

Summary: Southern Plains Drought Assessment and Outlook Forum Spring 2012 -- Lubbock TX

Key messages from the Forum:

- The second consecutive winter season La Nina has ended, but with impacts (fairly wet conditions in much of the Southern Plains) that differed markedly from the 2010-2011 La Nina.
- Near-neutral ENSO conditions currently prevail, and a transition to El Nino this summer would likely preclude the return of La Nina in 2012.
- However, “big” La Nina events tend to come back; historically 40% return for a third year. Thus, the next few months will be crucial in determining the 2012-2013 winter outlook.
- If El Nino develops this summer, it could potentially suppress tropical activity in the Atlantic basin including the Gulf of Mexico, thus limiting an additional source of drought relief. The official NWS summer precipitation outlook (Figure 1) does not contain a strong seasonal rainfall signal for the Southern Plains.
- The NWS summer precipitation outlook also does not contain a strong monsoon signal; however, an experimental forecast from NOAA’s Earth System Research Laboratory suggests a wetter monsoon is possible in Arizona and Colorado, with drier conditions potentially on tap for southeast New Mexico.

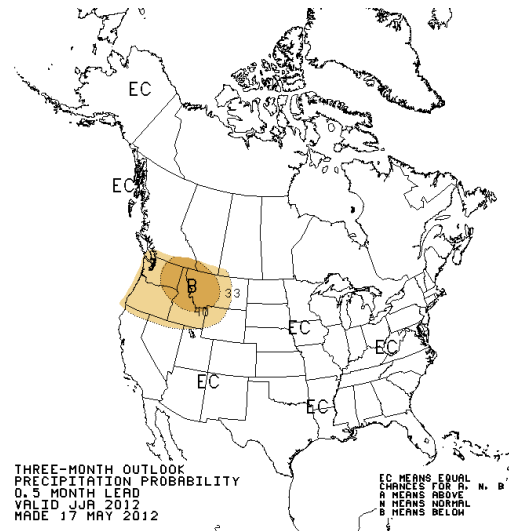


Figure 1: Three-month precipitation outlook (June, July, August) from the National Weather Service, Climate Prediction Center (<http://www.cpc.ncep.noaa.gov/>)

Changes in Conditions Since Forum:

Since May 1st, drought conditions have improved in west Texas and eastern New Mexico. Abundant rainfall in excess of 200% of normal has fallen in areas around Alamogordo NM, Odessa TX, and in parts of the Big Bend region. Within an area bordered by Lubbock TX in the north, Las Cruces NM in the west, Del Rio TX in the South, and San Antonio TX in the east, nearly all locations saw above normal precipitation during May 2012. This rainfall has allowed for a short-term groundwater recharge and reservoir replenishment, and some long-term recovery from the damage done to rangeland and pastures. As a result, a 2-3 category improvement in drought conditions has occurred in west Texas and eastern New Mexico, according to the latest U.S. Drought Monitor (Figure 2).

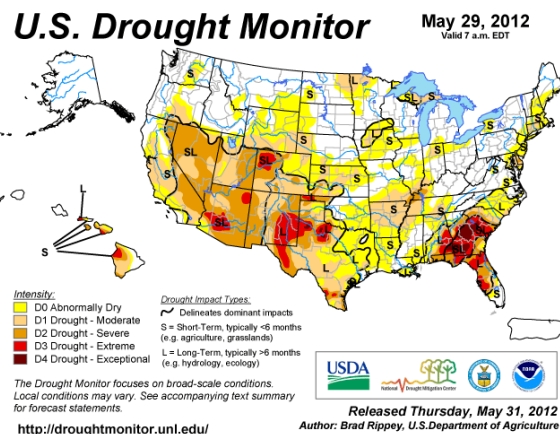


Figure 2: U.S. Drought Monitor released on May 31, 2012 (<http://droughtmonitor.unl.edu/monitor.html>)

Forecast Uncertainty:

With near-neutral ENSO conditions likely to persist through the late spring and early summer, there is a low probability of short-term reemergence or intensification of ENSO-driven drought conditions in the Southern Plains. Some forecast models are calling for El Nino to develop by late summer; under this scenario, a return to La Nina conditions in calendar year 2012 would be highly unlikely, and the prospects for continued drought recovery across the Southern Plains would be enhanced if El Nino persists into the winter season where it is typically linked to above-normal precipitation. However, “big” La Nina episodes (i.e., strong events that recur over consecutive years) do tend to come back; historically, 40% of two-winter La Nina events have returned for a third winter. If ENSO conditions remain neutral throughout the summer, rather than shifting to El Nino, the likelihood of a reemergence of La Nina conditions for the 2012-2013 winter increases, and with it the possibility of a reemergence of drought conditions across much of the region.

Southern Plains Drought Webinars:

In September 2011 a series of drought webinars were developed to improve communication among agencies and organizations dealing with the drought in the Southern Plains (Figure 3). The webinars provide information on available resources and assistance to help monitor and manage drought; improve communication and understanding of the impacts of drought in this region from the perspective of those who are tasked with managing it; and provide an overview of regional drought conditions and the outlook for next several weeks to months. The webinars are held on the second Thursday of each month at 11:00 a.m. (CST). A short briefing is recorded on the fourth Thursday of each month and posted to the YouTube page of the Southern Climate Impacts Planning Program (SCIPP); <http://www.youtube.com/SCIPP01/>. For more information, please visit SCIPP’s website at <http://www.southernclimate.org>.

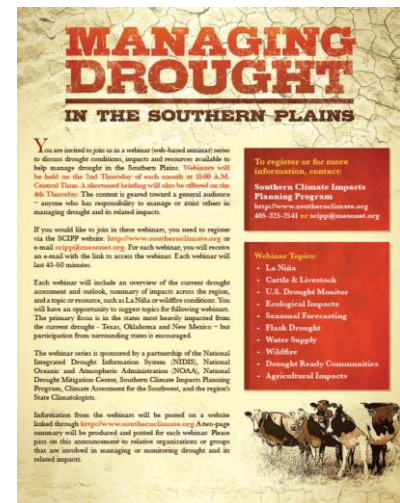


Figure 1: Flyer for the Managing Drought webinar series.

A Service Assessment of the 2010-2012 Drought:

Beginning in the summer, the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln, working with SCIPP as well as NOAA’s National Climatic Data Center, the National Integrated Drought Information System (NIDIS), and a variety of other partners, will be leading the development of a service assessment report of the 2010-2012 Southern Plains drought. This assessment will include: a climatological overview of the drought event, including information on the meteorological and climatological causes (“attribution”); a description of the regional environmental and economic impacts from Texas, Oklahoma, New Mexico, and beyond; a summary and evaluation of regional climate services put in place to respond to the event, including drought outlook forums and management webinars; an evaluation of the drought’s impact on decision making, particularly in water management sectors; and lessons learned and recommendations for addressing future extreme events in the Southern Plains. The service assessment will be completed in early 2013 and shared with federal, state, and local partners across the region.

