

# Seasonal Outlook through March 2007

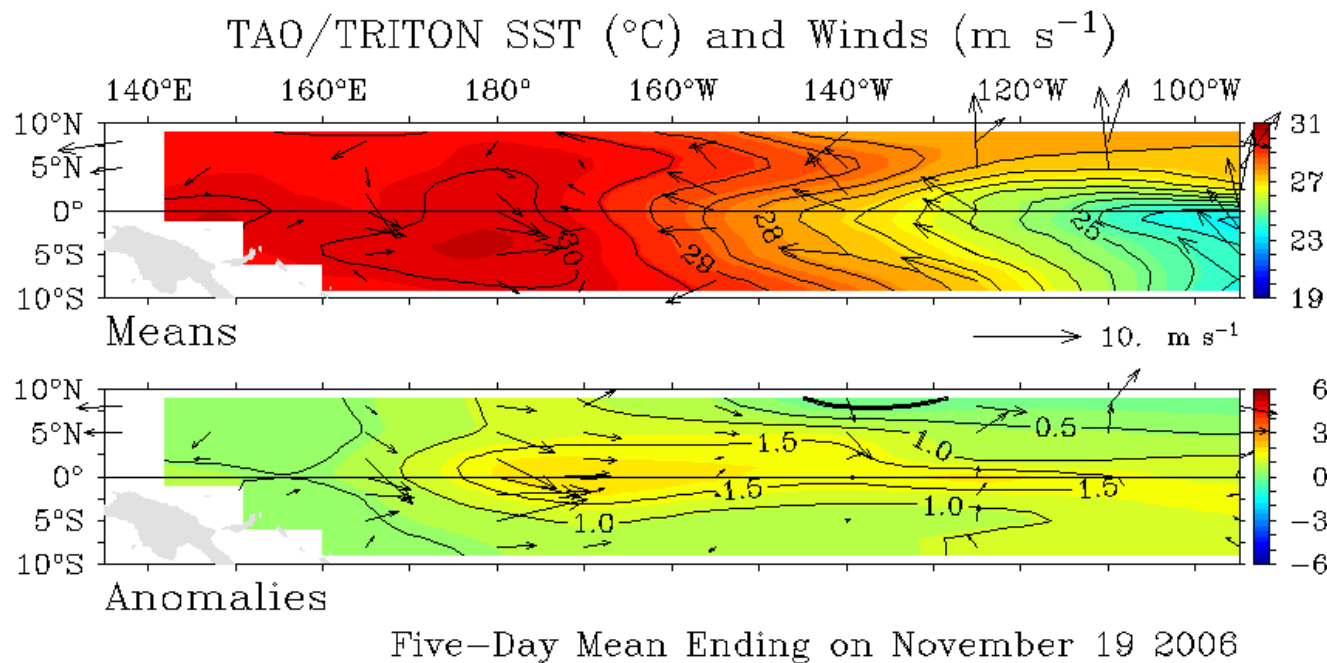
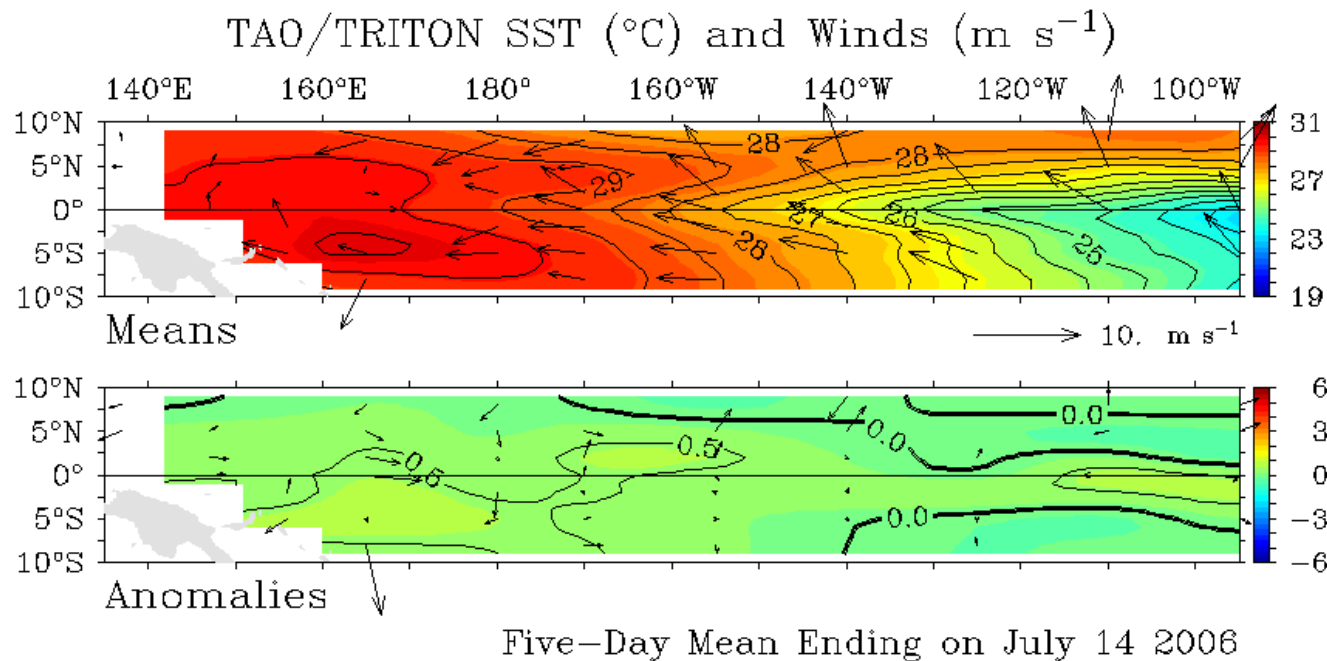
Klaus Wolter

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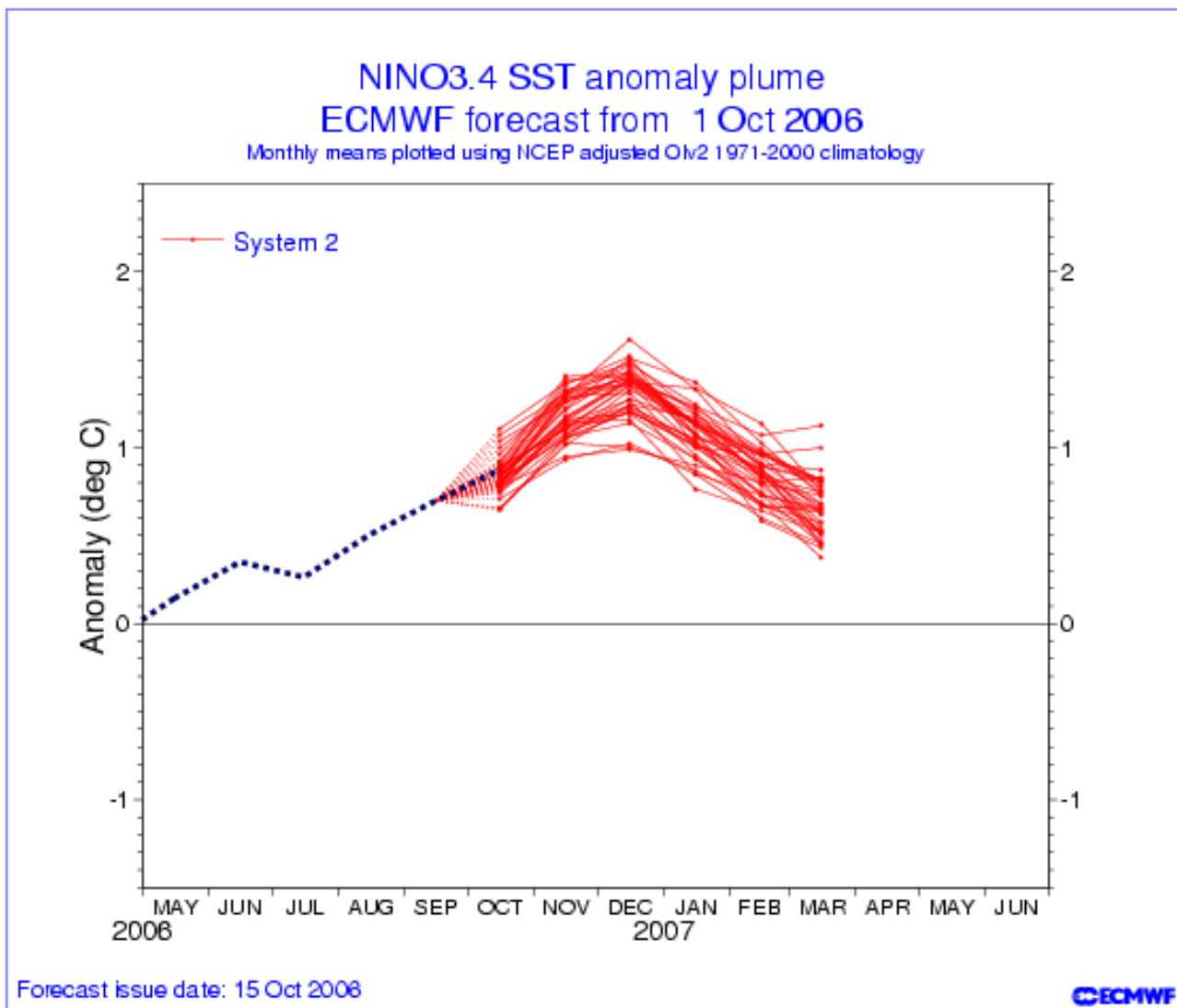
<http://www.cdc.noaa.gov/people/klaus.wolter/SWcasts/>

- **ENSO: It's a healthy boy!**
- **How have my forecasts been doing?**
- **CPC forecasts for December 2006 - March 2007**
- **Experimental forecast guidance**



Current state  
of ENSO  
(bottom)  
compared to  
June (top) - this  
is when the  
current event got  
started.

