



Event Type: Mass Casualty Incident

Date: May 25-31, 2026

Location: Egberts Fire; South of Wells, Nevada

The Story and Lessons from this Perplexing Long-Term, Multi-Jurisdictional Mass Casualty Incident

Background

On Monday, May 25, 2026, the Elko County Fire Protection District, U.S. Wildland Fire Service (WFS), Nevada Division of Forestry (NDF), and Humbolt-Toiyabe National Forest (HTF) resources were dispatched to the Egberts Fire, a wind-driven incident located south of Wells, Nevada.

By the end of the first shift, winds had died down, slowing fire growth and allowing dozer line to be constructed around the fire's perimeter.

Resources bedded down for the evening and, after briefing the following morning, began mop-up operations. The intent was to have a cold black edge around the fire before a predicted wind event arrived later that day.

As crews began working, the predicted winds began to occur in the fire area earlier than expected. Blowing from the south, sustained winds were recorded at 25 mph, with gusts estimated at 40 mph. The winds pelted assigned resources on the fire's north end—which included HTF/NDF Arc Dome Fire Module, HTF Engine 312 (E-312), and WFS Engine 1443 (E-1443)—with blowing dust, ash, and sand.

Patient 1

Engines 312 and 1443 and the Arc Dome Fire Module were assigned to Division A on the fire's north end. While the two engines worked their way around the north end of the fire, suppressing all the smokes they found, Arc Dome began working in a sagebrush steppe area just above Winchell Creek.

Two saw teams from Arc Dome cut fireline along the fire's edge while the rest of their crew cold trailed and mopped up spots behind them.

At approximately 1030 hours that day, the swamper from the second saw team (Patient 1) began experiencing watery and slightly painful eyes. Patient 1 mentioned this to his saw partner, a qualified EMT (Arc Dome EMT). Arc Dome EMT advised Patient 1, a first-year firefighter, that "this was normal" for the conditions they were working in and suggested he put on some fuller coverage glasses.

"I don't think we could have avoided this. There were no signs of anything. It was windy, sh*tty. The work needed to be done. I show up at that fire 100 times—and 100 times I engage. There was no sign of anything weird."

Arc Dome Captain

A little while later, Patient 1's irritated eyes had started swelling and he had "pinpoint" appearing pupils. Recognizing the swelling as a symptom of an allergic reaction, Arc Dome EMT called the crew's other EMT to let her know that she and Patient 1 would be walking back to the crew trucks that were parked midway up the fire's north flank in Division A. Before hiking out, Arc Dome EMT gave Patient 1 a dose of Benadryl.

By the time that Patient 1 and Arc Dome EMT made it to the trucks, Patient 1's symptoms had progressed to include hives on his chest and a slight wheezing in his right lung. Arc Dome EMT and an EMT off Wildland Fire Service Engine 1443 (E-1443 EMT) who had walked over to offer assistance, recognized that something unusual was happening.

At that time, the two EMTs made the initial Incident Within an Incident (IWI) call and requested a ground ambulance meet them at the Incident Command Post (ICP). By approximately 1400 hours, Patient 1 had been driven to ICP and was loaded into an ambulance, now en route to the Northeastern Nevada Regional Hospital in Elko, Nevada.

Patients 2 & 3

Around the same time that Patient 1 departed ICP, the other swamper from Arc Dome Fire Module, Patient 2, started presenting similar symptoms: eye itching and irritation. Patient 2 was escorted by another crew member back to ICP.

As Arc Dome EMT and E-1443 EMT examined Patient 2, Engine 312 arrived at ICP with a crew member, Patient 3, who had been having severe eye irritation despite flushing his eye several times. Earlier, Patient 3 had tied in with the Arc Dome crew while they were working in the sagebrush area on the fire's north end.

"As we got out of the area, I got miraculously better. I thought that was suspicious."

Patient 3
Engine 312 Crew Member

Mass Casualty Incident—Organizing Chaos

Within minutes of Engine 312's arrival at ICP, the other Arc Dome EMT who was still out on the line, informed Arc Dome Captain that additional crew members were exhibiting similar symptoms. At that point, Arc Dome Captain made the decision to pull the rest of the crew off the line and get them to ICP to be medically evaluated.

"Pull the crew out, something weird is happening."

Arc Dome Captain

Once everyone had arrived at ICP, patient assessments began. Personnel experiencing symptoms were initially evaluated by Arc Dome EMT and E-1443 EMT.

