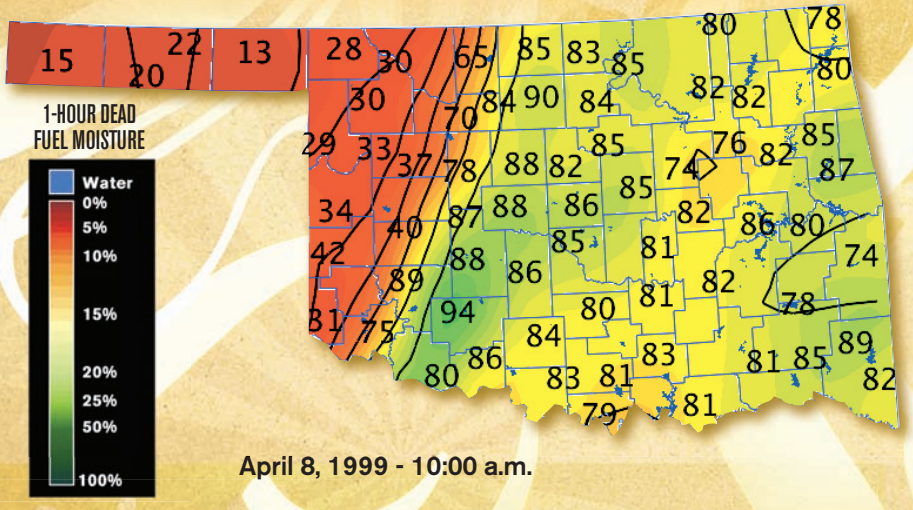
Weather Wise
Wildfires

Long before Oklahoma was settled, wildfires ran across the prairie, replenishing nutrients to the soils and controlling weeds. As Oklahoma's population grew, people and structures became more at risk from wildfires that spread across the grasslands and forests of Oklahoma.

Wildfire intensity is controlled by both weather and vegetation conditions. Grasses, leaves, small branches and other organic materials that accumulate on the ground can become fuel for the fire. These fuels can ignite easily when the humidity is low and the temperature and winds are high.

The following map shows the 1-hour dead fuel moisture (colors) and the relative humidity (numbers). One-hour dead fuel moisture indicates how much water is in smaller fuels. A lower percentage means less moisture in the plants causing them to burn easier. Dark red represents moisture close to zero percent and dark green represents moisture close to 100 percent. Relative humidity, shown in black numbers, is the percent of moisture in the air at a specific temperature. At a given temperature, the higher the percentage, the more moisture there is in the air.

For more fire weather information, visit http://agweather.mesonet.org/forestry/



Activity: Use the map to answer these questions.

- Circle each site where the relative humidity is at or below 35 percent relative humidity (remember that the black numbers represent relative humidity).
- According to the color legend, what is the 1-hour dead fuel moisture for these sites?
- Circle each site where the relative humidity is at or above 85 percent relative humidity. What is the 1-hour dead fuel moisture for these sites?
- Based on your answers from the first two questions, what is the relationship between 1-hour dead fuel moisture and relative humidity?
- Which area of the state would you predict is in the most danger for wildfires? Which area would you predict is in the least danger of wildfires?
- Using an Oklahoma map, which counties would you place in a fire danger alert? Why? What other weather conditions might you consider?

Newspapers for this educational program provided by:

THE OKLAHOMAN | Oklahoma Mesonet | Oklahoma Insurance Department | AWI American Water Institute