FACILITATED LEARNING ANALYSIS

IMPLEMENTATION GUIDE

RISK MANAGEMENT AND HUMAN PERFORMANCE

Revised June 2013

"Our national pastime of baseball differs from the society that spawned it in one crucial way: The box score of every baseball game, from the Little League to the Major League, consists of three tallies: runs, hits, and errors. Errors are not desirable, of course, but everyone understands that they are unavoidable. Errors are inherent in baseball, as they are in medicine, business, science, law, love, and life. In the final analysis, the test of a nation's character, and of an individual's integrity, does not depend on being error free. It depends on what we do after making the error."[1]

"Any safety system depends crucially on the willing participation of the workforce, the people in direct contact with the hazards. To achieve this, it is necessary to engineer a reporting culture—an organizational climate in which people are prepared to report their errors . . . An effective reporting culture depends, in turn, on how the organization handles blame and punishment . . . What is needed is a just culture . . ."[2]

USDA Forest Service photo by Becky Blankenship

This guide is intended for use by any organization wishing to foster organizational learning as the response to unexpected outcomes.

[1] Carol Tavris and Elliot Aronson, *Mistakes Were Made (but not by me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts* (Orlando, FL: Harcourt, 2007), 235.

[2] J. T. Reason, *Managing the Risks of Organizational Accidents* (Aldershot, England: Ashgate, 1997), 195.

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"The way leadership responds to a bad outcome is enormously important. It will vector us either towards, or away from, a learning culture."

Harv Forsgren
Former Regional Forester, Intermountain Region

PART 1 - BACKGROUND, PURPOSE AND NEED: CONSIDERATIONS FOR THE AGENCY ADMINISTRATOR

A. THE BENEFITS OF A FACILITATED LEARNING ANALYSIS

The driving force behind the Facilitated Learning Analysis (FLA) is simply the dissatisfaction with our current accident, injury, and fatality rates. They are unacceptable. We must do better; we must organize for higher reliability. We know the essential step in organizing for high reliability is developing and nurturing a "Just" and "Learning" culture.

How an agency responds to an accident is extremely important. The leaders' responses will either vector the agency toward a Learning Culture or away from it. If the agency assumes the accident happened *simply* because someone failed to do something right, then the natural reaction is to determine, in hindsight, what rules or protocols were broken. We can then identify (or blame) the rule breaker and return the system to safety. All that's needed are better rules or better compliance incentives. End of story—until the next accident.

Alternatively, leaders can see that while accidents are very rare, risk is never absent. Employees with limited perspectives continually adapt and make judgments to handle emerging risks, and these adaptations will never be perfect. Errors, mistakes, and lapses are commonplace. So are optimism and fatalism. So are taking shortcuts to save money, time, and effort. So are under- and overestimating risk. Indeed, human performance variability is not only normal, it's the rule! With this view, leaders can treat accidents as valued opportunities to look deeply into the operation to better understand how employees perceive and manage risk in the real world. This sets the stage for learning and improvement going forward: to be better tomorrow than we are today. With a commitment to learning rather than blaming, *an accident* becomes a *safe opportunity* for those involved to share their story and allow others to learn from it.

"Take your pick, you can blame human error or you can try to learn from the failure."[3]

[3] Sidney Dekker, *The Field Guide to Understanding Human Error* (Aldershot, England: Ashgate, 2006), 4.

B. An Expandable Process: The Difference Between a Basic FLA and a Complex FLA[4]

The FLA process is designed to be flexible and expandable depending upon the need. One way to think about the difference between a basic FLA and a complex FLA is an analogy with wildland fire incident management. The cheapest and fastest way (most often the best way) to learn from an event is to conduct a local After Action Review (AAR). Using the wildland fire analogy, **an AAR would be like a Type 5 or Type 4 incident.** AARs are relatively simple, inexpensive, and not time-consuming. The AAR is a powerful tool to capture immediate local learning. The involved group then moves on, goes back to work, while learning from mistakes and building on successes. AARs are predominantly closed, personal, and confidential, enabling participants to speak freely about mistakes. Consequently, the learning that occurs from an AAR is typically local in nature and not shared beyond the work unit (crew or team).

A more complex event often warrants a more vigorous learning response, one that can bring benefit beyond the local group. In the wake of an accident, the response should also fulfill the agency's requirement to complete an accident investigation required by internal policy and the Occupational Safety and Health Administration (OSHA). To respond effectively, administrators are encouraged to bring in outside expertise and take the time needed to "flesh out" what employees directly involved in the event learned and will share outside of their group. This is a basic FLA, which has been commonly referred to as an "After Action Review on Steroids." The basic FLA can be led by one or two people. The report may be only a few pages in length. With a larger FLA team, and given more time, the FLA report can describe the incident, create a factual chronology, and tease out lessons learned and recommendations for the local unit—and even the greater organization. In our analogy with wildland fire, **a basic FLA is like a Type 3 Incident**.

A complex FLA will explore much deeper. It is our most robust process to analyze an event and develop lessons learned, utilizing human and organizational performance expertise. A complex FLA report will contain a compelling accident story designed specifically for organizational learning. Most importantly, the report will also draw upon human performance expertise to explain the nature of the accident and offer an in-depth look at key conditions that surround the accident. A complex FLA may involve a team of 5 to 10 people (including subject matter experts and

The GAP: Advice to Agency Administrators

Human performance experts refer to the difference between what administrators *think* is going on and what is *really* going on in the field as "The Gap." The most fascinating part of this "Gap" is the difference between how much risk employees are taking in getting their work done—compared to how much risk administrators would say is *acceptable*. A large gap—indicated by shock and awe when it is revealed (usually in the wake of an accident)—is illustrated by this quote from author Dr. David Woods: *"The future seems implausible before an accident . . . But after the accident, the past seems incredible."* Advice from the experts: The greater the gap between the level of risk acceptance by employees and risk acceptability by managers, the more resources, time, and effort should be put into the FLA.

[4] In 2012, the Accident Prevention Analysis (APA) process was rolled into the FLA process. A complex FLA is essentially identical to an APA.

specialists), who work weeks or months to develop their analysis and craft their report. In our wildland fire analogy, **a complex FLA is like a Type 2 or Type 1 Incident.**

C. Critical Considerations for the Agency Administrator

[See also Appendix A]

Before the FLA team is formed, the Agency Administrator should consider how thorough and detailed the analysis and the report should be. What does the administrator base this decision on? This is a huge question for which there is no simple answer. Every incident is unique. Unfortunately, the natural tendency is to base the size and complexity of the FLA team upon the severity of the outcome. The more "serious the accident," the more resources are put toward the review team. One example is a recent FLA on a tree-cutting accident in which an employee was hit by a glancing blow from a tree cut by a fellow employee. The employee, knocked unconscious, treated, and released the same day, has recovered completely. Based solely on the outcome, this was a "non-serious accident." But was it really *not* serious? Perhaps it wasn't serious to the agency. But to the employee and to the employee's co-workers, friends and family, this incident was *very serious*. In fact, had the tree fallen one or two inches to the left, the employee would have been killed or at least seriously and probably permanently injured. Had the tree fallen two inches to the right, the worst outcome would have been a startled and perhaps angry employee. A chance occurrence of two inches should not be the determining factor of the potential for organizational learning in the wake of an accident or close call.

Questions to Consider When Making a Decision to Mobilize a Facilitated Learning Analysis Team

- How "deep" should we look?
- Is there enough trust here to support such an analysis?
- Do we want to analyze organizational contributions to this accident or just individual human performance?
- How might we exploit this event to make a large cultural impact on organizational safety?
- Are there repeated equipment or environmental factors at play?
- What kinds of specialized subject matter experts might be needed to conduct the kind of analysis we want?
- How long should this take? How much time should we be willing to spend on this analysis?
- Are there conflicting stories surrounding the event?
- Regardless of the outcome, do people close to the accident believe it could have been much more severe?
- What could be the cost of *not* choosing a "complex" FLA in terms of opportunities missed?

The best guidance available is: *The greater the gap between the employees' and managers' acceptability of risk, the more resources, time, and effort should be put into the FLA. The level of shock after an accident is a good indicator of the size of the gap.*

D. Report/Review Requirements

Implementing an FLA does not change the accident reporting requirements (Reference FSM 6732 and local policies if applicable).

If the accident is interagency in nature (involving personnel from more than one agency or jurisdiction), the authorizing Memorandum of Understanding between the agencies may have investigative requirements that must be considered.

A Complex FLA Meets All "Accident Investigation" Requirements

A complex FLA meets the serious accident investigation procedural and documentation requirements of the Occupational Safety and Health Administration's (OSHA) Executive Order 12196, as well as the accident investigation regulations (29 CFR 1960.29) and internal policies of the U.S. Forest Service (FSM 6731 and FSH 6709.12).

E. How We Got Here

By the end of 2004, the U.S. Forest Service fire community was stunned and disoriented by a string of administrative decisions and legal actions against firefighters involved in accidents. To many firefighters and agency administrators, the word "accountability" had become synonymous with "punitive actions." Owning mistakes and sharing lessons learned from an accident were seen to be career-ending decisions. To protect employees, any learning that was occurring from bad outcomes was local and had to stay local or go underground.

Against this background, fire leaders—concerned with the obvious safety implications—called for a shift to "principle-centered management" or "doctrine." The "Pulaski Conference" soon followed. In 2005, two members from the Fire Operations Risk Management Council pushed the limits of policy by conducting a learning-focused serious accident investigation on the I-90 Tarkio Fire Entrapment. "Just Culture" (see definition on page 6) became the Risk Management Council's mantra for a higher standard of accountability.

Building upon the popular support of doctrine, "Just Culture," and learning-focused accident investigations—and with an eye toward internal disputes over how accidents should be investigated—in 2006, the Risk Management Council put forth the briefing paper titled *Peer Review–Purpose and Process.* Based on learning, continuous improvement, and fair and just accountability, this paper was a call for a new paradigm in accident investigations.

That summer, five CALFIRE firefighters were entrapped but uninjured on the Ball's Canyon Fire in Region 4. While policy required entrapments be investigated by the Serious Accident Investigation process, Cal Fire joined Region 4 and quickly executed the first "Peer Review," deliberately testing the model of a "Just Culture" within an accident investigation. Support among firefighters was outstanding.

Two months later, ten employees and contractors were involved in a fire entrapment and shelter deployment on the Little Venus Fire on the Shoshone National Forest. Building upon the success of the I-90 Tarkio Fire Shelter Deployment and Balls Canyon Fire Shelter Deployment reports, Region 2 launched a Peer Review predicated on the model of a "Just Culture." Their Little Venus report was so popular that agency administrators across the country wanted to replicate this process.

Thus, the Risk Management Council began developing guides for a "Just Culture"-based accident investigation process and conducted trainings and national workshops on this tool. Over the years, this process—initially known as a "Peer Review"—has evolved, grown, shrunk, and is now refined as the Facilitated Learning Analysis.

