

# Rapid Lesson Sharing

**Event Type:** Hazard Tree Felling Accident –  
Downed Power Line

**Date:** Thursday, August 27, 2020

**Location:** Verlot Public Service Center  
Mt. Baker-Snoqualmie National Forest  
Washington

## Lessons and Insights from this Hazard Tree Felling Incident

*This RLS was conducted to gather facts and statements from employees, to make observations on what happened, and to provide recommendations to assist the Mt. Baker-Snoqualmie National Forest in preventing such future occurrences.*

### Summary of Events

It was August 27th on the Mount Baker-Snoqualmie National Forest, when a sawyer fell a dead 26-inch DBH silver fir at a busy Forest Service workstation known as the Verlot Public Service Center.

The fir had been identified as a “hazard tree” during assessment performed years prior and today was the day it would be coming down. The felling operation had several complicating factors, one of which was a “green” 14-inch DBH maple with branches that were growing around the dead fir—entangling the two trees together after years of growth.



The Verlot Public Service Center.

***“The fir took out the main power line for the town, crossed one lane of the road, and started a ¼ acre grass fire near the parking lot.”***

**Sawyer**

After removing the undercut on the forward leaning maple, the sawyer began the back-cut but stopped short from finishing the cut for fear of a “barber chair” occurring as the kerf on the back-cut began to quickly open. (A “barber chair” occurs when a tree being felled—while in the process of receiving the back-cut—delaminates vertically before the hinge is cut thin enough to bend. The term refers to the sliding action of the old-style barber chair that positioned patrons in a head down, feet up position so the barber could more easily shave with the straight razor.)

By intentionally leaving a 4.5-inch thick hinge on the 14-inch DBH maple, the sawyer believed that the fir’s larger size and subsequent weight would be sufficient to overcome any resistance the now crippled maple may exert after coming in contact with the fir as it was felled.

However, the fir had been kiln dried under the hot summer sun and did not contain the weight the sawyer expected. Therefore, as the fir began to fall and encountered the crippled maple, there was just enough resistance

to cause the fir's brittle hinge to break and for the tree to be deflected sideways by the maple—falling in an unintended direction and striking the nearby power lines.

During this falling operation, a spotter was staffing the parking lot closure at what was thought to be a safe distance away (2 ½ times tree height) on the opposite side of the parking lot. Out of pure happenstance, the spotter, who was the Verlot Public Service Center's Corridor Manager, was joined by two other employees who had stopped at the site for other reasons. Now, all three employees stood together and watched the sawyer as the tree was being felled.

Unbeknownst to the three onlookers standing directly under the powerlines, the events that were about to transpire would have them scrambling to avoid being hit—or worse—as the power lines came tumbling down, landing on a Forest Service vehicle parked near where they had been standing.

Time slowed down as it was realized the silver fir tree was heading directly toward the power lines. All three employees were in various states of dismay and running for their lives. The broken power lines hit the vehicle and ground, causing dangerous electrical sparks to fly and ignited a small grass fire in the center median that eventually was extinguished.

