

Staff Ride Library



Wildland Fire Leadership Development Program

Battlement Creek Fire - Facilitator's Field Guide

Note to Facilitators: This is a suggested format. Do not feel limited by the identified stands or discussion items. It is provided as a word document so that users may adapt and revise it to fit their specific audience and schedule.

STAFF RIDE DIFFICULTY RATING:

Physical

Light – Stand 1, Stand 2, and the Alternate Stand are accessible by vehicle.

Moderate – The hiking trail to Stand 3 and Stand 4.

Arduous – The hiking trail to Stand 5 and Stand 6.

The arduous and moderate Stands are accessible by an established trail system and hiking conditions consists of ridgelines and steep slopes.

Elevation

Stand 3 is approximately 6400 feet

Stand 6 is approximately 8500 feet

From the start of the ATV road to Stand 4 is approximately 1/2 mile with 450 feet of elevation gain.

Stand 4 to Stand 6 is approximately 3/4 mile with 850 feet of elevation gain.

Logistics

The Battlement Creek Fire site is located approximately 2.5 miles east, southeast of Parachute, Colorado. Parachute, Colorado is located at Exit 75 on Interstate 70. Parachute is approximately 1 hour (50 miles) east of Grand Junction, Colorado and approximately 3 ½ hours (200 miles) west of Denver, Colorado. Parachute has minimal lodging and meal accommodations for small groups. Larger group accommodations are available in Grand Junction or Rifle. Access to the Battlement Creek area is dependent on snow pack and weather conditions. County Road 302 is a dirt road into the area which consists of natural shale and can be very slippery during wet conditions. The trail to the fatality sites is steep and can be very slick during these same periods. Best access into the area is after mid-April. Parking is limited along County Road 302 at Stand 1, Stand 2, and at the base of the ATV road to Stand 3.

Hazards

Traffic

Depending on local natural gas drilling activities there may be periods of heavy truck traffic in and out of the area early in the mornings and late in the afternoon.

Terrain

The trail system is an open cut saw line which is located on a ridge between the North and South Bowls, respectively referred to as the 16th and 17th Bowls due to the fire behavior on each day. While walking the trail from Stand 4 to 6 you may experience some loose shale rock. When dry, the soils are loose and unstable footing is common. When wet or frozen, the soils become slippery and unstable footing is to be expected with potential for slips and falls.

Other Users: The area is frequented primarily during the fall hunting season (August through November). The base of the 17th Bowl is used by sportsman to sight in rifles and for general target practice.

Weather

Given the nature of the terrain, cloud build-up can appear quickly from the Southwest. Summer time afternoon thunderstorms and lightning occur frequently. Winds can be very significant in the area, especially in the afternoon and typically cooler at the higher elevations. The shape of the terrain causes a funneling of the winds up the bowls and to the saddle at the top of the ridges, just as it did in 1976. Warm clothing and plenty of drinking water is highly recommended.

Snags

There are a few Douglas-fir snags in the area. Be aware of potential for snags to come down without notice.

Rocks

Rolling rocks are few, but sliding shale is common, increasing the potential for slips and falls – wear sturdy soled hiking boots with adequate ankle support.

Fuel Types

The area is covered in re-growth of Gambel's oak, mountain mahogany, service berry and other assorted brush species. There are some pinyon and juniper trees in the area with smaller pockets of Douglas-fir. Along the trail, prickly pear and some small barrel cactus can be found. Long pants and long-sleeved shirts are highly recommended.

Stand 1 – T56

Maps

Travel Map

Local Access Map

Topographic Map with stand locations

Coordinates (WGS 84): Lat: N39° 24.513' Long: W107° 57.046'

Travel Directions

From Denver, Colorado:

I-70 West approximately 200 miles to Exit 75, Parachute, Colorado.

From Grand Junction, Colorado:

I-70 East approximately 50 miles to Exit 75, Parachute, Colorado.

From Parachute, Colorado:

At Exit 75 (off I-70), travel south on Garfield County Road 215 across the Colorado River and up the hill toward Battlement Mesa.

At the entrance to Battlement Mesa, continue straight up the hill (past the waterfall) on N. Battlement Parkway/E. Battlement Parkway (County Road 301) for approximately 2 miles.

