

POINT FIRE

ACCIDENT INVESTIGATION



JULY 28, 1995



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEDICATION

*This report is dedicated to
volunteer firefighters everywhere,
who put their lives on the line
whenever the call comes.*

ACCIDENT INVESTIGATION REPORT

Accident: Wildland Fire Burn-Over, Multiple Fatalities

Location: Boise District, Bureau of Land Management
Kuna, Idaho

Date: July 28, 1995



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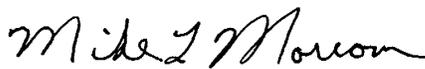
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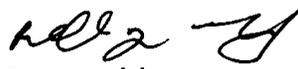
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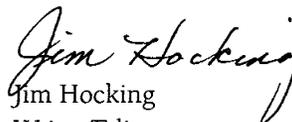
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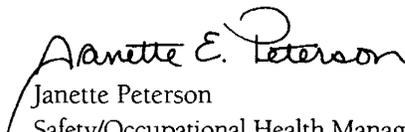
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INCIDENT OVERVIEW

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ACCIDENT INVESTIGATION

POINT FIRE OVERVIEW

DATE OF INCIDENT: JULY 28, 1995

TIME OF INCIDENT: 1829 MDT

INCIDENT NAME: POINT FIRE

LEGAL DESCRIPTION OF LOCATION: T1N R1W SECTION 35 SE1/4 NW1/4

Late in the afternoon of July 28, 1995, thunderstorms began to move into southwestern Idaho from northern Nevada. The thunderstorms produced little or no moisture, and the lightning associated with them sparked dozens of wildfires.

At 1829, the Danskin Lookout reported a wildfire northeast of Initial Point, about 16 miles southwest of Boise, Idaho. The wildfire was also reported by several citizens and the Ada County Dispatch Center. At 1831, the Bureau of Land Management's Boise District Dispatch sent the "Wild West" Unit to the wildfire. The Wild West Unit consists of two "type 4X" wildland engines (Engine 67 and Salmon District Engine 425) and a "type 6X" slip-on. The crew boss, Dave Kerby, drove to the wildfire in a Suburban.

More resources soon were dispatched. BLM's "Unit C" included three "type 4X" engines (Engine 09, Engine 83 and Boise National Forest Engine E-61) and a Suburban driven by unit leader Blas Telleria. Additionally, one "type 2" water tender and a transport with a bulldozer were sent.

The Wild West Unit was first to arrive on the scene at about 1900. Crew boss Kerby assumed the role of Incident Commander (IC).

The Point Fire was actively burning in sagebrush and cheatgrass with moderate rates of spread and 3 to 5 foot flame lengths along the flanks. Because of higher-than-normal spring moisture, cheatgrass growth was especially dense, estimated in excess of 3,000 pounds per acre. Mature sagebrush from 3 to 4 feet high also added to the fuel load. The fire size when the Wild West Unit arrived was estimated at 60 to 65 acres. Winds were generally from the west at 4 to 6 miles per hour.

IC Kerby was contacted by Boise BLM Dispatch and asked if the Kuna Rural Fire District (Kuna RFD) was on the scene. Kerby said that he had not seen any rural fire department equipment or personnel. Kerby was then contacted by Kuna Fire Chief Rich Cromwell (Kuna 650) and asked if assistance was needed. The BLM IC replied that he could use a brush truck and a water tender. At 1907, Kuna 650 radioed Ada County Dispatch and requested three vehicles to respond. Kuna Engine 620, a 1,500 gallon brush truck, Kuna Engine 622, a 1,750 gallon brush truck, and a 2,500 gallon water tender (625) responded. The Kuna vehicles departed from their fire stations at 1911 for the wildfire.

The Wild West Unit arrived at the southeast corner of the wildfire on Swan Falls Road, a two-lane paved road running north-south. Its initial strategy was to keep the fire from crossing Swan Falls Road to the east, and to minimize the loss of resources and property in the Snake River Birds of Prey National Conservation Area. (See Map #1.) The IC tactically positioned the type 6X slip-on along Swan Falls Road. The assignment was to burn out along the road to keep the fire from crossing it. Engines 67 and 425 followed the IC to an area near the fire's point of origin at the southwest corner.

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The engine crews were instructed to anchor and split up and directly attack the flanks, using water pumped through their hoses, called “live reels.” Engine 425 worked the southern flank east toward Swan Falls Road, while Engine 67 worked the northern flank eastward, also toward Swan Falls Road. Shortly after the flanking operation began, the BLM dozer arrived and was assigned to work the southern flank, constructing a line behind Engine 425 to the east.

A helicopter departed the Boise airport at 1857 enroute to the Point Fire. The helicopter picked up the IC for a reconnaissance flight. During the flight, BLM Unit C arrived on the scene along Swan Falls Road. Two of the Unit C engines, 61 and 83, were assigned to directly attack the northern flank, west from Swan Falls Road. Engine 09 was sent to directly attack the southern flank west from Swan Falls Road. Telleria, the Unit C leader, assisted the type 6X Wild West slip-on with securing Swan Falls Road.

Kuna RFD Engines 620, 622 and 625 arrived just behind Unit C at about 1930. The brush trucks were assigned to work behind Engines 61 and 83. Doyle McPherson, the Kuna captain (6803), came to the scene on Engine 620 and was dropped off on Swan Falls Road at Tender 625 to act as Kuna Command, as directed by Chief Cromwell.

Shortly thereafter, Engine 61 and Engine 83 began flanking the north line, working west from Swan Falls Road. Kuna Engines 620 and 622 drove around them in tandem and 620 began working a flare-up on the fire line, using nozzles attached to the front bumper while driving next to the fire’s edge. Engine 622 trailed Engine 620, conserving water. (See Map #2.)

At 2010, IC Kerby stated that engines on both flanks had met and the spread of the fire had been stopped. He estimated the size of the fire at 120 acres. The dozer continued working the southern edge toward Swan Falls Road.

RED FLAG WARNING

At 2022, BLM Boise Dispatch reported a “red flag warning” for dry lightning and locally strong winds had been issued by the National Weather Service. Red flag warnings are given to alert fire personnel to potentially dangerous conditions. At the Point Fire, wind gusts of up to 50 miles per hour were predicted from a thunderstorm, or “cell,” that was moving northward at about 30 miles per hour. Telleria radioed Kerby and requested that he reinforce the fire’s northern perimeter. Upon receiving the red flag warning, IC Kerby alerted Engines 61, 67 and 83 along the northern perimeter to anticipate gusty winds.

Kuna RFD Engines 620 and 622 continued to mop-up along the perimeter working west along the northern flank, then south around the west end and turning east. They passed the BLM dozer, Engines 425 and 09, ending up at a fence on the southeast corner of the fire line. There, Kuna RFD Engine 622’s crew met with Brian Barney, driving the Wild West slip-on. Kuna RFD Engine 622 received directions over Barney’s radio to turn around and work back around the perimeter, and to soak the perimeter with water. Kuna RFD Engines 622 and 620 (in that order), turned around and worked their way west along the southern perimeter. The Kuna engines worked in tandem to the southwest corner, then turned north and worked along the western perimeter, where Kuna RFD

Engine 622 ran out of water. Kuna RFD Engine 620 then went around Engine 622, using its remaining water. While following along behind Kuna RFD Engine 620, Engine 622 contacted the BLM IC for instructions. IC Kerby informed Kuna RFD Engine 622 to refill with water and standby due to predicted high winds. At that time Kuna RFD Engine 622 pulled off the line and drove east through the burned area toward Swan Falls Road.

Kuna RFD Engine 622, just prior to reaching Swan Falls Road, was contacted by Kuna RFD Engine 620 on the radio (BLM tactical channel 16). Engine 620's crew said that the vehicle was overheating. Kuna RFD 622 instructed the crew to remove the screen from the radiator. Kuna RFD Engine 620 acknowledged, "Remove the screen." After a time, Kuna RFD 622 pulled onto Swan Falls Road, turned south, and met with Tender 625, located south of the southeast corner of the fire, where refill operations started. Kuna RFD Engine 620 was not with Engine 622.

Sometime after Kuna RFD Engine 622 went to refill, Kuna RFD Engine 620 passed Engine 61 and Engine 67 on the west end of the fire line. Soon after, and for unknown reasons, Kuna RFD Engine 620 turned north on a two-track road at its intersection along the fire's northern perimeter. (See Map 3, point A.) Kuna RFD Engine 620 traveled along the two-track road for 1,945 feet (point C), where it turned off the two tracks and drove east and then north-northeast cross country another 1,786 feet through heavy sagebrush. At this point, the vehicle became disabled (point E). The vehicle was 713 feet west of Swan Falls Road and 1,750 feet north of the northern fire perimeter.

At about 2046, the fire escaped from the northern perimeter at several locations, fanned by strong, southerly winds from the thunderstorm. Telleria and Bob Stroud, a BLM fire investigator, were in a Suburban and immediately drove north on Swan Falls Road, about 2,000 feet from the original northern perimeter to assess fire behavior. To their surprise and horror, they witnessed a stationary Kuna engine in the path of the oncoming flame front. Telleria repeatedly attempted to radio the Kuna Engine and Kuna Command on the BLM tactical channel, but received no response. Telleria then radioed Engine 83's foreman, Lance Lane, a trained medical responder, and advised him that his skills may be needed. Telleria also radioed Boise BLM Dispatch and requested an ambulance and police assistance. (See Map #4.) At that time, Telleria was unsure if Kuna RFD Engine 620 was occupied.

At 2049, Kuna RFD Engine 620 contacted Kuna Command on the Ada County South frequency and reported, "We're on the north line, Doyle, we got fire coming hard and this thing has died." The speaker was Bill Buttram, a 31-year old volunteer fireman with Kuna RFD. The second fireman in the vehicle was 18-year old Josh Oliver of the Kuna RFD. A minute later, Engine 620 contacted Kuna Command again on the same channel. "It's not going to let us out of here!"

Kuna 650 asked Engine 620, "What kind of problem do you have?" Buttram's reply was, "We're surrounded by fire!" Kuna 650 asked him to repeat. "The truck's been overtaken by fire!"

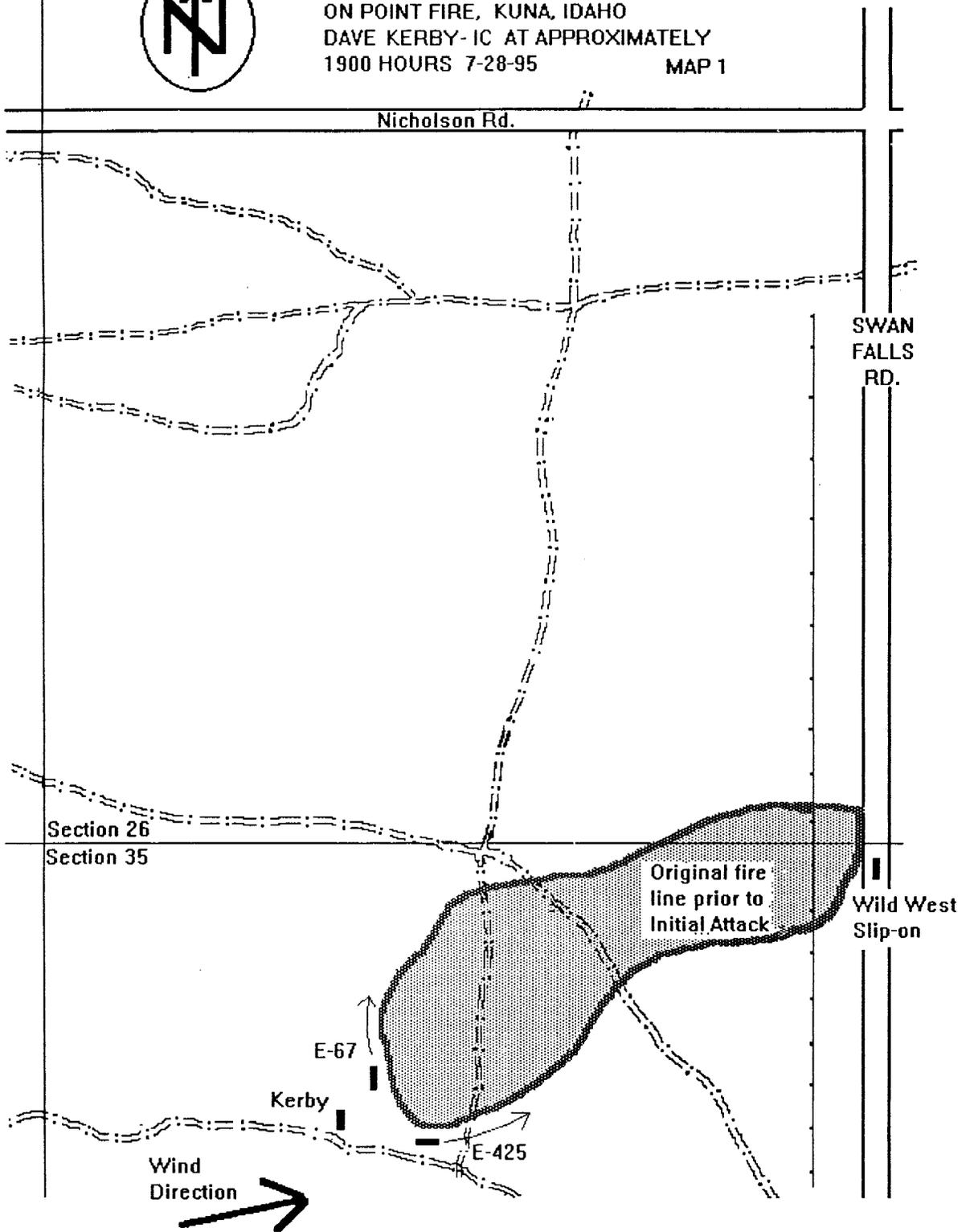
That was the last transmission from Kuna RFD Engine 620.

The fire was moving rapidly and burning intensely. Flame lengths were at least 20 feet long, and the rate of spread was estimated to be about 560 feet per minute. It took about 4 minutes from the point of escape for the fire to overrun the truck. (See Map #5.)



INITIAL ATTACK BY "WILD WEST" CREW
ON POINT FIRE, KUNA, IDAHO
DAVE KERBY- IC AT APPROXIMATELY
1900 HOURS 7-28-95 MAP 1

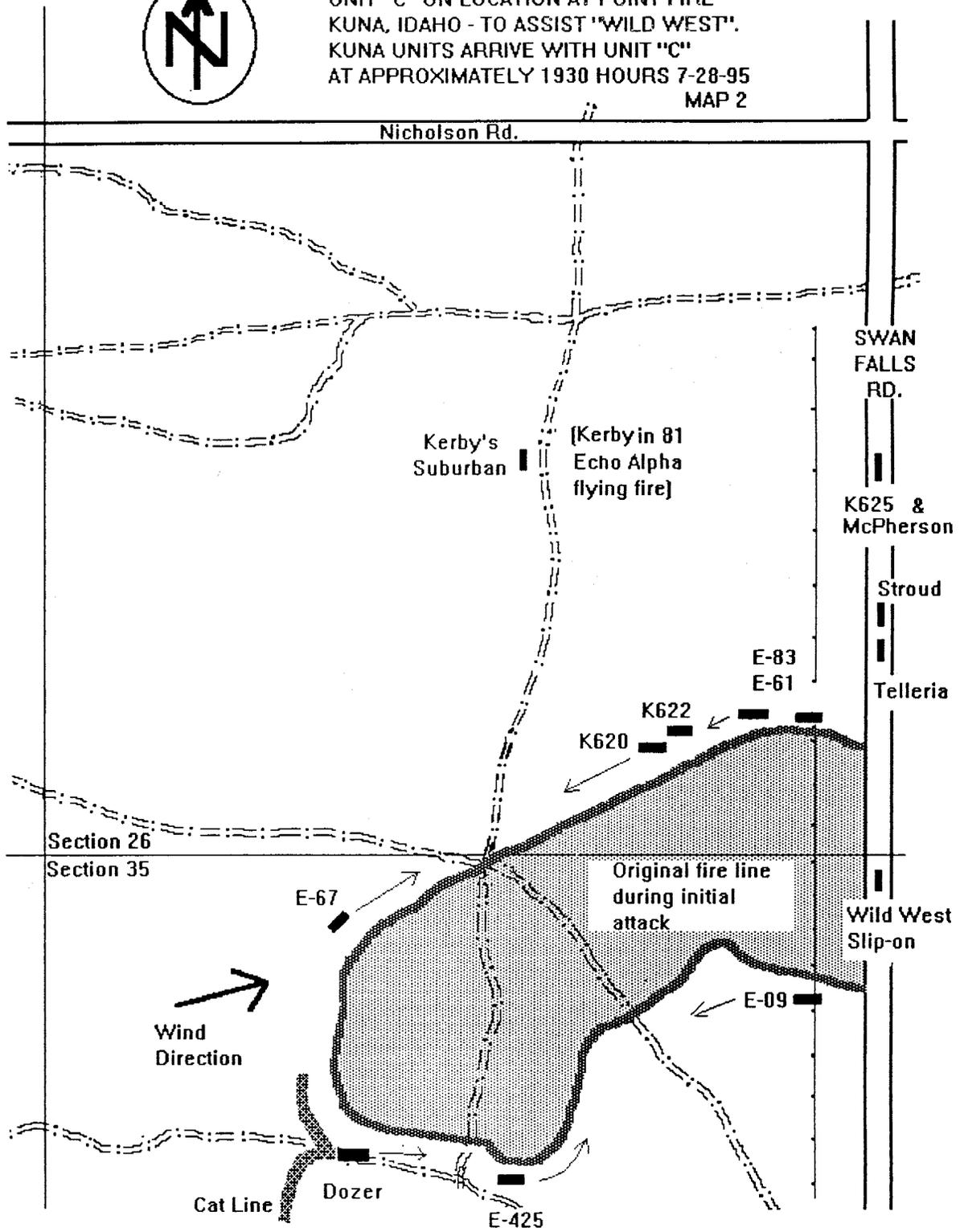
TO KUNA





UNIT "C" ON LOCATION AT POINT FIRE
KUNA, IDAHO - TO ASSIST "WILD WEST".
KUNA UNITS ARRIVE WITH UNIT "C"
AT APPROXIMATELY 1930 HOURS 7-28-95
MAP 2

TO KUNA



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In the early stages of the fire, the two Kuna RFD engines and two BLM engines worked the north flank of the fire.

Winds were mild with flame lengths in the 3 to 5 foot range. A little more than an hour after crews arrived, the fire spread had been stopped.





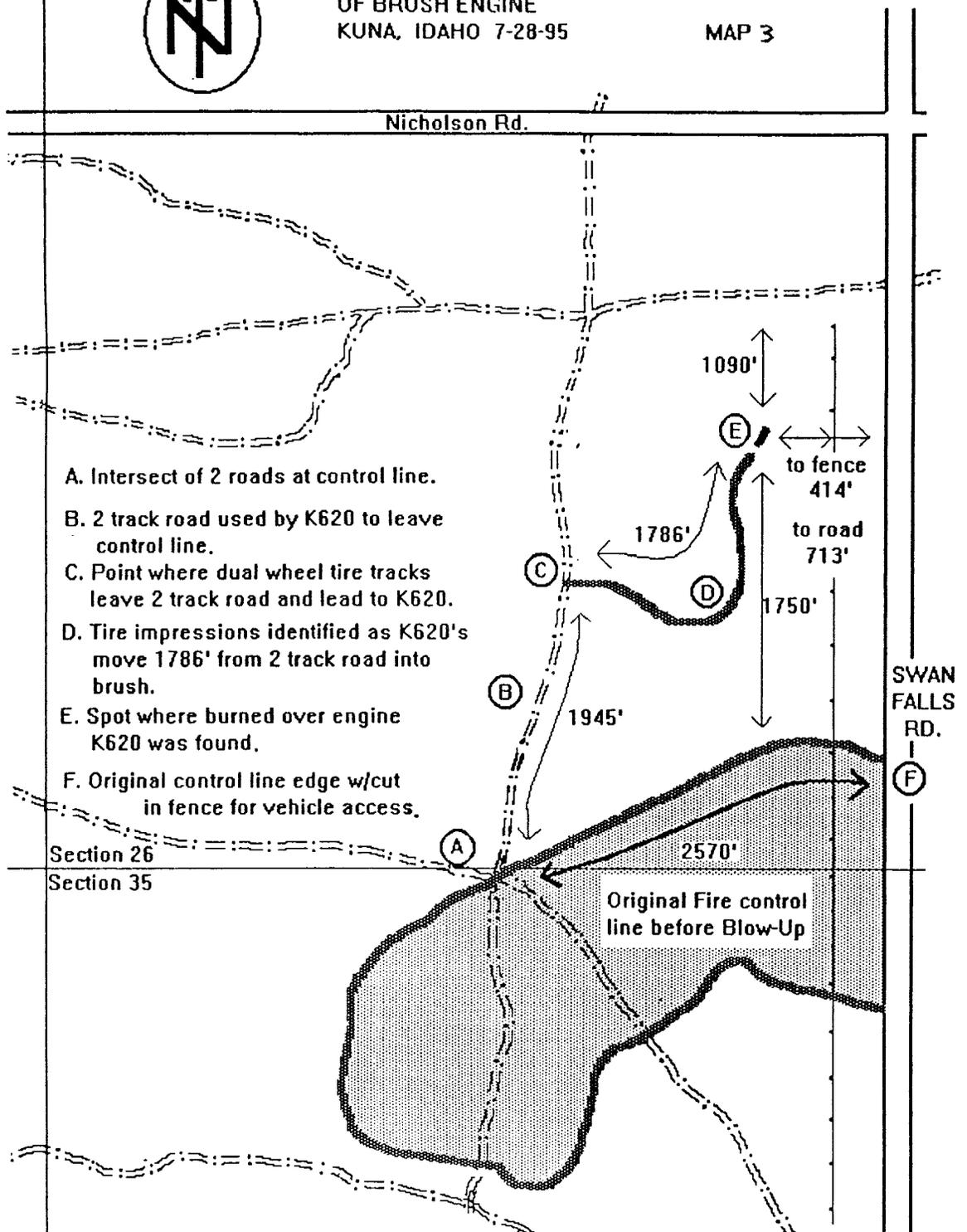
Winds gusting to over 40 miles an hour caused the Point Fire to blow up, leading to the entrapment of the two firefighters.



