

Incident Summary Page for the 100 Fires Project

Incident Name: Cramer Fire	Incident Date & Time: 07/22/2003 @ 15:25
Incident Location: Salmon-Challis National Forest, 50 miles northwest of Salmon, Idaho	Incident Size: 200 acres at time of incident
Types of resources involved: U.S. Forest Service helicopter rappel crew	# of Fatalities/injuries: 2 fatalities
Reason this fire was selected for the 100 Fires list: ➤ Fire made a notable impact within the wildland fire service	
Conditions leading up to the event:	
<p>In 2003, the Salmon-Challis National Forest was experiencing a period of prolonged drought for its fourth consecutive year. At the time, overall precipitation was 50-70% of normal, and no significant precipitation had fallen for nearly a month in the Cramer Fire area. Live fuel moistures were similar to, or lower than, samples taken in August of 2000, a year that saw 417,000 acres burned on forest.</p> <p>The fire occurred in a part of the forest known as the Salmon River Breaks, an area formed by prehistoric rivers cutting through miles of bedrock and known for its extremely rugged and steep terrain. This area is known for its difficult and dangerous fires; in 1979 four crews were entrapped on the Ship Island Fire resulting in one fatality, in 1985 two separate entrapments on the Lake Mountain Fire and Butte Fire resulted in a total of 155 individuals deploying fire shelters, and in 2000 several crews had near misses on the Clear Creek Fire.</p>	
Brief description of the event:	
<p>On the evening of July 19, thunderstorms rolled over the Salmon River Breaks, igniting several fires. The next afternoon, a lookout reported a fire in the area of Cramer Creek, near the confluence of the Middle Fork and main Salmon rivers. Smokejumpers attempted to staff the 3 acre fire but were thwarted by high winds. The nearby Indianola Rappel Crew was off-forest at the time, so another local rappel crew, Moyer Rappel Crew, was dispatched along with a couple of local Bureau of Land Management engines. Four Type 2 IA crews were later ordered as well. Limited by the approaching nightfall, only a handful of firefighters were flown up to the fire that evening. The lack of personnel combined with heavy roll-out seen on the fire resulted in the Type 4 Incident Commander (IC) deciding not to engage the fire that night, and a Type 3 IC was requested for the following day. Due to the fire's location in a thermal belt, it burned actively until about 02:00.</p> <p>By the morning of July 21, the fire was approximately 35 acres. Suppression efforts continued to be hampered by difficulties getting and keeping resources on the fire; one engine crew was pulled away for another initial attack and the first hand crew wasn't fully shuttled up until late afternoon. However, Indianola Helitack had returned from their off-forest assignment and were engaged securing the fire above helispot H-1 with bucket drops. Around 17:00, strong winds pushed the fire, now 60 acres, over their line and the IC made the decision to disengage. As air attack departed the fire later that evening, fire size was reported to be 200 acres, and the formerly cold west flank had spilled over into the Cache Bar drainage.</p> <p>The July 22 plan was to have three of the four crews flown into H-1, supervised by a Strike Team Leader. Two crews would work up from H-1 to the east, securing the line, while the third would work from H-1 to the north, then continue up the west ridge between the Cache Bar and Cramer Creek drainages. The fourth crew would be flown into a proposed helispot, H-2, on the west ridge later that day and work down toward the crew coming up from H-1. Under the supervision of the IC, the Indianola Rappel Crew would insert two sawyers, Jeff Allen and Shane Heath, to prep H-2.</p> <p>The IC designated two lookouts on the east flank, though only the lower one was put in place. Had the second, higher, lookout been in place, they would have had a view of H-2. The IC mentioned other lookouts would include air attack, helicopter pilots and the nearby Long Tom Lookout. The Indianola rappellers were briefed on their mission. This briefing included two possible safety zones which had been located by air but not seen by ground personnel. These two possible zones were a ceanothus brush field 200 - 300 yds down the west ridge which would require firing to be usable or back into the "black," which was an area of low intensity fire which was susceptible to reburn, about 150 yds down off the east side of the ridge.</p> <p>At 09:43, Allen and Heath rappelled into H-2, with the assumption it would only take an hour to cut out the helispot. After about an hour, Allen checked in and reported they needed another 45 minutes to an hour to finish.</p> <p>At 12:26, the rappellers received a call asking them to increase the size of the helispot to accommodate a larger Type 2 helicopter. Allen estimated another 30 to 45 minutes before it would be completed to the new specifications. They would eventually cut over 70 trees, ten times the initial estimate needed to clear the helispot.</p>	

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Around 12:45, Allen made contact with a helicopter doing bucket work near H-1, asking the pilot if he could take a look at a smoke south of H-2 that concerned him. The pilot reported he had limited visibility but saw a hot spot a half mile below H-2. Allen replied “OK, fine. We’ll keep an eye on it.”

