

Fuels and Fire Behavior Advisory

Louisiana, Southern Arkansas, Central and Southern Mississippi and Southwestern Alabama

Date Advisory Effective – September 18, 2023

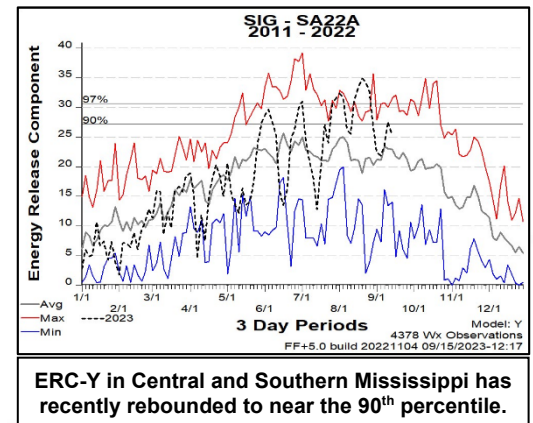
Subject: Underlying drought, along with a return to drier and warmer than normal weather, is expected to result in rebounding wildfire risk across the advisory area. Debris from hurricanes the past several years and other heavy dead fuels remain available to burn, while recent scattered rainfall has not significantly altered soil moisture that was depleted by this summer's record-setting evaporative demand. These conditions are expected to contribute to fire behavior that increases the resistance to control for wildfires burning in high-risk pine timber and underlying southern rough fuels across the advisory area.

Discussion: A welcome reprieve from triple-digit heat has been accompanied by beneficial but scattered rainfall the past one to two weeks, which has done little to alleviate long-term dryness across the Lower Mississippi Valley and central Gulf Coast states. Rainfall anomalies in the 30- and 60-day period ending in mid-September remain deeply in the negative, with large swaths of the area well below 25% of normal. Dead fuel moisture has shown some recovery with the recent spell of milder and more humid weather, but a dry post-frontal air mass overspreading the region is likely to reverse these trends. Longer range outlooks indicate persistent warmer and drier than normal weather may carry into at least early October, and this is expected to lead to accelerated drying of fine and heavy dead fuels and a corresponding increase in wildfire risk.

Difference from normal conditions: Widespread KBDIs above 700 are indicative of the continuing drought throughout most of the advisory area. Annual rainfall deficits are in excess of one to two feet in some parts of the region, while coastal marshes across southern Louisiana are estimated to need as much as 30-35" of rainfall to alleviate the current situation. Expansive drought throughout nearly the entire Mississippi River Basin has resulted in low water levels that, when combined with recent flash drought, have allowed wildfires to burn up to the water's edge in hardwood river bottoms across parts of Mississippi and Arkansas, as reported by the U.S. Fish and Wildlife Service. Generally, ERC-Y values have recovered from historical maximum values set in most of August but are still hovering around the 90th percentile. Values have remained above average since mid-July and are on track to continue within the Mississippi Central and South Predictive Service Area (PSA SA22A observations are depicted below).

Concerns to Firefighters and the Public:

- Extreme fireline intensity is to be expected during both initial attack and extended attack.
- Typical barriers to fire spread, like roads, rivers, and hardwood bottoms, may not be relied upon to stop fire progression.
- Active fire behavior may extend into the overnight hours during periods of poor RH recovery.
- Spotting up to ¼ of a mile away has routinely been reported on recent fires, including small initial attack fires.
- Reburn of scorched needle cast continues to be common during the days or weeks after suppression, while roots burning underground may result in green trees falling.
- Critical fire weather may be associated with but is not limited to: compressional warming in unstable pre-frontal environments, dry cold fronts, subsidence adjacent to tropical cyclones, sea breeze fronts and erratic winds associated with outflow from nearby thunderstorms.



