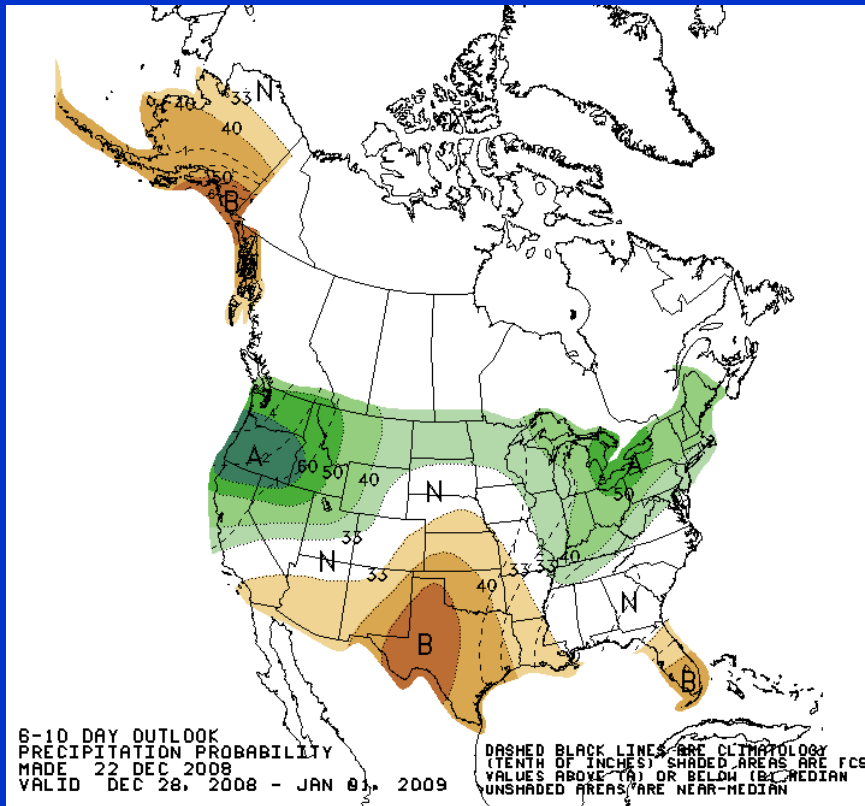


Weekly Climate Update December 23rd 2008

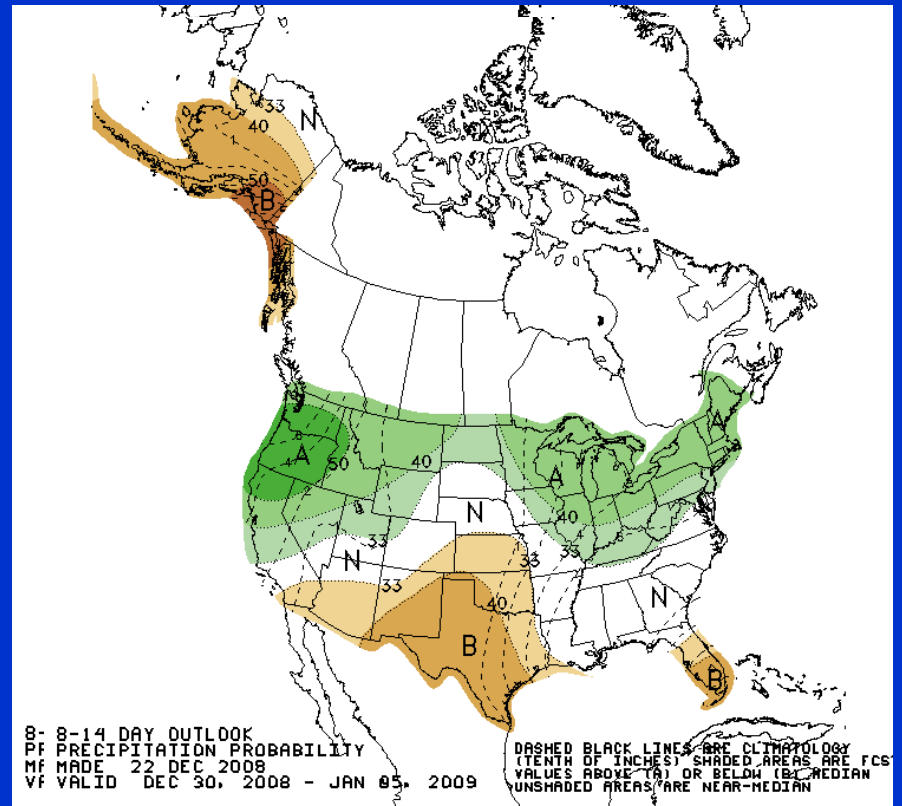
- A tremendous area of cooler than normal sea surface temperatures along the central and eastern equatorial Pacific extending northward to higher latitudes along the west coast of North America are a result of a developing La Nina and the cold phase of the Pacific Decadal Oscillation. These anomalies are indicative of an increase chance of below normal rainfall in the upcoming dry season months.
- Increases in the negative subsurface temperature anomalies in the equatorial Pacific Ocean are a sign of La Nina conditions should persist. The latest IRI and CFS models results simulate increased chances of drier than normal conditions for this upcoming dry season.
- The Official climate outlook calls for an increased probability of below normal rainfall for the remainder of December through mid- April.
- The Position Analysis in slide 13 - 17 illustrate projected water levels for Lake Okeechobee and Water the Conservation Areas

Medium Range Precipitation Outlook

6-10 Day Outlook

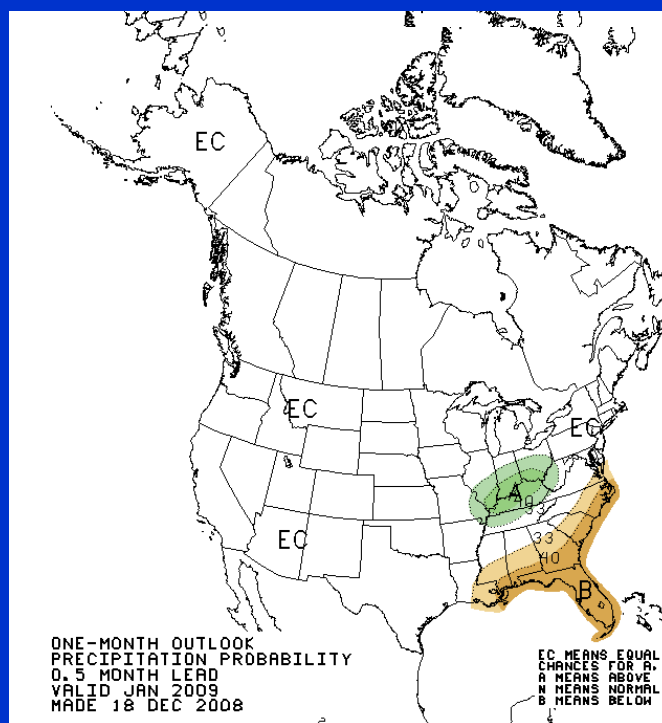


8-14 Day Outlook

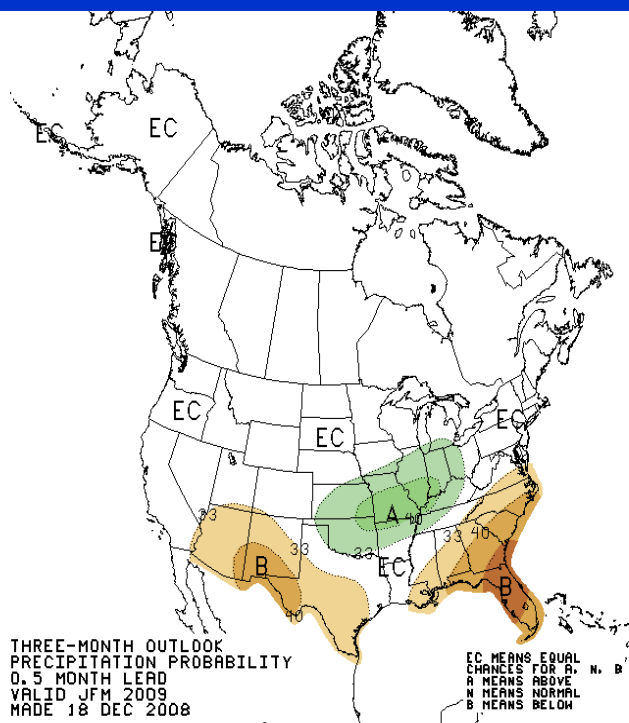


Official CPC Seasonal Rainfall Outlook

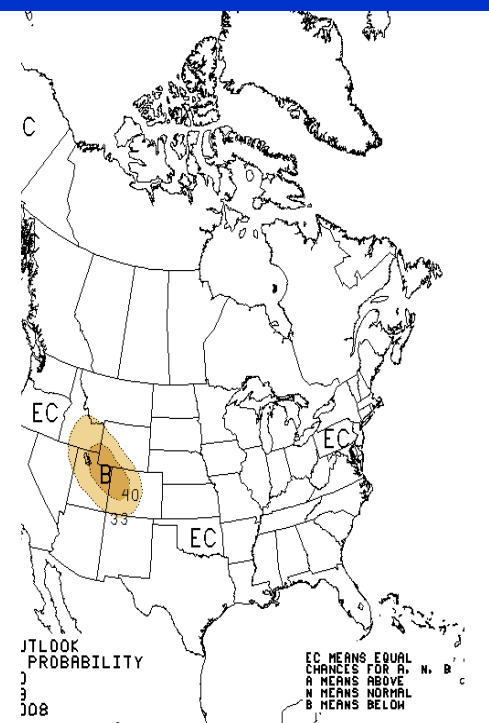
January



February-April

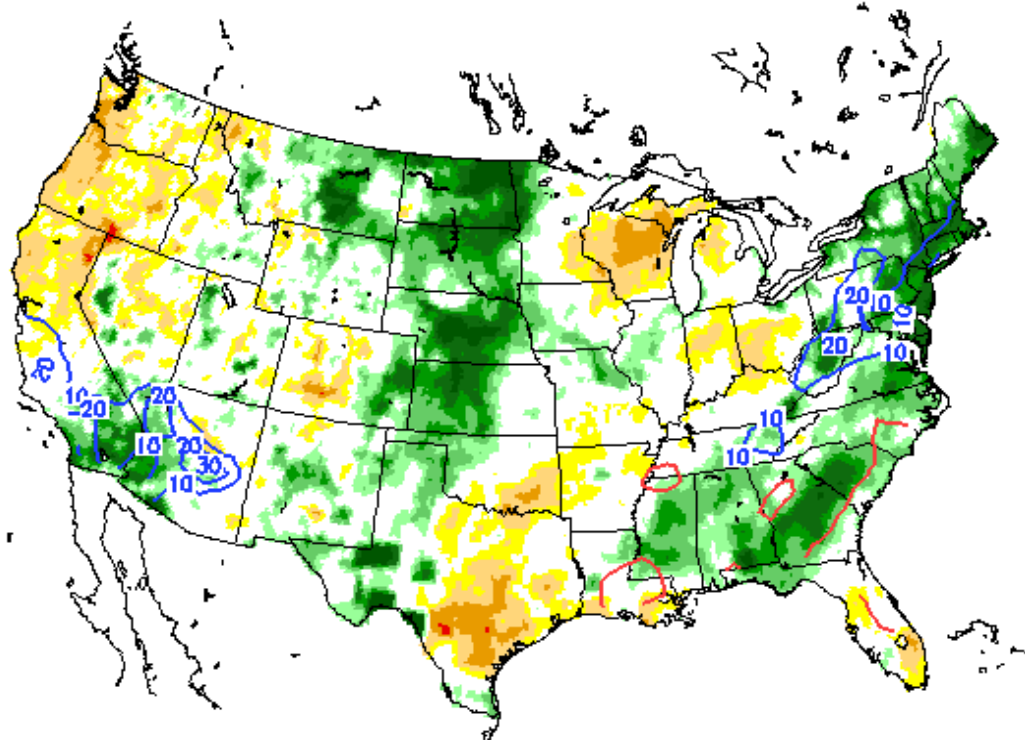


May-July



Current Soil moisture anomalies

Total Column Soil Moisture Percentiles on 20081218
(wrt samples within a 49-day window in 1951-2004)



Contours show the changes in quantiles in the last 7 days.



