

*July 19, 2005*

## ***Fire Behavior Alert***

A fire behavior alert is being issued for possible strong thunderstorm outflow for southern Arizona below the Mogollon Rim for Tuesday evening July 19 through Thursday, July 21, 2005. ERC values are at or above the critical 90<sup>th</sup> percentile level over much of the forecast area. Fine fuels can and will react to changes in moisture content very rapidly. With the predicted increase in mid-level moistures there is an increased chance of afternoon and nighttime thunderstorms. Strong outflow winds can be expected in association with these storms. These winds can gust to 40 – 60 miles per hour.

Even fires that are inactive during these periods of strong downdraft winds can experience rapid increases in rates of spread and flame length and can change direction. These rapid changes in fire behavior can occur within minutes of receiving the first downdraft winds. Fires can easily exhibit rates of spread approaching 4 miles per hour. This rapid buildup in intensities can reduce the time required to reach Safety Zones.

Over the past couple of nights some of the thunderstorms have occurred after midnight. Strong downdrafts can occur any time that thundercells are in the vicinity. These winds can and will cause fires to burn almost as rapidly downhill as they will upslope when surface winds are aligned with terrain.

All fire personnel should be briefed regarding the possibility of these winds materializing on any fire in the forecast area. **Escape Routes and Safety Zones** should be planned accordingly. Reaction time for fire shelter deployment may be reduced to just seconds.

By Friday, July 22<sup>nd</sup>, moisture levels are expected to increase to the point that the potential for strong winds should become more isolated. If this situation changes we will issue an update.