

Lessons Learned Review

Conner Fire Burn Injury



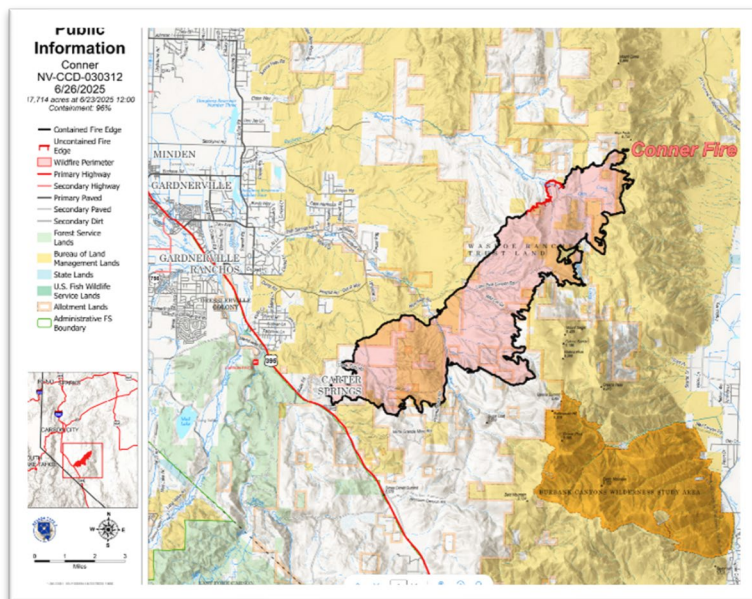
Conner Fire

BLM Nevada Carson City District

June 20, 2025

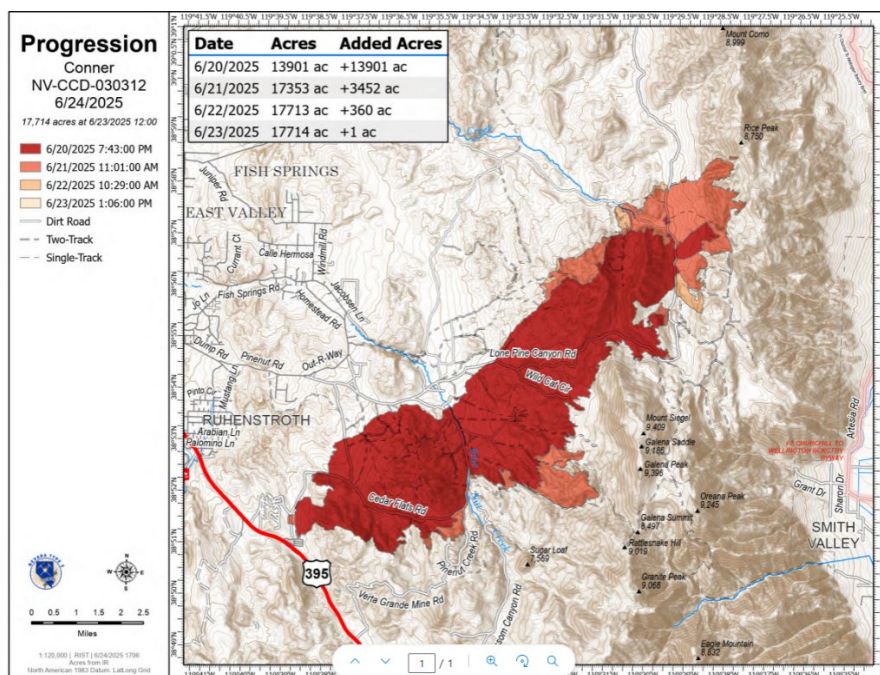
Executive Summary

The Conner fire was reported at 0255 on June 20, 2025, off Highway 395 near Carter Springs, 30 miles south of Carson City, Nevada. Initial accounts reported 20-30 acres burning with structures threatened. By 0520 the fire was reported to be 50-100 acres and local Bureau of Land Management (BLM) and municipal fire resources established unified command. A Nevada state type 3 incident management team assumed command June 21 at approximately 17,353 acres.



