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Ashmead Fire / Roosevelt IHC 20 Foot Fall

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Date: September 29, 2008

Executive Summary:
On July 3, 2008 at approximately 1147 hours, Firefighter 1 (FF1) , Squad Leader and member of the Roosevelt Interagency Hotshot Crew (RIHC) was participating in wildfire suppression and mop up duties on the Ash Mead Fire (DR9E), located in Upper Colorado River Interagency Fire Management Unit (UCR). Crew member Firefighter 2 (FF2) was working to extinguish a burning stump located on a small ledge, the ledge measuring approximately three foot wide by ten feet long ending in a twenty foot vertical cliff. FF2 was dry mopping the stump with no success; FF1 had utilized an Engine resource on the fire and filled a 5 gallon backpack pump and was attempting to assist FF2 in putting out the burning stump. FF1 turned his back to the cliff line and began to step down an approximately 26 inch high ledge, in full line gear and a full bladder pack. While down climbing, FF1either lost his grip or stumbled and lost his balance, he fell approximately twenty feet, landing on his back on a pile of rocks at the base of the cliff. FF2 used FF1's radio to call for medical assistance. Approximately 5 minutes later, the crew EMT, arrived at the accident scene and began to assess and stabilize FF1, however his initial assessments couldn't determine extent of internal trauma, the decision was quickly made to evacuate FF1 via helicopter. Grand Junction dispatch was notified and the appropriate requests were made. FF1 was secured to a backboard and litter; he was moved up a break in the cliff to a helicopter landing zone approximately one third of a mile away. The helicopter was unable to land closer due to the large amount of dust it created attempting to land in black burnt area. FF1 was Care Flighted to St. Mary's hospital in Grand Junction; he was treated for several minor injuries and was released later the same day.

Notice:
The original investigatory material collected by Hal Coombs (including; chronological IC Log leading up to the accident time, witness/crew interviews and investigator notes) on July 3, 2008 was misplaced during the Draft portion of this report. Site visit and photos references noted in the Final version of this report were taken on August 22 and 25, 2008 by Barry Oelrich. Subsequent interviews were conducted with the Roosevelt IHC Superintendent and Crew members on September 8, 2008 in Fort Collins, CO. Photographs of the accident scene taken by the EMT on the day of the accident were collected along with additional investigator notes.

Narrative:
The below log was created by ICT4(t) of the Roosevelt IHC on July 3, 2008.

1143 – FF1 fell off a 15 foot cliff

1145 – I (ICT4(t)) notified the ICT4 that a Roosevelt IHC crew member had fallen off a 15 foot cliff and that the crew EMT was on scene and getting a patient assessment done.

1146 - I called and notified Grand Junction Dispatch of the incident and requested the status of flight for life if the situation needed. ICT4 contacted 7PM, the incident helicopter, to inquire availability of possible medivac.

1150 - ICT4 contacted UCR West Zone (WZ) FMO to notify of incident, at this time the ICT4 over operations of Ashmead Fire and I took over as IC of FF1 incident.

1152 - I called GJ dispatch and requested flight for life be launched per Hotshots Superintendant request, as FF1 was complaining of pelvic and right leg pain.

1200 - GJ dispatch notified me that the request for life flight was put in to St. Mary's.

1217 - I called dispatch and was notified that life flight was 15 min. out

1230 - Life flight arrived on scene. The helicopter could not land due to ash and dust. I had previously put in a request for 7 PM to do dust abatement but there was not enough time.

1240 - Life flight landed approx. ½ mile to south east. At this time the RIHC began the extraction of FF1 up and over the cliffs to the mesa top. He was then carried to the east to a two track road where there was a Mesa County Sherriff's Department pickup truck waiting to drive him to the helicopter.

1250 – FF1 arrives at life flight and is loaded.

1300 - Life flight departs incident and takes FF1 to St. Mary's.

