

Eastern Piedmont FDRA FUEL MODEL X-Brush

FIRE DANGER CARD

January-December

NWS Forecasting Offices

Raleigh, NC (RAH)
Wakefield, VA (AKQ)

RAWS

Oxford Tobacco 313841
Lake Wheeler 314941
Central Crop Research 317441
Upper Coastal Research 312940

*All stations meet NWCG Weather
Station standards*



Edgecombe Johnston
Franklin Nash
Granville Northampton
Halifax Wake
Warren Wilson
Vance

MAXIMUM: Highest BI by day for 2006-2020.

AVERAGE: Shows mean daily BI value through the period.

2011: Representative fire season BI.

97th PERCENTILE: Only 3% of the days from 2006-2020 had a BI above 152.

67th PERCENTILE: Represents a BI level of 100 where large/multiple fire occurrences increase.

Burning Index (BI) relates to the contribution of fire's behavior in containing the fire. The difficulty of containment is directly proportional to the fireline intensity. BI can be a cross reference to fireline intensity & flame length. It assists in assessing spotting & crown fire potential as well as suppression resource needs & tactical considerations. Doubling the burning index indicates that twice the effort will be required to contain a fire, providing all other parameters are held constant.

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 Fuels Thresholds-- Watch out !

Combinations of any of these 4 factors can greatly increase fire behavior. **Wind speed** over 15 MPH, **RH** less than 35%, **Temperature** over 60°, **FFM** less than 12%.100 Hr Fuels less than 18%

Local Watch Outs

- Post passage of dry cold front
- Gusty winds and low Relative Humidity
- 1000 Hour FMC below 18%

Memorable Fires

- **Black Sunday:** 2/10/08, FDRA Wide - 17 fires over 50 acres, 3 fires over 1500 acres BI 246
- ▲ **Lynch Road:** 2/19/11, Warren County – 2,030 Acres - BI 203
- ◆ **Purvis Farm:** 9/25/10, Halifax County- 244 Acres - BI 142

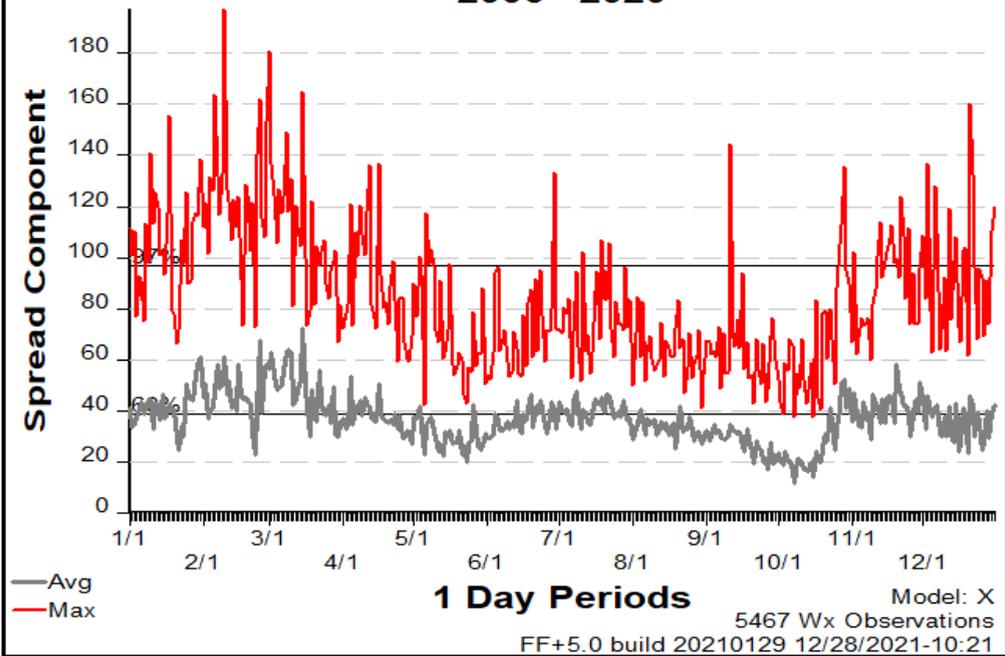
BURNING INDEX			
Fuel Model X	Average Seasonal Value	Average Highest Value	Highest Observed Value
January	77.8	95.5	190
February	86.6	115.1	246.8
March	90.7	115.9	210.8
April	78.8	107.2	184
May	68	94.5	168.2
June	87	114.6	197.3
July	94.8	116.7	178.7
August	82	105.9	167.2
September	67.4	116.9	212.6
October	60.3	92	193.8
November	86.3	104.1	180.4
December	71.3	87.1	177.2



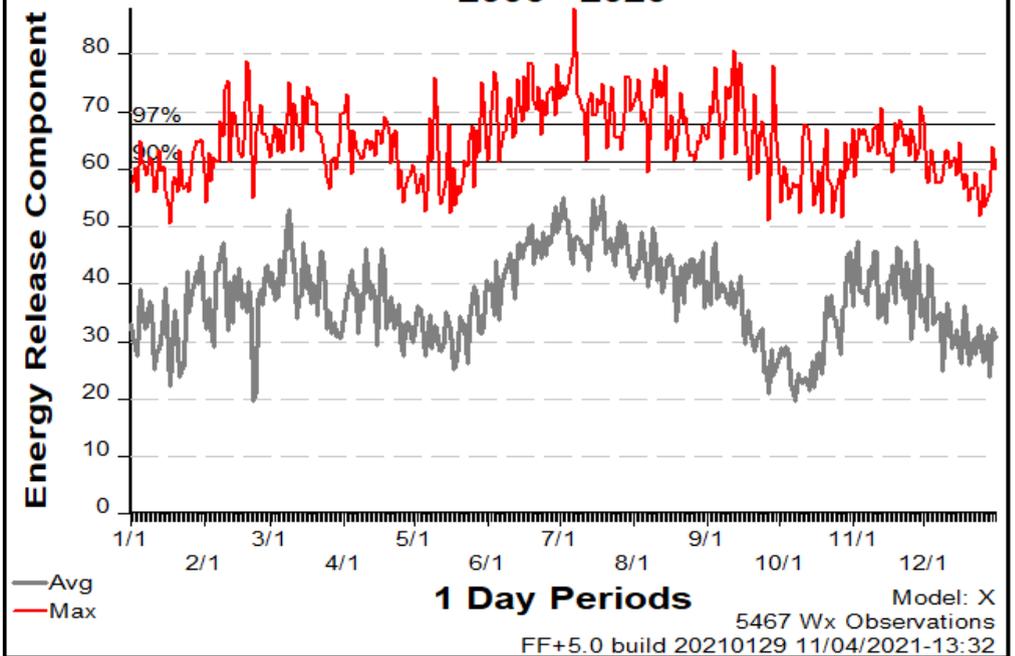
Updated 12/2021

This card is based on 15 years of data

SIG - East Piedmont 2006 - 2020



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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. *In coastal fuels SC Values exceeding 39 (60th Percentile) are critical. The higher the SC, the less likely a direct attack at the head of the fire will succeed.*

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 has to have the potential to spread. IC can be an aid in assessing spotting potential. An IC value of 17 (90th Percentile) is a critical threshold value. Values at this level are critical especially during February, March and April as firebrands initiate spot fires.

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 61 (90th Percentile) is a critical threshold value. At this value, large (>17 ac). and multiple fires (>3) begin to occur within the FDRA.*

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