Memorial site where Jeff Allen and Shane Heath perished July 22, 2003 on the Cramer Fire.

Dear Staff Ride Participant:

It is extremely important that you read and familiarize yourself with the background information contained in this preliminary study.

We look forward to your participation in what we feel is a significant and unique opportunity to honor our two fallen firefighters and learn from this wildland fire tragedy.

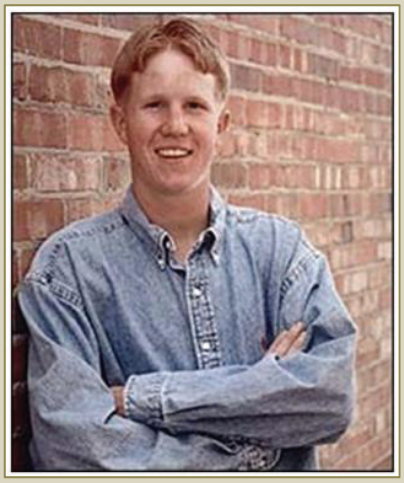
Cramer Fire Staff Ride Organizing Committee

Cramer Fire Staff Ride

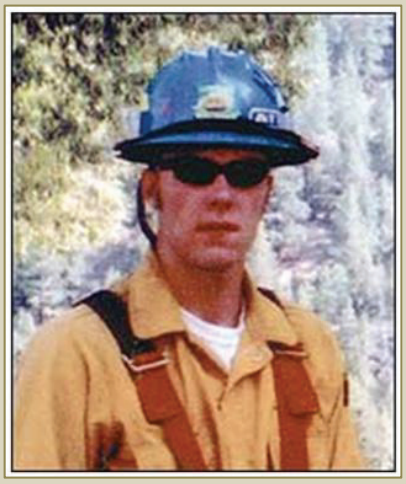
Preliminary Study

Salmon-Challis National Forest
June 2012

In Honor and Memory of



Jeff Allen



Shane Heath

Indianola Rappel Crew Partners Had Their Eyes on Future Careers

Jeff Allen

Jeff Allen, 24, of Salmon, Idaho, graduated from Salmon High School in 1997. He was a three-year letterman in basketball and football, and a four-year letterman in golf. As a senior, Jeff was named Mountain River Conference Player of the Year in basketball, and was also honored as First Team All-Conference in football. He was selected to play in the 1997 "Down Under Bowl" in Australia.

Salmon High School has retired Jeff's basketball number "22." Today, his basketball uniform is featured in a shadow box in the school's foyer.

Jeff started his seasonal firefighting in 1998. In 2000, he joined the Indianola Rappel Crew. (Jeff's father, Bill Allen, was on an Idaho-based helitack crew in the 1960s.)

Jeff was on track to graduate in December 2003 with a degree in Business Administration from Boise State University. The school has provided Jeff's parents with his Business Administration diploma. During the 2002-2003 season, Jeff served as an assistant on the Boise State basketball team. His dream was to become a college basketball coach.

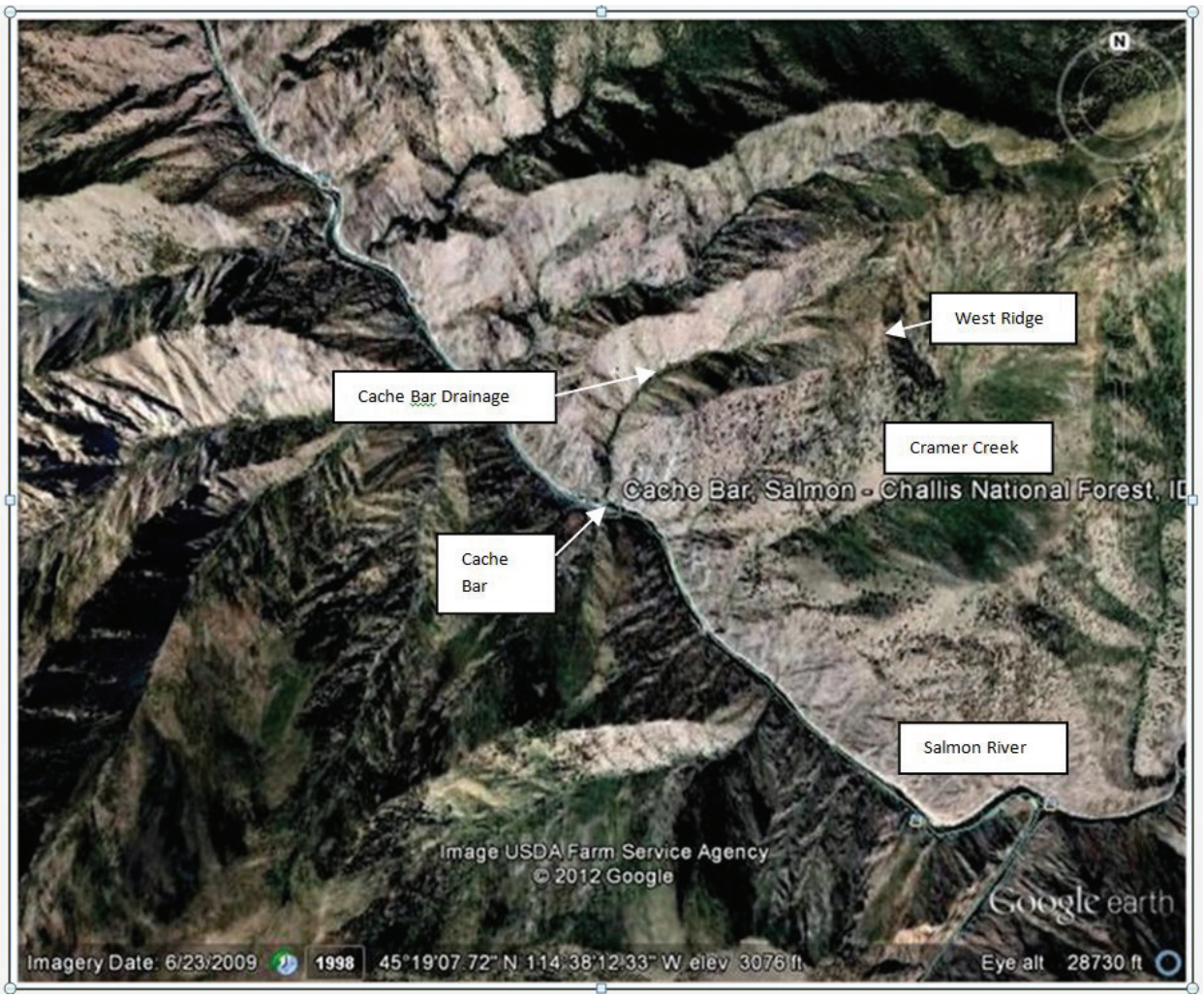
Shane Heath

Shane Heath, 22, was raised on his family's 7,500-acre row crop farm in Melba, Idaho. He was an avid outdoorsman. When he was 15, Shane starting working with the helicopter crew that was performing agricultural spraying on the family's farm. Shane became hooked on helicopters.

In 1999, Shane graduated from Melba High School, where he was active in Future Farmers of America and played football and basketball.

In 2000, Shane joined the Sula Fire Crew on the Bitterroot National Forest. In his second season on this crew, Shane continued to develop his tree felling skills and became a "Class C" Faller. At the end of that season, he joined the Indianola Rappel Crew.

A senior business major at Boise State University, by the end of this third firefighting season, Shane had decided to pursue a full-time wildland firefighting career.