Turn left onto Four Corners Road (County Road 308) for approximately 1.5 miles.

Turn left onto Underwood Lane (County Road 302) for approximately 5.2 miles.

Stay on the main road to the Battlement Creek drainage (DO NOT turn right into Jack's Pocket just after the fire danger sign).

Stand 1 is at the intersection of County Road 302 and the private Natural Gas Road (green gate).

Terrain Orientation

Interstate 70

Parachute

Colorado River

Battlement Creek drainage

Doghead Mountain

Rulison Project

Discussion Topics

- The Battlement Creek Fire of 1976 started on Sunday, July 11 at approximately 1600 after a severe lightning storm came through the Parachute and Morrisania communities. Lightning was concentrated in and around the Eames Orchard area of Morrisania Mesa. It consumed 880 acres in 3 days.
- On July 12, at approximately 1330, a ½ acre fire was reported and controlled at 1700 by the Grand Valley Volunteer Fire Department. At 2130, a lightning strike was observed by a local citizen in approximately the same vicinity which resulted in an immediate fire start. The Grand Valley Volunteer Fire Department responded to this fire and returned home at 0300, July 13.
- On Thursday, July 15, at approximately 1400, the Grand Valley Volunteer Fire Department responded to a smoke report in the same vicinity near Eames Orchard. It was determined this smoke report was from the same fire they took action on twice before on July 12th. They were just starting suppression action when an increase in wind velocity was noted. The fire jumped about 20-30 feet to the south into sage and cheatgrass and spread rapidly. At about 1530 the Grand Junction District BLM initiated the mobilization of additional ground and aviation resources.
- Project Rulison, a research site located up canyon from the point of origin, soon became a significant factor for establishing the initial incident objectives. This was a program sponsored by Austrol Oil of Houston, Texas, and Los Alamos Scientific Laboratories under the supervision of the Atomic Energy Commission.
- Project Rulison was the blast site of a 43-kilo ton atomic blast, 8,426 feet below the surface, which was conducted as part of the governments Operation Plowshare project on September 10, 1969. The blast was part of an effort to convert government nuclear programs into various peacetime uses of atomic power.
- At the time of the fire, there were still large amounts of equipment and two aboveground storage tanks still on site. Each tank contained explosive vapors and low-level radioactive materials.
- On Friday, July 16, one day before the crew accident, a B-26 airtanker crashed on a retardant dropping mission on the Battlement Creek Fire. The accident occurred at 0856, approximately one mile south of the fire. It was determined that T-56 never completed its turn prior to impacting the ridge in front of us. It was noted by witnesses that the pilot did jettison the retardant load just prior to impact. The pilot of T-56, Donald Goodman of Missoula, Montana, was killed.
- The crash diverted the Line Boss and the Sawtooth Inter-Regional crew for much of the day in controlling a fire at the crash site and removing the pilot's remains. This accident was not directly related to the crew fatalities and injuries.
- Airtanker operations were halted after the accident and not resumed until the following day.

Handout Tactical Decision Game #1, allow five minutes and discuss.

Stand 2 – The Cattle Guard

Maps

Topographic Map with stand locations

Topographic Map with fire progression

Coordinates (WGS 84): Lat: N39° 25.387' Long: W107° 57.745'

Travel Directions

Driving Directions to Stand 2: From Stand 1, drive back down Garfield County Road 302, 1.2 miles to the Cattle Guard.

You can park along side of the road, but you must be careful of traffic on this road.

Terrain Orientation

Division B/C break

July 17th Bowl

July 16th / 17th Ridgeline

Upper Helispot Ridge

Discussion Topics

- The national situation on July 16th was fairly busy with initial attack and a few large fires. Most of these fires were not utilizing outside resources. A large supply of crews, aircraft of all kinds (except heavy helicopters), overhead, radio equipment, and fire supplies were available.
- As part of the overall strategy to impede the fires southerly progress and protect the Project Rulison site, dozer line construction commenced around 0900 on Friday the 16th. Dozer operations were completed around 1600.
- The Mormon Lake and Happy Jack Hotshot crews began burning out the dozer line around 1615 and reached the road at about 2030. The burnout spread 60 feet from the line, with some deeper pockets and continued downhill (northerly).
- The burnout involved primarily surface fuels and there were no spot fires south of the line.
- An evening burnout from the intersection of the dozer line and County Road 302 to the north was not as successful as the previous section of line burned out during the afternoon. The burnout on the road was also primarily a surface fire and left a considerable amount of unburned fuel in the Gambel's oak overstory leaving the canopy cured.
- Mormon Lake and Happy Jack Hotshot crews reached fire camp around 0100 to get some sleep prior to meeting in a few hours for the next day's assignments.

