Rapid Lesson Sharing

Event Type: Tree Felling Tree Strike Injury

Date: December 17, 2025

Location: Olympic National Forest

The Story and Lessons from this Hazard Tree Felling Incident

Executive Summary

On December 17, 2025, two U.S. Forest Service employees—one recreation staff member and one wildland firefighter, both B Sawyers with several years of experience—were conducting hazard tree mitigation work at Big Creek Campground on the Olympic National Forest. The work was intended to reduce identified hazards and support employee and public safety within the campground.

During hand falling of a dead Douglas-fir approximately 10 inches in diameter at breast height (DBH) and 70 feet tall, several cutting actions at the stump resulted in the tree pulling to the left of the intended lay. As the tree began to commit to the fall, the top of the snag contacted a lower branch of an adjacent fir tree. This contact caused the upper portion of the dead snag to break and fold back toward the stump. As the top collapsed backward, it broke apart and a 3-inch DBH and 1 ½-foot-long piece of the broken top struck the sawyer on the left forearm, resulting in a fracture.

Background

In early- and mid-December 2025, a wide swath of the Pacific Northwest experienced multiple atmospheric river events that brought record-breaking rainfall and unusually high winds. These conditions resulted in widespread flooding, landslides, and downed trees—leading to road closures, power outages, and other emergency-related impacts across the region.

During this period, much of the Olympic National Forest experienced relatively minimal storm-related impacts. However, the Supervisor's Office was undergoing renovation and situational teleworking had been authorized. Therefore, many employees were working remotely during this timeframe. Personnel were directed to prioritize personal safety and limit field activities in response to the hazardous weather conditions. To support communication and coordination during this time, management used Microsoft Teams video conferencing to provide work direction and share real-time updates.

Although conditions remained hazardous in many areas, some Districts on the Forest were located in areas that were relatively protected from the storms' impacts. As a result, messaging regarding forest impacts and work mitigations did not always align with conditions observed on the ground in those locations. This was particularly evident on December 17, when skies cleared and winds subsided, creating conditions that appeared favorable for field work.

Incident Narrative

Following several weeks of weather-related uncertainty, extended work delays, and remote work arrangements, there was increased motivation to take advantage of these improved conditions to make progress on a significant backlog of hazard tree mitigation work in campgrounds and other developed areas.

After discussing the day's weather, two Forestry Technicians determined that conditions appeared suitable and began developing a plan to reinitiate hazard tree removal activities. This effort was taking place within the October 1 thru March 1 northern spotted owl work window, which constrained when hazard tree felling could occur and influenced work planning during this period.

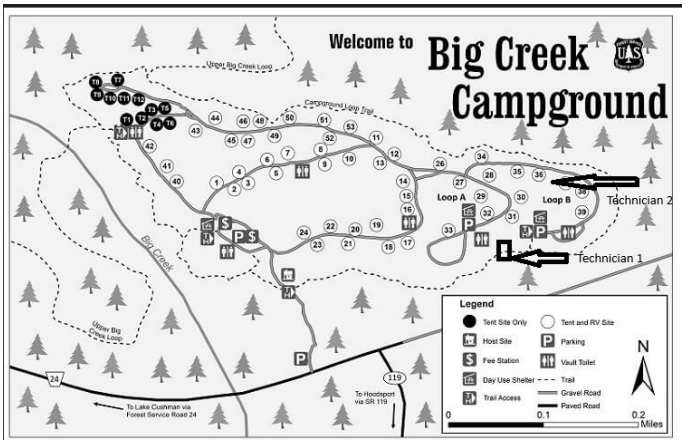
This window overlaps with seasonal weather conditions and reduced workforce availability, as many seasonal employees are typically not on duty during this timeframe. As a result, a large and complex hazard tree program on the unit was managed with limited staffing, including a single recreation employee with an Engine Captain assisting as a collateral duty when time allowed.

Both of these individuals expressed a strong interest in chainsaw operations and were motivated to work together on this project after five to six days of work cancelations. Although power outages at the Supervisor's Office due to wind made accessing the building difficult that morning, the work location was more than an hour's drive north and was experiencing favorable weather conditions at that time.

Together, the two Forestry Technicians discussed trigger points that they would monitor related to wind conditions and tree canopy movement that could negatively affect safety during felling operations. They also agreed to avoid work areas impacted by road closures or other unsafe conditions. It was learned only after reporting to work that morning that Highway 101 had been closed due to a landslide. Based on these considerations, hazard trees within Big Creek Campground were identified as the priority for the day, with an expectation that the work could be completed within half a day's time.

After notifying their supervisors, developing a Medical Plan that was submitted to Dispatch, and completing check-out procedures, the two Forestry Technicians decided to travel together in the engine's chase truck. The vehicle was fully equipped with saw gear and a large trauma bag needed for the planned work.

