Prescribed Fire Module PT Hike:

Transitions into Green Mountain Search and Rescue Incident

An FLA Story

Not all who wander are lost, but some people might think you are and respond accordingly . . .

March 15, 2017

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Why might this be an interesting story? Because it is probably a very familiar situation to many of us, and there were positive lessons learned.

1. Summary

On March 15, 2017, a winter prescribed fire module consisting of seven people performed an arduous physical training (PT) hike in an area that was familiar to some, but not all of the crew members. There was not a marked trail or route up the mountain for the intended hike.

One crewmember ended up exceeding the pace of the rest of the crew, becoming separated from all crew members and without communication. While ascending to what was perceived to be the summit, the crewmember noticed he had reached a different location. He traversed toward the Green Mountain Peak. He arrived on the summit short on time and with a failed route tracking device.

The crewmember began a descent down the mountain, ending up in an unfamiliar drainage.

Through excellent teamwork by the crewmembers, supportive leadership, and line officers, a coordinated search and rescue effort was initiated, resulting in the crewmember's safe return.

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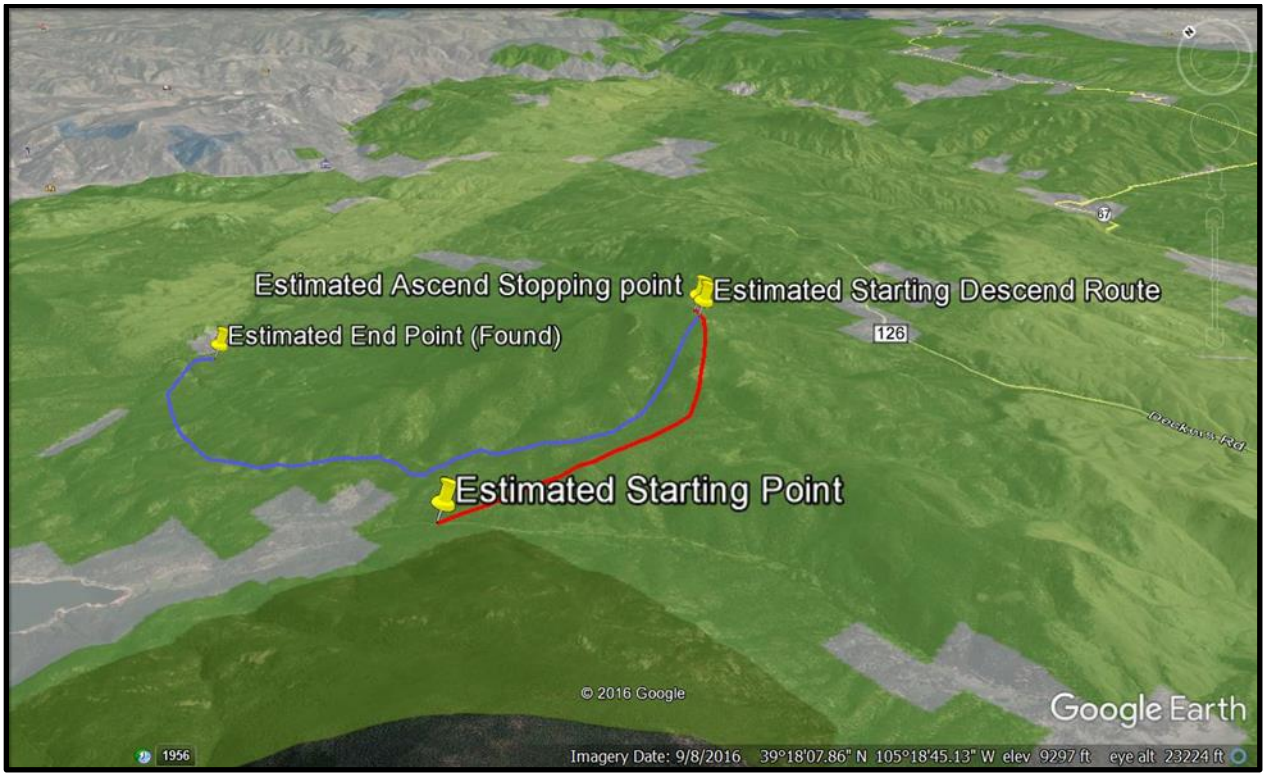

2. Narrative

This all began prior to March 15, 2017. There was talk among the crew of an "awesome" hike up Green Mountain that would provide a strenuous workout and award anyone who summited a breathtaking view of the Colorado Rocky Mountains and surrounding valleys.

Two crew members had previously hiked this unmarked course up the mountain. Several of the crewmembers worked in other states and wanted to test their physical nature in both the altitude of Colorado and the steep traverse up the mountain.

It was the last day for two of the crewmembers, so the choice of this hike for PT seemed a fitting end-of-season reward. The group had heard about the hike from locals as a "strenuous hike straight up to the summit and then back down."

Pre-Hike Prep
The drive out to the mountain seemed like a "typical" day. Some crewmembers talked while others were engaged in their personal devices. Several of the crewmembers had radios and others noted GPS tracking devices to be utilized.

