

EMIGRANT FIRE TREE STRIKE

Learning Review Narrative

September 2025

EXTRACTION TIMELINE

- 1156 RED Medical called into Emigrant Communications on Command
- 1158 LifeFlight ordered direct by Emigrant Communications Unit Leader
- 1207 Incident Medivac Helicopter, 74H w/Medic ordered to H25
- 1210 Patient Update: Contusion to neck, swelling to spineA/Ox4, HR95, O2-99, giving O2-15L/min, transporting to RD270
- 1216 74H departs Toketee Helibase, 7 min eta to H25
- 1220 LifeFlight departs Bend OR, 45 min eta to Toketee Helibase
- 1229 74H arrives at medivac site
- 1232 Patient Update: RED, 126/64, RR normal, responsive to voice, complaining of back pain, no sensation from chest down
- 1243 Loading patient, 74H will transport patient to Legacy Emmanuel (Portland). Keep LifeFlight coming
- 1254 74H departs medivac site with patient enroute Toketee Helibase
- 1259 74H arrives Toketee Helibase, transfers patient to Ambulance waiting for Lifeflight
- 1308 LifeFlight arrives Toketee Helibase
- 1321 LifeFlight departs Toketee Helibase enroute St. Charles Health (Bend OR)
- 1358 LifeFlight arrives St. Charles Health

EXECUTIVE SUMMARY

On September 8, 2025, during suppression efforts on the Emigrant Fire on the Willamette National Forest, a tree hit a Felling Boss (FELB) while working with a contracted felling module (FMOD). The incident occurred during hazard tree mitigation along a steep handline. The FELB was struck in the head, neck, and spine, prompting a complex and well-coordinated medical response involving multiple crews, EMTs, and air evacuation.

The FELB and FMOD recalled the sequence of events leading to the accident differently, leading to conflicting accounts. The narrative that follows provides as accurate an account of the events surrounding this incident as possible. Where individual recollections differ, those variations are labeled and italicized. The intent is to present both perspectives and acknowledging their differences, to ensure that readers may evaluate them thoughtfully and contribute to organizational learning.

September 7th, On Division Mike of the Emigrant Fire, 2025

On September 7th, 2025, firefighters were engaging a slopover above the 2136 road of the Willamette National Forest. This portion of the Emigrant Fire had established above the road, outside of the planned containment line on Division Mike. The Emigrant Fire started on August 24th and had been under the management of a Complex Incident Management Team (CIMT) for 13 days.

On that day, an Interagency Hotshot Crew (IHC) from the Pacific Northwest had traveled from another fire to the Emigrant to aid in suppression efforts. While the crew was preparing for their assignment, they had discussions about the hazards present on the Willamette National Forest. Those who had been with the crew in 2022 recounted to newer crew members their involvement in a fatality fire less than ten miles away on the same forest. On the Big Swamp Fire, the crew had been involved in the medical response and extraction of Collin Hagan, a hotshot who lost his life after being struck by a tree.

Once the IHC arrived on Div M, they received an operational briefing and joined resources already engaged in catching the slopover. They opened up a pre-existing handline and used existing roads to contain the slop. The IHC burned out the indirect handline late in the shift and were successful in completing their mission for the day. The line had not been snagged before the burnout. As they left the line, they identified the obvious hazard trees that could impact the line and dropped them without issue. They were feeling good closing out the shift with a win. In addition, there was added excitement because it was the crew's first burn out of the season. Tomorrow would be spent securing the line they had established.

September 8th

The plan for September 8th was to snag and secure the line. Doing so safely meant that the IHC needed to establish a break point with a Type 2 Initial Attack (T2IA) crew that had been on the division for a few days. The T2IA crew would work along the 270 spur and down the handline to the break point. The IHC would work from the break point down to and along the 2136 road. The entire section of handline was a bit under ½ mile over a rise of

600 feet. There were multiple contracted felling modules (FMOD) on the division. They would be working to clear hazard trees in advance of the crews mopping up and securing the lines.

One of the Squad Bosses from the IHC was assigned to be a Felling Boss on the handline. He started the day working with a saw team from the IHC. They began by working from the 2136 road up the handline, mitigating hazard trees as they went. The spec for hazard trees that day was anything within 1 ½ tree lengths that had the potential to affect the line. FMOD1 arrived on the 2136 road later in the morning because they had been sharpening chain from the previous day's operation.

