FACILITATED LEARNING ANALYSIS

IMPLEMENTATION GUIDE

RISK MANAGEMENT AND HUMAN PERFORMANCE

IN COOPERATION WITH THE OFFICE OF SAFETY & OCCUPATIONAL HEALTH

Revised January 31, 2015

"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."[*]

"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 . . ."[†]

"I got behind the safety shelter; then in a little bit, I heard a voice say, Get in This Truck!"

2011, Salt Fire Entrapment and Shelter Deployment FLA. U.S. Forest Service Photo by Tony DeMasters

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

[*] 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), p235.

[†] J. T. Reason, *Managing the Risks of Organizational Accidents* (Aldershot, England: Ashgate, 1997), p195.

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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 essential step in organizing for high reliability is developing and nurturing a "Learning" culture. A learning culture sees unintended outcomes as valued opportunities to learn and grow and be better, more reliable tomorrow.

How an agency responds to an accident is enormously important. The leaders' responses will either vector the agency toward a Learning Culture or away from it. If the leadership assumes the accident happened because someone failed to do something right, then the natural response is to determine (in dazzling 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. End of story—*until the next accident.*

Alternatively, leaders can see that while accidents[3] are very rare, risk is ever present. It is ubiquitous. Yes employees make mistakes but most of the time (almost continuously) they are *creating safety*. Employees regularly and systematically adapt and make judgments to handle emerging risks, and these adaptations will never be perfect. Errors, mistakes, and lapses are commonplace. So are irrational 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! Understanding this, progressive leaders can treat accidents and other unintended outcomes as precious opportunities to look deeply into the operation to better understand how employees perceive and manage risk. This view enables deep learning and with it, *an accident can become* a *safe opportunity* for those involved to share their story.

"Take your pick: You can blame human error, or you can try to learn from the failure."[4]

{A 40 minute video "Overview of the FLA Process" is available at: https://www.youtube.com/watch?v=_spEZD9aGc0}

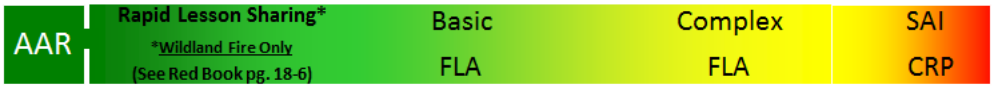
[3] The term "unintended outcome" can be used interchangeably with "accident" throughout this guide.
[4] Sidney Dekker, *The Field Guide to Understanding Human Error* (Aldershot, England: Ashgate, 2006), p4.

B. An Expandable Process: From Basic to Complex FLA[5]

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. After 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 people who were directly involved in the event learned and will share outside of their group.



This is a basic FLA, which has been referred to as an "After Action Review on Steroids." The basic FLA can be led by as few as just a couple of people. The report may be only a few pages in length. With a larger FLA team, and given more time, the FLA team can produce a more powerful learning tool, telling the story of the incident and displaying lessons learned for the greater organization. In our analogy with wildland fire, **a basic FLA is like a Type 3 Incident**.

A complex FLA will search much deeper. It is the most robust process to analyze an unintended outcome and develop lessons learned for the broader organization. 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 analyze the key conditions that surround the event. A complex FLA may involve a team of 5 to 15 people (including subject matter experts and 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.** In the Forest Service the "Coordinated Response Protocol" utilizes the Complex FLA process and incorporates additional agency efforts such as the Office of Learning, Law Enforcement and employee wellness.

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

C. CRITICAL CONSIDERATIONS FOR THE AGENCY ADMINISTRATOR

[Agency Administrators - see also **APPENDIX A: IS AN FLA THE RIGHT TOOL? ON PAGE 48]**

Before the FLA team is formed, the Agency Administrator (in consultation with safety and technical specialists) should consider how thorough and detailed the analysis and the report should be. What does the administrator base this decision on? This is an important 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.

To illustrate, recently a FLA was done on a tree-cutting accident in which a firefighter was hit by a glancing blow from a tree cut by a fellow firefighter. The injured firefighter was knocked unconscious, treated, and released the same day. He has recovered completely. Based solely on the outcome, this wasn't considered a "significant" accident."

But was it really *not* significant? Perhaps it wasn't significant according to our reporting system. But to the firefighter and his co-workers, friends and family, this incident was *very significant*. In fact, had the tree fallen one or two inches to the left, the firefighter 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 firefighter.

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 intriguing 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 Dr. David Woods: *"The future seems implausible before an accident . . . But after the accident, the past seems incredible."*

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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.

Should a chance occurrence of two inches be the determining factor for organizational learning? The best guidance available to the agency administrator to decide on a Complex versus a Basic FLA is this:

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.

Questions to Consider When Deciding to Mobilize a Facilitated Learning Analysis Team

- How "deep" should we look?
- Is there enough trust here to support such an analysis?
- How might we use this event to make a large cultural impact on organizational safety?
- 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? If so it may take time and skill to work through them.
- 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 lost?
- How close are <u>you</u> to the incident? How much do you own the decisions?
- Are recommendations going to be an essential part of this report?
- What other jurisdictions or agencies are involved? Do you need to consult an interagency agreement on accident investigations to determine team composition?

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 involves personnel from more than one agency, consult your Occupational Safety & Health Advisors for the appropriate protocols. The DOI and the Forest Service (for example) have signed an MOU agreeing on the team composition and protocols to be used on accidents that involve both DOI and FS employees.

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. 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 USFS 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 8) became the Risk Management Council's mantra for a higher standard of accountability.

Building upon the popular support of the "Just Culture" doctrine 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 continuous improvement and fair and just accountability, this paper was a call for a new paradigm in accident investigations.

That summer, five CALFIRE firefighters deployed their fire shelters on the Ball's Canyon Fire in Region 4. Although the firefighters were uninjured, policy required entrapments be investigated. CALFIRE joined Region 4 to quickly execute the first "Peer Review," overtly testing the model of a *Just Culture* within an accident investigation. The review also broke the narrative-model and used nonfiction storytelling instead. Support among firefighters was outstanding!

Two months later, ten fuels specialists 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 Balls Canyon Fire Shelter Deployment report, Region 2 launched a *Just Culture* based Peer Review. This investigation team tested the facilitated dialogue concept and refined the use of nonfiction storytelling

in a highly complex accident investigation. The Little Venus Fire Entrapment report was so popular that agency administrators across the country wanted to replicate this process.