Because patient assessments take time, these two EMTs recruited the Engine Boss from E-312 (E-312 Engine Boss)—a qualified EMT—and several Elko County Fire District EMTs assigned to the fire to help. However, it quickly became apparent that they needed to be more organized. People who had already been evaluated were wandering around and the EMTs couldn't remember who had been evaluated with what Medical Incident Report (MIR) status—Red, Yellow, or Green.

"It was so chaotic by the time we got to the end of vitals. No one knew what they were doing anymore."

Arc Dome EMT

Triage Key

The EMTs categorized patients using the following definitions for "Green," "Yellow," and "Red." They designated eight Green, two Yellow, and four Red patients (not including Patient 1).

Green (8 patients)—isolated eye pain/irritation, pinpoint pupils

Yellow (2 patients)—isolated eye pain/irritation, pinpoint pupils, and hives

Red (4 patients)—isolated eye pain/irritation, pinpoint pupils, hives, and respiratory involvement

To help organize the chaos, E-1443 EMT stepped out of his patient assessment role and began telling the patients where to go and what to do.

Meanwhile the Type 4 Incident Commander (ICT4) and the incoming Type 3 IC—recognize this IWI is becoming a mass casualty event.

They begin calling for ground ambulances and checking in with resources still out on the line to see if anyone else is experiencing symptoms. Initially, four ground ambulances and an air ambulance were ordered. The air ambulance was later cancelled. Two of the ground ambulances were diverted to other calls while en route to the Egberts Fire.

"I've been in fire 23 years, never seen something like this. Not in Nevada. It was concerning to me as an IC."

NDF Duty Officer

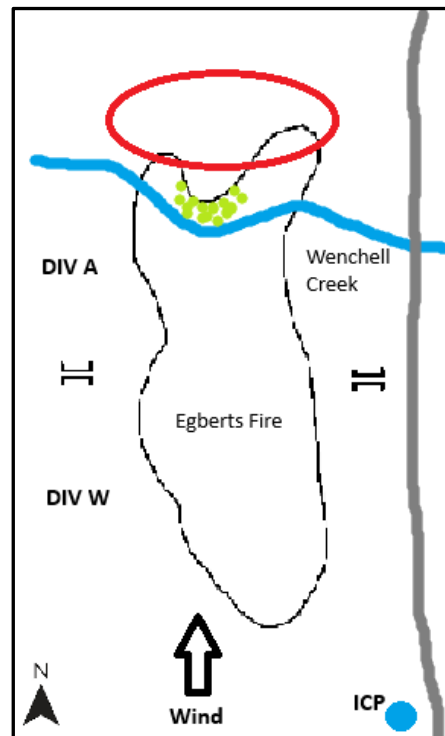
As the patients wait at ICP, the ICT4 directs a water tender to offer water and dish soap to folks for washing off. Wet wipes were also provided.

By the time the two ground ambulances arrived at ICP, 14 patients had been identified. These included members from Arc Dome Fire Module, Engine 312, and Engine 1443.

With no one showing critical needs, the ambulance staff decided to transport and treat all 14 patients—seven into each ambulance—including Arc Dome EMT and E-1443 EMT, the two administering EMTs.

While the 14 patients received rides, the module leads began forming a plan to get Arc Dome's trucks to the hospital and made notifications to their supervisors. Hospital Liaisons from the Forest Service, Wildland Fire Service, and Nevada Division of Forestry were sent to the hospital to assist the patients.

On that day, Tuesday, May 26, a total of 15 patients were treated at the hospital and released later that evening. Patients received a variety of treatments while at the hospital dependent on the symptoms they were exhibiting.



The red circle indicates the area where crews were working at the time of the exposure.

Out on the Egberts Fire

The ICT4 checked with all remaining resources to see if anyone was experiencing any similar symptoms. The reports back were negative. This led the ICT4 to believe that the exposure was isolated to that small area of the fire (see map above). He decided to let crews continue to work the fire's south end for the remainder of Tuesday evening.

Because the exposure source was still unknown, on Wednesday, NDF and Elko County Fire Protection District decided to only monitor the fire.

On Thursday, the fire was downgraded to a Type 5 incident.

Managing a Long-Term, Multijurisdictional IWI

While all 15 people were released from the hospital the same day, this group spent the next six days riding a roller coaster of jurisdictional confusion, additional exposures, and continually changing decontamination needs.

