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FROM : National Wildfire Coordinating Group

REPLY TO : NWCG@nifc.gov

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SUBJECT : SAFETY ADVISORY : Dry Fuels and Extreme Fire Behavior

Safety Advisory: Dry Fuels and Extreme Fire Behavior

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

This type of fire behavior is being observed because fuels across most of the west and in other portions of the country are extremely dry. These dry conditions are compounded by a variety of factors in some areas, such as abundant fine fuel loading, increased vegetation stress, frost-killed shrubs and brush, invasion of non-native species, lower than normal live woody and herbaceous fuel moistures, and mortality from drought and disease/insect infestations. Winter and spring precipitation deficits have created exceptionally low soil moistures drying duff layers deeper than normal for this time of year. 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.

Rapid rates of spread, torching, crowning, running, fire whirls and long range spotting have been observed on many fires. When coupled with the effects of terrain and weather, this type of fire behavior has proven lethal in the past. Based on fire danger indices along with weather forecasts and climate outlooks, the potential for extreme fire behavior exists during the coming weeks with periods of hot, very dry conditions likely. 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>

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

- Expect the unexpected! Fuels are drier than normal, so don't be surprised by extreme fire behavior!
- 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.
- Ensure firefighters have good anchor points, lookouts, communications, escape routes and

safety zones.

- o Use the Incident Response Pocket Guide! Be extremely cautious when working in areas that have potential for re-burn.
- 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, 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. 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 only works if carried and worn properly.

Leaders of wildland firefighters have special responsibilities :

- Maintain command and control. Give clear instructions and insure they are understood.
- Employ your subordinates in accordance with their capabilities. Consider team experience, fatigue and physical limitations when accepting assignments.
- Provide accurate and timely briefings. Keep your subordinates informed and updated throughout the day.
- Use the Risk Management Process identified in the Incident Response Pocket Guide.

On October 26, 2006, we lost five wildland firefighters during fire operations in the urban interface from extreme fire behavior on the Esperanza Fire in California. Since that date, wildland firefighters have deployed fire shelters in at least three other entrapment situations in urban interface /intermix areas with extreme fire behavior as a common denominator as well. Firefighters are reminded that no structure or facility is worth the loss of a human life.

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.

A long, hot, and active fire season is still ahead of us in many parts of the country. Pay attention to firefighting basics and remember, chance favors the prepared firefighter. ***The most important resource to protect on any fire is you !***