The official cause of the fire is undetermined at the time of this report. Due to strong winds on June 20, the fire made a ten-mile run. On the same day, a firefighter sustained burn injuries while engaging the fire. A lessons learned review (LLR) team was ordered to conduct an accident investigation and analysis of the human elements and organizational factors that may have contributed to the outcome of the accident.

Public information map of the Conner Fire as of June 26, 2025.



Progression map of Conner Fire, showing ten mile run on June 20.

Conditions affecting fire

Topography

The accident occurred in a saddle atop a drainage, oriented northwest of the saddle.

Fuels

Fuel types burning in the fire included decadent pinyon-juniper, previously burned areas with standing dead and downed woody fuels with a grass understory, and continuous grass. Cheatgrass was ubiquitous throughout the area but intermixed with other grasses. Previous burned areas had been seeded with crested wheatgrass, resulting in continuous perennial grass cover.

Fuels at the site of the accident included continuous cover of crested wheatgrass, roughly two feet high and not completely cured. A few scattered piles of skeletal debris from previously burned shrubs, about 3-4 feet wide were near the road.



Approximate location of Conner Fire incident (x) and approximate location of a previous firefighter entrapment (x) according to the [Preacher Fire Facilitated Learning Analysis](#).



Unburned crested wheatgrass adjacent to the accident site. Grass was continuous and not fully cured.



Skeletal debris from previously burned shrubs, near the accident site. The BLM engine had stopped at the saddle to extinguish a spot fire in similar fuels..

Weather Conditions

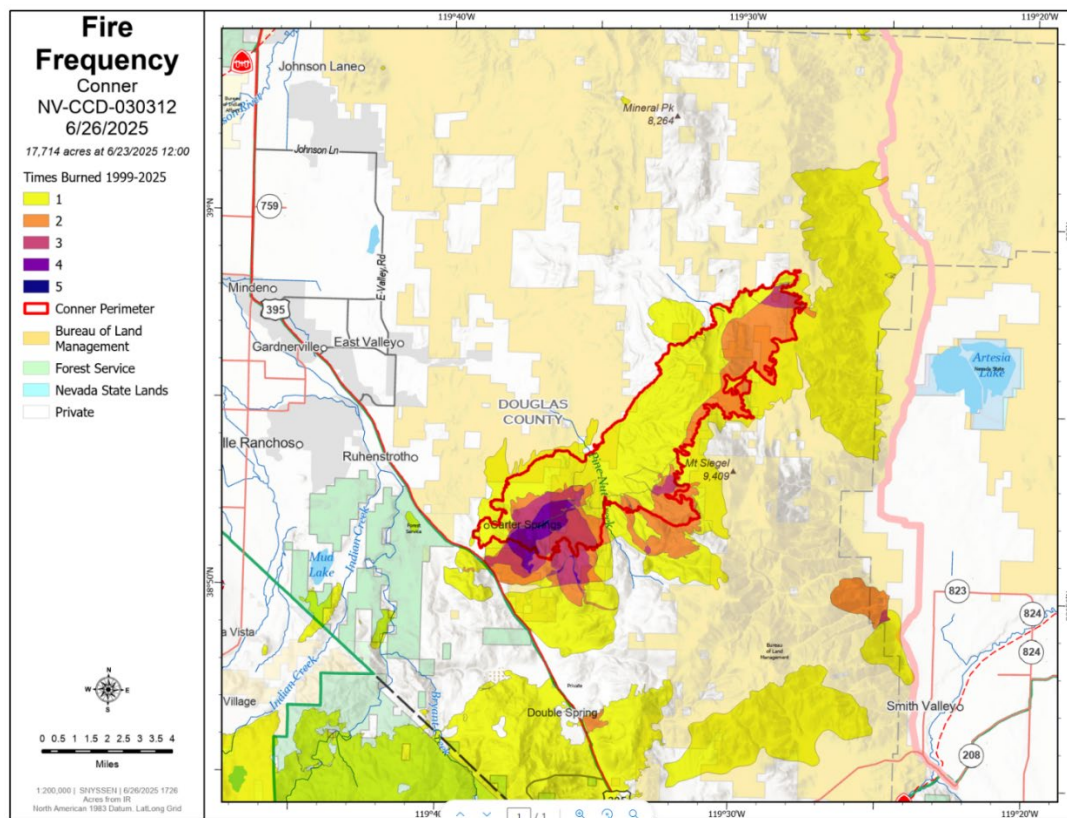
A red flag warning for strong wind and low relative humidity was in effect for the area within the fire footprint from 1300 Thursday June 19 until 2400

“If your chin strap wasn’t on, your helmet would blow away.”