The Egberts Fire was on private land, making it the jurisdiction of the Elko County Fire Protection District. But the 15 patients belonged to three different agencies: Nevada Division of Forestry, Forest Service, and Wildland Fire Service.

During the extended IWI, the decontamination and coordination needs became too large for the Elko County Fire Protection District. Jurisdiction therefore moved to the Nevada Division of Forestry, based on a pre-existing Delegation of Authority under the Wildfire Protection Program (WFPP).

In many ways, this Incident Within an Incident became bigger than the Egberts Fire itself.

This section of the RLS provides the perspectives and the experiences of each affected module and their local agency leadership.

Arc Dome and E-312 Play ‘Red Light/Green Light’

Tuesday Evening, May 26

Arc Dome Fire Module and Engine 312 personnel head to hotels where they remove and bag their contaminated clothing and then shower. They have conversations with the Egbert’s IC about returning to the fire the next day. The crew leads make the decision to clean their equipment and vehicles before considering returning to the fire.

Wednesday, May 27

With everyone feeling better and symptoms all mitigated, the crew leads of Arc Dome and E-312 feel comfortable having their folks clean their gear while wearing personal protective equipment (PPE) such as gloves and masks.

The modules drive their vehicles to local Forest Service and Nevada Division of Forestry workstations to begin cleaning their equipment. Their crew supervisors begin work on the CA-1s and CA-2s for their combined 14 affected crew members. As they work through these forms, both crew supervisors are regularly taking and making phone calls with various levels of their leadership.

At 1400 (Pacific Standard Time), the engine and module are asked to join an information collecting/sharing Microsoft Teams call with Forest Service Washington Office Fire and Aviation (WO FAM) staff and medical directors, as well as Humbolt-Toiyabe National Forest, WFS medical leadership, and NDF leadership. During this call, the group answers questions about the previous day’s events.

Based on what they hear during the call, the Washington Office medical staff advise the group that they *“are through the worst of it. Everyone’s symptoms have abated. We recommend cleaning your gear and vehicles and getting back to work.”* The crews leave the meeting expecting to return to their home units that evening.

Shortly after that Teams call, E-312 is 30 minutes into cleaning their gear (the crew had to address tire issues that morning which delayed cleaning efforts) when one crew member begins experiencing extreme itchiness and redness on his hands, throat, eyes, and stomach. The crew member is taken back to the hospital for evaluation. E-312 Engine Boss notifies his leadership and WO FAM staff via the Teams call “Chat” function that the crew has now had a second exposure.

“All our medical stuff is strewn about because we had just taken our engine apart. Notably, most of our medical stuff was in contaminated bags. We had to use contaminated equipment to treat [our crew mate].”

E-312 Crew Member

Based on this second exposure and still unsure of the cause, Arc Dome and E-312 are directed to: stop touching their gear; not drive their vehicles; and to change clothes and go back to their hotel rooms.

To help facilitate this, the local Elko Ranger District and NDF Office arrange for vehicles for the modules to use.

The Wildland Fire Service and Forest Service Agency Medical Staff Perspective

The Wildland Fire Service medical doctor was the first to hear about this mass casualty incident. He received a call on the After-Hours Medical Control phone line from E-1443 EMT. The Wildland Fire Service medical doctor then notified his counterpart at the Forest Service. At this time, both have very little details about this medical incident.

On Wednesday, the two doctors called the Emergency Room in the Northeastern Nevada Regional Hospital to speak with the staff that treated the firefighters. Their impression was that the staff had little information on the cause, but that they had treated the firefighters for allergic reactions.

At this point, the two doctors had been having difficulty communicating with the firefighters and asked their respective agency's WO Fire and Aviation Staff if they could speak directly with the affected crews. These doctors knew there were some concerns about chemical exposure and wanted to make sure the firefighters were getting the correct blood tests.

After the Teams call on Wednesday with the crews and hearing their story, the doctors had a much lower suspicion of chemical exposure. While it was apparent to them some type of exposure event had occurred, the doctors no longer believed that a blood test was needed. They advised the crews to decontaminate their vehicles and wash their clothes.

To keep the direct line of communication open between the doctors and the crews, the Teams call "Chat" capability was left open.

On Thursday, after the second exposure, the doctors wanted to determine its cause. They heard swab samples were a possibility and suggested that some of the overhead involved should talk to the owners of the land where the fire was burning.

