Remember what Fire Danger tells you:

Fire danger gives general conditions across the entire FDRA. Watch for localized conditions and variations across the landscape--Fuel, Weather, Topography. Listen to weather forecasts--especially RH and wind.

Local Weather and Fuel Thresholds That Shout WATCHOUT:
Combinations of any of these 4 factors can greatly increase fire behavior. Wind speed over 7 MPH, RH less than 30%, Temperature over 55º, FFM less than 10%.

Local Watch Outs
- When wind and topography are in alignment – Rapid uphill fire spread
- Post passage of a dry Cold Front – Gusty winds and low Relative Humidity
- 1000-hour FMC below 18% - Greatly contributes to fire behavior, intense mop-up

Memorable Fires
- Daly: 3/10/2021, Haywood County, 35 Acres. BI – 94.6, IC – 21.9, ERC – 71.3, 1000-FMC – 19.1, 1-hr FMC – 7.5
- Chalk Hill: 4/11/2021, Macon County, 34 Acres. BI – 70.9, IC – 16.1, ERC – 38, 1000-FMC – 18.1, 1-hr FMC – 8.4
- Pack Mountain: 11/1/2016, Cherokee County, 52 Acres. BI – 73.3, IC – 9, ERC – 27.1, 1000-FMC – 18, 1-hr FMC – 11.7

Updated – 10/2021
This card is based on 15 years of data
Ignition Component (IC) – The probability a firebrand will cause an "actionable" fire and requires suppression action. IC is more than just a probability of a fire starting. The fire must have the potential to spread. IC can be an aid in assessing spotting potential. An IC value of greater than 10 (89th Percentile) is a critical threshold value. Expect short range spotting to occur above this value.

Energy Release Component (ERC) - is a number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. The ERC reflects the contribution of all live and dead fuels to potential fire intensity. As live fuels cure and dead fuels dry, the ERC will increase. Each daily calculation considers the past 7 days in calculating the new number. Daily variations of the ERC are relatively small as wind is not part of the calculation. An ERC value of 30 (79th Percentile) is a critical threshold value. At this value, large (>10 ac.) and multiple (>5) fires begin to occur within the FDRA.

Spread Component (SC) - A rating of the forward rate of spread of a head fire. It integrates the effect of wind, slope, fuel bed and fuel particle properties. The daily variations are caused by the changes in the wind and moisture contents of the live fuels and the dead fuel moisture time lag classes of 1, 10, and 100 hour. The higher the SC, the less likely that direct attack at the head of the fire will succeed.
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**Southern Highlands**

**FUEL MODEL X**

**FIRE DANGER CARD**

**October - December**

**NWS Forecasting Offices**
- NWS Greenville/Spartanburg, SC (GSO)
- NWS Morristown, TN (MRX)

**RAWS**
- Tusquitee - 315602
- Franklin - 315802
- Highlands - 315803

All stations meet NWCG Weather Station standards.

**MAXIMUM**: Highest Bi by day for 2006-2021.

**AVERAGE**: Shows mean daily Bi value through the period.

**2016**: Representative fire season Bi.

**97th PERCENTILE**: Only 3% of the days from 2006-2021 had a Bi above 133.

**67th PERCENTILE**: Represents a Bi level of 38 where large/multiple fire occurrences increase.

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