

Lessons Learned Review
Muddy Creek Fire Entrapment
OR-PRD-557
Prineville District, BLM

Summary

The Muddy Creek Fire was started by lightning on August 1, 2009. The fire was located on private lands outside of Bureau of Land Management (BLM) fire protection. The area is commonly known as no-mans land, and is comprised of several ranches and small parcels of BLM. Many of the landowners related to the Muddy Creek Fire have historically chosen not to enter into any kind of local fire protection district or association. BLM has been very active in fire suppression in the area in the past, but recent changes to policy and land management objectives have resulted in BLM pulling back its suppression response in no-mans land. This has been confusing to the landowners and BLM fire fighters.

On August 2, the Prineville District staff began monitoring the fire to assess threats against BLM protected lands. On August 3, 2009, BLM staff made a decision to engage the fire on a limited basis with three engines and leadership. Tactics included using indirect line to burn out and hold along Robinson Ridge. During this initial burning period, fire behavior increased to the point that escape routes became compromised and the advancing fire front threatened the location of the engines and command vehicle. This occurred as the engines and the command vehicle were moving down the line (out of the fire area using one of two escape routes). In addition, there were two landowner representatives on ATVs moving with the BLM group.

The fire front crossed the escape route as the lead engine was moving through it. This engine found good black and parked. The remaining two engines, command vehicle and ATVs were cut off and moved in the opposite direction to an area that had been previously identified as a potential safety zone that could be burned out in a short period of time if needed. At this point, leadership has recognized that the second escape route has been compromised and the fire front is advancing on their location.

The decision to burn out the potential safety zone was made and implemented. A black safety zone of at least one acre was produced and the vehicles were parked in it. The main fire front passed around the group and moved past their location. No injuries to personnel or damage to equipment was experienced. On August 5, 2009, a three person facilitative team performed a Lessons Learned Review with the primary principles involved.

Chronology of Events

August 2, 2009

1012 – Duty Officer (DO) notified of Muddy Creek fire

Recon 1 estimated that the fire was 2 acres burning in grass

1243 – Fire was estimated to be 20 acres and growing

1251 – Fire was estimated to be 100 acres and growing

1736 – Fire was estimated to be 1000 acres and growing

1742 – DO ordered a recon flight of the area

1848 – Recon flight arrived on scene

1854 – DO requested recon flight for 8/3

1858 – Recon flight reported estimated fire to be 1500 acres

2157 – Fire was reported be actively burning on BLM

August 3, 2009

0901- Recon flight arrived on scene and geographic description of where the fire was located and actively burning.

1047 – DO request a response from Engine 20, Engine 24 & Engine 29. He indicated that he (Battalion 22) was also responding.

1415 – Battalion 22, Engine 20, Engine 24 & Engine 29 on scene. Fire size was estimate at 6000 acres.

1415 – Recon flight was ordered

1420 – Recon flight was not available due to flight time limitations

1600 – Battalion 22, Engine 20, Engine 24 & Engine 29 working Robinson RIDGE supporting a private DOZER.

1730 – Begin black lining operations down Robinson Ridge to the MAYS HWY

1800 – Stopped firing operations due to spots and erratic winds. Battalion 22 recognized wind shift while serving as Look Out.

1805 – Battalion 22 was notified by Dispatch that Stevenson Lookout reported the smoke column had reportedly capped out

1815 – Battalion 22 made decision to pull resources off line and progress down the pre-identified escape route to MAYS HWY

1820 - Engine 20 & Engine 24 began moving down escape route when the fire hit the line and jumped across, thus compromising the pre-identified escape route.

1825 – Engine 20 made the decision to drive thru the flame front due to size limitations of vehicle. Once on the other side of the flaming front, Engine 20 established a cool area of the black and used it as a safety zone.

1826 – Engine 24 turned around and progressed back up the ridge line to Battalion 22 location.

1830 – Engine 29 tied in with the locals at the anchor point (rock out cropping). After tying in with the locals, they began to progress down the ridge to Battalion 22's location.

1835 – As Engine 29 progressed down to Battalion 22's location, the fire hit the line behind them and jumped across, thus compromising their original anchor point and second escape route.

1840 – Battalion 22, Engine 24, Engine 29 & two locals on 4 wheelers met at the pre-identified meadow and began to fire out a safety zone. Once the Safety Zone (approx. 1 acre) had been created, the resources positioned themselves in the burned area.

1905 – After fire front had passed, Battalion 22 made decision to leave safety zone and progress down Robinson Ridge and to Mays Highway.

Reasons for Successful Outcome

Leadership

Strong leadership within the Prineville District exists at all levels within the organization.

- 36 seasons of fire experience between the three engine captains
- Contingency planning was evident between the engine captains and the BLM IC
- Leadership had good situational awareness
- Career appointments for lead positions such as captains and assistants has paid dividends in this example, and continues to promote leadership competence Bureau-wide
- A chase truck was parked at a staging area before engaging the fire, and its occupants were seated in the engines and command vehicle. The chase truck occupants were primarily first year employees and had the crews not been reconfigured, the chase truck and its occupants would have likely contributed to a higher complexity during the entrapment.

Training

- This program has integrated Engine Protection training into its normal training cycle. When the entrapment situation presented itself to the crews and leadership, they were able to fall back on their training to effect engine protection.

Lessons Learned

- Contingency planning should include enough backup plans to adapt to quickly evolving situations. Having enough depth in contingency plans was clearly a factor in the successful out come of this event.
- Ask more questions of leaders. Followers should not hesitate to ask questions of leaders to ensure intent is clear and that sufficient contingency planning is completed and known by all personnel.
- Chase trucks add complexity due to their presence on the fireline. They require operators and can take up vital space in safety zones.
- Engine leadership is key and should be promoted.
- Partnering first year people with more experienced employees is not only essential for mentoring, but in this case promoted greater control of personnel.
- Engine protection drills should be incorporated into annual training and practiced throughout the fire season.
- Changes in fire management strategies should be clearly communicated to those that are expected to implement them, as well as effected stakeholders. In the case of the Muddy Creek Fire and the associated entrapment, the role of the BLM fire fighters was not clear.

Conclusion

This incident has been determined to be an entrapment based on the current definition found in the 2009 Interagency Standards for Fire and Fire Aviation Operations due to compromised escape routes and the necessity for burning off the safety zone. The review recognizes the successful employment of engine protection tactics and entrapment avoidance and finds no fault with the fire fighters involved.

The successful outcome of the Muddy Creek Fire Entrapment was due to high quality leadership and effective decision-making during this very critical event. The Incident Commander and Engine Captains are to be commended for maintaining a high level of situational awareness, control of crewmembers and for recognizing and managing a potentially confusing and politically charged assignment. The implementation of the safety zone preparation was well planned, implemented seamlessly and mitigated all risks associated with the unanticipated movement of the main fire.

The District is currently focusing on developing standard operating procedures for the no-mans land to guide actions for the remainder of the fire season. In addition, the District will also engage landowners to develop long-term strategies for managing fires on those

lands. District leadership should be commended for making the hard decisions related to fire suppression on no-mans land.

Finally, the Review Team found the fire fighters, program managers and line officers open and committed to the LLR process. The sand table review was very important in recalling the events that led up to the entrapment and provided all participants an opportunity to engage in the review.

Review Team Members:

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