In the meantime, industrial hygiene and medical personnel from the agencies researched a decontamination company in the local Elko area and passed that information on to the Forest Service Branch Chief, Operational Risk. They also drafted a document for the firefighters that included information on decontamination, replacement equipment, compensation, and other medical-specific information. This document was provided to the firefighters on Friday.

Thursday, May 28

The next morning, E-312 Engine Boss, E-312 Engine Boss Trainee), and Arc Dome Captain, continue to move forward on OWCP paperwork and field calls from people trying to get or convey information—all while keeping their crew members productively occupied.

They started hearing rumors of Hazmat testing and decontamination units. Finally, concrete instructions come in: "Take your vehicles to a decontamination company to get cleaned and purchase PPE (Tyvek suits, respirators and gloves) so the drivers don't re-expose themselves." (The decontamination company used is a national company that specializes in Hazmat clean-up, remediation, emergency response, and other environmental management and services.)

Being the only person with a Government Purchase Card, E-312 Engine Boss goes to Home Depot with E-312 Engine Boss Trainee to buy the PPE (Tyvek suits and filtered respirators), and Arc Dome Captain and his crew boss trainee shuttle the trucks to the decontamination company.

Friday, May 29

Friday is more of the same. The Arc Dome and E-312 modules continue to "hotel up" in Elko while E-312 Engine Boss, E-312 Engine Boss Trainee, and Arc Dome Captain work on CA-1s and CA-2s and answer phone calls "every 15 minutes." In the morning, they are told the vehicles being decontaminated will be done by the end of that day and the two crews could go home after that.

“Everyone and their mother had questions. Poor [E-312 Engine Boss] was on the phone nonstop. I was picking up the things he couldn’t.”

E-312 Engine Boss Trainee

At some point during this day, Arc Dome Captain goes to the decontamination yard to talk with the company employees about the process, what they were cleaning, and the cost. He finds out that the services will cost roughly \$15,000 per engine and \$10,000 per pickup. Arc Dome Captain lets E-312 Engine Captain and E-1443 EMT know and then sends a Teams message to the WO FAM “Chat.”

With E-312 Engine Boss being the only person there with a purchase card—and a purchase limit that will not allow him to pay for the decontamination services—a flurry of calls begin between the Forest Service and Nevada Division of Forestry to determine who is going to pay these bills.

Who Lined Up and Paid for the Decontamination?

After the second exposure, the Forest Service WO FAM staff arranged for decontamination services for the five Forest Service vehicles, one Nevada Division of Forestry vehicle, and three Wildland Fire Service vehicles.

Initially, there was confusion around the payment mechanism. The two module leads had to make many calls to determine how to pay for it all.

Ultimately, the Nevada Division of Forestry established a contract with the decontamination company to pay them for their services.

While the payment is getting figured out, E-312 Engine Boss Trainee and E-312 Engine Boss are notified that their vehicles are done and ready to be picked up. Their engine is the first vehicle to be ready. Upon arrival, the engine crew notices that the engine doesn’t look clean. There is debris in the grill. The interior still has dust and dirt.

As they inspect the engine, E-312 Engine Boss Trainee once again feels symptoms coming on. When the two module leads ask the decontamination company employees about what they are seeing, they are told: “We cleaned everything to our specs.” No one, however, would tell them what these specs were.

“But the engine itself...we had every damn compartment open on that incident. The wind was blowing. Folks in and out of the truck. That whole truck experienced what we experienced.”

E-312 Crew Boss Trainee

Also during this time, an Arc Dome employee experiences eye irritation and is taken to the hospital as a possible third exposure event. At the hospital, it is determined that the eye irritation this crew member is experiencing is due to a scratched cornea and not related to exposure.

Worried about whether their trucks and gear are actually clean, E-312 Engine Boss and E-312 Engine Boss Trainee call their supervisors. The final word for the day: “Stay another day in Elko so we can figure out how to proceed.”

The decontamination company has not yet completed cleaning Arc Dome’s four vehicles. Therefore, the fire module also plans to stay another night in Elko.

Insights from Elko County Fire Protection District: Detailing vs. Decontaminating

Decontamination is not equivalent to car detailing. The intent is not to remove all the dust, debris, and dirt from every surface, nook, and cranny. Rather, decontamination is all about applying chemicals that suppress the irritants.

Typically, decontamination involves identifying the Hazmat or irritant and spraying everything down with a specific solution. They don't wipe down every surface. Therefore, even though a piece of equipment has been decontaminated, it may still appear dirty.