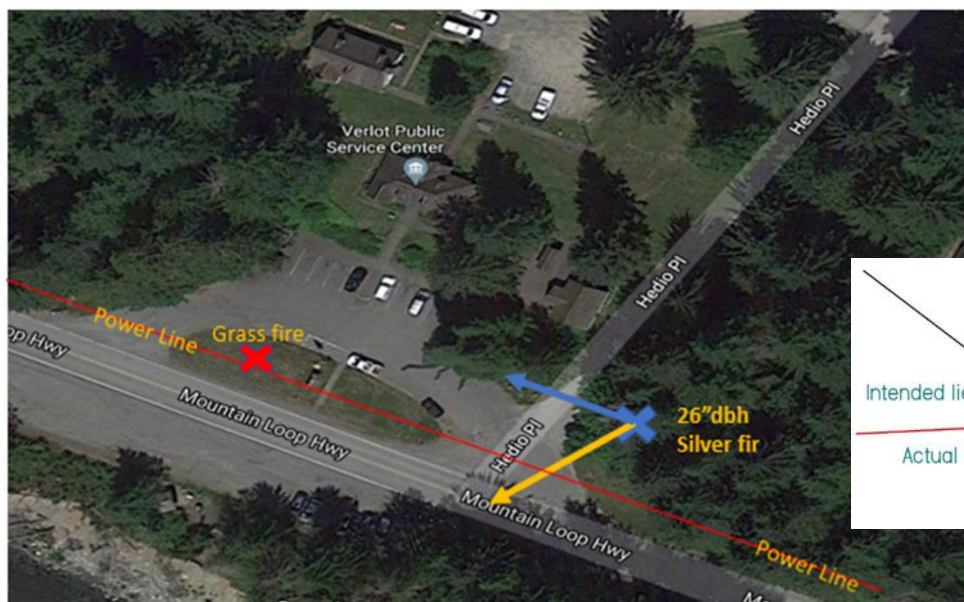
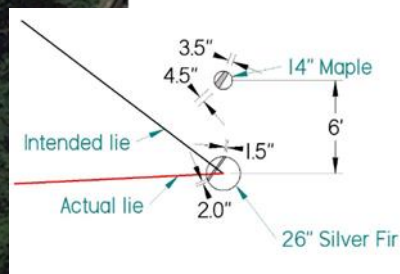


Image on left of the accident site shows the locations of the tree, actual and intended lay, power lines, and grass fire.



Live big leaf maple 14"

Gunning cut and back cut are level. Hinge oversized at 4.5". Little to no stump shot.



Dead silver fir 26"

Gunning cut and back cut are level. The hinge wood is properly sized at 10% the tree diameter. Stump shot of ½ - 1"

## **The Verlot Public Service Center**

The Verlot Workstation is a small and isolated Forest Service-owned facility on the Mount Baker-Snoqualmie National Forest. It has minimal staffing for recreation and a Corridor Manager who supervises the recreation staff and manages the workstation. The Verlot Public Service Center, because it is located so near the populated areas of Everett and Seattle, Wash., is among the most visited recreation areas on the Forest.

## **COVID-19**

COVID-19 emerged early in the Spring 2020, which initially required teleworking for most U.S. Forest Service employees. Line Officers were forced to make challenging and critically important decisions on safety, health of employees, and work priorities. There was confusion and uncertainty during this unfamiliar time as the details around the pandemic became known.

The Forest Service Washington Office, Regional Offices, and local Forests were in uncharted waters as they worked to understand COVID, develop guidance, and determine how employees would work under what is called the “new normal”.

COVID inevitably created a decrease with in-person contact time between employees, management and Line Officers. A new way of communication had to be learned with a reliance on technology (Teams, Zoom, text messages, etc.). The Verlot Public Service Center does not have cellular phone service or reliable technologies available to ensure timely and effective communications via virtual media. The realities around COVID further exacerbated the difficulties around communication at all levels.

## **A More Detailed Timeline of Events**

On Tuesday, August 25, the sawyer received a call from the Verlot Corridor Manager. The sawyer was a zoned employee, who normally reports to a different District office, yet was asked to come to Verlot to assist with moving some large boulders and to remove a single hazard tree.

The sawyer agreed to assist. A plan was made to travel to Verlot the next day, Wednesday, August 26. Shortly after arriving onsite, it was found that many hazard trees were present and that the job had grown significantly from what was originally planned. The time required to mitigate additional hazards would necessitate a second trip that was then scheduled to take place the following day. This would also allow the power company to be present so a discussion could be had regarding how to address several other hazard trees that were close to the overhead power lines.

On Thursday August 27, the Public Utility District (PUD) arrived at the workstation to assess which trees they were willing to remove and which would be the responsibility of the local unit to mitigate. The power company determined that the 26-inch silver fir was outside their corridor and not their responsibility to remove. There were several hazard trees the PUD fell that day that were deemed within their corridor. Once their work was done, they left Verlot and traveled down the road to eat lunch.

The sawyer, swamper and Corridor Manager sized-up the silver fir near the gate and discussed a plan to safely remove the tree by closing off the area and felling the tree into the parking lot. Road guards were discussed, but no one had the proper certification or resources to block a county road and it wasn't clear where they could be effectively placed. They therefore opted to proceed without road guards because the tree was to fall into the parking lot.

