

# Learning from Escaped Prescribed Fire Reviews Workshop Discussion Summary

## **Project Background**

This Joint Fire Science funded project seeks to understand individual and organizational learning from prescribed fire operations, particularly how existing review processes do or might promote capture and transfer of lessons from prescribed fire escapes. We seek to understand what aspects of current reviews (processes, venues/formats, timing, and distribution techniques) are most effective in promoting organizational learning.

## **Purpose of this Document**

This document synthesizes the topical landscape of five workshop dialogues. These two-day workshops were structured to explore all aspects of learning in the context of prescribed fire. Each was built around a learning “sandbox”, which included four contexts for potential learning: the prescribed fire event itself, the review process, products of the review process, and mechanisms and activities to transfer lessons learned to others. Our sandbox also recognized that learning may occur individually, among a crew, within a unit and across the inter-agency community. Dialogues explored four core topics: learning moments in prescribed fire, how lessons are or are not moved into action and changed behavior, barriers and facilitators to learning, and a summary of what to retain, remove, add or build upon to improve the current review system. This document follows this progression. Level of detail does not necessarily convey level of importance or amount of time devoted to that topic.

Five workshops were held between January and July, 2011: in Portland, Denver, Salt Lake City, Tucson, and Tallahassee. Each drew participants from multiple organizational levels from all federal wildland fire agencies, the Nature Conservancy, and the AD community. Half of the 66 total participants have worked for more than one wildland fire agency. Eighty-percent had some experience with reviews, either as a burn team or review team member, and one third had experience on both sides. Discussions were rich and lively. Participants appreciated the open format and the ability to share, listen, and learn from each other.

During each workshop one team member took notes, synthesized the themes that came up during the two days, and read the synthesis back to the participants at the end of the second day. The purpose was to generate a quick summary of topics discussed as well as to demonstrate the productivity of the dialogue approach by allowing the participants to see the breadth and depth of the conversations they had just created. The synthesis below is based on those topical summaries. It is important to note that it reflects the landscape of discussion – that is, topics participants chose to discuss during the dialogue sessions – but not yet our deeper analysis of these data. It should also be regarded as representative of the conversation but by no means exhaustive.

The Workshop Discussion Summary below supplements the Flip Chart Summary, which synthesizes participants’ written suggestions from the final afternoon. Both are initial products and will be supplemented and expanded upon in future reports.

## **LEARNING FROM THE PRESCRIBED FIRE EVENT**

Many of the learning moments described by participants occurred during the prescribed fire escape event itself. Stories and discussions encompassed not only tactical lessons, but also raised the importance of external pressures and pre-existing elements that “set up” challenging conditions – pressure to produce (meet target, use resources already committed, take advantage of a burn window), burn plans that were too specific or too vague or not useful as operational documents. These discussions also provided a glimpse into the emotional landscape surrounding escapes that influence an individual’s receptivity to learning, and how this can be heightened by the review process.

Participants identified the value of After Action Reviews as due to their regular occurrence regardless of outcome. Dialogues also indicated that most practitioners self-analyze escapes regardless of subsequent formal reviews and often “know” what went wrong before a review team even arrives. Suggestions for improving local learning from escapes themselves focus on promoting the AAR, and other informal, reflective mechanisms.

Considerable discussion time was also given to how lessons from previous escaped prescribed fires might be systematically and effectively incorporated into pre-burn preparations.

### **Production Pressure**

Participants noted a number of ways in which perceived production pressures can influence a burn. Much of the pressure to produce is created within programs/individuals that are highly motivated and want to do the right thing for the land. Pressure on a burn can arise from costs and resources already committed to a project. As one participant put it, “it’s difficult to turn off the spigot.” One Wildland Fire Module member characterized this as hearing, “you’re expensive – go burn stuff.” In general, regional level participants didn’t perceive target pressures as concretely as field level participants. Some participants wondered whether such pressures might be a matter of perception and might be clarified by revisiting intent with one’s supervisor. Others discussed ways to remedy these various sources of pressure.