Investigative Process:
The initial accident investigation was performed by Hal Coombs, UCR Safety Officer on July 3, 2008. An After Action Review (AAR) was held on the same day at the site of the fall. Most of the non-injured individuals who were directly involved in the accident participated in the AAR. The purpose of the AAR was to look at the planned actions, what actually happened, why it happened, and to assemble some lessons learned from the occurrence. The crew members with direct knowledge were asked to be candid in the discussions surrounding what had happened. There were no eye witnesses to the actual event, a co-crew member was physically nearby but had his back to the actual fall. The investigation focused on actions occurring before and after the fall.
They were assured that the intent of the AAR was to learn from the incident.
The process of information evidence gathering consisted of:

- Evaluating human, material, and environmental factors that may have contributed to this minor injury.
- Visiting the area where the accident occurred.
- Establishing the pattern of actions of the victim and chronology of events leading to the accident.
- Reviewing operational briefings.
- Gathering written statements of personnel on the fire which had firsthand knowledge.
- Interviewing IC, and co-crew members.

The Final version of this report was completed in accordance with Interagency Standards for Fire and Fire Aviation Operations, Chapter 18, Reviews, Investigations Analysis / Non-Serious Wildland Fire Accident Investigation Process.

A three person Investigation Team conducted the follow-up investigation. The investigation included an analysis of human, material and environmental factors. The process included interviews, verification and collection of documentation and visit to the accident site.
The investigation team consisted of the following individuals:
Barry Oelrich: Chief Investigator, District Safety Specialist for Northwest Colorado / (BLM)
Hal Coombs: Technical Specialist, UCR Fire Safety Officer / (USFS)
Mark McFall: Safety Advisor, Safety Manager, Medicine Bow-Routt National Forests & Thunder Basin National Grassland / (USFS). Note: Mr. McFall was not part of the original investigative team and did not participate in any of the interviews or verification of any documentation. Mr. McFall was asked by the Chief Investigator to review and provide technical input on the findings and final report.

Findings:
Finding #1: The decision was made on site, by UCR FMO and UCR WZ FMO, not to work the fire near the cliffs during the night hours on July 2, 2008.
Discussion: UCR FMO, UCR WZ FMO, RIHC Superintendant, ICT4 and ICT4(t) met on the edge of the cliffs on the SW side of the fire on the evening of July 2, 2008. They looked over and discussed some of the safety issues and decided to keep everyone on top that evening and not have personnel working in the hazard area in the dark. The fire's next shift morning briefing emphasizing working safely near the cliff band which indicated that overhead and supervisory personnel recognized the risk of working near the cliffs. Crew briefing conducted day of accident, separate of the morning briefing emphasized working safely near cliff tops. The investigation determined that the cliff hazards were recognized by individual crew members.
Recommendation: Ensure Leaders Intent that firefighter safety is first and always the highest priority is vigorously communicated to ground personnel during every briefing. Make sure crew members understand that they have the option of not carrying out an assignment if it cannot be done in a safe manner. Do not give conflicting direction concerning safety and operational objectives.

Finding #2: Just prior to the accident, FF1 was reverse down climbing a 26 inch high step onto a 3 by 10 foot ledge with a full backpack pump (weight 45 pounds) to assist in mopping up a smoldering stump. Due to the expected fire behavior, the decision was made to mop-up the entire fire perimeter. The thick fuels of cheat grass, sagebrush and Piñion /Juniper (PJ), provided very receptive fuels for spot fires to get large.
Discussion: A burning stump was located on the edge of a cliff on the outside perimeter of the fire line. The two crew members working at the site (which would later become the accident site) felt that the stump was a threat to spot outside the control line and spread in cheat grass. Poor situational awareness and complacency of the working environment, combined with an awkward procedure for accessing the ledge outfitted with a full backpack pump point to the major contributing factor that led to this accident.

Recommendation: Other methods of mitigating the stump hazard were considered but not used. When the resources to complete a task more safely are available they should be utilized, i.e. engines could have been used to pump water to the cliff line to mop up smoldering stumps deemed a threat. A total perimeter control strategy was implemented even in what was a high safety risk area of the fire. Review and change tactics and strategies when working fires in extremely steep terrain or cliff areas. Review a proactive stance of what is the wildfire risk in this area and are there other pre-fire season options other than total perimeter control strategy that can be implemented, change fire planning area to a different response polygon, implement point protection, fuels reduction projects.

