North American Drought Briefing for December 2012 and OND 2012

Climate Prediction Center/NCEP/NOAA

http://www.cpc.ncep.noaa.gov/products/Drought

Happy New Year!!!

Current Partners

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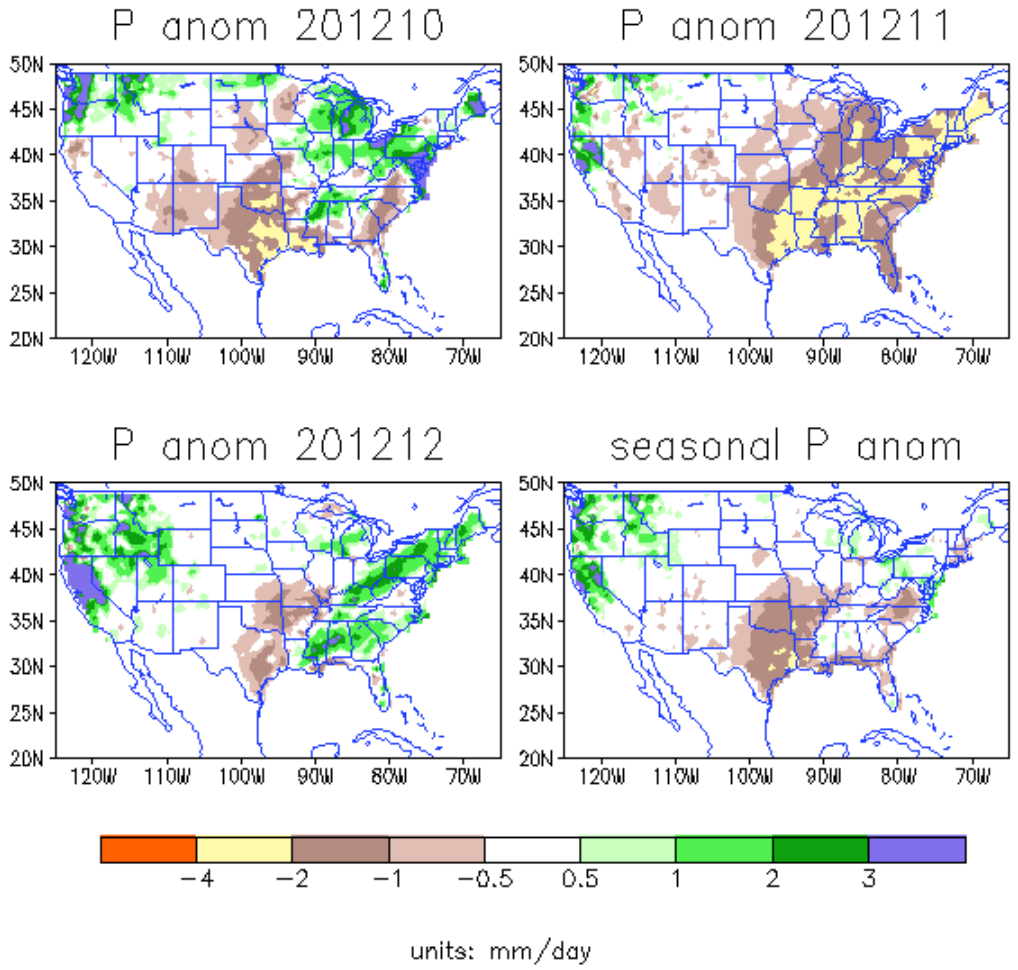
Project Funded by NOAA MAPP, TRACS & NASA

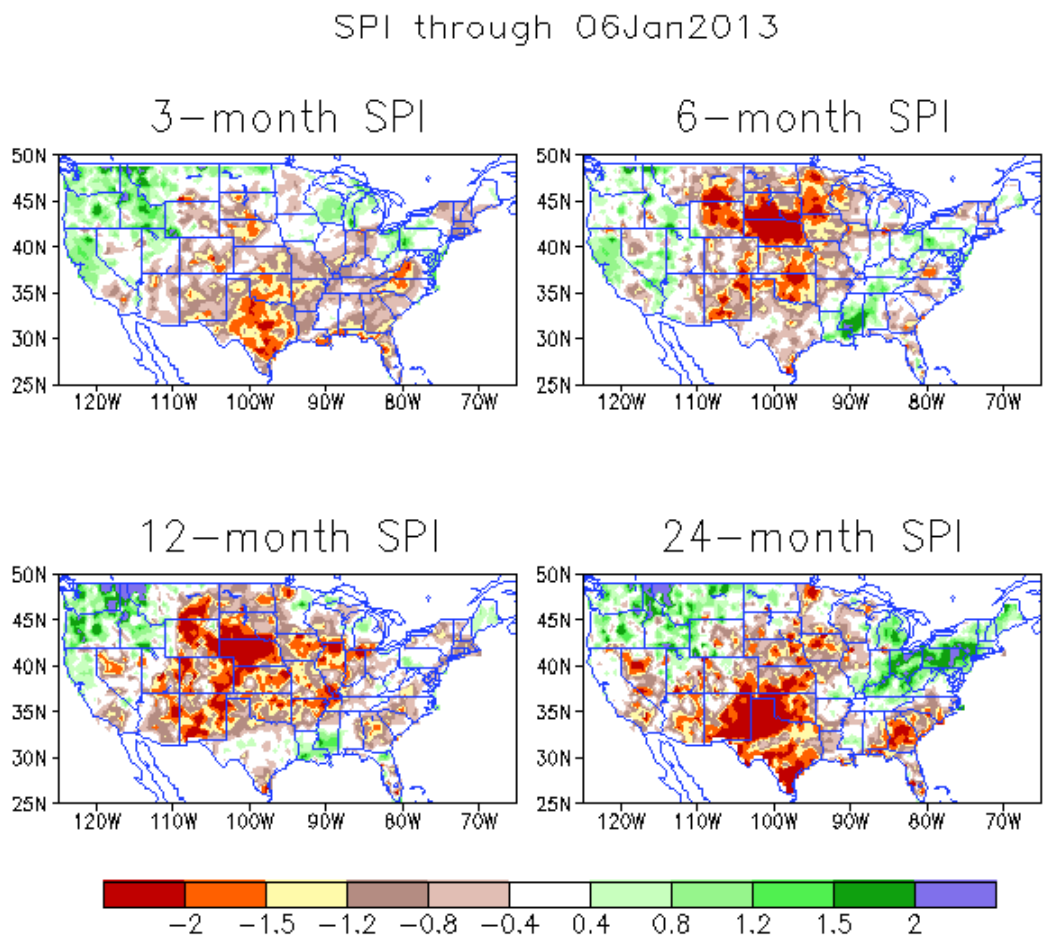
P anomalies over the United States



High lights:

December 2012

- **rain events : from the Gulf to the areas east of 90W gave relieve to drought**
- Texas and the Southern Plains were dry
- **Wet:** West Coast/ Pacific Northwest and California

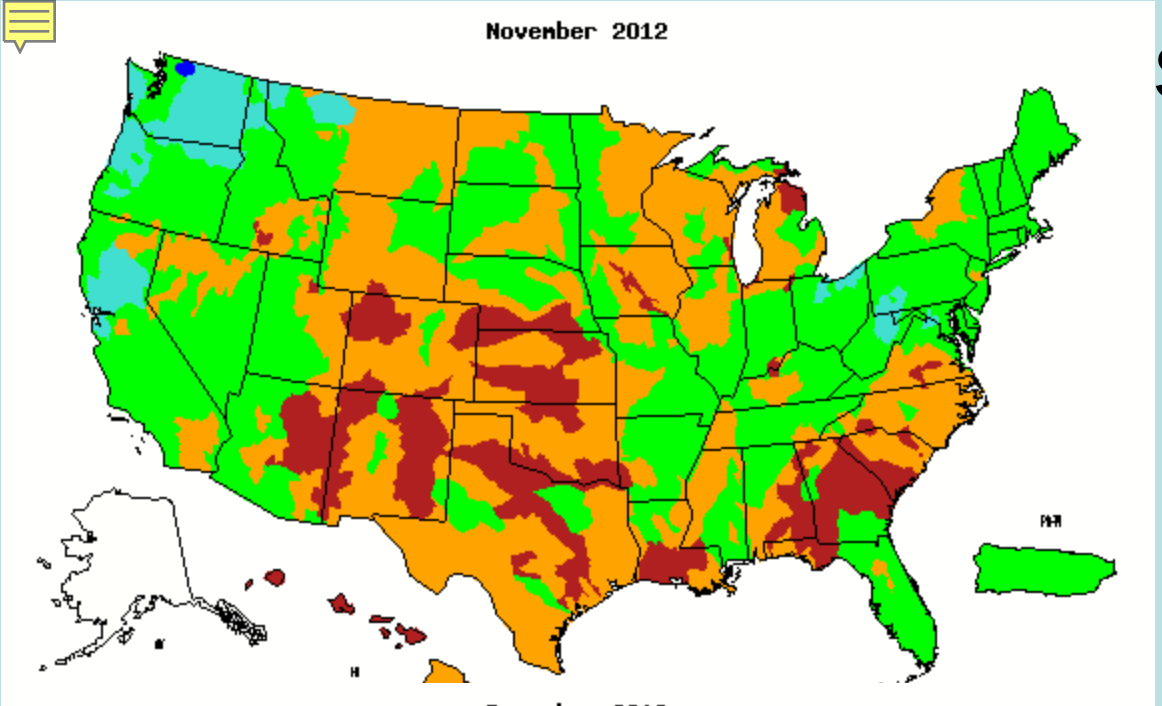


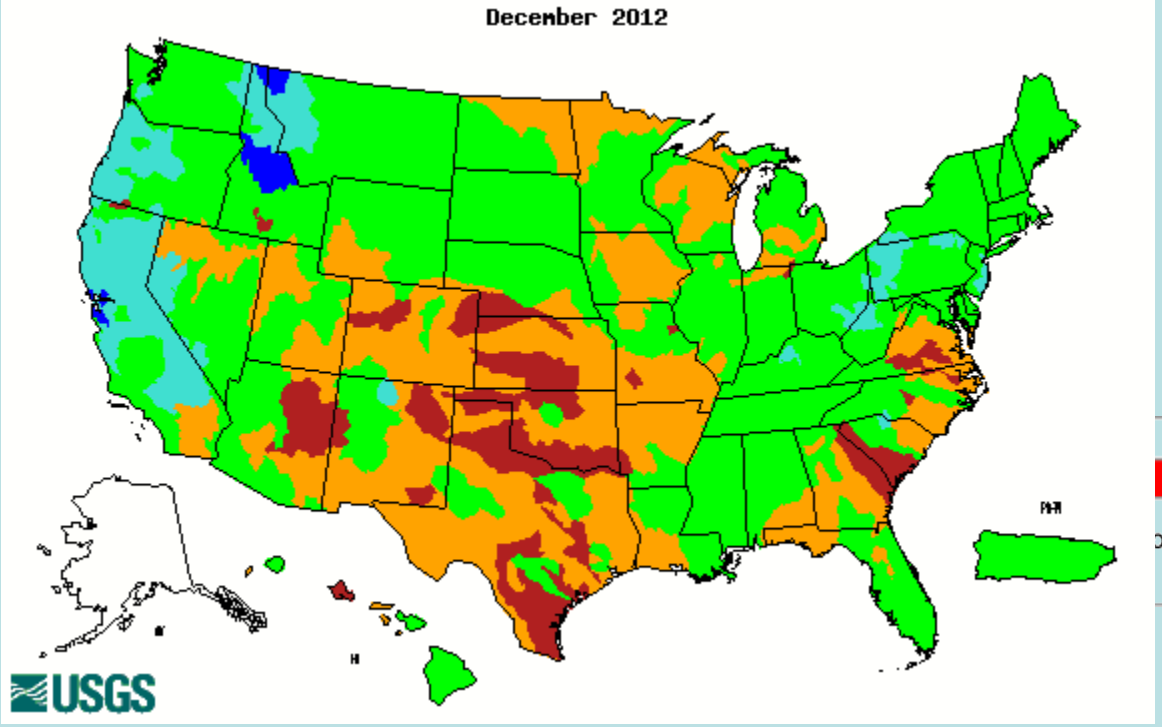
SPI

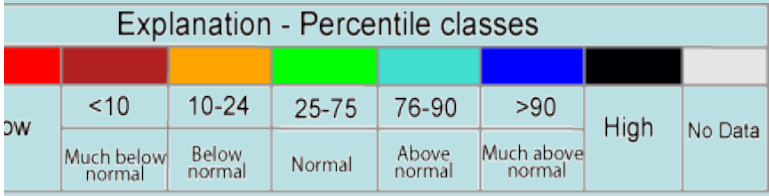
- *Some relieve to drought over the western interior states*
- *Drought continues over the Great Plains, where SPI6 is in the D4 category for almost 5 months*
- *Improvements over the Montana and Dakotas for short term SPI3*