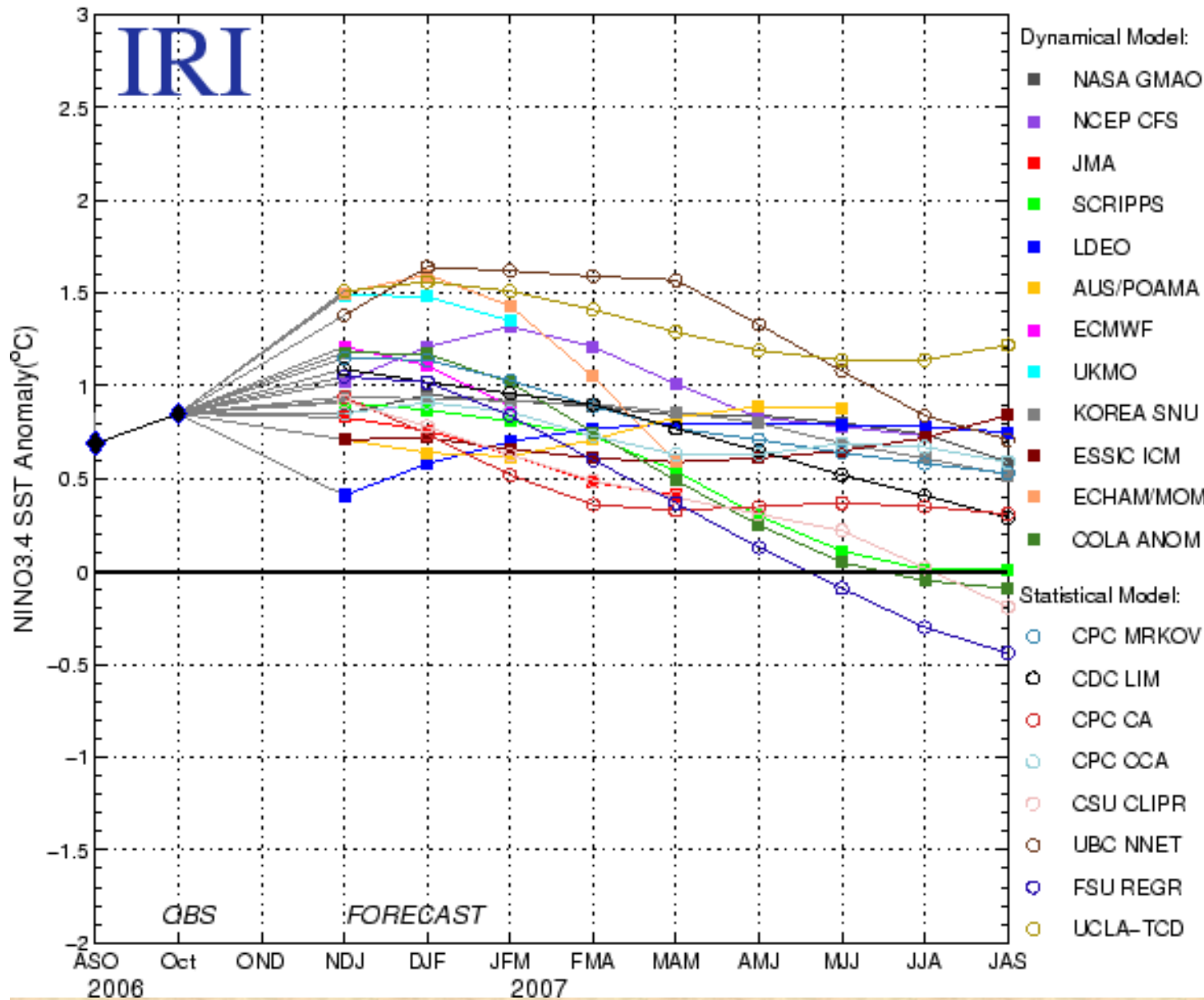
El Niño looks to  
be firmly in  
place, with 1.5C  
anomalies from  
180-110W, and  
healthy westerly  
wind anomalies.



The European model's most recent forecast continues the observed upward trend to a peak above  $+1^{\circ}\text{C}$ . Given the most recent observed conditions, this forecast now appears to be conservative.

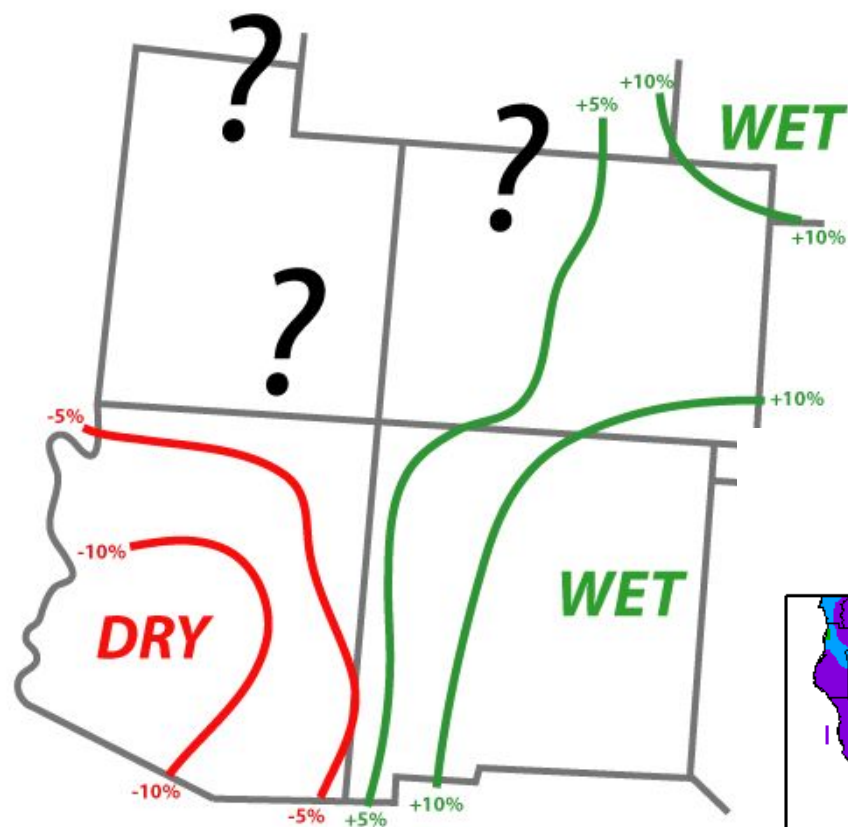


## Model Forecasts of ENSO from Nov 2006



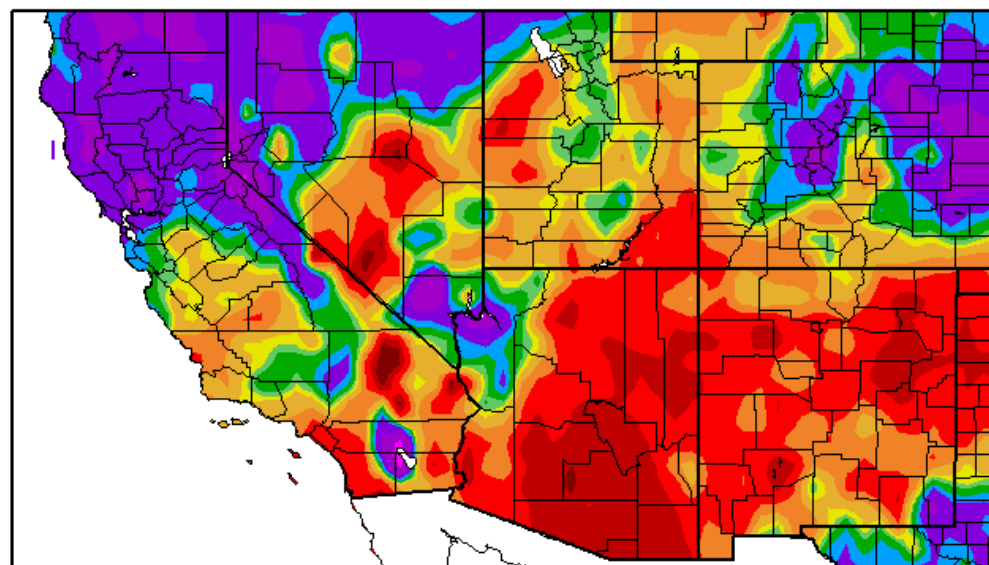
ENSO forecasts from 12 numerical & 8 statistical forecast models: four models peak at or above +1.5°C, while the rest more or less keep the 'status quo'. Note that quite a few models keep El Niño going past next spring!

