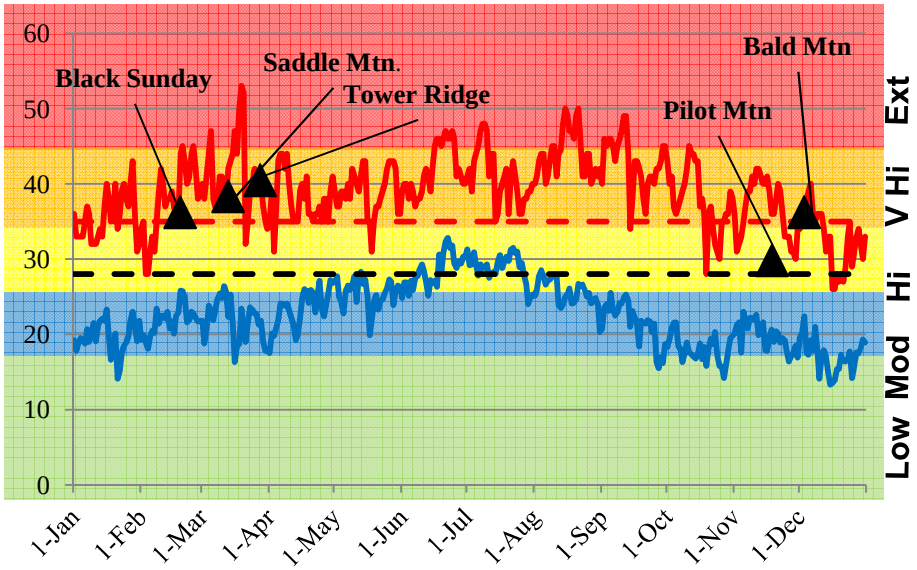
Energy Release Component - Lexington District

Maximum, Average, 70th & 90th Percentiles



Month	Energy Release Component		
	Avg. Seasonal Values	Avg. Max Values	Max Values Observed
JAN	21	35	43
FEB	22	36	45
MAR	21	34	53
APR	24	35	45
MAY	26	36	43
JUN	29	36	47
JUL	29	36	48
AUG	26	34	50
SEP	22	31	49
OCT	18	28	44
NOV	18	28	41
DEC	16	26	39

Fuel Model G – Heavy Litter & Accumulated Downed Woody

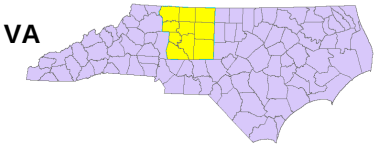
Fire Danger Area:

Prepared December 2013

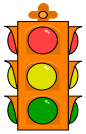
North West Piedmont, North Carolina.

NWS Office: Raleigh, NC & Blacksburg, VA

Lexington RAWS



Fire Danger Interpretation:



EXTREME -- Use extreme caution
(Caution) -- Watch for change
Moderate -- Lower potential, but always be aware

Maximum -- highest ERC by day for 2000 -2013
Average -- Shows the past 13 fire seasons Daily Mean.
90th Percentile - **Only 10%** of the days on a daily **annual** analysis from 2000 - 2013 had an **ERC above 35**
70th percentile - At this ERC value of **28**, suppression efforts become more difficult as mop up is more labor intensive.

Local Thresholds-- *Watch out* : Combinations of any of these factors can greatly increase fire behavior & contribute to large fires. After review of large fires the following rules of thumb where determined.