This FLA guide is the hard-won product of nine years of promoting "Just Culture" and collaborative trial and error. The effort has involved personnel from throughout the Forest Service at essentially all administrative levels. It reflects the review and feedback from persons at other public agencies, academic disciplines, and private industries. This FLA guide, dedicated to ongoing learning, is therefore continually refined to reflect current knowledge and evolving expertise in human performance. Please send comments or feedback on this guide to *sholdsambeck@fs.fed.us*.

F. FLAs *BEYOND* ACCIDENTS

The FLA process was designed to be a tool for accident investigation and learning from *accident-like* unintended outcomes. However, the process has been used successfully as a tool to learn from events that were not accidents, including close call/near-miss events and events that weren't necessarily unintended but had outcomes surprising to administrators. Sometimes we've used this process because we wanted an answer to the question: why were we surprised by this event? Two recent examples of FLAs used on non-accidents are:

http://wildfirelessons.net/documents/Retardant_Avoidance_FLA.pdf

http://wildfirelessons.net/documents/Tree_cutting_snow_stop_work_FLA.pdf

Agency administrators and users of this guide are encouraged not to let the word "accident" (as used throughout this guide) to dissuade them from using this process as a tool to examine non-accidents, surprise outcomes, and even exceptional successes.

"Most employees involved in a serious accident or near miss genuinely want to share what they believe really happened. They feel everyone knows the outcome but not why the decisions and actions made sense at the time. Generally, employees want to own their decisions and almost all want to turn the accident into something positive. Unfortunately, we have provided our employees with powerful incentives to not openly or frankly share their story of events. Our history justifies the belief that if our employees disclose their decisions and actions they will be disciplined, or embarrassed, or otherwise blamed for the accident."

Fire Operations Risk Management Council
U.S. Forest Service

PART 2 - ESSENTIAL PRINCIPLES OF THE FACILITATED LEARNING ANALYSIS PROCESS

A. "JUST CULTURE": THE GOLD STANDARD OF ACCOUNTABILITY

FLA teams must have a good grasp of the "Just Culture" model. It is fundamental to this process. To most people, being held accountable - *equals*-being punished. Within the model of a Just Culture, accountability means simply: the degree to which one can account for one's influence on the outcome. The focus is on fairness and there is recognition that leaders and administrators bear responsibility (or accountability) for the system and, to a large extent, for the culture of the workplace. The justice of a Just Culture is that accountability is distributed not retributive. It is forward-looking accountability. It is concerned with preventing the next accident, not focused on correcting the past.

Definition of "Just Culture"

"Just Culture" is a workplace where employees at all levels are held fairly to account for their participation and their commitment to the organization's safety culture. Accountability is the focal point and it is justly distributed under this model. Workers are recognized to be inheritors of the production incentives, tools, trainings, procedures, and even the safety-vs.-production *values* of the workplace. Management, in contrast, is accountable for how it manages these artifacts, including the safety-vs.-production values of the workplace.

In a Just Culture, Management purposefully and deliberately learns from workers how work gets done and how risks are actually perceived and managed. Management partners with employees to continuously enhance performance and enhance the certainty of outcomes.

In a mature Just Culture, workers and administrators see information as the *lifeblood of safety*. Therefore, *all* employees disclose unsafe conditions, as they do individual mistakes. Employees and administrators share stories of how they manage the tradeoffs between efficiency and thoroughness. This sharing is routine and protected through the fair and just distribution of rewards for participation in the safety culture.

"In a just culture, management can balance the tension between needing to know what is going on, and needing to correct what is going on."
Fire Operations Risk Management Council
U.S. Forest Service

see also www.justculture.org

B. Administrative Assurance of No Punitive Actions

It is critical to maintain a solid firewall between the FLA and any potential administrative actions that may be taken against the employee. Information is the lifeblood of safety. We must let it flow. If we punish employees for actions that, in perfect hindsight, appear to be errors or mistakes, we may (or may not) stop them from making errors or mistakes. However, it will definitely stop employees from sharing with management how they make sense about which rules are relevant, and how they make the tradeoff decisions between production and safety.

INSERT A: UNDERSTANDING THE WORK UNDER A JUST CULTURE

☑ PARADIGM CHECK POINT

If some team members are new to the process, it may be helpful to pause and have a team discussion or even a full dialogue session around these points. Team members will have a hard time understanding the FLA process unless they understand these concepts.

ALIGNING THE TEAM: NORMAL WORK, RISK, SAFETY, AND JUST CULTURE

- Risk is in everything we do. Short of never doing anything, there is no way to avoid all risk or ever to be 100% safe.
- How employees (at any level) perceive, anticipate, interpret, and react to risk is systematically connected to conditions associated with the design, systems, features, and culture of the workplace.
- "Risk does not exist 'out there,' independent of our minds and culture, waiting to be measured. Human beings have invented the concept of 'risk' to help them understand and cope with the dangers and the uncertainties of life. Although these dangers are real, there is no such thing as a 'real risk' or 'objective risk.'"[5]
- We define "safety" as *the reasonableness of risk*. A feeling. It is not an absolute. It is personal and contextual and will vary between people within identical situations based on expected outcomes.
- While safety is an essential business practice, our agency does not exist to be safe or to protect our employees. We exist to accomplish a taxpayer-funded mission as efficiently as possible—knowing that many activities we choose to perform are inherently hazardous (for example, firefighting, driving, flying in helicopters, horseback riding, tree cutting, and even walking through a forest).
- Mistakes, errors, and lapses are normal and inevitable human behaviors. So are optimism and fatalism. So are taking shortcuts to save time and effort. So are under- –and overestimating risk. In spite of this, our work systems are generally designed for the optimal worker, not a normal one.
- Essentially *every* risk mitigation (every safety precaution) carries some level of "cost" to production or compromise to efficiency. One of the most obvious is the cost of training. Employees at all levels (administrators, safety advisors, system designers, and front-line employees) are continuously—and often subconsciously—estimating, balancing, managing, and accepting these subtle and nuanced tradeoffs between safety and production.
- All *successful* systems, organizations, and individuals will trend toward efficiency over thoroughness (production over protection) until something happens (usually an accident or a close call) that changes the perception of risk. This is what makes them successful.
- Our natural intuition (our common sense) is to let outcomes draw the line between success and failure and to base safety programs on outcomes. Risk management, however, is wholly concerned with managing risks, *not* outcomes. Risk management is counterintuitive.
- Employees directly involved in the event *did not expect* that the accident was going to happen. They expected a positive outcome. If this is not the case, then you're not dealing with an accident.

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[5] Paul Slovic, as quoted in Daniel Kahneman, *Thinking Fast and S*low (Farrar, Straus and Giroux, 2011), 141.

The Elkhorn 2 Escaped Prescribed Fire FLA in 2008 was one of the first attempts to use the FLA process to fulfill the requirement for Escaped Prescribed Fire Reviews. The FLA Process is now recommended for these reviews.

PART 3 - INITIATING THE FLA: BEFORE THE FLA TEAM ARRIVES

A. PRIORITY AGENCY ADMINISTRATOR ACTIONS

1. Immediately following any accident or near-miss, the Agency Administrator's first priority is the appropriate physical and psychological care for the employees, their families, and their co-workers. If the accident involves a death, serious injury, or traumatic event such as a fire entrapment, the Agency Administrator should immediately request professionals to provide this psychological care. Resources vary by agency and organization but generally Human Resource Officers or Safety Officers have protocols for securing psychological care.

   Once the employees, families, and co-workers are cared for, the administrator should ask those involved to separately take a moment to jot down notes of what they remember as significant events, observations, decisions, etc. Personal note-taking should occur as soon as possible after the event—if possible, *before* employees discuss the accident with other employees. The purpose is to capture their thoughts and perceptions as close as possible to the time when the event occurred. Memories will change as sensemaking evolves. Ask employees to write their notes in brief "bulleted" form. Ask employees to try the best they can to *refrain* from building a story or make sense of what happened as much as they can. Assure them that they will get a chance to tell their story later. What is needed now are bullet statements of memories that might get lost later. Remind employees that these notes are their own property and will not be collected or read by anyone else.

Facilitated Learning Analysis Teams NEVER collect or request "witness statements."

2. Provide employees with a liaison who will explain the FLA process and who will be available to support employees until the FLA is completed. In complex events, it can take days before the FLA team is assembled and employees will have questions and concerns about what is happening. In some cases, the liaison will need the authority to authorize overtime, travel, meals, etc. On wildland fire incidents, this liaison needs to ensure that critical employees or contractors are not demobilized *before* the FLA team is ready for them to leave. This employee liaison can also help the FLA team with logistics, travel, and other tasks.

B. Forming the FLA Team

The Agency Administrator should form the FLA team in consultation with their safety advisors. Depending on the complexity of the situation, the Agency Administrator could form a team as small as two people—or a much larger team composed of subject matter experts, technical specialists and trained human performance specialists.

Each member of the FLA team must meet the following minimum team member attributes:

- A basic understanding of Just Culture.
- A basic understanding of the FLA process (team leaders and facilitators should be formally trained in the process or have experience under a trainer).
- A solid reputation for dealing with confidential matters.
- Not be from the local unit or have any strong social ties with anyone directly involved in the event.

POTENTIAL FLA TEAM MEMBERS AND ROLES

Team Leader

The team leader is typically (but not necessarily) at the same level of seniority as the supervisor or line officer of the unit where the incident occurred. The team leader ensures that the team stays on task and is meeting deadlines. The team leader also is the mediator between the delegating official and the FLA team. The delegation of authority is issued to the team leader, who is ultimately the responsible official accountable for the quality and content of the FLA.

FLA Facilitator

This position is needed on all FLAs, basic and complex. On most FLAs, the facilitator is the team's "FLA process expert." This position is analogous to "chief investigator" on a Serious Accident Investigation Team. A basic FLA does not demand the same skill level as a complex FLA. On a basic FLA, the facilitator needs to be a good listener and have solid facilitation skills. The more complex the FLA, the more the facilitator needs experience and competence in reflective listening, interviewing techniques, and accident sequence re-creation. Most importantly, the complex FLA facilitator should have a solid understanding of the Lessons Learned Analysis process (see pages 15 and 29).

Documentation Specialist

On most FLAs, the facilitator, or a combination of the facilitator and others, can handle the report writing. A complex FLA may involve a lot of documentation and a lengthy report. In these instances, bringing in a writer-editor/documentation specialist is a good idea. Also, if there is private property damage or personal injuries involved in the accident, then litigation or claims against the government may arise months to years later. In such cases, the FLA document may be the government's only official accident investigation report. As a general rule, if the accident involves significant private property damage or personal injuries, a separate claims investigation *should* occur. For a variety of reasons, this doesn't always occur. Therefore, a critical position that involves potential claims or litigation is the documentation specialist who will track and catalog important claims-related documents.

Storyteller

The most effective way to share the learning throughout the organization is with a powerful story. If the FLA will feature an accident story (or a story about an intended outcome), it is generally recommended to bring in a person with this unique skill set. While there are talented storytellers in our agency, this is a rare skill. This position must have the ability to create the story of the accident and to write it accurately, clearly, and compellingly in such a way as to take maximum advantage of its learning potential for the greater organization.

