

# MANAGING DROUGHT

## IN THE SOUTHERN PLAINS

Webinar Topic: Wildfire  
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### Regional Drought Summary

Brian Fuchs, National Drought Mitigation Center

The trend toward improvement in eastern Oklahoma and Texas continued as parts of the region are now drought-free. Even with the rains, however, long-term impacts related to hydrology and water supply remain. South and West Texas have not seen the degree of recovery as other parts of Texas, but it is their dry season. Even with the improvements, there is still much more drought than compared to this time last year.

Short-term forecasts indicate more rainfall across much of the Southern Plains. Longer-term, the tendency is to return to dry and warm, following one of the warmest Januaries on record. However, La Niña this year has not behaved according to expectations, so more relief may be possible.

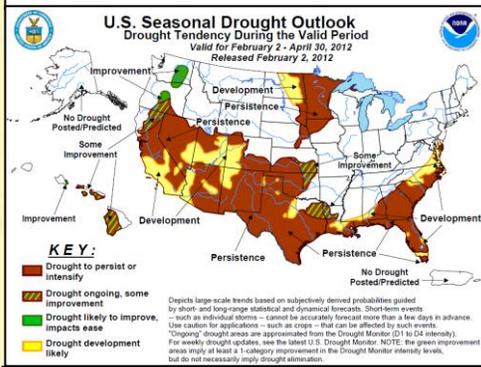
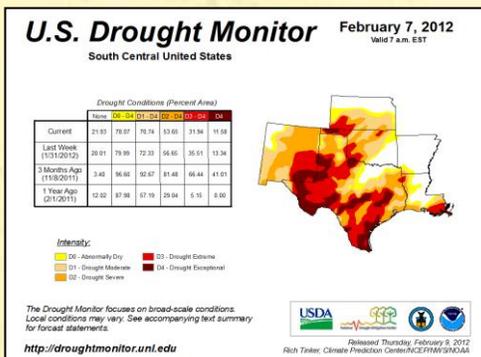
Louisiana has seen dramatic improvement over the last several weeks. As of mid-January 73% of Louisiana was in some stage of drought (D1-D4); this is now down to 44%. Three stations reported over 14 inches of rain in the two-week period. Southeast Louisiana has missed out on these very un-La rains, as it remains mired in D3.

At the other end of the region, New Mexico started off the fall in much better shape, but those improvements have faded. The water year, beginning October 1, has been near-normal, but Southeast New Mexico is still running well below normal. The winter started off with good snowpack in the northern mountains with prospects for improved stream flow next spring, but has fallen behind since then. Heavy snowfall in March is not unusual, so there is still hope for at least close to a normal year.

### Did You Know?

There are a number of agencies that forecast wildfire conditions. In addition to these listed below, there are other links on the [NIDIS Drought Portal](http://www.nidms.gov) in Current Drought and Forecasting sections.

- National Interagency Coordination Center 7-day outlooks: <http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>
- National Weather Service experimental fire weather page: <http://radar.srh.noaa.gov/fire/>
- NWS Storm Prediction Center Fire Weather Outlooks: [http://www.spc.noaa.gov/products/fire\\_wx/](http://www.spc.noaa.gov/products/fire_wx/)
- Keetch-Byrum Drought Index (available on NIDIS Portal and several state climate office websites)



### Resources

U.S. Drought Portal

<http://www.drought.gov>

National Drought Mitigation Center

<http://drought.unl.edu>

Drought Impact Reporter

<http://droughtreporter.unl.edu>

State Climatologists

<http://www.stateclimate.org>

Southern Climate Impacts Planning Program (SCIPP)

<http://www.southernclimate.org>

Climate Assessment for the Southwest (CLIMAS)

<http://www.climas.arizona.edu>

Southern Plains Portal

[http://www.drought.gov/portal/serve.rpt/community/southern\\_plains](http://www.drought.gov/portal/serve.rpt/community/southern_plains)

Oklahoma has a program for helping manage fires. Visit OK-Fire at <http://okfire.mesonet.org/>. OK-Fire includes:

- Fire danger forecasts to 84 hours
- Fire Prescription planner that includes weather conditions
- One-day training sessions covering both wildfire and prescribed fire

## Preparing for Wildfire

Fire is a natural part of our ecosystem with an average of 5.5 million acres burned per year. However, under some conditions, these fires can get out of control, posing threats from smoke due to poor visibility and health impacts in addition to the fires themselves. Improvements in forecasting have helped us anticipate where large fires may occur, giving us time to pre-position resources to fight the fires before they can become large.