SITE DESCRIPTION OF FATAL BURN-OVER
OF BRUSH ENGINE
KUNA, IDAHO 7-28-95

TO KUNA

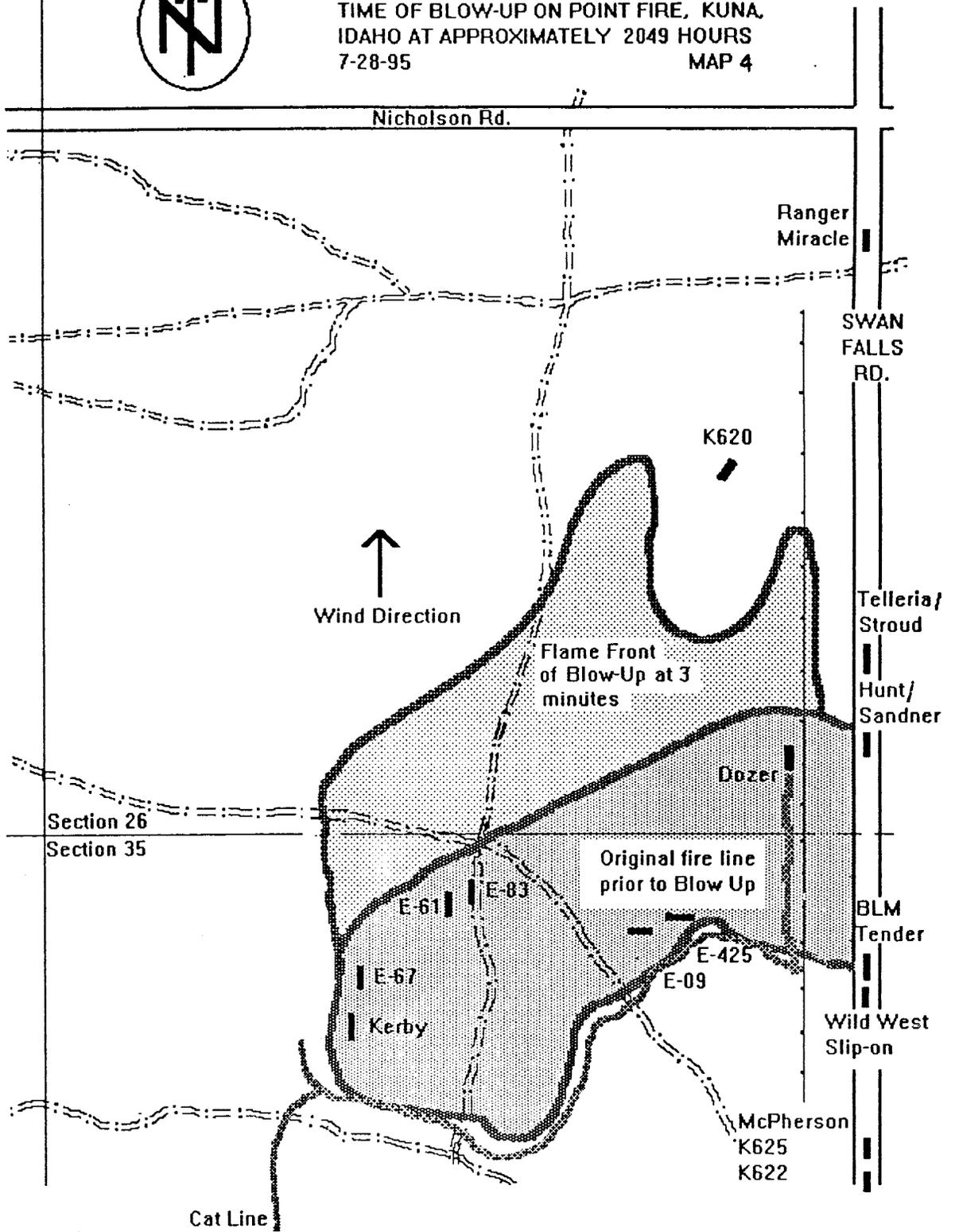
MAP 3





VEHICLE/CREW LOCATIONS KNOWN AT
 TIME OF BLOW-UP ON POINT FIRE, KUNA,
 IDAHO AT APPROXIMATELY 2049 HOURS
 7-28-95
 MAP 4

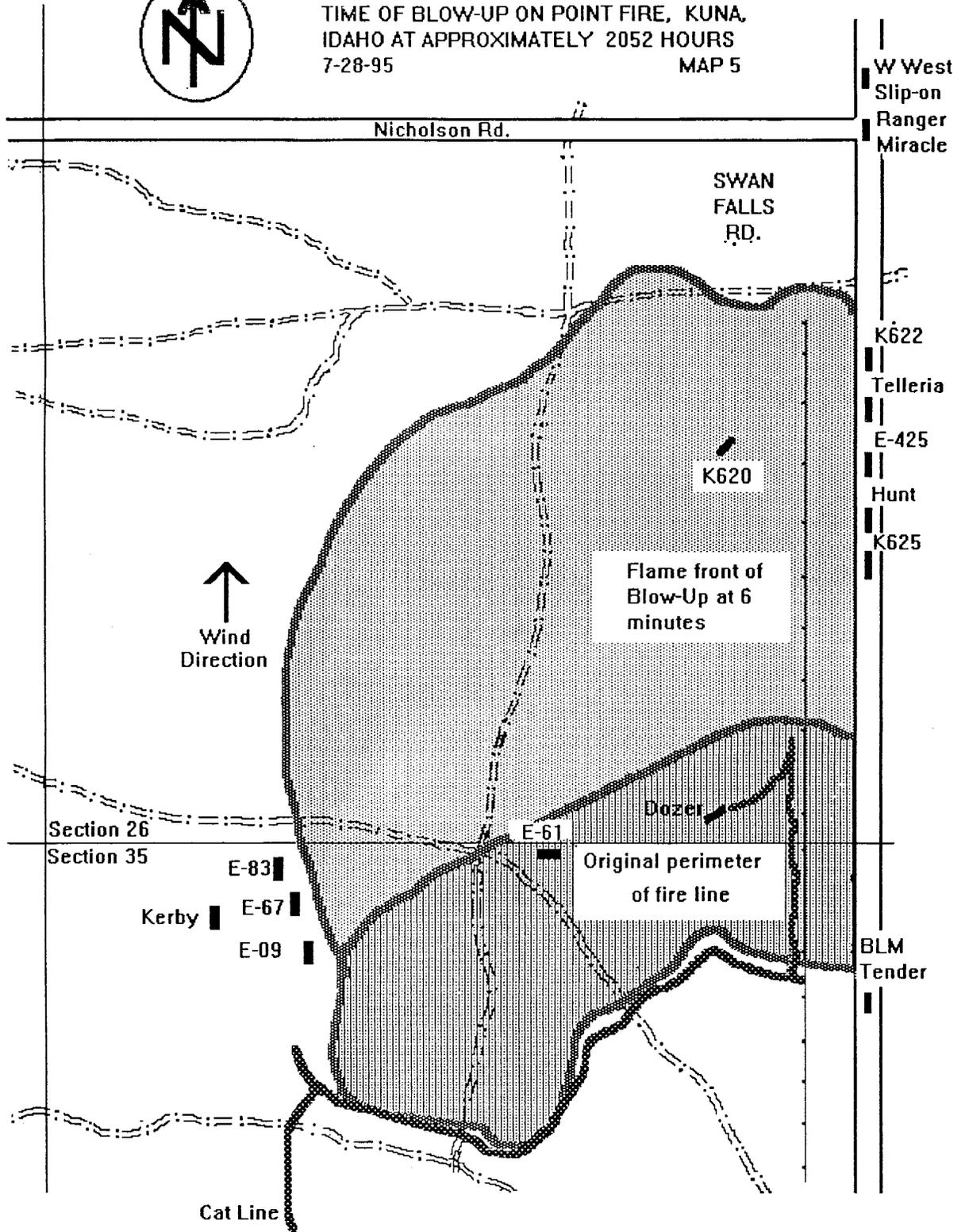
TO KUNA





VEHICLE/CREW LOCATIONS KNOWN AT
TIME OF BLOW-UP ON POINT FIRE, KUNA,
IDAHO AT APPROXIMATELY 2052 HOURS
7-28-95
MAP 5

TO KUNA

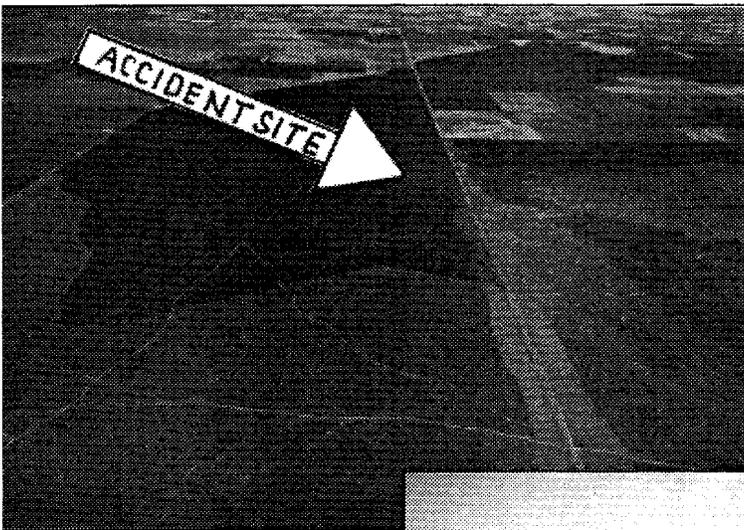


RESCUE ATTEMPTS

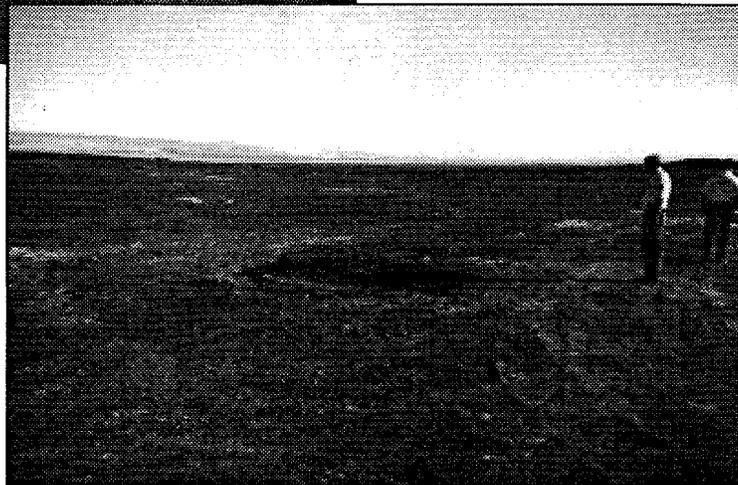
Rescue efforts were hampered by the duration and intensity of the fire, caused by the heavy sagebrush fuel.

After the flame front passed, several rescue attempts were made by members of Kuna RFD and BLM crews. The residual heat from the sagebrush made the first few attempts to reach the engine impossible. At 2121, Kuna RFD Engine 622 was able to approach the vehicle. Engine 620 was still on fire. Kuna RFD Engine 622 extinguished the flames and gained access to the vehicle. Kuna Command was notified that two fatalities had occurred.

Most fatalities that occur on wildfires are not the result of a single mistake or circumstance. Rather, they occur as a chain of unfortunate occurrences. Such is the case in the deaths of Bill Buttram and Josh Oliver. Taken individually, the three primary events that led to the accident were all probably survivable, and perhaps, not even remarkable. But when the decision to leave the burned area and drive into heavy, unburned fuels was grouped with Kuna RFD Engine 620 stalling and the advent of 40 to 50 mile-an-hour winds from the thunderstorm, it proved to be a fatal combination of events.



*Point Fire scene.
Fire started in
lower portion.
Swan Falls Road
(asphalt) to right of
initial fire area.*



*Site where
Engine 620
was overrun
by fire.*

INVESTIGATION PROCESS

The investigation of the Point Fire fatalities was initiated by the Bureau of Land Management through its National Fire and Aviation office in Boise, Idaho.

The team's charter was:

1. Identify factual data associated with the circumstances relating to the accident.
2. Accurately and objectively record the findings.
3. Analyze the findings to identify the significant factors involved and their relationships.
4. As appropriate, recommend actions that should be implemented immediately to prevent similar future occurrences.
5. Establish liaison with, and involve appropriately, local, county, state and federal officials who have a jurisdictional responsibility relative to this accident.
6. Develop and submit an investigation report as soon as possible, but no later than 45 days from the accident.

The team convened Monday, July 31, at the National Interagency Fire Center (NIFC) in Boise for initial briefings and instructions regarding the investigation process.

In the following days the team interviewed witnesses, examined the incident site, discussed the incident with members of the Kuna Rural Fire District, BLM Boise District employees and others who had information pertinent to the investigation. The team also collected information such as weather data and burning conditions at the site of the fire.

Assignments were made to team members. The remainder of the week involved collection of data, documentation of events, and interviews with many of the persons associated with the accident.

Kuna RFD had the vehicle removed from the accident scene late on the morning of July 29, 1995. Two mechanics volunteered to examine the truck for external evidence of drive train failure. No evidence was found. Clothing recovered from the vehicle was sent to the U.S. Forest Service's Missoula Technical Development Center (MTDC) for determination of fire protection effectiveness.

The team closed out the initial phase of the investigation in Boise on August 6, 1995. The team reconvened on August 15-18 to review the draft report, and most team members met again August 24-25 to further refine the report.

The final report was presented to Lester K. Rosenkrance, Director, Office of Fire and Aviation, on September 7, 1995.

FINDINGS

A. FIRE BEHAVIOR AND ENVIRONMENTAL FACTORS

1. The primary fuel type was cheatgrass and sagebrush. It most closely correlates to Fuel Model 2.
2. Live fuel moisture levels (water content of foliage expressed as a percentage of its oven-dry weight) in sagebrush were approximately 90-106%.
3. Dead fuel (annual grasses and woody material) moisture levels (water content of a fuel expressed as a percentage of its oven-dry weight) were 2-6%.
4. Dead fuel content (sagebrush) was about 25%.
5. The fuel types present coupled with their low moisture content caused an extremely fast rate of fire spread when combined with the high winds that prevailed on the fire at the time of the accident.
6. Greater than normal spring rains had created an abundance of cheatgrass, exceeding 3,000 lbs. per acre.
7. The area encompassed by the fire was mostly flat, with gently rolling terrain and few natural obstructions. This allowed an almost continuous fuel bed.
8. Afternoon temperatures on July 28 reached 100 degrees fahrenheit. Relative humidity was about 15%.
9. The thunderstorm that approached the fire from the south contained downdrafts and strong winds, estimated to be in excess of 40 mph.
10. The BLM Boise District Dispatch transmitted a red flag warning at 2022 on July 28 for the area included in the Point Fire.
11. A Haines Index of "6 high" was calculated for the area on July 28. The Haines Index is a tool used to measure the contribution of atmospheric stability to the growth potential of existing wildfires.

B. INCIDENT MANAGEMENT

1. The control objective for the Point Fire area was influenced by its location within the Snake River Birds of Prey National Conservation Area. This area is classified as the second highest priority for the Boise District for fire control. The BLM Boise District's Fire Management Activity Plan (FMAP) objectives call for containment of fires at 50 acres or less in this area. Only the Boise Front area, with its numerous residential areas and critical watershed, is classified as a higher priority.
2. The Kuna RFD chief asked the BLM IC if assistance was needed in suppressing the Point Fire. The BLM IC responded by requesting 1 engine and a water tender from Kuna RFD.

3. A safety briefing specific to this fire was not done by BLM initial attack crews upon arriving at the fire scene. The Kuna RFD firefighters of Engines 620 and 622 received instructions from their command to stay together and to fall in behind the BLM engines prior to beginning firefighting activity.

4. Strategies and tactics used by the BLM IC were sound.

C. CONTROL MECHANISMS

COMMUNICATIONS

1. Lack of common communication ability contributed to this incident. The BLM IC could not monitor Kuna Command because the frequency was not programmed into his radio.
2. Some Kuna crews had the capability to utilize the Boise District frequencies while others did not. Kuna Command did not have complete radio communications capability at all times with all the units.

While Kuna RFD Engines 620 and 622 had communication capabilities with both BLM and Kuna Command, they could not communicate with Kuna Command when they switched to the BLM frequency.

3. A critical lack of communication occurred when the crew of Kuna RFD Engine 620 did not communicate its intention to leave the fire line.
4. The Salmon BLM crew (Engine 425), Kuna water tender 625, Kuna Command (6803) and the Ada County Dispatch Center did not hear the red flag warning broadcast by BLM Boise District Dispatch.

10 STANDARD FIRE ORDERS/18 SITUATIONS THAT SHOUT “WATCH OUT”

1. Eight of the ten standard fire orders were compromised on this fire by one or more crews.
2. Eight of the 18 Situations That Shout “Watch Out” were not recognized by one or more crews.

D. INVOLVED PERSONNEL

TRAINING

Team members reviewed all training records for the personnel involved in the Point Fire. A full copy of training records is available in the official investigative file.

1. Firefighters on the Point Fire had a variety of experience and training. BLM firefighter experience ranged from 3 months to 29 seasons. Kuna RFD firefighters’ experience ranged from 2 months to 21 years.

2. While Kuna RFD personnel were well trained for fighting structure fires, most firefighters on the Point Fire had only five hours of wildland fire training in 1995. That training was requested by Kuna RFD in June and July, and was provided by the BLM Boise District.

3. Kuna RFD Engine 622 had a combined experience of 31 years. Kuna RFD Engine 620 had about 1.5 years of combined wildland fire experience. BLM engine crews had an average of 8 seasons of experience. (A season equates to 4 months.)

ATTITUDES

1. Kuna RFD engine personnel at times did not follow orders issued by Kuna Command or the BLM IC. For example, the Chief directed Kuna RFD Engines 620 and 622 to stay together on the fire and Kuna Command 6803 instructed both Kuna engines to fall in behind the BLM engines.

2. A relaxed attitude prevailed when the fire's spread was stopped. That was evidenced by requests from both BLM and Kuna RFD to allow inexperienced personnel to operate engines on the firelines.

3. A complacent attitude toward safety was displayed by some BLM firefighters, particularly regarding the use of PPE. Agency standards regarding safety were overlooked or ignored in several instances on the Point Fire.

4. No attempts were made to verify a safe location of all crews by BLM or Kuna RFD when the blow-up occurred.

LEADERSHIP

1. Kuna Command (6803) stayed on Swan Falls Road, where he could see much of the fire activity. However, he had limited radio communication with Kuna crews, and no communication with BLM during initial suppression efforts.

2. Two less experienced Kuna RFD firefighters occupied the same engine. To compensate, however, Kuna Command ordered the two engines to stay together on the fire and follow the BLM engines.

3. The BLM IC and Kuna Command 6803 did not make physical contact to clarify details of the shared command process.

4. Kuna RFD had successfully participated with BLM on a previous wildland fire on July 3, 1995, using the Unified Command approach outlined in the Incident Command System.

5. The Boise District and Kuna RFD has no formal mutual aid fire protection and suppression agreement that details radio frequencies to use, incident command protocol and standard operating procedures, safety, personal protective equipment requirements, training, and qualifications for firefighters.

E. EQUIPMENT

1. The Kuna RFD engine crews had personal protective equipment, including bunker pants and structural (rubber) boots, and structural helmets. They did not, however, have fire shelters.
2. Kuna RFD Engine 620 experienced mechanical problems (overheating) earlier in the season and on the Point Fire prior to the blow up.
3. There were adequate resources (both equipment and personnel) to successfully fight this fire in its initial stages.
4. Kuna RFD Engine 620 was reported by its crew as stalled just prior to the turnover.
5. The crew of Kuna RFD Engine 620 did not have adequate means to spray the vehicle, thus eliminating one possible way of protecting themselves and the truck.
6. No maintenance records were kept for Kuna RFD Engine 620 to help determine its reliability for fighting wildland fires.

It is not known exactly when or why the Kuna RFD Engine 620 crew left the safety of the burned area and proceeded into the unburned area north of the fireline at a time when the fire appeared to be stopped. The most likely explanation is that the crew of Kuna RFD Engine 620 had run out of water and believed that the water tender was located farther north on Swan Falls Road. Kuna RFD Engine 620 may have left the safety of the burned area when the fire's progress had been halted and embarked cross-country in an attempt to save time. A definite explanation will never be known. It is clear that the failure of their vehicle in dense fuels at the critical time when the winds picked up placed the crew members in a perilous situation from which they could not escape.

CAUSAL FACTORS

More than any other factor, the accident hinged on Kuna RFD Engine 620 leaving the safety of the burned area. By leaving the burned area and traveling into unburned fuels as a serious storm front approached, the crew of Kuna RFD Engine 620 placed themselves in an extremely dangerous situation.

Other omissions of safe firefighting procedures also occurred on the Point Fire. An analysis of the 10 Standard Fire Orders and 18 Situations That Shout "Watch Out!" was completed. The results of this analysis appear later in this report.

DIRECT CAUSAL FACTORS

- Mechanical failure of Kuna RFD Engine 620.
- Kuna RFD Engine 620 crew members did not communicate their intent to leave the burned area, which was their safety zone.
- Kuna RFD Engine 620 did not follow instructions of Kuna Command.
- Extreme weather phenomenon combined with the very heavy flashy fuels located where the vehicle stalled.

INDIRECT CAUSAL FACTORS

Leadership deficiencies indirectly contributed to this incident.

- The BLM and Kuna ICs never met on the fire.
- Kuna Command remained on Swan Falls Road without the capability to communicate with Boise BLM, and allowed less experienced personnel to staff one engine.
- There is no formal mutual aid agreement between Kuna RFD and BLM, or operational plan similar to that which exists for wildfires in the Boise Front.
- There is no local or state entity in Idaho that has an oversight role and the responsibility to set training and qualification standards for rural firefighters and equipment involved in wildland and urban interface fire management.

ENTRAPMENT INVESTIGATION ELEMENT MATRIX

	DID NOT CONTRIBUTE	INFLUENCED	SIGNIFICANT CONTRIBUTION
I. FIRE BEHAVIOR			
Fuels			✓
Weather			✓
Topography	✓		
Predicted vs. Observed	✓		
II. ENVIRONMENTAL FACTORS			
Smoke	✓		
Temperature			✓
Visibility		✓	
Slope	✓		
Other	✓		
III. INCIDENT MANAGEMENT			
Incident Objectives		✓	
Strategy	✓		
Tactics	✓		
Safety Briefings/Major Concerns Addressed		✓	
Instructions Given	✓		
IV. CONTROL MECHANISMS			
Span of Control	✓		
Communications			✓
Ongoing Evaluations		✓	
“10 Standard Fire Orders/ 18 Watch-Out Situations”			✓
V. INVOLVED PERSONNEL PROFILES			
Training/Quals/Physical Fitness			✓
Operational Period Length/Fatigue	✓		
Attitudes		✓	
Leadership		✓	
Experience Levels			✓
VI. EQUIPMENT			
Availability			✓
Performance/Non-Performance			✓
Equipment Adequacy, Flexibility, and Options		✓	

ENTRAPMENT INVESTIGATION

FIRE BEHAVIOR

FUELS

(Significant Contribution) Fuel types on this fire were pertinent to the incident. Fuels consisted of an unbroken expanse of dense, cured cheatgrass, about 1-2 feet high, mixed with mature sagebrush 3 to 4 feet tall, of which about 25 percent was dead (Model 2). Sagebrush contributed to the burn duration. Live fuel moisture was 90-106%; dead fuel moisture was 2-6%.

Wet spring weather allowed the cheatgrass to reach unusual density and height. Recent dry and hot weather cured the cheatgrass to a point where it became a fuel that would ignite easily and burn rapidly.

WEATHER

(Significant Contribution) In the days preceding the incident, the weather had been hot and dry. On the day of the incident, temperatures were near 100 degrees. Relative humidity was approximately 15%; the Haines Index was 6 high.

Dry lightning ignited the Point Fire late in the afternoon. Winds were light at ignition and for some time thereafter while initial attack measures were being taken. No weather observations were taken at the site.

A red flag weather warning for the area was transmitted by the BLM Boise District at 2022.

A severe storm cell began to move in from the south, reaching the fire about 2040. Winds from the south increased, with gusts up to 50 miles an hour. Strong winds continued for several hours into the late evening and night.

ENVIRONMENTAL FACTORS

HEAT

(Significant Contribution) Heat generated by the burning fuels when the fire overran the truck, coupled with heat from the burning vehicle itself, made the victims' environment unsurvivable.

VISIBILITY

(Influenced) The gently rolling terrain may have hidden the location of engines, depending on their position on the fire. Consequently, Kuna RFD Engine 620 was out of view and able to move off the fire line without being observed by other engines.

INCIDENT MANAGEMENT

INCIDENT OBJECTIVES

(Influenced) The objectives of fire control in this area are influenced by the fact that it lies in the Snake River Birds of Prey National Conservation Area. This designation prompted BLM to classify

the area as the second highest suppression priority of the Boise District for fire management purposes. FMAP objectives call for containment of fires at 50 acres or less.

SAFETY BRIEFINGS

(Influenced) A safety briefing was provided to the Kuna Rural Fire District by its chief and captain prior to beginning suppression action. The BLM crews did not have a safety briefing prior to initial attack of the Point Fire. The "LCES" (lookouts, communications, escape routes, safety zones) was not established.

No briefings were held jointly between BLM and Kuna RFD firefighters. No special safety briefings were conducted at the time the red flag warning was issued.

CONTROL MECHANISMS

COMMUNICATIONS

(Significant Contribution) Lack of common communication capability hampered coordination of resources on the fire scene. Some of the Kuna RFD units had the ability to switch to the Boise District frequencies and those tactical frequencies used by BLM personnel on the fire itself. Other Kuna RFD units lacked any common frequencies with BLM. Kuna Command did not have complete radio coverage with its own engines and personnel on the fire when a mobile hand-held radio was used. Kuna RFD Engine 620 did not communicate its intention of leaving the burned area, which was its safety zone.

Kuna Command was on Swan Falls Road with a hand-held radio that did not have BLM or B-Front frequencies. Kuna RFD 625, the water tender, was parked on Swan Falls Road with a radio that did not have BLM frequencies. Kuna RFD Engines 622 and 620 were driving along the fireline and had their radios on channel 16, which enabled communication with BLM. All radios have scan capabilities, with a selected priority channel. The priority channel is the channel that is selected on the dial. The BLM radios were not capable of communicating on the Kuna frequencies. BLM engines and the IC along the fireline had their radios on BLM frequencies. Because of the limitations of Kuna Command's radio, communications with Kuna RFD Engines 620 and 622 were not possible while they were communicating on channel 16. At the time Kuna RFD Engine 620 was overrun by the fire, its radio was on channel 154.400.

The problem with communication on the Point Fire was illustrated most dramatically at the time of the blow up. The Unit C Leader was aware of Kuna RFD Engine 620's location and the peril faced by the crew, but could not contact anyone from Kuna. At the same time, Kuna Command knew of pending trouble, but did not know Engine 620's location, and was trying frantically to contact anyone who did.



Typical fuels at the Point Fire were mature sagebrush with an understory of cheatgrass.



Kuna Rural Fire District has the following radio capabilities:

BLM	6803 (KUNA COMMAND)	625	622	620
163.9375 DIRECT	1- 154.400 YEL	1- 154.400 YEL	1- 154.400 YEL	1- 154.400 YEL
163.175 TAC-2	1- 154.175 K/T	2- 154.250 RED	2- 154.250 RED	2- 154.250 RED
163.837 TAC-1	3- 154.250 RED	3- 154.370 BRNZ	3- 154.370 BRNZ	3- 154.370 BRNZ
167.950 AIR NET	4- 154.190 NAMPA	4- 154.430 ORNG	4- 154.430 ORNG	4- 154.430 ORNG
154.280 B-FRNT	5- 155.055 PURP	5- 154.160 GRAY	5- 154.160 GRAY	5- 154.160 GRAY
	6- 155.280 F-1	6- 154.280 B-FRNT	6- 154.280 B-FRNT	6- 154.280 B-FRNT
	7- 155.340 F-2	7- 154.190 NAMPA	7- 154.190 NAMPA	7- 154.190 NAMPA
	8- SCAN	8- 153.890 MELBA	8- 153.840 MELBA	8- 153.840 MELBA
		9- 155.340 F-1	9- 155.340 F-1	9- 155.340 F-1
		10- 155.280 F-2	10- 155.280 F-2	10- 155.280 F-2
		11- 155.055 RXEMS	11- 155.055 EMSRX	11- 155.055 EMSR
		153.995 TX	153.995 TX	153.995 TX
		12- 155.265 ACEMS	12- 155.265 ACEMS	12- 155.265 AEMS
		13- 154.265 CCEMS	13- 154.265 CCEMS	13- 154.265 CEMS
		14- BLANK	14- 163.8375 BLM	14- 163.8375 BLM
		15- BLANK	15- 163.175 BLM	15- 163.175 BLM
		16- BLANK	16- 163.9375 BLM	16- 163.9375 BLM
		17- BLANK	17- 163.9375 BLM	17- 163.9375 BLM
		18- 155.260 S&R	163.125 BLM	163.125 TX
		19- BLANK	18- 155.160 S&R	18- 155.160 S&R
		20- 154.175K/T	20- 154.175 K/T	20- 154.175 K/T

Other communication problems existed on the Point Fire.

