



Scenario -Extreme Fire Behavior 1

Scenarios are situations that can arise on a Wildland Fire or Aviation incident and are meant to add a realistic setting for the application of Today's Safety Discussion.

You are the Module leader responding to an incident that is burning in open Ponderosa Pine with an under story of bitterbrush on the eastside of the Cascades. In addition, the vegetation has been effected by a long term drought. You notice as you arrive at the incident that the morning that there are Alto cumulus and Castellanus clouds moving west to east. You note that the eye level wind is 2-5 miles out of the west.

What are the Critical Issues?

Mild, moderate and EXTREME fire behavior has always been present in cases of shelter deployment. It is critical for firefighters to maintain situational awareness of live and dead fuel moisture conditions as well as predicted and current weather conditions. As fire behavior changes, it is critical to act decisively to the changing situation. **Note that Castellanus clouds are precursors to possible Thunderstorm development later in the day.**

Discuss the following indicators of extreme fire behavior:

- Relative humidity less than 15%
- 1-hour fuel moisture less than 5%
- Transition from surface to crown fire
- Smoldering fires that exist in the early part of the day are beginning to burn very actively as the day progresses.
- Approaching thunderheads with dark clouds beneath
- Presence of dust devils indicating an unstable atmosphere
- Increased spotting
- Sudden calm
- High clouds moving fast in direction different from surface wind
- Predicted Haines Index of 5 and 6 in those areas where this level is a good indicator of atmospheric instability
- Fire whirls

Failure to recognize the potential for change in wind direction as the result of a thunder cell passing over the Crank fire, Modoc National Forest, resulted in shelter deployments and engine losses.

Have an idea? Have feedback? Share it.

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