Seasonal Drought Outlook

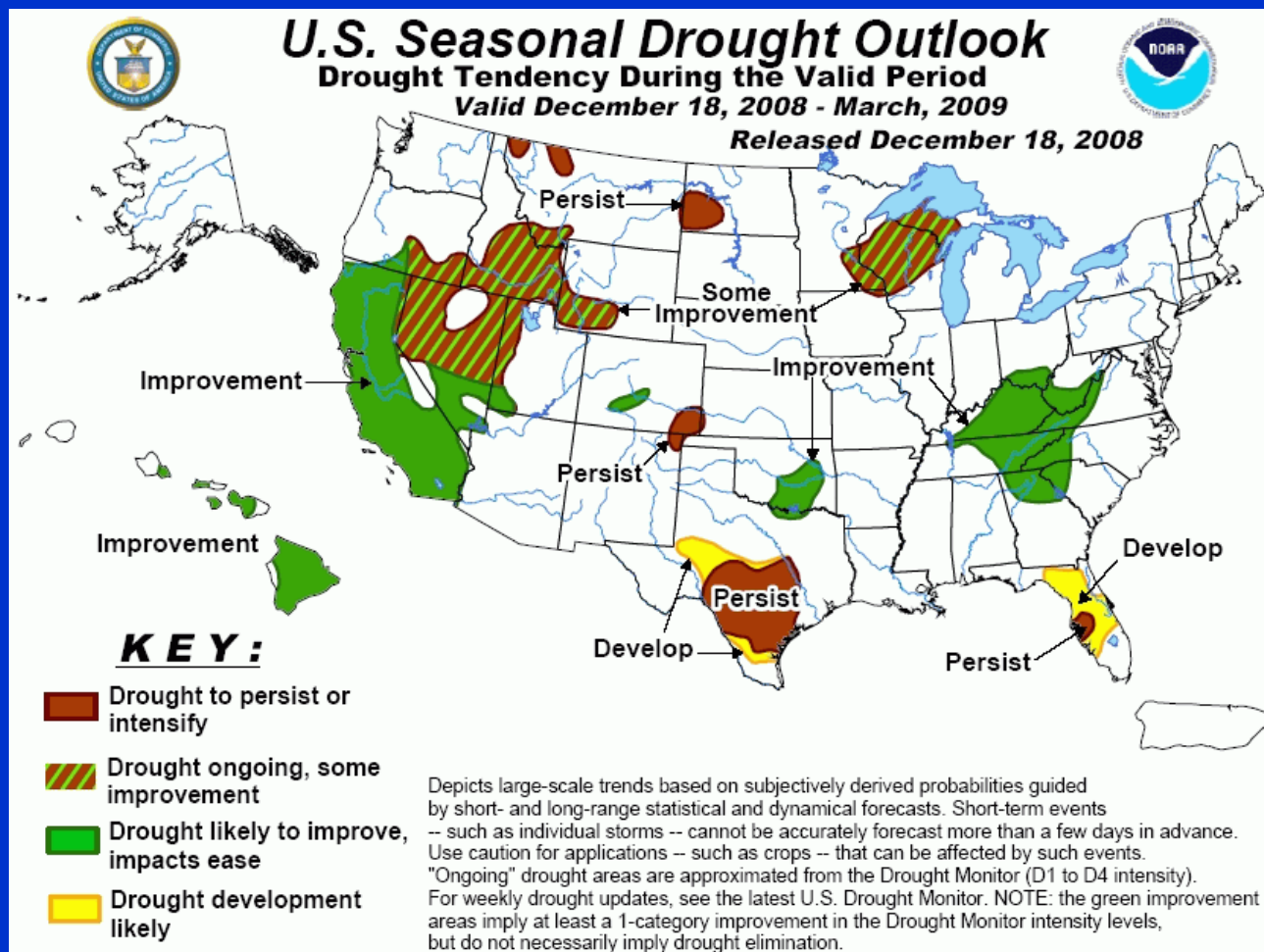
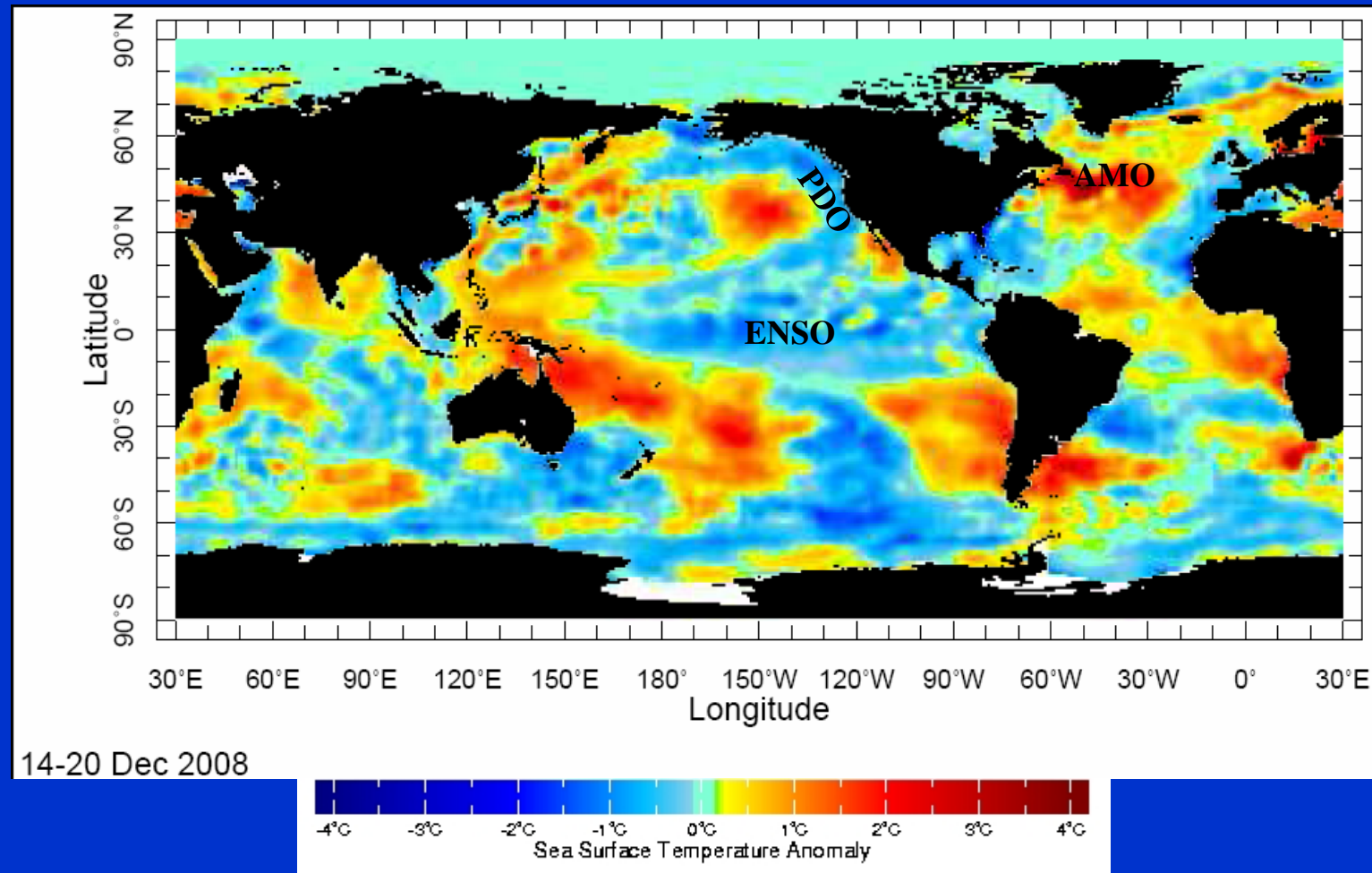


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Latest Weekly Sea Surface Temperature Anomaly

International Research Institute



Large area of cooler than normal sea surface temperatures in the equatorial Pacific extending northward to higher latitudes along the west coast of North America are a result of marginal La Nina type conditions and the cold phase of the Pacific Decadal Oscillation.

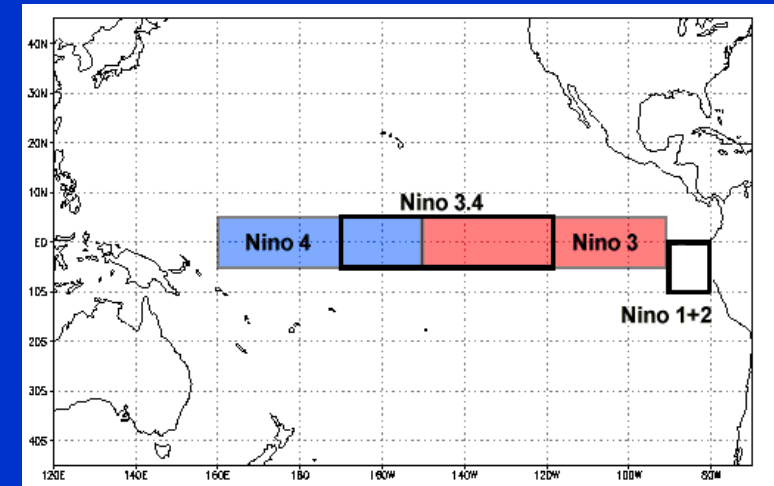
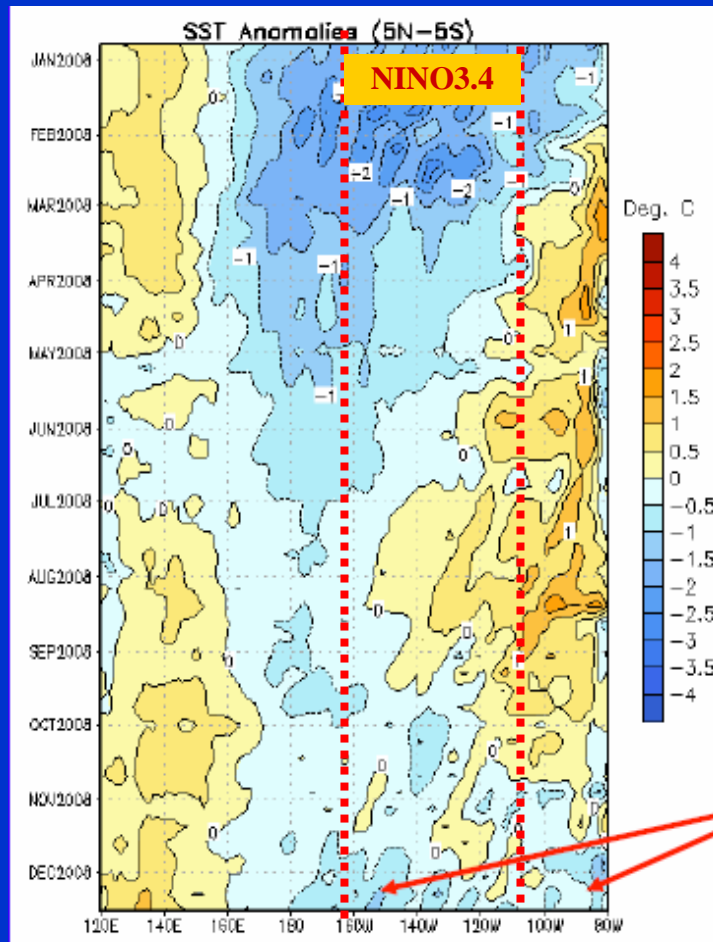
Recent Evolution of Equatorial Pacific SST Departures (°C)

Climate Prediction Center

El Nino-Southern Oscillation Weekly Update

Jan.
Apr.
Time
↓
Aug.

Dec.



Since October 2008, negative sea surface temperature anomalies have strengthened in portions of the central and eastern equatorial Pacific Ocean.