The National Weather Service undertook an intensive effort to improve fire weather forecasts following large blazes in Oakland, California in 1991 and Long Island, New York in 1995. Since then, [forecasts](#) have grown to 8-days to allow better deployment of equipment and staffing. Forecasters look for dry, windy conditions and dry thunderstorms – those that produce lightning but little rainfall. Sixty-one percent of total acres burned were started by lightning, including 99% of the fires in the Northern Rockies during the extreme fire season of 2000. Forecasts project fire potential as critical, extremely critical, or dry thunderstorms with associated updates and additional details in text discussions. To make these products, forecasters combine information from weather observations, lightning detection, climatological studies, radars, satellites (which can detect hot spots and burn areas), computer models and [fuel dryness forecasts](#).

The dry winter of 2010-2011 set the stage for the worst fire season in Texas history. More than 3,000 fires burned 3 million acres and destroyed 2,246 homes, an area the size of Connecticut. Most of the fires occurred during two periods, April 6<sup>th</sup> – 30<sup>th</sup>, mostly in west Texas, and August 30-September 5<sup>th</sup>, with the worst in Bastrop County in Central Texas. In 2011, the Keetch-Byrum Drought Index (KBDI) averaged a record 550 (on a scale of 0 to 800), compared to a long-term average of 300. As fire weather forecasts have improved, officials have been able to be more proactive in staffing decisions. Texas Forestry Service uses 30 and 60-day dryness, shorter-term forecasts and fuel dryness to anticipate areas at risk. Current concerns are greatest from the Big Bend area to near Lubbock, although much lower threat than last spring. Two wildcards are in the mix this year. Juniper mortality, greatest in southwest and west Texas, could make fires more severe. This is balanced by a lack of fine fuels (grasses) that requires higher wind speeds to move fire along the landscape.



Fire is often portrayed as a destructive, uncontrolled element, but effective use of fire on the landscape has many benefits. Native Americans used fire to restore grasslands and today it is used similarly to control invasive vegetation and provide natural fertilizers to pastures. Controlled burning is also used to reduce dangerous fuels like dead wood and brush. Excessive fire suppression leads to build-up of these fuels which can make uncontrolled fire reach much higher intensity. Prescribed fire is commonly used in Oklahoma, Kansas and Florida on up to 1.5 million acres every year. Prescribed burns are more challenging to conduct during drought but are still possible. Some things a producer should keep in mind:

- Should I burn? Producers can consider patch burning so that parts of the field are maintained.
- Do I have enough fuel to burn? If fires cannot get hot enough to control cedars and junipers, it may be better to postpone a burn and instead adjust stocking rates.
- Will fire kill my native plants during drought? Native plants are adapted to fire and will recover.
- Should I wait to see if it rains before burning? Timing can be adjusted to see if there is sufficient rainfall for regrowth.
- Is there risk of fire escaping? There can be good burn days during drought and high fire danger days in wet years. The big difference is less leaf moisture in evergreens and cedars making them more volatile.

Texas offers two programs to assist homeowners and communities in preparing for wildfire: Firewise ([www.firewise.org](http://www.firewise.org)) and Ready-Set-Go ([www.wildlandfireRSG.org](http://www.wildlandfireRSG.org)). Firewise is a community-driven program that gives national recognition to homeowners and communities that have taken steps to address risks under guidance from a wildland-urban interface specialist. Steps include conducting a hazard risk assessment; forming a “Firewise Board”; creating a wildfire protection plan; invest at least \$2 per capita in Firewise projects; completing at least one major project a year; and observe a Firewise Day public awareness event. The funding requirement need not be cash; it could be met through the value of volunteer time.

Ready-Set-Go builds upon many of the principles in Firewise. Getting Ready involves creating at least 30 feet of defensible space around the home. Thinning and removing dead vegetation, pruning vegetation near windows and choosing plants with a high moisture content inhibit the spread of flames as well as creating a more attractive environment around the house. Using non-combustible materials, boxing eaves and screening vents to prevent embers from getting inside the house, clearing and fencing underneath decks, using double-pane and tempered glass, and replacing wood supports and fencing immediately adjacent to the house with non-combustible materials make the home more defensible. When conditions are favorable for wildfire, Get Set. Remove lawn furniture and doormats near the house, remove flammable window shades and curtains, and back the car into the driveway so you can evacuate quickly. Have a stock of food, water, medication and important documents ready. Turn on the lights so firefighters can see your house clearly and turn off the air conditioner. When you receive an evacuation order – Go. Delaying departure can create traffic problems when fire vehicles are attempting to enter the area.

### Presenters:

Phillip Bothwell – NWS Storm Prediction

Brad Smith – Texas Forestry Service

John Weir - Oklahoma State University Extension

Karen Stafford – Texas Forestry Service