The following section presents two differing perspectives based on interviews with the three individuals present when the tree strike accident occurred. Each person was given the opportunity to review and clarify their own account to ensure it accurately reflected their recollection. Because of the divergence, this narrative does not seek to determine which version is correct, but rather to present how individuals remembered the events.

FMOD Recollection:

The two members of FMOD1 recalled being guided up the handline by one of the Squad Bosses from the IHC. As they moved up the line, they eventually tied in with one of the IHC Captains, the Crewboss Trainee [CRWB(T)], and the FELB they would be working with. FMOD1 took their packs off and set the saw down and chatted for a while. It was a welcome break after a short but steep hike considering FMOD1 were not hotshots. They discussed the mission for the day which would be sweeping through their area mitigating hazard trees for the crew coming in to mop up and secure the line. The FELB indicated that he would identify the trees to be cut and the FMOD would do the cutting. After this discussion, the FELB went up the hill to tie in with the T2IA crew working above to establish a break with them.

When the FELB returned, the FMOD recalls walking up the handline with the FELB another 100 to 150 yards, making small talk along the way. It was during this small talk that they discovered the swamper and the FELB both lived in the same small town in Western Oregon. As they approached their starting point, the group identified a small hung-up snag (dead tree). The snag was a 75' buckskin (no bark, no branches), 11-inch DBH, hung up in the canopy of a mature, live hemlock. There were also several mature Douglas firs in the falling area. The snag was burning at the base and not attached to the stump. The group then discussed a plan to cut the snag out. FMOD1 recalled discussing the felling plan with the FELB. The sawyer would make a horizontal cut and leave a strap of about 10% of the wood intact. His partner would then push at the cut and the snag would separate and fall to the ground. The FMOD anticipated it would take multiple attempts to get the snag to release from the canopy of the live tree and fall completely to the ground. When it was released from the canopy, they anticipated it would fall side-slope towards the handline and towards the "green." The FELB then left FMOD1 to go up the hill. It was their understanding that the FELB was going to tie in with the T2IA crew one more time before starting cutting operations. When the FELB returned, FMOD1 said they were ready to get

going, which the FELB acknowledged. The FELB was positioned behind a large, live Douglas fir near the handline. The FMOD believed the FELB knew what they were cutting and the expected direction the snag would fall.

FELB Recollection:

The FELB recalled hiking up most of the handline with FMOD1. It was during this hike up that he made small talk, trying to establish a rapport with the swamper and sawyer. He made jokes with the sawyer about how thick the rhododendron was and discovered that he had just bought a house in the same small town that the swamper lived in. The FELB ran up to tie in with the T2IA crew to establish a break point after what felt like a very slow hike up the hill. He left FMOD1 around the IHC Captain and CRWB(T) and told them to wait for him in the area while he talked to the other crew.

The FELB met up with two squad leaders from the T2IA crew and established where FMOD1 would begin work, ensuring that it was clear of any area that the T2IA crew was working. The FELB and one of the T2IA squad leaders had previously worked together on a different crew and spent a bit of time catching up. After they had caught up, the three of them split up and the FELB walked back down the hill to begin work with FMOD1, meeting them where he had left them with the IHC Captain and the CRWB(T).

The FELB returned to the area where FMOD1 was waiting for him after he had tied in with the T2IA crew. The IHC Captain and CRWB(T) asked if he had flagged off the area. The FELB said “No,” but he would do it before they started cutting. The FELB and the sawyer from FMOD1 walked up 100-150 yards together and the swamper fell behind. He asked the sawyer to stand by while he ran up to flag the line. When the FELB left to flag the starting point, he heard the saw start and thought to himself that he was going to have to address them cutting after he had told them to stand by. He remembered already having a lot on his mind, wondering how he was going to keep the operation safe with such a small piece of ground. The 2022 Big Swamp fatality was on his mind and now he was thinking about how he was going to reprimand the two individuals he had just met.

When the FELB returned to the area, he approached with caution, unsure of what FMOD1 was working on, but assuming they were just brushing out their work area. He pulled back some branches of rhododendron so he could see what was happening. He was alarmed to see a horizontal cut being put into the bole of a snag, which he assumed to be the back cut of a conventional cut. Knowing that the opposite direction of a back cut is typically one of the safest places to escape, the FELB retreated quickly from the area, moving downhill and away from the direction he believed the snag would fall.

