

**HILLSBOROUGH
DISTRICT 11
FUEL MODEL G**

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**FIRE DANGER
POCKET CARD
(STANDARD)**



MAXIMUM: Highest ERC by day for 2000-2013.

AVERAGE: Shows mean daily ERC value thru the year .

93th PERCENTILE: Only 7% of the days from 2000- 2013
had an ERC above 38.

72th PERCENTILE: Represents an ERC level of 29 where
large/multiple fire occurrences increase.

Fuel Model G	ENERGY RELEASE COMPONENT		
	Average Seasonal Value	Average Highest Value	Highest Value Observed
January	22	30	43
February	24	34	52
March	25	39	53
April	26	37	49
May	25	34	47
June	24	37	45
July	24	34	45
August	23	36	43
September	19	35	40
October	17	29	41
November	20	32	44
December	20	28	40

Local Thresholds-- Watch out !

Combinations of any of these 3 factors can greatly increase fire behavior.

Wind speed over 10 mi/h, **RH** less than 30%, **Temperature** over 70

Remember what Fire Danger tells you:

ERC gives general seasonal trends calculated from precipitation, temperature, and RH.

Wind speed is not part of the ERC calculation.

Watch local conditions and variations across the landscape--Fuel, Weather, Topography.

Listen to weather forecasts--especially WIND.

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.

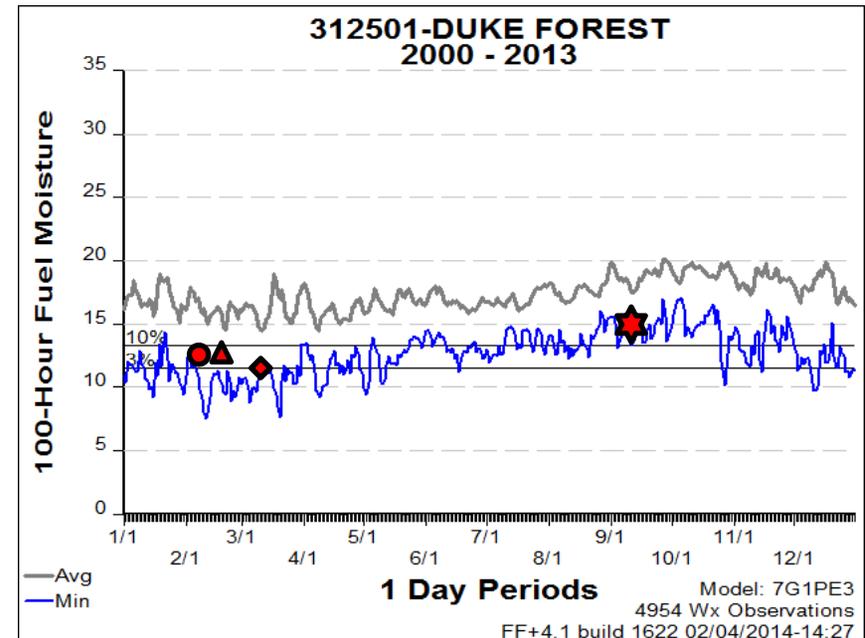
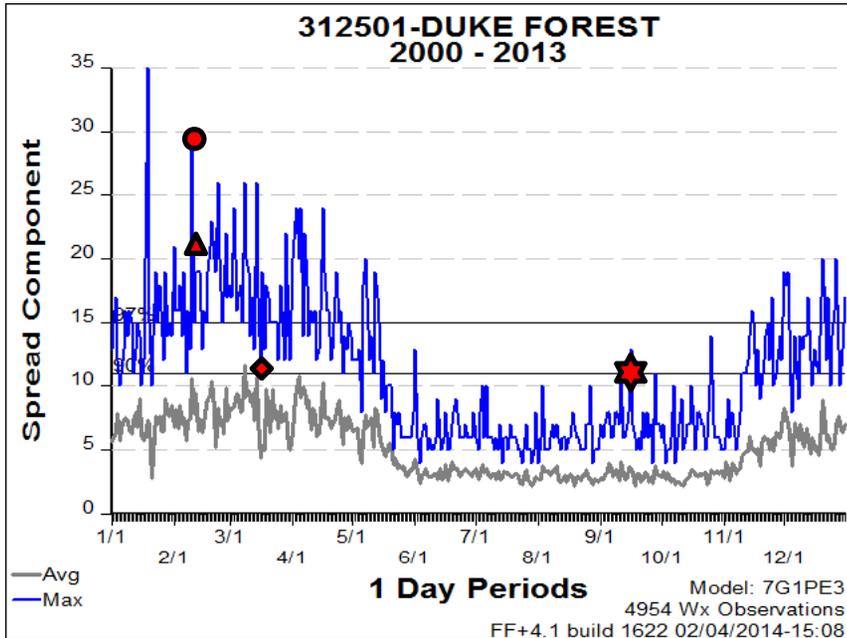
Past Experience:

- ◆ **Heavy Hill Fire:** 3/16/2006 Caswell Co. 69 acres ERC 46
- ▲ **Multi fire Day:** 2/19/2011 D-11 (18 fires) 68 acres ERC 40
- **Water Line:** 2/10/08 Granville Co. 216 acres ERC 38
- ★ **Hebron Fire:** 9/11/07 Orange Co. 289 acres ERC 39



February 4, 2014

This card is based on 13 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 hardwood litter **SC Values exceeding 10+ are critical**. At this value the fire is moving faster than initial attack of a "booster reel".

100 hr Fuel Moisture (100hr) - the moisture content of fuels 1 to 3 inches in diameter. Aids in assessing holding tactics and mop-up that may be required. An 100hr value of 15% or lower is a critical threshold value and a good indicator of when large and / or multiple fire days can be expected.

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. In hardwood fuels, **BI's of 40+**, are known to support crown fires & spotting with erratic behavior starting at **30+**. The doubling of the **BI**, 20 to 40 can increase flame length from 2 to 4 ft. yet, increases fireline intensity 5 times.

