

Rapid Lesson Sharing

Event Type: Engine Burnover

Date: August 3, 2022

Location: Williams Lake
Fire, Spokane County,
Washington



**Engine CB1 after it was burned over.
The tree on the right is where the engine became
“parked.”**

Cheney Fire Department Engine Burnover

Background

During their morning shift change on Wednesday, August 3, the Cheney Fire Department crew discussed the weather and other Red Flag conditions that could impact their day. Knowing that these conditions could easily produce wildfire in the area, the crew completed their daily inspection of the brush truck (a Type 6 Engine with call sign CB1) and ensured that their wildland gear was pre-loaded and ready to go. They hadn't gotten a wildland fire yet this season. While their working tempo that morning was “normal,” there was a sense that things could change at any time.

Dispatch Receives the 9-1-1 Call; Resources Respond

At 1433, a 9-1-1 caller reported a brush fire burning near his home. Units from several surrounding Fire Districts including the Cheney Fire Department's Brush Truck CB1, were dispatched to the

Williams Lake Fire for a “two-acre brush fire.”

CB1 was comprised of crewmembers with both structural and wildland firefighting experience. Adam, the Engine Boss, Chad, the Engine Operator, and Dean, a new hire who had previous wildland experience with Washington Department of Natural Resources (DNR). Dean was a recent graduate of the local Structure Fire Academy. He was on his third shift with the Cheney Department. By 1437, they had left the station for the approximately 20-minute drive to the fire's vicinity.

A Battalion Chief from District 3 (BC 12) was the closest resource to the fire and immediately responded down Williams Lake Road from the west. CB1 met with a District 3 Engine (D3-1) and two district overhead trucks on Cheney Plaza Road, all of whom turned onto Williams Lake Road, arriving from the east.

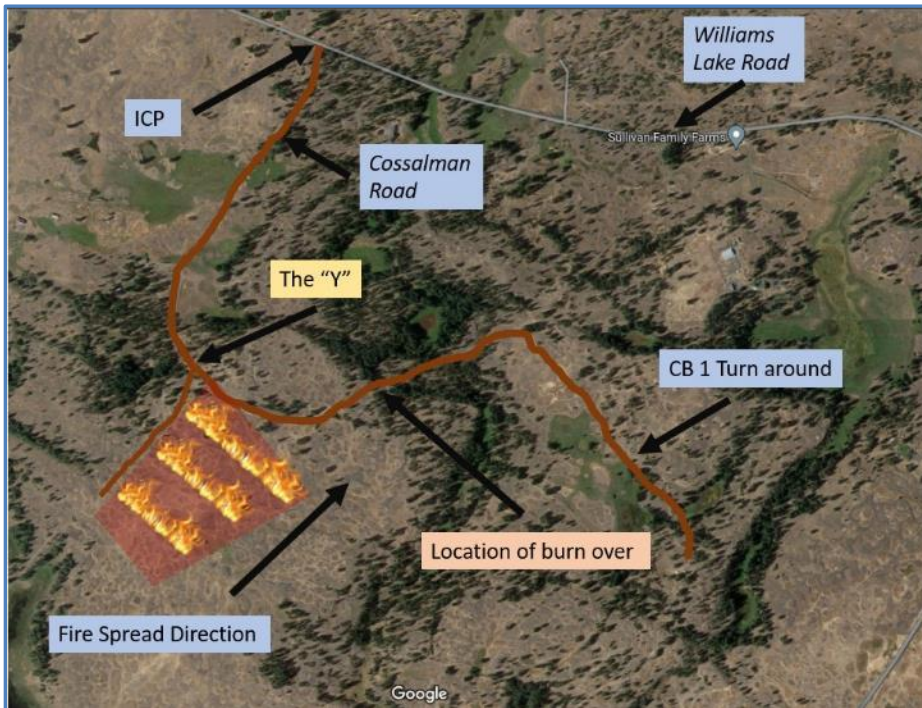
BC 12 reached Cossalman Road and headed south toward the fire activity to perform an initial size-up. He called back to CB1, who had just turned south on Cossalman Road to “head down the main road.” BC 12 pulled off Cossalman Road at a “Y” at the top of a slight hill with some tree cover to gain situational awareness and wait for CB1 and the other resources to tie-in face-to-face.

BC 12 and CB1 had worked together previously in the area and were comfortable working with each other. Both BC 12 and CB1 became immediately concerned about what they perceived to be excessive radio communication. CB1 Engine Operator Chad later recalled his frustration when attempting to communicate over the radio began impacting operations. “There was a challenge getting good info out and there was a lack of etiquette,” Chad said. “You want to be respectful, but it is frustrating when the radio is bogged down. The first thing that fails on fire is communication.”

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Chad, Engine Operator

Dean, Crewmember from CB1, began to think about the amount of unburned fuel in the Williams Lake Area and how “this is the stuff that kills people.”



Vicinity map of Williams Lake Fire engine/brush truck burnover.