Longitude

Recent Evolution of Niño Region SST Departures (°C)

Climate Prediction Center

El Nino-Southern Oscillation Weekly Update

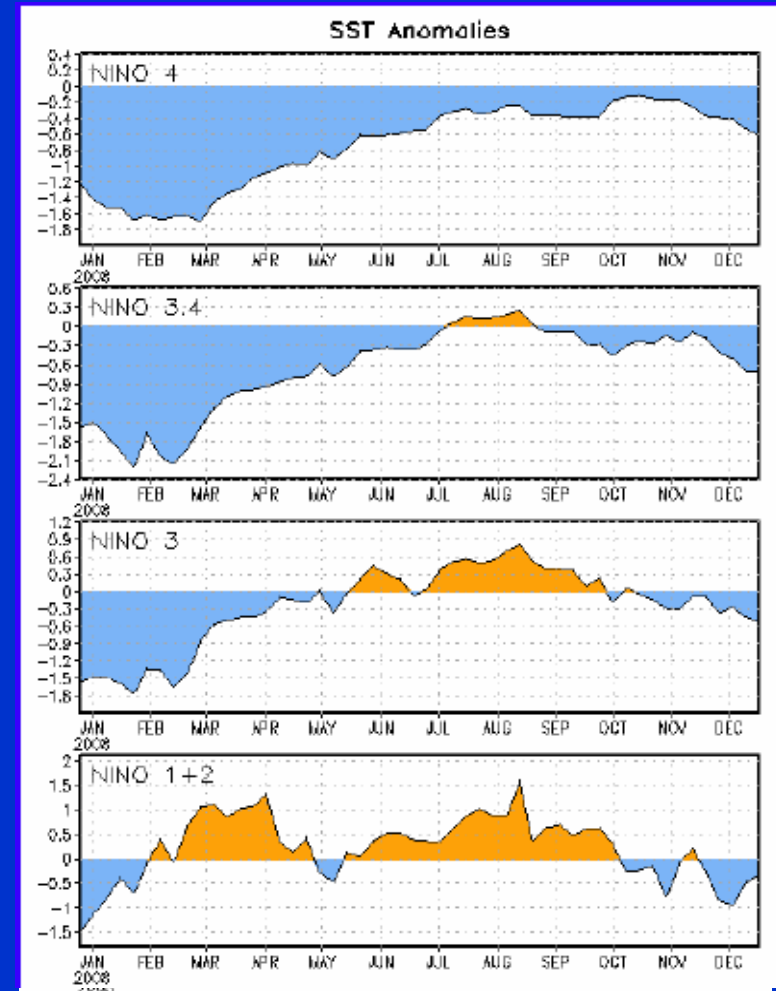
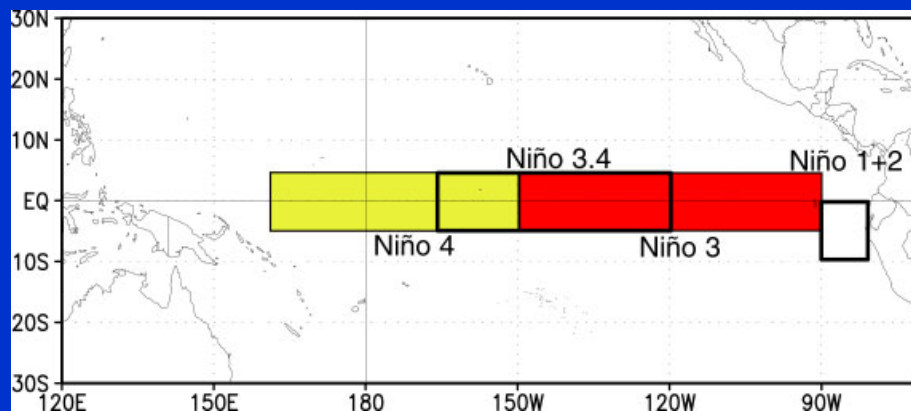
The latest weekly SST departures are:

Niño 4 -0.6°C

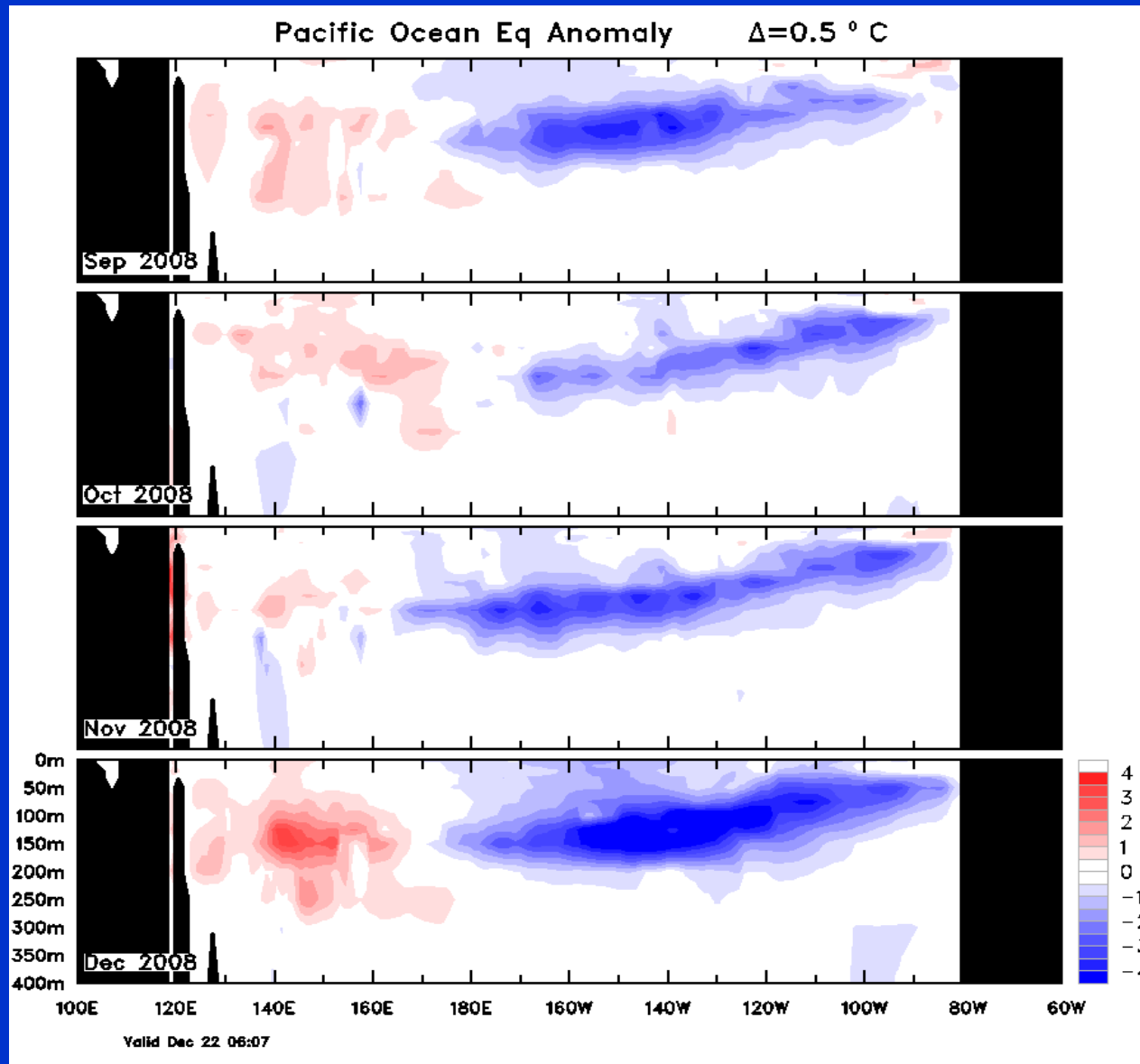
Niño 3.4 -0.7°C

Niño 3 -0.5°C

Niño 1+2 -0.3°C

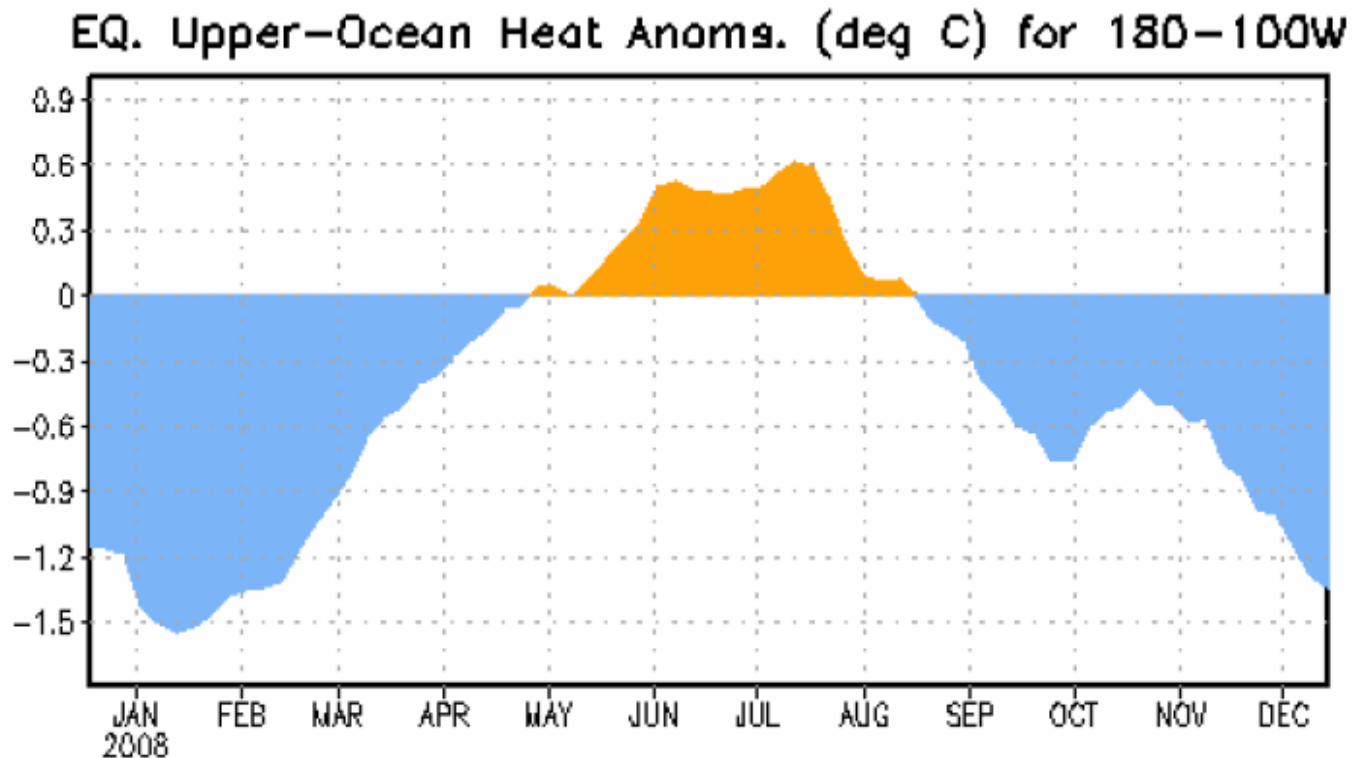


Equatorial Pacific Subsurface Temperature Anomalies





Central & Eastern Pacific Upper-Ocean (0-300 m) Weekly Heat Content Anomalies



The upper ocean heat content was below-average across the eastern half of the equatorial Pacific Ocean between January 2007 and April 2008 and again since mid-August 2008. The negative heat content anomalies have strengthened since mid-October 2008.