In 2006, the Risk Management Council developed a Peer Review guide for a Just Culture-based accident investigation process. The Risk Management Council promoted this guide and conducted trainings and national workshops on this process. Over the years, this process—initially known as a "Peer Review"—has evolved, grown, shrunk, and is now refined as the Facilitated Learning Analysis. The FLA was formally accepted by the Forest Service in July 2013. Reports generated from the Forest Service's Coordinated Response Protocol (the agency's response to the most serious of accidents) are called "Learning Reviews". The investigative process used to execute a Learning Review however, is the Complex FLA process.

The guide you are reading now is the hard-won product of ten years of promoting Just Culture and collaborative trial and error following an unintended outcome. The effort has involved personnel from throughout the Forest Service at all administrative levels. This guide reflects the critique and feedback from safety experts at other public agencies, private industry, and academic review. The editors of this Guide honor those wildland firefighters – whose courage to face the risks of both fires *and accident investigations* – provided the inspiration to change the way the Forest Service responds to unintended outcomes and learn from a variety of contexts ranging in all disciplines within the agency.

This guide is continually refined to reflect evolving expertise in human performance and user experiences. See **APPENDIX B: LESSONS AND ADVICE FROM 9 YEARS OF FLA EXPERIENCES** for lessons and advice from previous FLA teams. Your comments and feedback on this guide are welcome! Please send them to: **FLA.GUIDE.IMPROVEMENTS@GMAIL.COM.**

Considering an FLA for a Success Story?

This guide assumes that unintended outcomes offer the best opportunities for learning through the FLA process. Some have suggested that the FLA process be used to examine successes.

One challenge of doing an FLA on a success story is that is difficult to identify *why* something went right. In general, when this has been tried, teams have tended to pat themselves on the back for strengths they were already championing. But how do they know *those* specific initiatives contributed, and how do they know they did not just get lucky that one time? In other words, what teams look for is generally what they find.

Your team could certainly try this (and if you do, send us feedback and let us know how it went): **FLA.GUIDE.IMPROVEMENTS@GMAIL.COM**

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

negative 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:

- Retardant Avoidance FLA
- Bear Meadows Stop Work FLA

Agency administrators and users of this guide are encouraged not to let the word "accident" (as used throughout this guide) 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 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, 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. It is forward-looking accountability. It is concerned with preventing the next accident, not focused on correcting history.

To most people, being held accountable - *equals*-being punished. Within the model of a Just Culture however, accountability means: *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 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. The system, the culture and supervisors are fairly held accountable for their influence.

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, especially 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 perceived and managed. Management partners with employees to continuously enhance performance, risk management and 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 openly share stories of how they balance the tradeoffs between safety and production; between efficiency and thoroughness. This sharing is routine and protected through the fair and just distribution of rewards for participation in the safety culture.

*(see also **APPENDIX F: REFERENCE MATERIALS** for Team Members)*

{*Fire Management Today* published a brief article on Just Culture in 2011, see: *http://www.fs.fed.us/fire/fmt/fmt_pdfs/FMT71-1.pdf*}

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 cherish it and protect it. Of course supervisors need to use the tool of discipline from time to time but accidents are rare opportunities to examine how the system is not working.

"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**

After an accident, everyone is surprised - especially those directly involved. In the interest of a learning culture, we exploit this opportunity. In essence we are telling employees "we trust that they did not intend for this to happen. We trust that they are good, competent employees. And, what happened to them could happen to other good, competent employees. Now, please trust management that our only goal is to learn everything we can about this accident."

If we punish employees for actions that, in perfect hindsight, appear to have caused the accident, we may (or may not) stop them from making that mistake again, but we will definitely stop these employees from sharing with management how they make sense about which rules are relevant, which are not, and how they balance the tradeoff decisions between production and safety; efficiency and thoroughness.

Therefore, all FLAs must have a signed delegation from the Agency Administrator giving their employees assurance that nothing discovered, or revealed by the FLA team will result in administrative actions. Administrative actions include any type of disciplinary actions and other adverse actions such as forced retraining, removal from an incident or reduction in planned overtime. This promise has never been broken in the history of the FLA implementation in the Forest Service; a promise kept on literally hundreds of FLAs across the country! Employees should be cautioned that the Agency Administrator cannot offer immunity or protection from legal actions arising from law enforcement agencies, or civil suits.

Often the reason for the FLA (the accident) turns out to be fairly simple and instead the response to the accident becomes the focus of the Lessons Learned - as was the case in the Wenatchee Complex Faller Fatality FLA, 2012

HANDOUT 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 inherent 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.'"[6]
- The best definition of "safety" is: *the reasonableness of risk*. It is a feeling. It is not an absolute. It is personal and contextual and will vary between people even within identical situations.
- 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 the normal one.

Isn't there always a tradeoff between safety and performance?

The answer depends on how you view the mission and define performance. If performance is viewed as producing widgets then yes, providing for safety often involves a cost.

But if performance is viewed as taking reasonable risk to achieve outcomes on the ground which are *also* safe, then these two concepts are intertwined and become difficult to separate. Ultimately, the question becomes a false choice.

- 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, optimizing, 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) over time until something happens (usually an accident or a close call)

[6] Paul Slovic, as quoted in Daniel Kahneman, *Thinking Fast and S*low (Farrar, Straus and Giroux, 2011), p141.

that changes their perception of risk. This creativity and drive for efficiency is what makes people, businesses and agencies 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. This is shortsighted and eventually dangerous. Using the science of risk management is more potent and robust. Importantly, Risk Management is wholly concerned with managing risks, *not* outcomes. Risk management is counterintuitive.

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. A critical incident is an event that has the capacity to overwhelm an individual's or an organization's normal coping mechanisms. Following a critical incident involving a near-miss, serious injury or death, it is the responsibility of the Agency Administrator to insure that the appropriate physical and counseling support needs are provided for the employee, their families and co-workers. Pre-incident planning is crucial in becoming familiar with resources within the Administrator's community. At the Agency level, Critical Incident Peer Support (CIPS) is a resource providing professional and peer-support by specially trained individuals in stress management. These types of early peer support interventions may mitigate negative long-term effects of a critical incident. The Employee Assistance Program may or may not have adequate resources to provide a response.

2. Provide employees with a trusted 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. Employees will have questions and concerns about what is happening. In most 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. When personnel are held at a location post-accident they can have high levels of anxiety about what is going to happen next; it will be very important to provide them with real-time information and answer their questions**.** This employee liaison can also help the FLA team with logistics, travel, and other tasks.

3. Once the employees, families, and co-workers are cared for, the liaison could 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. Assure them that they will get a chance to tell their story later. What are 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 written "witness statements."

