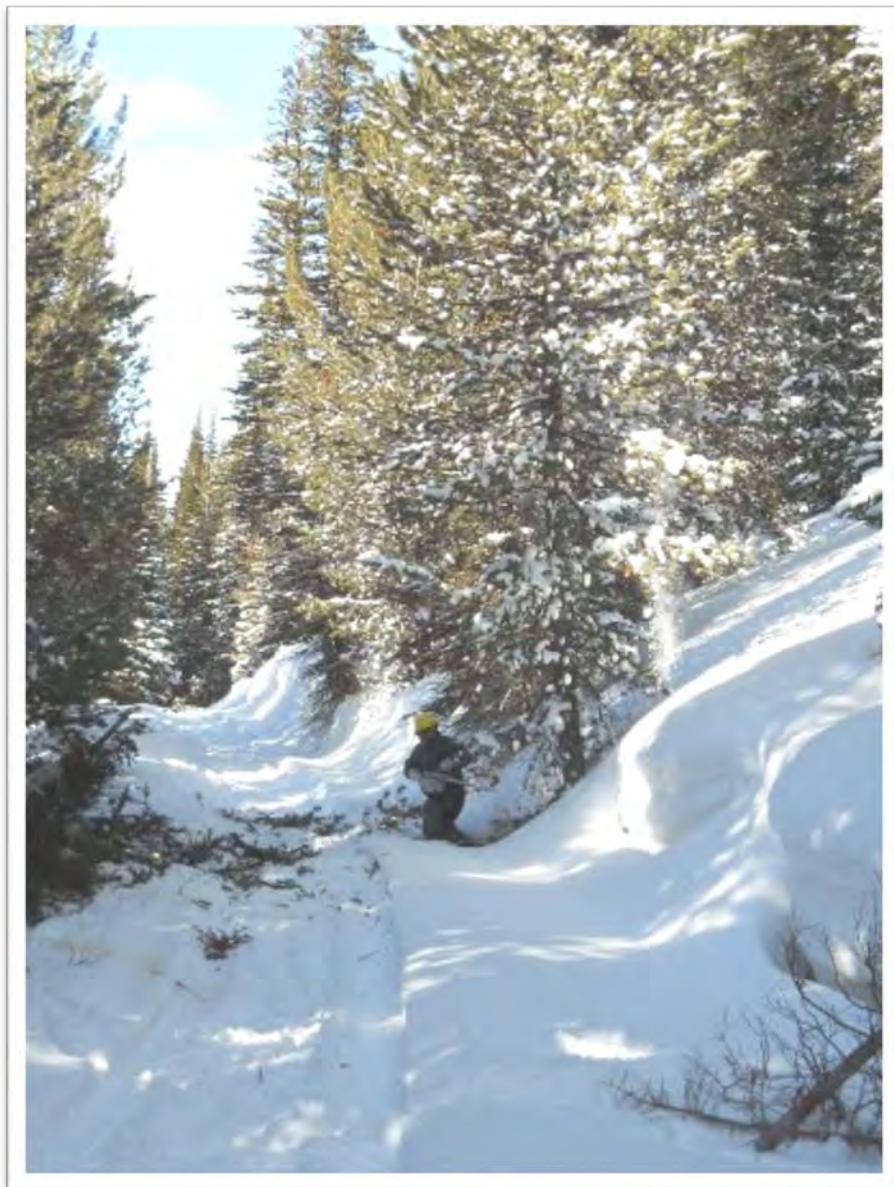


# Bear Meadows Stop Work FLA

---

Suspending a Project Due to Risk

A Facilitated Learning Analysis on Safety Empowerment



U.S. Forest Service – Intermountain Region - March 2011

## Executive Summary:

This Facilitated Learning Analysis looks at an event that was:

- successful,
- very relevant to capability to manage risk,
- a rare occurrence, unfortunately, within our agency.

The event was simply that an employee, over a period of time, came to realize a project he was working on was unsafe; not just for a person at his own skill level, but for anyone. Eventually the employee spoke up. After some initial surprise and organizational inertia, the project was reviewed by outside experts. The employee's perceptions were validated and the project was suspended.

It was *successful* because a safety concern from a front line worker got to the right people and the project was suspended before additional risks were taken and importantly before anyone was hurt. It was successful because regardless of whether or not the employee was right, he was listened to.