EXPERIMENTAL CDC OCT-DEC 2005 PRECIPITATION FORECAST  
(issued September 12, 2005)



My fall forecast in 2005 worked out for eastern Colorado and Arizona, while Utah and western Colorado were left open, and New Mexico was drier than expected. Two out of three states correct!

Percent of Normal Precipitation (%)  
10/1/2005 – 12/31/2005

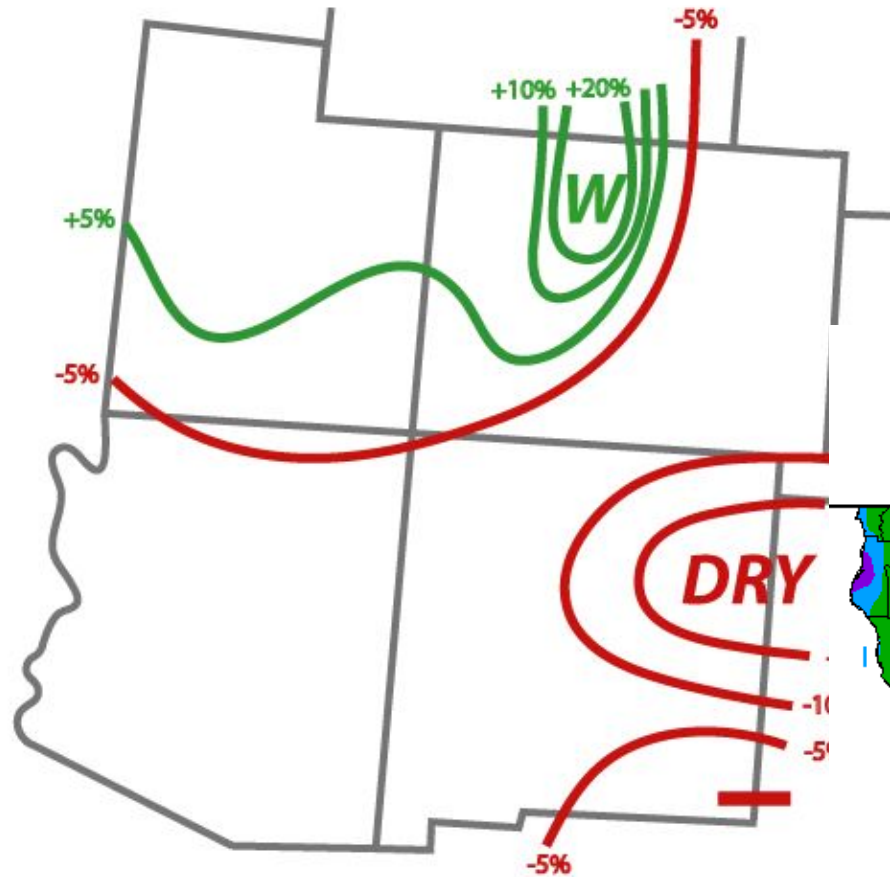


Generated 5/12/2006 at HPRCC using provisional data.

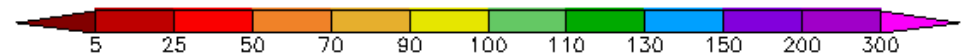
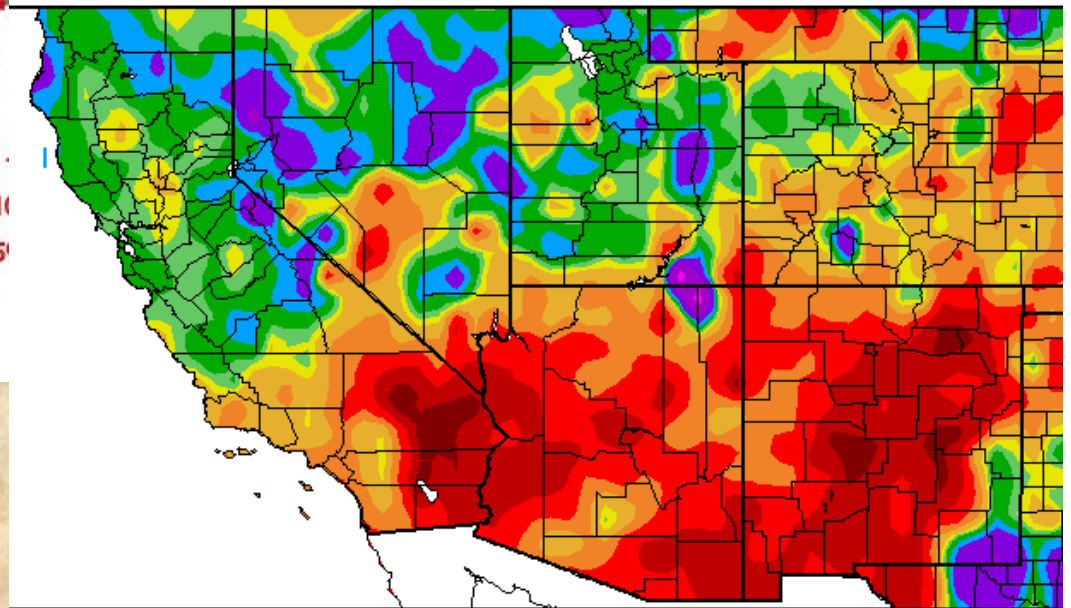
NOAA Regional Climate Centers

EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
JAN-MAR 2006 (issued December 13, 2005)

My dry winter forecast verified for Arizona, New Mexico, and eastern Colorado, while the wetness in Utah and western Colorado petered out somewhat but had the correct sense.



Percent of Normal Precipitation (%)  
1/1/2006 – 3/31/2006

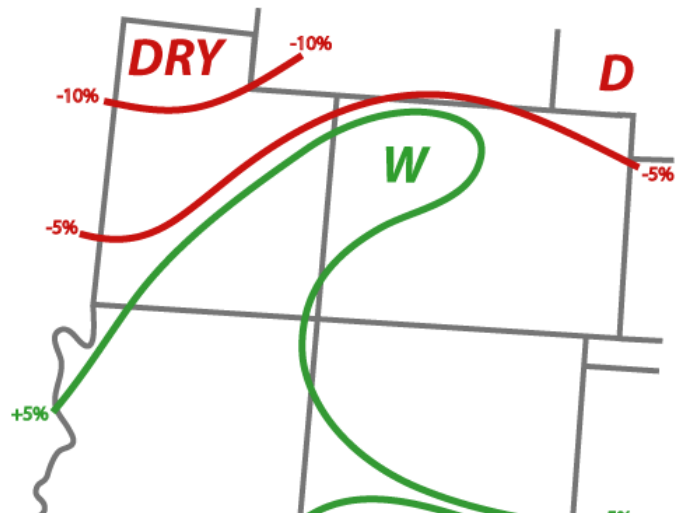


dated 10/5/2006 at HPRCC using provisional data.

