

Learning from Escaped Prescribed Fire Reviews Workshop Flip Chart Summary

This document presents a synthesis of the flip charts and discussions from the final afternoon of each workshop. During this session, participants brainstormed about what to keep, what to dump and what to change in burn operations, review processes, products, and transfer in order to further encourage organizational learning from escaped prescribed fires. Although each workshop developed its own flavor and culture, the main topics arose spontaneously in every workshop.

The synthesis below reflects the flip chart notes, after editing for clarity and to remove redundancies. This document supplements the Workshop Discussion Summary by providing more concrete ideas about how to improve the review system, the review process, review products, and transfer of lessons learned. Both are initial products and will be supplemented and expanded upon in future reports.

Although many of these ideas can be initiated locally, taken together, the workshops convey a request for national level articulation and coordination of an over-arching system for learning from events, synthesizing the information, and disseminating it back to practice at all levels. This begins with a clear, aligned system of reviews that allow for trend analysis and synthesis at the organizational level, complemented by easy access to products by all levels of the fire community.

REVIEW SYSTEM: Create clear system of review types, and clarify the application, goals, scope, and audiences for each one.

- ❖ Expand “reviews” to include the full spectrum of performance: good, routine, bad, and ugly.
 - Focus on understanding performance and variability in all its forms.
 - Think of accidents as unexpected combination of normal performance variability.
 - Take every opportunity for learning and create more.
 - Travel to other units/agencies/areas to build experience at all levels.
 - Make trainee mentoring a priority (with agency support).
 - Increase flexibility so that any level of the burn organization can request a review of an event
 - Highlight successful programs/individual burns with presentations at conferences, staff rides, etc.
 - Local learning culture is engaged when punitive action is taken off the table. Given, though, that there will continue to be legal investigations at times, participants note that if the organization can provide legal protection and counsel that would help address if not mitigate the fright factor.

- ❖ Clarify and succinctly define and describe each process. Why are Rx reviews different from other reviews? Why not the same process?
 - Consensus formed around the need for greater clarity in direction:
 - Identify the intent, purpose, audience and product for each type of review. The one in the APA guide is buried; this needs to be easily accessible and include all types of reviews, perhaps on a 1-2 page website.

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- Fifteen pages devoted to reviews in the Red Book can be intimidating! Use a doctrinal approach as opposed to a prescriptive one. For instance, there is confusion about whether direction is inter-agency, or agency-specific, how the Rx Guide and “policy” and manuals intertwine.
 - Change policy, simplify or clarify so that we have one, scalable review process vs. the confusion that now exists – AAR/FLA/APA/Review SAI.
 - But no clear consensus emerged regarding *how* to clarify
 - Several workshops listed pros and cons:
 - AAR – good because are routinely practiced regardless of outcome and anyone can initiate.
 - Insert risk dialogue into briefings and AARs:
 - What could go wrong and what will we do about it?
 - Allow people to bring up their “left hand columns” – those thoughts or incomplete thoughts that contain potentially useful information, but are rarely shared.
 - APA/FLA - While some workshop participants feel that APAs and FLAs are good because there is no investigation, others would say that APAs and FLAs have been accused of looking like investigations, and some organizations (e.g., BLM) would say they “not good” *because* there is no investigation.
 - SAI - covers the legal bases, but has a fright factor.
 - Regional reviews - determined according to agency manual also have a fright factor.
 - BAR (before action review; similar to a Pre-mortem) - good because anyone can initiate, can look at the big picture, or programmatic.
 - Readiness review - BARs if at programmatic level would be similar.
 - Technical/peer review - good because anyone can initiate. Consider having an on-site peer review of a burn plan.
 - And a number of new ideas emerged:
 - Develop an optional “what can go wrong” list for the RxB to do after the burn plan is complete. Keep short. [As one participant noted, the actual burn plan can provide a mechanism for this. Element 13 covers safety (e.g. – injuries, medical emergencies, etc), element 16b identifies critical holding points, element 19 covers smoke, element 5 are the objectives (e.g. – unwanted fire effects), element 7 prescription (e.g. – unwanted fire behavior), etc. What can go wrong is embedded in almost every element.]
 - Consider matching burn boss experience and aptitude to each burn (i.e., local BB may or may not be best BB for a particular burn.).
 - Include past burn history in burn plan file for specific unit (insert the post-burn report into the burn plan file).
 - Develop Burn Boss report to transfer info to successors (on unit).
- ❖ Do not mix pursuit of cause with pursuit of learning, but ensure that the learning needs of each level of the organization are met (field, regional managers, WO, etc.).
 - Many question the ‘7 elements’:
 - What is the purpose and value of the “7 elements” as required by policy? Is the need to document due diligence or to generate actual for answers to those 7

questions? The 7 elements appear to relate to cause. Depending on the review objectives, having some kind of starting frame work is probably beneficial.