The BLM Boise Dispatch radio system experienced a brief operational problem with Tactical Net 2 at the time of the fire. It was later remedied.

BLM Boise Dispatch did not notify all persons involved in the Point Fire that Kerby was the designated IC.

The Salmon BLM crew leader stated he did not hear the broadcast red flag warning relayed by Boise Dispatch. Ada County Dispatch Center does not receive Weather Service red flag warnings.

The BLM Boise Dispatch does not have a continuous tape recording of its radio traffic with time encoding capability. A radio logbook is used. Some sharing of a single logbook between two radio dispatchers occurs. The radio log lacked significant documentation pertaining to events on the Point Fire.

ONGOING EVALUATIONS

(Influenced) At the time the red flag warning was broadcast from BLM Boise Dispatch, no regrouping of personnel for a safety briefing occurred. No request for confirmation was made that the message had been copied by all units on the fire.

Eight of the 10 Standard Orders and 8 of the 18 “Watch Out” Situations were compromised on the Point Fire.

INVOLVED PERSONNEL PROFILES**TRAINING/QUALIFICATIONS**

(Significant Contribution)

The investigative team examined all training records for involved personnel. A full copy of the records is in the official investigative file.

The firefighters on the Point Fire represented a wide range of firefighting training and experience. The BLM firefighters' experience ranged from 3 months to 29 seasons. (A season equals 4 months.) Their qualifications ranged from firefighter type 2 (40 hours) to Incident Commander type 3. These qualifications are in accordance with Wildland Fire Qualification Subsystem Guide, PMS 310-1.

The Kuna RFD firefighters' experience ranged from 2 months to 21 years. Their qualifications ranged from firefighter with 12 hours of training to Fire Captain. Kuna RFD's Engine 622 had a combined experience level of 31 years. Kuna RFD Engine 620 had a combined experience level of 1.5 years of wildland fire experience. BLM's engine crew had an average of 8 seasons of experience.

The training records provided by Kuna RFD showed BLM provided the following wildland firefighter training:

June 15: Basic Firefighter Safety - 3 hours.

July 6: Helicopter Training - 2 hours.

This training was provided by BLM Boise District. (The agenda for this training is listed in the "Supporting Data" section.)

Both organizations provided the necessary training for the firefighters to do their primary job; wildland fire suppression for BLM, and structural fire suppression for Kuna RFD. Rural fire departments in Idaho have no standards for wildland firefighting equipment, personal protective equipment, or training.

All firefighters had met their organization's required physical fitness levels. Again, these levels are different for their primary job. Fatigue (long work hours) was not a contributing factor in this accident.

ATTITUDE

(Influenced) The first of the Ten Standard Orders speaks to fighting fire aggressively, but providing for safety first. This is a basic policy of wildland firefighting. On the Point Fire, the aggressiveness demonstrated by firefighters put themselves at risk. This was apparent when the Kuna RFD engines did not follow the lead of BLM engines as directed by Kuna Command, choosing instead to move ahead and attack hot spots.

A lack of cohesiveness between units on the fire was evidenced by failure to understand the differences in the capabilities among units, the lack of teamwork, a feeling of competition between units to attack the fire, and failure to maintain communication among engines and firefighters.

A "relaxed" attitude became apparent at the time the fire's spread was essentially stopped. This is evidenced by shedding of required PPE by some federal crew members, and switching to less experienced drivers during a time when the fire was knocked down, but not controlled.

It was at the time when the fire had slowed that Kuna RFD Engine 620 was last seen on the fireline. Evidence suggests it was at that time that the engine turned into the unburned area.

No attempts to verify location of all crews by either the BLM IC or Kuna Command were made when the fire blew up.

LEADERSHIP

(Influenced)

Command Structure Prior to the Blow Up: The first crew boss on the wildfire was Dave Kerby, who arrived at 1900. He assumed the role of IC as the first crew boss on site, which is a standard BLM Boise District practice. However, no confirmation of his IC status was given over the radio by BLM Boise Dispatch.

When Unit C arrived at 1927, Blas Telleria worked on the fire in the crew boss capacity. He was given geographic responsibility from the BLM IC to coordinate fire suppression efforts along the northern perimeter and Swan Falls Road.

The Kuna RFD engines and Kuna IC, Doyle McPherson, arrived at 1930 hours. The Kuna IC attempted to contact the BLM IC, but was unsuccessful. The Kuna IC briefed his crew and sent them into the fire area, and he remained on Swan Falls Road. From this point until the blow up occurred, the Kuna IC was not involved in the strategies, tactics or coordination with either Kuna RFD Engines 620 and 622, or the BLM IC. Kuna Command communication capabilities consisted of a handheld radio that did not have the frequency to contact BLM.

Command Structure During the Blow Up and Accident: The BLM IC was not in proximity of the accident, and was cut off from the northeast side of the fire when it blew up. The Unit C crew boss informed him that he would handle the accident. This allowed the IC to maintain tactical control of equipment and personnel still fighting fire on the west flank. The Unit C crew boss coordinated information with BLM Boise Dispatch about the accident. Kuna Command used a cellular phone to coordinate efforts through Ada County Dispatch.

In summary, from 1930 to 2046, the approximate time of the blow up, neither the IC nor Kuna Command made contact with one another. The BLM IC was not aware that Kuna Command was present on the fire.

EXPERIENCE LEVELS

(Significant Contribution) The Point Fire was from the start a potentially serious fire and a threat to the safety of all firefighters. The wildland firefighting experience level of the various Kuna RFD firefighters varied from two months to many years. Crew members of Kuna RFD Engine 620 had a combined total of 1.5 years of wildland fire suppression. The BLM crews had an average of eight seasons of experience in fighting this type of fire.

EQUIPMENT AVAILABILITY

(Influenced) Fire shelters were not available to the victims, nor to any other of the Kuna RFD firefighters. It cannot be determined with certainty that additional PPE would have altered the outcome of this incident. Reports show that some firefighters have survived in similar circumstances when fire shelters were properly deployed outside vehicles.

At the request of the investigative team, experts at the U.S. Forest Service's Missoula Technology and Development Center (MTDC) inspected and analyzed the protective clothing and equipment recovered from Kuna RFD Engine 620. (See the full report, *Technical Analysis of Personal Protective Equipment*, in the "Records and Reports" section.)

They concluded that the clothing worn by the victims was adequate for fighting structural fires, but was not ideal for wildland fire. The report suggests that the victims' decision to stay in the truck caused them to be exposed to higher temperatures for a greater length of time than if they had left the vehicle and laid on the ground.

PERFORMANCE OF EQUIPMENT

(Significant Influence) The Kuna firefighters reported that Engine 620 was stalled. Kuna RFD Engine 620 had overheated on a previous wildfire and it was having overheating problems on this fire prior to the burnover. The driver of Engine 620 did not state the specific problem with the truck prior to the burnover, only that "This thing has died."

EQUIPMENT ADEQUACY, FLEXIBILITY, AND OPTIONS

(Influenced) The accident may not have had such dire consequences if the vehicle been equipped to deal with the emergency situations that occurred during the burnover. The engine had no live reels, no way to quickly protect itself with direct water spray, and no fire shelters. Had there been sufficient remaining water, those devices may have provided enough protection to weather the burnover. No maintenance records were kept for Kuna RFD Engine 620, making it difficult for the investigative team to determine if it was in suitable condition for wildland fire fighting.

TEN STANDARD ORDERS

The Ten Standard Firefighting Orders and 18 “Watch Out “ Situations are designed to help firefighters be aware of dangerous circumstances and reduce firefighting risks. They also serve as an analytical tool to help assess what errors might have occurred during an incident. Federal wildland firefighters are instructed in the 10 Standard Orders and 18 “Watch Out” Situations and are expected to recognize and know them.

An asterisk denotes orders or watch out situations that were compromised or ignored.

- 1.* *Fight fire aggressively, but provide for safety first.*
Most crews on the Point Fire did this consistently.

Some crew members were not wearing all items of PPE.

Kuna RFD did aggressively attack the fire, but did not adequately provide for safety as evidenced by the fact that fire shelters were not provided.

Kuna RFD Engine 620 did not maintain an adequate safety zone.
- 2.* *Initiate all action based on current and expected fire behavior.*
Some crews were pulled into the burned area and the dozer was repositioned. IC Kerby told Kuna RFD Engine 622 to standby because of expected high winds.

Some of the crews on the Point Fire did not receive word of the expected rapid change in weather.

Not all personnel reacted appropriately upon receipt of the red flag warning.
- 3.* *Recognize current weather conditions and obtain forecasts.*
Some crews recognized a storm was coming before the warning was issued.

A red flag warning was broadcast by BLM Boise District. Kuna RFD was not able to convey this information to all its crew members.

One BLM crew leader did not receive this warning, but recognized the oncoming storm cell.
4. *Ensure instructions are given and understood. (Not compromised)*
BLM IC gave appropriate tactical instructions to all crews.

Kuna Fire Command provided initial instructions to its crews.
- 5.* *Obtain current information on fire status.*
The fire’s status changed dramatically when the high winds struck. Information about fire behavior and the location of all firefighters was incomplete due to poor communication capabilities.

Kuna Command failed to contact and obtain briefing from BLM IC upon arrival at the fire.

- 6.* *Remain in communication with crew members, your supervisor and adjoining forces.*

This order was compromised by all parties on the fire at times. BLM Boise Dispatch had momentary radio frequency problems that caused some confusion.

There was no communication between the BLM IC and Kuna Command.

The Kuna IC left Engine 620 (which had provided him with all operating radio channels on the incident) and operated on foot with a handheld radio that was unable to transmit/receive on all channels used on the fire.

Kuna RFD Engine 620 did not communicate its intention to turn north and leave the safety of the burned area.

- 7.* *Determine safety zones and escape routes.*

BLM crews and Kuna RFD Engine 622 were very cognizant of the burned area as their safety zone and used it throughout the fire. Some engine crews failed to utilize the burned area consistently. This failure ultimately led to the burnover of Kuna RFD Engine 620.

No reminder was given to firefighters that the burned area was their safety zone, although the majority of firefighters recognized it as such.

8. *Establish lookouts in potentially hazardous situations. (Not compromised)*

The fire location was in gently rolling terrain, providing no potentially hazardous situations, so no lookouts were posted. Personnel, both BLM and Kuna RFD, had a generally good view of the fire.

- 9.* *Retain control at all times.*

Kuna Command did not contact the BLM IC to notify him of his presence. Prior to the accident, the BLM IC and Kuna Command were separated physically in the early stages of the fire, making unified control difficult or impossible. Consequently, no unified control organization was established. Kuna Command, after giving specific instructions to its engine crews, did not intercede when these orders were violated.

- 10.* *Stay alert, keep calm, think clearly, act decisively.*

While most firefighters did this, there were instances where firefighters did not follow all of this standard order.

18 SITUATIONS THAT SHOUT “WATCH OUT”

1. *The fire is not scouted and sized up.*
This was accomplished, both on the ground and by helicopter.
2. *You are in country not seen in the daylight.*
This was not an issue.
- 3.* *Safety zones and escape routes are not identified.*
Though not specifically identified, most crews demonstrated their understanding that the burned area was their safety zone throughout the course of the fire.

Kuna RFD Engine 620 did not use the burned area as a safety zone.
- 4.* *You are unfamiliar with weather and local factors influencing fire behavior.*
Even the most experienced members of fire crews were surprised at the extreme rate of spread as the erratic weather behavior reached the fire. The Kuna RFD Engine 620 crew did not recognize the effect of changing weather conditions on fire behavior.
5. *You are not informed of tactics, strategy, and hazards.*
All units were given strategy and tactics information.
- 6.* *Instructions and assignments are not clear.*
Instructions were not an issue, but there was confusion because of lack of communication and coordination between BLM and Kuna RFD on the incident.
- 7.* *No communication link has been established with crew members or your supervisor.*
Various units on the fire did not have communications with BLM IC and/or BLM Boise Dispatch.

Kuna IC could not maintain continuous radio contact with all the units on the fire, nor with the BLM units.
8. *You are constructing line without a safe anchor point.*
This was not an issue.
9. *You are building fireline downhill with fire below.*
This was not an issue.
10. *You are attempting a frontal assault on the fire.*
This was not an issue.
- 11.* *There is unburned fuel between you and the fire.*
Kuna RFD Engine 620 crossed into unburned fuels to a location 1,750 feet from the fire's edge.

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ACCIDENT INVESTIGATION

12. *You cannot see the main fire and are not in contact with someone who can.*
This was not an issue.
13. *You are on a hillside where rolling material can ignite fuel below you.*
This was not an issue.
14. *The weather is becoming hotter and drier.*
This was not an issue.
- 15.* *The wind is increasing and/or changing direction.*
While most crews were aware of this, the firefighters of Kuna RFD Engine 620 apparently were not, at least until it was too late to take evasive action.
- 16.* *You are getting frequent spot fires across the line.*
This in itself was not a direct cause of the incident. Though spot fires were not present, frequent breakouts were occurring along the line.
- 17.* *The terrain and fuels make escape to safety zones difficult.*
Once the fire escaped the lines, given the winds at the time and resulting rapid spread rates, escape to safety zones could be extremely difficult for someone in front of the fire. This is the situation in which Kuna Engine 620 found itself.
18. *You are taking a nap near the fireline.*
This was not an issue.

RECOMMENDATIONS

POINT FIRE
ACCIDENT INVESTIGATION



RECOMMENDATIONS

The most important part of this report could very well be the recommendations found in this section. Lessons, however painful, can be learned from the tragedy that occurred at the Point Fire. If the recommendations help to make the difficult job of fighting wildfires safer, then the investigation team's efforts will have been worthwhile.

Some of the recommendations are of limited geographic applicability; others may have far-ranging utility. Recommendations that require immediate attention are marked by an asterisk.

A. INCIDENT COMMAND AND LEADERSHIP FACTORS

A lack of coordination between the BLM IC and the Kuna RFD command was apparent on the Point Fire. No physical contact was made or radio communication maintained between the two entities. No mutual aid agreement exists defining wildland firefighting roles and responsibilities.

RECOMMENDATIONS

- 1.* BLM and cooperating local entities should review Incident Command System alternatives to clarify roles under combinations of jurisdictions.

Where there is a multi-agency response to a single jurisdiction, a single IC should be used. Multiple jurisdictions, such as mixed ownership lands where structure protection is needed, may require a shared command. If there is a question about jurisdictions, agency supervisors must mutually decide on the command structure as soon as they arrive at the fire. Once this decision has been made, the organization in use should be broadcast to all units on the fire as well as dispatch centers.

2. All adjoining federal, state, and local agencies should work toward securing formal mutual aid agreements for fire protection and suppression. Formal agreements should identify operating procedures, including command structure, and common radio communications.
3. All mutual aid entities should foster increased interaction between agency fire management personnel and local entities (primarily rural fire departments) to generate better understanding of the duties, responsibilities, and capabilities of the cooperating entities. Activities such as prescribed burns, training, post-wildfire critiques, and managed or simulated fires could provide valuable experience in fire control and firefighting skills.
4. BLM needs to reaffirm the necessity of providing basic safety briefings to crews when fire conditions or weather conditions change significantly.
5. The State of Idaho is urged to establish an entity whose role would include oversight responsibility to establish, coordinate and maintain standards for wildland firefighter qualifications, training and equipment. Without such oversight, rural volunteer firefighters will continue to be asked to perform duties for which they may not have been adequately trained.

6. It is further recommended that the Idaho State Association of Fire Chiefs take the lead in explaining to the public and elected officials the need for the above-mentioned oversight role in the Idaho State government.
7. It is recommended that agencies not request, accept or use wildland firefighters or equipment that do not meet mutually negotiated standards as identified in mutual aid agreements.

B. COMMUNICATIONS

Communication, or lack of adequate communication, was a significant factor in this incident. Specifically, common radio communications were not always available to all firefighters on the Point Fire. Instructions and warnings were not always received, and consistent radio contact with engines was not always possible.

RECOMMENDATIONS

1. BLM and local cooperators should begin to develop and strengthen regional mutual aid communication plans, including radio frequency use and management.
- 2.* All cooperating entities should inventory their capabilities to ensure that they are able to communicate on common radio channels. BLM and rural fire departments should consider exchanging radios during multi-agency wildfires.
3. The BLM Boise District should provide its Dispatch Center with tape recording capabilities that include automatic time encoding.
- 4.* BLM Boise Dispatch should immediately modify its current logging process for documenting radio transmissions by providing a log for each radio dispatch console. Also, BLM Boise Dispatch should initiate a separate log specific to each fire whenever possible and limit entries to activities specific to that fire.
5. BLM Boise District should better observe National Wildfire Coordinating Group (NWCG) standards for engine designation, identification of individuals and so forth. Use of "clear text" guidelines need to be emphasized. Agency-specific terms, slang, and ten codes need to be eliminated.
6. All agencies should reaffirm the need for engines to notify the IC when they re-position themselves, run low on water, and the route they will take to refill.
- 7.* Severe weather warnings should be provided to the appropriate city or county dispatch center and the center should broadcast these warnings to those monitoring their frequencies.

C. EQUIPMENT AND TRAINING

This incident identified significant variations between federal and rural organizations in the types of equipment and training provided for wildland firefighters. Rural fire departments have no uniform standards for equipment and training for wildland firefighting.

RECOMMENDATIONS

1. Cooperating entities involved in wildland firefighting are encouraged to provide themselves with personal protective equipment that meets the National Fire Protection Association Standard #1977. Further, it is strongly recommended that each wildland firefighter be equipped with a fire shelter.
- 2.* BLM and cooperators should perform and document weekly inspections of equipment and personal protective equipment, including fire extinguishers, hoses, fittings, connectors, vehicle fluid levels, drive lines, tires, etc. Equipment that experiences a breakdown on an incident or exercise should be thoroughly examined by qualified personnel and certified by management to be in working order before it is again placed in service. Equipment with a history of mechanical failure should not be used in off-road wildland fire suppression efforts, unless corrective steps have been taken.
3. BLM should contact the MTDC for information currently being gathered regarding staying in a vehicle overrun by fire versus leaving the vehicle and deploying fire shelters. Such information, when available, should be shared with all cooperators involved in wildland fire suppression.
- 4.* Engines must be equipped to distribute water around the entire vehicle for protection in emergencies. Engines must retain enough water in the tank at all times to provide protection in an emergency.
5. Engines should always carry one or more individuals with enough training and experience to recognize and avoid unsafe practices.
6. Federal agencies, in cooperation with state and local officials, should consider basic wildland firefighting training, using the NWCG wildland firefighter training program as guidelines for rural fire departments and other cooperators involved in wildland fire suppression.

D. INVESTIGATION PROCEDURES

RECOMMENDATIONS

Although not directly tied to the Point Fire, the team suggests three improvements in the investigation process be incorporated in any similar efforts in the future.

1. The investigation process must begin promptly after an incident occurs. Incidents with the loss of lives should receive an immediate response, by the local unit involved and by agency officials. When logistically possible, the investigation team should be on site within hours of a fatal accident.
2. The local unit involved must also act quickly to preserve evidence, gather initial statements and photographs, provide for site security and prepare for investigation team briefings. It should prepare a list of persons to contact, and prepare maps and other documents that will be needed.
3. An investigation “handbook“ needs to be developed that provides guidelines for team membership, investigation process and other relevant information.

SUPPORTING DATA

POINT FIRE
ACCIDENT INVESTIGATION

SEQUENCE OF EVENTS: JULY 28 · 1995

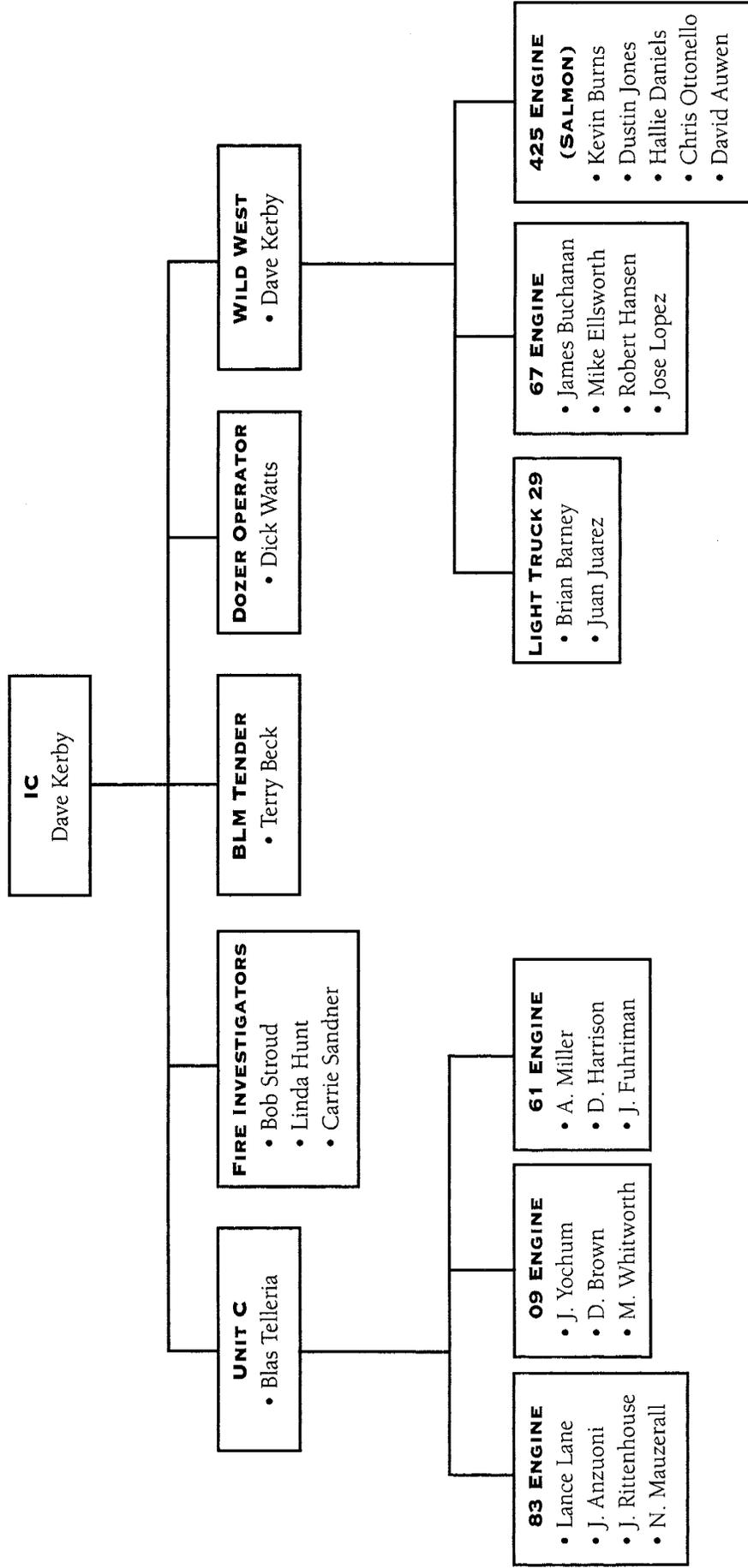
- 1829 BLM lookout reports fire from Danskin Lookout.
- 1831 BLM dispatcher dispatches Wild West Crew to the Point Fire.
- 1833 Unit C, with crew boss Blas Telleria, requested to go to Point Fire.
- 1857 Helicopter off from Boise enroute to Point Fire.
- 1900 Wild West crew arrives on fire. Crew boss Dave Kerby becomes Incident Commander (IC).
- 1905 Kuna Rural Fire Department Chief (650) asks BLM IC if assistance is needed. IC Kerby requests a brush truck and water tender.
- 1907 Kuna RFD Chief dispatches engines 620, 622, and 625 to the fire via Ada County Dispatch.
- 1911 Kuna RFD engines depart Kuna fire stations for the fire.
- 1915 Kuna Rural Fire Chief instructs engines 620 and 622 to stay together on the fire.
- 1927 BLM crew leader Telleria and Unit C arrive on fire.
- 1930 Kuna RFD engines 620, 622, and 625 arrive on fire, with 6803 in engine 620.
- 1937 BLM helicopter is released from fire.
- 2010 IC Kerby estimates spread of fire has been stopped at 120 acres.
- 2022 BLM broadcasts red flag warning via BLM radio frequency.
- 2046 Approximate time fire blow-up begins.
- 2049 Kuna RFD Engine 620 reports via radio to Kuna Command, "We're on the north line, Doyle, we got fire coming hard, this thing has died."
- 2050 Kuna RFD Engine 620 reports, "It's not going to let us out of here."
- 2051 Kuna RFD Chief asks Engine 620 what kind of problem they have. Engine 620 responds, "We're surrounded by fire." Chief asks for repeat. Engine 620 responds, "The truck's been overtaken by fire!"
- 2052 Kuna unit 650 (Fire Chief) departs for fire. Kuna Unit 641 dispatched to fire.
- 2055 Kuna ambulance dispatched to fire.

