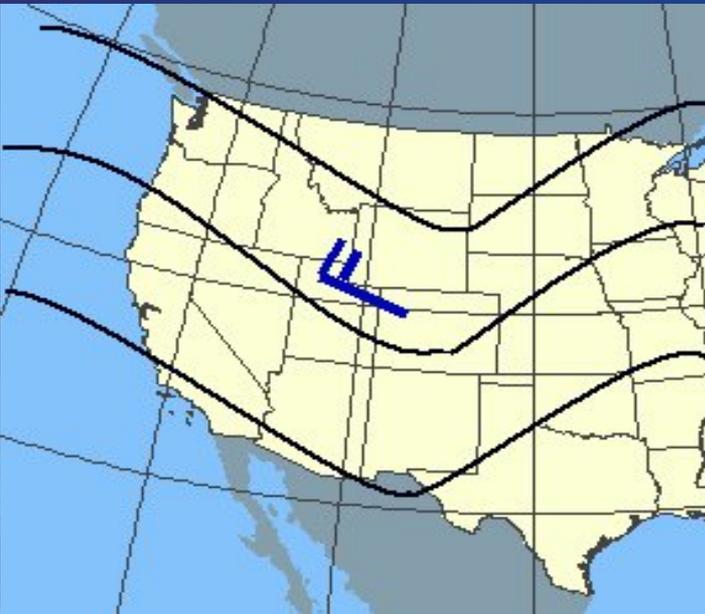
a-b) more common during La Niña, such as 2007-08 and 2008-2009

c) more common during El Niño, such as 2006-2007

a)



b)



c)



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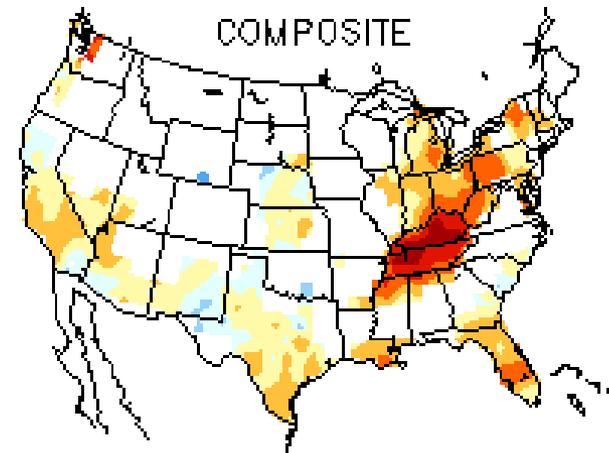
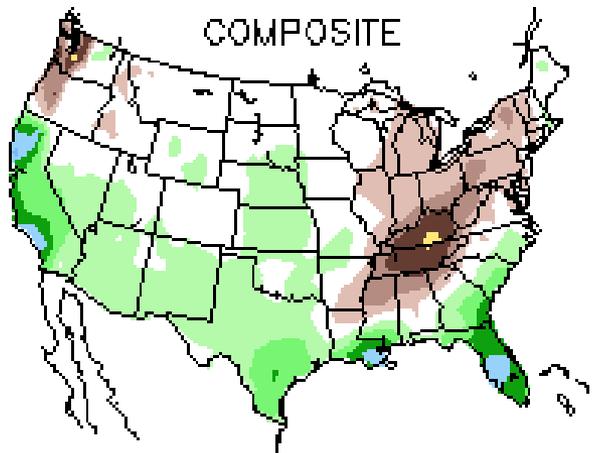
JFM EL NINO PRECIPITATION ANOMALIES (MM) AND FREQUENCY OF OCCURRENCE (%)