- For whom are they useful? The 7 elements are viewed by many as a search for “cause,” which is perceived as in opposition to a learning environment.
 - And noted that if these are not valuable for RO-WO, then remove or adjust these to capture only what is necessary to create learning products (i.e. field-oriented).
 - There is also considerable sensitivity to the potential need for those particular 7 elements, with the general supposition that these may be useful to the RO and/or WO. In such a case, participants raised a number of potential solutions:
 - If they are needed and valuable, is it possible to create both a “review” document (for higher levels) and a “learning” document (for ground level) from the same team and process? (*Note: participants were divided on this point.*)
 - If retained, ensure discussion of each of the elements is followed by “so what” and how did this affect the outcome?
 - Stage or separate reviews if there are multiple needs.
- ❖ Recognize there are different people who need/want to learn from a review, each of whom may have different goals, processes, and audiences. These groups exist across a spectrum like concentric ripples, but the boundaries between are permeable. Each has a slightly different set of learning to come out from an event, and therefore a slightly different set of goals, audiences, and processes.
- **Individual/Burn Team:** In the center, the smallest groups are the individual and burn team. Learning occurs here with AARs and other such internal, informal, undocumented reflections, with roll-ups emerging when an issue has a broader implication. Likely focuses on the operational and real-time.
 - **Group/Home Unit:** next ring out, includes larger perspective, fuels program, leadership and more operational and strategic level factors.
 - **Agency/Interagency:** next ring out. Important to capture key elements for identification of weak and strong signals across units, and development of subsequent broad-scale response if necessary.
 - **Policy/Stakeholders/Public:** outer ring includes necessity to identify potential policy needs (strategic level) as well as to account for activities to external audiences.

REVIEW PROCESS: Get the review off to a good start, and strive for buy in from – and emotional support for – the crews involved.

- ❖ Whether a positive experience occurs depends in large measure on how a review begins. Line/Key staff set stage for positive outcomes. Ensuring “no surprises” for the unit is an essential part of this. Involving key members of the unit being reviewed in planning establishes an important tone.
- Conduct a local AAR immediately and capture significant outcomes.
 - Line officer should collaborate with burn team to identify and discuss the type of process to use and the desired outcomes.
 - Involve key burn team players in selection of review team and/or composition criteria and timing of review.
 - Share expectations with burn team prior to review team arrival (delegation letter, documentation, etc.).

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- Transparency throughout process and findings/products is important.
 - Seek to avoid surprises and lack of clarity on purpose, process, and outcome. Communicate leader's intent up and down with Delegation of Authority.
- ❖ Match the process with the event and be transparent about what and why. (Note: The idea of basing the review process on intensity of outcome had proponents and opponents.)
 - An outside perspective can be very helpful (both for internal and external audiences, though for different reasons), particularly helpful for local unit if the person is known and can function in a mentoring/coaching capacity.
 - Promote learning opportunities to encourage improvement of Rx program, such as leaving one member of team behind for coaching.
 - Need processes for facilitating healing. Heightened emotional state influences the ability to learn, and the review may impact this further (either positively or negatively).
 - Need more dialogues, both informal and facilitated, among those involved to stimulate sensemaking and learning.
 - Learning continues, often for years following a significant event. Can we capture that? Developing staff rides, even low complexity local ones, can be very effective to stimulate and encourage learning over the long term.
 - Consider that different levels need different things. Can the review team produce both a lessons learned document quickly for locals and something else for other internal audiences, such as a 45 day administrative review?
 - Involve all levels of operation and focus on facts and learning (what and why as opposed to who).
- ❖ Consider adding an element to the Red Book specifically outlining need and responsibilities for communication/distribution plan and implementation.

REVIEW TEAMS: Improve team direction and composition, as well as team member tone and training.

- ❖ Ensure a clear, comprehensive Delegation of Authority letter. Ensure it covers the intended audience, the purpose of the review, how it should be conducted, and the expected products. Work to include/align the various desires, such as those from the burn team, district, forest, and region.
 - Consider posting the delegation letter locally in a public place, such as outside the room where the review team is working.
 - Carefully consider time frame: Too rushed means burn participants may not have had time to regroup from stress or to make sense of what happened (i.e., too soon for insights). Too drawn out means that the opportunity to transfer immediate operational lessons might be lost.
 - Drop "punitive" in-briefing language, e.g., "if we find anything, we stop and another review team takes over" because this raises anxiety.
 - Change the emphasis of the review to strike a balance between process and product. Now process seems skewed to "using" locals to create a document "for" others. This needs to be balanced so that the process allows the locals to learn and also provides guidance to others.