POINT FIRE

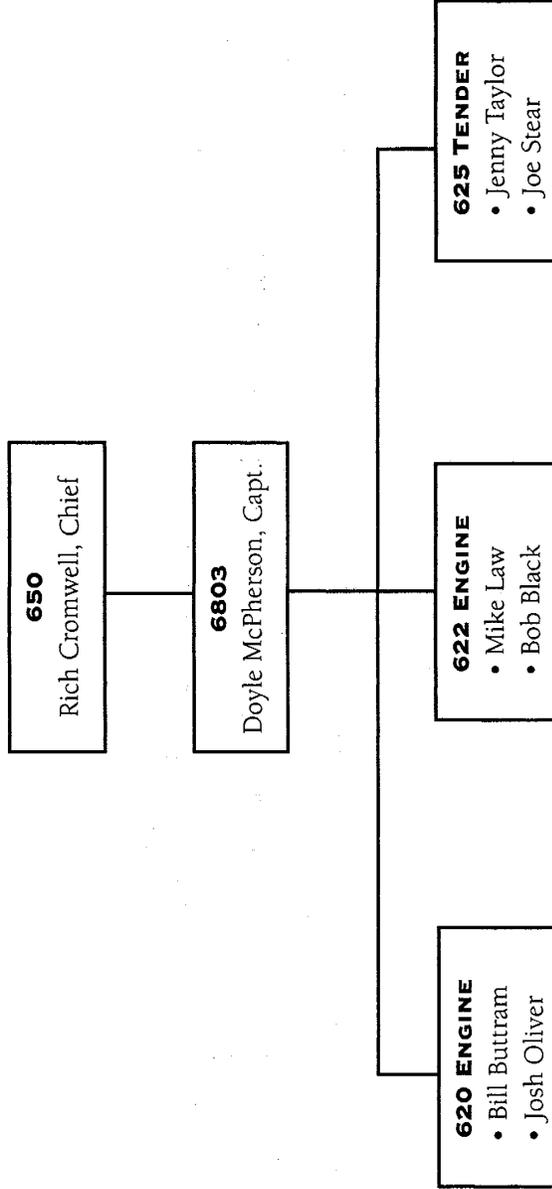
ACCIDENT INVESTIGATION

- 2104 Law enforcement unit dispatched to fire for traffic control.
- 2115 BLM crew leader Telleria reports to BLM dispatch that Kuna fire engine is on fire and personnel not accounted for.
- 2121 Kuna RFD Engine 620 is reached and bodies discovered inside cab.
- 2130 Law enforcement authorities are notified of deaths.

BUREAU OF LAND MANAGEMENT ORGANIZATION
JULY 28, 1995
POINT FIRE



**KUNA FIRE DISTRICT ORGANIZATION
JULY 28, 1995
POINT FIRE**



OTHER UNITS DISPATCHED LATER
• 641
• 605
• 601

SITE INVESTIGATION

GROUND CONDITIONS

The area where the fire burned and the fatalities occurred was sagebrush with annual grass cover. Above-normal winter and spring precipitation led to a thick, lush growth of cheatgrass (3,000 lbs/acre). The cheatgrass was fully cured at the time of the fire.

The sagebrush and grasses were fairly continuous and heavy. Shrub heights were 3 to 4 feet. Live woody fuel moistures were estimated to be in the range of 90% to 106%, based on Weather Information Management System (WIMS) indices. About 25% of the stand of sagebrush consisted of dead plants and plant material.

The primary carrier of the fire was grass. The sagebrush contributed to the intensities and longer duration of the fire. The fuel model classifies out as fuel Model 2 under the Fire Behavior Prediction System, and fuel model "T" under the National Fire Danger Rating System.

The fuel moisture content of the grasses was likely 2% to 4% at the time of the fire. The larger dead woody material had moistures ranging from 4% to 6%. These estimates match the readings taken from WIMS outputs from the Remote Automated Weather Stations (RAWS).

After the burnover, the fire rapidly spread into areas of similar fuels as well as Fuel Model 1 (grasses) and Model 3 (wheat fields).

Because of the intensity of the burn, virtually all ground cover was removed. Even the sagebrush stems were burned level with the ground.

POINT FIRE

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*Kuna RFD Engine 620
after burnover.*

*Kuna RFD Engine 620
after burnover.
Note cotton hose
still intact on reel.
Fire approached
engine from rear.*



FIRE BEHAVIOR REPORT

FUELS

The area where the fire burned and the fatalities occurred was sagebrush with a thick grass cover. Above-normal winter and spring precipitation led to a thick, lush growth of cheatgrass. The cheatgrass was fully cured at the time of the fire.

The sagebrush was fairly continuous and heavy. Shrub heights were 3 to 4 feet. Live woody fuel moistures were estimated to be in the range of 90%-106%, based on Weather Information Management System (WIMS) indices. About 25% of the stand of sagebrush consisted of dead plants and plant material.

The primary carrier of the fire was grass. The sagebrush contributed to the intensities and longer duration of the fire. The fuel model classifies the vegetation as fuel Model 2 under the Fire Behavior Prediction System, and Fuel Model T under the National Fire Danger Rating System.

The fuel moisture content of the grasses was likely 2%-4% at the time of the fire. The larger dead woody material had moistures ranging from 4%-6%. These estimates match the readings taken from Weather Information Management System (WIMS) outputs from Remote Automated Weather Stations (RAWS).

After the burnover, the fire rapidly spread into areas of similar fuels as well as Fuel Model 1 (grasses) and Model 3 (wheat fields).

WEATHER

PRIOR CONDITIONS

Above-normal precipitation during the winter and spring led to abundant growth of cheatgrass and other grasses. Listed below is the precipitation in inches compared to normal at the Boise National Weather Service office between November 1994 and July 1995.

Inches	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Actual	1.78	1.79	2.10	.51	1.51	1.03	2.36	.88	.59
Normal	1.48	1.36	1.45	1.07	1.29	1.24	1.08	.81	.35
Diff.	.30	.43	.65	-.56	.22	-.21	1.28	.09	.24

The weather pattern two weeks prior to the fire was more typical for the area, with temperatures ranging from the upper 80s to upper 90s, relative humidities in the low to mid-teens, and no precipitation. These conditions led to rapid curing of the grasses and lowering the live fuel moistures in the shrubs. The 10 hour fuel moisture, measured at the Boise National Weather Service Station, reached a low of 4% by July 28.

POINT FIRE

ACCIDENT INVESTIGATION

FRIDAY, JULY 28, 1995

After several days of hot, dry high pressure, an upper level trough of low pressure approached the area. This brought in enough moisture to trigger strong, dry thunderstorms, prompting the National Weather Service to issue a fire weather watch for dry lightning for the late afternoon and night. Dry thunderstorms did actually develop in the afternoon and within 24 hours started 21 wildfires in the Boise District, including the Point Fire.

Weather conditions during initial attack activities were hot and dry with light winds. Initial attack resources did not take weather readings at the site. They did, however, report winds to be light and predominantly out of the west at 4-6 miles an hour. Temperatures were near 100 degrees fahrenheit, and relative humidity was about 15%. The crews did notice more thunder cells building to the west and south.

At 2022, the National Weather Service issued a red flag warning for dry lightning and locally strong winds. Information relayed to the Point Fire IC called for expected wind gusts of up to 50 mph, with the storms moving northeast at about 30 miles per hour.

About 15 to 20 minutes after the red flag warning was issued to the initial attack IC, strong winds associated with a dry thunderstorm hit the fire area. Strong downdrafts caused the fire to blow up in a northerly direction, then northeasterly. Wind speed estimates from personnel on site ranged from 20 to 40 miles per hour. The wind speed 20 feet above the surface was about 20-30 miles per hour, with gusts over 40 miles per hour.

HAINES INDEX

The Haines Index for July 28, 1995, was calculated to be "6 high." Based on the atmospheric conditions over the fire, a Haines Index value of 6 high correlates to a high potential for large fire growth. The combination of strong thunderstorm-associated winds and a 6 high Haines Index contributed to the blow up on July 28.

RAWS UNITS

RAWS units used to help in analyzing weather conditions were the Boise Test Unit, located about 15 miles northeast of the fire, and the Triangle Unit, located about 25 miles southwest of the fire.

BOISE RAWS JULY 28, 1995					
TIME	TEMPERATURE	RELATIVE HUMIDITY	AVERAGE WINDSPEED	DIRECTION	PEAK WINDSPEED
1200	98	12	3	204	17
1300	99	13	5	311	10
1400	99	13	6	022	12
1500	101	13	4	040	10
1600	102	13	5	335	11
1700	103	13	4	351	14
1800	105	13	2	029	10
1900	102	13	4	139	10
2000	97	16	2	30	12
2100	92	20	15	285	25
2200	94	16	20	264	40
2300	91	19	7	253	49
2400	88	22	5	095	9

POINT FIRE

ACCIDENT INVESTIGATION

**TRIANGLE RAWS
JULY 28, 1995**

TIME	TEMPERATURE	RELATIVE HUMIDITY	AVERAGE WINDSPEED	DIRECTION	PEAK WINDSPEED
1200	90	19	14	213	22
1300	91	17	17	237	32
1400	92	18	17	241	32
1500	93	18	17	241	31
1600	94	15	16	228	28
1700	94	15	15	256	32
1800	92	15	18	239	35
1900	90	16	17	230	28
2000	84	20	11	269	25
2100	71	48	22	262	43
2200	72	44	7	215	22
2300	73	40	10	200	13
2400	81	23	27	227	49

TOPOGRAPHY

The terrain in the Point Fire area was relatively flat, with some rolling hills. Topography did not have much influence on the fire. The open nature of the terrain did not provide any natural breaks, leaving the area open to wind flows.

POTENTIAL FIRE BEHAVIOR

No formal prediction of fire behavior was made on the Point Fire before the tragedies occurred since it was in the initial attack stages. Using information gathered through interviews, witness statements, RAWs outputs, weather forecasts, photographs, video tape, and on-site visits, it is possible to use the fire behavior prediction systems to determine rates of spread and fire intensities. This information can aid in approximating the time that the fire escaped the fire line and overran the two firefighters.

The inputs and data sources for the potential fire behavior calculations are listed below:

Fuel Model	2	Model 2 is used to model fire behavior in grass with shrub overstory and litter.
1 hour fuel	2-4	1 hour fuel moisture was calculated using forecasted moisture temperature and humidity. They were also taken from RAWs outputs.
10 hour fuel	4	Value from Boise RAWs moisture
100 hour fuel	6	Value from Boise RAWs and moisture meter probe tests moisture.
Herbaceous	3	Value from Boise RAWs fuel moisture
Mid-flame	18	Estimate from sources on the site during blow-up. Some gusts were estimated to be higher, but the 18 mph estimate coincides with RAWs data.

The calculated rate of spread (ROS) during the initial stages of the blow-up and ensuing burnover on July 28 was 510 chains/hour. This computes to an approximate ROS of 561 feet/minute.

The calculated flame length (FL) was 23 feet. Actual visual observations ranged from 15 to 30 feet. Fireline intensity was calculated to be approximately 4,966 BTU/foot/second. The predicted ROS and FL are in a range where major fire runs are probable, and control options are limited.

ACTUAL FIRE BEHAVIOR

The fire behavior on the evening of July 28 is referred to as a blow-up. A blow-up is defined as a sudden increase in fireline intensity sufficient to preclude immediate control, which is what happened at the Point Fire. (See Maps 4-5.)

Lightning started the Point Fire at about 1829. The fire spread to the east at about 57 chains per hour. The fire burned up a gentle westerly facing slope toward Swan Falls Road in sagebrush and

POINT FIRE

ACCIDENT INVESTIGATION

grass. Flame lengths at the head of the fire were about 6 to 9 feet, too intense for attacking. By the time the initial attack crews began suppression action at the rear of the fire, it had burned 60 to 65 acres, and the head was near Swan Falls Road.

Flame lengths along the flanks were about 3 to 5 feet. Winds during the initial attack were westerly at 4 to 6 mph. Primary wind direction encountered by the initial attack crews was northwest, with temporary gusts from the southwest. By the time the initial flanking action was completed, the fire was temporarily stopped at 120 acres.

When the strong winds associated with the thunderstorms began to blow at about 2046 from the south, re-kindling of the sagebrush began along the edges. This was particularly true along the north line.

The initial attack crews reported numerous breakouts over the north line. Although their fire line was only a temporary wet line at the time, it is unlikely it would have held under the windy conditions even if a dozer line had been constructed.

As the numerous breakouts occurred, they quickly burned together and became a large line of fire moving to the north. The northwest portion of the line apparently escaped first, which was likely to happen since the eastern portion of the line was sheltered somewhat by a small ridge. At almost the same time, a finger of fire began burning just west of the fence along Swan Falls Road.

The resulting flame front looked like a horseshoe to observers on the Swan Falls Road, with two fingers moving north. It is likely that much of the control line between the two fingers broke out a short time later and started filling in between the two fingers. The lead finger of fire was likely past Kuna RFD Engine 620 on the ridge west of the truck's location about 3 minutes after the fire escaped. The remainder of the flame front likely overran Kuna RFD Engine 620 within 4 to 5 minutes after the blow-up began.

The heavy, continuous sagebrush led to a longer duration of fire than normal grass fires usually sustain. This is evidenced by the time (about 20 minutes) it took for anyone to reach the site of the burned-over truck to attempt a rescue. Virtually all plant material, both herbaceous and woody, was consumed by the fire.

Shortly after the truck was overrun by fire, the wind switched to the northwest, according to observers on Swan Falls Road. The wind also seemed to increase.

Although no calculations have been made for the remainder of the fire, it made a rapid run to the northeast and ended up burning about 10,000 acres in the next 3 hours. The fire burned through 3 basic fuel types: grass/sagebrush, grass, and grain fields. Some structures were lost during the burn. Fuels were broken in places by green fields, plowed fields, and roads. Winds started subsiding around midnight, but not until the fire had run over 9 miles. The ROS can be measured to be about 240 chains/hour, but it would likely have been much more if it had not been for the broken continuity of the fuels and the higher night-time fuel moistures.

PROPERTY DAMAGE REPORT**WRECKAGE EXAMINATION**

General Description: Surplus military 6-wheel drive truck

USFS/BLM designation: Type 4X

ID Number: 33,3332

Engine: Regular Gas

Tank: 1,500 gallons

Pump: Single Stage Hale — Wisconsin 2 cylinder

The vehicle, a converted 1954 surplus military 6 wheel drive, was removed from the site of the burn-over on July 29 by lifting it intact with a crane-type wrecker. It was placed on a flatbed recovery truck and transported to a secured area. The truck was inspected in the tow operator's yard.

GENERAL APPEARANCE

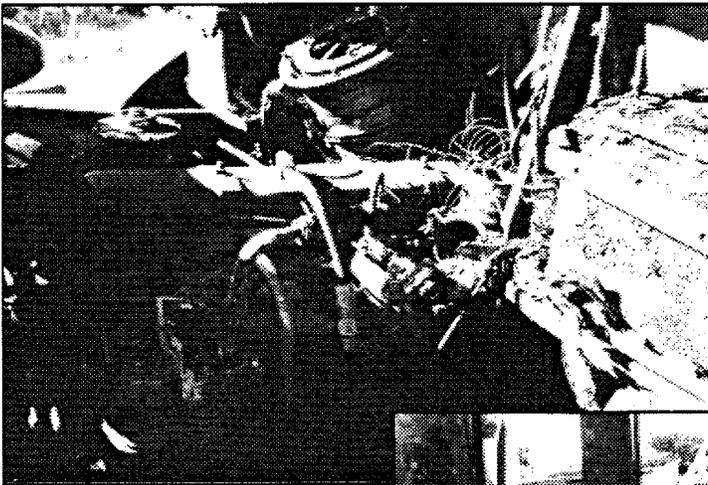
Kuna RFD Engine 620 was sitting on the ground directly on the rims and axles. The springs were warped and had lost their flexibility. The tires were completely burned off, with the exception of the area that contacted the ground. Tire pieces were found in the cab of the truck, where they were put during transport. The metal was discolored and many of the flat areas on the tank and cab were warped due to the extreme heat of the fire. The red paint was burned off and only a tinge of color was found on the top near the water tank fill hatch.

THE CAB

The top of the cab, a fiberglass aftermarket addition, was gone. The remains (small, de-laminated pieces of glass cloth) were found on the seats and floorboards, along with the bracket and rotators from the Code 3 lightbar.

The seats, a driver's bucket and a 2-passenger bench, were mostly burned. The seat backs were only wire and flat metal, and the seat bottom sections were partially destroyed with springs visible and melted insulation showing. The canvas covering was partially intact but blackened, charred, and in many places, gone. The instruments were still in the panel, but the glass was gone and the gauges were inoperative. The steering wheel handgrip was burned off as was the handle to the automatic transmission. The glass was broken and gone, and there were melted fragments left in the rims of the windshield and side windows. The side windows appeared to have been rolled up. The doors were warped and there were signs that they had been forcibly opened. Opening the doors required use of hand tools. Investigation of the floorboards was complicated by roof items that had fallen into the cab, and by many pieces and parts that were picked up at the scene by the tow company and placed there. Under the passenger's bench was an intact bucket holding hose adapters and fittings. On the floorboards in front of the seats, separated from the roof, tire, and unrelated parts, were remains of the crew's personal protective gear. A number of clothing items were bagged and labeled for testing.

*Kuna RFD
Engine 620
after burnover.
Extreme heat
from burning
tires exacerbated
damage to truck.*



*Engine
compartment of
Kuna RFD Engine
after burnover.*

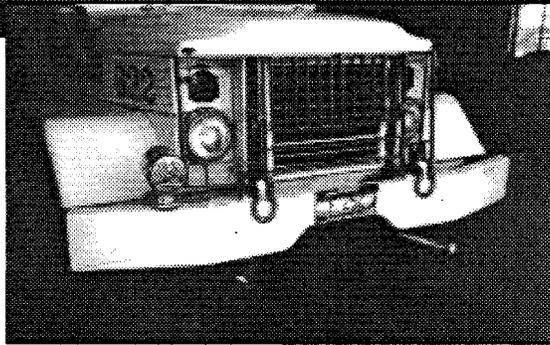
*Interior of cab,
Engine 620.
Fiberglass roof
disintegrated.
All windows
broken by heat.*



POINT FIRE
ACCIDENT INVESTIGATION



Kuna RFD Engine 620 that was burned over.



Type of nozzles used by Kuna RFD to fight grass/brush fires.

PASSENGER SIDE — SERVICE BODY

The main feature of the body was a 1,500 gallon water tank. The tank was steel, about 10 to 12 feet long and from the rear, was hexagonal. Attached to the length of the right side was a sheet-metal sleeve that contained the frame of a portable dump tank, its liner a pile of ashes. The dump tank would be removed from the rear of the truck.

Below the dump tank sleeve and just behind the passenger's door was a large fuel tank. The tank was blistered and blackened, with no visible sign of rupture.

DRIVER'S SIDE — SERVICE BODY

Directly behind the cab and below the tank was the pump assembly. The tank discharge protruded down at approximately a 30-40 degree angle (from the lower side bevel of the tank). The connection between the pump intake and the tank was gone. The pump, a single stage Hale was driven by a 2-cylinder Wisconsin gas engine. The only discharges were piped to the front bumper where two 1.5 inch nozzles had been mounted at angles to spray the ground in front of and to the side of the truck.

The plumbing of the pump had broken and the package was resting on the ground although still attached to the truck. To the rear of the pump, mounted on the rear fenders was a double hose tray. The trays each held the remains of hose. The outside tray was used for 1 inch hose and all that was left were ashes and the couplings (length or quantity held in the tray was unrecorded). The inside tray, nearest the tank, held a larger diameter hose (1.5 or 2.5 inches) with only the fittings left.

On the upper left side of the tank, mounted on the beveled section of the hexagonal tank, was a metal sleeve that had held two sections of 2.5 inch flexible hard suction hose. Only the coil wires were left in the holder.

REAR

The back of the tank was clean as most of the mountings were from the extended rear step bumper. Facing the rear of the truck from left to right, a Hannay electric rewind hose reel was mounted facing the rear. The reel had several hundred feet of cotton jacketed hose on it with some of the outside layer burned off, but a great deal of the hose appeared to be intact and usable. To the right of the reel was an extended 6-8 inch diameter tank dump with a quarter turn valve, blackened but complete. In the center of the tank, in a metal mount, were the remnants of an orange drink-dispenser. The outside of the dispenser was melted, but identifiable and even had a distinguishable spigot still attached. The lid of the dispenser was gone but the inside was still fairly intact, as the foam insulation was visible and the orange inner liner was still there. To the right of the dispenser was a 2.5 inch intake/discharge, blackened but unremarkable. To the right of this intake/discharge was the opening and frame of the dump tank.

TANK TOP

The top of the 1,500 gallon tank was flat except for a large, round fill port which had a hinged lid. Inspection of the tank showed that any paint coating that was on the inside had been blistered off and there was no sign of water or a possible boil line on the inside or outside of the tank.

FRONT END — BUMPER

The truck had an extended front bumper that had the charcoaled remnants of several shovels and pitchforks. The heads of these implements were found lying in a depression on the driver's side of the bumper. The radiator had partially melted and was slumped behind the metal grill. The hood was found unlatched, and when opened, displayed a burned-over gas engine with near-total destruction of the wiring and carburetor areas. The spray attachments under the bumper had no sign of the red twister nozzles reported to have been installed on them. The hose that was used to connect each sprayer to the pump was gone.

The vehicle is considered a total loss.

The vehicle is being inspected by an engineering firm in an attempt to pinpoint the cause of its engine failure. The results were not available at the time of this report's publication. Findings will be included in the official investigative file when the engineering report is completed.

RECORDS AND REPORTS

POINT FIRE

ACCIDENT INVESTIGATION

PREPLANNED DISPATCH

BLM RADIO TRANSMISSION LOG

ADA COUNTY DISPATCH LOG

FIRE INCIDENT STATUS SUMMARY

ESCAPED FIRE SITUATION ANALYSIS

WILDLAND FIRE ENTRAPMENT REPORT

TECHNICAL ANALYSIS OF PERSONAL PROTECTIVE EQUIPMENT

VEHICLE INSPECTIONS

WEATHER REPORTS

V. LIGHTNING OPERATIONS PLAN

When dry type lightning is forecasted, imminent, or lightning fires are occurring, the preplanned lightning plan will be implemented. This plan establishes parameters for management actions including automatic call up procedures, dispatching and repositioning of both district and non-district resources. The lightning plan is divided into three sections which correspond with the response levels used in the first part of this plan.

RESPONSE LEVEL I BI 0-34

When lightning occurs in response level one, normal preplanned dispatching procedures will be followed.

RESPONSE LEVEL II BI 35-54

When dry lightning is forecasted to be at a Lightning Activity Level of three or higher, and a high probability of multiple lightning fires exists, or fires are already occurring and additional fires are a high probability the following actions will be taken.

All off-duty district fire personnel will be called back and placed in a duty status.

Resource area contacts will be notified of the current and expected situation.

Critical available non-fire personnel (heavy equipment operators, qualified fire fighters) will be contacted and placed in duty status.

The status and location and availability of all district heavy equipment (dozers, and transports) will be determined.

The status and location of southern Idaho retardant ships. Boise, Idaho Falls and Payette will be determined.

Four additional engines with a dozer and tender (contract resources could be used) will be ordered and repositioned in a standby status at a predetermined location. Preferred locations are Boise, Wildwest, or Mountain Home. Expected lightning occurrence should dictate placement.

The FMO, FCO will coordinate with the designated Resource Area Contacts on setting individual priorities for suppression within the overall district priorities determined to be as follows:

1. Boise Front
2. Birds of Prey National Conservation Area
3. Danskin Range (Lucky Peak to E. of Danskin Mtn.)
- ③ Silver City

4. Squaw Butte, Willow Ridge Area
5. Bennett Mtn.
6. Payette River Corridor
7. Snake River Brownlee Resv. Area
8. Goodrich /Council Area
9. Salmon Falls Area of Critical Environmental Concern, (ACEC)
10. Hot Creek ACEC
11. Hickson Sharptail Grouse Management Area
12. Boulder Creek Habitat Management Plan, (HMP)
13. Jarbidge Greenstrip/Sagebrush Areas
14. De Lamar Mine/Cinnabar, War Eagle Mtns.

The following dispatch strategies will be followed in the event of multiple lightning fires.

If the lightning event occurs during daylight hours fires occurring in priority areas will be flown to determine their location and potential. Fires occurring in non priority areas will be flown and evaluated as time permits.

Fires will be initial attacked in accordance with the district fire suppression priorities list. Consideration will be given to the expected lightning track. If areas of higher priority are at risk, response to lower priority areas will be delayed until the lightning has cleared the higher priority area, or until the area is no longer at risk. It is extremely important that the available fire suppression forces are not used attacking fires in lower priority areas and leave adequate forces available for high priority area fires. Cooperating agencies and other available fire suppression forces will be asked to assist with lower priority fires near their geographical area.

The recommended dispatch procedures for the districts listed high priority areas is as follows:

AREA	RESOURCES	CLOSEST FORCES	CONSIDERATIONS
Boise Front	4 Engines Helicopter Dozer/Tender	See FMZ 1.4,2.5	See FMZ 1.4 2.5
BOP NCA	4 Engines Dozer/Tender	See FMZ 1.5	See FMZ 1.5
Danskin Range	4 Engines Helicopter/Tendr	See FMZ 2.5	See FMZ 2.5
Silver City	Helicopter 2 Engines	See FMZ 3.2	See FMZ 3.2
Squaw Butte/ Willow Ridge	4 Engines Helicopter	See FMZ 2.3	See FMZ 2.3
Bennett Mtn.	4 Engines Helicopter	See FMZ 2.5	See FMZ 2.5

DATE 7/28/95
 CALL SIGN: KOP-426

Lucky Peak-----T 63.1250 Juniper Mtn.-----Tx. tone 100.1 (Tone 1)
 Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
 Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
 Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
 TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

DISPATCHER: BARCKS

TIME	STATION	INFORMATION	INIT.
1802	IEA	A Boise enroute FO54 Duggs/Beik/Bolan	
1804	Kruson	2 mins requested 2 crews from Shoshone	
1804	Shoshone	off Boise	
1805	Cada	Go to fire & Amulstone farms FO52 & FO53	
1900	Shoshone	Have reports of fire at Shilly. Made from TWF Co. Shady. May be other fires to W. but have sent Rodriguez crew & Helicopter	
1812	Shoshone	T-12 off at 1807	
1813	IEA	2 miles out from fire	
1815	IEA	on the fire	
1815	Veris C	on the fire	
1824	Spain	On fire FO52 advised of	
1828	Cada	SB at Bureau 6.5.	
1830	IEA	Shoshone FO54	
1831	IEA	Shoshone calls on fire at	
1832	Shoshone	1P 1W sec. 34 BM wind color winds SW	
1833	Shoshone	Mtn Home can handle what's left on FO54	
		Requested to go to initial PS.	

