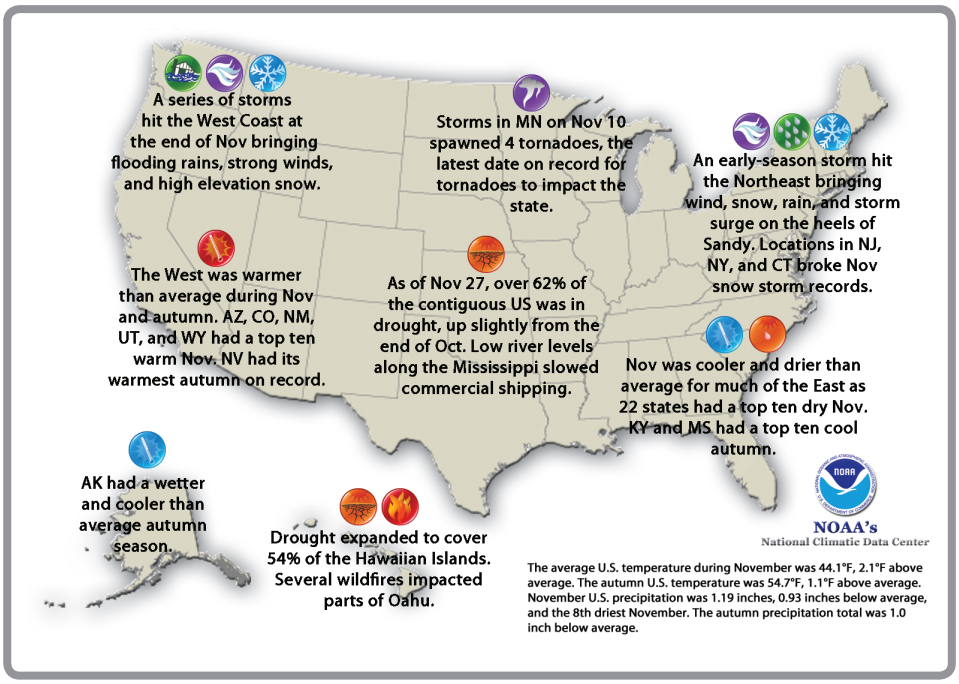
Quarterly Climate Impacts and Outlook

Southern Great Plains Region

Winter 2012

Significant Regional and National Events for September - November 2012



Historic Drought Continues to Affect the Southern Great Plains

Oklahoma

- Agricultural damages of **$426 million** during Oct 1 2011 – Sep 30 2012 water year

Texas

- Much-needed September rainstorm adds **over a year** of supply to O.H. Ivie Reservoir

New Mexico

- State's primary reservoir, Elephant Butte, at **6% of capacity** as of Nov 30th; water releases and deliveries may be in jeopardy

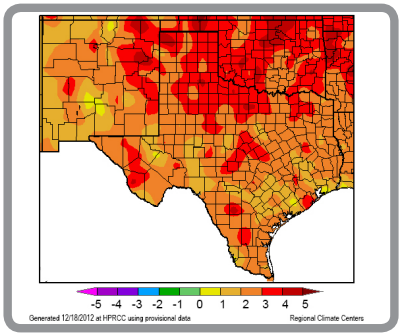
Chihuahua (Mexico)

- La Boquilla Reservoir, a major resource for the state, at **23% of capacity** as of Nov 30th

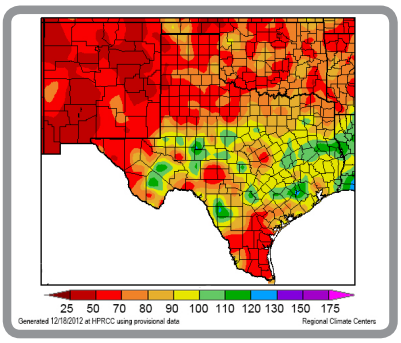
Regional - *Climate Overview for September - November 2012*

Temperature and Precipitation Anomalies

Departure from Normal Temperature (°F)
1/1/2012 - 11/30/2012



Percent of Normal Precipitation (%)
1/1/2012 -11/30/2012

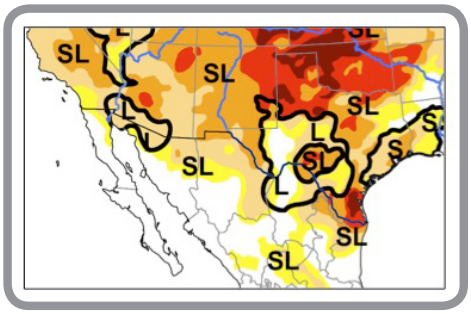


(Provisional data courtesy of HIgh Plains Regional Climate Center, **www.hprcc.unl.edu**)

Temperature and Precipitation Rankings			
	Jun 1st-Nov 30th	Jan 1st-Nov 30tht	Dec 2010-Nov 2012
Oklahoma	15th warmest	**WARMEST**	**WARMEST**
Texas	15th warmest	2nd warmest	**WARMEST**
New Mexico	2nd warmest	**WARMEST**	**WARMEST**
Oklahoma	8th driest	13th driest	3rd driest
Texas	17th driest	40th driest	4th driest
New Mexico	2nd driest	2nd driest	**DRIEST**

North American Drought Monitor

North American Drought Monitor
11/30/2012



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)

Warm temperatures and drier-than-normal weather across much of the region in 2012 continue to drive extreme and exceptional drought conditions

More information on the Southern Plains drought early warning system pilot project is available at **drought.gov**

