Learning as a shared responsibility: insights about escaped Rx reviews

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3rd Human Dimensions in Wildland Fire
Seattle, WA
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Lessons Learned Review for the East Encerrito Prescribed Fire

Louden Ranch Prescribed Fire Review

Alley Springs Glade Prescribed Fire Regional After Action Review

New Holland Prescribed Fire Escaped Prescribed Fire Review

Jungle Prescribed Fire Review

An Experiment in Learning

Breaks One Unit Four Prescribed Fire Escape Facilitated Learning Analysis

NEW HOLLAND UNIT MAP

Water Refill Structure
WPA Major Road
Other Roads

Forest Service US Department of Agriculture
### How do we define learning?

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<th>Review Product</th>
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*INSIGHT – ‘aha’*

*ACTION – new behavior*
Participants

Organizational level

- District (30)
- Forest/Refuge/Park (19)
- Region/State (12)
- National (6)

67 Total

Agency

- NFS (40)
- NPS (6)
- FWS (9)
- BLM (4)
- BIA/Tribe (2)
- Other (6)

Other: TNC (2), FUTA (1), PFTC (1), LLC (1), AD (1)
## Positions Represented

### District
- District/Zone AFMO (5)
- District/Zone FMO (8)
- District Fuels Specialist (4)
- Zone Fuels specialist (2)
- Zone Fire Staff Officer (1)
- Engine Captain (2)
- Seasonal (1)
- Smokejumper (1)
- WF Module (2)
- Hotshot, Asst Sup (1)
- AD (1)
- District Ranger (2)

### Forest/Park/Refuge
- Multi-refuge FMO (4)
- Forest/Tribe FMO (6)
- Forest Fuels Specialist (5)
- Forest Fuels Planner (1)
- Forest Fire Staff Officer (1)
- Burn Boss (1)

### Region/State
- Regional/Deputy Regional FMO (3)
- State/Regional Fuels (6)
- Regional Fire Ecologist (1)
- Regional Safety (1)
- Regional Asst Dir F&AM (1)

### National:
- TNC (1)
- FUTA (1)
- PFTC (1)
- LLC (1)
Experience

88% had some experience with Rx Reviews

- the subject of an escaped Rx review?
- a member of a review team?
- the line officer accountable for a review?
- both subject and team member?
- No experience

No experience
Three Lenses

• Our initial framing
• Inductive - What the data reveals
• Deductive – Looking through other frames
  • Definitions of Organizational Learning
  • Rhetoric - Communications
  • Learning from experience --Counter-factuals
Where is learning occurring?

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Action and Learning

Prepare → Conduct → Reflect

Learn

Leader’s Intent Audience
Audience: Who desires what?

Ground levels:

**Personal improvement**: “I was looking at the review team as kind of the experts …to come in and tell me, well, these are the tricks of the trade or whatever .. (USFS, District Fuels Specialist)

**Info to train/coach**: “I’m looking for …something that I can maybe turn into a sand table exercise. …from the actual players … some kind of a bullet list that you can go through and sort of latch onto it.” (NPS, Fuels Management Specialist)

“The story is in the experience as well as all the decision-making leading up to lighting the match and following through with it... I want to hear the stories. “ (Tribal FMO)
Regional levels:

**Due Diligence:** “Number one through seven in the policy guide, {laughter} seriously. That’s what I need when I’m on the receiving end of one of those until such time as that policy changes at the minimum.” *(USFS Regional F&AM)*

**Trends:** “Are there themes coming out that make our program very vulnerable in future planning and implementation and application?” *(USFS, Regional Fuels)*

National levels:

**Corrective Action (policy):** “What we’re looking for at our level is findings, recommendations that need to be addressed by policy change or something like that. “*(National Fire Ops, BLM)*
Action and Learning

Prepare → Conduct → Reflect

Confidence – Self/Other

Learn

Leader’s Intent
Audience
Tone
Open, Understanding

Compassion - Self/Other
Action and Learning

Prepare → Conduct → Reflect

Sand-tables  BAR  Pre-mortem  DAR/PA

AAR  Outcome Review

Sense-making

?follow-up?
?implement rec’s?

Instill  Transfer  Capture

Refresher, LLC library, 1MChain

Leader’s Intent
Audience
Tone
Open, Understanding
Consistent process
All outcomes

?GE Staff Rides?  Podcasts?  Reports
Other Lenses – definitions and types of learning

**Individual**
- Updating knowledge through experience
- Learning in absence of experience

**Group**

**Organizational**
- Updating policies, procedures, training,
- Coordinating analysis & dissemination, transfer of knowledge, Inculturation of practices

“In Chinese, ‘learning’ is expressed by two symbols: the first stands for ‘take in’, the second stands for ‘practice constantly’.”

(Kofman and Senge 2001:5)
Thank you!

Discussion
How to improve learning? – personal actions

Target the audience
Be clear about who the intended audience is and how review products will meet the needs of the intended outcomes – focus on learning

Set the tone
Be clear, collaborative, and transparent about intended outcomes and the process to get there.
Staff the Review Team to achieve desired process and product outcomes – peers, coaches; technophiles

Practice and Train
Practice reviewing by looking at all outcomes
Identify desired Review Team skill-set and train

Share and Compare
Identify roll-up lessons and target these to a specific audience.
Pick up someone else’s review and use it to benchmark your organization.

Follow-up
Incorporate sharing into daily, weekly, annual meetings and refreshers.
Review prior recommendations; incorporate lessons – into burn plans, actions, processes.
How to improve learning? --- organizational actions

**Review Team**

- **composition**
  -- focus on peers, needed expertise

- **training**
  -- identify and train in key areas of expertise/knowledge

- **tone**
  -- listen, coach and mentor

**Pay attention to Transfer**

-- Develop ways to transfer lessons through personal connection
-- Develop, institutionalize transfer mechanisms

**Follow up**

-- Make sure those corrective actions happen,
Lindberg’s criteria

**Initial reporting.** All events are plausible candidates...

**Selection.** Events selected for in-depth study should be those from which as much information as possible can be extracted that is useful for preventive work.

**Investigation.** Procedures and methods constructed to provide information that is as useful as possible for preventive work.

**Dissemination.** Distributed to all those who can use them to prevent future accidents.

**Preventive measures.** Information from investigations is used to prevent future accidents.

**Evaluation.** Process itself is regularly evaluated and improved.
Summary and Implications

- Data supports, adds detail to our models of learning and performance.
- Collectively, suggest several sorts of activities to pursue:
  - Vector towards learning on the Compliance – Risk – Learning Spectrum
  - Enhance learning by closing the Learning Circuit
  - Emphasize coaching to build resilience to stress
“The goal of the declared wildfire review process is to guide future program actions by minimizing future resource damage and/or preventing future escapes from occurring by gathering knowledge and insight for incorporation into future resource management and prescribed fire planning.” Interagency Prescribed Fire Guide, p 29, 2008

2006: US Forest Service Risk Management Council – introduced Just Culture and learning focused approach to accident investigation


2011-12: Revision of Interagency Prescribed Fire Guide

“The driving force behind the Facilitated Learning Analysis (FLA) is simply the dissatisfaction with our current accident, injury, and fatality rates. These are unacceptable; we must do better; we must organize for higher reliability. We know the essential step in organizing for high reliability is developing and nurturing a ‘Just’ and ‘Learning’ culture. “ 1st para 2012