Peer

Employees directly involved in the accident should be represented by an FLA team member with intimate knowledge of the duties and skills necessary to serve in a similar position/job title. For example, if the accident is an engine rollover, a member of an engine crew should be on the FLA team. The peer can also function as the facilitator.

Subject Matter Expert

The more complex an FLA, the more we will be looking for lessons learned for the larger organization. Therefore, it is important to have an FLA team member with expertise in the activity surrounding the accident. For example, if the accident occurred on a prescribed fire, the team should have a member with expert knowledge of prescribed burning operations, planning, coordination, and execution. In many cases, the peer and subject matter expert may be the same person.

Union Representative

The National Federation of Federal Employees (NFFE) has been a strong supporter of Just Culture and the FLA process. Anytime an employee wishes union representation, the Team Leader needs to ensure that request is honored. On complex FLAs, if employees on the unit are represented by a union,having a union representative is often valuable as a full team member. As with all other members, the union representative must meet the minimum team member attributes

Interagency Participation

If the event involved employees from other agencies, consider involving these agencies by having a representative on the FLA team. This person could serve as the peer, subject matter expert, or other role.

Technical Specialists

Human performance specialists can add great value and competency to a complex FLA. Other specialists such as videographers or graphic designers can provide quality graphics, maps, video, and even animation. If the report can easily be turned into a training exercise because of the way it is designed, the impact of the learning can be much enhanced.

Important

If the accident involved a burnover or fire shelter deployment, the Agency Administrator and FLA team need to consider the functionality of wildland fire personal protective equipment (PPE) involved. Subject matter experts from the Missoula Technology Development Center (MTDC) must be consulted. If an injury has occurred, these MTDC representatives often analyze the performance of the PPE.

C. Clear Mutual Objectives: The In-Briefing

When arriving at the host unit, the FLA team should in-brief first with the Agency Administrator and then with individuals involved in the accident. This is an opportunity to establish common expectations of

Considerations for the In-Briefing:
Can We Transition From a Basic to Complex FLA? Or Complex to Basic?

At the outset, the FLA team and the Agency Administrator should agree (at least in principle) on the bounds of the FLA. That is, how long it will take, the complexity of the analysis, how the report will appear, etc. How these various aspects could change should also be discussed. Usually, this first assessment of the size and complexity of the FLA team is correct. Often, additional time is needed but it is rare for additional team members to be required.

Occasionally, a team will uncover a surprise, a rich vein of learning opportunities. For example, a relatively basic FLA team of perhaps three members conducts a dialogue and uncovers a very large gap between the risk employees are taking on a routine basis and the amount of risk managers would deem acceptable. *A very large gap involving risk acceptance is fertile ground for learning!* If not exploited, it will be a lost opportunity (at least until the next employee is hurt). To take advantage of this opportunity, the team needs to go deeper and conduct a "Lessons Learned Analysis" (see pages 15 and 29). Doing so may require technical experts including a human performance expert. This will add cost, complexity, and time. The report may also be ripe for a good storyteller to help turn the event into a powerful organizational learning experience. Of course, this will add more cost, time, and complexity.

To shift from a basic or moderately complex FLA to a much more thorough and complex analysis is difficult but can be absolutely necessary. Team members that committed to a week may have to spend a month. A unit that budgeted a few thousand dollars for an FLA may have to come up with tens of thousands. There is no easy answer to these issues. Frequent, open communication will make them easier to deal with.

what will happen over the next days or weeks and to discuss what the outcome of the review will look like. Always be wary of host unit expectations for a "quick wrap-up."

The Agency Administrator and the team should review the delegation of authority together. Then, they and all the key personnel involved in the incident/accident should review *each item* in the In-Briefing Tickler List found in Appendix D.

It is critical that everyone involved in this process have a basic understanding of the purpose and intent of an FLA and how it differs from a Serious Accident Investigation, an Administrative Investigation, or an Occupational Safety and Health Administration Investigation. Everyone should be assured that no administrative punitive actions will result from information gathered by the FLA team. This assurance of no agency imposed administrative actions should be clearly stated in the delegation to the FLA Team Leader. ***However, all participants must understand that this assurance of no administrative action does not protect employees against actions taken by the Department of Justice, Office of Inspector General, or other authorities that are outside the control of your federal agency.***

All participants should understand that if the FLA team learns someone involved in the accident acted with a *willful and reckless disregard for human safety* (that is, they expected their actions would result in harm), the FLA will be canceled immediately. The FLA Team Leader should not disclose any details to the Agency Administrator other than a recommendation to pursue an administrative or law enforcement investigation.

D. Trust

The use of the FLA process is growing every year in the Forest Service and in other wildland management agencies because employees and administrators are beginning to trust the process and trust the teams that are implementing it. All FLA team members *must* guard this trust and never betray the confidentiality of the employees involved or divulge any information not contained in the report to anyone outside the team. The only exception to this promise of confidentiality would be because of judicial order outside of agency control.

Open, Frequent Communication

Regularly scheduled conversations should occur between the FLA Team Leader and the agency official who authorized the FLA. The purpose of these discussions is two-fold:

- To keep the agency official updated on the FLA team's progress, and
- To ensure that the FLA is meeting the needs of the sponsoring official.

These conversations are not an opportunity for the Agency Administrator to "steer" the analysis in a particular direction. Rather, they are opportunities to ensure that the needs of the administrator are being met and that the FLA Team is answering all of the "how" and "why" questions that initially triggered the review.

E. Cooperation with Other Investigations

FLAs are independent from any other investigation or review that may be occurring. Communications with the people involved in the incident, internal team deliberations, and draft reports will be held confidential to the extent possible.

If other investigations are occurring concurrently with an FLA (this is very rare), the Agency

Administrator must ensure that the FLA process is insulated from these other activities. For example, if compliance officers from the OSHA or investigators from the Office of Inspector General (OIG) wish to conduct an accident or a criminal investigation, they should be supported by the Agency Administrator but kept separate from the FLA process and team members. (See 29 CFR 1960.29 for OSHA guidance on accident investigations.)

Material items that are evidentiary in nature such as photographs, transcripts of dispatch logs, law enforcement reports, personal protective equipment, etc., must be shared with the OSHA, OIG, and other investigative authorities. Requests for this type of information should be directed to the Agency Administrator and the team response should go back through the Agency Administrator. Interaction directly between the FLA team and OSHA, agency law enforcement, or any other investigative authority is generally inappropriate and should be minimized.

F. Recommendations: Not Always Recommended

Our traditional paradigm has been that one way to prevent accidents is by investigating them, discovering their cause, and then fixing the cause to prevent a repeat of the accident. However, causal statements are typically problematic and highly subjective. Recommendations, like causal statements, are also usually problematic because of the belief that we will eliminate the risk by implementing the recommendation. In reality, implemented recommendations simply change the nature of risk.

Often, the best outcome of an accident investigation or an FLA is simply learning how we make sense of risk. Effective learning can increase dialogue, change behaviors, change how we understand risk, change how we go about accomplishing work, and change how we make difficult trade-off decisions between efficiency and thoroughness, or production and safety. In many circumstances, recommendations actually interfere with learning. Instead of recommendations, consider ways to make the FLA report an effective and compelling learning tool.

G. Human Performance Expertise: Review and Advice

One positive attribute of Basic FLAs is that they are relatively quick and the sharing of lessons learned across the agency is rapid (at least in governmental terms). In some cases, however, the effort to keep the FLA at the basic level comes at a high cost in terms of lost opportunity to involve specialist, particularly a human performance expert. In many cases a basic FLA has been completed, then in hindsight the team has realized they missed a valuable opportunity to *exploit* the event for its full safety and learning value because the team did not have the human performance expertise available. Basic FLA team leaders and Agency Administrators should be sensitive to this fact. There are numerous FLA coaches and Human Performance experts available to help an agency administrator decide if it would be worthwhile to bring in a Human Performance expert.

H. Suggested FLA Report Outlines: Complex and Basic

Complex FLA	Basic FLA
1. Executive Summary A one- to two-page summary of the accident with highlights of lessons learned.	**1. Summary** A one- or two-paragraph summary of the accident.
2. Introduction An overview of the accident, the setting, and background information on conditions.	**2. Narrative or Chronology** A brief summary of what happened. This can be told in the form of a timeline or a narrative.
3. The Accident Story The factual story of the accident using the techniques of nonfiction storytelling.	**3. Lessons Learned by Those Involved** A listing or creative display of the views expressed by those involved in the accident related to what they learned and what they believe the organization should learn from their experience. Alternatively stated as: *"What would I do differently next time, knowing what I know now?"*
4. Lessons Learned by Those Involved A listing or creative display of the views expressed by those involved in the accident related to what they learned and what they believe the organization should learn from their experience.	**4. Summary (Recommendations Optional)** A brief summary of the FLA. If it is requested by the Agency Administrator, this summary may also contain team recommendations. (Recommendations are generally not advisable, especially for a basic FLA.)
5. Lessons Learned Analysis An analysis of the relevant workplace conditions to explain the nature of the accident. The relevance (to the accident) of a given condition is a subjective determination made by the FLA team and, where feasible, originates from the lessons learned by the peers. Highlight conditions that were key to the accident and that may be latent conditions for a subsequent accident.	
6. Summary A brief summary of the Lessons Learned Analysis. Performance-shaping factors or workplace conditions that pose an unnecessary risk to future operations should be discussed in this section and will serve as the basis for the recommendations.	
7. Appendices The appendices feature information such as a Human Performance Analysis/Human Factors report, fire shelter performance report, engineer's structural analysis, fire behavior analysis report, etc.	
8. Recommendations (Optional) A listing of reasonable courses of action that modify, enhance or remedy performance-shaping factors or latent conditions that pose an unnecessary risk to future operations. Recommendations are often the most contentious part of the report and should be limited to only the essential performance-shaping factors.	

"Hindsight bias is the chief saboteur of any accident investigation. Interviewers should remember their highest objective, to be able to describe how interviewees (the people they are interviewing) developed their understanding of the situation—and then made sense of their choices at the time, and in context."

Fire Operations Risk Management Council
U.S. Forest Service

PART 4 - THE FLA PROCESS

A. INTERVIEWING

For a basic FLA, the team may not need to conduct individual interviews. The facilitator may have enough background information to go right to the dialogue. Most often, however, key people involved in the accident should be interviewed before the dialogue session. These interviews will frame the dialogue and ensure key events and conditions are brought forth. For complex FLAs, extensive interviewing is often necessary and should not be hurried to meet an arbitrary date. Conducting interviews appropriately is crucial to the FLA process.

Keeping the Trust

FLA Teams do not use depositions, do not record interviews, and do not request "witness statements." These traditional accident investigation tools conflict with establishing trust. If used during the FLA process, they could interfere with obtaining frank disclosure of "mistakes," at-risk behaviors, and various important personal insights.

