

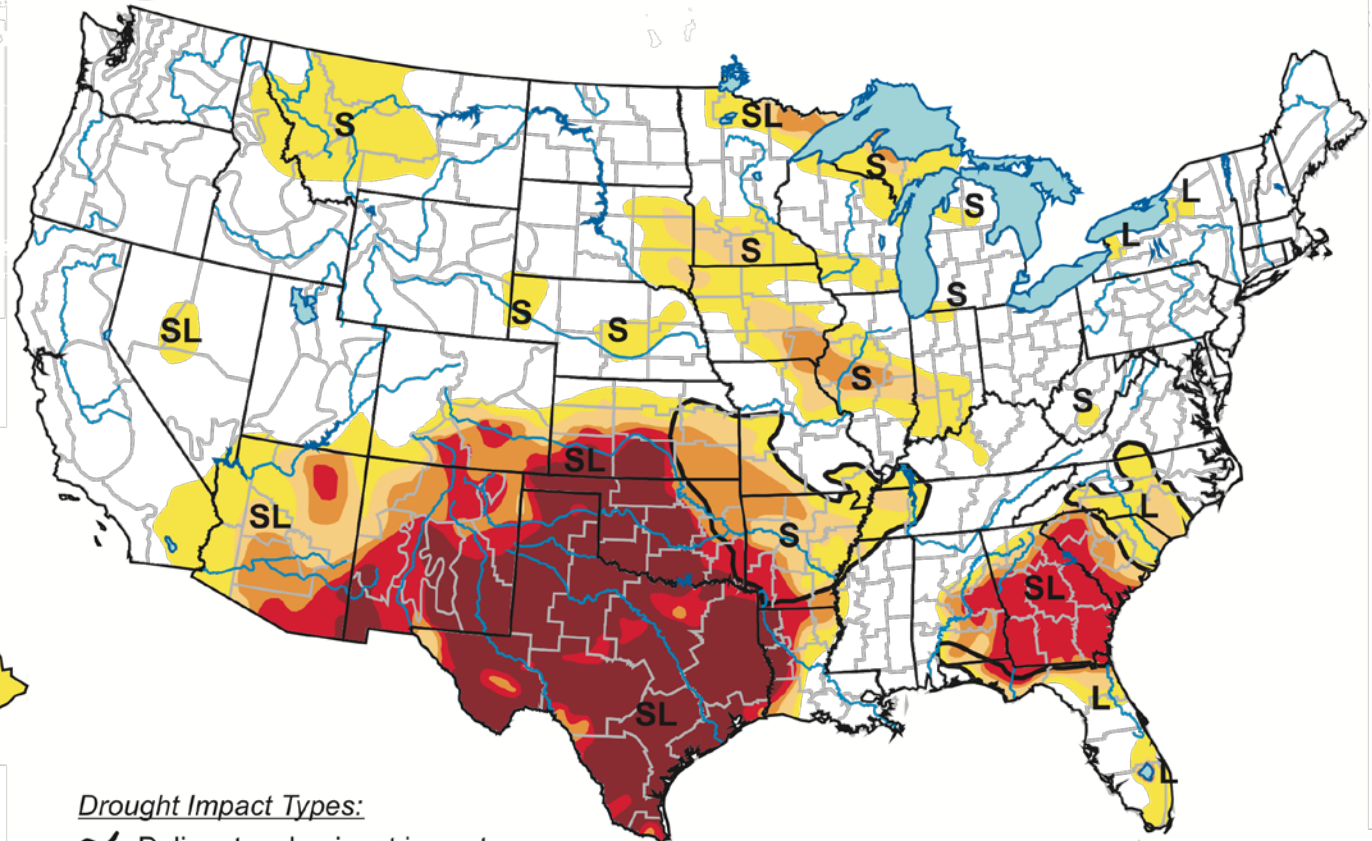
Drought 2012 and Beyond...

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U.S. Drought Monitor

September 27, 2011

Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. See accompanying text summary
for forecast statements.



Released Thursday, September 29, 2011

Author: Michael Brewer/Liz Love-Brotak, NOAA/NESDIS/NCDC

<http://droughtmonitor.unl.edu/>

October- September Precipitation

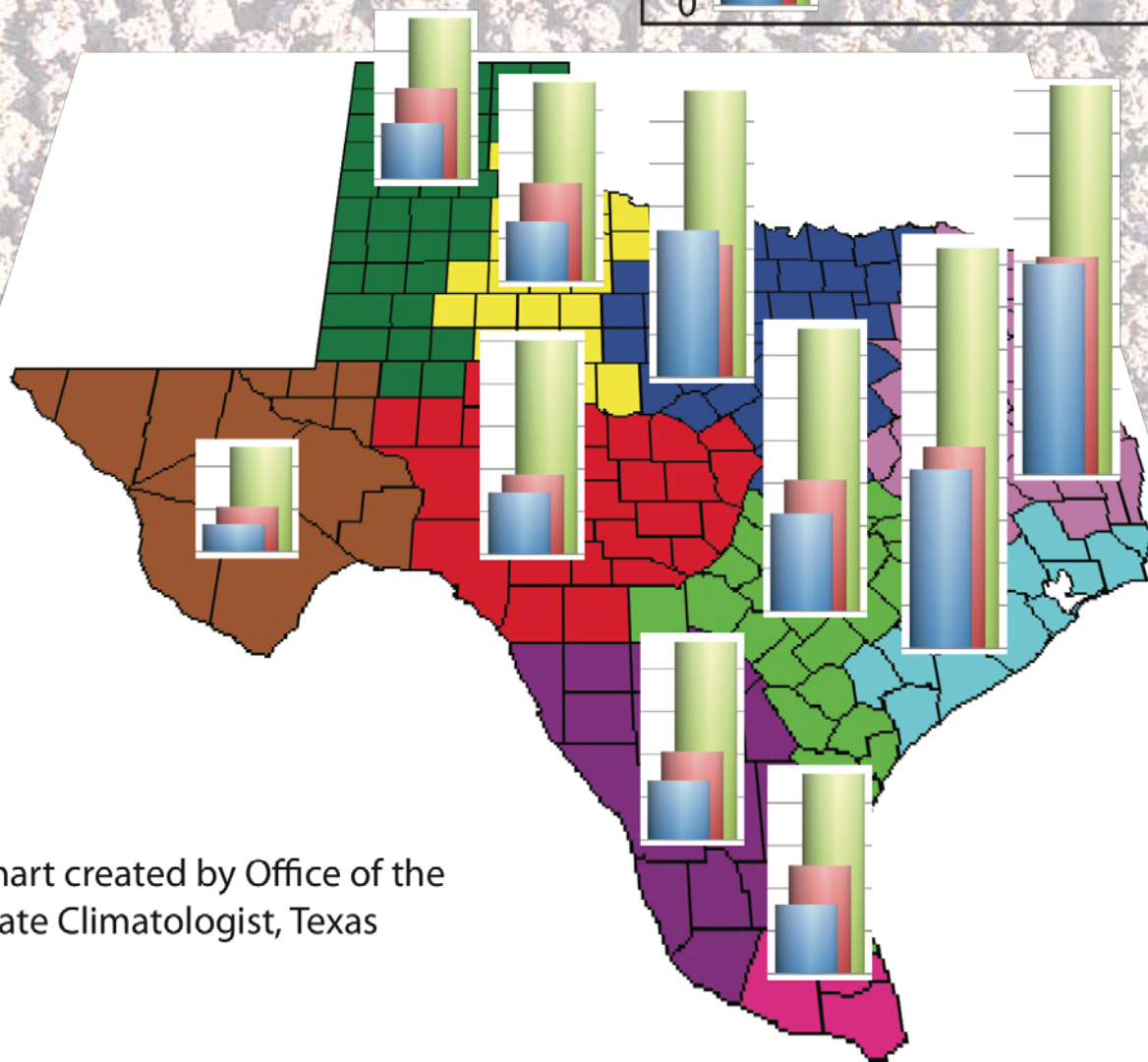
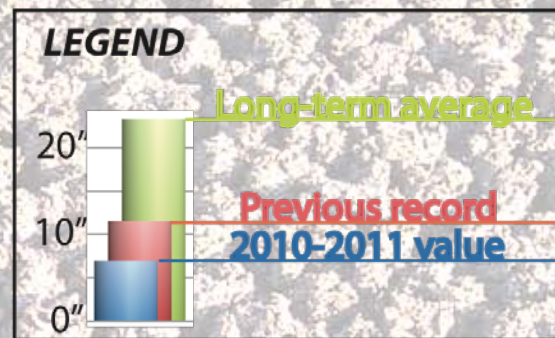
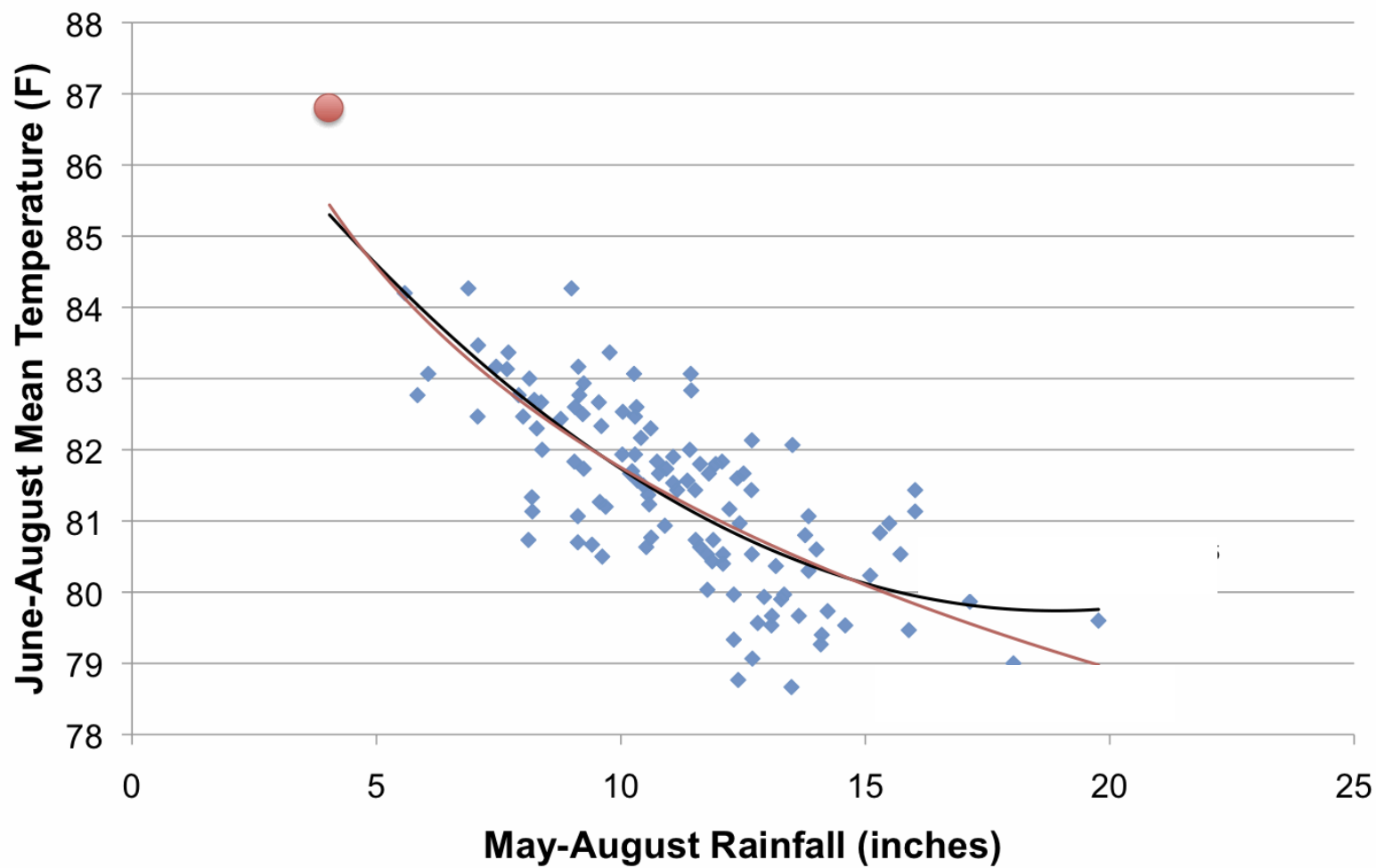