Tree Strike

The sawyer for FMOD1 made the cut to the bole of the snag about 3' above the ground and left a strap of about 1" on the edge of the round. FMOD1's swamper pushed the bole of the snag and the strap broke, releasing the base of the snag towards the base of the live hemlock that it was hanging in. The butt of the snag fell to the ground, and the top began to fall towards the handline.

The swamper yelled, "Watch her! Watch her! Watch her!" But as the snag fell, the sawyer saw the tree fall onto the FELB and hit him on the top of the hardhat and his neck, shoulders, and back. The swamper for FMOD1 couldn't see the tree hit the FELB, but he recalled hearing a loud crack as the tree hit him. The FELB was driven to the ground by the snag and was underneath the bole when FMOD1 made their way over to him. They made one cut to the bole and removed it from on top of him and yelled uphill and downhill for help.

Incident Within the Emigrant Fire

One of the squad leaders from the T2IA crew was on his way to flag the line indicating falling operations below when he heard yelling that concerned him. Based on the tone of the voices, he requested EMTs from his crew to leave the spot where the squad was working for a possible medical. The CRWB(T) and IHC Captain were slightly downhill and saw the tree fall towards the green. Then they

This incident underscores the significant complexity often associated with choosing to remove a hung-up tree. Using a chainsaw and a series of cuts alone—particularly when the cutting plan repositions the tree base into a more vertical orientation—introduces high levels of unpredictability. Under these conditions, it is extremely difficult to control or accurately predict how a snag will react once cut and released from the supporting tree. The forces of tension, compression, and binds created by canopy entanglement can generate sudden, unexpected movement, placing sawyers and nearby personnel at considerable risk of injury. This reinforces the critical importance of conducting a thorough procedural size-up and clearly communicating the plan to everyone involved in the operation.

PNW Saw Program Manager



The strike tree, taken from the base, looking towards the handline.

heard yelling and became worried about what had happened. They ran up over a rise where they could see the felling area and only saw the two red hardhats of the fellers. What they couldn't see in the area was the hardhat from their crewmember, the FELB.

The IHC Captain immediately dropped his pack and started calling for additional help on the radio. The CRWB(T) hurried to the area and found the FELB lying unresponsive in the black. He recounted later, "I'm not an EMT but I saw what I thought could have been agonal breathing. His eyes were open, but he wasn't saying anything. I was rubbing his sternum and screaming but he wasn't responding to me." Crewmembers from the T2IA crew came down the line to aid the CRWB(T). He asked if any of them were EMTs and felt immense relief when he found out they were EMTs and saw them take over patient care. The IHC Captain initiated a Red medical incident within an incident (IWI) at 11:56 and began communicating some of the medical incident report over Command.

When the EMTs from the T2IA crew found the FELB, he was in a bad position for stabilization. The first EMT to arrive thought he was dead. The sawyer and swamper from FMOD1 were actively holding the log uphill from him and he was unconscious near the handline, on the burned side. The EMT did not see breathing, checked for a pulse, conducted a rapid assessment and found blood on the back of his head, recognizing a need to move him quickly. They cut off his line pack and positioned him on a MegaMover for a rapid movement away from the log. There was a quick conversation between the IWI IC and one of the T2IA squad leaders about whether or not they should carry the patient uphill or downhill, because the IWI IC hadn't been uphill. The T2IA squad leader said it would be much easier to go up. When they moved the patient onto the MegaMover, he roused groggily and asked, "What's going on?"—but was not alert to person, place, or time. The rest of the T2IA crew hurried down the hill to deliver their medical gear and help however they could.

The lead EMT from the IHC had been one of the first people radioed by the IHC Captain to come up the line. He asked if he needed to bring the saw team he was working with. The IHC Captain said: "No." This clued-in the rest of the IHC that something was not right. The lead EMT immediately began hiking up the hill. Shortly after, the saw team followed. The rest of the IHC on the 2136 road began to organize crew members and collect medical equipment to move up the hill towards where they knew people were working. The IHC crew members made their way up the handline in pairs and squads, carrying their medical gear.