Contents

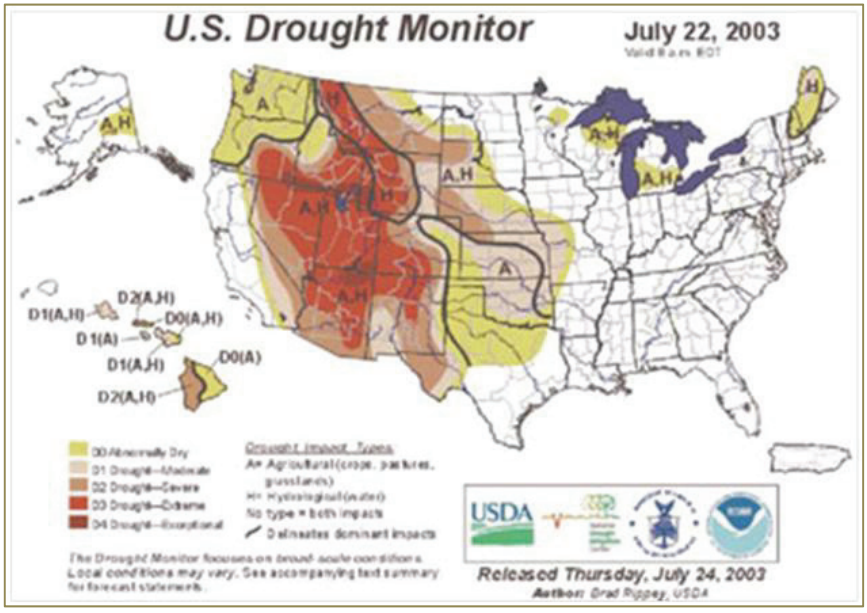
1. Cramer Fire Background

A. Prior and Current Conditions

During the summer of 2003, central Idaho—including the Salmon-Challis National Forest—had been in a period of prolonged draught the previous four years.

By May 2003, the central Idaho snowpack was near average, ranging from 90 to 110 percent of normal. However, spring and summer rainfall for the area lagged, pegged at 50 to 70 percent of normal.

No significant precipitation had fallen in the Cramer Fire area since June 25, 2003—24 days before the Cramer Fire ignites.



The National Drought Monitor map for the week of July 22, 2003 indicates that the Cramer Fire area is in the "extreme drought" category.

The National Drought Monitor for the week of July 22, 2003 indicated that the Cramer Fire area was in the "extreme drought" category.

B. Seasonal Severity and NFDRS Indices

The Salmon-Challis National Forest uses the Energy Release Component (ERC) of the National Fire Danger Rating System (NFDRS) for initial fire sizeup, complexity analysis, and management response.

The Forest also uses the Burning Index (BI) as a standard index for predicting general fire behavior. The ERC relates to the potential available energy per unit area in the flaming front of a fire, while the BI reflects the potential fire intensity and difficulty of control. The BI is somewhat sensitive to changes in weather conditions, and the ERC much less so.

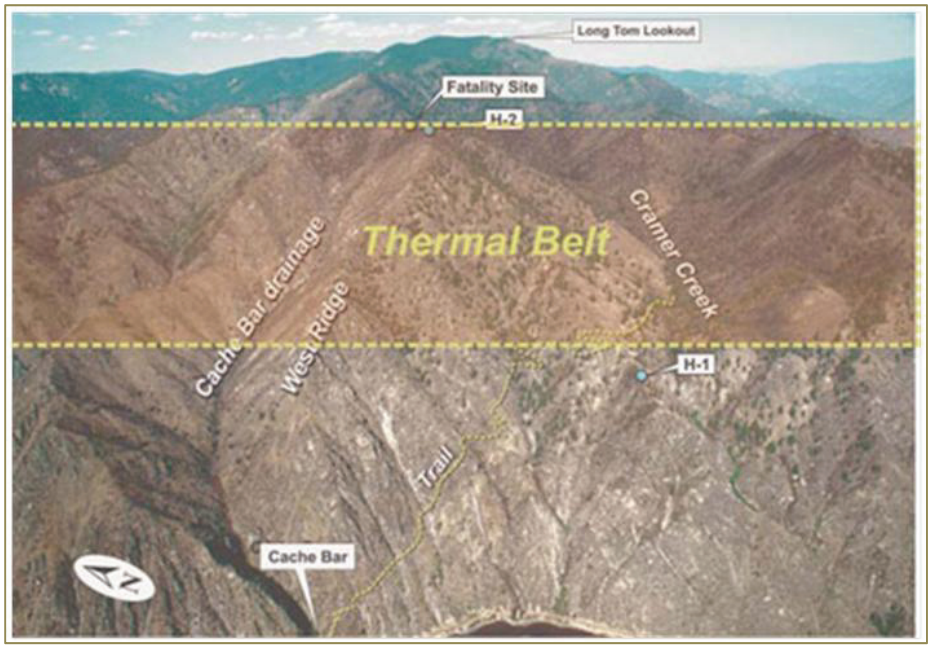
In July 2003, the overall BI level on the Forest was well above the 90th percentile. The ERC was in the 96th percentile, indicating extreme burning conditions.

Both the nearby Indianola Remote Automated Weather Station (RAWS) (NFDRS Fuel Model C, open pine stands with grass understory) and the Lodgepole RAWS (NFDRS Fuel Model G, dense conifer stands) indexes also indicated extreme burning conditions.

ERC values for both of these RAWS stations were well above the 97th percentile. For the three weeks prior to the Cramer Fire, the Lodgepole RAWS ERC had been at or near the historical extreme. The Indianola RAWS showed the BI to be at the 95th percentile. For the Lodgepole RAWS, the BI was well above the 97th percentile. Calculated 1,000-hour fuel moistures were 8 and 9 percent respectively. During the previous month, these BI indexes had been at or near the historic extremes.

C. Weather

Hot, dry conditions prevailed in the Cramer Fire area from the end of June through July. Daytime temperatures here peaked at over 100 degrees F. at lower elevations and into the mid-80 degrees at Long Tom Lookout. Relative humidity (RH) from 10 to 15 percent was common at midslope locations. Night time RH recovery seldom exceeded 60 to 65 percent.



This schematic diagram illustrates the thermal belt location in the Cramer Fire area.

Nighttime inversions in the Salmon River drainage commonly produce a thermal belt effect at midslope elevations, promoting active burning conditions at night. Thermal belts were present on July 20 and 21 that resulted in active burning on the Cramer Fire well into the late evening and early morning on these nights.

Remote Automated Weather Stations are located on seven sites on the Forest and are routinely used to track weather and fire danger trends. The Skull Gulch RAWS, positioned to serve as most representative of the Cramer Fire area, was found to have a bad temperature/humidity sensor during the initial stages of the Cramer Fire. Additionally, it was determined that this RAWS had a programming error that resulted in improper reporting of wind speeds. As a result, during the Cramer Fire, all data for the Skull Gulch RAWS was considered to be inaccurate and unusable.

Of the remaining stations, the Indianola RAWS (elevation 3400 feet) best represented weather conditions at the lower elevations of the Cramer Fire, and the Lodgepole RAWS (elevation 6100 feet) represented mid-elevation conditions reasonably well.

D. Temperature and Relative Humidity

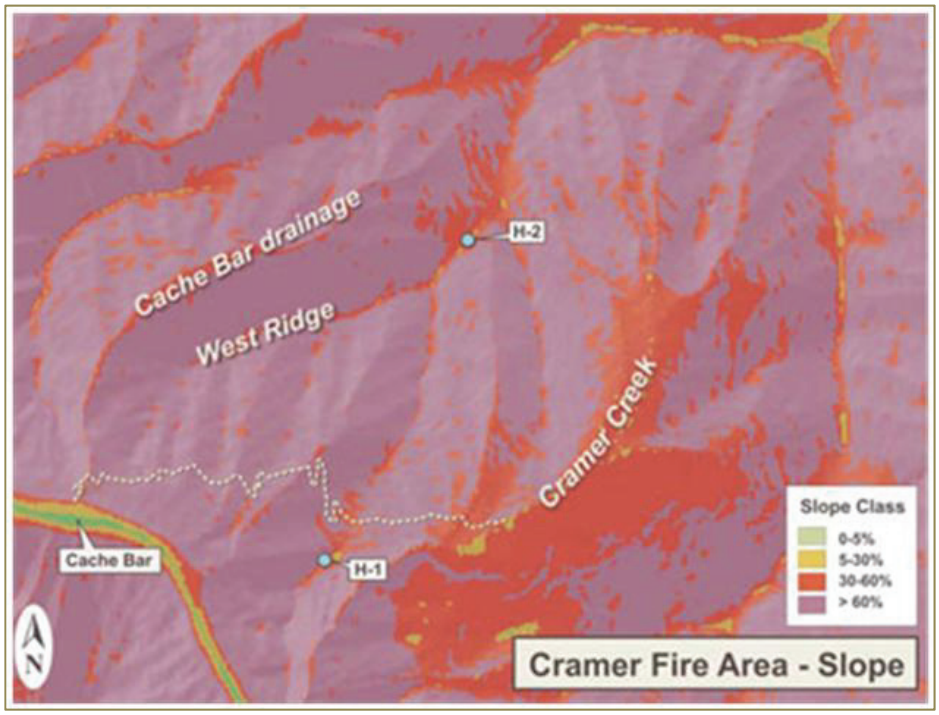
Temperatures for the previous 90-day period prior to the Cramer Fire indicated surface temperatures in the fire area to be 3 to 6 degrees F. warmer than normal.

