

Fuels and Fire Behavior Advisory

North, East and Central Texas extending into the Central Plains and Southern Cross Timbers of Oklahoma

Date Advisory effective – August 5, 2022

Subject: Long-term drought and critically low live fuel moistures in high-risk fuels have produced dangerous fire behavior conditions across north, east, and central Texas extending into the central plains, southern Cross-Timbers and mixed timber of Oklahoma. Problematic fire behavior including group tree torching and frequent spot fires will quickly transition to extreme fire behavior under elevated to critical fire weather conditions to include crown runs and spotting up to 200 yards.

Discussion: Persistent and intensifying drought conditions into August have live fuel moisture values trending well below normal in high-risk oak/juniper fuels in north and central Texas. Below normal rainfall and consistent temperatures over 100 degrees continue to further degrade live fuel moisture values. Live fuel moisture values in the high-risk pine/yaupon fuels of the Texas Western Pineywoods, northeast Texas and mixed fuels in Oklahoma have fallen well below average values due to 60-day rainfall deficits, relative humidity below 30%, and persistent 100-degree temperatures.

Difference from normal conditions: Energy Release Component values in the area of concern are trending near or above the 97th percentile. Live fuel moistures in Ashe Juniper are near 80% ranging from near the 10th percentile to historic lows across north and central Texas. Fire weather thresholds for significant fire activity is substantially reduced when critical to extremely dry fuel is present.

Concerns to Firefighters and the Public:

- There is a high potential for extreme fireline intensity and fire growth during both initial attack and extended attack operations, especially when critical fire weather is occurring. Problematic fire behavior is likely on all areas of the fire perimeter including the flanks.
- Typical barriers to fire spread including roadways, rivers, and hardwood river bottoms will not be reliable under current conditions.
- Active fire behavior may extend into the night-time hours with poor overnight moisture recovery.
- The public will need to be advised to avoid areas in the vicinity of ongoing fires and heed evacuation notices coordinated by local incident responders.

Mitigation Measures:

- Fire Managers should be prepared for periods of more frequent fire occurrence as well as complex, long duration incidents.
- Firefighters should anticipate constructing wider than normal control lines with dozers and graders (maintainers) working in tandem with engine support.
- Recent observations indicate ground fuels and large diameter surface fuels are burning more readily and holding heat longer due to low 1000-hr fuel moisture and ongoing drought. The time and effort needed for mop up will continue to increase as large diameter fuel and ground fuel hold heat with the continued forecast of very hot and mostly dry conditions. The potential for reburn will continue in pine timber as scorched needle cast falls and becomes available surface fuel.



Photo Above: Extreme fire behavior in pine/yaupon fuels on the Van Zandt 4526 fire in Van Zandt County on August 2nd.



Photo Above: Extreme fire behavior on the Boomer Canyon Fire in Pushmataha County Oklahoma on July 27th.

Issued By: Texas A&M Forest Service and Oklahoma Forestry Services coordinating with the Southern Area Geographic Area.

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