B. FORMING THE FLA TEAM

The Agency Administrator should form the FLA team in consultation with their safety advisors. Again the general rule is that the more surprised the supervisors and agency leaders are in the outcome and/or the risks employees were accepting, the richer the potential harvest of learning can be by opting for a complex (instead of a Basic) FLA team.

Regardless of whether a complex or basic FLA team is formed, the team must meet the following minimum attributes:

1. A basic understanding of Just Culture.
2. A basic understanding of the FLA process (team leaders and facilitators should be formally trained in the process or have experience under a trainer).
3. A solid reputation for dealing with confidential matters.
4. Generally, team members should not be from the local unit or have any strong social ties with anyone directly involved in the event.
5. Team Leaders and Facilitators should not be from the hosting unit.

POTENTIAL FLA TEAM MEMBERS AND ROLES

FLA teams, much like the Incident Command System, are comprised of a changeable, scalable response organization providing a set of roles and responsibilities to enable people to work together effectively. Depending upon the situation one or two people can manage the responsibilities of all the roles listed below. Conversely, as the situation elevates in complexity it becomes necessary to expand the team and delegate roles to individual people. The key to successfully managing and developing a team is to stay flexible and accommodate the team's needs as they develop by expanding or merging roles as needed.

- ❑ **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.

- ❑ **Lead Facilitator**

This position is needed on all FLAs, basic and complex. On most FLAs, the lead 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 lead facilitator should have a solid understanding of the Lessons Learned Analysis process (see **PAGE 35, PROCESS FOR CONDUCTING THE LESSONS LEARNED ANALYSIS**).

❑ **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 happen. 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. See special section **STORYTELLING BASICS: TIPS FOR CREATIVE NONFICTION STORYTELLERS ON PAGE 40**.

❑ **Peer**

Individuals 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 Experts**

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. Another example would be if the incident required expert knowledge of heavy equipment or specialized tools (aviation, artillery, etc.) the team may look for a Heavy Equipment Operator, Helicopter Manager or Demolitions expert. In many cases, the peer and subject matter expert may be the same person.

Subject matter experts from the Missoula Technology Development Center (MTDC)(406.329.3900) must be consulted to analyze the performance of **PPE**, particularly if the event involved a burnover or fire shelter deployment.

If **escape routes** or **safety zones** are a critical component of an entrapment, contact the Missoula Fire Lab @ 406.329.4801.

❑ **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.

❑ **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. For further guidance, see the selection table for DOI USFS Serious Accident Investigation Type based on the 1995 Interagency MOU (available on the web).

C. Clear Mutual Objectives: The In-Briefing

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

Together, the Agency Administrator and the FLA team should review the delegation of authority and each item in **Appendix E: Tickler List of In-Briefing Discussion Items**.

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 other types of investigations. . 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

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.

***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 in order to preserve the integrity of the FLA process while other administrative actions take place.

The FLA Team Leader *must* 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 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.

E. COOPERATION WITH OTHER INVESTIGATIONS

Sometimes other investigations must proceed alongside an FLA. FLAs are independent from other investigations or reviews 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, the Agency Administrator must ensure that the FLA process is insulated from these other activities. For example, if compliance officers from 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 OSHA, OIG, and other investigative authorities when requested. 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"? *USE CAUTION*

Our traditional safety paradigm has been that we prevent accidents by investigating them, discovering their cause, and then fixing the cause to prevent a repeat of the accident. Causal statements however, are typically problematic and highly subjective. They are always outcome dependent. FLAs must avoid causal statements. *For more information on the problem with causal factors, see* ***PAGE 31***.
Recommendations can be trouble too, when they play into this narrative. Managers used to the "causal" model may jump straight to the "Recommendations" section of the report, develop an action

plan, and believe they've solved the problem. Readers may look to recommendations for security, "If I'm following these recommendations, then I must be safe". In both cases, our cultural baggage around recommendations may make learning harder. Remember that an accident represents a single data point with a single outcome.

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. Often recommendations, when implemented, add complexity to the workplace, which has the paradoxical effect of increasing risk. Instead of recommendations, consider ways to make the FLA report an effective and compelling learning tool.

In lieu of written recommendations in the report, the Team Leader can discuss recommendations informally with the Agency Administrator. This should be discussed in the delegation of authority letter.

G. Human Performance Expertise

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. There are numerous FLA coaches and Human Performance experts available, including in the Forest Service's Office of Learning, to help an agency administrator decide if it would be worthwhile to bring in a Human Performance expert to leverage the event for its full safety and learning value.

When Do We Transition From a Basic to a Complex FLA?

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. 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. The team and the Agency Administrator may need to modify the delegation of authority to explore more fully a gap that has been revealed.

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.

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, a narrative, story or a first-hand account.
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 lessons learned. (Recommendations are generally not advisable.)
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 setting the organization up 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 any 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 that create unnecessary risk to future operations. Recommendations are often the most contentious part of the report; if required, should be given to Delegating Authority separately.	

"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."

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PART 4 - THE FLA PROCESS

A. SETTING THE STAGE

Throughout the FLA process, team members should be prepared to explain the history of FLA and its major underpinnings, such as the degree of confidentiality, Just Culture and The Gap. A frank discussion of the delegation can be useful, too, to frame the conversation and to give assurance about the Agency Administrator's stance on punitive action. Agency Administrators and FLA participants may not be familiar with the process; there is also a tendency after an incident for participants to worry that this time the "investigators" are out to get them. Explaining the process can help put them at ease and make them more responsive through the process.

The heart of the FLA process is the conversations with the participants. It's important to use both group discussion and individual interviews. Important learning can happen from both. It may not be essential to do individual interviews in every case, but you should always conduct a facilitated dialogue with those involved with the incident.

For both individual and group interviews, the team should attempt to control the environment by making it as comfortable for the participants and conducive to the planned conversation as possible. Do everything in your power to discourage the impression of an interrogation.

B. INTERVIEWING

For a basic FLA, the facilitator may have enough background information to go right to the dialogue. The team may not need to conduct individual interviews. 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.

No Witness Statements: An FLA Commitment

Very often people involved in a traumatic event remember things that never actually happened and cannot recall key events that they were directly involved with. This is what happens to normal and honest people. We expect and intend for participants involved in the event to actually learn along with the FLA team.

The facilitated dialogue session (see page **25**) is when the participants and witness all share their contrasting memories together with other information gathered by the team. This session is often punctuated by moments of shock and surprise as participants compare their memories with others.

Witness statements and recorded interviews may actually *interfere* with recreating the best account of what happened. Consequently, FLA Teams *never* collect written witness statements or record interviews. We don't want participants to feel like that have to maintain or defend early perspectives of what they think happened.