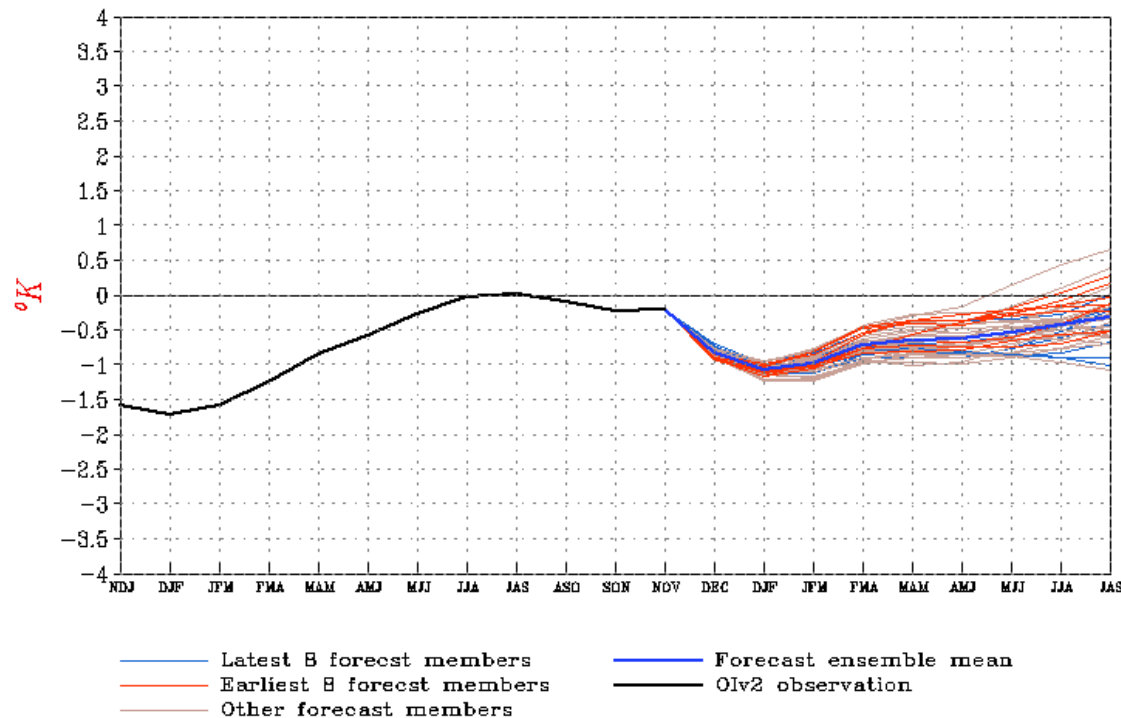
Equatorial Pacific SST and Temperature Anomaly Forecast- NCEP Climate Forecast System Issued December 23rd 2008



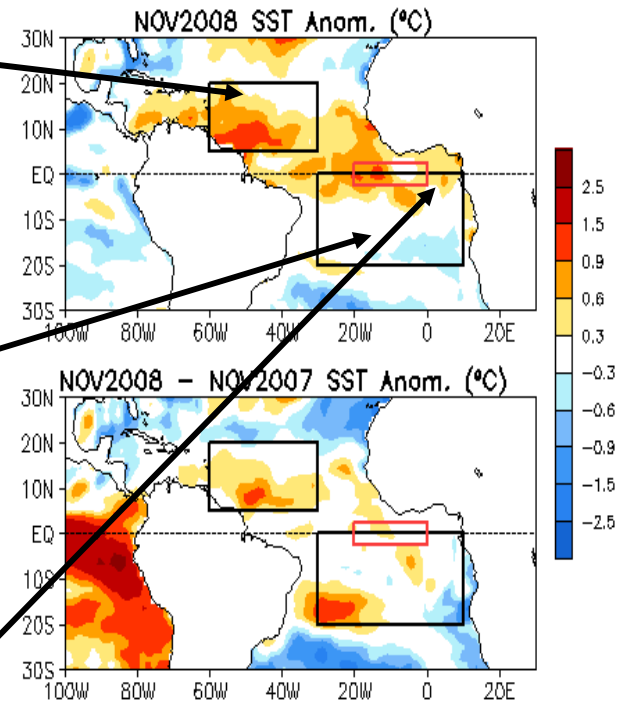
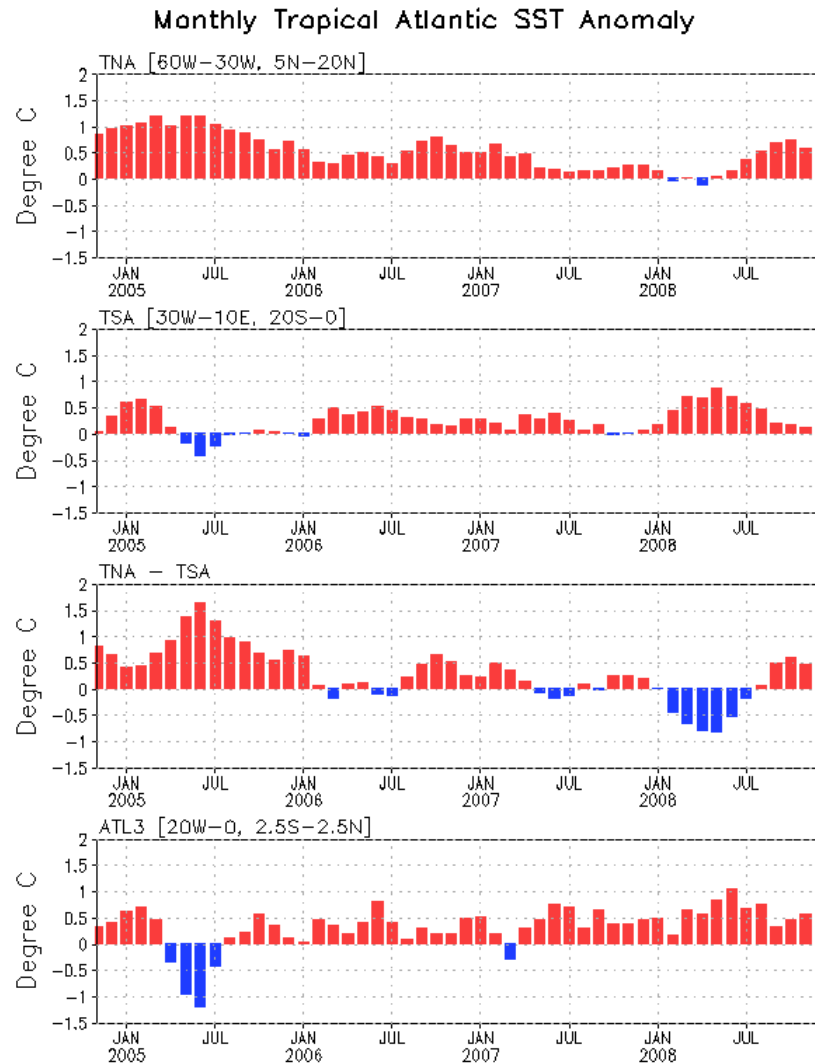
NWS/NCEP

Last update: Tue Dec 16 2008
Initial conditions: 5Dec2008-14Dec2008

PDF correction: Forecast *Nino3.4* SST anomalies from CFS



Evolution of Tropical Atlantic SST Indices

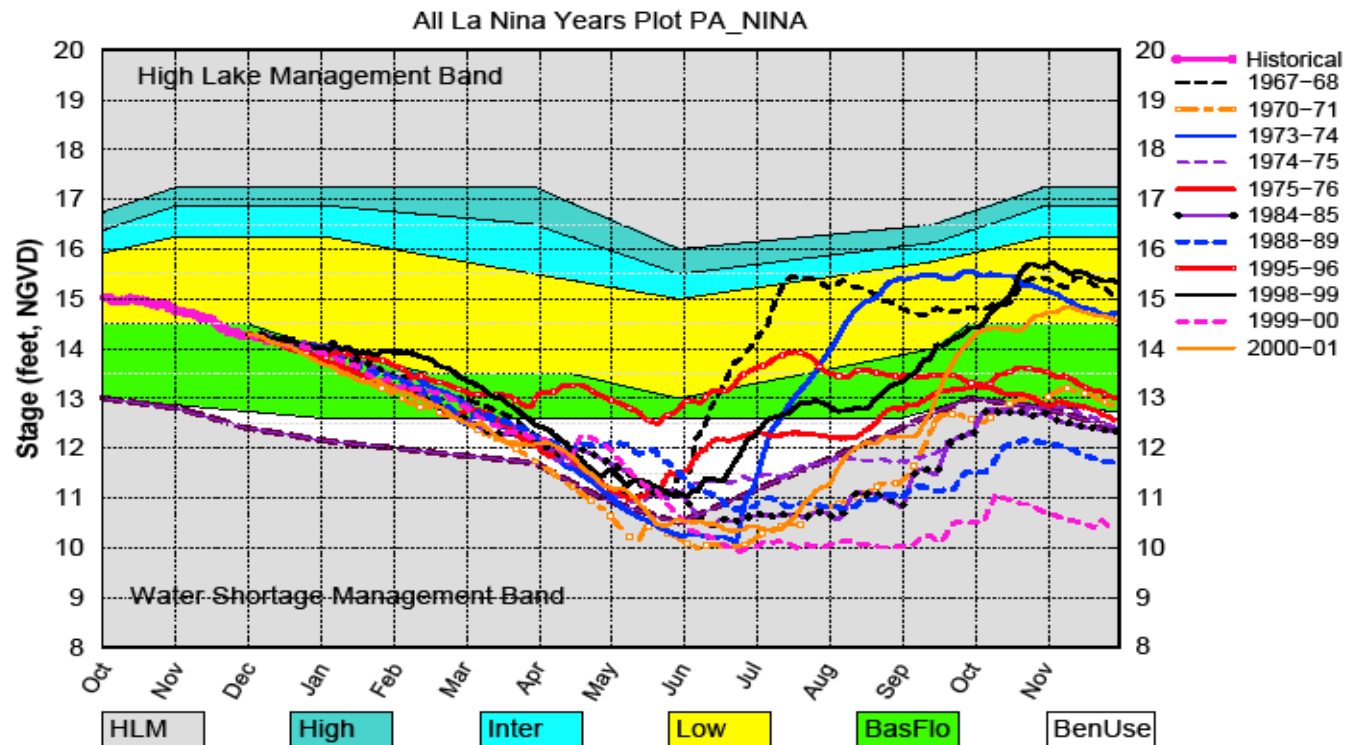


- Positive SST anomalies across the basin from 5S to 15N.
- All Atlantic indices are above average.

Fig. A1a. Tropical Atlantic Variability region indices, calculated as the area-averaged monthly mean sea surface temperature anomalies ($^{\circ}\text{C}$) for the TNA [60°W - 30°W , 5°N - 20°N], TSA [30°W - 10°E , 20°S - 0] and ATL3 [20°W - 0 , 2.5°S - 2.5°N] regions, and Meridional Gradient Index, defined as differences between TNA and TSA. Data are derived from the NCEP OI SST analysis, and anomalies are departures from the 1971-2000 base period means.

December 1st Position Analysis for La Nina Years

Lake Okeechobee SFWMM December 2008 Position Analysis



(See assumptions on the Position Analysis Results website)