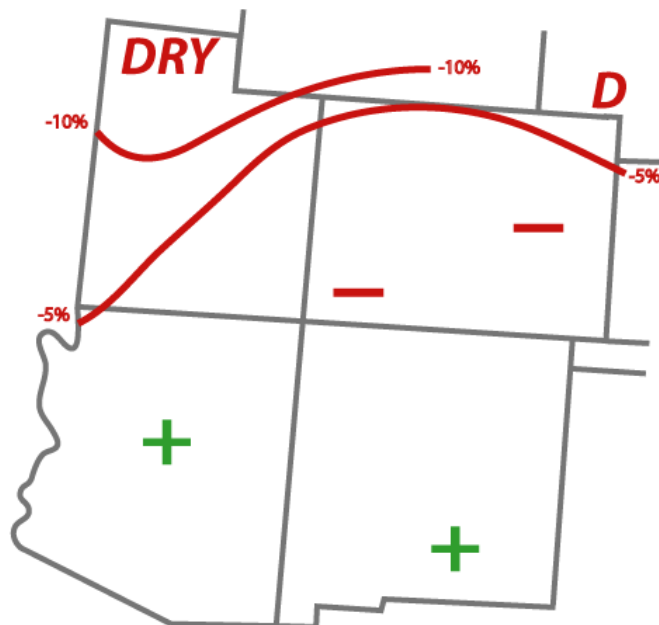
NOAA Regional Climate Ce



EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
APR-JUN 2006 (issued March 10, 2006)

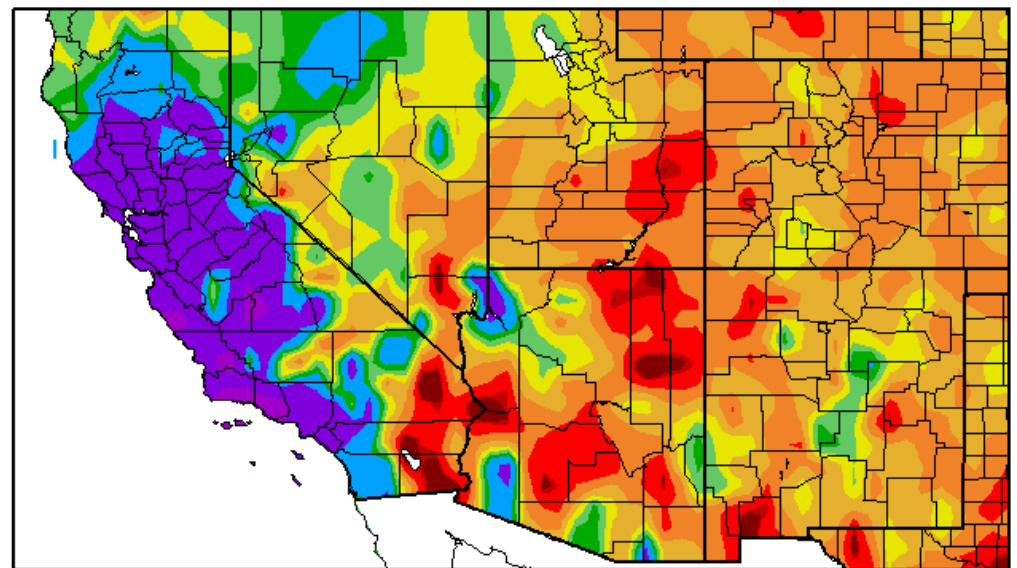


EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
APR-JUN 2006 (issued April 4, 2006)



My March spring forecast (top) was considerably more optimistic than my updated forecast in April (bottom left). Drought conditions (re-)developed over much of the Southwest (below), in response to the final 'hick-up' of La Niña as well as the blocked NAO in late winter.

Percent of Normal Precipitation (%)  
4/1/2006 – 6/30/2006

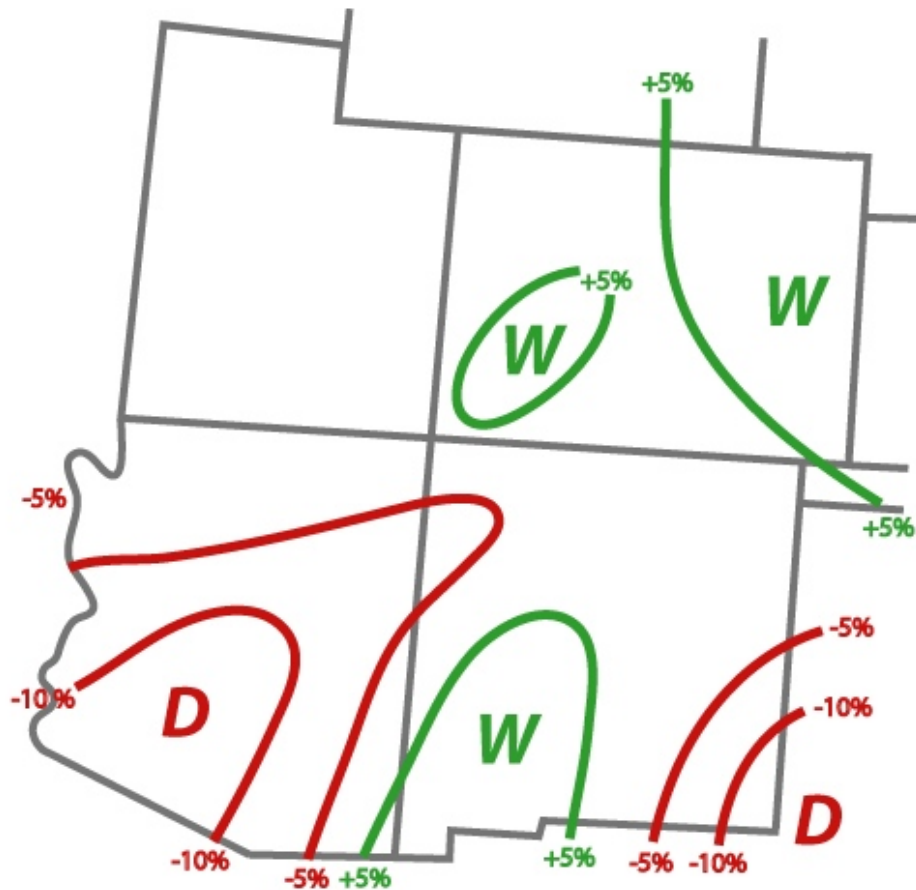


Generated 11/7/2006 at HPRCC using provisional data.

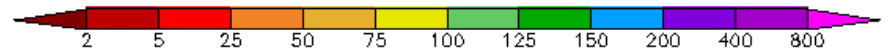
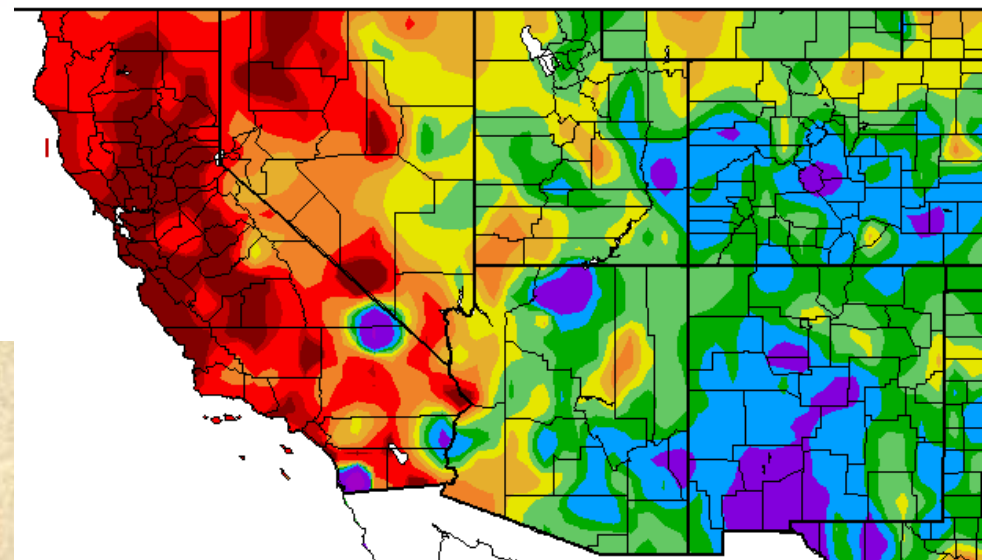
NOAA Regional Climate Centers

EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
JUL-SEP 2006 (issued June 14, 2006)

This year's summer monsoon came in early and aimed more towards New Mexico and Colorado (✓). It saved us from a potentially devastating fire season.



Percent of Normal Precipitation (%)  
7/1/2006 – 9/30/2006

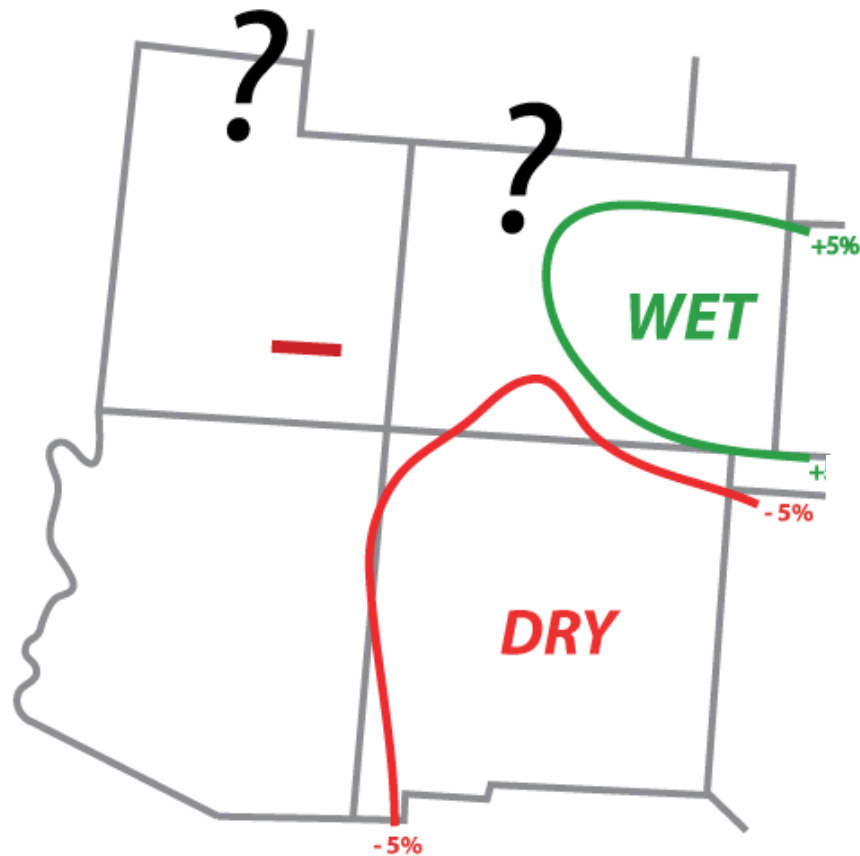


dated 11/6/2006 at HPRCC using provisional data.