The team leader should select interviewers based on their experience, skills in empathic listening, interviewing, and interpersonal communications. Interviews should occur as soon after the accident as possible, especially for accident victims who demonstrate a strong emotional response to the event.

For key accident participants or witnesses, the team leader should consider using a team of two interviewers. Please note: because using two interviewers can sometimes be intimidating to the interviewee, this approach should be used with appropriate caution and understanding. Employees who are more tangential to the accident may be interviewed in groups of two to four at a time.

Pictures Are Precious

FLA teams needs to be proactive and almost aggressive in asking for pictures or video. Often employees won't admit in public that they were taking pictures but may do so in private. Not only do pictures add much to FLA reports, they also frequently contain information on when the image was taken, adding verifiable time-stamps to key events.

All interviewers will face hindsight bias (see Insert C on page 19) Interviewers must stay focused on their objective to be able to describe how employees developed their understanding of the situation and made sense of their choices at the time and in context.

Before interviews begin, the FLA facilitator should update interviewers with the interview process guidance outlined in this chapter. The FLA facilitator should also

remind the interviewers to collect quotes and interview information to be displayed in the FLA report under the headings:

- "What the Employees Involved in the Incident Learned for Themselves and for Their Peers Across the Agency"
- "What the Employees Involved Believe Management Should Learn From Their Experience"

The FLA Team should meet frequently. During these meetings, the results of interviews should be discussed and adjustments made accordingly.

INSERT B: INTERVIEW QUESTIONS

Copy this page for interviewers.

You control the interview environment.
If it isn't comfortable, private, and friendly, find another location.

1. Ask the interviewee to tell the story from his or her point of view. Don't "correct."
2. Tell the story back to them to ensure that you can make sense of their decisions the same way that they made sense of them at the time.
3. Accept the interviewee's perspective and story. Remain neutral. Don't agree or disagree with statements made, including when critical junctures are discussed in their story. Probe deeper into these junctures with questions such as:

Clues

- What were you seeing?
- What were you focusing on?
- What did you feel was going to happen; what was your level of optimism?
- Did you have any feelings of doubt, or worry about how things would turn out?
- What else were you thinking about (*friends? finances? hurting feet?*)?

Interpretation

- If you had to describe the situation to a peer, what would you have told them?
- What were your thoughts about dangers and risks, and how you'd mitigate them?
- Are there any feelings that come to mind concerning the confidence you felt in your situation?

Hindsight

- What mistakes in interpretation were likely at this point?
- Knowing the outcome, what do you feel you learned from this event? What do you think the agency needs to learn?

Previous Experience

- Were you reminded of any previous experiences?
- Did this situation fit a standard scenario?
- How do you feel you were trained or prepared to deal with this situation?
- What rules and SOPs were helpful in this situation?
- Which were problematic?
- What was your intuition or experience telling you?

Goals

- What goals governed your actions at the time?
- What were the conflicts or trade-offs to make between goals?
- Were there time pressures?

Taking Action

- How did you feel that you could influence the course of events?
- How did you feel you were prevented from taking action or not taking action?
- Did you discuss or mentally imagine a number of options? Or, did you know straight away what to do?

Outcome

- Did you feel that the outcome fit your expectation? What surprised you?
- Did you have to update your assessment of the situation?

INSERT C: MITIGATING HINDSIGHT BIAS

☑ *Before* beginning the interviews, the FLA team should consider referring to this page and discussing the following tools to mitigate "hindsight bias." A team dialogue session may be needed to ensure that all members are comfortable with these concepts.

While teams will never be able to completely overcome "hindsight bias," they can mitigate many of the negative effects using the following threefold approach:[6]

1. As deeply as possible, the interviewers need to achieve the same limited perspective that was shared by the participants leading up to the incident. If the interviewer doesn't experience some sense of surprise that the outcome occurred, then the interviewer has failed in this regard.
2. The team should reason together to explain how the exact same decisions could have led to the expected outcome and, conversely, how the accident participants could have undertaken a different set of initiatives that resulted in the same unintended outcome.
3. The team must avoid using "counterfactual" expressions or even thinking in terms of counterfactuals. "Counterfactuals" are realities that *did not* happen but—with perfect hindsight—*could have* made a difference.

What team members might think *should have happened* are the most seductive counterfactuals and they will blind the team from understanding the event in context. Examples include *"If only the employee had . . ." "The crew leader failed to . . " "The supervisor should have . . ."*

When counterfactuals come to mind, FLA team members should try to overcome their effect by telling themselves that even if the counterfactual had happened, the outcome might still have been the same. Remember, if the person involved in the accident had known what the results would be, they would have taken a different action. But the future hadn't happened yet, and they couldn't know the outcome. The bottom line is that the human being sitting in front of the interviewer simply *did not* take the counterfactual action at that time.

Interviewers should appreciate that the accident participants are also afflicted by hindsight bias. Human memory connects images and facts to build a coherent mental story that makes sense in the light of the *now known* outcome. This is not a conscious process. "Sensemaking" (see definition on page 29) does not stop after the accident. It is normal, and even unavoidable, for all of us to continuously rebuild and restructure our memory and mental stories to incorporate additional (new) information. Soon, memory of the actual event is replaced by memory of what was previously remembered. Over time, our recollections of events can change dramatically. It is common to interview an employee involved in an accident and find their language packed with things they wished *they* had done differently. Then, in the subsequent weeks, this person's language changes to the certainty of what *other people* should have done. A recommended solution is to interview employees as soon as possible and help keep them focused on telling the story solely from their perspective. That is, how they saw, felt or sensed events happening—and not why they *believed* things were happening.

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[6] Sidney Dekker, *The Field Guide to Understanding Human Error* (Aldershot: Ashgate, 2008) and Neal J. Roese and Kathleen D. Vohs, "Hindsight Bias," *Perspectives on Psychological Science* 7 no. 5 (September 2012), 411-426. The latter, available at http://pps.sagepub.com/content/7/5/411.abstract , is recommended reading for all FLA teams!]

B. The Heart of the FLA Process: The Facilitated Dialogue

The heart of the FLA process is a dialogue session with those directly involved with the event. This generally includes one facilitator helping a group of employees think together about the incident and talk their way through what happened and what they can learn from it. The following general outline provides a flexible structure for adapting to any audience, event, organization, and facilitator.

Recommended Reading for all FLA Facilitators
Dialogue and the Art of Thinking Together by William Isaacs

Principles and Agreements

1. A clear agreement with the Agency Administrator that no administrative actions, (that is, disciplinary actions such as letters of caution, stand-downs, forced re-trainings) may result from anything learned through the FLA process. If there is any question about this, stop and clear up confusion.
2. *Respectful* discussion is the rule; it can be emotional but it remains respectful.
3. Learning for future events is more important than assessing past blame.
4. We all make mistakes—it's inevitable; it's the human condition. It's okay to openly discuss these occurrences.
5. Almost all human actions and decisions are intuitive responses to circumstances largely based on past experiences. It is extremely rare that employees are actually careless.
6. Overwhelmingly, accidents are the result of rare combinations of normal performance variability and chance combinations of unlikely events.
7. Safety is never an absolute.
8. Within this dialogue, safety should be thought of, and referred to, as the reasonableness of risk. It is a feeling that two experienced, competent professionals can disagree—*and both be right!*

Participants

The nature of the FLA often depends on who is participating. For instance, each of the following people could be involved with, and benefit from, an FLA:

- People involved in the event
- Supporting FLA team members
- Supervisors of people involved
- The FLA facilitator
- Project leaders
- Agency administrators

When project leaders, supervisors, and agency administrators are involved in the FLA, effective discussions often result and are broader in scope with organizational and interdepartmental topics included in the lessons learned discussions. In some cases, it may be more productive to conduct the discussion without supervisors present. The team leader and facilitator should confer about and control who is present based on what they learned from the interviews.

"In skillful discussion, we inquire into the reasons behind someone's position and the thinking and the evidence to support it. As this kind of discussion progresses, it can lead to a dialectic, the productive antagonism of two points of view. A dialectic pits different ideas against one another and then makes space for new views to emerge out of both."

William Isaacs
From *Dialogue and the Art of Thinking Together*

Agenda

Only a general agenda is necessary. It should not constrain the flow of the discussion. Experienced facilitators have learned to ensure there is more than enough time available; dialogues often go for several hours or longer. Occasionally a dialogue session opens a rich vein of sharing and underderstanding that you will not want to shortcut. Plan for the amount of time you think you'll need then make contingency plans in case the dialogue needs to go twice as long.

Make sure to take a few minutes to explain the FLA process and discuss the principles and agreements above. Also, discuss the nature of the report that will document the learning.

Suggestions to FLA Facilitator for Initiating the Dialogue

- **Location.** The setting is extremely important. It is basically the "stage" for the FLA performance. The best location is almost always the field where the incident occurred. If going to the field is not an option, don't just accept the "available conference room." Get a location where the workers directly involved in the incident feel most comfortable. If the FLA involves a fire engine accident, the best location might be their engine bay, using their sand table. If the FLA involved a wilderness crew, the best location might be the horse stable with a projector and screen set up to show Google Earth images.

A Dose of Humor and Humility

The master FLA facilitator, Paul Chamberlin (recently retired, US Fish & Wildlife Service) would sometimes "accidently" spill water on the front of his pants just prior to beginning a facilitated dialogue. He would use this embarrassing moment to disarm the participants and introduce stories about how unexpected things happen despite the best of intentions.

- **Willing to be Vulnerable.** Give strong assurance of two things: first, that we are *not* here to find who "caused" the accident. We are here only to share what each individual has learned from the incident and then see if we can turn that into collective learning. The FLA team is not here to "fix" a problem. This is only about taking advantage of an opportunity to learn. Second, that nobody will be disciplined or "stood down" because of anything learned here. For this, we have the Agency Administrator's assurance. Moreover, this dialogue will be respectful. If anyone would rather use this session to prove someone else was wrong, they are invited to leave.

- **You are not your point of view!** Give the participants an introductory story or an example of a situation where a smart person was absolutely convinced things were one way when, in fact, the person turned out to be completely wrong (a personal story from your past is often the best type of story). The goal is to get people to feel that they don't have to defend their perspective. There will be differences of opinions on history; there always are. People have the right to change their opinions through the course of the dialogue. Get agreement with your audience upfront that nobody's credibility is on the line.

- **Incite uncertainty.** Our workplace culture has trained us to be very careful about what we say in meetings. Consequently, when others are talking, we tend to be barely listening. Rather, we are thinking about what we are going to say next. Dare people to suspend any certainty they have in what happened and challenge them to anticipate (and even *imagine*) that over the next hour or two, they will be surprised by what they didn't know. They need to listen deeply to each person, seeking clues and insights into this new understanding.

- **Listen for the silent voice.** Many people, even some extroverts, do not feel comfortable speaking up in a group of peers. Some great thinkers don't feel confident in their ability to *think on their feet,* developing coherent arguments while talking at the same time. The facilitator needs be attentive these quiet participants and work them into the dialogue. Don't allow a self-directed dialogue to continue very long unless everyone is participating.