The week previous to the Cramer Fire start—on Saturday, July 19—Long Tom Lookout recorded an afternoon high temperature of 87 degrees F.

Afternoon high temperatures for the period of July 20-22, 2003, at the Lodgepole and Indianola RAWS sites were in the mid-90s to low-100s, with overnight lows in the mid-40s to low-50s at the Lodgepole RAWS and in the lower 50s at the Indianola RAWS.

E. Windspeed and Direction

During mid to late July 2003, a large ridge of high pressure dominated central Idaho—with a thermal trough of low pressure at the surface. Prior to July 22 (the day of the Cramer Fire fatalities), the surface wind pattern was diurnal in nature, with thermally induced slope and valley wind components.



Forecast models for July 22 indicated that a weak "short wave" weather disturbance could move through the area. This would change the typical diurnal wind pattern to a more synoptic or large-scale pressure pattern with northwest-to-west winds over central Idaho. Such a change would be particularly evident in west-to-east or northwest-to-southeast oriented valleys and drainages.

This change in wind patterns was reflected in the fire weather forecast for Zone 405 issued the morning of the July 22—which forecast northwest winds at 5 to 15 mph.

F. Topography

The Salmon River Breaks are characterized as steep, dry, and rugged, with limited visibility because of the steep sections with very pronounced relief.

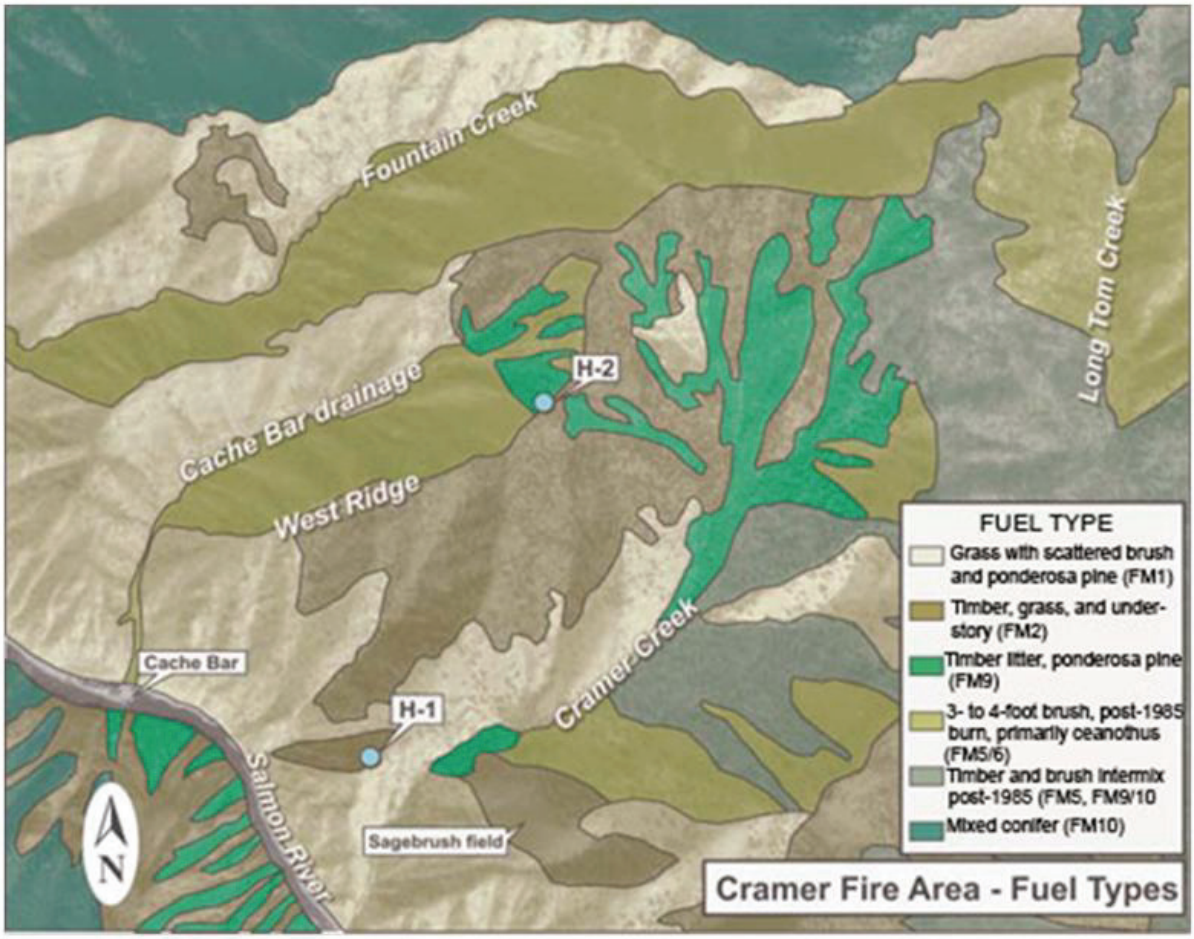
Slope in much of the Cramer Fire area (with elevations ranging from 3500 to 8000 feet) exceeds 60 percent, with more moderate slopes limited largely to the bottom of the Cramer Creek drainage. These steep areas are predisposed to rapid uphill fire spread, problems with rolling firebrands, and extreme fire behavior under dry conditions.

The topography also has a strong influence on surface winds. Thermally-induced diurnal slope and canyon winds are the norm here. Additionally, nighttime inversions in the Salmon River's deep river canyon often create a thermal belt effect at midslope, causing fires to remain active into the night and early morning. [*See image on page 6.*]

G. Fuels

The following fire-behavior fuel models are represented in the Cramer Fire area:

- **Fuel Model 1** – Short Grass
- **Fuel Model 2** – Short Grass with Litter Understory
- **Fuel Model 5** – Short Brush
- **Fuel Model 6** – Dormant Brush
- **Fuel Model 9** – Long-Needle Pine Litter
- **Fuel Model 10** – Mixed Conifer



Fuels in the Cramer Creek drainage area are primarily grass, grass-litter understory in open stands of ponderosa pine and Douglas fir, and mixed conifer stands—with more continuous canopy in the upper reaches of Cramer Creek. *[See fuel type map above.]*

In the Cache Bar and Fountain Creek drainages, south-facing slopes are covered by continuous short grass with scattered shrubs in some places. North-facing slopes are covered by large, continuous brush fields where an intense stand-replacement fire in 1985 (the Fountain Fire) removed mixed-conifer stands and facilitated brush growth.

These brush fields consist primarily of shiny-leaf ceanothus interspersed with pockets of ninebark. Snags are numerous in these brush fields. In July 2003, many snags had fallen—contributing to a significant down woody fuel component. Where the Cramer Fire burned through the Cache Bar drainage—positioned below the fatalities—it is estimated that the ceanothus brush height was from three to four feet.

The Forest's fire ecologist reported live fuel moistures in the Cramer Fire area at approximately 100 percent, with live foliar moisture in the crowns at 85 percent. Dead fuel moistures were extremely dry.

By the end of July 2003, live fuel moistures on the Salmon-Challis National Forest were at—or below—levels recorded during the same time in 2000, known as a "benchmark fire year" on the Forest.

2. Cramer Fire Chronology

A. Monday, July 12

Today—and for the next 10 days—the Salmon-Challis National Forest has several ongoing Type 2 Fires. The Forest's fire staff, the North Fork/Middle Fork District Ranger, and the Zone Duty Officer are all fully engaged with large fire management and fire-related business.

Hot, dry conditions have prevailed in this area from the end of June through July. *[For more specific weather and fuel information, see previous chapter.]*

B. Saturday, July 19

Approx. 2100

A single-tree lightning strike ignites a new fire start on the Salmon-Challis National Forest's North Fork Ranger District. The strike is located at approximately 5,000 feet in elevation on a spur ridge running south of West Ridge. (It will not be detected until the following afternoon.)