NOAA Regional Climate Ce

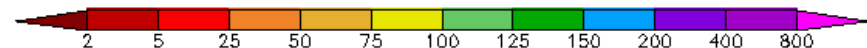
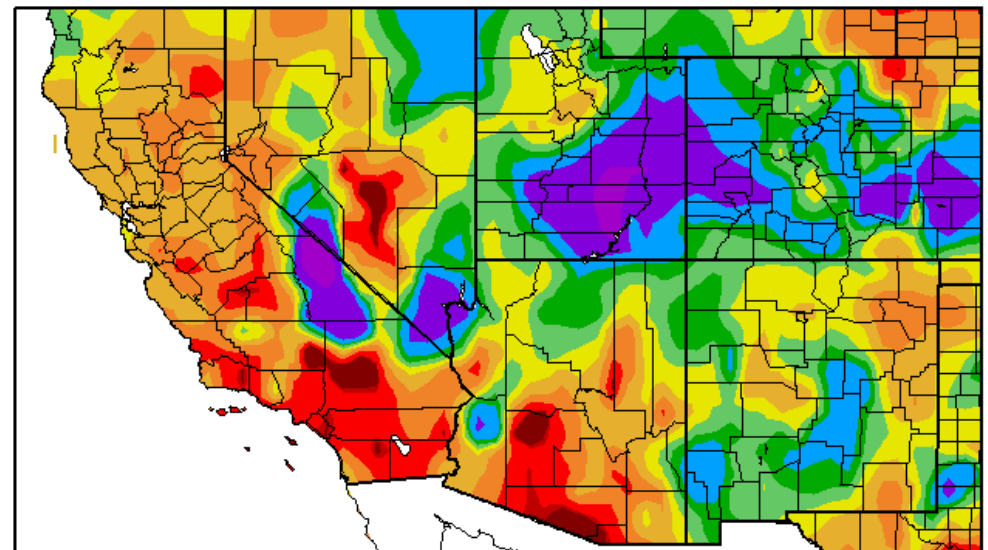


EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
OCT - DEC 2006 (issued September 19, 2006)



My most recent fall forecast appears to be working out for eastern CO and much of NM, while heavy rains in SE UT wrecked their dry forecast. Almost all of our moisture surplus accumulated in September and October.

Percent of Normal Precipitation (%)  
10/1/2006 - 11/19/2006



Generated 11/20/2006 at HPRCC using provisional data.

NOAA Regional Climate Centers

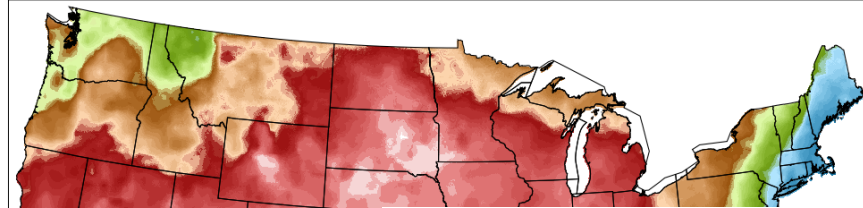
# After a warm & dry run in NOV, what's in store for us?

At best near-normal  
moisture chances in  
next two weeks...