Discussions of the go/no go call also raised issues of voice. In addition to production pressure, some participants mentioned how cooperators can still exert pressure to move forward (sometimes cooperators can exert the opposite as well: holding programs back, particularly with in-season burning), often for the same reasons mentioned above. For instance, burn windows closing and the prospect of having to re-schedule resources are factors that sometimes pressure burn teams to keep going even in suboptimal conditions. Some participants mentioned “the need to call BS when people pressure you” but others implored that “it is not enough to say ‘stand up to people’” but rather to implement structural change. Some talked about mentoring fire staff to enable them to see the bigger picture.

### **Burn Plans**

Burn plans came up frequently as a result of review team’s focus on them. First, participants debated the relevance of the burn plan as an operational document. Some wondered if burn plans were “just for show” or to “jump through hoops.” Second, participants mentioned the cumbersome mechanics of putting a burn plan together which may encourage a cut and paste approach from previous plans. However, we did hear some specific stories of crews being mentored by more experienced people to “start from scratch” when preparing a burn plan. Third, the discussions revealed a kind of pendulum of

## Learning from Escaped Prescribed Fire Reviews

burn plan specificity. That is, at any given time, the prevailing practice in preparing burn plans may vary from being too specific and creating more opportunities for being out of prescription, on the one hand, to being not specific enough (or with blocks intentionally not filled in) and thus lacking operational utility, on the other hand.

Examples of lessons learned from an event include: staging the contingency resources listed in the burn plans, and conducting a “pre-mortem,” or trying to shoot holes in the burn plan ahead of time to identify what might go wrong.

### **Emotional Landscape**

Dialogues provide a glimpse into the emotional impacts of an escape and its aftermath. Burn bosses and others reported immediate and continuous self-recrimination and second-guessing. They don’t need a review team to do that. Some feel that a review “creates a shadow over the team” that adds to the emotional burden and heightens concerns about outsider scrutiny. Participants noted, for example, that the presence of a review team can reinforce the perception that being out of prescription signals “failure”, even when using an ecological scale of time, a higher-than-expected intensity ultimately proved beneficial to the landscape.

Related to review products, many participants insisted that receipt of the final review product provides an important step toward closure. Release of a final report signals the end of the event and the beginning of the healing and rebuilding process among individuals, crews, program, and partners. Without the official report, it is difficult to ‘move on’ and ‘rebuild’.

## **LEARNING FROM THE REVIEW PROCESS**

In general, field-level participants did not report learning much from most review processes, with the exception of those that are specifically targeted to assist *their* learning, as opposed to capturing lessons for *others* to learn. Participants generally characterized a “failed” review as one that results in blame and scapegoating, and does not convey the correct story or the “entire” story. On the other hand, they characterized a “successful” review as one where the crew has buy-in, learning happens, and everyone comes away satisfied with the process and its result.

Where do reviews go wrong and why? Where do they go right and why? How might review processes be changed to capitalize on the successes and avoid the failures? When discussing these kinds of questions, workshop participants identified a climate of fear as well as specific missteps or gaps in the current processes that might cause even well intentioned reviews to feel like failures for those involved. These include confusion over the intent, audience, and scope of a review, as well as the composition, mobilization, timing, and attitudes of the review team members.

Fortunately, for each of these problems, participants also identified concrete suggestions for improving reviews, and possibly the climate for reviews, going forward. These included suggestions for review team composition and mobilization, delegation letters, scope of reviews, considerations about audience, and review process timing.

### **Climate for Reviews**

At all of the workshops, discussions about current escaped prescribed fire review processes raised concerns about the cultural climate that exists for reviews in general. Discussion of climate was not just limited to prescribed fire, but ranged from AARs to serious accident investigations. High profile events like Thirtymile and Cramer in particular were cited as having had a chilling effect on younger firefighters' willingness to talk. Some expressed feelings of betrayal or bitterness from seeing peers not supported by their agencies during or in the aftermath of an escaped prescribed fire review, and from processes gone awry. The resulting perceptions of lack of safety put reviewees in a defensive stance, which impairs learning.

Those who had conducted reviews noted how difficult it can be to get people to relax and open up during a review because crews seem suspicious of reviewers, interviews, and even "new" processes that are specifically intended to reestablish trust. Some told stories about how the climate of mistrust can manifest itself as internal suspicion, such as one FLA that devolved into "finger pointing."