Saturday, May 30

Having experienced a second exposure on Thursday and seeing the state of their "cleaned" vehicles, E-312 members have concerns about additional exposure.

Two of the members have a wife and children at home. They are worried about exposing their families. After talking with their supervisor, E-312 Engine Captain, he offers to drive out to exchange vehicles and deep clean all the gear and the engine to allow the E-312 members to travel home.

By the end of the day, Arc Dome is told that their vehicles have been decontaminated and they can pick them up. Arc Dome's trucks are the last to be decontaminated. When Arc Dome Captain arrives to inspect them, he finds them to be very clean. Arc Dome Captain and his crew therefore feel very comfortable with the status of their trucks. Because no secondary exposures were experienced by the module, they feel safe to drive the trucks off the lot.

Due to their trucks being ready for pick up later in the day, they drive back to their hotels for another night in Elko.

Sunday, May 31, and Beyond . . .

Arc Dome drives home and decontaminates the gear that the decontamination company wasn't able to clean. They follow the decontamination instructions that the company had provided and allow their gear an additional day to dry. On Tuesday, the module goes back on "Available" status.

E-312 Engine Captain drives to Elko to exchange vehicles with the E-312 crew. After he arrives, the crew drives home. E-312 Engine Captain stays to thoroughly clean out the engine and its equipment. He also launders all their clothing. Two days later, on Tuesday, E-312 Engine Captain then drives home.



The contents of Engine 312 crew's gear taken out for cleaning and laundering.

Wildland Fire Service Engine 1443

Tuesday Evening, May 26

Engine 1443, an Elko District engine, returns to its workstation after crew member and E-1443 EMT is released from the hospital. E-1443 EMT puts all his contaminated clothes into a garbage bag before entering his home. Worried about exposing his family, E-1443 EMT showers and self-isolates for the rest of the evening. He believes that his symptoms were from dealing with the patients.

Wednesday, May 27

The three Engine 1443 crew members are given an administrative day off to rest and recover.

Thursday, May 28

E-1443 EMT coordinates with Arc Dome Captain, on the details of the decontamination process. Engine 1443 personnel take the engine and engines 1441 and 1448, who were also assigned to the Egberts Fire, to the decontamination company.

Friday, May 29

Decontamination is finished. The trucks are picked up at the end of the day. The internal bins appeared to have been sprayed with a solution with the gear left in place.

Saturday, May 30

All three engines are back in service.

Elko County Fire Protection District

Wednesday, May 27

The Fire District is taking a barrage of phone calls with misinformation about what the exposure was. They continually had to ask people to be patient and reiterated that the exposure agent was still unknown.

The Fire District sent fire personnel equipped with a “sniffer”—a multi-gas detector—to see if it could detect any toxic gasses. None are detected. They also interview local ranchers while on site to inquire about what herbicides or pesticides have recently been used there. They are told that because cattle are not grazed on those lands, none are typically used in that area.

The Fire District also offered those affected by the incident access to their laundering facilities and engine bays to enable decontamination. The County Fire District is having a difficult time being a part of the contamination incident follow-up conversation. For the Fire District Chief, it doesn’t feel like the agency is being successful in getting the word out.

Thursday, May 28

The Fire District reaches out to a Civil Support Team (CST)—a Department of Defense function from the National Guard—that they work with regularly.

The CST team happens to be in the area for a training when the Fire District Chief calls them. However, the CST would only be able to pull samples. They didn’t have their mobile lab equipment with them. Therefore, they would not be able to process the samples until a later date.

They did offer to have their medical person speak with the ER doctors who treated the patients. After speaking with the ER doctors, the CST medical person told the Fire District Chief that—in their professional opinion—there was an extremely low probability of the exposure being chemical.

The Fire District Chief hears about vehicles going through decontamination. While the Fire District Chief thought this was a good decision, they also believed that waiting until they had a better idea of what they should be decontaminating would have been better.

"I had a conversation with [NDF Duty Officer] and [NDF POC] last week who had spoken with [the decontamination company]. They said it was weird for the company. It was the first time the company had deconned for something without knowing what they were deconning for."

**Fire Chief
Elko County Fire Protection District**

The County Fire District had a lot of local and subject matter knowledge to convey—especially with responding to exposure events. Even so, they believed that they were unable to insert themselves into the many discussions happening at the state and national level. This resulted in the County Fire District being outpaced by the decisions being made at the national levels.