C. Sunday, July 20

1630

The Long Tom Lookout—located two miles to the north—reports the fire, burning on the upper portion of a steep (60- to 70-percent), rocky southwest-facing slope positioned west of the Cramer Creek drainage. The fire is located in rugged terrain high above the Salmon River Breaks in the deep Salmon River Canyon, approximately 25 miles northwest of Salmon, Idaho.

Jumper 41 estimates the fire, now at three acres, has a "high spread potential."

Weather

1100 Hours

76 degrees F. 25 percent relative humidity. Northwest winds at 2 mph.

1648

McCall smokejumper aircraft Jumper 41 is diverted from another fire on the Forest to initial attack the Cramer Fire. Due to high winds, however, no personnel jump the fire.

Jumper 41 estimates the fire, now at three acres, has a "high spread potential." It is currently burning primarily in grass and light ponderosa pine needle litter (fuel models 1 and 2). Fuels are sparse and light. The fire is spreading by creeping, backing, and rolling burning material.

1705

At 1705, this photo of the Cramer Fire is taken from Jumper 41 plane.

Between 1800 and 1952

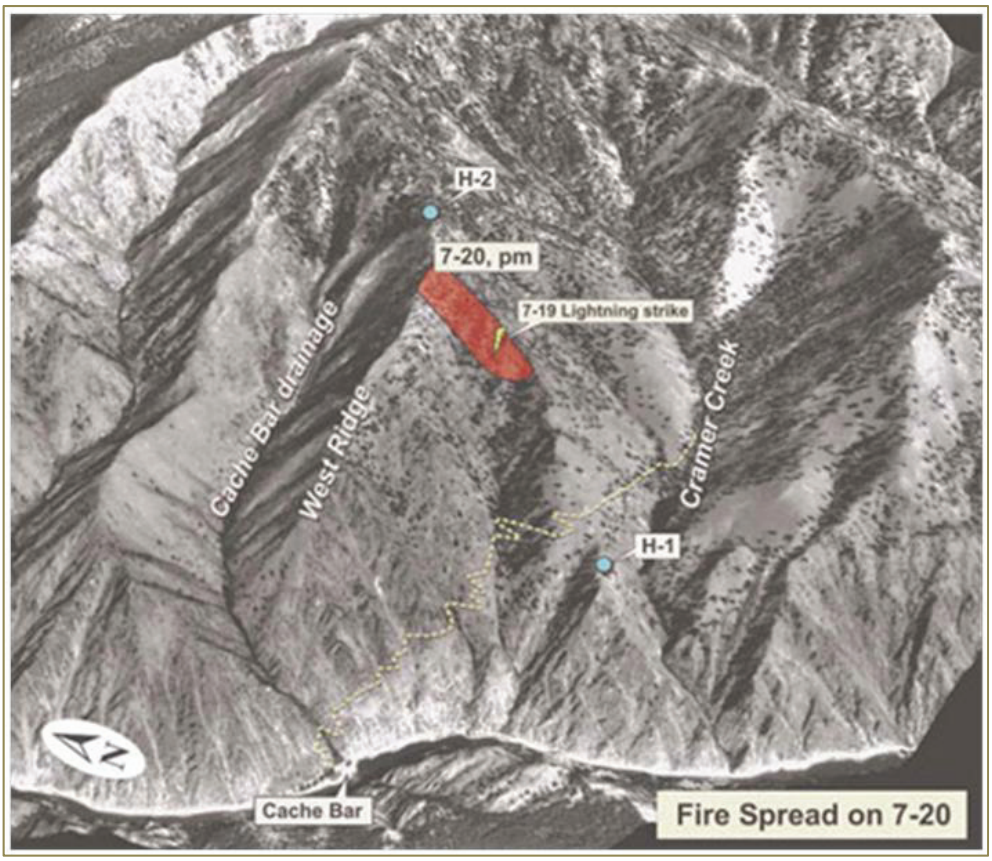
Single-Engine Air Tanker 454 drops two loads of retardant on the Cramer Fire.

1938

The Type 4 IC requests a Type 3 IC for the fire. The incident, which has grown to 20-25 acres—burning in ponderosa pine, mountain mahogany, and grass—becomes an extended attack fire.

2015

Helicopter 166 (Type 3 helicopter) flies the following personnel to the Cramer Fire: an IC Type 4, IC Type 4 Trainee, five members of an engine crew. Onsite conditions include high temperatures, low humidity, and winds gusting from 10-20 mph. Rocks and large trees are rolling from the top of the



The red area shows the Cramer Fire perimeter on the afternoon of Sunday, July 20. By the evening of July 21, the fire is 222 acres. The following day, it grows to 1000 acres. The next day, July 23, the fire is 5400 acres.

fire into its middle and lower sections. A thermal belt has set up. Conditions on the fire remain warm and dry. The fire stays active throughout the night and early morning hours. Fire personnel note that winds are much stronger than they had expected. Due to dangerous conditions and darkness, no suppression action is taken—other than assessing and monitoring the fire.

D. Monday, July 21

0230

The fire begins to die down, with increasing relative humidity (RH).

0530

Type 4 IC Trainee walks fire perimeter.

0710

A spot weather forecast is requested.

Weather

0800 Hours

60 degrees F. 49 percent relative humidity. Northeast winds at 2 mph.

0800

The spot weather forecast [*see next page*] calls for wind speeds much lower than what—based on winds from the previous night—fire personnel are anticipating.

0900

The RH begins to steadily drop.

1000

Air Attack estimates the Cramer Fire is now 40 acres. There is fire activity on the fire's northeast corner, but the fire along its western perimeter has burned into rocks and appears cold.

Cramer (WILDFIRE) (Requested: 724 MDT 7/21/03)
Forecast complete at 750 MDT 7/21/03
Requested by: Central Idaho Coordination Center

Elevation: 4520-6050 Drainage: Cramer Aspect: South Size: 40
Fuel Type: Grass (Partially Sheltered)

Observations:

Place	Elev	Time	Wind	Temp	Wetbulb	RH	Dewpt	Remarks
Fire	5000	0700	1-3 upslop		64	51	43	Clear
				Calculated:		44	42	

FORECAST:

DISCUSSION...STRONG HIGH PRESSURE ALOFT WILL BRING HOT AND DRY WEATHER OVER THE FIRE SITE THE NEXT TWO DAYS.

FOR TODAY
SKY/WEATHER.....SUNNY.
CWR.....0%
TEMPERATURE.....MAX 97-101
HUMIDITY.....MIN 11%
WIND - 20 FT.....UPSLOPE 4 TO 8 MPH

FOR TONIGHT
SKY/WEATHER.....CLEAR.
CWR.....0%
TEMPERATURE.....MIN 60-65
HUMIDITY.....MAX 50%
WIND - 20 FT.....DOWNSLOPE 3 TO 6 MPH

OUTLOOK FOR TOMORROW
SKY/WEATHER.....SUNNY.
CWR.....0%
TEMPERATURE.....MAX 97-101
HUMIDITY.....MIN 10%
WIND - 20 FT.....UPSLOPE 4 TO 8 MPH

FORECASTER...KAISER

The requested spot weather forecast—issued by the National Weather Service Pocatello Office—received on the morning of Monday, July 21.

1058

The IC Type 4 turns the fire over to an IC Type 3.

Weather

1100 Hours
69 degrees F. 40 percent relative humidity.

1130

Fire activity begins to increase. RH values drop into the low 20s at mid-elevations, and into the teens at lower elevations.

1148

As they return from an off-Forest assignment, a second helicopter, H-193 (Type 3)—from the North Fork Ranger District's Indianola Helitack Base—arrives on the fire with its crew and is asked to do bucket work above Helispot 1.

1242

Aviation and crew resources begin to arrive at the Cove Creek Helibase—located approximately 13 miles up the Salmon River from the Cramer Fire.

A Type 2 initial attack crew is flown from the helibase to Helispot 1 (H-1) located at the base of the fire. This crew begins suppression actions on the fire's east flank. Helicopter 133-KA (Type 1 helicopter) is launched to perform bucket work.

1410

IC Type 3 requests retardant.

1613

IC Type 3 reports active fire with potential to reach Salmon River Road by morning.

1630

Fire behavior increases, pushing the Cramer Fire east into the Cramer Creek drainage.

The Type 2 initial attack crew pulls back to Helispot 1 to hold the hand line they built above this location. Winds blow the fire across this line.

1715

Air Attack estimates the fire has grown to approximately 60 acres.

