

# Southeast and South-Central Montana Fuels and Fire Behavior Advisory

July 9, 2012

**Subject:** Severe fuel conditions and uncharacteristic extreme fire behavior across southeast and south-central Montana

**Discussion:** Heavy, fine fuel loadings from 2011 combined with a lack of winter snowpack and intermittent spring precipitation in the lower elevations throughout southeast and south-central Montana has caused tremendous dead, fine fuel loadings. In addition throughout this area there has been little to no green up this year. Unusually warm temperatures, low relative humidity, and strong winds have also allowed trees and shrubs to become exceptionally dry. This has created a situation where fires exhibit rapid rates of spread and extreme fire behavior.

Fires are running in the timber and grass in the first burning period with rates of spread up to 3 miles an hour in the timber and up to 16 miles an hour in the grass. The Taylor Creek fire grew 37,000 acres in all directions in one afternoon. The Ash Creek Fire burned over 100,000 acres in one day. Fires continue to run throughout the night.

Live Fuel Moisture Content (LFMC) values in trees and shrubs are at values normally seen in August. Fire behavior is expected to quickly transition to crown fires. The models are showing much of eastern Montana as having the potential for greater than 4 foot flame lengths with the current conditions. Probability of Ignition is up to 100%. Maximum spotting distances are over ½ mile. 1,000 hour fuels are reading 8-10%, figures normally seen in August. The majority of ERC values in the area are at or above the 90 percentile, with the expectation that these will rise. All fuels are available to burn even when they appear green including riparian areas.

Drought conditions are expected to continue and intensify during July and August. Many locations across the southern half of Montana have received only 50%-70% of normal precipitation. The abnormally dry conditions have resulted in areas of moderate to severe drought that stretch from southwest Montana into southeast Montana. As of July 5, 2012, a record 485,000 acres have burned across the Northern Rockies Region. This exceeds the previous record set in 2008 by more than 430,000 acres.

## Concerns to Firefighters and the Public:

- Anticipate any ignition in fine fuels to ignite easily and move rapidly. **YOU CAN'T OUT RUN IT!**
- Anticipate fire to creep under wet lines and retardant lines.
- Anticipate fire whirls because of a combination of fine flashy fuels, terrain, dry atmospheric conditions, and strong surface instability.
- Anticipate large acres to be consumed in a short period of time, especially with strong winds.
- Fire Behavior will quickly burn the fine flashy fuels leaving some shrub components. Watch out for re-burn situations!
- Anticipate fires to exhibit extreme rates of spread, elongated flaming fronts, and increasing fire brands; expect more long range spotting.
- Anticipate dependent and independent crown fires in the insect infested conifer stands.

## Mitigation Measures:

- Ensure firefighters have good anchor points and are keeping one foot in the black.
- Establish Escape Routes and Safety Zones.
- Indirect tactics may have to be used throughout the area.
- Have adequate numbers of Field Observers and Lookouts who understand the effects of weather changes, topography and can see the flaming front.

