

West Slope of Colorado

Fuels and Fire Behavior Advisory

June 4, 2012

Subject: Aggressive fire behavior encountered during spring and early summer.

Discussion: The mild and dry winter in western Colorado has caused available dead and down woody fuels to exhibit fuel moistures in the single digits. Compounded with last season's fine fuels, the abundance of escaped human-caused starts and the multiple instances of high wind events, observed fire behavior for the past two months has been aggressive and generally of high intensity.

Due to the lower-than-normal snowpack over the winter, fine fuels have not been compacted and are extremely "flashy" when ignited. Live fuels such as pinyon, juniper and some of the brush species are near dormancy so their values are generally in the 75-95% LFMC (Live Fuel Moisture Content) range. Gambel Oak and other mountain brush species have suffered one to two early frosts that have killed up to 40% of the foliage. Frost kill in the Gambel Oak was also present in the 1976 Battlement Creek fire in which three firefighters were killed. Rapid fire spread through these fuels can still occur when last year's fine fuels, leaf litter and/or frost kill are present. Conifer species in the upper elevations, such as Douglas Fir and Lodgepole Pine are also still within dormancy and their associate LFMC is very low. Areas which have been impacted by insects and disease are generally free of snow this year and are also able to burn outside of historic date ranges.

Western Colorado is currently experiencing extreme drought conditions, which are forecasted to persist and intensify during the next 30 days. Colorado's snowpack is 5% of average (statewide) for this time of year while annual precipitation is 40 to 60% percent of average. The forecast does not indicate any significant relief to the drought conditions, until the Southwest monsoons develop in early to mid-July. Due to these factors, expect fire conditions to intensify as plants begin to exhibit physiological signs of drought stress.

Western Colorado has experienced a large number of wind events in the last two months, with a higher-than-average number being classified as "Red Flag" warnings. These winds have caused many human-caused fires to escape and burn considerable acreage and have caused damage or destruction to personal property. **Intensity and severity will increase and will significantly affect burning conditions.**

Concerns to Firefighters and the Public:

- Anticipate fire to creep under retardant/foam/wet lines in areas where fine fuel matting is seen and remember that any ignition in flashy fine fuels will move rapidly. **You can't out run it!**
- Anticipate prolific spotting and/or fire whirls because of a combination of fine flashy fuels, terrain, dry atmospheric conditions, strong surface instability and wind events.
- Anticipate large acres to be consumed in a short period of time.
- Expect fire behavior in the Gambel Oak to increase due to spring frost kill.
- Do not expect any temporary relief from vegetative green-up to last very long. As the LFMC begins to drop, fires will burn with more intensity and fire behavior will become more extreme with higher potential for long range spotting.