Upon reaching the mountain, the ridge to be hiked to the summit appeared pretty straight forward. The crew discussed a timeframe for the hike, knowing there were differing fitness levels among the group. They identified a turn-around time as well as a target time to meet back at the vehicles—and off they went.

Something May Be Wrong
Communication was verbal "hooting" for the crewmembers who did not have radios. This was used to determine the approximate location of each crewmember as they ascended the mountain, trying to stay consistent with one general course of direction around and through the rugged terrain.

The crew discussed a timeframe for the hike, knowing there were differing fitness levels among the group. They identified a turn-around time as well as a target time to meet back at the vehicles—and off they went.

At approximately 0900, the crewmember to have last contact with the soon to be "missing" crewmember realized that he had not made contact in some time, but assumed the crewmember had ascended to the top of the mountain.

At 1000—the agreed upon turnaround time—crewmembers decided to turn back, having not reached the summit.

At 1100, the concerned crewmember began to raise suspicion in his mind that something may be wrong.

Crew Boss Contacts FMO; FMO Requests Helicopter
As the time approached 1200, the module realized that their crewmember was not at the vehicle and began to discuss the possibility that their crewmember could be lost or injured. At the time, several of the crewmembers had "bits" of information regarding the situation.

At 1245, once the Crew Boss met-up with other crewmembers and gathered additional facts and determined there was concern, the crew boss hiked to a location with cell coverage to notify his supervisor (AFMO) of the situation. At this time, the module still had the feeling they would find the missing crewmember but did not know how long it may take and determined they needed to request assistance.

The AFMO immediately contacted his supervisor, then called Dispatch to request launching their Type 3 Helicopter ("call when needed" [CWN] on severity) to assist in the search from the air.

Missing Crewmember Realizes He is Off Course

Meanwhile, as all of this activity is occurring, the "missing" crewperson had been ascending to what was perceived to be the summit, but continued to run into false peaks.

The crewmember had been under the impression both from conversations with fellow crewmembers who knew the mountain and his initial observation, that the hike would be a straight-forward climb up the ridge. However, upon ascending to the first false peak, he realized he was off course.

He continued to hike, thinking he would run into other crew members whom he thought were out in front of him. Once he reached the summit, he hit "stop and save" on a cell phone tracking app only to find his track was not saved as there was no cell coverage. He immediately noticed none of his fellow crewmembers were at the summit, so he began his descent down the mountain on a slightly different path toward the established meeting point.

The irony is that numerous District employees relayed stories of being "sucked" into this drainage or knowing someone who drifted into the drainage and became lost.

During Descent, Finds Himself in Unfamiliar Drainage

The missing crewmember was conscious that he was pushing the agreed upon timeframes, but did not feel "lost," nor was he concerned about his ability to hike down to the road. While descending, he found himself in a drainage that was not familiar, so moved up and out to try and regain his bearing. (The irony is that numerous District employees relayed stories of being "sucked" into this drainage or knowing someone who drifted into the drainage and became lost.)

At this time, he heard a helicopter, got a visual of it flying by, and thought: *"That helicopter can't be for me?"* He deduced there must be something else going on in the local area.

He continued his descent and noticed the helicopter approaching again, at which time he realized that the helicopter might actually be looking for him. He, therefore, moved into the closest open meadow. But the helicopter banked and flew off. He hurriedly continued down the mountain toward a road, conscious that he was beyond the agreed upon meeting time.

County Search and Rescue Arrives

Back at the vehicles, the county Search and Rescue Team had arrived and were preparing to engage.

Notifications were being made throughout Forest Service chains of command—both the Line and Fire—that a crewmember was missing, with appropriate actions and plans being undertaken at all levels.

In addition, several crew members were broken into two groups, crisscrossing the mountain in search of their fellow crewmember.

Shortly after 1500, individuals from the county Search and Rescue Team patrolling a road came upon the crewmember walking up the road.

Conclusion

While this situation ended in a very positive way, we recognize there was a great deal to learn from this event. We should all be able to relate to this scenario, as it is a common one.

All personnel involved were astute in their intentions, each playing out a linear story.

Imagine his surprise when the crewmember reunited with his crew, to learn that they had done a thorough job of responding and preparing for a worst case scenario, when he knew he was late, but not "missing" or "lost".

Imagine the relief of all personnel involved when the crewmember arrived safe and sound. This well-coordinated response was implemented by caring professionals who are invested in their people.

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3. Notable Times for March 15, 2017

0800	Briefly discuss plan of estimated route, turnaround time, "head back" time, and time to be back at the vehicle.
0900	(Approximately) the last contact with the missing person.
1000	(Turnaround Time) Module decided to head back down to the vehicle.
1100	Crewmember with last contact of missing crewmember has suspicion something may be wrong.
1200	Crew realizes missing crewmember is not at the vehicle.
1245	Module notifies supervisor (AFMO) of current situation.
1307	AFMO notifies supervisor (FMO) and Dispatch to request Type 3 Helicopter to assist with search. FMO notifies District Ranger, Forest FDO. District Ranger notifies Forest Supervisor.
1325	District FMO requests county Search and Rescue (SAR) through Dispatch.
1337	Dispatch notifies AFMO that county SAR has been ordered with two-hour ETA.
1359	Helicopter and Sheriff on scene.
1522	Missing crewmember found walking down a dirt road, search and rescue cancelled.