Although there was acknowledgement that sometimes there will still need to be legal investigations, participants struggled with whether and how to pursue learning in such a climate. It was noted that while having access to an attorney signaled organizational support, having one's attorney present has a chilling effect on discussions.

A crew's reception to a review team is directly affected by how leadership presents the process and review team. It is also affected by the specific unit's history with reviews, and by a general lack of experience with reviews (outside of the AAR). As one participant put it, "perhaps if you did reviews all the time they would not feel as raw." Some workshop participants debated whether crews should be interviewed individually or in teams. While some advocated that group approaches like the FLA are essential for achieving true crew learning, others cited examples of how fears of "looking stupid in front of peers" may cause people to not be as forthcoming in the group setting as compared to what they might share in later individual interviews.

### **Review Process - current gaps and potential mis-steps**

A good review can provide a program with a broader view, more clarity, and can reduce individual blind spots.

Participants cited the following reasons for conducting a review: people want to share their story; they generally want to learn and a review can provide opportunity for reflection for team learning in particular; and likely is necessary to show due diligence at regional and/or national levels. An outside perspective can provide a useful perspective. And ultimately, such feedback may help to create a stronger prescribed fire program overall. But our discussions also registered a perceived disconnect between these worthy goals and the intent and scope of reviews as they are currently structured.

#### *Intent*

The fact that reviews are required by policy continually raised discussions about the intent of reviews: The question was often asked whether we conduct reviews for the sake of learning, or for the sake of policy, or both? Some expressed that reviews were intended "only" for policy reasons, and were not actually intended to be "something to learn from," such as for the burn boss and below. This led to discussions of the proper audience for a review, as well as scope.

### *Audience(s)*

The policy “vs.” learning characterization created space for discussion about who exactly is (or ought to be) the intended audience for reviews. The consensus is that reviews *should be* for the Fire Management Officer and below, but currently are not. Participants felt that this is mostly due to the orientation and behavior of the review team, as opposed to the type of review process used. For instance, while several FLA’s were praised, others were not. Participants identified different groups who might benefit from a review, but also acknowledged their needs might be different or even incompatible. Potential audiences inside the organization included: the burn crews involved, the burn program, peers, the administrative or regional office (especially for tracking trends), and the Washington Office (for the sake of policy). Potential external audiences included cooperators, regulators, and legislators. What may be useful for the line officer or regional office may be different from what might be useful for the crews and cooperators, to name a few, and their differing and sometimes conflicting needs pose a challenge to a “one size fits all” approach.

One unexpected audience was the review team itself. Many participants identified things they personally learned while acting as a reviewer for others. In more than a few instances, participants returned to their home units with a deeper understanding of what review teams looked for, and conveyed this message to their coworkers and subordinates. Review team members were also mentioned as having a stake in learning from reviews insofar as they could identify lessons they learned in conducting the review that might be useful for future review teams.

### *Scope*

The “seven questions” required by policy (as per the Interagency Prescribed Fire Guide and the *Red Book*) were the subject of much discussion in all workshops. Some noted that there are judgments embedded in them. For example, the question says not “Was there a burn plan?” but rather “Was the burn plan adequate?” A few asked, who decides what is “adequate”? For instance, concerns were raised about the scrutiny that is placed on the burn plan itself during escaped prescribed fire reviews, often, according to many participants, the first thing review team looks at, even when in the eyes of the burn crew it was irrelevant.

Participants often agreed that the seven elements were “probably useful for someone” (such as at the RO or WO levels) but that they do not facilitate learning at the burn boss level and below. Even regional office participants felt the seven questions were mostly valuable to answer only insofar as they were required by policy, not that those particular questions gave them useful information. Some articulated the need for an “eighth” or “extra” element to focus on capturing lessons learned. Specific delegation letters were cited for having helpfully added this additional step, thus creating more of a space to pursue crew learning. Sometimes these “extra” elements were called “identifying human factors”, “capturing lessons learned”, or “identifying ways to work toward becoming a more highly reliable organization (HRO).” [Note that another element raised in the flip chart summary relates to responsibility for product distribution.]