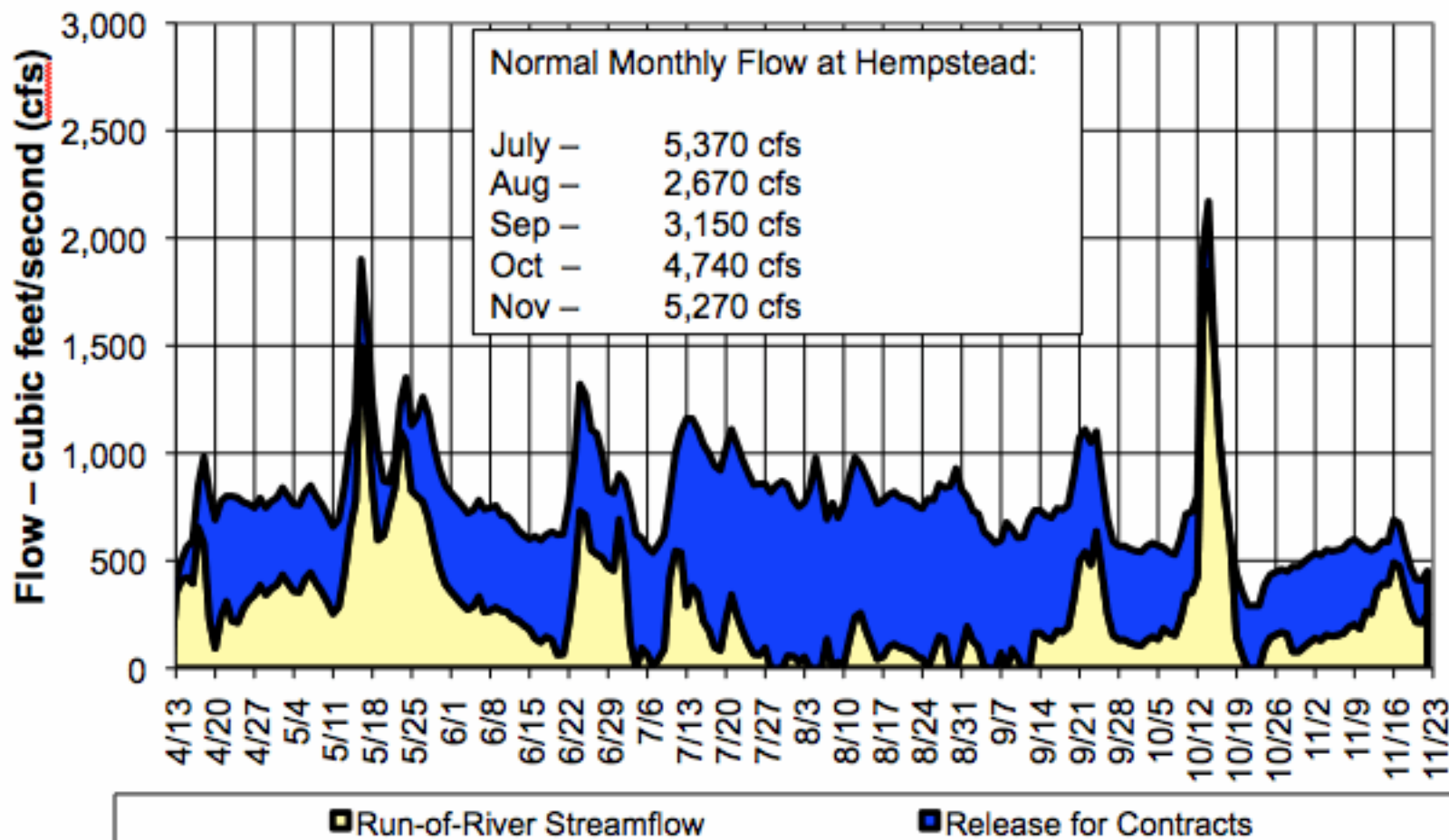
Chart created by Office of the
State Climatologist, Texas

Texas Summertime Rainfall and Temperatures, 1895-2011





Reservoir Releases Dominate Streamflow Brazos River near Hempstead





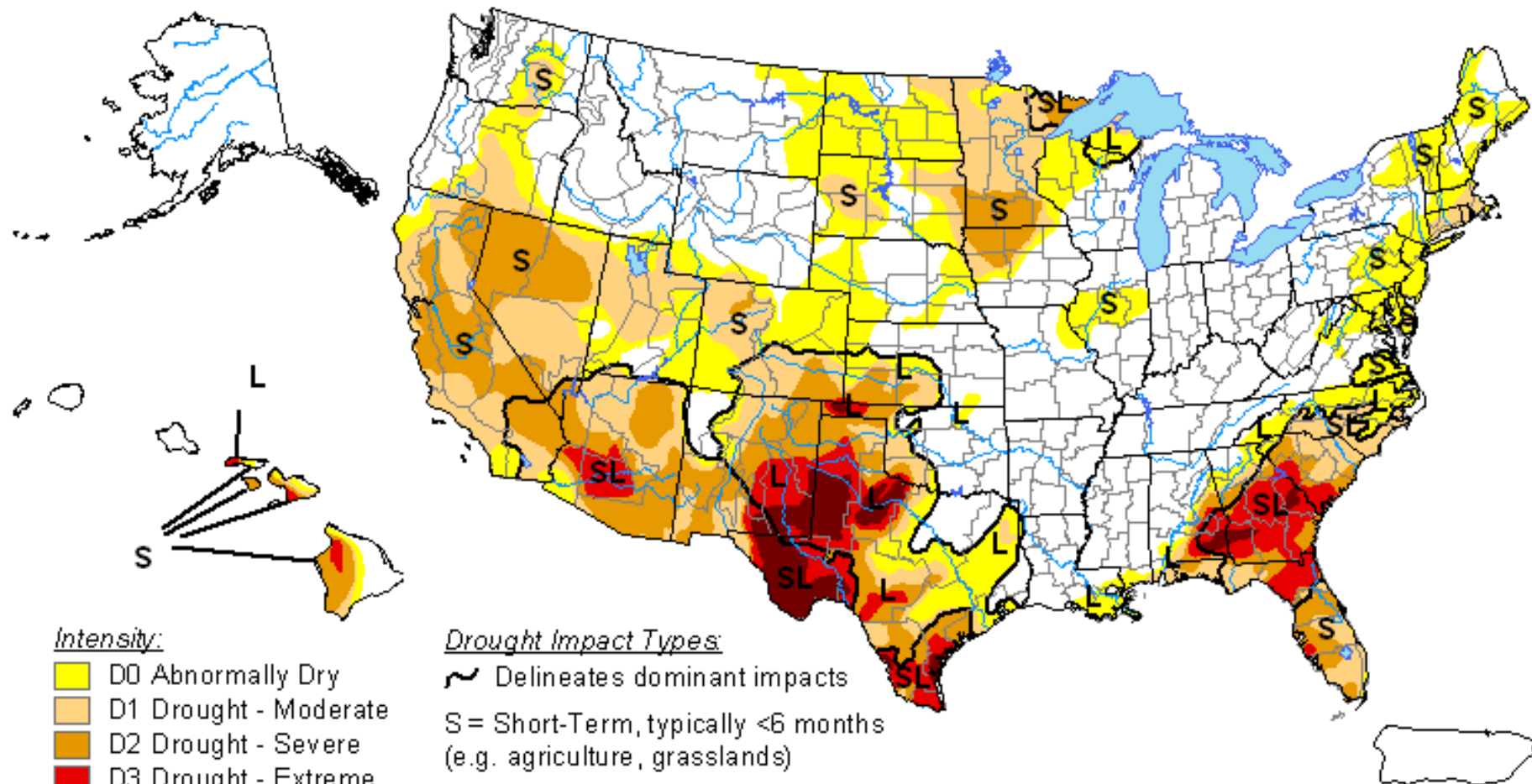
Khushab, Pakistan



U.S. Drought Monitor

March 27, 2012

Valid 7 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically <6 months
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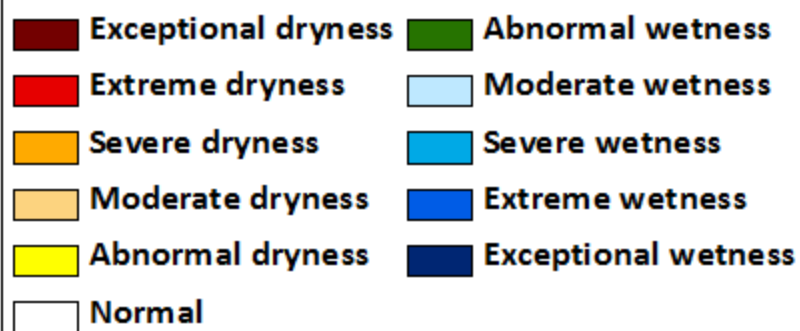
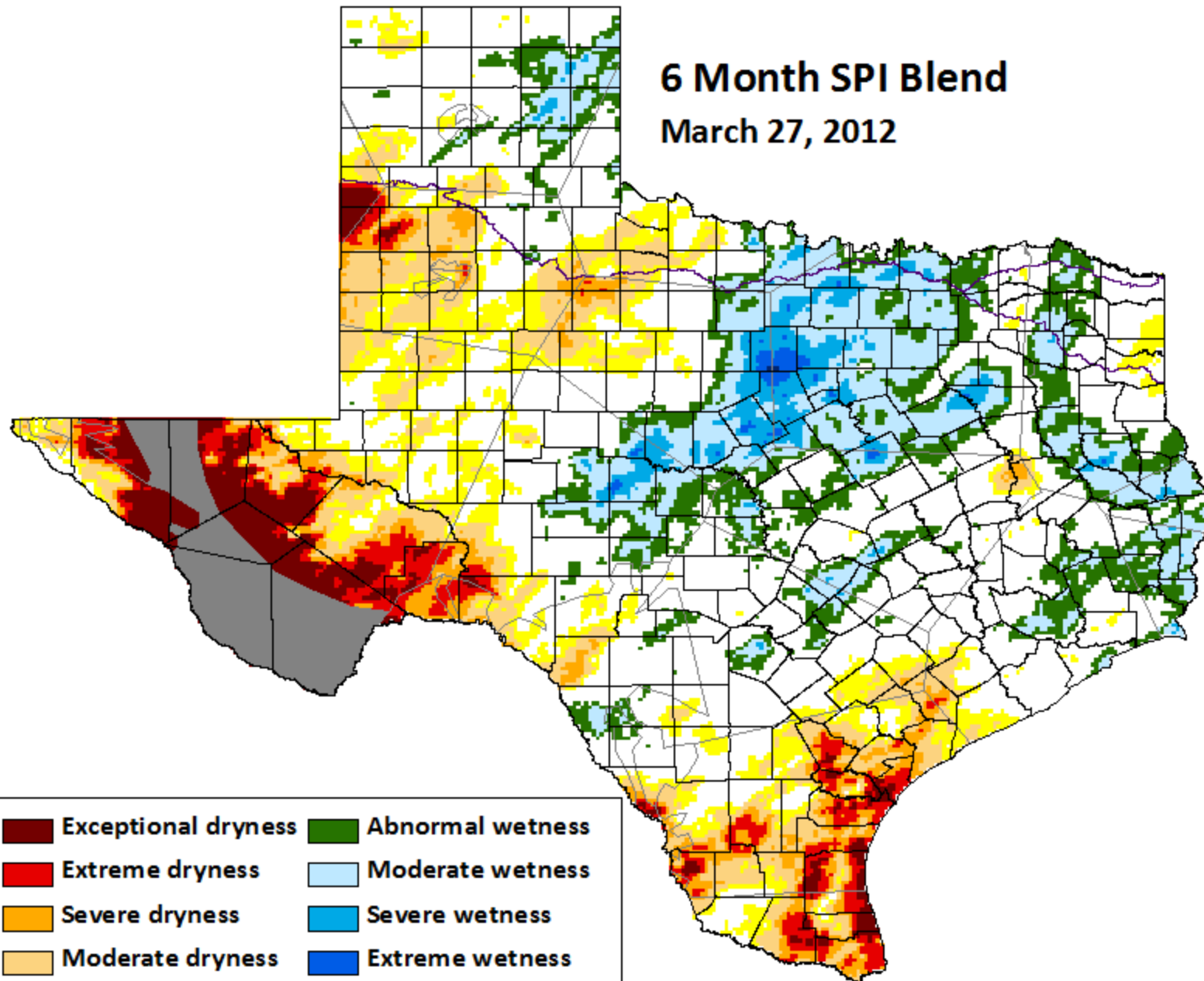
Released Thursday, March 29, 2012

