Rapid Lesson Sharing

Event Type: Vehicle Fire

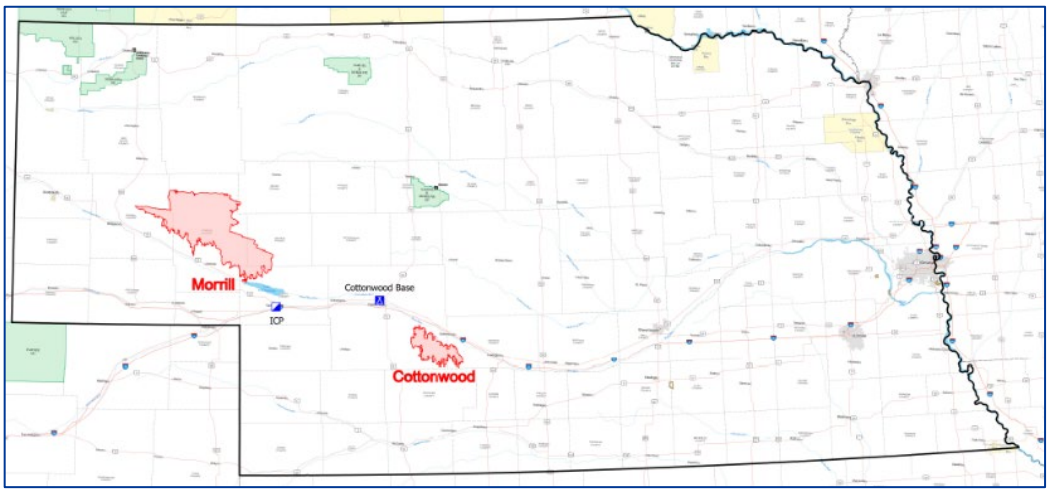
Date: March 21, 2026

Location: Cottonwood Fire; Nebraska

The Story and Lessons from this Burned Vehicles Incident

Background

The 2026 fire season is shaping up to be one of record proportions with many areas in the west experiencing drought conditions and very early and above normal fire activity.



State of Nebraska map showing the locations of the Cottonwood and Morrill fires.

This is true in Nebraska, where drought conditions and a significant wind event triggered and fueled an unprecedented initial attack (IA) fire event on March 12 in which several fires exceeded tens of thousands of acres in a matter of hours. The two largest fires in the state grew rapidly: The Morrill Fire nearing 400,000 acres the first day, and the Cottonwood Fire nearing 100,000 acres the first day.

These fires exceeded the response capability of the local responders. A Complex Incident Management Team (CIMT) was mobilized along with several additional resources. At 1800 on Saturday March 14, the CIMT took command of both fires.

The Morrill Fire was primarily burning in flat, rolling terrain dominated by a grass fuel type and agricultural land. The Cottonwood Fire was burning primarily in western red cedar with deep narrow ravines and canyons peppered with large flat plateaus that challenged good visibility of the fire area. This topographic condition created an incomplete burn with a potential for a reburn with an undefined ragged fire edge—which channeled and flowed wind in numerous directions.

Over the next several days, under the management of the CIMT along with the addition of several more suppression resources, forward fire progression had been stopped on both fires. The Morrill Fire was 98 percent contained at 642,029 acres. The Cottonwood Fire was contained at 94 percent on 128,192 acres.

The ongoing severe drought across the state of Nebraska gave way to several critical to even extreme fire weather days after the March 12 start of the Morrill and Cottonwood fires. Strong winds diminished March 13-14 with relative humidities remaining dry into the teens. Temperatures remained well above normal, with highs in the 70s.

Early on March 15, a strong cold front brought northerly winds gusting to 50 mph and very cold conditions. Temperatures bottomed out near 0° Fahrenheit on March 16 with relative humidities generally near 30 percent. Winds stayed generally light.

By March 17, temperatures quickly warmed back above normal with increasing northwest winds. Critical fire weather conditions were experienced across this region each day with the weather peaking on March 21. Relative humidities were in the single digits with winds gusting around 25–35 mph. Temperatures reached record March highs in the low- to mid-90s.

This fuels advisory [click on hyperlink] was issued by the Rocky Mountain Area Coordination Center on March 20. This advisory was briefed extensively by the CIMT Field Operations Section Chief and crew supervisors.

Due to the high levels of containment on both the Cottonwood and Morrill fires and the overall concern of the higher fire potential, many of the suppression resources were being redirected into Initial Attack Task Forces responsible for any new IA within the entire state of Nebraska.

Initial Attack Crew Parks Their Three Vehicles in 'Good' Black

On March 21 after a morning briefing that focused on the current weather and fuel conditions, crews engaged in suppression operations on the Cottonwood Fire. A Type 2 Initial Attack Crew (referred to as "crew" in this RLS) was tasked with patrolling and securing the fire perimeter. Their best route to the fire's edge was through the interior of the fire. The fire's interior was described as a mix of "clean hard black," along with unburned and underburned islands of red cedar.

