Fuels and Fire Behavior Advisory

Southern Plains

Date Advisory Effective - March 20, 2025

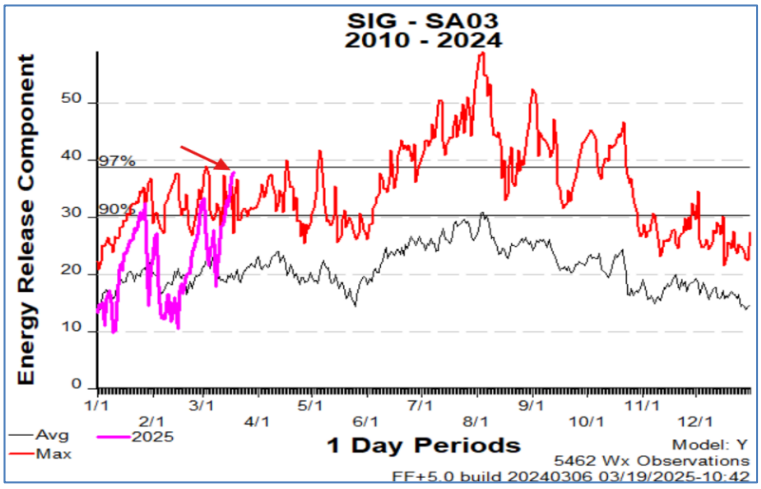
Subject: Dry air and warmer than normal conditions have rapidly desiccated freeze-cured grasses across the Southern Great Plains, while unusually frequent extreme wind events have resulted in wildfire outbreaks across the region. Extreme fire behavior with high rates of spread and high resistance to control has been observed and expected to continue for the foreseeable future.

Discussion: The Southern Great Plains have been consistently exposed to dry air masses since late February, resulting in a sharp decrease in dead fuel moistures. This accelerated drying of normal to above normal grass loads has resulted in increasing wildfire occurrence and difficulty in containment, particularly as frequent high wind events have swept through the region. The weather pattern that has resulted in high winds will temporarily ease during the week of March 24th, but at least weekly high wind events appear likely to return by late March into April. Otherwise, drought is expected to intensify in much of the advisory area, with an early season heat wave potentially contributing to even drier fuels by early April. Precipitation trends are less clear with eastward and southward extent, where some green-up of cool season grasses has been reported. If additional rain does not materialize there, summer-like heat could halt or reverse green-up and lead to an expansion of fire-receptive fuels in the coming weeks. These conditions may lead to critical conditions within the fire environment with abnormally active fire behavior and spread.

Grass fuels in Oklahoma

Differences from Normal Conditions: The persistence of dry air masses with poor overnight recoveries has been unusual across the advisory area. Weekly-averaged mean relative humidity in the Oklahoma Central Predictive Service Area (PSA SA03) is the lowest during the dormant season since at least 2010, only bested by the summer of 2011. A progressive and amplified weather pattern has also resulted in an unusual frequency of windy days in a part of the country that is no stranger to winds. This is evident in multiple fire danger indices, in addition to real-world impacts as reported by the Oklahoma Forestry Services.

Dry air combined with growing areas of moderate to severe drought have led to record high ERCs (nearing 97th percentile) and historically low fuel moistures. Abundant grass fuels in areas normally considered barren have also contributed to abnormally large fire spread events.



An ERC-Y graph for the Oklahoma Central PSA (SA03) depicts record ERCs near the 97th percentile.