Author: Eric Luebehusen, U.S. Department of Agriculture

<http://droughtmonitor.unl.edu/>

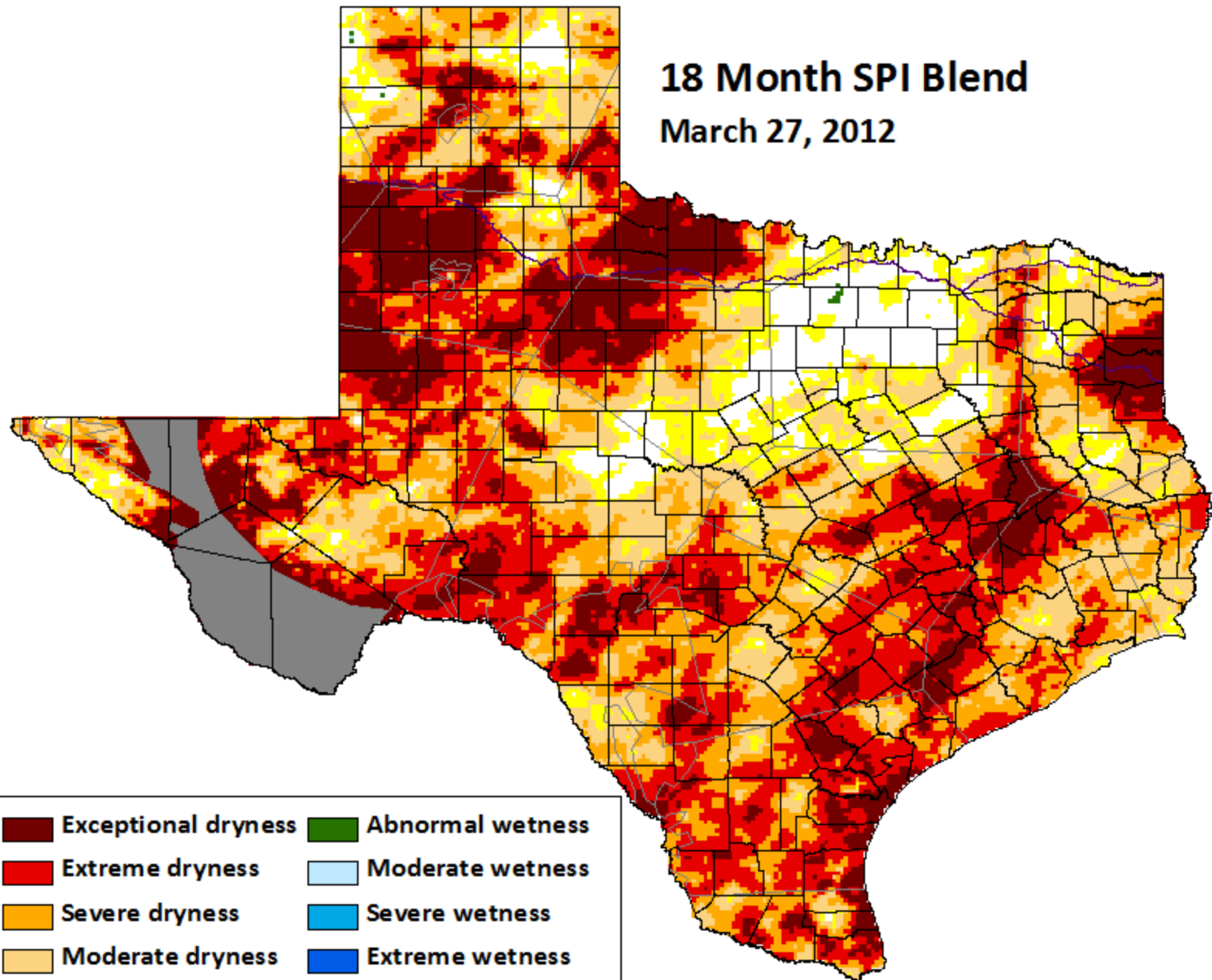
6 Month SPI Blend

March 27, 2012



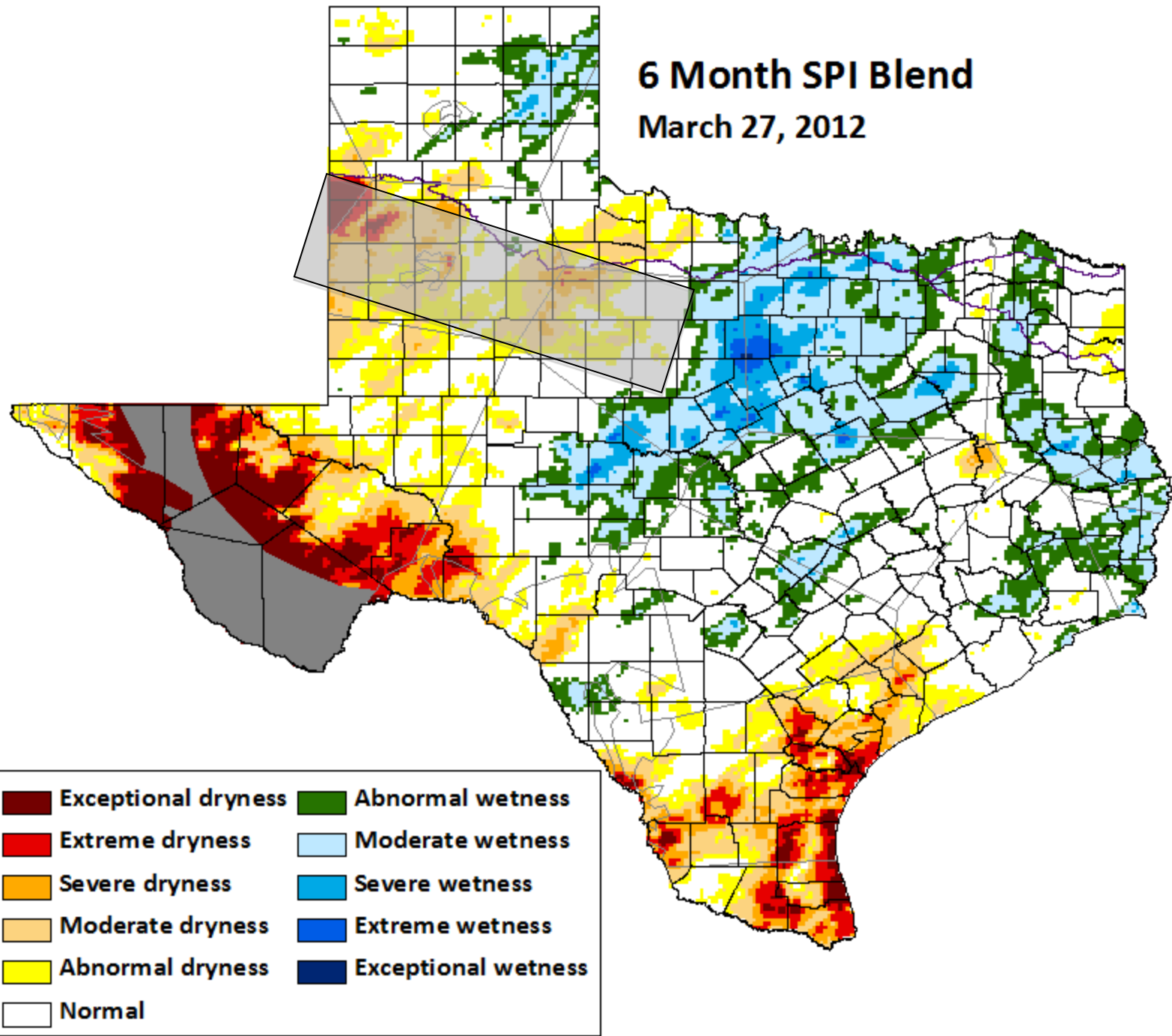
18 Month SPI Blend

March 27, 2012



