FIRE RESTRICTION CRITERIA DEFINITIONS

1. **Measured Thousand Hour Time-Lag fuel moisture content is 12% or less.**

1,000 hour fuels are generally considered the larger dead logs on the forest floor. The fuel diameter class for 1,000 hour fuels is 3 to 8 inches. 100- and 1,000 hour fuel moisture calculations are used to estimate the slowly changing moisture contents of these large fuel classes. Daily fluctuations have only small impact on their moistures (the 1,000-hour especially), so they provide an estimate of slowly changing seasonal moisture trends. Generally speaking, kiln dried lumber is in the 12-14% range. When 1,000 hour fuels are down in the lower teens or below, fire managers are generally concerned. Early in the season, if 1,000 hour fuels are in the 20s or upper teens, it indicates a dry spring and possibly a dangerous trend.

2. **Seasonal Energy Release Component (ERC) is above the 80th percentile.**

The ERC is a number related to the 24-hour, potential worst case, total energy released per unit area within the flaming front at the head of the fire. It is directly related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of the fire. The energy release component is derived from predictions of the rate of heat release per unit area during flaming combustion and the duration of the flaming which are functions of:

1. *Fuel model, particularly fuel loading.*
2. *Dead fuel moistures, particularly the 100 and 1,000 hour fuels.*
3. *Live fuel moisture, particularly the woody fuel moisture.*

One unit value of energy release is equivalent to 25 BTUs of available energy per square foot.

Day to day variability is minimal as the value is not affected by wind speed.

The condition of the larger fuels has more influence on this component than the finer fuels.

Energy Release Component discussion points.

1. *Wind is not an input so daily fluctuations are leveled.*
2. *Best component for indicating the effects of intermediate to long term drying on fire behavior (if it is a significant factor).*
3. *Tracks the seasonal "fire season" trend.*
4. *Used as an early indicator of a busy fire season.*
5. *Does respond to extended dry periods but not intended for use as a drought index.*

This may be a simpler explanation off of the Fire Danger Pocket Card: "Energy Release Component gives seasonal trends calculated from 2 PM temperature, humidity, daily temperature and RH ranges, and precipitation duration."

3. **Three-day Burning Index is above the 80th percentile.**

The Burning Index (BI) is an estimate of the potential difficulty of fire containment as it relates to the flame length at the head of the fire. For example, if the BI is 50, divide 50 by 10 or put a decimal point in the BI number and the expected flame length is 5 feet.

4. **Ignition component is 80% or above.**

A rating of probability that a fire brand will cause a fire requiring suppression action. Theoretically, on a day that registers an IC of 60, 60% of all firebrands which contact wildland fuels will start fires which require suppression action.

5.

6. **Local Preparedness Level (PL) is 3 or above.**

This local PL level corresponds to the national PL. It can be found on the NIFC website (www.nifc.gov or from Durango Interagency Dispatch.

Other items are self-explanatory.