

Northern Rockies

Fuels and Fire Behavior Advisory

Subject:

Early season, very low fuel moisture in large diameter fuel in many portions of the Northern Rockies created the potential for fires with short range, profuse spotting. Live fuels look green but burn readily.

Discussion:

Spring snowmelt occurred early in mid to high elevations throughout the Northern Rockies. Very hot temperatures through June accelerated drying of large diameter fuels on east, south and west slopes, even at higher elevations. This is much earlier than would be expected for late June. Direct measurements in thousand hour fuels reveal conditions more common to late August (direct measurements in some areas, less than 15%). This causes surface fire to move into tree canopies resulting in intense, short duration crown fires. Some fires have been observed to burn through the under-story and re-burn through the crowns. Surface duff is drying out deeper than expected also resulting in persistent smoldering fire affecting the potential for hold over fires and re-burn.

Measurements in live fuels are very low for late June and early July.

Concerns to Firefighters and the Public:

- Anticipate short range, profuse spotting from intense surface fires, torching trees and areas of active crowning.
- Watch for intense heat generated by burning in large dead and down material to result in conditions for pre-drying of aerial fuels leaving them available for re-burn at a later time.
- Notice if northern slopes begin to accept fire.
- Be aware that fire activity will pick up earlier in the day and continue later into the night even under lower wind speeds, higher humidity values and lower temperature thresholds found this time of year.
- The combination of climate change (hotter and drier) and vegetation under stress from insects, disease and high densities result in a challenging operating environment for fire fighters, don't expect "normal" fire behavior.

Mitigation Measures:

- **Lookouts** will be briefed regarding specific weather thresholds conducive to active fire behavior on your specific fire.
- **Communication** regarding direction of fire perimeter spread, rates of spread and spotting distances will be clear and consistent.
- **Escape routes** will be evaluated with travel time considered regarding steep slopes and heavy fuels and have a secondary escape route identified.
- **Safety zones** will be identified consistent with predicted and observed flame lengths.
- **Reevaluate** your LCES periodically as things change during the burning period.

Area of Concern: Timber fuel types containing large diameter dead material, elevations to 9,000 feet.

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