This event reminds us that there is always a gap between prescription and execution; between risk management in the office and risk management in the real world. The event is a good lesson and reminder that to successfully *manage risk* we need to learn from and be open to understanding the gap.

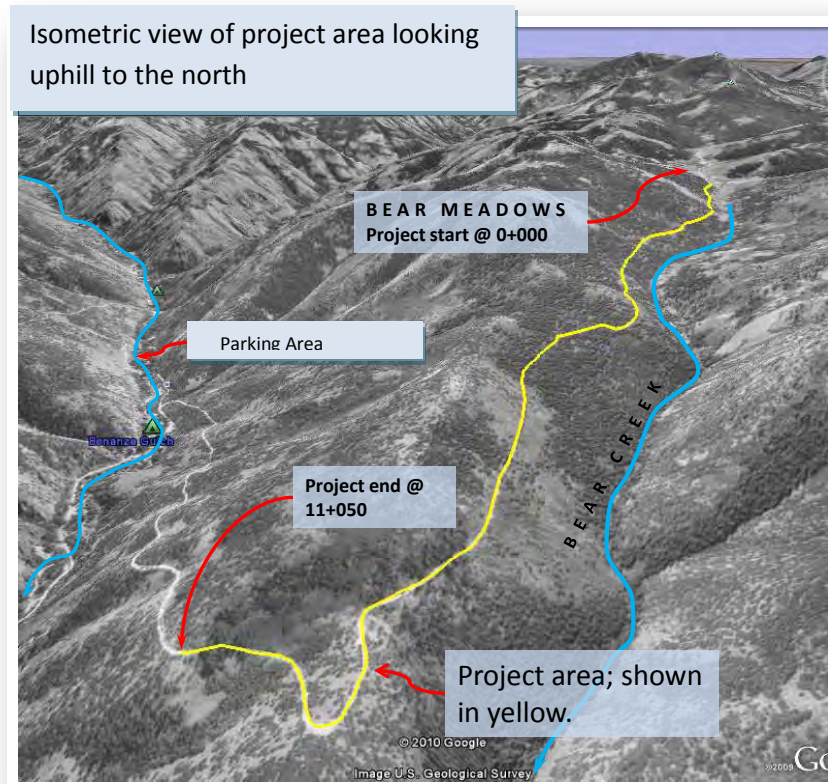
*"Individual chainsaw operators have the obligation to say "NO" and walk away from any situation they determine to be an unacceptable risk."*

Forest Service  
Health and Safety Code Handbook

And finally the event is *rare*. It is difficult, even in the best of workplace cultures, for a front line worker to raise safety concerns and not appear to be questioning or even challenging the expertise of their supervisors and co-workers. It is human nature to wonder and even become suspicious about the motivation behind the person raising the safety concern. This may be especially true when everyone else seems to be saying, the project is safe; it's fine; we are mitigating all the risks. The easier route, the more common event under similar circumstances is just say, it's not safe for *me* - and let the project continue on.

### What was planned

On a high elevation district in the Intermountain Region, a segment of a Forest Service arterial road was scheduled for reconstruction in the summer of 2011. Prior to reconstruction approximately 300 trees needed to be removed along a two mile section of the road. Leadership from the Supervisors office and the local Ranger District evaluated how best to remove these trees. One constraint was their understanding that tree cutting needed to be accomplished prior to mid-May to protect migratory nesting birds. This meant the trees along the road would need to be cut during winter conditions. Based on the availability of skilled firefighters that were to be laid-off over the winter and adequate funding resources, leadership's decision was to use firefighter labor to cut the trees and then use other force account labor to haul the trees down to a gathering area after the snow had melted.



A project plan was developed and a job hazard analysis signed. It was estimated and budgeted that 6 firefighters would compose the crew, working 10-hour days; 4 days a week. Safely cutting a tree in heavy snow is extremely laborious. Forest Service safety standards would require the workers to clear out a safety circle around the base of the tree and clear out two escape routes at least 20 feet from the tree. The expectation was that only half the 6-person crew would actually be cutting; the rest would be shoveling snow from safety circles and escape routes.