As their concern grew about the radio traffic, Dean, Crewmember from CB1, began to think about the amount of unburned fuel in the Williams Lake Area and how *“this is the stuff that kills people.”*

Resources Arrive at Cossalman Road

Although the District 3 Engine (D3-1) would have been the first engine on the scene, they missed the turn on Cossalman Road and had to double back. The two other overhead trucks and CB1 arrived together near the “Y” where BC 12 had pulled off to wait for them. BC 12 saw the other trucks, but he never had a visual on CB1. Because they had not seen each other, CB1 radioed BC 12 to ask for his location. BC 12 directed them to *“stay on the main road and go left at the Y.”*

Believing that BC 12 was farther down the main road, they began to suppress the

fire as it approached Cossalman Road to secure BC 12’s escape route. The fire behavior was moderate, with 3-5-foot flame lengths in light flashy fuels of grass and brush. At that time, the Engine Boss Adam described the winds as *“swirly, but not out of the ordinary for a wind advisory.”*

Adam noted BC 12’s location on a responder application on his phone. It showed him at the tree line even farther down the main road. The responder application on their phones was delayed because of poor cell reception in the area—and failed to show BC 12’s actual location at the “Y.”

Confusion at the “Y”

Adam saw that things were lining up geographically with what BC 12 was radioing in. He was confident that BC 12 was well in front of them.

Again, BC 12 asked for an engine at the heel of the fire, still unaware that CB1 had already passed him. CB1 responded by asking for directions to BC 12. BC 12 said, *“stay on the main road.”* Confused by the description, CB1 radioed back, *“left at the Y?”* BC 12 confirmed to stay left at the “Y”.

Trusting the description and BC 12’s last location on the app, CB1 drove farther down Cossalman Road. Engine Boss Adam recalled, *“I thought the heel of the fire was behind us and the head of the fire had moved out to an open area to free burn.”*

As CB1 traveled to tie-in with BC 12, they attempted to contact him several times on the radio but were unsuccessful. The radio traffic was bogged down with multiple resources from different districts and volunteer agencies. CB1 could see increased fire activity where they believed BC 12 was located. Adam keyed the mic to tell BC 12: *“If you are where we think you are, you may have fire behind you”*—although Adam was unsure if the transmission was heard. CB1 proceeded to where they assumed BC 12 was located at the end of Cossalman Road. BC 12 stated later that he did not receive these transmissions due to the heavy radio traffic.

With the increased fire activity and additional resources arriving, BC 12 left the “Y” and returned to the intersection at Williams Lake Road and Cossalman Road to set up an Incident Command Post (ICP).

Recognizing They Aren't Heading to the Heel of the Fire

As CB1 continued down Cossalman Road, they saw increased fire behavior and smoke behind them. The winds started picking up, which got the crew's attention. They continued through a patch of timber to where they thought BC 12 was located. Although they thought they were heading to the heel of the fire, they quickly realized that they were now in a meadow with unburned fuel between them—at the head of the fire.

As they silently contemplated the growing seriousness of their situation, the winds began to pick up. Adam thought, *"We are in front of this fire, and it is going to burn us over."* They were on a slightly elevated road and could see that the trees on the other side of the timber—that they just passed through—were now torching and the fire was going to jump Cossalman Road and potentially cut off their escape route.

CB1's Crewmember Dean recalls sensing the tension as they were driving when Adam broke the silence to say: "This is not a good place to be." That's when the other crewmembers agreed as if they were about to say the same thing.

Making a Quick Decision

Adam knew they had very little time to decide if they were going to drive back to the "Y" or burnout around their truck in the meadow. The fire was now moving through the timber. Without hesitation, they decided to drive back to the "Y".

As they approached the top of the timberline, the smoke was growing, but had not impeded visibility. When they drove into the tree line, the smoke was thicker, but Chad, the Engine Operator, could still see the road. CB1 was "creeping" closer to the fire. Chad asked Adam, *"What do you want to do?"* Adam told Chad, *"If you are going to go, this is the time to go!"*

Chad stepped on the gas pedal to punch through the timber stand. Dean recalls instant relief that the decision was made quickly.

"If you are going to go, this is the time to go!"

Adam, Engine Boss



Image shows the steep soft shoulder and the safety zone located at the top of the hill.

CB1 Strikes a Tree

As the visibility was getting worse, they drove into a small draw in the timber stand and visibility went to zero. Chad couldn't see that the road had a slight bend to the right. As he proceeded straight forward, he immediately felt the vehicle being pulled down onto the soft, steep shoulder.

Although they had slowed down in the thicker smoke, the vehicle's momentum, combined with the soft shoulder, pulled the truck down off the road where they struck a tree "parking" the front driver side of the engine into the tree. Due to the soft, steep shoulder, they could not back up.

(Because of their cautious speed, the airbags didn't activate, and the vehicle did not sustain heavy body damage.)

The tree that CB1 struck was burning in the canopy above them. The ground fire had not yet reached the tree.