Handout Tactical Decision Game #2, allow five minutes and discuss.

Stand 3 – The 16th Bowl

Maps

Topographic Map with stand locations

Topographic Map with fire progression

Coordinates (WGS 84): Lat: N39° 25.662' Long: W107° 57.697'

Travel Directions

From Stand 2, drive .1 miles north on County Road 302; park along County Road 302;

Walk up the ATV road to the ridgeline;

The 16th Bowl (Stand 3) is on the northern edge of the ridgeline.

Terrain Orientation

July 16th Bowl

Lower Helispot Ridge

County Road 302

Morrisania Mesa

Parachute

Discussion Topics

- A prophetic report prepared by the Colorado State Forest Service, “Guidelines and Criteria for Wildfire hazard Areas, September 1974” described frost killed Gambel’s oak as “fuel type X” that supports high-to-severe wildfire hazards. Potential for extreme fire behavior conditions surrounding frost killed Gambel’s oak had been documented before this incident.
- A severe frost on June 14th killed more than 50% of the leaves on the Gambel’s oak. At the time of the fire, many of the dead leaves were still hanging in the canopy while others had fallen creating a 1 – 2 inch litter layer. Relatively warm, dry weather following the frost provided conditions that further cured the Gambel’s oak overstory.
- Minimum fuel moistures of the dead leaves in the oak canopy and other fine fuels were estimated to be between 7-8%.
- The typical weather pattern combined with steep mountainous terrain and existing fuels established conditions for high rates of fire spread in the Battlement Creek drainage during the afternoon hours.
- On July 16th, in the span of 30 minutes the fire made a run from County Road 302 (Battlement Creek Road) to the ridge top generating two large fire whirls.
- Precipitation amounts were near normal for this time of year, relative humidity was not unusually low, and wind velocities were typical of the area.

Handout Strategic Discussion Point #3, allow five minutes and discuss.

Stand 4 – The Observation Point

This is the last identified stand at the Battlement Creek Fire location when conducting a light or moderate staff ride. The Alternate Stand – Battlement Creek Fire Memorial, located just north of Interstate 70 at the Parachute Rest Area, may be used as the last stand and/or the integration phase of the staff ride.

Maps

Topographic Map with stand locations

Topographic Map with fire progression

Coordinates (WGS 84): Lat: N39° 25.745' Long: W107° 57.405'

Travel Directions

From Stand 3, walk back to the main trail and continue up the middle ridgeline in an easterly direction for approximately 1400 feet.

You are walking on the ridgeline located in between the 16th (north) and 17th (south) Bowls.

To the south, approximately 1.5 miles away is the crash site of the T-56.

Terrain Orientation

July 17th Bowl, Ridgeline & Cliffs

Upper Helispot

T 56 Memorial Site

County Road 302

Discussion Topics

- During the summer of 1976 western Colorado was experiencing an unusually severe fire season caused partly by unusual fuel conditions (frost kill) and heavy lightning activity during dry weather. The Grand Junction BLM District experienced a greater number of fire starts, which taxed their fire control capability.
- The national situation on July 17, reported 458 fires. Of the 458 fires, 384 of them were in California which was experiencing red flag conditions. The Battlement Creek Fire was the only one drawing on BIFC (NIFC) support.
- There were 13 crews totaling 270 personnel and approximately 20 overhead assigned to the fire July 17.
- The overhead that managed this fire had not worked together previously and was not a pre-organized Class II Overhead Team (Incident Management Team).
- The following positions were not filled on this fire: Tractor Boss (DOZB), Fire Behavior Officer (FBAN), Equipment Officer (GSUL), Communication Officer (COML) and Air Attack Boss (ATGS). There was an absence of key support positions in the plans and service function which resulted in members of the team doing other duties which detracted from their primary assignment.