~~FO56~~

DATE 7/28/95
 CALL SIGN: KOD-426

DISPATCHER: DARCUS/ROEDEL/TOWNS

Lucky Peak-----T 63.1250 Juniper Mtn.-----Tx. tone 100.1 ne 1)
 Rx. 163.9375 South Mtn.-----Tx. tone 107.2 jne 2)
 Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
 Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
 TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

TIME	STATION	INFORMATION	INIT.
1834	T-122	T-122 off at 1800	
1845	T123	agree time news fire # and set long, & that relayed Base would be TWF	
1845	T-12	news fire F052	
1847	T-12	Dispatched F054 at 1838 enroute to F056	
1847	Squaw	Head to F056	
1849	Squaw	dispatched to Unit 9 PD F056	
1854	Squaw	confirmed 14T on at 1820	
1857	11EA	off phone to initial Pt. Fire	
1916	T-122	From fire to Tulf load & RTN	
1917	Adrian	Just arrived on F056	F056
1929	Miracle	Have a report from Squaw Co. about fire on French John Hill & Jump Cr.	
1935	Vale	Requested they send 2 engines to F057	
1936	Squaw	Kennedy with Lewis & the cat on the fire	
1937	Reddy	Squaw H 1EA to Jump Cr. F057!	
1938	MID Ann 165	Receiving F054 enroute back to Mtn Home	
1928	TWFF Base	T-12 off TWF To Fire	

DATE: 7/28
CALL SIGN: KOD-426
DISPATCHER: ZARCUS/ROEDEL

Lucky Peak-----Tx. 163.1250 Juniper Mtn.-----Tx. tone 100.1 (Tone 1)
Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

TIME	STATION	INFORMATION	INIT.
1932	TWTF	7-123 ON TWTF	
1943	1FA	send from F054 to F057	
1952	1FA	T-123 off TWTF 1945	
2006	1FA	request made out of 10113 will have Squaw Butte check	
2013	Squaw Butte	E. of Pagette 9N 5W 36 Rain over 500 acres	
		(see note at end of log)	
2020	470	One on hill with 299°/10' 9P 3W 26	
		called 4 Gwi Harry on NE - from snow machine	
2030	Squaw	Card seen within five E. of Pagette on one in the valley	
2038	1FA	T-123 should be almost to Boise will probably be sending T-12 to Boise loaded	
2043	Denslow	S. of Hom 276° 20' Squawk Small white Snake	
		2N 5W stand. Small but picking up	
2054	1FA	Requested a couple engines	
2055	1FA	Snow Falls Rd to 1st Point	
2057	911	Requested ambulance to Snow Falls & 2nd St and will send Paramedics	

BOISE DISPATCH

LOG 1

DATE: 7/28
 CALL SIGN: KOD-426
 DISPATCHER: BARNEY ROEDEL / jacob
 Lucky Peak-----Tx. 163.1250 Juniper Mtn.-----Tx. tone 100.1 ne 1)
 Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
 Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
 Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
 TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

TIME	STATION	INFORMATION	INIT.
2103	Miracle	Condensation is on scene with Hiram	
2057	7123	V at Boise	
2109	1EA	all flames knocked down	
2111	Unid	ambulance to Boise T-12 being last drop & will come in	
2111	Deerin	Fire F056 blow out on two sides Real Problems	
2113	Carroll	T-123 want fly over to winds	
2115	Deerin	Keena engine on fire & personal saw captured	
2116	T-12	15' out of Boise	
2127	Unit B	enroute to Quince Hollow F058	
2127	T-12	holding to approach control for landing	
2131	Danakin	125° 30' W side of SFK at base	
2132	1EA	off fire to Jordan Valley zone - worked down crew will stay till things look good.	
2133	Danakin	125° 30' is 7E of sign on hill to river	
2136	firebird	on ground Boise	
2136	Unid	Notified that ambulance is on the way.	
2140	Johansen	gone on far we railroad tracks and continuing further south.	
2142	Carroll	Quail to 1000, right around corner of e.g. house	

7/29 2061

DATE: Lucky Peak-----I 63.1250 Juniper Mtn.-----Tx. tone 100.1 (Tone 1)
 CALL SIGN: KOD-426 Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
 Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
 DISPATCHER: Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
 TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

INIT.

INFORMATION

50 ANN called for info - told him to call 384-3444. JG

54 Caller reported hearing the fire had jumped 5-Mile @ Columbia.

58 Fuel truck to HP (Clea Spain) later this am. (Kally)

21 ~~Blas called to / time they called for treatment~~

29 ~~This was logged @ 2057 and Related to Blas~~

29 Cada - his crew almost done, instructed to call in when done.

21 Gem County Sheriff called to say that BNF reported fire at 1 mi W - 9 mi S of powerhouse, S side of river @ Horse Bend. Boyd told her we had no one to send right now, try + get local crews to handle.

26 Amy called to tell us Gem County had called to report fire @ Montour, Boyd will call Gem County. Area being reported is private

16 Rich called in - they'll try to hold on until

17 Amy - lightning SN #W Sec 21 Ontario - told her to call Fayette + N. Plymouth locals.

DATE: 7/28 2001
CALL SIGN: KOD-426

Lucky Peak-----Tx 163.1250 Juniper Mtn.-----Tx. tone 100.1 ne 1)
Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

DISPATCHER: YEF

TIME	STATION	INFORMATION	INIT.
221	Canada	Heavy winds blowing from the north see report at Mc Dermott	
221	Canada	fire blown up - multiple calls received - 911 they are potentially	
228	Tobasa	will go toward Eagle Pt. w. of tie in with Canada.	
230	Kenneth	cont' see Amphib 130.	
233	Pigas	no access to fire during morning in Subdiv. Center to north	
241	Shuttleworth	Notified Jump Creek fire of high winds coming tonight	
304	Spain	reports major problems with fire - steady to Agreement - could we consider plans for structure fire - need to consider of Pt. Blm notified Bee Carey of Pt. Blm Sheriff in TWF dated permission Bush fire dept for structure protection in Bell Rapids area - we want then a boat wind problems; they passed it to Bush who will respond.	
390		Notified Kody in TFWO about change in command with paper call -	

BOISE DISN VI BLN

7/28
LOG
DATE: 7/29
CALL SIGN: KOD-426

Lucky Peak-----Tx. 163.1250
Rx. 163.9375
Squaw Butte-----Tx. 163.1250
Rx. 163.9375
TAC 1-----163.175 TAC 2-----163.8375
AIR NET-----167.950

Juniper Mtn.-----Tx. tone 100.1 ne 1)
South Mtn.-----Tx. tone 107.2 (Tone 2)
Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
Snow Bank-----Tx. tone 123.0 (Tone 4)

YJF

DISPATCHER:

TIME	STATION	INFORMATION	INIT.
054	426	KENNY CALLS - SW SIDE OF FIRE BURNED TO SUCDIVISION INFORMED CONN ANOTHER FRONT WERE MORE IN 2-3 HOURS FIRE DOWN BUT NEEDS MAP-UPS	D
001		numbers of sleep on to Clearing below	
		2 Shoshone Engineers & 21 FS. to Point	
092	126	fire - called Williamson / trailhead about fire - cattle near -	
046		Scott Lowby contacted M: allotment, 543-6678	Sm
047		Blas T. notified of stem first heading north Cross the Snake River.	
054		Boyd warned all personnel of approaching storm.	Sm
1105		Call re: power poles burning on B-Mile (Rogers)	"
1108		Jerry in conn w/ Squaw Butte re: Console Problems (?)	"
1120		Lee's going home, doing map-up now, no need to stay. Will come back @ 10 ^{am} unless needed sooner.	

7/29 1061

BOISE DISTRICT

DATE: 7/29 1061
CALL SIGN: KOD-426

DISPATCHER: UEE

Lucky Peak-----163.1250 Juniper Mtn.-----Tx. tone 100. ne 1)
Rx. 163.9375 South Mtn.-----Tx. tone 107.2 (Tone 2)
Squaw Butte-----Tx. 163.1250 Bennett Mtn.-----Tx. tone 114.8 (Tone 3)
Rx. 163.9375 Snow Bank-----Tx. tone 123.0 (Tone 4)
TAC 1-----163.175 TAC 2-----163.8375 AIR NET-----167.950

TIME	STATION	INFORMATION	INIT.
1123		Called in Joan Howard + Shelley Cooper.	
1123		Knudson reporting fire burning down, low on fuel, requesting diesel fuel + gas. Boyd will call Shoshone to see if they can re-fuel, if not will have to go w/contract services.	
1127		Shelley Cooper on the way.	
1127		Blas T called in on fire F056, fire into 2 divisions, #1 Telleria + Kerby orig part of fire, #2 Roger Cade working w/add'l equip.	
1129		No answer for Joan Howard, will CB.	
"		Joey threats to Blacks Cr Gun Club call 888-7531 + rd; Gun powder stored @ facilitate.	
1130		Desert View Sub fire took few structures.	
1131		Phoned Joan Howard, left msg.	
1136		Cary called in, says crew can go, will shift his crew in about 1 hour.	
1137		No fuel truck available from Shoshone.	
141		Boyd contacted Blas Calvin Wild (Kelly Oil) to transport - Crows Nest Rd @ 44-7/8 am	

8/1/95

Note: star in dispatch log between 2013 and 2022.

at 2020 Paul Werth National Weather Service called me. He stated he was going to upgrade the red flag watch to a red flag warning for dry lightning and high winds up to 50 MPH. As soon as we hung up the telephone the dispatchers were instructed to notify all personnel of the warning. As the log indicates 2022 hrs personnel were notified. Dispatchers indicated to me that all fire personnel acknowledged the warning.

Jerry Warden
Flagstaff Coordinator
Boise District BLM.

1 DISPATCH: Okay. And your phone number, John?
2 JOHN: 922-4072.
3 DISPATCH: Okay, thanks.
4 JOHN: All right.
5 DISPATCH: Um-hum, bye.
6 JOHN: Bye.
7 DISPATCH: Fire Dispatch.
8 UNIDENTIFIED WOMAN: Hi, I need to get ahold of
9 somebody in regards to BLM land, there's a fire started out
10 here by our house.
11 DISPATCH: Okay. Are there any structures
12 threatened?
13 UNIDENTIFIED WOMAN: No, it's just desert land out
14 here.
15 DISPATCH: Okay. We've got another call out there,
16 but how big of an area is it covering?
17 UNIDENTIFIED WOMAN: Oh, geez, I don't know, we
18 can't probably tell from here.
19 DISPATCH: Okay. All right.
20 UNIDENTIFIED WOMAN: It's just -- we had a great big
21 lightning strike out here a couple of minutes ago, and it
22 started it right up, it's --
23 DISPATCH: All right, we'll get ahold of BLM.
24 UNIDENTIFIED WOMAN: All right, thanks.
25 DISPATCH: Thanks, bye.

1 (Dispatch Dialing Phone, Gets Answering Machine)

2 DISPATCH: Hi, this is Boise Fire Dispatch, we need
3 somebody from BLM to call us ASAP. Thanks, bye.

4 (Dispatch Dialing Phone, Gets Busy Signal, Dials Again)

5 BLM DISPATCH: Dispatch.

6 DISPATCH: Hi, this is Ada County.

7 BLM DISPATCH: Hey, how are you?

8 DISPATCH: Just fine, I just called and left word on
9 that 867 number, and then it dawned on me, you know I bet you
10 guys are even still there.

11 BLM DISPATCH: Oh.

12 DISPATCH: We're getting calls from a couple people
13 out one to two miles from the Nicholson Road, the area of
14 Initial Point and Swan Falls --

15 BLM DISPATCH: Yeah, we just got that turned into
16 us.

17 DISPATCH: Yeah, we did too, just now, got -- we got
18 two different calls.

19 BLM DISPATCH: Okay.

20 DISPATCH: It was activated by a lightning strike.

21 BLM DISPATCH: Is that what it was?

22 DISPATCH: Yeah, and they said it is really going up
23 out there.

24 BLM DISPATCH: Okay. Yeah, our lookouts have called
25 it in, and so we're getting ready to go after it.

1 DISPATCH: Okay. Thanks.

2 BLM DISPATCH: Thank you.

3 DISPATCH: Um-hum. Bye.

4 UNIT 650: Dispatch, 650.

5 DISPATCH: 650.

6 UNIT 650: Will you set off our pagers? I want 622,
7 620, and 625 to respond approximately six and a half miles
8 south of Swan Falls Road to assist BLM.

9 DISPATCH: Copy. Is this on the grass fire?

10 UNIT 650: That's affirmative.

11 DISPATCH: Copy. Kuna Fire, 650 is requesting 622,
12 620, and 625 to assist BLM, approximately six and a half miles
13 south on Swan Falls.

14 Kuna Fire, 650 is requesting 622, 620, 625, to
15 respond approximately six and a half miles south on Swan Falls
16 Road to assist BLM with a grass fire. 1908.

17 UNIT 622: Dispatch, 622 responding.

18 DISPATCH: 622 responding. 1910.

19 UNIT 620: 620 responding.

20 DISPATCH: 620 responding. 1910.

21 UNIT 625: 625.

22 DISPATCH: 625.

23 UNIT 650: 60-650. 620, 650.

24 UNIT 620: 620, go ahead.

25 UNIT 650: Do you have two men?

1 UNIT 620: Affirmative.

2 UNIT 650: Copy. 625, do you have two men?

3 UNIT 625: Affirmative.

4 UNIT 650: 622, do you have two men?

5 UNIT 622: One.

6 UNIT 650: Copy. Stop in Kuna and they'll get you
7 another man.

8 UNIT 622: Okay.

9 UNIT 650: 622 and 620, when you get on location, I
10 want you two to stay together.

11 UNIT 622: Copy.

12 UNIT 625: Copy. Dispatch, we'll be delayed by
13 train.

14 DISPATCH: Have a delayed by a train. 1912.

15 UNIT 625: Negative. It's clear. 625 back en
16 route.

17 DISPATCH: 625 back en route. 1911.

18 UNIT 650: Dispatch, 650.

19 DISPATCH: 650.

20 UNIT 650: You might notify Union Pacific that the
21 cross arms on the Swan Falls crossing are malfunctioning,
22 there is no train in sight, and they are coming down and
23 staying and then going back up.

24 DISPATCH: Copy.

25 UNIT 6803: 650, 6803.

1 UNIT 650: Go ahead.

2 UNIT 6803: Do you want to respond the squad also on
3 this?

4 UNIT 650: Negative, they just say two brush trucks
5 and a tanker. The squads, we're going to keep them in town.

6 UNIT 6803: Do you want me to stay in town and
7 command town?

8 UNIT 650: No, why don't you go with those and
9 command them. I'm on my way back now. Also, 6803, when you
10 get out there, you'll switch to channel 16, and talk to BLM
11 and find out where they want you.

12 UNIT 6803: 6803, copy.

13 UNIT 61: 650, 61.

14 UNIT 650: Go ahead.

15 UNIT 61: Do you want me to respond to the fire or
16 to the station?

17 UNIT 650: Why don't you respond to the station.

18 UNIT 61: Copy, dispatch, 61 is en route to Kuna
19 Station 1.

20 UNIT 622: 622, Kuna Base.

21 UNKNOWN: 622, go.

22 UNIT 622: Yeah, were you going to come out and pick
23 up me?

24 UNKNOWN: Where are you at?

25 UNIT 622: Station 1.

19:12

1 UNKNOWN: Station 1, we'll be dropping by that way,
2 unless somebody wants to meet me there at the corner.

3 UNIT 622: Just swing by and pick me up.

4 DISPATCH: 650, dispatch.

5 UNIT 650: Go ahead.

6 DISPATCH: We just received a call from a John
7 Lightenburg at 8902 South Swan Falls Road. He states that the
8 fire is getting pretty close to his residence, he has a large
9 haystack and a large diesel tank that he believes are being
10 threatened.

11 UNIT 650: Copy. 6803, 650.

12 UNIT 6803: 3, go ahead.

13 UNIT 650: You might look at that situation as you
14 go by, but when we were coming from there, it was probably
15 three-quarters of a mile from that area anyway.

16 UNIT 6803: Copy. I'll check it out.

17 UNIT 61: Dispatch, Kuna Base is covering fire and
18 medical.

19 DISPATCH: Copy, covered for fire and medical both?

20 UNIT 61: Affirmative, available for automatic aid.

21 DISPATCH: Copy at 1915.

22 (Pause)

23 UNIT 625: Dispatch, 625 is on location.

24 DISPATCH: 625 on location. 1919.

25 UNIT 6803: 625, 6803.

1 UNIT 625: Go ahead.

2 UNIT 6803: Where are you staging?

3 UNIT 625: We're about 500 feet from the fire line
4 right now.

5 UNIT 6803: Are you on Nicholson Road, or on farther
6 south on Swan Falls?

7 UNIT 625: We're on Swan Falls.

8 UNIT 6803: 625, do we have BLM here on location?

9 UNIT 625: I'm trying to locate -- we have I believe
10 it's a police car up here, I haven't seen any BLM personnel
11 yet.

12 UNIT 6803: Okay, we've got a helicopter on the west
13 side, that's all I can see so far.

14 19:21 UNIT 625: Yeah, that's the only thing I can see
15 too.

16 UNIT 6083: Okay, we've got BLM guys coming in now
17 off of Poen Road right now, we're just across from Poen on
18 Swan Falls.

19 UNIT 625: Copy. I'll just stop here on Swan Falls
20 and wait.

21 UNIT 620: Dispatch, 620 is on location Swan Falls
22 and Nicholson Road, 6803 will be Kuna Fire Command.

23 19:22 DISPATCH: 620 on location, 6803 fire command.

24 KUNA STATION 2: 6803, Kuna Station 2.

25 UNIT 6803: Go ahead.

1 KUNA STATION 2: Do you want me to roll 601? I'm by
2 myself, or do you want me to just stay here?

3 UNIT 6803: Negative, stand by the station at this
4 time, also you can contact station 1 by land line.

5 KUNA STATION 2: Copy, we have no way of doing that.

6 UNIT 6803: Copy, just stand by the station then,
7 we'll update you in a little while.

8 KUNA STATION 2: Station 2 copy.

9 (Pause)

10 19:29 UNIT 622: Dispatch, 622 on location.

11 DISPATCH: 622 on location.

12 UNIT 6803: 622, 6803.

13 UNIT 622: 22.

14 UNIT 6803: 20 is going to pull in behind these two
15 19:30 BLM engines, and you pull in right in behind them. Have your
16 pump running and ready to go.

17 UNIT 622: Roger.

18 UNIT 625: 620, you have loose gear on the back of
19 19:31 your truck. 620, 625. 620, 625. 620, do you have your radio
20 on?

21 (Pause)

22 19:40 UNIT 625: 620, go to tac.

23 DISPATCH: Unit calling.

24 (Pause)

25 20:24 UNIT 620: 6803, 620. ^{Doyle}~~Well~~, we're basically just

20:29

1 doing mop-up. Is it okay for Josh to get some drive time just
2 doing mop-up?

3 UNIT 6803: (Inaudible).

20:30

4 UNIT 620: That's affirmative, we're tucked in
5 behind 622.

20:33

6 (Pause)

7 COUNTY STATION 4: County Station 4.

8 County Station 4, I have a young female juvenile on the land
9 line, she's at 5340 Willow Creek Road at a house on top of the
10 hill. She's extremely hysterical, she's home by herself,
11 she's advising that flames are very close to her house and she
12 does not know what to do. She's on a dirt road. Can you
13 advise on what I might instruct her to do?

14 (Pause)

15 DISPATCH: County Station 3 stand by for request
16 from Eagle for an engine, grass fire with structures
17 threatened, 4674 Willow Creek Road.

18 DISPATCH: County Station 3 request~~s~~ an engine,
19 grass fire with structures threatened, 4674 Willow Creek Road,
20 map section Edward One Six crosses Stillwell.

21 DISPATCH: County Station 3 request~~s~~ for an engine
22 to respond, grass fire, structures threatened, 4674 Willow
23 Creek Road, map section Edward One Six, crosses Stillwell,
24 County Station 3 confirmed.

25 UNIT 304: Dispatch, 304 responding to Willow Creek

1 Road.

2 DISPATCH: 304 responding, request^{you} respond on North
3 County Eagle, 461 in command.

4 UNIT 304: Copy, Eagle 461 in command.

5 (Pause)

6 COUNTY STATION 3: Dispatch, County Station 3 is
7 covered.

8 DISPATCH: County Station 3 covered.

20:49 9 (Pause)

10 BUTTRAM: Doyle, Buttram.

20:49 11 UNIT 6803: 6803.

12 BUTTRAM: We're on the north line, Doyle, we got
13 fire coming hard, this thing has died.

20:50 14 UNIT 6803: Is it on the [transmission cutting out]?

15 BUTTRAM: Affirm. 6803, 6809. Bill -- it's not
16 going to let us out of here.

17 UNIT 650: 6803, 650.

18 UNIT 650: 620, 650.

20:51 19 BUTTRAM: Go ahead.

20 UNIT 650: What kind of problem do you have?

21 BUTTRAM: We're surrounded by fire.

22 UNIT 650: Repeat?

20:51 23 BUTTRAM: The truck has been overtaken by fire.

24 UNIT 6803: Copy, we're en route.

25 DISPATCH: ^{unit} On south county that needs an assist,

20:51

1 advice.

2 UNIT 650: Dispatch, 650. Ring out our station, I
3 want the other squad responding and a pumper.

4 DISPATCH: I can just barely copy. Request another
5 squad and repeat.

6 UNIT 650: We need our other squad, 641, and a
7 pumper truck.

8 DISPATCH: Copy, request 641 and a pumper. Advise
9 exact location. 650, request location.

10 UNIT 650: The grass fire on Swan Falls Road.

11 DISPATCH: Copy.

12 UNIT 641: Dispatch, 641 is responding.

13 DISPATCH: 641 responding.

14 UNIT 605: Dispatch, 605 responding.

15 DISPATCH: 605 responding.

16 (Pause)

17 KUNA BASE: Dispatch, Kuna Base.

18 DISPATCH: Kuna base.

19 KUNA BASE: Covered by one fire fighter, 62 is
20 available to transport.

21 DISPATCH: Copy.

22 UNIT 650: 620, 650. 620, 650. 625, 650.

23 UNIT 625: 25, go.

20:54

24 UNIT 650: Give us approximate location of 620,
25 where they're in trouble at?

1 UNIT 625: I don't know, they couldn't advise.

2 UNIT 650: Copy. What side of the flank were they
3 on?

4 UNIT 625: Did you get in to -- get in contact with
5 622, they were with them last.

6 UNIT 650: Copy. 622, 650.

7 DISPATCH: Kuna 62, dispatch. Kuna 62, dispatch.

8 UNIT 62: 62.

20:55 9 DISPATCH: Request you respond to the fire.

10 UNIT 62: Copy, 62 responding.

11 (Pause)

12 UNIT 650: 622, 650.

13 UNIT 641: 650, 641. I think Buttram said he was on
20:55 14 the north flank.

15 UNIT 650: Copy. 622, 650. Where's your location
16 at?

17 UNIT ~~622~~⁶⁵⁰: We're west of Watt [phonetic].

18 DISPATCH: Dispatch, 62 responding.

19 UNIT 650: Calm down and talk slower so we can hear
20 you. Repeat it. 622, repeat, but talk slower.

21 UNIT ~~622~~⁵⁰: Copy.

22 UNIT 650: 641, did you copy that?

23 UNIT 641: Copy.

24 UNKNOWN: 62, 6819.

25 KUNA DISPATCH: 62, go ahead.

1 KUNA STATION 2: You by yourself?

2 KUNA DISPATCH: I have a full crew rendezvousing at
3 the LDS Church.

4 KUNA STATION 2: Okay, because I've got 6830 here if
5 you need her.

20:57

6 UNIT 625: 650, 625. One of the BLM trucks down
7 here said that they saw one of our trucks, just before the big
8 wind, on the southwest corner of the fire.

9 UNIT 650: Copy, we're headed to the northwest
10 corner of the fire at this point.

11 UNIT 625: Copy.

12 UNIT 6803: 650, 6803. Our ambulance is en route.

13 DISPATCH: 650, Dispatch.

14 UNIT 650: Go ahead.

15 DISPATCH: We've also made contact with Melba,
16 they'll be en route.

17 UNIT 650: Copy, thanks.

18 UNKNOWN: Joe, repeat, you were breaking up.

19 UNIT 650: Dispatch, 650.

20 DISPATCH: 650.

20:58

21 UNIT 650: We need Life Flight on standby, also Ada
22 County Paramedics en route.

23 DISPATCH: Dispatch copy. EM --

24 UNIT 605: 650, 605, do you want us to protect this
25 new structure?

1 UNIT 650: Yeah, go ahead.

2 UNIT 641: 50, 641, we're going to work with you,
3 we'll cover each other.

4 UNIT 61: Dispatch, Kuna 61 available as a
5 transport.

6 DISPATCH: Confirmation, 61 available, returning.

7 UNIT 61: Negative. 61 available as a transport.

8 DISPATCH: Dispatch copy.

9 UNIT 641: 6803, 641, repeat your -- you were
10 overrun by traffic?

11 *2100* UNIT ~~6803~~⁶⁴¹: 6803, we're on Nicholson Road, we're
12 heading into the head of the fire now. BLM is down on
13 Nicholson Road and Swan Falls starting a backfire at this
14 time.

15 DISPATCH: 650, dispatch.

16 UNIT ~~6803~~⁶⁴¹: Working together. 650, be advised BLM
17 is starting a backfire right behind us.

18 UNIT 650: Copy. We'll be alright.

19 DISPATCH: 650, dispatch.

20 UNIT 650: Go ahead.

21 DISPATCH: I have Medic 51 and Medic 49 en route,
22 Kuna 2, (inaudible) 61 is available for transport.

23 UNIT 650: Copy, how about 49 -- I mean, Life
24 Flight?

25 DISPATCH: Advise 49, stand by, I'll confirm with

1 him again.