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- ❖ Staff review teams deliberately and consistently. Currently they are developed “ad hoc,” and when this is done thoughtfully, it can be excellent; however, not all seem to be. The IMT model, such as having a standing review team at the national level is an option to consider. Other ideas include:
 - Consider a pre-identified interagency review team selected by peers who are trained and integrated beyond local reviews to the regional and national levels.
 - Involve like agencies in review process.
 - Strive for a peer-based team (lowers anxiety level, increases potential for coaching and learning). Prior relationships are important for establishing a climate of trust and openness to learning.
 - Strive for an unbiased review team (i.e., no preconceived notions).
 - Ensure a review team has good leadership; change if necessary.
 - Ensure review team members know their responsibility with respect to disseminating, and posting products. Likewise, so do other players (Unit staff, Lessons Learned Center).
 - Consider assigning 1-2 team members to focus on the learning aspect.
 - Ensure team includes skills to develop the expected transfer mechanism and products desired for transfer of lessons.
 - Include Generation Y and tech geeks to improve transfer by using the latest technology.
 - Add a review for review teams. Could be an AAR with (or aired with) Agency Administrator, Line Officer, Liaison, Fire Staff, or could be with everyone involved with the Delegation. Look at:
 - Adherence to Delegation
 - Process used
 - Product
- ❖ Select and train reviewers to ensure that they have skills, ability, and emotional intelligence. These are skills we need to find and bring in, or develop from within.
 - Identify and provide qualifications and training for review team leaders.
 - Ensure team has good writers, good access to maps, pictures, timelines, field personnel.
 - Review teams to post their lessons learned to a central location so other teams can review and get tips, techniques (team set up, logistics, etc.) before going out themselves.

REVIEW PRODUCTS: Clarify audience and content, shorten and standardize formats, and get products out in a timely manner.

- ❖ Ensure Team knows who its audience is and how the product(s) are expected to be used – local, regional, national.
 - Consider 2 separate products:
 - FLA/lesson learned for the ground and local levels.
 - Review/investigation for higher levels of organization (if needed).
- ❖ What is included and what is left out hugely impacts credibility.
 - Tell the story in a way that readers/viewers can put themselves into it.
 - Be clear about whose perspectives are/are not reflected.

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- Clearly call out concise lessons learned from actual players. Highlight Lessons Learned section (vetted and ground-truthed) as identified by the burn team and affected units.
 - Vet the story with the participants and allow edits. Consider videos for different perspectives.
 - It's ok for reviewers to give their perspectives, and it's good when the review team acknowledges their limitations.
- ❖ Key report elements:
- Standardize the format so that it's easy to scan across reviews, but allow for flexibility.
 - Intro, what happened, chronology, pictures, map, etc.
 - Identify burn objectives and outcome.
 - Consider video quotes from the event.
 - Discuss human factors.
 - Validate safe, effective actions.
 - Shorten the reports as much as possible to state the facts (less than 50 pages with a good exec summary).
 - <5 page bullet list of field applicable learning points.
 - Include recommendations in FLAs.
 - Consider a sand table exercise, Google Earth virtual staff ride, lesson plan for NWCG course or Burn Boss workshop instead of (or in addition to) written report.
- ❖ Get reports out in a timely fashion, on the order of 2 weeks rather than 45 days. This is important for the field to transfer lessons immediately and critical for the unit to initiate healing and rebuilding at individual and relationship levels.
- Initial report out quickly, but continue to develop useful products.
 - Balance speed and quality.
 - Release the report!

TRANSFER MECHANISMS: Create a defined dissemination system for after the review products are complete.

- ❖ Create a buzz that generates a “pull” to complement the release “push.”
- Release the report!
 - Have leadership (e.g., Regional) create “buzz” about a review product and generate interest in seeking out the product.
 - Use specialists who are skilled in getting the message out. Use a local or team PIO, possibly a regional PIO and task them with developing and implementing a distribution/communication plan for the review product after the Review Team has completed their effort.
 - Model the aviation distribution system.
 - Institute an email notification system of new postings, such as what LLC neighborhood offers, but there needs to be a centralized place, not scattered across LLC, MFC, etc.
- ❖ Tailor transfer mechanisms to specifically target different audiences.
- Recognize what is useful locally vs. globally (including what's useful for fire community vs. general public) and communicate appropriately.
 - Staff and appropriately fund transfer activities to develop effective products.