The team leader should select interviewers based on their experience, skills in empathic listening, interviewing, and interpersonal communication. 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. Participants who are more tangential to the accident may be interviewed in groups of two to four at a time.

All interviewers will battle hindsight bias (see Handout C: Mitigating Hindsight Bias). Interviewers must strive to focus on their objective to be able to describe how the people involved 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 coach interviewers on using the interview process guidance outlined in this chapter. The FLA facilitator should also remind the interviewers to collect quotes from the interviewees.

Interview information will be displayed in the FLA report the headings, such as:

- "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"

Members of the FLA Team should debrief with each other daily. During these meetings, the results of interviews should be discussed and adjustments made to the questions, setting, etc. Typically teams meet every evening for an hour or two for this discussion.

The specific details of interviews and deliberations must never be shared with anyone outside of the FLA Team, including the Agency Administrator.

Often the best place to conduct interviews is at the accident site as was the case with the Little Venus Entrapment, 2006

Pictures Are Precious

FLA teams need to be proactive and even assertive in asking for pictures or video. Often employees won't admit in public that they were taking pictures on an assignment but they may do so in private. Not only do pictures add much visual appeal to FLA reports, but they also contain valuable information, like time stamps, GPS coordinates and other important metadata.

HANDOUT B: INTERVIEW QUESTIONS

Copy this page for interviewers

Control the interview environment. Find a location that's comfortable, private, and appropriate.

1. Ask the interviewee to tell the story from his or her point of view. Try not to "correct" or interrupt the interviewee unless you need to ask them to slow down or clarify for your notes.
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. Try not to agree or disagree with statements made, including when critical junctures are discussed in their story. Rather, 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? painful 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?
- Are there any feelings that come to mind concerning the confidence you felt in your situation?

Previous Experience

- Were you reminded of any previous experiences?
- Did this situation fit a standard scenario? Was it "normal"?
- How do you feel you were trained or prepared to deal with this situation?
- What rules and SOPs did you find helpful in this situation? Which ones weren't?
- What was your gut telling you?

Goals

- What were your goals 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 other options? Or, did you know straight away what to do?

Outcome

- What surprised you the most? What other events surprised you?

Hindsight

- Looking back (using your hindsight) what would you do differently?
- What do you feel you learned from this event? What do you think the agency needs to learn?

HANDOUT 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.

All your data pertaining to the event is after the fact. It's all viewed from the perspective of already knowing the outcome. The issue isn't fighting hindsight; the issue is overcoming *the bias of hindsight*. While team members will never be able to completely overcome "hindsight bias," they can mitigate many of the negative effects using the following threefold approach:*

1. As faithfully as possible, the interviewers need to try to achieve the same limited perspective experienced by the participants leading up to the incident. If the interviewer doesn't feel 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 outcome that had been expected by the participants; and, conversely, how the accident participants could have undertaken a different set of initiatives that might have resulted in the same unexpected outcome.
3. The team must avoid using "counterfactual" expressions or even thinking in terms of counterfactuals. (See sidebar and continued discussion below.)

What is a counterfactual?

A counterfactual is a statement that contains at least two assumptions that are linked: 1) somebody could (and should) have done something different that 2) had that action been taken it would have produced a different (and often better) outcome.

This is problematic because it assumes that the action was possible, that it would have produced a counterfactual outcome, and that no other variability would have been introduced in the process. Counterfactuals have tended to lead to punitive models for accountability. They also assume a perfect model of human performance, which the FLA rejects.

What team members may 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 firefighter 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 probably would have taken a different action. But the future hadn't happened yet, and they couldn't have known 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 and it is unknowable what would have happened if they had.

Interviewers should appreciate that the accident participants are also affected 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 37) does not stop after the accident. It is common to interview a firefighter 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 those involved in the accident 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.

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* 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.full.pdf+html , is recommended reading for all FLA teams!]

C. 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 people think together about the incident and talk their way through what happened and what they can learn from it. The following pages provide a flexible structure for adapting to any audience, event, organization, and facilitator.

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

PRINCIPLES AND AGREEMENTS FOR ALL INVOLVED IN THE FACILITATION

1. We have clear agreement with the Agency Administrator that no administrative actions, (that is, disciplinary actions such as letters of caution, stand-downs, and 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 must remain 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 our people are actually careless, meaning that they didn't care if the outcome was or was not as intended.
6. Accidents are almost always 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 about which two experienced, competent professionals can disagree—*and both be right!*

"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*

D. THE DIALOGUE SESSION

PARTICIPANTS

Who is involved in the dialogue session? It depends. An experienced FLA facilitator is one most qualified to know who should and shouldn't be present. Typically participants include everyone directly involved in the event including permittees, outfitters, cooperators, etc.

Depending upon the situation, consider including:

- Supporting FLA team members
- Supervisors of people involved
- Project Planners
- Project leaders
- Trainee Facilitators

When project leaders, supervisors, and agency administrators are involved in the dialogue the discussions often become broader in scope with organizational and interdepartmental topics included. In some cases, it may be more productive to conduct the discussion without these high level members present. Indeed as a general rule supervisors should not be present unless they were directly involved in the event. The team leader and facilitator should confer about, and control, who is present based on what they learned from the interviews. Don't be afraid to ask the participants themselves who should be involved.

Do interview project leaders, supervisors, agency administrators because they are participants in the decision. Their perspective on risk and how it may differ from participants is important for the FLA team to explore.

AGENDA FOR THE DIALOGUE SESSION

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 understanding 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.

- **Willingness 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 people involved in the event can reveal different understandings of what the different participants viewed as "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. .

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*.

HANDOUT D: TWO SUGGESTIONS FOR DIALOGUE FOCUS

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

This page contains questions modeled after the After Action Review and the hallmarks of High Reliability Organizing (HRO), two discussion tools that participants may be familiar with.

AFTER ACTION REVIEW-TYPE QUESTIONS

Dialogue facilitators most commonly use the well-known After Action Review questions. These questions are designed to evoke discussion and escort 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. Notes from the Dialogue session will be very helpful when writing of the FLA story and 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-TYPE QUESTIONS

The Five Traits of Highly Reliable Organizations

- ☑ Preoccupation with Failure
- ☑ Reluctance to Simplify
- ☑ Sensitivity to Operations
- ☑ Deference to Expertise
- ☑ Commitment to Resilience

The five hallmarks 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 people who were 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?" Example questions include:

1. What were we sure that we not want to misestimate? How well did we do? Did we do a premortem? What were our trigger points and how effective were they?
2. Where was our attention? How did we name what was going on, and why?
3. What cues were we paying attention to in the environment? Where did we contain small errors before they had big consequences? What surprised us and why?
4. Who did we listen to, and why? Who did we not listen to and why not?
5. Was this a "brutal audit"? What did we learn about our system, including brittle points where small errors had big consequences? Where do we need to build in more redundancy or more slack? How easily can we bounce back? What does this incident tell us about the environment we work in now?