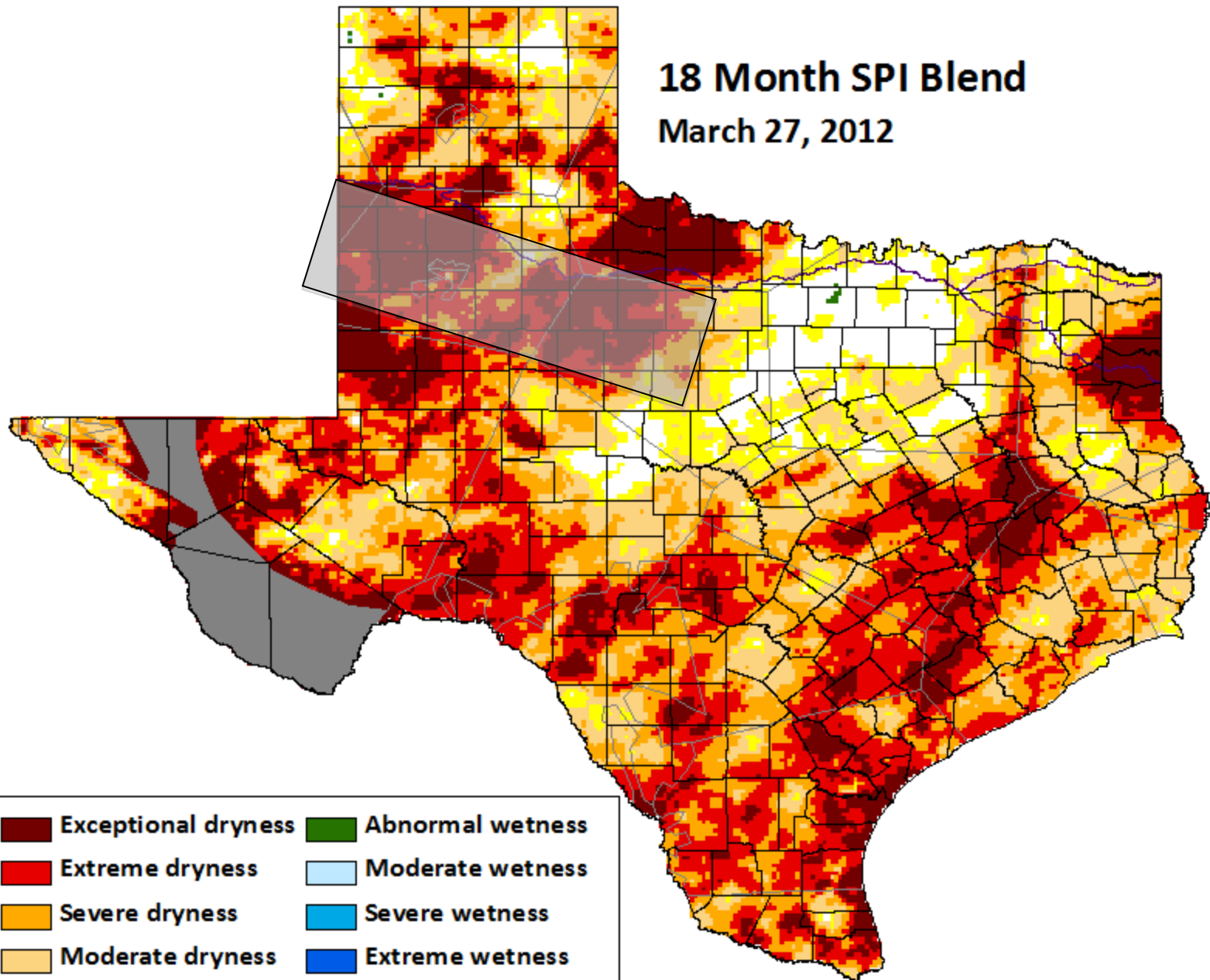
6 Month SPI Blend

March 27, 2012

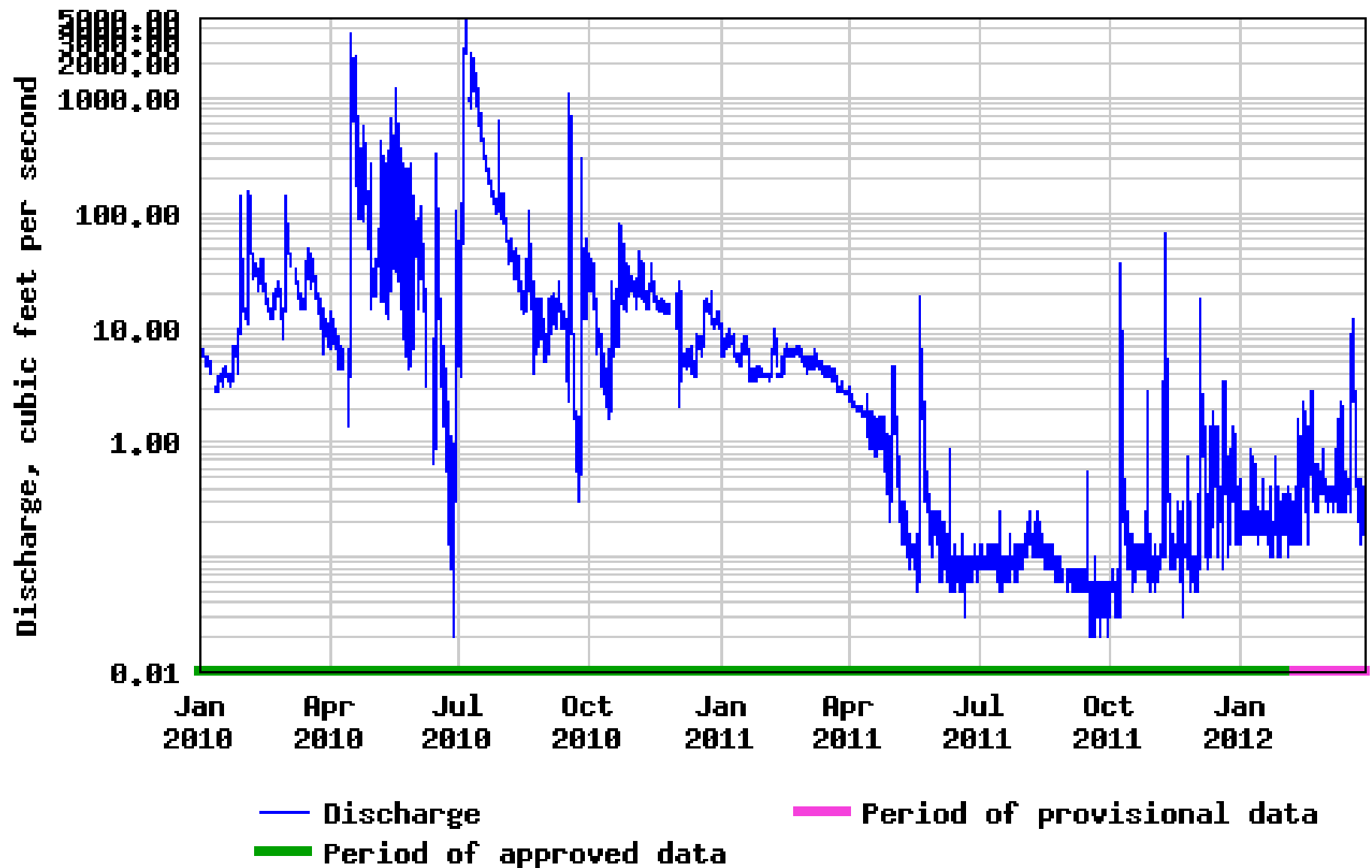


18 Month SPI Blend

March 27, 2012

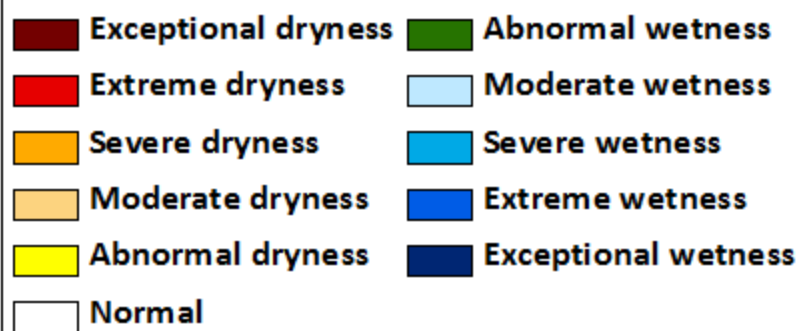
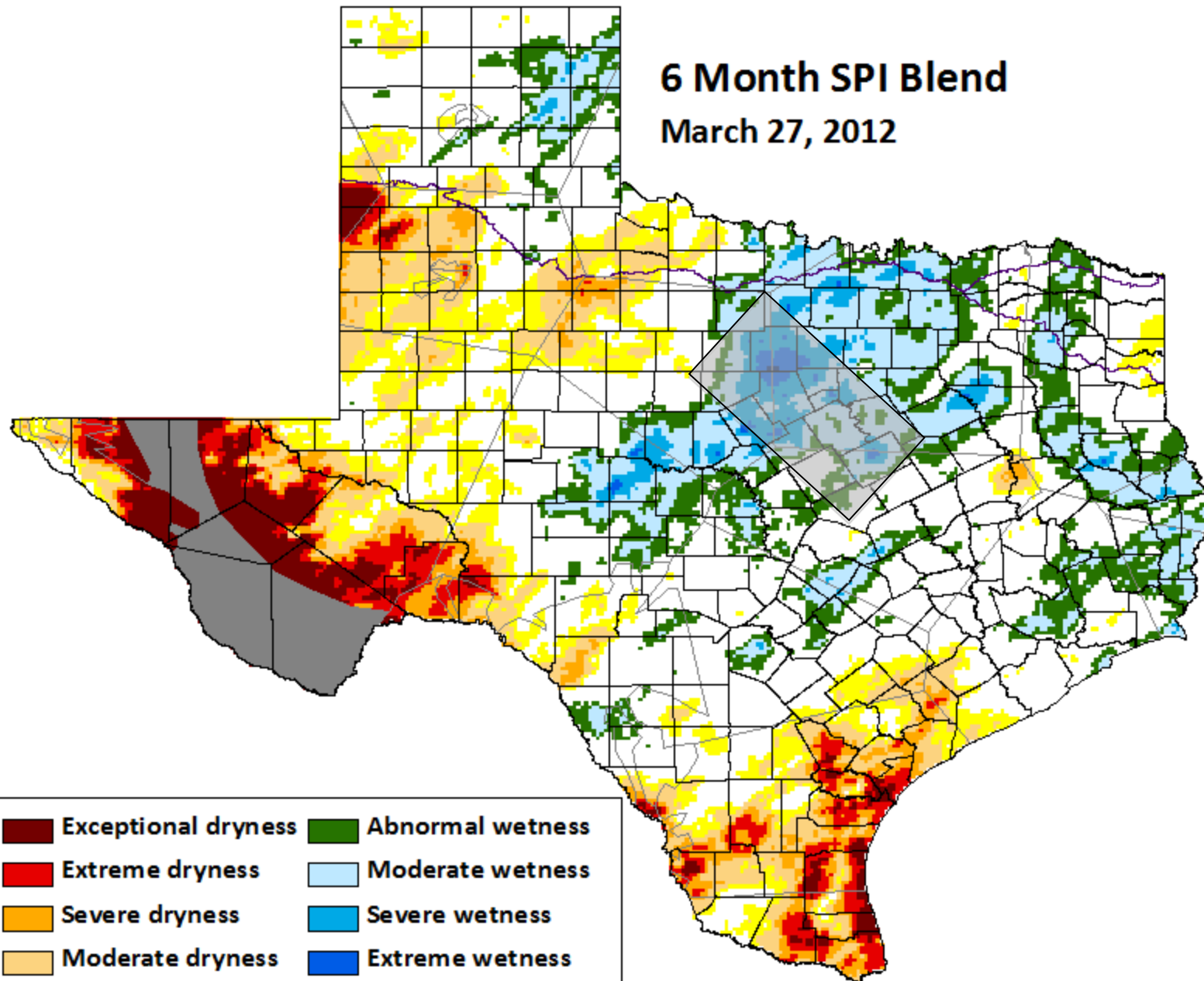