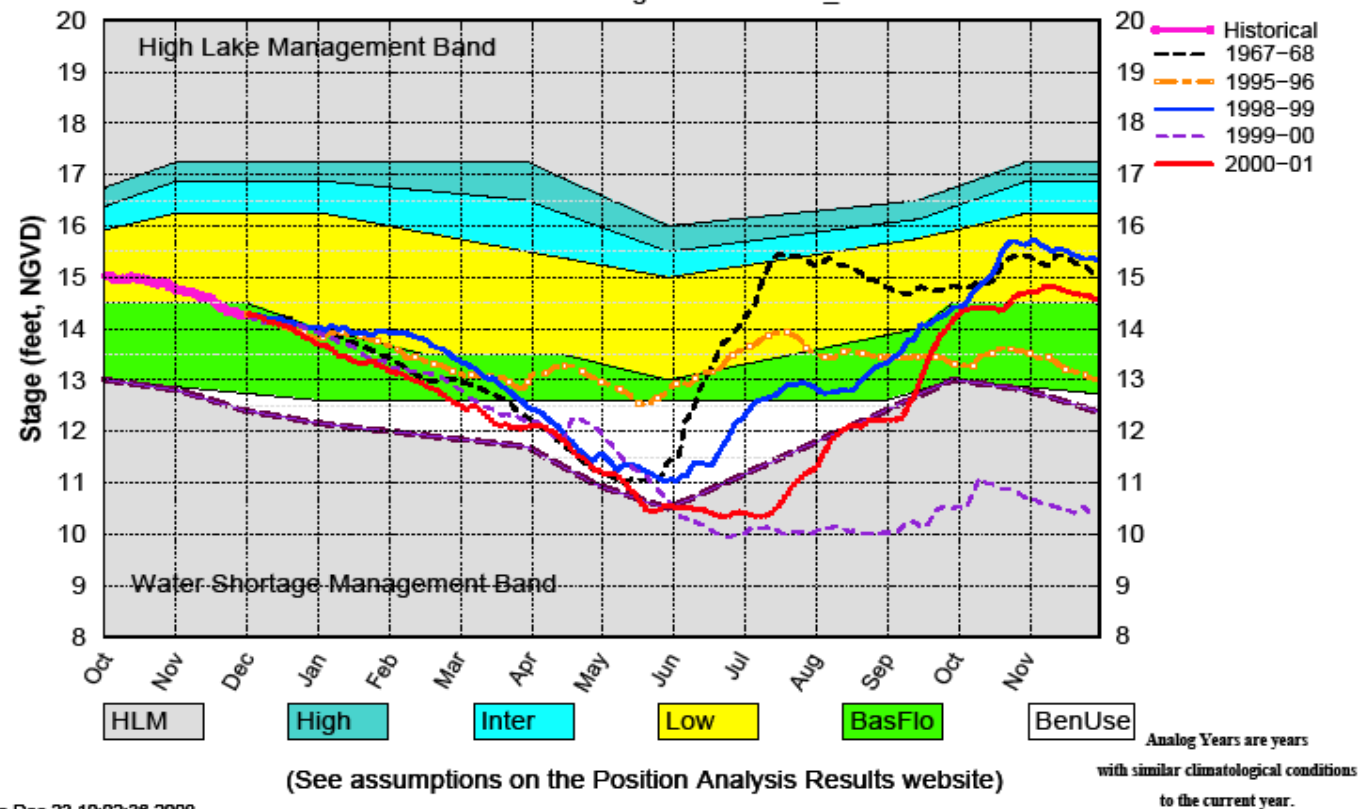
Tue Dec 23 10:02:35 2008

December 1st Position Analysis

La Nina /AMO Warm sub sampling

Lake Okeechobee SFWMM December 2008 Position Analysis

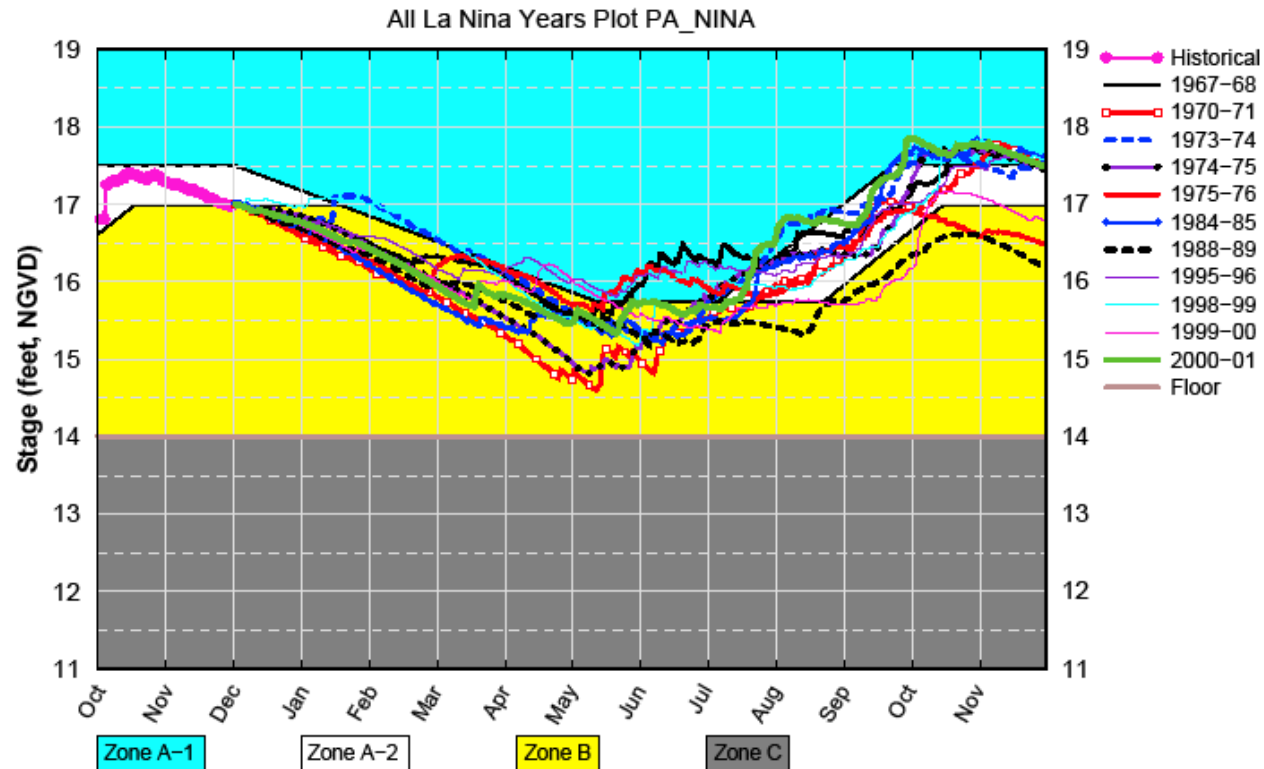
AMO Warm / La Nina Analog Years Plot PA_NINA



Tue Dec 23 10:02:38 2008

December 1st Position Analysis for La Nina Years

WCA1 SFWMM December 2008 Position Analysis



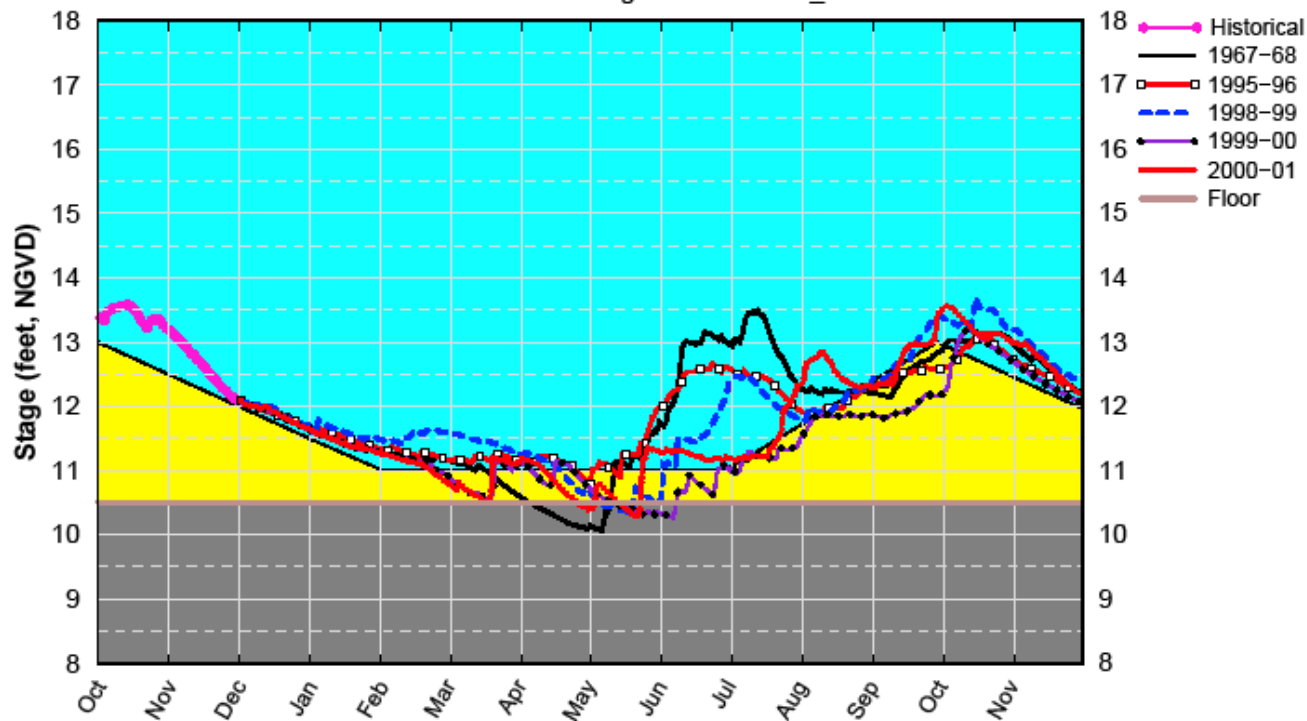
(See assumptions on the Position Analysis Results website)

Tue Dec 23 10:02:38 2008

December 1st Position Analysis for La Nina Years

WCA2A SFWMM December 2008 Position Analysis

AMO Warm / La Nina Analog Years Plot PA_NINA



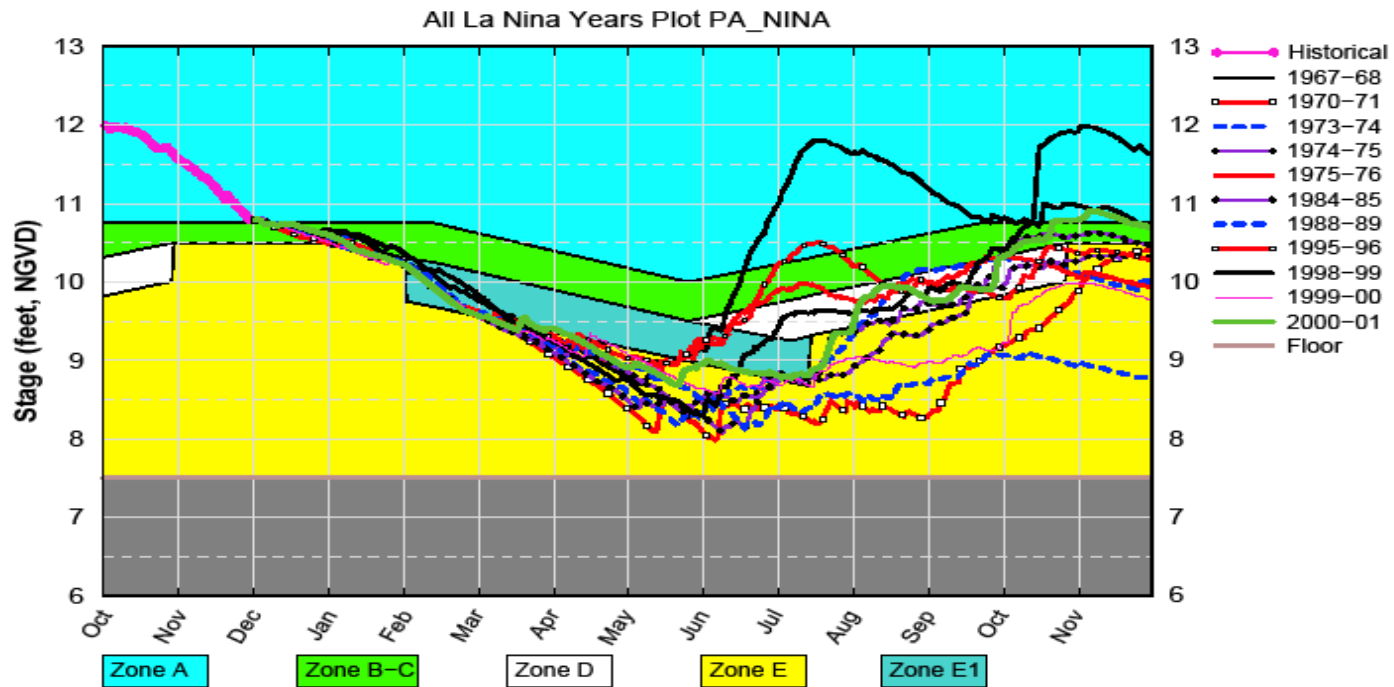
(See assumptions on the Position Analysis Results website)

Analog Years are years
with similar climatological conditions
to the current year.

Tue Dec 23 10:02:42 2008

December 1st Position for La Nina Years

WCA3A SFWMM December 2008 Position Analysis

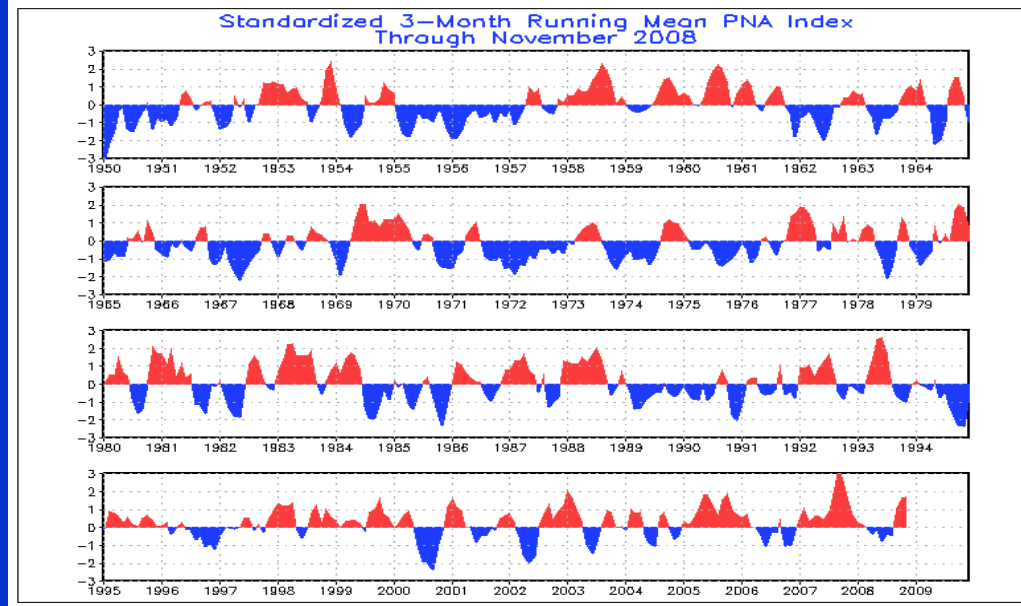
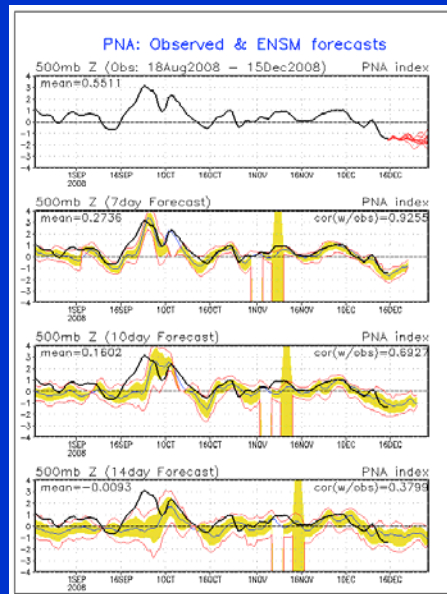