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4. Lessons Learned

These lessons are not intended to give the impression that they would have prevented this incident. Rather, as we all move forward, these are items that people can learn from—and hopefully reduce the likelihood of a similar event taking place.

A. Technology can fail, necessitating an alternate plan for communication and navigation.

- The lost employee was using a smartphone app called "Strava" for running and cycling. This app allows users to map tracks and times and saves them to the app and to an Internet site. When out of cell range and trying to save the tracks, the app loses the track and information. In this scenario, after the employee hit "save", he realized that the app was no

longer useful as a navigation tool. The employee tried to use "Avenza PDF Maps" as a backup, but did not have a topo map loaded for the area.

- ❖ During the search effort, the crew realized that some of their communication equipment would begin to fail if the search lasted a long time. In order to protect cell phone and radio batteries, they went into an aviation problem solving model. (Aviation problem solving is used to increase time during a situation and increase chances of a good outcome.) The crew paired-up and turned off several radios and cell phones in order to increase the time they could maintain communications in search mode. They were teamed-up and formed two separate search parties, with each party maximizing available communication equipment.

- ❖ The crew felt that a short orientation briefing prior to leaving the vehicles would have been helpful. The lost employee felt that if he had seen a paper map, it would have helped him avoid being sucked into the large drainage to the north. He also wished he had marked a waypoint using a GPS-based tool, so he might have been better able to identify the vehicle's location.

When the crew's method of "hooting" to keep tabs on each other failed, they had to back-track to when they could last confirm they had contact with the lost employee. This added some confusion and allowed assumptions to be formed.

B. During planning/briefing for an activity, some key questions can be useful. For Example: *"What is our plan if something goes wrong?"* We sometimes make the natural assumption that everything will go according to the plan, especially when the effort has been made to make/communicate a plan.

- ❖ The crew felt that it would have been useful to identify separation protocols and trigger points, particularly in light of the limited communications in the area. Some of the crew were very familiar with the area, while other crewmembers had not been on that side of the mountain before.

- ❖ Some of the crewmembers removed items from their packs given the nature of the hike. Thus, no one really knew what this particular individual was carrying or not carrying. As it turned out, the employee had six quarts of water, an MRE, and a space blanket. He could have (uncomfortably) stayed the night. However, no one knew that for sure during the time he was missing.

- ❖ After conducting an AAR and RLS discussions, the crew thought that staying together in groups of two with a radio would be safer for this type of activity, just in case something did go wrong with an individual crew member. When the crew's method of "hooting" to keep tabs on each other failed, they had to back-track to when they could last confirm they had contact with the lost employee. This added some confusion and allowed assumptions to be formed.

C. Although the Fire and Dispatch organization is well-suited to incident response, different protocols may be required for non-fire incidents. That being said, protocol overload and fatigue is real.

- During the search and rescue, some crew and District employees were surprised by the questions of the county Search and Rescue (SAR) personnel. They felt it would have been helpful to have a general understanding about how SAR works before they were part of an incident. SAR professionals deal with these incidents in a methodical manner that, from our perspective, may seem broken and non-urgent at times.

- District leadership felt that the crew had followed safety protocols. However, they were unsure if protocols were robust enough for situations like this. District leadership plans to engage in a discussion about whether a lost persons' plan is necessary, and if so, how to disseminate it without overloading employees with new processes.

- Several people involved in the incident highlighted the importance of coordinating communication at all levels to avoid assumptions and to build an understanding of communication protocols, which may be slightly different than on a wildfire incident.

- The crew and leadership stayed calm throughout the incident, from the point of suspicion to confirmation that a crew member was missing. Regular training for incident response contributes to the resiliency of the organization during an incident.

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D. Fostering a learning environment that encourages everyone to share stories is important to prevent adverse incidents and to ensure that we are avoiding assumptions throughout an incident. In our community and culture, myth and legend carry as much power over people's behavior as policy, especially when something difficult must be reported.

- Several people involved in this event relayed stories about previous incidents where employees have become disoriented in the same drainage. Story-telling as a navigation tool could have identified the drainage as a hazard.

- While the District leadership fosters an environment that is open for upward communications, there is still a slight fear of reprisal within the ranks of the organization at different levels. A few young leaders stated that there was some hesitancy to report upward. They wondered how this might affect their future? Will there be a reputation attached? And will they be looked down on in the future? These thoughts did not delay the upward reporting, nor did they change the outcome of the situation. The Crew Leader reported upward immediately when their situational awareness was up to speed and complete. This is just a reminder to the organization that these feelings still exist and we need to further our efforts to change our culture toward a learning culture.

5. FLA Team

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