

Executive Summary

The Salmon-Challis National Forest (SCNF) in the Intermountain Region (R-4) is located in central Idaho. Rugged, steep terrain on the northern part of the forest has a significant impact on fire behavior, fuels, and local weather. On south-southwest aspects, fuels range from scattered shrubs, grass, and forbs on lower slopes to grass, shrubs and open ponderosa pine stands at higher elevations. On west-northwest aspects, mixed age Douglas-fir are prevalent. Live fuel moisture on the forest was at critically low levels at the time of the Cramer Fire; the *Burning Index* (BI) and *Energy Release Component* (ERC) indicated dangerous conditions.

The SCNF, a high-fire-load forest, has a fire organization, typical for the region, and delegates decisionmaking and fire management on all but Type I fires to the ranger districts (RDs). The fire organization was experiencing some tensions and problems as well as funding and staffing shortages, but the supervisor's office (SO) and regional office (RO) thought it worked well overall. The SCNF has a rigorous system of training and qualifications for its fire management personnel and stressed the importance of firefighter and public safety as the highest priority in fire suppression activities.

From July 12–22, the SCNF had several ongoing Type II fires as well as the Type III Cramer Fire. Because

fully engaged with large fire management and fire-related business, there was little management oversight or direction to the Cramer Fire incident commander (IC).

The Cramer Fire became an extended attack fire at approximately 1938 on Sunday, July 20. This should have triggered a need for a complexity analysis and a wildland fire situation analysis (WFSA). No complexity analysis or WFSA was prepared on July 20, 21, or 22.

July 19 and 20, 2003

The Cramer Fire, located on the North Fork RD, started on July 19, 2003 from a lightning strike. It was detected by Long Tom Lookout at 1630 on July 20. At 1648, a McCall, ID, smokejumper aircraft (jumper 41) was diverted from another fire on the SCNF to do initial attack on the Cramer Fire but was unable to put smokejumpers on the fire because of high winds. Jumper 41 estimated the fire at 3 acres, burning in light fuels on a 60- to 70-percent slope, with a high spread potential.

Later in the evening on July 20, an _____ and five members of an engine crew were flown into the fire by helicopter H-166. The engine crew was not used because the central Idaho dispatch center wanted the crew available for initial attack the next day. Because of dangerous conditions and darkness, no suppression action was taken on July 20 other than to assess and monitor the fire.

July 21, 2003

The Cramer Fire was actively burning through the early morning hours of July 21 and was 35 to 45 acres at 0710. At 1058, the _____

of the fire, the _____ noted that the perimeter was calm except for the northeast corner. By late morning, aviation and crew resources began to arrive at the Cove Creek helibase approximately 13 miles up river from the Cramer Fire. A Type II initial attack crew was flown from the helibase to a helispot (H-1) at the base of the fire to begin suppression action on the east flank, and a Type I helicopter was launched to do bucket work. Late in the afternoon after returning from an off-forest assignment, a second helicopter H-193 from the North Fork RD Indianola helitack base arrived on the fire with its crew and was asked to do bucket work above H-1.

At 1613 on July 21, fire behavior on the Cramer Fire increased, pushing the fire east into the Cramer Creek drainage. The hand crew pulled back to H-1 to hold the line they built above H-1, but the winds blew the fire across their hand line. At 1735, the _____ suppression due to increased fire behavior. The majority of the hand crew walked off the fire to the Salmon River road while the remainder, including the IC, flew back to the Cove Creek helibase. Later that evening, Cramer air attack reported that the fire had grown to 200 acres.

During a conversation later in the evening on July 21 with dispatch, the

two Type II medium helicopters and logistics and operations support to accomplish his objective of catching the fire at 300 acres on July 22. He was told that Type II helicopters were ordered but unavailable and to use a strike team leader the following day to supervise the hand crews. The logistics support position was filled early on July 22.

July 22, 2003

At 0820 on July 22, the _____

_____ The strategy for the day was to fly three crews into H-1, use two crews to secure the east flank and one crew to anchor the fire to the west, and put two rappellers above the fire to build a helispot (H-2). H-2 would be used to fly a fourth crew in to secure the west flank of the fire. At 0900, the Type I helicopter was launched from Indianola to do bucket work on the fire.

At 0943, two Indianola helitack personnel rappelled from H-193 into a site above the fire to build H-2. The rappel spotter in H-193 estimated it would take one hour to clear H-2. During the morning and afternoon, Cove Creek helibase contacted the rappellers on H-2 several times, inquiring about their progress. The

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rappellers responded each time that they needed another 15 minutes to 1 hour before the helispot was completed.