Over the next two hours, strong west-northwest winds began overpowering local diurnal winds, dramatically increasing fire activity over the entire fire. The strike team leader in charge of the hand crews informed the IC that they had moved to their safety zones. In the Cache Bar drainage, the backing fire, which had underburned and preheated the brush, reached the drainage bottom and transitioned to an active fire front.

At 15:00, pushed by strong winds, the fire front established in the bottom of the Cache Bar drainage began moving rapidly up-canyon towards H-2. Fire intensity and spread rate were observed to be much greater than expected and Allen requested a helicopter for pickup at 15:05. Both the Indianola and Moyer helicopters were at the helibase; one down for a maintenance inspection, the other refueling.

At 15:09 Allen again asked the helibase for a pickup and was told one helicopter would leave shortly. After his third request at 15:19, he was informed that a helicopter was off and should arrive shortly. At this point, the fire front had reached the upper portion of the drainage, became more exposed to the prevailing winds and increasing significantly in intensity.

The helicopter arrived over H-2 at 15:20 with the pilot informing Allen that he was unable to land due to smoke. Allen calmly acknowledged, and replied that he and Heath were then leaving H-2. Allen made his final radio call at 15:24, this time in an excited voice and breathing heavily, “*Could I get some support up here right now?*”

About 100 yards up the ridge from H-2, the fire overran Allen and Heath, killing both.

Fire behavior factors that were present during the event:

“Shortwave” weather disturbance overpowering local winds resulting in gusty and erratic winds of over 30 mph.

Weather on the fire had also been hotter and dryer than predicted each day.

Steep and rugged terrain, with poor visibility due to the variability of terrain features.

Cache Bar drainage is located in a stand-replacement fire scar. The primary fuel types were grass and ceanothus brush—a volatile fuel on its own, but even more so when preheated by under-burning after fire backs through it.

Operational lessons available for learning from this incident:

Lookouts were not positioned where they could see H-2 or into Cache Bar drainage. Often, we are our own lookouts, however even from H-2, only the upper portion of the drainage could be seen. The rappellers were likely task-saturated as well from the extra work of making the helispot larger.

Communications on the fire were described as unclear and chaotic; first and last names were used interchangeably which confused resources not familiar with the local organization. Several communication breakdowns occurred as well. Aerial supervision was aware of the change from backing fire to active flame front 50 minutes before the burnover, but it was never communicated. Resources on the fire assumed a second lookout had been posted higher up, but did not verify this was true.

Aerial resources were relied on to function as both lookouts and escape routes, with disastrous results. It is never a good idea to rely solely on aviation for survival.

Notable impact or historical significance for the wildland fire service from this incident:

Criminal charges were filed against the U.S. Forest Service Type 3 Incident Commander which were eventually reduced by plea bargain to probation and suspension from the agency. Occupational Safety and Health Administration (OSHA) notices were also issued to the agency for serious and willful violations of safety standards.

This incident, following closely on the heels of the Thirtymile Fire fatalities in 2001, pushed the U.S. Forest Service to implement more rigorous evaluation standards for Incident Commander Type 3 certification of its employees.