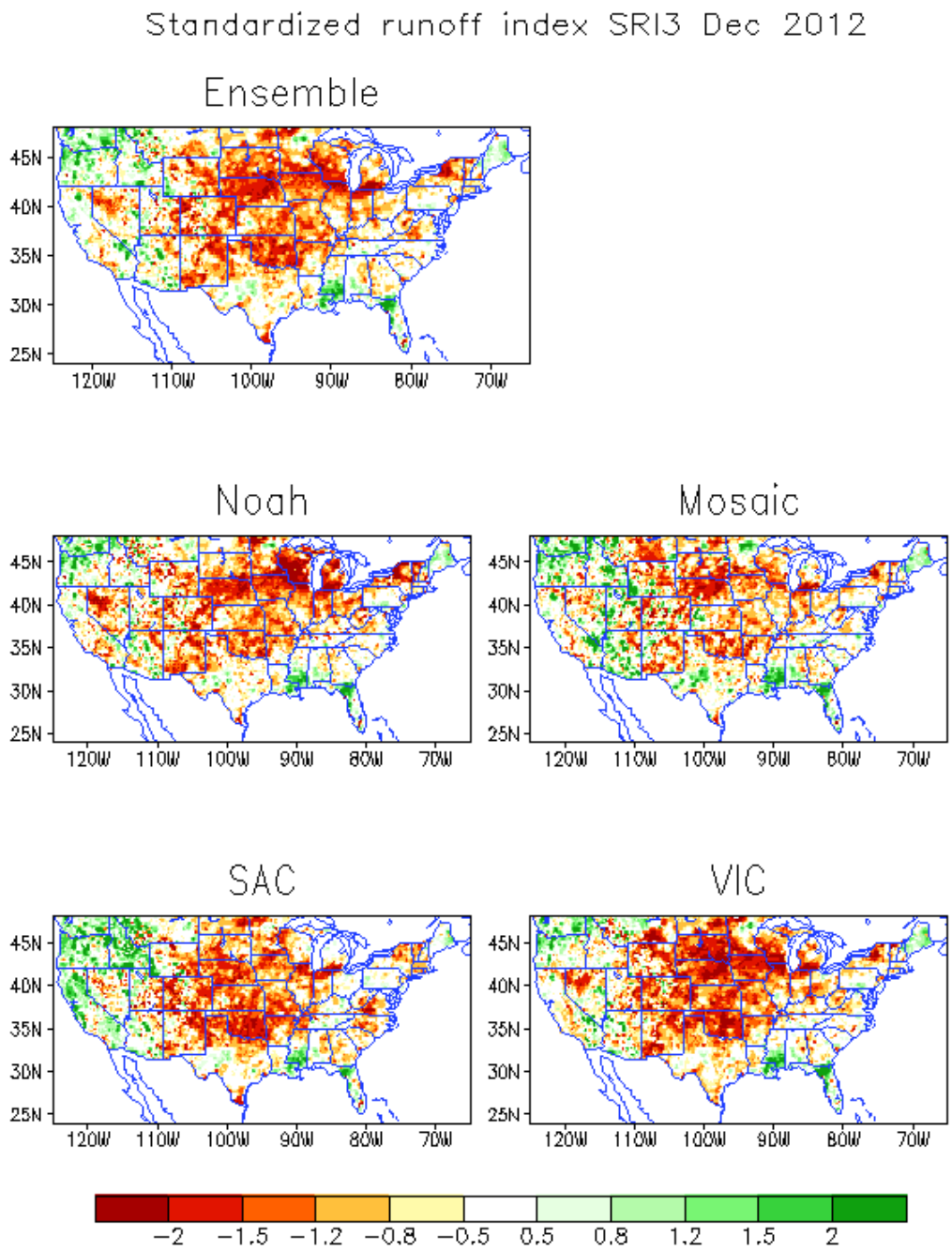
Streamflow percentile (USGS)

- There was improvement over Montana and Dakotas and the Southeast





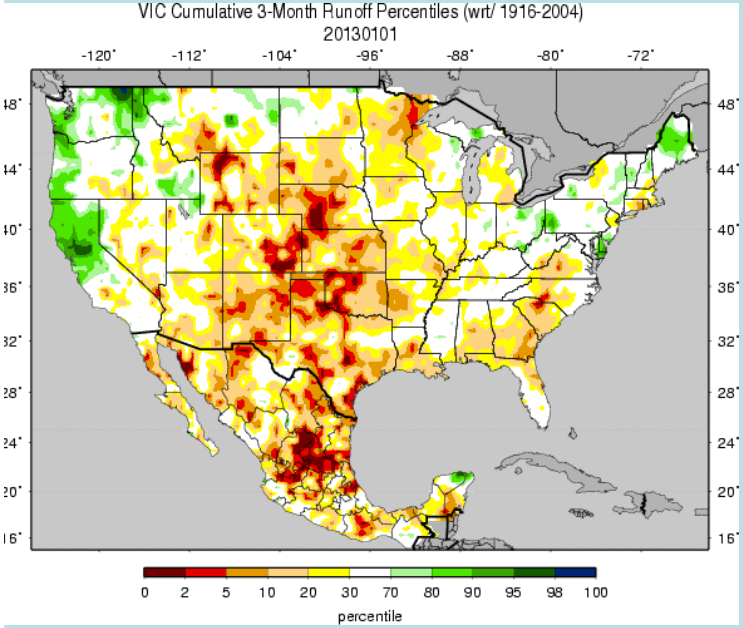




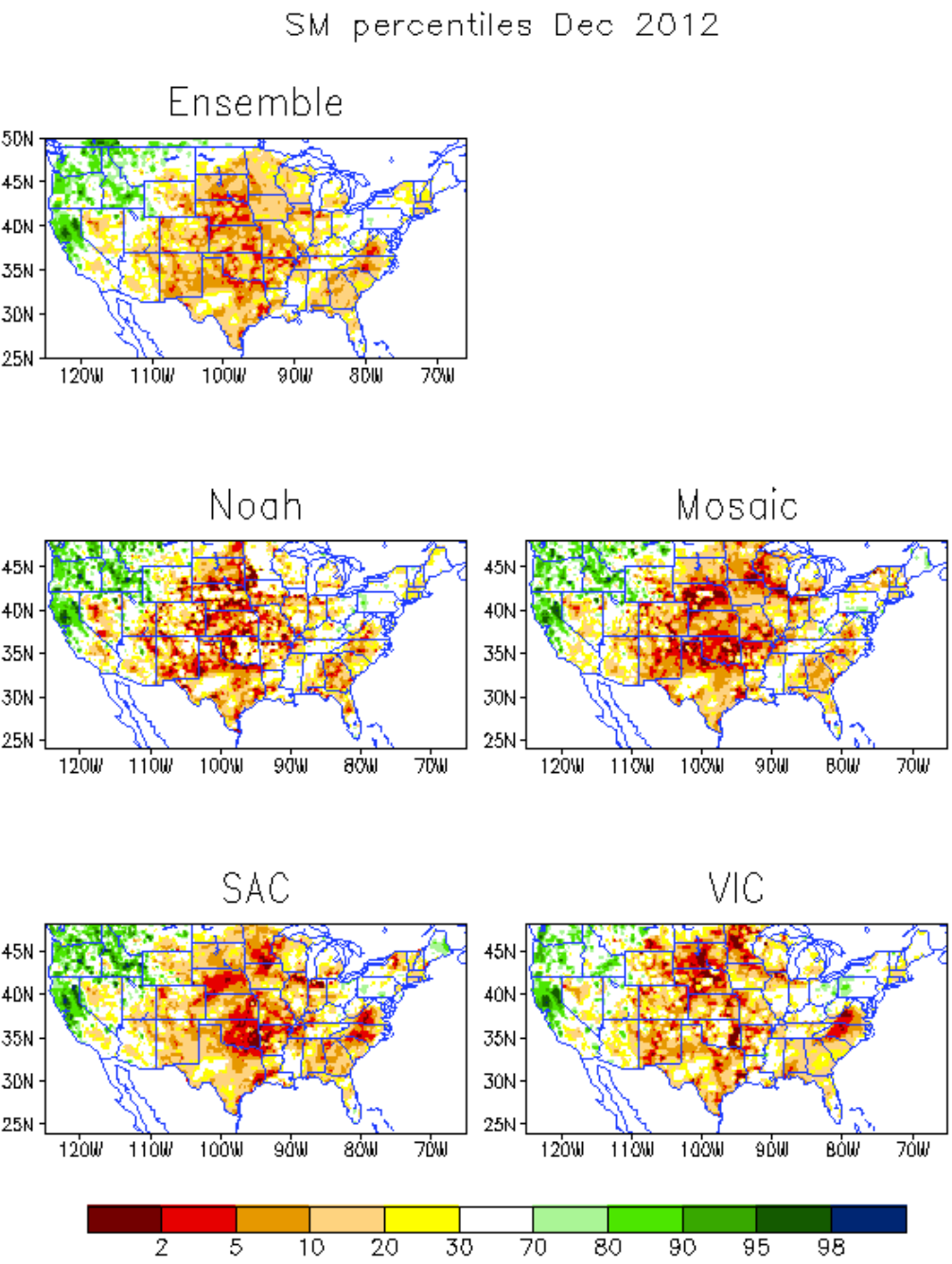
RUNOFF percentiles

U Washington

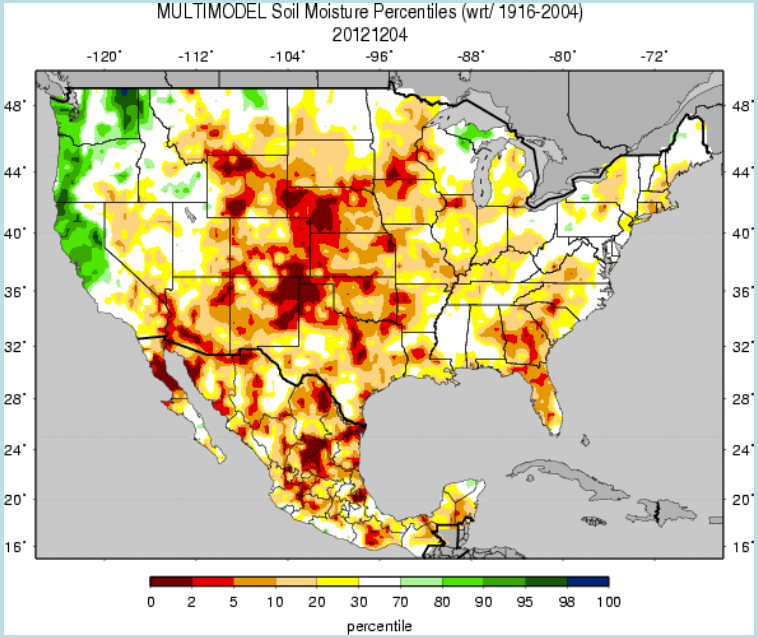
3-month accumulation



Both UW and EMC show the Central U. S. is under severe drought . The improvement was over the areas east of 90W



