

Mount Holly DISTRICT 12 FUEL MODEL G SHORT NEEDLE (HEAVY DEAD)

NWS Forecasting Offices
Greenville-Spartanburg

RAWS Stations
Mountain Island 316602
Rutherfordton 316302

FIRE DANGER POCKET CARD (STANDARD)



MEMORABLE FIRES

◆ **Black Sunday:** 02/10/2008 Multiple fires, District wide— ERC 30

▲ **Catawba Cove Fire, Judes Gap Fire (Project Fire) :** 02/19/2011 Gaston Co. & Rutherford County- ERC 22

Dry frontal passages were major contributors to the Catawba Cove and Judes Gap Fires. Steady wind speeds along with low RH's were observed on these fires..

● **Double H Fire:** 07/29/2008 524 Acres Rutherford County ERC 30

Persistent drought conditions had the KBDI over 700. With the fuels already extremely dry, a dry lightning strike ignited the fire. Steep terrain, hot temperatures, and difficulty of access hampered containment efforts.

● **Camp Creek Fire:** 11/29/12 147 Acres Rutherford County ERC 29

Fuel Model G Short Needle (Heavy Dead)	ENERGY RELEASE COMPONENT		
	Average Seasonal Value	Average Highest Value	Highest Value Observed
January	17	29	41
February	20	33	44
March	23	35	47
April	25	35	51
May	24	32	41
June	24	32	44
July	26	32	40
August	25	32	49
September	22	30	42
October	18	27	36
November	18	27	38
December	14	25	37

Energy Release Component (ERC) is a number relating to the available energy released from forest fuels (BTU / ft²) at the head of a fire's flaming front. ERC is a composite of all live & dead fuel moistures. It is a very good reflection of drought conditions. It is a "build up" type index. Given a fire start in a fuel with a high ERC, fire containment can be expected to be difficult. ERC is very valuable in assessing the depth of a burn, consumption of the various fuel sizes, residual burning, and mop-up requirements.

LOCAL THRESHOLDS...WATCHOUT!

Temperature

Temperatures above **60F** are where large and multiple fires typically begin. Working on fires with temperatures above **90F** consider additional resources, more frequent breaks and the current tactics being implemented.

Relative Humidity

RH's below **30%** are where large and multiple fires increase. When RH's drop below **20%** expect extreme fire behavior that is rarely seen; spotting, crowning, and rapid rates of spread.

Winds

20' winds above **6 mph** (RAWS-10 min avg). Wind is the most critical weather factor to stay aware of. Sudden changes in winds cause more firefighter fatalities than any other weather element.

EXTREME: >97 percentile. Only 3% of the days from 2002-2013 had an ERC above **38**.

VERY HIGH: 90-97 percentile. ERC values range from 33-37

HIGH: 70-90 percentile. ERC values range from 27-33, where large/multiple fire occurrences increase.

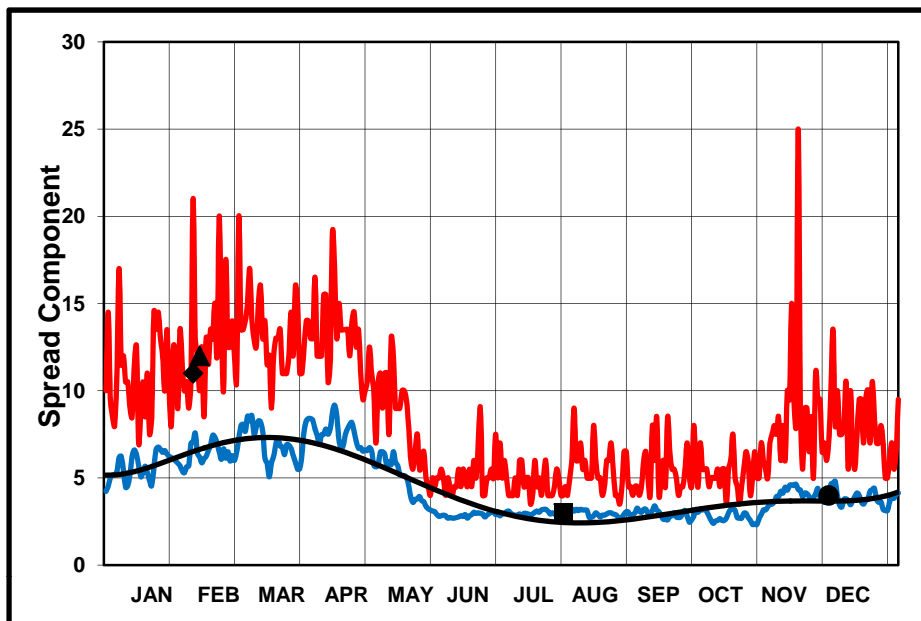
MODERATE: 20-70 percentile. ERC values range from 13-26. Most fires occur in this range.

LOW: <20 percentile. ERC values range from 0-13. Very little to no fire activity.



MAY, 2014

This card is based on 11 years of data



Spread Component (SC) - the rate of spread expressed in feet per minute or chains per hour at the head of a fire. **SC** aids in assessing readiness plans, tanker use, ground tactics, and pre-positioning resources. The **SC** value usually exceeds the fire's true ROS. In Pine Plantations **SC** values exceeding **>8** are critical. At this value the fire is moving faster than initial attack of a Slip-On Unit.

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. It has to have the potential to spread. **IC** can be an aid in assessing spotting potential. An **IC** value of **>20** is a critical threshold value. Values at this level are critical especially during March, April & May as firebrands initiate spot fires.

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** is derived from the combination of the SC & ERC. **BI** can be a cross reference to fireline intensity & flame length. It assists in accessing spotting & crown fire potential as well as suppression resource needs & tactical considerations. **BI's** of **>25**, expect increases in fire occurrence and higher probabilities of larger fires. The doubling of the **BI**, 20 to 40 can increase flame length from 2 to 4 ft. yet, increases fireline intensity 5 times.