People were trying to solve problems rapidly, not necessarily solving problems correctly.

Humbolt-Toiyabe National Forest

Because the Egberts Fire was on private land, the Elko County Fire Protection District—and later the Nevada Division of Forestry—had jurisdiction of the fire and this Incident Within an Incident. Not wanting to “step on toes” or come in “hard charging,” the local Elko Ranger District Fire Management Officer (FMO) and Ranger continually offer help. They are told that things are currently covered. Even so, they continue to try to stay engaged through conversations and to offer help.

Arc Dome Fire Module’s Fire Management Officer (FMO) is included in most of the conversations and updates his Line Officer and other District FMOs on the Forest with the information.

From Tuesday through Thursday, Forest leadership continue to communicate with each other through phone calls and face-to-face conversations. They also offer support to the County Fire Protection District.

Several times, they discuss sending an agency representative to support Arc Dome and E-312. But each time they do so, they receive news that the crews have “dealt with the issue at hand” and will be coming home. And, therefore, to stand down their efforts. This happens multiple times.

However, on Thursday, with the decontamination company invoice payment issues, the worries about the quality of decontamination, and a general lack of information, the Humboldt-Toiyabe FMOs stand up a daily information sharing meeting. In this way, everyone is hearing the same information and how they can provide more help to their affected employees.

By Saturday, the FMO group decided to send E-312 Captain to Elko to assist.

Nevada Division of Forestry

The NDF spent the next six days trying to support their employees on the Arc Dome Fire Module and share information with the other three agencies.

The NDF Hospital Liaison reached out to their Duty Officer (NDF Duty Officer) to ask for help making arrangements for decontamination services. Although the NDF Duty Officer was getting direction from their superiors to establish those services, because so many agencies were involved, some confusion surfaced concerning what exactly was going to happen.

The NDF Duty Officer (originally the incoming Type 3 IC) went back out to the fire to see if he could discover anything unusual that might help the agencies narrow down the cause of the exposure. He searches for barrels, old cans, dump sites—but finds nothing suspicious.

The NDF Duty Officer is notified that by the end of the week, a decontamination unit will be arriving to clean boots, packs, and vehicles.

Wanting to get some information out, the NDF released a press release announcing the exposure event. Because very little was known about what the firefighters were exposed to, the NDF kept the information to solely what they knew to be true.

"We were being told a lot of stuff about contamination issues. We were doing our best to keep off social media. We were trying to not hide anything as we were trying to figure out what we were actually dealing with."

NDF Duty Officer

After the second exposure on E-312, NDF leadership decided to quarantine the Arc Dome trucks until they could be tested by the CST team and cleaned by the decontamination company.

After discussions with the Forest Service, the NDF formalized a contract to pay for the services provided by the decontamination company.

On Thursday, the NDF Duty Officer changes.

The incoming NDF Duty Officer serves as a point of contact (NDP POC) with the Arc Dome crew and the decontamination company, helps with CA-1 and CA-2 paperwork, and makes notifications to partner agency leadership as needed.

As of the Publication of this RLS

The cause of the allergic reactions has yet to be determined.

A Civil Support Team swabbed gear, boots, and vehicles and ran testing for chemical products. The only chemicals found were DEET ("N,N-diethyl-meta-toluamide," the most common and widely used active ingredient in commercial insect repellents), and a chemical commonly found in cleaning products like Simple Green (the concentrated, non-toxic and biodegradable all-purpose cleaner and degreaser). These chemicals are not known to cause such reactions.

Through conversations with botanists and local ranchers, the agencies involved are investigating the possibility of several plant species as potential sources for the reactions. Death camas, water hemlock, and poison hemlock have all been identified in the area. These species are known to cause some of the symptoms experienced by the firefighters. They are also known to increase in toxicity during drought conditions, which the Egbert Fire area was and is still experiencing.

"Everyone is going to want to know what it was. And I don't know that we will ever get there."

Fire Chief

Elko County Fire Protection District

Lessons Learned

The lessons discussed below come from those who were involved in the exposure event and subsequent extended IWI. They are not intended to be recommendations from the participating agencies.

1. Even though the Egberts Fire incident itself was winding down, the IWI morphed into an extended event with additional complexities and challenges. All personnel involved recognized that the aftermath needed an incident command structure of some type.

“The operational tempo had decreased, but there was an entire other incident happening within it that almost became a separate thing, but it actually wasn't.”