Sand Tables and Google Earth

If you can't physically go to the site where an event occurred, you can utilize a computer, a projector, and Google Earth. People skilled with Google Earth can set up and animate a display that adds a bird's eye view and various features that often help participants see a larger perspective.

Using an informal, interactive sand table approach to present what happened during an event can also be particularly helpful. The very act of setting up the sand table using employees involved in the event can reveal different understandings of what employees thought was "reality."

Either Google Earth or a sand table presentation can illustrate how well-intentioned people acted when confronted with difficult situations. Via the re-creation of the event, you can share what people perceived, what they were thinking, how they performed, and—now—what they might think about differently in the future.

C. Event/Accident Reconstruction

The exact process of reconstructing the incident (generally by chronology and key events) will vary. No set procedure is prescribed. The final incident story (or chronology, or narrative) need not be completed until the very end of the process. For the sake of efficiency, however, the team should build a time line of events as they go. It may be helpful to post a series of flip chart pages together and construct a chronology or timeline of events. Timestamps from photographs and dispatch logs are also helpful for verifying critical times.

Leader's Intent for a Basic FLA

A basic FLA is successful if it simply captures the information about an event with enough detail to provide a picture of the incident so that the reader (or listener) can determine (on their own) why the actions made sense. In its purest form, this is the intent of a Basic FLA. The process does not require analysis or judgment; rather, it presents information like a documentary. A Basic FLA is somewhat like a staff ride. Observations and recollections do not have to agree; in fact, the process should capture the *fog of war*.

INSERT D: TWO SUGGESTIONS FOR DIALOGUE FOCUS QUESTIONS

The facilitator may want to refer to this page during the dialogue.

AFTER ACTION REVIEW QUESTIONS

Dialogue facilitators most commonly use the well-known After Action Review questions. These five key question groups are designed to evoke discussion and help guide participants to share their perspectives. By discussing the answers to these questions, a better "picture" of the event can be formed that further explores the decisions and behaviors involved in the event. These key questions will also help the writing of the FLA report:

1. What was planned? What was your leader's intent?
2. What information were you provided? What did you feel was missing? Why couldn't you get this?
3. What was the situation? What did you see? What were you aware of that you couldn't see?
4. What did you do? Why did you do it? What didn't you do? Why didn't you do it?
5. What was routine? What surprised you?
6. What did you learn? What might you do differently next time? What can we learn as an organization? What might we do differently?

ORGANIZING FOR HIGH RELIABILITY QUESTIONS

The five traits of High Reliability Organizations (HRO) can also be used to help structure or frame a facilitated dialogue. Generally, these questions should be reserved for cases in which the employees involved with the incident are already familiar with the HRO traits and understand the principles. To base the dialogue on HRO traits, ask each participant what happened before the incident and what was learned about the organization after the accident, with regard to each of the traits. The core of the dialogue is getting an answer to the question, "What did you (or we) learn from this event that will move us closer to actualizing each of these traits?"

1. Preoccupation with Failure
2. Reluctance to Simplify
3. Sensitivity to Operations
4. Deference to Expertise
5. Commitment to Resilience

Self-reporting of intentional rule violations and even deliberate law violations is one of the most valuable features of an FLA; this is the chief reason why we offer the assurance of "no administrative actions."

D. Final Considerations

1. Sensitivity to Admitting Mistakes

The credibility of the FLA depends on full disclosure of the events and actions and decisions surrounding the incident. However, when writing the report, the FLA team must make decisions about which details to include. Keep in mind that the purpose of the report is organizational learning. In crafting this report, the team must be sensitive to stakeholder concerns and seek to minimize embarrassment to employees, leaders, and organizations (including cooperators). Insensitivity on this point can be detrimental to the FLA process. Why would people choose to participate if they expect professional embarrassment? In addition to making selections about what to include in the public report, pay close attention to how those details and ideas are presented. In some cases, people and organizations will be embarrassed simply for having a bad outcome, no matter how appropriate their actions were at the time. The FLA team members must be firmly grounded in the understanding that if employees were not willfully and recklessly disregarding human safety, their actions leading up to the incident must have seemed reasonable to them at the time.

Intentional Rule Violation is *Not* Reckless and Willful Disregard for Human Safety

The FLA team must remain very aware that an intentional violation of a rule or procedure does not equate to reckless or willful disregard for human safety. Most often, a procedural rule violation falls within the category of normal, if not predictable, human performance. Frequently when we probe into why an employee intentionally violated a rule, we find that the rule was interfering with experienced safe practices. Most often, rule violations are the byproduct of workplace pressures or incentives on employees to increase efficiency. For instance, a firefighter talking to a duty officer on a cell phone while driving to a fire is a commonplace example of an employee knowingly violating a rule in order to achieve an additional measure of efficiency and productivity.

It is our best and brightest employees who learn how and where to be efficient in ways the rule makers never imagined. The gap between procedures and practice should be respected as the *evolution of expertise*.

From a safety perspective, we must react to knowledge of intentional rule violations with careful appreciation. Information such as this is the lifeblood of safety and anything that is done to impede the flow of this information will result in less upward reporting.

Understanding the expectation of the employee is critical to discriminate between a normal procedural rule violation and reckless and willful disregard for human safety. Admissions of procedural rule violation or at-risk behavior must be protected, and even cherished, throughout the FLA process.

2. Crimes or Willful Disregard for Human Safety

During the course of the FLA process, though likely very rare, it could be discovered that an employee acted with a reckless and willful disregard for human safety or committed a serious criminal act. For example, say it was discovered that the accident victim was drunk or on illegal drugs at the time of the event, or an employee involved in the accident intentionally tried to hurt another employee. If such a

discovery is made, then the event is no longer appropriate for a safety investigation. It is no longer considered an accident. The FLA team leader should write a memo to the delegating official stating that the FLA has been terminated and that there may be cause to initiate an administrative or law enforcement investigation. The FLA team leader should release all physical evidence (that is, photographs, sketches, PPE or other physical equipment gathered by the FLA team) to the Agency Administrator.

Collecting and Storing the Analysis Materials

After the FLA report is accepted, the FLA team's facilitator will collect and secure all electronic data storage devices, notes of interviews, team deliberations, and draft reports.

Material "evidence" such as photographs, personal protective equipment used, audio files/transcripts of radio communications, law enforcement reports, etc. shall be collected, cataloged, sealed, and given to the Agency Administrator for secure storage.

Agency Administrators should consult with their appropriate legal counsel or records managers on retention of these records.

Notes of interviews and other team products should be given to the FLA facilitator for confidentiality and secure storage. At this point, the FLA process has terminated and FLA team members should take no further actions The FLA process is a safety investigation. By choosing the FLA process, the Agency Administrator and the FLA team members share a mutual promise to maintain separation between the FLA process and any other sort of disciplinary, administrative, or law enforcement action under agency control. While the FLA team leader and the Agency Administrator must have some degree of discretion and flexibility to handle unique situations, including discussions on confidential matters, there must remain a firm firewall between the FLA and any other internal (agency-controlled) process that could use information from the FLA for non-safety related purposes. (See also the in-briefing tickler list in Appendix D.)

If an FLA is terminated for the above reasons, team members ***must not*** discuss anything they learned during the FLA process with anyone. *This includes agency officials performing internal (agency-controlled) administrative or agency-controlled law enforcement actions*. To do otherwise would violate the integrity of the safety investigation process and the implicit agreement within the FLA process. However, at any time, any team member may be required to cooperate with inquiries or investigations from external authorities (not under agency control) such as civil police agencies or officials from the U.S. Department of Justice, the Office of Inspector General, and the Office of Safety and Health Administration.

3. Report Completion

As soon as possible, the FLA team should complete a draft of the report and those involved in the event should review it. The recommended method for conducting this review is to read the report verbally (or with a projector displaying the report). Distributing copies of the draft is not recommended but, in some cases, may be unavoidable. Depending on the situation, the team might want to let key incident participants see and comment on the draft prior to its review release. This is at the discretion of the team leader. While the accident victims and others involved don't have to fully agree with everything in the report, they need to know that they had a fair opportunity to correct any errors.

If approved by the delegating authority, the report should be distributed appropriately. Wildland fire-related reports should be posted on the Wildland Fire Lessons Learned Center website at www.wildfirelessons.net.

4. Improving the Process

It is helpful if FLA teams can reconvene (at least with a conference call) and conduct an After Action Review of their FLA experience. Results from these After Action Reviews should be forwarded to the Forest Service Risk Management Officer for consideration in future FLA Guides.

This guide is revised and updated annually based on lessons learned from conducting FLAs across the country.

FLA General Rule

Facilitated Learning Analysis reports must avoid using people's names and only refer to gender if it is relevant to the incident or meaningful to the story. Using employee titles may be awkward within the story. One acceptable technique is to use fictitious, gender neutral names such as Terry, Tracy, Lynn, Leslie, etc. If fictitious names are used, ensure the reader understands they are fictitious and why.

For some types of incidents such as wildland fires, it is usually appropriate to include a person's Incident Command System (ICS) position for organizational and command issues to provide context and make sense to the reader. This can be annotated as "DIVS A" or "DIVS Smith" (where "Smith" is fictitious but the person was performing in a Division/Group Supervisor role).

"A large gap between work as imagined by administrators and work as actually done in the field is precious information for an organization serious about safety."

Fire Operations Risk Management Council
U.S. Forest Service

PART 5 - A COMPLEX FLA

Because of the necessary time and expertise, two components of a "complex" or thorough FLA are generally not featured in a "basic" FLA: the Lesson Learned Analysis and the accident story.

The Lessons Learned Analysis is one of the most powerful tools for mining deeper organizational issues. A basic FLA focuses almost exclusively on the lessons learned by those involved. The complex FLA takes this to the next step—the organizational level—by using the Lesson Learned Analysis process. This process can take several days and requires an FLA team that has subject matter experts on both human performance and the specific activity surrounding the event. If no one on the FLA team is experienced in this process, a Lessons Learned Analysis coach may also be needed.

A. RECOMMENDED PROCEDURE FOR CONDUCTING THE LESSONS LEARNED ANALYSIS

1. Gather the FLA team members together in a secure, private meeting room.

2. Post around the room, most likely on flip chart paper, the quotes and key bits of information gathered from the interviews. Highlight what the employees learned from this incident for themselves and what they want management or other employees to also learn.

3. Construct a list of key expectations and beliefs that the people held before the incident. Construct a parallel list of key decisions, actions, judgments, and behaviors that were directly proximal in space or time with the event. If there were key mistakes (like a math miscalculation or "had the radio on the wrong channel," etc.) list these as well.

Wikipedia Definition of "Sensemaking"

"sensemaking . . . is the ability or attempt to make sense of an ambiguous situation. . . More exactly, sensemaking is the process of creating situational awareness and understanding in situations of high complexity or uncertainty in order to make decisions. It is 'a motivated, continuous effort to understand connections (which can be among people, places, and events) in order to anticipate their trajectories and act effectively.'"

