

Rapid Lesson Sharing

Event Type: Wildfire Blowup with Civilians on Scene

Date: July 30, 2023

Location: Elkhorn Fire, Payette National Forest, Krassel Ranger District, Frank Church River of No Return Wilderness

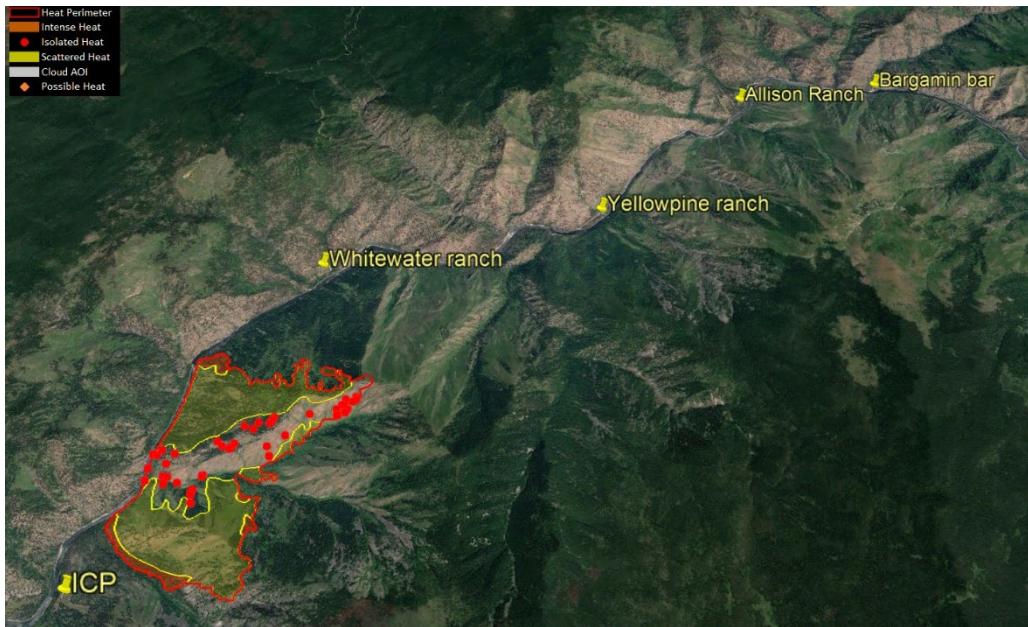
The Story and the Lessons Learned on the Elkhorn Fire

Background

Smoke Report: Fire in the Salmon River Canyon

The Elkhorn Fire was detected on the evening of July 24, 2023, and was quickly responded to by McCall Smokejumpers and the Payette National Forest's Snowslide Wildland Fire Module (WFM), based in McCall. The fire grew from the initial light smoke seen by the Sheepeater Lookout to an estimated 100 acres by the time the smokejumpers arrived on scene.

By the next evening, the fire had already grown to 1,250 acres. Due largely to the fire's remote location, the challenging logistics, and the potential for continued growth, a local Type 3 incident management team was assembled to assume command of the incident on July 26.



The Elkhorn Fire perimeter and the privately owned river ranches on July 26.

The U.S. Congress designated the Frank Church-River of No Return Wilderness in 1980. It now encompasses a total of 2,366,757 acres. Administration of the wilderness is accomplished by two U.S. Forest Service regions (the Northern and Intermountain), and four national forests (the Salmon Challis, Payette, Nez Perce, and Bitterroot).

As with most other wilderness areas within the national forest system, land management plans allow for fire to play its natural role within the ecosystem. While "contain and control" strategies are still utilized when appropriate, a strategy of monitor with "point protection" of values at risk allows for fire to assume its natural role while maximizing any incident's first objective: To provide for firefighter and public safety.

The initial strategies on the Elkhorn Fire were point protection of values at risk, including private property and national forest infrastructure within the Elkhorn Fire planning area boundary, and confine/contain the fire to the wilderness boundary.

After five days of moderately active growth, the fire was an estimated 2,000 acres in size. On the afternoon of July 30, the Elkhorn Fire will make a 20,000-acre, 9-mile run up the Salmon River Canyon, destroy 7 structures, and require firefighters to make quick decisions and take independent action to ensure not only their own safety but that of the public as well.

