



## Southwest Area Incident Management Team Dan Oltrogge - IC

# After Action Review

*Nuttall Complex – Coronado National Forest, Safford Ranger District*

### What was planned?

On July 2, 2004, a firing group consisting of four Hotshot crews, a Safety Officer, two medics, and a DIVS was assigned to Div E to contain a 7+ acre slope-over that had occurred above H-4 and to assess firing needs between the slope-over and H4. A portion of the Div had been fired the previous evening.

### What actually happened?

While preparing to start firing operations, fire intensity increased rapidly necessitating the movement of some firefighters uphill to DP-20 while others moved into two safety zones (H-4 and a previously identified aspen grove within a partially burned area, located on the lee side of a ridge. Eleven of twelve firefighters who had moved into H-4 deployed fire shelters, due to ember/ash wash and heavy smoke. None of the approximately 35 firefighters in the aspen grove deployed shelters. (See attached Shelter Deployment Fact Sheet for more detailed information.)

On July 3<sup>rd</sup>, a CISD was held; later that day, an AAR, using the format contained in the Incident Response Pocket Guide, was conducted involving the supervisory and overhead personnel involved in the incident. A second AAR was conducted on July 9<sup>th</sup> involving four helitack personnel and one hospitalized individual who had been involved.

Several challenges, barriers, ineffective behaviors and/or other actions were identified during the course of the AAR's. These included:

- Frustration that there were too many frequencies, too much chatter, and poor radio discipline.
- Indecision about moving to DP-20.
- Poor communication regarding the transition from burning to holding.
- Inadequate fireline experience and "terrain-conditioned" stamina by some support personnel. (This was one factor in the decision of 12 firefighters to remain at H-4.)

- Fire behavior beyond prior experience in similar conditions. (Note: this sentiment was expressed by several seasoned firefighters.)
- At the time of the incident, one T1 helicopter was out of service with mechanical difficulties, potentially contributing to the event.
- Insertion of helitack personnel without coordination or adequate communication with the DIVS lead to inadequate accountability, and strained air support capacity. (When fire behavior increased, helitack personnel were evacuated from H-5 and H-6: some felt these two sites were non-essential for the day's operations and did not require staffing.)
- A lack of understanding and/or communication regarding the difference between a safety zone and a deployment zone.
- Although the escape route to the aspen grove had been flagged, a second, less arduous route, had not.
- Inadequate preparation of the fireline and a rapidly conducted burnout operation the previous operational period was identified as a potential cause of the slop-over.

During the AAR, several effective behaviors and/or positive actions were also identified. Some of those included the following:

- All involved repeatedly stated that LCES worked! Several reported that continual reassessment was valuable.
- Crews used and relied greatly upon lookouts, and an adequate number were assigned.
- Good leadership by experienced supervisors, particularly from the Type I crews, contributed to a successful outcome. (Paul Musser, Flagstaff IHC Superintendent, was praised for his calming presence at H-4.)
- The IMET's radio announcement at 1100 hours reporting that the Haines Index had changed from 5 to 6 played a crucial role in keeping several crews at or near DP-20, and resulted in the early movement of other firefighters back uphill to that location.
- Inter-crew frequencies played a crucial role in crew cohesion during a difficult time.
- Early identification of potentially problematic personnel occurred. (Some, but not all, miscellaneous support personnel who exhibited inadequate stamina were moved uphill early, thereby preventing additional problems during later critical periods.)
- Team work between crews was extremely important and directly contributed to a successful outcome. (One crew stayed with and assisted another crew with an ill crewmember, at a time when the fire behavior was becoming extreme, providing a tremendous boost to the other crew.)
- Once in the aspen grove, delegation of various tasks to different individuals occurred.
- Early assessment and implementation of required actions in several areas, including clearing of snags around H-4, was critical to the successful outcome.
- Previous attendance at the Fireline Leadership course was identified as having played a positive role in the incident's outcome.
- Standardized training, including shelter deployment, played an important role as well: crews and individuals from widely different areas were able to come together and know what to expect of each other.

Participants in the After Action Review were also asked what, if any, non-standard operating procedures occurred during the incident. Those identified were:

- One out-of-region crew described the use of an aspen grove as a safety zone as a new experience.

## Why did it happen?

There were several factors which may have contributed to the event. Some of these include:

- The insertion of helitack crew members into helispots was not well communicated or coordinated with the DIVS. This led to the need for Air Operations to spend valuable flight time evacuating helitack personnel from other, non-essential helispots, when air assets could have been more focused on actions surrounding the H-4 area.
- Some support personnel assigned to the Div E possessed inadequate fireline experience and insufficient stamina considering fire behavior and area terrain.
- A reluctance, as expressed by some, to trust their instincts.