**Fire Management Officer
Elko Ranger District**

- a. IWIs typically end when patients are transferred to higher care. This one continued for much longer.
 - b. The IWI involved people from four Humboldt-Toiyabe National Forest districts, the Nevada Division of Forestry, the U.S. Wildland Fire Service, and the Elko County Fire Protection District. It would have been beneficial to have structured coordination between these agencies.
 - c. A finance person would have been helpful to prevent the E-312 Engine Boss from having to worry about buying and justifying.
 - d. Assigning a Hospital Liaison for the duration of the incident would have been helpful with the second exposure and follow-up CA-1 and CA-2 paperwork.
 - e. It was difficult for the people on the ground to come together to make a good decision that everyone agreed upon that was supported by their higher ups. Decisions were being made separately by out of region, out of local area people, and by each individual agency.
2. Humboldt-Toiyabe National Forest crew and engine leaders were challenged with properly completing medical forms for so many employees and without computer availability. (The E-312 Engine Boss's laptop was in the quarantined engine.) The Forest will pursue giving all module leaders Hospital Liaison training—which includes CA-1, CA-2, CA-4, and CA-16 training.

“I think people are intimidated and scared to drop the ball. It's really about knowing how to fill out paperwork. It does not come with the same responsibilities as a Family Liaison.”

**Fire Management Officer
Elko Ranger District**

- a. The Humboldt-Toiyabe National Forest is unique in size. This Forest spans the entirety of the state of Nevada and a tiny chunk of California. It can take a full day to drive from one district to another. Considering the scale of this Forest, more people are necessary to be available as Hospital Liaisons.
 - b. It would be preferable if the Forest had a list of two or three Hospital Liaisons on each district who could be called.
3. **Exposure Day.** The initial IWI was well organized and coordinated. When the additional patients arrived at ICP, the IWI morphed into a Mass Casualty Incident (MCI). Crew leaders believed that the MCI needed a more structured organization to obtain a fluid operation.

"I should have 'Sharpied' on those people: Red, Yellow, Green with the stats and time of assessment."

Arc Dome EMT

- a. This IWI should have been run like a Type 4 incident—with an IWI IC with support positions, including a medical coordinator, head of staging/triage, operations.
 - b. Establish an ICS structure as soon as you notice things slipping through the cracks.
 - c. We have never had training in Hazmat or exposures. All of our medical scenario training has been trauma. We train for IWIs but not for Mass Casualty Incidents.
 - d. It was helpful to have an Elko County Fire Protection Service person as the IC. They were an advanced EMT who could order the needed supplies and support.
 - e. A feather in the cap to the EMTs. They took the IWI seriously from one or two all the way up to 15 people.
 - f. Getting people off the fireline was the best decision. Holding people back from going out on the fireline the next day was also the right decision.
4. **Interagency Relations.** With personnel from four different agencies affected, overhead involved were concerned about appearing to "step on the toes" of other jurisdictions. Each agency was doing the best they could with the information they had. However, all of the agencies acknowledged that coordination was lacking.

"I don't think we need an invite to take care of our folks."

**Fire Operations Specialist
Humbolt Toiyabe National Forest**

- a. Early on in such IWIs, it needs to be established who has the authority and responsibility and who should be looped in.
 - b. The Forest will use this incident as a future discussion item with other agencies/jurisdictions with the goal to improve work communication, coordination and cooperation.
5. **This incident is a good reminder for cleaning and wearing serviceable flame-resistant (FR) clothing.** Flame-resistant clothing is routinely contaminated with toxins from the wildland fire environment.

"Encourage culture change to clean PPE and to care more about what's on your body. It's not just the biological chemicals. It's the carcinogens and all the other things."

**Fire Chief
Elko Fire Protection District**

- a. Local units having laundry facilities and showers available is essential for best work practices regarding soiled/contaminated clothing. Avoid taking soiled/contaminated clothing home.
 - b. More information can be found here: <https://www.nwcg.gov/announcement/general/etcrmc-safety-bulletin-25-001-new-guidance-on-laundering-wildland-fire-clothing-to-reduce>
6. **The "Rumor Mill Culture" of filling in gaps when information is not available.** All involved wanted to know what the cause was and how to deal with it—but there was no obvious cause. Openly discussing the topic and potential causes inadvertently started rumors.

"What do you do when you don't have any 'slides' for the situation?"