Upon arrival, they paused to observe wind conditions affecting several larger hazard trees along the road and near the campground entrance where several cars were parked. Based on these observations, as well as the associated impacts to roadways, trail users, etc., they decided to begin work on 20 smaller diameter and shorter hazard trees located throughout the campground.

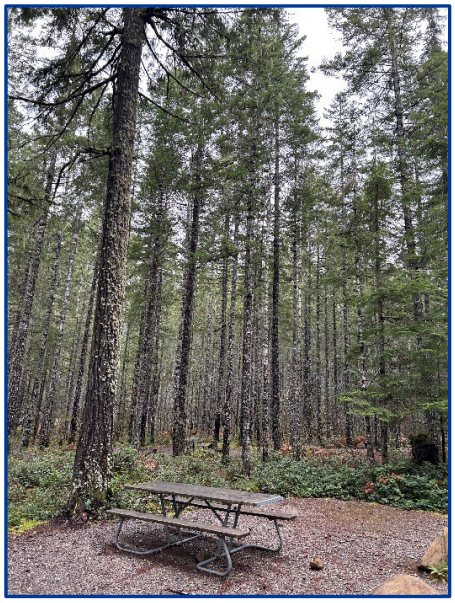


A verbal tailgate safety session was conducted to review hazards and work objectives. The Forestry Technicians then separated, maintaining a safe distance from one another, and began felling operations. Technician 1 worked in Loop B, while Technician 2 worked in Loop A—both moving in a circular fashion from one another as work progressed (see map on right).

General Stand Condition

The predominant overstory species in Big Creek Campground is Douglas-fir, with a vine maple and brush component and a moss-covered understory. Most Douglas-fir within Loops A and B of the campground average 10-18 inches in diameter and range from 50-100 feet in height, with larger trees interspersed throughout the perimeter of the stand. The campground area was clearcut prior to its development, resulting in a largely even-aged forest structure with tight spacing.

Laminated root rot (Phellinus weirii) is prevalent within this stand and has resulted in elevated levels of tree mortality, increasing the need to manage risk associated with whole-tree and top-failure, particularly during wind events that increase the likelihood of windthrow and breakage. This condition necessitates ongoing hazard tree mitigation efforts, as evidenced by numerous previously felled trees throughout the campground, and contributes to increased complexity during annual treatment activities.



Big Creek Campground campsite showing tree stand condition.

"The last couple years, I have been cognizant of how smaller diameter trees are often the ones that kill or injure you. So I took extra time to slow down and fully assess each tree."

Technician 1

Deep Depression Noted on the Tree's Right Side

Technician 1 began tree felling operations following standard safety procedures, including a procedural sizeup, clearing debris from the base, and creating an escape route. Approximately eight or nine previously identified hazard trees had been felled without issue.

Technician 1 then moved to a dead Douglas-fir snag approximately 10-inch DBH and 70-feet in height. During the sizeup, a deep depression was noted on the right side of the tree—the side they typically used for cutting. This influenced positioning and required reassessment of the cutting location. As a result, Technician 1 positioned on the opposite (offside) of the tree bole to execute the undercut.

Performing the conventional undercut from this position proved awkward and affected the geometry and alignment of the cuts. Two attempts were required to complete the undercut. An estimated one- to one-and-a-half-inch bypass remained on the stump's far side that was not observed or fully removed. The tree was aimed at an opening. A standard backcut was initiated without the use of wedges, as the tree exhibited some favorable forward lean toward the intended lay.

While progressing the backcut, a portion of the hinge on the far side was inadvertently severed. The combination of the remaining bypass and the compromised hinge caused the tree to pull left of the intended lay. As the tree committed to the fall, the top of the dead Douglas-fir snag contacted a lower branch of an adjacent tree.

As the snag continued to fall, the top portion of the tree flexed under compression and fractured approximately one-third of the way up the bole. The broken section folded backward and broke into several pieces as it fell toward the stump and struck Technician 1, resulting in a fracture to the left forearm.

Top: The incident tree. The water bottle (arrow) indicates where the sawyer was standing when struck on the left arm by the broken top.
Left: The small 3-inch DBH 1 ½-foot-long broken top section of the tree top responsible for the injury.

Area Around Stump Had Not Been Cleared

During the site visit conducted as part of the Rapid Lesson Sharing review process, Technician 1 noted that the area around the stump had not been cleared to the extent that they had previously remembered. The image (above right) indicates the approximate location in which the sawyer was standing while observing the top of the tree during its felling.

This image also shows the approximately 10-inch DBH downed log that was located directly behind the stump, along with additional debris in the immediate area. These features limited available movement and effectively constrained the escape path that had been intended for use during the falling operation.