- The Sector Boss (DIVS) and the Line Boss (OSC2) relied heavily on Mormon Lake and Happy Jack Hotshot Crew judgment to complete their assignments.
- The Mormon Lake Hotshot Crew was established in 1976 and had worked together on 17 fires prior to the Battlement Creek Fire. It was the first year the overhead had worked together as an established Hotshot Crew.
- The fuels and topography in the 17th Bowl are very similar to 16th Bowl therefore suppression tactics on the 17th were based off the previous days' fire behavior. By noon on July 17th, the Happy Jack Hotshots burnout was established in the bottom of the 17th Bowl.
- An aerial reconnaissance flight occurred prior to day shift on the 17th with the Mormon Lake Hotshot Crew Boss, Sector Boss and the Line Boss.
- Handheld radios in 1976 were not field programmable and could not scan. Mormon Lake Hotshot Crew Boss, Czack, had to carry two radios; one to talk to his crew and a second to talk to overhead.

Handout Strategic Discussion Point #4, allow five minutes and discuss.

Stand 5 – The Upper Helispot

Maps

Topographic Map with stand locations

Topographic Map with fire progression

Coordinates (WGS 84): Lat: N39° 25.841' Long: W107° 57.151'

Travel Directions

From Stand 4, continue walking the trail to stand 5. Loose soil and footing may be a problem.

When you reach the top, the trail leads to the center of a cleared opening and flat area. This area is the Upper Helispot used by the Mormon Lake crew on the day of July 17, 1976.

Total walking distance is approximately 1500 feet.

The designated Safety Zone is down the slope to the north and east, past the Lower Helispot.

Terrain Orientation

July 16th & 17th Ridgeline

Upper Helispot

July 17th Bowl

Flat Tops Wilderness & Storm King Mountain (1994 South Canyon Fire) to the east

Roan Plateau, north of I-70

Discussion Topics

- At the morning briefing on Saturday the 17th, the Happy Jack Hotshots were assigned to burnout inside the black in order to solidify previous day's burnout adjacent to the road and dozer lines along the south perimeter.
- The Mormon Lake Hotshots were assigned to improve the line on top of the ridge which was previously worked on by the night shift crews. Line construction was just to the lee side of the slope.
- Mormon Lake Hotshots arrived at Helibase at 0730 and due to a series of other priorities never reached the Upper Helispot until about 1100. At this time they began improving the line from the rock bluff back down to the Upper Helispot.
- The Happy Jack Hotshots began ignitions at or around 0900 and worked their way down the dozer line reaching the road at around 1200. At this time the crew broke into squads with half eating lunch and the remainder continuing to improving the blackline along County Road 302 (Battlement Creek Road).
- The Happy Jack Hotshots worked deep in the black, off the road, with the completion of firing around 1315. The fire burned uphill in the 17th Bowl.

- From their position along the top of the ridge on the morning of the 17th, Mormon Lake crewmembers would have seen residual smoke in the 16th Bowl and current smoke along the dozer line from the Happy Jack Hotshots burn out operation.
- The Mormon Lake Hotshot Crew Boss, Tony Czak and three other crewmen, attempted to burn out fingers between the Rock Bluff and the Upper Helispot. Two other Mormon Lake crewmembers were posted on top of the bluff to observe for spots.
- In 1976, even though fire shelters were available, they were not mandatory for personnel to carry. The Mormon Lake Hotshots had fire shelters but because of the weight, they were left in camp that morning, a common practice at the time. Typical personal protective equipment at the time consisted of blue jeans, early generation Nomex shirts, Filson cruiser vests and aluminum hard hats.
- Observers on the fire at the time of the accident reported high winds at ground level 25-35 mph. and above. Earlier in the day, the weather was described as fair; winds were light both on the ridge and on lower portions of the fire. Some small whirl activity was reported about 1230-1300 which would indicate unstable atmospheric conditions.

Handout Tactical Decision Game #5, allow five minutes and discuss.

Stand 6 – The Flag

Maps

Topographic Map with stand locations

Topographic Map with fire progression

Coordinates (WGS 84): Lat: N39° 25.689' Long: W107° 56.947'

Travel Directions

From Stand 5, follow the trail south, up the ridge to the Flag.