4. The lists above are not causes. They are simply conditions. The team should now conduct its own dialogue session. The object of this dialogue is to achieve consensus on which are more important, which are the key conditions. During this dialogue, it helps to come to a consensus on a list of all the unlikely events and the chance conjunction of these events that had to happen (at just the right time and place) for the accident to occur.

5. For each key condition, the FLA team should deliberate on the seven questions framed in the "Seven Hows" below.

"Usually what we find is that our workplace systems, protocols and rules are designed to accommodate optimal employees – not actual employees."

Fire Operations Risk Management Council
U.S. Forest Service

B. Deliberate the "Seven Hows"

In discussing and coming to a consensus on the key conditions that made the accident participants' actions seem reasonable, natural, or expectable in the context of the situation leading up to the event, FLA team members should keep asking "*Why?"* or, even better, *"How*?"—until they reach the level of "sensemaking" (see definition on page 29) that was shared by those people directly involved in the accident. In doing so, the team should not hesitate to contact people previously interviewed to clarify perceptions and resolve conflicting memories and understandings.

PROCESS→ For each key condition, the FLA Team should deliberate on the "Seven Hows" below.

The Seven Hows

***How it made sense at the time of and leading up to the incident to*:**

1. see things the way they were seen.
2. expect what was expected.
3. believe the risks were one way, when—*in hindsight*—we know they were another way.
4. forgo an available hazard mitigation.
5. shortcut typical procedure.
6. accept a risk that—*in hindsight*—seems unreasonable to have accepted.
7. ignore a risk that—*in hindsight*—seems so obvious.

KEY PRINCIPAL→ Keep the focus on the players involved in the incident. The focus is NOT "how" it makes sense to the FLA team, but rather how it made sense *to those involved*.

Discussing the answers to these seven "how" questions will provide the FLA team context necessary to understand *why* the accident happened and the accountability of the system.

If the Delegation Requires You to Determine "Cause"

If the delegation *requires* the FLA team to find cause, determine cause, or identify causal factors in the report, the team should define the word "cause" within the report as "The team's judgment of the conditions that describe the nature of the accident" including:

- Conditions that create tension between production and protection, and
- Conditions that collectively produce the latent factors that permit the chance conjunctions of local triggers and active failures to breach all the barriers and safeguards.

Adapted from *The Human Condition* by James Reason

"Do we teach our future leaders that every decision they make will be the right one?
Then why do we expect, in the wake of accident, that every decision should have been the right one?"
Fire Operations Risk Management Council
U.S. Forest Service

C. Recommendations for the Lessons Learned Analysis Documentation

1. Characterize the Accident by "Condition" *Not* "Cause"

There is a deliberate effort in the FLA process to avoid labeling human errors, omissions or other actions (or non-actions) as "causal." Labeling these "findings" as cause impedes our ability to explain or understand what was experienced in context before the accident. Constructing causal statements inevitably degrades our ability to understand the complex nature of accidents, the role of chance, and nature of human performance functioning in dynamic environments.

Causal statements tend to lack context because, for one, context is too complex; and two, because once context is explained, cause becomes a conclusion that no longer follows from the premise (a non sequitur). To create cause, investigators have to recreate the event showing how certain anomalies (discrete omissions or actions) led to, or contributed to, the accident. This leads to the simplistic (and therefore *wrong*) conclusion that if the people who were dealing directly with the risks just complied with the rules (or complied better), they *would have been* safe. In reality however most of those discrete omissions or actions occur during the course of normal work *continuously*. They are not anomalies at all. Indeed, those same omissions and actions typically lead directly to successful outcomes and even avert disasters. A chance conjunction of events is almost always the difference between *normal* success and the *rare* accident.

Finally, causal statements tend to imply that safety is the responsibility of those employees on the front lines facing the risks ("the driver was speeding," "the faller's face cut was too shallow," "the firefighter lost situational awareness," etc.). This impedes learning because it faults only one part of the system. However, safety is in the entire system. Employees at the "sharp end" (those workers who directly confront the risks of the workplace) are inheritors of policies, training programs, tools, culture, incentives, etc. that make up the larger system. Reporting cause or causal factors is highly discouraged in FLAs.

The FLA report should explain the nature of the accident. The bias of the FLA team is that accidents are *not* caused by anomalous, blundering, or deviant employee behavior. Accidents are more accurately understood as unexpected combinations of *normal* performance variability (both human and system performance variability).

Through the Lessons Learned Analysis and the use of the Seven Hows, the Complex FLA Team will gain the ability to identify, understand, and explain the risks of the situation and the performance-shaping factors surrounding the incident. This is very different than trying to determine the cause; indeed, this

exercise will make obvious that the label of 'cause' is a distraction to understanding the nature of the accident. Most often, the Lessons Learned Analysis will reveal that multiple improbable events were necessary for the accident to occur. A quality Lessons Learned Analysis may conclude simply that we need to learn to think statistically if we are to enhance our odds in future endeavors. In many cases, the best that can come from an accident investigation is to illuminate conditions where a human mistake is likely, especially conditions where a human mistake can be catastrophic.

2. Avoid Counterfactual Arguments

FLA teams must guard against making counterfactual arguments such as: *"If this person had done X, then the outcome would have been Y and the accident would not have occurred."* The FLA is only useful when it learns why people did what they actually did (why it made sense to them at the time), rather than why they did not do something that—in hindsight—others might think they should have.

3. Display Misalignments Between Administrators' and Employees' Perspectives

Many unsafe behaviors are well tolerated and even valued—until there is an accident. Indeed, one of the values of experience is that it teaches us what rules and procedures are important and which ones can be shortcut to increase efficiency or effectiveness.

Once the FLA team understands how the accident participants made sense of their environment, the team should contrast this understanding with how administrators thought employees would (or should) make sense of the environment. Illuminating the gap between work as imagined by administrators and work as actually accomplished will illuminate substantial and critical organizational vulnerabilities.

Deficiencies in physical ability, knowledge, skill, or leadership competencies may also be uncovered and considered key conditions or risk factors. Once again, in these situations, the focus of the FLA team is not on the *individual* but on the *system* (the organizational conditions) that enabled under-qualified or under-capable employees to be in critical or difficult situations.

"We like to hear good stories retold. What is more interesting is our need to tell stories, again and again and again. Each telling helps us understand more about the lessons embedded in the story."

Gary Klein, Author
Sources of Power: How People Make Decisions

PART 6 - CAPTURING AND SHARING THE STORY

A central feature of the complex FLA report is the "story" of the accident. Effective storytelling is the most powerful teaching tool we have to convey the wisdom and experience gained from living through an incident. Storytelling moves *Lessons Learned* into the vicarious experience of *Lessons Lived*. In some cases, a short factual story may also be appropriate for a basic FLA.

A. FLA STORYTELLING AND STORY WRITING TIPS

In the context of an FLA, stories should not be confused with fiction or an enhancement of facts. In an FLA, the narrative is a factual account of what occurred as told from the perspective of those most directly affected.

Because the FLA report is designed to be a learning tool, the narrative is written to utilize and highlight the power of storytelling. People tend to make sense of and remember "facts" by creating mental stories that give the facts context and an emotional attachment. Consequently, storytelling is widely recognized by leading educators as the most effective tool for teaching human/environmental interactions to successfully effect organizational and cultural change.

Effective storytelling includes details gleaned from interviews to enhance the reader's vicarious experience. The story is written in plain language and leads the reader through the sequence of events as they occurred.

The participants did not expect the outcome that occurred. Persons reading the story should be able to feel (or at least respect) the sense of surprise felt by the employees at the time, and to understand why they were expecting something very different.

After a draft of the story is developed, read it aloud to the FLA team and a few guests (people who have no firsthand knowledge of the event). The setting for this reading should be casual, private, and relaxed. After the reading, each team member and guest should be able to relate a sense of what the accident participants were *feeling* at the time. That the characters in the story were hot, thirsty, confused, or angry gives readers anchors upon which to attach themselves emotionally to the event and greatly enhances experiential learning. Even more importantly, the emotions and sensory perceptions of those who *lived the event* establish the context for their decisions and are critical to understanding the sensemaking that occurred at the time. Edit the story as necessary to achieve this result.

In an FLA, the story presents the accident as it was seen, felt, and understood by those involved. To the extent possible, the story should not be written from an outsider's perspective. Rather, the story is written from the point-of-view of the people most directly involved in the accident. The story is not written to persuade, but rather to reveal to readers the reality of what actually happened from the perspectives and within the context of those involved. It should strive to accurately convey what these people understood, believed, felt, and experienced.

Storytelling is a common talent but story-*writing* is unnatural for most people accustomed to writing linear narratives. If the team is struggling on this task, consider bringing in a skilled nonfiction storywriter.

B. Different Perspectives

The story should strive to enable its readers to "walk in the shoes" of the accident's key players. At a minimum, the story should show how the decisions of these employees made sense within their social and cultural context based on information known to them at the time.

It is inevitable in any complex event that the people involved in the accident will have different perspectives and memories of what happened and how and why. The FLA team's emphasis should be focused on the need to enhance completeness and accuracy to create a coherent and readable story.

Multiple stories are acceptable and this has been used in FLAs to resolve irreconcilable differences in recollections or to illuminate important differences in perspectives. The FLA team may also consider telling one story from the perspective of the accident victims and a companion story from the perspective of the supervisors involved.

The Pagami Creek Fire Shelter Deployment & Entrapment FLA is highly complex but also easy to read. It successfully tells the accident "story" from multiple perspectives.

C. STORY VALIDATION

All of the key individuals involved with the accident should have an opportunity to hear the finalized FLA report's story read out loud by the FLA Team. They should be requested to correct or clarify important details and ensure that their lessons learned are captured correctly. There is high value in employees seeing their thoughts and inputs captured in the report. Even emotional or controversial comments can be powerful points of learning—providing they are captured appropriately in the context in which they were offered.

If significant discrepancies surface, these should be resolved. Further follow-up interviews may be necessary. If important discrepancies cannot be reconciled, consider including an appropriate disclaimer in the report. Alternate recollections could also be posted in an appendix to the report.

The validation should occur in two phases: first to those directly involved in the incident and secondly to the other participants, supervisors, and administrators. If people are shown a hard copy of the report, all copies should be collected afterward to prevent contradictory copies from being circulated.

In some situations, it may be appropriate to bring all persons involved in the incident together for story validation in a facilitated group setting. Use caution with this approach, as strong supervisors will suppress the voices of those who have different perspectives. It is usually preferable to read the story to those directly involved first, then to supervisors and administrators. After corrections are made to the story from both readings, it can then be read to all, led by a strong facilitator, in a group setting.