Technician 1 recalled observing the top of the tree coming back toward them in what felt like slow motion while mentally assessing their next move. They described perceiving that they had sufficient distance or time to avoid being struck and delayed moving farther down their escape route.

"I thought I had enough time or was far enough away to avoid being struck."

Technician 1

X-ray of the fracture in Technician 1's left forearm.

Medical Response

Technician 2, who was working some distance away felling hazard trees, heard a loud scream, shut down the saw, and immediately moved to assist. Upon reaching Technician 1, Technician 2 observed they were in significant pain and there was visible deformity to Technician 1's left forearm, leading to the assessment that a fracture had likely occurred.

After an initial assessment, Technician 2 returned to the chase truck to retrieve the trauma bag and then to Technician 1 to provide first aid. A SAM splint was removed from the trauma kit and used to stabilize the injured arm.

After discussing the situation, both technicians determined that self-transport to a local hospital was the most appropriate course of action for further medical evaluation and treatment.

Additional Context Prompting a Work Stand Down and Review

The injury sustained by Technician 1 had the potential to be significantly more serious, as minor differences in position could have resulted in a more severe outcome. This incident is the second tree strike accident to occur within Big Creek Campground during 2025.

Earlier in the spring, a group of sawyers with varying levels of experience were engaged in hazard tree removal operations in this same area. During the operation, a breakdown in shared understanding regarding work status and positioning occurred. A sawyer felling hazard trees had been informed that another technician was retrieving a truck to bring fuel and supplies. However, visibility of the roadway was limited due to dense brush.

The technician moving the truck assumed that felling operations had been completed. Shortly after the vehicle was repositioned and parked within the work area, another tree was felled and struck the vehicle. Although the bole narrowly missed the truck, the vehicle sustained damage from branches of the felled tree. No injuries occurred during that event.

In addition, several years earlier on this unit, technicians engaged in hazard tree mitigation activities that involved climbing and setting pull lines experienced a fatal cardiopulmonary medical emergency after descending from a tree.

Taken together, the combination of a vehicle strike incident, the fractured arm sustained during the most recent event, and a prior fatality all associated with hazard tree operations prompted a work stand down and a broader review of the hazard tree program on the unit.

Photo of the incident tree taken from the stump that shows the broken top and tree lay.

Lessons

- **Cutting position and proficiency:** Hazard tree operations may require sawyers to cut from non-preferred or offside positions due to tree defects, terrain, or obstacles. Practicing and maintaining proficiency cutting from both sides of the tree can support better cut alignment, hinge construction, and situational adaptability when ideal positioning is not available.
- **Escape path preparation:** Clearing brush, downed material, and other debris from the base of each hazard tree is critical to maintaining effective escape options. When felling outcomes deviate from the intended plan, having multiple unobstructed escape routes increases the ability to move farther—or in unplanned directions—to avoid emerging hazards.
- **Bypass detection during undercut completion:** After removing the undercut, placing the saw bar back into the initial gunning cut can help confirm whether a bypass remains. This technique is particularly useful when awkward positioning or limited visibility prevents a clear view of the tree's far side.
- **Medical training in remote environments:** While First Aid and CPR training are required for sawyers, real-world medical response in remote field settings can present challenges that exceed the scope of standard curricula which meets the minimum safety standard.

Conclusion – Hazard Tree Program Safety Stand Down Initiated

These Big Creek hazard tree felling incidents illustrate how outcomes in complex, high-risk work is shaped not by a single action or decision, but by the interaction of environmental conditions, operational constraints, human factors, and organizational context. Weather impacts, regulatory work windows, staffing limitations, and communication challenges all influenced how work was planned, perceived, and carried out.

In response to this most recent event—and in consideration of prior incidents associated with hazard tree operations at Big Creek—a safety stand down of the hazard tree program was initiated. This pause provided an opportunity to reflect on how the program is supported, communicated, and administered, and to ensure that safety expectations are clearly understood and consistently reinforced.

The lessons captured through this review highlight the importance of leadership engagement in sustaining effective safety programs. Routine administrative elements—such as reviewing, updating, and signing Risk Assessment Worksheets and similar safety documentation—play a critical role in reinforcing shared understanding of hazards, controls, and expectations. When these processes are actively supported and completed in collaboration with employees, they help strengthen trust, accountability, and alignment between leadership intent and field execution.

This Rapid Lesson Sharing report is intended to support learning across the organization by highlighting the conditions that shaped this event. By fostering open discussions, following through on safety program administration, and applying these insights to similar operations, we can continue to improve how hazard tree mitigation work is planned, supported, and executed in service of employees and public safety.

This RLS was submitted by:

Aaron Pedersen

Regional Saw Program Manager,

U.S. Forest Service, Pacific Northwest Region

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