Friday June 20. Multiple people interviewed recalled hearing about the red flag warning over the radio. The nearest remote automated weather station (Fish Springs RAWs) recorded relative humidity as low as 5% on June 20 and wind gusts up to 62 mph. The topography at the accident site contributed to strong winds felt by firefighters, with winds being funneled through the canyon below into the saddle. Several firefighters mentioned the strong wind the afternoon of June 20, noting at times it was hard to open engine doors, or stand without the wind taking you off your feet.

Wildfire and Fuel Treatment History

This area of the district has an active fire history, with several large fires occurring in the past 25 years. Several local firefighters were aware of this local history, noting “this area burns every five years”. A fire of particular significance is the 2017 Preacher Fire, which burned 5,333 acres within the footprint of the Conner Fire and resulted in a firefighter entrapment (see [Preacher Fire Facilitated Learning Analysis](#)). This investigation team discovered that this previous entrapment occurred within a few 100 yards of the burn injury incident on the Conner Fire. The local BLM district has implemented some fuel treatments in the area and crews successfully utilized treatments during wildfire suppression operations on the Conner Fire. However, the checkerboard land ownership, rugged topography, and cultural resources make fuel treatment planning challenging in this area.



Map showing the frequent fire history in the vicinity of the Conner Fire.

Narrative

On the morning of June 20, a BLM type 4 engine with a chase truck was working on the Winnemucca district as an out-of-state resource, assisting with a fire they had been on for several days. That morning, they were informed of a new fire that started south of Carson City and were requested to assist with initial attack. They were instructed to head towards Carson City and report to the incident command post, located at Douglas County Fairgrounds.

The BLM engine arrived at the Douglas County Fairground around 1400 and was instructed to report to Branch 1. The BLM engine traveled to the fire's edge and arrived as divisions were splitting and tied

"We were feeling like we could really catch this thing."

in with Division Romeo. Division Romeo assigned the BLM engine to a task force to support the hand crew's effort to hold the fire along Pine Nut Road. The objective of the operation was to tie two lines together on the southern flank of the fire with one hand crew coming from the west end of the fire and the other coming from the east. The operation was going well with minimal slops and manageable fire intensities. The division leader felt good as they rounded the corner of Pine Nut Road toward the Buffalo Spring area.

Also on Division Romeo, a Nevada state type 4 wildland engine was assigned to protect a structure at Buffalo Springs. Enroute to the structure they stopped at a saddle, about a quarter of a mile from the structure, and observed a few pulse fires burning from the bottom of the drainage up the slope to the road and some embers spotting over the road. They notified the task force leader (TFLD) by radio that the fire was approaching the structure from the canyon below with spotting over the road. Given how fast the fire was moving in these brief runs, they didn't feel it was worth the risk to hold the fire at the road in the saddle and proceeded to the structure. They felt the structure was defensible and requested support. The TFLD, concerned about the report of spotting across the road, directed the BLM engine to proceed to the structure at Buffalo Spring and support the Nevada state engine. The TFLD proceeded down the road toward Buffalo Spring to assess the spotting across the road.

"I couldn't open my driver's side door because the wind was blowing so hard"

While the BLM engine and chase were enroute, they noticed a spot fire had established in a small wood pile in the unburned areas on the uphill side of the road. The BLM Engine stopped and applied water to the wood pile to prevent it from spreading. As they stopped, they noticed how strong the winds were felt at the saddle.

After spraying the pile with water, they continued to the structure and informed the TFLD of the spot fire and that they would feel more comfortable if they returned to put a line around it. The BLM engine captain instructed two crew members in the chase truck to wait at the structure while the BLM engine captain and assistant captain returned to address the spot with the engine.



“Winds were insane, it felt like 50-60 mph sustained.”

View of the structure at Buffalo Springs from the saddle.