Another complexity adding high risk to the project was the extreme remoteness of the work site combined with the fact that access was exclusively by snowmobile. However, as with the timber felling risks, the planners felt they had sufficiently and thoroughly mitigated these risks to an acceptable level. The workers were given ample time to complete the project so as not to put undue production pressure on safety. In fact the production estimate was under two trees per day per crew member, for a total of only about 10 trees cut per day for the entire crew. The project was to start in late February and would take a couple of months to complete.

### *What actually happened*

Only three firefighters volunteered for the extra winter work instead of the planned crew of six. They began cutting on a Wednesday. On this first day conditions were referred to as *arduous* in the words of the crew. Getting to the parking area was over a two hour drive, and from the parking area they had to snowmobile three to five miles setting new track and breaking through deep drifts. One snowmobile became stuck in a deep drift which took some time to recover. While the firefighters eventually cut several trees that day most of their time and effort was spent just getting to the job site. As planned, the firefighters spent the night in a local bed & breakfast not far from the parking area. That evening the three felt this was tough, physical work but generally “a cool project”. No particular safety concerns were voiced by any of the firefighters.

The next day it began snowing and the crew only put in a half day’s work being cautious about getting snowed-in and knowing they had a long drive back to the ranger station. On the way back one of the snowmobiles had a mechanical issue causing the breaks to fail – another reason to return early.

The next Monday one of the three firefighters called in sick and so the field work was canceled that day. Then on Tuesday the firefighter who was sick the day before was starting to second guess the safety of the project.

He did not drive to the staging area to meet with the rest of the crew as planned but instead went directly to his duty station office. Meanwhile the two project supervisors had decided to put in a couple of days of field work on the project to check on project status and safety. They joined one of the crewmembers and waited at the staging area. Neither the crew member nor the project supervisors were told that the firefighter who was sick on the day before wouldn’t be coming to the staging area. The three ended up waiting for him to show up for almost two hours before they left for the work site expecting the late firefighter to eventually show up in the field.

While at his duty station office, the firefighter who had been sick the day before and who was now questioning the safety of the project began to talk with a co-worker about the riskiness of cutting large trees, in heavy snow, on steep ground. The firefighter reflected on a few close calls he had on the project, including falling down in deep snow while trying to get away from a falling tree. He also talked about a few trees he cut that did not fall as expected. Through these discussions with another and personal reflections, this firefighter eventually came to feel the risks of working on that project (at least for a person at his skill level) were too great.



His initial thought was simply to tell the project supervisors that he did not feel that he could work on the project safely. That is to say that the project was beyond his personal skill level. By that afternoon the firefighter had made a decision; he was not going to work on the project.

*Timber felling is considered a high risk - specialized skill. On a per hour basis or exposure basis, it is statistically, by far, the most hazardous work we do in the Forest Service.*

*Employees are certified and authorized to fell certain sizes and certain classes of trees based not only on technical proficiency but also on the employee's individual confidence or comfort level.*

*The skills needed to recognize and fell large or unbalanced trees are largely intuitive. The expert faller does not calculate the risks involved; they are sensed and estimated and managed through a variety of skill based techniques.*

*Experienced fallers rarely offer a simple or plain (black and white) determination when evaluating a tree for falling safety. Rather, some trees are relatively safe to cut some are relatively unsafe. A given tree can appear relatively safe to one faller but relatively unsafe to another faller even though both may be certified to the same level. It is not uncommon for a Forest Service faller to say, "I don't feel good about that tree." and then offer it to another employee to cut down. Because it's not an exact science, quality escape routes are crucial.*

The more he thought about it however the more he began to feel the work wasn't safe for the other workers either. He questioned how he could live with himself if someone got killed or crippled on the project. He eventually realized what he needed to do was a much harder task than simply turning down an assignment; he needed to tell the Ranger that the project itself was unsafe.

He knew his first call should go to the project supervisors. The firefighter expected the project supervisors would respect his opinion but also knew that the supervisors felt the project's risks were being mitigated to acceptable levels and were out there working that very day. He also recognized that he did not have the rank nor the experience level of either of the project supervisors so it could be a bit awkward and there might be some questions about his ability to make such a determination. Another consideration that weighed on his mind was that one of the reasons for volunteering for this project was for winter work to keep in pay status - he and the other firefighters might get laid off if the project is suspended.