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- Develop transfer products that can be used off the shelf.
- ❖ Recognize that reports are useful...
 - to field-level people who have a personal/individual connection – know somebody involved, know the ground, etc. existing reviews are read when there is such a connection.
 - to upper level managers as evidence of managerial responsibility.
 - for communicating to external audiences.
 - for developing additional transfer materials.
 - ... but that they often will not reach many at the ground level.
- ❖ Build on what works: incorporate personal stories and experiential learning.
 - Have individuals who were involved tell their story.
 - Increase training and emphasis for Rx fire “annual refresher.”
 - Bring in lessons learned to inter-agency burn boss refresher.
 - Have a practitioner discuss Rx program at Agency Admin workshops/meetings.
 - Promote one-on-one face to face mentoring with a team member.
 - Develop case studies. These are good because anyone can initiate, can do frequently, and can do for positive and negative outcomes.
 - Create training videos by personnel involved in escape for training, refreshers and broader audiences (public).
 - Tell a lesson learned story each week during a briefing.
 - Bring in engaging discussions/reports to district morning briefings (such as streaming Bryan Henry’s morning weather report instead of simply reading the report).
 - Use more social media and web-based technologies. The Lessons Learned Center , with its automatic notification system is an excellent way to get information out to the agencies/individuals that participate.
 - Podcasts of individual stores: sit down with those who have a story to tell about their experience and record them. Post.
 - Create a place – with a search function – where local units can put things they think others can use.
 - Blogs – for operations, AARs, or consider adding an anonymous blog or comment post to allow response to product.
 - Virtual staff rides using Google Earth tools.
 - Facebook – because of its email notification system, YouTube.
 - Create experiential learning products.
 - Sand table exercises.
 - Role playing exercises.
 - Local staff rides, both real and virtual, positives as well as negatives.
- ❖ Provide a nationally coordinated and integrated notification system.
 - Incorporate review products into NWCG courses and workshops.
 - Newsletter or something to disseminate lessons learned; the Fire Learning Network has a great model.
 - Expand “6 minutes for safety” to include lessons learned from recent review products.
 - Develop and distribute an end of year roll up by agency to the field.

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- Revisit lessons learned and recommendations from previous events.
- ❖ Train those who speak to others.
 - Use people who like to teach and are good at it.
 - Create a community of practice among those who want to teach/ train/ communicate and have them share ideas and generate additional training needs.
 - Train people as story tellers and story capturers.
 - Stop “death-by-PowerPoint.”
- ❖ Create a clearinghouse, a one-stop shopping center.
 - Improve searching on Lessons Learned Center website.
 - Organize reviews so that they can be easily sorted and retrieved.
 - Geographic Area, Region, Forest, District.
 - Use Google-type search algorithms.
 - Cross-reference other sites:
 - The NWCG website good for refresher course information and resources.
 - Wildland fire refresher website (WFSTAR)
 - FS FAM website: information on FLAs and APAs under Doctrine.
 - Leadership website has another good toolbox.
 - Use a “subscribe” option so that subscribers would get notification when something new was posted.
- ❖ Clarify the role of the Lessons Learned Center for synthesizing and summarizing lessons.
 - Succinct summary of individual reports.
 - List of resources.
 - Ideas for how to incorporate in Burn Boss refreshers.
 - Trend analysis and reporting?

TREND TRACKING AND REPORTING: Develop an easy, institutionalized reporting and tracking system.

- ❖ Need to track and identify trends in good, routine, bad, ugly. Need corporate housing of reports so that these are readily accessible for both field and higher level analysis.
 - Develop, periodically analyze, and report at the organizational level – capturing the patterns across the entire community. This creates the ability to identify weak signals at organizational levels.
 - Search for factors to track, create resilience around those that commonly lead to less than desirable outcomes.
 - Identify, understand and disseminate info on factors that lead to above average outcome.
 - Designate an entity/position to track, search for patterns, synthesize and disseminate organizational level patterns and trends.
- ❖ Consider basing the error reporting/dissemination system the aviation community uses; with the annual AMD accident summaries that DOI produces, aviation safety bulletins, SAFECOMS, Fire behavior-type advisories and a report that includes more details.
 - These need to be quick and efficient, “just the nuggets please.”
 - Need to identify what to note/track: the fuels, weather behavior influences.

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.