



Scenario - Extreme Fire Behavior 2

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.

It is early July and you are the Module leader assigned to an incident in Oregon. The fire is on midslope a 50 percent slope and is burning in a stand open grown Ponderosa Pine with an under story of frost killed ceanothus on the eastside of the Cascades. It is early afternoon and you notice that the winds are blowing up slope at 5 - 7 miles an hour. As the fire burns into the frost killed ceanothus you notice a significant increase in fire behavior. You have been taking weather on an hourly basis and you note that the temperature has risen to 78 degrees and the RH is now 18%.

What are the Critical Issues?

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.

Discuss how the following factors can contribute or lead to extreme fire behavior:

- Frost Kill: Has there been a late or unusually extensive freeze? Is the loading of frost-killed fuels high?
- Drought Conditions: Live Fuel Moistures Index, KBDI, Soil Moisture Index, low humidity, high temperatures
- Slope: Increases fire spread uphill, preheats fuels by convection, may channel winds
- Sea Breeze/Foehn: Wind direction may vary throughout the day, humidity changes may occur; strong wind velocities may drive fire behavior to extremes.

To aid situational awareness, track NFDRS live and dead fuel moisture outputs. Take hourly weather observations and track the hourly changes. By tracking fuel moisture and weather observations and using Fire Severity Related to Fuel Moisture Chart, firefighters can be alerted to those conditions that can lead to situations where there is a high potential for extreme fire behavior.

Failure to recognize the potential for extreme fire behavior has lead to a number of situations where fire fighters were forced to deploy because they could not reach their safety zone. It is imperative that all fire fighters be on the alert to those situations where there is a high probability of extreme fire behavior. When in doubt disengage and re-evaluate whether the 10 standards can be met.

Have an idea? Have feedback? Share it.

[ONLINE](#) | MAIL: 6 Minutes for Safety Task Group • 3833 S. Development Ave • Boise, ID 83705 | FAX: 208-387-5250

[Back to Today's Discussion Extreme Fire Behavior 2](#)