

Rapid Lesson Sharing

Event Type: Dead and Down
Mitigations

Date: Aug. 12, 2014

Location: Tonahutu Fire, Colorado



NARRATIVE

During initial attack and subsequent extended attack in 10-year-old beetle-killed lodgepole on the Tonahutu Fire, crews encountered high tree fall rates at low wind speeds and encountered challenges in developing a medical egress route through the dense, dead-and-down jackstraw.

Beetle kill stability changes over time. Many studies suggest it reaches its peak in approximately five to eight years. Crews working on the Tonahutu Fire were in a stand that was most likely reaching its peak of instability.

Wind speeds as low as 4-7 mph and light rotor wash were capable of triggering tree fall. Because these lower wind speeds occur quite frequently with little to no warning in this area, it became evident that a snag-free zone in the adjacent area was a necessity.



Crews on the Tonahutu Fire, working in 10-year-old beetle-killed lodgepole, encountered high tree fall rates at low wind speeds.

Meeting Dutch Creek Mitigations

This dead-and-down build-up was greatly reducing the mobility of crews. To help meet the Dutch Creek Mitigations, a saw line was established into the fire. Even though the distance to the fire from an access trail was less than one quarter mile, it took a five-member saw squad five hours to complete this essential medical egress route.

It was concluded that the time it would take to complete the egress route and a snag free zone(s) becomes severely limiting during IA when distances from a trail exceed one mile.

LESSONS

Beetle kill age and changes in the fuels have increased our risk levels. We therefore need to develop and follow new or additional mitigation measures to retain the same acceptable risk to benefit ratios.

An After Action Review of the Tonahutu Fire has revealed many similarities with the recent [Holroyd Park Fire Facilitated Learning Analysis](#). Many of the questions and concerns that remain unanswered are the same.

Lessons Learned for Our Program to Move Forward Include:

- ✓ Adjust tactics when lower winds speeds trigger tree fall.
- ✓ Consider the need for adjacent "snag free" zone(s) to retreat to.
- ✓ Adjust tactics to address increased medivac timeframes due to increased dead-and-down levels. This may include planning for indirect tactics.
- ✓ Plan for active engagement with internal and external audiences (including cooperators, local communities, and other stakeholders) to manage expectations that conditions have changed and overall management of fires may also need to change.

Submitted By: Fire Management Officer

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