Many participants identified the letter of delegation as a key document that sets up a review for success or failure. As mentioned above, they can direct a team towards facilitating learning. However, lack of communication regarding the contents of a letter can lead to a lack of shared understanding of the goals of the review, or ‘buy in’ from the unit being reviewed. Even though some may be privy to a delegation letter, it may still be unclear to others who ordered the team and what the intent was. A vague letter can enable momentum to expand review scope beyond the intent of the letter.

## Learning from Escaped Prescribed Fire Reviews

One review per incident is better than multiple reviews from the perspective of those being reviewed, although it may be difficult to impossible to meet agency needs for accountability and learning with a single process.

### **Review Teams**

Participants identified factors related to the review team itself that can make or break a review (that is, either leave a negative impression or create a positive experience). These include who is assigned to conduct a review, their relationship to the team being reviewed, how they are brought in, the attitudes and behaviors they display while they are there, what they are assigned to look at, and how long they stay.

#### *Composition*

Review team members' positions and agency affiliations vis-a-vis the team being reviewed were of concern. Having the process too "in house" taints credibility, according to some participants. Yet, having out-of-region or WO level reviewers potentially diminishes psychological safety – and peer knowledge - of the unit being reviewed. One participant commented that even when reviewers try to convey a "helpful" spirit ("Hi, we're from the National Office – we're here to help!") it is not so easy to set aside the symbolic effects of rank and power. Statements like "the RO and SO are not our 'peers'" conveyed this idea, but also a desire to be reviewed by peers closer to their level who understand their work and the conditions they work with on the ground. Being reviewed by peers is important; it seems to add credibility to the whole process.

#### *Mobilization and Timing*

Participants discussed how timing of the review team mobilization can impact a review. On the one hand, participants expressed dismay at reviewers being mobilized so quickly that they "surprise" the fire staff, or, at the opposite extreme, how too much of a delay between the event and the review team mobilization can raise levels of anxiety and uncertainty. Mobilizing too soon and the level of stress may still be too high for effective reflection. If the escape occurs in the middle of a busy season, mobilizing too late means the burn team has already moved on or has lost the opportunity to incorporate lessons into on-going operations.

The duration of the review can impact how it is perceived, with proponents for both shorter and longer durations. On the one hand, participants discussed time constraints placed on a team to finish a review by a certain deadline (deadlines have to have a realistic expectation, when we don't is where we get into trouble). On the other hand, participants noted that a review team's prolonged presence can send a negative message. At times it seems as though momentum may lead to an overly ambitious review process.

#### *Attitudes and Agendas*

Participants underscored the importance of "working respectfully with field folks" during a review, citing review team member attitudes and behaviors that they had witnessed that erode trust and worsen an already negative climate for reviews.

A major misstep occurs when reviewers seem to "have an agenda". For example, a reviewer may be perceived to be using a review to advance a pet issue they wanted to air anyway, even if ground crews feel like the issue was irrelevant to the incident. Or, reviewers may seem to have a preconceived bias about what they think happened that colors their approach. In this category, participants included

## Learning from Escaped Prescribed Fire Reviews

review team members having been “pre-briefed” by the delegating authority, meaning that instructions to the team seemed to point toward particular findings before the team even began its work.

Participants described a gap that can occur between what a review is called and how those being reviewed actually experience it. Some described frustration from seeing a “new” name being used for an “old” process. In other words, despite being told the goal of the review was for learning, the review ultimately felt like a “witch hunt” to those involved, seeming to focus on measuring compliance rather than seeking lessons. At the opposite extreme, reviews at times seem like just another box to check, and therefore seeming empty, disingenuous, or a waste of time and resources.

### **Wish List for the Review Process**

#### *Audience.*

Overwhelmingly, participants felt that the burn team who was the subject of a review should be a key audience to benefit from the review.

#### *Timing.*

Participants in each workshop also noted that learning continues long after the review is complete and that it would be great to figure out how to capture and communicate these. Participants also reiterated the importance of actually releasing the report or product for the sake of the local team to reach closure, to move on, and to begin transferring and incorporating lessons with their partners.

#### *Telling the story*

It is important for the reviewers to document what happened from perspective of people on ground, including vetting the story with the people involved and getting “buy in” from them. There are many different perceived realities to a single event. Multiple perspectives can fill in holes. Some noted that doing this well could represent an opportunity to repair a bad experience, such as righting ‘wrongs’ you experienced yourself on the other side of the coin.