Leader's Intent for a Complex FLA

A Complex FLA is successful if describes what happed and explains how it made sense leading up to the event, to the people involved, to make the decisions and choices they made.
The FLA should include enough information about context of the event such that the reader (or listener) can literally feel some of the surprise that the actors in the event felt at the time. The story within the complex FLA must make the accident *make sense,* so that the reader can vicariously learn the lessons others had to learn the hard way.
The analysis section should daylight the important workplace and human performance conditions that were influential in sensemaking at the time. It should also display the *Gap* between work as imagined by the administrators as compared to actual work accomplished by employees.
The product of the FLA team, (report or video, etc.) should be in a format conducive to widespread agency learning.

"Experience is the cruelest teacher.
She gives you the exam first, then the lesson later."

Attributed to Albert Einstein, Vern Law, and others

PART 7 - COMPLETING THE COMPLEX FLA REPORT

A. THE SUMMARY

The summary section needs to be sufficiently thorough to give the reader the context behind the accident. At a minimum, it should include a synopsis of the accident and an overview of the conditions that supported assumptions, expectations, and actions taken. Consider making note of the combinations of events and conditions necessary to surprise the characters involved. Give proper attention to the foreseeability and likelihood of accident triggers in the time and space necessary for them to have their effect.

The summary also provides an overview of the lessons learned, especially lessons that the participants believe need to be learned by the agency. Avoid summarizing the lessons learned as this will raise the question over why some lessons learned were included in the summary and some were not.

B. THE RECOMMENDATIONS

The FLA Team Leader and delegating official should discuss and consider the value of recommendations. Recommendations are often problematic because there is no policy or regulatory requirement that accident investigations contain recommendations.

If recommendations are desired, keep them to the minimum absolutely necessary. Care should be taken to ensure that recommendations are realistic and achievable, recognizing the limitations of the organization for which they are designed.

FLA recommendations should be focused on workplace conditions that pose an unnecessary risk to future operations. They may also focus on actions the administrator can take to move the organization toward a Just Culture.

C. EXAMPLE

The following example illustrates how a complex FLA report links the Lessons Learned, the Lessons Learned Analysis, the Summary, and the Recommendation sections. The Story section of the report describes a serious accident that occurred when an employee was driving a vehicle with an under-inflated tire that became overheated and blew out, creating a loss of vehicle control. With protection from administrative actions, the employee admits that, although he had been told periodically to check the tire pressure, he never takes the time to do so.

- A Lesson Learned by an employee directly involved in the accident:

"Under inflated tires can be deadly! I will, from now on, regularly check the air pressure in my tires."

- A Lesson Learned for management by an employee directly involved with the accident:

  "Some employees do not know how dangerous it can be to drive with an under-inflated tire. I had to learn the hard way. Management should ensure that we all understand the importance of checking tire pressures."

- A Lessons Learned Analysis provided by the FLA Team:

  Key Conditions Related to Risk:

  - The unit recently began using pooled vehicles rather than assigning vehicles to individuals.
  - Employees interviewed reported that maintenance deficiencies (including over- and under-inflated tires, low oil levels, bad shocks, worn wiper blades, etc.) are now common among pooled vehicles.
  - Unit vehicles are considered to have low reliability and employees generally seem to have accepted this as normal.
  - Rules such as requiring all employees to perform all maintenance checks on vehicles are generally known but not enforced.
  - Most of the employees on the unit believe that routine maintenance on vehicles is everyone's responsibility—but not anyone's responsibility.
  - The employee involved in the accident rarely checks the tire pressure or performs any maintenance on fleet vehicles.
  - There is no record of the tires ever being checked but it is likely the tires were last checked at the last oil change, approximately 11 months and 14,000 miles prior to the accident.
  - According to the manufacturer, tires such as those on the vehicle involved in the accident can experience bead separation at 290 degrees resulting in catastrophic failure. This temperature threshold can be reached after moderate driving at highway speeds when the cold tire pressure is less than 8 lbs.

  Key Conditions and Factors Shaping Employee Performance:

  - Management and employees have become accustomed to—have normalized and accepted—driving vehicles that lack regular or standard maintenance. There is a general and pervasive sense that vehicle maintenance is nobody's responsibility and that the related safety concerns are minimal. While the maintenance policy exists in writing, there is no administrative or social pressure to maintain vehicles.

- The Summary section could state:

  Through the lens of hindsight, we know that <u>not</u> checking tire pressure regularly is a very risky behavior. In a culture where this behavior is accepted, the risks associated with the behavior become normalized. Once normalized, the risks are no longer managed. Instead, they become routine and ignored or treated as unavoidable risks.

  A key workplace condition that supported the decisions and perceptions of risk involved in this accident is that the unit has no process in place to enforce (or provide the social or administrative incentives to comply with) the existing rules requiring regular and routine maintenance of all vehicles.

- A Recommendation provided to the Agency Administrator:

  The unit should establish, continually update, and reinforce a process to assure that regular vehicle maintenance and servicing has been performed.

The Deer Park Fire FLA report relays the story of a serious accident and then another accident which that occurred during the rescue operation.

The specific details of interviews and deliberations are not shared with anyone outside of the FLA Team, including the Agency Administrator.

D. Report Approval and Publication

Upon final completion, the FLA report is presented for comments and recommendations to the delegating Agency Administrator and other officials chosen by the administrator.

The FLA team leader, the FLA facilitator, and the Agency Administrator should work together to resolve any items of dispute pertaining to the report. While it is important to distribute the report as quickly as possible, the integrity of the process is most important.

The original Delegation of Authority ideally should be a consensus of objectives. In addition, throughout the FLA process, the FLA team should be communicating the key points of its analysis with the Agency Administrator in a spirit of full disclosure to prevent any "last-minute" surprises. However, in the unlikely event of an irreconcilable dispute between the Agency Administrator and the FLA team leader, the report should be withheld from publication.

Under no circumstance should the FLA report be changed or redacted without the explicit approval of the FLA team leader.

Agency Administrator Authority

The Agency Administrator retains the authority to request the FLA report be vetted by legal counsel, Freedom of Information Act, or Claims and Privacy Act specialists. To neutralize unnecessary legal or political damage to the agency, the FLA Team shall comply with these requests.

If other agencies are involved in the accident (for instance, cooperator personnel were injured or were associated with the event), coordination should occur with those agencies prior to the release of the FLA report.

As soon as possible, the report should be posted on safety and lessons learned websites. The team leader should work with the Regional Safety Advisor or Fire Operations Risk Manager to post appropriately. Wildland fire-related reports should be posted on the Wildland Fire Lessons Learned Center website: www.wildfirelessons.net.

PART 8 - APPENDICES

APPENDIX A: IS AN FLA THE RIGHT TOOL?

Five Questions for the Agency Administrator

Determining if an FLA is the appropriate investigative tool requires the Agency Administrator to gather sufficient information to answer the following five questions:

1. **Is a Serious Accident Investigation required by policy?**

   Forest Service policy requires a Chief's-level investigation of an accident with one or more fatalities. The Chief's Office may also choose to investigate any other type of accident (Reference FSM 6731.1 and FSH 6709.12 section 34.1). Implementing an FLA does not change the accident reporting requirements (Reference FSM 6732 and local policies if applicable). If the accident is interagency in nature (involving personnel from more than one agency or jurisdiction), the authorizing Memorandum of Understanding between the agencies may stipulate investigative requirements. Nothing in the *Interagency Standards for Fire and Aviation Operations* (the "Red Book") precludes any agency from utilizing the FLA process.

2. **Is litigation against an employee or the agency likely as a result of the accident?**

   If the answer to this question is "Yes," the Agency Administrator should consider a confidential administrative investigation or a traditional Serious Accident Investigation. An FLA investigation is inappropriate under the threat of a criminal or civil action.

3. **Is there evidence that an act of reckless and willful disregard for human safety directly contributed to the accident?**

   If the answer to this question is "Yes," the Agency Administrator should consider an administrative investigation and, if appropriate, a concurrent Serious Accident Investigation. If the FLA Team uncovers an act of reckless and willful disregard for human safety, the team may not be able to sustain the trust and confidence of other accident participants—knowing that disciplinary action is likely. (A reckless and willful disregard for human safety is conduct that is intentional, unjustifiable, and occurred with the foreknowledge that the conduct was likely to result in serious harm, death, or injury to a human. See shaded box on page 26.) Moreover, one of chief benefit of an FLA is to hold the agency accountable for designing safe systems and managing human reliability. The employee, not the agency, is accountable for reckless and willful disregard for human safety. If this behavior is believed to have directly contributed to the accident, an FLA is likely a wasted effort.

4. **Is the Agency Administrator committed to disseminating the lessons learned in a public report?**

   The answer to this question must be "Yes." To some extent, the report is documenting that, in hindsight, we made a mistake, and some information in the report may be uncomfortable and even embarrassing to management officials. This is exactly what is needed in a learning culture.

Employees at all levels need to see that leaders are standing up and sharing their mistakes and what they learned from accidents and close calls to help prevent future accidents.

5. Is the Agency Administrator committed to "learning" rather than "punishing"?

The answer to this question must be "Yes." This "learning" concept is central to the FLA philosophy and process. If punishment is intended, in whatever form, the FLA process should be dropped. The FLA's overriding purpose is always individual and organizational learning. Therefore, if learning is the more important goal, an FLA is the appropriate vehicle. The learning that will result from this constructive process will far outweigh any perceived benefit that might be derived from punishing individuals for making errors, mistakes, or violating rules.

Have You Decided To Do an FLA?

Assistance in fielding a quality FLA team is only a phone call away.

Coaches for FLA Teams are also available. They can coach the team through the entire process by telephone.

Call for Help
208.387.5970
or
801.721.7258

The FLA process can be used in almost any type of unintended outcome, including aviation incidents such as the Davies Creek Ridge FLA in 2011

APPENDIX B: DELEGATION OF AUTHORITY FOR A BASIC FLA

Delegations of Authority should be negotiated between the team and the administrator.

File code: 6730 Date:

Route to:

Subject: Delegation of Authority

To: (Facilitated Learning Analysis Team Leader)

I have chosen to utilize the Facilitate Learning Analysis Process to fulfill my responsibility to

Choose one:

Investigate the (accident name) .

or,

Review the (event name) .

This memorandum formalizes your appointment as Team Leader for the Facilitated Learning Analysis Team.

As Team Leader, you have the full authority of my office to execute and complete an FLA. To the extent reasonable, follow the procedures displayed in the 2013 Facilitated Learning Analysis Implementation Guide. You are scheduled to in-brief with my staff and me on (date and location). _____ will be your logistical coordinator and my liaison to you. Please contact him/her at (phone number) to discuss your logistical support needs.

_____ will be your team's coach. I expect you to consult with her/him frequently to ensure you and your team are benefiting from the mentor's experience in FLAs. Please contact your coach at _____ as soon as practical.

You are expected to produce the 72-hour (or Preliminary Accident Briefing) report and the final report as soon as practicable.

Based on the situation as I know it now, this event does not warrant a complex FLA with a Lessons Learned Analysis or accident story. Therefore, I expect you will limit your team accordingly and complete this FLA promptly. Please contact me immediately if you learn of information that would warrant significantly adding to the complexity of this FLA thus changing it to a Complex FLA.

