



**TO :**  
**FROM :** National Wildfire Coordinating Group  
**REPLY TO :** NWCG@nifc.gov  
**DATE :** 07/20/2006  
**SUBJECT :** SAFETY ADVISORY : Extreme Fire Behavior

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## **Safety Advisory: Extreme Fire Behavior**

This summer, the National Incident Management Situation Report has consistently reported “extreme fire behavior”, “very active fire behavior”, “active fire behavior” or “rapid rates of spread” on large fires in many different geographic areas. Obviously, these same conditions are occurring daily on numerous smaller initial and extended attack fires in the same areas.

Rapid rates of spread, torching, crowning, running and long range spotting have been observed on many fires. Based on fire danger indices, the potential for extreme fire behavior exists during the coming weeks with periods of hot, dry conditions forecast.

Fuel conditions of concern include:

- Very heavy (now cured) fine fuel loadings in many locations
- Continuity of fuels, especially in grass/shrub regimes
- Extremely low live and dead fuel moisture values, well below historic levels for this time of year in some locations
- Extensive areas of bug-killed or frost damaged vegetation

Many locations in recent weeks have seen extended periods of higher than average daytime temperatures coupled with low relative humidity and periods of strong wind. Forecasts indicate above normal temperatures over much of the west for the remainder of the summer season. All of these conditions, coupled with local topographic effects, may combine to produce rapid rates of spread and extreme fire behavior. The NWCG members request that all Operations and Aviation resources who may be assigned to wildland fire incidents be oriented to the key messages from this safety alert to assist them in preparing for assignments in which they may be exposed to extreme fire behavior.

Wildland firefighters can mitigate the risks posed by these hazardous conditions in a variety of ways. These include:

- Maintain constant vigilance. Remember, most fires are innocent in appearance before unexpected shifts in wind direction and/or speed results in flare-up or extreme fire behavior
- Look up, look down, look around! A firefighter who has situational awareness is a safe firefighter.
- Practice LCES at all times: Lookouts, Communications, Escape Routes and Safety Zones. You’ve studied them well – put that knowledge into practice.

- Use the Safety Zone Guidelines found on page 7 of the Incident Response Pocket Guide. Be extremely cautious when working in areas with potential for reburn.
- Pay attention to what your fire is doing, how it responds to changing conditions, and anticipate how fire behavior will change throughout the day.
- Closely observe the fuels in the area where you're working. Remember that fine, flashy fuels respond very quickly to changes in environmental conditions.
- "Keep informed on fire weather conditions and forecasts". Stay attuned to the fire environment so that you notice the little, incremental changes in addition to the big sudden wind shifts.
- Develop an understanding of local conditions, especially if you are in an area unfamiliar to you. Demand a thorough briefing before engaging the fire.
- Monitor your health and well-being and that of your co-workers. Drink plenty of water to maintain your hydration level and monitor fatigue. Fatigue, dehydration and stress impair situation awareness. Take countermeasures as needed.
- Use Personal Protective Equipment. It was designed for your use and issued to you for your protection; it doesn't work if worn improperly or not carried.

Leaders of wildland firefighters have special responsibilities:

- Maintain command and control. As stated in the Standard Firefighting Orders, "Give clear instructions and insure they are understood" and "Maintain control of your forces at all times."
- Employ your subordinates in accordance with their capabilities. Consider team experience, fatigue and physical limitations when accepting assignments.
- Keep your subordinates informed. Provide accurate and timely briefings.
- Use the Risk Management Process identified in the Incident Response Pocket Guide. It will help you make good risk decisions.

Information on national and geographic area fire season outlook products can be found on the National Predictive Services Outlook page at <http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm>

A long, hot, and active fire season is still ahead of us in many parts of the country. Pay attention to firefighting basics. The most important resource on any fire is you.

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