

Rapid Lesson Sharing

Event Type: Fuels and fire behavior resulting in an entrapment

Date: July 24, 2017

Location: Preacher Fire, Nevada

KEY POINTS

- Recognition of extreme fire potential in Nevada
- Ability to maintain communications
- Familiarization of burn protocol

NARRATIVE

On July 24, 2017 at approximately 1700, winds pushed the Preacher Fire past containment efforts. As a result, the escape route for a crew lookout was compromised, forcing him to retreat from the fire through unburned fuels. The lookout lit a fire to create a safety zone, which aided a Type I helicopter to quickly locate him.

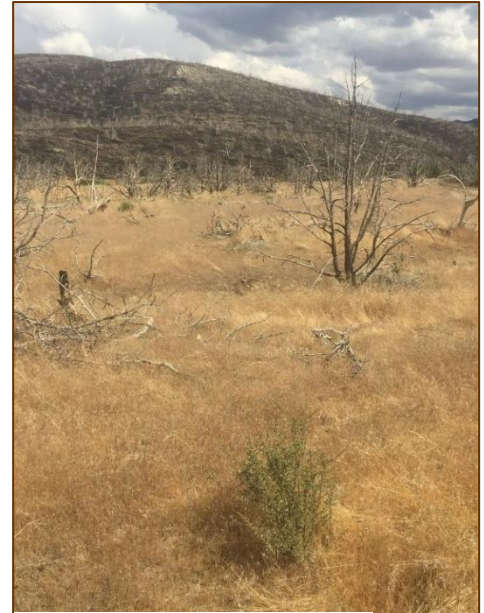


2017 partially burned cheatgrass

The helicopter landed and the lookout boarded the aircraft and was taken to the helibase at the Minden-Tahoe Airport.

He complained about an ankle injury and was coughing. Because of the cough and a raspy voice, his crew boss followed the Burn Injury Criteria in the 2017 Red Book and had him transported to the nearest regional burn center.

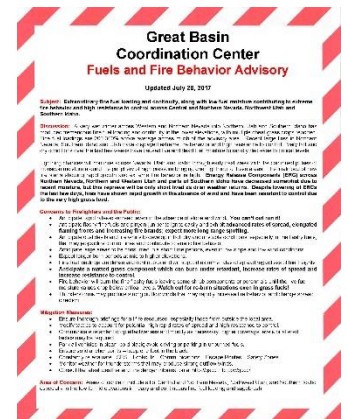
The fire had been burning in heavy cheatgrass, brush and scattered pinyon-juniper. This area of Nevada experienced several years of drought, followed by record-breaking snow in 2017, producing twice as much moisture than normal. This excessive winter moisture promoted vigorous growth of cheatgrass, a non-native invasive species, and considerably changed the fuel matrix in the cheatgrass/sagebrush/pinyon-juniper communities from recent years. It has also impacted fire suppression tactics.



2017 Cheatgrass fuel loading

The Great Basin Coordination Center issued a [Fuels and Fire Behavior Advisory](#) early in the season, which was updated on July 28, 2017.

Cheatgrass is highly flammable, grows faster and displaces native plants such as sagebrush. The area where this fire occurred did not burn in 2016, resulting in a dense mat of cheatgrass underneath the new cheatgrass crop.



LESSONS

Fuel Conditions

- The vertical growth and density of cheatgrass this year was much more pronounced and overtops an already dense mat of vegetation from the previous growing season.
- The use of water and retardant is much less effective than previous fire seasons since fires are able to burn under the retardant and continue to spread.
- Water and retardant lines must be followed up by ground resources, otherwise the fire continues to progress through aerial applied water and retardant.



Convective column from fuel-driven fire behavior

Fire Behavior

- Fire intensity is greater than previous fire seasons due to density and vertical structure of cheatgrass, resulting in higher rates of spread.
- Wind from local influences and/or thunderstorms have resulted in extreme fire behavior.
- Greater and prolonged burning periods have occurred during nighttime hours.
- Higher than normal fire intensity necessitates the need for firefighters to be very close to the black and maintain effective escape routes and safety zones.

Firefighting Tactics and LCES

- Greater rates of spread and larger fire perimeters can cause hand crews to be more spread out, impacting fire line communications.
- Evaluate changing fire environments to determine the most appropriate strategies and tactics.



Example of the lookout's perspective on the Preacher Fire

As a final note, when a firefighter is exposed to heat and smoke, it is essential that all supervisors, module leaders and firefighters are familiar with the "Required Treatment for Burn Injuries," located on page 171 of the Red Book.

This will ensure firefighters exposed to high temperature gasses, receive proper examination and treatment for damage to skin and internal airways.

A Facilitated Learning Analysis (FLA) is in progress on the Preacher Fire.

This RLS was submitted by:

The Preacher Fire Facilitated Learning
Analysis (FLA) Team

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