#### *Letter of Delegation.*

It is really important that employees know the commander’s intent and objectives of a review. Participants recommended clarifying the objectives of the review and using the letter to create an opportunity for dialogue. Some recommended that the delegating authority should draft the letter, discuss it with the team, change it if it is too narrow or too broad, and revisit it when need be during the review.

#### *Review team - composition and skills*

The review team should be from a unit “distinct enough” from the burn team, well matched to the burn team by having similar skills and level of performance (GS level), and should be matched to the burn teams’ needs. Many participants also expressed gratitude and desire for ‘mentors’, those with more experience who can help the burn team members grow their skills during the review.

Teams should include members with good writing skills, listening, and training in interviewing. They should set aside any agenda, work respectfully with field personnel.

When mobilized, the review team should not be too close by or in the way of ongoing operations – working in an off-site location or posting the letter of delegation outside the office where the review team works can help lower anxiety levels.

## Learning from Escaped Prescribed Fire Reviews

Some discussions toyed with whether a standing cadre of trained reviewers would be advisable, while others cautioned that it should look something more like a professional cadre rather than a “review specialist” who is tied to a particular process.

### *Review scope.*

Reviews need to look at human factors beyond the seven items required by policy. And, many expressed the scope of a review should be scaled to match the burn complexity, although others equally advocated that it should be scaled to match the severity of the outcome.

### *Duration*

Duration of a review should strike a balance between completing a review too quickly and being there too long. Don't steamroll, said the participants, but don't draw it out either.

### *Transfer of review products.*

Participants debated whether it is the review team's role to develop transfer products. Some felt it may not be, whereas others expressed that one or two members could be tasked with this job. Whichever, spelling this out in policy or the Letter of Delegation would help. The Lessons Learned Center could serve as a good repository.

## LEARNING FROM THE REVIEW PRODUCTS

What do review teams produce and who reads/uses them, why, and how do they use them? What are the incentives and barriers for accessing, attending to, and learning from the products? When considering these kinds of questions, participants discussed value and motivations for and against reading reports, comments on the design of reports and other products, and offered suggestions for deliverables review teams might and might not produce.

### **Reading or Using a Report**

Review lengths frequently reduce their value, who has the time to read through long reports?

Participants said they take the time to read a report if it happened to or affected their particular unit, has some parallel connection or relevancy to one's job, if they knew someone on the incident or heard something intriguing about it that piqued their curiosity.

Motivations to not read a report include not being able to interact with a report - some would rather talk with the people who were there. Participants indicated being less likely to read or recommend a report that did not seem to have the “whole story,” or as in some cases, seems to have “more than” the whole story. They were also skeptical of reports that did not seem to have “the accurate” story; that is, not compatible with the story heard from someone they knew was there or not compatible with their own story if they were involved. At a few workshops participants engaged in lengthy discussions about how multiple stories exist because multiple perspectives exist on the same incident, and they grappled with how this could be expressed in a single story written at a single point in time.

At other times, participants report, they do not read a report because they are unaware that it exists or they are not sure why they should read it. Concerning the length of reports, participants say they already have too much to read in general for work, including email. A few participants noted that



## Learning from Escaped Prescribed Fire Reviews

completeness, accuracy, and length issues aside, it may be a cultural badge of honor to question the credibility of any report that attempts to tell an operational story.

### **Current Product Design**

Current reviews lack a clear audience. While many field-level want the specifics of what happened and what was learned, current reports are often too long, include too much ‘fluff’, and/or too much redundancy. On the other hand, the documents produced by more recent ‘learning’ oriented processes are often too cryptic for others, even peers, to learn from. Regional and national audiences seem to want to be able to quickly assess ‘what happened’ and ‘why’. They are less interested in field-level lessons learned and more in understanding whether they need to ‘do’ something ... often times that ‘doing’ translating to policy or procedure changes. Maybe the WO does need answers to the seven items, many reasoned, but those seven things are not designed for peer to peer learning. As a result, in current reviews there is “not much there for Burn Boss and below”.