**Analog Prob Precip > 66th Percentile**

fcst from 2006112000 valid 2006112300-2006112600

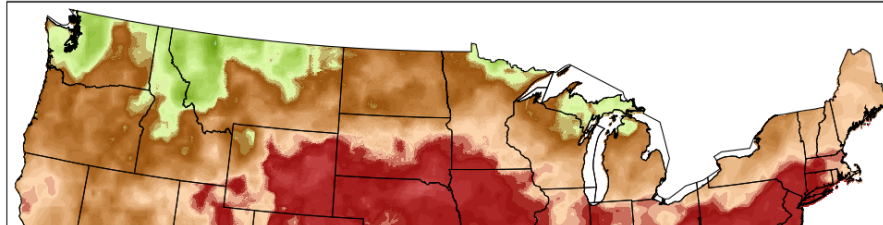
Percent



**Analog Prob Precip > 66th Percentile**

fcst from 2006112000 valid 2006112500-2006113000

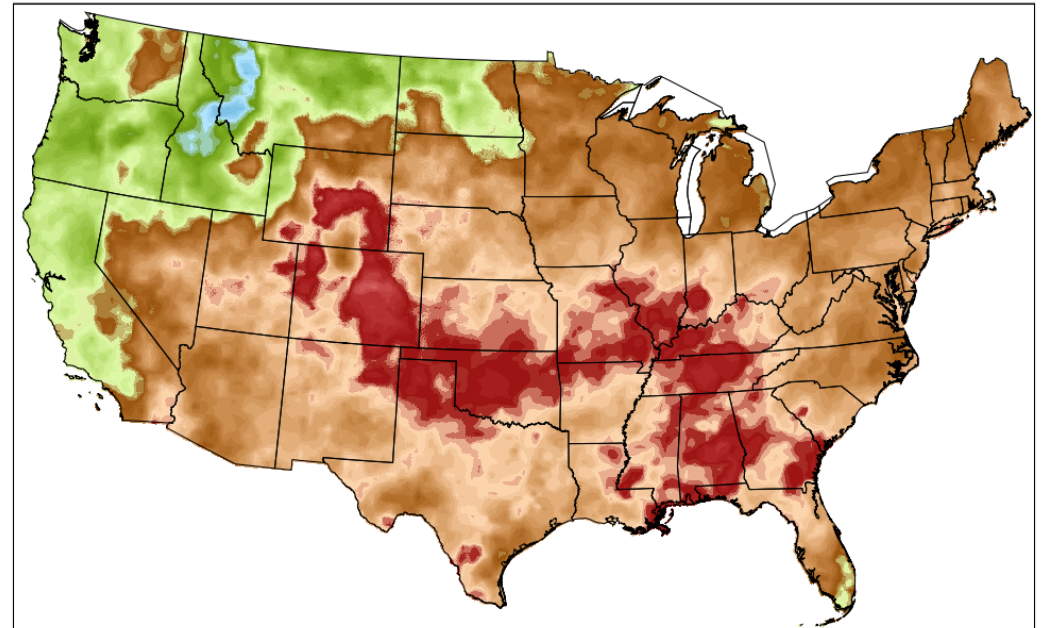
Percent



**Analog Prob Precip > 66th Percentile**

fcst from 2006112000 valid 2006112700-2006120400

Percent



0 4 8 12 16 20 24 28 32 36 40 44

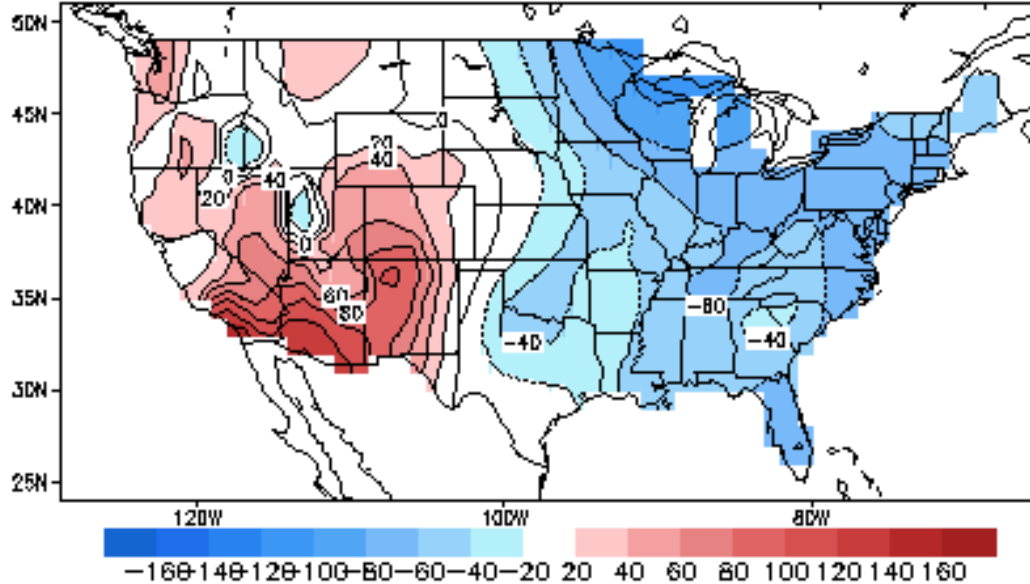
0 4 8 12 16 20 24 28 32 36

0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100

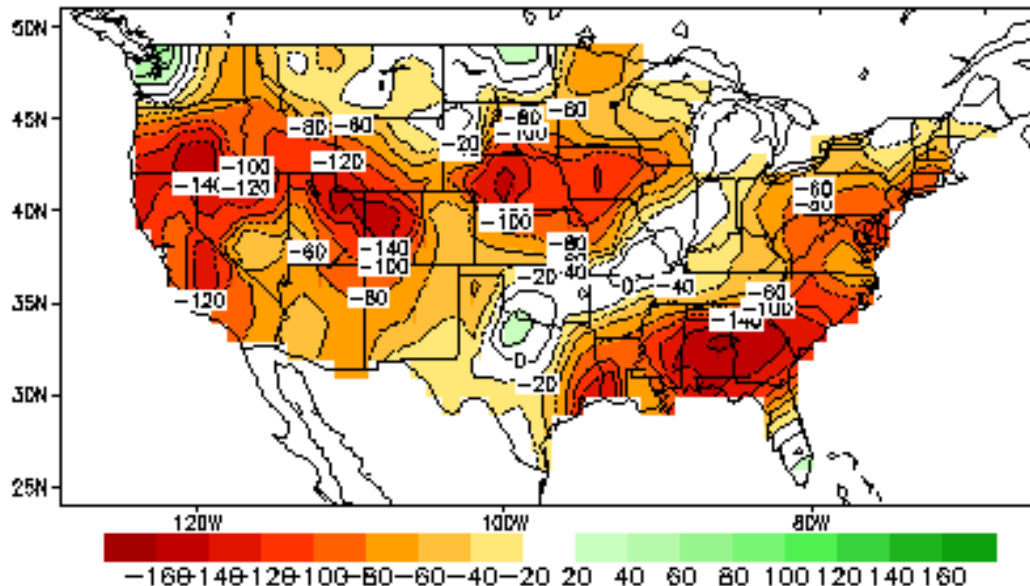
While the October snows  
were consistent with El Niño,  
the current dry spell is a bit  
too early, but not unusual.



Lagged Averaged Temperature Outlook for DEC 2006  
units: anomaly (sdX100), SM data ending at 20061119



Lagged Averaged Precipitation Outlook for DEC 2006  
units: anomaly (sdX100), SM data ending at 20061119



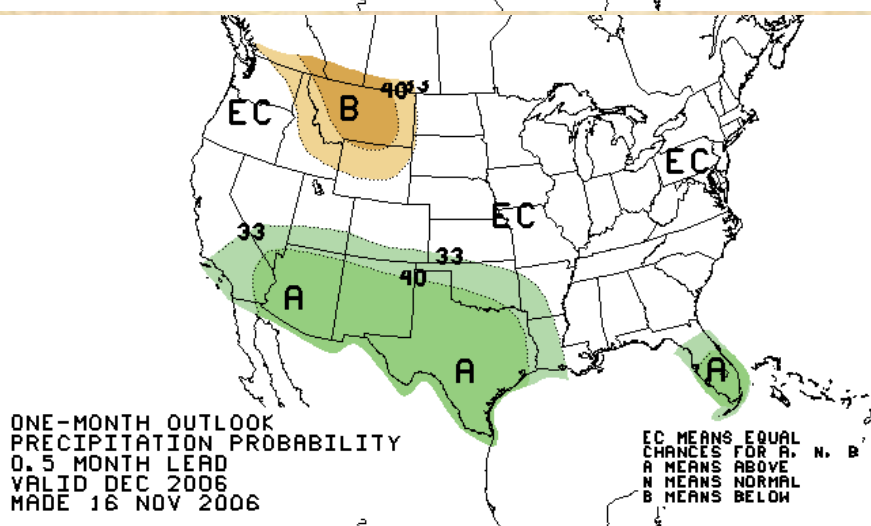
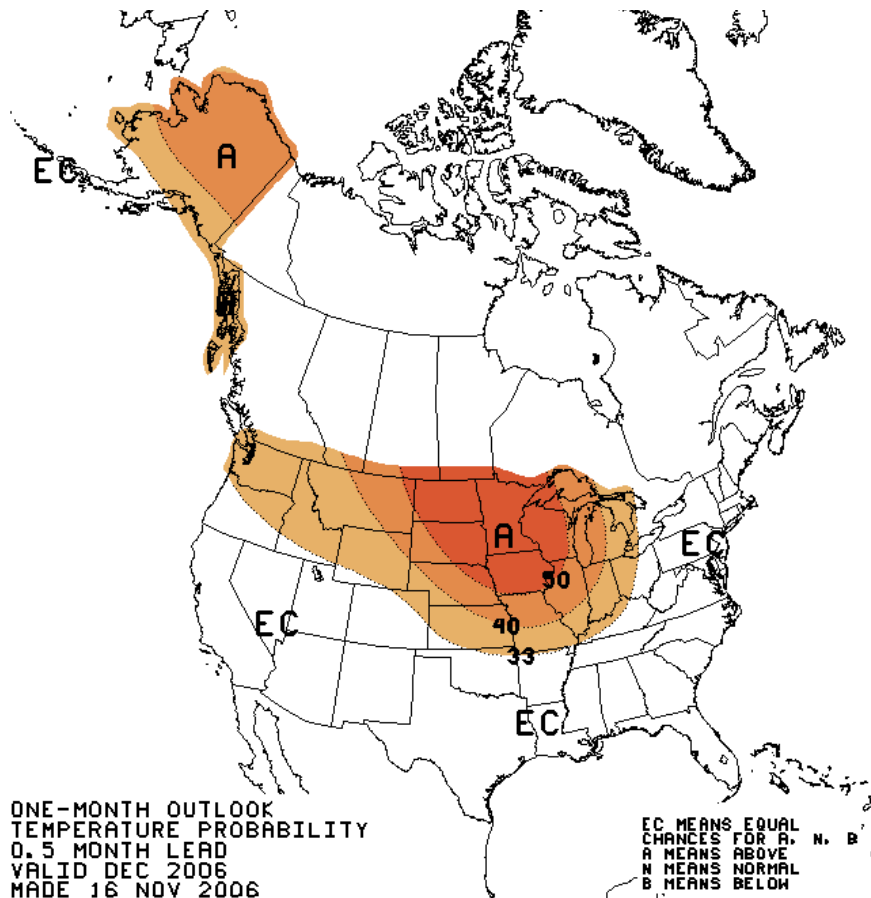
## How about December?

A surprisingly dry December may be in store for much of the country, if the ‘constructed analog’ forecast is to be believed. It would also keep our heating bills low, if correct.