Finding #3: FF1 fell of the cliff at 1143hrs, he was airborne and in route to St. Mary's hospital at 1300hrs.
Discussion: In just over an hour's time, several critical decisions were made on the ground. The first was made bythe crew EMT. His decision to get FF1 out was made and the request relayed through dispatch was placed, the Lifeflight was airborne and enroute to the scene by 1215hrs. The second critical decision was to turn the "FF1 Incident" over to IC4(t) and to leave IC4 in command of the Ashmead fire. This created an incident within an incident and was now being individually worked on by two separate IC's, freeing up both individuals to work with the situation in front of them. The third critical decision came when helicopter 7PM was unable to dust off the landing zone (LZ), making it unsuitable for the medivac, an alternative LZ was located for the Life flight and FF1 was transported to that site with little delay. All of these decisions were made possible through clear, concise communication and prior mock scenario trainings. While interviewing the crewmembers in Ft. Collins, CO the question of JHA availability was made, they were available upon investigators request.

Conclusions and Observations ***(excerpt from Coomb's original report)***
Talking with the personnel working on and near the cliff top (stump) it seemed somewhat of a consensus that it was just a normal part of the job and therefore not to be that unsafe (right or wrong). Several comments made during the onsite AAR were in the character of: "we do this kind of thing all the time". and "our jobs are inherently dangerous and these types of accidents are just going to happen."

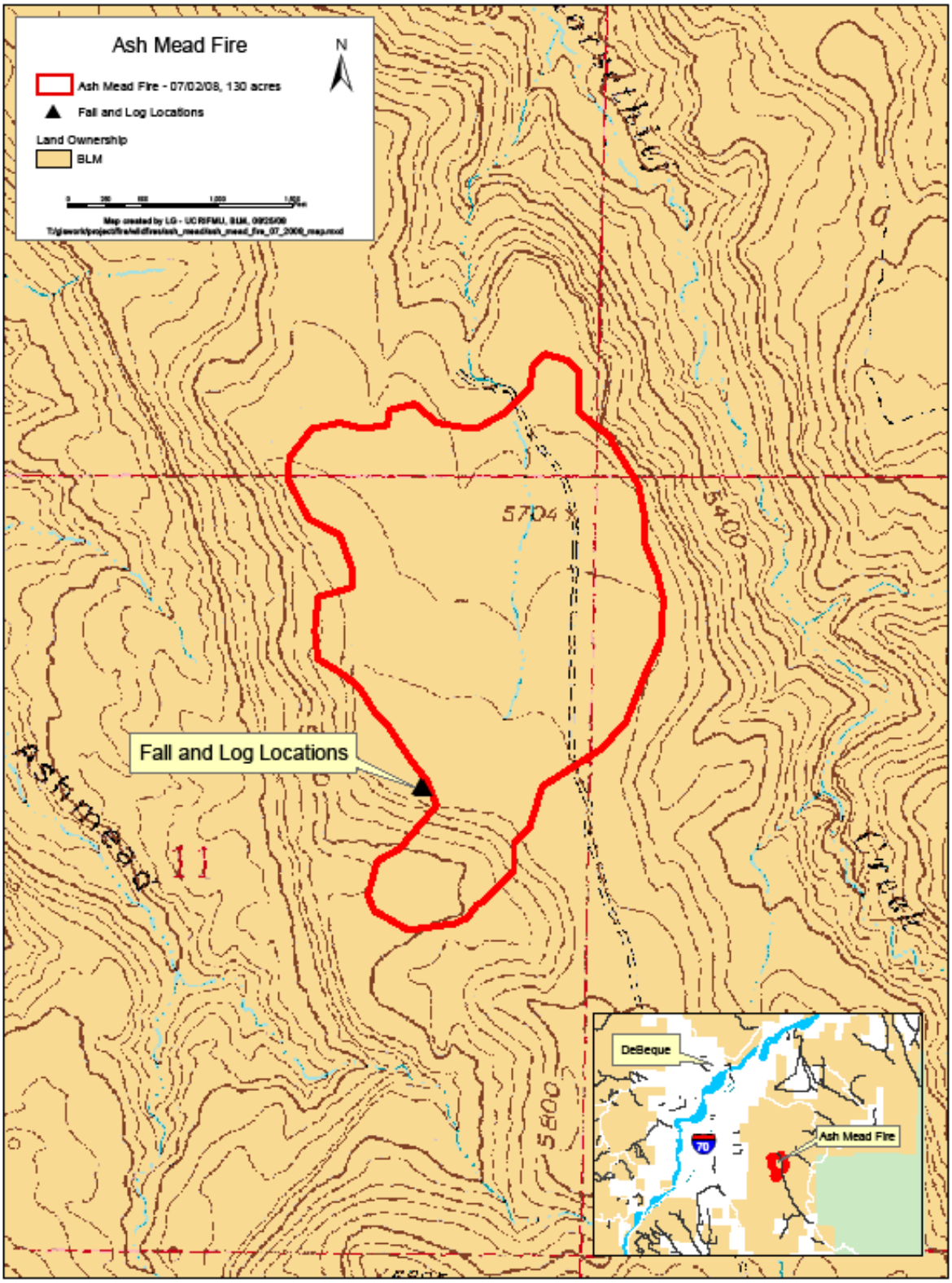
If you read Turner and Mutch's theory on accidents and disasters, one thing becomes clear: disasters occur, when people get away with risky practices, they become complacent. They begin to accept greater and greater risk, and accept this risk as "normal". With hindsight, when accidents and disasters do occur it is usually obvious why it happened and what could have been done to prevent it.