Mitigation Measures:

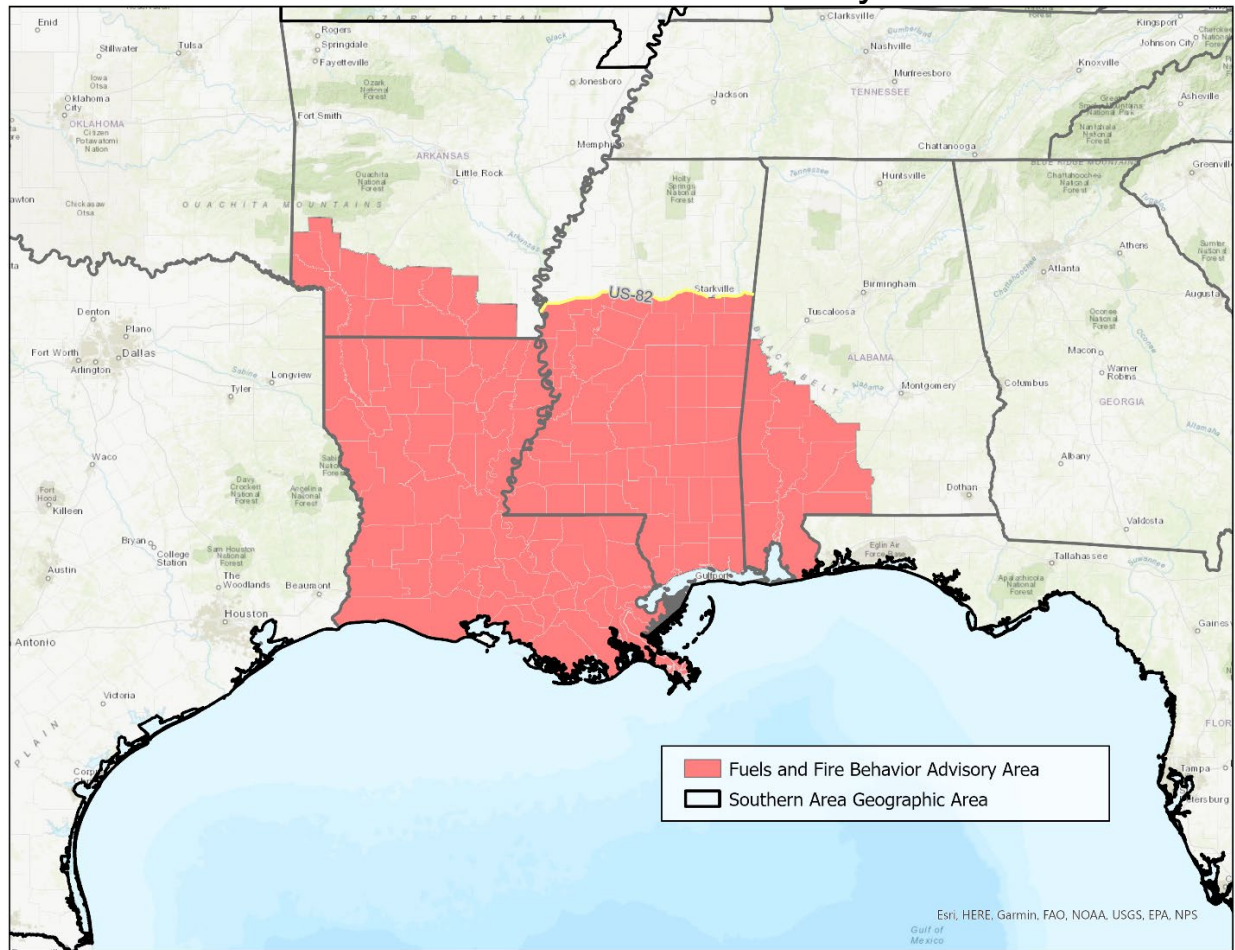
- Fire managers should be prepared to support periods of increasing fire occurrence, as well as complex, long-duration incidents.
- Firefighters should anticipate constructing wider than normal control lines, with dozers and graders (maintainers) working in tandem with engine support.
- Recent observations indicate large-diameter surface fuels and duff layers are burning more readily and holding heat longer due to low 1000-hr fuel moisture and underlying drought. The time and effort toward mop up will continue to be elevated as these fuels hold heat, especially with the forecast of dry and hot weather returning for an extended period.

Issued By: Southern Area Predictive Services in coordination with state and federal partners.

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Needle cast remains a source of reburn on the Tiger Island Fire in Louisiana (left). The I-10 Fire has also experienced multiple instances of reburn and escaped containment since August, as reported by the Mississippi Forestry Commission (right).