USGS 08082000 Salt Fk Brazos Rv nr Aspermont, TX



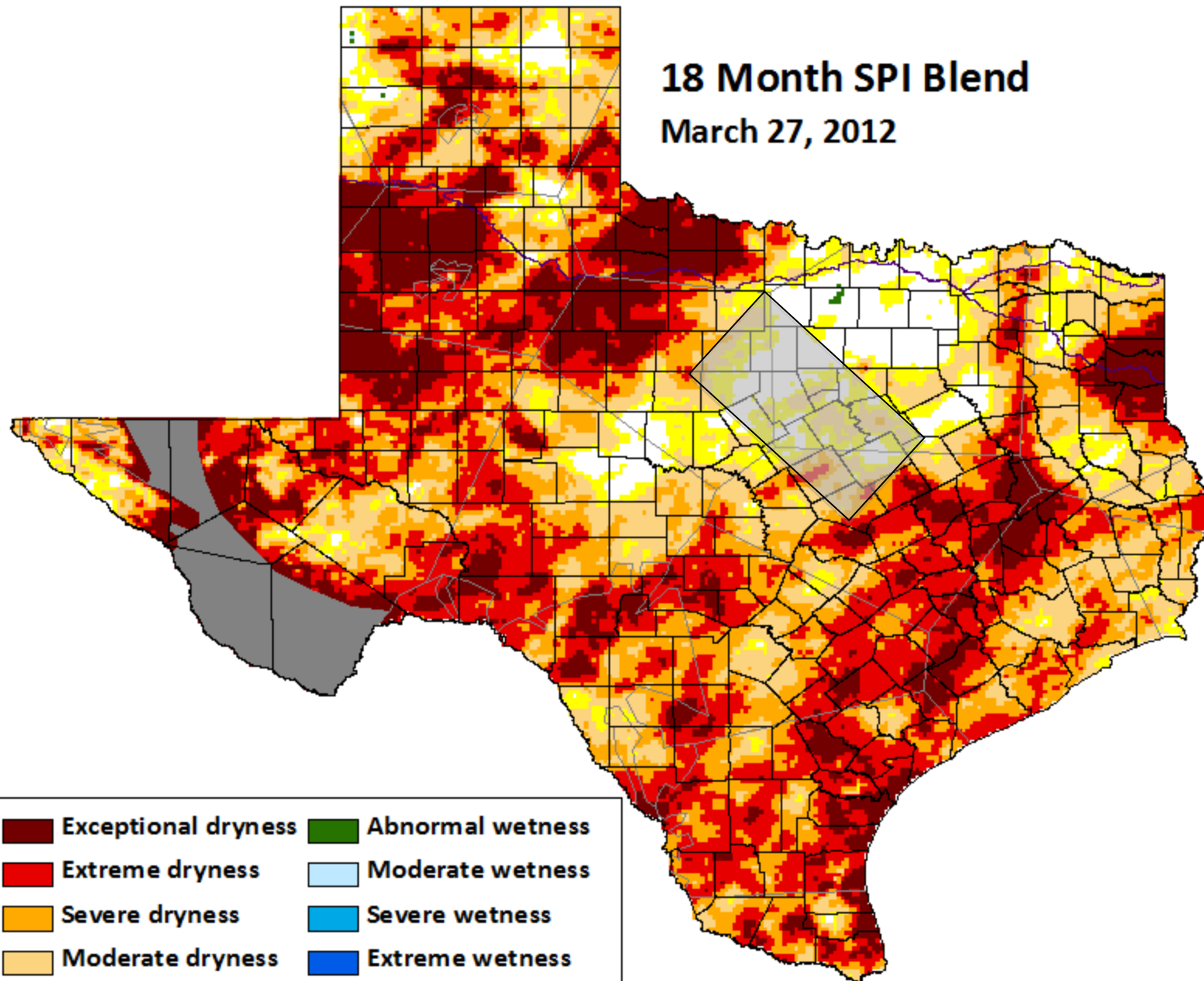
6 Month SPI Blend

March 27, 2012

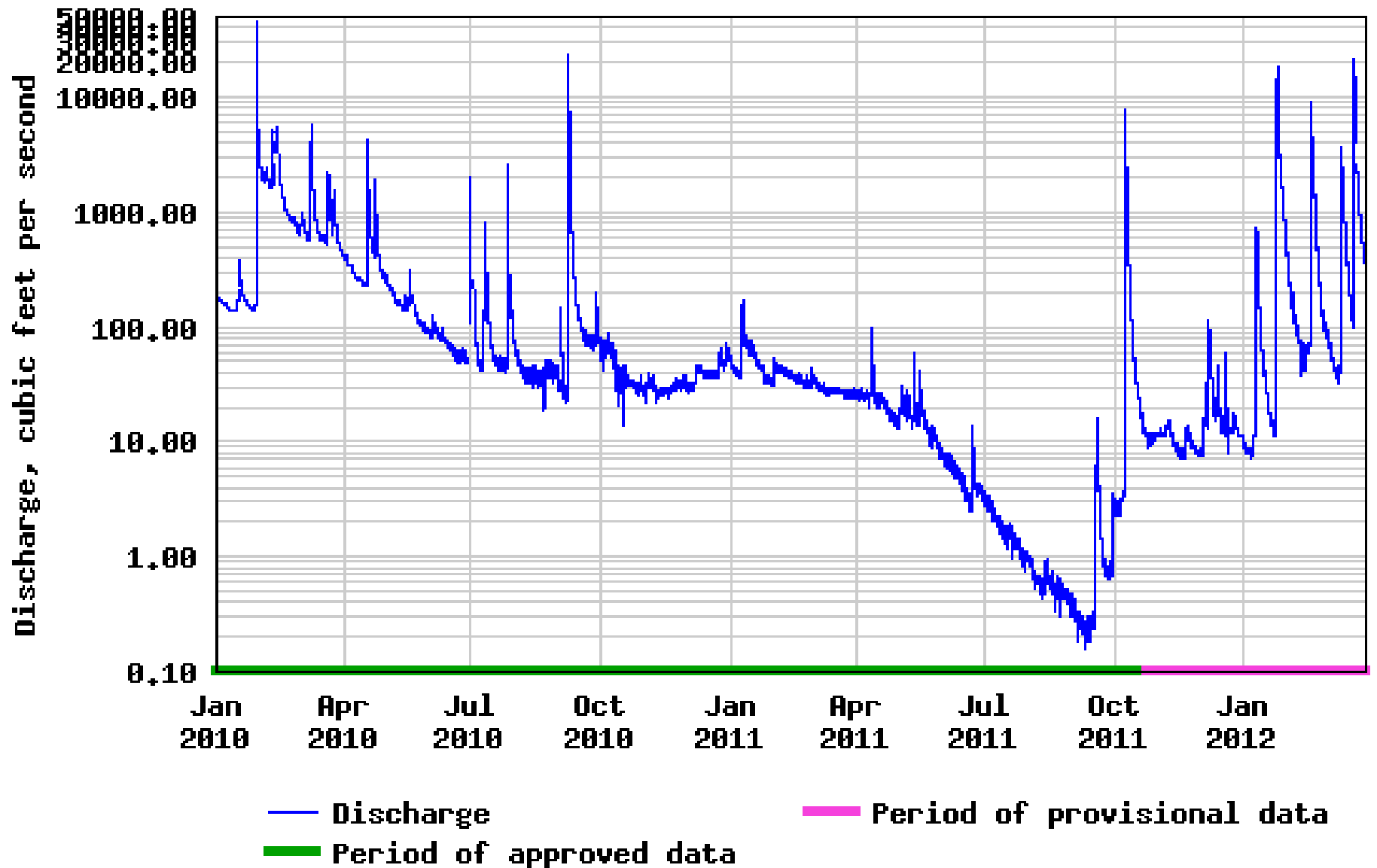


18 Month SPI Blend

March 27, 2012

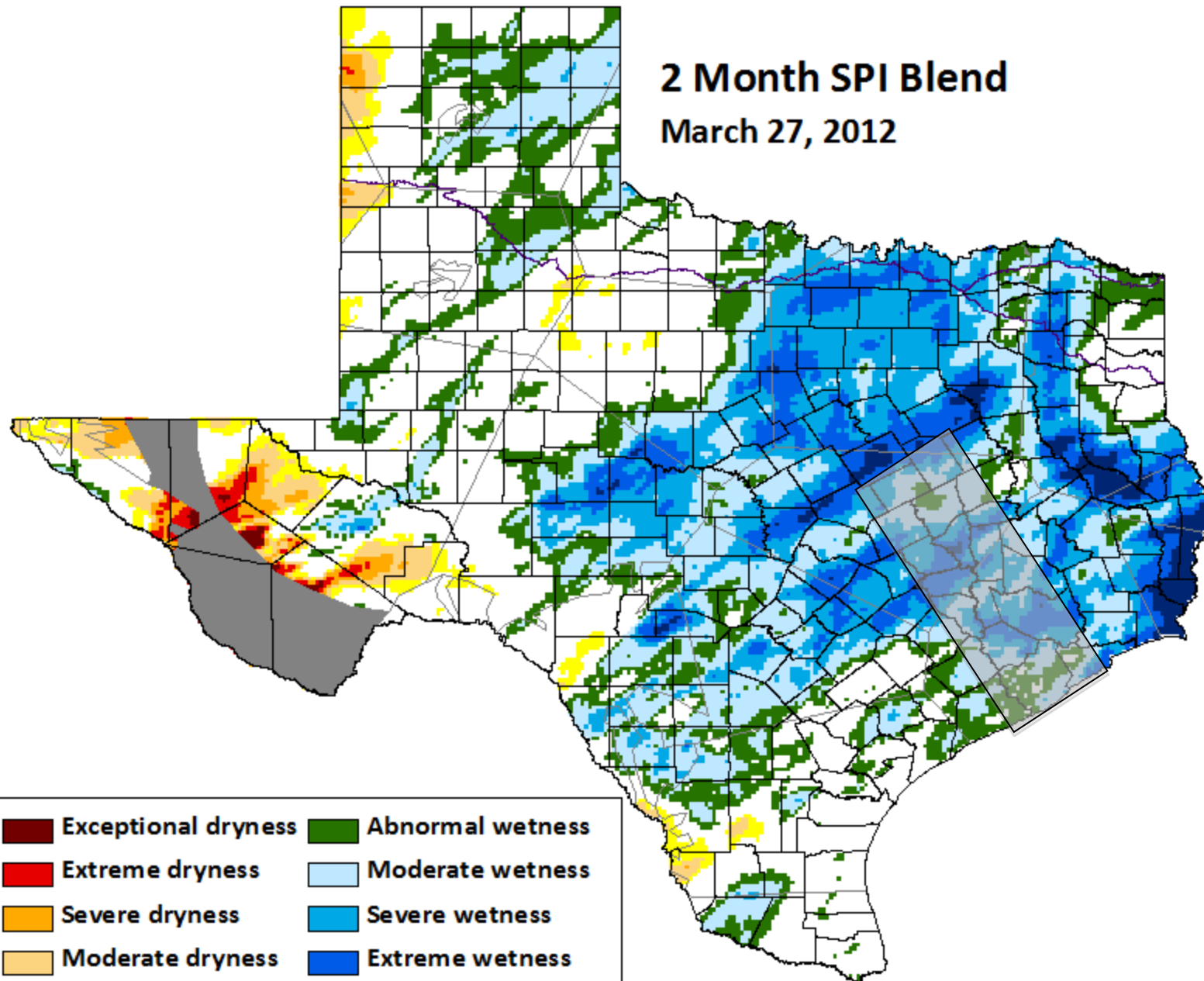


USGS 08095200 N Bosque Rv at Valley Mills, TX