ANOMALIES

FREQUENCY

COMPOSITE

COMPOSITE



From the Climate Prediction Center



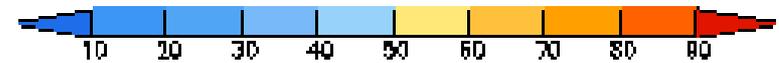
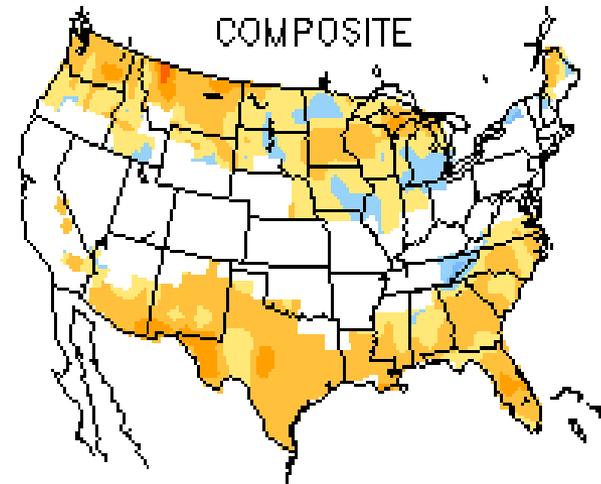
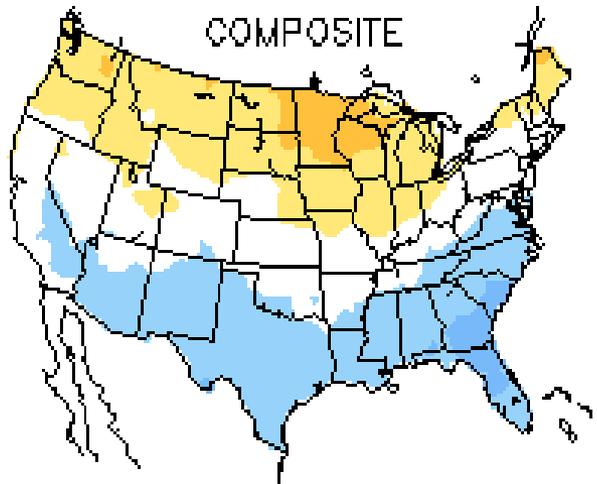
JFM EL NINO TEMPERATURE ANOMALIES (C) AND FREQUENCY OF OCCURRENCE (%)