While Cramer _____ was over the fire, he contacted the IC and recommended using retardant to pretreat the ridge above Cramer Creek and H-2. The _____ confirmed the plan with Cramer _____

The crew shuttle from the Cove Creek helibase to H-1 began at 1047. H-166 and H-193 took more than 3½ hours to shuttle 60 people—three per helicopter per 15-minute round trip.

_____ arrived over the Cramer Fire at 1245 while two airtankers were dropping retardant. Shortly after arriving on the fire, lead plane 41 assumed the duties of air attack because Cramer air attack had returned to Salmon for refueling. _____ noticed small spot fires in the Cache Bar drainage.

During a recon at 1326, the _____ noted that most of the fire activity was below H-1 but the fire was also active on the east flank. The IC decided not to put the fourth crew into H-2 because they would have to walk in dangerous terrain at night. At 1400, fire activity increased and was intense around H-1, eventually burning over the helispot. At 1423, the IC contacted the forest FMO with concerns about the fire making a run to the west.

Between 1430 and 1440, the fire that had been smoldering in the Cache Bar drainage turned into an active flaming front. Between 1500 and 1520 _____

observed spread rates and intensities that were much greater than he expected and thought that the personnel on H-2 would not be at great risk due to the light fuels and rocky areas in the Cache Bar drainage.

At 1500, H-193 was down for a 30-hour maintenance inspection and H-166 was down for refueling. At 1505, the rappellers on H-2 requested a pickup and said, "Send them in a hurry." At 1509, the rappellers again called the helibase requesting the status of their pickup and said, "We need them right now." At approximately 1510, the Cove Creek

helibase radio operator asked the rappellers on H-2 if they were in danger and if they needed to go to their safety zone. The rappellers responded no, it was getting real smoky and they needed a ride out. At 1511 the _____ assembled his three crews, and after 1530, began walking the crews off the fire to the Salmon River road. At 1512, the Cove Creek helibase called the rappellers on H-2. When the rappellers responded at 1513, helibase said that the helicopter would be taking off momentarily and asked if there were any problems. The rappellers on H-2 responded, "Oh, God. We just got fire down below us. The smoke's coming right at us. Just make them hurry up."

During this time, the _____ was involved in multiple radio conversations with central Idaho dispatch in Salmon, ID, about using resources assigned to the Cramer Fire for initial attack on the Stoddard Fire, a new start close by. H-166 was later diverted from the Cramer Fire to the Stoddard Fire for initial attack.

At 1520, H-166 said it was coming to get the rappellers at H-2 but couldn't land because of the smoke. Lead plane 41 heard the rappellers on H-2 respond to H-166 in a calm voice that the winds were 20 to 25 knots and that they were leaving H-2. At 1524, the rappellers called and asked, "Could I get a helicopter up right now?" _____ observed that when the fire in the Cache Bar drainage reached the ridge, some flame lengths were 50 feet or more with occasional flame lengths up to 100 feet. The fire, described as "a big flash front," burned over and around H-2, killing the rappellers shortly after their last radio transmission. Estimated temperatures at the fatality site were from 1,300 °F to potentially over 2,000 °F. Two fire shelters were found at the site, but neither was deployed.

Numerous attempts were made to locate the rappellers after the burnover. Two personnel were rappelled below H-2 later in the afternoon for a search-and-rescue mission. Shortly after reaching the ground, the search-and-rescue person-

nel were notified by a helicopter over the area that it had located the rappellers approximately 75 to 100 yards northwest of H-2. The search-and-rescue personnel flagged and secured the fatalities site. Later on, two more personnel were delivered close to H-2 and the four spent the night near H-2.

At 1008 on July 23, the Lemhi County sheriff, the Lemhi County deputy sheriff, and a Forest Service employee flew into a helispot above H-2 to remove the bodies. The victims were flown to the Cove Creek helibase and then on to the Salmon airport. The accident investigation team arrived in Salmon at 1800.

Findings

Forty-four major findings, conclusions developed from the facts of the incident, were divided into sixteen categories below. Some of the more significant findings are highlighted and summarized within each category.

Fire Management Plan Direction

The SCNF Fire Management Plan identifies two trigger points that define when a fire transitions from initial attack to extended attack and what analyses are needed once a fire reaches extended attack status. It also addresses the hazards of fire suppression in the Salmon River Breaks and recognizes that fire line construction at midslope is dangerous and that underslung fire lines are hard to secure and hold. Midslope fire suppression tactics were used on the Cramer Fire during extreme burning conditions.