I expect you to terminate this investigation if you uncover information that leads you to believe this accident resulted from a reckless and willful disregard for human safety. I respect that the information you collect from interviews will remain confidential even in this instance. I also agree that no punitive actions will be taken by the Forest Service against any employee as a result of information provided to any member of your team. Please ensure participants understand that actions taken by civil authorities, or other agencies, are outside of my authority. I will contact you

periodically for an update on your progress.

Your authority includes, but is not limited to:

- Controlling, organizing, managing, and directing the analysis.
- Controlling and managing the confidentiality of the process.

Add other direction as appropriate such as:

- Include a peer or other FLA team member from the other agencies that were involved in this accident.
- Provide me your recommendation verbally at the conclusion of this FLA. If you believe it is appropriate to add a recommendation section in the report, please consult with me in advance.

- Protecting and managing the integrity of evidence collected.
- Authorizing and requesting additional personnel, including technical specialists, to support the FLA Team, and releasing them upon completion of assigned duties.
- Authorizing and coordinating the expenditure funds.
- Coordinating all media releases about the investigation.
- Issuance of Safety Alerts, if warranted, in coordination with _____, the Regional Safety Manager, cell number: _____.

All travel, equipment, and salary costs related to this investigation should be charged to [job code] with an override code of _____.

For additional information, please contact me at _____

/s/_____
Agency Administrator

APPENDIX C: DELEGATION OF AUTHORITY FOR A COMPLEX FLA

Delegations of Authority should be negotiated between the team and the administrator.

File code: 6730 Date:

Route to:

Subject: Delegation of Authority

To: (Facilitated Learning Analysis Team Leader)

I have chosen to utilize the Facilitate Learning Analysis Process to fulfill my responsibility to

Choose one:

Investigate the (accident name) .

or,

Review the (event name) .

This memorandum formalizes your appointment as Team Leader for the Facilitated Learning Analysis Team.

As Team Leader, you have the full authority of my office to execute and complete a thorough Facilitated Learning Analysis. To the extent reasonable, follow the procedures displayed in the 2013 Facilitated Learning Analysis Implementation Guide. The focus is how the events leading up to this accident made sense at the time *to those involved*. You are scheduled to in-brief with my staff and me on (date and location). _____ will be your logistical coordinator and my liaison to you. Please contact him/her at (phone number) to discuss your logistical support needs.

_____ will be your team's mentor and coach. I expect you to consult with her/him frequently to ensure you and your team is benefiting from his/her experience in complex FLAs. Please contact your mentor/coach at _____ as soon as practical.

You are expected to produce the 72-hour (or Preliminary Accident Briefing) report and the final report as soon as practicable.

Based on the situation as I know it, I am expecting you to complete a Complex FLA report including a Lesson Learned Analysis and an Accident Story. Please prepare your team accordingly.

I expect you to terminate this effort if you uncover information that leads you to believe this accident resulted from a reckless and willful disregard for human safety. I respect that the information you collect from interviews will remain confidential even in this instance. I also agree that no punitive actions will be taken by the Forest Service against any employee as a result of information provided to any member of your team. Please ensure participants understand that actions taken by civil authorities, or other agencies, are outside of my authority. I will contact you periodically for an update on your progress.

Your authority includes, but is not limited to:

- Controlling, organizing, managing, and directing the analysis.
- Controlling and managing the confidentiality of the process.
- Protecting and managing the integrity of evidence collected.
- Authorizing and requesting additional personnel, including technical specialists, to support the FLA Team, and releasing them upon completion of assigned duties.

Add other direction as appropriate such as:

- Include a peer or other FLA team member from the other agencies that were involved in this accident.
- Provide me your recommendation verbally at the conclusion of this FLA. If you believe it is appropriate to add a recommendation section in the report, please consult with me in advance.

- Authorizing and coordinating the expenditure funds.
- Coordinating all media releases about the investigation.
- Issuance of Safety Alerts, if warranted, in coordination with _____, the Regional Safety Manager, cell number: _____.

All travel, equipment, and salary costs related to this investigation should be charged to [job code] with an override code of _____.

For additional information, please contact me at: _____.

/s/_____
Agency Administrator

APPENDIX D: TICKLER LIST OF IN-BRIEFING DISCUSSION ITEMS

If the unit is represented by the union, ensure union representation is present at the in-briefing.

Note: points in italics are generally relevant only to Complex FLAs.

1. Why an FLA?

a. This event was unexpected. Unexpected outcomes are disturbing to our organizational and personal security. The suffering of our employees and their families from accidents are unacceptable to us. If there is something we can change so that it never happens again, we are ethically and morally compelled to do so.

b. We've learned the hard way that how we react to any accident will either shift us toward, or away from, a learning culture. The FLA process, as demonstrated and refined by years of implementation and experience, will move us toward a learning culture.

c. We knew there was a chance of this type of accident happening. It may have been a surprise but it probably wasn't outside of the range of what we felt could happen. The FLA report will show how our employees made sense of their situations and reveal the workplace systems and conditions that made such sensemaking reasonable and perhaps even inevitable. With this information, management can make system adjustments that should enhance performance and reliability in the future.

d. All accidents are required by OSHA and by U.S. Forest Service policy to be "investigated" and all escaped prescribed burns are to be reviewed per Forest Service policy. This FLA shall constitute an investigation/review and fulfill that requirement.

e. The FLA report will tell the story of the event in a way that gives others across the country a vicarious experience of the accident. It is hoped this experience will be a "portal" experience leading to a greater awareness of risks and safety. (Leader: consider discussing the meaning and value of portals.)

2. The Process the FLA will Follow

a. The FLA team will gather background information such as timelines, maps, dispatch records, and photographs, and information from conversations with those involved. This enables the team to piece together all the "facts" and to create a timeline of the accident story and an outline of key events. Concurrently, team members will work closely with those most directly involved with the accident to understand what they believed happened and how the decisions and actions leading up to the event made sense at the time.

b. Using the FLA's Lessons Learned Analysis process, the team will examine and interpret the workplace conditions and other factors that led to the sensemaking that occurred before and during the accident. Lessons learned by those directly involved will be featured in this analysis, preferably in their own words.

c. A draft of the report will be read in a confidential setting to the key characters involved with the incident. A vetting process will occur between the team and the key characters until there is agreement on the factuality of the report and that their perspectives have been adequately captured.

d. A draft of the report will be then be submitted to the Agency Administrator. If requested, this draft will include recommendations that the team believes will enhance risk management in the future. Any changes to the draft document will be negotiated between the Agency Administrator, the FLA team leader, and facilitator.
e. As soon as the FLA report is accepted, it will be posted on appropriate websites for widespread distribution and learning.
f. Other steps or items this particular FLA may include:

_____
_____
_____

3. What the FLA Team Needs from the Agency Administrator

a. Assurance of no administrative actions against any employee involved in this FLA. (Leader: consider discussing what administrative actions mean from the employee's perspective.)
b. A commitment to comment on and approve the report promptly.
c. Support for the FLA team with regard to facilities, logistics, making employees available, etc. Immediate logistical needs include:

_____
_____
_____

4. Expectations

a. FLA team members will be absolutely confidential in all deliberations and conversations.
b. If the FLA team discovers a willful and reckless disregard for human safety (for example, "the crew was smoking dope"), the FLA will be terminated and the team will leave. The background and details of the discovery will remain confidential. (Leader: consider discussing the meaning of a "willful and reckless disregard for human safety" or reading the text box on page 26.)
c. The draft report should be completed by about __/__/___.

5. The Desired End State

a. The employees and their colleagues better understand not only what happened but why the choices made leading up to the accident made sense at the time, in the context of the event.
b. Employees see that their supervisors can be trusted (at least in this incidence) to react to an accident in a way intended to build trust and a learning culture.
c. Administrators and employees have a document that will be helpful for use in future operational training, safety training, or risk management. This document may also be useful to other units for these purposes across the country.
d. The accident investigation policy requirement is completed with the acceptance of the FLA report. The Agency Administrator may choose to implement the recommendations—or not.

Summary

"Risk Management" and even "Safety" can be somewhat obscure and indefinite goals, especially in the aftermath of an accident. A tangible goal, however, is simply to be better than we were before.

One of the traits of HROs is *a preoccupation with failure*. This isn't negative thinking, it is intelligent wariness. As Karl Weick wrote, *"If eternal vigilance is the price of liberty, then chronic unease is the price of safety."* We know that we cannot make our workplace free from all potential or even recognized hazards; intentional exposure to hazards is, in fact, a hallmark of emergency response. But we can *exploit the value of accidents and close calls* by focusing on learning from our mistakes and continuously improving how we discern, interpret, and manage risks.

APPENDIX E: REFERENCE MATERIALS FOR TEAM MEMBERS

Accidents and Human Performance

Dekker, Sidney. *The Field Guide to Understanding Human Error*. Aldershot, England: Ashgate, 2006.

Hollnagel, Erik. *The ETTO Principle Efficiency-Thoroughness Trade-Off: Why Things That Go Right Sometimes Go Wrong*. Farnham, England: Ashgate, 2009.

Kahneman, Daniel. *Thinking Fast and Slow*. New York, NY: Farrar, Straus and Giroux, 2011

Neal J. Roese and Kathleen D. Vohs, "Hindsight Bias," Perspectives on Psychological Science 7 no. 5 (September 2012), 411-426. Available at http://pps.sagepub.com/content/7/5/411.abstract

Reason, J. T. *Managing the Risks of Organizational Accidents*. Aldershot, England: Ashgate, 1997.

Reason, J. T. *The Human Contribution: Unsafe Acts, Accidents and Heroic Recoveries*. Farnham, England: Ashgate, 2008.

Tavris, Carol, and Elliot Aronson. *Mistakes Were Made (but not by me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts.* Orlando, FL: Harcourt, 2007.

Woods, D.D. and R.I. Cook. "Nine Steps to Move Forward from Error." *Cognition, Technology, & Work* 4, no. 2 (2002): 137-144. Available online at: http://www.ctlab.org/documents/NineSteps.pdf

Organizational Learning and Learning Culture

Bruner, Jerome. *Making Stories: Law, Literature, Life.* Cambridge, MA: Harvard University Press, 2003.

Isaacs, William. *Dialogue and the Art of Thinking Together: A Pioneering Approach to Communicating in Business and in Life*. New York: Currency/Doubleday, 1999.

Just Culture

Dekker, Sidney. *Just Culture: Balancing Safety and Accountability.* Aldershot, England: Ashgate, 2007.

Marx, David. *Patient Safety and the "Just Culture": A Primer for Health Care Executives.* New York: Trustees of Columbia University, 2001. Available on line at: http://www.unmc.edu/rural/patient-safety/tools/Marx%20Patient%20Safety%20and%20Just%20Culture.pdf

On-line training modules on application of Just Culture, produced by Outcome Engineering Inc. Available at: www.JustCulture.org

Risk Management

Taleb, Nassim. *The Black Swan: the impact of the highly improbable*. New York, NY: Random House