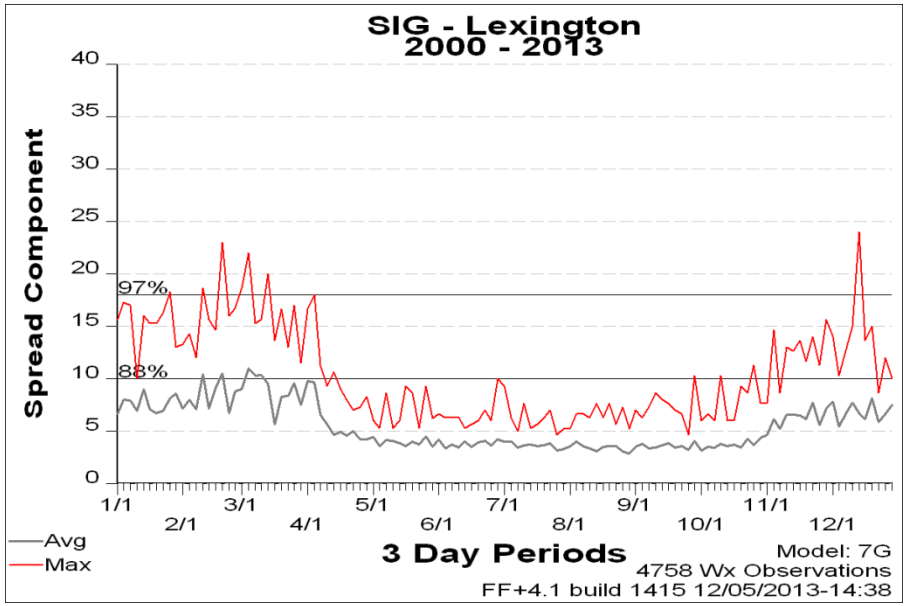
Wind over **7** mi/h, **RH** less than **35%**, **Temp** over **60**, **100hr Fuel** less than **16**

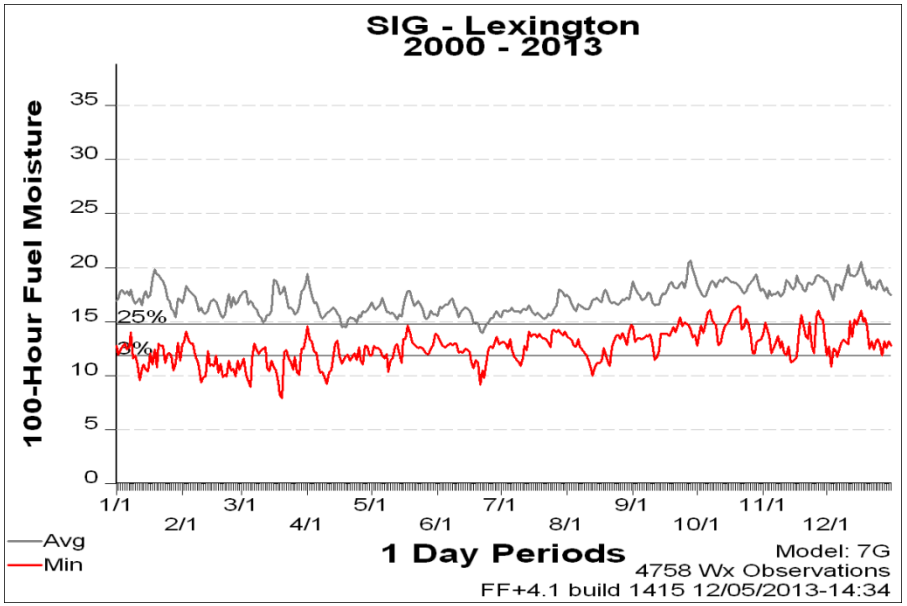
Remember what Fire Danger tells you:

- ERC gives general seasonal trends calculated from precip, temp, 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 is a number relating to the available energy released from forest fuels at the head of a fire's flaming front. ERC is a composite of 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 , mop-up requirements & Air Tanker support.

Past Experience ▲:	Acres	ERC	IC	BI	Time-Lag Fuels 100hr	1000hr
Tower Ridge Fire – Stokes Co (3/26/08)	363	37	61	64	12	19
Saddle Mountain – Surry Co (2/28/06)	484	36	33	51	11	19
Pilot Mtn – Surry Co (11/8/12)	675	29	19	22	14	19
Black Sunday – District Wide (2/10/08)	161	35	65	78	12	20
Bald Mtn – Davidson Co (11/25/12)	115	33	39	49	16	18





Spread Component (SC) – is the "theoretical ideal" rate of spread (ROS) loosely translated to feet per minute or chains per hour. SC aids in assessing readiness plans, tanker use, ground tactics, and pre-positioning resources. The SC value usually exceeds the fire's true ROS. **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. **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.