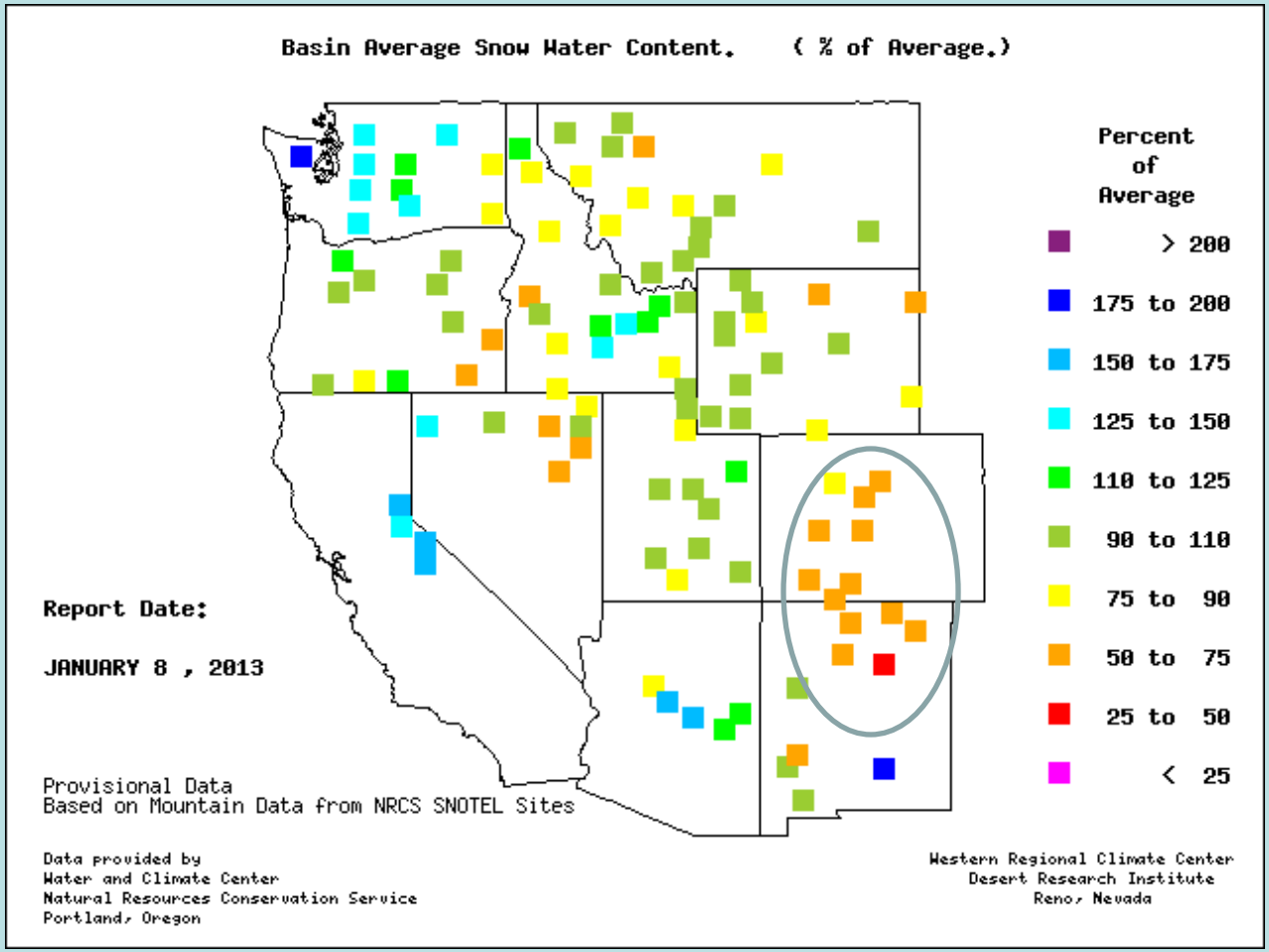
U Washington



A very dry picture:

Both total soil moisture percentiles show dryness over the Central U. S.

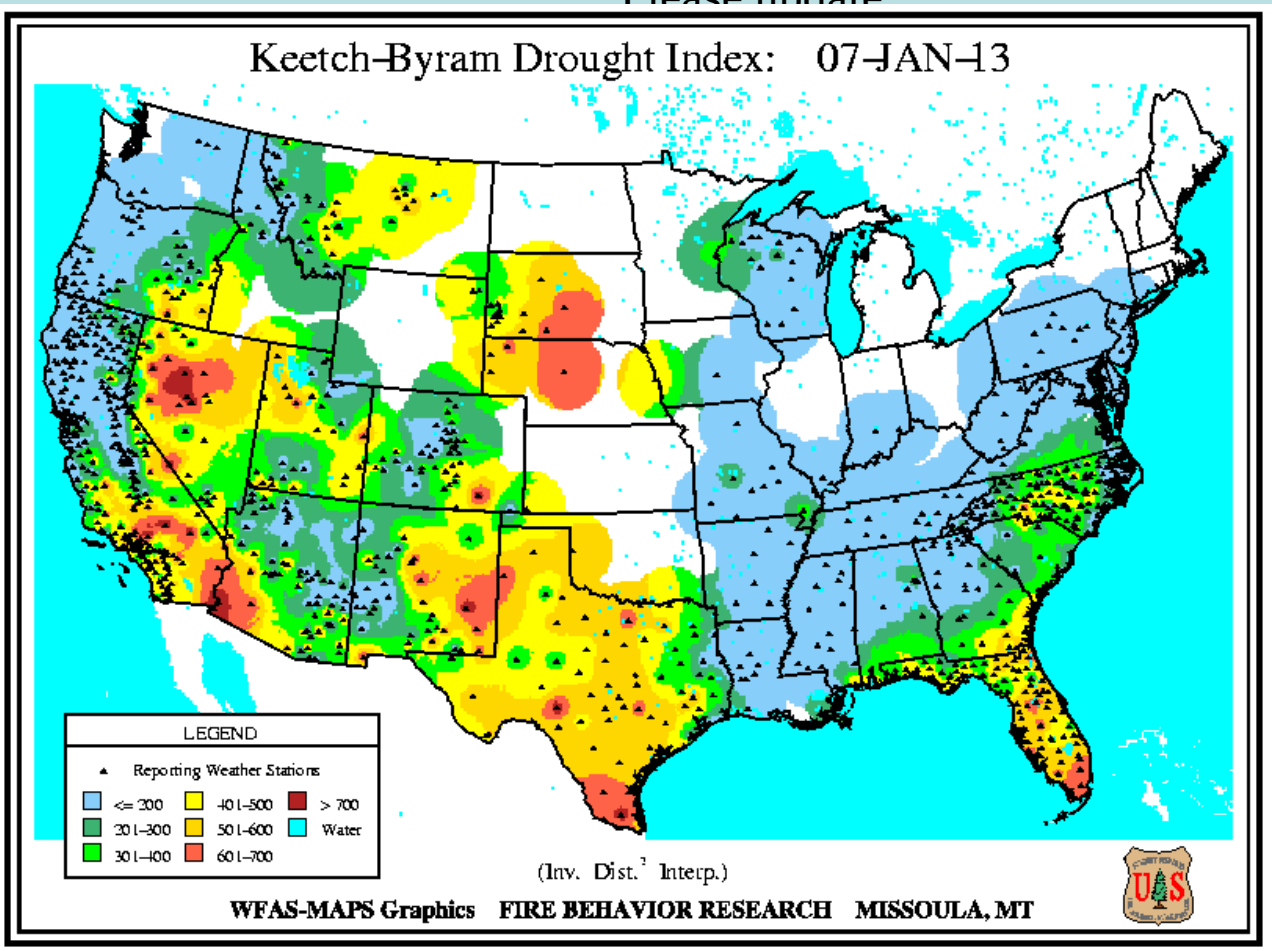
Snotel (SWE)

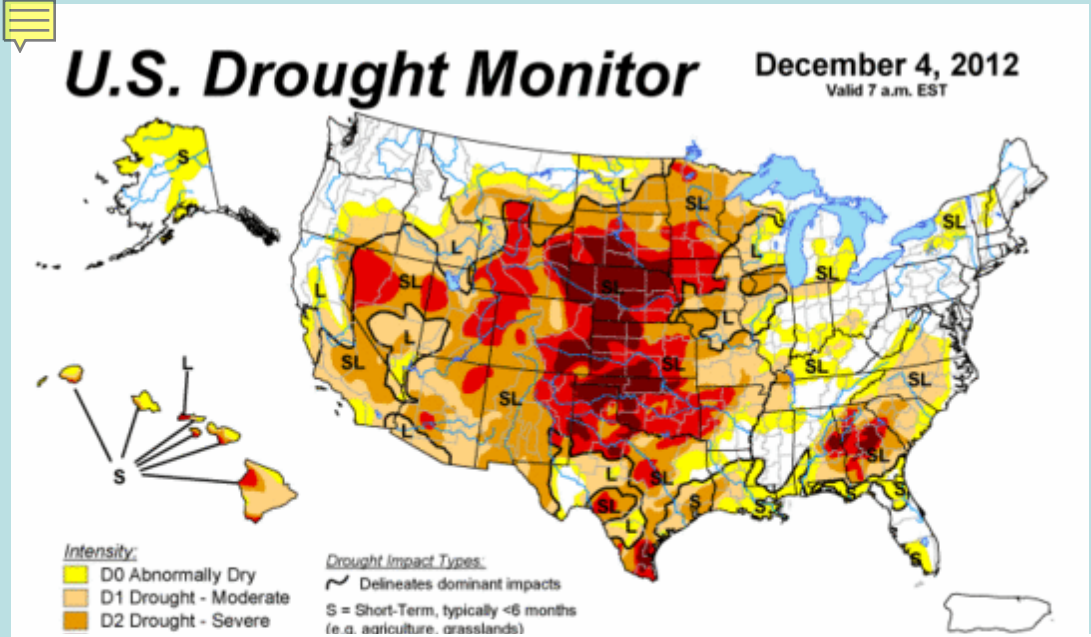


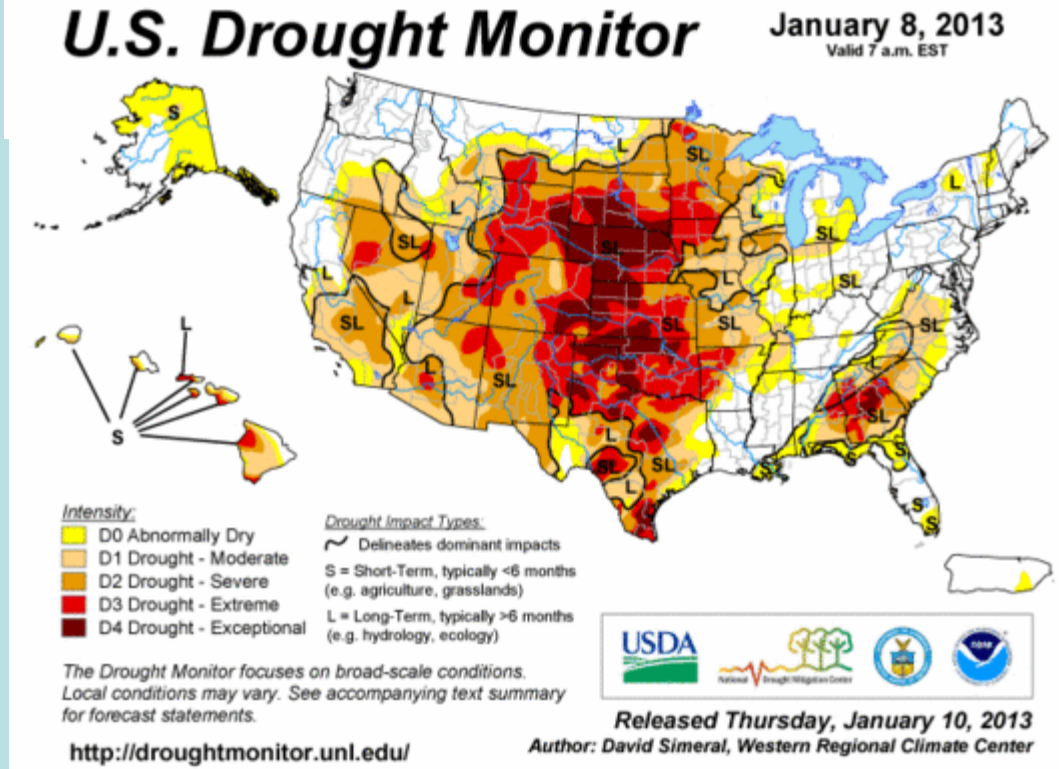
Most western states had normal or above normal SWE except Colorado and northern New Mexico