When the lead EMT from the IHC arrived at the accident scene, the T2IA crew was moving the patient uphill in the MegaMover with no spinal immobilization in place. The IHC EMTs asked them to set the patient down on a flat spot about 15 feet away so they could conduct a full assessment and immobilize the patient's spine. At this point, the patient was conscious and yelling about the pain in his back. The lead EMT from the

Measurements of the line taken later revealed that they were in the middle of the handline. It was 0.2 miles from the accident site down to the 2136 road and up to the 270 spur. However, the elevation gain to the 270 spur was 190 feet and the elevation loss to the 2136 road was 350 feet.
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IHC made it clear in his tone that he would be taking lead on patient care, asked for anyone who wasn't an EMT to step away, and then directed others to get a set of vitals. A Squad Boss from the IHC arrived on scene a bit later with additional crew members and additional medical gear. As more EMTs from the IHC arrived, they aided in cutting the clothes off the patient and conducting a full assessment. Their assessment showed swelling and red splotchy skin on his neck, shoulders, and back. There were external signs of spinal trauma and the patient did not have sensation or motor response in his feet—though he did have pedal pulses. They also noticed a large hematoma on the back of his skull. During their assessment, the patient regained awareness of person, place, time, and events (A&O x 4) and the crew began to administer oxygen to the patient (15 LPM via NRB). Their Traverse Rescue Stretcher (TRS) arrived on scene and they configured it to immobilize the patient. Once they moved him to the TRS he complained of intense pain and said there was a rock under his spine—despite the patient care providers checking multiple times for any debris before immobilizing him with the straps. EMTs addressing the patient's head rolled up yellow Nomex shirts to pad around his head and neck. Prior to closing the TRS for transport, the IHC put on an automatic blood pressure cuff.

The IHC was well practiced in IWI responses. This was a regular part of their preseason training. One of the Squad Bosses from the IHC, who thought he would originally be working to facilitate patient transport, switched to a “scene control” role—in which he was directing personnel and watching the overall scene. The Crewboss for the T2IA saw that there was plenty of help moving the patient and backed away from the patient carry. He saw Air Attack circling in a helicopter and picked him up on air-to-ground to start working on landing sites. They discussed which direction the patient was going: up or down? Up was a bit longer and fighting gravity. But there were possible landing sites on the ridge and popping out on the 270 spur would put them closer to H-25, the nearest approved helispot. It was then communicated that the patient would go uphill. This was relayed over the radio to the IHC Superintendent who was waiting at the junction of the 2136 and 2154 roads with Ambulance 3. Once they confirmed they were transporting up the line, the IHC Superintendent, Ambulance 3,

Patient Care Lessons:

- Check your gear midseason. Two pulse oximeters, one from the IHC and one from the T2IA were both dead when it was time to assess the patient. The crews had to pull spare batteries from their pack to use the oximeter. The first oxygen bottle to arrive was completely empty and the second was only about halfway full.
- One crewmember noted that the leg immobilization straps on the TRS made it difficult to remove the MegaMover and Nomex pants. He was planning to spend time working on methods to increase the speed and safety of using those straps when clothing or other items could get in the way.
- An automatic BP cuff being placed on the patient at the time of spinal immobilization made it possible to monitor vitals without interrupting transport.
- Spinal immobilization in the field should conform to the body, both the TRS and the MegaMover were a better option than a backboard.
- Moving a patient towards advanced care is critical, however, it needs to be balanced with assessment and stabilization.

and Rapid Extrication Module 3 (REMS 3) all headed towards the 270 spur from the 2154 road.

The scene control IHC Squad Boss organized people into groups of eight to carry the patient. Three people would be on either side, one person would manage the patient's head, and one person would carry the oxygen bottle. Taller crewmembers were directed to be at the feet and shorter crewmembers at the head to keep him supine as he moved uphill. They switched to a "caterpillar carry" in areas that were steep or rocky. Spotters walked in front of the carry-out, communicating paths and obstacles and even guiding the responder at the patient's head (who was walking backwards) by their belt. Individuals were actively removing obstacles from the path, including pulling shrubs back and laying on top of the shrubs to keep them from snagging anyone's feet or ankles. It was apparent that crew members on the T2IA and IHC had practiced carrying patients within their crews. Some noted that the independent responders helping to move the patient just didn't operate as smoothly during the carryout, though they were well intentioned.

The IHC's IWI training involved the use of two scribes: one for IWI IC and one for patient care. A position they incorporated into this incident was a "runner." The IWI IC was not right next to the patient, so the patient care scribe would send a runner with pages torn out of their notebook to share patient updates, rather than yelling over the chaos of the scene or on an already busy radio frequency.

