

Local Thresholds

Watch out!

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

Wind speed over 10 mi/h (NWS – 2 Min Avg)

RH less than 40% is where large & multiple fires occur. Rhs below 20% are critical, expect elevated fire behavior

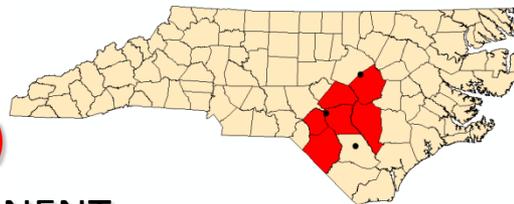
Temperature over 57 are where large & multiple fires occur

FUEL MODEL G

D -6 Fayetteville

SHORT NEEDLE (HEAVY DEAD)

**FIRE DANGER
POCKET CARD
(SUPPLEMENTAL)**



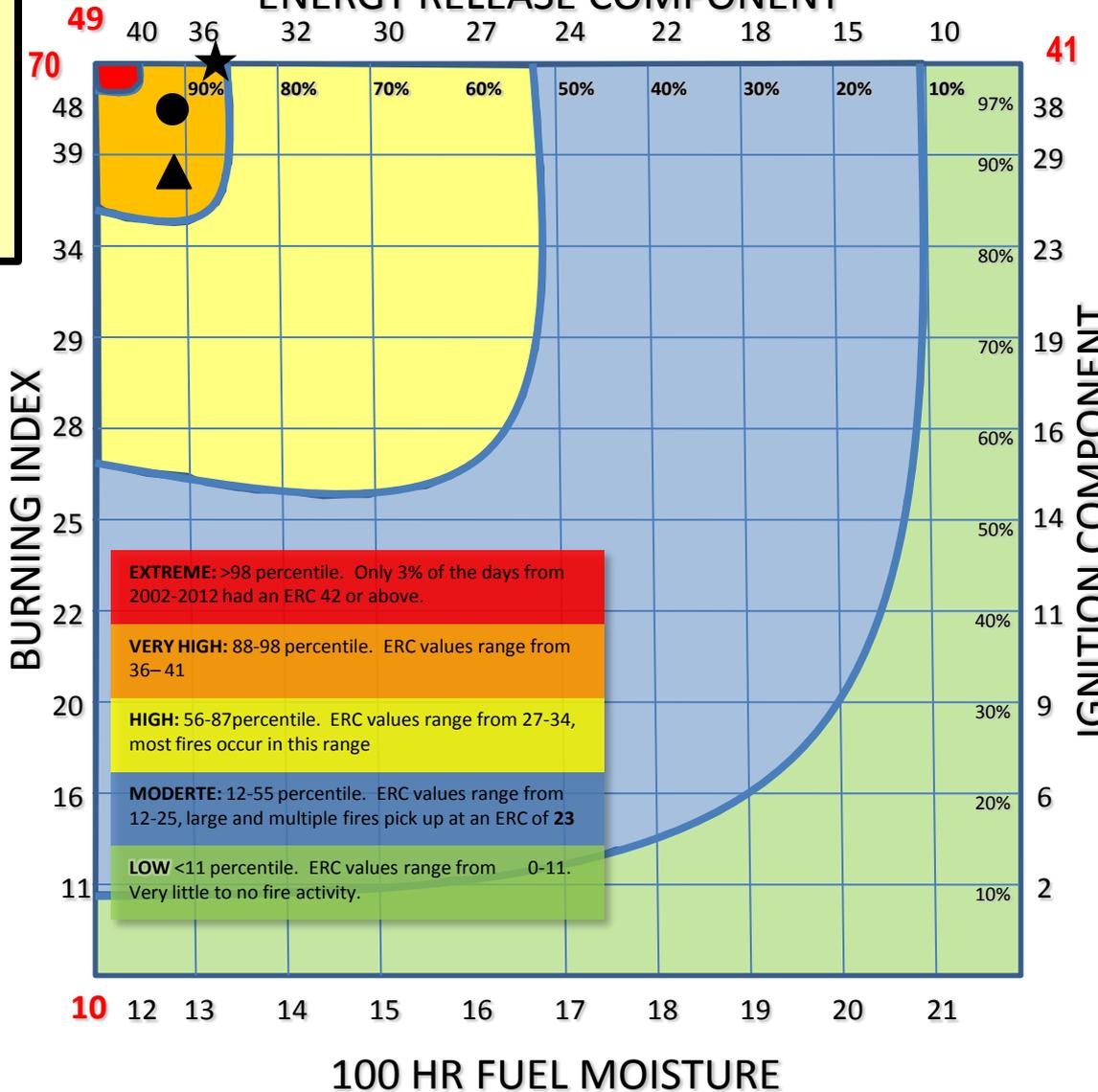
NWS Forecasting Offices

Wilmington, NC
Raleigh, NC

RAWS Stations

Ft Bragg – 318503
Turnbull Creek – 319302
Central Crops Research – 317441
(represented by black dots)