1735

Due to increased winds and fire behavior, the IC decides to cease suppression actions.

The majority of the IA hand crew personnel walk off the fire to Salmon River Road (where they are picked up). The remainder of the crew, along with the IC, fly back to the Cove Creek Helibase.

Cramer Fire late afternoon on Monday, July 21—showing that day's typical fire activity.

Cramer Fire early evening on Monday, July 21—showing backing and short surface-fire runs.

Red circle in this photo shows where, at approximately 1830 on July 21, the Cramer Fire spreads into the Cache Bar drainage.

Weather

1745 Hours
80 degrees F. 18 percent relative humidity.

1830

The fire spreads into the Cache Bar drainage.

1952

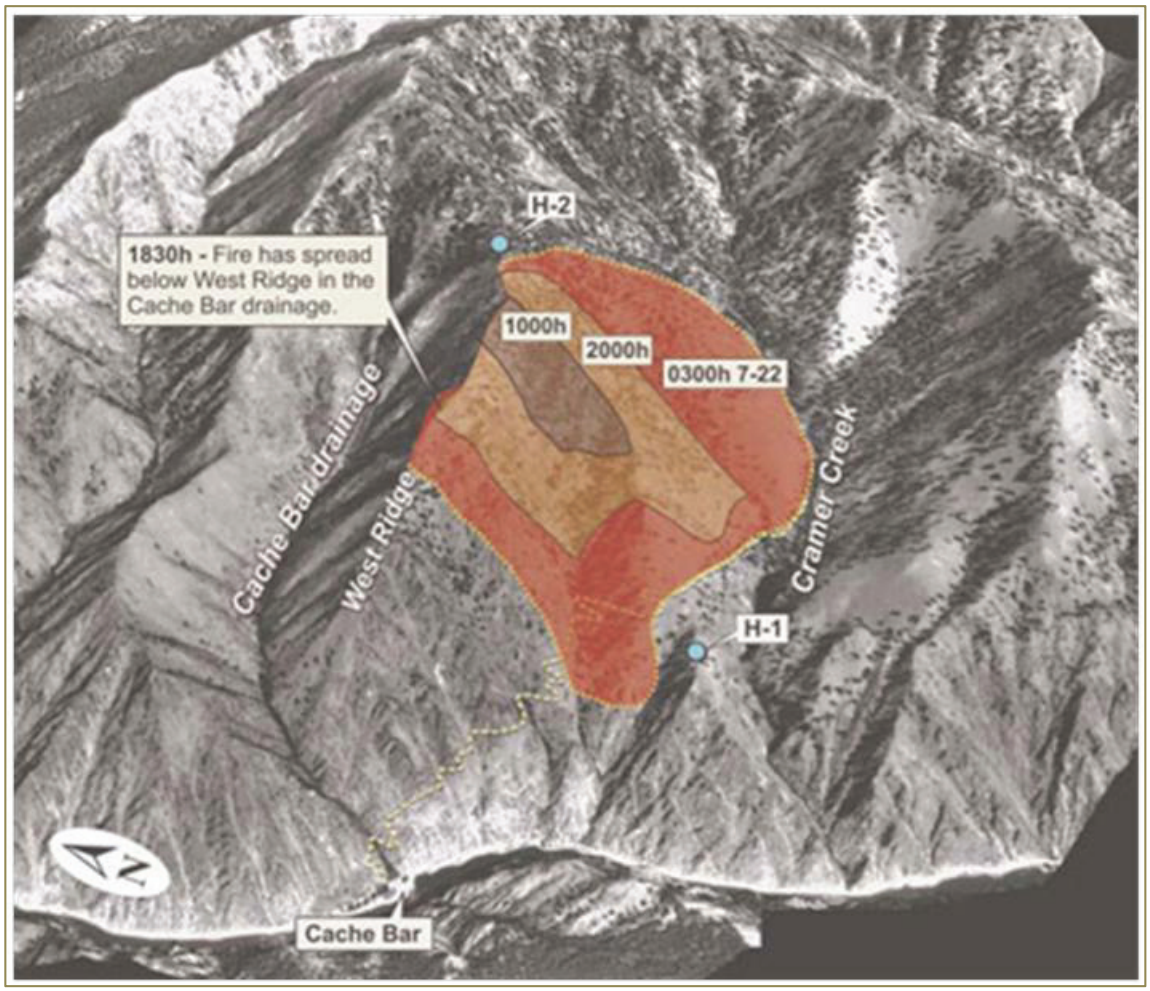
Air Attack reports that the fire has doubled in size, growing to 200 acres.

To accomplish his objective of catching the fire at 300 acres the next day, the IC requests (in discussions with the Forest Fire Management Officer and the Zone Duty Officer) two Type 2 medium helicopters as well as logistics and operations support.

The IC is told that the two Type 2 medium helicopters have been ordered, but they are unavailable. The IC is told to use a Strike Team Leader the following day to supervise the hand crews.

2000

The fire intensity to the east and northeast begins to diminish. The fire's west side appears relatively quiet.



Cramer Fire perimeter and spread that occurs on Monday, July 21 and the early morning hours of Tuesday, July 22.

E. Tuesday, July 22

On this day, onsite conditions on the Cramer Fire will include 100-degree F. temperatures, low humidity, and winds gusting from 10 to 20 mph.

0300

After burning actively all night, the fire starts to die down.

0820

The IC recons (via helicopter) the fire with a Crew Boss and the Assistant Manager of Helicopter 193.

The strategy for the day: 1) Fly three crews into Helispot 1, use two of these crews to secure the fire's east flank, and one crew to anchor the fire to the west. 2) Position two rappellers above the fire to construct another helispot, Helispot 2 (H-2)—to be used for flying in a fourth crew to secure the fire's west flank. Two options for safety zones are identified.

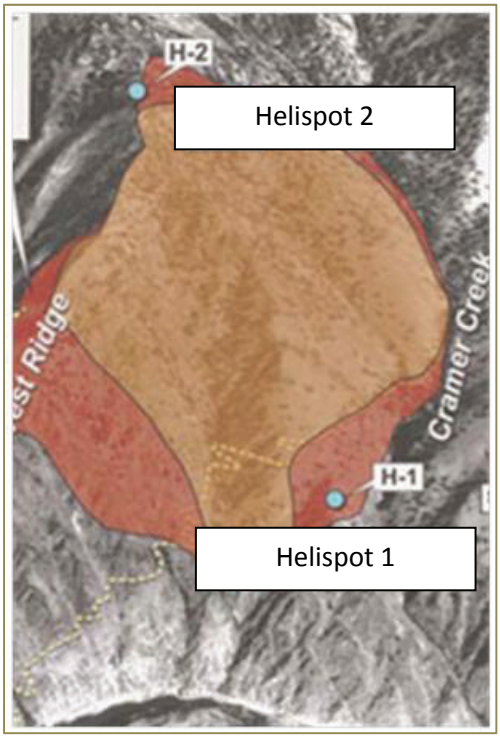
0858

The previously requested Logistics Support position is filled.

0900

The (Zone 405) fire weather forecast is discussed at the morning briefing. Fire personnel are informed that, the last few days, conditions have become progressively warmer and drier. They are told to expect stronger winds in the area, as occurred yesterday.

Helicopter 133-KA (Type 1) is launched from Indianola Helitack Base to do bucket work on the fire.



Helispot 2—located uphill approximately one mile north-northeast from Helispot 1—is positioned on the ridge between Cramer Creek and the Cache Bar drainage.

Weather

0800 Hours

64 degrees F. 50 percent relative humidity. West winds at 5 to 10 mph.

0943

Two Indianola Helitack personnel, Jeff Allen and Shane Heath, rappel from Helicopter 193 into a site located above the fire to build Helispot 2. Allen, a Class B Faller, is in charge. Heath is a Class C Faller. Two safety zones are identified for these rappellers—a grassy area (that would require burning out) in an old burn approximately 250 yards below and to the west of Helispot 2, and 150 yards down the east side of the ridge into the black from yesterday's burn.

The two rappellers need to remove approximately six trees and one snag in the middle of Helispot 2's opening. Helicopter 193's rappel spotter estimates it will take one hour to clear Helispot 2. *[However, later, at 1226, Forest Net radio transcripts indicate that Allen and Heath are requested to perform additional work to make the site operational for a (larger) medium size helicopter. The two rappellers ended up falling more than 70 trees.]*

Helicopter 193's pilot sees fire—that appears to be not very active—below and to the east of Helispot 2. The pilot asks Helicoper 133-KA to perform some bucket work in this area.