At the initiation of the Red medical, the IWI IC had requested transport of the patient that utilized air evacuation and LifeFlight. Their first plan communicated over Command was to carry the patient to a road and then drive the patient to H-25. The Air Tactical Group Supervisor (ATGS) was communicating with the T2IA Crewboss and evaluating alternative landing sites that were closer to the patient than H-25. An alternative suggested by ATGS and the T2IA crew was the end of the 270 spur. The ATGS helicopter shot an approach into the end of the 270 spur and touched the skids. It would provide a flat landing pad with no fire issues but would still need dust abatement and removal of trees and brush around the pad. The T2IA crew began cutting trees to improve the landing site.

As the patient was being carried up the fireline to the road, the T2IA Crewboss and ATGS were working on multiple options to transport the patient off the fire to advanced medical care while the IMT was doing their best to support as many transport options as possible. At Toketee Helibase, the flight crew for a Bell 407 helicopter had overheard the Red medical IWI. Because they were the pre-identified medical ship, they immediately began reconfiguring the ship to carry the patient litter and grabbed the paramedic that was staffing helibase. The Communications Unit Leader in ICP called LifeFlight to request an air ambulance be sent to the fire. Ambulance 3 and REMS3 arrived at the end of the 270 spur from the adjacent division. The 407 launched from Toketee with the medic and manager on board as soon as they were reconfigured.

When the 407 arrived over the IWI, the scene was chaotic with sawyers moving brush and personnel spraying water from a hose lay for dust abatement. The manager and pilot approved the landing, but it was tense. They had to land with the tail rotor towards the handline due to the position of the helispot on the ridge. The Helicopter Manager (HMGB) planned to shut down the ship before loading the patient due to the position of the tail rotor

and the low clearance on the main rotor. But personnel on the ground assumed that they would load the patient hot and were trying to approach the ship as it was shutting down. The HMGB had to exit the ship with the rotors still spinning to wave people away until the ship had completely shut down. In retrospect, the HMGB reflected that he could have better communicated the need to clear the landing site and the need to shut down the aircraft before loading the patient.

Once the 407 was shut down, the patient was set down by the door and the lead EMT transferred patient care to the paramedic that arrived with the ship. The patient was reeling in pain, continuing to yell that he was lying on a rock. The paramedic left him immobilized in the TRS to avoid unnecessary spinal movement. The medics from REMS3 assisted the lead medic and established IVs in both arms. The lead paramedic planned to alleviate his pain but wanted the patient to remain awake enough for a neurological assessment at the hospital. The paramedic gave a standard dose of pain medication after verifying the dosage with a REMS3 medic.