Of their four vehicles, the crew parked three of them—all pickup trucks—on top of a plateau in "good" black with the closet patch of underburned cedars located 700–900 feet away.

The crew, along with several other incident responders, had parked there before and stated that it was a good, safe area for parking vehicles. The aerial photo (below) shows several vehicle tracks of where crews had parked there in previous shifts.

Aerial photo of the parking area was taken after the blowup incident in which the parked vehicles were burned. Arrow indicates where the vehicles were located.

The crew spilt into squads and went to work for the day. They said it took them 15–20 minutes to hike into the closest areas of unburned and underburned cedars where they were performing mop up and indirect line construction.

The crew had been engaged in this area the four previous days, primarily mopping up the fire edge. They noted that the perimeter on incident maps did not align well with what they were seeing on the ground. The crew said that in some cases a third of a mile—as the crow flies—was actually nearly four miles of fire perimeter due to the fire's ragged edge and long fingers.

Crew Splits into Three Squads—Fire Intensity Increases

As the day progressed, the crew posted lookouts for each squad. However, on this day, Operations did not post a general lookout to the parking area as they had done the previous three days. The two squads hiked in different directions from their parked vehicles.

By late morning or early afternoon, fire behavior began to increase. This increased activity prompted one of the squads to split again and go in a third direction. The crew was now divided into three different squads—all with appropriate lookouts, communication, and leadership. Each squad was between 30–60 minutes hike time to their three parked vehicles.

By 1500, fire activity was starting to increase substantially across the entirety of the Cottonwood Fire. Helicopters started working a higher priority area to the southeast near structures. All of this increased fire activity was interior to the fire perimeter. It was therefore presenting minimal concern to the possibility of additional fire perimeter growth—as was the situation several days before.

This fire activity, while not posing a significant risk to new perimeter growth, was nonetheless described as "Extreme" by the crew, with estimated flame lengths of 150–200 feet and large column growth—largely due to the size of the unburned and underburned green islands of red cedar. The crew did note that several times over the previous few days there was limited concern for this type of fire behavior because it was all interior-located fire activity.

Around 1545, fire activity began to dramatically increase in one of the large unburned and underburned islands of red cedar near the crew's parking area. The crew's individual squads became concerned. They started to pull out of their missions and hike back toward their vehicles.

These squads were separated by a substantial distance. In addition, terrain features inhibited clear communication over TAC—radio reception was "scratchy." Each squad boss remained in good communication with each other via cell phone.

As the fire activity increased, each squad stayed together, remained in contact with the other squads, and were mindful of their escape routes and safety zones as they moved toward the parking area.

Through the scratchy radio communication, some of the crew heard from either a Division/Group Supervisor or Task Force Leader: *"The fire is starting to blow up but the trucks are in a good spot."* It could not be validated who said this.

These three photos were taken by members of the three different squads as they returned toward the parking area. They all show how that location was now engulfed in flame.

Around 1600, as one of the squads got to the approximate location of the parking area, they were met by a large black column of smoke and high-intensity flames that were leaning over the parking area's general vicinity. Because of this black smoke and flames, it was unclear where the vehicles were located.

Due to safety concerns and the extreme heat, the squad could not proceed.

Moments later, the smoke lifted enough to see that the three parked trucks were fully involved by fire. This was communicated over Command: "Three vehicles fully involved in fire; no injuries."

This radio notification alerted many of the responders on the Cottonwood Fire as well as the CIMT. The CIMT initiated a "Purple" (a high-priority critical medical emergency or unexpected event) Incident Within an Incident. Several of the crewmembers stated that they believed this fire event was a "freak of nature."

A crew member on the closest squad to the parking area took this photo of their vehicles burning. It was too hazardous to approach any closer.

The Crew is Accounted For

In the field, radio communication was suddenly very active—as is expected during increased extreme fire growth on multiple fronts. The additional IWI radio traffic, paired with scratchy transmissions, created a sense of uncertainty among some of the crew members—leading to anger, fear, concern, and anxiety.

The squads worked their way through the black to their escape route, where they were picked up on a road system and gathered at a single Drop Point. At some point while they were walking out, the word "Deployment" was heard over the radio on a different Division. With the squads already accounted for, the other Division was notified that no deployment had occurred.

Once all crew members were at this Drop Point, CIMT Field Operations tied in with them. The crew was picked up by drivers from the CIMT and transported to a hotel for the night.

The following morning, the crew was met by the CIMT Safety Officer, who ensured that the crew's needs were being met and supported by the CIMT. At this time, the events and lessons learned from this event were documented. A peer support session was also held with the crew.