ENERGY RELEASE COMPONENT



★ **Bumper Fire**
Harnett County
132 Acres
2/2/11
IC- 41
BI- 70
ERC- 35
100HR- 13

▲ **Simmons Road**
Cumberland County
5438 Acres
6/20/11
IC- 36
BI- 37
ERC- 38
100HR- 15

● **Daughtry Road Fire**
Johnson County
50 Acres
9/20/11
IC- 28
BI- 37
ERC- 39
100HR- 15

	FM O HIGH POCOSIN	FM C PINE GRASS SAVANNA
100%	IC-49 BI-121 ERC-62 SC-66 100-10	IC- 49 BI- 46 ERC- 19 SC- 24 100-10
97%	IC-38 BI-107 ERC-58 SC-46 100-12	IC-41 BI-39 ERC-18 SC-17 100-12
90%	IC-28 BI-88 ERC-51 SC-30 100-13	IC-29 BI-31 ERC-15 SC-11 100-13
80%	IC-18 BI-66 ERC-46 SC-19 100-14	IC-21 BI-25 ERC-12 SC-8 100-14
70%	IC-12 BI-40 ERC-43 SC-8 100-15	IC-15 BI-17 ERC-9 SC-5 100-15
60%	IC-10 BI-34 ERC-40 SC-5 100-16	IC-11 BI-12 ERC-6 SC-3 100-16

Fuel Model G Short Needle (Heavy Dead)	IGNITION COMPONENT			BURNING INDEX			ENERGY RELEASE COMPONENT			100 HR FUEL MOISTURE		
	Average Seasonal Value	Average Highest Value	Highest Value Observed	Average Seasonal Value	Average Highest Value	Highest Value Observed	Average Seasonal Value	Average Highest Value	Highest Value Observed	Average Seasonal Value	Average Lowest Value	Lowest Value Observed
January	15	19	46	26	32	58	21	30	44	17	15	11
February	20	25	69	31	38	62	23	30	45	16	14	9
March	21	26	59	32	41	63	25	35	49	16	14	9
April	23	29	68	35	42	67	29	40	48	15	13	10
May	16	20	49	30	34	61	29	36	49	16	14	10
June	14	19	32	25	32	43	29	36	44	15	14	11
July	13	16	30	25	28	39	29	34	45	16	15	11
August	11	15	31	22	28	39	24	34	42	17	15	12
September	12	20	40	21	30	50	21	33	41	18	16	12
October	11	18	31	19	23	35	18	23	33	18	17	13
November	13	17	52	21	29	41	20	30	39	18	15	12
December	12	15	39	20	26	47	19	27	39	18	16	11

REMEMBER WHAT FIRE DANGER TELLS YOU

✓ **Ignition Component (IC)** – the probability a firebrand will cause an “actionable” fire, & requires suppression. **IC** is more than just a probability of a fire start. It has to have the potential to spread. **IC** can aid in assessing spotting potential. An **IC value of 16+ is when large & multiple fire activity increase.**

✓ **IC** gives day-to-day fluctuations calculated from 2 PM temperature, humidity, state of the weather and wind.
 ✓ Wind speed is part of **IC** calculation.

✓ **Burning Index (BI)** - relates to the contribution of the fire’s behavior in containing the fire. **BI** is derived from the SC + the ERC. **BI** is a cross reference of fireline intensity & flame length. It accesses suppression resource needs & tactical considerations. **A BI value of 28+ when large & multiple fire activity increase.** The doubling of the **BI**, 20 to 40 can increase flame length from 2 to 4 ft. yet, this is a 5 fold increase in fireline intensity.

✓ **BI** gives day-to-day fluctuations calculated from 2 PM temperature, humidity, wind, daily temperature and RH ranges, and precip duration.
 ✓ Wind speed is part of **BI** calculation.

✓ **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. **ERC value of 26+ is when large & multiple fire activity increase.**

✓ **ERC** gives general seasonal trends calculated from precip, temp, and RH.
 ✓ Wind speed is not part of the **ERC** calculation.

✓ **100 Hour Fuel Moisture (100 HR)** The 100 hour fuel moisture value represents the modeled moisture content of dead fuels in the 1 to 3 inch diameter class. It can also be used as a very rough estimate of the average moisture content of the forest floor from three-fourths inch to 4 inches below the surface. A **100 HR** fuel moisture of 16% or less is when large & multiple fires activity start to increase.

✓ **100 HR** gives general seasonal trends calculated from precip, temp, and RH.
 ✓ Wind speed is not part of the **100 HR** calculation.

