

SOUTHERN PLAINS DROUGHT WEBINAR

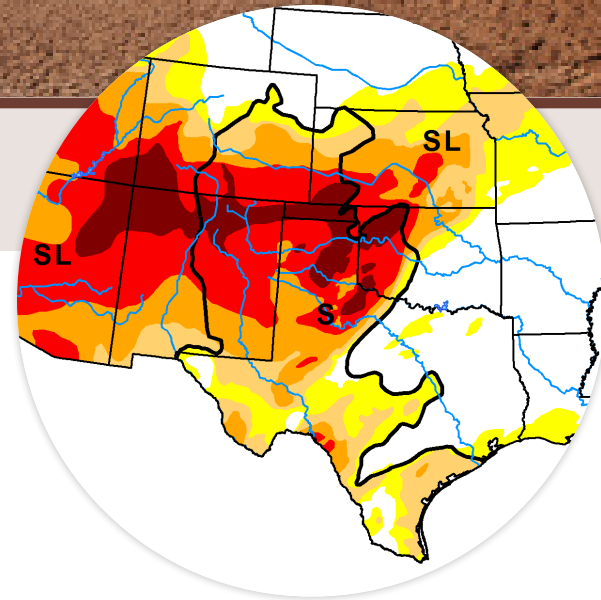
MAY 21, 2018

Below is a summary of the 21 May webinar, led by New Mexico State Climatologist Dave DuBois, on drought conditions, outlook, and impacts in the Southern Plains.

Drought Status

The 15 May U.S. Drought Monitor (USDM) introduced D4 “Exceptional Drought” in all Southern Plains states, indicating that the current drought is comparable to the worst 1-2 droughts in the past 100 years.

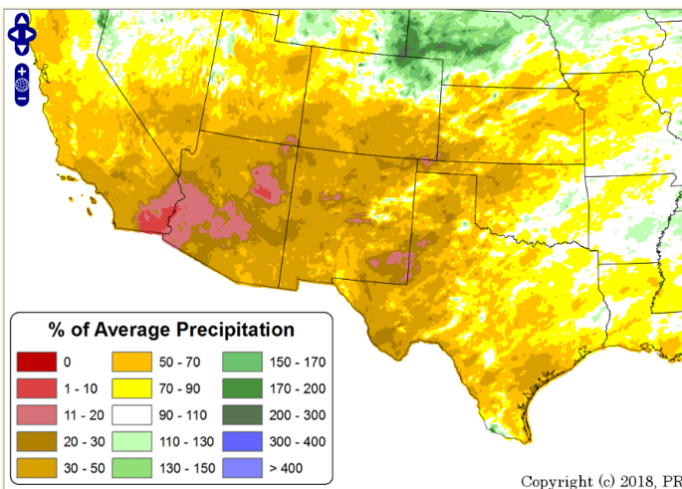
State	Primary Counties	Contiguous Counties
Colorado	24	18
New Mexico	30	3
Oklahoma	62	13
Texas	87	58



▲ Fig 1. U.S. Drought Monitor for May 15. Source: droughtmonitor.unl.edu

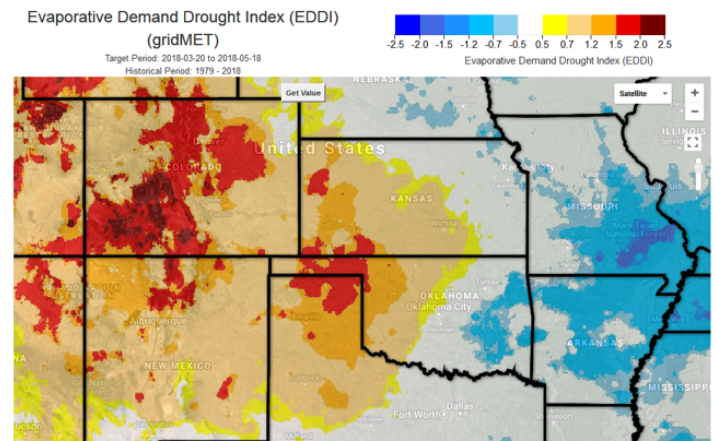
Meteorological Conditions and Indicators

Slight precipitation over the last three weeks did not compensate for accumulated precipitation deficits over the Water Year (October 2017 to the present) (Fig. 2).