2 UNIT 650: Dispatch, 650.

3 DISPATCH: 650.

21:01 4 UNIT 650: Unknown at this time until we get to our
5 trucks, we are not sure if we have personnel that are burnt or
6 not, if that's your reasoning for Life Flight.

7 DISPATCH: Affirmative, 49 is putting them on stand
8 by.

9 UNIT 650: 622, 650.

10 UNIT 622: (inaudible).

11 UNIT 650: Northbound on Swan Falls Road? How about
12 620? Where are they at? Copy

13 UNKNOWN: (Inaudible).

21:02 14 UNIT ~~622~~⁶⁵⁰: At this point we are on the northwest
15 section of the fire, heading towards it. We'll see if we
16 cannot get through and get in to them.

17 UNIT 650: Copy.

18 UNIT ~~622~~⁶⁵⁰: Copy. We're going to have troubles
19 getting through this down here so just stand by.

20 DISPATCH: Go ahead.

21 KUNA COMMAND: We've got huge demands (inaudible).

22 DISPATCH: Kuna command, I cannot copy, try again.

23 Kuna command, try again.

24 KUNA COMMAND: (Inaudible)

21:03 25 DISPATCH: Units are covering, 650, dispatch.

1 UNIT 650: We need PD for traffic control ASAP.

2 DISPATCH: Copy.

3 UNKNOWN: 625, go ahead.

4 UNIT 625: 6803, 625, we're kind of still where we
5 were.

6 KUNA COMMAND: (Inaudible) down here, the
7 (inaudible) ~~is closed, he's~~ (inaudible).

8 UNKNOWN: Zero.

9 UNIT 650: Where are you at?

10 UNKNOWN: (Inaudible).

11 UNIT 650: Are you on foot?

12 UNKNOWN: (inaudible).

13 UNIT 650: We'll head that way.

14 UNIT 6803: 50, it's building pretty fast behind us,
15 you might want to hit the road and get out.

16 UNIT 650: We're heading. ^{Kuna} ~~Unit~~ Command, 650.

17 UNIT 6803: Go ahead.

21.04
18 UNIT 650: We cannot get through to the northwest
19 section of this thing, it's moving this way at about 20, 25
20 mile an hour at this point.

21.05
21 UNIT ⁶⁴¹ ~~6803~~: We're already gone, we're almost to the
22 road. When this dies down, we'll go back in if we can. It
23 hasn't crossed Nicholson yet. I take that back, it has, it's
24 jumped Nicholson Road, it's about halfway to Kuna Cave Road.

25 ⁶⁴¹ ~~UNKNOWN~~: Go ahead, command.

1 UNKNOWN: (inaudible).

2 UNIT 641: We are right behind 650, we're cut off
3 from Swan Falls by the head.

4 UNIT 6803: (inaudible).

5 UNIT 641: 6803, 641, and I recommend maybe
6 contacting mutual aid with Whitney and Meridian.

7 UNIT 622: Doyle, this is 622. We cleared -- we ran
8 into a desperate situation here where we tried to get through
9 the northern eastern flank and we were held up by fire, and so
10 far, we haven't located those guys. Over.

11 Hey, also, Doyle, advise our incoming ^{units} (inaudible)
12 that this is a very dangerous situation on the highway, to
13 maybe back off. Because otherwise they're going to get
14 enveloped.

15 DISPATCH: 650, dispatch.

16 UNIT 650: Go ahead.

17 DISPATCH: PD is en route, code 3, ETA 20.

18 UNIT 650: Copy. We want mutual aid from Meridian
19 and Whitney, ASAP.

20 DISPATCH: ^{Dispatch} ~~That's~~ copy. Boise 21, County Station 3,
21 stand by, requesting mutual aid from Kuna Fire, grass fire,
22 Initial Point and Swan Falls.

23 County Station 3, Boise 21, Kuna Fire is requesting
24 mutual aid, grass fire, Initial Point and Swan Falls, map
25 section --

21:05

21:07

1 COUNTY STATION 3: Dispatch, County Station 3.

2 DISPATCH: County Station 3.

3 COUNTY STATION 3: What equipment do they need?

4 DISPATCH: 650, dispatch. Kuna command, dispatch.

5 UNIT 650: ^{Go Ahead} ~~Yeah~~, send me two squads and an engine,
6 and a tanker.

7 DISPATCH: ^{Copy} ~~It~~ requesting two squads, one engine,
8 one tanker.

9 COUNTY STATION 3: 3, will be responding into Kuna.

10 DISPATCH: Unit responding, I covered.

11 UNIT 143: 143 responding.

12 DISPATCH: ^{Copy} Whitney 143 responding?

13 UNIT 143: Affirmative.

14 DISPATCH: County Station 3, did you copy?

15 UNKNOWN: Go ahead.

21'09

16 ~~620~~ UNKNOWN: Now, if the wind has calmed down enough,
17 we're going to try a few wide sweeps. Have you by chance had
18 any contact with those guys?

19 ~~650~~ UNIT 6803: Negative. I want you to go up Swan
20 Falls and make a sweep off of the east side of Swan Falls, and
21 give me an update of what we've got going there, we've got
22 something heavy happening.

21.09

23 UNKNOWN: ⁶²² Did you say to make a sweep on the east
24 side?

25 UNIT 6803: Affirm, we have fire on the east side of

1 the road, with structures and whatnot threatened.

2 ⁶²² UNKNOWN: Copy, we have the fire side we're going to
3 attack.

4 UNIT 341: Dispatch, 341 responding to mutual aid to
5 Kuna.

6 DISPATCH: Approximately one mile south of --
7 correction north of the fire on Swan Falls.

8 UNIT 341: Affirm. Can you advise visibility there?

9 DISPATCH: It's approaching north quickly.

10 UNIT 605: Command, 605.

11 UNIT 6803: Go ahead.

21:10 12 UNIT 605: Yeah, we've got a fire that has jumped
13 Swan Falls Road. We're trying to back up and protect these
14 structures now.

15 UNIT 6803: Okay, I'm trying to get you another
16 engine and a tanker to support.

17 UNIT 605: Copy. The way the fire --

18 UNKNOWN: Copy, 344.

19 UNIT 605: -- jumped Kuna Cave Road by now.

20 UNIT 6803: 641, Command.

21 DISPATCH: Unit on South County.

22 UNIT 6803: Melba 205, go ahead.

23 UNIT 341: 341 responding --

24 DISPATCH: Copy.

25 UNIT 304: ^{dispatch} 304 responding, Swan Falls.

1 DISPATCH: 304 responding.

21:11

2 UNIT 6803: Melba 205, request you meet up with my
3 crew at the northwest corner of the fire and stage.

4 UNIT 62: Unit Command, this is Kuna 62.

5 UNIT 6803: Go ahead.

21:11

6 UNIT 62: Fire at this time is about a half a mile
7 north of Kuna Cave Road.

8 UNIT 6803: Copy. Thanks. ^{Break} 605, Command.

9 UNIT 605: Go ahead.

10 UNIT 6803: How are you doing for manpower there?

11 UNIT 605: 605 has two personnel.

12 UNIT 6803: Copy. 622, can you give me an update of
13 what you've got there?

21:11

14 UNIT 622: We're about to make a fire attack on the
15 northeast side of Swan Falls Road. And the fire is running
16 about 200 yards due north and east off of Swan Falls Road.

17 UNIT 126: Dispatch, 126 responding.

18 UNIT 6803: ^{Station 2} ~~62~~ go ahead.

19 UNIT 62: Well, we're covered by two, do you want us
20 to respond?

21 UNIT 6803: Affirm. Respond to pumper and meet up
22 with 605 on Nicholson and Swan Falls.

23 UNIT 320: Dispatch, 320 responding to Swan Falls
24 fire.

25 DISPATCH: Copy.

1 UNIT 6803: 650, Command.

2 UNIT 62: Kuna, 62.

3 UNIT 6803: 650, go. Your status there too.

4 UNIT 650: We're at the northwest end of the fire
5 with the BLM crew. We are backfiring this as quick as we can.

21:12

6 UNIT 6803: Okay, do you have an injured subject
7 somewhere. Medic 51 is here on location.

8 UNIT 650: That's unknown at this time, 51, we have
9 two guys who are missing. We are unable to locate at this
10 time. Have them standby.

11 UNIT 6819: Copy. The fire is rapidly approaching
12 Kuna Cave, we're staged here. 6819 is location, do you need
13 extra manpower anywhere?

14 UNIT 6803: Affirmative. I want you to go to 605
15 and give them a hand.

16 UNIT 6819: Where is there location?

17 UNIT 6803: They are on Nicholson and Swan Falls.
18 Do use due caution because the smoke is real thick across Swan
19 Falls Road.

20 UNIT 6819: ^{30 advised} ~~Unit 5~~, the fire has jumped Swan Falls
21 Road, there is no way I can get through.

21:13

22 UNIT 602: Command, 602 is responding with two
23 personnel.

24 UNIT 6803: Pick up with 602.

25 UNKNOWN: Affirm.

1 UNIT 6803: 622, Command.

2 UNIT 602: Command, 602, where would you like us to
3 go?

4 UNIT 6803: 622, Command.

5 UNIT 622: This is 622.

6 UNIT 6803: I want you to pull off and come back and
7 go to our truck out in the brush.

8 UNIT 622: ^{come back to you?} (inaudible).

9 UNIT 6803: Affirmative.

10 UNIT 622: Coming back.

11 UNIT 320: Dispatch, 320 responding to Swan Falls
12 fire.

13 DISPATCH: 320.

14 UNIT 601: Dispatch, 601 is responding to Swan Falls
15 and Nicholson Road.

16 DISPATCH: 601.

17 UNIT 650: That's affirmative, Scott, it has jumped
18 Swan Falls Road.

19 UNIT 6803: Whitney 143, Command. Your location?

20 UNIT 143: (inaudible) south.

21 UNIT 6803: What route of travel are you taking?

22 UNIT 143: Meridian Road, we're on Victory at the
23 present time.

24 BOISE 21: Dispatch, Boise 21 is covered by 1.

25 DISPATCH: 21 covered by 1.

21:13

21.14

1 UNIT 602: Command, 602, where would you like us to
2 go?

3 UNIT 6803: 602, advise when you get to where 62 and
4 51 are staged. Depending on visibility I'd like to put you in
5 near this new dairy under construction out here, but due to
6 visibility we may not be able to get you there.

7 UNIT 602: Copy.

8 UNIT 6803: Go ahead. Copy, can you give me a
9 report of the fire from that position.

10 UNKNOWN: (Inaudible)^{ms} county.

11 UNIT 650: Kuna Base, 650.

12 DISPATCH: 650, I can relay.

13 UNIT 650: Kuna Base, 650.

14 KUNA BASE: Kuna Base.

15 UNIT 650: ^{2, 4} This road that runs from the trailer
16 houses back over to Kuna Cave Road is it accessible only by
17 squads or can we get a pather [sic] truck through there?

18 KUNA BASE: Them's the one down by Nicholson?

21/16 19 UNIT 650: It's the one that goes in to the -- from
20 the south -- or north into Kuna Caves.

21 KUNA BASE: Affirmative. You should be able to get
22 a truck through there.

23 UNIT 650: (Inaudible)^{open}.

24 KUNA BASE: Take it kinda easy.

25 UNIT ~~650~~⁶⁰⁵ ~~clear~~ ^{Command} 605, ~~go ahead~~

Unit 650 - go ahead

1 UNIT 605: Yeah, when we -- ^{can} do you have somebody to
2 get down to Swan Falls and Nicholson, we're in to the east
3 approximately a quarter mile protecting a large haystack.

4 UNIT 6803: Affirm. Dispatch, Command. Dispatch,
5 Swan Falls, Command.

6 DISPATCH: Go ahead.

7 UNIT 6803: Would you advise what tankers we have en
8 route?

9 DISPATCH: You were covered by other traffic,
10 repeat.

11 UNIT 6803: Would you advise what tanker, mutual aid
12 you have en route?

13 DISPATCH: A tanker from Meridian and Whitney.

14 UNIT 602: Command, 602, do you want us to go down
15 Kuna Cave Road from Swan Falls, east of Swan Falls?

16 UNIT 6803: 605, Command. 602, standby.

17 (Pause)

18 UNIT 6803: 605, Command, ~~go ahead~~.

19 UNIT 605: ^{6803 - go ahead} Yeah, we're down here trying to protect
20 these haystacks.

21 UNIT 6803: Okay, I'll get you a tanker. Melba 205,
22 can you proceed on Swan Falls to the south with your tanker?

23 UNIT 205: Yes, sir.

24 UNIT 601: Kuna Command, 601.

25 UNIT 6803: Go ahead.

1 UNIT 601: We're at Kuna Road and Stroble, where do
2 you want us? *mandible*

3 UNIT 6803: Request you stand by at the station.

4 UNIT 641: 6803, 641.

5 UNIT 6803: Go ahead.

6 UNIT 641: We're on the east flank -- or on the west
21:14 7 flank, we've got a road and we got the wind working for us.
8 We're going to go up and try and hit the hill and go inside
9 the black and look for those guys.

10 UNIT 6803: Okay, be careful and keep an escape
11 route.

12 UNIT 641: Okay, I have 650 with us also.

13 BOISE 21: Dispatch, Boise 21 is covered by two.

14 UNIT 6803: Unit calling, Command, repeat.

15 BOISE 21: Dispatch, Boise 21, is covered by two
16 available auto aid.

17 DISPATCH: Dispatch, Boise 21, covered by two
18 available automatic aid. Canyon Station 3, dispatch.

19 COUNTY STATION 3: County Station 3, covered by 3.

20 DISPATCH: Copy.

21 UNIT 6803: Their status?

21:20 22 UNIT 341: Unit, Command, 341.
7:00 341 in the truck

23 UNIT 601: 50-601.

24 UNIT 6803: Go ahead.

25 UNIT 641: We've got a BLM engine up here, we're

1 going to go ahead, as soon as we can, we're going to take off
2 and go behind them and see if we can get in the black and go
3 look for those guys.

2:21

4 UNIT 650: Okay, we're right behind you.

5 UNIT 641: We've located our men.

6 UNIT 6803: Copy. Where they at?

7 UNIT 641: Still in the truck.

8 UNIT 6803: Exactly, what is the truck due? Does
9 anybody know yet?

10 UNIT 650: The truck is south of Nicholson Road on
11 Swan Falls about a half a mile.

12 UNIT 6803: Repeat that again.

13 UNIT 641: Swan Falls Road, a half a mile south of
14 Swan -- of Nicholson and to the west about 100 yards.

2:21

15 UNIT 6803: They are on the road then or they're
16 still in the burn?

17 UNIT 641: In the burn, in the truck.

18 UNIT 650: Thank you kindly, and just calm down a
19 little bit, even though it's bad.

20 DISPATCH: Kuna Command, Dispatch.

21 UNIT 6803: Go ahead.

22 DISPATCH: The information, citizen reporting
23 another fire starting one mile east of the large fire between
24 Locust Grove and Cloverdale.

25 ~~UNIT 143:~~ ^{Command} Whitney 143 to Command.

INCIDENT STATUS SUMMARY
(See reverse for general instructions)

1. Date 7/29/95		Time 2000		2. INITIAL <input type="checkbox"/> UPDATE <input type="checkbox"/> FINAL <input checked="" type="checkbox"/>			3. Incident Name Point			4. Incident Number BOD F056		
5. Incident Commander KIRBY		6. Jurisdictions BOD KUNA FD		7. County ADA		8. Type Incident Fire		9. Location TIN R W S.34			10. Started Date 7/28 Time 1829	
11. Cause Lightning		12. Area Involved 10,000		13. % Contained 100%		14. Expected Containment Date 7/29/95 Time 1900		15. Est. Control Date 7/29/95 Time 2200		16. Declared Controlled Date 7/29/95 Time 1910		
17. Current Threat NONE						18. Control Problems NONE						
19. Est. Loss 500,000		20. Est. Savings 3,000,000		21. Injuries 0		Deaths 0		22. Line Built 18 miles			23. Line to Build 0	
24. Current Weather WS 15-20 WD West		Temp 80 RH 35%		25. Predicted Weather WS 15 WD WNW		Temp 85 RH 35%		26. Costs to Date 80,000		27. Est. Total Cost 90,000		

28. AGENCIES																									
29. RESOURCES	B/M		Other																						TOTALS
	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST			
ENGINES	9		11																					20	
DOZERS	3																							3	
CREWS																									
HELICOPTERS			1T3																						
AIRTANKERS			1T2																						
TRUCK COS.																									
RESCUE/MED.																									
WATER TENDERS			2																				2		
OVERHEAD PERSONNEL			5	4																			9		
TOTAL PERSONNEL			50	37																			87		

30. Cooperating Agencies **Boise City, KUNA FD, Whitney FD**

31. Remarks **Fire is being demobed at present all resources are being returned to base.**

INCIDENT STATUS SUMMARY
(See reverse for general instructions)

ID-BOD-

Date 7/28/95	Time 2400	2. INITIAL <input checked="" type="checkbox"/> UPDATE <input type="checkbox"/> FINAL <input type="checkbox"/>	3. Incident Name POINT	4. Incident Number F056		
Sent Commander Kirby		6. Jurisdictions BOD City of Kuna	7. County Ada	8. Type Incident Fire	9. Location IN IW 34	10. Started Date 7/28 Time 1829

11. Cause Lightning	12. Area Involved 10,000	13. % Contained 20	14. Expected Containment Date No est of Time CONTAIN	15. Est. Control Date NO EST Time	16. Declared Controlled Date N/A Time
------------------------	-----------------------------	-----------------------	--	---	---

17. Current Threat Private lands, Structures	18. Control Problems High winds lightning
---	--

19. Est. Loss 700,000	20. Est. Savings n/a	21. Injuries 0	Deaths 2	22. Line Built NO estimate	23. Line to Build NO estimate
--------------------------	-------------------------	-------------------	-------------	-------------------------------	----------------------------------

24. Current Weather WS 15 Temp 80 WD E RH 18		25. Predicted Weather WS 25 Temp 90 WD S to W RH 30		26. Costs to Date 50,000	27. Est. Total Cost 200,000
--	--	---	--	-----------------------------	--------------------------------

28. AGENCIES

29. RESOURCES	28. AGENCIES																								TOTALS
	BLM		Other FD																						
KIND OF RESOURCE	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	SR	ST	
ENGINES	9		21																						30
DOZERS	3																								3
CREWS																									
ICOPTERS			1	3																					1
AIRTANKERS																									
TRUCK COS.																									
RESCUE/MED.																									
WATER TENDERS			1		1																				2
OVERHEAD PERSONNEL			5		4																				9
TOTAL PERSONNEL			50		65																				115

30. Cooperating Agencies Boise City FD, Kuna FD, Mountain Home FD, Whitney FD
Numerous other departments (also shown in other above)

31. Remarks
See attached narrative.

32. Prepared By Linda Bass	33. Approved By W. V. Cook	34. Sent To
-------------------------------	-------------------------------	-------------

Great Basin
Incident Status Summary (ICS-209) Continuation Sheet

Incident Name: Point Incident Number: F056
Priority: 1 (to be assigned at local unit/dispatch center)

Incident Narrative Summary

The following information (items 1 through 11) is mandatory, and must be submitted to the local dispatch center along with the ICS-209 form by 2100 hrs. on a daily basis, until the incident is controlled. (See Great Basin Mobilization Guide Section 26.1). There are two options for submitting this information: (1) include items 1-11 in a narrative summary, then complete the approval block, or (2) skip the narrative summary and fill in items 1-11 and the approval block.

Analysis

- 1. Significant events - highlight events such as hazardous materials spills, evacuations, closures, accidents/injuries, significant progress made on containing/controlling the incident, etc.

At approx. 2030 hrs. frontal passage occurred on fire. Kuna F.D. engine was overrun, resulting in two fatalities. Control efforts continue to be hampered by high winds and dry fuel conditions.

- 2. Structures destroyed - describe the type of structure(s) (commercial/business, primary residence, outbuilding, summer cabin, etc.). Include dollar values, if known.

Four confirmed residences destroyed with assorted outbuildings. Structure protection and evacuations continuing.

- 3. Today's fire behavior - describe fire behavior observed on the incident during the reporting period. Leave blank for non-fire incidents.

Extreme - near fire storm conditions @ 2400 hrs. little temperature recovery.

Prognosis

- 4. Tomorrow's predicted fire behavior - describe the fire behavior expected during the next operational period. Leave blank for non-fire incidents.

Temps in 90's and high winds w/ frontal passage will continue to produce extreme fire behavior.

5. Structures threatened - categorize according to type of use (commercial/business, year-round residence, summer residence, outbuilding, etc.) and include the time that the fire is anticipated to reach the structure(s).

Residences, year round, is currently
burning in a subdivision near town

6. Resources threatened - describe significant threats to watershed, timber, wildlife habitat and/or other valuable resources.

Structures, critical wildlife habitat

7. Major problems and concerns - list expected control problems/threats for the next operational period, social/political/economic concerns and impacts, etc. This section may also be used to explain critical resource needs by relating them to tomorrow's action plan.

Extreme fuel loading
Fire weather windy temps in 90's Thunder storms

8. Projected incident size - estimate the total size of the incident at control (acres for fire incidents; square miles/counties/municipalities affected for other types of natural disasters). Estimate 20,000

9. Outlook - Analyze the probability of meeting the suppression objectives within the specified timeframe documented in the Escaped Fire Situation Analysis (EFSA).

Good,

10. Critical resource needs (list in priority order). Relate to operations planned for the next 1-2 days, if possible. Use additional lines, if needed.

- (1) Resource type: A/T
- (2) Resource type: DOZERS
- (3) Resource type: Engines

11. Projected demob start (date and time): 7/31 1800

Submitted by:	Approved by:	Date:	Time:
	<u>W</u>	7/28	2400

Critical incident stress team is currently on scene,

ESCAPED FIRE SITUATION ANALYSIS (EFSA) WORKSHEET

Page 1 of 5

Date: July 29, 1995 Time: 1200 Location: BLM Boise District (BOD) Name: Point

I. SITUATION

A. FIRE: Current Size (acres) 10,000 acres Date Started July 28, 1995 Time: 1829MDT

B. FIRE WEATHER AND BEHAVIOR

1. Current: High pressure ridge being overridden by moisture streaming up from California coast. Widespread cloud development triggering frequent lightning with gusty winds.
2. Outlook: RED FLAG WARNING below 5500 ft for low RH, dry lightning, and erratic thunderstorms.

C. FUELS:

1. Type: Sagebrush-steppe. Unusually heavy fine fuel loadings (cheatgrass in the "Birds of Prey" Area measured in excess of 3,000 lbs/acre.
2. Extent: Widespread, covering all of the affected area.

D. RESOURCE AVAILABILITY: Competition exists at the local level and within the geographic area for Federal resources. Adequate support from local cooperators.

Source: ICS 209 dated 7/28/95, 2400

E. FIRE SIZE POTENTIAL: 30,000 acres

F. CONSTRAINTS ON SUPPRESSION ACTIVITIES (Administrative, Legal): None

G. AREA MANAGEMENT OBJECTIVES: FMAP objective 50 acres or less. Objective was exceeded shortly after ignition. Current objectives are to minimize resource and property damage.

H. SOCIAL OR EXTERNAL CONSIDERATIONS: Internationally recognized habitat for birds of prey. Also, the Peregrine Fund facility is located nearby. Also, Initial Point and surrounding area is within the Birds Of Prey NCA.

EFSA WORKSHEET

Page 2 of 5

<i>II. ALTERNATIVES</i>			
	Alternative A	Alternative B	Alternative C
A. Strategy	Aggressive initial/extended attack with engines, dozers, and airtankers to minimize habitat loss, protect improvements, and protect lives and private property.	Indirect attack by burning out and backfiring along existing roads and ways.	
B. Strategy			
C. Estimated Date Contained:	2400, July 29, 1995	2400, July 31, 1995	
D. Estimated Size @ Containment	10,000 acres	20,000 acres	
E. Estimated Suppression Cost	\$100,000	\$200,000	
F. Estimated Rehabilitation Cost	\$175,000	\$350,000	
G. Estimated Probability of Success	80%	80%	

EFSA Worksheet

Page 3 of 5

<i>III. ANALYSIS OF EFFECTS</i>	Alternative A		Alternative B		Alternative C	
CONSIDERATIONS	Critical	Not Critical	Critical	Not Critical	Critical	Not Critical
A. Social	X		X			
1. Safety						
a. Firefighter	X		X			
b. Public	X		X			
2. Economic						
a. Long Term	X		X			
b. Short Term	X		X			
B. Resource and Environmental	X		X			
1. Visual		X		X		
2. Water/Watershed		X		X		
3. Soils	X		X			
4. Vegetation	X		X			
a. Economic		X		X		
b. Non Economic	X		X			
5. Recreation		X		X		
6. Wildlife	X		X			
7. Fish		X		X		
8. Rec. Opportunity		X		X		
9. Air Quality	X		X			
C. Other Considerations						
Improvements	x		x			
Private property	x		x			
<p>Comments: About 300 residents evacuated. 1 primary residence and several additional structures destroyed. 2 fatalities.</p>						

EFSA Worksheet

Page 4 of 5

IV. **DECISION:** Alternative A is selected because:

 7/29/95
Date

 1200
Time

 John C. Sullivan
Line Officer(s) (Acting)

DAILY REVIEW:

By _____

By _____

By _____

By _____

Date

Time

V. **EXPANSION OF ANALYSIS OF EFFECTS** (Any further explanations as necessary.)
Attach additional sheets as needed.

NWCG

WILDLAND FIRE ENTRAPMENT/FATALITY INITIAL REPORT

Timely reporting of entrapments or fatalities is necessary for the rapid dissemination of accurate information to the fire management community. It will also allow fire safety and equipment specialists to quickly respond to these events as appropriate. This initial report does not replace agency reporting or investigative responsibilities, policies or procedures. Complete this report for fire-related entrapment and/or fatalities. Immediately notify the National Interagency Coordination Center (NICC) attn: Intelligence Section. Submit this written report to the address given below within 24 hours. Submit even if some data are missing.