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."

Fire Operations Risk Management Council
U.S. Forest Service

E. 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 and post all the known times of significant events. 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

F. Final Considerations

1. Sensitivity to Admitting Mistakes

The credibility of the FLA depends on open and honest discussion regarding 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 human nature and human pride. The team must seek to minimize embarrassment to individuals, leaders, and organizations (including cooperators). Why would people choose to participate if they thought it would result in 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. Admitting or "owning" mistakes can be presented in a way that is quite admirable.

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

The FLA team must remain 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 a person 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, on the one hand, and reckless and willful disregard for human safety, on the other. Admissions of procedural rule violation or at-risk behavior must be protected, and even cherished, throughout the FLA process.

2. CHARACTERIZE THE ACCIDENT BY CONDITIONS AND CHANCE CONJUNCTIONS, NOT "CAUSAL FACTORS"

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 inevitably lack context because, for one, context is too complex; and two, because once context is explained you'll find cause becomes a conclusion that no longer follows from the premise (a non sequitur). Cause isn't something investigators 'find' or 'discover'; cause is always something we create by recreating the event showing how certain anomalies led 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), or just paid attention to the right things, the unintended outcome would not have happened.

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 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

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 the people 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. Practitioners 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 are the responsibility of those managers and administrators at the "blunt-end[*]."

The FLA report should explain the nature of the accident. The key commitment of the FLA team is that accidents are *not* caused by anomalous, blundering, or deviant behavior. Accidents are more accurately

[*] Sharp end refers to the field practitioners who are in direct contact with operational risks. They are the actualizers of a work program designed and organized by those at the blunt end. Practitioners at the sharp end are those who make real-time, operational risk management decisions. Those at the blunt end are the supervisors, and administrators who are engaged in strategic risk management

understood as *unexpected combinations of normal performance variability*[*] (both human and system performance variability).

3. 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. **SEE HANDOUT C: MITIGATING HINDSIGHT BIAS**).

4. 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 people who were underqualified or under-capable to be placed in critical or difficult situations

[*] Eric Hollnagel *Safety Management – Looking Back or Looking Forward,* Resilience Engineering Perspectives, Vol 1 (Ashgate 2008), p75

G. Terminating A Review

Serious Crimes or Reckless and Willful Disregard for Human Safety

During the course of the FLA process, though highly unlikely, it could be discovered that an agency 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 one employee involved in the accident intentionally tried to hurt another. If such a discovery is made, then the event is no longer appropriate for a "safety investigation" (FLA). ***Why? Because the event 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. Notes of interviews and other team products should be given to the FLA lead facilitator for confidential and secure storage. At this point, the FLA process has terminated and FLA team members should take no further actions.

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.

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 **Appendix E: Tickler List of In-Briefing Discussion Items**.)

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 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.

Once an FLA is terminated, arrangements should be made to notify all involved. This is especially true for people who were interviewed by FLA team members who will suspect the worst if they are not quickly contacted to let them know the FLA was terminated. Obviously you will not be able to discuss

details. A simple statement such as; "the team found it could not meet the requirements of the delegation and so they terminated the review" may be all that you can say.

REPORT COMPLETION

As soon as practical, 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. 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.

H. IMPROVING THE PROCESS

This guide is revised and updated continuously based on lessons learned from users like you (for examples, see **APPENDIX B: LESSONS AND ADVICE FROM 9 YEARS OF FLA EXPERIENCES**). It is helpful for FLA teams to reconvene (at least with a conference call) and to conduct an After Action Review of their FLA experience. Document any suggestions for improving the process or the guide. Forward these suggestions to: **FLA.GUIDE.IMPROVEMENTS@GMAIL.COM**.

From your mobile device, scan this link to email suggestions for the guide:

Privacy - A 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 position titles (e.g., holding boss) 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 Lessons Learned Analysis is not about explaining why those involved in the accident made their decisions. Rather, it about understanding the conditions surrounding the event so thoroughly that team members begin to believe that they themselves would have made exactly the same decisions! This is the defining moment of clarity. The team has gained the wisdom of knowing that similar conditions in the future will again lead to similar decisions and outcomes. These are the conditions that need to be understood by others who work in similar circumstances."

From NAFRI's Learning from Unintended Outcomes Workshop

PART 5 – ADDITIONAL STEPS FOR 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 well developed 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—to 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. PROCESS FOR CONDUCTING THE LESSONS LEARNED ANALYSIS

The Lesson Learned Analysis begins with a closed-door confidential team dialogue. Expect it will take at least a few hours and maybe a few days to complete. The task is for the team to achieve the same level situational awareness, belief, and expectation that was held by those involved in the accident - which they had *before* the accident. The end-state is the insight generated from the dialogue itself. Consensus is not the goal. Tension between individual team member's perspectives is valuable.

Pick someone on the team to facilitate the dialogue; typically the Lead Facilitator is best suited for this role. The facilitator will then guide the team through a discussion of the key decisions and actions running them through the "six hows" below. The function of the six hows is simply to provoke and frame the discussion on *"How*?"—until the team is able to reach the level of sensemaking that was shared by those people directly involved in the accident. As Dekker and Pruchnicki write, "Actions that are interpreted as 'bad decisions' after an adverse event are, at the same time actions that seem reasonable – or people would not have taken them." [The FLA team], "…does not see wrongdoing, but rather tries to understand how people can see their actions as being right." [*]

Through the Lessons Learned Analysis and the use of the Six Hows, the Complex FLA Team will gain the ability to identify, understand, and explain the risks of the situation and the performance-shaping

[*] Dekker & Pruchnicki (2013) *Drifting into Failure: Theorizing the dynamics of disaster incubation*. Theoretical Issues in Ergonomic Science

factors surrounding the incident. This is very different than trying to determine the cause; indeed, this exercise will make it obvious how the label 'cause' distracts from 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 some cases, the best that can come from reviewing an incident is to illuminate conditions where human mistakes are likely, especially where conditions can fool people into misperceiving dangerous situations.

B. THE SIX HOWS - *SENSEMAKING*

PROCESS→ For each key action or decision, the FLA Team will deliberate on the "Six Hows" below.

