

Fuels and Fire Behavior Advisory

Portions of Mississippi and Alabama
Date Advisory Effective – October 22, 2024

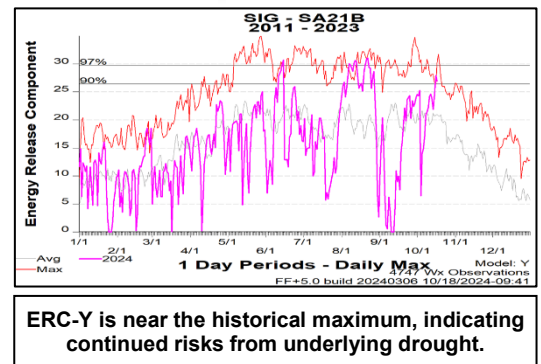
Subject: Drought is re-emerging across large parts of Alabama and Mississippi after temporary relief in early fall. Abnormally warm and dry conditions into at least the start of November will result in increasing wildfire potential and resistance to control, particularly in forests impacted by 2023's historic drought and beetle kill.

Discussion: Wet weather at the end of August into early September, followed by Hurricane Francine's passage in mid-September lowered fire occurrence in most of the region after an uptick over the summer. This was quickly followed by additional rain in north Mississippi and parts of Alabama as Helene skirted by in late September. A gradual uptick in fire occurrence has resumed across both states as wetting rain has been minimal the past three to five weeks, especially where D0-D2 conditions are in place on the U.S. Drought Monitor. Dead pine trees from last year's drought and subsequent Southern Pine Beetle outbreak have challenged fire containment efforts and increased risks to responders in the affected areas. Meanwhile, leaf drop in hardwood forests continues for areas most severely impacted by drought. A locked-in weather pattern featuring above normal temperatures and below normal rainfall will be likely as we head into the dormant season, allowing for worsening drought impacts and a likely increase in wildfires until more frequent wetting rainfall returns to the area. Adjacent states in the Southern Area will see similar weather conditions as La Niña sets in, which may require the footprint of this advisory to be expanded in the coming weeks.

Difference from normal conditions: Drought conditions featuring KBDIs above 600 are increasingly widespread, while ERC-Y values in the coastal Mississippi predictive service area (PSA SA21B, shown below) and adjacent PSAs are back to setting records after a brief reprieve. This has resulted in recent reports of re-burn, increased resistance to control and lengthening mop-up efforts, especially in stands of dead pines. Of note, forecasts for 1000-hour dead fuel moisture through late October indicate that values may drop below the historically dry conditions observed in the fall of 2016 across portions of the advisory area.

Concerns to Firefighters and the Public:

- Extreme fire line intensity is possible 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.
- Heavy fuel loading and standing hazard trees associated with Southern Pine Beetle infestations may contribute to fire intensity and present a hazard to firefighters in the area.
- Reburn due to freshly fallen leaves could occur during the days or weeks after suppression.
- Critical fire weather may be associated with but is not limited to dry cold fronts followed by windy and dry conditions, strong high pressure over the eastern U.S. combined with low pressure south of the advisory area, dry and breezy conditions adjacent to distant tropical cyclones, sea breeze fronts and erratic winds associated with outflow from nearby thunderstorms.



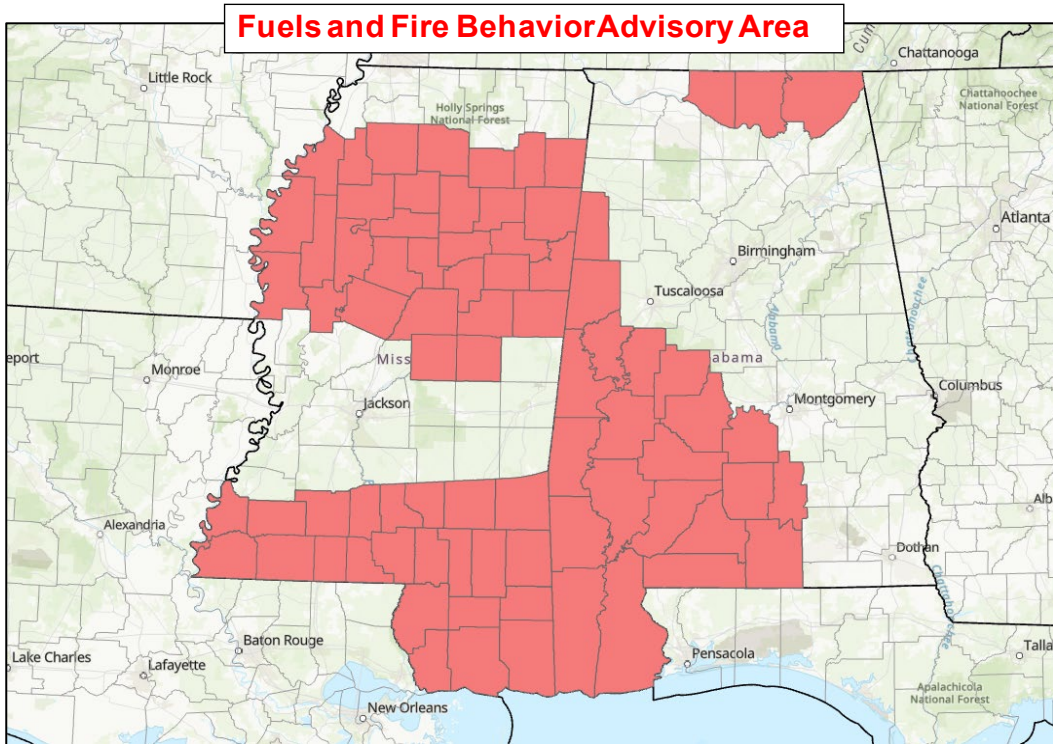
Mitigation Measures:

- Fire managers should be prepared to support periods of increasing fire occurrence, as well as complex, potentially long-duration incidents.
- Leaf blown and wet lines will not hold when duff and organic soils are dry.
- Evaluate the need for swampers and their placement when working with heavy equipment in areas with concentrations of hazard trees.
- Firefighters should anticipate constructing wider than normal control lines, with dozers working in tandem with engine support.
- Large-diameter surface fuels and duff layers may burn more readily and hold heat longer due to low 1000-hr fuel moisture. The time and effort toward mop-up will continue to be elevated as these fuels hold heat.

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

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Aerial image of a wildfire in a storm-damaged forest in Perry County, Alabama, showing downed 100-hour and 1000-hour fuels consuming to white ash. Reignitions have also recently occurred in this part of the state (image courtesy of the Alabama Forestry Commission).