The TFLD left the structure before the BLM engine and drove approximately 200 yards back down the road within the saddle and radioed that there was some fire hitting the road. The fire had already reached the road in the nearby saddle about a quarter of a mile north of the structure and was holding at the road. The TFLD requested the BLM engine to keep the fire from spotting across the road. The BLM engine arrived behind the TFLD and observed a small section of fire—no more than ten feet wide —attempting to cross the road. The BLM engine assessed the situation and decided to initiate suppression efforts to extinguish any flames with the potential to spread across the road.

The captain was driving the engine while the assistant captain dismounted to deploy the 1.5 inch knockdown hose on the driver's side of the engine.

The assistant captain pulled out the 25-foot hose and opened the valve to charge it. While the hose was filling, he began putting on his fire pack. Before he

“We couldn’t see the emergency lights, the smoke was so thick.”

could put on his gloves or grab the hose, the wind briefly shifted, blowing with gusts of an estimated 50-60 mph toward the back of the engine. This caused the fire to move laterally below the engine for a moment before shifting again to an upslope direction. The engine captain then noticed flames rolling up the hill toward them and in a matter of seconds “*flames were on top of us*”. At this point the Nevada state engine reported that they could no longer see the BLM engine, as it was engulfed in a thick cloud of smoke.



Engine hose deployed before accident occurred

Due to the sudden heat, the assistant captain abandoned his attempt to put on his gloves and ran behind the engine for protection. The captain initially lost visual contact due to the smoky condition but saw the assistant captain in the passenger mirror as he climbed back into the cab. Once he was inside, the captain drove forward approximately 30 yards to escape the flames. Once they stopped the captain noticed that the assistant captain's hair was charred and skin was sloughing off his hands.

Medical Evacuation

The engine captain called the TFLD on a tactical (tac) frequency and told the TFLD to return to their location. *"We have a medical!"*. The TFLD was on the scene of the accident within approximately two minutes. The TFLD notified Division Romeo of the medical emergency via radio, loaded the patient into the back seat of the TFLD truck due to the

dusty condition outside the vehicle, and immediately began transporting the patient back down the road toward medical care. A radio call was placed to Branch 1 to request an ambulance to meet them at the Pinyon Trailhead on Pine Nut Road, roughly where the road transitions from pavement to gravel. The TFLD came across the supervisor of a hand crew and requested an emergency medical technician (EMT) from the crew. The supervisor informed the TFLD that the crew was further down the road. Continuing down the road, the TFLD truck reached the hand crew and picked up an EMT from the crew, who hopped into the back seat of the pickup with the patient and began assessing and stabilizing while continuing to be transported by the TFLD towards Pinyon Trailhead.

The TFLD arrived with the patient at Pinyon Trailhead, where paramedics from a local government wildland engine were assigned and continued stabilizing the patient. After a short time, an ambulance arrived and began patient transport toward Carson Valley Hospital in Gardnerville. The ambulance decided to transfer the patient to an air ambulance service (which was also located at Carson Valley Hospital in Gardnerville), and the patient was then flown to Renown Regional Medical Center in Reno. The patient was treated at the hospital and then transferred via ground to UC Davis Medical Burn Center in Sacramento.

Within a short timeframe, the patient was transported from the site of the incident to a medical care facility in Nevada and then to a burn center for advanced medical care. The organization of this care was well-executed, from the TFLD quickly moving the assistant captain out of the location and picking up the EMT from the hand crew, to the local fire department medic deciding to fly the patient to a medical center in Reno to refer the patient to a burn center. The BLM state

office, state fire management officer and hospital/family liaison provided valued support to the injured employee and family while recovering in the hospital.