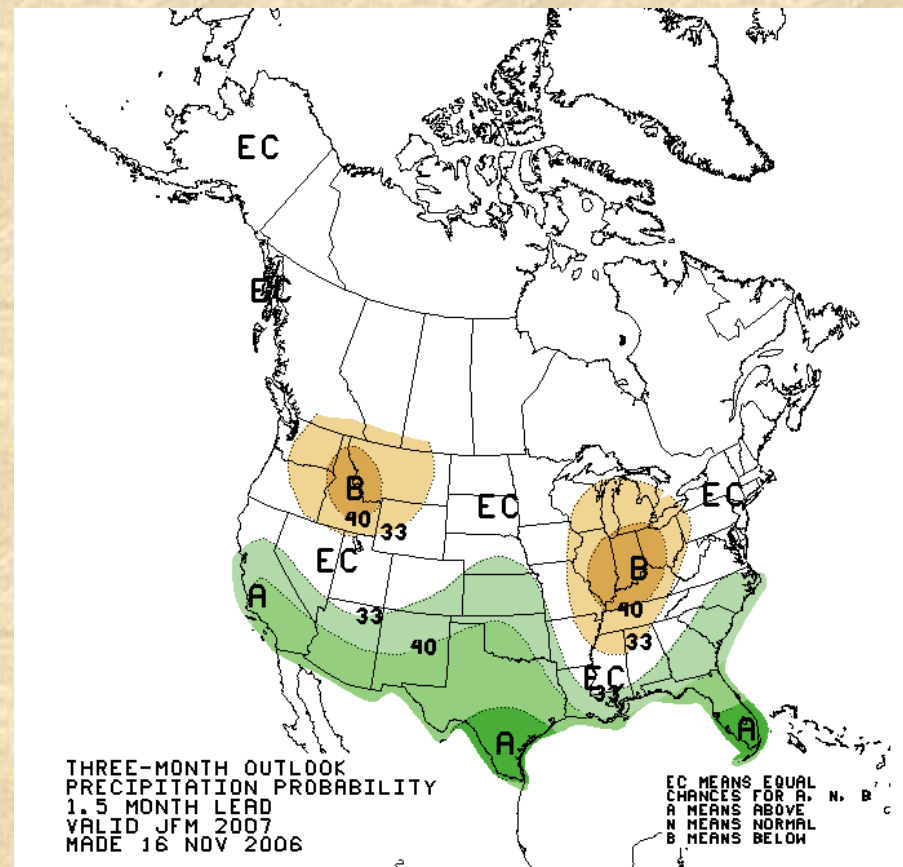
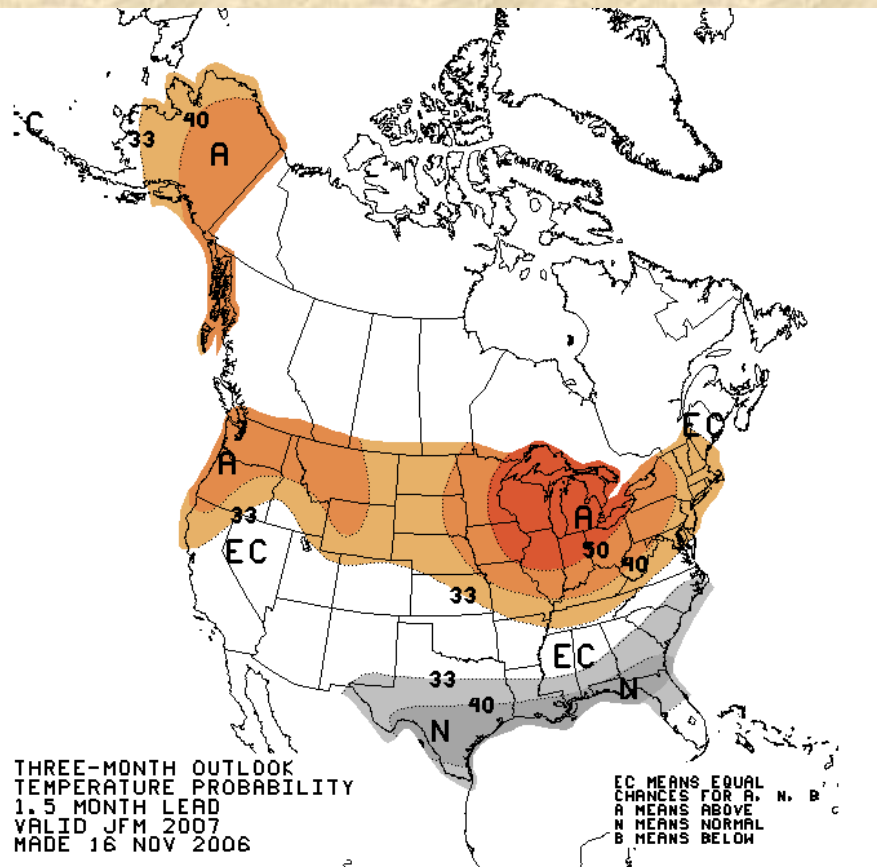


## How about December?

The official CPC forecast calls for a warm & dry December to our north, while keeping most of Colorado under 'equal chances' both for temperatures and precipitation. Otherwise, the familiar El Niño of an active storm track to our south is anticipated.



# CPC Winter Forecasts

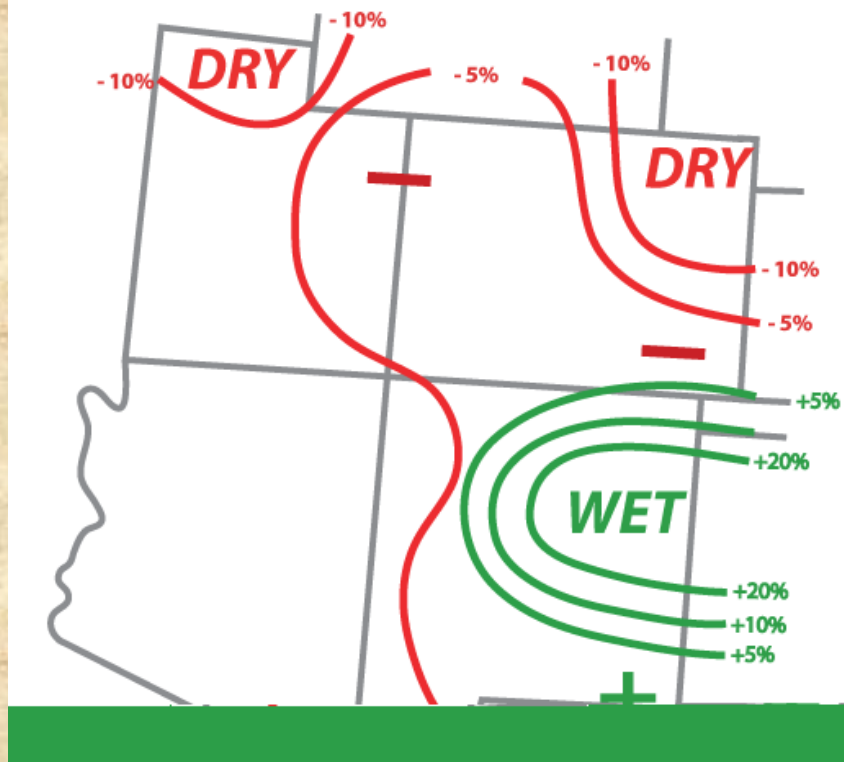


According to CPC's official forecasts, Jan-Mar 2007 temperature (left) and precipitation (right) forecasts keeps most of Colorado under 'EC', with a nod towards increased precipitation chances in southeastern Colorado.

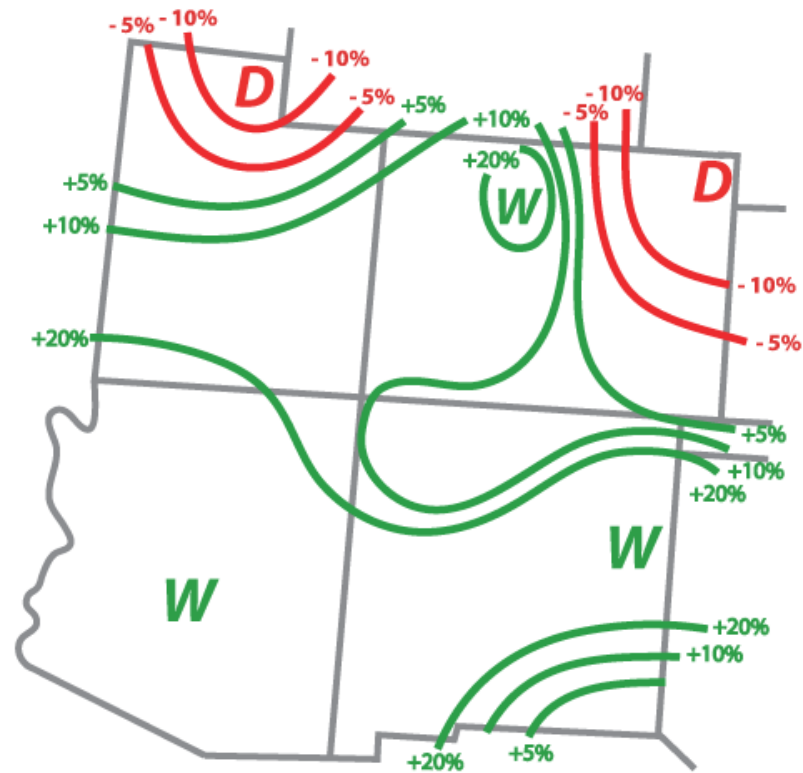
Source (for CPC forecasts): <http://www.cpc.ncep.noaa.gov/products/predictions/>

# Experimental CDC “Forecast Guidance”

EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
JAN - MAR 2007 (issued September 20, 2006)



EXPERIMENTAL CDC PRECIPITATION FORECAST GUIDANCE  
JAN - MAR 2007 (issued November 13, 2006)



My first forecast for the winter season (left) was on the dry side for all but NM. The most recent update has caught up with typical El Niño expectations to cover all of AZ with above-normal odds as well. Dryness in northern UT and eastern CO is more typical during mid-winter El Niño situations than in late winter, while a predicted wet late winter in our north-central mountains would have to make up for more typical dryness earlier in the season.