NICC-National Interagency Fire Center
3833 S. Development Avenue
Boise, Idaho 83705-5354

Phone-(208) 387-5400
FAX-(208) 387-5414

NICC Intelligence Section
DG-A.INT: W02A
IAMS- FCNICCOR

I. General Information

- A. Date 7/28/95
B. Fire name and location Point SW 1N S28
C. Number of personnel involved 25+
D. Number of injuries 0
E. Number of fatalities 2

II. Fire Related Information

- A. Fuel Model A-T
B. Temperature 101 R.H. 12% Wind 45 (mph)
C. Topography FLAT Slope 0-10%
D. Fire size at time of incident/accident 200+ Acres
E. Urban/wildland intermix Yes No
F. Cause of Fire Natural Incendiary Accidental Unknown

III. Entrapment

A situation where personnel are unexpectedly caught in a fire-behavior related, life threatening position where escape routes or safety zones are absent, inadequate or have been compromised. An entrapment may or may not include deployment of a fire shelter.

A. Entrapment information

1. Firefighter trapped with fire shelter without fire shelter
2. Burns/smoke injuries incurred while in fire shelter Yes No
3. Burns/smoke injuries incurred while escaping entrapment Yes No
4. Burns/smoke injuries incurred while fighting fire Yes No
5. Fire shelter performed satisfactorily Yes No NA
6. Fire shelter was available, but not used Yes No NA

B. Personal Protective Equipment Used

1. Fire Shelter	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5. Protective Shirt	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. Protective Pants	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	6. Hardhat	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Gloves	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	7. Boots	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
4. Face/Neck Protection	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8. Goggles	<input type="checkbox"/> Yes	<input type="checkbox"/> No

IV. Fatalities

A. Type of accident

- | | |
|---|---|
| <input type="checkbox"/> 1. Aircraft | <input type="checkbox"/> 5. Vehicle |
| <input type="checkbox"/> 2. Natural (lightning, drowning, etc.) | <input type="checkbox"/> 6. Smoke |
| <input type="checkbox"/> 3. Medical (heart, stroke, heat, etc.) | <input checked="" type="checkbox"/> 7. Entrapment |
| <input type="checkbox"/> 4. Struck by Falling Object | <input type="checkbox"/> 8. Other |

B. Where fatality(s) occurred

- | | |
|--|--|
| <input checked="" type="checkbox"/> 1. Fire site | <input type="checkbox"/> 3. In transit |
| <input type="checkbox"/> 2. Incident Base | <input type="checkbox"/> 4. Other |

C. Fatalities

1. Name Bill Buttram D.O.B. 31 years of age
 Employment status Career Seasonal Casual Other
2. Name Josh Oliver D.O.B. 18 years of age
 Employment status Career Seasonal Casual Other
3. Name _____ D.O.B. _____
 Employment status Career Seasonal Casual Other
4. Name _____ D.O.B. _____
 Employment status Career Seasonal Casual Other

Note: In the event of fatality(s), do not release name(s) until next of kin are notified.

- D. Employing agency KUNA Rural Fire District
 E. Unit name and address PO Box 57 KUNA 83634
 F. Firefighting part of employee's job description Yes No
 G. Person to contact for additional information _____ Phone _____
 Home unit address _____

H. Brief description of accident Two volunteer fire fighters were caught in their vehicle during a fruit passage.

**TECHNICAL ANALYSIS OF
PERSONAL PROTECTIVE EQUIPMENT (PPE)
from the**

“POINT FIRE”, IDAHO

July 28, 1995

On August 14, 1995, Fire Equipment Specialists George Jackson and Dick Mangan from the USDA Forest Service, Missoula Technology & Development Center inspected and analyzed the personal protective clothing and equipment recovered from the two fatalities, (William Buttram and Josh Oliver - Kuna Volunteer Fire Department) that were entrapped on the Bureau of Land Management's "Point Fire" on July 28, 1995.

This review was requested by Stan Palmer, Investigation Team member and Safety & Health Group Leader @ NIFC-BLM. Mr. Palmer forwarded three boxes to MTDC, which contained the following items. Bag #1: remains of structural turnout coat, retrieved from area next to gear shift housing. Bag #2: structural turnout coat and structural helmet, retrieved from the seat area of the vehicle. Bag #3: Josh Oliver's clothing received from the coroner. Bag #4: one glove retrieved from passenger side of the vehicle. Bag #5: steel boot shank, retrieved from the passenger side of the vehicle. Bag #6: EMT scissors enclosed in a pocket, retrieved from area of the gear shift housing. Bag #7: William Buttram's clothing received from the coroner. Bag #8: remains of a pair of structural turnout pants, retrieved from the passenger side of the vehicle.

INSPECTION AND ANALYSIS

Contents of bag #1 were retrieved from the center console of the vehicle from the area of the gear shift housing. Contents consisted of the remains of a structural turnout coat. (we were unable to determine the manufacturer) Zipper parts, coaxial cable, small metal speaker (possible PASS device), and snap fasteners with the name "Body Guard" printed on the snaps. It is probable that the manufacturer of the turn out coat was Body Guard, a division of Lion Uniform. No labels were found due to the extent of thermal damage.

Contents of bag #2 were retrieved from the area between the two victims. Contents consisted of a red structural fire helmet that was melted to a structural turnout coat manufactured by "Globe". The turnout coat had circular impressions possibly from the seat springs, from either the bottom or the back of the seat. There were no indications that the liner was attached to the turnout coat. A waterproof flashlight was found in a pocket of the turnout coat.

Contents of bag #3 were Josh Oliver's clothing received from the coroner. Contents consisted of: blue cotton sweat pants, (size large), cotton tee shirt, a protective baklava style knit hood, an orange colored, flame resistant (FR) cotton fire shirt, estimated weight in ounces per square yard is 9 to 11 o.s.y. and snap fasteners with the name "Body Guard"

printed on the snaps. Also included was a length of coaxial cable and a rectangular metal tray measuring 1.5" x 9".

Contents of bag #4 were retrieved from the passenger side of the vehicle and consisted of a right hand glove with a knit gauntlet and leather palm and fingers. Thermal damage had shrunk the glove to approximately 40% of its original size. No labels were evident.

Contents of bag #5 were retrieved from the passenger side and consisted of a steel boot shank for a left boot. In conversations with the investigation team three other steel boot shanks were located in the vehicle at a later date.

Contents of bag #6 were retrieved from the area of the gear shift housing and consisted of a pair of EMT scissors in a pocket that was probably attached to the structural turnout coat that was found in the same area.

Contents of bag #7 were William Buttram's clothing received from the coroner. Contents consisted of, cotton underwear, cotton tee shirt, blue colored uniform pants, with a black belt attached, pants appear to be a cotton, polyester blend, William Buttram's wallet, Motorola pager in case, (Model #J602/605, ID # 6809 etched into the case). Structural turnout pants, manufactured by Globe, and an orange flame resistant (FR) cotton fire shirt, estimated weight in ounces per square yard is 9 to 11 o.s.y..

Contents of bag #8 were retrieved from the passenger side of the vehicle and consisted of the remains of a pair of turnout pants manufactured by "Body Guard".

DISCUSSION

Information and articles of clothing that MTDC received from Stan Palmer suggest that William Buttram was driving the converted 2 & 1/2 ton military water tender and Josh Oliver was sitting in the passenger seat. When the victims were discovered in the vehicle, Josh Oliver was sitting in the passenger side of the vehicle and William Buttram was leaning against Josh Oliver in a sitting position.

William Buttram was wearing a FR cotton fire shirt with a cotton tee shirt on his upper torso. He was wearing cotton underwear with his uniform pants and turnout pants manufactured by "Globe" on his lower torso. With the location of four steel boot shanks from the interior of the vehicle we can surmise that William Buttram was wearing structural bunker boots. We can surmise that the structural turnout coat and helmet retrieved from between the victims belonged to William Buttram because the turnout coat was manufactured by "Globe" the same manufacturer as the turnout pants that he was wearing.

Josh Oliver was wearing a FR cotton fire shirt with a cotton tee shirt on his upper torso. He was wearing cotton sweat pants and structural turnout pants manufactured by "Body Guard" on his lower torso. The protective hood was probably tucked into the waist of his turnout pants. Evidence suggests that Josh Oliver was wearing structural bunker boots. Evidence also suggests that the structural turnout coat retrieved from the area of the gear shift housing belonged to Josh Oliver, buttons stamped "Body Guard" were retrieved from the same area matching the turnout pants that he was wearing.

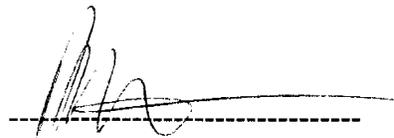
CONCLUSIONS

While the analysis of the (PPE) personal protective equipment from the "Point Fire" was not conducted on-scene, and the thermal damage destroyed much of the relevant information from the clothing and equipment, conclusions can be drawn, both from actual observation as well as knowledge gained from previous investigations.

1. The protective clothing and equipment worn by the victims was intended for structural fire fighting.
2. There was no physical evidence found that would suggest that the clothing the victims were wearing was compliant with NFPA 1977.
3. There was no physical evidence found that would suggest that the victims were carrying fire shelters.
4. Staying in the vehicle caused more severe thermal damage to the PPE than would have occurred if the victims had been away from the vehicle laying on the ground.
5. Combustible materials in and on the vehicle continued to burn after the flame front and residual fire from the natural fuels had passed.
6. The PPE worn by the fatally injured firefighters was subjected to long-duration high-intensity direct flame contact.



George M. Jackson
Equipment Specialist
MTDC



Dick Mangan
F & AM Program Leader
MTDC



4450 Enterprise St.
Boise, Idaho 83705
Tel. (208) 336-7220
Fax (208) 385-0477

- BRANCHES:
- Twin Falls, Idaho
- Salt Lake City, Utah

August 24, 1995

Stan Palmer
Safety and Health Manager
National Interagency Fire Center
3833 South Development
Boise, Idaho 83705

Dear Stan:

I inspected the fire vehicle with license plate #F528 at TNT Towing Storage Lot (3901 West Gowen Road, Boise, Idaho) on 8-24-95. I could not determine the exact cause of engine failure from the present condition of the vehicle. Any further analyses would involve the conditions at the time of failure and detailed vehicle service records.

If you have any further questions feel free to call met at 208-336-7220.

Sincerely,

A handwritten signature in cursive script that reads "Rick Milliron".

Rick Milliron
General Manager - V.P.

RM/wb

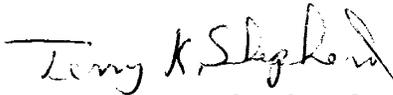
15 AUG 95

MEMORANDUM FOR BLM FIRE INVESTIGATION TEAM

SUBJECT: Inspection of Fire Truck #620, VIN#33-3321954

1. Inspection was conducted 14 August 1995 of a 1955 cargo truck model M211, mounted with water tank and pump assembly. There were no obvious mechanical failures that would indicate a stalling condition of drive train as viewed from under vehicle.

2. For further assistance or questions contact the undersigned:



Terry K. Shepherd
888-1559
Meridian



Wade C. Nielsen
378-9681
Boise

ZCZC BOIFWFBOI
TTAA00 KBOI 281508

BOISE FIRE WEATHER OFFICE...MORNING FORECAST
NATIONAL WEATHER SERVICE BOISE, IDAHO
ISSUED 9 AM MDT FRIDAY JULY 28, 1995 GIBSON

FIRE WEATHER WATCH FOR DRY LIGHTNING LATE THIS AFTERNOON AND
TONIGHT...LOWER ELEVATIONS OF ZONES 637...401...404...408-409 AND
412. DRY LIGHTNING WILL AFFECT ALL OF THE WESTERN FIRE WEATHER
DISTRICT. WATCH IN EFFECT ONLY FOR AREAS WHERE FUELS ARE IN THE
HIGH TO EXTREME CATEGORY...MAINLY BELOW 5000 FEET.

DISCUSSION...

WARMEST DAY OF THE SUMMER..SO FAR..FRIDAY. COLD FRONT..INITIALLY
DRY..SWEEPING THROUGH THE DISTRICT FRIDAY NIGHT AND SATURDAY.

A HOT AND DRY RIDGE OF HIGH PRESSURE ALOFT..OVER THE DISTRICT..IS
SHIFTING EAST THIS MORNING. AN UPPER LEVEL TROUGH IS APPROACHING
FROM THE GULF OF ALASKA. MOISTURE IS STREAMING NORTH ACROSS
CENTRAL CALIFORNIA AHEAD OF THIS SYSTEM. AS THE COLD FRONT
APPROACHES LATE TODAY AND TONIGHT SOUTHEAST TO SOUTHWEST WINDS
WILL INCREASE AND DRY THUNDERSHOWERS WILL DEVELOP OVER THE
WESTERN ZONES..SPREADING EAST BY DAWN. THE THUNDERSHOWERS WILL
BECOME WET IN NATURE BY SATURDAY EXCEPT FOR CONTINUING DRY
STRIKES OVER SOUTHWEST WYOMING INTO MIDDAY SATURDAY. A COOLER AND
MORE HUMID AIRMASS WILL SPREAD ACROSS THE DISTRICT SATURDAY AND
BEGIN TO MODERATE SUNDAY.

SOUTHEAST IDAHO AND WESTERN WYOMING (ZONES 411-417)

FRIDAY...

SKY/WEATHER...SUNNY, WARM AND DRY. WINDY DURING THE
AFTERNOON. ISOLATED LATE DAY THUNDERSHOWERS
YELLOWSTONE PLATEAU. SOME MAY BE DRY.
LAL.....1 EXCEPT 2 ZONE 411-412...415-416.
TEMPERATURE...UP 3-6. HIGHS 70S AND 80S EXCEPT LOW TO MID 90S
LOWER ELEVATIONS ZONES 412 AND 413.
HUMIDITY.....LITTLE CHANGE TO DOWN 6 PCT. MINS 12-25 PCT
LOCALLY NEAR 8 PCT ZONES 412/413 AND 417.
WIND - 20 FT..SOUTHWEST TO WEST INCREASING TO 15-25 MPH BY LATE
MORNING. AFTERNOON GUSTS TO 35 MPH RIDGES AND
USUAL WINDIER LOCATIONS WESTERN WYOMING. ERRATIC
WINDS GUSTING TO 50 MPH POSSIBLE WITH ANY
THUNDERSHOWERS.
HAINES INDEX..5..MODERATE NORTH TO 6..HIGH SOUTH.

TONIGHT...

SKY/WEATHER...INCREASING CLOUDS. SCATTERED DRY THUNDERSHOWERS
ZONE 412. ISOLATED...MAINLY EVENING THUNDERSHOWERS
ZONES 415-416.
LAL.....6 ZONE 412...2 ZONES 415-416 AND 1 ELSEWHERE.
TEMPERATURE...LOWS IN THE 40S AND 50S...EXCEPT MID TO UPPER 30S
HIGHER ELEVATION BASINS OF WYOMING.
HUMIDITY.....MODERATE TO GOOD RECOVERY VALLEYS, POOR UPPER
SLOPES AND RIDGES. MAX 65-95 PCT VALLEYS AND

25-45 PCT UPPER SLOPES AND RIDGES.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 15-20 MPH THIS EVENING WITH
GUSTS TO 30 MPH ON RIDGES. VALLEY WIND DIMINISHING
TO 5-12 MPH AFTER DARK BUT RIDGES CONTINUING 10-25
MPH. WINDS GUSTING TO 50 MPH POSSIBLE WITH
THUNDERSHOWERS.
HAINES INDEX..6..HIGH EARLY DECREASING TO 5..MODERATE

SATURDAY...

SKY/WEATHER...COOLER. PARTLY CLOUDY WITH A CHANCE OF MAINLY WET
THUNDERSHOWERS. BREEZY.

LAL.....3-4.

TEMPERATURE...DOWN 4-10. HIGHS FROM THE 60S ZONE 416 TO NEAR
90 LOWER ELEVATIONS OF SOUTHEAST IDAHO.

HUMIDITY.....UP 5 TO 15 PCT. MINS 12-35 PCT..LOWEST ZONE 417.

WIND - 20 FT..SOUTHWEST TO WEST 15 TO 25 MPH WITH GUSTS TO 50
MPH OVER EXPOSED RIDGES.

HAINES INDEX..5..MODERATE DECREASING TO 3..LOW.

SMOKE DISPERSAL....EXCELLENT TODAY AND GOOD TONIGHT.

SNAKE RIVER VALLEY/SOUTHEAST OREGON (ZONES 408-410 AND 637)

FRIDAY...

SKY/WEATHER...SUNNY, HOT AND DRY. ISOLATED DRY THUNDERSTORMS
VALE AND BOISE BLM DURING EVENING HOURS.

LAL.....1 EXCEPT 2 ZONES 637/408 DURING THE EVENING.

TEMPERATURE...UP ABOUT 5. HIGHS FROM 90 TO 103.

HUMIDITY.....NOT MUCH CHANGE. MINS 8-22 PCT.

WIND - 20 FT..LIGHT MORNING HOURS BECOMING SOUTHEAST TO
SOUTHWEST 10-20 MPH. GUSTY ERRATIC WINDS TO
55 MPH NEAR ANY THUNDERSTORMS.

HAINES INDEX..6 HIGH

TONIGHT...

SKY/WEATHER...PARTLY CLOUDY. BREEZY. SCATTERED...MAINLY DRY
THUNDERSHOWERS ZONES 637..408-409. ISOLATED DRY
THUNDERSHOWERS BY DAWN IN ZONE 410.

LAL.....3-4 EXCEPT 2 ZONE 410.

TEMPERATURE...LOWS MOSTLY IN THE 50S AND 60S.

HUMIDITY.....MODERATE RECOVERY. MAX 55-75 PCT VALLEYS
AND 30-55 PCT SLOPES AND RIDGES.

WIND - 20 FT..SOUTH TO WEST 10-25 MPH DECREASING TO 5-15 MPH
AFTER DARK. WINDS GUSTING TO 55 MPH POSSIBLE WITH
THUNDERSHOWERS.

HAINES INDEX..6..HIGH EARLY DECREASING TO 4..LOW LATE.

SATURDAY...

SKY/WEATHER...PARTLY CLOUDY...BREEZY AND COOLER. ISOLATED MAINLY
WET THUNDERSHOWERS WEST AND WIDELY SCATTERED
THUNDERSHOWERS EAST..SOME DRY.

LAL.....2 WEST TO 3-4 EAST.

TEMPERATURE...DOWN 5-15. HIGHS FROM 75 TO 90.

HUMIDITY.....UP 5-20 PCT. MINS 15-35 PCT.

WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-25 MPH WITH GUSTS TO 40
MPH. WINDS GUSTING TO 50 MPH POSSIBLE WITH
THUNDERSHOWERS.

HAINES INDEX..4..LOW DECREASING TO 3..LOW.

SMOKE DISPERSAL...EXCELLENT TODAY AND GOOD TONIGHT.

CENTRAL IDAHO MOUNTAINS (ZONES 401-407)

FRIDAY...

SKY/WEATHER...SUNNY, WARM AND DRY. ISOLATED LATE AFTERNOON DRY THUNDERSTORMS 401-404.

LAL.....2 WEST AND 1 EAST.

TEMPERATURE...UP 3-6. HIGHS UPPER 70S AND 80S EXCEPT LOW TO MID 90S LOWER ELEVATION CANYONS.

HUMIDITY.....LITTLE CHANGE TO DOWN 5 PCT. MINS 10-25 PCT.

WIND - 20 FT..RIDGES..SOUTH TO WEST 10-20 MPH WITH A FEW GUSTS TO 30 MPH AFTERNOON HOURS. VALLEYS CALM IN THE MORNING BECOMING SOUTH TO WEST 10-20 MPH DURING THE AFTERNOON.

HAINES INDEX..6 HIGH.

TONIGHT...

SKY/WEATHER...PARTLY CLOUDY. BREEZY. SCATTERED..MAINLY DRY THUNDERSHOWERS ZONES 401-404 AND ISOLATED DRY THUNDERSHOWERS BY DAWN ZONES 405-407.

LAL.....3-4 EXCEPT 2 EASTERN 405-407.

TEMPERATURE...LOWS 40S TO LOWER 50S.

HUMIDITY.....GOOD TO MODERATE RECOVERY. MAX 75-95 PCT VALLEYS, 50-75 PCT UPPER SLOPES AND RIDGES.

WIND - 20 FT..SOUTHWEST TO WEST 10-20 MPH. DECREASING TO 3-8 MPH IN THE VALLEYS AFTER DARK. WINDS GUSTING TO 55 MPH NEAR THUNDERSHOWERS.

HAINES INDEX..6..HIGH EARLY DECREASING OVERNIGHT TO 4..LOW.

SATURDAY...

SKY/WEATHER...PARTLY TO MOSTLY CLOUDY. BREEZY AND COOLER. SCATTERED TO WIDELY SCATTERED THUNDERSHOWERS. STORMS SHOULD BE WET EXCEPT SOME DRY STRIKES LOWER ELEVATIONS OF ZONE 406.

LAL.....3-4.

TEMPERATURE...DOWN 5-15. HIGHS IN THE 70S AND 80S.

HUMIDITY.....UP 10-25 PCT. MINS 20-50 PCT.

WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-20 MPH DURING THE LATE MORNING AND AFTERNOON. GUSTS TO 40 MPH OVER THE EXPOSED RIDGES. WIND GUSTS TO 50 MPH POSSIBLE WITH THUNDERSHOWERS.

HAINES INDEX..4..LOW DECREASING TO 3..LOW.

SMOKE DISPERSAL...EXCELLENT TODAY AND GOOD TONIGHT.

OUTLOOK FOR SUNDAY...

PARTLY CLOUDY AND BREEZY. WIDELY SCATTERED SHOWERS AND THUNDERSHOWERS NORTHERN AND EASTERN ZONES. HIGHS FROM THE UPPER 60S NORTHWEST WYOMING TO THE LOW 90S WESTERN SNAKE RIVER VALLEY.

EXTENDED FORECAST MONDAY AND TUESDAY...

MOSTLY SUNNY WITH A SLOW WARMING TREND. ISOLATED THUNDERSTORMS OVER THE MOUNTAINS TUESDAY. HIGHS SUNDAY IN THE 70S MOUNTAINS AND

85-95 VALLEYS WARMING 3-6 DEGREES TUESDAY.
END..

NNNN

BOISE FIRE WEATHER OFFICE.....NOON UPDATE
NATIONAL WEATHER SERVICE BOISE, IDAHO
ISSUED 1200 MDT FRIDAY JULY 28, 1995 GIBSON

DISCUSSION: SOUTHEAST OREGON, IDAHO AND WESTERN WYOMING...

FIRE WEATHER WATCH FOR DRY LIGHTNING LATE THIS AFTERNOON AND
TONIGHT...LOWER ELEVATIONS OF ZONES 637...401...404...408-409 AND
412. DRY LIGHTNING WILL AFFECT ALL OF THE WESTERN FIRE WEATHER
DISTRICT. WATCH IN EFFECT ONLY FOR AREAS WHERE FUELS ARE IN THE
HIGH TO EXTREME CATEGORY...MAINLY BELOW 5000 FEET.

MOISTURE IS STREAMING NORTH ACROSS NEVADA. THIS MOISTURE WILL
FIRE THUNDERSTORMS LATE THIS AFTERNOON AND TONIGHT OVER THE
WESTERN ZONES. OTHER THUNDERSTORMS WILL DEVELOP OVER NORTHWEST
WYOMING. WITH A VERY WARM AND DRY LOWER ATMOSPHERE THESE
THUNDERSTORMS WILL BE MOSTLY DRY.

AT NOON...
TEMPERATURES ARE RUNNING 6-12 DEGREES ABOVE YESTERDAY AT NOON.
TEMPERATURES RANGE FROM 68 AT YELLOWSTONE LAKE TO 91 AT BOISE.
RELATIVE HUMIDITIES HAVE FALLEN INTO THE TEENS AT LOWER
ELEVATIONS AND THE 20S IN THE MOUNTAINS. NO LIGHTNING HAS BEEN
DETECTED AS OF YET.

END..

ZCZC BOIFWFBOI
TTAA00 KBOI 282230

BOISE FIRE WEATHER OFFICE...AFTERNOON FORECAST
NATIONAL WEATHER SERVICE BOISE, IDAHO
ISSUED 4 PM MDT FRIDAY JULY 28, 1995 WERTH

FIRE WEATHER WATCH FOR DRY LIGHTNING THIS EVENING AND TONIGHT
LOWER ELEVATIONS OF ZONES 637...401...404...408-409 AND 412. DRY
LIGHTNING WILL AFFECT ALL OF THE WESTERN FIRE WEATHER DISTRICT.
HOWEVER, WATCH IN EFFECT ONLY FOR AREAS WHERE GRASS HAS ALREADY
CURED...MAINLY BELOW 5000 FEET.

FIRE WEATHER WATCH ROCK SPRINGS BLM (ZONE 417) SATURDAY FOR
STRONG WINDS, LOW HUMIDITIES AND ISOLATED DRY LIGHTNING.

DISCUSSION...