## What can we do the next time?

The following recommendations are offered:

- Trigger points need to be routinely identified and communicated throughout the chain of command.
- Size, location, and preparation of Safety Zones and Escape Routes need to be evaluated in a new light, and the implication of a Haines Index 6 communicated to all parties. Fire behavior, as evidenced by what occurred on the Nuttall, Gibson, and Willow fires the afternoon of July 2<sup>nd</sup>, has accelerated beyond traditional experience.
- Better coordination must occur between the AOBD and OSC/DIVS. Insertion of helitack personnel into helispots on Divisions must be communicated with line supervisors. The ICS 204 (Division Assignment List) or ICS 220 (Air Operations Summary) should list helitack personnel assigned to and working at helispots within Divisions.
- Identify Type 1 Training Crews on the Incident Action Plan as a “training crew,” so that there are no misunderstandings regarding their capabilities. Clear National standards are lacking regarding differences between IHC’s, training IHC’s and Regional HC’s: these must be communicated with IMT’s.
- Fireline experience and stamina levels of line support personnel, particularly line medics, must mimic the crews to whom they will be assigned, particularly in high altitude and steep terrain. Experience, fitness levels, and appropriate gear must be evaluated early by DIVS. (In this incident, packs carried by some line medics were in excess of 100 lbs.)
- Crews need inter-crew frequencies immediately upon arrival at an incident. If crews are expected to comply with FCC regulations, frequencies must be obtained expeditiously.
- Regarding the CISD, debriefers must clearly define the debriefing process, who is to be involved, what will be discussed, and what will be the expected outcome. In addition, the contracted CISD teams must be available 24/7. (In this case, a regional team was unavailable because the event occurred on a holiday weekend: fortunately, a highly-qualified local team was available and filled-in on short notice.)
- All involved personnel must be afforded CISD and the opportunity to participate in the AAR. In addition, the AAR should occur soon after the CISD, and not be delayed. Another important aspect, should more than one AAR be required, is that the same individual take notes at each.



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### Shelter Deployment Fact Sheet

#### *Nuttall Fire - Coronado National Forest, Safford Ranger District*

- On July 2, 2004, the Flagstaff, Augusta, Lassen and Plumas Hotshots, portions of the Structure Protection Group, Firing Group Supervisor, Division Echo medic team and a safety officer were assigned to a Firing Group.
- Based on information from an IR flight, crews were advised during the 7 AM briefing of a 5 to 7 acre slop-over. After scouting the slop-over and posting a lookout above a helispot (H4), line construction began.
- Late that morning lookouts observed an uphill run on the ridge west of H4 - all engine resources from the Structure Protection Group, who were establishing a hoselay, were directed to hike out to their apparatus at DP20.
- Shortly after that the Lassen and Plumas IHC's, who were working the upper end of the slop-over, also moved out to DP20.
- The Flagstaff and Augusta IHC's, who were working on the lower end of the slop-over, moved out to the main line and began to prepare the line for burning out from where the burn stopped the night before, down to H4. After a 10 AM briefing the Division Echo Supervisor, Jayson Coil, and the Superintendent from the Mt. Taylor IHC met with the Firing Group Overhead at a lookout location above H4. All other crews assigned to the Division remained at the DP20.
- Shortly thereafter, a downhill crown run was observed and reported by a lookout, and was communicated to all Division personnel.
- After it was determined that fire was established below H4, members of Flagstaff IHC began burning out around H4, while the Augusta IHC's moved to support the burnout.
- Shortly after the burnout around H4 began, fire intensity increased. The fire made a rapid uphill run of about ¼ mile.
- Based on observations from crewmembers and reports from lookouts, crewmembers above H4 determined that they could not safely make it to H4 and reversed course, moving upslope to a pre-identified aspen grove on the lee side of the ridge that had been partially under burned by the slop-over. 10 firefighters made it to the H4, where they joined 2 helitack personnel that had been previously inserted into H4. There were now 12 firefighters at H4.
- During the hike to the aspen grove, a member of the Flagstaff IHC sustained a heat stress-related illness and became immobile – members of the Flagstaff and Augusta IHC's evacuated the crewmember to the aspen grove.
- During this time members of Flagstaff IHC continued firing around H4 to increase the black and add an additional margin of safety.
- H4 began to experience ash/ember wash and heavy smoke. After the fire made its runs and conditions began to improve, a fire whirl moved across H4 with enough force to blow the helmet off one of the firefighters.
- Based on ember/ash fallout and heavy smoke conditions - 11 of the 12 individuals at H4 deployed their shelters.
- **None of the 12 firefighters sustained injury.**

- After scouting a safe route from the aspen grove to H4, Chris Wilcox, the Firing Group Supervisor, hiked to H4, and then returned to the aspen grove with Division Echo Supervisor Jayson Coil and a paramedic.
- At the aspen grove the ill crewmember from Flagstaff IHC received ALS treatment for heat exhaustion.
- After conditions improved, the Plumas IHC began to clear the trail from below DP20 down to the aspen grove.
- Once the route was completed, the ill crewmember was carried uphill via stokes litter to DP20 where care was transferred to a waiting ambulance.
- All crewmembers and overhead involved were transported back to the ICP, and were provided an opportunity to stay in an area hotel for the night.
- The ill crewmember was admitted to the hospital and is expected to be released on July 6.
- On July 3 all involved personnel were provided an opportunity to participate in a Critical Incident Stress Debriefing.
- An After Actions Review (AAR) was also completed on July 3. The proceedings will be disseminated widely throughout the wildland fire community.

**released July 4, 2004 at 1400 hours**