(See assumptions on the Position Analysis Results website)

Tue Dec 23 10:02:45 2008

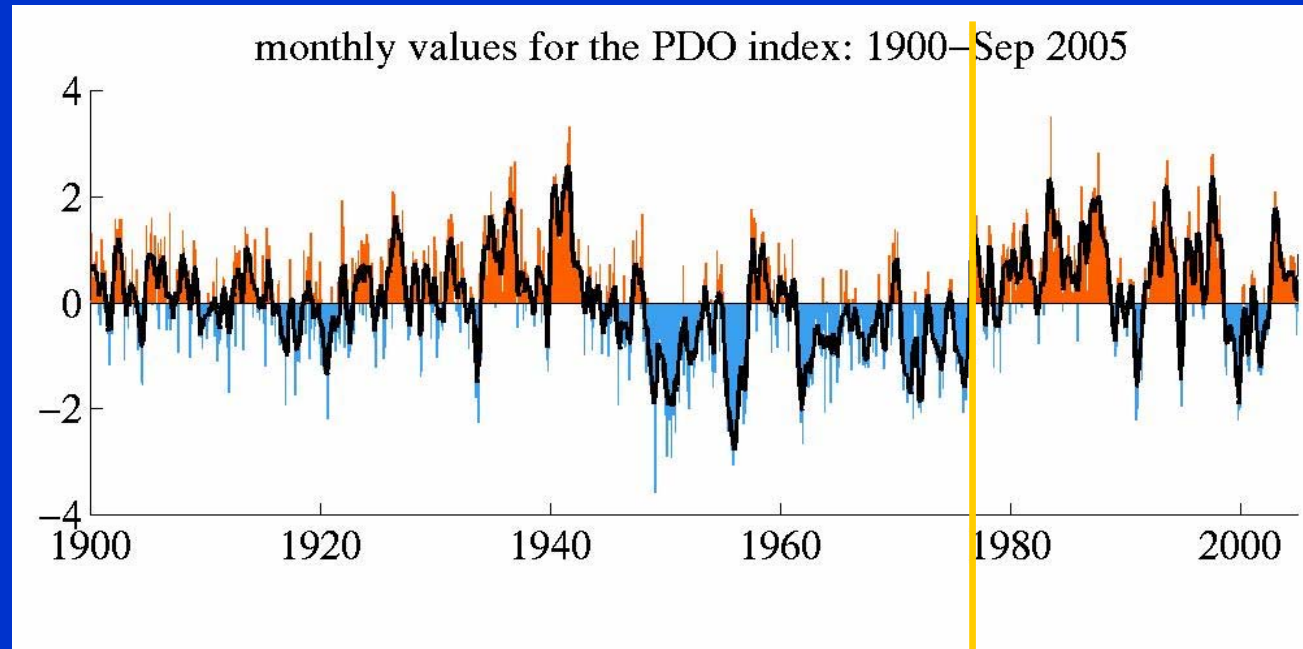
Backup Slides with additional support material

Pacific – North American Index



Currently
transitioning
to cold phase of
PDO

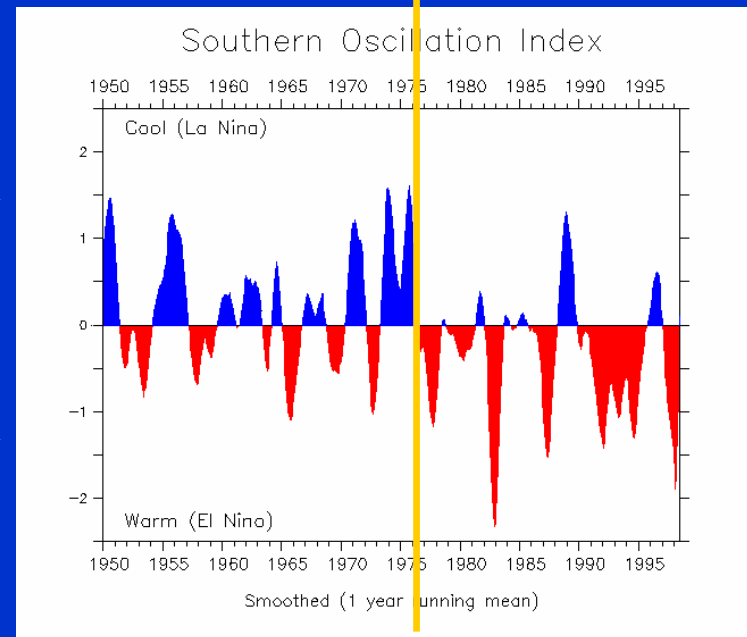
PDO



ENSO

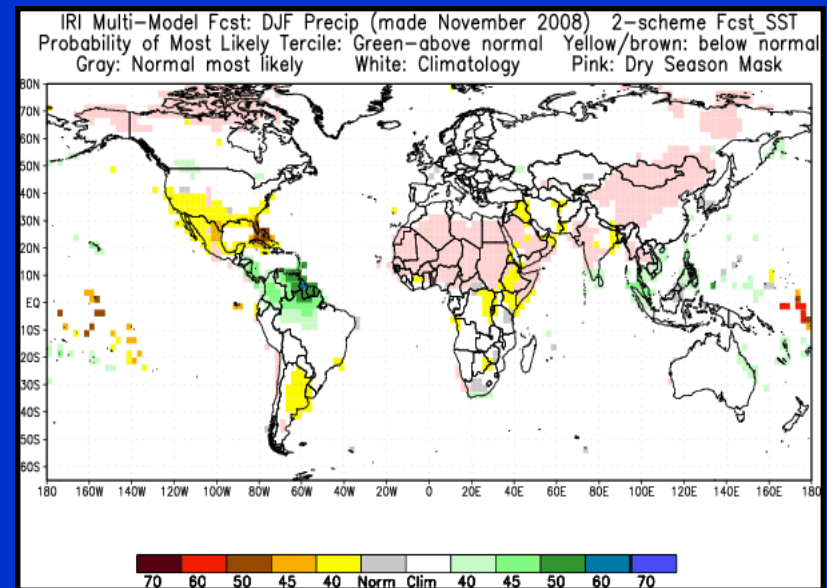
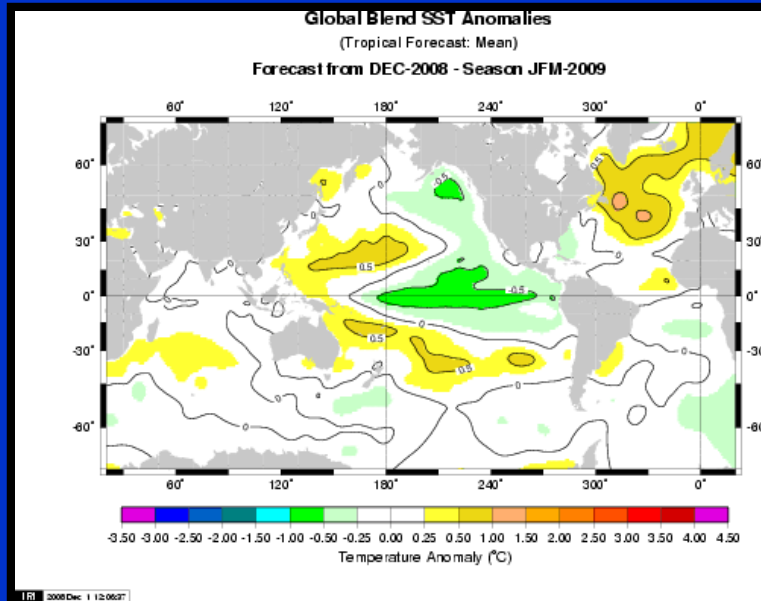
La Nina predominates when
PDO is in negative phase →

El Nino predominates when
PDO is in positive phase →

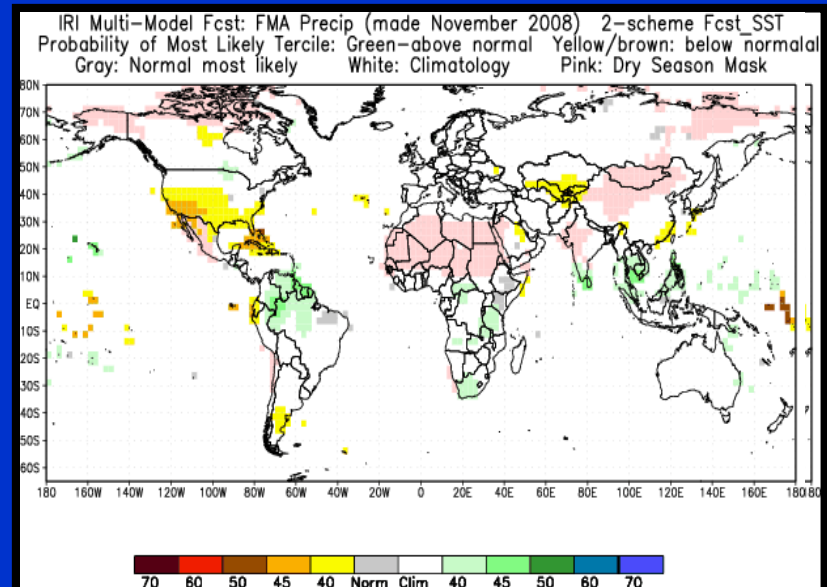
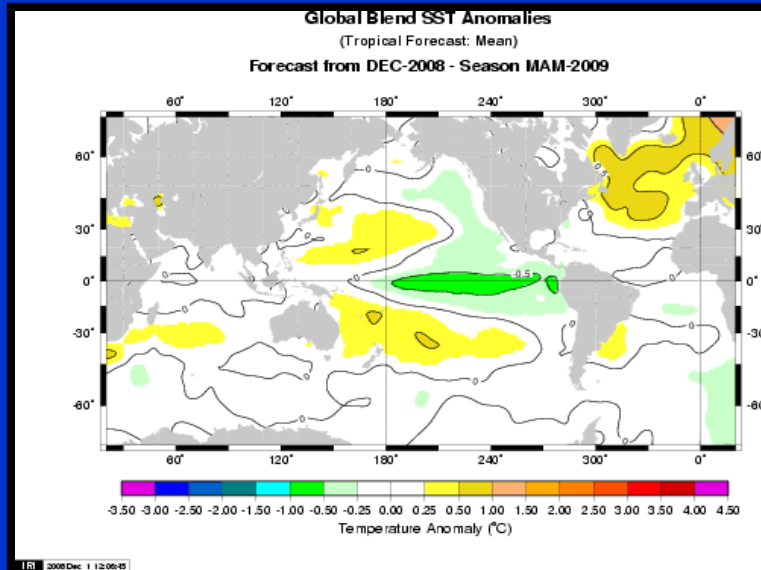