CHANCE OF DRY LIGHTNING TONIGHT EASTERN OREGON AND WESTERN IDAHO
MOVING INTO EASTERN IDAHO AND WESTERN WYOMING SATURDAY!! WILL
LEAVE FIRE WEATHER WATCH UP THROUGH TONIGHT..AND EXTEND INTO
SOUTHWEST WYOMING SATURDAY. COMBINATION OF DRY LIGHTNING AND
STRONG WINDS COULD RESULT IN FIRES WITH HIGH RATES OF SPREAD IN
CURED GRASSES. LATE AFTERNOON SATELLITE PICTURES SHOW AN UPPER
TROUGH APPROACHING THE PACIFIC NORTHWEST COAST..AND AN UPPER LOW
NEARING THE CALIFORNIA COAST. THESE TWO SYSTEMS WILL MERGE IN
EASTERN OREGON AND WESTERN IDAHO TONIGHT..AND THEN MOVE INTO
EASTERN IDAHO AND WESTERN WYOMING SATURDAY. A COLD FRONT WILL
DEVELOP IN WESTERN IDAHO AROUND SUNRISE SATURDAY..AND BY SATURDAY
EVENING SHOULD BE LOCATED IN SOUTHWEST WYOMING. COOLER AND MORE
STABLE AIR WILL MOVE INTO EASTERN OREGON AND WESTERN IDAHO LATER
SATURDAY MORNING ENDING THE THREAT OF THUNDERSTORMS THERE.
HOWEVER, STRONG GUSTY WINDS CAN BE EXPECTED ACROSS THE ENTIRE
FIRE WEATHER DISTRICT SATURDAY. SUNDAY SHOULD SEE A LITTLE MORE
COOLING, ESPECIALLY IN EASTERN IDAHO AND WESTERN WYOMING. HIGH
PRESSURE WILL REBUILD MONDAY AND TUESDAY WITH A RETURN OF HOT,
DRY WEATHER.

SOUTHEAST IDAHO AND WESTERN WYOMING (ZONES 411-417)

TONIGHT...

SKY/WEATHER...SCATTERED CLOUDS. ISOLATED DRY THUNDERSTORMS
ZONE 412.
LAL.....1 EXCEPT 2 ZONE 412.
TEMPERATURE...LOWS 40S TO MID 50S VALLEYS AND 50S TO MID 60S
RIDGES.
HUMIDITY.....MODERATE RECOVERY VALLEYS, POOR UPPER SLOPES AND
RIDGES. MAX 55-85 PCT VALLEYS AND 20-45 PCT UPPER
SLOPES AND RIDGES.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-20 MPH THIS EVENING WITH
GUSTS TO 30 MPH ON RIDGES. VALLEY WIND DIMINISHING
TO 5-15 MPH AFTER DARK BUT RIDGES CONTINUING 10-25
MPH. WINDS GUSTING TO 50 MPH POSSIBLE WITH
THUNDERSTORMS ZONE 412.
HAINES INDEX..5 MODERATE NORTH AND 6 HIGH SOUTH.

SATURDAY...

SKY/WEATHER...PARTLY CLOUDY AND WINDY. WIDELY SCATTERED THUNDERSTORMS, ESPECIALLY DURING THE AFTERNOON HOURS.
LAL.....2-3
TEMPERATURE...LITTLE CHANGE TO DOWN 5. HIGHS 70S AND 80S EXCEPT NEAR 90 LOWER ELEVATIONS ZONES 413 AND 417.
HUMIDITY.....UP 3-10 PCT. MINS 12-35 PCT..LOWEST ZONE 417.
WIND - 20 FT..SOUTHWEST TO WEST INCREASING TO 20-35 MPH BY LATE MORNING. GUSTS TO 55 MPH POSSIBLE RIDGES AND NEAR THUNDERSTORMS.
HAINES INDEX..5 MODERATE
SMOKE DISPERSAL...MARGINAL TONIGHT AND EXCELLENT SATURDAY.

SNAKE RIVER VALLEY/SOUTHEAST OREGON (ZONES 408-410 AND 637)

TONIGHT...
SKY/WEATHER...ZONES 637/408 AND 409..PARTLY CLOUDY AND BREEZY. WIDELY SCATTERED DRY THUNDERSTORMS DEVELOPING THIS EVENING AND CONTINUING THROUGH THE NIGHT. ZONE 410..SCATTERED CLOUDS AND BREEZY.
LAL.....2-3 EXCEPT 1 ZONE 410.
TEMPERATURE...A WARM NIGHT WITH LOWS MID 50S AND 60S.
HUMIDITY.....POOR RECOVERY. MAX 35-55 PCT VALLEYS AND 20-35 PCT SLOPES AND RIDGES.
WIND - 20 FT..SOUTH TO WEST 10-25 MPH DECREASING TO 8-18 MPH AFTER DARK. GUSTY WINDS TO 55 MPH POSSIBLE NEAR THUNDERSTORMS.
HAINES INDEX..6 HIGH DECREASING TO 5 MODERATE.

SATURDAY...
SKY/WEATHER...ZONES 637/408..PARTLY CLOUDY EARLY THEN MOSTLY SUNNY BY AFTERNOON. COOLER AND WINDY. ZONES 409/410..PARTLY CLOUDY WITH ISOLATED TO WIDELY SCATTERED THUNDERSTORMS. WINDY AND A LITTLE COOLER.
LAL.....2-3
TEMPERATURE...DOWN 10-15 ZONES 637/408..DOWN 6-12 ZONE 409.. AND DOWN 4-7 ZONE 410. HIGHS IN THE 80S.
HUMIDITY.....UP 5-15 PCT. MINS 15-30 PCT.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-25 MPH WITH GUSTS TO 40 MPH. GUSTY WINDS TO 50 MPH POSSIBLE NEAR THUNDERSTORMS.
HAINES INDEX..4 LOW WEST AND 5 MODERATE EASTERN ZONES.
SMOKE DISPERSAL...MARGINAL TONIGHT AND EXCELLENT SATURDAY.

CENTRAL IDAHO MOUNTAINS (ZONES 401-407)

TONIGHT...
SKY/WEATHER...SCATTERED CLOUDS. WIDELY SCATTERED THUNDERSTORMS DEVELOPING ZONES 401-404 AROUND MIDNIGHT MOVING INTO EASTERN ZONES BY MORNING. LITTLE IF ANY RAIN WITH THUNDERSTORMS.
LAL.....2-3
TEMPERATURE...LOWS 40S TO MID 50S VALLEYS AND 50S TO LOWER 60S

UPPER SLOPES AND RIDGES.
HUMIDITY.....MODERATE RECOVERY VALLEYS, POOR UPPER SLOPES AND
RIDGES. MAX 55-75 PCT VALLEYS AND 30-45 PCT UPPER
SLOPES AND RIDGES.
WIND - 20 FT..SOUTHWEST TO WEST 10-20 MPH. WIND DECREASING TO
4-9 MPH VALLEYS AFTER DARK. WINDS GUSTING TO 50
MPH NEAR THUNDERSTORMS.
HAINES INDEX..5 MODERATE.

SATURDAY...
SKY/WEATHER...ZONES 401-404..PARTLY CLOUDY WITH WIDELY SCATTERED
MORNING THUNDERSTORMS. CLEARING DURING THE
AFTERNOON. COOLER AND LOCALLY WINDY.
ZONES 405-407..PARTLY CLOUDY WITH WIDELY SCATTERED
THUNDERSTORMS, MAINLY DURING THE AFTERNOON. WINDY
AND A LITTLE COOLER.
LAL.....3
TEMPERATURE...DOWN 13 WEST TO 8 EAST. HIGHS 70S AND 80S.
HUMIDITY.....UP 5-10 PCT. MINS 18-35 PCT.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-20 MPH BY LATE MORNING.
AFTERNOON GUSTS EASTERN ZONES TO 30 MPH. GUSTS
TO 50 MPH POSSIBLE NEAR THUNDERSTORMS.
HAINES INDEX..4 LOW

SMOKE DISPERSAL...MARGINAL TONIGHT AND EXCELLENT SATURDAY.

OUTLOOK FOR SUNDAY...
MOSTLY SUNNY, MILD AND BREEZY. ISOLATED THUNDERSTORMS WESTERN
WYOMING ZONES. HIGHS MID 60S AND 70S MOUNTAINS AND 70S TO MID
80S VALLEYS.

EXTENDED FORECAST MONDAY THROUGH WEDNESDAY...
MOSTLY SUNNY, WARMER AND DRIER. ISOLATED MOUNTAIN THUNDERSTORMS
LATE TUESDAY AND WEDNESDAY. HIGHS WARMING INTO THE 80S AND 90S
WITH NEAR 100 LOWER ELEVATION VALLEYS.

THE 6-10 DAY EXTENDED OUTLOOK FOR THURSDAY AUGUST 3 THROUGH
MONDAY AUGUST 7 CALLS FOR ABOVE NORMAL TEMPERATURES AND LITTLE OR
NO RAIN.

END..

NNNN

ZCZC BOIFWFOI
TTAA00 KBOI 290251

BOISE FIRE WEATHER OFFICE...UPDATED FORECAST
NATIONAL WEATHER SERVICE BOISE, IDAHO
ISSUED 830 PM MDT FRIDAY JULY 28, 1995 WERTH

RED FLAG WARNING VALE AND BOISE BLM DISTRICTS (ZONES 637 AND
408) TONIGHT FOR DRY LIGHTNING AND LOCALLY STRONG WINDS.

RED FLAG WATCH REMAINS IN EFFECT TONIGHT FOR ZONES 409 AND
ELEVATIONS BELOW 5000 FT ZONES 401 AND 404 FOR POSSIBLE
DRY LIGHTNING AND STRONG WINDS.

FIRE WEATHER WATCH ROCK SPRINGS BLM (ZONE 417) SATURDAY FOR
STRONG WINDS, LOW HUMIDITIES AND ISOLATED DRY LIGHTNING.

DISCUSSION...

DOPPLER RADAR AND LIGHTNING DETECTION SHOW A BAND OF LIGHTNING
WITH VERY LIMITED RAINFALL FROM NEAR BOISE ACROSS THE VALE BLM
DISTRICT INTO NORTHWEST NEVADA. THESE STORMS ARE ASSOCIATED WITH
AN UPPER TROUGH THAT IS MOVING ONTO THE COAST. EXPECT THESE
THUNDERSTORMS WILL LAST PAST MIDNIGHT WITH GUSTS TO UP TO 50 MPH
POSSIBLE. THESE STORMS ARE MOVING TOWARD THE NORTHEAST AT ABOUT
30 MPH.

SOUTHEAST IDAHO AND WESTERN WYOMING (ZONES 411-417)

TONIGHT...

SKY/WEATHER...SCATTERED CLOUDS. ISOLATED DRY THUNDERSTORMS
ZONE 412.
LAL.....1 EXCEPT 2 ZONE 412.
TEMPERATURE...LOWS 40S TO MID 50S VALLEYS AND 50S TO MID 60S
RIDGES.
HUMIDITY.....MODERATE RECOVERY VALLEYS, POOR UPPER SLOPES AND
RIDGES. MAX 55-85 PCT VALLEYS AND 20-45 PCT UPPER
SLOPES AND RIDGES.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-20 MPH THIS EVENING WITH
GUSTS TO 30 MPH ON RIDGES. VALLEY WIND DIMINISHING
TO 5-15 MPH AFTER DARK BUT RIDGES CONTINUING 10-25
MPH. WINDS GUSTING TO 50 MPH POSSIBLE WITH
THUNDERSTORMS ZONE 412.
HAINES INDEX..5 MODERATE NORTH AND 6 HIGH SOUTH.

SATURDAY...

SKY/WEATHER...PARTLY CLOUDY AND WINDY. WIDELY SCATTERED
THUNDERSTORMS, ESPECIALLY DURING THE AFTERNOON
HOURS.
LAL.....2-3
TEMPERATURE...LITTLE CHANGE TO DOWN 5. HIGHS 70S AND 80S EXCEPT
NEAR 90 LOWER ELEVATIONS ZONES 413 AND 417.

HUMIDITY.....UP 3-10 PCT. MINS 12-35 PCT..LOWEST ZONE 417.
WIND - 20 FT..SOUTHWEST TO WEST INCREASING TO 20-35 MPH BY LATE
MORNING. GUSTS TO 55 MPH POSSIBLE RIDGES AND NEAR
THUNDERSTORMS.
HAINES INDEX..5 MODERATE

SMOKE DISPERSAL....MARGINAL TONIGHT AND EXCELLENT SATURDAY.

SNAKE RIVER VALLEY/SOUTHEAST OREGON (ZONES 408-410 AND 637)

TONIGHT...RED FLAG WARNING FOR DRY LIGHTNING AND STRONG WINDS..
SKY/WEATHER...ZONES 637/408 AND 409..PARTLY CLOUDY AND BREEZY..
WIDELY SCATTERED DRY THUNDERSTORMS DEVELOPING
THIS EVENING AND CONTINUING THROUGH THE NIGHT.
ZONE 410..SCATTERED CLOUDS AND BREEZY.
LAL.....6 ZONES 637/408..2 ZONE 409..1 ZONE 410.
TEMPERATURE...A WARM NIGHT WITH LOWS MID 50S AND 60S.
HUMIDITY.....POOR RECOVERY. MAX 35-55 PCT VALLEYS AND 20-35
PCT SLOPES AND RIDGES.
WIND - 20 FT..SOUTH TO WEST 10-25 MPH DECREASING TO 8-18 MPH
AFTER DARK. GUSTY WINDS TO 55 MPH POSSIBLE NEAR
THUNDERSTORMS.
HAINES INDEX..6 HIGH DECREASING TO 5 MODERATE.

SATURDAY...

SKY/WEATHER...ZONES 637/408..PARTLY CLOUDY EARLY THEN
MOSTLY SUNNY BY AFTERNOON. COOLER AND WINDY.
ZONES 409/410..PARTLY CLOUDY WITH ISOLATED TO
WIDELY SCATTERED THUNDERSTORMS. WINDY AND A
LITTLE COOLER.
LAL.....2-3
TEMPERATURE...DOWN 10-15 ZONES 637/408..DOWN 6-12 ZONE 409..
AND DOWN 4-7 ZONE 410. HIGHS IN THE 80S.
HUMIDITY.....UP 5-15 PCT. MINS 15-30 PCT.
WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-25 MPH WITH GUSTS TO 40
MPH. GUSTY WINDS TO 50 MPH POSSIBLE NEAR THUNDER-
STORMS.
HAINES INDEX..4 LOW WEST AND 5 MODERATE EASTERN ZONES.

SMOKE DISPERSAL....MARGINAL TONIGHT AND EXCELLENT SATURDAY.

CENTRAL IDAHO MOUNTAINS (ZONES 401-407)

TONIGHT...

SKY/WEATHER...SCATTERED CLOUDS. WIDELY SCATTERED THUNDERSTORMS
DEVELOPING ZONES 401-404 AROUND MIDNIGHT MOVING
INTO EASTERN ZONES BY MORNING. LITTLE IF ANY RAIN
WITH THUNDERSTORMS.
LAL.....2-3
TEMPERATURE...LOWS 40S TO MID 50S VALLEYS AND 50S TO LOWER 60S
UPPER SLOPES AND RIDGES.
HUMIDITY.....MODERATE RECOVERY VALLEYS, POOR UPPER SLOPES AND
RIDGES. MAX 55-75 PCT VALLEYS AND 30-45 PCT UPPER
SLOPES AND RIDGES.
WIND - 20 FT..SOUTHWEST TO WEST 10-20 MPH. WIND DECREASING TO
4-9 MPH VALLEYS AFTER DARK. WINDS GUSTING TO 50

MPH NEAR THUNDERSTORMS.
HAINES INDEX..5 MODERATE.

SATURDAY...

SKY/WEATHER...ZONES 401-404..PARTLY CLOUDY WITH WIDELY SCATTERED
MORNING THUNDERSTORMS. CLEARING DURING THE
AFTERNOON. COOLER AND LOCALLY WINDY.
ZONES 405-407..PARTLY CLOUDY WITH WIDELY SCATTERED
THUNDERSTORMS, MAINLY DURING THE AFTERNOON. WINDY
AND A LITTLE COOLER.

LAL.....3

TEMPERATURE...DOWN 13 WEST TO 8 EAST. HIGHS 70S AND 80S.

HUMIDITY.....UP 5-10 PCT. MINS 18-35 PCT.

WIND - 20 FT..SOUTHWEST TO NORTHWEST 10-20 MPH BY LATE MORNING.
AFTERNOON GUSTS EASTERN ZONES TO 30 MPH. GUSTS
TO 50 MPH POSSIBLE NEAR THUNDERSTORMS.

HAINES INDEX..4 LOW

SMOKE DISPERSAL...MARGINAL TONIGHT AND EXCELLENT SATURDAY.

OUTLOOK FOR SUNDAY...

MOSTLY SUNNY, MILD AND BREEZY. ISOLATED THUNDERSTORMS WESTERN
WYOMING ZONES. HIGHS MID 60S AND 70S MOUNTAINS AND 70S TO MID
80S VALLEYS.

EXTENDED FORECAST MONDAY THROUGH WEDNESDAY...

MOSTLY SUNNY, WARMER AND DRIER. ISOLATED MOUNTAIN THUNDERSTORMS
LATE TUESDAY AND WEDNESDAY. HIGHS WARMING INTO THE 80S AND 90S
WITH NEAR 100 LOWER ELEVATION VALLEYS.

THE 6-10 DAY EXTENDED OUTLOOK FOR THURSDAY AUGUST 3 THROUGH
MONDAY AUGUST 7 CALLS FOR ABOVE NORMAL TEMPERATURES AND LITTLE OR
NO RAIN.

END..

NNNN

GLOSSARY

POINT FIRE
ACCIDENT INVESTIGATION



GLOSSARY OF WILDFIRE-FIGHTING TERMS**BLOWUP**

Sudden increase in fireline intensity sufficient to preclude direct control or to upset existing suppression plans. Often accompanied by violent convection and may have other characteristics of a fire storm.

BREAKOVER OR BREAKOUT

A fire edge that crosses a control line intended to confine the fire and the resultant fire. Also called a slopover.

BURN OUT

Setting fire inside a control line to consume fuel between the edge of the fire and the control line.

CLEAR TEXT

The use of plain English in radio communications transmissions. No ten codes are used in clear text.

CONTAINMENT

Completion of a control line around a fire and any associated spot fires that can reasonably be expected to stop the fire's spread.

COORDINATION

The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority (for its decision) of viable alternatives for selection of the most effective combination of available resources to meet specific objectives.

DEAD FUELS

Fuels with no living tissue in which moisture content is governed almost entirely by atmospheric moisture (relative humidity and precipitation), dry-bulb temperature, and solar radiation.

DIRECT ATTACK

Any treatment of burning fuel, e.g. by wetting, smothering, or chemically quenching the fire or by physically separating the burning from unburned fuel.

DISPATCH

The implementation of a command decision to move a resource or resources from one place to another.

DISPATCHER

A person employed who receives reports of discovery and status of fires, confirms their locations, takes action promptly to provide people and equipment likely to be needed for control in first attack, and sends them to the proper place.

DISPATCH CENTER

A facility from which resources are directly assigned to an incident.

DOZER

Any tracked vehicle with a blade for exposing mineral soil, with transportation and personnel for its operation.

DOZER LINE

Fireline constructed by a dozer.

DRY LIGHTNING STORM

Thunderstorm in which negligible precipitation reaches the ground. Also called a dry storm.

ENGINE

Any ground vehicle providing specified levels of pumping, water, and hose capacity.

ENTRAPMENT

A situation where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes or safety zones are absent. An entrapment may or may not include deployment of a fire shelter for its intended purpose. These situations may or may not result in injury.

ESCAPE ROUTE

The way out to safety, either to an already burned area, previously constructed safety area, a meadow that won't burn, natural rocky area that is large enough to take refuge without being burned. When escape routes deviate from a defined physical path, they should be clearly marked (flagged).

ESCAPED FIRE

Fire that has exceeded initial attack capabilities.

ESCAPED FIRE SITUATION ANALYSIS

A decision-making process that evaluates alternative suppression strategies against selected environmental, social, political, and economic criteria. Provides a record of decisions.

EXTREME FIRE BEHAVIOR

"Extreme" implies a level of fire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, sometimes dangerously.

FINGERS OF A FIRE

The long narrow extensions of a fire projecting from the main body.

FIRE BEHAVIOR

The manner in which a fire reacts to the influences of fuel, weather and topography.

FIRE BEHAVIOR FORECAST

Prediction of probably fire behavior, usually prepared by a Fire Behavior Officer, in support of fire suppression or prescribed burning operations.

FIRE CREW

General term for two or more firefighters organized to work as a unit.

FIRE PERIMETER

The entire outer edge or boundary of a fire.

FIRE SHELTER

An aluminized tent offering protection by means of reflecting radiant heat and providing a volume of breathable air in a fire entrapment situation. Shelters may be used for protecting against falling embers or smoke inhalation in non life-threatening situations or as radiant heat shields during escape.

FIRE SHELTER DEPLOYMENT

The removing of a fire shelter from its case and using it properly for protection against fire.

FLAME HEIGHT

The average maximum vertical extension of flames at the leading edge of the fire front. Occasional flashes that rise above the general level of flames are not considered. This distance is less than the flame length if flames are tilted due to wind or slope.

FLAME LENGTH

The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface), an indicator of fire intensity.

FLAMING FRONT

The zone of a moving fire where the combustion is primarily flaming. Behind this flaming zone combustion is primarily glowing. Light fuels typically have a shallow flaming front, whereas heavy fuels have a deeper front. Also called fire front.

FLANKS OF A FIRE

The parts of a fire's perimeter that are roughly parallel to the main direction of spread.

FLASH FUELS

Fuels such as grass, leaves, draped pine needles, fern, tree moss and some kinds of slash, that ignite readily and are consumed rapidly when dry. Also called fine fuels.

FUEL BED

An array of fuels usually constructed with specific loading, depth and particle size to meet experimental requirements; also, commonly used to describe the fuel composition in natural settings.

FUEL LOADING

The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area.

FUEL MODEL

Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

FUEL TYPE

An identifiable association of fuel elements of distinctive species, form, size, arrangement, or other characteristics that will cause a predictable rate of spread or resistance to control under specified weather conditions.

GROUND FUEL

All combustible materials below the surface litter, including duff, tree or shrub roots, punky wood, peat, and sawdust, that normally support a glowing combustion without flame.

HAINES INDEX

A tool used to measure the contribution of atmospheric stability to the growth potential of existing fires.

HEAD OF A FIRE

The side of the fire having the fastest rate of spread.

HEAVY FUELS

Fuels of large diameter such as snags, logs, large limbwood, that ignite and are consumed more slowly than flash fuels.

INCIDENT COMMAND SYSTEM

The combination of facilities, equipment, personnel, procedure and communications operating within a common organizational structure, with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

INCIDENT COMMANDER

Individual responsible for the management of all incident operations.

INCIDENT OBJECTIVES

Statements of guidance and direction necessary for selection of appropriate strategy(s), and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed.

INITIAL ATTACK

The wildfire control efforts taken by resources that are first to arrive at a wildfire.

INITIAL ATTACK INCIDENT COMMANDER

The incident commander at the time the first attack forces commence suppression work on a fire

KNOCK DOWN

To reduce the flame or heat on the more vigorously burning parts of a fire edge.

LIGHTNING ACTIVITY LEVEL (LAL)

A number, on a scale of 1 to 6, that reflects frequency and character of cloud-to-ground lightning. The scale is exponential, based on powers of 2 (i.e., LAL 3 indicates twice the lightning of LAL 2).

LIVE FUELS

Living plants, such as trees, grasses, and shrubs, in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms, rather than by external weather influences.

NATIONAL WILDFIRE COORDINATING GROUP (NWCG)

A group formed under the direction of the Secretaries of Agriculture and the Interior and comprised of representatives of the U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, U.S. Fish and Wildlife Service and Association of State Foresters. The group's purpose is to facilitate coordination and effectiveness of wildland fire activities and provide a forum to discuss, recommend action, or resolve issues and problems of substantive nature. NWCG is the certifying body for all courses in the National Fire Curriculum.

NATIONAL INTERAGENCY FIRE CENTER (NIFC)

A facility located at Boise, Idaho, jointly operated by several federal agencies, dedicated to coordination, logistical support, and improved weather services in support of fire management operations throughout the United States.

NOMEX

Fire-resistant synthetic material used in manufacturing of flight suits, pants and shirts used by firefighters.

RATE OF SPREAD

The relative activity of a fire in extending its horizontal dimensions. Usually it is expressed in chains or acres per hour for a specified period in a fire's history.

RED FLAG WARNING

Term used by fire weather forecasters to alert forecast users to an ongoing or imminent critical fire weather pattern.

REEL

A frame on which hose is wound, now chiefly used for "booster" or small hose (3/4 or 1-inch hose), supplied by a water tank.

REMOTE AUTOMATIC WEATHER STATIONS (RAWS)

An apparatus that automatically acquires, processes, and stores local weather data for subsequent transmission to the GOES Satellite, from which they are retransmitted to an earth receiving station for use in the National Fire Danger Rating System.

RURAL FIRE PROTECTION

Fire protection and firefighting problems that are outside of areas under municipal fire prevention and building regulations and that are usually remote from public water supplies.

SITUATION ANALYSIS

Analysis of factors that influence suppression of an escaped fire from which a plan of attack will be developed; includes development of alternative strategies of fire suppression and net effect of each.

SPRAY

Water applied through an orifice in finely divided particles to absorb heat and smother fire, to protect exposures from radiated heat, and to carry water toward otherwise inaccessible fire.

STRIKE TEAM

Specified combinations of the same kind and type of resources, with common communications, and a leader.

STRIKE TEAM LEADER

Person responsible to a division/group supervisor for performing tactical assignments given to the strike team.

STRUCTURE FIRE

Fire originating in and burning any part or all of any building, shelter, or other structure.

TACTICS

Deploying and directing resources on an incident to accomplish the objectives designated by strategy.

TURNOUT COAT

Waterproof, lined fire coat with snap fastenings that may be donned quickly when turning out on a fire alarm; generally used on structure fires and hazardous material fires, but not on wildfires.

WATER TENDER

Any ground vehicle capable of transporting specified quantities of water.

WET LINE

A line of water, or water and chemical retardant, sprayed along the ground, that serves as a temporary control line from which to ignite or stop a low-intensity fire.

WILDLAND/URBAN INTERFACE

The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.