0955

Cramer Fire Air Attack (Airplane 61-N) is over the fire.

The pilot for Air Attack does not believe the two rappellers working to clear Helispot 2 are in harm's way.

Weather

1130 Hours
84 degrees F. 21 percent relative humidity. South-southwest winds at 3-4 mph, up-drainage.

1230 Hours
91 degrees F. 18 percent relative humidity. South-southeast winds at 2-3 mph, up-drainage.

1330 Hours
95 degrees F. 15 percent relative humidity. South-southwest winds at 4 mph, up-drainage.

1030 - 1100

The fire is becoming active below H-1—to the southwest just above Salmon River Road.

1047

Crew shuttle from Cove Creek Helibase to Helispot 1 begins. Using Helicopter 166 (H-166) and Helicopter 193 (H-193), it takes approximately four hours to shuttle 60 firefighters (three firefighters per helicopter; 15-minute roundtrip).

1130

The first weather observations are taken on the fire near H-1 at 4,300 feet: 84 degrees F., 12 percent RH, winds from the east at 3 mph with gusts to 11-15 mph. (This is one of three weather observations taken at the fire.)

Between 1230 and 1300

The Foreman (located at the Cove Creek Helibase) radios the two rappellers on Helispot 2 to inquire about their progress. Rappeller Allen responds that *"things are going fine"* and that they need *"another 30 to 45 minutes"* before the helispot is completed.

1245

Rappeller-in-charge Allen at Helispot 2 asks Helicopter 133-KA to fly up and look at a smoke—located between the West Ridge and Cramer Creek—that concerns him. Due to smoke, Helicopter 133-KA has a limited view, but does see a hot spot located one-half mile below Helispot 2. Helicopter 133-KA relays this to Allen. Allen replies: *"OK, fine. We'll keep an eye on it."*

1304

Lead Plane 41 arrives over the Cramer Fire to direct two retardant-dropping air tankers. Shortly after Lead Plane 41 arrives, Cramer Fire Air Attack returns to Salmon for refueling. Lead Plane 41 assumes dual responsibilities—Lead Plane and Air Attack duties. For the next two hours, Lead Plane 41 will work with Tanker 1 and Tanker 26 dropping retardant.

1326

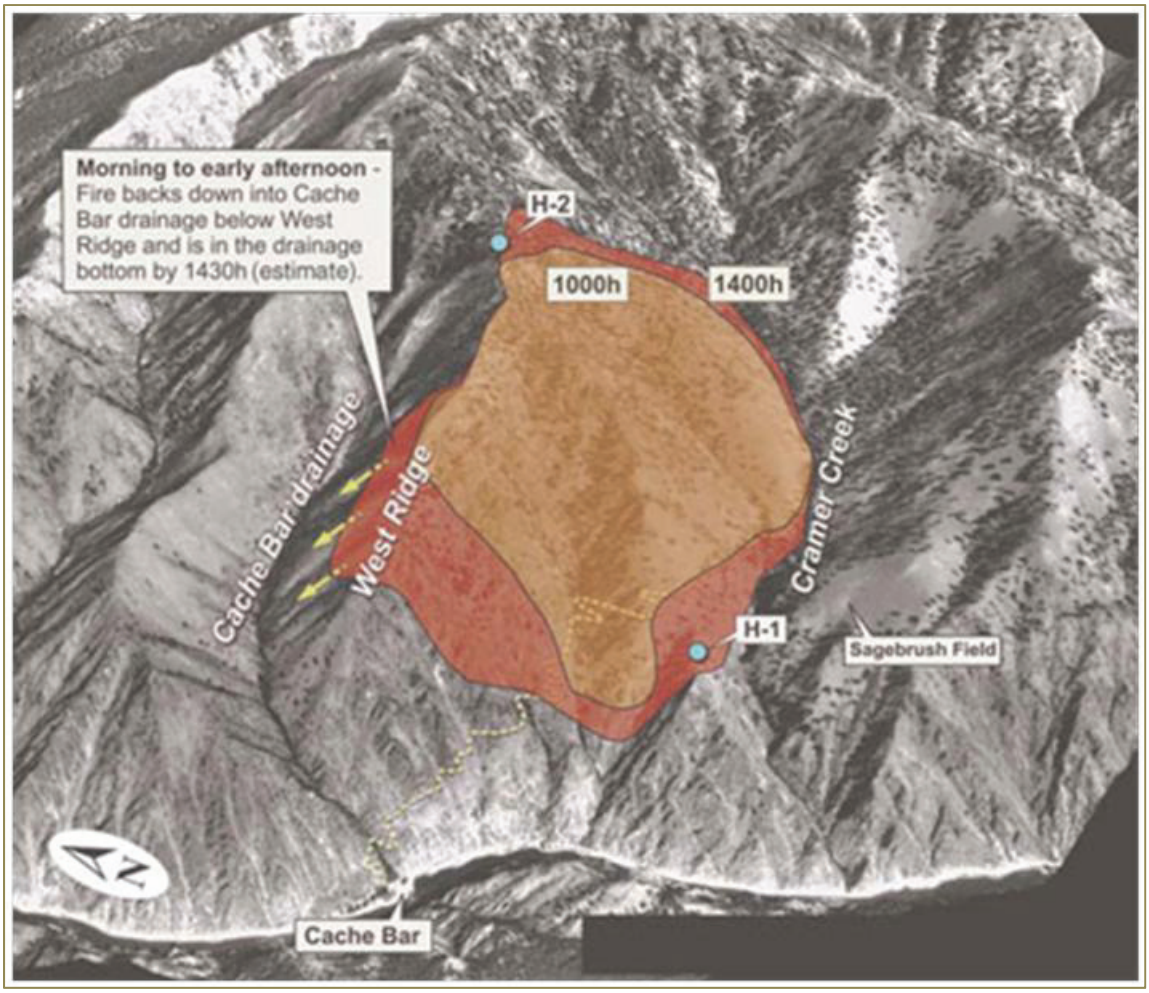
Lead Plane 41 observes small spot fires located on the upper third of the slope in the Cache Bar drainage (below Helispot 2).

During a helicopter recon, the IC observes that most of the more intense fire activity—including four- to six-foot flame lengths—is located just below Helispot 1, with additional activity on the east flank.

The Strike Team Leader informs the IC that the three crews have moved to their safety zones.

1327

Helicopter 193 transitions to bucket work on Helispot 1.



Cramer Fire perimeter and spread at approximately 1430 hours on Tuesday, July 22.

1330

As conditions become more warm and drier, fire activity begins to increase. The fire reaches Cramer Creek to the east and is active along the east and northeast flanks.

1336

The IC contacts Rappeller-in-Charge Allen to check on their progress at Helispot 2. Allen replies that there is *"a little more work to do"* and informs that they should be done in *"another 15 to 20 minutes."* The IC tells him to call for a pickup when they are finished.

The IC decides to not put the fourth crew into Helispot 2 (Allen and Heath's location) because they would have to walk in dangerous terrain at night.

1400

The fire burns over Helispot 1.

A "shortwave" weather disturbance—now moving into central Idaho—is increasing wind speeds with a strong flow from the northwest that is overpowering local diurnal winds.

Fire activity begins to increase dramatically over the entire Cramer Fire—as well as other fires in this area.

1423

The IC contacts the Forest FMO to express concerns about the fire making a run to the west.

1430

With hot conditions, increasing winds, and dry preheated foliage from the backing fire, smokes begin to transition to an active fire front. Where the fire had previously been smoldering in the Cache Bar drainage, it is now an active flaming front.