Contributing Factors

- *Communications:* Multiple reports were given of poor radio communications on the fireline. The use of the command channels was “*spotty at best*” and a relay person was often needed. Tac channels became quickly overwhelmed with communications, multiple reports stated, “*it was hard to utilize tac cause the amount of radio traffic*”. Reports from the Sierra Front Interagency Dispatch Center show that the incident commander (IC) requested additional tac channels and the use of a local tac channel. Additional tac channels were provided but the local tac channel was denied as it was being reserved for new fire starts.
- *Air Resources:* Aerial resources had multiple challenges throughout the day with delay of aircraft from mechanical issues. High winds caused aerial retardant drops to be ineffective and eventually grounded all aircraft.
- *Fire Behavior:* At the accident site, the fire was burning through crested wheatgrass which had not fully cured. Both the TFLD and the BLM engine captain observed the fire burning with low flame lengths, suitable for direct attack. The sudden increase in fire behavior that resulted in the accident was unexpected given time of year and the condition of the fuels. The strong wind gusts and topography likely resulting in shifting wind direction caused the unexpected fire behavior and ultimately resulted in a ten-mile run in one burn period. The fire front on top of the saddle moved past the road in a matter of seconds to minutes. So fast that the BLM engine sustained no damage from the flames.
- *Distractions:* Multiple external and internal factors were sources of distraction for the division leader, TFLD, and crews and created a sense of disarray. For example, the fire threatened multiple structures which were scattered across a large area. Many of the private landowners refused to evacuate their property and one was even engaging in fire suppression with a front-end loader. The BLM engine arrived at a time when divisions were splitting, and it took a while to figure out assignments. Radio traffic was overwhelmed and use of different fire terminology led to confusion over what the fire was doing. The fire had been described as jumping, spotting over, or bumping the road to Buffalo Spring by different people.

Timeline of events for June 20th, 2025

1400 (approx.)- BLM engine arrives at ICP

1500- BLM engine ties in with Division Romeo

1530-1630- BLM engine assisted hand crew with burnout operations

1630- BLM engine is requested to help with structure protection

1645- Captain of BLM engine called TFLD with medical emergency

1647- TFLD on scene- notified Division Romeo of medical emergency

1650- TFLD put patient in vehicle and began transport

1652- TFLD picked up EMT from adjoining crew

-EMT began assessing and stabilizing in backseat of vehicle while in transport

1715- TFLD, EMT and patient arrived at trailhead where paramedics from local government wildland engine continued to stabilize patient.

1720- Ambulance arrives at trailhead to transfer patient to Carson Valley Medical Hospital

Once they arrive at Carson Valley Medical Hospital, the decision by the paramedics was made to air ambulance patient to Renown Regional Medical Center in Reno. The patient was treated at the hospital, then transferred via ground to UC Davis Medical Burn Center in Sacramento CA.

Review Process:

A three-person LLR team, consisting of representatives from the BLM, conducted the incident review. The review included an analysis of human and environmental factors. The process included interviews, verification of documentation, a visit to the accident scene, site photography, and timeline review.

The review team consisted of the following individuals:

- Justin Fenton – LLR Team Lead, BLM National Fire Equipment Program
- John Petty- Safety Subject Matter Expert, BLM New Mexico State Safety
- Molly Hunter- Writer Editor, Fire Ecologist BLM Joint Fire Science Program

Conclusions and Recommendations

- The burned area has a history of frequent fires, and the accident site even had a prior firefighter entrapment. Under such circumstances, it is important that incoming resources are properly briefed on current conditions, any exceptional or unusual concerns, and local fire history or management concerns.
- Strong wind combined with local topographical influences caused unexpected wind shifts and gusts, which played a significant role in this incident. Even in seemingly benign fuel conditions, it is important to be cognizant of how the combined effects of wind and topography can lead to rapidly escalating fire behavior.
- Personal protective equipment (PPE) is designed to protect the user and minimize the risk of severe injuries. While on the fireline, wearing full PPE will help protect you if you find yourself in an unexpected situation.
- Communications became an issue with congested radio traffic along with terrain issues blocking radio channels. It is known that line of sight radio communications in this terrain is typically problematic and use of “human repeaters” to maintain communications may be required. As fires in this area evolve in complexity or into extended attack, additional radio communication equipment and tac channels may be needed to communicate important fire information over larger areas.
- Having the Serious Incident or Fatality Response Plan in place provided the ability to efficiently activate a hospital liaison and was a success for this incident. Support functions such as hospital liaison successfully supported agency administrators and employees involved with accurate and timely information.
- The medical response was swift and well-executed. Pre-season planning played a significant role in the successful execution of the medical evacuation and patient care. Several local resources assigned to the Conner Fire participated in an interagency pre-season drill in the spring prior to the fire. Simulation exercises included both overhead and suppression resources from local, state, and federal agencies, and included a multi-agency medical scenario. Having pre-planned medical protocols, including pre-staged ambulance resources and identified EMTs, laid a solid foundation that allowed for rapid efficient medical response.