It is Suspected that an Ember Landed in the Back of One of the Vehicles

Because there were no direct witnesses to the parking area and its immediate fire activity, it can only be speculated on how those three vehicles burned. What we do know is that all three pickup trucks were parked in hard black 700–900 feet away from any underburned or unburned trees.

These three pickups were in close proximity to each other with the saw truck parked on the outside, closest to the water tower. The saw truck contained saw fuel in its open bed—two 5-gallon fuel tanks and one Dolmar, as well as one chainsaw and four drip torches. All of the fuel cans and vehicles had been topped off with fuel that morning.

Several people stated that they would have parked in the same area and never given it another thought. All personnel and crew members were at least a 45- to 60-minute hike away from the vehicles at the time of the blow up.

It is suspected that an ember likely landed in the back of one of the pickup trucks—two had open beds, one had a camper shell—starting a fire which rapidly grew due to the hot and dry conditions. This fire would have been accelerated by the fuel in the saw truck and full fuel tanks in all of the vehicles. The proximity of the vehicles parked next to each other likely increased the fire intensity.

Photo shows the complex terrain with both underburned and unburned red cedar. The location of the parked vehicles that burned is just out of frame to the lower left.

Lessons, Thoughts, and Discussion Points to be Shared with All Levels of the Fire Organization

Weather and Fuel Types

Weather and fire briefings leading up to this event used words like "extreme," "adverse," "historic," and "unprecedented." The fuels advisory was also posted at these briefings.

Some of the crew did state that they had not been in this fuel type before and did not realize the reburn potential or number of embers produced by red cedar.

- When you see a fuels advisory or hear descriptor words like "extreme," "historic," or "unprecedented," what do they mean to you?
- How do you adjust your strategic plan?
- How do you adjust your tactical plan?

The Incident Strategic Alignment Process

The Incident Strategic Alignment Process (ISAP) focuses on four pillars:

1. ***Critical Values*** – Why are we here?
2. ***Strategy*** – How will we protect those values?
3. ***Responder Risk*** – What will hurt our responders?
4. ***Probability of Success*** – How successful will the mission be?

ISAP strives to bring alignment between the Agency Administrators, the CIMT, and the boots on the ground. At each of these levels there is a gap between what is perceived and what is real—work as imagined and work as actually carried out. Each of us has a responsibility to communicate these gaps—this is what improves alignment between everyone.

Perception and Reality

In this incident, some of the crew members were not sure of the mission. In addition, during the event, they expressed concern about: being spread out that thin on a critical fire day; the tactics that they were using—primarily mopping up the fire edge with some indirect handline to connect burned fingers to minimize miles of mop up. Some of the crew wondered why—because there wasn't a dedicated lookout—Air Attack wasn't providing a second set of eyes.

- What role do you have in narrowing the gap between perception and reality?
- How do you explain the "Why?" of the mission—the task, the purpose, the end state. Somehow, we need to communicate better what we are doing.

- What barriers prevent you from speaking up and asking questions? What are you doing to break down those barriers?

Supporting Those Impacted

Initially, the unintended outcome of this event was the loss of three crew vehicles. Calling a "Purple" IWI allowed the CIMT to work together allowing for different perspectives of what the loss and needs might be for the crew. These included: getting hotel rooms; arranging transportation from the field; inquiring about the loss of equipment and gear; and coordination of next steps to support the crew. It was noted by several members of the crew that they had lost all their personal belongings—wallets, cash, credit cards, personal identification, jackets, phones, etc.

- What are the protocols for a non-medical Incident Within an Incident and how is that shared and practiced between the CIMT and responders on the ground?
- The impact of loss and what is considered "loss" is different for everyone. Take the time to engage with those directly impacted to understand their needs. Don't make assumptions about what is best.
- How prepared are you to move forward if all is lost? This includes phones, phone chargers, coats, cash, credit cards, identification, etc. Do you know the process for getting those replaced?
- How do you get your affairs in order prior to the season or a deployment?

Critical events are defined by the impact to those involved. What may be critical to one person may not be critical to another. It is important that we always show up to support our responders the best that we can, regardless of the agency, company, or partner they work for.

Always error on the side of caution when a critical event occurs. You only get one chance to show up and people are always watching. Don't assume that you know what is best.

- *"Thanks for showing up for the crew over there, I'm glad you came down,"* a responder from another engine assigned to the Cottonwood Fire said to the CIMT's Safety Officer Complex (SOFC).
- *"Taking the time to pull the crew together to facilitate a dialogue and talk about this event brought the crew closer together,"* said one of the impacted crew members.
- What mental health support resources are available and where do you find them?

This RLS was submitted by:

Rocky Mountain Complex Incident Management Team 1

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(https://lessons.wildfire.gov/submit-a-lesson)

Share Your Lessons
