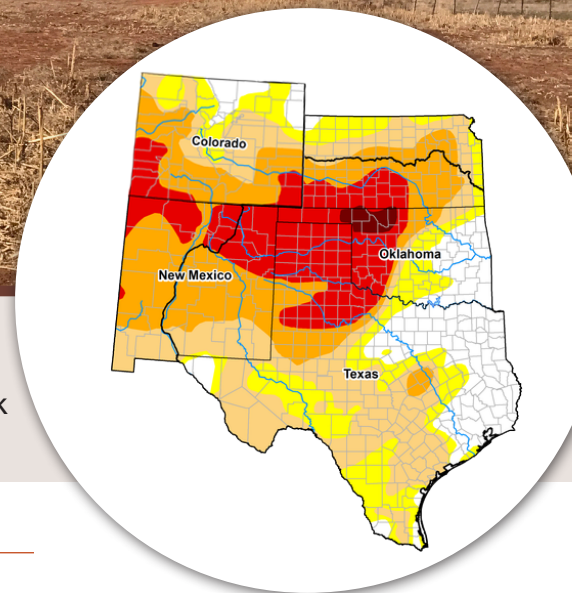


SOUTHERN PLAINS DROUGHT WEBINAR

MARCH 16, 2018



Photo: Mónica Mattox



Below is a summary of the presentation by John Nielsen-Gammon, Texas A&M University, Texas State Climatologist, on the current drought in the Southern Plains, as well as meteorological conditions, impacts, and outlook for the drought.

Drought Status

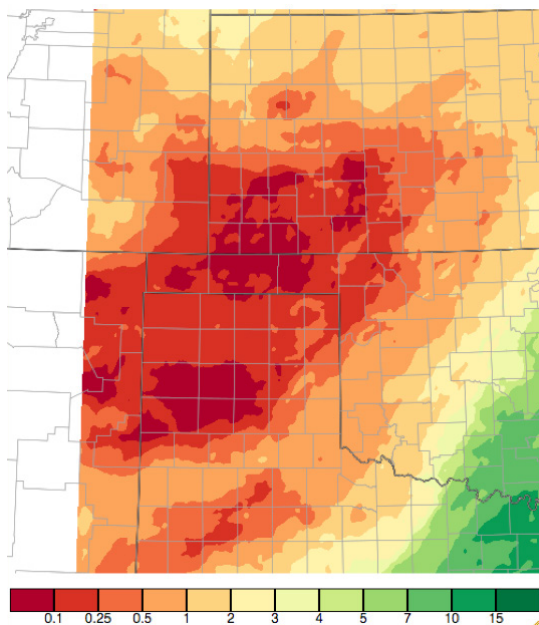
The Southern Plains saw the first emergence of D4 (Exceptional Drought) in 2018 in the US Drought Monitor (USDM) in March 2018. This was a 5-class degradation of drought conditions since September 2017.

▲ Fig 1. U.S. Drought Monitor for March 13. Source: droughtmonitor.unl.edu

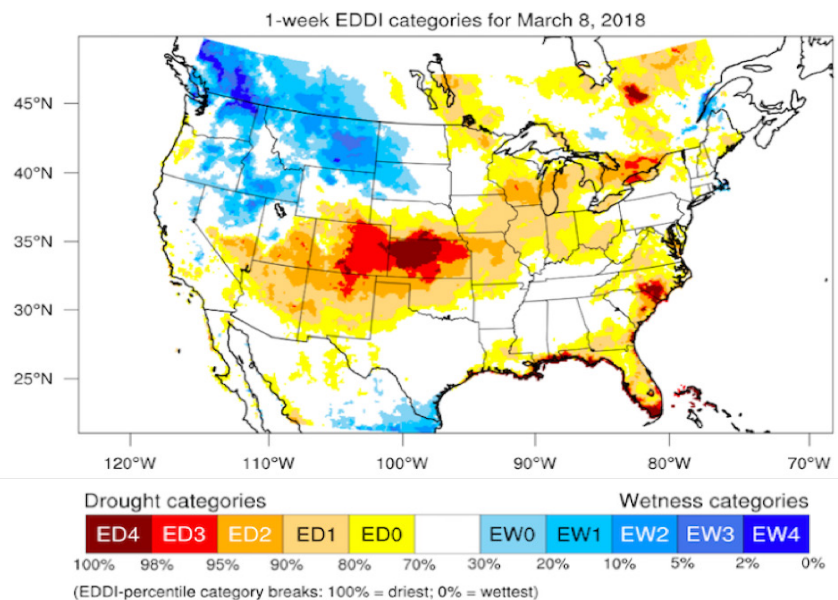
Meteorological Conditions and Indicators

Since the first week of November, precipitation in the region has been “ridiculously low.”