Keetch-Byram Drouught index

Please update





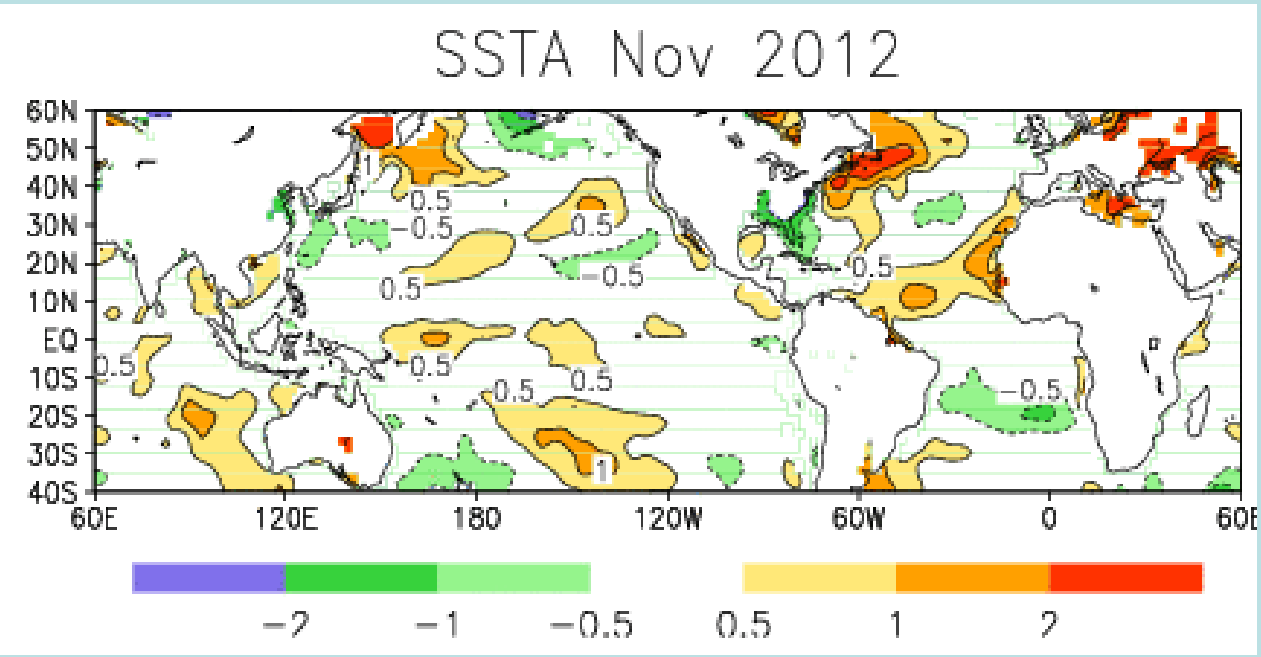


Drought monitor

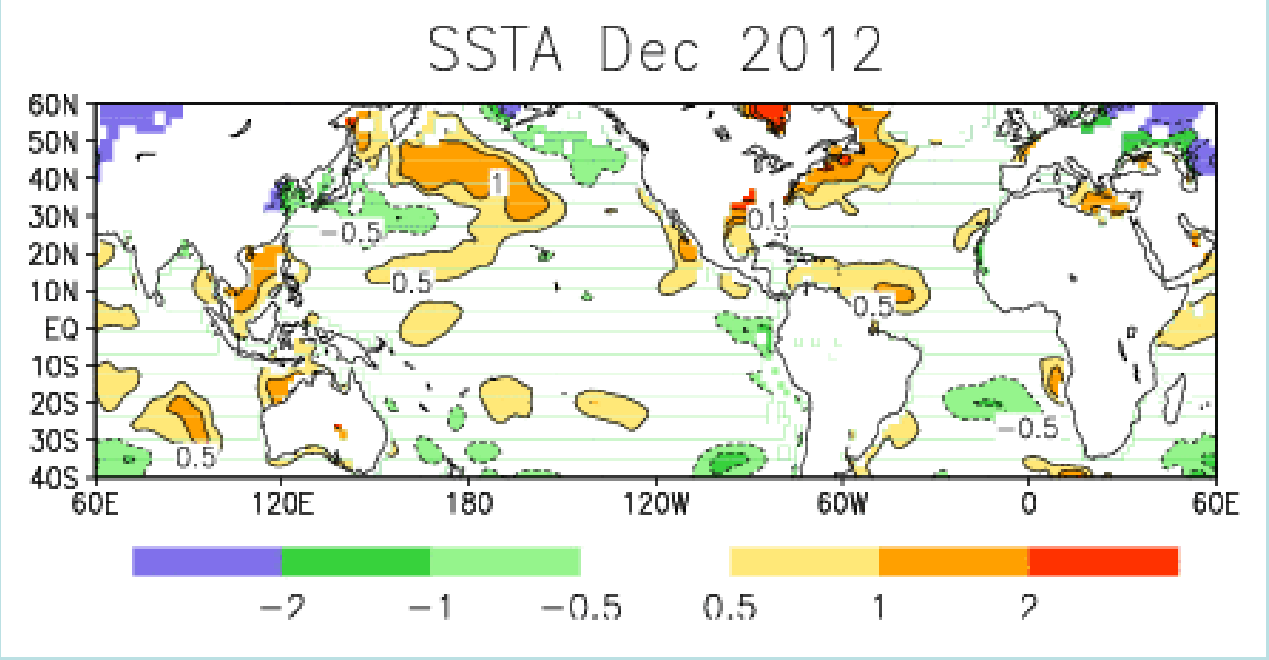
The Drought Monitor

similar to the Drought Monitor issued on Dec 4

SSTA



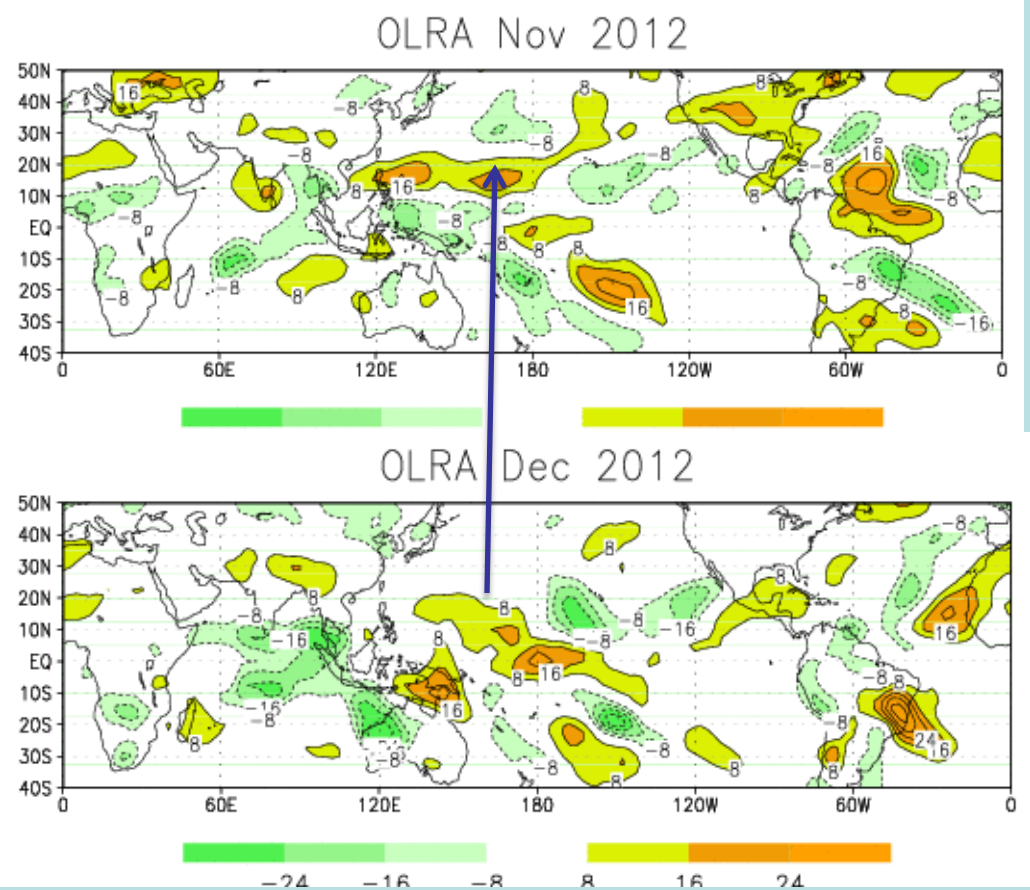
ENSO neutral condition in the Tropical Pacific, No ENSO alert

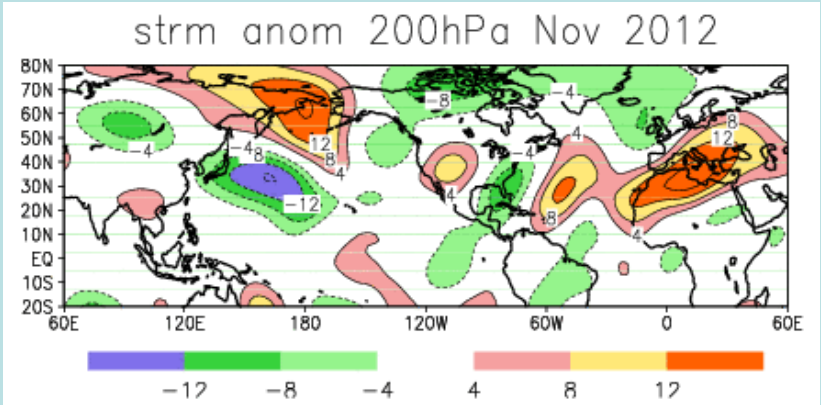


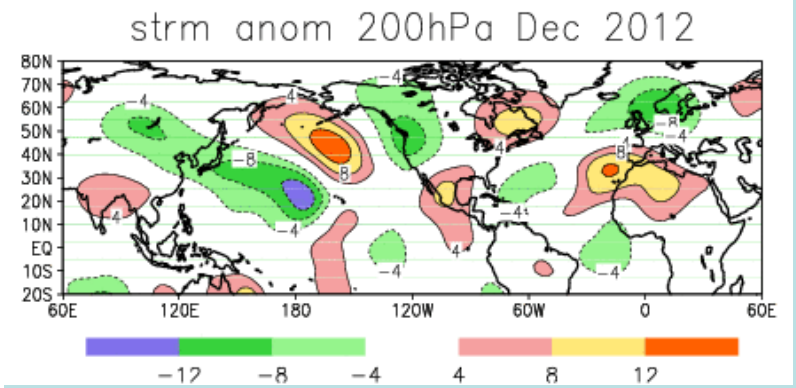
- No coherent SSTA pattern in the Pacific
- Warm SSTAs along the eastern coast of North America
- SSTAs in the North Tropical Atlantic are weaker than Nov

OLRA and 200hPa streamfn

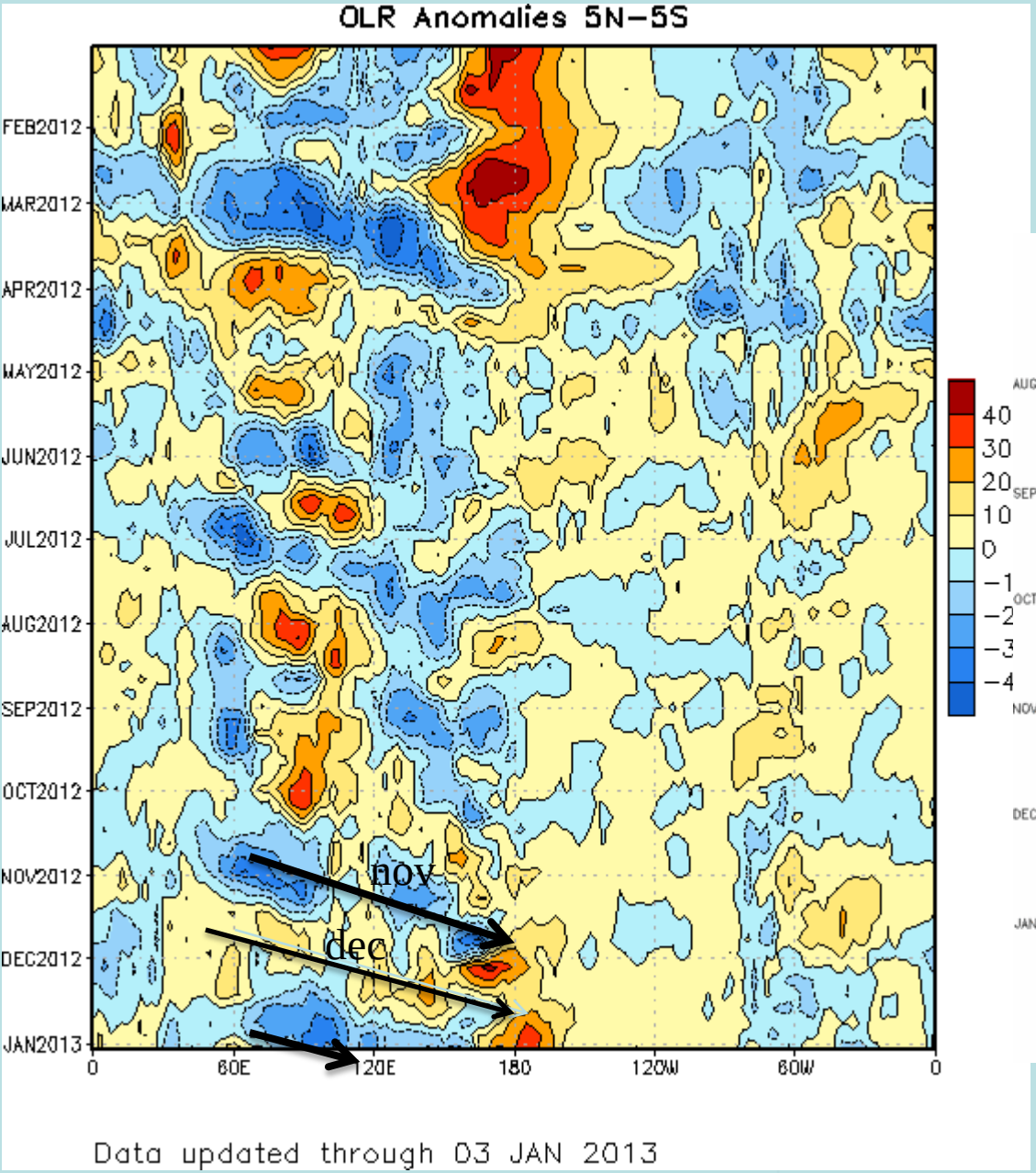
Nov and Dec are nearly in quardruture of each other in the Pacific North America suggesting the MJO influence