This is their story and their lessons learned.

The Story

On the morning of July 30, the Type 3 Incident Commander (ICT3) and Trainee were at the incident command post (ICP) at Campbell's Ferry, near the heel of the fire on the Payette National Forest side of the Salmon River. To this point, they had been observing the fire's behavior for 5 days. It was still burning updrainage on the south side of the Salmon River in a run-up-the-slope, flank across, rollout, "rinse and repeat" type pattern.

The forecasted weather was hot, dry, and breezy—not atypical for late July weather in the canyon. The spot weather forecasts for Friday July 28 through Sunday July 30 were showing temperatures in the mid-90s, humidities from 10 to 15 percent, and winds SW at 5 to 10—with the exception of the July 29 when they were forecasted to have ridgeline gusts in the upper teens.

***"We were ahead of the game. We kept asking:
'What are we missing? What aren't we doing
that we should be doing?'"***

ICT3 Trainee

Assigned to the Elkhorn Fire: A total of 14 McCall Smokejumpers, the Snowslide Type 1 Wildland Fire Module, and a 10-person module, Crew 11, from the Boise National Forest.

They had been working for 5 days to implement structure protection at the privately owned Whitewater Ranch (located directly across the Salmon River from the fire front), and the privately owned Yellow Pine Ranch (located 3 river miles upriver from the fire's edge). Both of these properties are located on the Nez Perce-Clearwater National Forest on the north side of the Salmon River.

Another suppression priority was to assess long-range point protection needs upriver, including the privately owned Allison Ranch (located 6 miles upriver from fire's edge) and various points farther east.

The primary plan, should the fire jump the canyon, was to utilize air support to attack any spot fires that crossed the canyon. If unsuccessful at initial attack, their structure protection measures would be utilized to herd the fire around the privately owned ranches.

Using contracted jet boats to move personnel between the river ranches and helicopters to sling in equipment, a typical day included: testing of pumps, improving plans for point protection, hiking the canyon to monitor fire behavior—and waving at the rafters enjoying their floats along the longest undammed river in the United States.

Between these daily tasks were regular conversations with the private landowners still going about their daily lives at their ranches. Most of the folks who live at these ranches have been there a long time. They are no stranger to wildfire and can provide a wealth of knowledge regarding fire behavior, fire history, local weather, and the logistics of living remotely in the Salmon River Canyon.

By the end of the day on July 30, the landowners, firefighters, and rafters on the river would all become part of the same crew to ensure everyone's safety.

“Never once did I think about asking the homeowners to leave, and they probably wouldn’t go anyway. They’ve seen a lot of fire and have been through this before.”

Incident Commander

The Witching Hour: Zero to Sixty

“It was a day just like any other.”

Violet
Crewmember, Snowslide Wildland Fire Module

By 1400 on July 30, the Incident Commander noticed the winds beginning to pick up with a few lenticular clouds overhead—nothing crazy as far as velocity. But it was a few hours earlier than it had been the last few days.

The fire was progressing upcanyon and was approaching an old burn scar consisting of heavy brush and dead-and-down timber on a northeast aspect. The firefighters were curious how this change in fuel type would affect the fire. Would it slow progression as burn scars historically do in this country? Or was the scar old enough to not slow the fire?

As the fire hit the ridge and spotted into the burn scar, the question was answered. Spot fires in the burn scar grew rapidly, burned hot, and a heavy smoke column began to develop. The best view of this activity was from the Whitewater and Yellow Pine ranches where Snowslide WFM and Crew 11 were working. They relayed the information back to ICP at Campbell’s Ferry via radio on the scene-of-action (SOA) portable repeater and began looking for spot fires.

At 1530, a spot fire across the river near Yellow Pine Ranch was observed by Crew 11 and Snowslide WFM. As planned, the crews ordered a Type 1 helicopter and fired-up the pumps. By 1600, continued fallout from the column is creating more and more spot fires, some within the perimeter of the hoselay. The spot fires grow rapidly under high winds, now reaching 60 mph and beyond the limit of the helicopter.