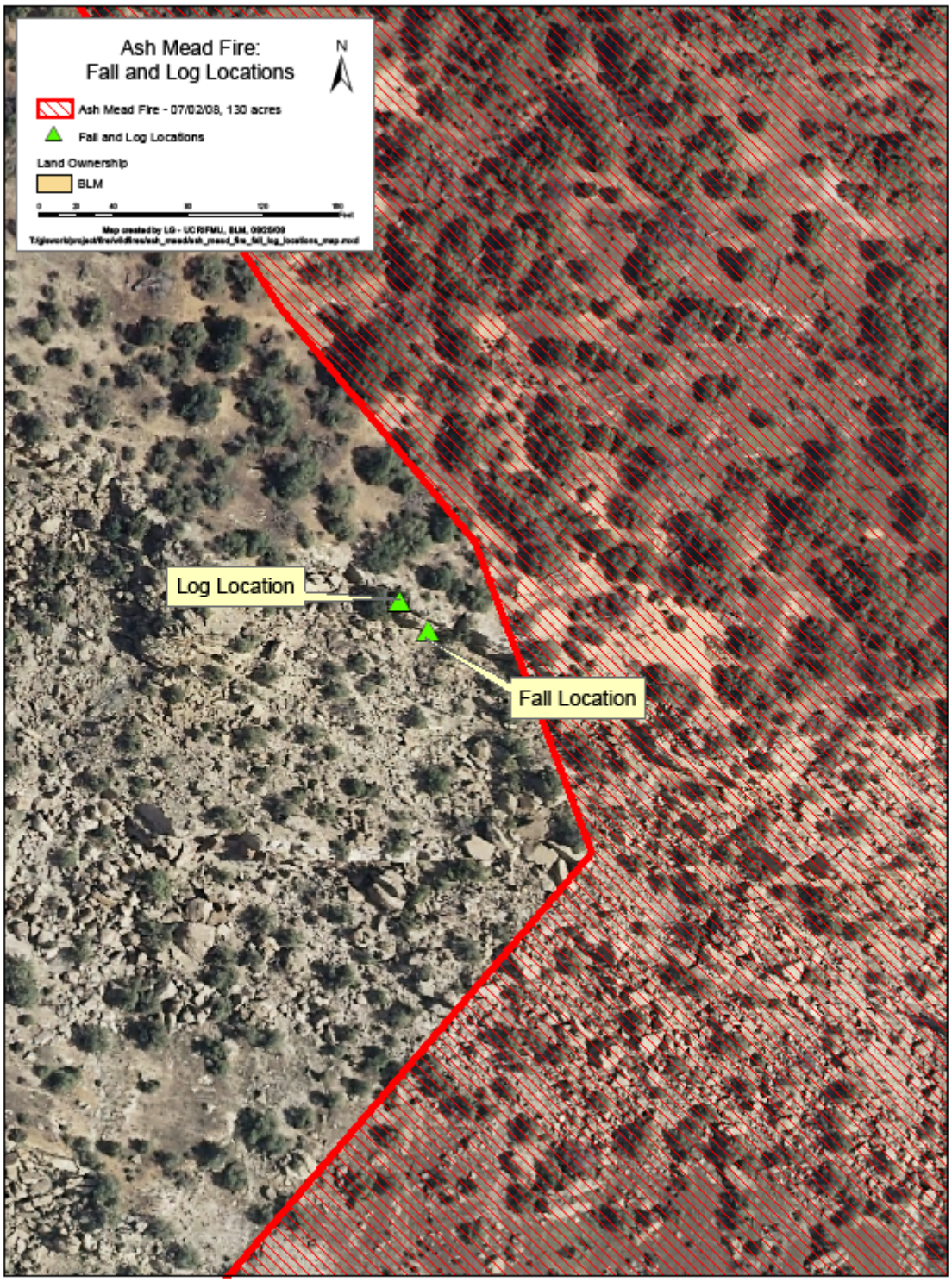
The comment that "we do this all the time" and that fires continue to be fully engaged in remote areas with cliff bands, gives rise to a couple of note-worthy observations: Are we fighting fire there to protect a value at risk, and if the firefighting there is particularly dangerous, then is there something proactive that can be done, like planned fuels projects, changing response strategies. Aggressively, fighting fire in landscapes with cliffs and extreme slopes, as we habitually continue to do, sooner usually more often than later, persist in getting people injured.