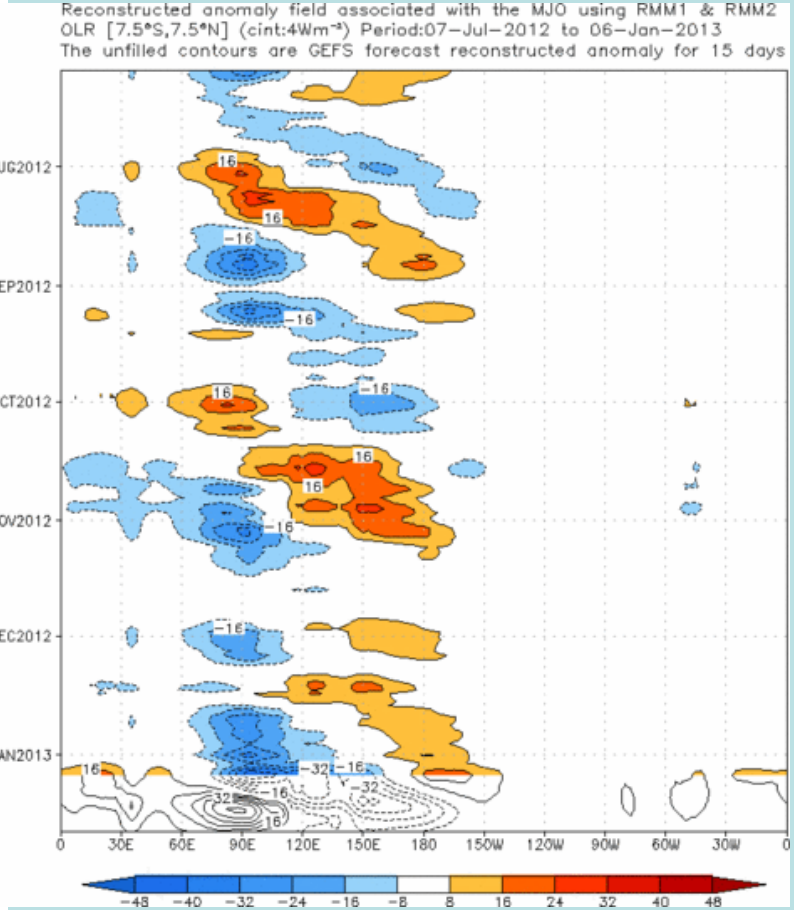




Outgoing Longwave Radiation (OL R) Anomalies

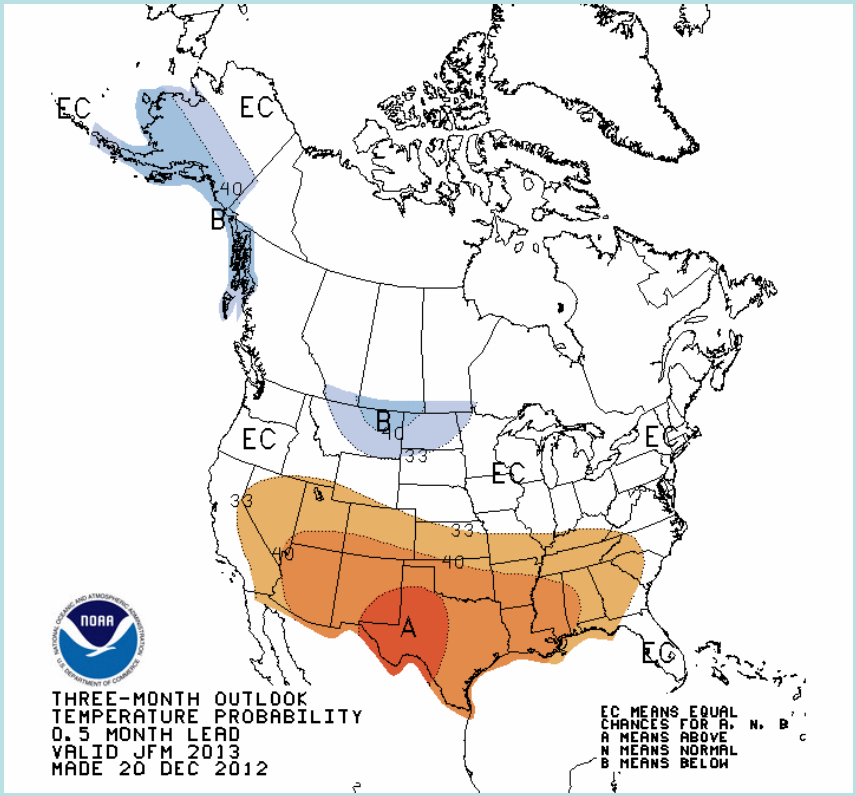


forecast

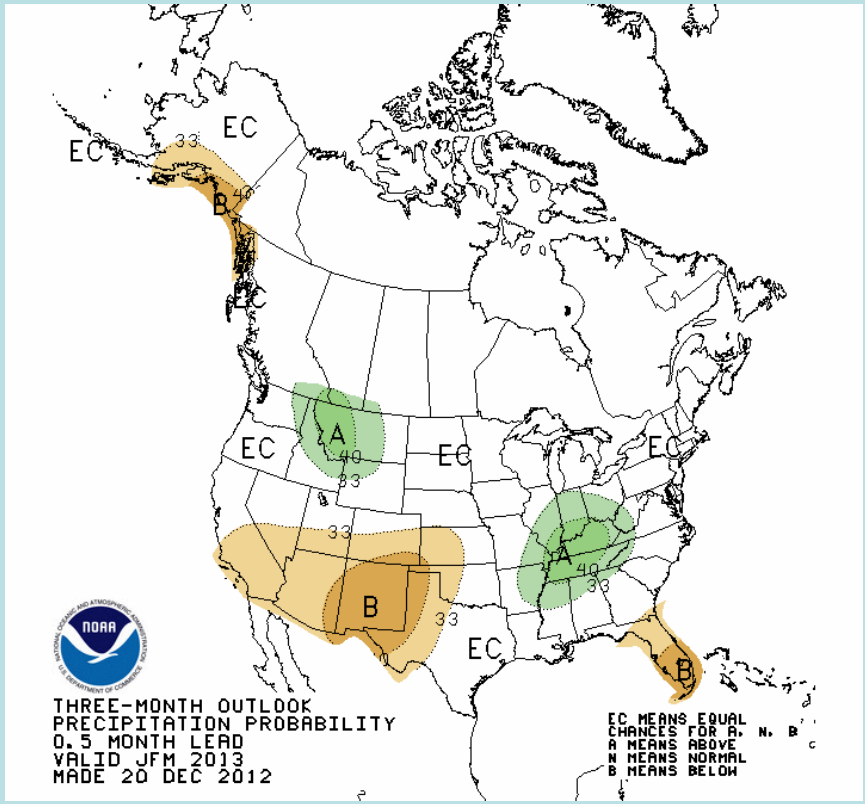


T and P fcsts for JFM 2013

Temp

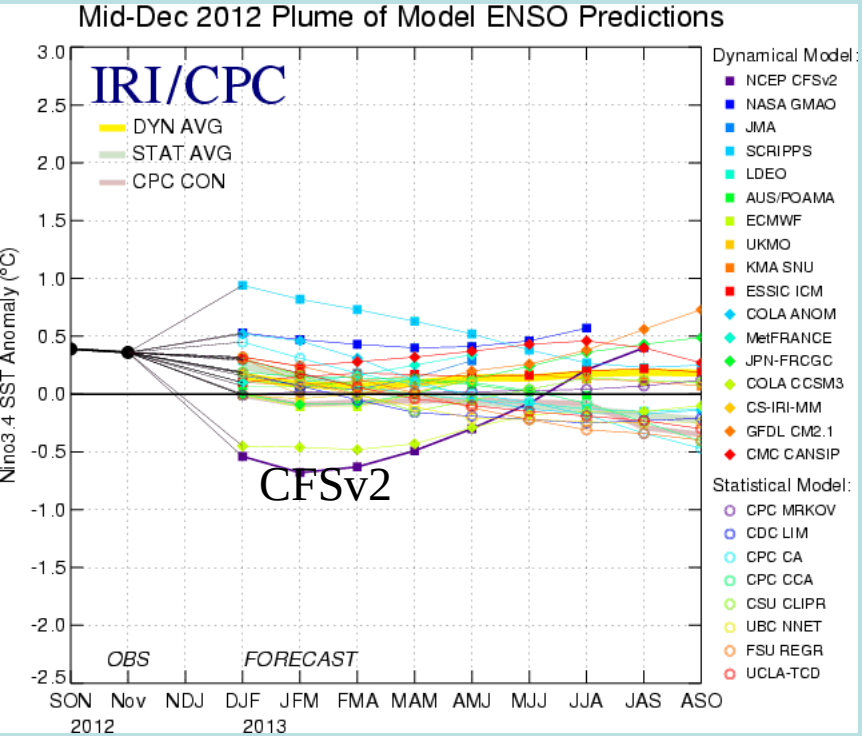


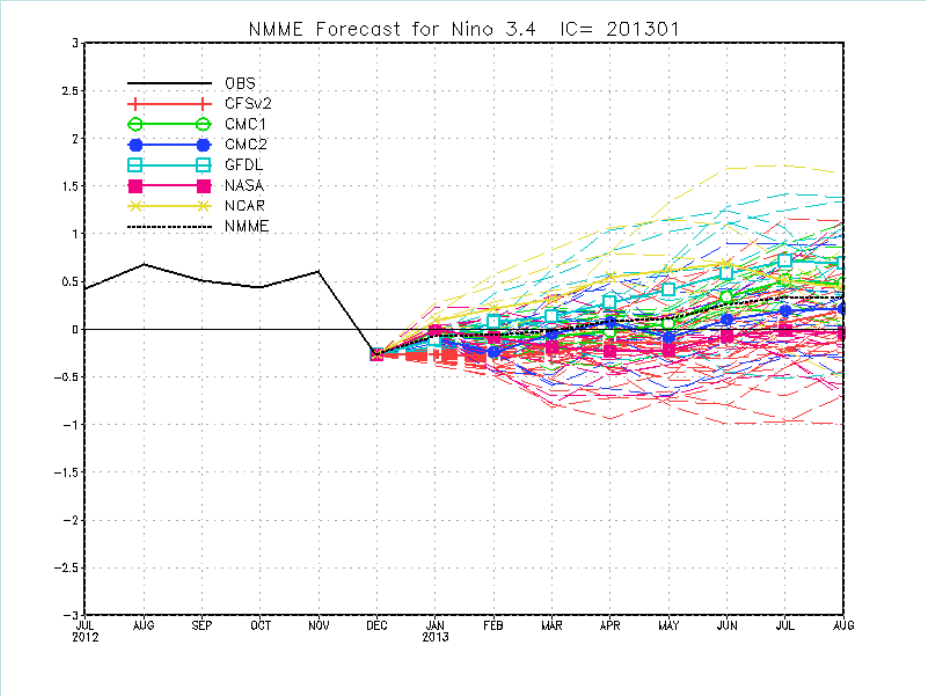
precip



Plume diagram

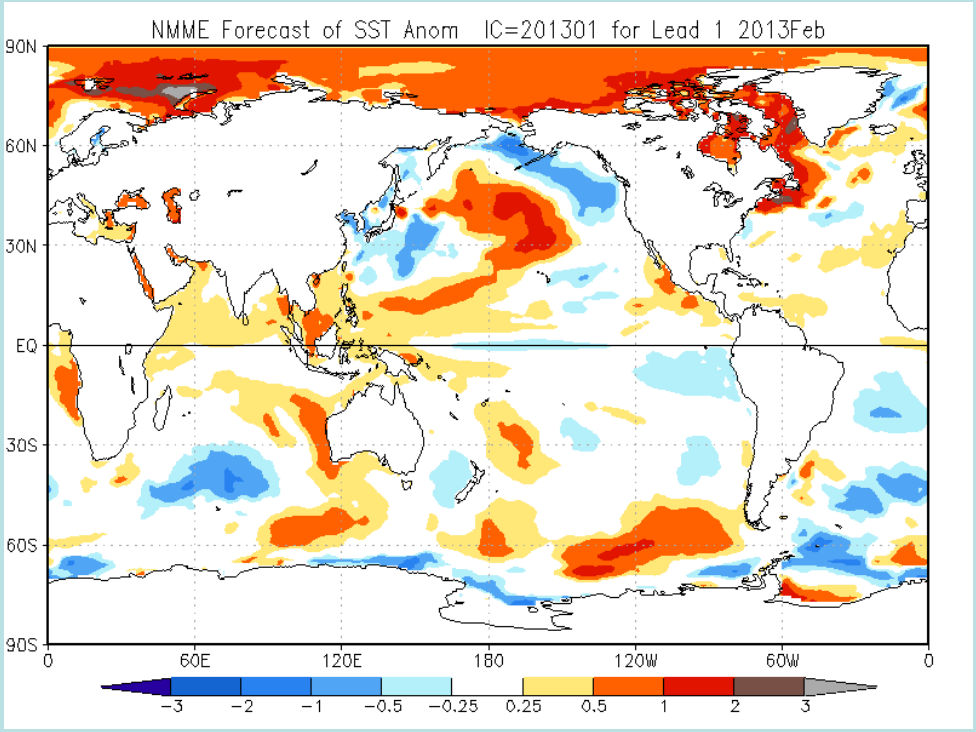
NMME Nino34 index



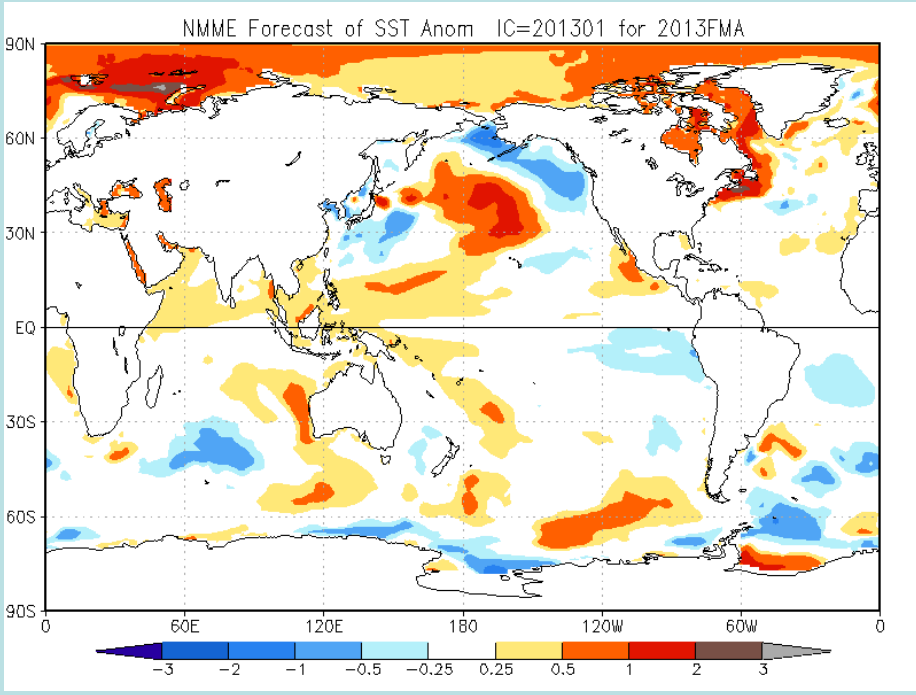


SSTA NMME FCSTs