Nevertheless he called the dispatch office and asked the dispatcher to contact the project supervisors (who were now at the job site and out of cell phone range) and advise (by radio) that he was not going to be working on the project - and to call back on the phone when possible. The firefighter then called the District Ranger who was over the project. He left a message on the project Ranger's phone that he was not going to work on the project for several reasons; one of them was concern for safety. He then called a highly ranked firefighter with whom he knew and trusted. He was feeling like he needed some support and reassurance he was doing the right thing. This senior firefighter answered the call and the two talked about safety concerns of the project. The senior firefighter advised that he was right to challenge the safety of the project but that he should also write an email to his duty-station Ranger (a different Ranger than the project Ranger) stating his reasons and rationale. This email would be back-up documentation, as it were, in case it were needed for a follow up review or other purpose. The firefighter wrote up and then sent the email the following day. The duty-station Ranger however was away on leave and would not see this email for almost a week.

The next morning, the project Ranger retrieved his voice mail. He was surprised and very concerned by the message from the firefighter saying he was turning down the assignment and that safety was his principle reason. Immediately the ranger sent an email to the project supervisors

(who were still up at the job site working) saying that safety and other concerns had been raised and to reconfirm with him that all necessary safety issues were being mitigated. The Ranger asked the supervisors to specifically address the issue of cutting in deep snow. This message was also blind-copied to the firefighter who had raised the concern. The project Ranger has a very high level of respect of the professionalisms of both the project supervisors. The project Ranger had full confidence that *if* there were unmitigated safety concerns, neither of these supervisors would hesitate to stop work immediately.

The following day the two project supervisors returned to their duty stations and read the email from the Ranger asking for confirmation concerning the safety of the project. Both supervisors responded assuring the Ranger that while the project was arduous, all necessary safety mitigations were in place and were being followed. This assurance was backed up by the fact they had just spent two days on the project and were fully aware of every safety issue. The project would continue as planned.

Soon thereafter, the duty-station Ranger returned from leave. He read the firefighter's email expressing concern over the safety of the project and immediately forwarded it to almost everyone that had responsibility over the project.

Upon reading the firefighter's letter the project Ranger called for an immediate project stand-down. About the same time, the two project supervisors also read the letter and also sent out stand-down notices. These events sparked confusion, tension and frustration at multiple organizational levels. The two project supervisors, for example had, just recently assured the Ranger that all safety mitigations were in place and being followed; *now* they were joining the Ranger in standing-down the project *for safety reasons*. The other firefighters working on the project were not mailed

*It is not unusual for firefighters to turn down assignments; indeed they are trained to do so. However, most often when firefighters turn down assignments it is not that the task is necessarily or inherently unsafe but rather that the firefighter or his/her crew does not have the skills to perform the task safely.*



the letter but were told about it. They were surprised at first and understandably felt somewhat betrayed by their co-worker. Why, (they didn't understand) had their co-worker not voiced these project stopping, supposedly serious safety concerns when they were together? If the project was *unsafe for anyone*, why would he not have been more concerned for their safety when he was there?



Over the next few days hard feelings began to brew. Some felt that by calling the Ranger the firefighter by-passed both standard protocol and common courtesy. The firefighter that raised the concern heard comments that he wasn't being a team player. Some people felt lied to, others felt their professionalism and reputation for safety was being challenged.

Rumors and water cooler talk about the motivation behind the firefighter refusing to work on the project began to spread, detracting from morale and communication. The project Ranger consulted with his supervisor and other Rangers. One Ranger shared that he had recently returned from a Regional Meeting where the Regional Forester had shared a *Safety EmPOWERment* (sic) card that could have been useful to support the voicing of a safety concern. The project Ranger decided to bring in 'the experts' – that is, felling specialists from outside the area that have no connection and ownership in the project. The Forest Supervisor also made preparations to bring in a Facilitated Learning Analysis team to see what could be learned from this event, specifically about the difficulty of voicing safety concerns in the Forest Service.

The next week, two highly respected felling specialists from outside the area joined the project Ranger and some of the original cutting crew and conducted a thorough safety review of the project. While it had snowed several additional feet in the past few days the review team found a location that the cutting crew confirmed was representative of the conditions experienced the prior week. The conclusion of the outside review team was that they were *“unable to mitigate the risks”* associated with falling trees in snow conditions such as those existing on the project area.

The project Ranger immediately suspended all felling on the project *“until there has been a significant reduction in the amount of snow in the project area”*.