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

The Six Hows

1 …see things the way they were seen.

2 …expect what was expected.

3 …forgo an available hazard mitigation.

4 …shortcut typical procedure.

5 …accept a risk that—*in hindsight*—seems unreasonable to have accepted.

6 …ignore a risk that—*in hindsight*—seems so obvious.

KEY PRINCIPLE→ 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*.

You'll find that some of these 'hows' do not apply and some will be redundant. Use those that are helpful and don't waste time trying to cook-book the process. Every situation is unique.

In the write up of the Lessons Learned Analysis, summarize the Team's insight from this dialogue session. Use whatever format for this summary that is deemed appropriate. In some cases the title of this summary may simply be "How the Accident Happened".

The intent of this write up is twofold. First to explain to the reader how and why the sensemaking occurred in that decisions and actions that seem wrong in hindsight were actually valid or at least legitimate in context at the time. Secondly to display the Team's insight on conditions that could lead to another similar unintended outcome. This is as close to a recommendations section as the FLA process allows.

"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

C. STEPS FOR LESSONS LEARNED ANALYSIS:

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

2. Post around the room the quotes and key bits of information gathered from the interviews. Use tools like flip chart paper and sticky notes. Highlight what the participants learned from this incident for themselves and what they want management or fellow employees to also learn.

3. Discuss the useful and interesting quotes. These are the one that stand out: surprising or potentially troubling statements, or actions that you seemingly cannot empathize with.

4. Identify interesting, odd, and disturbing lessons learned. For each of these discuss why it took this event or experience to cause this to be a "lesson learned." Specifically what were the:

    - Beliefs
    - Perceptions
    - Expectations
    - And paradigms that were held before the experience that in hindsight the characters now know were either wrong or inaccurate or misleading, or deceptive.

Wikipedia Definition of "Sensemaking"

Sensemaking is "the ability or attempt to make sense of an ambiguous situation." More precisely, "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.'"

5. Identify and discuss the "key decisions" or "key actions" that the characters made because they held these belief, perceptions, expectations, and paradigms. These actions are especially key if the characters or others reading the story would say these decisions/actions were mistakes, errors, or otherwise "bad."

6. Agree as a team on those key decisions or actions that seem most important. Then for each of these deliberate on the 6 How's engaging in a dialogue session.

7. From this dialogue session the team will be able to write up the "Lesson Learned Analyses" explaining the sensemaking that occurred before and during the event and why, in context, why the actions and decisions made sense.

"Stories are truer than arid accident narratives comprised of facts and findings. Stories illuminate paradox; they let us know how the characters felt about the facts; stories give us the context that binds the facts together and makes them make sense. To be blunt, a report that is just facts and findings leaves too much to chance."

Steve Holdsambeck

PART 6 - CAPTURING AND SHARING THE STORY

A central feature of the FLA 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. The dictionary defines wisdom as the ability to think and act utilizing knowledge, experience, understanding, common sense and insight. To effectively impart wisdom, we must share mishaps as well as mastery. Through storytelling, we strive to share knowledge and wisdom the participants of the unintended outcome experienced. In this way, storytelling moves *Lessons Learned* into the vicarious experience of *Lessons Lived*.

A. FLA STORYTELLING

In an FLA, 'the story' should not be confused with fiction or an enhancement of facts. An FLA's story is a factual description of what occurred. The story can be in narrative form or told in first person as if an accident victim was just asked, *"tell us what happened."*

Cognitive scientists have shown that humans make sense of, and remember, "facts" by attaching them to narratives (i.e., stories) that give them context and a sensory or emotional association. If given a listing of findings with no story as context, our minds are prone to give these findings relevance by either creating a story, or by associating them with a story that is already within our memory. In other words, *the lack of* the story behind the "facts" will actually lead to a distortion of the facts within our minds. Giving the reader/listener the facts within the context of a memorable story that is true to what actually happened, is the best way to communicate the meaning and the lessons from the event. Indeed, storytelling is widely recognized by educators as the most effective tool for experiential teaching and leading cultural change within an organization.

Effective FLA stories include sensory details gleaned from interviews and dialogue with the participants to enhance the reader's vicarious experience. 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 provides for experiential learning. The emotions and sensory observations of those who *lived the event* are the sinews holding narrative and facts together and they make the lessons learned real.

The participants did not expect the outcome that occurred. Persons reading (or hearing) the story should be able to feel (or at least respect) the sense of surprise felt by the participants at the time, and understand why they were expecting something very different. Master storytellers say the most effective stories for learning are told *where the ending feels like it is discovered only after it happens*.

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.

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 the people who were there 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. Often the facilitated dialog session will reconcile disparate stories. Occasionally however there will remain very different accounts of what happened. Don't see this as somebody being right and somebody being wrong. Instead, "…*respect otherness, difference in accounts about what happened as a value in itself. Diversity of narrative can be seen as an enormous source of resilience in complex system not as weakness. The more angles the more there can be to learn."*[*]

Multiple stories are not only acceptable but can add meaning and humanity to the report.

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.

[*] Dekker, Cillers, Hofmery 2011. *The Complexity of Failure: Implications of Complexity Theory for Safety Investigations*. Safety Science 49 (2011) p. 944

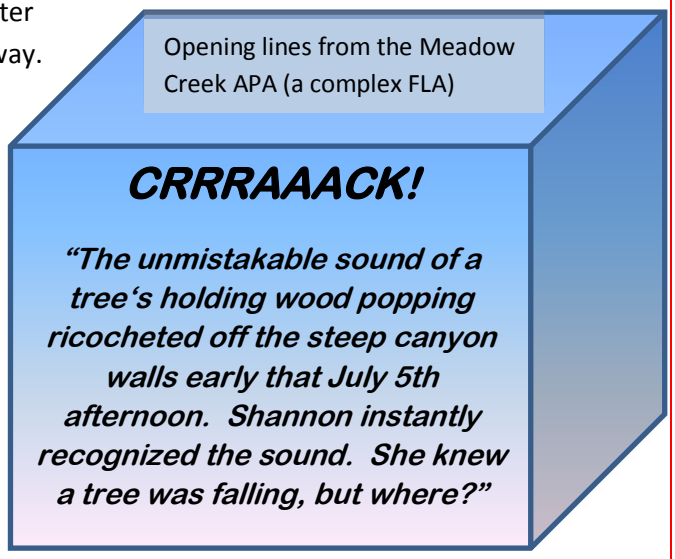
C. STORYTELLING BASICS: TIPS FOR CREATIVE NONFICTION STORYTELLERS

Most good stories begin with a hook to bring the reader in. Once you give them a reason to turn the page, begin introducing or setting up two elements:

1. **Set up the main character(s)/protagonist in the story** -- without using actual identifying information (not as difficult as it seems). Tell us about the characters. Tell us who these people are: their experiences and backgrounds, and even limited personal family backgrounds and physical traits. Give us enough information so to we as readers can relate to (or affiliate ourselves with) the character(s). Be mindful of when and how to get this information out to the reader. Doing a typical written experience "dump" in your final report will give your story a traditional, factual report feel.
2. **Set up the place.** Give us a good description of the environment where the action will take place. The fact that it was hot or cold, steep or flat, dusty or damp, may have no relevance to the actual event but these *sensory* details are necessary if we are to vicariously join the characters in their experience.