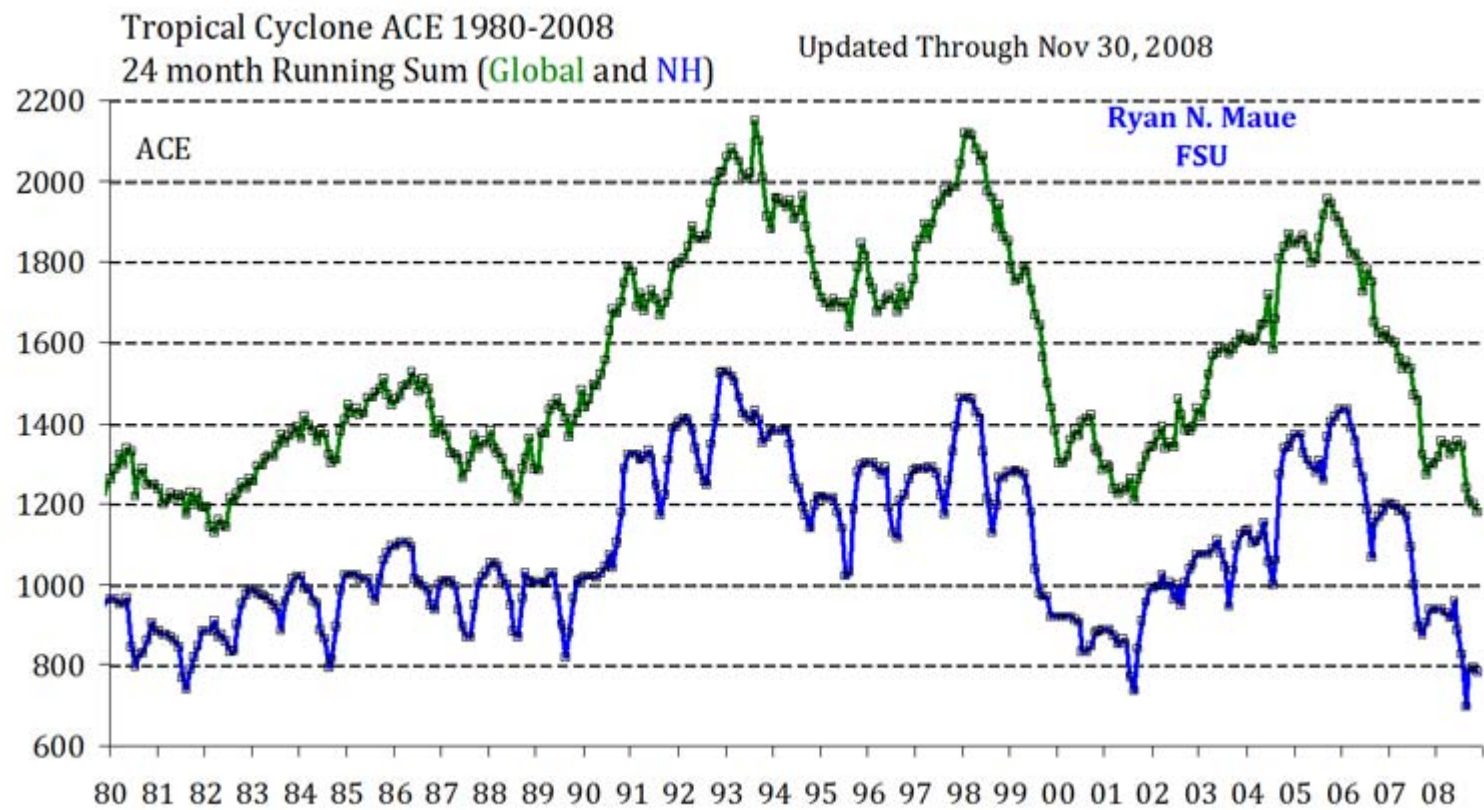
IRI Multi-Model Probability Forecasts 2008-2009

JFM



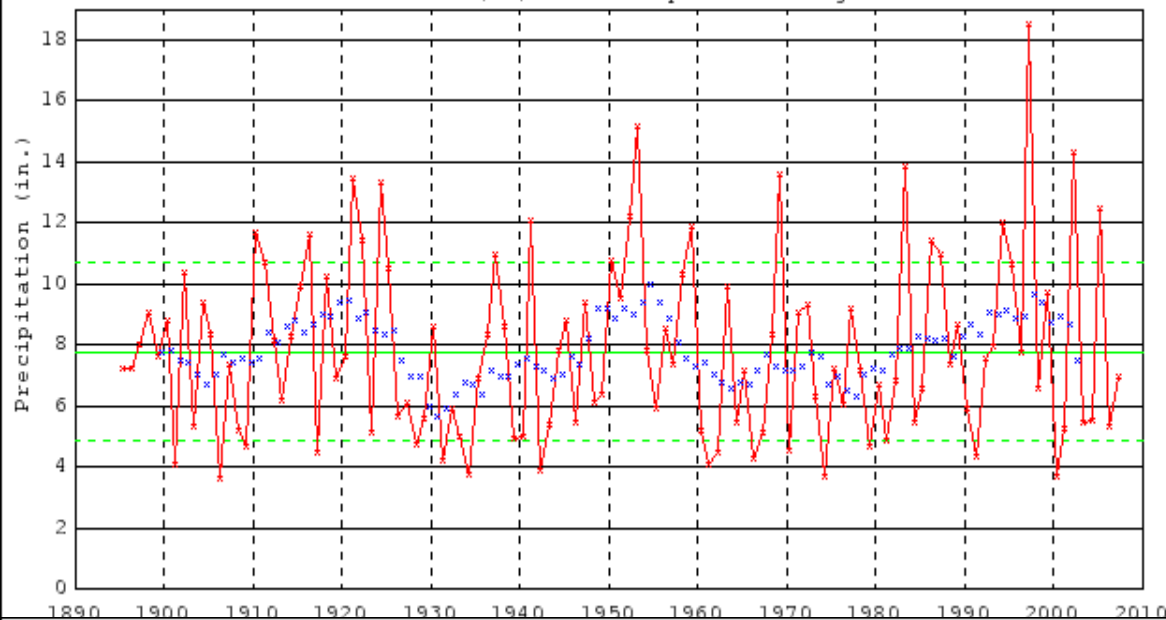
FMA





South Central Division, Florida Precipitation (in.)

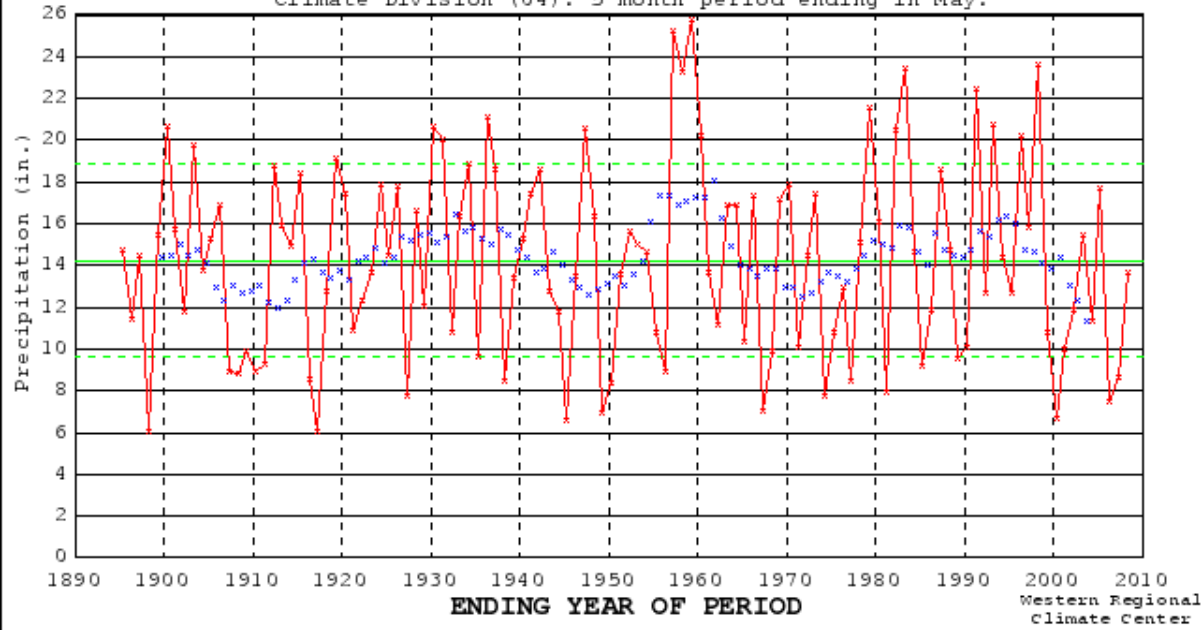
Climate Division (04). 3 month period ending in December.



YEAR 1997. VALUE = 18.47
 YEAR 1998. VALUE = 6.53
 YEAR 1999. VALUE = 9.71
 YEAR 2000. VALUE = 3.65
 YEAR 2001. VALUE = 5.23
 YEAR 2002. VALUE = 14.25
 YEAR 2003. VALUE = 5.47
 YEAR 2004. VALUE = 5.48
 YEAR 2005. VALUE = 12.47
 YEAR 2006. VALUE = 5.29
 YEAR 2007. VALUE = 6.94
 YEAR 2008. VALUE = 4.52

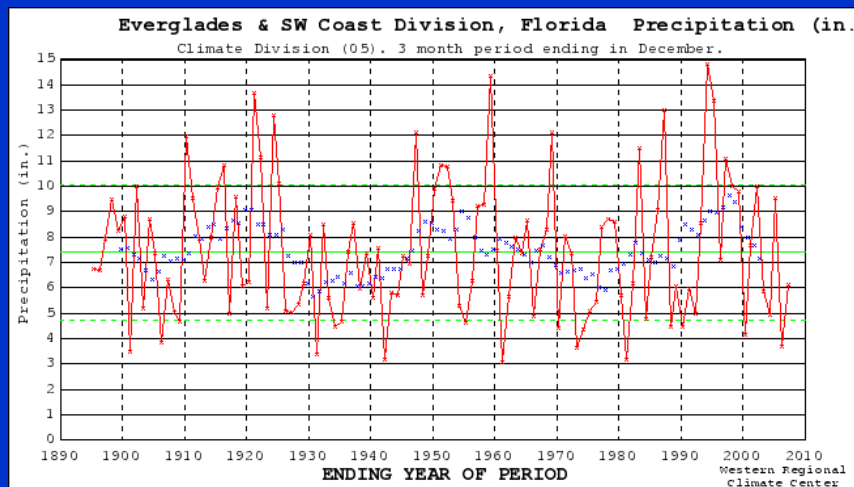
South Central Division, Florida Precipitation (in.)

Climate Division (04). 5 month period ending in May.

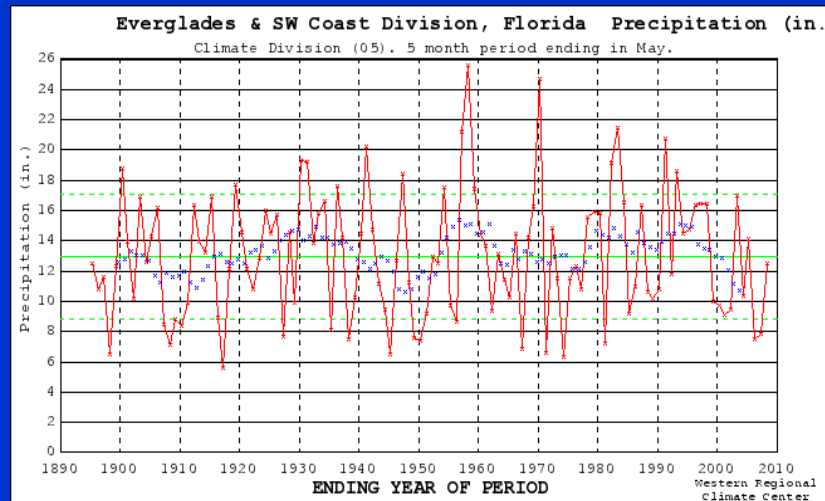


YEAR 1998. VALUE = 23.56
 YEAR 1999. VALUE = 10.78
 YEAR 2000. VALUE = 6.59
 YEAR 2001. VALUE = 9.94
 YEAR 2002. VALUE = 11.79
 YEAR 2003. VALUE = 15.43
 YEAR 2004. VALUE = 11.28
 YEAR 2005. VALUE = 17.62
 YEAR 2006. VALUE = 7.41
 YEAR 2007. VALUE = 8.59
 YEAR 2008. VALUE = 13.64