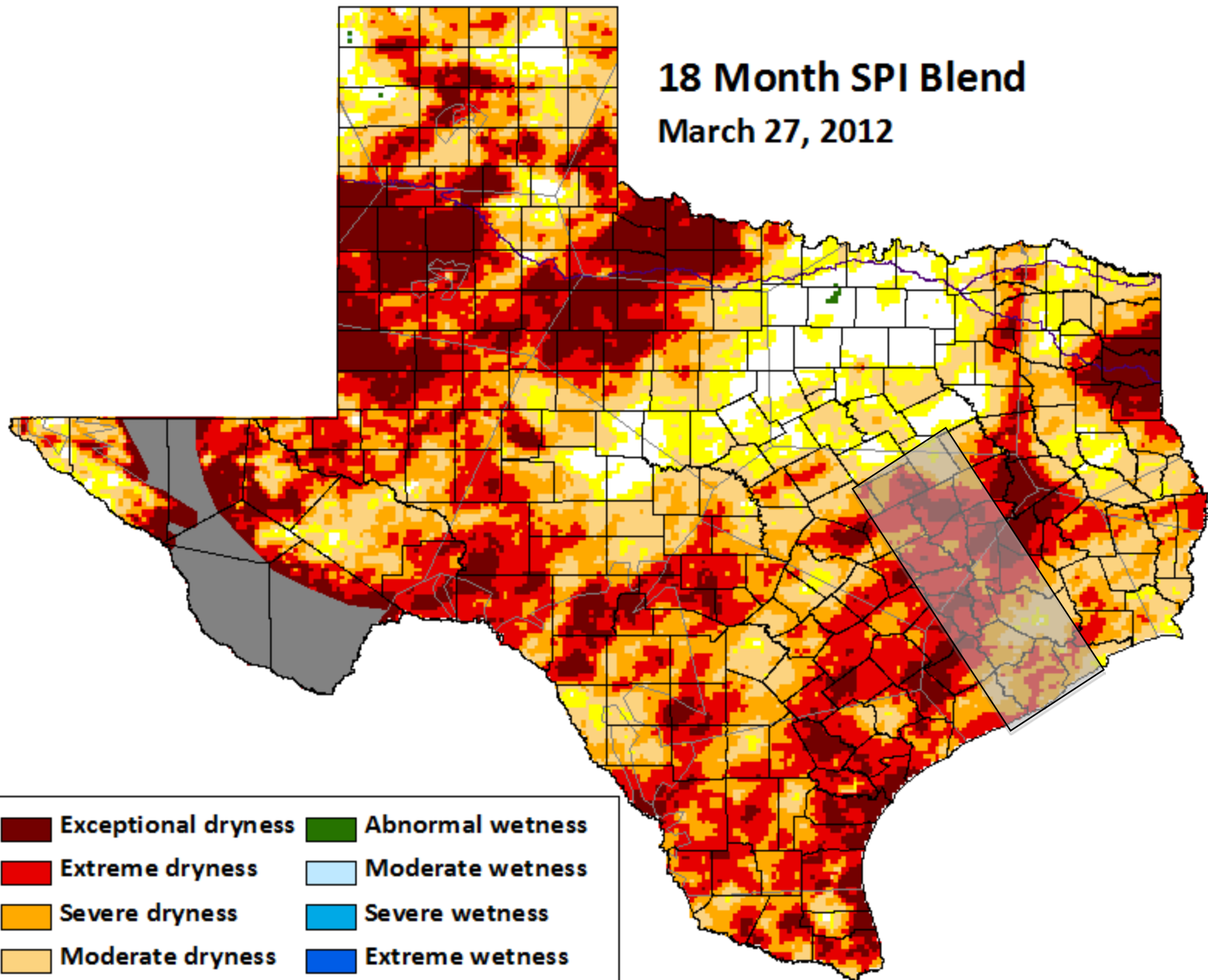
2 Month SPI Blend

March 27, 2012

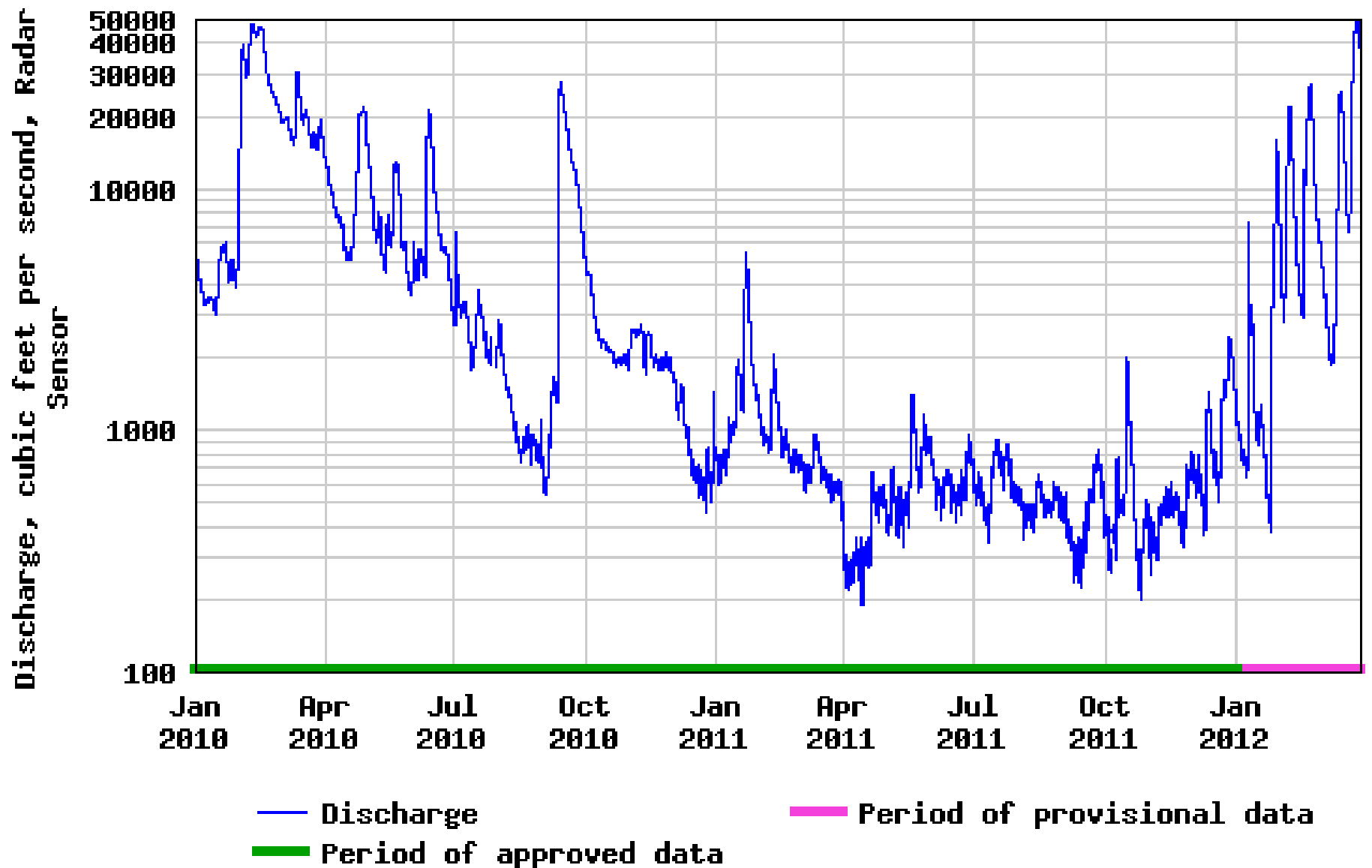


18 Month SPI Blend

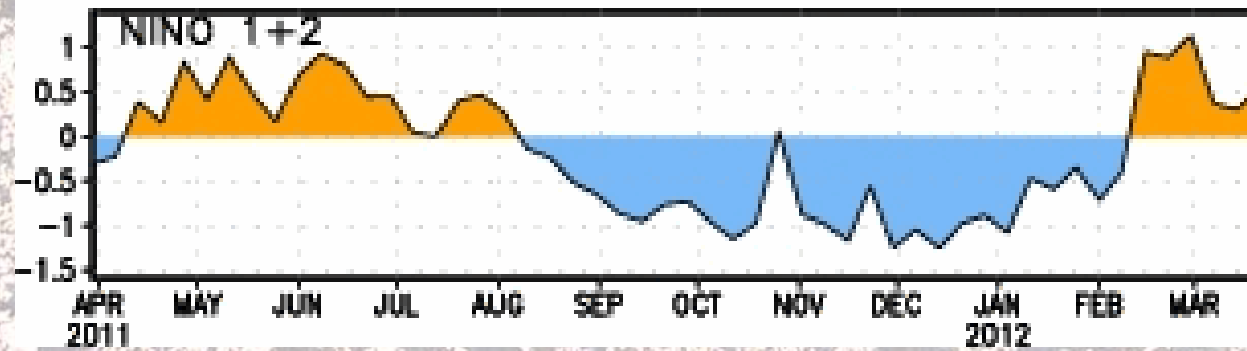
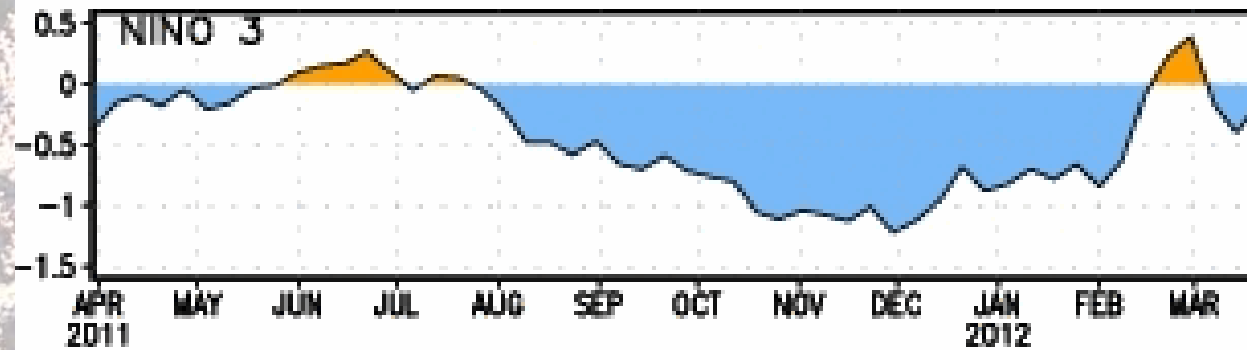
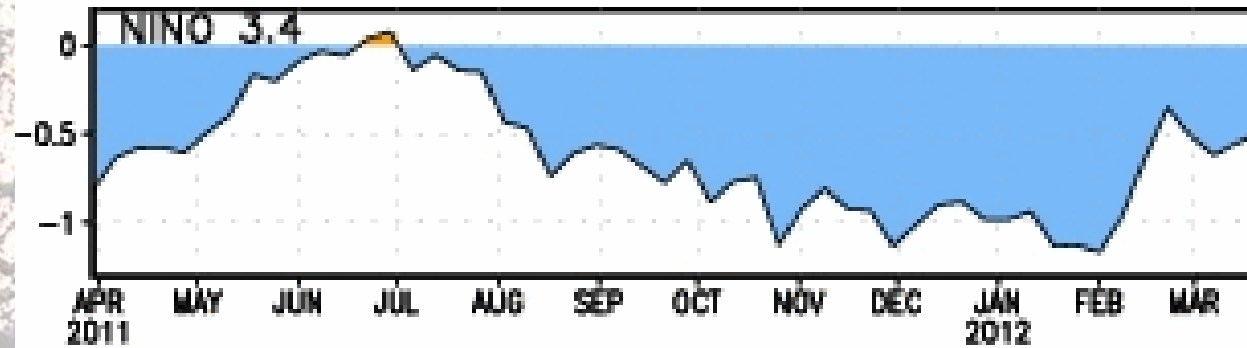
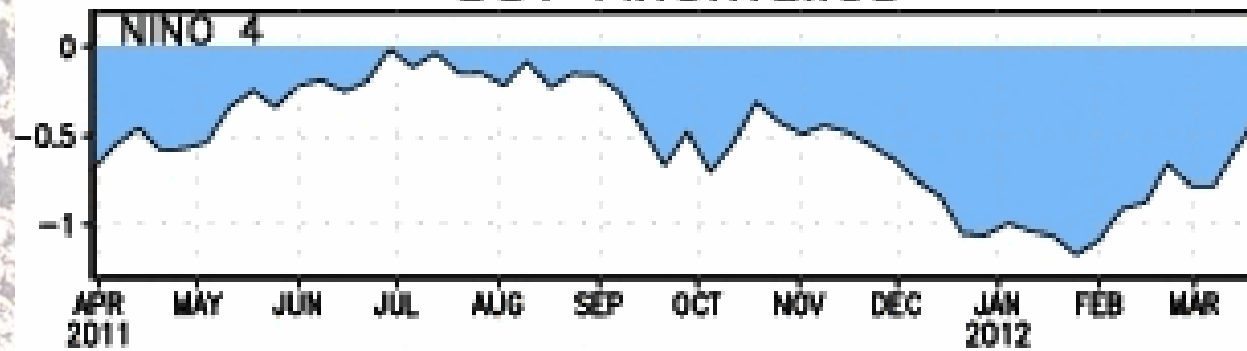
March 27, 2012