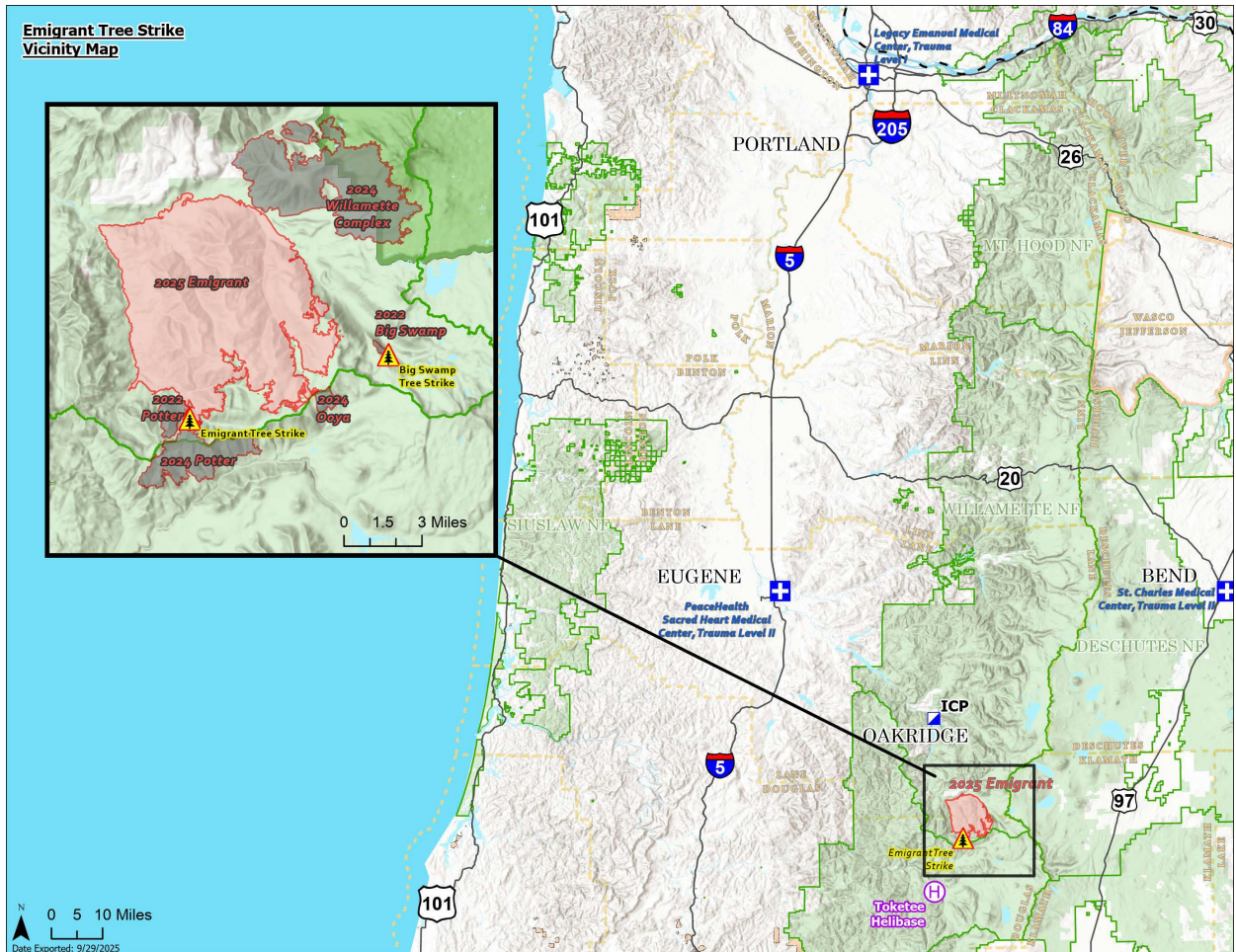
The T21A Crewboss, the Helicopter Manager, and the paramedic discussed that LifeFlight was the preferred transport. However, they were unsure on the status or ETA for LifeFlight. If LifeFlight was unavailable, direct transport from the helispot to a hospital

would be their next best option, with a Level 1 Trauma Center in Portland being the preferred destination. ATGS offered to the three of them that they had multiple options, but that they needed to determine a transport plan because this was their patient. They determined that they had enough fuel to reach a Level 1 Trauma Center in Portland if that is what they had to do to get the patient to a hospital. While they were in deliberation, they heard a radio transmission indicating LifeFlight was 12 minutes away from Toketee Helibase. The HMGB didn't have a handheld radio, asked to borrow the CRWB's and said to ATGS, "That's where we're going!"—to make it clear that the patient would go to Toketee Helibase. They later learned that weather that afternoon would have prevented transporting the patient north to Portland.

If there's an option to transfer a patient to an air ambulance, it is my preference to make that transfer happen. We do helispots; they do hospitals. There are a lot of reasons for us to defer to them as the experts for transporting a critical patient and landing at definitive care.
-HMGB

The 407 lifted from the helispot and landed at helibase a few minutes later. The paramedic and helibase staff transferred the patient to a waiting ambulance to stand by until LifeFlight arrived, about five minutes later. The patient was transferred to LifeFlight and flown to Bend, a Level 2 Trauma Center. After he was stabilized, he was transferred by ground ambulance overnight to a Level 1 Trauma Center in Portland.

When the patient arrived at the Oregon Health and Sciences University Hospital he was sent for a six-hour spinal stabilization surgery. He had multiple displaced spinal fractures between thoracic vertebrae 4-7, multiple broken ribs, a broken sternum, and—as of the collection of interviews during the review of this incident—was still unable to walk. Any brain injuries the patient sustained were asymptomatic and did not require any treatment or follow-up.



Map showing Emigrant Fire in relation to hospitals in Western Oregon. Inset shows tree strike location on the fire perimeter relative to the Big Swamp tree strike in 2022.

Review Team Members

- Dave Williams – Regional Risk Management Officer, Northern Rockies
- Ted Adams – Risk Management Specialist, Washington Office
- Hannah Coolidge – Foreman, Entiat Hotshots
- Ryan Gregg – Assistant Fire Management Officer, Sisters Ranger District
- Aaron Pedersen – Regional Saw Program Manager, Pacific Northwest Region