The parking lot was closed and blocked at both entrances to keep traffic from entering. It was about this time that two Forest Service engineers came to visit the workstation and were instructed to stand near the Corridor Manager who was acting as a spotter, keeping an eye on the parking lot entrance. As they watched the sawyer

working to fell the hazard tree, it appeared to be heading toward the intended lay. But then—without warning—it was deflected by the maple and began falling in the direction of the power lines.

The spotter and the two engineers realized the danger they were in only after the tree struck the power lines and the now severed lines came tumbling to the ground—nearly on top of them. Sparks flew when the power line contacted the parked vehicle, which ignited a small grass fire.

The PUD workers parked down the road near the power line, heard and observed the power lines in their location pop and jolt while they ate their lunch. They realized exactly what had just taken place back at the workstation and headed back promptly to assess the situation. Once the PUD determined it was safe to approach the power lines, the grass fire was quickly extinguished by the Forest Service employees.

### **Safety Stand Down**

The Forest Service employees gathered to discuss what had just happened. It was mentioned that management needed to be notified. The sawyer and swamper left and reported the incident immediately to their District Ranger. Due to the broken power line and no other advanced communications, the Corridor Manager was unable to contact his direct supervisor until the following day. The Verlot District Ranger, who manages the Verlot Public Service Center, became aware of the incident over the weekend after being contacted by the MBS Supervisors Office.

Having experienced three other serious incidents in recent weeks on the Mount Baker-Snoqualmie National Forest, the Forest Supervisor decided to institute a Safety Stand Down, lasting Friday through Monday. Forest leadership was to discuss safety and priorities with their employees. The input from employees regarding the action was mixed, some agreed that the Safety Stand Down was a good thing, but the intent and messaging seemed lacking as employees each took away something different, or did not participate in a formal action at all.

---

***“I can’t think of another season that I can compare this one to.”***

**Sawyer**

---

### **Reflections and Observations from Employee Interviews**

After pondering the incident at Verlot, employees at all levels reflected on what had taken place. Some simply said: *“Well, no one was injured.”* Others said: *“That was a dangerous situation. People could have been seriously injured or killed”.*

Many employees remarked on the year that they were handed. There was COVID, teleworking, reduced in-person contact time with management, funding issues, deadlines, unknown and fluid priorities. Some employees were still dealing with a very recent accident similar in nature to this incident and were trying to shake it off.

There seemed to be a lack of formal documentation at the Verlot Workstation pertaining to the hazard tree management and a backlog of hazard trees that had not been mitigated as varying displays of old ribbon mixed with fresh ribbon on several trees.

### **Vague or Misunderstood Leader’s Intent**

It was explained by a few employees how priorities were not clearly identified due to COVID. Information provided to employees was: *“If we don’t get anything done this season it’s okay”* to the other extreme of needing hazard trees felled at recreation sites with unrealistic deadlines. This can cause stress and increased complacency with sudden, hurried deadlines. As one manager mentioned, the type of employees we tend to hire are “Can Do” people. This seems to create a sense of urgency around accomplishing work even though they have been told to do less.



This bias toward action compounded with the lack of communication with management due to COVID may have caused vague or misunderstood Leader's Intent and unknown or forgotten SOPs or guidance. This situation may put employees into a situation of making on-the-spot decisions without first addressing them with upper management. As one manager explained: *"I feel like I'm sacrificing seasonal employees when I'm working from home while they are working out in the field."*

An employee commented that tailgate safety sessions were not being conducted, and that they just recently reinstituted them due to the recent increased trend of safety incidents.

In addition, it was realized after the incident that road guards could have been organized with Snohomish County or another entity. It was also discussed that perhaps this was a good indicator to purchase radio headsets for communications between the sawyer and lookouts/road guards.

### **Communication Issues**

Management was aware of the Verlot Workstation communication issues. The lengthy distance between the Ranger District office and Verlot Workstation coupled with limited telecommunication options were a continual problem. Line officers are given multiple areas of responsibility and must prioritize work. All these factors made it necessary to empower the Corridor Manager to make decisions independently when the higher chain-of-command may not have the capacity to make on their own.