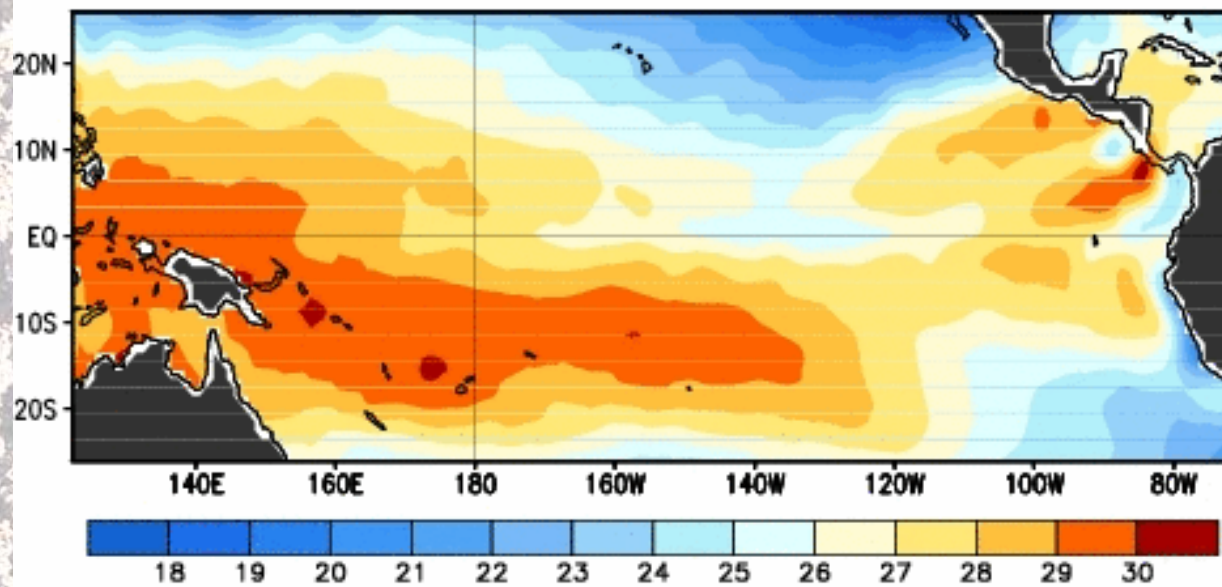
USGS 08114000 Brazos Rv at Richmond, TX



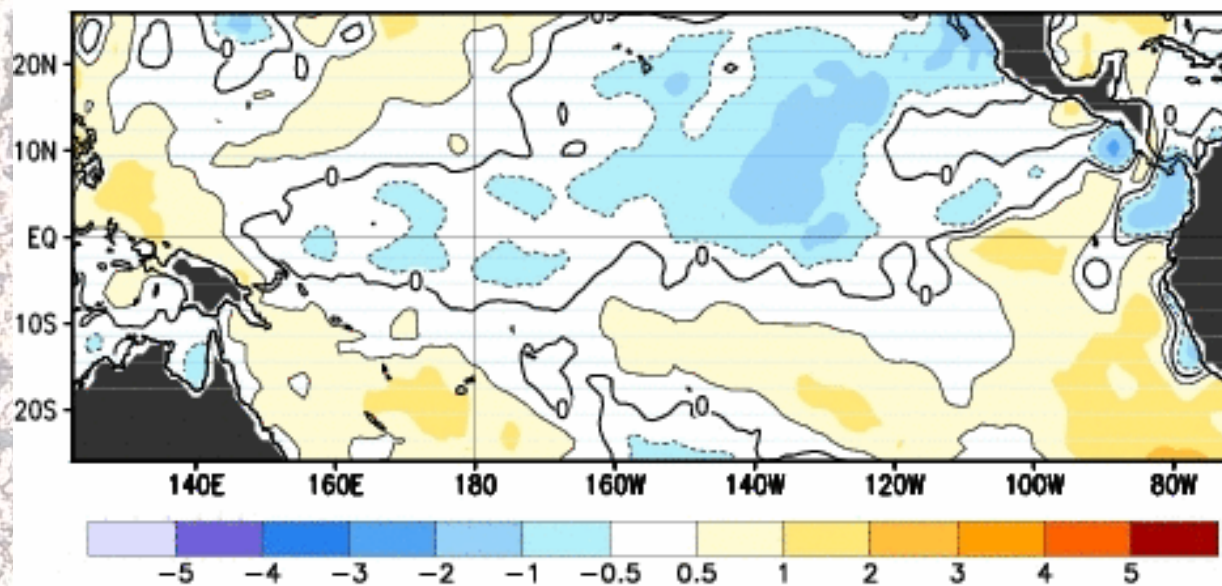
SST Anomalies



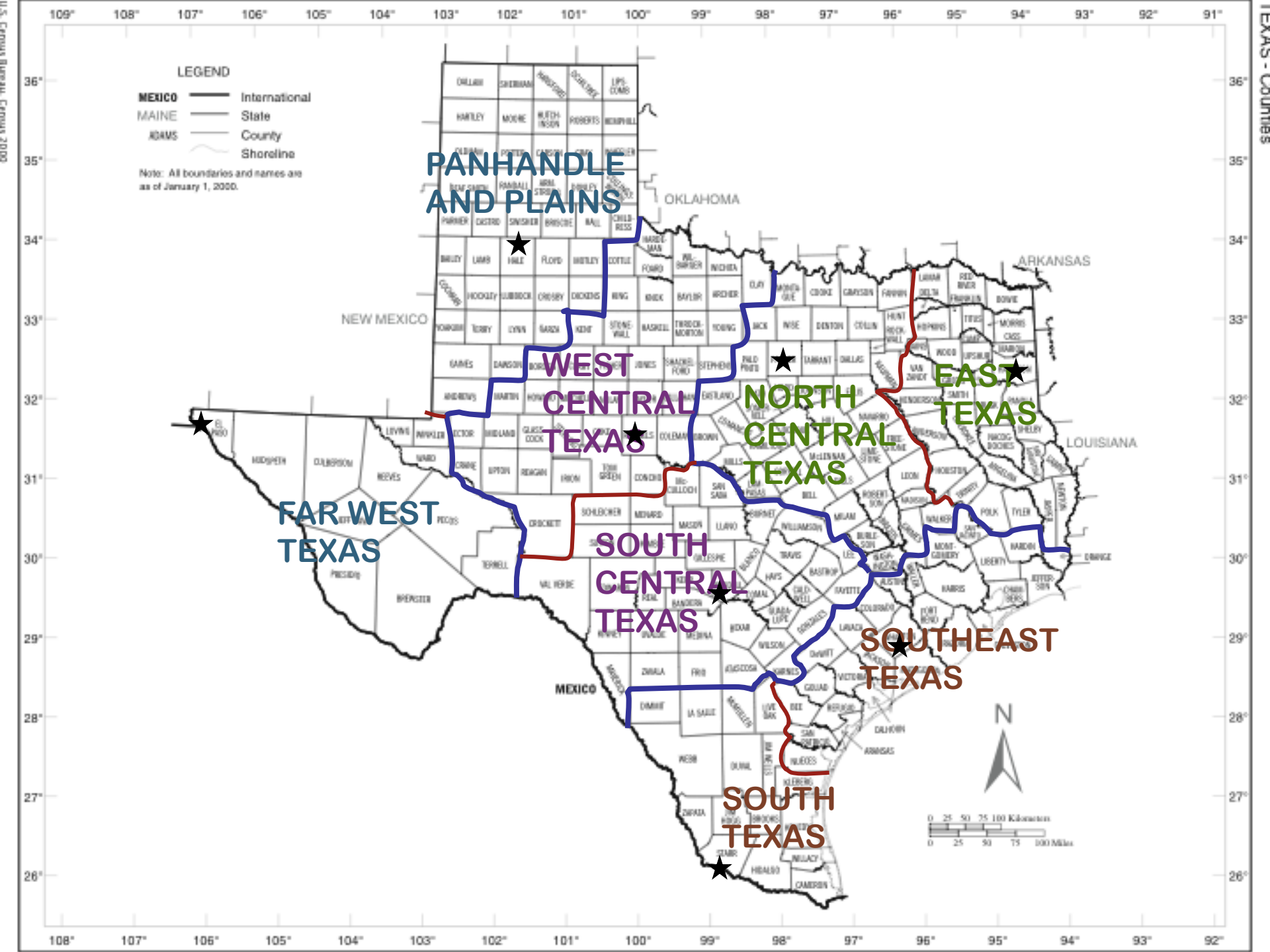
Observed Sea Surface Temperature ($^{\circ}\text{C}$)



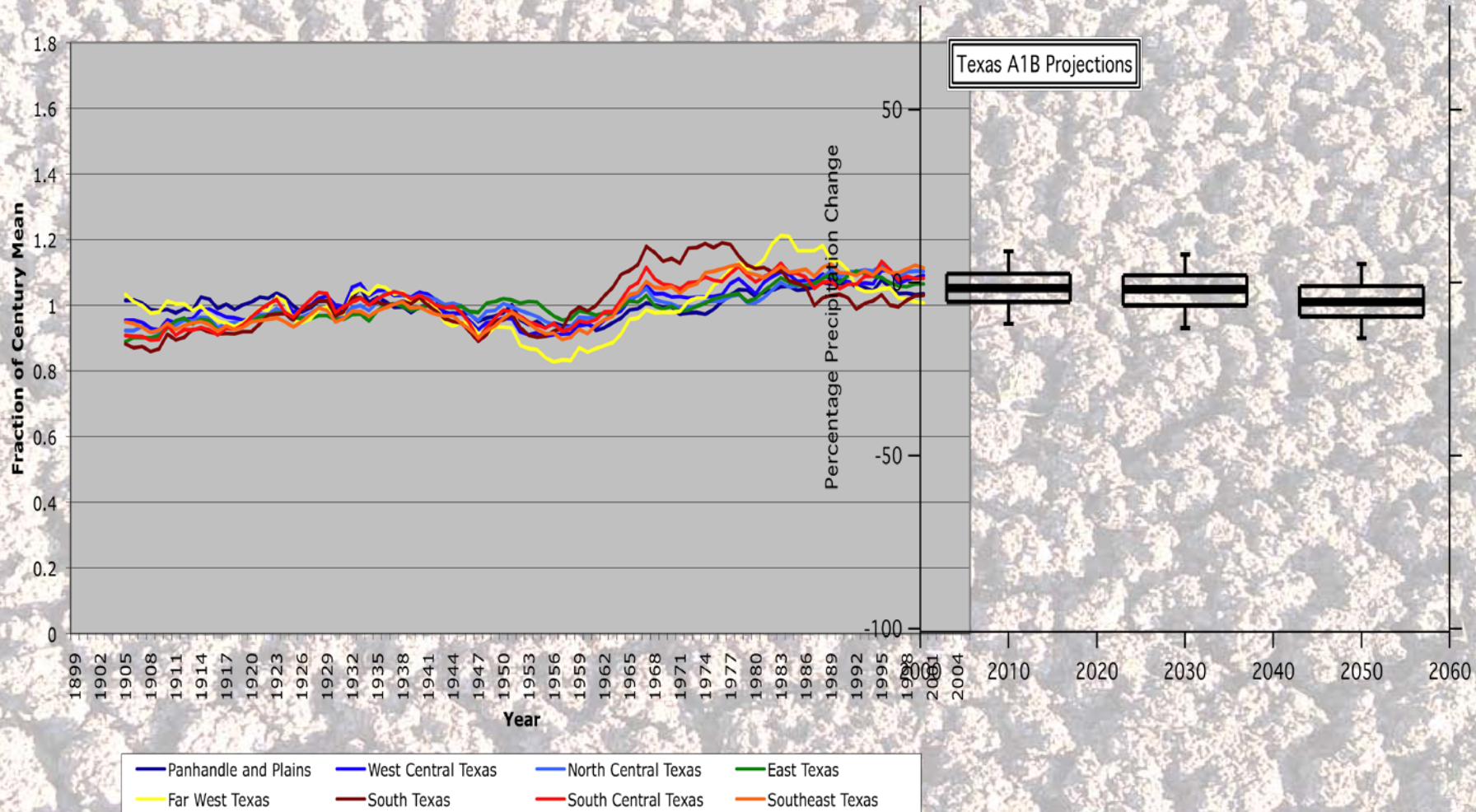
Observed Sea Surface Temperature Anomalies ($^{\circ}\text{C}$)



