



United States
Department of
Agriculture

Forest
Service

Pacific
Northwest
Region

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Subject: Toolbox Deployment Lessons Learned

To: Regional Foresters, Regional Fire Directors, National Fire Safety Officer, PNW-R6 Forest Supervisors, and Regional Health and Safety Managers

On July 24, 2002, a 20-person contract wildland fire crew deployed their fire shelters for environmental reasons in a designated safety zone on the Toolbox Incident on the Fremont National Forest. Subsequent investigations by a Serious Accident Investigation Team (SAIT) and Occupational Safety and Health Agency (OSHA) offered a wide range of causal factors. After agreement with OSHA, the Pacific Northwest utilized the Lessons Learned process to examine the successes and issues of the incident. The entire Lessons Learned package from the Toolbox Fire can be found at <http://www.wildfirelessons.net/> I ask these lessons be shared with fire personnel so others may learn from the incident.

The Lessons Learned Center provides a valuable service that focuses on successes, training opportunities, and addresses unresolved issues to prevent future occurrences. I encourage you to take advantage of an excellent feedback mechanism through the Lessons Learned Program at NARTC.

/s/ Jim Golden (for)
LINDA GOODMAN
Regional Forester

Enclosures



Toolbox Lessons Learned

1. What were some of the most notable successes at the incident (in relation to the deployment) that others may learn from?

- The effectiveness of the Incident Management Team's (IMT) action plan worked well in dealing with an "incident within and incident."
- The Agencies involved in the Toolbox Incident (USFS, BLM) worked well together.
- Those on scene made accurate calls at the time of the deployment.
- The succinct, accurate, timely communication over the radio immediately calmed the fears of those who were not directly involved in the incident, as the Crew Boss relayed the environmental deployment. This assisted in the safe, efficient continuation of the 80,000-acre firefighting effort.
- The Operations Section Chief immediately disengaged his command upon learning of the deployment to concentrate on the outcome and investigation of the deployment. Transfer of command was made immediately after the deployment from the Day Shift Operations Section Chief to the Planning Operations Section Chief in order to ensure the firefighting continued for the 80,000-acre active fire.
- The response by the Team Safety Officer was immediate. He took control of the "incident within the incident" ensuring the welfare of the crew who deployed.
- No 2-for-1 violations were noted on the incident. This was attributed to the consistent messages disseminated at the daily briefings by Finance and the daily Finance messages included in the Incident Action Plans.
- The fire shelters worked. As a result, 20 crewmembers were not injured. The shelters effectively shielded the members from the embers, smoke and radiant heat. (Link?)
- Personnel accountability was rapid and accurate for the crew involved in the deployment.
- After action reviews on a daily basis assisted the Crew Bosses and Hot Shot Superintendent in re-creating the day's events during the investigative process.
- The leadership demeanor demonstrated by the Incident Commander emulated to the entire Team, allowing the IMT to do what was necessary and work as a cohesive unit.
- The 30-Mile Abatement Plan was an active part of Team operations.
 - ❖ The Safety Officer actively participated in the safety briefings on the line the day of the deployment.
 - ❖ The Incident Commander, Deputy Incident Commander and Planning Section Chief were on the line the day of the deployment.

- Daily briefings were conducted at the inception of each shift. The Standard Firefighting Orders; Lookouts, Communication, Escape Routes, and Safety Zones (LCES); as well as the information in the Incident Response Pocket Guides (IRPG) are discussed at *EVERY* briefing.
- Fire shelter training received by the contract crew at their home base allowed the Crew Boss to assume the use of the shelters in this case was appropriate. (The Ferguson Crew is trained it is appropriate to use a fire shelter as a shield).
- The proper equipment was identified and onsite to construct the required safety zones.
- The Safety Officer's foresight to seek assistance from a mentor was integral in the successful initiation of the investigative process.

2. What were some of the most difficult challenges faced and how were they overcome?

- The amount of information required after the deployment from the various agencies was exorbitant. As a result, the format and informational requirements for the Team Narrative will be changed to incorporate the layout used by the Serious Accident Investigation Team. Further, the Team will utilize the Lessons Learned process during the Team critique at the conclusion of each incident.
- Language difficulties were identified immediately following the deployment between the crewmembers and those attempting to evaluate what happened (i.e., investigators, medical personnel, etc.). An interpreter was located and his services were utilized.
- The fear of the outcome of the investigations was hard to overcome because of the stigma associated with the shelters being deployed.