Feb 2013



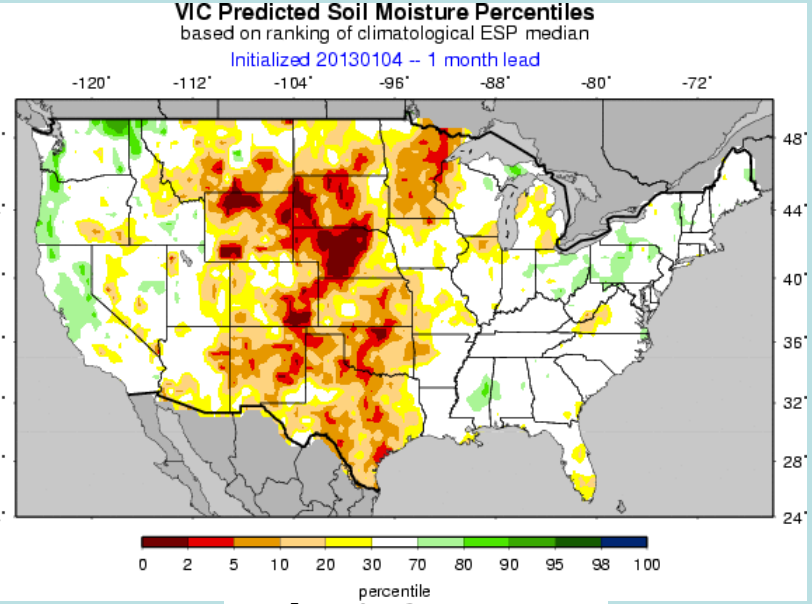
FMA 2013



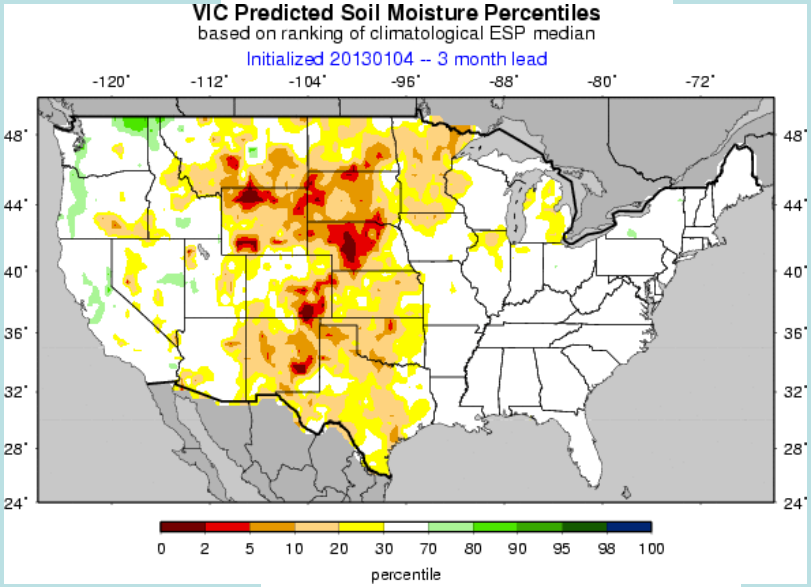
A possible negative phase of the PDO
ENSO neutral

ESP FCST UW ICs=4Jan2013

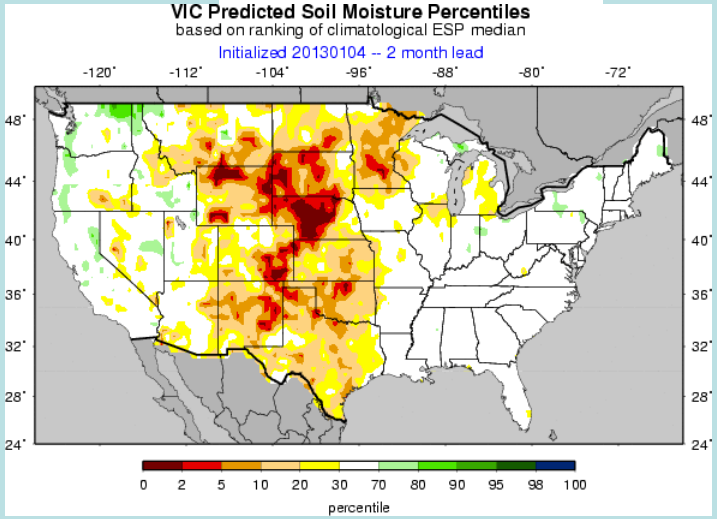
Jan2013



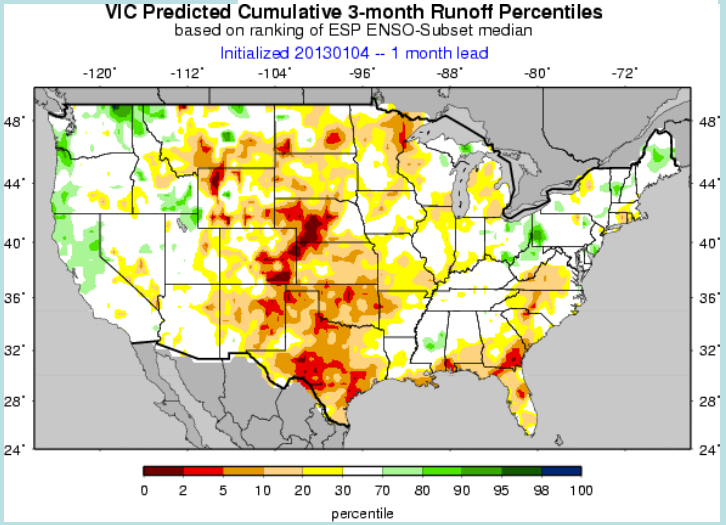
Mar 2013



Feb 2013

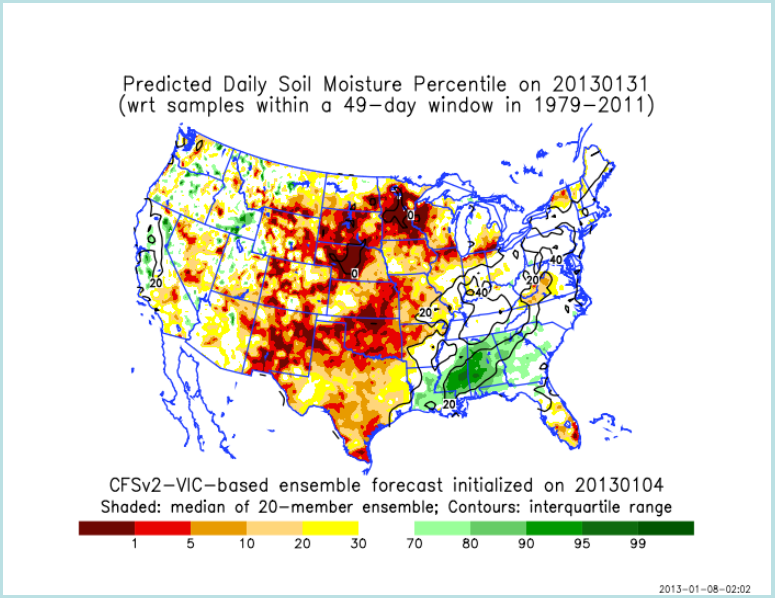


Runoff Jan



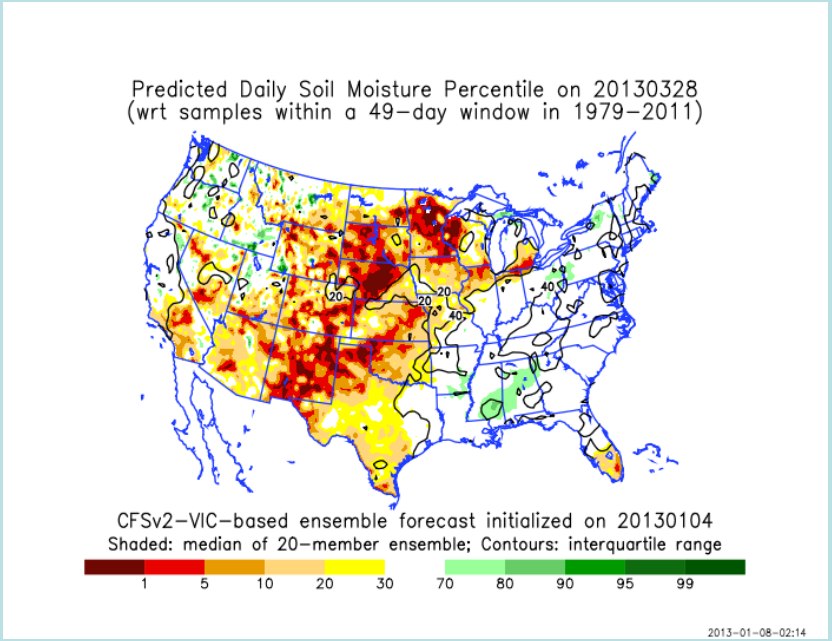
SM fcsts from MSU (Lifeng Luo)

1/31/2013(4-week lead)