Fire Management Organization

Responsibility for managing Type II through Type V fires was assigned to the district rangers on the SCNF, which placed

a considerable fire management workload on the North Fork/Middle Fork district ranger. There was a critical fire management vacancy (the FMO) on the North Fork RD, and there were no initial attack resources from the North Fork RD on duty or available when the fire was reported, lengthening the response time.

The SCNF increased the number of positions in its fire organization when it received additional fire funding, but there were different perceptions on the forest of how well the fire organization functioned. The performance of the fire organization was becoming a source of increasing concern, but limited action was taken to address the state of the fire organization.

Qualifications

Personnel assigned to the Cramer Fire were qualified for their positions.

Transition from Initial Attack to Extended Attack

When the Cramer Fire went into extended attack status, the change from initial attack to extended attack was not acknowledged, recognized, or reported by the

_____ a consequence, the analyses required by the FMP were not conducted and there was no communication regarding the change in fire status.

Fire Suppression Strategy and Tactics

There was minimal discussion of Cramer Fire suppression strategy and tactics among the _____

_____ On July 21 and 22, fire suppression strategy and tactics on the Cramer Fire did not provide for safe and effective suppression operations. The _____

_____ were not available.

Safety

There was good attention to safety at the forest level and in the early stages of the Cramer Fire, however, there were significant safety lapses on the Cramer Fire prior to the fatalities. Visibility of the slopes below H-2 was limited by topography and vegetation, obscuring the rappellers' view of fire below them.

Fire Management Resources

There were inadequate resources and a logistical inability to fully utilize available resources to implement the _____

_____ On July 22 there was confusion about the availability and positioning of some resources and helicopters were not available to retrieve the rappellers at a critical moment of need.

Weather Information

Fire activity on the SCNF increased in July due to hot, dry, weather and multiple lightning starts, indicating the potential for new starts to grow rapidly. Crews were informed on the morning of July 22 that conditions had been progressively warmer and drier the previous two days. Weather information was not aggressively sought and the information that was obtained did not represent the Cramer Fire site.

Fuels and Terrain

Fuel and terrain conditions on the Cramer Fire lent themselves to extreme fire behavior and difficult fire suppression.

Fire Behavior, General

Fire behavior on the Cramer Fire was consistent each day—calm in the morn-

ing and severe in the afternoon. Even though the Salmon River Breaks are known for their potential extreme fire behavior and some crew members were aware that seasonal conditions were extreme, other personnel on the fire did not expect extreme fire behavior in the afternoon of July 22.

Lookouts

There were no effective lookouts for the rappellers at H-2. The plan for placement of lookouts was not clearly communicated to personnel assigned to the fire. No lookout with a view of H-2 or the Cache Bar drainage was posted on July 22 to monitor fire in the Cache Bar drainage and to communicate critical weather and fire behavior information to the rappellers. Aviation resources over the fire could not function full time as lookouts for ground crews given their other duties and responsibilities.

Escape Routes and Safety Zones

Three of the four safety zones identified by the IC and two crew bosses were not safety zones on the afternoon of July 22, during conditions of extreme fire behavior. Helicopter retrieval became the primary escape route to safety for the rappellers.

Fire Behavior, Cache Bar Drainage

The seriousness of the fire in the Cache Bar drainage was underestimated. Development of an active fire front was observed from the air as much as 50 minutes before the fire reached H-2, but this information was not conveyed to the rappellers on H-2. When the fire front reached H-2, the intensity and rate of spread were much greater than had been anticipated, and conditions were not survivable with or without a fire shelter.

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Postaccident Response

Multiple attempts were made to contact and locate the rappellers. More than 30 minutes after losing contact with the rappellers, the IC became involved in the search and rescue operation. Prior to that time, he was checking on the safety of personnel near H-1 and dispatching Cramer Fire resources to another fire on the forest.

Leadership on the Cramer Fire

Leadership on the Cramer Fire was inadequate to provide for safe and effective

suppression operations. The _____ the rappellers, the _____

_____ He remained confident he could contain the fire with the same strategy even though he did not receive the requested resources, and his view of the fire on July 22 came from two reconnaissance flights. The rest of the day he was at the Cove Creek helibase, 13 miles from the Cramer Fire. When the _____ the rappellers from H-2, 1/2 hour elapsed before a helicopter was launched to get them, and that launch was requested by the rappellers. During the critical period prior to and after contact was lost with

Management Oversight

The SCNF assigned responsibility for the Cramer Fire to the _____ but did not provide oversight. Those who should have provided oversight focused attention on other priorities. When concerns about management of the fire surfaced, follow-up on these concerns was inadequate.