### *Why did it happen*

It wasn't pretty; but the system worked! This was a success - congratulations should go out to those involved. Restating the executive summary: an employee was involved in a Forest Service activity that he eventually came to believe was too risky. He sought council that confirmed his belief and then alerted the appropriate line officers. The line officers involved in this event responded immediately – first with a measured but reasonable response to the verbal alert; and then with a thorough and decisive response when the threat was more formally identified. Outside experts confirmed the employee was correct, the project was too risky; and it was suspended.

### *What have we learned*

During the dialogue session the following lessons-learned were shared. These can also be forward looking statements in the sense that they are what should happen next time:

- We needed a more thorough briefing on safety and specifically how to raise safety concerns. It's always better to raise safety issues on site when they are happening. Discuss issues as they come up. Don't wait.
- Shutting down a project for safety shouldn't be a big deal. We don't need to make a fuss about it. We don't need to do a review or a FLA every time we shut down a project.
- We didn't see the increased snow, over time, as increasing the risks over time. Conditions changed from the time the project was planned - but perceptions and maybe risk management didn't.
- The increased complexity (i.e., areas of deep snow) decreased productivity but we didn't seem to factor that in to how we were managing the project. This was a lot more work than anticipated.
- Field crews can be expected to take more risks than the Ranger will probably feel comfortable with.
- When several things start to not go right like close calls and heavy snow, that's a sign to step back and take a bigger look at the entire project.
- Make sure you understand the project before you volunteer to work on it. Don't just assume you understand what all it involves and then volunteer.
- We do AARs daily on fires; we should do them on project work too.
- Don't just assume you understand how another person is feeling about risk, talk to him specifically about it.
- Don't be wishy-washy about concerns that deal with safety. If you have a safety concern say, "I have a safety concern."
- Be more thorough and detailed in expressing leader's intent - specifically in detailing all the tasks necessary to mitigate safety issues.
- When you are so comfortable with your folks that you assume they know what you know and see things how you see them, then you've got trouble. If I feel I don't need words; well, that's dangerous and I should take that as a warning signal.
- When somebody says "hold on the work isn't safe", our first reaction should be to say "thank you" not question their motivations.
- The process worked. We just need to improve on the execution. It's just the communications breakdowns caused some hard feelings.

### *Suggestions for continued learning.*

The following question arose out of the dialogue session, interviews with people involved in the project and other conversations about this project. They may be helpful as pre-mortem questions to use in future project planning, risk assessments, risk management planning. They may also be useful in safety meetings focused on upward reporting, building a just culture and safety empowerment. Most of these questions are hypothetical and have no direct relation to the event or people surrounding this FLA:

- How would you react if you had been one of the project supervisors of this project after learning that a serious safety concern had been raised about your project to the Ranger? How would your reaction encourage or discourage employees to report future safety concerns?
- How would you have reacted if you had been the project Ranger? How would your reaction have encouraged or discouraged safety empowerment and a just culture throughout the rest of your district?
- If a project your employees are working on is considered fun; how would that affect their perception of risks?
- If a project your employees are working on is the reason some of them are in pay status, would this fact affect their perception of acceptable risk? or yours?
- If you were intimately involved in the NEPA, budget and operational planning, JHA and supervision of a project, would that color your perception of risks? If the risks on this project changed slightly but cumulatively over time, would you be more or less likely to notice them as compared to an outsider?
- How can you give attention to one voice saying “unsafe” when all others are assuring you it is safe?
- How worried are you that an employee will *pull the safety card* as an act of reprisal or to get out of doing difficult work? How does that affect your response to an employee actually raising a safety concern?
- Do your leaders react positively or defensively when they are asked to defend the safety of their projects or the safety of their decisions?
- Say an employee claims a project is unsafe. You respectfully analyze their concerns, maybe with outside



experts, and determine the risks are clearly acceptable – from your standpoint the employee is wrong. How would you keep that employee from regretting raising the safety concern? How would you keep the employee engaged and willing to trust you again; that is to trust that you’ll react positively if he or she speaks up again?

➤ You’ve probably heard well intended supervisors say things like, “if anyone raises a safety issue I’ll stop the project!” What kind of message does this send? How can it be interpreted and be counterproductive?

*FLA Team:*  
*Stan Adams, Fishlake NF*  
*Steve Holdsambeck, R-4*