Terrain Orientation

July 17th Ridgeline & Cliffs

Upper Helispot

July 17th Bowl

County Road 302

After conducting Stand 6 discussions, allow time to explore the area

Stephen Furey's marker is located near the Flag.

- Lat: N39° 25.684' Long: W107° 56.947'

Scott Nelson's marker is located down slope, west of the flag.

- Lat: N39° 25.681' Long: W107° 56.988'

Tony Czak's marker is located north, approximately 1,000 feet down the trail from Nelson's marker. The original cairn that was constructed after the fire, and is still located at this site.

- Lat: N39° 25.785' Long: W107° 57.112'

Discussion Topics

- At the time of the accident, the atmosphere was unstable, normal up-slope winds were occurring, winds aloft were generally light SW and ranged from 5-15 m.p.h.
- At approximately 1315 the Happy Jack Hotshot crew had completed the lower burnout along the road. Unbeknownst to the Mormon Lake Hotshots the fire was starting to work its way up into the 17th Bowl.
- At about 1330 the Mormon Lake burnout squad was to burn out a 60 – 80' strip along the improved line on the main ridge. The burn out progressed slowly and was difficult to keep burning. The burnout squad consisted of crew boss Tony Czak, Squad boss John Gibson, and Crewmen Stephen Furey and Scott Nelson.
- At 1400, the burnout squad encountered dense oak brush which produced erratic fire behavior. During this same time span, fire behavior lower downhill in the 17th Bowl was increasing. Topography ranged from 10% at the bottom near the road to 75% near the ridgeline.

- The Sector Boss called Czak to move the line improvement squad to the Safety Zone because of incoming Airtankers, they moved to the Safety Zone. The conditions became smokey.
- Tony Czak had two radios, an incident radio and crew net radio; the two squad bosses had only crew net radios.
- When the order to leave was made by sector boss, Czak heard it on the incident radio and had to relay the message to his squad bosses on the crew net radio.
- The Sector Boss heard the report that all had made it to the Safety Zone and assumed “all” included the members of the burnout squad.
- The burnout squad was separated by 100 – 200 yards from the rest of the crew with a wall of fire between them. The time was between 1425 & 1430. Unable to reach the Safety Zone, Crew Boss Czak radioed his squad boss who was in the Safety Zone and told him that they were trapped and unable to make it to the Safety Zone. Czak also radioed the Sector Boss with the same information and told him that the burnout squad would be moving back up the ridgeline toward the rock bluff. The time is now between 1430 & 1435.
- At approximately 1440 the burnout squad was unable to go any further up the slope toward the rock bluff. After being given orders by Crew Boss Czak, the crew took off their canvas vests, wet down their vests, shirts and trousers and laid down in the fireline. At approximately 1440 – 1445 the fire roared over the burnout squad. During the burnover, at approximately 1448, Crewman Scott Nelson got up and ran down hill. Shortly after Nelson got up, crew boss Tony Czak got up and ran down the ridgeline in the direction of the Safety Zone and died after traveling approximately 1000 feet.
- At 1510, the Sector Boss arrived at the original burnover site and found Gibson and Furey still alive. Shortly after his arrival, Stephen Furey passed away. John Gibson was airlifted to St. Mary’s Hospital in Grand Junction and then on to a burn center in Albuquerque, New Mexico.

Handout Tactical Decision Game #6 or Strategic Discussion Point #6, allow five minutes and discuss.

Alternate Stand – Battlement Creek Fire Memorial Parachute Rest Area

Maps

Travel Map

Coordinates (WGS 84): Lat: N39° 25.698' Long: W107° 57.532'

From Denver, Colorado

I-70 West approximately 200 miles to Exit 75, Parachute, Colorado.

From Grand Junction, Colorado

I-70 East approximately 50 miles to Exit 75, Parachute, Colorado.

The memorial is located north of Interstate 70 in Old Town Parachute, at the Parachute Rest Area.

Terrain Orientation

Interstate 70

Parachute

Colorado River

Battlement Creek drainage

Doghead Mountain

Fatality Site

Discussion Topics

- This stand could serve as a good site for the integration phase of a staff ride.