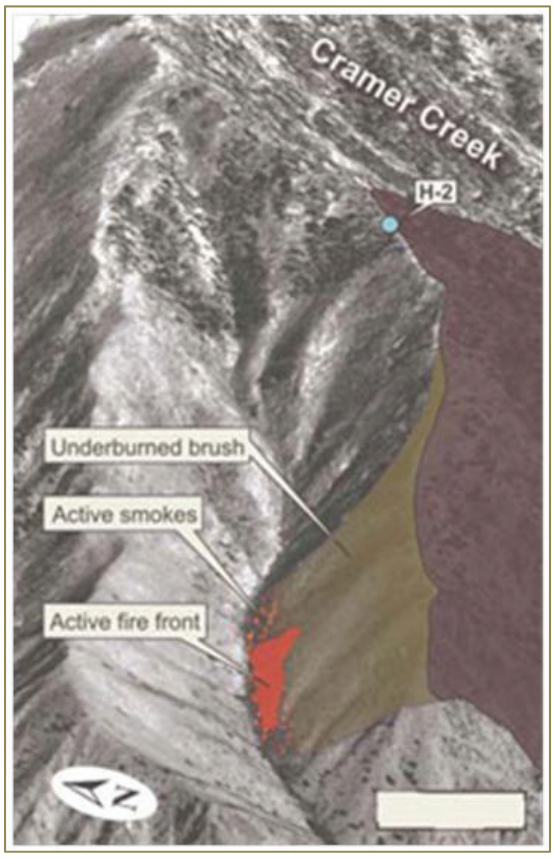
1447

In a radio conversation with someone near Helispot 1, the IC says that they need to contact Allen at Helispot 2 to get the two rappellers out.

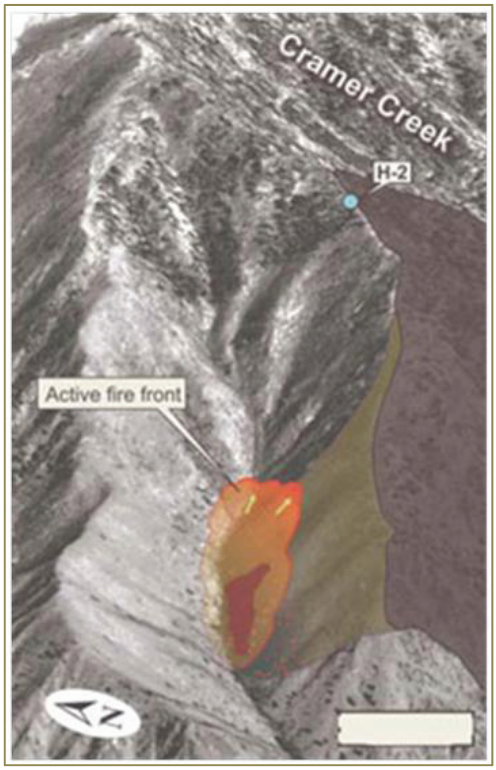
1500

The "shortwave" weather disturbance has moved over the Cramer Fire area, bringing strong northwest winds, shifting to westerly. Driven by these winds, the fire begins to make rapid, intense runs in both the Cramer Creek and Cache Bar drainages.

Gusts up to 30 mph are reported at Helispot 1. (Crews in that area have already moved into the black for a safety zone.)



Between 1430 and 1440 hours, smokes in the bottom of Cache Bar drainage transition into a flaming front.



In Cramer Creek, the fire transitions from a surface fire to a crown fire. A large, brown column forms, pushing vertically to 12-thousand feet that moves eastward toward the town of Salmon.

Pushed by strong winds, the active fire front established in the bottom of the Cache Bar drainage begins moving rapidly up-canyon—toward Helispot 2. Lead Plane 41 observes that these fire spread rates and intensities are much greater than he (as well as other personnel on the fire) had expected.

Lead Plane 41 believes that—due to light fuels and rocky areas—the two rappellers (Allen and Heath) located at Helispot 2 should not be at great risk.

At 1500 hours, the active fire front in the bottom of Cache Bar drainage begins to move up-canyon toward Helispot 2, where the two rappellers are located.

1505: *"Send them in a hurry."*

1500

Both Helicopter 193 and Helicopter 166 are at the Cove Creek Helibase. Helicopter 193 is down for a 30-hour maintenance inspection and refueling. Helicopter 166 is refueling.

1505

Allen at Helispot 2 requests pickup. He is informed they will send Helicopter 193. Allen replies: *"Send them in a hurry."*

1509

Allen calls the Cove Creek Helibase asking about the status of Helicopter 193 and their pick up. The Helibase responds that Helicopter 193 is still on the ground and will leave shortly.

Allen: *"We need them right now."*

Helibase: They are sending H-166 to get them immediately.

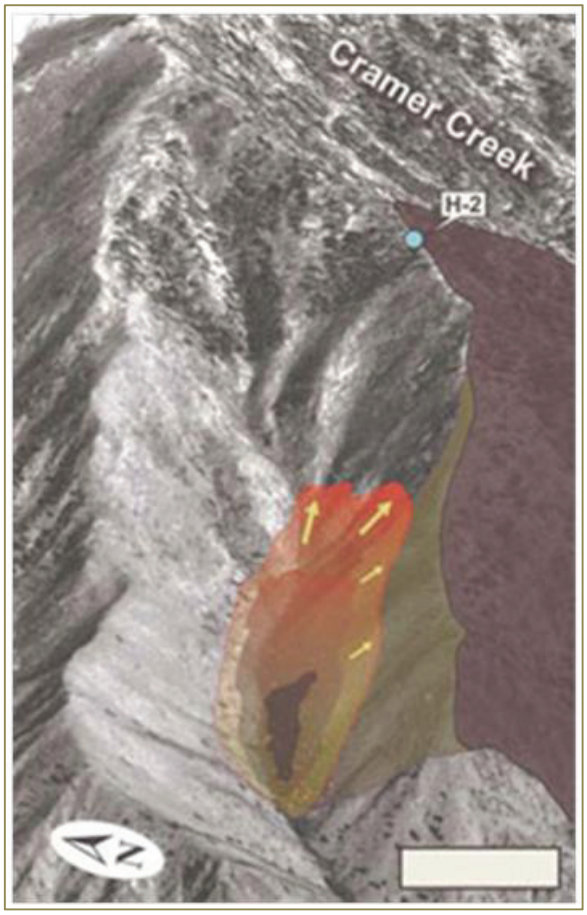
Allen: *"Good—Thanks."*

Nearby Long Tom Lookout now reports quite a bit of smoke coming from the Cramer Fire.

1510

The Cove Creek Helibase radio operator asks Allen if they are in danger and need to proceed to their safety zone.

Allen responds: *"No, it's getting real smoky. We need a ride out."*



Between 1513 and 1520 hours, the fire front intensifies and continues to move upslope toward Helispot 2.

1509: *"We need them right now."*

1511

The Strike Team Leader assembles his three crews. They begin walking off the fire to Salmon River Road.

1512

The Cove Creek Helibase calls Allen.

1513

The fire front moving upslope toward Helispot 2 intensifies. The fire burns right through the slope's rocky areas. *(Post fire modeling will indicate the spread rate was 130 to 150 feet per minute [Fuel Model 6].)*

Allen responds to Cove Creek Helibase's radio transmission. He is informed that Helicopter 166 needs fuel and will be leaving *"right away."* Allen is asked if they are having any problems.

Allen: *"No, bud. We just got fire down below us and smoke's coming right at us, so just make 'em hurry up."**

1513:

". . . We just got fire down below us and smoke's coming right at us, so just make 'em hurry up."*

*****This direct quote was unintentionally partially misrepresented in the Cramer Fire Accident Report. After re-reviewing radio transcripts, what now appears here is what Jeff Allen actually said.

Helicopter 166 launches with just enough fuel to retrieve Allen and Heath.

During this time, the IC is involved in multiple radio conversations with Central Idaho Dispatch (located in Salmon, Idaho) about using Cramer Fire resources for initial attack on a nearby new fire start, the Stoddard Fire.

1519

Allen contacts Cove Creek Helibase regarding Helicopter 166's status. Helibase responds that the helicopter is off the ground and should arrive shortly. Allen copies.

1520

The fire reaches the upper portion of Cache Bar drainage that is more exposed to the prevailing winds. This entire upper portion of the drainage appears to erupt—simultaneously—into flame.

Helicopter 166 contacts Allen and informs him that—due to smoke—it cannot land.

Lead Plane 41 hears Allen respond—in a calm voice—to Helicopter 166 that the winds are 20 to 25 knots from the west and that he and Heath are leaving Helispot 2.

Cramer Air Attack is looking for a route that the two rappellers can follow to safety.

At 1525, the fire front burns through Helispot 2. This fire spread map is based on a model projection.

1524

Allen (in an excited voice, breathing heavily) calls on the radio and asks: *"Could I get some support up here right now?"**

Lead Plane 41 observes the fire in the Cache Bar drainage reach the ridge—exhibiting 50-foot and sometimes 100-foot flame lengths.