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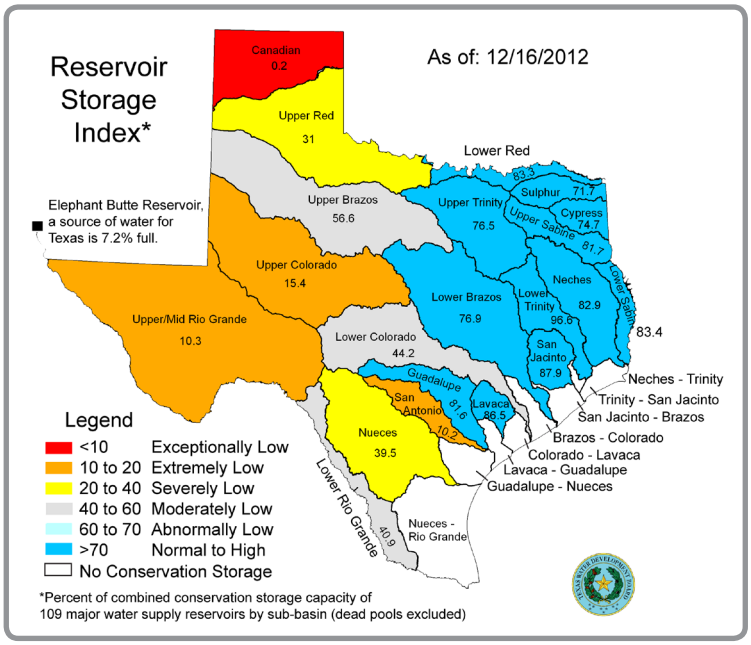
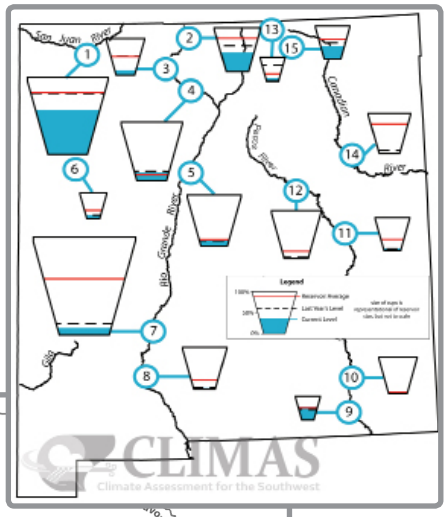
Regional Highlight - *Water Resources Remain Exceptionally Stressed*

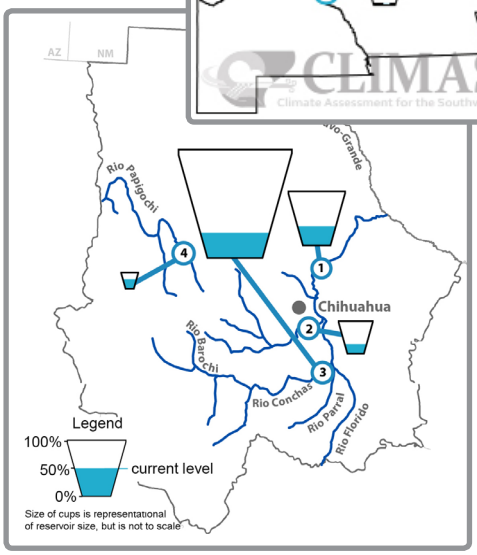
In addition to exceedingly low reservoir levels in New Mexico (right), Chihuahua (right, below), and West Texas (below), most SNOTEL snow water equivalent stations in the Rio Grande basin were reporting below 50% of average snow conditions for mid-December (source: NM state climate office).

Elsewhere in the region, the impacts of the drought on cattle herds in Oklahoma and beyond suggest that the 2013 U.S. calf crop is likely to be the smallest since 1942 (source: OSU extension).

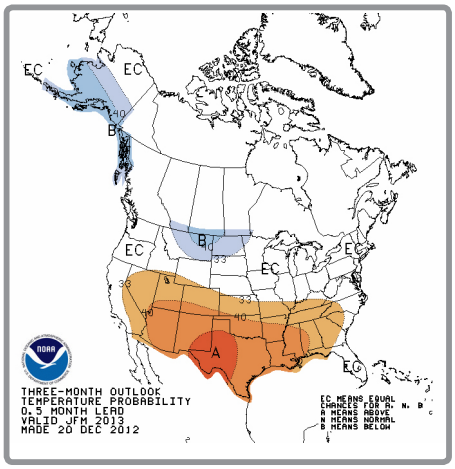


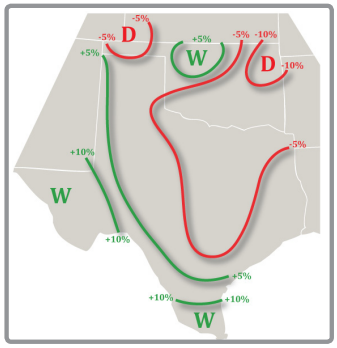
Left: www.twdb.state.tx.us (as of Dec 16th)
Right and above right: www.climas.arizona.edu (as of Nov 30th)





Regional Outlook - *for Winter Season*





Warm and Dry Conditions More Likely to Prevail

- NOAA's official outlook for January – March (top) suggests an increased probability of warmer-than-normal temperatures across the entirety of the Southern Plains
- Experimental precipitation forecast guidance for the Southern Plains (bottom) for January – March points to higher probabilities of dry conditions in much of central and eastern parts of the region, with a chance of wetness in far western and southern areas
- Areas that continue to be affected by drought this winter could see challenges to wheat crops, reduced forage for cattle, and an active wildfire season

Top: **www.cpc.noaa.gov**
Bottom: **www.esrl.noaa.gov/psd**

Southern Plains Partners

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stateclimate.org
Western Governors' Association
westgov.org
Western Regional Climate Center
wrcc.dri.edu

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