Links to more information on this incident:

<https://lessons.wildfire.gov/incident/cramer-fire-entrapment-fatalities-2003>

<https://www.nwcg.gov/6mfs/day-in-history/cramer-fire-idaho-july-22-2003>

https://nrfirescience.org/sites/default/files/FinalCramer_Fire_Staff_Ride_Preliminary_Study.pdf

Incident Summary Page for the 100 Fires Project

<https://www.coloradofirecamp.com/Cramer/background.htm>

<https://wlfalwaysremember.net/2003/07/22/cramer-jeff-allen-shane-heath/>

Video:

➤ <https://www.youtube.com/watch?v=3GRLlv2yWHc>

This summary page was proudly provided by:
Chris Trotter, Assistant Superintendent Salmon Heli-Rappellers

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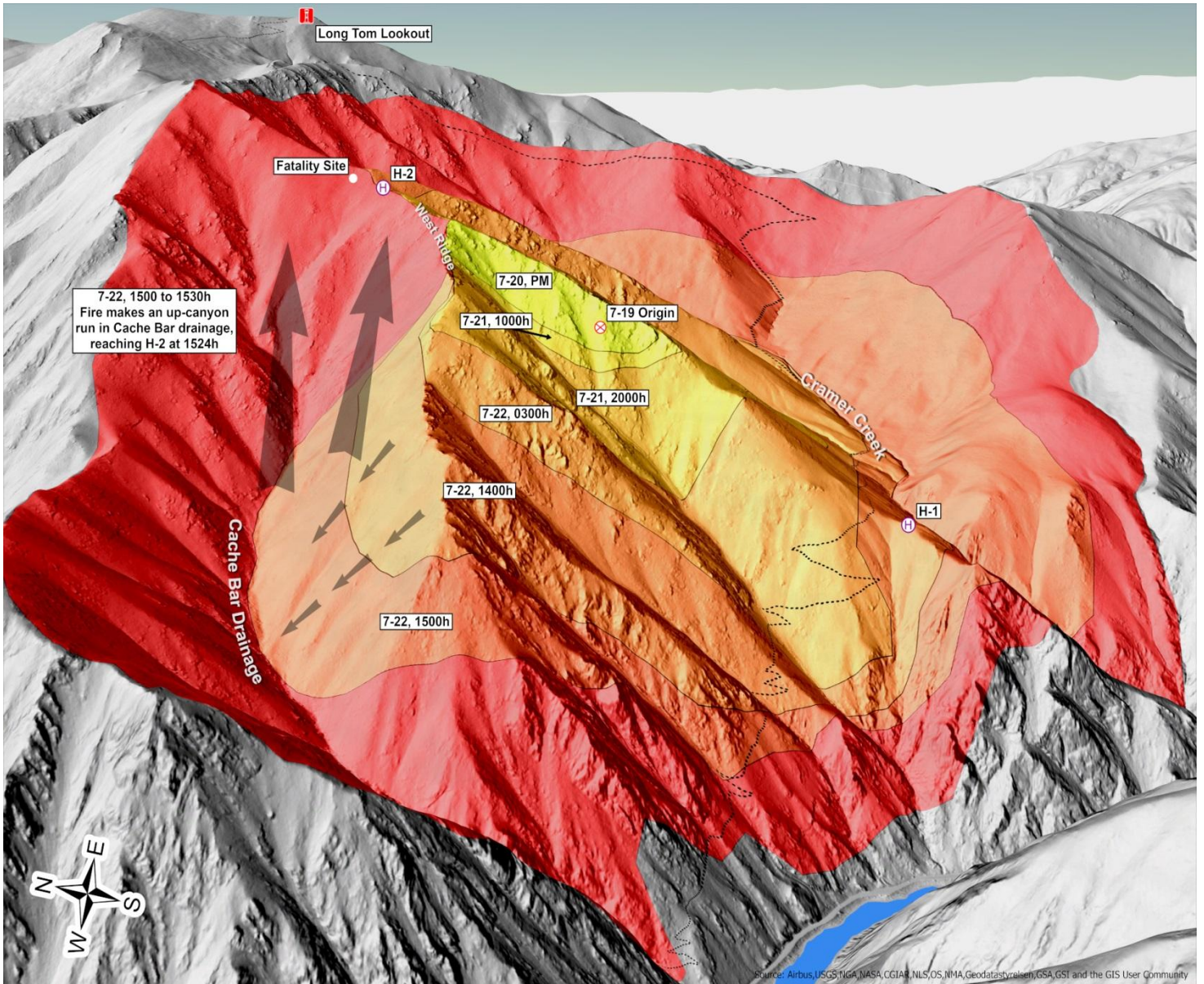


Memorial at Indianola Guard Station for Jeff Allen and Shane Heath



Jeff Allen and Shane Heath preparing for a rappel mission

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Fire progression map of the Cramer Fire from July 19 to July 22, 2003