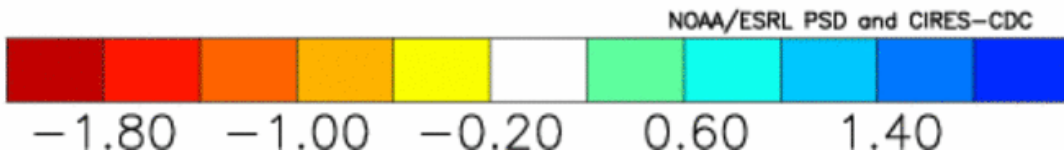
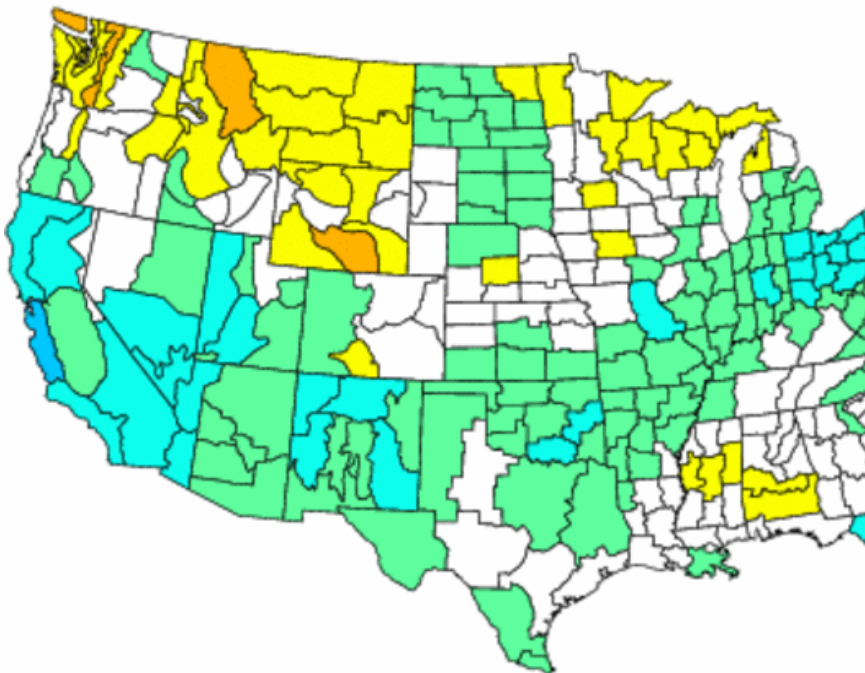
**Source:** <http://www.cdc.noaa.gov/people/klaus.wolter/SWcasts/>



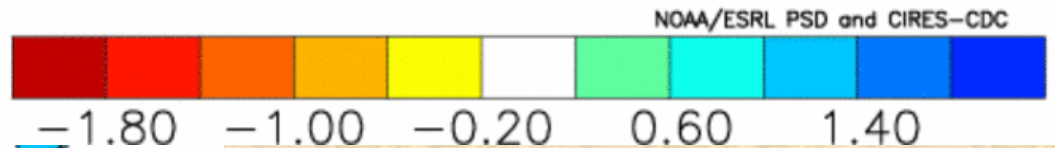
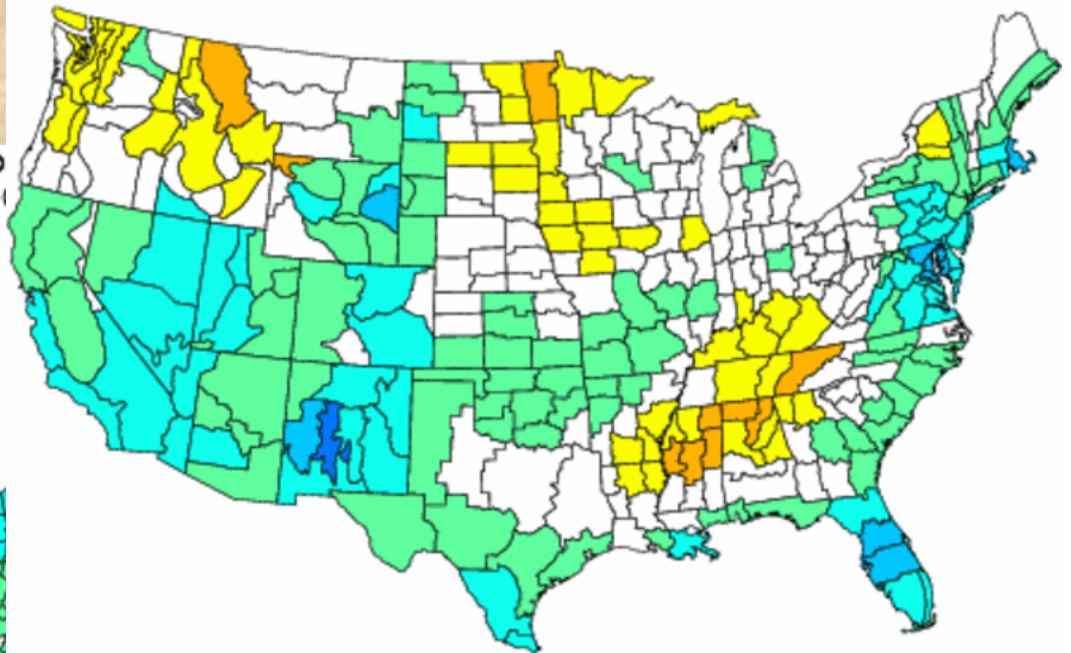
# AMO positive & El Niño composites

**Not much tilt in mid-winter, followed by late winter wetness in eastern CO is typical for El Niños during the warm North Atlantic phase.**

Composite Standardized Precipitation Anom  
Dec to Feb 1951-52,1957-58,1987-88,1997-98,2002-03  
Versus 1950-1995 Longterm Average



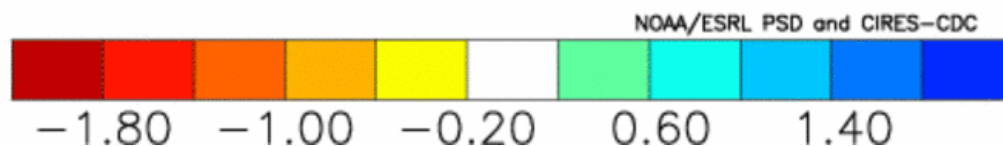
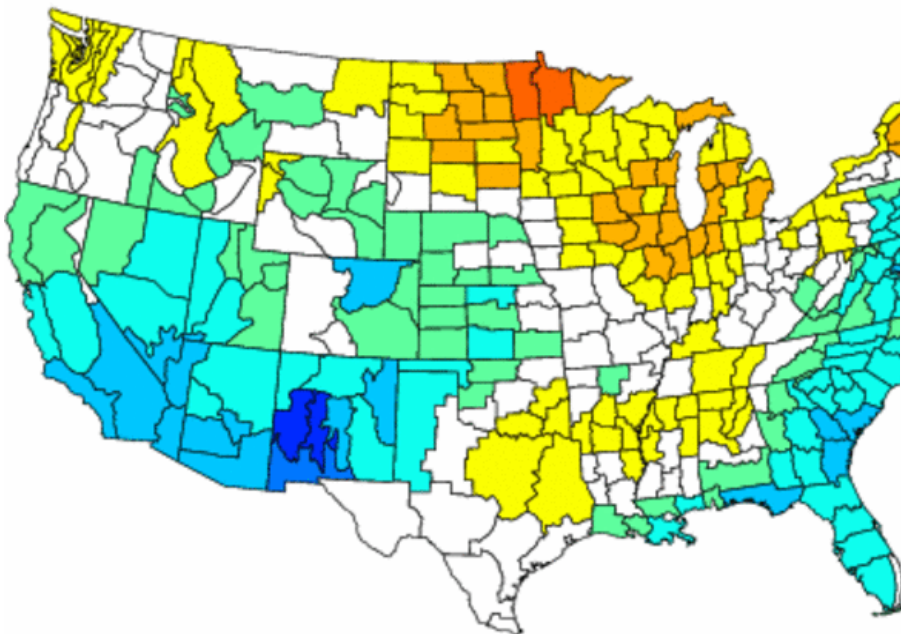
Composite Standardized Precipitation Anomalies  
Jan to Mar 1952,1958,1988,1998,2003,2005  
Versus 1950-1995 Longterm Average



# AMO positive & El Niño composites

**Early-to-mid spring is drier during warm North Atlantic El Niño seasons than during the opposite North Atlantic phase (last seen in 1994-5).**

Composite Standardized Precipitation Anomalies  
Feb to Apr 1952, 1958, 1988, 1998, 2003, 2005  
Versus 1950–1995 Longterm Average



Composite Standardized Precipitation Anomalies  
Mar to May 1952, 1958, 1988, 1998, 2003, 2005  
Versus 1950–1995 Longterm Average