3. What changes, additions, or deletions are recommended to Wildland Fire Training Curriculums?

- **Hotshot Superintendent Training**
 - Redefine the role of the Hotshot Superintendents in the dissemination of information to those they work along side. Educate Hotshot Superintendents to the established crew typing process for crew capabilities.
- **Crew Boss, S-230 Training**
 - Educate crew bosses to their responsibilities as they relate to the following areas:
 - Understanding the Incident Action Plan,
 - Speaking Up and Asking Direct Questions,
 - Situational Awareness (i.e., where do escape routes lead to)
 - And Knowledge of Incident Response Pocket Guide (IRPG).
- **Division Supervisor Training**

- Training in span of control and the briefing and debriefing process. Currently, this type of training is not provided until S-420.
- **Incident Management Team Training**
 - Incident Commander
 - Training in the SAIT process and OSHA Process
 - Training regarding the SafeNet Process
 - Training about the Lessons Learned Process
- **Serious Accident Investigation Team Training**
 - Training on what Team Members can experience on an incident when something goes wrong
 - Cultural Diversity Training
- **Purchasing Unit Leader Training**
 - Contract Administration and Interpretation Training
- **Proper Use of a Fire Shelter Training**
 - Define an “environmental deployment”
- **Develop National Standards for Contract Crews** – Is the crew typing standard to apply to all crews? Should there be a category for contract crews?
- **Mentoring Program** – In addition to the completion of a task book, assign trainees to a mentor that would provide additional support while working on their trainee assignments throughout the fire season.
- **Training for Operations Chiefs and Safety Officers on the evaluation of crew classifications.**
 - Contract review training should be added to help OSC and SOFR’s in assessing the suitability specifications of a crew.

4. What issues were not resolved to your satisfaction and need further review? Based on what was learned, what is your recommendation for resolution?

- The OSHA draft report references conflicting interpretations of command and control. It is perceived that OSHA’s expectation is for the Division Supervisor to maintain positive communication ***at all times***, never re-delegating the responsibility for communication to any other level. Given this, it will force a revision of a previously accepted past practice of allowing the Hotshot Superintendent to assume responsibility for burning or other operations to include communication of plan revisions to the crews working along side them. The Hotshot Superintendent and Crew Boss of Chugash #1

believed the briefing prior to the second burnout was sufficient. The Crew Boss of Ferguson #53 did not feel the briefing was sufficient. Resources must follow the Risk Assessment Process in the IRPG as a briefing tool. This process is intended to be interactive for both the senders and receivers of the information to ask questions to ensure the information is given and received correctly.

- The general consensus is the deployment of these shelters, although not for life-threatening reasons, was appropriate in this case. There is a need to review, and if warranted, revise the training process that shelters should not only be deployed as a last resort, but that the use of fire shelters as an option maybe appropriate in certain instances. (*Note: The Red Book 2003 edition in Chapter 4 under Fire Shelters states "The fire shelter is to be used as a last resort, and will not be used as a tactical tool." Your Fire Shelter 2001 Edition states that the fire shelter "can also protect you from falling embers or help you escape through thick smoke."*)
- Determining crew capabilities continues to be an issue. The current check-in procedures are inadequate. Check-in procedures need to be reviewed to address this issue.
- Serious accidents or incidents do not happen on a regular basis. Therefore, the need for a mentoring program has been identified. In conjunction with having SAI Teams, agencies should have a list of mentors identified in order to assist the Incident Management Teams when something does happen.
- Establish a protocol and identify who makes the assessment as to, if and when, it is appropriate to re-engage key individuals that a part in an incident.
- Issues pertaining to contract crew qualifications must be overcome.
- Multiple Investigations.
 - Conflicting report findings
 - Not everyone was interviewed
 - Recommend one centralized investigation
- Inter-Agency conflicts and Interference
 - IMT's and Agencies must constantly evaluate the need for Unified Command. If the span of control, multiple agencies in the span of control becomes an issue, adding additional IMT's or modifying strategies and tactics will allow for a more manageable Unified Command workload.
 - Multiple delegations of authority. Trigger points should be identified as to the point when a team is managing multiple incidents and reach their threshold of maximum control therefore turning down any further new incidents. During the first three days the Team was on the Toolbox Incident, they received three different delegations, making the incident more complex with each delegation.
- Contract Interpretation and Administration
 - Add Contract Tech Specialist Position to IMT who would deal with contract crews and contract interpretation.
 - And/or add a clause to the contracts for a lump sum payment at the conclusion of the assignment for contract crews, eliminating the need to record time sheets into system. Only monitoring requirement would be for 2-for-1 work/rest ratios.
- Use of Fire Shelters

- Distinction between deployment types and types or levels of investigations should be made.
 - Dispel the stigma associated with the fire shelter use.
- Roles and differences in the SAIT and OSHA were not defined to the IMT upon their arrival onsite. Recommend that each investigation team explain their roles and responsibilities to the IMT.
- Investigation team membership needs to include all levels of experience and situational soundness.
- Outside issues were a major difficulty to overcome. It appeared there was another agenda besides the shelter deployment (i.e., contract crew issues, alien status, etc.)
- Too many investigations distracted from the incident. Should look into compiling a combined team and incorporate all investigative needs into a sole investigation.
- The debriefing/investigation procedures conducted by Agency Law enforcement Officers were irregular and intimidating. It appeared they were looking for violations of law versus the factual information on the deployment.