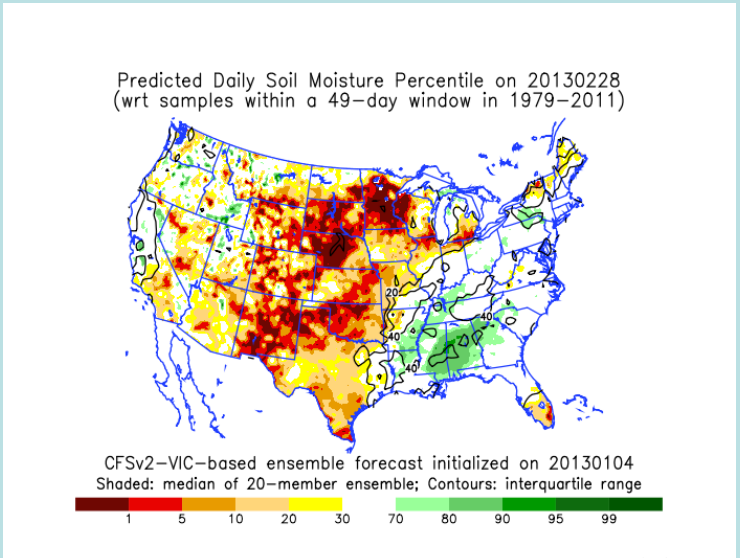


Princeton-MSU Fcst
from 01/04/2013

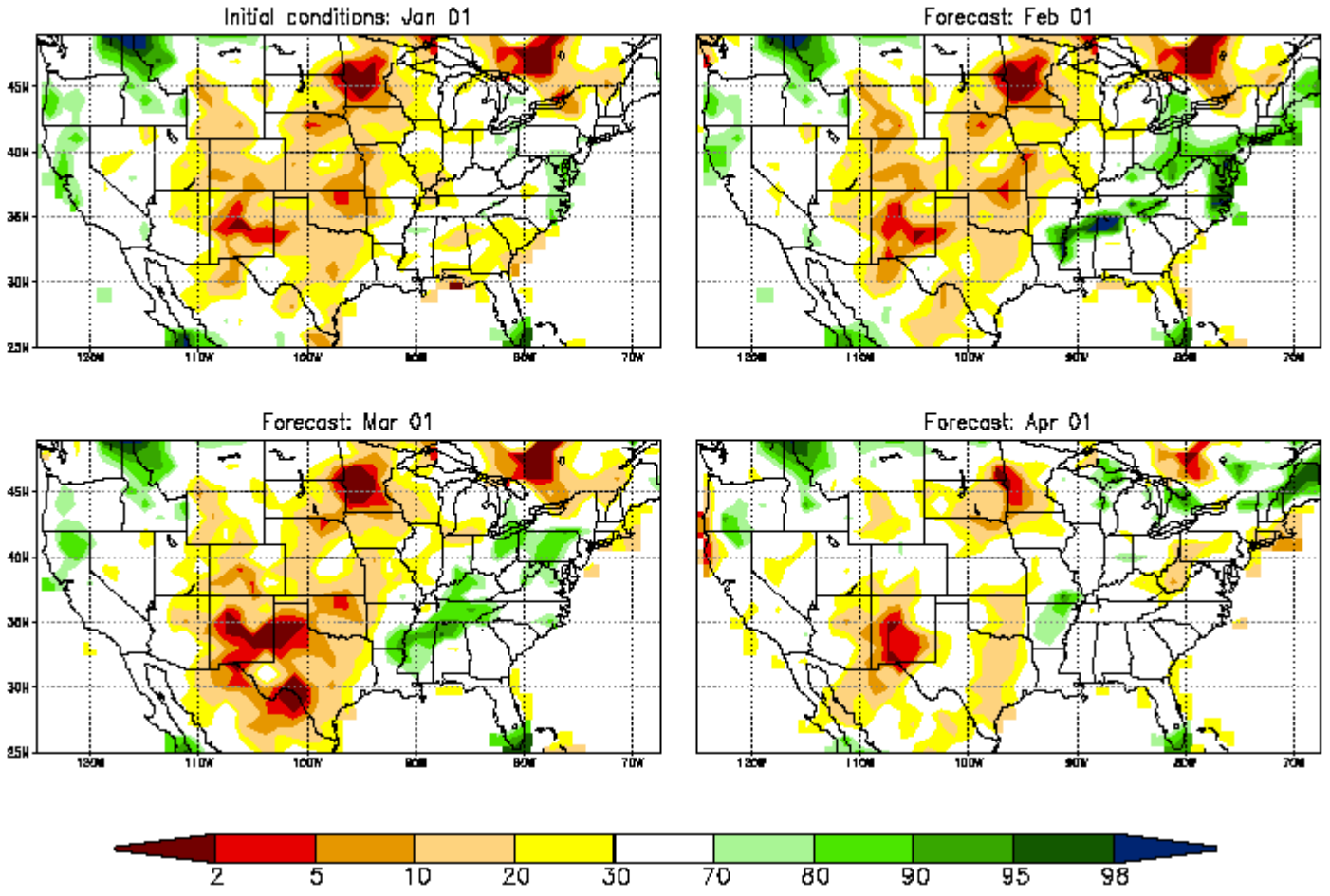
3/28/2013 (12-week lead



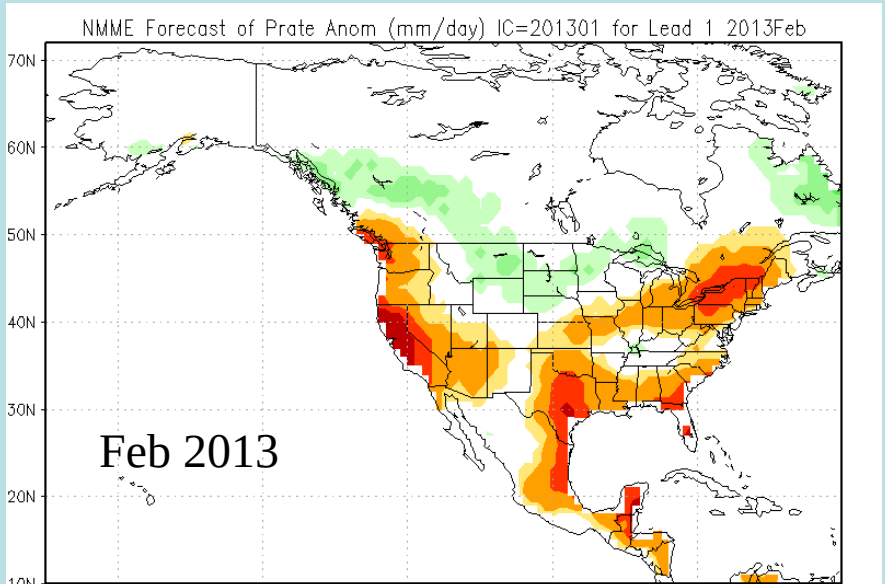
2/28/2013 8- week lead

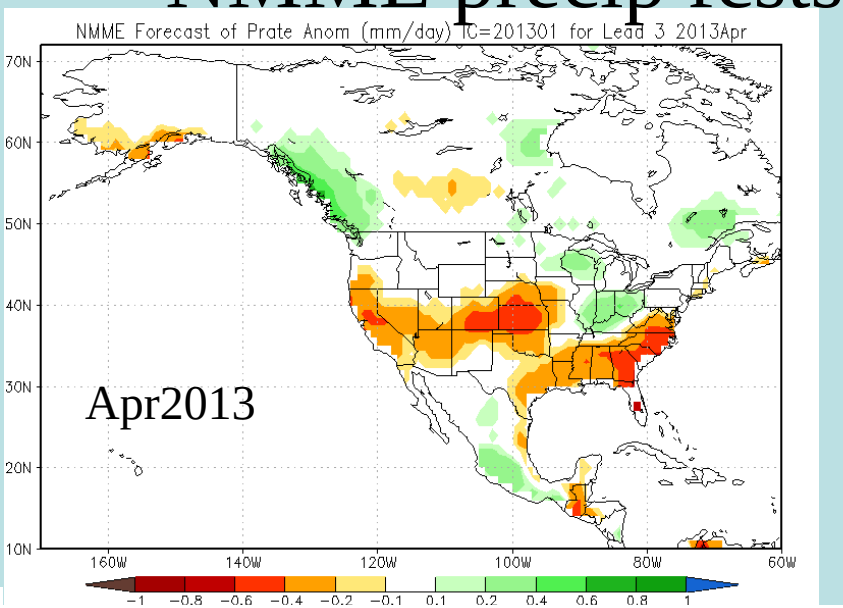


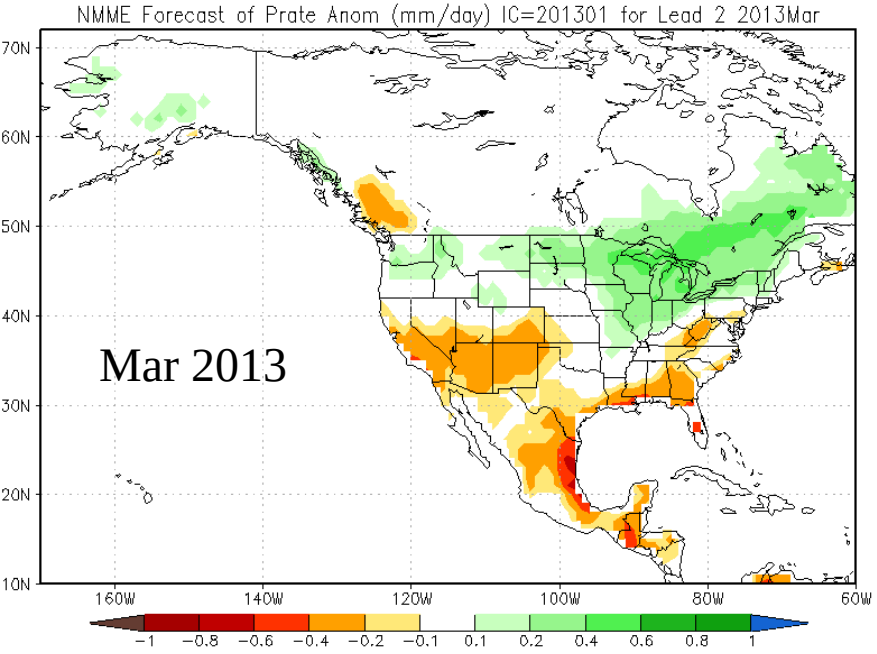
Soil moisture percentile from NASA GEOS–5 forecast system