**Fire Management Officer
Ely Ranger District**

- a. Some managers felt uncomfortable with giving inconclusive information.
 - b. The rumor mill outpaced official communication channels on this incident. Information had to be continually corrected.
 - c. Many people involved, in hindsight, wished they would have avoided speculation. This can breed misinformation and lead to undue stress.
7. While employees were free to discuss this incident internally with their families, they were asked not to share with social media or the press. There were no information leaks.
- a. People did a good job of not talking to anyone other than those who needed to be informed.
8. **“Wuss” Culture.** Several of the patients spoke about not wanting to be “that person” who needs medical attention. They, therefore, delayed asking for medical attention. Some of the EMTs and crew leads also mentioned initial reactions of “this is just fire—we work in sh*tty conditions.” In retrospect, they all now wish they would have spoken-up sooner—or given more credit to the complaints.

“We don’t want to look vulnerable; we don’t want to look soft. Maybe that is not the reaction we need.”

E-312 Engine Boss

- a. The people involved in this incident say that in the future they will take a harder look when deciphering between: “Is this just part of wildland fire—itchy, irritated skin and eyes. Or, is this more than that?”
 - b. In the future, they intend to bring such concerns up earlier with their EMT or captain.
 - c. A major lesson they learned was: “Don’t delay patient care.”
9. **Limiting Exposure.** In hindsight, EMTs, module leaders, and ICs identified decisions they would have made differently to reduce exposure risk to additional personnel on the fire.

“The second you find something is wrong, step back until we know it’s clear. Make an exclusion zone. Flag off the area, just like you’d flag off a hazard tree.”

E-312 Crew Member

- a. Were so many EMTs doing assessments necessary? They were also being potentially exposed.
 - b. Initially, the affected people were going to camp out after their exposure. That plan was changed to take these people to hotel rooms where they could shower and clean up.
 - c. “I [Arc Dome Crew Boss] didn’t think about it when I asked everyone to drive to ICP. I could have exposed more people by having them drive together before assessing them for symptoms.”
 - d. “I [E-312 Engine Boss] should have taken more precautions that first morning. Let’s hold off on getting stuff cleaned for a sec. We are all handling stuff that was out on the line.”
10. **Mobilizing Support Staff Sooner.** All resources on this incident acknowledge the toll that the six days after the initial exposure took on E-312 and Arc Dome crew members. To reduce such negative impacts in the future, the involved agencies now plan to mobilize support staff sooner rather than waiting to see what transpires.

“Going forward, we should have a trigger point in place. If everyone is stuck somewhere, we can’t just leave the module leaders on their own to figure things out.”

Forest Duty Officer Humboldt-Toiyabe National Forest

- a. It seemed like the Forest FMO group would get spooled-up and then we'd hear they were taking care of it. Then we'd get spooled-up on something else, then we'd hear it was resolved.
- b. Instead of waiting for our partners to share information, the Forest should be more proactive. The Forest probably should have engaged 36 hours earlier.
- c. The Forest Service recently decreased the number of purchase cards available for employees. The Engine 312 Engine Boss was the only Forest Service employee with a purchase card. This limited his ability to tend to both crews' needs.

11. **Speaking Up.** Several people involved in this incident noted how they had questions about or suggestions on how to move forward as the events proceeded. However, they neglected to bring them up due to their "low man on the pole" status. Reflecting on this now, they said that in the future they will not be afraid to speak up, no matter how high up in the agency the people are to whom they're speaking.

"Maybe it was too much leading up for what I'm comfortable with. Maybe I need to get more comfortable with that [leading up]."

E-312 Engine Boss

12. Streamline communication channels between firefighters in need and their agency's medical team while including the firefighters' supervisors and forest managers. Once communication channels are established, continue open communication to ensure that updates can be provided.

E-312 Engine Boss's Advice on Leading a Module Until Support Arrives

If another Engine Boss ever finds themselves in this situation, here's my advice to them:

- Take notes. Just notes, notes, notes.
- Ask someone to be your scribe. There is so much information coming in, you will need help tracking it all.
- I should have paused the Engine Boss Trainee's assignment and put them in a role to assist me.
- Don't multitask. Sometimes you need to know when it's time to focus on the priority task.

Other Thoughts and Lessons from Those Involved in This Incident

Be familiar with the plants in your local area.

One person involved observed how county responders have updated CAD (Computer-Aided Design) tools that allow responders to see Hazmat sites, hostile landowners, and other premise alerts in the area to which they are responding—before they arrive on scene. They suggested that federal resources could benefit from having these same tools.

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