ANOMALIES

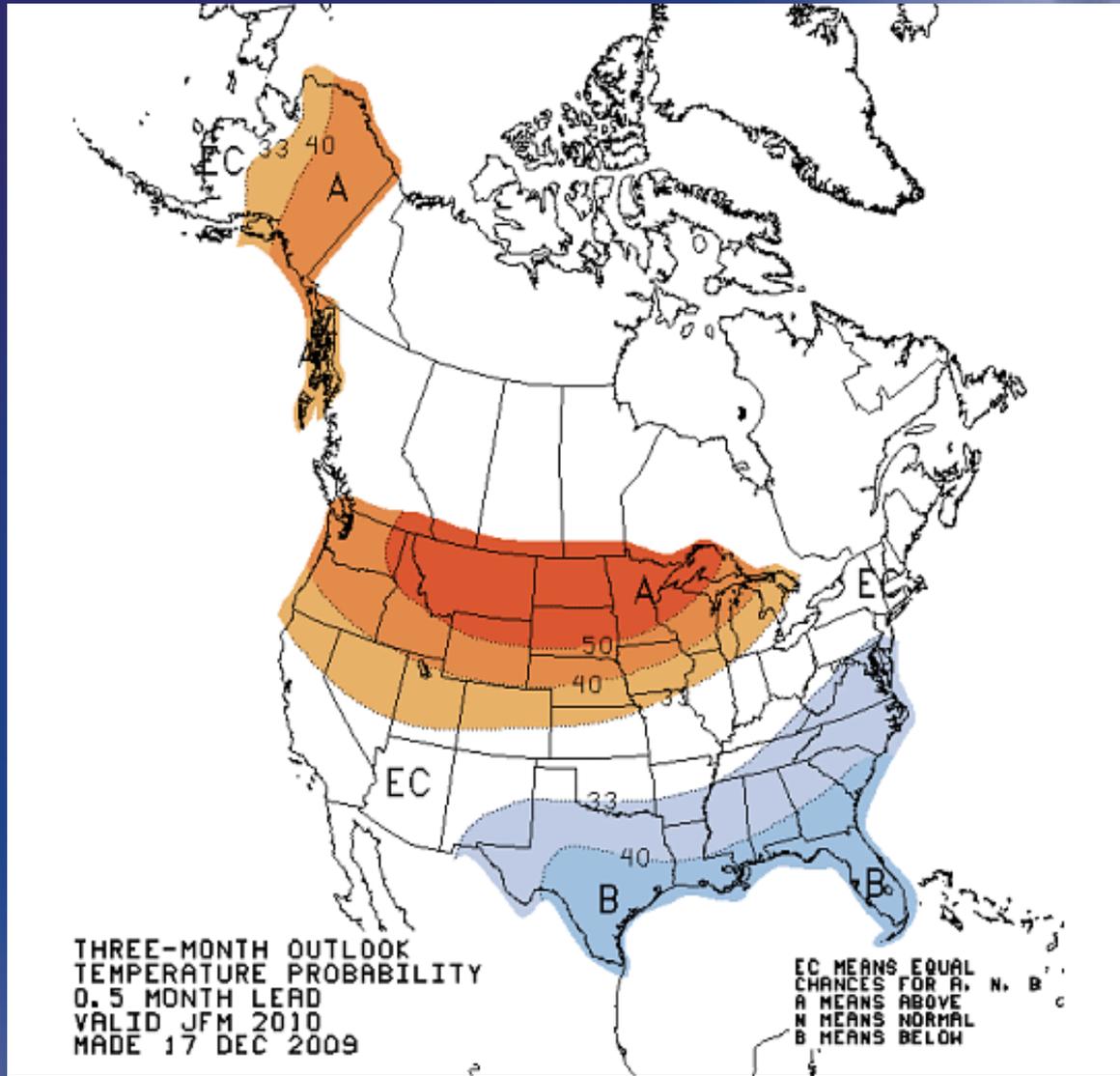
FREQUENCY

COMPOSITE

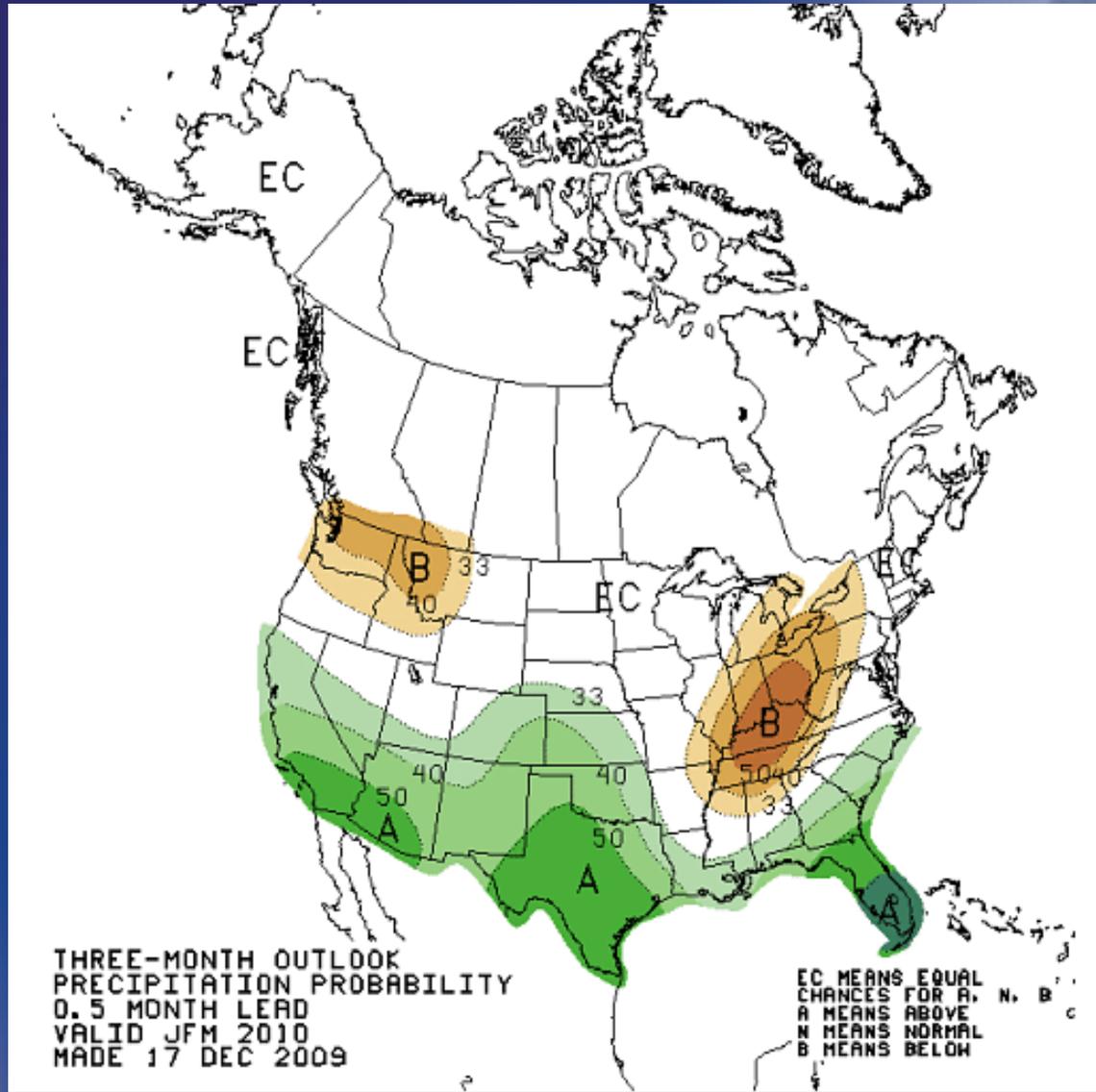
COMPOSITE



From the Climate Prediction Center



From the Climate Prediction Center



From the Climate Prediction Center



From Local Studies...

- **Based on studies performed at the Grand Junction Weather Forecast Office, an El Nino winter in Western Colorado can bring:**
 - ***A tendency towards a drier winter, especially across the north***
 - ***Below normal precipitation during the December-January-February period, especially across the north, with the exception of the Front Range***
 - ***Increased storminess during the March-April period***
 - ***Warmer than normal conditions***
 - ***A more southerly storm track which favors the four-corners region***