The 1-week Evaporative Demand Drought Index (EDDI) shows drought deepening in the region, particularly in Kansas and Colorado.



▲ Fig. 2. Total precipitation (inches) - November 1, 2017 through March 10, 2018



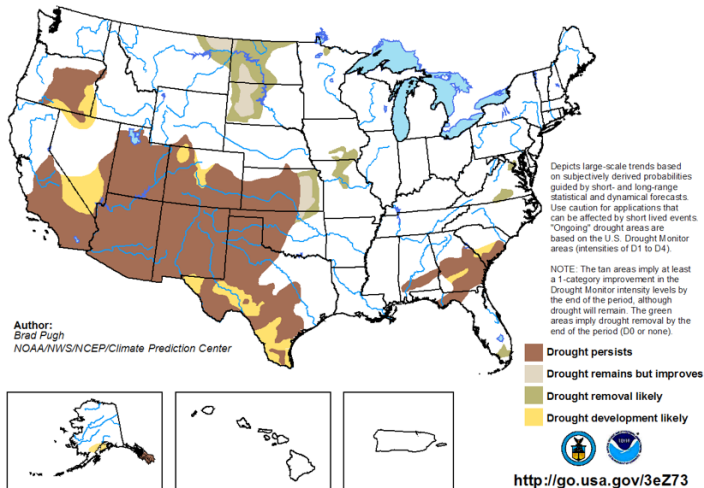
▲ Fig. 3. 1-week EDDI categories for March 8, 2018. Image generated by NOAA/ESRL/Physical Sciences Division.



Snowpack, which supplies much of the region’s irrigation and municipal water, has been unusually low this winter, with some basins well below 25% of normal.

Regional Drought Outlook

The latest temperature long lead outlook from the NWS Climate Prediction Center (CPC) shows an 80%-plus chance of above-normal temperatures for April/May/June. It also shows a slight tilt towards continued drier-than-normal conditions. As temperatures warm, this will place a higher demand on available water resources, and cause precipitation to evaporate quicker than usual, thus contributing to the deepening drought. Given these precipitation and temperature outlooks, the CPC Seasonal Drought Outlook anticipates that drought will persist and expand in this region (Figure 4).



▲ Fig. 4. U.S. Seasonal Drought Outlook valid for March 15 - June 30, 2018. Released on March 15, 2018.

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About the Drought Webinar Series

The Southern Plains webinar series features drought and climate experts and provides the latest information on current conditions, impacts and outlooks. In the March 16 webinar, John Nielsen-Gammon (Texas State Climatologist) presented information for the Southern Plains. A recording this webinar can be found at: <https://youtu.be/HzNxSJFDfp8>

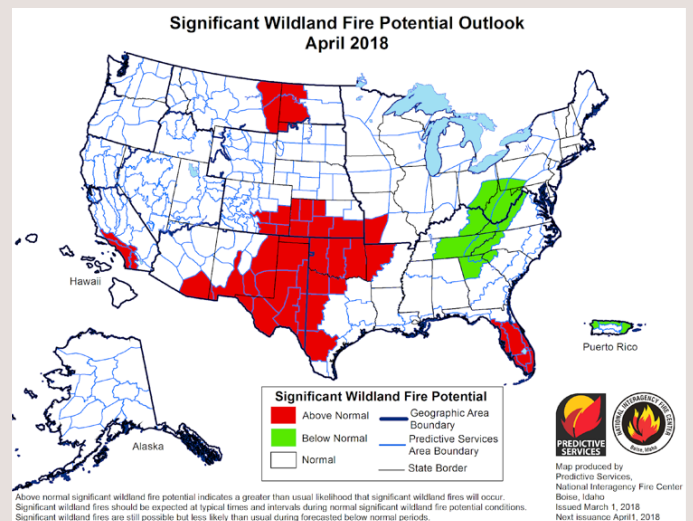
Impacts of the Drought

Winter wheat has been severely impacted: approximately 2/3 of Oklahoma's winter wheat is in "poor" to "very poor" condition. In the USDM D4 areas, much of the wheat crop is a total loss. The State of Kansas issued drought emergency declarations on March 13. The dry winter "almost guarantees" a low yield, even if precipitation increased soon. The drought has negatively impacted livestock forage and stock tanks.



▲ Fig. 5. Wheat field in Beaver County, OK. Photo: Monica Mattox.

Wildfire is a high risk due to drought in combination with abundant fuels, which are 130% - 150% of normal due to the wet year preceding this winter. The National Interagency Coordination Center's *National Significant Wildland Fire Potential Outlook* for April 2018 (below) shows "Above Normal" fire potential in the region due to drought conditions and fuel loadings.



▲ Fig. 6. Significant Wildland Fire Potential Outlook for April 2018 showing "above normal" potential for large portions of the Southern Plains region.