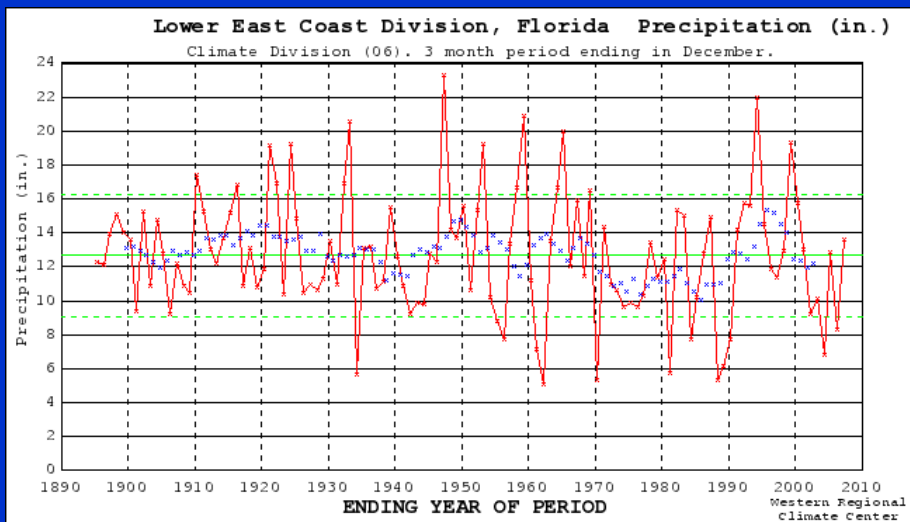
South Interior



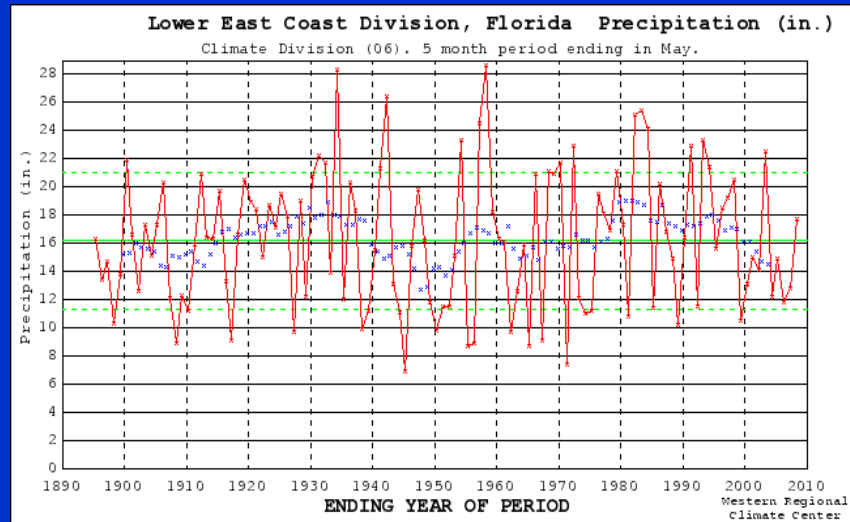
South Interior



LEC

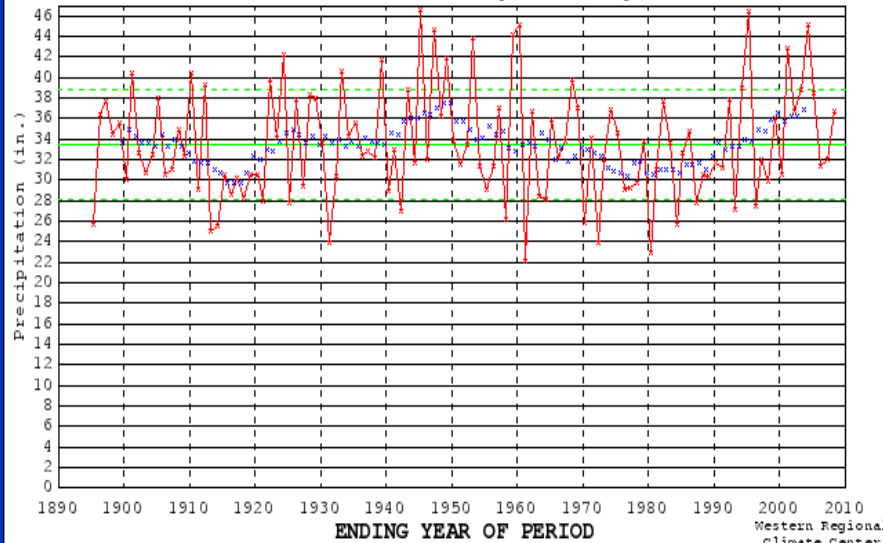


LEC



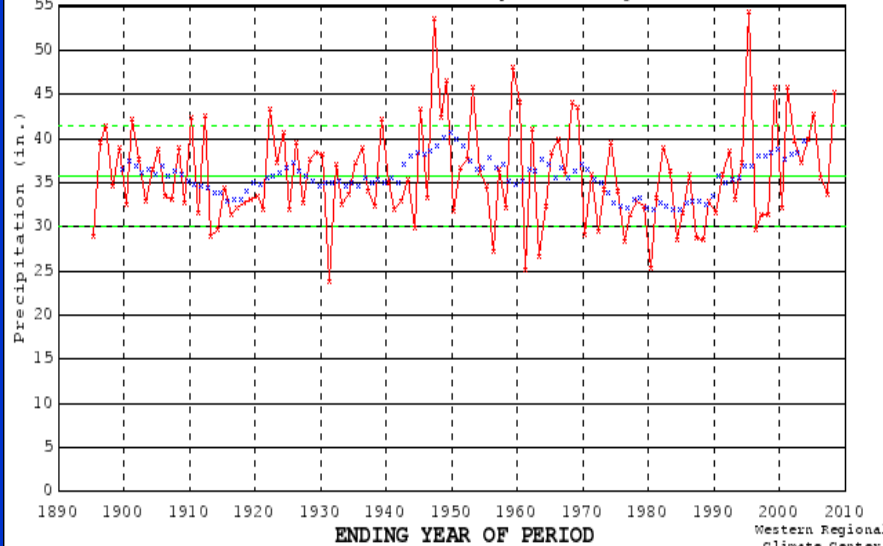
South Central Division, Florida Precipitation (in.)

Climate Division (04). 5 month period ending in October.



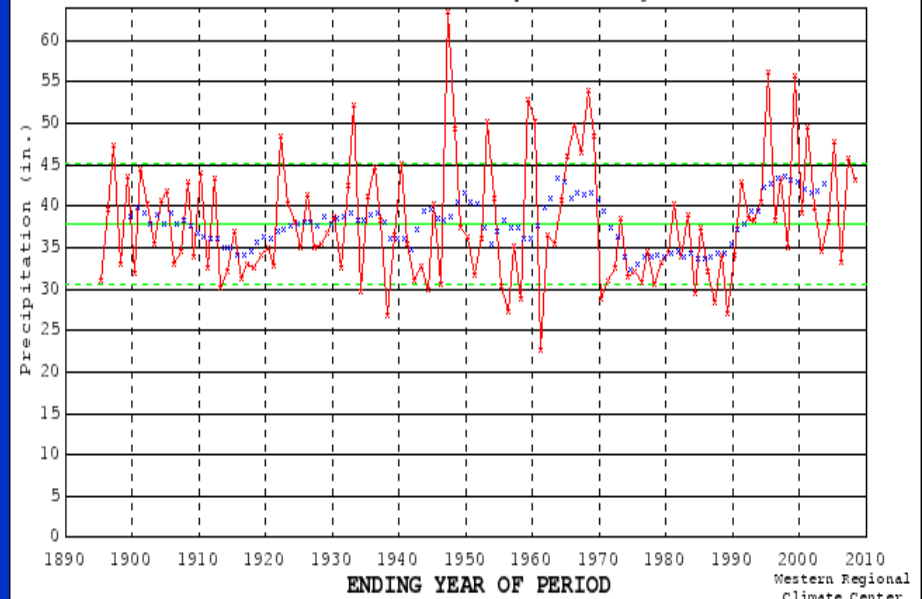
Everglades & SW Coast Division, Florida Precipitation (in.)

Climate Division (05). 5 month period ending in October.



Lower East Coast Division, Florida Precipitation (in.)

Climate Division (06). 5 month period ending in October.

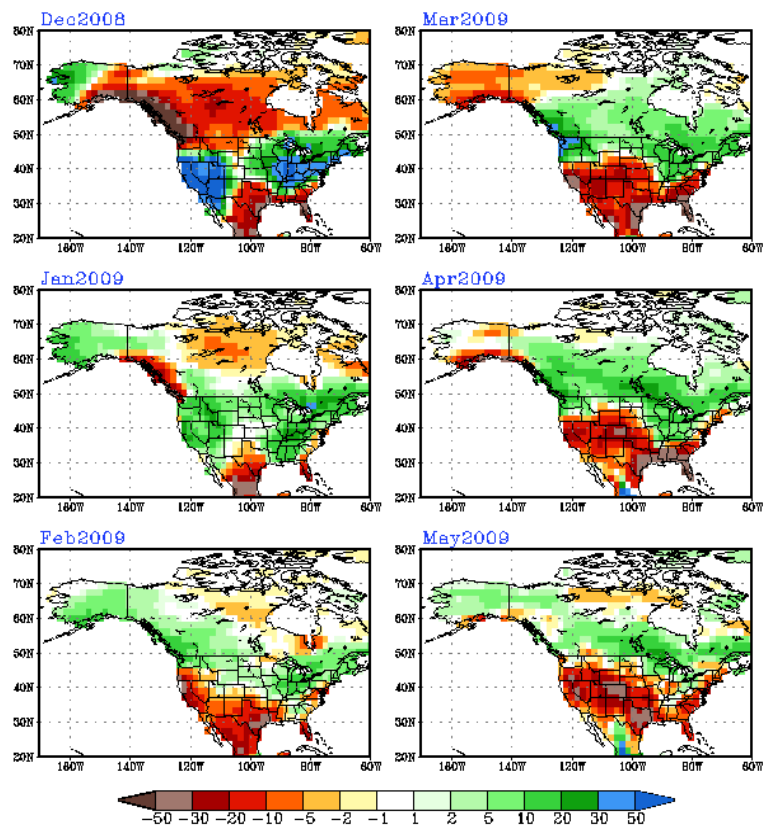




NWS/NCEP

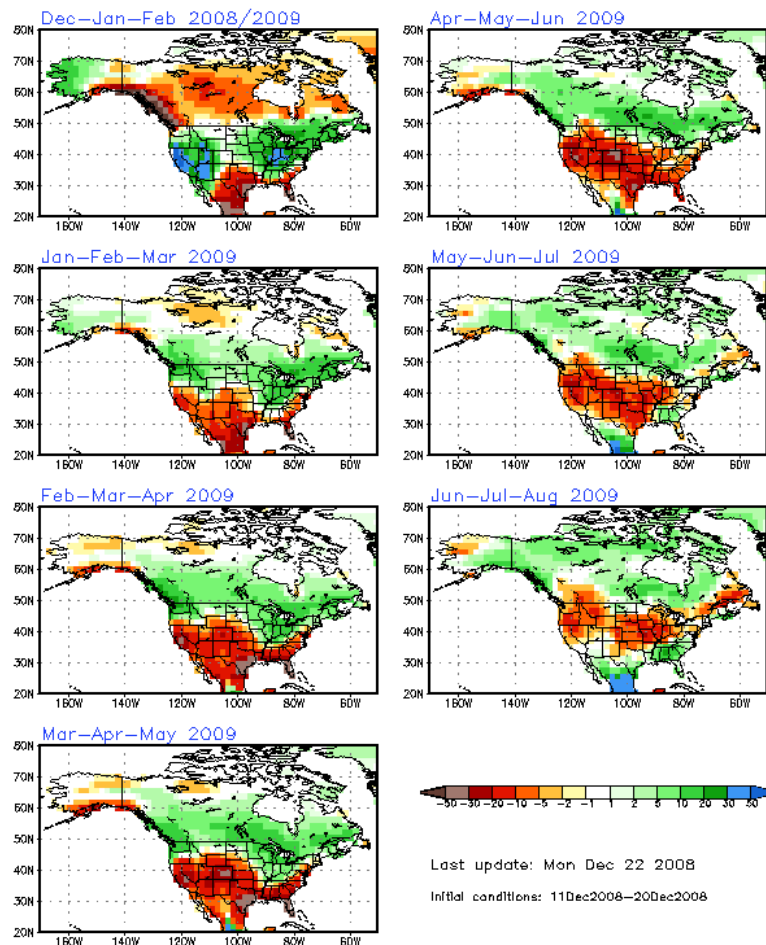
Last update: Mon Dec 22 2008
Initial conditions: 11Dec2008–20Dec2008

CFS monthly Prec forecast (mm/month)



Ensemble average of 40 members from initial conditions of 11Dec2008 to 20Dec2008.
Base period for climatology is 1952–2003. Base period for bias correction is 1982–2003.

CFS seasonal Prec forecast (mm/month)



Last update: Mon Dec 22 2008
Initial conditions: 11Dec2008–20Dec2008



NWS/NCEP