Reluctantly, this K-MAX Type 1 helicopter departs back to McCall. Fully aware of the increasing complexity, Violet, one of the Snowslide crewmembers, an FFT1 with 5 years of experience, is assigned to head upstream 4 river miles in a jet boat, captained by the owner of the Allison Ranch, to stop rafters at Bargamin Bar—



The Elkhorn Fire looking east upriver on July 30.

preventing them from floating into the firestorm that is quickly unfolding downriver.

With the ample time available in the previous days to prep the Yellow Pine Ranch, firefighting efforts were largely successful in protecting the ranch with no structures lost. However, the fire was now “off to the races” and heading toward another private value at risk located 2.5 river miles upstream that under more predictable conditions would have taken the fire days to get to: the Allison Ranch.

“Just like that—we were in it.”

Dale
McCall Smokejumper

When the 4 smokejumpers arrived at Allison Ranch by jet boat the morning of July 30, their mission was straightforward: continue to triage the ranch and begin setup of the protection equipment that had been dropped off by sling load the day before.

Allison Ranch is of substantial size, including 12 structures spread out up a slope. Therefore, the setup was anticipated to take a couple days. The fire that morning was still +/- 7 river miles away and still on the south side of the river. There seemed to be plenty of time to prep the property.

Around 1530, radio traffic began to increase from the situation unfolding at Yellow Pine Ranch. However, during this time, the jumpers recalled very little wind at Allison Ranch and a smoke column barely visible downriver. By 1630—just one hour later—it was a completely different situation at the Allison Ranch. Within an instant, the smoke and 60 mph winds that Yellow Pine Ranch had experienced were now bearing down on not only the smokejumpers at Allison Ranch, but also the residents there.

With 6-inch firebrands falling all around in a thick cloud of smoke and high winds, the jumpers considered burning out as best they could around the ranch. But with well-established spot fires seemingly everywhere, their focus quickly shifted to the immediate safety of themselves and the residents of the ranch.

As 90 mph gusts of wind broke tops out of trees, the jumpers and residents made their way down to the safety of a sandbar on the riverbank near the ranch.

Objective #1:
**Provide for Firefighter
and Public Safety**

When Violet arrived upriver at Bargamin Bar, the smoke and wind was already there. The plan was for her to remain at Bargamin to stop raft traffic at the relative safety of the nearby sandbar, while the jet boat driver (also the owner of Allison Ranch) ran back downriver to check on his family and his ranch.

Before he departed, Violet remarked: “Don’t forget about me!”

Now alone with only her line gear and radio—with spot fires becoming established on both sides of the river—Violet took a minute to roll-up a smoke and gather some situational awareness.



Looking downriver from Bargamin Bar. Note the spot fire on south side of the river.

Over the radio, she could hear the jumpers back at Allison Ranch attempting to burn out and eventually declare they were heading to their safety zone. She thought to herself: "This thing is coming right for me, and this (Bargamin Bar) definitely isn't a legit safety zone. What if I have to deploy my shelter?"

After collecting her thoughts, she got down to business scraping out a deployment area in the sand with her Rino tool, limbing-up nearby brush with her handheld silky saw and prepping for what she knew had to be done if she was going to ride it out at Bargamin—burn out around the bar.

Armed with the fusees in her line gear, she radioed back to ICP and notified them of her intention to burn out. ICP quickly responded with: "if that's what you need to do, we support the plan". By this time, Air Attack was overhead providing updates on the fire's progression to ICP and reaching out to Violet on air-to-ground, asking if she was okay. Violet replied that she was, but recalls: "When Air Attack asks if you are okay; that's not good."

Just as she was about to start burning out, through the smoke and the wind came a large group of boaters: 4 loaded rafts, 4 inflatable kayaks, and 12 people including kids—all headed straight for the firestorm.

Upon hearing that a group of rafters showed up at Bargamin Bar right when Violet was planning to burn out, Dale, one of the smokejumpers at Allison Ranch, decided to head upriver to assist Violet at Bargamin Bar. With the jet boat operator's family now safe, accounted for, and delivered by jet boat to Whitewater Ranch, Dale and the boat operator (who is fully aware he just lost his house) headed back upriver.

Meanwhile, the remaining jumpers hiked back up to Allison Ranch to see what they could save after the fire's initial pulse.

"I told the rafters to put on your shirts, your bandanas, anything you have to protect yourselves."