Fuels and Fire Behavior Advisory

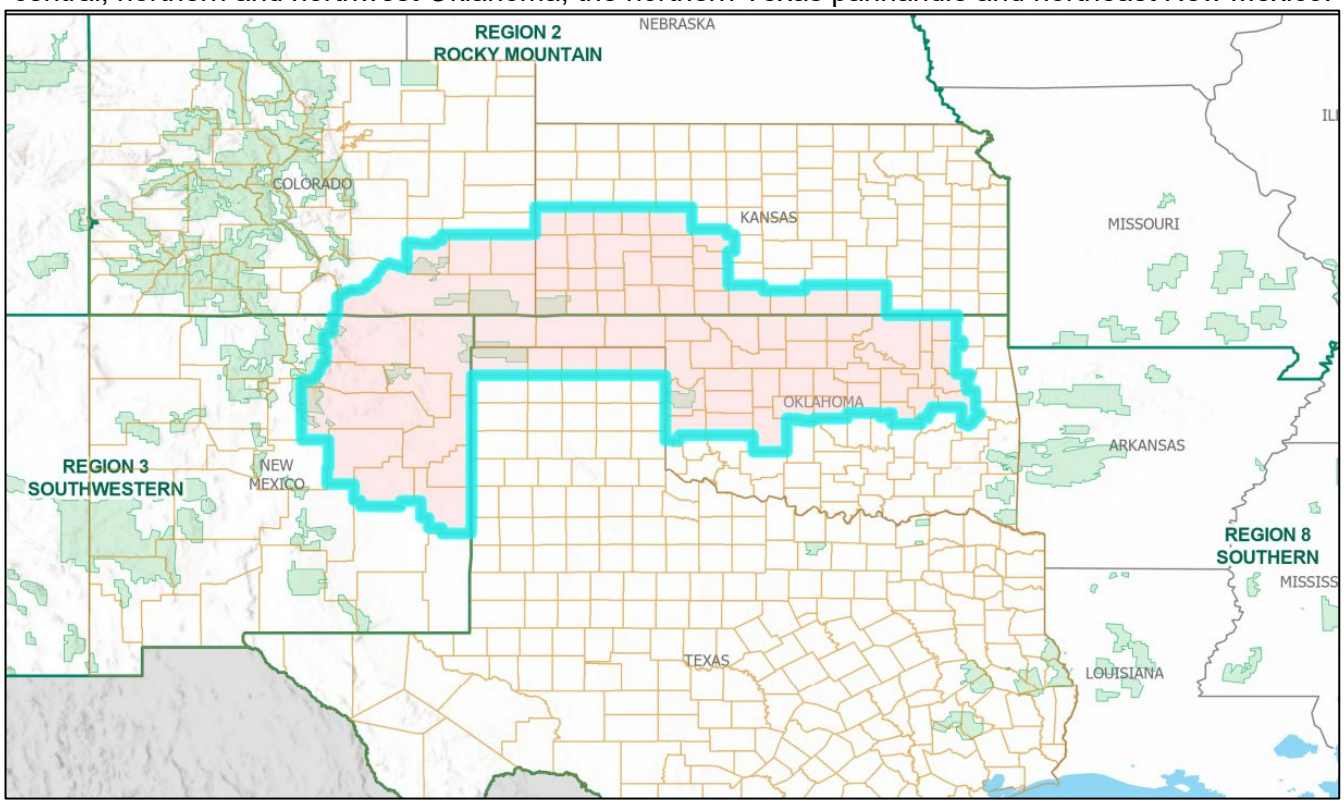
Southern Plains

Date Advisory Effective - March 20, 2025

Concerns to Firefighters and the Public:

- The fire environment across the advisory area is primed for above normal fire occurrence and well above normal fire spread and intensity.
- Fire spread will change dramatically with any increase in wind speed or change in direction.
- Firefighters should expect extreme rates of spread in fine fuels along with increased fireline intensity on all portions of the fire. Frontal assault of wind driven fires should not be considered.
- The dry conditions and pattern of lower-than-normal mean humidity may increase burn periods and promote active burning during nighttime hours.
- Expect longer duration and more complex initial attack along with an increasing occurrence of extended attack.
- The public should avoid areas in the vicinity of an ongoing fires and heed evacuation notices should fires occur near their home or places of employment.

Area of Concern: The advisory area covers portions of southeast Colorado, southwest and southern Kansas, central, northern and northwest Oklahoma, the northern Texas panhandle and northeast New Mexico.



Issued By: The Southern Area Decision Support group in coordination with federal and state partners in the Southwest and Rocky Mountain Geographic Areas.