The body of a good story generally contains four elements:

1. **Connect the main characters with 'the place.'** Give the readers the backstory of the event, the setting, how the event has been evolving, etc. If the event was a wildland fire, for example, describe the fire. Tell us how long the fire has been going, how big it is, how many firefighters are working it, how many houses lost, etc. The storyteller needs to give enough information about the environment so the reader can visualize it and meet the characters in that place. The storyteller also needs to share how the characters came to that place specifically. For example, if an accident occurred on Interstate 90, the character shouldn't just appear driving on an interstate highway. A driver must first decide they need to get work, so he gets into his 1978 blue mustang convertible, leaves the top up because it feels chilly this morning, take the drive through at McDonalds, gets a coffee – spilling a little bit on the seat, negotiate heavy city traffic and then merges on to Interstate 90 near exit 287 where the traffic is unusually heavy. The storyteller's objective here is to anchor the characters to the real world, 'the place' that is important to the event.



2. **Share the character's internal voice.** What do they want to achieve and why? If present, details like the following are important to capture: What is motivating them to do what they have set out to do? How committed are they? Are they flexible or ambivalent? Are there any differences between their personal goals and their public/outer goals? Are there any differences between what the characters want to do and with what they are expected to do?

3. **Challenges and Obstacles or conflict.** With this element the Storyteller completes the portrait of the conditions that influenced the characters behaviors. This element builds on the previous two elements to set up the context for sensemaking and decision making. Providing the reader the full context is extraordinarily important. Context is why decisions make sense. The storyteller is providing this so the reader understands the challenges and obstacles the characters are up against. Also in all endeavors there are trade-offs between efficiency and thoroughness; there are always goal conflicts, tell the reader what these are. Let the reader know about time constraints, distances needed to travel, radio problems, interpersonal tensions, shortcuts available, etc. What conditions are capturing most of the characters' attention?
4. **Sensemaking and decision making.** The characters have shared with the FLA Team, either in interviews or in the facilitation session, how they came to understand the conditions they faced and then made the decisions they made. This evolution of understanding and perspective needs to be faithfully retold. In this element the storyteller relates how the decisions made sense within the context of the event. This can be tricky. Remember to never qualify the decisions as good or bad or unfortunate, etc., even though the characters themselves may tell you their decisions were 'bad' or 'stupid'. These decisions must have seemed reasonable at the time given the conditions the character understood at the time. This does not mean that the storyteller is defending the decisions; rather, they are only relating how decisions made sense at the time. If the storyteller is having difficulty relating how the decisions made sense in context, have the FLA Team run through the Lessons Learned Analysis exercise as discussed on page **37**. It is most important to expose what the characters believe is true contrasted with what is actually true.
5. **Completing the story**. This is the easy part of storytelling: just tell what happened. A really memorable story will make the reader feel the same sense of surprise felt by the characters as the event unfolded. Include descriptions of the character's fear, anxiety, confusion, bewilderment, etc., that they have shared with the FLA team. One tool that has been used many times successfully is to switch the narrative from past to present-tense as the unintended outcome is unfolding. Then, after the unintended outcome occurs and the characters react, the story teller can go back to past-tense to relate how the characters recovered.

One final note: there may be a trap here. When we sit down to write, we bring along all the writing tenets we have learned and developed from grade school through college. We are asking you to hold in check those traditional mental models of writing and instead consider the tenets regarding a written story as described in this section. The trap here is you will need to put down your old mental models, utilize the tools outlined in this section and being writing. Do not let any structures hinder individual creativity when you start.

The intent of these tips are for you to use it as a quality check against what you already written. Once you have a solid start, return to this section and review the key elements of basic storytelling and continue to build, polish and strengthen the story. Many successful story writers just start writing what happened and then they add layers by continuing to develop the story with fact checks, performing read backs, adding sensory information, checking grammar and spelling, etc.

D. 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. Remember this is their story, not yours. There is high value in participants 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, there are two different ways to respond. Sometimes the discrepancies can be resolved through further follow-up interviews if the discrepancies are a mistake made by the team. However some discrepancies develop due to multiple perspectives, different memories, etc. These discrepancies will need to be captured in the report to respect all the participants' viewpoints. A word of caution when writing: be very cognizant of the language used to describe these discrepancies and make sure it does not sound judgmental or utilize hindsight bias.

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 may 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 it describes what happed and shows how the decision and choices made by the people involved made sense leading up to the event. The FLA should include enough information about the 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.

HANDOUT E: TIPS FOR FACILITATED LEARNING ANALYSIS

COLLECTING GOOD INFORMATION DURING INTERVIEWS AND SITE VISITS

- Look and listen – write down sounds, colors and smells when in interviews or site visits. Get personal background information on the protagonist(s). You'll need to share some of this in the story to build a relationship between your reader and the characters involved.
- Take photos generously so that you can incorporate them as the story unfolds. Take photos of the scene and also visual reminders that might not be obviously important at the time. Don't try to preplan which ones you will need ahead of time. You will inevitably miss the ones that are most valuable.
- In interviews or group discussions, ask clarifying questions to ensure that you are tracking their thoughts and feelings accurately. Generally it's best to have one person to do most of the asking and then let the other interviewers ask follow-up questions toward the end. This tends to set a flow that helps round out the story by not skipping from one topic to the next.
- Directly after an interview or group discussion, reflect with the team and highlight key information, themes, and quotes. This will help everyone listen for themes in proceeding interviews.
- Seek out storytelling critical elements (empathy pathways) that you'll need to weave into the story:[*]
  - The difference between what the protagonist(s) believes is true and what is actually true.
  - The difference between what the protagonist(s) wants to do and what s/he is expected to do.
  - The difference between the protagonist(s) inner goals and his/her external goals.