Violet

As the rafters at Bargamin Bar eddied out to the sandbar to tie-in with Violet she could see the concerned and exhausted looks on their faces and the tears running down their cheeks from the smoke.

The rafters informed her that their intention had been to camp for the night at Bargamin, however it was becoming clear that that was no longer a good idea. When the jet boat arrived shortly afterwards, Violet, Dale, and the boat operator started to develop a plan.

Having just come up the river, Dale provided Violet with an update on the fire behavior downstream. While it was still very windy and smoky, the risk of continuing downriver to the safety of Whitewater Ranch was a far better option than remaining at Bargamin Bar.

The plan quickly came together: Deflate the kayaks and leave them at Bargamin; use the jet boat to take the kids to the sandbar at Allison Ranch and ultimately Whitewater Ranch; and have the remaining adults row the rafts and gear to Allison Ranch along with Violet and Dale. Violet and Dale grabbed lifejackets from the jet boat, helped the kids aboard, and sent them downriver. Still in their boots and Nomex, they hopped in the rafts and started downriver themselves.



The Elkhorn Fire looking west downriver.

Back at Allison Ranch, the 3 jumpers made their way up the slope to the structures to see what they could salvage. As propane tanks vented from the intense heat and rounds of ammunition discharged from inside the burning buildings, they knew it was not a safe place to remain and made their way back to the sandbar to assist in their next mission: Evacuation.

From Violet's seat on the raft, she could see the oarsman's exhaustion. He had been on the river all day, rowing into a headwind that only seemed to get worse. Having some whitewater experience herself and knowing what rapids were ahead to get to Allison Ranch, she offered to take the oars for a bit. The oarsman gratefully accepted and they continued toward the waiting jet boat at Allison Ranch.



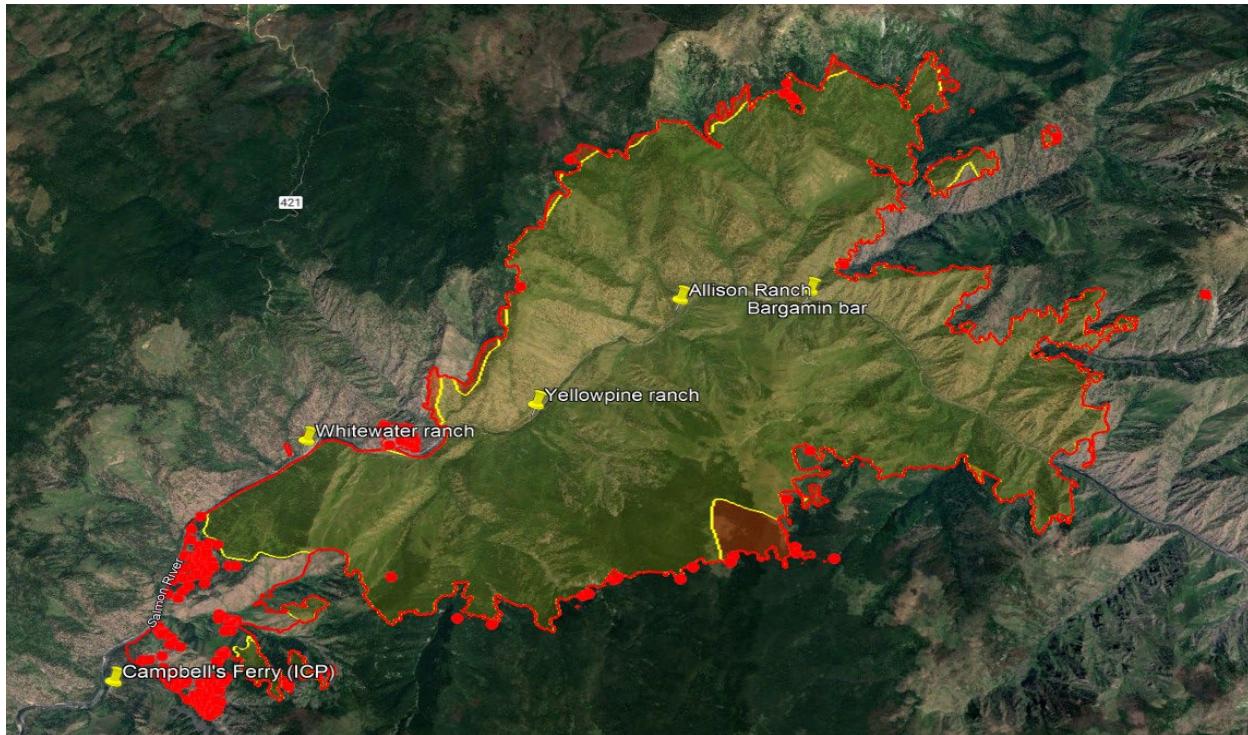
Getting ready to depart Bargamin Bar for Allison Ranch.