Chad briefly thought about continuing to try to reverse when Adam yelled: *"Ditch the truck! Get out and run!"*

As Chad opened the door, he recalled the amount of radiant heat, but no flames near him. He pulled up his collar and ran to the rear of the engine, and then 90 feet up the hill to safety. Dean jumped out of the backseat passenger side and ran the same route to safety. Adam jumped out the passenger side, then quickly reached in to grab a radio and a phone before sprinting up the hill.

"Ditch the truck! Get out and run!"

Adam, Engine Boss

Made it to the Safety Zone

At the safety zone, Adam attempted to radio out. But the battery was low and would not transmit. They happen to run into a District 3 Engine (D3-2) who then relayed the information. At 1508, D3-2 radioed: *“CB1 Crew evacuated the truck. Crew is safe. Truck is in peril.”*

Adam asked the D3-2 Engine to suppress the fire around the truck, as the crew believed they could save the vehicle. D3-2 told him they weren't comfortable taking their engine down into that area. CB1 Crewmember Dean then asked if he could take the nozzle and try to suppress the fire. Both CB1 Engine Boss Adam and the D3-2 Engine Boss said: *“No, I'm not willing to take that risk.”*

At 1508, D3-2 radioed: “CB1 Crew evacuated the truck. Crew is safe. Truck is in Peril”.

BC 12 heard the radio traffic about CB1 while setting up ICP for the incoming resources. He recalls hearing that the crew was safe. While he was very concerned, he knew that he had to also focus on the large, quickly-moving fire. As BC 12 transitioned from the role of Incident Commander (IC) to Operations, and later Division, over the radio he heard the update about CB1 being fully engulfed.

The crew from CB1 walked approximately ½ a mile when they caught rides from D3-1 and D3-2 to the Williams Lake and Cossalman Road (the staging area/original ICP) where their Fire Chief (C1) tied in with them. After determining the crew was safe, C1 drove Engine Boss Adam to the area where the engine was burning. The fire had burned over the truck and left it in a smoldering heap.

While C1 realized that the truck was a complete loss, he was grateful that his firefighters were unharmed. C1 drove Adam back to his crew at Williams Lake and Cossalman Road. He then traveled to the newly formed ICP, approximately one mile north of the original ICP, to tie in with the incoming IC.

When C1 tied in with the IC, he was asked to help with incident management. Because the fire was growing rapidly, this temporarily took his focus off of CB1. Although the outgoing IC (BC 12) was aware of the engine/brush truck turnover, he was transitioning between multiple roles on the fire and could not tie-in with the crew. C1 had been in contact with a chief from a neighboring department, as well as members of the incoming incident resources, to arrange for the CB1 crew to be picked up.

However, the crew was not made aware of this arrangement. After approximately an hour of waiting at the staging area, the crew, feeling forgotten, started to wonder if anyone was coming for them. A few minutes after the one-hour mark, a neighboring department chief picked them up and returned them to their station, where they had a brief AAR, showered, and went home.

Lessons and Suggestions

I. Lessons for giving and receiving verbal locations and driving directions

A. Wildland-Urban Interface (WUI) fires occur in neighborhoods that are being developed, which might mean that a “road” looks the same as a “driveway.” While these terms might not sound complicated, people might see the same thing and call it two very different things.

B. When the radio directions stop matching the verbal descriptions or you are not seeing what you are expecting to see, stop and get further clarification and information. Instead of relying on one piece of information (“turn at the Y”) ask for or give at least two pieces of information (“turn at the Y, which is 0.5 miles from the cattleguard”).

II. Watchouts around using “live” incident tracking software applications

A. When using a smartphone application for real-time tracking, be aware that it is common for the applications to reset or run with a delay. Do not use your electronic device as your only source of information. Smartphone applications and electronic devices should be considered verification tools.

B. Compatibility Issues – Ensure applications are running on the current upgrades. Ensure the application is compatible with IOS upgrades.

C. It may look like your screen has refreshed, but you might be looking at old information. Verify with more than one tool that correct information is available for decision-making.

III. Breaking the silence might save your life

A. “Perception checking” with those around you can be lifesaving. When your perception of a situation causes you to pause, speak up and consult with those around you. Trust yourself and voice that concern. This can be especially difficult when it seems like no one else is bothered by what’s bothering you. *“Do you see what I see?”* is a great way to engage everyone to assess potential risk. Checking your perception with others is advantageous because it functions as a “mid-point” between staying quiet and declaring that something must happen.

IV. Tips for facilitating post-incident sensemaking

A. After an event, there are often unanswered questions and a certain level of confusion. Having a group sense-making opportunity, such as an AAR, as soon as reasonably possible allows everyone a chance to understand the complexity that others are facing during an Incident Within an Incident (IWI). Such a group sensemaking opportunity can answer perplexing questions, provide clarity, voice compassion and understanding, and potentially provide closure. In this incident, the crew did not know that their Fire Chief (C1) had spoken to a neighboring chief who had volunteered to pick them up and return them to the station. Conversely, C1 and the Battalion Chief from District 12 (BC 12) did not know how disregarded the crew felt at the time.

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