



Royal Gorge Fire, June 11, 2013

Fuels and Fire Behavior Advisory

Southeastern and Southern Colorado

June 21st, 2013



Subject: Extreme fuel conditions have resulted in potential for extreme fire behavior in southeastern Colorado.

Discussion: Southeastern and Southern Colorado are experiencing a multi-year (3-year) drought. Extremely low snowpack during the winter of 2012-2013 and high temperatures with only sporadic spring moisture have resulted in 1000-hour fuels in the single digits (4-10%). Dead fuel moistures have not recovered from previous year's drought. Spring moisture also allowed for some green-up, which has also lulled personnel into a sense of complacency.

Difference from normal conditions: Ponderosa Pine Live Fuel Moisture Content (LFMC) values are 80-90%. Juniper LFMC values are 60-80%. LFMC values of other species, as well as duff and litter, are below normal values as well.

Piñon-Juniper – fuels and wind continue to contribute to an increase in extreme fire behavior conditions, increased rates of spread, profuse long-range spotting and earlier than average transitions to crown fire. The Royal Gorge Fire on 6/11/13 spotted $\frac{3}{4}$ mile across the 1,500 foot-deep gorge. Significant beetle-kill has occurred in many areas.

Mixed Conifer: High elevations are snow-free and are available to burn, with minimal green-up occurring. These areas have very high fuel loadings due to disease and insects, and several blowdown events.

Average conditions for the month of June for the area are for hot and dry conditions. Over 90% of all acres burned in the area occur during the month of June. With persistent drought conditions, expect fires to spread readily and exhibit high resistance to control.

Concerns to Firefighters and the Public:

- Fuels beneath Aspen stands are available and should not be used as a safety zone or barriers to fire spread.
- Areas of heavy fuel concentrations due to blowdown and disease/insect are available to burn.
- **Until the on-set of the monsoons (typically in late June to Mid-July), expect intensity and severity to increase, resulting in increased burning conditions.**
- Anticipate any ignition in flashy fine fuels to ignite easily and move rapidly. **You can't out run it!**
- Anticipate fires to exhibit extreme spread rates, elongated flaming fronts, and increased fire brands; **expect more long range spotting.**
- Anticipate dependent and independent crown fires, as well as profuse spotting, in the insect infested conifer stands.
- Active fire behavior can extend well into the night and early morning hours even with moderate RH recovery.

Mitigation Measures:

- Incoming resources need to be informed of the increased potential through the use of incoming briefings, Pocket Cards, ERC's, live and dead fuel moistures, and special fuel conditions (drought, blowdown, and insect mortality).
- **Firefighters should acknowledge that fire growth and fire behavior they encounter this year may exceed anything they have experienced before due to the drought factor. Normal strategies and tactics may need to be adjusted to account for the drought factor.**

Area of Concern: Please reference the map posted on the National Fuel Advisory Page, http://www.predictiveservices.nifc.gov/fuels_fire-danger/fuels_fire-danger.htm

The timber and brush fuels within this area of concern are the target for this fire behavior advisory.