"You could really feel the heat off of both sides of the river."

Violet

Once the rafts arrived there, an additional jet boat from downriver joined in the mix. The plan to shuttle the rafters to Whitewater Ranch continued. However, due to the Class 3 and 4 rapids between Allison and Whitewater ranches, it became apparent that the rafts would need to remain at Allison Ranch overnight. In a race against the darkness, the jet boats and their experienced operators took load after load of people and gear through shallow rapids, wind, and smoke to the clear air and safety of Whitewater Ranch.

As the sun went down over "one hell of an afternoon" in the Salmon River Breaks, all but the 3 jumpers at Allison Ranch who remained on the sandbar overnight recovered to either Whitewater Ranch or to ICP at Campbell's Ferry. Exhausted and hungry but physically unharmed, everyone involved in the Elkhorn Fire blowup ended the day with a fresh perspective of the power and unpredictability of wildfire in the Salmon River Canyon.



The Elkhorn Fire perimeter on August 1.

The Lessons

Think first, then act. Be proactive and don't sit idle.

When operational tempo changes, so does our brain function. Taking a short moment just as Violet did at Bargamin Bar to consider personal safety is a valuable tool in navigating the “fog of war” and subsequently leads to crew safety and accountability in stressful situations.

What personal factors alert you to “tac pause” before making decisions?

What about those around you?

Be human when interacting with the public. Show leadership and empathy. Just listen.

Many times, the most stressful situations we find ourselves in as firefighters includes the public. Take a moment to consider their position: evacuations, loss of possessions, fear, panic, and, in some cases, the loss of loved ones. As responders we develop barriers to external emotions that influence our decision making. But that doesn't mean we can't consider the public's perspective and exhibit compassion. Many times, simply listening to involved public or landowners can foster mutual understanding and can often assist in bolstering situational awareness surrounding local factors.

How would you like to be treated if your property was burning up?

How do you practice active listening?

Empower people to make decisions. Build trust on a foundation of good information.

Even in these times of near-constant connection, at some point, people need to make independent decisions regarding risk and safety. These independent decisions become even more critical when resources are spread out, as was the case on the Elkhorn Fire. Building trust takes time, effective relationships require vulnerability, especially as a leader. One success noted from the Elkhorn Fire was that nearly everyone assigned to the fire had worked with each other before, creating a positive trust climate and rapid team building.

What is the trust climate within your group?

Are your folks prepared to make critical decisions independently?

Make no mistake, point protection is working out in front of the fire.

If we didn't think the fire had a chance at reaching a value, we likely wouldn't spend the time or effort protecting it. Especially in remote areas such as wilderness where there is only one way in and out—usually by helicopter, foot, or jet boat—making sure that the value you are protecting is not only defensible but a legitimate safety zone to ride out the worst-case scenario of fire behavior is critical.

How do you calculate safety zones?

Does perceived time and space of current and predicted fire behavior influence your safety zone standards?

Mental Mop-Up: Facilitating healing and learning after an event.

After a critical event, people need to connect with others who were involved in the incident. This allows people to share their stories, validate their experiences, and move forward with a network of support. Rarely does this occur in wildland fire simply due to the fact that most folks on an incident are from all over the place and generally splinter off after the event or incident occurs. AARs are generally good for the operational retrospective. But the odds of getting people back together to recount the incident from a healing perspective are slim to none. This can leave groups or individuals on an “island” and can delay both learning from the event and recovering from stress or trauma.

How does your group debrief the effects of stress or trauma?

Is stress management part of standard operating procedure, or is it reactive?

This RLS was submitted by:

Nick Bohnstedt
Safety Manager

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