Employees were asked about reporting incidents, and if there was a fear of reporting. One answer the RLS Team obtained was: *"Yes, but I don't know why."* Another employee commented on the fear of liability that they face. They have heard of many instances when an employee was held liable for an action that they took on the job—and was not backed by the agency. It also seems that in some instances, such as new employees, it is not known what and when to report.

### **Conclusion**

The situation at the Verlot Workstation is not isolated to one Forest, it is an issue Forest Service wide. The theme is quite consistent: Losing local knowledge base and experience through retirements and RIFs; constrained funding and reduced staffing; management and employees over-tapped; isolated workstations; and communication issues with isolated workstations.

With COVID and reduced in-person contact on top of it all in 2020, it's understandable how the "Swiss Cheese Model" may be prone to line up.

After the RLS briefing to Mount Baker-Snoqualmie National Forest management, a line leader summarized the issue very well: *"There are Verlot-like outpost administrative sites all over the Forest Service. And with the kind of budget we have had for 10 years it's very common to have strong local boots-on-the-ground leaders at those sites who eventually retire and leave a corporate knowledge vacuum in their wake. We cannot assume that things will continue to run smoothly at these sites with the loss of that local knowledge. But rather, we need to recognize that we need to OVER communicate expectations, SOPs, etc. for a few years compared to the past."*

The RLS Team thoroughly enjoyed working with the Forest's employees and management. The RLS Team empathizes with this common issue that we face Forest Service wide. It is obvious that the line leaders truly care about their employees and the employees care about the Forest.

## Recommendations from the RLS Team

*These may not be all inclusive. Therefore, it is encouraged to have more discussions among management and employees to continue this learning venture.*

- ✓ **Hazard tree management** – Various levels of understanding exist at all levels around agency/regional policy for hazard tree management, mitigation, reporting, documentation, and training requirements. A thorough review of current practices and procedures is warranted. Reviewing the policies with applicable employees could be performed annually.
- ✓ **Communication and in-person contact** – Finding creative ways to increase opportunities for in-person contact time and direct involvement with District leadership and the Supervisors office, as well as between employees and their supervisors, would be beneficial, especially now during COVID.
- ✓ **Technology** – Research new technology that allows a sawyer to wear a headset for radio communication with his swamper, road guards and lookouts. This would improve safety when falling trees.
- ✓ **Turnover/new employees** – The importance of mentorship and the need to develop a robust onboarding program for new employees, especially those with no experience working for a natural resource organization like the Forest Service, would greatly benefit employees and organizational efficiencies/safety/retention.
- ✓ **Leader's intent** – Provide clear, decisive direction from leadership on what the work priorities are to minimize employee stress. In addition, employees need to know when to consult up the chain-of-command for their decisions, input and involvement prior to performing an action, and when to report a safety incident.
- ✓ **Standard Operating Procedures (SOP)/Risk Assessments (RA)** – Develop SOPs and risk assessments around employee safety. They should be discussed and updated on a regular basis. SOPs/RAs could be for falling trees around power lines and reporting safety incidents. Institute regular and thorough Tailgate Safety Sessions to address the SOPs and RAs.
- ✓ **Safety stand down** – When a safety stand down is instituted, ensure that it's understood what message needs to be delivered to employees.
- ✓ **Liability** – Employees would benefit from having an open dialog with management around liability issues. A fear exists among employees that they will be held personally liable for costs associated with a mishap or legally vulnerable to lawsuit even when acting in the scope of their duties.
- ✓ **Stop, think, talk, act or not act** – Train employees to take the time to analyze and critically think situations through. Ask critical questions to evaluate the situation and action. Could this job have been delayed and allow PUD to come back with a boom truck to provide their service? Could it be researched on where to obtain road guards? Should it be postponed to research hazard tree documentation more thoroughly? Should the chain-of-command be briefed prior to acting?



***This RLS was submitted by:  
Wayne Chevalier, Lisa Spahr,  
Drew Peterson, David Roe and  
Aaron Pedersen***

Do you have a Rapid Lesson to share?  
Click this button:

[Share  
Your Lessons](#)