

Fire Weather Products and Services Available From the National Weather Service

1. **Rangeland Fire Danger Index:** This product is issued once daily and updated as needed. Forecasts are generated for each of the six Kansas Fire Weather Divisions – Northwest, North Central, Northeast, Southeast, South Central, and Southwest. Index values are: Low, Moderate, High, Very High, and Extreme. When the Index values are Very High or Extreme, the associated region will be highlighted on the map on the NWS Internet homepage.
2. **Fire Weather Forecast:** This product will be issued routinely, once per day by 6am throughout the year and updated as needed. There is a discussion at the top of the product, followed by a tabular forecast for each county. Parameters included in this product are cloud cover, precipitation type, chance of precipitation, temperature, relative humidity, 20 foot wind (MPH), precipitation amount, mixing height (ft. AGL), transport wind (MPH), smoke dispersal, lightning activity level, and Haines index.
3. **Red Flag Watch/Warning:** This product is issued as needed and is updated as needed. Red Flag conditions are met when **dry fuels exist with one or more of the following for 3 or more hours:**
 - a. Sustained surface winds 20 mph or more or gusts of 25 mph or more.
 - b. Relative Humidity values near 20 percent or below.
 - c. Widely scattered or greater coverage of dry thunderstorm activity.A watch will be issued when these conditions are likely within 24 to 48 hours. A warning will be issued when these conditions are likely within the next 24 hours.
4. **Spot Forecast:** This product is issued when requested by a federal agency for prescribed burns or for **wildfire support when requested by federal, state, or local officials for the protection of life and property.** The Spot forecast requests are submitted through the NWS Spot program, which can be found at <http://www.crh.noaa.gov/ict/?n=firewx>.
5. **Burn Ban:** When a burn ban is issued by a county Emergency Manager, a Special Weather Statement will be issued by the National Weather Service for the county making the request.

Definitions of Elements Specific to Fire Weather

1. **Mixing Height:** Represents the height at which smoke will lose its buoyancy and stop rising. Mixing heights are generally low early in the morning and higher in the afternoon.
2. **Transport Winds:** The average wind speed and direction of all winds within the layer from the ground to the mixing height. These winds are important for horizontal smoke dispersion.
3. **Haines Index:** Gives an indication about the potential for a fire “blow up”. The values are devised from a moisture term and a stability term. Possible values are:

HI of 2-3 = Very low rate of spread (ROS)

HI of 4 = Low ROS

HI of 5 = Moderate ROS

HI of 6 = High ROS

4. **Lightning Activity Level (LAL):** Indicates the coverage of lightning across an area. LAL values range from 1 to 6.

LAL 1 = No Thunderstorms

LAL 2 = Isolated or Slight Chance Thunderstorms

LAL 3 = Scattered or Chance Thunderstorms

LAL 4 = Numerous or Likely Thunderstorms

LAL 5 = Widespread, Definite, or Occasional Thunderstorms

LAL 6 = Dry thunderstorms

5. **Smoke Dispersal:** A numerical value relating the potential of the atmosphere to disperse airborne pollutants from a stationary source. It is calculated by multiplying the mixing height by the transport wind speed. Values are indicated with descriptors such as poor, good, very good, and excellent rather than numerical values.