▲ Fig. 2. Water Year Percent of Average Precipitation. Data: PRISM, <http://prism.nacse.org/comparisons/drought.php>

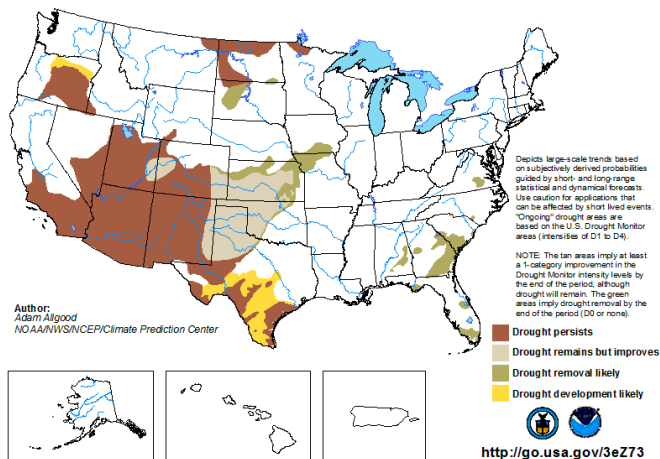
The drought has been exacerbated by high temperatures (8-10 degrees above average in the past 2 weeks), which increases evapotranspiration, leading to plant stress. The Evaporative Demand Drought Index (EDDI) depicts high evaporative demand in the western portion of the Southern Plains (Fig. 3).



▲ Fig. 3. EDDI categories for March 20, 2018 - May 19, 2018. Image generated by NOAA/ESRL/Physical Sciences Division.

Regional Drought Outlook

Regional forecasts show continuation of below-average precipitation and above-average temperatures through the next 8 to 14 days. The outlook for June through August shows increased chances for above-normal temperatures, and equal chances for above-, below-, or near-normal precipitation.



▲ Fig. 4. U.S. Seasonal Drought Outlook valid for May 17 - August 31, 2018. Released on May 17, 2018.

Contributors:

State Climatologists of New Mexico, Colorado, Kansas, Oklahoma, Texas.

NOAA

USDA

SCIPP (Southern Climate Impact Planning Program)

National Drought Mitigation Center

High Plains Regional Climate Center

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 this May 21 webinar, Dave DuBois (New Mexico State Climatologist) presented information for the Southern Plains.

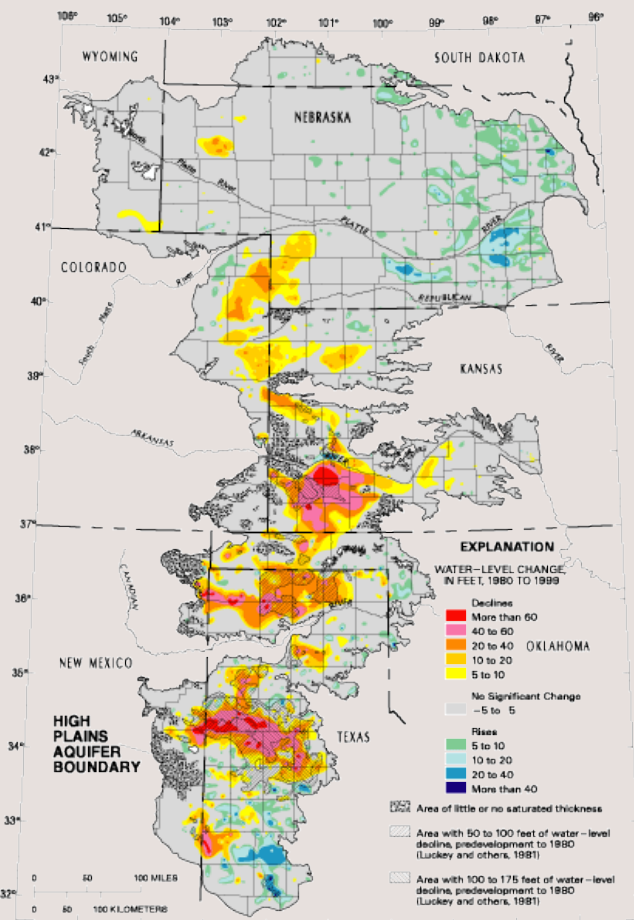
Recordings and written summaries for the March, April, and May 2018 drought webinars are available at www.drought.gov/drought/dews/southern-plains



Impacts of the Drought

This winter's snow drought in the mountains is impacting surface water systems that rely on snowpack, including the Pecos River Basin in New Mexico.

▲ Fig 5. Photo of Pecos River: Stan Engle, NM Climate Center



▲ Fig. 6. Water-level changes in the High Plains aquifer, predevelopment (about 1950) to 2015. Image: USGS

Water supply: There is large variation among the region's reservoirs and groundwater levels. During the 2011-2012 drought, irrigation use jumped significantly, so the current drought may affect water withdrawals from the Ogallala Aquifer, which has experienced severe water level declines since 1950.

Agriculture impacts include extremely poor winter wheat production. Preliminary figures show declines in winter wheat yields in Texas, Oklahoma, Kansas and Colorado. Winter wheat abandonment in Oklahoma is 56 %, the highest on record dating to 1909. Many stock tanks are either dry or too brackish for cattle; there are reports of ranchers selling cattle in New Mexico and western Oklahoma.