There needs to be an overhaul of fires safety culture, until risk management is more than just lip service and actions don't convey silent expectations to take unmitigated risks, people will keep taking unacceptable or worst yet unrecognizable risks. Wildland fire fighting is in an inherently dangerous environment, but there are many instances when simple changes in tactics and strategies would greatly improve safety.

Change the collective fire fighting safety thinking, rather than continue doing the same thing time after time, normalizing risk and therefore getting complacent with "normalized risk taking". A constant examination by overhead of strategy and tactics must take place, not for how they can fail so minor adjustments can be applied, but how they may be done differently even if different may be radical (AMR). Discontinue trying to generate band-aid safety adjustments to dangerous practices, instead shift your focal point to safely creating a means of getting the job done with what is not a dangerous practice.

Somewhere, the chain of events leading to an accidents must be broken, fire overhead leadership has the first responsible to provide the safe work environment, but implementation of leaders safety intent, at some point, becomes an individual's personal responsible. All occupational levels of firefighters, should be developing an attitude that is not their "job" that is inherently dangerous but it's their working environment that's inherently dangerous. Therefore they can and must be in charge of their own personal safety, all the trainings, hazard/safety briefings, check lists and decisions of supervisors will not mitigated a direct (an usually an environmental hazard) personal hazard. Stop with the mixed and then opposing implied safety messages "go into a hazardous environment (cliffs) and get the job done, and (oh by the way), be safe while you're doing it.


Ash Mead Fire
N
Ash Mead Fire - 07/02/08, 130 acres
Fall and Log Locations
Land Ownership
BLM
Fall and Log Locations
5704
5400
5600
Ash Mead
DeBeque
70
Ash Mead Fire


Ash Mead Fire:
Fall and Log Locations
N
Ash Mead Fire - 07/02/08, 130 acres
Fall and Log Locations
Land Ownership
BLM
Log Location
Fall Location

Ash Mead Cliff Line *B.Oelrich*

IHC Member Overlooking Fall Site (Day of Accident)

Fall Site *B.Oelrich*

Rock Pile Where FF1 Landed

Accident Team Member Contact Information

Barry Oelrich: Chief Investigator, District Safety Specialist for Northwest Colorado / (BLM)
2815 H Road
Grand Junction, CO 81506
Ph. 970-589-9658
Barry_Oelrich@blm.gov

Hal Coombs: Technical Specialist, UCR Fire Safety Officer / (USFS)
0094 County Road 244
Rifle, CO 81650
Ph. 970-625-2872
Hcoombs@fs.fed.us

Mark McFall: Safety Advisor, Safety Manager, Medicine Bow-Routt National Forests & Thunder Basin National Grassland / (USFS)
2150 Centre Avenue
Building E
Fort Collins, CO 80526
970-295-6672
Mmcfall@fs.fed.us