Others lamented that despite the time and effort that goes into a review, it seems that a report often “doesn't fix the problems” that may have been identified in a review. Some explained that recommendations – which aren’t required by policy but are often the only thing a delegating Line Officer wants to see from a review team - can be “wiggle worded”. Participants also noted there is too little follow-up to check on whether recommendations had been implemented or make a difference.

### **Wish List for Products**

When asked what features and qualities they would like to see in a product from a review team participants said that a product should help others to understand the decisions that were made by the people involved at the moment. For the field level, this does not necessarily need to be a written report, although some tangible document is useful for posterity and for creating additional transfer products. What would we know about Mack Lake, a participant mused, if we didn’t have a report? The ability to create a vicarious experience for the reader/viewer is crucial, in which someone can relate to the event by recognizing how it could occur for themselves or their programs.

Many suggested (or was that implored) making written reports shorter in length. Two pages or five pages were often mentioned as acceptable lengths, with bullets being preferred. For many, however, there is a minimum set of elements that would need to be included: a chronology, maps, pictures, and quotes from people who were there.

Workshop participants expressed that review team products should provide learning for the team that was involved as well as for others. The review team should establish buy in, and vet any stories with participants. Additionally, a way should be identified to capture multiple perspectives that exist on a fire, perhaps through the inclusion of multiple stories.

Reviews should consider multiple vehicles for dissemination to multiple audiences. Workshop participants started talking about a review team “Package” rather than a “report,” acknowledging different modalities they could produce for different audiences.

The most valuable transfer mechanism appears to be “road shows,” where a burn boss or other burn team participant travels to trainings, refreshers, workshops, and conferences to give a presentation about an event. Unfortunately, these may also be the most expensive transfer technique. Given the

## Learning from Escaped Prescribed Fire Reviews

desire expressed to “review” successful outcomes as well as escapes, this might be for positive as well as unintended outcomes.

Other product types mentioned frequently are interactive and communicated in the voice of the burn team, including podcasts, sand table exercises, staff rides, and videos.

Participants expressed an interest in creating some best practices documents that could be “living documents” in the sense that they could be updated as need be, perhaps electronically. Two ideas that were raised included a best practices living document for conducting prescribed burns, and a best practices living documents for conducting reviews. A particular prescribed fire review could also be a living document, as imagined by some workshop participants. The ability to add to story later, or even change the story if needed, was discussed.

## LEARNING FROM TRANSFER

Many workshop participants identified a slowly changing climate in which reviews are being conducted and their products disseminated, though noting that it is challenging to get compliance minded people to buy into new processes and products.

Among practices that are working well for transfer, participants identified road shows by burn team participants.

One lingering question that emerged across all of our workshops is: Can you learn from someone else's experience? Or do you have to experience an escape to learn from it? Some expressed a belief in being able to learn vicariously from others' stories. Others worried that even if some can learn from others' experiences, whether the learning can be “permanent” in an organizational sense.

### Wish List for Transfer

As described above in Product, workshop participants often expressed that the review team or another publicly designated entity should generate a “package” of items or products targeted to different audiences.

Products should be better promoted to those audiences. The intent should be to provide a “that could have been me” or vicarious experience for the viewer/reader/listener.

Transfer should incorporate newer technologies that not only can reach a variety of audiences such as Google Earth tours, podcasts, video interviews, and sand table exercises that also allow for details and perspectives to be added at a later date.

Many expressed the desire for regional offices to compile trends and share that information back to the field. As one participant put it, “someone needs to look at all of it, identify and communicate trends and patterns.”

Review teams should share lessons with Burn Unit and the unit should use those as litmus tests for next the burn plan. These should roll up to case studies at Burn Boss refreshers.

## Learning from Escaped Prescribed Fire Reviews

This product is part of a Joint Fire Science Program sponsored project ( 10-1-05-1) designed to describe how learning currently occurs during reviews of escaped prescribed fire and ways to improve learning. Principal investigators include: Drs. Anne Black, Jim Saveland (USDA Forest Service, Rocky Mountain Research Station), Dave Thomas (renoveling, Inc), and Dr. Jennifer Ziegler (Valparaiso University). For more information, please contact: Anne Black, aeblack at fs.fed.us, or visit the Joint Fire Science Program website.