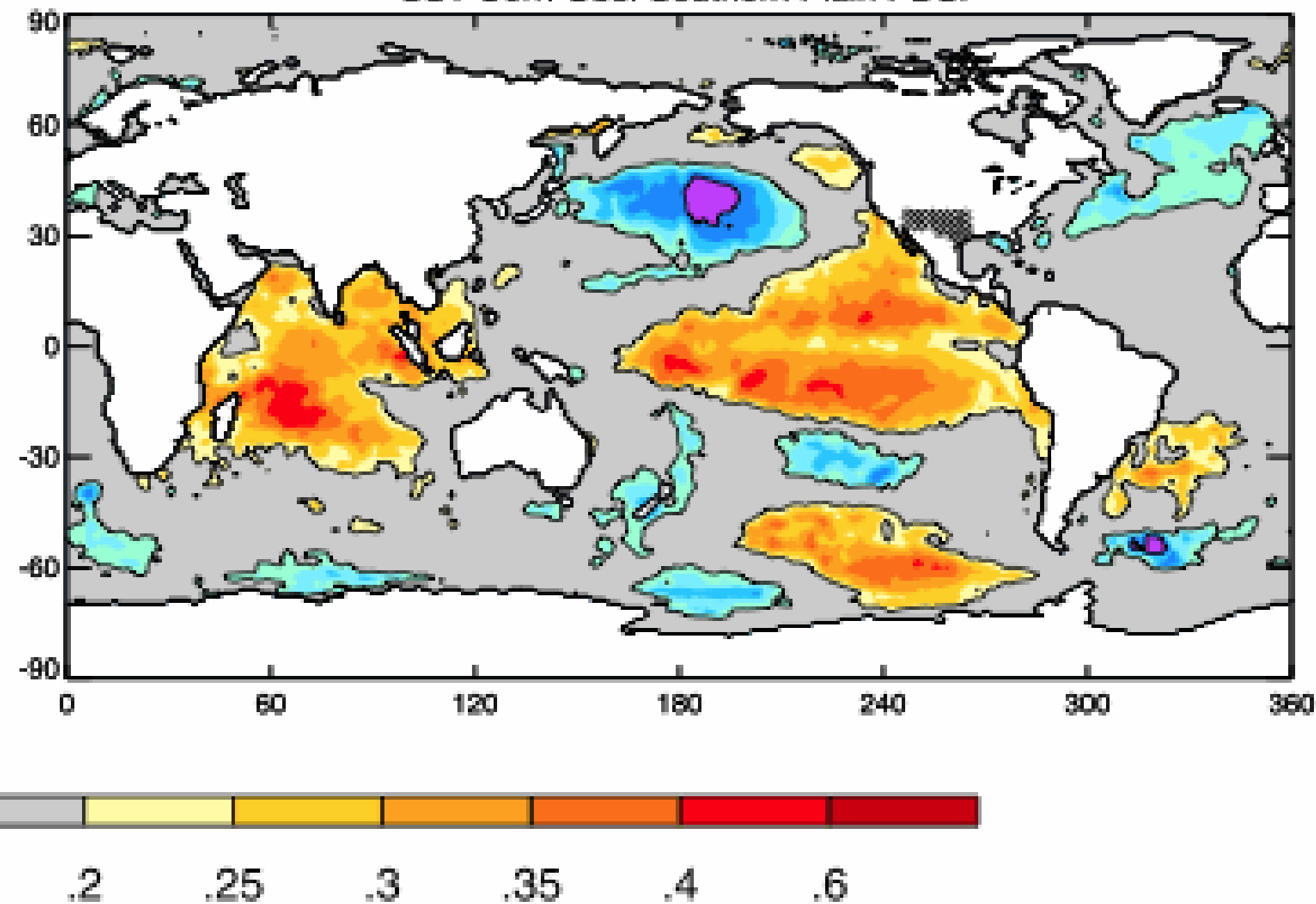
7-day Average Centered on 21 March 2012



20-yr Smoothed Texas Precipitation

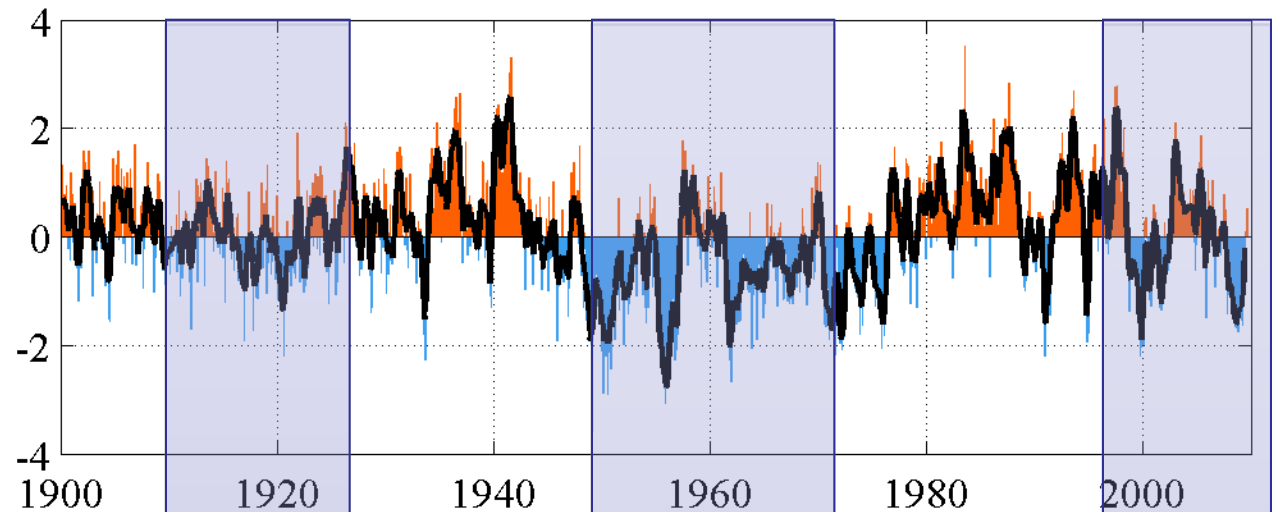


SST Corr: Obs. Southern Plain PDSI

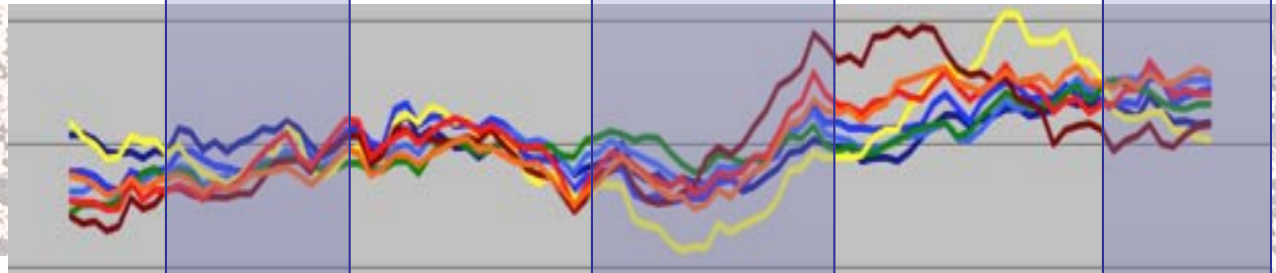


monthly values for the PDO index: 1900-September 2009

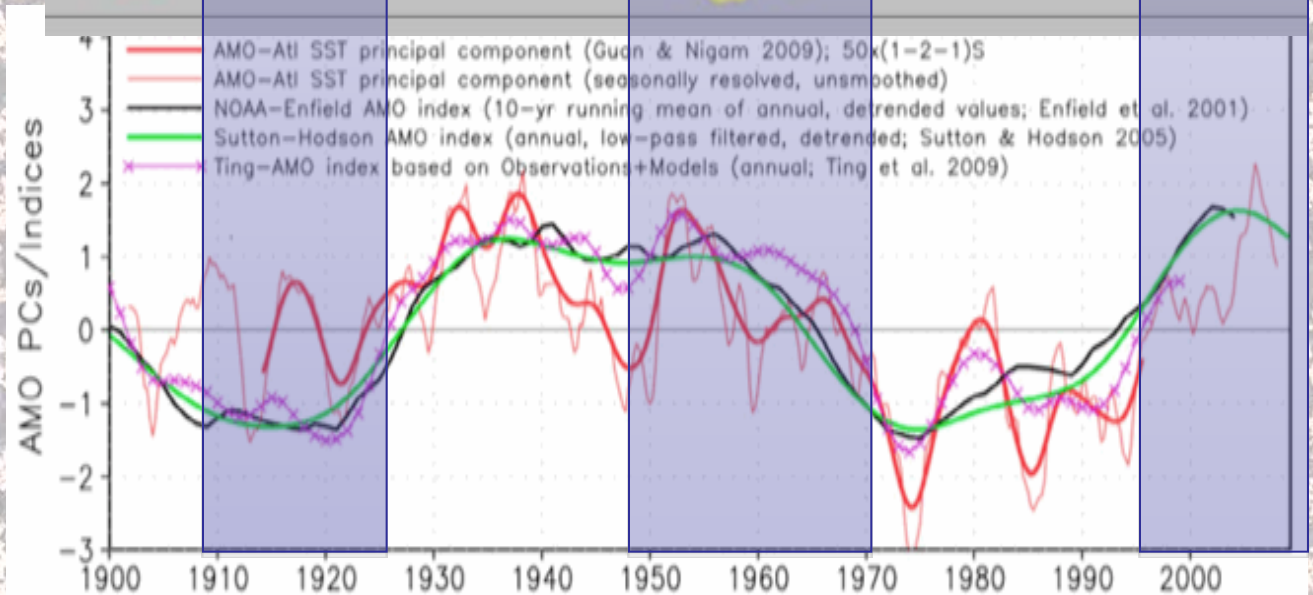
Pacific



Texas



Atlantic



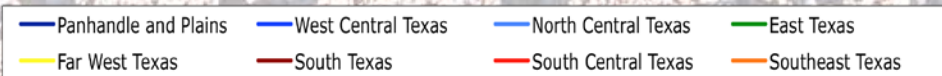
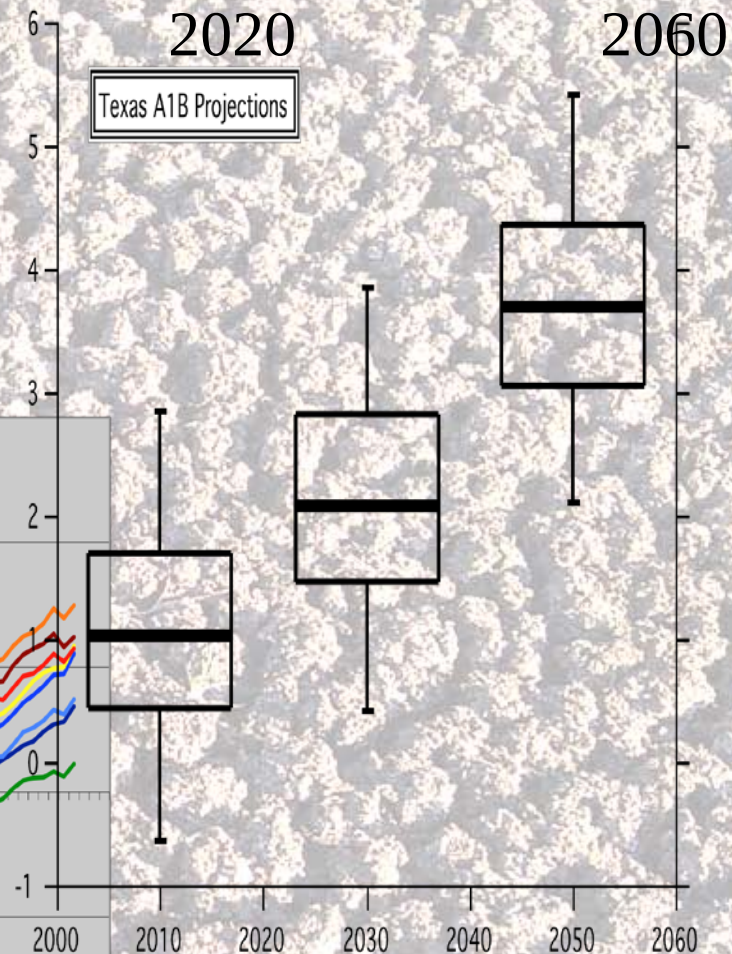
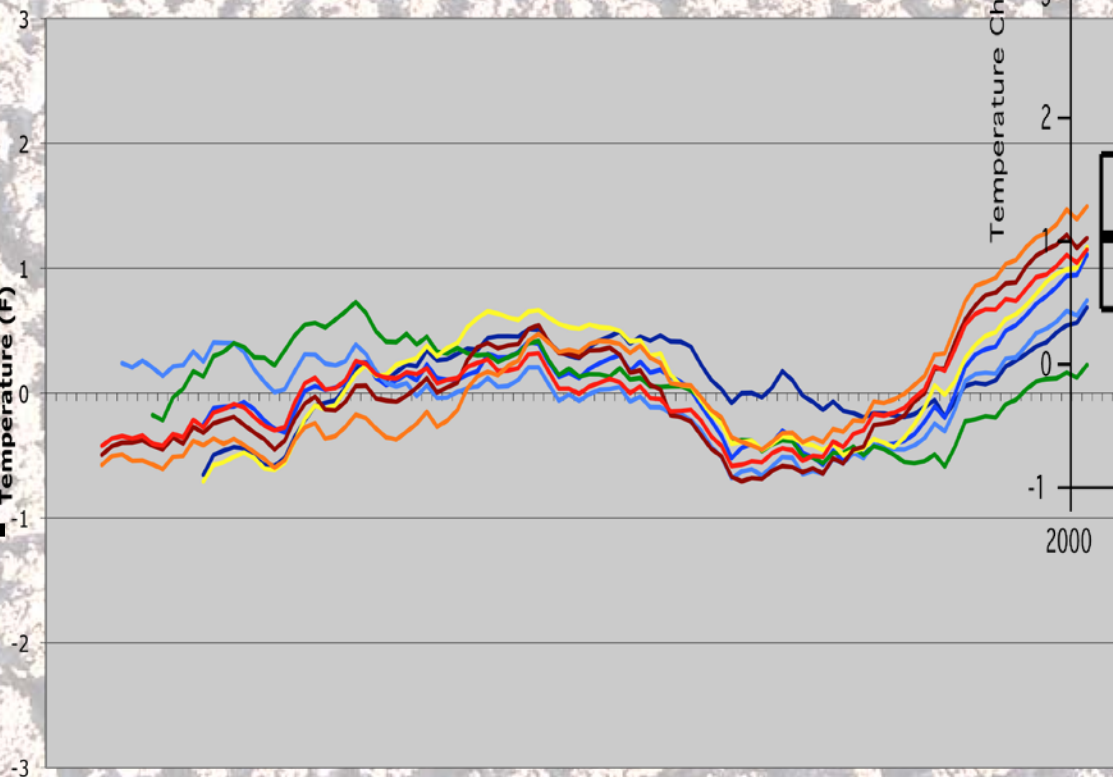
Temperature →

Time →

Annual Mean Temperature

Temperature Change (F)

Texas A1B Projections



Drought and La Niña

- Dissipating La Niña
 - Drought (temporarily) over (?) for Southeast Texas?
 - 5 out of 11 2-year La Niñas get a third year

Drought and Natural Variability

- Cold tropical Pacific (PDO) +
- Warm north Atlantic (AMO) =
- Period of drought susceptibility for Texas (ONO)
 - A few more years, or a decade or more?
 - 1950s-type drought still possible
 - It WILL get wet again

Drought and Climate Change

- Precipitation changes unknown
- Temperatures becoming warmer
- More evaporation, more water demand, less streamflow
- Easier to cross the threshold of drought
- Future droughts will be hotter

Contact Information

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- <http://blog.chron.com/climateabyss>