WORKING WITH AN FLA TEAM

- Have one person write the story; don't divide it up between team members. This gives the writer the space and the freedom to choose a voice, be creative, and to use common themes or visualizations throughout the story. Give them time to write without micromanaging.
- Be careful about the pitfalls of editing as a group. The team should be consulted for major decisions like scope, character development, and tone, but be wary about editing at the sentence level as a group. This can be a waste of time. Save sentence polishing for the final, final, final draft.

WRITING THE STORY

- Start strong. The first sentence or paragraph sets the tone and either captures the audience or doesn't.
- Describe the smells, tastes, sounds experienced. The reader must know what the protagonist(s) were feeling and what was causing these feelings! Use adjectives. Use a thesaurus!
- Capture quotes. Some participants are very expressive speakers. Their quotes can add a lot of flavor to a story. They can initiate metaphors or similes that can be stretched throughout a paragraph or story. Be careful however, to not limit your perspective to just that of these expressive speakers.
- Don't be concerned about capturing all the details. A story in an FLA is not an exhaustive report. Focus on events, perspectives and feelings that have the most significance.
- Read the story aloud to the team to see if it "sounds" good. Insure you have covered the storytelling critical elements (above).

[*] Lisa Cron, *Wired for Story* (Ten Speed Press, 2012), p130

"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 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

(See earlier discussion **"RECOMMENDATIONS"? USE CAUTION ON PAGE 16**.) The FLA Team Leader and delegating official should discuss and consider the value of recommendations. Recommendations are often problematic. Importantly, there is no Forest Service policy or regulatory requirement that accident investigations, or FLAs, etc., contain recommendations. As mentioned before, an accident is a single data point; be very wary of recommending systemic or organizational changes based on that single point of data. There may be no way to predict some of the unintended consequences of a particular system or organization change. In other words, how can you know whether the system or organization will be "better" or "worse" as a result of the changes you recommend?

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 more Just Culture.

C. EXAMPLE

The following example illustrates how a complex FLA report links the Lessons Learned, the Lessons Learned Analysis and the Summary. In this example, the Story section of the report describes a serious accident that occurred when an engine captain was driving a vehicle with an under-inflated tire that

became overheated and blew out, resulting in losing control of the vehicle. 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 a person 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 from someone 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.
  - Those 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 unit members generally seem to have accepted this as normal.
  - Rules such as requiring all unit members 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 the responsibility of anyone in particular.
  - The person actually 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 Shaping Workplace 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 not 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.

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

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.

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.

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.

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.

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: http://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. **Isn't a Serious Accident Investigation required by policy?**

   This is no longer the case for the Forest Service. This is now handled through the Coordinated Response Protocol. Even within the CRP process, the Chief may choose from among several processes (including the FLA process) to execute the investigation. 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. 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 or law enforcement 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 30.) Moreover, one of chief benefits of an FLA is to hold the agency accountable for designing safe systems and managing human reliability. If an employee harms another employee intentionally, that employee is responsible and an FLA is likely the wrong response. FLAs are for the vast majority of events in which good people, doing what they thought made sense at the time, ended up in an unexpected situation.

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

The answer to this question must be "Yes." The report documents an unintended outcome. Some information in the report may make you feel uncomfortable. This is exactly what is needed in a learning culture. Members at all levels need to see that leaders are reflecting on their experiences and standing up to share 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
Larry Sutton: 208.387.5970
or
Steve Holdsambeck: 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: LESSONS AND ADVICE FROM 9 YEARS OF FLA EXPERIENCES

The following are Lessons Learned shared by teams over the past 8 years of implementing FLAs.

1. Choose the Local Liaison Wisely and Put the Liaison to Work Quickly.

The more traumatic the incident the more urgent is the need to heed this advice. In the days, hours, and seconds following an accident the people involved relive the incident over and over. They wonder what they could have done or said that would have changed the outcome and they also ponder what they might have done wrong that contributed to the outcome. As soon as practical the Team Leader needs to work with the Agency Administrator to assign a trusted FLA team liaison(s) to local unit. The duty of the liaison is to meet personally with those involved and explain the FLA process, what is FLA team will do and what is the outcome of an FLA review. Most importantly the liaison needs to explain that the FLA process is predicated on a Just Culture (See page **8**, and the Just Culture References in **APPENDIX F: REFERENCE MATERIALS FOR TEAM MEMBERS**). The liaison should also coordinate with the FLA Team Leader to line up interviews, site visits, and other actions to make the expectations of those involved consistent with the FLA philosophy. Usually the best liaison is someone known and trusted by the people who were directly involved in the event.

2. Build the Team & Align Team Values.

Make sure everyone reads the FLA guide. Once together, invest the time early on in the process to get to know each other and build team cohesion and trust. Plan for this to take at least couple of hours. **HANDOUT A: UNDERSTANDING THE WORK IN A JUST CULTURE** on page **10**, has proven to be very valuable to teams when they discuss each of the points, one-by-one, in a respectful dialogue.

3. Lay Out the Road Map and Adjust as Needed.

The Lead Facilitator should lay out a schedule so everyone knows where they are in the process and what is planned next. Don't just tell team members to "trust the process". People want know where they are and what is going to happen next and know they are making progress. Obviously the schedule needs to be flexible and might be adjusted daily.

4. Debrief with the Team Every Evening.

The Lead Facilitator should schedule a time at the end of each day to give each team member time to share what they did, what they learned and even how they are feeling about the process. This is the time to share what was heard during interviews.

5. Stay Together.

Keep the team physically together until you have a solid draft. Letting people go home and trying to complete the report by emails and conference calls will inevitably add problematic delays.

6. Don't Skimp on Peer Participation (this is CRITICAL).

Ensure that peers are part of the team. The importance of having people on the team that are "peers" to the people involved in the unintended outcome cannot be overstated. Don't try to save money or minimize the footprint of the team by cutting these positions.

APPENDIX C: 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 D: 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.

I expect you to interview all participants in this event, including the Agency Administrator.

Your authority includes, but is not limited to:

- Controlling, organizing, managing, and directing the analysis.

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.

- 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.
- 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 E: 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 30.)
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 F: REFERENCE MATERIALS FOR TEAM MEMBERS

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 and articles on the application of Just Culture, available at: www.JustCulture.org and www.sg-collaborative.com

ACCIDENT, SAFETY 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

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Jonathan Gottschall, *The Storytelling Animal; How Stories Make Us Human,* NY, New York, Mariner Books, 2012.

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

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Taleb, Nassim. *The Black Swan: the impact of the highly improbable*. 2nd edition, New York, NY: Random House, 2010