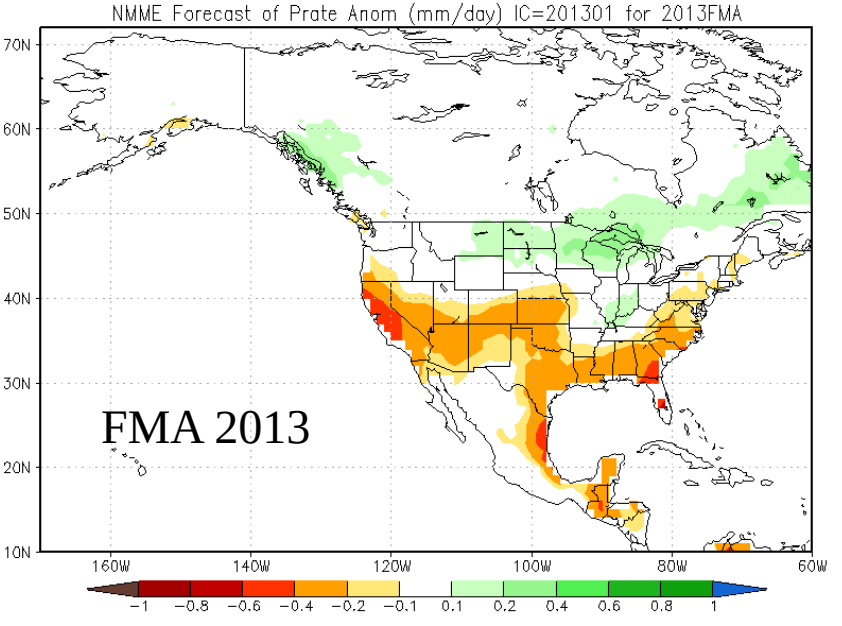


NMME precip fcsts

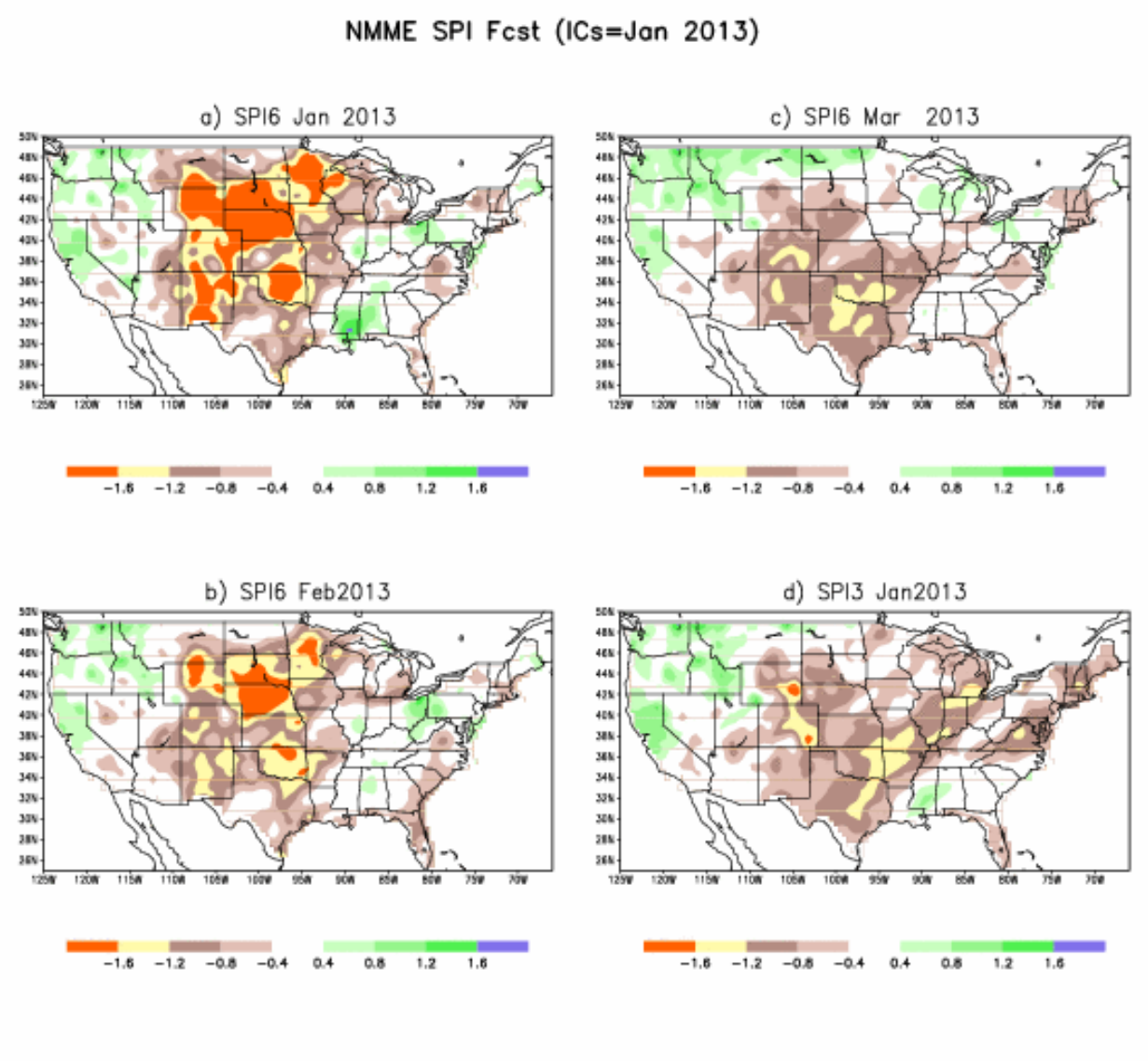


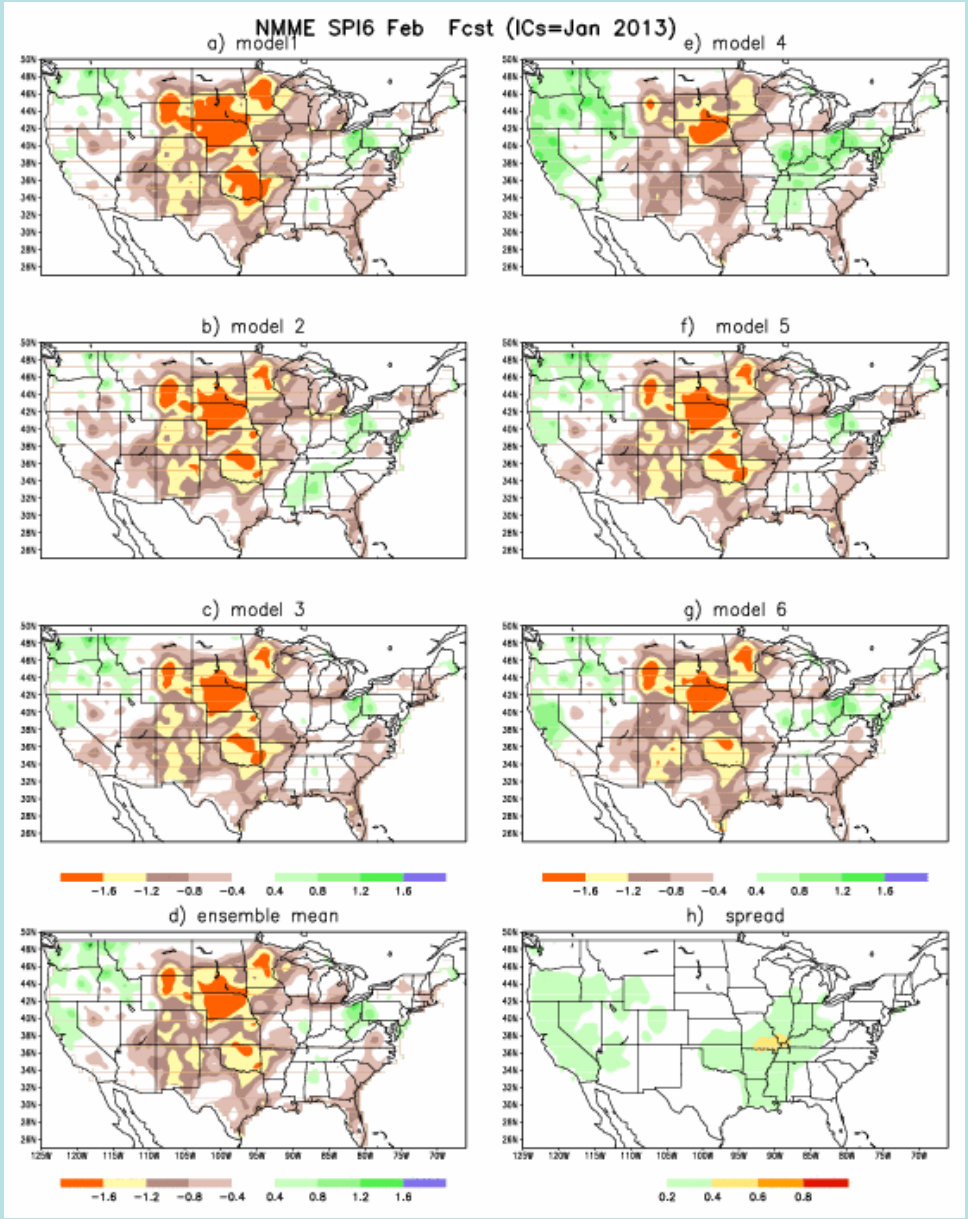






SPI Fcst Ics Jan 2013

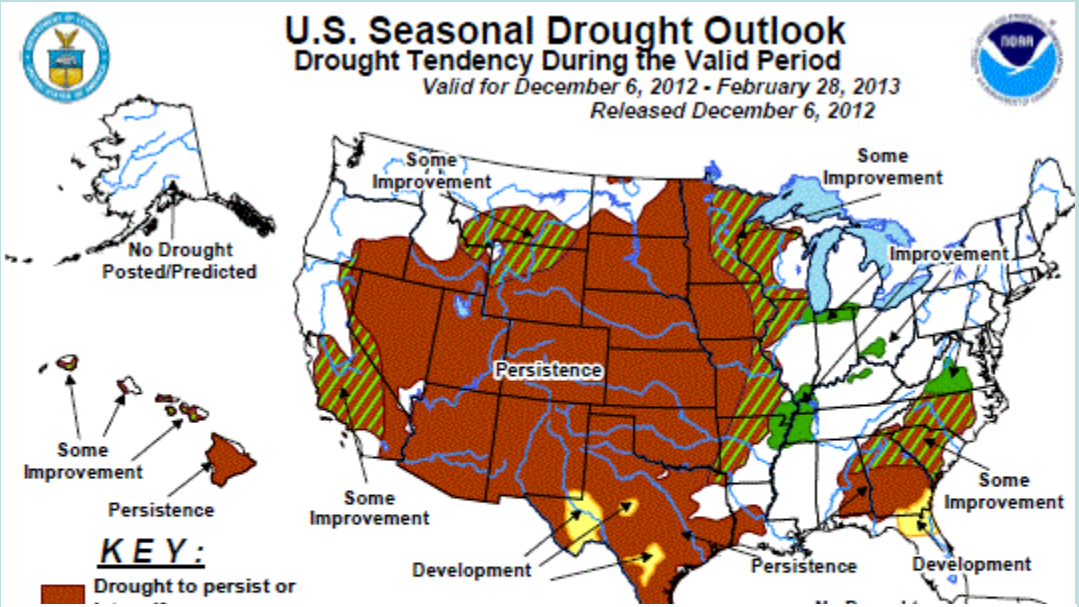


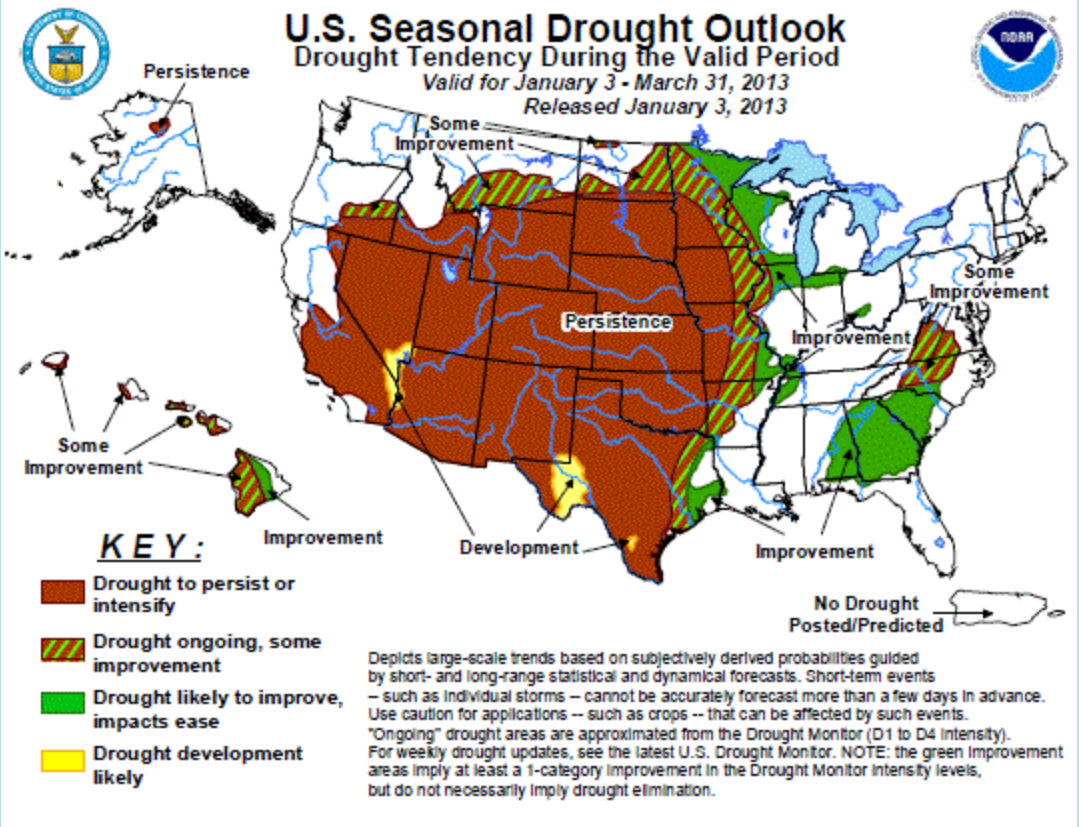


SPI6 Lead 2 Feb 2013

Low spread

seasonal Drought outlook





Jan 3 release

Conclusions

Ocean conditions :

ENSO : Neutral

With warm SSTAs along the Atlantic coast and tropical north Atlantic

Current conditions:

Drought continues over most United States with the center located over the Great plains .

Drought over the Southeast had some relieve

Prediction

- Oceanic conditions
- ENSO normal
- Warm SSTAs along the Atlantic coast
- Drought
- All forecasts indicate that drought over the Central United States will continue for 2-3 months.