1525

The fire, described by Lead Plane 41 pilot as "a big flash front," appears to burn over and around Helispot 2.

1530

Cramer Air Attack tries to contact Allen.

Helicopter 166 has returned to Cove Creek Helibase to refuel. Helicopter 193 departs the helibase to pick up Allen and Heath, but, due to smoke, cannot locate them.

Helicopter 193 returns to Cove Creek Helibase to formulate a search and rescue plan.

1524
Jeff Allen's Final Radio Transmission:

"Could I get some support up here right now?"*

*This direct quote was unintentionally partially misrepresented in the Cramer Fire Accident Report. After re-reviewing radio transcripts, what now appears here is what Jeff Allen actually said.

When the fire reaches the upper portion of Cache Bar drainage—that is more exposed to the prevailing winds—this entire upper portion of the drainage erupts into flame.

Looking downslope into Cache Bar drainage below Helispot 2 and the fatalilty site.

1609

The fire reaches the ridge between Cramer Creek and Long Tom Creek drainages.

1624

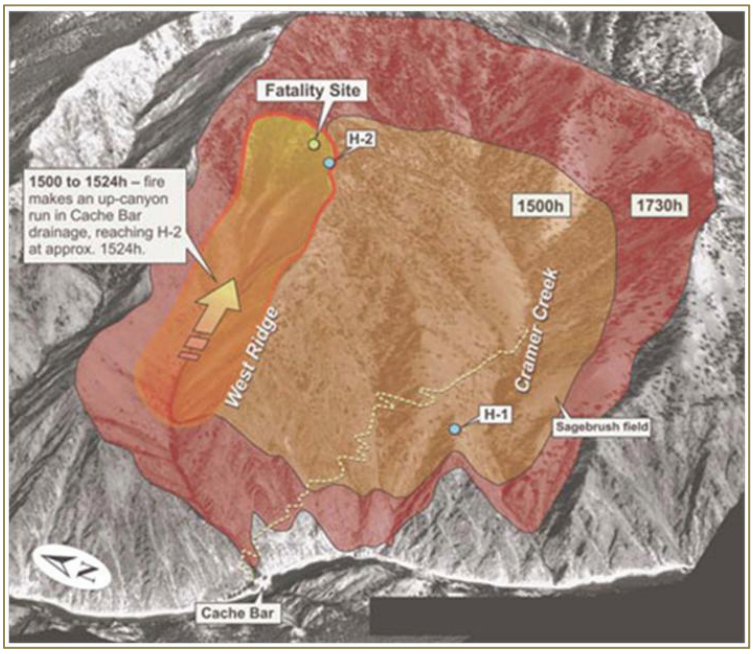
The IC contacts Central Idaho Dispatch and requests to have Missoula Life Flight on standby.

1625

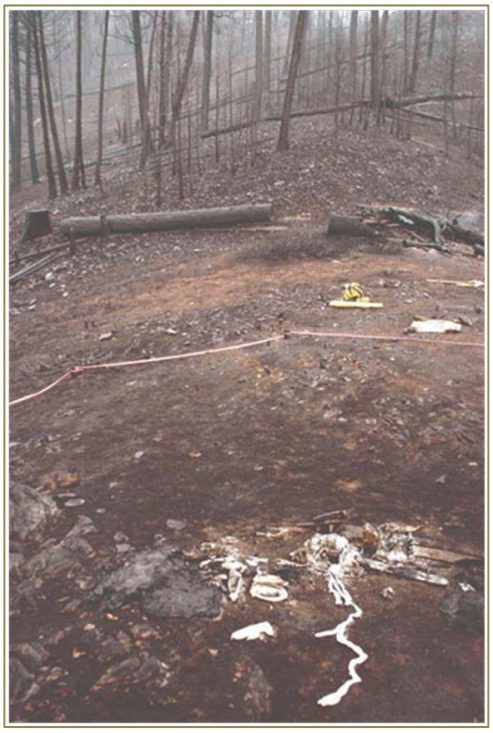
Helicopter 166, still unable to locate Allen and Heath, sees Helispot 2. The area around it is burned over. Some trees are still torching.

1727

A Type 1 Incident Management Team is ordered for the Cramer Fire.



Cramer Fire perimeter spread from 1500 to 1730 when the fatalities occurred.



Heath and Allen had their gear ready for transport at Helispot 2. Some pieces of cast aluminum melted—indicating temperatures of at least 1,000 degrees F.

1730

Helicopter 166 launches with two rappellers to conduct a ground search to locate Allen and Heath.

1755

The two rappellers rappel out of Helicopter 166 to initiate their ground search for Allen and Heath.

One of the rappellers walks up the ridge to Helispot 2 and finds burned over gear that had been ready for transport—two chainsaws, two Indy gas packs, tools, and a few wedges.

The rappeller observes that Allen and Heath had done a great deal of work clearing Helispot 2. On a rocky ridge along the east side of the helispot, they felled 17 ponderosa pines—some 24 inches DBH and larger—with *"lots of lean to them"* and rot inside. In addition, there were at least as many smaller diameter trees—with six to eight inch DBH—that had been felled. Approximately the same number and sizes of trees had also been felled on the ridge's west side.

1820

Approximately 75 to 100 yards farther up the ridge northwest of Helispot 2, Helicopter 193 locates Allen and Heath's bodies.

When the fire overran them, temperatures at their fatality site are estimated to have been from 1,300 to 2,000 degrees F.

Two fire shelters are found at the fatality site. Neither had been deployed.

2020

Search and rescue personnel flag and secure the fatality site. Four people spend the night near Allen and Heath.

All of Cramer Creek drainage has burned. The fire moves eastward into Long Tom Creek.

Fatality site with fire shelters and flight helmets.

Both fire shelters had been removed from their packs. One of the shelters (top) was still "accordion" folded in the same shape in which it was packaged—indicating it had not been unfolded prior to burnover. The second shelter (bottom) had been partially unfolded before the burnover.

F. Wednesday, July 23

0912

A new helispot is cleared near the burned-over Helispot 2.

1008

Helicopter 166 transports the Lemhi County Sheriff and Lemhi County Deputy Sheriff into the fatality site.

1258

The bodies of Jeff Allen and Shane Heath are flown to the Cove Creek Helibase.

1500

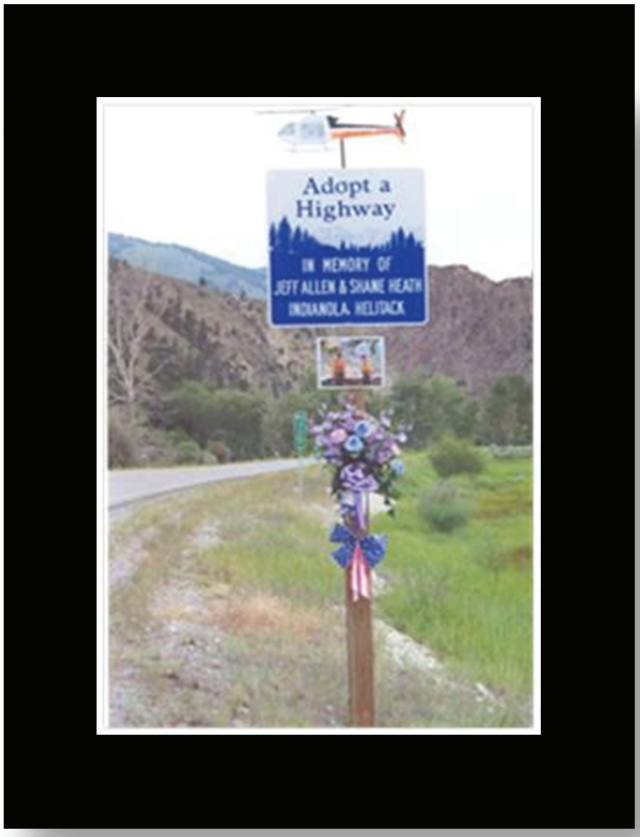
The fatality site is secured.

1510

The bodies of Jeff Allen and Shane Heath are flown to the Salmon, Idaho airport.

1800

The Accident Investigation Team arrives in Salmon, Idaho.


Adopt a
Highway
IN MEMORY OF
JEFF ALLEN & SHANE HEATH
INDIANOLA HELITACK